CITY OF REDLANDS

CITY COUNCIL

A G E N D A

DECEMBER 20, 2022

PAUL BARICH
Mayor

EDDIE TEJEDA
Mayor Pro Tempore

DENISE DAVIS
Council Member

JENNA GUZMAN-LOWERY
Council Member

MICK GALLAGHER
Council Member

***

JEANNE DONALDSON
City Clerk

ROBERT DAWES
City Treasurer

CHARLES M. DUGGAN JR.
City Manager

YVETTE M. ABICH GARCIA
City Attorney

5:00 p.m. Open Public Meeting, Public Comment (Closed Session)
6:00 p.m. Open Session (Public Meeting)

* * *

City Council Chambers
Civic Center, 35 Cajon Street, Redlands, California

Recycled Paper

A G E N D A

The following information comprises the agenda for the regular meeting of the City Council of the City of Redlands at the times noted below in the City Council Chambers, Civic Center, 35 Cajon Street, Redlands, California, on:

TUESDAY, DECEMBER 20, 2022

To join via Zoom on a computer, laptop, or smart device
Please visit www.zoom.us, click on Join a Meeting
Enter the **Meeting ID 824 4618 0187**, then run the Zoom launcher
To join via Zoom with audio only (cell phone or landline):
Dial **1-877-853-5247**
Enter the **Meeting ID 824 4618 0187**

Should the City lose connectivity on Zoom, we will halt the meeting until it can be restored. To check on the status of remote connectivity in the event of an outage, go to the City's website at www.cityofredlands.org or to the City's Facebook page at @CityofRedlands or the Instagram page at @CityofRedlands_CityHall.

In the event the City cannot reestablish Zoom connectivity in a reasonable amount of time, the mayor will adjourn the meeting to a future date.

***PLEASE NOTE**:* Anyone desiring to speak on an agendized item at this meeting may do so during the consideration of that item. Due to time constraints and the number of persons who may wish to give oral testimony, public comments will be limited to three (3) minutes.

- **To provide comment while participating from Council Chambers:**
  - Although it is not required, speakers are encouraged to submit a "Speaker Sign Up Sheet" before the meeting is convened. Forms are available in the Office of the City Clerk or in Council Chambers.
  - After the meeting has convened, you may place the speaker form in the basket at the table along the north wall of the Chambers. Please do not disturb the City Clerk while the meeting is in progress.

- **To provide comment through Zoom (on a computer, laptop, or smart device)**:
  - Click the "Raise Hand" button and the moderator will unmute you when it is your turn to speak

- **To provide comment via audio only (cell phone or landline)**:
  - Dial *9 to "Raise Hand". The moderator will identify you by your area code and last 3 numbers of your telephone number when it is your turn to speak.

PLEASE SILENCE CELL PHONES, PAGERS AND OTHER ELECTRONIC COMMUNICATION DEVICES UPON ENTERING THE CHAMBERS

5:00 P.M.

A. **Call City Council Meeting to Order.**

B. **Public Comment**
(Any person wishing to provide public comment on a closed session matter may do so at this time.)

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C. **Recess City Council Meeting to a Closed Session**

1. Conference with legal counsel: Existing Litigation - Government Code §54956.9(d)(1)
(City Attorney Garcia)

Two Cases:

a. Lydia Rodriguez v. City of Redlands, San Bernardino Superior Court Case No. CIVDS1935452

b. Steve Rogers v. City of Redlands, San Bernardino Superior Court Case No. CIVSB2126031

Recycled Paper

6:00

D. **Reconvene City Council Meeting**

E. ***Invocation by Council Member Guzman-Lowery - Pledge of Allegiance***
(In keeping with long-standing traditions of legislative invocations, this City Council meeting may include a brief invocation. Such invocations are not intended to proselytize or advance any one, or to disparage any other, faith or belief. Neither the City nor the City Council endorses any particular religious belief or form of invocation.)

F. **Closed Session Report**
(No reportable action taken in closed session unless otherwise announced by the City Attorney at this time.)

G. **Certification of Election - Oaths of Office - Reorganization of the City Council**

1. Consideration of Resolution No. 8397 of the City Council of the City of Redlands reciting the fact of the General Municipal Election held on Tuesday, November 8, 2022, declaring the results and such other matters as provided by law (City Clerk Donaldson)

2. Recognition of outgoing Council Member Mick Gallagher.

3. Presentation of certificates of election - Administration of oaths of office
    1. Newly elected Council Members (City Clerk Donaldson)

4. Election of Mayor and Mayor Pro Tempore (City Clerk Donaldson)
(The City Clerk will conduct the elections of the Mayor and Mayor Pro Tempore for the term of two years. If more than one nomination is made, a public roll call vote will be taken. Nominations do not require a second.)

5. Comments from Mayor, Mayor Pro Tempore, and newly elected and re-elected City Council Members

6. Brief Recess

H. Reconvene City Council Meeting

I. **Public Comment - City Council**
(At this time, the City Council will provide an opportunity for the public to address them on any subject, within the jurisdiction of the City Council, which is not already scheduled on this agenda. However, any matter that requires action will be referred to staff for a report and possible action at a subsequent meeting. Comments will be limited to three {3} minutes.)

J. **Consent Calendar**
(The following routine items have been recommended for approval and will be acted upon simultaneously unless separate discussion and/or action is requested by a Councilmember or a member of the audience.)

1. Approve the regular meeting minutes of December 6, 2022 (City Clerk Donaldson)

2. Approve the Local Appointments List for 2023 in accordance with Government Code Section 54972 (Mayor Barich)

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3. Approve recommendation for appointments to the Planning Commission (Mayor Barich)

4. Approve recommendation for reappointments to the Historic and Scenic Preservation Commission (Mayor Pro Tem Tejeda)

5. Approve recommendation for an appointment to the Traffic and Parking Commission (Council Member Davis)

6. Adopt Resolution No. 8428 authorizing remote teleconference meetings by the City Council and all Boards, Commissions, and Committees of the City in accordance with Assembly Bill 361 (2021) for a period of 30 days (Council Member Davis)

7. Approve recommendation for a reappointment to the Cultural Arts Commission (Council Member Guzman-Lowery)

8. Approve recommendation for reappointments to the Library Board of Trustees Commission (Council Member Gallagher)

9. Adopt Ordinance No. 2940 (Second Reading) - Amending Chapter 1.08 of the Municipal Code regarding Custody and Use of the Official City Seal and City Logos, Badges and Patches (Assistant City Manager McConnell)

10. Approve a Second Amendment to the Professional Services Agreement with Webb Municipal Finance, LLC to allow for the continued performance of professional services for the annual levy administration and annexations for Community Facilities District No. 2004-1, authorize an Additional Appropriation in the amount of $33,577.59 and determine that this contract amendment is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act (Development Services Director Desatnik)

11. Adopt Resolution No. 8426 - Annual Report of Development Impact Fees for the Year Ended June 30, 2022, and Adoption of Findings (Management Services/Finance Director Garcia)

12. Authorize an annual maintenance payment to Motorola Solutions, Inc. in the amount of $96,853.66 for the Police Department's Spillman Computer Aided Dispatch/Records Management System (Management Services/Finance Director Garcia)

13. Receive and file the Annual Reports for Community Facility District (CFD) No. 2001-1 and Community Facility District (CFD) No. 2003-1 pursuant to Local Agency Special Tax and Bond Accountability Act (SB 165) (Management Services/Finance Director Garcia)

14. Reject all bids for the Security Fencing Installation Project (Municipal Utilities and Engineering Director Harris)

15. Approve withdrawal from the Santa Ana River - Mill Creek Exchange Plan Agreement, and authorize the City Manager or his designee to issue a withdrawal notice to the San Bernardino Valley Water Conservation District (Municipal Utilities and Engineering Director Harris)

16. Approve the License Agreement with the California Department of Water Resources and the San Bernardino Valley Municipal Water District (Municipal Utilities and Engineering Director Harris)

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17. Adopt Resolution No. 8416 establishing an approved contractor list pursuant to the Uniform Public Construction Cost Accounting Act and determination that approval of the Resolution is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act (Municipal Utilities and Engineering Director Harris)

18. Adopt Resolution No. 8419 approving the 2022 Water Systems Master Plan and determine this action is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act (Municipal Utilities and Engineering Director Harris)

19. Adopt Resolution No. 8420 authorizing the submittal of a grant application to the California Department of Water Resources for the 2022 Urban Community Drought Relief Funding Program requesting supplemental funding for the engineering and replacement of the Sunset Reservoir (Municipal Utilities and Engineering Director Harris)

20. Approve the Additional Services Agreement with the Flock Group, Inc. for the lease of automated license plate recognition cameras in the amount of $69,550 for two years (Deputy Police Chief Martinez)

21. Approve the First Amendment to the Agreement with Universal Protection Service, LP, DBA Allied Universal Security Services to amend the total to an amount not to exceed $135,785.28 (Assistant City Manager Boatman)

22. Approve the in-kind support for use of the Redlands Sports Park in the amount of $66,584 for Redlands Region 50 of the American Youth Soccer Organization (Assistant City Manager Boatman)

K. **Communications**

1. Discussion and possible action relating to the selection of two City Council representatives to serve on the San Bernardino Valley Municipal Water District Regional Recycled Water Ad Hoc Committee (Mayor Barich)

2. Discussion and possible action on Ordinance No. 2954 and Resolution No. 8429 relating to the process for filling vacancies on the City Council (Mayor Pro Tem Tejeda)

L. **Public Hearings**

1. Resolution No. 8427
(Mayor to declare meeting open as a public hearing)

   a. Public Hearing to consider Resolution No. 8427 - A request for approval of Street Vacation No. 186 to vacate an excess public right-of-way that is three (3) feet wide and 404 feet in length along the westerly side of Jasper Avenue, and along the eastern property line of the commercial property located at the southwest corner of the Naples Avenue Jasper Avenue intersection (APN: 0298-051-07-0000) (Applicant: Madison Capital Group) (Development Services Director Desatnik)

Recycled Paper

2. Resolution No. 8424
(Mayor to declare meeting open as a public hearing)

   a. Public Hearing to consider Resolution No. 8424 - A request for approval of Street Vacation No. 187 to vacate an excess public right-of-way that is four (4) feet wide and 152.91 feet in length along the easterly side of North Church Street, and across the front property line of the residential property located 710 North Church Street (APNs: 0170-071-03-0000 and 0170-071-04-0000) (Michael Frazier, Applicant) (Development Services Director Desatnik)

3. Resolution No. 8425
(Mayor to declare meeting open as a public hearing)

   a. Public Hearing to consider Resolution No. 8425 - A request to vacate excess public right-of-way along East Highland Avenue, which is ten (10) feet wide and 998 feet in length, along the southerly side of East Highland Avenue and approximately 50 feet west of Redlands Street/South Lincoln Street, along the entire frontage of the previously approved Tract Map No. 20065 (APN: 0174-161-25-0000) (Hicks and Hartwick, Inc., Applicant) (Development Services Director Desatnik)

M. **New Business**

1. Consideration of Ordinance No. 2953 changing Chapter 2.02 of the Redlands Municipal Code relating to the selection of the Mayor and Mayor Pro Tempore, their respective terms of office, and adoption of Resolution No. 8414 (Council Member Davis)

N. **Individual Council Member Announcements and/or Reports on Activities**
(No collective discussion or action.)

O. **Adjournment**
The next regular meeting of the City Council will be held on January 17, 2023

If you challenge any proposed development entitlement listed on this agenda in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City Council at or prior to this public hearing.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact Goutam Dobey, of the Municipal Utilities and Engineering Department at (909) 798-7584 ext 2. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

(28 CFR 35.102-35.104 ADA Title II)

Any writings or documents distributed to a majority of the City Council regarding an open session agenda item less than 72 hours before this meeting are available for public inspection at the City Clerk's Office or at the dais of the City Clerk once the open session begins.

Staff reports or other written documentation relating to items referred to on the agenda are available at the A. K. Smiley Public Library, 125 West Vine Street, Redlands, California, and on the City's website referenced below.

Regular meetings are televised live on Redlands TV Channel 3 (Spectrum) and Channel 35 (Frontier) and re-broadcast at 7:00 P.M. the following Wednesday, Friday and Sunday; and at 9:00 A.M. Thursday, Saturday and Monday. Meetings are also streamed live and archived for later viewing on demand on the City's website at www.cityofredlands.org. Agendas, staff reports and minutes of the City Council of the City of Redlands are available online at: www.cityofredlands.org.

Recycled Paper

City Council Meeting **G. 1.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Consideration of Resolution No. 8397 of the City Council of the City of Redlands reciting the fact of the General Municipal Election held on Tuesday, November 8, 2022, declaring the results and such other matters as provided by law (City Clerk Donaldson)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to adopt Resolution No. 8397.

Recognition of Outgoing Council Member Mick Gallagher

1. Mr. Gallagher to exit the dais as a Council Member.

Certificates of Election - Administration of Oath of Office Council Members District 1, 3 and 5

1. City Clerk Donaldson to administer oath of office to newly elected Council Member Denise Davis

2. City Clerk Donaldson to administer oath of office to newly elected Council Member Mario Jacob Saucedo

3. City Clerk Donaldson to administer oath of office to newly elected Council Member Paul T. Barich

Election of Mayor and Mayor Pro Tempore (City Clerk Donaldson)
(If a new selection process is not established, the City Clerk will conduct the elections of the Mayor and Mayor Pro Tempore for the term of two years. If more than one nomination is made, a public roll call vote will be taken. Nominations do not require a second.)

Comments from the newly elected Council Members.

RECOMMENDATION:

It is recommended the City Council adopt Resolution No. 8397, a resolution of the City Council of the City of Redlands reciting the fact of the General Municipal Election held on Tuesday, November 8, 2022, declaring the results and such other matters as provided by law.

DISCUSSION:

Pursuant to the requirements of the laws of the State of California relating to General Law cities, the Redlands City Council adopted Resolution No. 8317 on June 21, 2022, calling and ordering to be held in the City of Redlands, California, a General Municipal Election, and requesting the Board of Supervisors of the County of San Bernardino authorize the Registrar of Voters to canvass the returns and provide the necessary services pertaining to the election to be held Tuesday, November 8, 2022, for the purpose of electing three Members of the City Council by-district, in Districts 1, 3 and 5 for the full term of four years.

Furthermore, on July 5, 2022, the Redlands City Council adopted Resolution No. 8364, ordering the submission of an ordinance proposing to amend Section 5.08.482 of the Redlands Municipal Code as it relates to Business License Tax Rates for Distribution Centers (MEASURE J); and on August 4, 2022, the Redlands City Council adopted Resolution No. 8378, ordering the submission of an ordinance proposing to amend sections lA.0, lA.10, 1.A.30, 4.2B and 4.41j of the Redlands General Plan 2035, collectively titled, "Principles of Managed Development (MEASURE F), to the qualified voters of the City of Redlands at the General Municipal Election to be held on November 8, 2022, and requesting the Board of Supervisors of the County of San Bernardino authorize the Registrar of Voters to canvass the returns.

The San Bernardino County Registrar of Voters provided a Statement of Certification of Election results of the 2022 Statewide General Election, showing the total number of votes cast in San Bernardino County and that the totals as shown are full, true and correct.

ALTERNATIVES:

Not Applicable.

STRATEGIC PLAN:

Not Applicable.

SUBMITTED BY:
Jeanne Donaldson, City Clerk

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager

PREPARED BY:
Jeanne Donaldson, City Clerk

Fiscal Impact

Discussion:

Certification of Election Results will not have an impact on the City of Redlands General Fund.

Attachments

Certified Election Results

Reso No. 8397 General Election Results

777 East Rialto Avenue, San Bernardino, CA 92415 | Phone: 909.387.8300 Fax: 909.387.2022
www.SBCounty.gov

SAN BERNARDINO COUNTY

Registrar of Voters

Michael Jimenez
Interim Registrar of Voters

CERTIFICATION OF REGISTRAR OF VOTERS OF THE RESULTS OF THE CANVASS OF THE NOVEMBER 8, 2022, GENERAL ELECTION

STATE OF CALIFORNIA)
) ss.
SAN BERNARDINO COUNTY)

I, Stephenie Shea, Interim Assistant Registrar of Voters of San Bernardino County, do hereby certify that, in pursuance of the provisions of Elections Code section 15300, et seq., I did canvass the results of the votes cast in the General Election held in said County on November 8, 2022, for measures and contests that were submitted to the vote of the voters, and that the Certified Election Results to which this certificate is attached is full, true and correct.

I hereby set my hand and official seal this 8th day of December, 2022, at San Bernardino County.

Stephenie Shea
Interim Assistant Registrar of Voters
San Bernardino County
State of California

BOARD OF SUPERVISORS
COL. PAUL COOK (RET.) First District | JANICE RUTHERFORD Second District | DAWN ROWE Vice Chair, Third District | CURT HAGMAN Chairman, Fourth District | JOE BACA, JR. Fifth District
Leonard X. Hernandez Chief Executive Officer

Final Certified Election Results

Next Update: Final Posting

ELECTION CONTESTS MENU

FILTER CONTESTS

City of Redlands Member, City Council District 1 (Vote for 1)

Precincts Reported: 21 of 21 (100.00%)

	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Times Cast	3,390	5	548	30	3,973 / 7,639	52.01%
Undervotes	394	0	62	7	463	
Overvotes	2	0	0	0	2	

Candidate	Party	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
DENISE DAVIS		1,705	1	157	12	1,875	53.45%
TOM BERG		717	0	214	6	937	26.71%
RODGIR COHEN		257	2	56	2	317	9.04%
ANDREW HODER		315	2	59	3	379	10.80%
Total Votes		2,994	5	486	23	3,508	

		Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Unresolved Write-In		0	0	0	0	0	

City of Redlands Member, City Council District 3 (Vote for 1)

Precincts Reported: 23 of 23 (100.00%)

	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Times Cast	3,852	4	659	29	4,544 / 8,899	51.06%
Undervotes	463	0	87	5	555	
Overvotes	1	0	0	0	1	

Candidate	Party	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
MIKE SAIFIE		1,350	0	333	9	1,692	42.43%
MARIO JACOB SAUCEDO		2,038	4	239	15	2,296	57.57%
Total Votes		3,388	4	572	24	3,988	

		Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Unresolved Write-In		0	0	0	0	0	

City of Redlands Member, City Council District 5 (Vote for 1)

Precincts Reported: 17 of 17 (100.00%)

	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Times Cast	6,882	0	959	32	7,873 / 11,591	67.92%
Undervotes	2,087	0	320	8	2,415	
Overvotes	0	0	0	0	0	

Candidate	Party	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
PAUL T. BARICH		4,706	0	626	21	5,353	98.08%
Total Votes		4,795	0	639	24	5,458	

		Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
RICHARD O'DONNELL	WRITE-IN	89	0	13	3	105	1.92%
Unresolved Write-In		0	0	0	0	0	

City of Redlands MEASURE F (Vote for 1)

Precincts Reported: 95 of 95 (100.00%)

	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Times Cast	21,041	9	3,274	144	24,468 / 45,411	53.88%
Undervotes	1,871	0	297	27	2,195	
Overvotes	5	0	1	0	6	

Candidate	Party	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
YES		7,637	2	813	52	8,504	38.19%
NO		11,528	7	2,163	65	13,763	61.81%
Total Votes		19,165	9	2,976	117	22,267	

		Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Unresolved Write-In		0	0	0	0	0	

City of Redlands MEASURE J (Vote for 1)

Precincts Reported: 95 of 95 (100.00%)

	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Times Cast	21,041	9	3,274	144	24,468 / 45,411	53.88%
Undervotes	1,467	0	253	26	1,746	
Overvotes	3	0	0	0	3	

Candidate	Party	Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
YES		10,956	2	1,123	54	12,135	53.41%
NO		8,615	7	1,898	64	10,584	46.59%
Total Votes		19,571	9	3,021	118	22,719	

		Mail Ballot	Designated Mail Ballot	Polling Place	Provisional	Total	
Unresolved Write-In		0	0	0	0	0	

SAN BERNARDINO COUNTY | Registrar of Voters

777 East Rialto Avenue
San Bernardino, CA 92415-0770
Tel 1-800-881-VOTE • (909) 387-8300

RESOLUTION NO. 8397

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS RECITING THE FACTS OF THE GENERAL MUNICIPAL ELECTION HELD ON TUESDAY, NOVEMBER 8, 2022, AND DECLARING THE RESULTS AND SUCH OTHER MATTERS AS PROVIDED BY LAW

WHEREAS, a general municipal election was held and conducted in the City of Redlands on Tuesday, November 8, 2022, as required by law; and

WHEREAS, notice of the election was given in time, form, and manner as provided by law; that voting precincts were properly established; that election officers were appointed; and that in all respects the election was held and conducted and the votes were cast, received, and canvassed, and the returns made and declared in time, form and manner as required by the provisions of the California Elections Code for the holding of elections in general law cities; and

WHEREAS, pursuant to City Council action approved on June 21, 2022, the County Registrar of Voters canvassed the returns of the election and has certified the results to this City Council; said results are received, attached and made a part hereof as "Exhibit "A;"

NOW, THEREFORE, the City Council of the City of Redlands does resolve, declare, determine and order as follows:

Section 1. That the names of persons voted for at the election for Member of the City Council, were as follows:

DISTRICT 1:

- DENISE DAVIS
- TOM BERG
- RODGIR COHEN
- ANDREW HODER

DISTRICT 3:

- MIKE SAIFIE
- MARIO JACOB SAUCEDO

DISTRICT 5:

- PAUL T BARICH
- RICHARD O'DONNELL (Write-In Candidate)

Section 2. That the measures voted upon at the election were as follows:

Measure F: "AN INITIATIVE ORDINANCE OF THE PEOPLE OF REDLANDS AMENDING SECTIONS 1A.0, 1A.10, 1.A.30, 4.2B AND 4.41J OF THE

PRINCIPLES OF MANAGED DEVELOPMENT OF THE CITY OF REDLANDS GENERAL PLAN 2035"

Measure J: "AN ORDINANCE OF THE PEOPLE OF THE CITY OF REDLANDS, CALIFORNIA, AMENDING SECTION 5.08.482 OF THE REDLANDS OF THE CITY'S MUNICIPAL CODE AS IT RELATES TO BUSINESS LICENSE TAX RATES FOR DISTRIBUTION CENTERS".

Section 3. That the number of votes given at each precinct and the number of votes given in the City to each of the persons named above for the respective office for which the persons were candidates and the number of votes for and against the measures are as listed in Exhibit "A" attached hereto.

Section 4. That the City Council of the City of Redlands does hereby declare and determine that:

DENISE DAVIS was elected as a Member of the City Council, District 1, for the full term of four years;

MARIO JACOB SAUCEDO was elected as a Member of the City Council, District 3, for the full term of four years;

PAUL T BARICH was elected as a Member of the City Council, District 5, for the full term of four years;

Section 5. That as a result of the election, a majority of the voters voting on MEASURE F, relating to, amending Sections 1a.0, 1a.10, 1.A.30, 4.2b and 4.41j of the Principles of Managed Development of the City of Redlands General Plan 2035, did not vote in favor of it, and that the measure was not carried and shall not be deemed adopted and ratified.

Section 6. That as a result of the election, a majority of the voters voting on MEASURE J, relating to, Business License Tax Rates for Distribution Centers, did vote in favor of it, and that the measure was carried and shall be deemed adopted and ratified.

Section 7. The City Clerk shall enter on the records of the City Council of the City of Redlands a statement of the results of the election showing the whole number of votes cast in the City; the names of the persons voted for; the measure voted upon; for what office each person was voted for; the number of votes given at each precinct to each person, and for and against the measure; and the total number of votes given to each person, and for and against the measure.

Section 8. That the City Clerk shall immediately make and deliver to each of the persons so elected a Certificate of Election signed by the City Clerk and authenticated; that the City Clerk shall also administer to each person elected the Oath of Office prescribed in the Constitution of the State of California and shall have them subscribe to it and file it in the Office of the City Clerk; and each and all of the persons so elected shall then be inducted into the respective office to which they have been elected.

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing Resolution No. 8397 was duly adopted by the City Council at a regular meeting thereof held on the 20th day of December 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

EXHIBIT “A”
CERTIFIED RESULTS

City Council Meeting **J. 1.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve the regular meeting minutes of December 6, 2022 (City Clerk Donaldson)

MOTION:

I move to approve the regular meeting minutes of December 6, 2022.

Attachments

Regular meeting minutes of December 6, 2022

MINUTES

Regular meetings of the City Council and the Board of Directors of the Successor Agency of the former Redevelopment Agency of the City of Redlands held in the Council Chambers, Civic Center, 35 Cajon Street, on December 6, 2022 at 5:00 P.M.

Present:	Paul Barich, Mayor Eddie Tejeda, Mayor Pro Tempore Denise Davis, Council Member Jenna Guzman-Lowery, Council Member Mick Gallagher, Council Member
Staff:	Charles M. Duggan, Jr., City Manager; Yvette M. Abich Garcia, City Attorney; Jeanne Donaldson, City Clerk; Janice McConnell, Assistant City Manager; Chris Boatman, Assistant City Manager; Carl Baker, Public Information Officer; Chris Catren, Police Chief; Danielle Garcia, Management Services/Finance Director; Brian Desatnik, Development Services Director; John Harris, Municipal Utilities and Engineering Director; Rich Sessler, Fire Chief

Mayor Barich called the meeting to order and explained that comments could be presented in-person, via Zoom, via cell phone or landline. This was conducted as a teleconference meeting with Council Member Davis participating remotely and all votes during the meeting were conducted by roll call. He offered the public an opportunity to provide comment on any item on the agenda for the closed session.

PUBLIC COMMENT

AYSO & Sport Park- Seven people, including Ernesto Lemos, Jamie Corbett, Courtney Meyer, Isaiah Lopez, Stephanie Meriaux, Rasu Mathurakku and Bruce Laycook spoke in support of the American Youth Soccer Organization (AYSO), describing several ways in which the program brings exceptional value to the community. They requested the Council delay terminating the contract and accept a 90-day tolling agreement. Stephanie Meriaux, Isaac Villagrana and Isaiah Chavez urged the Council to manage the sports park equitably, allowing programs, other than AYSO, to use the fields, while Jared Gustafsan said mental health benefits are tied to a robust youth program.

CLOSED SESSION

Conference with legal counsel: Anticipated Litigation - Government Code §54956.9(d)(2), and §54956.9(e)(3) (Assistant City Manager Boatman)
A point has been reached where, in the opinion of the City Council on the advice of its legal counsel, based on the below described existing facts and circumstances, there is significant exposure to litigation against the City.

One Case:

a. Receipt of written communication threatening litigation by Burton Haimes, of

Tennenbaum, Helpern, Syracuse, Hirschtritt. A copy is available for public inspection in the City Clerk's Office.

Conference with legal counsel: Anticipated Litigation - Government Code §54956.9(d)(2) and §54956.9 (e)(3) (Assistant City Manager McConnell)
One Case:

a. Facts and circumstances: Consideration of a workers' compensation claim filed by Taylor Shuey

RECONVENE CITY COUNCIL MEETING

The meeting reconvened at 6:19 P.M. with an invocation by Mayor Pro Tem Tejeda followed by the pledge of allegiance to the American flag.

CLOSED SESSION REPORT

City Attorney Abich Garcia announced that no reportable action was taken during the closed session.

PRESENTATIONS

Holiday Performance

The Redlands Girls' Vocal Ensemble, led by Katharine Bond, performed musical selections celebrating the holiday season.

City's 2022 Holiday Video

Public Information Officer, Carl Baker, presented the City's 2022 Holiday video wishing the community a wonderful holiday season.

Mayor Barich announced Item I-23 relating to American Youth Soccer Association (AYSO) would be pulled from the Consent Calendar for discussion by the Council.

PUBLIC COMMENT

National Transgender Day of Remembrance - Twenty- eight speakers voiced their support of the Council for approving the proclamation remembering National Transgender Day promoting a safe environment for queer and trans people. They thanked the City for what they considered to be courageous behavior, standing up to hate. They spoke passionately about the need for inclusivity, kindness and gender-affirming care to help everyone feel safe and accepted. They thought the Gays Against Groomers (GAG) organization was misleading the public with their agenda, which they claimed capitalizes on misinformation and fear. Ana McNaughton suggested the Human Relations Commission could play a vital role in the contentious dialogue.

Eighteen speakers of Gays Against Groomers (GAG) expressed anger and disappointment with Council Members for approving a proclamation remembering National Transgender Day and

they claimed that schools and community leaders were trying to indoctrinate children about sexual and gender identity. Various viewpoints were presented passionately, including, protections under the 1st Amendment provide for freedom of speech to everyone and yet, they said that some of the Council spoke harshly to a member of the audience who addressed them at the November 15 meeting. They thought this behavior showed a lack of leadership on the dais. They also wanted schools to protect students and stop promoting lies and ideologies which they said could cause irrevocable harm to our youth.

Health Facts - Isaac Villagrana said health facts should be based on science and not on divisive talk and finger-pointing. He suggested health education be returned to the RUSD curriculum.

AB 1177 - Jonathan Shidler was in favor of forming a commission to review AB 1177 known as the Public Banking Option Act, related to providing basic financial services to all residents, including underbanked households and unemployed residents who often don't have access to traditional and affordable financial services.

Homelessness- Luis Camargo complained about the growing homeless population near Orange and Lugonia. He said he had witnessed blatant drug use and vandalism, and he urged the City to take action to address the problem.

Mayor Barich called for a brief recess at 9:04 P.M. The Council Meeting reconvened at 9:16 P.M.

CONSENT CALENDAR

Minutes

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the regular meeting minutes of November 15, 2022, the special meeting minutes of November 15, 2022, and the special meeting minutes for July 29, 2022.

Vote: 5 - 0 Passed

Student Commissioner Appointments

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously appointed, by roll call vote, Kelechi Amobi, Citrus Valley High School, to serve as the student commissioner on the Human Relations Commission for calendar year 2023; appointed Johnathan Ghazal, Redlands East Valley High School, to serve as the student commissioner on the Traffic and Parking Commission for calendar year 2023; and appointed Nikitas Jos, Redlands High School, to serve as the student commissioner on the Parks and Recreation Advisory Commission for calendar year 2023.

Vote: 5 - 0 Passed

Parks and Recreation Advisory Commission Appointment

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously appointed, by roll call vote, Scott Carlson to serve the remainder of a four-year term on the Parks and Recreation Advisory Commission ending March 1, 2025.

Vote: 5 - 0 Passed

Resolution No. 8411 Remote Teleconference Meetings

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, Resolution No. 8411 authorizing remote teleconference meetings by the City Council and all Boards, Commissions, and Committees of the City in accordance with Assembly Bill 361 (2021) for a period of 30 days.

Vote: 5 - 0 Passed

Ordinance No. 2952 City Procurement Business Preference Program

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously adopted, by roll call vote, Ordinance No. 2952, amending Chapter 2.16 of the Redlands Municipal Code relating to the establishment of a business preference program for City procurement. The ordinance provides for an 8% local preference applicable to businesses operating within the City for procurement of supplies, materials, equipment and specialized goods; and provides for a 2% preference for County of San Bernardino businesses for procurement of supplies, materials, equipment and specialized goods and provides a four-year sunset provision for the increased local preference, with an end-date of December 31, 2026. The existing 1% local preference that generates sales tax dollars, would be reinstated on January 1, 2027.

Vote: 5 - 0 Passed

Resolution No. 8406 City Employee Salary Schedule

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, Resolution No. 8406 establishing a Salary Schedule and Compensation Plan for City Employees and Rescinding Resolution No. 8352. Position changes were made in Municipal Utilities and Engineering, Facilities and Community Services, and Police and Fire Departments. Salary adjustments have also been made to full and part-time positions as necessary to maintain compliance with minimum wage requirements.

Vote: 5 - 0 Passed

RAMME & RCSEA Side Letter Agreements

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the Side Letter Agreements between the City and the Redlands Association of Mid-Management Employees and the Redlands Civilian Safety Employees Association. The agreements provide for a $3,500 retention bonus for its employees. All other provisions of the Memorandum of Understanding between the City and RAMME and RCSEA employees are unaffected by this agreement.

Vote: 5 - 0 Passed

Resolution No. 8423 Time Extension CRA No. 907

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, Resolution No. 8423 to authorize a one-year time extension to the expiration date of Commission Review and Approval No. 907 to construct one commercial office building totaling approximately 7,198 square-feet in size located at 1702 West Park Avenue (APN: 0292-155-22-0000).

Vote: 5 - 0 Passed

Ordinance No. 2951 Self-Storage Facilities

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, Ordinance No. 2951 (Ordinance Text Amendment No. 363 - Second Reading) to amend the Redlands Municipal Code Section 18.96.070 for the Highway Commercial (C-4) zone to permit self-storage facilities as a conditional use subject to a Conditional Use Permit on properties in the C-4 zone that are a minimum of five acres in size.

Vote: 5 - 0 Passed

Utility Customer Management Database Invoice Payment

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, payment of the invoice to Systems & Software, Inc. for support of the enQuesta Utility Database for Customer Management in an amount not-to-exceed $188,415 for annual software maintenance and support.

Vote: 5 - 0 Passed

Grant Acceptance State Library Building Forward

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously accepted, by roll call vote, the California State Library Building Forward Grant in the amount of $445,035 for the Lower Level Revive Project at the A.K. Smiley Public Library; approved an additional appropriation of the same; and adopted Resolution No. 8417 authorizing the City Manager or his designee to execute the Grant Agreement, and all other related documents.

Vote: 5 - 0 Passed

Ordinance No. 2946 Prima Facie Speed Limits

Municipal Utilities and Engineering Director Harris reviewed Ordinance No. 2946, amending Chapter 10.24 of the Redlands Municipal Code to establish prima facie speed limits for various streets throughout the City. He pointed out this was the second reading and on November 15, 2022, a public hearing was conducted to receive public input. In accordance with the CVC, City staff contracted with RK Engineering Group, Inc to perform traffic surveys on various street segments throughout the City. The recommended speed limits identified in the RK summary report titled "2021 Engineering and Traffic Survey" (2021 E&TS) was approved by the Traffic and Parking Commission on March 2, 2022 and was accepted by City Council on June 7, 2022 with adoption of Resolution No. 8348.

This methodology used was founded on the premise that a reasonable speed limit is one that conforms to the actual behavior of the majority of vehicle operators within a street corridor. Speed limits that are established based on this methodology reduce the variance in vehicle speeds. The CAMUTCD allows the City Engineer discretion to adjust the 85th percentile speed up or down by five (5) miles per hour in consideration of physical or environmental conditions that may impact vehicle operator behavior.

As public comment, Chris Deveau, Jim D'Amico, Sarah and Camille strongly urged the Council to reconsider increasing the speed limit on Alta Vista to 40 mph and requested it remain at 35 mph. They pointed out the street included several twists and turns, creating blind spots, and they said that pedestrians and cyclists would be in danger because the street lacked proper sidewalks and shoulders. They thought the methodology was flawed and that residents should have been included in the discussion. Council Members and staff discussed at length state law and considered options that might be available to provide safe environments for all street users. It was agreed that a new survey should be ordered once the state law allowed the City Engineer more discretion to adjust speed limits.

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously adopted, by roll call vote, Ordinance No. 2946, amending Chapter 10.24 of the Redlands Municipal Code to establish prima facie speed limits for various streets throughout the City of Redlands.

Vote: 5 - 0 Passed

Amending Agreement EVC Bike Route Interconnect Project

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the First Amendment to the Professional Services Agreement with KOA Corporation to extend the termination date to December 31, 2023 for the East Valley Corridor Bike Route Interconnect Project.

Vote: 5 - 0 Passed

Amending DIF Study Professional Services Agreement

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the Second Amendment to the Development Impact Fee Study Professional Services Agreement with David Taussig and Associates, Inc. to extend the termination date to December 31, 2023.

Vote: 5 - 0 Passed

Asset Management System Agreement

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the First Amendment to the Professional Services Agreement with Sedaru, Inc. to expand the scope of work to provide an asset management system for street maintenance, and increase the service fee by $65,000.

Vote: 5 - 0 Passed

Rejects Bids Sunset Temporary Reservoir Replacement Project

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, to reject all bids for the Sunset Temporary Reservoir Replacement Project. Staff recommended rejecting all bids and postponing the Project until the Initial Study/Mitigated Negative Declaration (IS/MND) was complete and a California Water Board Division of Drinking Water permit has been issued.

Vote: 5 - 0 Passed

Amending Agreement for Water Treatment Plant Sludge Press Engineering Project

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the First Amendment to the Professional Services Agreement with Dudek for the Hinckley Water Treatment Plant Sludge Press Engineering Project to extend the project completion deadline to December 31, 2023.

Vote: 5 - 0 Passed

Polygraph Services Contract SB County

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the agreement with the San Bernardino County Sheriff's Department to provide pre-employment polygraph examinations for applicants and to authorize the Chief of Police to execute the agreement.

Vote: 5 - 0 Passed

Police Department Vehicle for Specialized Investigations

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the agreement between the City of Redlands and Nationwide Mutual Insurance Company for the Redlands Police Department to utilize a vehicle from Nationwide Mutual Insurance Company in specialized investigations involving GPS technology.

Vote: 5 - 0 Passed

MOU Inland Regional Narcotics Enforcement

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, the Memorandum of Understanding (MOU) with the Inland Regional Narcotics Enforcement Team (IRNET) and authorized the Chief of Police to sign.

Vote: 5 - 0 Passed

Artwork Loan and Display Agreements

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously determined, by roll call vote, that approval of the Artwork Loan and Display Agreements are exempt from environmental review pursuant to Section 15301 of the State's guidelines implementing the California Environmental Quality Act; and approved three Artwork Loan and Display Agreements with Rude Calderon, Chad La Fever, and John and Nicolas Meyer.

Vote: 5 - 0 Passed

Furniture Purchase Orders

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, cooperative purchase orders with Trendway Furniture in an amount not to exceed $45,273 and with Global Industries in an amount not to exceed $112,421 for furnishings at the State Street City Hall facility located at 300 E. State Street; approved a sole source purchase order with Consolidated Office Systems in an amount not to exceed $26,176 for installation of the furnishing; and approved an additional appropriation in the amount of $183,870.

Vote: 5 - 0 Passed

AYSO Reimbursement of Funds for Redlands Sports Park Construction

Assistant City Manager Boatman provided background of the proposed disbursement of $207,768 to the American Youth Soccer Association ("AYSO") as pro-rated reimbursement of funds received in connection with the City's construction of the Redlands Sports Park. Staff recommended to move forward with the disbursement of funds. AYSO has been a valued partner of the City since 2008 but inflation for maintenance costs have significantly increased yet AYSO's maintenance contribution has only increased marginally and it now pays far less than any other youth sports organization. City Manager Duggan reiterated the City would also work with AYSO to grant them a permit so they can continue the program through the next year and the City would continue a dialogue with them to negotiate a new contract.

As public comment, Norma Mendez, Michael Reynaga, Denise Key Igbinosun and two audience members agreed AYSO was a great program that served many young people, but they pointed out it was not the only program, and they urged the Council to promote an equitable plan for sharing the fields, allowing more groups to participate. In support of AYSO, Nicole Madsen and Eric Holliday said that AYSO stood for inclusivity, with a mission that promotes every player must play, and they added that Region 50 offered even more opportunities to participate with their VIP (special needs) program.

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously approved, by roll call vote, a disbursement of $207,768 to the American Youth Soccer Association (AYSO) as pro-rated reimbursement of funds received in connection with the City's construction of the Redlands Sports Park; and approved an additional appropriation from the Parks Development Fund.

Vote: 5 - 0 Passed

COMMUNICATIONS

National Community Survey

City Manager Duggan requested the presentation of survey results be postponed to a future meeting and Council Members agreed to table this item until the January 17, 2023 City Council meeting.

Selection Process of Mayor and Mayor Pro Tem

Council Member Davis opened the discussion relating to the process for selecting the Mayor and Mayor Pro Tempore, and their respective terms of office. She proposed a 1-year seniority-based rotation with the most senior Council Member becoming Mayor, and the 2nd most senior serving as Mayor Pro Tem. At the end of the 1-year term, the Mayor Pro Tem would then rotate into the role of Mayor. The proposal also included an "opt-out" clause allowing a Council Member to decline serving as mayor.

Mayor Pro Tem Tejeda proposed a modification to the current code, stipulating a Council Member must agendize their interest in being selected as Mayor or Mayor Pro Tem by their colleagues in

the second regularly scheduled City Council meeting in November coinciding with a statewide general election. Council Members who have declared their interest may be selected by majority vote of their colleagues and serve a term reflecting the two-year statewide election cycle. The proposal allowed for the Mayor and/or Mayor Pro Tem to resign from serving at anytime and the Mayor and/or Mayor Pro Tem may be removed from their position by a majority vote of their colleagues. He also suggested an option to place the question before the voters to create the position of Mayor as elected at-large by the electors once every two years.

Each Council Member offered their thoughts and perspectives regarding the proposals before them. Council Members Guzman-Lowery and Davis pointed out the district boundary maps would need to be redrawn if the voters determined the position of Mayor should be elected at-large and this could be costly, time-consuming and confusing. Council Member Gallagher was comfortable with the present method of selection, adding the system was effective and had withstood the test of time. As public comment, Valerie Roach, Jennifer Kim, Samantha Trad and Karen Brandon supported the annual rotation method as they said it provided more transparency and diversity and reduced bias. They pointed to the survey results showing the various surrounding cities that have already instituted an annual rotation system. Ana McNaughton liked the recommendation to require Council Members to announce their interest in being selected as Mayor or Mayor Pro Tem in advance, but overall, she thought the item was being rushed and she preferred the Council take more time to thoroughly review and consider the matter.

On motion of Mayor Pro Tem Tejeda, seconded by Council Member Gallagher, the City Council, by roll-call vote, failed to direct staff to bring forth proposed changes to the City's Municipal Code for the selection of the Mayor and Mayor Pro Tem as proposed by Mayor Pro Tem Tejeda.

Vote: 2-3 Failed
NAY: Mayor Barich, Council Member Davis, Council Member Guzman-Lowery

On motion of Council Member Denise Davis, seconded by Council Member Jenna Guzman-Lowery, the City Council approved, by roll call vote, to direct staff to bring forth proposed changes to the City's Municipal Code for the selection of the Mayor and Mayor Pro Tem as proposed by Council Member Davis, providing for a 1-year seniority-based rotation with the most senior Council Member becoming Mayor, and the 2nd most senior serving as Mayor Pro Tem. At the end of the 1-year term, the Mayor Pro Tem would then rotate into the role of Mayor.

Vote: 3 - 2 Passed

NAY: Mayor Pro Tempore Eddie Tejeda
Council Member Mick Gallagher

PUBLIC HEARINGS

Ordinance No. 2948 Fire Code Update

Mayor Barich declared the meeting open as a public hearing and called on Fire Chief Sessler for review of Ordinance No. 2948 amending Chapter 15.20 of the Redlands Municipal Code for the adoption of the 2022 California Fire Code, which incorporates by reference the 2021 International Code, with necessary California amendments. With no further discussion, Mayor Barich closed the public hearing.

On motion of Council Member Jenna Guzman-Lowery, seconded by Council Member Mick Gallagher, the City Council unanimously adopted, by roll call vote, Ordinance No. 2948 amending Chapter 15.20 of the Redlands Municipal Code for the adoption of the 2022 California Fire Code, which incorporates by reference the 2021 International Code, with necessary California amendments.

Vote: 5 - 0 Passed

NEW BUSINESS

Ordinance No. 2940 Official City Seal and City Logos

Public Information Officer Carl Baker discussed the City Seal and City Logo and reviewed Ordinance No. 2940, proposing to amend Chapter 1.08 of the Municipal Code regarding Custody and Use of the Official City Seal and City Logos, Badges and Patches. In early 2022, Mayor Paul Barich commissioned Pennington Designs to create a new logo for the City. In June 2022, the City Council adopted the new city logo and following the adoption of the logo, Mayor Barich donated the logo and all graphics, proofs, drafts and other items associated with the logo to the City. All intellectual property rights, including any rights to do any act necessary to secure copyright or trademark registration, renewals, reissues, and extensions are the property of the City. The ordinance will provide for adopted policies and detailed regulations for the use of the Official City Seal or any other City logos, badges or patches.

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Jenna Guzman-Lowery, the City Council unanimously introduced, by roll call vote, Ordinance No. 2940 amending Chapter 1.08 of the Municipal Code regarding custody and use of the Official City Seal and City Logos, Badges and Patches and determined that the Ordinance is exempt from environmental review under the California Environmental Quality Act pursuant to Section 15061(b)(3) of the State's Guidelines.

Vote: 5 - 0 Passed

Contract Award 2022 Citywide Sidewalk and ADA Ramp Replacement

Municipal Utilities and Engineering Director Harris presented a Public Work Construction Contract with Tryco General Engineering for the 2022 Citywide Sidewalk and ADA Ramp Replacement Project for an amount not-to-exceed $1,000,000. The Project will replace approximately 3 miles of lifted and broken sidewalks and forty-five ADA curb ramps in various locations throughout the City.

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Jenna Guzman-Lowery, the City Council unanimously determined, by roll call vote, that approval of the 2022 Citywide Sidewalk and ADA Ramp Replacement Project is exempt from environmental review in accordance with Section 15301(c) of the State's Guidelines implementing the California Environmental Quality Act; approved the 2022 Citywide Sidewalk and ADA Ramp Replacement Project plans and specifications, and awarded the Public Work Construction Contract to Tryco General Engineering for an amount not to-exceed $1,000,000.

Vote: 5 - 0 Passed

Wellhead Perchlorate Treatment Project Agreement

Municipal Utilities and Engineering Director Harris detailed the Professional Services Agreement with Dudek for the Wellhead Perchlorate Treatment Project for an amount not to exceed $512,170. Perchlorates are commercially produced salts that are primarily used as oxidizers for pyrotechnic devices and are commonly used in rocket fuels and fertilizers and trace amounts of perchlorate persist in the Bunker Hill Basin and have been detected at four City groundwater well sites. In preparation of the anticipated perchlorate MCL reduction threshold, staff developed a scope of work to engineer a treatment solution at the City's groundwater well sites.

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Jenna Guzman-Lowery, the City Council unanimously determined, by roll call vote, that the Wellhead Perchlorate Treatment Project is exempt from environmental review pursuant to Section 15301(b) of the California Environmental Quality Act; approved the Professional Services Agreement with Dudek for the Wellhead Perchlorate Treatment Project for an amount not-to-exceed $512,170.

Vote: 5 - 0 Passed

Redlands Bowl Re-Stucco Project Contract Award

Assistant City Manager Boatman introduced the need for the Public Work Construction Contract with K.C. Restoration Co., Inc. for an amount not-to-exceed $258,188.97 for the Redlands Bowl Re-Stucco Project. He pointed out an arithmetic error was discovered in the bid proposal, showing bid Item #3 and #4 were not correctly multiplied. The total bid amount was corrected based on the given unit price, which did not affect the ranking. He announced the work is in preparation for the 100-year anniversary of the Bowl next year.

On motion of Mayor Pro Tempore Eddie Tejeda, seconded by Council Member Mick Gallagher, the City Council unanimously determined, by roll call vote, that approval of the Public Work Construction Contract with K.C. Restoration Co., Inc. for the Redlands Bowl Re-Stucco Project is exempt from environmental review pursuant to Section 15301 of the State's guidelines implementing the California Environmental Quality Act; approved the additional appropriation of $284,007.87 as detailed in the staff report; agreed to waive the minor error in the bid by K.C. Restoration Co., Inc.; and approved an award of the Public Work Construction Contract in the amount of $258,188.97 to K.C. Restoration Co., Inc. for the Redlands Bowl Re-Stucco Project.

Vote: 5 - 0 Passed

Arts and Culture Master Plan

Assistant City Manager Boatman offered background related to the recommendation by the Cultural Arts Commission to develop an Arts and Culture Master Plan. On September 13, 2021, the Commission recommended the City Council direct staff to prepare a request for proposal for the development of an Arts and Culture Master Plan and designate funding in the amount of $100,000. The Commission views the Plan as a necessary tool to ensure that art is promoted and utilized in a cohesive and intentional manner throughout the community. He reviewed the AEP5

Study which documented the economic contributions of the arts in 341 communities and regions across the country, and the economic impact for Redlands from nonprofit arts and culture organizations and their audiences was found to support 416 full-time equivalent jobs, with over $609,000 in revenue generated for local government and over $3,390,000 in event-related expenditures annually.

As public comment, Tristan Clark stated he very much appreciated the new paintings on the local bus stop benches. Council Members Davis and Guzman-Lowery enthusiastically supported exploring this further.

On motion of Council Member Jenna Guzman-Lowery, seconded by Council Member Denise Davis, the City Council unanimously agreed, by roll call vote, to direct staff to advertise a request for proposal for the development of an Arts and Culture Master Plan.

Vote: 5 - 0 Passed

COUNCIL MEMBER ANNOUNCEMENTS AND ACTIVITIES

Mayor Barich announced the Christmas parade was a great success and he thanked the RPOA for hosting two separate Thanksgiving dinners recently.

ADJOURNMENT

There being no further action required the meeting adjourned at 10:52 P.M. The next regular meeting of the City of Redlands City Council will be held on December 20, 2022.

SUCCESSOR AGENCY OF THE FORMER REDEVELOPMENT AGENCY OF THE CITY OF REDLANDS

Chairman Barich called the meeting to order and offered anyone present the opportunity to address the Board on any subject not already on the agenda, within the jurisdiction of the Successor Agency.

PUBLIC COMMENT

None forthcoming

Minutes

On motion of Vice Chair Tejeda, seconded by Board Member Gallagher, the minutes of the regular meeting of November 1, 2022 were unanimously approved.

Vote: 5 - 0 Passed

ADJOURNMENT

There being no further business, the Successor Agency Board of Directors' meeting was adjourned at 10:53 P.M. The next regular meeting of the Agency will be held on February 7, 2023.

City Council Meeting **J. 2.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve the Local Appointments List for 2023 in accordance with Government Code Section 54972 (Mayor Barich)

MOTION:

I move to approve the Local Appointments List for 2023 as required by Government Code Section 54972.

DISCUSSION:

In accordance with Government Code Section 54972, each legislative body is required to prepare a list of all regular and ongoing commissions and boards which are appointed by the City Council. The list is to include all appointive terms which will expire during the next calendar year with the name of the incumbent appointee, the date of appointment, the date the term expires and the necessary qualifications for the position. To comply with Government Code Section 54972, staff has prepared the attached local appointments list for calendar year 2023.

SUBMITTED BY:
Janice McConnell, Assistant City Manager

REVIEWED BY:
Charles M. Duggan, Jr., City Manager

PREPARED BY:
Jennifer Macias, Management Analyst

Attachments

Local Appointments List 2023

CITY OF REDLANDS
BOARDS, COMMISSIONS AND
COMMITTEES LOCAL APPOINTMENTS LIST
FOR 2023
(Govt. Code § 54972)

AIRPORT ADVISORY BOARD

Board members shall serve without compensation and shall be residents of the City and neither officers nor employees thereof.

Name of Incumbent	Appt. Date	Date Term Expires
Jason Golembeski	11/02/2021	05/01/2023

CITRUS PRESERVATION COMMISSION

Commission members shall serve without compensation and shall be neither officers nor employees of the City.

There are no terms expiring on this commission in 2023.

CULTURAL ARTS COMMISSION

Commission members shall serve without compensation and shall be residents of the City and neither officers nor employees thereof.

Name of Incumbent	Appt. Date	Date Term Expires
Danielle Guidici Wallis	12/21/2021	01/06/2023

HISTORIC AND SCENIC PRESERVATION COMMISSION

Commission members shall serve without compensation and shall be residents of the City and neither officers nor employees thereof.

Name of Incumbent	Appt. Date	Date Term Expires
Kurt Heidelberg	05/05/2015	01/18/2023
Dr. Lauren Weiss Bricker	03/05/2019	01/18/2023
Steven Holm	03/05/2019	01/18/2023

HUMAN RELATIONS COMMISSION

Commission members shall serve without compensation and shall be residents of the City of Redlands and neither officers nor employees thereof. The student member of the Commission shall serve without compensation and shall be from the junior class of a Redlands Unified School District High School at the time of appointment to the Commission.

Name of Incumbent	Appt. Date	Date Term Expires
Kenneth Ford	03/05/2019	03/05/2023
Student Commissioner	01/01/2023	12/31/2023

LIBRARY BOARD

Name of Incumbent	Appt. Date	Date Term Expires
William Hatfield	02/19/1997	01/01/2023
Kate Pretorius	09/06/2016	01/01/2023

MUNICIPAL UTILITIES/PUBLIC WORKS COMMISSION
Commission members shall serve without compensation and shall be residents of the City of Redlands and neither officers nor employees thereof.

There are no terms expiring on this commission in 2023.

MEASURE T OVERSIGHT COMMITTEE
Committee members shall serve without compensation, shall each be a resident of the city with the exception of the two (2) members representing the city's employee bargaining units, and shall be neither a member of any other standing commission, board or committee of the city nor an employee thereof.

Name of Incumbent	Appt. Date	Date Term Expires
Steven M. Chapman	04/20/2021	04/20/2023
Shelli Stockton	04/20/2021	04/20/2023
Joseph Valdivia	04/21/2022	04/21/2023
Mike Foster	04/21/2022	04/21/2023

PARKS & RECREATION COMMISSION
Commission members shall serve without compensation and shall be residents of the City of Redlands and neither officers nor employees thereof. The student member of the Commission shall serve without compensation and shall be from the junior class of a Redlands Unified School District High School at the time of appointment to the Commission.

Name of Incumbent	Appt. Date	Date Term Expires
Douglas Gonzales	11/05/2019	03/01/2023
Adam Hebden	11/05/2019	03/01/2023
Earl Ryan Johnson	05/05/2015	03/01/2023
Student Commissioner	01/01/2023	12/31/2023

PLANNING COMMISSION
The Commission members shall be residents of the City of Redlands and neither officers nor employees thereof.

Name of Incumbent	Appt. Date	Date Term Expires
Joe Richardson	02/19/2019	01/06/2023
Mario Saucedo	02/19/2019	01/06/2023

STREET TREE COMMITTEE

The Committee members shall serve without compensation and shall be residents of the City of Redlands and neither officers nor employees thereof.

Name of Incumbent	Appt. Date	Date Term Expires
Lorraine Enriquez	02/19/2019	02/16/2023
Janet Ward	11/20/2012	02/16/2023
Augustin Ortega	09/03/2019	02/16/2023
Andrew Hoder	01/06/2015	02/16/2023

TRAFFIC AND PARKING COMMISSION

Members of the Commission shall serve without compensation and shall be residents of the City of Redlands and neither officers nor employees thereof. The student member of the Commission shall serve without compensation and shall be from the junior class of a Redlands Unified School District High School at the time of appointment to the Commission.

Name of Incumbent	Appt. Date	Date Term Expires
Student Commissioner	01/01/2023	12/31/2023

City Council Meeting **J. 3.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve recommendation for appointments to the Planning Commission (Mayor Barich)

MOTION:

I move to appoint **Marc Shaw** and **Rich Smith** to each serve four-year terms on the Planning Commission beginning January 6, 2023 ending January 6, 2027.

RECOMMENDATION:

Pursuant to the Redlands Municipal Code, appointments to this commission are made by the Mayor. It is recommended by Mayor Barich that the City Council consider the appointments of Marc Shaw and Rich Smith to the Planning Commission.

DISCUSSION:

The terms of Commissioners Joe Richardson and Mario Saucedo will expire on January 6, 2023. Commissioners Richardson and Saucedo are not seeking reappointment. A public notice inviting interested residents to submit an application for an appointment to the Planning Commission was issued in October. The public notice was concurrently aired on Redlands TV and posted on the community bulletin board at the A. K. Smiley Public Library. The local newspapers also received distribution of the public notice. Seven applications were received, and three applications from a previous notice were included.

The Planning Commission consists of seven members as follows:

- Joe Richardson - Term Expires 1.6.23
- Mario Saucedo - Term Expires 1.6.23
- Rosemarie Gonzales

- Steven Frasher
- Matthew Endsley
- Maryn Wells
- Karah Shaw

ALTERNATIVES:

The City Council may choose not to support the recommendation and direct staff to seek further applications for consideration.

SUBMITTED BY:
Janice McConnell, Assistant City Manager

REVIEWED BY:
Charles M. Duggan, Jr., City Manager

PREPARED BY:
Jennifer Macias, Management Analyst

Attachments

Public Notice

Planning Commission Applications

City of

REDLANDS

Incorporated 1888
35 Cajon Street, Redlands, CA 92373
909-798-7510
www.ci.redlands.ca.us

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that the City Council of the City of Redlands encourages residents to apply for a position on the following commission:

PLANNING COMMISSION

The Planning Commission prepares a comprehensive long term general plan for the physical development of the City and makes recommendations to the City Council relating to the maintenance of the General Plan, zoning administration, environmental assessments, site plan and architectural review, subdivision planning, sign, parking and landscaping regulations, housing and historic preservation.

The Planning Commission meets on the second and fourth Tuesday of each month at 4:00 p.m. Residents interested in applying for the non-salaried position on this commission may request application forms from the Office of the City Manager, City Hall, 35 Cajon Street, Suite 200, or by phone 798-7510, or from the City's website at www.cityofredlands.org

Deadline for filing applications is October 21, 2022.

Jennifer Macias, Management Analyst
Office of the City Manager
City of Redlands, California

10/07/2022

City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

OCT 18 2022

(Please note that this form is a public record that may be subject to disclosure upon request.)

Received

COMMISSION\BOARD APPLIED FOR

Planning Commission

Name Byran Whitehead

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation Student at University of Redlands/Camp Counselor at YMCA Camp Oakes

Reasons for desiring to serve – relevant experience and qualifications:

As a student who currently is a resident of Redlands and intends to continue being a resident I can provide the experience of young professionals.

Residential planning needs to serve not only middle class and lower class communities but also young professionals in order to attract business and employment oppurtunities.

I will also add that alongside growth we must balance Redlands' rich architectural culture especially in more historical areas.

Qualifications: University of Redlands Fall 2021 and Spring 2022 Dean's List with a 4.0 GPA. Political Science and English Major.

Signature Byron Whitehead **Date** 10/15/2022

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Graeme Auton
Professor
Telephone [redacted]

(2) Fredy Diaz
Employer
Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address Verified

City Manager's O...

CITY OF REDLANDS
COMMISSION APPLICATION FORM

OCT 18 2022

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR Received

Planning Commission and Traffic and Parking Commission

Name Dalton Nowak

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation DC Area Supervisor

Reasons for desiring to serve – relevant experience and qualifications:

I love the city of Redlands and I want to be more involved with the community. What qualifies me is that I have lead and made impacts on committees such as safety, Instructional, and engagement. I also have strong communicaton skills + presentation

Signature [signature] **Date** 10/18/2022

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Sharean Penn

DC Operations Manager

worked with her on several different committees at work for (1½ years)

Telephone [redacted]

(2) Abraham Garcia

Assistant General Manager

I have worked w/him for +2 years

Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

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City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

OCT 21 2022

Received

COMMISSION\BOARD APPLIED FOR

Planning Commission

Name Dan Jimenez

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation High SchoolTeacher

Reasons for desiring to serve – relevant experience and qualifications:

I have been a resident of Redlands since 2008 and am interested in serving the community, building community connections, and developing leadership skills. I have a B.S. in Public Health from CSUSB and an M.A. in Teaching and Learning from the University of Redlands.

Signature _____ **Date** 10/21/22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Dorie Stratton

Telephone [redacted]

(2) Kim Clark

Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

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✓ address Verified

Scanned with CamScanner

City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request)

OCT 21 2022

Received

COMMISSION\BOARD APPLIED FOR
Planning Commission

Name Jason Doyle

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation University Administrator

Reasons for desiring to serve – relevant experience and qualifications:

I would be honored to serve on the Planning Commission because this is an exciting time in Redlands. The forthcoming transit villages are a great opportunity for Redlands to take advantage of the new rail line. It also is just as important to preserve the essence and history of other neighborhoods in our city. In my career, I have had significant experience working with developers of high-quality residential and mixed-use projects in California. Through this work, I am familiar with the development process in California and the need for community participation in current and advance planning. I hold a bachelor's degree in environmental studies and MBA from the University of Redlands. I look forward to being able to serve my community in this way.

Signature [signature] **Date** 10/20/2022

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Mike Amaya
[redacted]

Telephone [redacted]

(2) Roger Cellini
University of Redlands
[redacted]

Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

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✓ address Verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Planning Commision

Name Joseph Bryson

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation Healthcare

Reasons for desiring to serve – relevant experience and qualifications:

Passionate about Public Health and policies that support a healhty lifestyle in the community

Bachelors in Public Health and Masters in Health Administration

Have worked 8 years in preventive health and quality healthcare

Well read in publications around city planning and community health

Signature Joseph Bryson Digitally signed by Joseph Bryson Date: 2021.11.08 12:19:39 -08'00' **Date** 11/8/2021

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Jack Urquhart

Management Anaylst for Springville City

Telephone [redacted]

(2) Jen Holtkamp

Vice Chair Parks and Recreation Commission City of Chino Hills

Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

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✓ address verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

City Manager's Office
OCT 21 2022
Received

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Planning Commission

Name Louisa Amis

Address [redacted]

Telephone (Work) ----- (Cell / Home) [redacted]

Email [redacted]

Occupation Apartment Manager

Reasons for desiring to serve – relevant experience and qualifications:

I have a strong interest in local government. I have served on LAFCO (Local Agency Formation Commission). Lafco has a planning function,a regulatory function and also evaluates the effectiveness and efficiency of cities. It can propose changes as seen as needed. I served as a juror on the Civil Grand Jury of San Bernardino County. In my past employment at Loma Linda University; I worked with and managed a very diverse group of individuals

Signature Louisa Amis **Date** 10-21-22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Willie Davis, PhD
Professor
Loma Linda University
Telephone [redacted]

(2) Eileen Brantley, PhD
Researcher and Professor
Loma Linda University
Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

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✓ address verified

City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

OCT 18 2022

Received

COMMISSION\BOARD APPLIED FOR

Planning Commission

Name Marc Shaw

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation State of California

Reasons for desiring to serve – relevant experience and qualifications:

See attached...

Signature Marc Sh **Date** 10/18/2022

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Carole Beswick

[redacted]

Redlands, CA 92374

Telephone [redacted]

(2) Scott Welsh

[redacted]

Redlands, CA 92373

Telephone [redacted]

Return Application to: Office of the City Council, C/O City Manager's Office, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

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✓ address verified

Reasons for desiring to serve – relevant experience and qualifications:

As a resident of the Inland Empire since 1980, I have seen tremendous growth within our region. I have witnessed areas of responsible growth and others where there was a lack of vision, which ultimately led to communities and infrastructure that were substandard. As we move forward and enjoy improved economic stability and growth, it is imperative that the City closely evaluate future development to ensure it is aligned with the vision of our community and in the best interest of our residents and business partners. As a member of the Planning Commission, I feel I will be able to positively contribute to the future of our city.

In order to be successful in any type of public environment, the ability to communicate, interact with others and establish meaningful and trust-based relationships is of the utmost importance. I have refined these skills through my years of work in the public sector, particularly my twenty eight years with the State of California in a wide variety of roles, and through my formal education at St. Mary's College of Moraga (BA-Management) and the Naval Postgraduate School (MA-Security Studies).

Volunteerism has been a part of who I am since I was a Boy Scout growing up in Redlands. It prompted me to join the Redlands Police Department Explorer Program and CHP Explorer Program. While living in Highland, I served for five years as the Chairman of the East Highlands Ranch Covenants Committee and three years on the City of Highland Planning Commission. Since 2015, I have served as President of the Redlands Bicycle Classic Organizing Committee. Most recently, I have served on the Citrus Preservation Commission.

My professional career experience provides a unique background that will assist me in my role on this Commission. Having spent sixteen years in a management capacity, I have been closely involved in traffic management and urban planning, including the evaluation of construction projects, residential housing proposals and special event plans. When coupled with my years of service on the City of Highland Planning Commission, I am confident I have the experience and knowledge that will assist me in making sound decisions as a member of the Planning Commission and I look forward to the opportunity to continue serving my hometown in this role.

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Planning Commision

Name Mark Triassi

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation Digital Media - Albertsons Companies

Reasons for desiring to serve – relevant experience and qualifications:

As a new homeowner in Redlands I have a vested interest in the controlled growth in the Redlands. We were drawn here by the charm and want to ensure the town continues is growth as it maintain its attractiveness to bring families here.

Signature _____ **Date** 2/28/22

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Idilio Sanchez
Planning commisioner
Fontana
Telephone [redacted]

(2) Harmoni Morales
Planning commisioner
San Bernardino
Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

✓address verified

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR
City Planning

Name Nancy Huffaker

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation retired teacher/small business owner

Reasons for desiring to serve – relevant experience and qualifications:

Signature _____ **Date** _____

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) _____ (2) _____

Telephone _____ Telephone _____

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address verified

City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

OCT 19 2022

Received

COMMISSION\BOARD APPLIED FOR

Planning Commisson

Name Rich Smith

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation Labor Organizer / Business Agent

Reasons for desiring to serve – relevant experience and qualifications:

I am a long time resident of Redlands.
I was a 20+ year employee with the city until 2019
I am involved in my community and previously served
on the Utilty Advisory Committee
I currently serve on the GRC for the Chamber of Commerce.

Signature _____ **Date** 10/19/2022

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Toni Momberger

Telephon [redacted]

(2) Bonnie Klatt

Telephon [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address Verified

City Council Meeting **J. 4.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve recommendation for reappointments to the Historic and Scenic Preservation Commission (Mayor Pro Tem Tejeda)

MOTION:

I move to reappoint Kurt Heidelberg, Dr. Lauren Weiss Bricker, and Steven Holm to each serve four-year terms on the Historic and Scenic Preservation Commission ending January 18, 2027.

RECOMMENDATION:

It is recommended by Mayor Barich and Mayor Pro Tem Tejeda that the City Council consider these appointments to the Historic and Scenic Preservation Commission. Pursuant to the Redlands Municipal Code, appointments are made by the Mayor and approved by the City Council. However, Mayor Barich has expressed his desire to rotate recommendations for commission/board appointments among the City Council Members; therefore, Mayor Pro Tem Tejeda has been delegated authority by Mayor Barich to make the recommendation for this appointment.

DISCUSSION:

The terms of Commissioners Kurt Heidelberg, Dr. Lauren Weiss Bricker, and Steven Holm on the Historic and Scenic Preservation Commission expire on January 18, 2023. Commissioners Heidelberg, Weiss Bricker, and Holm are seeking reappointment and are each eligible to serve an additional term.
A public notice requesting interested residents to submit an application for the Historic and Scenic Preservation Commission was issued in October 2022. In addition, the public notice was concurrently aired on Redlands TV and posted at the community bulletin board at the A. K. Smiley Public Library. The local newspapers also received distribution of the public notice. The City received 3 applications from residents interested in serving on this commission.

The Historic and Scenic Preservation Commission consists of seven members as follows:

- Dr. Rose-Marie Raumin
- Greg Weissman
- Justine Guidry
- Kurt Heidelberg (1.18.23)
- Nathan Gonzales (permanent member)
- Dr. Lauren Weiss Bricker (1.18.23)
- Steven Holm (1.18.23)

ALTERNATIVES:

The City Council may choose not to support the recommendation and direct staff to seek further applications for consideration.

SUBMITTED BY:
Janice McConnell, Assistant City Manager

REVIEWED BY:
Charles M. Duggan Jr., City Manager
Yvette M. Albich Garcia, City Attorney

PREPARED BY:
Jennifer Macias, Management Analyst

Attachments

Historic & Scenic Preservation Applications

Public Notice

City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request)

OCT 21 2022

Received

COMMISSION\BOARD APPLIED FOR

Historic and Scenic Preservation Commission

Name Anna Marie Nigg

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation Realtor

Reasons for desiring to serve – relevant experience and qualifications:

My grandparents arrived in Redlands in the late 1960's to visit a friend and never left due

As a local realtor, I am always staying informed on the changes being made to Redlands

and while I encourage growth, I am also aware the importance of preserving our city's his

I have always had a passion for preserving the authenticity of this beautiful city.

Signature _____ **Date** 10/21/22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Joseph Shaw
Co-Owner, Rita Shaw Broker & Ass
Telephone [redacted]

(2) Philip Mielke
Product Manager, ESRI
Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

Address Verified

My grandparents arrived in Redlands in the late 1960's to visit a friend and never left due to its beauty. As a local realtor, I am always staying informed on the changes being made to Redlands, and while I encourage growth, I am also aware the importance of preserving our city's history as well. I have always had a passion for preserving the authenticity of this beautiful city.

City Manager's Office

OCT 18 2022

Received

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Historic and Scenic Preservation Commission

Name Byran Whitehead

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation Student at University of Redlands/Camp Counselor at YMCA Camp Oakes

Reasons for desiring to serve – relevant experience and qualifications:

As a 3rd generation Redlands resident, I believe it is my duty not only to maintain the architectural and scenic history of Redlands, but to also educate about and make that known

I also believe that to preserve such architecture Redlands can be actively seeking revivalist construction and restoration firms to stimulate growth while maintaining history.

I will also add that alongside growth we must balance Redlands' rich architectural culture especially in more historical areas.

Qualifications: University of Redlands Fall 2021 and Spring 2022 Dean's List with a 4.0 GPA. Political Science and English Major.

Signature Byran Whitehead **Date** 10/15/2022

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Graeme Auton

Professor

Telephone [redacted]

(2) Fredy Diaz

Employer

Telephone [redacted]

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✓ address Verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

City Manager's Office

(Please note that this form is a public record that may be subject to disclosure upon request.)

OCT 21 2022

Received

COMMISSION\BOARD APPLIED FOR

Historic Preservation and Scenic Commission

Name Louisa Amis

Address [redacted]

Telephone (Work) ----- (Cell / Home) [redacted]

Email [redacted]

Occupation Apartment Manager

Reasons for desiring to serve – relevant experience and qualifications:

I am a member of the Redlands Conservancy and the Historical Society. I was a history major in college and have maintained my interest in the subject. I have civic service experience, serving on LAFCO (Local Agency Formation Commission) and on the Civil Grand Jury for San Bernardino County. In my previous employment at Loma Linda University, I worked with and managed a very diverse group.

Signature Louisa Amis **Date** 10-21-22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Willie Davis, PhD
Professor
Loma Linda University
Telephone [redacted]

(2) Eileen Brantley, PhD
Researcher and Professor
Loma Linda University
Telephone [redacted]

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✓ address verified

City of
REDLANDS
Incorporated 1888
35 Cajon Street, Redlands, CA 92373
909-798-7510
www.ci.redlands.ca.us

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that the City Council of the City of Redlands encourages residents to apply for a position on the following commission:

HISTORIC AND SCENIC PRESERVATION COMMISSION

The Historic and Scenic Preservation Commission promotes public interest in and understanding of historical and scenic properties and their preservation.

The Historic and Scenic Preservation Commission meets on the first Thursday of each month at 6:00 p.m. Residents interested in applying for the non-salaried position on this commission may request application forms from the City Manager's Office, City Hall, 35 Cajon Street, Suite 200 or by phone at 798-7510, or from the City's website www.cityofredlands.org

Applications will be accepted until October 21, 2022.

Jennifer Macias, Management Analyst
Office of the City Manager
City of Redlands, California

10/07/2022

City Council Meeting **J. 5.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve recommendation for an appointment to the Traffic and Parking Commission (Council Member Davis)

MOTION:

I move to appoint Kevin Morningstar and Bill Waddell to each serve a four-year term on the Traffic and Parking Commission ending December 20, 2026.

RECOMMENDATION:

It is recommended by Mayor Barich and Council Member Davis that the City Council consider these appointments to the Traffic and Parking Commission. Pursuant to the Redlands Municipal Code, appointments to this commission are made by the Mayor and approved by the City Council. However, Mayor Barich has expressed his desire to rotate recommendations for commission/board appointments among the City Council Members; therefore, Council Member Davis has been delegated authority by Mayor Barich to make the recommendation for these appointments.

DISCUSSION:

The terms of Commissioners Matt Malouf and Curtis Dison on the Traffic and Parking Commission expire on December 20, 2022. Commissioners Malouf and Dison are not seeking reappointment. A public notice requesting interested residents to submit an application for the Traffic and Parking Commission was issued in October 2022. In addition, the public notices were concurrently aired on Redlands TV and posted at the community bulletin board at the A. K. Smiley Public Library. The local newspapers also received distribution of the public notice. Four applications were received in response. One application from a previous posting was included.

The Traffic and Parking Commission consists of six members as follows:

- Curtis Dison - Term Expires 12.20.22
- Anna Jaiswal
- Matt Malouf - Term Expires 12.20.22
- Eric Shamp
- Marc Tran
- Cassie MacDuff

ALTERNATIVE:

The City Council may choose not to support the recommendation and direct staff to seek further applications for consideration.

SUBMITTED BY:
Janice McConnell, Assistant City Manager

REVIEWED BY:
Charles M. Duggan, Jr., City Manager

PREPARED BY:
Jennifer Macias

Attachments

Traffic & parking Commission Applications
Public notice

CITY OF REDLANDS
COMMISSION APPLICATION FORM

City Manager's Office

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR
Traffic and Parking Commision

OCT 17 2022

Received

Bill Waddell

Name _____

Address [redacted]

N/A

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Retired Police Officer (City of Fontana)

Occupation _____

Reasons for desiring to serve – relevant experience and qualifications:
Having served as a police officer with the City of Fontana for 25 years, I value my city, community, and its safety. During my time as a police officer, I served as the traffic team's Corporal for eight years and valued the work we completed as a department to give back to our city, and provide traffic safety for our community. Redlands has been my home for 20 years and I hope my experience can contribute to keeping the city safe.

Signature _____ **Date** 10-17-22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

Jim Sandoval	Amanda Losch
(1) _____	(2) _____
_____	_____
_____ [redacted]	_____ [redacted]
Telephone _____	Telephone _____

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address verified

City Manager's O...

CITY OF REDLANDS
COMMISSION APPLICATION FORM

OCT 18 2022

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR Received

Planning Commission and Traffic and Parking Commission

Name Dalton Nowak

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation DC Area Supervisor

Reasons for desiring to serve – relevant experience and qualifications:

I love the city of Redlands and I want to be more involved with the community. What qualifies me is that I have lead and made impacts on committees such as safety, Instructional, and engagement. I also have strong communicaton skills + presentation

Signature [signature] **Date** 10/18/2022

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Sharean Penn

DC Operations Manager

worked with her on several different committees at work for (1½ years)

Telephone [redacted]

(2) Abraham Garcia

Assistant General Manager

I have worked w/him for +2 years

Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

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City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

OCT 20 2022

Received

COMMISSION\BOARD APPLIED FOR

Traffic & Parking Commission

Name Kevin Morningstar

Address [redacted]

Telephone (Work) n/a (Cell / Home) [redacted]

Email [redacted]

Occupation Retired - Former Chief Information Office with the California State University

Reasons for desiring to serve – relevant experience and qualifications:

* Looking to serve community in retirement; interest in transportation issues.

* Lifetime area resident; 24 year city resident; two terms on the city's Utility Advisory Committee.

* Retired; 35 year career in Information Technology; 16 years working in municipal utilities.

* Educated in Redlands schools; MBA from the University of Redlands.

* Current volunteer service as President of the Board of the San Diego Futures Foundation.

Signature [signature] **Date** 10/20/2022

If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)

Two References: (Please do not include Councilmembers or City Staff)

(1) William Alex
[redacted]
Redlands, CA 92373
Telephone [redacted]

(2) David Mascetti
[redacted]
Redlands, CA 92373
Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

City Manager's Office

(Please note that this form is a public record that may be subject to disclosure upon request.)

OCT 21 2022

COMMISSION\BOARD APPLIED FOR

TRAFFIC AND PARKING COMMISSION

Received

Name R. Eric Pendery

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation Police Officer

Reasons for desiring to serve – relevant experience and qualifications:

Will be retiring from the city this year and still want to give back to the city. I have worked in traffic and parking for the last 20 years and feel I have a lot I can give to the commission.

Signature R. Eric Pendery **Date** 10-21-22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Ben Bersteeg
[redacted]
Redlands, Ca 92374
Telephon[redacted]

(2) Maria Galvez
[redacted]
Redlands CA 92374
Telephone[redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓address Verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Traffic and Parking Commission

Name Trent Brudin

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation Civil Engineer

Reasons for desiring to serve – relevant experience and qualifications:

1) I am relatively new to the Redlands community and would like to become more involved/engaged.

2) I am a registered civil engineer in the state of California and Arizona. I regularly work with engineers to design streets and other transportation elements for various cities in the Southern California Region

3) I unfortunately do not have any experience serving with any type of public planning commision or local government.

Signature _____ **Date** 12/2/2021

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) John Egan
[redacted]
Redlands, CA 92373
Telephone [redacted]

(2) Lori Askew
[redacted]
Banning, CA 92220
Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

City of

REDLANDS

Incorporated 1888
35 Cajon Street, Redlands, CA 92373
909-798-7510
www.ci.redlands.ca.us

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that the City Council of the City of Redlands encourages residents to apply for a position on the following commission:

TRAFFIC AND PARKING COMMISSION - The Traffic and Parking Commission carries on educational activities in traffic matters, supervises the preparation and publication of traffic reports, receives complaints relating to traffic matters, and recommends to the City Council ways and means of improving traffic conditions and the administration and enforcement of traffic regulations. This commission also advises the City Council on the development of adequate parking for commercial and retail uses, recommend policies to encourage, develop and support adequate parking within the City, recommend actions for the establishment of long-term parking plans for the City and, in particular, the Downtown Redlands Business Area, and advises the City Council in the administration of resources for the development of parking. The Commission may also assist other advisory groups such as the Planning Commission in matters relating to parking.

The Traffic and Parking Commission meets bi-monthly on the fourth Thursday of odd-numbered months at 6:00 p.m. Residents interested in applying for the non-salaried position on this commission may request application forms from the City Manager's Office, City Hall, 35 Cajon Street, Suite 200, Phone: 798-7510, or by downloading an application from the City's website at www.cityofredlands.org

Deadline for filing applications is October 21, 2022.

Jennifer Macias, Management Analyst
City Manager's Office
City of Redlands, California

10/7/22

City Council Meeting **J. 6.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Adopt Resolution No. 8428 authorizing remote teleconference meetings by the City Council and all Boards, Commissions, and Committees of the City in accordance with Assembly Bill 361 (2021) for a period of 30 days (Council Member Davis)

MOTION:

I move to adopt Resolution No. 8428.

DISCUSSION:

On December 6, 2022, the City Council adopted Resolution No. 8411 authorizing remote teleconference meetings by the City Council and all Boards, Commissions, and Committees of the City in accordance with Assembly Bill 361 (2021) for a period of 30 days ending January 4, 2023. AB 361, signed into law on September 16, 2021, amends Government Code Section 54953 to provide the authority and specific requirements for public agencies to hold virtual meetings during a proclaimed state of emergency and remain in compliance with the Brown Act.

In accordance with Government Code Section 54953 (e)(3), the City Council must review the need and make findings for continuing the teleconferencing as authorized by AB 361 at least once every thirty days until the Governor terminates the state of emergency. With the adoption of Resolution No. 8384, the City Council is reaffirming its findings and compliance with AB 361 for an additional 30 days ending January 18, 2023.

SUBMITTED BY:
Council Member Denise Davis

Attachments

Reso. 8428 Teleconference Meeting

RESOLUTION NO. 8428

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS AUTHORIZING REMOTE TELECONFERENCE MEETINGS BY THE CITY COUNCIL AND ALL BOARDS, COMMISSIONS, AND COMMITTEES OF THE CITY IN ACCORDANCE WITH ASSEMBLY BILL 361 (2021) FOR A PERIOD OF THIRTY DAYS

WHEREAS, COVID-19 (also known as the "Coronavirus Disease") is a respiratory disease that has spread across the globe, with thousands of confirmed cases in California, including within the City of Redlands ("City"); and

WHEREAS, on January 31, 2020, the United States Secretary of Health and Human Services declared a public health emergency based on the threat caused by COVID-19, and the President of the United States issued a proclamation declaring a national emergency concerning COVID-19 beginning March 1, 2020; and

WHEREAS, in response to COVID-19, the Governor of the State of California issued a proclamation of a state of emergency on March 4, 2020; and

WHEREAS, the City Council of the City adopted a proclamation of a local emergency related to the COVID-19 virus on March 17, 2020; and

WHEREAS, the City is committed to preserving and fostering public access, transparency, observation, and participation in meetings of the City Council and City boards, commissions, and committees (hereafter collectively referred to as "legislative bodies;") and

WHEREAS, all meetings of the City Council and legislative bodies are open and public as required by the Ralph M. Brown Act ("Brown Act") (Government Code section 54950 *et seq*.), so that any member of the public may attend, observe, and participate in a meaningful way; and

WHEREAS, Government Code section 54953(b)(3) of the Brown Act allows a local legislative body to hold public meetings by teleconference and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to attend and to address the local legislative body, as long as the following requirements are met:

1. Each teleconference location from which a member is participating is noticed on the agenda;
2. Each teleconference location is accessible to the public;
3. Members of the public must be able to address the body at each teleconference location;
4. At least one member of the legislative body must be physically present at the location specified in the meeting agenda; and
5. During teleconference meetings, at least a quorum of the members of the local body must participate from locations within the local body's territorial jurisdiction; and

WHEREAS, the Brown Act, as amended by AB 361 (2021), at Government Code section 54953(e), allows for remote observation and participation in meetings by members of a legislative body and members of the public without compliance with the requirements of Government Code section 54953(b)(3), subject to certain conditions; and

WHEREAS, the initial required condition of Government Code section 54953(b)(3) is a declaration of a state of emergency by the Governor pursuant to the California Emergency Services Act at Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state and within the boundaries of the City, caused by conditions as described in Government Code section 8558; and

WHEREAS, the Governor's proclamation of a state of emergency includes area within the jurisdictional boundaries of the City; and

WHEREAS, Government Code section 54953(e)(3)(A-B), added by AB 361, provides an alternative to having public meetings in accordance with Government Code Section 54953(b)(3) when the City Council has reconsidered the circumstances of the COVID-19 state of emergency and that the following circumstances exist:

1. The state of emergency because COVID-19 continues to directly impact the ability of the members of City Council and the members of the City's boards, commissions, and committees to meet safely in person; and

2. The State of California and the County of San Bernardino continue to recommend measures to promote social distancing; and

WHEREAS, Government Code Section 54953(e) further requires that state or local officials have imposed, or recommended, measures to promote social distancing, or the legislative body finds that meeting in person would present an imminent risk to the health or safety of attendees; and

WHEREAS, such conditions now exist in the City in that (i) state and local officials do recommend social distancing measures, and (ii) emergency conditions evidenced by COVID-19 and its variants create ongoing COVID-19 cases, hospitalizations, and deaths, such that meeting in person would present imminent risk to health or safety of attendees; and

WHEREAS, the City Council affirms that it will allow for observation and participation by City Council members as well as board, commission, and committee members and the public, via Zoom, or other appropriate technology, in an effort to protect the constitutional and statutory rights of all attendees; and

WHEREAS, Government Code Section 54953 (e)(3) further requires that the City Council review the need and make findings for continuing the teleconferencing as authorized by AB 361 at least once every thirty days until the Governor terminates the state of emergency;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF REDLANDS HEREBY RESOLVES AS FOLLOWS:

Section 1. The above recitals are true and correct and are incorporated herein by this reference.

Section 2. The City Council finds that the state of emergency conditions related to COVID-19 as set forth in the Governor's and City's proclamations of emergency are on-going.

Section 3. The City Council further finds that State and county officials recommend social distancing conditions causing imminent risk to attendees as described above exist.

Section 4. The City Council hereby recognizes and affirms the existence and conditions of a state of emergency as proclaimed by the Governor, and the City, and affirms, authorizes, and proclaims the existence of a local emergency throughout the City.

Section 5. The City Council finds that the state of emergency because COVID-19 continues to directly impact the ability of members of the City Council and the members of the City's boards, commissions, and committees to meet safely in person and such fact creates an imminent health risk to such members.

Section 6. The City Council hereby authorizes the City Council, and all of the boards, commissions, and committees of the City, to conduct their meetings without compliance with Government Code section 54953(b)(3), and to instead comply with the remote meeting requirements as authorized by Government Code section 54953(e).

Section 7. The City Manager and City Clerk are authorized and directed to take all actions reasonably necessary to carry out the intent and purpose of this Resolution, including, conducting open and public meetings remotely in accordance with Government Code section 54953(e), and other applicable provisions of the Brown Act, for all City Council meetings, and all boards, commissions, and committee meetings of the City.

Section 8. This Resolution shall take effect immediately upon its adoption and shall be effective until either (i) January 18, 2023, or (ii) such time as the City Council adopts a Subsequent Resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the City Council and all City legislative bodies may continue to meet remotely, without compliance with Government Code section 54953(b)(3), but otherwise as permitted by Government Code section 54953(e).

ADOPTED, SIGNED AND APPROVED this 20th day of December 2022.

ATTEST: Paul T. Barich, Mayor

Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the City Council at a special meeting thereof held on the 20th day of December 2022.

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

City Council Meeting **J. 7.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve recommendation for a reappointment to the Cultural Arts Commission (Council Member Guzman-Lowery)

MOTION:

I move to reappoint Danielle Giudici-Wallis to serve a four-year term on the Cultural Arts Commission beginning January 6, 2023 and ending January 6, 2027.

RECOMMENDATION:

It is recommended by Council Member Guzman-Lowery that the City Council consider this reappointment to the Cultural Arts Commission. Pursuant to the Redlands Municipal Code, appointments to this commission are made by the Mayor and approved by the City Council. However, Mayor Barich has expressed his desire to rotate recommendations for commission/board appointments among the City Council Members; therefore, Council Member Guzman-Lowery has been delegated authority by Mayor Barich to make the recommendation for this reappointment.

DISCUSSION:

Commissioner Danielle Giudici Willis' term will expire January 6, 2023. She is interested and eligible for reappointment to a four-year term ending January 6, 2027. A public notice requesting interested residents to submit an application for the Cultural Arts Commission was issued in October. In addition, the public notices were concurrently aired on Redlands TV and posted on the community bulletin board at A. K. Smiley Public Library. The local newspapers also received distribution of public notices. No applications were received from the recent posting. However, five applications were included from previous postings.

The Cultural Arts Commission consists of seven members as follows:

- Daniel Goham
- Dennis Christensen
- Kelly McGrail
- Margo Mullen
- Danielle Giudici Wallis-expiration 1/6/2023
- Jina Edwards
- Daniel Rodriguez

ALTERNATIVE:

The City Council may choose not to support the recommendation and direct staff to seek further applications for consideration.

SUBMITTED BY:

Jennifer Macias, Management Analyst

REVIEWED BY:

Charles M. Duggan, Jr., City Manager
Janice McConnell, Assistant City Manager

Attachments

Public Notice

Cultural Arts Commission Applications

City of
REDLANDS

Incorporated 1888
35 Cajon Street, Redlands, CA 92373
909-798-7510
www.ci.redlands.ca.us

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that the City Council of the City of Redlands encourages individuals to apply for a position on the following commission:

CULTURAL ARTS COMMISSION

The Cultural Arts Commission promotes public interest in arts, recommends new arts programs and sources of funding for those programs, assists the City Council by recommending policies to encourage, develop and support the arts in Redlands, and advises the City Council in the administration of the City's "Art in Public Places" program.

The Cultural Arts Commission meets bi-monthly on the second Monday of odd-numbered months at 4:00 p.m. Residents interested in applying for the non-salaried position on this commission may request application forms from the Office of the City Manager, City Hall, 35 Cajon Street, Suite 200, or by phone 798-7510, or from the City's website at www.cityofredlands.org

Deadline for filing applications is October 21, 2022.

Jennifer Macias, Management Analyst
Office of the City Manager
City of Redlands, California

10/07/2022

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Cultural Arts Commission

Name Jason Gerraughty

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation Business Services Specialist, Sage Oak Charter School

Reasons for desiring to serve – relevant experience and qualifications:

I have a PhD in Music, and have been a working composer, nationally recognized, for over twenty years. Prior to moving to Redlands, I worked for arts organizations in Sydney, Australia, where I previously lived, including Musica Viva Australia, and Opera Australia. I would like to take these skills and my experience and apply them toward the strengthening and enrichment of Redlands' local arts culture, ensuring that all artists have the opportunity to thrive in our city, and to make sure that the arts remain a priority in Redlands.

Signature Jason Gerraughty **Date** 02/24/2022

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Shane Williams
[redacted]
Hesperia, CA 92345
Telephon[redacted]

(2) Tony Gonzalez
[redacted]
Azusa, CA 91702
Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address verified

Authentisign ID: 9019914E-55AF-4C59-8F27-5507BA5ECC5A

FEB 2022
RECEIVED
City Attorney's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Cultural Arts Commission

Name Melissa O'Donnell

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) _____

Email [redacted]

Occupation Realtor

Reasons for desiring to serve – relevant experience and qualifications:

I love the way Redlands is expanding and using art as a tool to communicate. I have many ideas to further the expansion and bring unique art and cultural events to the area. It is so important to keep thinking of new ways to share art forms. I hope to be able to add even more by being on this committee.

Signature Authentisign Melissa O'Donnell 2/23/2022 3:34:37 PM GMT **Date** 2-23-2022

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Vanessa Bernardo

Telephone [redacted]

(2) Anahita Perez

Telephone [redacted]

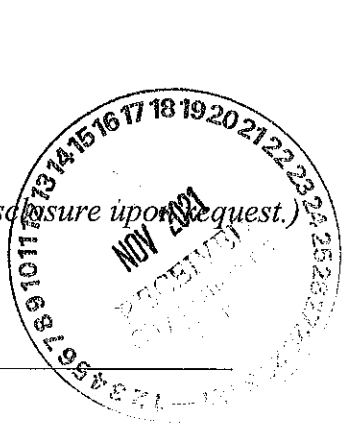
Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)



COMMISSION\BOARD APPLIED FOR

Cultural Arts Commission

Name 40Nancy Huffaker

Address [redacted]

Telephone (Work) _____ (Cell / Home) [redacted]

Email [redacted]

Occupation retired teacher/small business owner

Reasons for desiring to serve – relevant experience and qualifications:

I spent 30+ years teaching high school fine and performing arts. While I've lived and worked in a myraid of places, Redlands remains my base. I grew up here, and have spent many summers here before returning to live here last year. In addition to my experience in other places, I was a company member of the RTF before they had a permanate home in the Prospect Park, served several positions with the bowl (albeit many moons ago), and, when living and working on Lanai (in Maui County), helped to procure an AIPP grant for our tiny island.

Signature _____ **Date** _____

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Vicki Janis
[redacted]
Redlands CA
Telephone [redacted]

(2) Cynthia Lake
[redacted]
Redlands CA
Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓ address verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Cultural Arts Commission

Name Stephanie MacLean

Address [redacted]

Telephone (Work) n/a (Cell / Home) [redacted]

Email [redacted]

Occupation Development & Operations Coordinator at Geena Davis Institute on Gender in Media

Reasons for desiring to serve – relevant experience and qualifications:

I am interested in serving on the commission in order to be more involved in the Redlands community and also to continue my passion for supporting community art endeavors. I have experience working at the Robert and Frances Fullerton Museum of Art (RAFFMA) at CSUSB for nearly a decade as well as serving on the board of directors for Arts Connection, the Arts Council of San Bernardino County for over 2 years. Currently, I work as a development and operations coordinator for the Geena Davis Institute, where we use proprietary research in order to push for better representation of gender, race, age, etc in the media which I believe will be a good resource for the board to ensure that public art initiatives are properly representative of the community.

Signature Stephanie MacLean **Date** 2/8/22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Annery Sanchez
Marketing & Graphic Design Specialist
Riverside Art Museum
Telephone [redacted]

(2) Danielle Guidici Wallis
Artist
Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓address verified

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)

COMMISSION\BOARD APPLIED FOR

Cultural Arts Commission

Name Trisha Cupples

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) same

Email [redacted]

Occupation Substitute Teacher and Artist

Reasons for desiring to serve – relevant experience and qualifications:

I am an artist. I hold a B.S. in Education, an A.A. in Fine Arts, and I am currently obtaining my Masters in Education at U of R.

I plan to be a teacher within the Redlands School District. Currently, I substitute teach in Redlands, which gives me the unique

advantage of meeting a large protion of the student body and youth of our community. I grew up in Redlands

and now I am raising two children in my hometown. I want to contribute to the well-being of children by creating opportunities to

view art and culture in our community. I travel to see artwork and participate in cultral activities. I want them to be in Redlands!

Signature Trisha Cupples **Date** March 31, 2022

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Crystal Colbert
Elementary School Teacher at Kingsbury

Telephone [redacted]

(2) Riana Fisher
Close friend, Biologist for the County of Riverside

Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

✓Address Verified

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

Trisha Cupples

[redacted]

Skills

- CBEST Passed
- Artistic and Design skills
- Lesson & Curriculum Planning
- Effective Communication
- Leadership Skills
- Compassion & Empathy

Experience

January 2022 - PRESENT

Redlands Unified School District- *Substitute Teacher*

- Teach classes in all grades and schools within RUSD
- Follow Teacher's lesson plan and requests for their students
- Manage classroom and activities

September 2021 - PRESENT

Kingsbury Elementary, Redlands - *Classroom Volunteer*

- Assist Kindergarten teachers with reading centers.
- Assist with STEM lab activities, including engineering builds, robotics, and coding.

March 2021 - April 2021

92nd St. Elementary STEAM Academy, Los Angeles - *Classroom Volunteer*

- Observed teacher conducting daily lessons.
- Assisted with small group lessons in mathematics and ELA.

April 2016- September 2019

Paralegal and Supervisor, Ramirez & Associates, Lawndale, California

- Compose legal documents and correspondence.
- Supervise collector's work product, oversee completion of tasks, and delegate work projects.
- Perform employee training and daily advice of proper lien procedure.
- Advise Hearing Representatives on their settlement authority and arguments for court.

April 2013 - April 2016

Hearing Representative & Paralegal, MedLegal, LLC, West Covina, California

- Litigate liens at the Workers' Compensation Appeals Board, including participating in trials and court hearings.

City Council Meeting **J. 8.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve recommendation for reappointments to the Library Board of Trustees Commission (Council Member Gallagher)

MOTION:

I move to reappoint William D. Hatfield and Kate Pretorius to each serve three-year terms on the Library Board of Trustees beginning January 1, 2023 and ending January 1, 2026.

RECOMMENDATION:

It is recommended by Mayor Barich and Council Member Gallagher that the City Council consider these reappointments to the Library Board of Trustees. Pursuant to the Redlands Municipal Code, appointments are made by the Mayor and approved by the City Council. However, Mayor Barich has expressed his desire to rotate recommendations for commission/board appointments among the City Council Members; therefore, Council Member Gallagher has been delegated authority by Mayor Barich to make the recommendation for these reappointments.

DISCUSSION:

The terms of Library Board Members William D. Hatfield and Kate Pretorius will expire on January 6, 2023. Board Members Hatfield and Pretorius have each expressed an interest in reappointment to the Library Board of Trustees. Because Library Board members are governed by the State Education Code and are not subject to the City's two, four-year term limitation as other City commissioners, Board Members Hatfield and Pretorius are eligible for reappointment.

A public notice requesting interested residents to submit an application for the Library Board of Trustees was issued in October. In addition, the public notice

was concurrently aired on Redlands TV and posted at the community bulletin board at the A. K. Smiley Public Library. The local newspapers also received distribution of the public notice. One application was received in response, and one from a previous notice was included for consideration.

The Library Board of Trustees Commission consists of five members as follows:

- Martin Davis
- Rosa Gomez
- William T. Hardy, Jr.
- William D. Hatfield - Term Expires 1.1.23
- Kate Pretorious - Term Expires 1.1.23

ALTERNATIVE:

The City Council may choose not to support the recommendation and direct staff to seek further applications for consideration.

SUBMITTED BY:
Janice McConnell, Assistant City Manager

REVIEWED BY:
Charles M. Duggan, Jr., City Manager

PREPARED BY:
Jennifer Macias, Management Analyst

Attachments

Public Notice
Library Board Applications

City of

REDLANDS

Incorporated 1888
35 Cajon Street, Redlands, CA 92373
909-798-7510
www.ci.redlands.ca.us

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that the City Council of the City of Redlands encourages residents to apply for a position on the following board:

LIBRARY BOARD OF TRUSTEES

The Board consists of five members, appointed by the Mayor with the consent of the City Council. The trustees hold office for three-year terms. One member of the board is selected as President of the board.

The State Education Code mandates that "the public library shall be managed by a board of library trustees." The Library Board meets on the second Tuesday of each month at 5:00 p.m.

The Board may make and enforce all rules, regulations and bylaws necessary for the administration, government and protection of the library and all property belonging thereto. The Board may administer trusts created for the Library and receive gifts by devise or bequests, hold property in trust in California or elsewhere, and dispose of property for the benefit of the Library. Since 1922, the Trustees have managed an Endowment Fund, income from which supplements and enriches the Library's programs, acquisitions and well-being.

By City Council resolution in 1932 affirming Robert Watchorn's Deed of Gift, the Library Trustees administer the Lincoln Memorial Shrine. In 2001, by City Council resolution, the Trustees also administer the Redlands Municipal Museum.

Residents interested in applying for the non-salaried position on this board may request application forms from the Office of the City Manager, City Hall, 35 Cajon Street, Suite 200, or by phone 798-7510, or from the City's website at www.cityofredlands.org

Deadline for filing applications is October 21, 2022.

Jennifer Macias, Management Analyst
Office of the City Manager
City of Redlands, California

10/06/22

City Manager's Office

CITY OF REDLANDS
COMMISSION APPLICATION FORM

OCT 21 2022

(Please note that this form is a public record that may be subject to disclosure upon request.)

Received

COMMISSION\BOARD APPLIED FOR

Library Board of Trustees

Name Dan Jimenez

Address [redacted]

Telephone (Work)_____ (Cell / Home) [redacted]

Email [redacted]

Occupation High SchoolTeacher

Reasons for desiring to serve – relevant experience and qualifications:

I have been a resident of Redlands since 2008 and am interested in serving the community, building community connections, and developing leadership skills. I have a B.S. in Public Health from CSUSB and an M.A. in Teaching and Learning from the University of Redlands.

Signature [signature] **Date** 10/21/22

**** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)***

Two References: (Please do not include Councilmembers or City Staff)

(1) Dorie Stratton

Telephone [redacted]

(2) Kim Clark

Telephone [redacted]

Return Application to: **Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org**

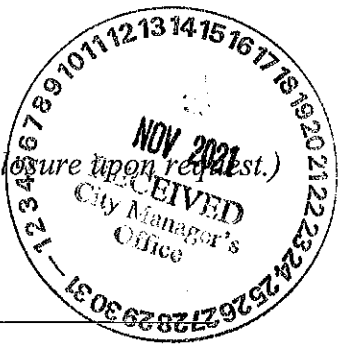
You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓address Verified

Scanned with CamScanner

CITY OF REDLANDS
COMMISSION APPLICATION FORM

(Please note that this form is a public record that may be subject to disclosure upon request.)



COMMISSION\BOARD APPLIED FOR

Library

Name Lisa DeLorme

Address [redacted]

Telephone (Work) [redacted] (Cell / Home) [redacted]

Email [redacted]

Occupation Attorney

Reasons for desiring to serve – relevant experience and qualifications:

•The Smiley Library is a big part of what makes Redlands so special. Robust library resources are an important part of vital and dynamic cities and critical to the education of our young residents. I would like to contribute to the care and maintenance of this special resource. I have previously been involved in education by several years service on the Grove School Board of Directors.

Signature /s Lisa DeLorme **Date** Nov. 15, 2021

** If appointed, please be advised that all City commissioners and committee/board members must complete mandatory harassment prevention training consistent with the requirements of Assembly Bill No. 1825. (Resolution No. 7206 adopted July 26, 2012)*

Two References: (Please do not include Councilmembers or City Staff)

(1) Lindy Resnick
Clergy, Congregation Emanu El
[redacted]
Telephone [redacted]

(2) Andrew Christopherson
Grove School Principal
[redacted]
Telephone [redacted]

Return Application to: Office of the City Council, C/O Office of the City Manager, Suite 200, 35 Cajon Street, PO Box 3005, Redlands, CA 92373, OR by email to RedlandsOCM@cityofredlands.org

You will be notified of appointments by the City Council. Your application will be retained for one year. PLEASE NOTE: Planning Commissioners and Historic & Scenic Preservation Commissioners are required to file Statements of Economic Interest in accordance with California State Law.

✓address verified

City Council Meeting **J. 9.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Adopt Ordinance No. 2940 (Second Reading) - Amending Chapter 1.08 of the Municipal Code regarding Custody and Use of the Official City Seal and City Logos, Badges and Patches (Assistant City Manager McConnell)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to adopt Ordinance No. 2940.

RECOMMENDATION:

It is recommended that the City Council adopt Ordinance No. 2940 amending Chapter 1.08 of the Municipal Code regarding custody and use of the Official City Seal and City Logos, Badges and Patches.

DISCUSSION:

The proposed ordinance and staff report prepared for the introduction of this ordinance are available in the City Clerk's office.

ALTERNATIVES:

The Council may continue this matter in order to allow additional time to review Ordinance No. 2940.

STRATEGIC PLAN:

Not Applicable

SUBMITTED BY:
Jeanne Donaldson, City Clerk

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director

PREPARED BY:
Jeanne Donaldson, City Clerk

Fiscal Impact

Discussion:

Codification: $22/per page affected by the change
Legal Publication: $300

Attachments

Ordinance No. 2940 City Seal and Logo

ORDINANCE NO. 2940

AN ORDINANCE OF THE CITY OF REDLANDS, CALIFORNIA, AMENDING REDLANDS MUNICIPAL CODE CHAPTER 1.08 ESTABLISHING REGULATIONS FOR CUTODY AND USE OF THE CITY SEAL, LOGOS, BADGES AND PATCHES

WHEREAS, the City desires to protect its official Seal and Logo from all unauthorized uses to prevent fraud, deception, misrepresentation, and/or abuse;

WHEREAS, California Government Code § 34051.5 and California Elections Code § 18304 prohibits the use of the City seal in any campaign literature or mass mailing with intent to deceive voters;

WHEREAS, the use of a reproduction or facsimile of a seal may create a misleading, erroneous, or false impression of an endorsement or authorization by the City or public official; and

WHEREAS, the City Council seeks to ensure that the City Seal and City Logo are used only for purposes directly related to the official business of the City of Redlands, or as expressly authorized.

THE CITY COUNCIL OF THE CITY OF REDLANDS DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 1.08 of the Redlands Municipal Code titled, "City Seal," is hereby re-titled and amended in its entirety to read as follows:

"CHAPTER 1.08

CUSTODY AND USE OF THE OFFICIAL CITY SEAL, CITY LOGOS, BADGES AND PATCHES

Sections:

1.08.010 Definitions.
1.08.020 Use of Official City Seal, City Logos Badges and/or Patches.
1.08.030 Prohibited Uses of City Seal, City Logos, Badges and/or Patches.
1.08.040 Penalties.

1.08.010 Definitions. The following words shall have the meanings set forth below when used in this Chapter:

A. "Official City Seal" means the official City Seal of the City of Redlands as adopted by City Council Ordinance No. 2718. The official seal of the City of Redlands shall be in the form of a die approximately two inches ("2") in diameter. The form of the die shall be two (2) circles, one inside the other. Within the smaller circle shall be imprinted the words "Incorporated 1888," and within the larger circle and outside the limits of the inner circle shall be imprinted the words "City of Redlands California depicted below:

B. “City Logo” shall be the following image adopted as the official logo of the City of Redlands by action of the City Council on June 7, 2022:

C. “Redlands Police Logo” shall be the following image adopted as the official logo of the Redlands Police Department:

D. “Redlands Police Badge” shall be the following image adopted as the official badge of the Redlands Police Department:

E. "Redlands Police Patch" shall be the following image adopted as the official patch of the Redlands Police Department:

F. "Redlands Recreation & Senior Services Logo" shall be the following image adopted as the official logo of Redlands Recreation & Senior Services:

G. "Official City Seal, City Logos, Badges and/or Patches" shall mean collectively the Official City Seal, the City Logo, the Redlands Police Logo, the Redlands Police Badge,

the Redlands Police Patch, and the Redlands Recreation & Senior Services Logo, unless expressly stated otherwise.

1.08.020 Use of Official City Seal, City Logos, Badges and Patches.

A. The City Clerk or designee, acting as the Custodian of the Official City Seal as defined herein is authorized to use or affix the Official City Seal, as appropriate, to all certificates and documents as may be required by law, by this Municipal Code, or by City ordinance or resolution, to authenticate official City documents or to indicate institutional sanction for official, legal and ceremonial purposes.

B. The Official City Seal, City Logos, Badges and/or Patches shall only be used for purposes directly connected with the official business of the City of Redlands, its City Council, City boards, commissions, committees, City officers, employees or departments, or for other city-related purposes upon written authorization of the City Clerk or designee for use of the Official City Seal and the City Manager or designee for use of the City Logos, Badges and/or Patches.

C. The members of the City Council and City boards, commissions and committees, and any City officer or employee may use stationary, business cards, and other materials and articles printed by the City with the Official City Seal, City Logos, Badges and/or Patches only while acting within the scope of their office or employment.

D. The Director of Facilities & Community Services shall designate the vehicles, equipment or other items of property belonging to the City to be affixed with the image of the City Logos, Badges and/or Patches, as appropriate.

E. The City Council retains the right to create variations of the Official City Seal and any City Logos, Badges and/or Patches and to adopt and establish other official City seals and logos, badges and patches. Such variations may include, but are not limited to, centennial or other seals or logos which mark anniversaries, events, and/or any other City occasion the City Council wishes to commemorate. The Official City Seal, City Logos, City Badges and/or Patches may only be altered pursuant to ordinance or resolution of the City Council.

1.08.030 Prohibited Uses of Official City Seal, City Logos, Badges and Patches.

A. Except as otherwise provided for herein, it is unlawful for any person or entity to make use of the Official City Seal, City Logos, Badges and/or Patches or any portion, facsimile, mock-up, derivative or reproduction thereof, or make or use any design, symbol, emblem, insignia or similar device that is an imitation of said Official City Seal, City Logos, Badges and/or Patches or that may be mistaken therefor, that is designed, intended or likely to confuse or mislead the public, for private or commercial purposes or for any purpose other than the official business of the City.

No person, firm, association, or corporation shall use the Official City Seal and the City Logos, Badges and/or Patches or any facsimile thereof for purposes of supporting or opposing the nomination or election to any City or other public office of any person, or for purposes of supporting or opposing any ballot measure, nor include such Official City Seal or any City Logos, Badges and/or Patches on any writing distributed for purposes of influencing the action of the electorate, or any part thereof, in any election. This section shall not be applicable to official writings issued by the City or the City Council as a whole pursuant to law.

1.08.040 Penalties.

Unauthorized use of the Official City Seal, City Logos, Badges and/or Patches for malicious, deceptive, fraudulent, or other unauthorized purposes in violation of this Chapter is declared to be a public nuisance and the City can abate or enjoin such use pursuant to the Redlands Municipal Code. Violation of this Chapter shall be an infraction or misdemeanor, as determined by the City Attorney. Nothing herein prevents the City from using any other available civil and/or criminal remedies allowed by law to protect the Official City Seal, City Logos, City Badge and/or Patch from improper or illegal use.

Section 2. WHEREAS, the City Council hereby determines that approval of Ordinance No. 2940 is exempt from environmental review under the California Environmental Quality Act ("CEQA") pursuant to Section 15061(b)(3) of the State's Guidelines implementing CEQA because it can be seen with certainty that adoption of the Ordinance will not cause any significant environmental effects and will not result in a direct or reasonably foreseeable indirect physical change in the environment.

Section 3. If any section, subsection, subdivision, paragraph, sentence, clause or phrase, or portion of this Ordinance is, for any reason, held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Ordinance or any part thereof. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, paragraph, sentence, clause or phrase of this Ordinance irrespective of the fact that one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional or invalid or ineffective. To this end the provisions of this Ordinance are declared to be severable.

Section 4. The Mayor shall sign this ordinance and the City Clerk shall certify to the adoption of this ordinance and shall cause it, or a summary of it, to be published once in a newspaper of general circulation within the City, and thereafter, this ordinance shall take effect as provided by law.

Paul T. Barich, Mayor

ATTEST:

Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk, City of Redlands, hereby certify that the foregoing Ordinance was duly adopted by the City Council at the regular meeting thereof, held on the 6th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAINED:

_____

Jeanne Donaldson, City Clerk

City Council Meeting **J. 10.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve a Second Amendment to the Professional Services Agreement with Webb Municipal Finance, LLC to allow for the continued performance of professional services for the annual levy administration and annexations for Community Facilities District No. 2004-1, authorize an Additional Appropriation in the amount of $33,577.59 and determine that this contract amendment is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act (Development Services Director Desatnik)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motions are provided:

1. I move that City Council determine that approval of this contract amendment is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act;

2. I move to approve the Second Amendment to the Agreement with Webb Municipal Finance, LLC changing the name of the City's representative, updating the rate schedule and extending the end term by 3 years from December 31, 2022 to December 31, 2025, in an amount not-to-exceed $86,500; and

3. I move to authorize an Additional Appropriation in the amount of $33,577.59.

RECOMMENDATION:

Staff recommends City Council approve the Second Amendment to the Professional Services Agreement with Webb Municipal Finance, LLC to change the name of the City's representative, extend the end term of the agreement for 3 years from December 31, 2022, to December 31, 2025, and authorize an Additional Appropriation in the amount of $33,577.59, to allow for the continued performance of professional services for the annual levy administration and annexations for Community Facilities District No. 2004-1 (District) which is exempt from the California Environmental Quality Act pursuant to Section 15061(b)(3) of the CEQA Guidelines.

DISCUSSION:

On September 18, 2018, City Council approved an agreement with Webb Municipal Finance, LLC for an amount not to exceed $56,500.

On November 5, 2019, City Council approved a first amendment to the agreement with Webb Municipal Finance, LLC to change the City's representative and to extend the term of the agreement for 3 years through December 31, 2022.

Webb Municipal Finance, LLC is a Municipal Advisor with the Securities and Exchange Commission. Webb provides land use research, classification of property, financial analysis, report preparation, enrollment of special taxes, annexation boundary map preparation, landowner elections, and preparation of notices for tax liens for the City's Community Facilities District (CFD). Municipal Utilities and Engineering Department staff utilizes Webb to provide CFD annual levy, administration, and annexation services.

Webb Municipal Finance, LLC, has been the CFD Engineer since the formation of the District, has processed all annexations into the District for the past 18 years, and has prepared the required annual CFD Engineer's Reports which establish the annual assessments to be collected by the San Bernardino County Assessor.

The proposed action is exempt from the requirements of the California Environmental Quality Act's (CEQA) guidelines pursuant to Section 15061(b)(3) as the amendment of an existing agreement would be covered by the general rule common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment, where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, and there is negligible expansion of existing facilities.

ALTERNATIVES:

City Council may elect not to amend the existing agreement and direct staff to advertise a request for proposals for the annual levy, administration, and annexations for the Community Facilities District No. 2004-1. However, not approving these actions would result in a halt in the processing of future annexations until a new CFD engineering firm is selected.

STRATEGIC PLAN:

Not applicable.

SUBMITTED BY:
Brian Desatnik, Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director

PREPARED BY:
Tricia Munoz, Management Analyst

Fiscal Impact

Fiscal Year:	2022-23
Revenue Generating:	N
Appropriation Required Y/N:	Y
Amount:	$33,577.59
Budgeted Y/N:	N
Account No.:	101163-6106

Discussion:

Approval of this Second Amendment will result in the use of General Fund. However, fees for funding this agreement are supported by an annexation fee each time an annexation into the Community Facilities District 2004-1 is requested. The Development Services Department Land Use Engineering Division (101163-6106) 2022-23 budget will need to be increased by $33,577.59 for the Second Amendment to the Agreement with Webb Municipal Finance, LLC.

Attachments

Second Amendment Webb Municipal Finance LLC
First Amendment_Webb Municipal Finance LLC
Original Agreement_Webb Municipal Finance LLC
Additional Appropriation

SECOND AMENDMENT TO AGREEMENT TO PERFORM PROFESSIONAL SERVICES

This second amendment ("Second Amendment") to the agreement for the provision of services associated with Community Facilities District ("Agreement"), dated September 18, 2018, by and between the City of Redlands, a municipal corporation and a general law city ("City"), and Webb Municipal Finance, LLC, a California Limited Liability Company ("Consultant"), is made and entered into this 20th day of December 2022. City and Consultant are sometimes individually referred to herein as a "Party", and collectively as the "Parties".

RECITALS

WHEREAS, the Parties entered into a Professional Services Agreement ("Agreement") on September 18, 2018 to provide Community Facilities District services to the City;

WHEREAS, the Parties entered into a First Amendment to the Agreement ("First Amendment") on November 5, 2019; and

WHEREAS, it is the desire of the Parties to amend their existing Agreement, specifically to make a change to the City's designated representative, update the Consultant's Hourly Rate Schedule and extend the time for performance of services by Consultant.

NOW, THEREFORE, for good and valuable consideration in the receipt of which is hereby acknowledged City and Consultant agree as follows:

AGREEMENT

Section 1. Article 3 of the Agreement, entitled "Responsibilities of the City," is hereby amended to read as follows:

"3.2 City designates Brian Desatnik, Development Services Director, as City's representative with respect to performance of the Services, and such person shall have the authority to transmit instructions, receive information, interpret and define City's policies and decisions with respect to performance of the Services."

Section 2. Article 4 of the Agreement, entitled "Performance of Services" is hereby amended to read as follows:

"4.2 Consultant shall complete the Services by December 31, 2025, unless the Services are terminated earlier as provided for herein."

Section 3. Exhibit "B" entitled "Hourly Rate Schedule" and as described in Article 5.1, and made part of the First Amendment is hereby replaced with a new Exhibit "B", which is attached hereto and incorporated herein and into the Agreement by this reference.

Section 4. All other provisions of the Agreement shall remain unchanged by this Second Amendment and in effect.

IN WITNESS WHEREOF, the Parties have executed this Second Amendment, to be effective as of 20th day of December 2022.

CITY OF REDLANDS

_____
Paul T. Barich, Mayor

WEBB MUNICIPAL FINANCE, LLC

By: _____
Heidi Schoeppe
President/Managing Director

ATTEST:

_____
Jeanne Donaldson, City Clerk

EXHIBIT "B"

HOURLY RATE SCHEDULE

CLASSIFICATION	
Engineers/Project Managers/Planners/Scientists/ Assessment/Special Tax Consultants/Landscape Architects/Designers	**Rates $/Hour**
Principal II	293.00
Principal I	279.00
Senior III	252.00
Senior II	240.00
Senior I	232.00
Associate III	208.00
Associate II	197.00
Associate I	191.00
Assistant V	173.00
Assistant IV	156.00
Assistant III	144.00
Assistant II	135.00
Assistant I	98.00
Survey Services	
2-Person Survey Party	302.00
1-Person Survey Party	208.00
Inspection Services	
Construction Manager II	245.00
Construction Manager I	185.00
Inspector (Non-Prevailing Wage)	141.00
Inspector Overtime (Non-Prevailing Wage)	190.00
Inspector (Prevailing Wage)	152.00
Inspector Overtime (Prevailing Wage)	200.00
Administrative Services	
Project Coordinator	115.00
Administrative Assistant III	102.00
Administrative Assistant II	91.00
Administrative Assistant I	72.00
Other Direct Expenses	
Incidental Charges	Cost
Postage	Cost
Subcontracted Services	Cost
Special Consultant	365.00
Survey/Inspection Per Diem	Prevailing Wage Rate
In-House Delivery Up to 1/2 hour	32.00
In-House Delivery 1/2 Hour up to 1 Hour	64.00
In-House Delivery Over 1 Hour up to 2 Hours	118.00
In-House Delivery Over 2 Hours	170.00
Survey/Inspection Vehicle	0.81/Mile
Mileage	0.72/Mile

Note: All rates are subject to change based on annual inflation and cost of living adjustments. Prevailing wages are dictated by the California Department of Industrial Relations (DIR). As such, the indicated rate will remain in effect until revised rates are published by the DIR. The rate shown shall be subject to renegotiation to remain in compliance with State requirements if prevailing wages are increased by the DIR.

FIRST AMENDMENT TO AGREEMENT TO PERFORM PROFESSIONAL SERVICES

This first amendment ("First Amendment") to the agreement for the provision of services associated with Community Facilities District dated September 18, 2018 ("Agreement"), by and between the City of Redlands, a municipal corporation ("City"), and Webb Municipal Finance, LLC ("Consultant"), is made and entered into this 5th day of November, 2019.

RECITALS

WHEREAS, it is the desire of the City and Consultant to amend their existing Agreement, specifically for an extension of time for performance of services by Consultant.

NOW, THEREFORE, City and Consultant agree as follows:

AGREEMENT

Section 1. Article 3 of the Agreement, entitled "Responsibilities of the City" is hereby amended to read as follows:

"3.2 City designates Chris Boatman, Municipal Utilities and Engineering Interim Director, as City's representative with respect to performance of the Services, and such person shall have the authority to transmit instructions, receive information, interpret and define City's policies and decisions with respect of performance of the Services."

Section 2. Article 4 of the Agreement, entitled "Performance of Services" is hereby amended to read as follows:

"4.2 Consultant shall complete the Services by December 31, 2022, unless the Services are terminated earlier as provided for herein."

Section 3. An amended Exhibit "B," entitled "HOURLY RATE SCHEDULE" and as described in Article 5.1, is hereby substituted for the original Exhibit "B" to the Agreement, which is attached hereto and incorporated herein and into the Agreement by this reference.

Section 4. All other provisions of the Agreement shall remain unchanged by this First Amendment, and in effect.

IN WITNESS WHEREOF, the parties have executed this First Amendment, to be effective as of 5th day of November, 2019.

CITY OF REDLANDS

Paul W. Foster, Mayor

ATTEST:

Jeanne Donaldson, City Clerk

WEBB MUNICIPAL FINANCE, LLC.

By: Heidi Schoeppe
President/Managing Director

EXHIBIT "B" (Amended)

HOURLY RATE SCHEDULE
Effective through December 31, 2022

For the services performed related to the projects identified in Exhibit "A", compensation shall be at the hourly rates set forth below, together with reimbursement, at cost, for incidental expenses incurred in connection with such services, together with reimbursement for outside services at cost plus 15%.

PERSONNEL	$/Hr.
Principal-in-charge	$183.00
Project Manager	$136.00
QA/QC Analyst	$136.00
GIS Analyst	$107.00

"A City That Works"

City Council/Successor Agency Meeting **AGENDA ITEM NO. I. 11.**

DATE: 11/05/2019

TO: Honorable Mayor and City Council Members

SUBJECT: Approve a contract amendment with Webb Municipal Finance, LLC to change the name of the City's representative and to extend the term of the agreement for 3 years to allow for the continued performance of professional services for the annual levy administration and annexations for Community Facilities District No. 2004-1 and determination that this contract amendment is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act (Interim Municipal Utilities and Engineering Director Boatman)

MOTION(S):

I move that the City Council find that amending an existing agreement with Webb Municipal Finance, LLC to change the name of the City's representative and to extend the term of the agreement for 3 years to allow for the continued performance of professional services for the annual levy administration and annexations for Community Facilities District No. 2004-1 is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act and;

I move that the City Council approve an amendment to the existing agreement with Webb Municipal Finance, LLC, changing the name of the City's representative and extending the contract until December 31, 2022, to allow for the continued performance of professional services for the annual levy, administration, and annexations for Community Facilities District No. 2004-1.

RECOMMENDATION:

Staff recommends City Council find that amending an existing agreement with Webb Municipal Finance, LLC to change the name of the City's representative and to extend the term of the agreement for 3 years to allow for the continued performance of professional services for the annual levy administration and annexations for Community Facilities District No. 2004-1 is exempt from the California Environmental Quality Act pursuant to Section 15061(b)(3) of the CEQA Guidelines, and approve an amendment the existing agreement with Webb Municipal Finance, LLC to change the name of the City's representative and to extend the time period of the agreement until

December 31, 2022, to allow for the continued performance professional services for the annual levy, administration, and annexations for Community Facilities District No. 2004-1.

DISCUSSION:

On September 18, 2018, City Council approved an agreement with Webb Municipal Finance, LLC for an amount not to exceed $56,500. Webb Municipal Finance, LLC is a Municipal Advisor with the Securities and Exchange Commission. Webb provides land use research, classification of property, financial analysis, report preparation, enrollment of special taxes, annexation boundary map preparation, landowner elections, and preparation of notices for tax liens for the City's Community Facilities District (CFD). Municipal Utilities and Engineering Department staff utilizes Webb to provide CFD annual levy, administration, and annexation services.

Section 3.2 of the original agreement names Paul Toor, Municipal Utilities and Engineering Director, as City's representative with respect to the performance of the Services identified in the agreement. Amending the contract to identify a new representative will not alter the scope of the agreement.

Section 4.2 of the original agreement includes an expiration date of December 31, 2019. The work performed by the consultant is intermittent and is performed on an "as-needed" basis. Approximately $44,000 remains on the purchase order. Amending the contract to extend the term of the agreement for three years will simply extend the timeframe for contract administration.

Exhibit "B" of the original contract listed the effective date of the hourly rate schedule through December 31, 2019. With this amendment there is no change to the hourly rate to be paid to the consultant. Exhibit "B" has been amended to change the effective date of the hourly rate schedule through December 31, 2022.

There is no fiscal impact as funds for the amended agreement have already been allocated. Should City Council act upon the recommendation by staff, the existing purchase order with Webb Municipal Finance, LLC will be updated. The proposed action is exempt from the requirements of the California Environmental Quality Act's (CEQA) guidelines pursuant to Section 15061(b)(3) as the amendment of an existing agreement would be covered by the general rule common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment, where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, and there is negligible expansion of existing facilities.

ALTERNATIVES:

City Council may choose not to amend the existing agreement and direct staff to advertise a request for proposals for the annual levy, administration, and annexations for Community Facilities District No. 2004-1.

STRATEGIC PLAN:

Not applicable.

SUBMITTED BY:
Chris Boatman, Interim Municipal Utilities and Engineering Director

RECOMMENDED BY:
Janice McConnell, Assistant City Manager

REVIEWED BY:
Daniel J. McHugh, City Attorney
Danielle Garcia, Management Services/Finance Director
Dana Abramovitz-Daniel, Procurement Manager
Ross Wittman, Senior Project Manager
Goutam Dobey, Senior Civil Engineer

PREPARED BY:
Donald Young, One Stop Permit Center Manager

Fiscal Impact

Fiscal Year:	19/20
Revenue Generating:	No
Appropriation Required Y/N:	No
Discussion:	

Attachments

A. Contract Amendment
B. Original Agreement

AGREEMENT TO PERFORM PROFESSIONAL SERVICES

This agreement for the provision of services associated with Community Facilities District ("Agreement") is made and entered in this 18th day of September, 2018 ("Effective Date"), by and between the City of Redlands, a municipal corporation ("City)" and Webb Municipal Finance, LLC ("Consultant"). City and Consultant are sometimes individually referred to herein as a "Party" and, together, as the "Parties." In consideration of the mutual promises contained herein, City and Consultant agree as follows:

ARTICLE 1 – ENGAGEMENT OF CONSULTANT

1.1 City hereby engages Consultant to provide Community Facilities District services for City (the "Services").

1.2 The Services shall be performed by Consultant in a professional manner, and Consultant represents that it has the skill and the professional expertise necessary to provide the Services to City at a level of competency presently maintained by other practicing professional consultants in the industry providing like and similar types of Services.

ARTICLE 2 – SERVICES OF CONSULTANT

2.1 The Services that Consultant shall perform are more particularly described in Exhibit "A," entitled "Scope of Services," which is attached hereto and incorporated herein by reference.

2.2 Consultant shall comply with applicable federal, state and local laws and regulations in the performance of this Agreement including, but not limited to, State prevailing wage laws.

ARTICLE 3 – RESPONSIBILITIES OF CITY

3.1 City shall make available to Consultant information in its possession that may assist Consultant in performing the Services.

3.2 City designates Paul Toor, Municipal Utilities and Engineering Director, as City's representative with respect to performance of the Services, and such person shall have the authority to transmit instructions, receive information, interpret and define City's policies and decisions with respect to performance of the Services.

ARTICLE 4 – PERFORMANCE OF SERVICES

4.1 Consultant shall perform and complete the Services in a prompt and diligent manner accordance with the schedule set forth in Exhibit "A," entitled "Scope of Services," which is attached hereto and incorporated herein by reference. The Services shall commence on the Effective Date of this Agreement.

4.2 Consultant shall complete the Services by December 31, 2019, unless the Services are terminated earlier as provided for herein.

4.3 If Consultant's Services include deliverable electronic visual presentation materials, such materials shall be delivered in a form, and made available to the City, consistent with City Council adopted policy for the same. It shall be the obligation of Consultant to obtain a copy of such policy from City Staff.

ARTICLE 5 – PAYMENTS TO CONSULTANT

5.1 Total compensation for Consultant's performance of the Services shall not exceed the amount of Fifty-Six Thousand Five Hundred Dollars ($56,500). City shall pay Consultant on a time and materials basis up to the not to exceed amount in accordance with Exhibit "B" entitled "HOURLY RATE SCHEDULE" attached hereto and incorporated herein by reference.

5.2 Consultant shall submit monthly invoices to City describing the Services performed during the preceding month. Consultant's invoices shall include a brief description of the Services performed, the dates the Services were performed, the number of hours spent and by whom, and a description of reimbursable expenses related to the Services. City shall pay Consultant no later than thirty (30) days after receipt and approval by City of Consultant's invoice.

5.3 Any notice or other communication required, or which may be given, pursuant to this Agreement, shall be in writing. Any such notice shall be deemed delivered (i) on the date of delivery in person; (ii) five (5) days after deposit in first class registered mail, with return receipt requested; (iii) on the actual delivery date if deposited with an overnight courier; or (iv) on the date sent by facsimile, if confirmed with a copy sent contemporaneously by first class, certified, registered or express mail; in each case properly posted and fully prepaid to the appropriate address set forth below, or such other address as a Party may provide notice in accordance with this section:

City	Consultant
City Clerk	Heidi Schoeppe
City of Redlands	Webb Municipal Finance, LLC
35 Cajon Street	3750 McCray Street
P.O. Box 3005 (mailing)	hschoeppe@webbmfinance.com
Redlands, CA 92373	951-320-6087

ARTICLE 6 – INSURANCE AND INDEMNIFICATION

6.1 The following insurance coverage required by this Agreement shall be maintained by Consultant for the duration of its performance of the Services. Consultant shall not perform any Services unless and until the required insurance listed below is obtained by

Consultant. Consultant shall provide City with certificates of insurance and endorsements evidencing such insurance prior to commencement of the Services. Insurance policies shall include a provision prohibiting cancellation or modification of the policy except upon thirty (30) days prior written notice to City.

A. Workers' Compensation and Employer's Liability insurance in the amount that meets statutory requirements with an insurance carrier acceptable to City, or certification to City that Consultant is self-insured or exempt from the workers' compensation laws of the State of California. Consultant shall execute and provide City with Exhibit "C" entitled "Workers' Compensation Insurance Certification," which is attached hereto and incorporated herein by this reference prior to performance of the Services.

B. Comprehensive General Liability insurance with carriers acceptable to City in the minimum amount of One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) aggregate, for public liability, property damage and personal injury is required. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.

C. Business Auto Liability coverage, with minimum limits of One Million Dollars ($1,000,000) per occurrence, combined single limit bodily injury liability and property damage liability. This coverage shall include all Consultant owned vehicles used in connection with Consultant's provision of the Services, hired and non-owned vehicles, and employee non-ownership vehicles. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.

6.2 Consultant shall defend, indemnify and hold harmless City and its elected officials, employees and agents from and against any and all claims, losses or liability, including attorneys' fees, arising from injury or death to persons or damage to property occasioned by any negligent act or omission by, or the willful misconduct of, Consultant, or its officers, employees and agents in performing the Services.

ARTICLE 7 – CONFLICTS OF INTEREST

7.1 Consultant covenants and represents that it does not have any investment or interest in any real property that may be the subject of this Agreement or any other source of income, interest in real property or investment that would be affected in any manner or degree by the performance of Consultant's Services. Consultant further covenants and represents that in the performance of its duties hereunder, no person having any such interest shall perform any Services under this Agreement.

7.2 Consultant agrees it is not a designated employee within the meaning of the Political Reform Act because Consultant:

A. Does not make a governmental decision whether to:

(i) approve a rate, rule or regulation, or adopt or enforce a City law;
(ii) issue, deny, suspend or revoke any City permit, license, application, certification, approval, order or similar authorization or entitlement;
(iii) authorize City to enter into, modify or renew a contract;
(iv) grant City approval to a contract that requires City approval and to which City is a party, or to the specifications for such a contract;
(v) grant City approval to a plan, design, report, study or similar item;
(vi) adopt, or grant City approval of, policies, standards or guidelines for City or for any subdivision thereof.

B. Does not serve in a staff capacity with City and in that capacity, participate in making a governmental decision or otherwise perform the same or substantially the same duties for City that would otherwise be performed by an individual holding a position specified in City's Conflict of Interest Code under Government Code section 87302.

7.3 In the event City determines that Consultant must disclose its financial interests, Consultant shall complete and file a Fair Political Practices Commission Form 700, Statement of Economic Interests, with the City Clerk's office pursuant to the written instructions provided by the City Clerk.

ARTICLE 8 – GENERAL CONSIDERATIONS

8.1 In the event any action is commenced to enforce or interpret any of the terms or conditions of this Agreement the prevailing Party shall, in addition to any costs and other relief, be entitled to the recovery of its reasonable attorneys' fees, including fees for the use of in-house counsel by a Party.

8.2 Consultant shall not assign any of the Services, except with the prior written approval of City and in strict compliance with the terms and conditions of this Agreement. Any assignment or attempted assignment without such prior written consent may, in the sole discretion of City, results in City's immediate termination of this Agreement.

8.3 Consultant is for all purposes under this Agreement an independent Consultant and shall perform the Services as an independent Consultant. Neither City nor its agents shall have control over the conduct of Consultant or Consultant's employees, except as herein set forth. Consultant shall supply all necessary tools and instrumentalities required to perform the Services. Assigned personnel employed by Consultant are for its account only, and in no event shall Consultant or personnel retained by it be deemed to have been employed by City or engaged by City for the account of, or on behalf of City. Consultant shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent, nor shall Consultant have any authority, express or implied, to bind City to any obligation.

8.4 This Agreement may be terminated by City, in its sole discretion, by providing not less than five (5) days prior written notice to Consultant of City's intent to terminate. If this Agreement is terminated by City, an adjustment to Consultant's compensation shall be made, but (1) no amount shall be allowed for anticipated profit or unperformed Services, and (2) any payment due Consultant at the time of termination may be adjusted to the extent of any additional costs to City occasioned by any default by Consultant. Upon receipt of a termination notice, Consultant shall immediately discontinue its provision of the Services and, within five (5) days of the date of the termination notice, deliver or otherwise make available to City, copies (in both hard copy and electronic form, where applicable) of project related data, design calculations, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by Consultant in performing the Services. Consultant shall be compensated on a pro-rata basis for Services completed up to the date of termination.

8.5 Consultant shall maintain books, ledgers, invoices, accounts and other records and documents evidencing costs and expenses related to the Services for a period of three (3) years, or for any longer period required by law, from the date of final payment to Consultant pursuant to this Agreement. Such books shall be available at reasonable times for examination by City at the office of Consultant.

8.6 This Agreement, including the Exhibits incorporated herein by reference, represents the entire agreement and understanding between the Parties as to the matters contained herein, and any prior negotiations, written proposals or verbal agreements relating to such matters are superseded by this Agreement. Except as otherwise provided for herein, any amendment to this Agreement shall be in writing, approved by City and signed by City and Consultant.

8.7 This Agreement shall be governed by and construed in accordance with the laws of the State of California.

8.8 If one or more of the sentences, clauses, paragraphs or sections contained in this Agreement is declared invalid, void or unenforceable by a court of competent jurisdiction, the same shall be deemed severable from the remainder of this Agreement and shall not affect, impair or invalidate the remaining sentences, clauses, paragraphs or sections contained herein, unless to do so would deprive a Party of a material benefit of its bargain under this Agreement.

IN WITNESS WHEREOF, duly authorized representatives of City and Consultant have signed in confirmation of this Agreement.

CITY OF REDLANDS

By: _____
Paul W. Foster, Mayor

WEBB MUNICIPAL FINANCIAL, LLC

By: _____
Heidi Schoeppe,
President/Managing Director

Attest:

_____
Jeanne Donaldson, City Clerk

EXHIBIT "A"

SCOPE OF SERVICES

ADMINISTRATION SERVICES

a. Land Use Research
   i. Development Research: WEBB will use all resources available including the San Bernardino County equalized roll data, shape file data for our in-house GIS platform, and regular parcel data updates from the Assessor's Office. We are confident we are able to quickly identify residential and commercial/industrial developments, conduct assessor's parcel research, and provide accurate database management. WEBB will conduct development research to identify building permit issuance, building square footage, and situs address for the new buildings. Upon determination of this information, WEBB will be able to provide the City with related GIS data, as required.
   ii. Parcel Research: WEBB will review current Assessor's Parcel Maps for updating the Assessor's Parcel Numbers (APN) within the City.
   iii. Database Management: WEBB will utilize our proprietary software, WebbSTARTM, to maintain a comprehensive database of the CFD and Parcel information in a form compatible for the annual levy submission to San Bernardino County as outlined in the County's fixed charge submission packet. WebbSTARTM will maintain all data related to individual parcels including special tax information,), current property ownership information, and assessed valuation information.

b. Classification of Property
   i. Exempt Property: WEBB will determine the appropriate property classification in accordance with the Rates and Method of Apportionment (RMA). WEBB will review the land use code information from the latest equalized roll from San Bernardino County and update our WebbSTARTM database for the special tax calculations annually. WEBB will identify all property owned by public agencies or entities exempt from the special tax and classify them in accordance with the RMA. WEBB will communicate these classifications to the City and report them on our Annual Levy Detail reports. WEBB will confirm the location of these properties using our GIS database and illustrate them on our annual Audit Map.
   ii. Taxable Property: WEBB will identify all taxable properties and classify them in accordance with the RMA. WEBB will communicate with the City these classifications and report them on our annual levy detail reports. Through our GIS database, we will confirm the location of these properties and illustrate them on our annual audit map.

c. Financial Analysis
   i. Special Tax Requirement: WEBB will apply the RMA and calculate the annual special taxes to be levied for the current fiscal year. WEBB will report this information to the City to assist in the budget review process. WEBB will review the special tax requirement as it is defined in the RMA to ensure accurate cost recovery for the City.

ii. Calculate Special Tax Rates: With the use of our WebbSTARTM software, WEBB will calculate the special tax rates for all classifications and report this information to the City prior to submittal to the San Bernardino County Auditor-Controller's Office.

d. Report Preparation
   i. Annual Levy Report: Once finalized, WEBB will provide the City with a hard copy and an electronic copy of the annual levy report containing the information used to calculate the annual installment amount for each parcel, as well as a summary of the total annual levy for the CFD.
   ii. Assembly Bill (AB) 2109: WEBB will prepare all required reports pursuant to the recently enacted AB 2109 (Government Code Section 12463.2). This report is due annually, seven months after the close of the fiscal year, along with the City's annual Financing Transactions Report. WEBB will inform and keep City Staff apprised of all aspects relating to this new bill.

e. Enrollment of Special Taxes
   i. Levy Requirement: In consultation with the City, WEBB will determine the Levy requirement for the current fiscal year on or before August 10.
   ii. Annual Levy Preparation and Submittal: Each year WEBB will, in consultation with City Staff, determine the levy requirement for the current fiscal year. WEBB will calculate and prepare the annual levy in the media, format, and configuration acceptable for direct submission to the San Bernardino County Auditor-Controller's Office prior to the statutory deadline and shall perform adjustments and corrections to the levies on the property tax rolls as necessary.

f. Roll Changes and Adjusted Property Tax Bills
   i. Changes to the Secured Tax Roll: Upon determination that changes to the secured tax roll necessitate corrections/revisions after the deadline, WEBB will research, recalculate, and with the City's approval, rectify the issue.

g. Responses to Property Owner Questions
   i. Primary Contact: WEBB will serve as the initial and primary contact to the CFD's property owners, title companies and other interested parties regarding the CFD proceedings and annual installments. A toll free telephone number, of WEBB's designation, will appear on the regular property tax bill, next to the CFD, to facilitate contact with the public. WEBB will provide a toll free phone number for the City to refer property owners, title companies, and other interested parties to in regard to CFD proceedings and annual installments.

h. Disclosure
   i. Report Preparation: WEBB will prepare, for the City's approval, any State and/or Federal Disclosure reporting requirements pertaining to the CFD, if applicable. WEBB will provide an electronic and a hard copy of each report to the City for internal use.

ANNEXATION SERVICES

a. Annexation Boundary Map

i. Boundary Map Preparation: WEBB's Engineers and GIS Specialists will prepare the annexation boundary map, illustrating the boundaries of territory proposed for inclusion in the CFD, capturing the entirety of any parcel subject to taxation by the CFD. The map shall meet the requirements of the Mello-Roos Act and the San Bernardino County Recorder's Office. Additionally, WEBB will record the map with the San Bernardino County Recorder's Office.

b. Gathering Information

i. Land Use Classification: WEBB will meet with the City's Staff, legal counsel, team of consultants and project proponents to confirm the annexation schedule of events, procedural and financial considerations, establish the appropriate land use classifications, and discuss and identify the boundaries of the proposed annexation. WEBB will obtain the latest assessor's parcel maps and equalized tax roll information from the San Bernardino County Assessor's Office, and GIS shape files from our in-house GIS platform for the annexation.

ii. Identify Boundaries: WEBB's GIS Specialists will identify the boundaries of territory proposed for inclusion in the annexation capturing the entirety of any parcel subject to taxation by the annexation.

c. Consulting Services

i. Consulting and Advising: WEBB will provide consulting services and advise the City as necessary. This includes due diligence to ensure accuracy in the process and provision of clear written documentation in our approach to structuring the RMA and the special tax roll. To ensure and maintain quality assurance, WEBB has instituted an internal auditing and review policy that requires a minimum of two individuals with the appropriate expertise to review and audit any information prior to dissemination of that information to the client. WEBB will attend City Council meetings as well as informal meetings or hearings held for the purpose of disseminating information to the public. WEBB will be fully prepared to present all necessary testimony and to respond to all public comments.

d. Landowner Election

i. Owner Name Preparation: WEBB will prepare a list of the owner names and acreages using the most current data available from the San Bernardino County Assessor's office.

ii. Registrar of Voters: WEBB will obtain a certificate from the Registrar of Voters confirming whether there are, or are not, registered voters within the boundaries of the annexation.

e. Notice of Special Tax Lien

i. Notice Preparation: WEBB will provide a list of APNs for the Notice of Special Tax.

ADDITIONAL SERVICES NOT INCLUDED IN SCOPE OF SERVICE, INCLUDED IN ANNUAL FEE

F. Assembly Bill (AB) 2109

i. Report Preparation: WEBB will prepare all required reports pursuant to the recently enacted AB 2109 (Government Code Section 12463.2). This report is due annually, seven

months after the close of the fiscal year, along with the City's annual Financing Transactions Report. WEBB will inform and keep City Staff apprised of all aspects relating to this new bill.

EXHIBIT "B"

HOURLY RATE SCHEDULE
Effective through December 31, 2019

PERSONNEL	$/ Hr.
Principal-in-charge	$183.00
Project Manager	$136.00
QA/QC Analyst	$136.00
GIS Analyst	$107.00
Financial Analyst	

EXHIBIT "C"

WORKERS' COMPENSATION INSURANCE CERTIFICATION

Every employer, except the State, shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.

(b) By securing from the Director of Industrial Relations, a certificate of consent to self-insure, either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.

CHECK ONE

✓ I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work and activities required or permitted under this Agreement. (Labor Code §1861).

____ I affirm that at all times, in performing the work and activities required or permitted under this Agreement, I shall not employ any person in any manner such that I become subject to the workers' compensation laws of California. However, at any time, if I employ any person such that I become subject to the workers' compensation laws of California, immediately I shall provide the City with a certificate of consent to self-insure, or a certification of workers' compensation insurance.

I certify under penalty of perjury under the laws of the State of California that the information and representations made in this certificate are true and correct.

Webb Municipal Finance, LLC Date: 9/18/18

By: Heidi Schoeppa
Heidi Schoeppe
President/Managing Director

CITY OF REDLANDS
REQUEST FOR ADDITIONAL APPROPRIATION

DATE OF REQUEST: 12/20/2022

FINANCE USE ONLY
TRANSACTION NO:
ACCOUNTING PERIOD:

An additional appropriation is hereby requested as follows:

Department: Development Services

EXPENDITURE APPROPRIATION INCREASE (if applicable)				
Account Description	**Orgkey**	**Object Code**	**Job Ledger (If applicable)**	**Amount**
Professional Services	101163	6106		$ 33,577.59
			$	$ 33,577.59

REVENUE APPROPRIATION INCREASE (if applicable)				
Account Description	**Orgkey**	**Object Code**	**Job Ledger (If applicable)**	**Amount**
				$ 0.00
			$	$ 0.00

JUSTIFICATION: Increase professional services to fund the Webb Municipal Finance, LLC agreement associated with providing annexation services for the Community Facilities District 2004-1 (CFD). Fees associated with this service are collected each time an annexation into the CFD is requested.

Requested By: _____
Department Head

Recommended By Finance Director:

Yes _____ No _____ Signed _____

Recommended: _____
City Manager

Comments: _____

Approved by City Council:

Date: _____

Signed: _____
City Clerk

City Council Meeting **J. 11.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Adopt Resolution No. 8426 - Annual Report of Development Impact Fees for the Year Ended June 30, 2022, and Adoption of Findings (Management Services/Finance Director Garcia)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to adopt Resolution No. 8426.

RECOMMENDATION:

Staff recommends the City Council adopt Resolution No. 8426 approving the Annual Report of Development Impact Fees for the year ended June 30, 2022, and the findings contained therein.

DISCUSSION:

Government Code Section 66006 requires municipalities imposing impact fees to prepare an annual report that summarizes the revenues and interest income earned and the expenditures made for each category of development impact fees during a given fiscal year. This report was filed with the City Clerk's Office and available for public review on December 1, 2022. The report must provide the beginning and ending balances of the fiscal year, the amount of fees collected by the City, interest income and any other income earned, a description of how the fees were expended during the subject fiscal year, and any refunds or allocations pursuant to Government Code Section 66001(f). If fees are unexpended or uncommitted for a period of five or more years, the report must include a finding identifying the purpose of the fee and the anticipated improvements to be financed by the fee. If such findings are not made, State law requires that the City refund the unused fees being held.

At June 30, 2022, outstanding loans to be repaid from future development impact fees include: $7,835,045 to the General Fund and $40,966 to the Water Operating Fund. The grand total of these outstanding loans is $7,876,011.

ALTERNATIVES:

Not Applicable

STRATEGIC PLAN:

Not Applicable

SUBMITTED BY:
Danielle Garcia, Management Services/Finance Director

RECOMMENDED BY:
Charles M. Duggan, Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager

Fiscal Impact

Fiscal Year: FY 2021-22

Discussion:

None. All required findings are included in the report.

Attachments

AB 1600 Annual Report FY 2021-22
Resolution No. 8426 DIF Annual Report FY 2021-2022
Public Facilities Summary of Cash Transactions FY 2021-22
Resolution No. 7951 Development Impact Fees Rescinding 7907

December 20, 2022
The Honorable Mayor, Members of the City Council, and Residents of Redlands
Redlands, CA 92373

Subject: Annual Report of Development Impact Fees

Dear Mayor, Members of the City Council, and Residents of Redlands,

Pursuant to the Mitigation Fee Act (the "Act") (Government Code section 66000 et seq.), and specifically section 66006 of the Act, the following report on the receipt, use, and retention of development impact fees for the Fiscal Year 2021-2022 is hereby presented to the City Council for review and approval. Development impact fees are charged by local governments to defray all or a portion of the cost of public facilities related to new development being constructed within the City. The requirements for enactment of a development impact fee program are set forth in the Act, which was enacted by the State Legislature as Assembly Bill No. 1600 and is commonly referred to as "AB 1600 requirements".

In Redlands, development impact fees may be collected at the time of issuance of a certificate of occupancy or date of final inspection, or earlier as permitted by Government Code section, for the purpose of mitigating the impacts caused by new development on the City's infrastructure. Fees are used to finance the acquisition, construction, and improvement of public facilities related to new development projects. A separate funding structure has been established to account for the impact of new development on each of the following types of public facilities: Open Space, Parks, Public Facilities (including police, fire, community center, library, and general government facilities), Transportation, Water, Non-Potable Water, Solid Waste, and Sewer.

Impact fees collected and spent during Fiscal Year 2021-22 were set by Resolution No. 7951 as approved by the City Council on April 2, 2019, which rescinded Resolution No. 7907. The amount of corresponding fee types, currently established by Resolution No. 7951, is attached hereto. The Act requires the City to prepare an annual report for the City's development impact fees, summarizing the revenues, interest income, and expenditures for each category of funds during the fiscal year. This report was filed with the City Clerk's Office and A. K. Smiley Public Library and was available for public review on December 6, 2022.

Respectfully submitted,

Management Services / Finance Staff
City Manager's Office

(227) Open Space Fund – Redlands Municipal Code Chapter 3.32 establishes an Open Space and Park Development Impact Fee. Twenty-five percent (25%) of this fee is deposited into an Open Space Fund to be used solely for the purpose of acquisition, improvement, preservation, and expansion of open space areas within the City in accordance with the provisions of the recreation, open space, and conservation element of the City's General Plan. The General plan specifies the policy to preserve open space land in order to protect the visual character of the City, provide for public outdoor recreation, conserve natural resources, support groundwater recharge, and otherwise preserve open space areas. In the General Plan, specific open space areas in the Planning Area include the "Emerald Necklace" concept, San Timoteo Canyon, the Santa Ana Wash, and Live Oak Canyon. Fee amounts are set by Resolution No. 7951.

The following table shows the balances, receipts, and expenditures of the Open Space Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	727,643	428,728	505,631	1,508,088	1,622,321	1,746,567
Receipts	49,392	78,399	1,003,881[1]	185,482	126,661	419,086[2]
Expenditures	(348,306)	(1,496)	(1,424)	(71,249)	(2,416)	(9,599)
Ending Balance	428,728	505,631	1,508,088	1,622,321	1,746,567	2,156,054

[1]Includes non-DIF revenue of $785,000 deposit of land sale proceeds designated by the City Council for the acquisition of open space and received from the sale of the City's Mullin grove property.

[2]Receipts also include a GASB 31 Adjustment.

Receipts include fees of $478,934 and negative investment income of $60,848. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $15,240.

Expenditures include $9,599 in administrative charges.

Over the last ten years, monies collected in the Open Space Fund, along with grant monies, have been spent on the restoration and acquisition of open space within San Timoteo Canyon, including the San Timoteo Creek Habitat Enhancement Project, the Thompson Property, the Allen property, the Mistretta property and most recently, the Hudson property.

The current cash balance exceeds the cumulative fee collection over the past five years by $914,043, when adjusting for the $785,000 deposit of land sale proceeds as detailed above[1]. As a result, the City must make "findings" in accordance with the requirements of Government Code Section 66006.

Findings:

Fees deposited into an Open Space Fund are to be used solely for the purpose of acquisition, improvement, preservation, and expansion of open space areas within the City in accordance with the

provisions of the recreation, open space, and conservation element of the City's General Plan. Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for anticipated funding sources or amounts to complete the projects listed below. Monies collected into the Open Space Fund, including the existing excess cash, are expected to be used in accordance with the General Plan for the following projects over the next 3-5 years:

1. **Open Space/Citrus Acquisition –** the City is committed to retaining and improving the maximum feasible amount of open space property for recreational opportunities, conservation, agricultural uses, and resource protection. In terms of agricultural open space, one of the City's goals is to increase the City's acreage of citrus groves to an approximate target of 200 acres. As of FY 2022, the city owns 185 acres.
2. **Emerald Necklace –** the Emerald Necklace is a conceptual framework for a series of green open spaces and park areas surrounding the city approximately 45 miles in length, joined together with a special scenic road and trail system. The City has identified gaps in the Emerald Necklace and is working collaboratively to prioritize land acquisition or other resource preservation strategies in those areas. Several sites and properties have been purchased under this framework. Additionally, as suitable properties become available for acquisition, the City will evaluate opportunities to purchase the same.
3. **Scenic Routes and Trails –** The City has several project priorities: develop a linear parkway/recreational corridor centered along San Timoteo Creek and extending throughout the canyon, coordinate with San Bernardino County and the Santa Ana River Conservancy on implementing the objectives of the Santa Ana River Trail Parkway and Open Space Plan, and to complete the Emerald Necklace system of scenic routes and trails, including the Zanja Trail, Santa Ana River Trail, San Timoteo Trail, and other trails linking parks, regional trails, and open space areas.

No refunds of fees, because of the cumulative cash balance in the Open Space fund, are required, and none have been made during Fiscal Year 2021-2022.

(250) Park Development Fund – Park development impact fees are levied for the purpose of acquiring and developing land for parks. The fees are established per the Redlands Municipal Code as noted above for Open Space. Fee amounts are set by Resolution No. 7951. Seventy-five percent (75%) of the Open Space and Parks fees are deposited into the Park Development Fund. The General Plan sets the policy on park development as one aimed towards creating and maintaining a high-quality, diversified park system that enhances Redlands' unique attributes. The General Plan prescribes the parkland standard of 5 acres per 1,000 residents and, based on that standard, 82 acres of new parkland would be required to meet the needs of the Planning Area.

The following table shows the balances, receipts, and expenditures of the Park Development Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	555,525	760,793	708,482	477,392	609,313	878,329

Receipts	614,052[(1)]	326,477[(2)]	1,020,460[(3)]	454,596	382,923	1,408,479
Expenditures	(408,784)	(378,788)	(1,251,551)	(322,674)	(113,907)	(244,684)
Ending Balance	760,793	708,482	477,392	609,313	878,329	2,042,124

(1) Includes miscellaneous revenues/transfers of $465,912 that were received from Nevada Palmetto Grove sales proceeds to reimburse expenditures for both Heritage Park off-site improvements ($400,000) and Skate Park Project design costs ($65,912).

(2) Includes miscellaneous revenues/transfers of $101,531 that were received from Nevada Palmetto Grove sales proceeds and community donations to reimburse expenditures for the Skate Park Project design & project-related costs ($16,850 to date).

(3) Includes miscellaneous revenues/transfers of $635,613 that were received from Nevada Palmetto Grove sales proceeds and community donations of $38,723 to fund the construction of the Skate Park.

Impact fee revenue in this category consists of $1,468,650 in fees and $60,171 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $11,628.

Disbursements during Fiscal Year 2021-22 totaled $244,684, including a payment of $62,859 in principal, $39,398 in interest, and $3,846 in fees associated with the State I-Bank loan for the Sports Park. Park Development impact fees will represent approximately 35% of the total cost for the Sports Park design & construction once the debt service is fully satisfied. Projects funded this year included the purchase of a 2,500 square foot parcel to expand the City's Sports Park for $22,828 and $86,381 towards a portion of the cost to convert two tennis courts into eight (8) pickleball courts at the Redlands Community Center. Other disbursements included $29,373 in administrative charges.

The current cash balance exceeds the cumulative fee collection over the past five years by $644,380. As a result, the City must make "findings" in accordance with the requirements of Government Code Section 66006.

Findings:

Fees deposited into the Park Development Fund can be used for the acquisition, development, expansion and improvement of parks, sports fields and similar active and passive recreational use. Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for anticipated funding sources or amounts to complete the projects listed below. Monies collected into the Park Development Fund, including the existing excess cash, are expected to be used in accordance with the General Plan for the following projects over the next 3-5 years, or as development needs dictate:

1. **Transit Villages –** Proposed as approximately 20 acres of community and neighborhood parks to serve residents and employees in the Transit Village Overlay Zone.
2. **Mission/Zanja Park -** Proposed as a linear park that would follow the Mission Zanja. To be developed as a natural trail with neighborhood and pocket parks along its length.

3. **Israel Beal Park Expansion** - Continued expansion of Israel Beal Park along the bluffs as land is developed on its western border. Additional acreage will include active and passive recreation area as well as trails including the future location of the Santa Ana River Trail.
4. **West Redlands Park -** Proposed neighborhood park near the intersection of Kansas Street and Orange Avenue.
5. **Centennial Park –** Proposed 30-acre park, located along the bluffs adjacent to Riverview Drive. This land was acquired for recreational uses including trails and parkland as well as for flood control. The Santa Ana River Trail is planned to go through this park.

No refunds of fees, because of the cumulative cash balance in the Park Development fund, are required, and none have been made during Fiscal Year 2021-2022.

(251) Public Facilities Development Fund - Public Facilities Development Fees have been established per Redlands Municipal Code Chapter 3.60 with the purpose and intent of implementing the Redlands General Plan to ensure that public facilities and related improvements which satisfy City standards are available concurrent with the needs caused by new development within the City. Fee amounts are set by Resolution No. 7951. Fees are collected from applicants for development projects to construct, improve, and maintain public facilities as identified in the City's public facilities program.

Police Facilities

The purpose of this fee is to provide a revenue source that will provide funds to acquire vehicles, equipment, and facilities that will mitigate the impacts of new residential and non-residential development on the City's Police resources. A complete listing of proposed facilities is contained within the City's Development Impact Fee Justification Study, dated January 9, 2017.

The following table shows the balances, receipts, and expenditures of the Police Facilities Fee for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	349,293	422,566	428,533	440,922	464,906	471,706
Receipts	74,769	6,088	12,641	24,474	6,939	22,322
Expenditures	(1,495)	(122)	(253)	(489)	(139)	(446)
Ending Balance	422,566	428,532	440,922	464,906	471,706	493,582

Receipts consist of $22,322 in fees. Disbursements include $447 in administrative charges.

The current cash balance exceeds the cumulative fee collection over the past five years by $386,671. As a result, the City must make a "finding" in accordance with the requirements of Government Code Section 66006.

Findings:

Fees deposited into the Public Facilities Fund – Police Facilities category are to be used solely for costs related to police facilities, vehicles, and equipment. The largest cost, by far, will be the development of a new safety hall center. The current buildings that house police staff are aged, not ADA-compliant, and represent barriers to effectively managing the department's resources. As a result, plans have been underway to conceptualize and fund a new Safety Hall. In December 2021, the City acquired a property at 1625 West Redlands Boulevard to retrofit into a new safety hall center. The total project to convert this building into a new police facility is estimated to cost somewhere between $40 and 60 million dollars, including construction, commissioning, and furnishing. Impact fees will be used to help fund the retrofit project once it commences and their expenditure will reflect a portion of new development's share in the cost of the new facility. Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for anticipated funding sources or amounts, in total, that are needed to complete the Safety Hall project. The City anticipates developing a timeline for this project in early 2023. From that point, timelines for project construction/completion are likely to be established.

No refunds are required, and none have been made during Fiscal Year 2021-22.

Fire Facilities

The purpose of this fee is to establish a revenue source that will provide funds to construct various Fire facilities and acquire equipment and vehicles that will mitigate the impacts of new residential and non-residential development on the City's Fire facilities. A complete listing of proposed facilities is contained within the City's Development Impact Fee Justification Study, dated January 9, 2017.

The following table shows the balances, receipts, and expenditures, including loan activity, of the Fire Facilities Fee for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	-	13,700	69,271	315,622	399,928	463,557
Receipts	117,100	75,378	251,379	196,707	140,752	427,545
Expenditures	(103,399)	(19,807)	(5,028)	(112,401)	(77,123)	(29,051)
Ending Balance	13,700	69,271	315,622	399,928	463,557	862,051

Receipts consist of $427,545 in fees.

Disbursements include $8,550 in administrative charges. In addition, $20,500 was expended on a plan to prepare a facility and spatial needs assessment, including architectural layouts, for the City's fire stations.

The current cash balance exceeds the cumulative fee collection over the past five years by $80,735. As a result, the City must make a "finding" in accordance with the requirements of Government Code Section 66006.

Findings:

Fees deposited into the Public Facilities Fund – Fire Facilities category are to be used solely for costs related to fire facilities, vehicles, and equipment. The largest cost, by far, will involve the creation of two new fire stations and the relocation of a third temporary structure currently serving as a fire station. The City is currently setting aside funds to finance these projects and intends to use funding from these development impact fees to partially fund the City's cost as it relates to new development. These new stations will serve areas of newer development that are currently outside the 4-minute drive time window for call response. Because development impact fee revenue fluctuates and is difficult to forecast, the City anticipates that it will use multiple different funding sources, including possible debt issuance to finance the construction of the new stations. The City anticipates developing a timeline for this project in early 2023. From that point, timelines for project construction/completion are likely to be established.

No refunds are required, and none have been made during Fiscal Year 2021-22.

Library Facilities

The library facility impact fees were established to provide a revenue source that will generate funds to acquire various library collection items and remodel/refurbish existing facilities that will mitigate the impacts of new residential development on the City's Library facilities. Planned uses from the proceeds of these fees include the expansion of library collection items as well as the remodeling and refurbishment of existing facilities. Collection items include, but are not limited to, books, periodicals, newspapers, DVDs, e-books, etc.

Previously, impact fees collected for Library Facilities were also used to make contributions towards the annual debt service of the 2003 Lease Revenue Refunding Certificates of Participation (COP). The 2003 COPs refunded prior COPs that were used to finance major improvements to the Library's facilities. The past fees collected were earmarked to pay debt service on these bonds, which matured in Fiscal Year 2017-2018 and are now designated to repay outstanding loans from the General Fund, as well as loans that were provided by the Storm Drain Construction, and Water funds. Those loans were incurred during those fiscal years when library impact fee revenues were insufficient to meet the debt service requirements.

The following table shows the balances, receipts, and expenditures, including loan activity, of the Library Facilities Fee for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	-	-	-	0	0	0
Receipts	143,742	108,011	26,890	42,926	33,427	133,379
Expenditures	(143,742)	(108,011)	(26,890)	(42,926)	-33,427	(133,379
Ending Balance	-	-	-	0	0	0

Receipts consist of $133,379 in fees.

Disbursements include $956 in interest expense on its share of inter-fund loans noted above that were provided during Fiscal Year 2010-2011, $2,668 in administrative charges, and $130,712 repaid on outstanding loans from the Storm Drain and Water Funds.

As of June 30, 2022, outstanding loans total $3,784,436, with $3,743,470 owed to the General Fund, and $40,966 owed to the Water Fund. During fiscal year 2021-22, the outstanding loan from the Storm Drain Construction Fund in the amount of $58,078 was fully repaid by the Library Facilities category of Fund 251. As noted, these loans occur when impact fee revenues are insufficient to cover the Library Facilities category 34% share of debt service on the 2003 Lease Revenue Refunding COPs. Historically, no specific term or interest rate has been established for loans owed to the General Fund, however, when the City Council approved loans from the Storm Drain Construction Fund and Water Funds, they did so with the caveat that as sufficient impact fees become available, the non-General Fund loans would be repaid first, with interest set at the Local Agency Investment Fund (LAIF) annual interest rate. For fiscal year 2021-2022, the interest rate was 0.39%. Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which the remaining outstanding balances of the interfund loans will be repaid.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

General Government Facilities

Impact fees for General Government Facilities were first established with the completion of the impact fee study performed in Fiscal Year 2006-2007 and implemented in August 2007, and the most recent fee justification study is the City's Development Impact Fee Justification Study dated January 9, 2017. The purpose of this fee is to establish a revenue source that will provide funds to purchase and install additional IT hardware and construct a government center/safety hall building and public parking facility that will mitigate the impacts of new residential and non-residential development on the City's general government facilities.

The following table shows the balances, receipts, and expenditures, including loan activity, of the General Government Facilities Fee for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	-	-	-	535	0	0
Receipts	258,296	197,046	299,241	233,858	159,044	511,327
Expenditures	(258,296)	(197,046)	(299,241)	(234,392)	-159,044	(511,327)
Ending Balance	-	-	-	(0)	(0)	(0)

Receipts consist of $511,327 in fees.

Disbursements include $31,255 in total interest expense on its share of inter-fund loans provided during Fiscal Year 2010-2011, $10,227 in administrative charges, and a loan repayment of $469,845 to the General Fund. For fiscal year 2021-2022, the interest rate was 0.39%.

As of June 30, 2022, the remaining outstanding loan totals $4,091,574 and is owed to the General Fund. Previous loans in place from the Open Space Fund (227) and Park Development Fund (250) have been repaid in full, including the current year interest and all outstanding principal. As noted, these loans occur when impact fee revenues are insufficient to cover the General Government Facilities category 60% share of debt service on the 2003 Lease Revenue Refunding COPs. When the City Council approved loans from the Open Space and Park Development Funds, they did so with the caveat that as sufficient impact fees become available, the non-General Fund loans would be repaid first, with interest set at the annual Local Agency Investment Fund rate. Although no specific term or interest rate has historically been established for General Fund loans, in Fiscal Year 2010-2011 when non-General fund loans were made and interest approved on these loans at the Local Agency Investment Fund rate, interest was also applied in the same manner to the General Fund loan made in that year. Since that time, $54,018 in interest has been added to the General Fund loan principal balance, including an additional $31,255 that has been added for fiscal year 2021-2022. For fiscal year 2021-2022, the Local Agency Investment Fund interest rate was 0.39%. Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which this loan from the General Fund will be repaid.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

Community Center Facilities

Community Center Facilities impact fees were established in Fiscal Year 2014-2015 and are collected using a replacement cost per capita for the City's existing community centers as the basis for the fees. The fees charged to future residential development are set at a level needed to maintain the existing level of service as the City grows. The purpose of these fees collected from future development is to approximately cover the cost of adding community center space while maintaining the current ratio of community center asset value to population. The most recent fee justification study is the City's Development Impact Fee Justification Study, dated January 9, 2017, which contains a complete listing of proposed community center facilities.

The following table shows the balances, receipts, and expenditures of the Community Center Facilities Fee for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	47,081	67,644	68,208	68,208	68,208	68,208
Receipts	21,031	576	-	-	0	-
Expenditures	(468)	(12)	-	-	0	-
Ending Balance	67,644	68,208	68,208	68,208	68,208	68,208

There were no receipts or disbursements made from this category in fiscal year 2021-2022.

The current cash balance exceeds the cumulative fee collection over the past five years by $46,601. As a result, the City must make a "finding" in accordance with the requirements of Government Code Section 66006.

Findings:
Fees deposited into the Public Facilities Fund – Community Center Facilities category are to be used solely for the purpose of costs related to adding community center space to maintain the current ratio of community center asset value to population.

The largest cost, by far, will involve the construction of a new community center. Projects of this nature are generally large in scope and require several years' worth of receipts. The cost estimate developed in 2016 to complete the construction of a new community center was $7,488,046 according to the most recent fee justification study - the City's Development Impact Fee Justification Study, dated January 9, 2017. Timelines for completing this project are difficult to estimate due mainly to the significant costs and the unpredictability of the timing of adequate impact fee revenue.

No refunds are required, and none have been made during Fiscal Year 2021-2022.

At June 30, 2022, the Public Facilities Fund has Advances Payable (Interfund Loans) to Other Funds for loans received as follows:

Advance Payable To:		
General Fund		$ 7,835,045
Open Space Fund		-
Park and Open Space Fund		-
Storm Drain Construction Fund		-
Water Operating Fund		40,966
	Total	$ 7,876,011

As noted above, fees collected for Fire, Library, and General Government Facilities have been collected and used to make contributions towards the annual debt service of the 2003 Lease Revenue Refunding Certificates of Participation (COP), which matured during Fiscal Year 2017-2018. The 2003 COPs refunded prior COPs that were used to finance Fire Station #3 (6% of total debt service), as well as Library Facilities (34% of total debt service) and the City Yard (60% of total debt service). In years when

the revenue from these fee categories was insufficient to meet debt service obligations, the Public Facilities Fund was loaned amounts from the General Fund, Open Space, Park Development, Storm Drain Construction, and Water Funds. For fiscal year 2021-2022, the interest rate was 0.39%. Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which each loan will be repaid.

Transportation Fees

During Fiscal Year 2021-2022, Resolution No. 7951 prescribed the methodologies and amounts of Transportation fees. Impact fees in this category are intended to fund transportation improvements, including the following components: interchange improvements, railroad crossing improvements, improvements to regional arterials, and improvements to local streets. The first three components are intended to satisfy the requirement, pursuant to Measure I (2010-2041) and the San Bernardino County Transportation Authority (SBCTA) Congestion Management Plan, that the City assess new development for its fair share of the cost of those improvements. The local street component is based on data provided by the City that represents the full cost of local street improvement projects needed entirely to serve future development. Allocations are established based on a weighted average for each improvement type based on cost. The City's Development Impact Fee Study, dated January 9, 2017, estimated transportation improvement costs in each component category and allocated them according to the tables below.

Resolution No. 7701, DIF Study Jan. 2017		
Fund 252 -	Regional Arterial	43%
Fund 252 -	RR Crossings	1%
Fund 252 -	Local Streets	19%
Fund 253 -	Signals	4%
Fund 254 -	Interchanges	36%

These development fees are utilized in conjunction with revenue generated under the Measure "I" half-cent sales tax to fund regional transportation projects. These fees establish a revenue source that will provide funds to construct various transportation projects that will mitigate the impacts of new development on the City's circulation system. The uses to which the fees are to be put include the funding of new roadways within the City limits.

(252) Arterial Street Construction Fund – This fund includes development fees, as discussed above, for both the regional (SBCTA) and local transportation development fees which, in concert with the Regional Measure "I" sales tax revenue, when needed, are used to construct transportation

improvements. Both development and Measure "I" funds are required to construct the transportation improvement projects. A complete listing of proposed facilities is contained within the City's Development Impact Fee Justification Study, dated January 9, 2017.

The following table shows the balances, receipts, and expenditures of the Arterial Street Construction Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	2,310,315	3,015,544	3,141,989	3,721,696	3,954,816	3,928,436
Receipts	721,613	133,137	592,243	597,315	398,827	528,723
Expenditures	(16,384)	(6,692)	(12,536)	(364,193)	(425,207)	(13,058)
Ending Balance	3,015,544	3,141,989	3,721,696	3,954,816	3,928,436	4,444,102

Impact fee revenue in this category consists of $652,898 in fees and $124,175 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $32,904.

Disbursements consist of $13,058 in administrative charges.

The current cash balance exceeds the cumulative fee collection over the past five years by $2,290,120. As a result, the City must make "findings" in accordance with the requirements of Government Code Section 66006.

Findings:

Monies collected into the Arterial Street Construction Fund, including the existing excess cash, are based on a detailed breakdown of citywide transportation projects needed to mitigate the impacts of new development through the year 2035. These projects have been approved by the City Council for construction under this program, as a part of Resolution No. 7951 and the Development Impact Fee Study dated January 9, 2017. The project list includes improvements to regional and local arterials with a total estimated cost allocated to new development of $21,087,242.

A complete listing of proposed facilities is contained within the City's Development Impact Fee Justification Study, dated January 9, 2017.

Below is a partial listing from that study.

- Alabama Street from the northerly City limit to Palmetto Avenue
  - Estimated Cost - $10,653,000
  - New Development Fair Share – 23.1%
- Orange Street from Lugonia Avenue to Interstate 10 freeway
  - Estimated Cost - $2,960,000
  - New Development Fair Share – 23.1%
- San Bernardino Avenue from Church Street to Wabash Avenue

  - Estimated Cost - $2,744,000
  - New Development Fair Share – 23.1%
- Ford Street from 5th Avenue to Interstate 10 freeway
  - Estimated Cost - $2,058,000
  - New Development Fair Share – 23.1%

Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which the project will be completed. At this time, no other sources of revenue are projected.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

(253) Traffic Signals Fund – This fund includes seven percent of the transportation development impact fees collected and is for the purpose of constructing traffic signals and signal improvements.

The following table shows the balances, receipts, and expenditures of the Traffic Signals Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	1,122,990	1,210,815	1,223,302	1,283,765	1,382,585	1,444,989
Receipts	89,357	16,708	72,366	99,412	62,910	40,123
Expenditures	(1,532)	(4,221)	(11,903)	(591)	(507)	(37,399)
Ending Balance	1,210,815	1,223,302	1,283,765	1,382,585	1.444.989	1,447,712

Impact fee revenue in this category consists of $76,221 in fees, $3,870 in developer deposits, and $39,968 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $11,411.

Disbursements consist of $1,524 in administrative charges, $23,395 for engineering and design services for the University Street & Brockton Avenue traffic signal construction project, and $12,480 for the preparation of environmental documents related thereto.

The current cash balance exceeds the cumulative fee collection over the past five years by $1,272,245. As a result, the City must make “findings” in accordance with the requirements of Government Code Section 66006.

Findings:

Monies collected into the Traffic Signals Fund, including the existing excess cash, are based on a detailed breakdown of citywide transportation projects needed to mitigate the impacts of new development through the year 2035. These projects have been approved by the City Council for

construction under this program, as a part of Resolution No. 7701 and the Development Impact Fee Study dated January 9, 2017. The project list includes local signal projects with a total estimated cost allocated to new development of $4,996,610. A complete listing of proposed facilities is contained within the City's Development Impact Fee Justification Study, dated January 9, 2017.

Below is a partial listing from that study.

- Texas Street and Pioneer Avenue
  - Estimated Cost - $350,000
  - New Development Fair Share – 32.32%
- University Street and Brockton Avenue
  - Estimated Cost - $300,000
  - New Development Fair Share – 32.32%
- Intelligent Traffic Management System
  - Estimated Cost - $5,400,000
  - New Development Fair Share – 23.1%
- Automated Fire/Police Emergency Vehicle Preemption System
  - Estimated Cost - $150,000
  - New Development Fair Share – 32.32%

Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which the project will be completed. At this time, no other sources of revenue are projected.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

(254) Freeway Interchange Fund – As discussed above, thirty-seven percent of the transportation fees collected are to meet the City's responsibility for the construction of major freeway interchange improvements on I-10 and one freeway interchange on the I-210 freeway. These projects are funded through the collection of multi-jurisdictional development fees and the collection of regional Measure "I" revenue, under the 2010-2040 Measure "I" voter-approved ½ cent sales tax transportation program.

Two projects are currently underway. The first is the I-10/University Street Interchange project. The San Bernardino County Transportation Authority (SBCTA) and the City, in coordination with Caltrans District 8, will widen the I-10 westbound on-ramp and I-10 eastbound off-ramp at University Street, as well as restripe University Street from Citrus Avenue to Central Avenue. The project is designed to reduce congestion, improve safety, and improve traffic operations along University Street between Citrus Avenue and Central Avenue. It will also install new traffic signals at the I-10 eastbound off-ramp at University Street and the I-10 westbound on-ramp at University Street and provide street

improvements within the project limits including drainage improvements, pavement construction, and landscaping replacement.

On September 3, 2013, the City entered into a memorandum of understanding to commence the design of the project. The initial estimate to design and construct the Project was estimated to cost $5.2 million. Pursuant to the Cooperative Agreement, the City is responsible for 17.9% ($912,900) of the total $5.1 million project cost, with the remaining 82.1% ($4,188,000) to be funded by SBCTA. The remaining $100,000 is for project management costs that are the sole responsibility of the City. In May 2019, SBCTA informed the City that an amendment to the Cooperative Agreement would be needed as the total project cost for the Project had increased from $5.2 million to $5,812,935. Increases in costs were mainly attributable to planning & design stages, project management, and additional paving requirements. Project planning and design have been completed, and the construction work has started and is anticipated to conclude in late 2022.

In addition to the University I-10 Interchange project, on February 16, 2016, the City entered into a memorandum of understanding to commence the alternative Interstate 10 – Alabama Street Interchange project. When constructed, the Project will improve the Interstate 10 at Alabama Street Interchange between Orange Tree Lane and Industrial Park Avenue, with on and off-ramp widening, the addition of turning lanes, new pavement, and striping. As part of the MOU, funding responsibilities for the development of the estimated $10.96 million Project were delineated for the parties. Per SBCTA's 10-Year Delivery Plan and SBCTA's Development Mitigation Nexus Study, the City, SBCTA, and County of San Bernardino have funding responsibilities for the Project. Specifically, SBCTA has 49.5% of the Public Share of funding responsibilities (~$5.26m) for the Project, and the City and County share the remaining 50.5% (~$5.70m) Development Share, with City responsible for 34.9% ~ ($1.99m) and County 65.1% (~$3.71m). In November 2016, City Council approved a Development Mitigation Cooperative Agreement with the County in order to memorialize the financial responsibilities between the City and County for their shared Development Share responsibilities.

In mid to late 2019, SBCTA approached City and County about cost increases identified during the design of the Project. The total project cost has risen from the original estimate of $10.96 million to a new estimate of $15.15 million, a rise of $4.19 million. With this new estimate, City costs for the Project have risen from $1,990,065 million to $2,506,921, an increase of ~$516,856. The City has been in contact with both SBCTA and County and both entities have the funding necessary and desire to move forward with the Project. SBCTA has completed the design phase, and construction on the project began in January 2022 and is anticipated to conclude in December 2022.

At this time, staff is unable to ascertain when all required funding amounts will be received by the City. This is because the rate and pace of development is difficult to determine with respect to the deposit of impact fees by developers.

The following table shows the balances, receipts, and expenditures of the Freeway Interchange Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	2,418,020	2,855,127	2,766,083	2,941,748	3,815,420	3,046,266
Receipts	491,600	156,368	559,907	1,293,437	243,103	479,165
Expenditures	(54,493)	(245,412)	(384,243)	(419,765)	(1,012,257)	(1,906,865)
Ending Balance	2,855,127	2,766,083	2,941,748	3,815,420	3,046,266	1,618,566

Impact fee revenue in this category consists of $387,421 in fees, reimbursement from the County of San Bernardino of $188,988 for a share of the portion of construction costs related to the I-10 Alabama Street Project, and $97,255 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $25,077.

Disbursements consist of $7,748 in administrative charges. Expenses also included $32,045 was disbursed in connection with the City's cooperative cost-sharing agreement for project management services associated with the I-10 Alabama Street Project. Capital expenditures were also made from this account: $1,867,071 for the I-10 Alabama Street Project.

During Fiscal Year 2021-2022, the current cash balance exceeds the cumulative fee collection over the past five years by $161,199. As a result, the City must make "findings" in accordance with the requirements of Government Code Section 66006.

Findings:

Monies collected into the Freeway Interchanges Fund, including the existing excess cash, are based on a detailed breakdown of citywide transportation projects needed to mitigate the impacts of new development through the year 2035. These projects have been approved by the City Council for construction under this program, as a part of Resolution No. 7951 and the Development Impact Fee Study dated January 9, 2017. The project list includes local signal projects with a total estimated cost allocated to new development of $6,029,266. A complete listing of proposed facilities is contained within the City's Development Impact Fee Justification Study, dated January 9, 2017.

Below is a partial listing from that study.

- I-10 at Mountain View:
  - Estimated Cost - $53,214,296
  - New Development Fair Share – $784,485 (3.9%)
- I-10 at California
  - Estimated Cost - $46,562,380
  - New Development Fair Share – $3,249,495 (14.6%)
- I-10 at Wabash
  - Estimated Cost - $41,822,810

  - New Development Fair Share – $1,871,571 (12.5%)
- I-10 at Live Oak
  - Estimated Cost - $19,478,974
  - New Development Fair Share – $72,072 (1%)
- I-10 at 5th Street
  - Estimated Cost - $8,364,562
  - New Development Fair Share – $51,643 (1.4%)

Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which the project will be completed. At this time, no other sources of revenue are projected.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

(405) Storm Drain Fund – New development generates additional stormwater runoff by increasing the amount of land that is not penetrable to precipitation. Consequently, new development generates the need for, and benefits from, expanded storm drain facilities. Storm Drain Development Fees have been established per Redlands Municipal Code Chapter 3.56 with the purpose and intent of implementing the Redlands General Plan to ensure that storm drain facilities and improvements that satisfy City standards are available concurrent with the needs caused by new development within the City. This chapter establishes the methods of financing the construction of the required storm drain facilities. Fees are established by Resolution No. 7951.

The following table shows the balances, receipts, and expenditures of the Storm Drain Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	1,789,457	1,832,744	1,832,238	1,985,305	1,975,112	2,118,971
Receipts	94,186	112,404	206,098	227,799	151,397	299,402
Expenditures	(50,899)	(112,910)	(53,032)	(237,992)	(7,538)	(12,428)
Ending Balance	1,832,744	1,832,238	1,985,305	1,975,112	2,118,971	2,405,945

Impact fee revenue in this category consists of $306,560 in fees and $65,235 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $17,790.

Disbursements consist of $12,428 in administrative costs.

At June 30, 2022, a loan made from the Storm Drain Construction Fund in Fiscal Year 2010-2011 to the Public Facilities Fund for a portion of its half-share of annual debt service on the 2003 Lease Revenue Refunding Certificates of Participation has been fully repaid.

During Fiscal Year 2021-2022, the current cash balance exceeds the cumulative fee collection over the past five years by $1,805,377. As a result, the City must make "findings" in accordance with the requirements of Government Code Section 66006.

Findings:

New development generates additional stormwater runoff by increasing the amount of land that is not penetrable to precipitation. Consequently, new development generates the need for, and benefits from, expanded storm drain facilities. Fees are to be used on the costs associated with the construction of regional and local facilities, based on the amount of estimated costs allocable to new development and new service population.

Storm drain construction is an ongoing effort. Projects are generally large in scope and require several years' worth of receipts. For the last two years, the City has been preparing to further develop the Opal basin project. However, recent investigation suggests a reprioritization of storm drain projects to better meet current conditions. Still, the Opal Basin remains a project under consideration. In 2014, the City adopted a Drainage Master Plan. The outlines scope and priority of various projects. Timelines for completing these projects are difficult to estimate due mainly to each project's significant costs and the unpredictability of the timing of adequate impact fee revenue.

The project list includes local and regional projects in terms of the City's share, with a total estimated cost allocated to new development of $10,724,400.

1. **Reservoir Canyon –** The Reservoir Canyon Channel is the second largest watershed area tributary to downtown. The total costs to fund new and upgrade existing storm drain facilities that would mitigate the flooding potential specific to this watershed have been estimated at $16,510,000; new Development Fair Share – 27%.
2. **Downtown Watershed** – The Downtown watershed consists of the local drainage systems in the downtown area. The total costs to fund new and upgrade existing storm drain facilities that would mitigate the flooding potential specific to this watershed have been estimated at $10,210,000; new Development Fair Share – 27%.
3. Redlands **Opal Basin** – This project addresses the Mission Zanja watershed (the largest watershed tributary) and consists of the construction of a retention basin and is one of two major facilities needed to protect the City during a 100-year storm event. When completed, the facility will retain up to 825 acre-feet of water. Additional funds to complete the $13 million project will come from the Storm Drain Fund and other sources as they become available; new Development Fair Share – 27%.

Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which the project will be completed. At this time, no other sources of revenue are projected.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

(508) Water Source Acquisition Fund - The Water Source Acquisition Fund is established per Redlands Municipal Code Chapter 13.40.020 to implement the Redlands General Plan and finance the acquisition of approved water stock and water rights to assist the City in maintaining an adequate supply of water to meet the needs of development requiring water service from the city. Water Source Acquisition charges are established per Section 13.40.040 of the Redlands Municipal Code. Fee amounts are set by Resolution No. 7951.

The following table shows the balances, receipts, and expenditures of the Water Source Acquisition Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	131,549	112,116	258,120	753,768	898,102	943,636
Receipts	232,384	146,004	495,649	144,333	45,534	500,418
Expenditures	(251,817)	-	-	-	-	-
Ending Balance	112,116	258,120	753,768	898,102	943,363	1,444,054

Receipts include $540,844 in fees and $40,426 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $9,991.

There were no disbursements for fiscal year 2021-2022.

During Fiscal Year 2021-2022, the current cash balance exceeds the cumulative fee collection over the past five years by $1,805,377. As a result, the City must make “findings” in accordance with the requirements of Government Code Section 66006.

Findings:

The Water Source Acquisition Fund is intended to provide funds for the purchase of approved water stocks and rights, as set forth in the Redlands Municipal Code. As the City expands its housing stock and non-residential development, it is critical that the City plan on acquiring supplies sufficient, not just to serve development needs, but also to meet its annual groundwater recharge/replenishment requirements, which are affected by new development. To this end, the following water rights and stocks have been identified, but the strategy and timeline to acquire rights and stocks from this list is currently under development. The City estimates that a more formal plan for water source acquisition will be developed and adopted by Council during the calendar year 2023.

- Crafton Water Company
- Redlands Heights Water Company
- South Mountain Water Company

- Bear Valley Mutual Water Company

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

(509) Water Capital Improvement Fund – The Water Capital Improvement Fund is established per Redlands Municipal Code Chapter 3.48 to implement the Redlands General Plan and finance the construction of water capital facilities and improvements to provide new capacity required to serve new development requiring water service from the city. This chapter establishes the methods of collecting fees for financing the construction of the water facilities. Fee amounts are set by Resolution No. 7951.

The following table shows the balances, receipts, and expenditures of the Water Capital Improvement Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	(0)	51,246	(0)	(0)	(0)	(0)
Receipts	604,149	654,396	2,191,906	1,132,991	772,122	1,624,228
Expenditures	(552,902)	(705,643)	(2,191,906)	(1,132,991)	(772,122)	(1,624,228)
Ending Balance	51,246	(0)	(0)	(0)	(0)	(0)

Receipts include $1,624,228 in fees.

Disbursements include a payment to the Water Fund (501) in the amount of $1,624,228. This represents a 4% share of that fund's debt service, with the Water Operating Fund picking up the other 96% share of debt service. Projects financed through this debt service include the Agriculture Drainage Water Management Loan Program, used to finance the Texas Street Wellhead Treatment Project, and the Clean Water State Revolving Fund loan agreement that financed the construction of the Hinckley water treatment plant upgrade.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

(519) Solid Waste Capital Improvement Fund - The Solid Waste Capital Improvement Fund is established per the Redlands Municipal Code Chapter 3.70 to implement the Redlands General Plan and finance the cost of solid waste capital facilities and equipment to provide new capacity required to serve development requiring solid waste service from the city. Included are landfill, material recovery and transfer station facilities, solid waste collection equipment, transfer equipment, and other capital facilities equipment. Fee amounts are set by Resolution No. 7951.

The following table shows the balances, receipts, and expenditures of the Solid Waste Capital Improvement Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	3,924,397	4,152,887	4,259,811	4,556,559	4,452,524	5,157,797
Receipts	320,261	106,924	446,896	453,305	163,410	284,311
Expenditures	(91,771)	-	(150,148)	(557,340)	(15,477)	(1,089,511)
Ending Balance	4,152,887	4,259,811	4,556,559	4,452,524	4,600,457	4,352,597

Receipts include $435,148 in fees and $150,837 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $41,478.

Disbursements include $1,089,511 towards the purchase of three new automated side-loading trucks to add new routes for solid waste, recycling, and green waste as a result of the recent addition of single-family residences, as well as 20% of the lease payment on a new D7 dozer used in landfill operations.

The current cash balance exceeds the cumulative fee collection over the past five years by $3,189,104. As a result, the City must make "findings" in accordance with the requirements of Government Code Section 66006.

Findings:

Monies collected into the Solid Waste Capital Improvements Fund, including the existing excess cash, are expected to be used for the developer-paid portion of major capital improvements. The project list includes capital improvement projects as well as capital equipment replacement, with a total estimated cost allocated to new development of approximately $1,220,000.

1. **Phase V landfill expansion** (FY 2024) –costs estimated at approximately $5 million. New Development Fair Share – 20% ($1,000,000).
2. **Expansion of the leachate and landfill gas recovery systems** (FY 2023) is necessary to provide extraction and collection on landfill expansion areas as well as capital improvement to the existing system layout in order to maintain regulatory compliance with State and Federal requirements. Estimated costs depend on the scope of the project and are estimated at $600,000 to $700,000 for construction and engineering. New Development Fair Share – 20% per project ($120,000 - $140,000).
3. **Landfill operation heavy equipment** (ongoing) the projected expense for capital replacement of landfill equipment ranges from $1.5 to 2.3 million dollars and covers off-road vehicles such as Loaders and Graders as well as on-road vehicles such as Fuel Trucks and Water Trucks. New Development Fair Share – 20% per project ($300,000 - $460,000).

Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which the project will be completed. At this time, no other sources of revenue are projected.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

(529) Sewer Capital Improvement Fund - The Sewer Capital Improvement Fund is established per Redlands Municipal Code Chapter 3.44 to implement the Redlands General Plan and finance the construction of wastewater capital facilities to provide new capacity required to serve development requiring sewer service from the City. Included are wastewater treatment plant facilities, sewer trunk lines sized larger than the eight-inch local collection mains and appurtenances used to serve property frontage, and other capital facilities and appurtenances. Fee amounts are set by Resolution No. 7951.

The following table shows the balances, receipts, and expenditures of the Sewer Capital Improvement Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	2,624,406	2,633,256	2,846,876	5,041,145	6,115,482	0
Receipts	777,381	508,336	2,395,041	1,275,108	845,212	1,650,192
Expenditures	(768,532)	(294,716)	(200,771)	(200,771)	(6,960,694)	(55,858)
Ending Balance	2,633,256	2,846,876	5,041,145	6,115,482	0	1,594,334

Receipts include $1,697,186 in fees and $46,994 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $17,425.

Disbursements included $55,858 in project cost-sharing to install a large sewer trunk line parallel to Alabama Street between Pioneer Avenue and Palmetto Avenue. This project expands the capacity of the current trunk line from 24 to 36 inches, which will be needed as the property through which the line runs is currently under development.

No refunds of fees are required, and none have been made during Fiscal Year 2020-2021.

(532) Nonpotable Capital Improvement Fund - The Nonpotable Capital Improvement Fund is established per the Redlands Municipal Code Chapter 3.53 to implement the Redlands General Plan and finance the construction of nonpotable capital facilities to provide new capacity required to serve development requiring nonpotable water service from the City. Included are mains and appurtenances used to serve property frontage, and other capital facilities and appurtenances. Fee amounts are set by Resolution No. 7951.

The following table shows the balances, receipts, and expenditures of the Nonpotable Capital Improvement Fund for the current and last five fiscal years:

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Beg. Balance	852,751	1,117,268	1,150,025	1,254,427	1,331,477	1,536,923
Receipts	264,517	32,757	104,402	77,050	205,446	30,445
Expenditures	-	-	-	-	-	(53,262)

Ending Balance	1,117,268	1,150,025	1,254,427	1,331,477	1,536,923	1,514,107

Receipts include $72,506 in fees and $42,061 in negative investment income. Negative investment income is caused by GASB 31 for the temporary fair value adjustment of investments held by the City at June 30, 2022. Actual investment income was $12,081.

Disbursements include $53,262 expended on the design and preparation plans and specifications for two recycled water reservoirs to be constructed at the City's Wastewater Treatment Plant.

For continuity, it is worth noting that with the conversion of the City's financial accounting system, this fund was renumbered from Fund 539 Nonpotable Capital Improvement Fund to Fund 532 Nonpotable Capital Improvement Fund.

The current cash balance exceeds the cumulative fee collection over the past five years by $918,471. As a result, the City must make "findings" in accordance with the requirements of Government Code Section 66006.

Findings:

Monies collected into the Nonpotable Capital Improvements Fund, including the existing excess cash, are expected to be used for several projects that will enhance and expand the nonpotable water distribution system pressure zones. Specifically, major projects under evaluation include:

1. Construction of a nonpotable reservoir, booster station and pipeline needed to operate Pressure Zones 1350 and 1570. These two pressure zones are the City's two lowest and, as such, are particularly sensitive to increases in demand from new growth and development. Cost estimates for the project total $4.8 million.

Because development impact fee revenue fluctuates and is difficult to forecast, there is no estimate for the date on which the project will be completed. At this time, no other sources of revenue are projected.

No refunds of fees are required, and none have been made during Fiscal Year 2021-2022.

RESOLUTION NO. 8426

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS APPROVING THE CITY'S ANNUAL DEVELOPMENT IMPACT FEE REPORT AND MAKING CERTAIN FINDINGS WITH RESPECT THERETO

WHEREAS, Government Code Section 66006 requires local agencies that impose development impact fees upon development projects to deposit such fees in separate capital facilities accounts to avoid commingling of such fees with other revenues and funds of the local agency, and to expend those fees only for the purposes collected; and

WHEREAS, for each separate capital facility account or fund established, the local agency shall, within 180 days after the last day of each fiscal year, make available to the public the following information for the fiscal year:

A. A brief description of the fee;
B. The amount of the fee;
C. The beginning and ending fund balance of the account;
D. The amount of the fees collected and the interest earned;
E. The identification of the improvements on which the fees were expended, including the percentage of the cost of the public improvements funded with fees;
F. The identification of the commencement construction date for incomplete improvements for which sufficient funds have been collected;
G. A description of each interfund transfer or loan, and the date of such loan, the repayment date, and the interest rate;
H. The amount of refunds of fees, if any made pursuant to Government Code Section 66001; and

WHEREAS, Government Code Section 66001 requires local agencies, for the fifth fiscal year following the first deposit of fees into an account or fund, and every five years thereafter, to make certain findings with respect to that portion of the account or fund remaining unexpended, whether committed or uncommitted; and

WHEREAS, the annual report reflecting the balance in each capital improvement fee account, the fee, interest, income, and the amount of expenditure upon public improvements, and the amount of refunds made for the fiscal year, if any, has been available for public review as required by law;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section1. The City Council hereby approves the Annual Report of Development Impact Fees for the year ended June 30, 2022.

Section 2. The City Council finds and determines that with respect to development impact fees remaining unexpended or uncommitted in their respective accounts, for five (5) or more years after deposit of the fee, as follows:

A. New development in the City will continue to generate additional demands on public facilities throughout the City, and will contribute to the impact upon existing public facilities.

B. There is reasonable relationship between the fees' uses and the types of development for which the fees are charged, as these reasonable relationships are described in more detail in the City's Development Impact Fee studies and improvement master plans.

C. There is a reasonable relationship between the need for the public facility and the type of development project upon which the fee is imposed.

D. The fees expected to be generated by new development will not exceed the costs for construction of the public facilities identified in the City's improvement master plans and as set forth in the Developer Impact Fee study.

E. That the Annual Report identifies all sources and amounts of funding anticipated to complete financing for any incomplete improvements.

F. That the Annual Report designates the approximate dates on which fees are expected to be deposited for the financing of any incomplete improvements.

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

City of Redlands
Public Facilities Development Fees
Cash Transactions for Fiscal Year 2022
Prepared 10/5/2022

DESCRIPTION	Police Facilities	Fire Facilities	Library Facilities	Gen Gov't Facilities	Comm Ctr Facilities	TOTAL
Beginning Cash Balance (July 1)	$ 471,706.27	$ 463,557.01	$ 0.00	$ 0.00	$ 68,208.42	$ 1,003,471.71
Impact Fee Receipts	22,322.34	427,544.60	133,379.23	511,326.70	-	1,094,572.87
Misc. Receipts	-	-	-	-	-	-
Investment Income	-	-	-	-	-	-
Expenditures**	-	(20,500.00)	-	-	-	(20,500.00)
Interest on Loans	-	-	(956.00)	(31,254.99)	-	(32,210.99)
2% Admin Charge	(446.45)	(8,550.89)	(2,667.58)	(10,226.53)	-	(21,891.46)
Debt Service - COPs	-	-	-	-	-	-
Debt Service - Fire	-	-	-	-	-	-
Loan from (repayment to):						
- General Fund (101)	-	-	-	(501,100.17)	-	(501,100.17)
- General Fund (101) Int	-	-	-	31,254.99	-	31,254.99
- Open Space Fund (227)	-	-	-			-
- Park/Open Space Dev Fund (250)	-	-	-			-
- Storm Drain Const Fund (405)	-	-	(58,403.00)	-	-	(58,403.00)
- Storm Drain Const Fund (405) Int			325.00			325.00
- Water Fund (501)	-	-	(72,308.65)	-	-	(72,308.65)
- Water Fund (501) Int	-	-	631.00	-	-	631.00
Ending Cash Balance (June 30)	$ 493,582.16	$ 862,050.72	$ 0.00	$ 0.00	$ 68,208.42	$ 1,423,841.30
Liabilities & Equity:						
Loans Payable	(0.00)	0.00	3,784,436.40	4,091,574.35	-	7,876,010.75
Fund Balance	493,582.16	862,050.72	(3,784,436.40)	(4,091,574.35)	68,208.42	(6,452,169.45)
Total Liabilities & Equity	$ 493,582.16	$ 862,050.72	$ -	$ 0.00	$ 68,208.42	$ 1,423,841.30

** = excludes accounts payable

Notes: 1. Although the Public Facilities Development Fund is accounted for as a special revenue fund, each fee must be accounted for separately (Government Code Section 66001 et seq, commonly known as "AB 1600").

2. The fees collected for Fire Facilities, Library and City Yard were previously committed toward one-half of the annual debt service requirements of the 2003 Lease Revenue Refunding Certificates of Participation which refunded the 1993 Refunding of the 1986/87 Projects Certificates of Participation. Annual debt service on this one-half portion was charged to each of the three fees based upon an allocated share of the original proceeds used for acquisition and construction activities. The General Fund was responsible for the other half of the total annual debt service requirements. The debt was fully defeased in FY 2018-19. Loan amounts from the General Fund, Water and Storm Drain Funds remain outstanding.

3. When fees collected for these three categories of public facilities were not sufficient to cover their share of the annual debt service, the General Fund made loans to each category as necessary. These loans are governed by Resolution No. 7354, the City's interfund loan policy.

4. In FY 2010-11, for one-time only, Council authorized loans from other specific funds to cover, as necessary, the public facilities share of debt service. These loans, with interest at the annual LAIF rate, are to be repaid in proportion to the loan balances, **before** repayment to the General Fund. Actual loans required were as follows: General Fund,$300,753; Open Space, $130,000: Park/Open Space Dev, $130,000; Storm Drain, $100,000; Water, $150.000.

RESOLUTION NO. 7951

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS ESTABLISHING DEVELOPMENT IMPACT FEES FOR ACCESSORY DWELLING UNITS WITH RESPECT TO SEWER, WATER, SOLID WASTE, ACQUISITION OF WATER STOCK AND WATER RIGHTS, OPEN SPACE AND PARKS, TRANSPORTATION, AND PUBLIC FACILITIES, RESTATING SUCH DEVELOPMENT IMPACT FEES FOR ALL OTHER TYPES OF DEVELOPMENT, AND RESCINDING RESOLUTION NO. 7907

WHEREAS, Chapters 3.32, 3.44, 3.48, 3.54, 3.56, 3.60, 3.70 and 13.40 of the Redlands Municipal Code establish, respectively, Open Space and Parks, Sewer Capital Improvement, Water Capital Improvement, Transportation Improvements, Storm Drain Facilities, Public Facilities Fees, Solid Waste Improvement, and the Acquisition of Water Stock And Water Rights, to implement the City's General Plan to ensure that public facilities improvements which meet City standards are available concurrent with the need caused for such facilities by new development in the City; and

WHEREAS, it is now the desire of the City Council of the City of Redlands ("this City Council") to establish development impact fees for Accessory Dwelling Units; and

WHEREAS, on August 31, 2018, DTA, formally known as David Taussig and Associates, prepared a study in accordance with Government code section 66000 et seq. for the City recommending the amounts of development impact fees which may be imposed for Accessory Dwelling Units; and

WHEREAS, the development impact fee provisions of the Redlands Municipal Code provide that the specific amounts of fees shall be established by resolution of this City Council; and

WHEREAS, by purposes of efficiency, it is further the desire of this City Council to establish the development impact fees for Accessory Dwelling Units and restate the development impact fees for all other categories of development within this one resolution;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Redlands as follows:

Section 1. The Open Space and Parks Fee is hereby established in the following amounts:

	Residential Development	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$2,454.85
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$1,841.14
2.	Single Family	$3,959.94
3.	Multi-Family	$3,624.62
4.	Transit Oriented	$2,454.85

Section 2. The Library Fee is hereby established in the following amounts:

	Residential Development	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$164.02

	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$123.01
2.	Single Family	$264.58
3.	Multi-Family	$242.18
4.	Transit Oriented	$164.02

Section 3. The Storm Drain Facilities Fee is hereby established in the following amounts:

	Residential	Fee per dwelling unit
1.	Single Family	$700.00
2.	Multi-Family	$343.00
3.	Transit Oriented	$343.00

	Non-Residential	Fee per 1,000 square feet of building area
1.	Retail	$170.00
2.	Commercial	$170.00
3.	Food Service and Entertainment	$170.00
4.	Office	$170.00
5.	Warehousing – Standard	$150.00
6.	Warehousing – High Cube	$150.00
7.	Manufacturing and Assembly	$150.00
8.	Industrial/Other	$150.00
9.	Institutional and Health Care	$150.00

	Non-Residential	Fee per room (single guest room or suite)
1.	Hotel / Motel	$170.00

Section 4. The Public Facilities Fee is hereby established in the following amounts:

	Residential Development	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$425.55
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$319.16
2.	Single Family	$686.45
3.	Multi-Family	$628.33
4.	Transit Oriented	$425.55

	Non-Residential	Fee per 1,000 square feet of building area
1.	Retail	$197.03
2.	Commercial	$83.13
3.	Food Service and Entertainment	$1,068.13
4.	Office	$852.83
5.	Warehousing – Standard	$266.06
6.	Warehousing – High Cube	$44.83

7.	Manufacturing and Assembly	$230.16
8.	Industrial/Other	$217.54
9.	Institutional and Health Care	$ 439.10

	Non-Residential	Fee per room (single guest room or suite)
1.	Hotel / Motel	$198.70

Section 5. The Fire Protection Facilities Fee is hereby established in the following amounts:

	Residential Development	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$357.74
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$268.31
2.	Single Family	$577.08
3.	Multi-Family	$528.21
4.	Transit Oriented	$357.74

	Non-Residential	Fee per 1,000 square feet of building area
1.	Retail	$165.64
2.	Commercial	$69.89
3.	Food Service and Entertainment	$897.94
4.	Office	$716.94
5.	Warehousing – Standard	$223.67
6.	Warehousing – High Cube	$37.69
7.	Manufacturing and Assembly	$193.49
8.	Industrial/Other	$182.88
9.	Institutional and Health Care	$369.14

	Non-Residential	Fee per room (single guest room or suite)
1.	Hotel / Motel	$167.04

Section 6. The Police Facilities Fee is hereby established in the following amounts:

	Residential Development	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$18.67
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$14.00
2.	Single Family	$30.11
3.	Multi-Family	$27.56
4.	Transit Oriented	$18.66

	Non-Residential	Fee per 1,000 square feet of building area
1.	Retail	$8.64
2.	Commercial	$3.65
3.	Food Service and Entertainment	$46.85
4.	Office	$37.40

5.	Warehousing – Standard	$11.67
6.	Warehousing – High Cube	$1.97
7.	Manufacturing and Assembly	$10.09
8.	Industrial/Other	$9.54
9.	Institutional and Health Care	$19.26

	Non-Residential	Fee per room (single guest room or suite)
1.	Hotel / Motel	$8.71

Section 7. The Transportation System Improvements Fee is hereby established in the following amounts:

	Residential Development	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$937.54
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$703.16
2.	Single Family	$1,512.36
3.	Multi-Family	$1,048.32
4.	Transit Oriented	$1,074.63

	Non-Residential	Fee per 1,000 square feet of building area
1.	Retail	$3,438.17
2.	Commercial	$3,331.11
3.	Food Service and Entertainment	$6,977.94
4.	Office	$2,007.94
5.	Warehousing – Standard	$709.44
6.	Warehousing – High Cube	$262.62
7.	Manufacturing and Assembly	$388.46
8.	Industrial/Other	$1,271.14
9.	Institutional and Health Care	$3,009.17

	Non-Residential	Fee per room (single guest room or suite)
1.	Hotel / Motel	$1,049.11

In lieu of using the San Bernardino County Congestion Management Program manual, the transportation system improvements fee for a non-residential project may be determined, at the discretion of the Municipal Utilities and Engineering Director, by use of an approved engineering traffic study to establish a more precise number of trips generated by that specific non-residential project to determine Transportation fees at the fee rate of $334.29 per trip which is the same per trip rate used in the establishment of the specific transportation rates listed above.

Section 8. The Sewer Capital Improvement Fee is hereby established in the following amounts

	Residential	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$824.65
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$618.49

2.	Single Family	$3,130.00
3.	Multi-Family	$2,295.00
4.	Building Permit issued prior To November 1, 1961	$366.00
5.	Senior Restricted dwelling unit	$1,774.00

	Non-Residential	Fee per 100 gallons per day estimated flow
1.	Retail/Commercial	$1,482.00

Note, the Sewer Capital Improvement Fee shall not be applicable to any accessory dwelling unit created within the existing space of a single family residence or accessory structure, including but not limited to, a studio, pool house, or other similar structure.

Section 9. The Water Capital Improvement Fee is hereby established in the following amounts

	Residential	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$1,146.08
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$859.56
2.	Single Family (more than 1 acre)	$9,431.00
	Single Family (more than 21,000 sq. ft.)	$6,896.00
	Single Family (11,000 - 21,000 sq. ft.)	$5,623.00
	Single Family (less than 11,000 sq. ft.)	$4,350.00
3.	Multi-Family	$2,181.00
4.	Senior Restricted dwelling unit	$1,096.00

	Non-Residential	Fee per 100 cubic ft. per month estimated demand
1.	Retail/Commercial	$188.00

Note, the Water Capital Improvement Fee shall not be applicable to any accessory dwelling unit created within the existing space of a single family residence or accessory structure, including but not limited to, a studio, pool house, or other similar structure.

Section 10. The Solid Waste Capital Improvement Fee is hereby established in the following amounts

	Residential	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$325.00
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$325.00
2.	Single Family	$650.00
3.	Multi-Family	$325.00

	Non-Residential	Fee PPD estimated waste stream
1.	Retail/Commercial	$52.00

Section 11. The Acquisition of Water Stocks and Water Rights Fee is hereby established in the following amounts

	Residential	Fee per dwelling unit
1.	Accessory Dwelling Unit (more than 700 sq. ft.)	$206.29
	Accessory Dwelling Unit (less than or equal to 700 sq. ft.)	$154.72
2.	Single Family (more than 1 acre)	$1,701.00
	Single Family (more than 21,000 sq. ft.)	$1,242.00
	Single Family (11,000 - 21,000 sq. ft.)	$1,023.00
	Single Family (less than 11,000 sq. ft.)	$783.00
3.	Multi-Family	$397.00
4.	Senior Restricted dwelling unit	$167.00

	Non-Residential	Fee per 100 cubic ft. per month estimated demand
1.	Retail/Commercial	$33.00

Note, the Water Stocks and Water Rights Fee shall not be applicable to any accessory dwelling unit created within the existing space of a single family residence or accessory structure, including but not limited to, a studio, pool house, or other similar structure.

Section 12. Notwithstanding any other section of this resolution, the development impact fees for Accessory Dwelling Units established herein shall take effect thirty (30) days after the effective date of City of Redlands Ordinance No. 2880.

Section 13. This resolution shall take effect on April 2, 2019.

ADOPTED, SIGNED AND APPROVED this 2nd day of April, 2019.

Paul W. Foster, Mayor

ATTEST:

Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing Resolution was duly adopted by the City Council at a regular meeting thereof, held on the 2nd day of April, 2019, by the following vote:

AYES:	Councilmembers Barich, Tejeda, Momberger, Davis; Mayor Foster
NOES:	None
ABSTAIN:	None
ABSENT:	None

Jeanne Donaldson, City Clerk

City Council Meeting **J. 12.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Authorize an annual maintenance payment to Motorola Solutions, Inc. in the amount of $96,853.66 for the Police Department's Spillman Computer Aided Dispatch/Records Management System (Management Services/Finance Director Garcia)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move that the City Council authorize payment of the annual invoice for the Police Department's Spillman Computer Aided Dispatch/Records Management System to Motorola Solutions, Inc. in the amount of $96,853.66

RECOMMENDATION:

City staff recommends that the City Council authorize payment of the annual invoice for the Police Department's Spillman Technology or Computer Aided Dispatch/Records Management System to Motorola Solutions, Inc. in the amount of $96,853.66

DISCUSSION:

Motorola Solutions, Inc, is the vendor and owner of the Police Department's Spillman Computer Aided Dispatch/Records Management System (CAD/RMS). Since it was installed and deployed over ten years ago, Spillman, the developer, has provided maintenance and support to City staff through the annual maintenance agreement which has been renewed every year since. As with many other software applications in use by the City (and is the case in all other jurisdictions for that matter), Motorola is the only provider of software maintenance and support for the Spillman CAD/RMS system and is, as such, a sole source. Payment of the annual invoice to Motorola Solutions ensures

access to routine software updates and technical support.

ALTERNATIVES:

Not Applicable.

STRATEGIC PLAN:

Not Applicable.

SUBMITTED BY:
Danielle Garcia, Management Service/Finance Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Dana Abramovitz-Daniel, Procurement Manager
Christopher R. Catren, Chief of Police

PREPARED BY:
Valerie Abrego, Administrative Assistant II

Fiscal Impact

Fiscal Year:	2022-2023
Appropriation Required Y/N:	No
Budgeted Y/N:	Yes
Account No.:	604900

Discussion:

The annual maintenance for this system totals $96,853.66. Funding for this expense was included in the FY 2023 budget for Management Services/DoIT.

Attachments

Motorola Spillman FY 2022-2023 Renewal Invoice

MOTOROLA SOLUTIONS

ORIGINAL INVOICE

Motorola Solutions, Inc.
500 West Monroe
Chicago IL 60661
United States
Federal Tax ID: 36-1115800

Transaction Number	Transaction Date	Transaction Total
8230386303	07-OCT-2022	**96,853.66 USD**

P.O. Number	P.O. Date	Customer Account No
		1011860485

Payment Terms	Payment Due Date
Net Due in 30 Days	06-NOV-2022

Visit our website at www.motorolasolutions.com

Bill To Address

REDLANDS POLICE DEPARTMENT
ATTN: Accounts Payable
P.O. BOX 1025
REDLANDS CA 92373
United States

Ship To Address

REDLANDS POLICE DEPARTMENT
30 CAJON STREET
1270 W PARK #C
REDLANDS CA 92373
United States

IMPORTANT INFORMATION

For all invoice payment inquiries contact
SLT8WB@motorolasolutions.com
Telephone: 800-247-2346
Fax: +1(631)883-4238

Sales Order(s): USC000202163-R02-JUN-22 23:35:46

SPECIAL INSTRUCTIONS / COMMENTS
General Comment: Regular Invoice

Line Item #	Item Number	Description	Qty.	Unit Price (USD)	Amount (USD)
		Equipment at Site: 1862975 1011860485 30 CAJON STREET 1270 W PARK #C REDLANDS CA 92373 United States			
1	SSV00S00012A-SP	CAD MAINTENANCE (ENHANCED) - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	1,885.98	1,885.98
2	SSV00S00181A-SP	E9-1-1 INTERFACE MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	1,885.98	1,885.98
3	SSV00S00184A-SP	EQUIPMENT MAINTENANCE MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	0.00	0.00

Please detach here and return the bottom portion with your payment

Payment Coupon

Transaction Number	Customer Account No	Payment Due Date	Transaction Total	Amount Paid
8230386303	1011860485	06-NOV-2022	**96,853.66 USD**	

Please put your Transaction Number and your Customer Account Number on your payment for prompt processing.

REDLANDS POLICE DEPARTMENT
ATTN: Accounts Payable
P.O. BOX 1025
REDLANDS CA 92373
United States

Payment Transfer Details

CHICAGO
WIRE Routing Transit Number: 026009593
ACH/EFT Routing Transit Number: 111000012
SWIFT: BOFAUS3N
Bank Account No: 3756319819

Send Payments To:

MOTOROLA SOLUTIONS
Motorola Solutions, Inc.
13104 Collections Center Drive
Chicago IL 60693
United States
Please provide your remittance details to:
US.remittance@motorolasolutions.com

DIVERSION CONTRARY TO EXPORT CONTROL LAW IS PROHIBITED

MOTOROLA SOLUTIONS

Motorola Solutions, Inc.
500 West Monroe
Chicago IL 60661
United States
Federal Tax ID: 36-1115800

ORIGINAL INVOICE

Transaction Number	Transaction Date	Transaction Total
8230386303	07-OCT-2022	**96,853.66 USD**

P.O. Number	P.O. Date	Customer Account No
		1011860485

Payment Terms	Payment Due Date
Net Due in 30 Days	06-NOV-2022

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Line Item #	Item Number	Description	Qty.	Unit Price (USD)	Amount (USD)
4	SSV00S00262A-SP	IMAGING MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	5,305.89	5,305.89
5	SSV00S00301A-SP	LICENSES AND PERMITS MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	907.11	907.11
6	SSV00S00331A-SP	MOBILE ARREST FORM MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	3,579.52	3,579.52
7	SSV00S00334A-SP	MOBILE FIELD REPORT WITH FIELD INTERVIEW MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	2,789.02	2,789.02
8	SSV00S00352A-SP	MOBILE STATE & NATIONAL QUERIES MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	732.46	732.46
9	SSV00S00354A-SP	MOBILE VOICELESS CAD MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	3,836.92	3,836.92
10	SSV00S00396A-SP	NON-CUSTODIAL ARREST MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	0.00	0.00
11	SSV00S00015A-SP	HUB MAINTENANCE (ENHANCED) - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	32,108.89	32,108.89
12	SSV00S00432A-SP	PERSONNEL MANAGEMENT MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	2,214.97	2,214.97
13	SSV00S00438A-SP	PIN MAPPING MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	3,192.48	3,192.48
14	SSV00S00447A-SP	PREMISES AND HAZMAT INFORMATION MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	907.11	907.11
15	SSV00S00480A-SP	SENTRYX GIS (GEOBASE) MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	0.00	0.00
16	SSV00S00527A-SP	TRAFFIC INFORMATION MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	1,570.52	1,570.52
17	SSV00S00566A-SP	XML ACCIDENT INTERFACE MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	3,132.90	3,132.90
18	SSV00S006026-SP	MOBILE SERVER CAD SHARE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	10,814.88	10,814.88
19	SSV00S00028A-SP	FLEX TOUCH MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	1,439.19	1,439.19
20	SSV00S00033A-SP	LAW RECORDS MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	1,483.86	1,483.86

DIVERSION CONTRARY TO EXPORT CONTROL LAW IS PROHIBITED

MOTOROLA SOLUTIONS

Motorola Solutions, Inc.
500 West Monroe
Chicago IL 60661
United States
Federal Tax ID: 36-1115800

ORIGINAL INVOICE

Transaction Number	Transaction Date	Transaction Total
8230386303	07-OCT-2022	**96,853.66 USD**

P.O. Number	P.O. Date	Customer Account No
		1011860485

Payment Terms	Payment Due Date
Net Due in 30 Days	06-NOV-2022

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Line Item #	Item Number	Description	Qty.	Unit Price (USD)	Amount (USD)
21	SSV00S00036A-SP	MOBILE AVL AND MAPPING MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	7,380.06	7,380.06
22	SSV00S00038A-SP	MOBILE RECORDS MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	2,214.97	2,214.97
23	SSV00S00052A-SP	STATELINK MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	3,698.84	3,698.84
24	SSV00S00072A-SP	CAD MAPPING MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	3,927.64	3,927.64
25	SSV00S00164A-SP	DATA WAREHOUSE INTERFACE MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	0.00	0.00
26	SSV00S00050A-SP	IBR MAINTENANCE - STANDARD:01-OCT-2022:30-SEP-2023: Service From: 01-OCT-2022 Service To: 30-SEP-2023	1	1,844.47	1,844.47
		Site CA Tax at 0%			0.00
		Site Total			96,853.66

Total Tax CA 0.00	**USD Subtotal**	**96,853.66**
	USD Total Tax	**0.00**
	USD Total	**96,853.66**
	USD Amount Due	**96,853.66**

DIVERSION CONTRARY TO EXPORT CONTROL LAW IS PROHIBITED

City Council Meeting **J. 13.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Receive and file the Annual Reports for Community Facility District (CFD) No. 2001-1 and Community Facility District (CFD) No. 2003-1 pursuant to Local Agency Special Tax and Bond Accountability Act (SB 165) (Management Services/Finance Director Garcia)

MOTION(S):

I move to receive and file the annual reports for CFD 2001-1 and CFD 2003-1 pursuant to the Local Agency Special Tax and Bond Accountability Act (SB 165).

RECOMMENDATION:

Not applicable.

DISCUSSION:

Government Code Section 53411 requires that on or after January 1, 2001, any local bond measure that is subject to voter approval that would provide for the sale of bonds by a local agency, provide accountability measures that include the issuance of an annual report from the chief fiscal officer to the governing body of the local agency. This report should include a description of the purpose of the bond, the amount of funds collected and expended, and the status of the authorized project. The reports cover the period from July 1, 2021, through June 30, 2022.

ALTERNATIVES:

Not applicable.

STRATEGIC PLAN:

Not applicable.

SUBMITTED BY:
Danielle Garcia, Management Services/Finance Director

RECOMMENDED BY:
Charles M. Duggan, Jr., City Manager

REVIEWED BY:
Janice McConnell, Assistant City Manager

Fiscal Impact

Fiscal Year: 2021-2022

Discussion:

There is no fiscal impact associated with the motion to receive and file this report.

Attachments

SB 165 2001-1 Annual Report
SB 165 2003-1 Annual Report

CITY OF REDLANDS
COMMUNITY FACILITIES DISTRICT NO. 2001-1
(NORTHWEST DEVELOPMENT PROJECT)
SPECIAL TAX BONDS, SERIES 2001

ANNUAL REPORT

The purpose of this report is to comply with the provisions of the Local Agency Special Tax and Bond Accountability Act (the "Act"). The Act provides that any local special tax measure that is subject to voter approval on or after January 1, 2001, that would provide for the imposition of a special tax by a local agency shall require the chief fiscal officer of the levying local agency to file a report with its governing body no later than January 1, 2002, and at least once a year thereafter. The annual report shall contain both of the following:

- The amount of funds collected and expended.
- The status of any project required or authorized to be funded as identified in subdivision (a) of Section 50075.1 and Article 1.5, Section 53410.

The City of Redlands issued $9,255,000 in Community Facilities District No. 2001-1 Special Tax Bonds in September 2001. The bonds were issued to finance the acquisition and construction of certain public facilities including streets, storm drain, traffic signals, potable water facilities, non-potable water facilities and sewer facilities required for the development of the property in the district.

Separate accounts have been established with a third party trustee to administer the receipt and subsequent disbursement of the bond proceeds as the City accepts completed improvements. A summary sheet showing the receipt of funds as well as all subsequent disbursements made during the reporting period (from July 1, 2021 to June 30, 2022) is attached as a part of this report. All of the facilities to be funded by CFD No. 2001-1 bond proceeds have been completed.

CITY OF REDLANDS CFD NO. 2001-1
NORTHWEST DEVELOPMENT PROJECT
SB165 FUND SUMMARY

Fund	Beginning Balance as of 7/1/21	Funds Received (7/1/21 through 6/30/22)	Funds Expended (7/1/21 through 6/30/22)	Ending Balance as of 6/30/22
Administrative Expense Fund	$47,404	$23,003	($15,424)	$54,983
Bond Fund	$19	$724,388	($724,388)	$19
Costs of Issuance Fund	$0	$0	$0	$0
Escrow Fund	$0	$0	$0	$0
Improvement Fund	$0	$0	$0	$0
Rebate Fund	$0	$0	$0	$0
Redemption Fund	$0	$0	$0	$0
Reserve Fund	$741,440	$37	($45)	$741,432
Special Tax Fund	$654,984	$754,431	($747,343)	$662,072
Grand Total	$1,443,847	$1,501,859	($1,487,199)	$1,458,506

CITY OF REDLANDS
COMMUNITY FACILITIES DISTRICT NO. 2003-1
(REDLANDS BUSINESS CENTER)
SPECIAL TAX BONDS, SERIES 2004

ANNUAL REPORT

The purpose of this report is to comply with the provisions of the Local Agency Special Tax and Bond Accountability Act (the "Act"). The Act provides that any local special tax measure that is subject to voter approval on or after January 1, 2001, that would provide for the imposition of a special tax by a local agency shall require the chief fiscal officer of the levying local agency to file a report with its governing body no later than January 1, 2002, and at least once a year thereafter. The annual report shall contain both of the following:

- The amount of funds collected and expended.
- The status of any project required or authorized to be funded as identified in subdivision (a) of Section 50075.1 and Article 1.5, Section 53410.

The City of Redlands issued $9,545,000 in Community Facilities District No. 2003-1 Special Tax Bonds in March 2004. The bonds were issued to finance the acquisition and construction of certain street improvements, sewers, storm drains, water distribution facilities, and other public improvements to be owned and operated by the City of benefit to the property in the district.

Separate accounts have been established with a third party trustee to administer the receipt and subsequent disbursement of the bond proceeds as the City accepts completed improvements. A summary sheet showing the receipt of funds as well as all subsequent disbursements made during the reporting period (from July 1, 2021 to June 30, 2022) is attached as a part of this report. All of the facilities to be funded by CFD No. 2003-1 bond proceeds have been completed.

CITY OF REDLANDS CFD NO. 2003-1
REDLANDS BUSINESS CENTER
SB165 FUND SUMMARY

Fund	Beginning Balance as of 7/1/21	Funds Received (7/1/21 through 6/30/22)	Funds Expended (7/1/21 through 6/30/22)	Ending Balance as of 6/30/22
Administrative Expense Fund	$56,056	$20,503	($13,932)	$62,627
Bond Fund	$956	$748,731	($748,685)	$1,002
Costs of Issuance Fund	$0	$0	$0	$0
Escrow Fund	$0	$0	$0	$0
Improvement Fund	$0	$0	$0	$0
Reserve Fund	$915,421	$46	($46)	$915,421
Special Tax Fund	$562,818	$788,182	($769,185)	$581,816
Grand Total	$1,535,251	$1,557,462	($1,531,848)	$1,560,865

City Council Meeting **J. 14.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Reject all bids for the Security Fencing Installation Project (Municipal Utilities and Engineering Director Harris)

MOTION(S):

If City Council determines the staff recommendation is appropriate, the following motion is provided:

I move that City Council reject all bids received for construction of the Security Fencing Installation Project.

RECOMMENDATION:

Staff recommends City Council reject all bids received for construction of the Security Fencing Installation Project.

DISCUSSION:

Carollo Engineers, Inc. recently completed a Risk and Resilience Assessment (RRA) and prepared an Emergency Response Plan (ERP) for the City's water utility infrastructure in accordance with requirements mandated by the America Water Infrastructure Act of 2018 (AWIA). The goal of the RRA was to identify potential security threats and opportunities to improve defense strategies against them. The RRA recommends the installation of perimeter security fencing at all water treatment facilities and groundwater well sites to improve physical security of the City's most critical water infrastructure assets.

MUED staff developed a construction plan and specifications for the replacement of chain link fencing with metal security fencing and issued a Request For Bids in late-October 2022. Bid items associated with the replacement of perimeter fencing at the Hinckley and Tate Water Treatment Plants were included in the base bid and similar items associated with the

replacement of perimeter fencing at the Maguet Well and Lugonia Well #6 groundwater well sites were consolidated into two (2) alternate bid items. The following bids were received prior to the November 17, 2022 submittal deadline:

BIDDER	BASE BID	ALTERNATE BID #1	ALTERNATE BID #2
AB Fence Co.	$1,511,963.65	$94,426.00	$79,314.00
Alcorn Fence	$1,053,587.25	$45,762.00	$61,492.00
Econo Fence	$1,213,225.00	$90,590.00	$77,616.00
Fence Corp.	$1,167,859.26	$83,399.33	$78,023.11
Ferreira Coastal Construction	$1,067,787.50	$57,992.50	$51,146.40
J&A Engineering	$1,196,345.00	$56,780.00	$49,578.00
Perimeter Security Group	$1,697,861.00	$103,956.00	$92,364.00
Red Hawk Services, Inc.	$1,168,032.11	$78,525.48	$72,730.20
Valley Cities Gonzales*	$1,624,578.40	$153,833.66	$116,366.24

*An arithmetic error was discovered in the bid proposal. Total bid amount was corrected and is shown above.

All bids significantly exceed the approved project budget. Therefore, staff recommends rejecting all bids. Staff will reprioritize bid items and issue a new Request For Bids in the near future.

ALTERNATIVES:

City Council may deny the staff recommendation and provide alternate direction.

STRATEGIC PLAN:

N/A

SUBMITTED BY:
John R. Harris, Municipal Utilities and Engineering Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director

PREPARED BY:
John R. Harris, Municipal Utilities and Engineering Director

Fiscal Impact

Discussion:

There is no fiscal impact associated with this action.

Attachments

Bid Report

CITY OF REDLANDS
Office of the City Clerk
BID OPENING REPORT

The following bids were opened on the **17th day of November, 2022** at **2:00 p.m.** on behalf of the Municipal Utilities and Engineering Department for **Security Fencing Installation Project – MUED20221021JH**. The bid amounts have not been checked and are subject to correction after the bids have been completely reviewed.

No.	Name of Bidder	Bid Signed	Addenda Acknowledged (2)	Base Bid	Alternate 1 Total	Alternate 2 Total
1	AB Fence Co., Beaumont CA	Yes	2 Acknowledged	$1,511,963.65	$ 94,426.00	$ 79,314.00
2	Alcorn Fence, Sun Valley CA	Yes	2 Acknowledged	$1,053,587.25	$ 45,762.00	$ 61,492.00
3	Econo Fence, Riverside CA	Yes	2 Acknowledged	$1,213,225.00	$ 90,590.00	$ 77,616.00
4	Fence Corp., Riverside CA	Yes	2 Acknowledged	$1,167,859.26	$ 83,399.33	$ 78,023.11
5	Ferreira Coastal Construction, Rancho Cucamonga CA	Yes	2 Acknowledged	$1,067,787.50	$ 57,992.50	$ 51,146.40
6	J & A Engineering, Azusa CA	Yes	2 Acknowledged	$1,196,345.00	$ 56,780.00	$ 49,578.00
7	Perimeter Security Group, Coeur d'Alene ID	Yes	2 Acknowledged	$1,697,861.00	$ 103,956.00	$ 92,364.00
8	Red Hawk Services, Inc., Perris CA	Yes	2 Acknowledged	$1,168,032.11	$ 78,525.48	$ 72,730.20
9	Valley Cities Gonzales, Norco CA	Yes	2 Acknowledged	$1,624,578.40	$ 153,833.66	$ 116,366.24

Bidders are listed in alphabetical order

Jeanne Donaldson, City Clerk
City of Redlands, California

Emailed: Councilmembers,
City Manager, City Treasurer, PIO, Press
Department Head: John Harris
Staff: Goutam Dobey; Paul Mariscal

City Council Meeting **J. 15.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve withdrawal from the Santa Ana River - Mill Creek Exchange Plan Agreement, and authorize the City Manager or his designee to issue a withdrawal notice to the San Bernardino Valley Water Conservation District (Municipal Utilities and Engineering Director Harris)

MOTION(S):

If City Council determines the staff recommendation is appropriate, the following motion is provided:

I move that City Council approve withdrawal from the Santa Ana River - Mill Creek Exchange Plan Agreement, and authorize the City Manager or his designee to issue a withdrawal notice to the San Bernardino Valley Water Conservation District.

RECOMMENDATION:

Staff recommends withdrawal from the Santa Ana River - Mill Creek Exchange Plan Agreement.

DISCUSSION:

In 1976, the City of Redlands, San Bernardino Valley Municipal Water District (SBVMWD), San Bernardino Valley Water Conservation District (SBVWCD), Bear Valley Mutual Water Company (BVMWC), Crafton Water Company (CWC), East San Bernardino County Water District, Lugonia Water Company (LWC), North Fork Water Company, Redlands Water Company (RWC), and Yucaipa Valley County Water District executed the Santa Ana River - Mill Creek Cooperative Water Project Agreement (Agreement). The Agreement outlined the roles and responsibilities for each Party related to the construction, operation, and maintenance of cooperative water project facilities, delivery of imported and

local water, and the preservation, transfer, condemnation, and defense of water rights. The Agreement also established a Management Committee that established operating rules, regulations, and policies, approved/disapproved delivery requests, resolved disputes between the Parties, and offered engineering, construction, operations, and pricing policies.

Since then, the cooperative water project facilities have been constructed and the Parties are operating their own facilities. Recently, the Parties reconvened to update the Agreement. During several meetings, the Parties developed a Restated Santa Ana River - Mill Creek Exchange Plan Agreement (Restated Agreement) to replace the original Agreement entirely. The Restated Agreement removes language about the construction of cooperative water project facilities and the Management Committee, and generally requires the Parties to operate and maintain their own facilities responsibly. The Restated Agreement also allocates costs, estimated at approximately $40,000 annually, to each Party that receives the Conservation District's daily flow report.

Since the cooperative water project facilities have been constructed, each Party is operating and maintaining it's own facilities, the daily flow report is not significantly useful for the Redlands staff, and Redlands' water entitlements and interests are represented by the continued participation of SBVMWD, BVMWC, CWC, LWC, and RWC, staff recommends City Council approval to withdraw from the Agreement. Section 13 of the original Agreement requires the written consent of all other Parties in order for any Party to withdraw. The process requires a written notice from the withdrawing Party, which will be approved by each of the remaining Parties prior to adoption of the Restated Agreement. Staff recommends City Council approval for the City Manager or his designee to draft and issue this withdrawal notice to SBVWCD.

ALTERNATIVES:

City Council may deny the staff recommendation and provide alternative direction.

STRATEGIC PLAN:

N/A

SUBMITTED BY:
John R. Harris, Municipal Utilities and Engineering Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director

PREPARED BY:
John R. Harris, Municipal Utilities and Engineering Director

Fiscal Impact

Discussion:

There is no fiscal impact associated with this action.

Attachments

1977 SAR/MC Exchange Plan Agreement

MILIGEN

BOOK 9008 PAGE 1

WHEN RECORDED PLEASE RETURN TO:

San Bernardino Valley
Water Conservation District
303 Brookside Avenue
Redlands, CA 92373

1

RECORDED IN OFFICIAL RECORDS
SEP 9 1976 AT 8 AM
V. DENNIS WARDLE
CLERK-RECORDER
SAN BERNARDINO COUNTY, CALIF.

NO FEE
A

SANTA ANA RIVER – MILL CREEK

COOPERATIVE WATER PROJECT AGREEMENT

Delivery Priority Issue

Para 5d

- implies potential conflict of schedule and avail capacity when requesting use of CWP facilities for delivery of any portion of entitlement water.

Para 5g

- speaks to use of CWP facilities
- when constraints, etc exist for use of CWP facilities, then the priorities established herein will be used.

Para 6b

- PM directs deliveries & source of water deliveries from CWP facilities and Associated Water Fac, in accord with Mgt Cttee instructions
  - implies Assoc Fac. used only when Mgt Cttee directs

Para 2.o. - Assoc. Water Fac are owned by the Parties ~~and~~ but subject to direction ~~of Mgt Cttee of, therefore, the PM~~ PM.

Para 2n. - CWP Fac are owned & operated by Muni, but subject to PM instructions

SANTA ANA RIVER--MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

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RECORDED PLEASE RETURN TO:

San Bernardino Valley
Water Conservation District
303 Brookside Avenue
Redlands, CA 92373

1

NO FEE
A

RECORDED IN OFFICIAL RECORDS
SEP 9 1976 AT 8 A.M.
V. DENNIS WARDLE
CLERK-RECORDER
SAN BERNARDINO COUNTY, CALIF.

SANTA ANA RIVER – MILL CREEK

COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

Deff. Credits

Pge 6 par C. may allow or require Party to request Deff. Credit

Pge 7 ~~local~~ W (e)
appears to require Deff Credits for local made avail to Valley Dist.

Pge 11 par b Def credits due to interpt of Sum have no Time limit

Pge 6 par C. Last Sentence precludes Del of Ex Water (which by def includes Def. credits) only to Del ~~pts~~ points in Ex B.
this appears to preclude the Del of MC [illegible] to Santa Ana and vice Versa

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SANTA ANA RIVER - MILL CREEK

COOPERATIVE WATER PROJECT AGREEMENT

This Agreement is concluded by and between the Parties hereto to provide for the efficient and economical use of Local and Import Water supplies and shall be known as "The Cooperative Water Project Agreement," hereinafter sometimes referred to as "Agreement."

1. RECITALS

The Eligible Entities (as hereinafter defined), other than the San Bernardino Valley Municipal Water District, have water rights, including in certain cases water rights on the Santa Ana River and on Mill Creek, and have, in many cases for over seventy years, exercised those water rights for the purpose of supplying water to the water users of their respective Entities. Such Entities also have existing facilities which they have used for the development, diversion, and transmission of water from their respective sources of supply.

The San Bernardino Valley Water Conservation District has been engaged for many years in conserving and spreading water from the Santa Ana River and Mill Creek for the purpose of groundwater replenishment pursuant to rights which it holds for such purpose.

The San Bernardino Valley Municipal Water District has a contract with the State of California Department of Water Resources pursuant to the State Water Project under which it is importing a water supply into the San Bernardino Valley. Said District is presently engaged in the construction of local distribution facilities to make Import Water available for direct delivery, including groundwater recharge.

Pursuant to engineering studies which indicate that all of the Eligible Entities, as defined herein, will benefit from a cooperative water supply plan, it is the desire of the Parties to provide for the Parties' beneficial use of existing Local Water and of the available Import Water supply on an integrated basis utilizing various exchanges and transfers in order to provide the most economical, efficient, and dependable supply possible at a minimum of expense to water users and the taxpayers and to conserve energy. The studies indicate that the plan is of mutual benefit to all of the Eligible Entities and that

there will be no adverse effects or penalties to any of them or to other Entities not signatory to this Agreement.

2. DEFINITIONS

As used herein, the following terms shall have the meanings set forth below:

a. Entity: An individual, partnership, corporation (including a mutual water company), or public agency.

b. Eligible Entity: Any Entity eligible to become a Party hereto as set forth in Section 3, below.

c. Party: Any Eligible Entity signatory to this Agreement in accordance with its terms and conditions.

d. Management Committee: The committee comprised of one representative from each Party to this Agreement.

e. Project Manager: The San Bernardino Valley Water Conservation District or any other public agency appointed by the Management Committee and approved by the San Bernardino Valley Municipal Water District, acting under the supervision of the Management Committee.

f. Import Water: Water imported by and belonging to San Bernardino Valley Municipal Water District pursuant to its contract with the State of California Department of Water Resources from the State Water Project.

g. Local Water: All water supplies, except Import Water, available to an Entity.

h. Entitlement Water: Local Water to which a Party has an entitlement as described in Exhibit A, which water rights are not necessarily any Party's total claim to water rights in the respective source listed. This definition is solely for purposes of this Agreement and not for the purpose of defining or establishing water rights with respect to any Party.

i. Exchange Water: Local Water or Import Water delivered to a Party in exchange for Entitlement Water. The quantity of Exchange Water delivered to a Party plus Deferred Exchange Water Credits earned by a Party shall be equal to the quantity of that Party's Entitlement Water delivered to and used by the Management Committee.

j. Simultaneous Exchange: Delivery of Exchange Water substantially at the same time the Party's Entitlement Water is being delivered to others. Unless otherwise provided in the rules adopted by the Management Committee, delivery of Simultaneous Exchange Water shall be at the same rate of flow and completed within 24 hours of the delivery of Entitlement Water.

k. Deferred Exchange: Delivery of Entitlement Water to others for a future delivery of Exchange Water. Deferred Exchange shall be made only as provided in Section 5f below.

l. Deferred Exchange Water Credit: A water credit for the quantity of Entitlement Water delivered to others in a Deferred Exchange.

m. Supplemental Water: Any water requested by and delivered to a Party other than said Party's Entitlement Water or Exchange Water.

n. Cooperative Water Project Facilities: Certain facilities constructed or to be constructed and owned and maintained by San Bernardino Valley Municipal Water District which shall be operated by the San Bernardino Valley Municipal Water District in accordance with the Project Manager's instructions to effectuate this Agreement, subject to the provisions of Section 15. These facilities are shown conceptually on Plate I herein.

o. Associated Water Facilities: Water facilities at or near the mouth of Santa Ana Canyon and Mill Creek owned by various Parties to this Agreement which shall be operated by the owners thereof in accordance with the Project Manager's instructions to effectuate this Agreement, as shown generally on Plates 2 and 3 herein.

p. Cooperative Water Project: Those facilities and the operational plan defined herein that permit the substitution of Exchange Water for Entitlement Water.

q. Historical Conditions: Methods and facilities used to take Entitlement Water into the respective distribution systems of the Parties prior to construction of the Cooperative Water Project Facilities.

r. Edison Company: The Southern California Edison Company, a corporation organized under the laws of the State of California.

s. Year: A calendar year unless specified otherwise.

t. State Contract: Contract between the State of California Department of Water Resources and the San Bernardino Valley Municipal Water District for a Water Supply, dated December 30, 1960, and all amendments thereto, heretofore or hereafter concluded.

3. ELIGIBLE ENTITIES

The following Entities shall be eligible to become Parties to this Agreement:

a. Bear Valley Mutual Water Company, a mutual water company, hereinafter referred to as "Bear Valley."

b. City of Redlands, a municipal corporation, hereinafter referred to as "Redlands."

c. Crafton Water Company, a mutual water company, hereinafter referred to as "Crafton."

d. East San Bernardino County Water District, a county water district organized and existing under the County Water District Law, Water Code Sections 30000, et seq, hereinafter referred to as "East San Bernardino." EVWD

e. Lugonia Water Company, a mutual water company, hereinafter referred to as "Lugonia."

f. North Fork Water Company, a mutual water company, hereinafter referred to as "North Fork."

g. Redlands Water Company, a mutual water company, hereinafter referred to as "Redlands Water."

h. San Bernardino Valley Municial Water District, a municipal water district organized and existing under the Municipal Water District Law of 1911, Water Code Sections 71000, et seq, hereinafter referred to as "Valley District."

i. San Bernardino Valley Water Conservation District, a water conservation district organized and existing under the Water Conservation District Law of 1931, Water Code Sections 74000, et seq, hereinafter referred to as "Conservation District."

j. Yucaipa Valley County Water District, a county water district organized and existing under the County Water District Law, Water Code Sections 30000, et seq, hereinafter referred to as "Yucaipa District."

4. CONSTRUCTION OF COOPERATIVE WATER PROJECT FACILITIES

Subject to availability of funds, to budgetary, supply, and construction restraints, and to obtaining necessary approvals, permits, and agreements, Valley District shall design and construct the Cooperative Water Project Facilities so as to provide for delivery of water at the maximum flow rates and at the delivery points hereinafter specified. Each of the Parties shall have reasonable opportunity to inspect and study the Valley District's plans and specifications for all Cooperative Water Project Facilities during the planning stage and prior to the solicitation of bids for the construction thereof and may make comments and recommendations thereon to Valley District. Valley District shall make all reasonable efforts to commence construction of the first increment of the Cooperative Water Project Facilities, which consist of the facilities listed in Exhibit D, on or before

April 1, 1977, and bring the first increment to completion with reasonable diligence thereafter. Construction of additional increments will be scheduled by Valley District on a basis of need to meet water demands as determined by Valley District in consultation with the Management Committee. The obligations of Valley District hereunder shall be subject to the following specific conditions:

a. Facilities shown on Exhibit D which are required exclusively or primarily to deliver water to an Eligible Entity which does not become a Party to this Agreement by the effective date of this Agreement need not be built as a part of the first increment of the Cooperative Water Project Facilities nor at any subsequent time until the Eligible Entity shall become a Party.

b. The construction of facilities which would be physically, legally, or economically usable only in the event of the conclusion of the agreement with Edison Company provided for in Section 10 hereof shall be contingent upon the satisfactory conclusion of such an agreement.

c. The construction of facilities which are subject to a requirement of obtaining an approval or permit either for the construction of or for the use of such facilities shall be contingent upon obtaining such approval or permit in form satisfactory to Valley District. Valley District shall attempt to obtain all necessary approvals and permits with reasonable diligence.

d. Valley District with the advice of the Management Committee will schedule the construction of the facilities listed in Exhibit D to keep expenditures within the funds available to Valley District for construction of said facilities.

5. DELIVERY PROVISIONS

a. General

Subject to the delivery of Exchange Water by the Management Committee to replace any Entitlement Water delivered pursuant hereto, each of the Parties having Entitlement Water hereby makes available to the Management Committee said Party's supply of Entitlement Water for delivery and use pursuant to the terms of this Agreement.

East San Bernardino hereby makes available to the Management Committee, for exchange, water it is entitled to receive from North Fork by virtue of its ownership of North Fork stock. However, at such time as North Fork becomes a Party to this Agreement, East San Bernardino shall no longer be required to make the water from its stock ownership in North Fork available for exchange.

The Management Committee may cause delivery of water to be made to any Party entitled to and/or requesting said delivery from any source available to the Management Committee. In exercising its discretion hereunder, the Management Committee shall act on the basis of securing the maximum efficiency and economy in the use of the Local and Import Water supplies available to it.

All water deliveries shall be subject to:

(1) Rules and regulations adopted by the Management Committee.

(2) Scheduling requirements of the Management Committee.

(3) Payment of any charge imposed therefor.

(4) Limitations of available water supplies and capacity in the delivery facilities (including Valley District's Foothill Pipeline).

b. Import Water

Valley District hereby makes Import Water available to the Management Committee as scheduled for delivery and use as Exchange Water and Supplemental Water, subject to the availability of Import Water from the State Water Project, the equal rights of others within the boundaries of Valley District to receive Import Water, requirements for water service other than pursuant hereto, all of the requirements imposed by Valley District's contract with the State of California Department of Water Resources, and all applicable laws and regulations of water service.

c. Exchange Water and Supplemental Water

The Management Committee shall cause to be delivered to each of the Parties Exchange Water to replace any Entitlement Water made available by such Party and used by the Management Committee by Simultaneous Exchange, unless otherwise scheduled by the Party concerned and approved by the Management Committee. Exchange Water shall be delivered to each of the Parties at the points and up to the maximum instantaneous rates of flow specified in Exhibit B.

In addition to such deliveries, the Management Committee shall schedule Supplemental Water deliveries to any Party requesting the same.

d. Use of Cooperative Water Project Facilities to Convey Entitlement Water

A Party may request from the Management Committee delivery of any portion of its Entitlement Water through the Cooperative Water Project Facilities subject to availability of capacity in said facilities and to scheduling limitations.

Nothing in this Agreement shall be construed as authorizing the transport of Entitlement Water outside the boundaries of Valley District without prior approval of the Management Committee; however, in the case of a Party whose own boundaries extend beyond the boundaries of Valley District, that Party may transport Entitlement Water anywhere within its own boundaries.

e. Local Water

The Management Committee shall cause to be delivered to Valley District upon request Local Water if made available by a Party or Parties at flow rates, times, and at the delivery points specified by Valley District to the extent possible, using Cooperative Water Project Facilities, subject to Valley District delivering to the Management Committee an equal quantity of Import Water at the flow rates, times, and to delivery points as required to permit the Management Committee to make said delivery of Local Water to Valley District.

f. Deferred Exchange Water

All Parties with Deferred Exchange Water Credits shall be entitled to receive Deferred Exchange Water for such credits upon request. A Party's Deferred Exchange Water Credits shall be utilized by said Party within a two-year period subsequent to the accumulation of Deferred Exchange Water Credits, unless approved otherwise by the Management Committee.

g. Priorities

After provision for deliveries is made to Valley District and the San Gorgonio Pass Water Agency pursuant to Section 15 of this Agreement, then in case of scheduling, water availability, or facility constraints in any portion of the Cooperative Water Project Facilities, water deliveries in such portion shall be scheduled by the Management Committee on the following basis:

(1) First priority shall be given to Simultaneous Exchange Water.

(2) Second priority shall be given to Deferred Exchange Water.

(3) Third priority shall be given to Supplemental Water.

(4) Fourth priority shall be given to Entitlement Water delivered through Cooperative Water Project Facilities.

(5) Fifth priority shall be any use of the Cooperative Water Project Facilities by parties other than Eligible Entities.

h. Instructions

The Project Manager shall issue all instructions as directed by the Management Committee necessary to deliver water under the terms of this Agreement to the Parties using the Cooperative Water Project Facilities and the Associated Water Facilities.

6. MANAGEMENT

a. Management Committee

A Management Committee comprised of one person representing each of the Parties is hereby established.

(1) Duties: The Management Committee shall be responsible for:

(a) Setting operating rules, regulations, and policies not covered herein;

(b) Approving or disapproving requests for scheduling deliveries of water;

(c) Supervising the work of the Project Manager;

(d) Assisting in resolving disputes between Parties; and,

(e) Advising Valley District on pertinent design, construction, operations, and pricing policies.

(2) Appointments and Terms: Each of the members of the Management Committee shall be appointed by the Party he represents and shall serve at the pleasure of the appointing Party for a period of four (4) years and/or until appointment of a replacement. Notice of appointments shall be filed with the Project Manager. Members shall receive no compensation for their services; provided that in each case the appointing Party may provide such compensation as it deems appropriate.

(3) Quorum and Vote Required for Action: A majority of the members of the Management Committee not in default of this Agreement shall constitute a quorum for the transaction of business, and the vote of a majority of all of the members of the Committee shall be required to take any action.

(4) Officers: At its first meeting in each Year, the Management Committee shall select a chairman and such other officers as it may require. The Management Committee shall select a secretary who may be, but need not be, a member of the Management Committee. Said secretary shall keep an accurate record of all of its proceedings.

(5) Meetings and Notices: The Management Committee shall hold regular meetings at places and times to be specified in the rules to be adopted by the Management Committee. Notice of the scheduled or regular meetings and of any changes in time or place thereof shall be mailed to all persons who shall have filed a request therefor in writing with the Management Committee.

(a) Special meetings may be called at any time by the chairman or by any three (3) members of the Management Committee and shall be noticed as required by Government Code Section 54956.

(b) All meetings of the Management Committee shall be held in conformance with the requirements of Government Code Sections 54950, et. seq.

(6) Incurring of Expenses: Except as herein specifically provided, the Management Committee shall not be authorized to incur any expense on behalf of any or all of the Parties without the written consent of such Party or Parties.

b. Project Manager

Subject to the supervision of the Management Committee, the administration and management of the Cooperative Water Project Facilities shall be the responsibility of the Project Manager, which shall act as the executive arm of the Management Committee with the duty and responsibility to implement Management Committee rules, regulations, and policies and to direct the rate, time, place, and source of all water deliveries from the Cooperative Water Project Facilities and the Associated Water Facilities in accordance with the Management Committee's instructions.

c. Administrative Expenses

Expenses of the Project Manager and expenses of the Management Committee, except compensation for the services of the Management Committee members, shall be paid by Valley District. Valley District's payments for these expenses shall not exceed the budgeted amount set forth in an annual agreement between Valley District, the Project Manager, and the Management Committee without the consent of Valley District. Said agreement shall include terms and conditions of payment and rates of compensation for all services to be provided under said agreement.

7. OWNERSHIP AND OPERATION OF FACILITIES

Each of the Parties hereto shall retain the ownership of its own facilities together with full responsibility for their operation, maintenance, and replacement. The Associated

Water Facilities shall be operated in accordance with the Management Committee's instructions. The Cooperative Water Project Facilities shall be operated in accordance with the Project Manager's instructions to effectuate this Agreement, subject to the provisions of Section 15.

8. WATER QUALITY

All water delivered pursuant to this Agreement will be untreated and shall be of a quality suitable for its intended use, it being understood that suitability is to be determined by a rational method which includes consideration of the quality of the local water used prior to the adoption and implementation of this Agreement. This Agreement is adopted with the understanding that the present quality of Local, Exchange, Entitlement, Supplemental, and Import Water appears to be suitable for the intended uses. Each of the Parties agrees to operate its facilities so that the quality of the water is not impaired or degraded during diversion, transportation, or delivery.

If any Party is in violation of any water quality standards imposed on said Party by any governmental agency or unit because the quality of Exchange Water being delivered to said Party is lower than the quality of said Party's Entitlement Water, then said Party shall be entitled to revert to its Historical Conditions until the Exchange Water quality allows reasonable compliance with such standards.

9. RECORDS

Each Party hereto shall maintain such records and shall file such reports as may be reasonably required by the Management Committee and as may be required by law to protect any water rights affected hereby. In the event any of the Parties shall fail to maintain such records, the Management Committee may direct the Project Manager to estimate and maintain such records for such Party, and such Party shall be charged with the cost thereof.

The Project Manager shall be responsible for maintaining records on all water delivered pursuant to this Agreement.

The Management Committee shall have the right to measure flows of water as needed to satisfy the provisions of this Agreement; necessary access for said measurements will be provided without charge to the Management Committee by the Parties to this Agreement.

10. EDISON COMPANY AGREEMENTS

There are existing agreements between certain Parties to this Agreement and the Edison Company, including, but not limited to, a Grant Deed from Edison Company to Crafton dated February 27, 1929, and a Grant Deed from Crafton to Edison Company dated December 18, 1931. Valley District shall undertake with reasonable diligence to make the new arrangements and agreements with the Edison Company, Crafton and Bear Valley necessitated by the Cooperative Water Project Agreement and to use its best efforts therefor, provided that any such agreement which may in any way alter, modify, change, or affect the rights of any Party hereto under any existing agreements shall not be effective without the consent of such Party.

11. SHORTAGE OF SUPPLY OR TEMPORARY REDUCTION OR CESSATION OF DELIVERIES

a. Scheduled Shutdowns

Each of the Parties shall notify the Project Manager of a scheduled shutdown of any facility that would cause interruption of the Cooperative Water Project.

b. Interruption of Service

In the event of interruption of service in any portion of either the Cooperative Water Project Facilities or the Associated Water Facilities, the Project Manager may, to the extent possible, continue limited operations, and Parties whose delivery of Exchange Water has been interrupted will accrue Deferred Exchange Water Credit for such Exchange Water not delivered during the interruption of service, and such Deferred Exchange Water Credit shall not be subject to the two-year limitation stated in Section 5f but shall maintain its validity until used.

c. Temporary Discontinuance

If the Project Manager is unable to deliver quantities and qualities of water as provided for in this Agreement, it will immediately notify all the affected Parties that the Exchange Program is going to be temporarily discontinued until delivery schedules can be met or until the cause of the interruption is remedied.

After receiving notice of the temporary discontinuance of the Cooperative Water Project, each Party may revert to its Historical Condition.

When the Project Manager is again able to deliver the quantities and qualities of water as scheduled, it shall immediately notify the Parties and resume deliveries.

d. Continuity of Service

When it is necessary to interrupt service, the Project Manager and the Parties shall cooperate to minimize the down time and to restore service to all Parties as soon as possible.

12. BREACH

a. Right to Revert to Historical Conditions

In addition to any other remedies provided by law, in the event the terms and conditions of this Agreement are not complied with and there are no reasonable alternatives, any Party adversely affected by such breach and which is not itself in default may withhold delivery of its Entitlement Water and revert to its Historical Conditions until such breach is remedied.

b. Preliminary Determination of Serious Breach

A preliminary determination that such a breach has occurred may be made (1) by the Party concerned, with the concurrence of the Project Manager, or (2) without the concurrence of the Project Manager, in the manner hereinafter specified. In the event a Party claims such a breach has occurred and the Project Manager disagrees, the Party claiming breach has occurred shall poll other members of the Management Committee and, if any other two (2) members agree that such a breach has occurred, those members shall so certify to the Project Manager a breach has occurred. Immediately upon any preliminary determination that such breach has occurred, the Project Manager shall cause the Party claiming the breach to receive its Entitlement Water under Historical Conditions.

c. Rights to Judicial Relief Unaffected by Preliminary Determination

Nothing herein shall prevent any Party from seeking judicial relief either before or after any preliminary determination, and no preliminary determination shall be binding upon or affect the rights of any Party in connection with such a judicial proceeding.

13. WITHDRAWAL FROM THE COOPERATIVE WATER PROJECT AGREEMENT

No Party shall be entitled to withdraw from this Agreement without the written consent of all other Parties.

14. PROVISIONS WITH RESPECT TO PRESERVATION, TRANSFER, CONDEMNATION, AND DEFENSE OF WATER RIGHTS

With respect to the water rights to produce and use the Entitlement Water set forth in Exhibit A, it is agreed between the Parties hereto that the following shall apply:

a. Non-Use of Water

No Party hereto will lose any such water right by non-use, by use by another Party, by exchange, or by prescription.

No prescription.

b. Transfer

Each Party hereto may sell, mortgage, transfer, or otherwise alienate any such rights, provided that in the event of any such sale, transfer, foreclosure, or alienation of such rights, the transferee shall take such rights subject to the terms and conditions of this Agreement and shall be bound thereby. Prior to the consummation of any such sale, transfer, foreclosure, or alienation, the prospective transferee shall execute an instrument expressly assuming all of the obligations of the transferor under this Agreement with respect to such rights and deliver said instrument to the Management Committee. Until such instrument is so executed and delivered, such transaction shall be void.

c. Rights

The execution of this Agreement by the Parties hereto shall not be construed as constituting any alteration in the respective priorities or terms of any of the rights held by any of the Parties or any admission with respect to any of the rights or claims set forth herein. Between the Parties hereto the Management Committee shall consider that each Party has the rights claimed until otherwise instructed by the Party claiming such right or by the determination of the court with jurisdiction so to do.

The Management Committee.

d. Condemnation

Each of the Parties hereto, to the extent allowed by law, undertakes not to condemn or take, without consent of the owner thereof, any water rights, sources of water supply, water diversion, production or transmission facilities, or corporate stock owned by any Party hereto, which is subject to the terms of this Agreement, so long as the owner thereof is not in default hereunder.

e. Defense

Each of the Parties hereto shall be responsible for the defense of any rights claimed or asserted by it to produce and use the Entitlement Water set forth in Exhibit A hereto. As against anyone not a Party to this Agreement, Valley District shall defend this Cooperative Water Project Agreement and all rights arising from it.

f. Covenant and Lien

The provisions of this Agreement are hereby declared to be for the benefit of the water rights of the Parties hereto to produce and use the Entitlement Water set forth in Exhibit A. Said provisions are hereby made a covenant binding upon the owners of each such water right and their successors, heirs, transferees, and assigns for the benefit of the owners of each such other water right and their successors, heirs, transferees and assigns. The benefits and burdens of said covenant shall run with said water rights of the Parties hereto.

Each of the Parties hereto hereby grants a lien upon the said water rights to the other Parties hereto to secure its obligations hereunder, which lien shall be appurtenant to the said water rights of the other Parties hereto.

g. Successors and Assigns

Each and all of the terms, conditions, and provisions hereof shall inure to the benefit of and be binding upon the Parties hereto and their respective successors, heirs, transferees, and assigns.

h. None of the provisions of this Section 14 shall apply to or preclude Bear Valley from voluntarily or involuntarily transferring to Big Bear Municipal Water District, free and clear of any obligations of Bear Valley under this Agreement, all of the rights of Bear Valley to impound the natural water supply of Bear Valley behind Bear Valley Dam and later release such water which would otherwise flow in the Santa Ana River.

15. USE OF COOPERATIVE WATER PROJECT FACILITIES FOR DELIVERY OF WATER BY VALLEY DISTRICT

a. Use of Facilities

The Cooperative Water Project Facilities shall be available to Valley District for use as part of its water transmission facilities and may be used by it for the delivery of water to any Entity, whether a Party hereto or not.

b. San Gorgonio Pass Water Agency

Valley District has a contract with the San Gorgonio Pass Water Agency (Pass Agency) dated July 16, 1970, under which the Pass Agency has the option to obtain capacity in certain water transmission facilities constructed by Valley District and to receive deliveries of water or the right to operate the facilities, all upon the terms specified therein. The Cooperative Water Project Facilities to be constructed by Valley District constitute a portion of the water transmission facilities subject to the said contract, and in the event the Pass Agency exercises its option with respect thereto shall be constructed, maintained, and operated in compliance with the terms of the said contract.

SECTION 1611 of the CIVIL CODE

Ascertainment of Consideration:

When a contract does not determine the amount of the consideration nor the method by which it is to be ascertained or when it leaves the amount thereof to the discretion of an interested party, the consideration must be so much money as the object of the contract is reasonably worth.

16. WATER CHARGES AND PAYMENT PROVISIONS

Charges for water deliveries made under this Agreement and provisions for payment shall be as listed below.

Said charges shall be reasonable and shall conform to the applicable provisions of Section 1611 of the Civil Code, State of California.

see Opposite Page

a. Charge for Supplemental Water

The charges to be made by the Project Manager to any Party to this Agreement for Supplemental Water per acre-foot shall be computed by the following formula:

$$\text{Supplemental Water Charge per Acre-Foot} = E - S + C \quad \underline{\text{or}} \quad E - S + P + L$$

whichever is greater

where:

E = The variable operation, maintenance, power, and replacement component of the Department of Water Resources Transportation Charge per acre-foot* incurred by Valley District.

S = Direct water spreading costs per acre-foot spread by the Conservation District, not to exceed $3.00 per acre-foot.

C = Dollar amount equal to power generation credit per acre-foot from Devil Canyon power generation plant.

P = Cost of energy incurred by Valley District to convey Supplemental or Entitlement Water to said Party per acre-foot.

L = Power loss charges incurred by Valley District in conveying Supplemental or Entitlement Water to said Party per acre-foot.**

**As defined in Section 26 of the State Contract.*

***Power loss charges are defined as those charges resulting from the loss of electric power generation from existing hydroelectric plants on Mill Creek and Santa Ana River.*

1986

If Valley District sets any charges upon a basis which, if applied, would result in a lower charge than is provided for above, then charges computed on said basis shall be substituted for the charges provided for above as long as said basis is in effect.

The charges for Supplemental Water provided for in this Agreement shall be in effect for a period beginning with the effective date of this Agreement and ending ten (10) years thereafter; beginning ten (10) years after the effective date of this Agreement the charges to Parties to this Agreement shall be as set by Valley District.

b. Simultaneous Exchange Water Charge

There are to be no charges made by the Project Manager to any Party for Simultaneous Exchange Water under the terms and conditions of this Agreement.

c. Deferred Exchange Water Charge

The charge to be made by the Project Manager to any Party to this Agreement for Deferred Exchange Water shall be the amount of all additional costs required to deliver water on the Deferred Exchange basis over and above the amount of the costs for making said deliveries on a Simultaneous Exchange basis.

d. Charges for Conveyance of Entitlement Water through Cooperative Water Project Facilities

Charges to be made by the Project Manager for the use of the Cooperative Water Project Facilities by Parties to this Agreement for conveyance of Entitlement Water shall be as follows: During the period beginning with the effective date of this Agreement and ending ten (10) years thereafter, $2.50 per acre-foot + P + L as P and L are defined above. Beginning ten (10) years after the effective date of this Agreement, these charges shall be as set by Valley District, except that they shall not exceed the following: The amount of all costs for making such deliveries including, but not limited to, operations, maintenance, energy, repair, replacement, overhead, and capital costs.

In the event the Management Committee with the approval of Valley District decides to convey all or any portion of the 9 cfs presently going from the forebay of Santa Ana Powerhouse No. 3 to the Boullioun Box through the Cooperative Water Project Facilities, that portion shall be exempt from any conveyance charge.

Provisions of Payment

Provisions for payment to the Project Manager by the Parties to this Agreement for water charges are as follows:

(1) The Project Manager shall provide monthly invoices to each Party of monies due the Project Manager.

(2) The Parties to this Agreement shall make payment to the Project Manager within thirty (30) days after receipt of said invoices.

(3) The Project Manager shall remit to Valley District all payments received under this Section within five (5) days of receipt.

17. ADDITIONAL PARTIES

After the effective date of this Agreement, additional Entities may become Parties hereto upon application to and approval by the Management Committee and written consent of all of the Parties not in default of this Agreement.

18. AMENDMENTS

This Agreement may be amended at any time by written agreement signed by all of the Parties.

19. OPINIONS AND DETERMINATIONS

Where the terms of this Agreement provide for action to be based upon the opinion, judgment, approval, review, or determination of any Party hereto, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable.

20. NOTICE

Any notice pursuant hereto shall be deemed to have been properly given if delivered personally or if enclosed in a properly addressed envelope and deposited in the United States mail for delivery First Class, postage prepaid.

Unless and until formally notified otherwise, notice may be given to each of the Parties addressed as follows:

Bear Valley Mutual Water Company
101 East Olive Avenue
Redlands, California 92373

City of Redlands
P. O. Box 280
Redlands, California 92373

Crafton Water Company
P. O. Box 627
Mentone, California 92359

East San Bernardino County Water District
P. O. Box 3427
San Bernardino, California 92413

Lugonia Water Company
101 East Olive Avenue
Redlands, California 92373

North Fork Water Company
P. O. Box 3427
San Bernardino, California 92413

Redlands Water Company
101 East Olive Avenue
Redlands, California 92373

San Bernardino Valley Municipal Water District
P. O. Box 5906
San Bernardino, California 92412

San Bernardino Valley Water Conservation District
303 Brookside Avenue
Redlands, California 92373

Yucaipa Valley County Water District
P. O. Box 458
Yucaipa, California 92399

21. APPROVALS REQUIRED, EFFECTIVE DATE, AND MECHANICS OF EXECUTION

This Agreement shall become effective among the Parties executing the same sixty (60) days after it shall have been executed by the Conservation District, Valley District, Bear Valley, Crafton, Redlands, and Redlands Water.

Cons Dist June 7
Valley Dist [illegible]
Bear Valley May 5
Crafton June 16
Redlands June 15
Red Water June 7

This Agreement may be executed in counterparts so that the same copy need not be signed by each of the Parties hereto. Upon execution of each counterpart, said counterpart shall be delivered to the Conservation District and, when the required number of counterparts has been received, the Conservation District shall give notice to each of the Eligible Entities hereunder stating the date of execution of the last required counterpart and the date 60 days thereafter upon which the Agreement shall become effective. Upon such effective date, this Agreement shall become effective among all of the Eligible Entities which have executed said Agreement by said effective date, and the Conservation District shall attach all of the signature pages from the counterparts to one copy of the Agreement and shall mail a copy of the conformed Agreement to each of the Parties executing the same. From and after the effective date, any non-signatory Entity shall be eligible to become a Party hereto only in the manner provided in Section 17.

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

DATED: May 5-1976

BEAR VALLEY MUTUAL WATER COMPANY

By Donald S C Anderson
President

Betty Farquhar
Secretary

Approved:
SURR & HELLYER
By Robert J Birschbach
Attorney

DATED May 6, 1976

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

STATE OF CALIFORNIA)
: ss.
COUNTY OF SAN BERNARDINO)

On this 6th day of May, 1976, before me, the undersigned a Notary Public in and for said County and State, personally appeared ROBERT J. BIERSCHBACH, a member of the law firm of SURR & HELLYER, known to me to be the person who executed the foregoing instrument on behalf of said law firm, and acknowledged to me that such law firm executed the same.

WITNESS my hand and official seal.

(OFFICIAL SEAL)
MOIRE E. ALEXANDER
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires Oct. 26, 1978

Moire E. Alexander
Notary Public

STATE OF CALIFORNIA)
: ss.
COUNTY OF SAN BERNARDINO)

On this 6th day of May, 1976, before me, the undersigned, a Notary Public in and for said County and State, personally appeared DONALD C. S. ANDERSON, known to me to be the President, and BETTY FARQUHAR, known to me to be the Secretary, of BEAR VALLEY MUTUAL WATER COMPANY, a corporation, the corporation that executed the within instrument, and known to me to be the persons who executed said instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

WITNESS my hand and official seal.

OFFICIAL SEAL
PATRICIA L. MERRITT
NOTARY PUBLIC CALIFORNIA
PRINCIPAL OFFICE IN
SAN BERNARDINO COUNTY
My Commission Expires October 2, 1979

Patricia L. Merritt
Notary Public

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

DATED: June 15, 1976

CITY OF REDLANDS

By _____
Mayor

By _____
City Clerk

Approved:

_____
Attorney

OFFICIAL SEAL
LORETTA C. POYZER
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires June 3, 1977

State of California)
County of San Bernardino) SS

On June 15, 1976, before me, the undersigned, a Notary Public in and for said State, personally appeared Charles G. DeMirjyn, known to me to be the Mayor, an Peggy A. Moseley, known to me to be the Ci Clerk of the City of Redlands that execut the within Instrument, on behalf of the City of Redlands and acknowledged to me that the City of Redlands executed the within instrument pursuant to its City Council meeting of June 15, 1976.

WITNESS my hand and official seal.

_____
Loretta C. Poyzer
DATED _____

SANTA ANA RIVER - MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

CRAFTON WATER COMPANY

By Ralph F. Sechrest
President

Peggy A. Jacinto
Secretary

Approved:

_____
Attorney

DATED June 16, 1976

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO } ss.

On June 16, 1976 before me, the undersigned, a Notary Public in and for said County and State, personally appeared Ralph F. Sechrest, known to me to be the President, and Peggy A. Jacinto, known to me to be Secretary of the corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

Signature Alice E. Smith

Alice E. Smith
Name (Typed or Printed)
Notary Public in and for said County and State

FOR NOTARY SEAL OR STAMP

OFFICIAL SEAL
ALICE E SMITH
NOTARY PUBLIC CALIFORNIA
PRINCIPAL OFFICE IN
SAN BERNARDINO COUNTY
My Commission Expires December 29, 1978

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

EAST SAN BERNARDINO
COUNTY WATER DISTRICT

By Philip A. Desch
President

Bennie R. Eastwood
Secretary

Approved:

Robert J. Dennis
Attorney

DATED August 9, 1976

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

STATE OF CALIFORNIA,
COUNTY OF SAN BERNARDINO } ss.

ON August 9, 19 76,
before me, the undersigned, a Notary Public in and for said State, personally appeared

Philip A. Disch, Bonnie R. Eastwood and Robert J. Farrell, known to me,
to be the persons whose names are subscribed to the within instrument,
and acknowledged to me that they executed the same.

WITNESS my hand and official seal.

ELISABETH PERKINS
NOTARY PUBLIC
SAN BERNARDINO COUNTY
CALIFORNIA
My Commission Expires February 26, 1978

Elisabeth Perkins
Notary Public in and for said State.

ACKNOWLEDGMENT—General—Wolcotts Form 233—Rev. 3-64

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

LUGONIA WATER COMPANY

By _____
President

_____
Secretary

Approved:

_____
Attorney

DATED May 20, 1976

STATE OF CALIFORNIA)
) ss.
County of San Bernardino)

On May 20, 1976, before me, the undersigned, a Notary Public in and for said County and State, personally appeared G. R. REES, BETTY FARQUHAR and EDWIN B. HALES, known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

_____
EDWIN R. HALES, Notary Public

OFFICIAL SEAL
EDWIN R. HALES
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SAN BERNARDINO COUNTY
My Commission Expires March 13, 1978

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

SANTA ANA RIVER - MILL CREEK

COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

NORTH FORK WATER COMPANY

By Arnold L. Wright
President

Howard H. Hendricks
Secretary

Approved:

Attorney

Dated: 8-4-76

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO } ss.

On August 4th 1976 before me, the undersigned, a Notary Public in and for said State, personally appeared ARNOLD L. WRIGHT known to me to be the President, and HOWARD H HENDRICKS known to me to be the Secretary of the Corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

(Seal) Leroy H. Roebke

NAME (TYPED OR PRINTED)
Notary Public in and for said State.

LEROY H. ROEBKE
NOTARY PUBLIC
SAN BERNARDINO COUNTY
CALIFORNIA
My Commission Expires May 11, 1979

Acknowledgment—Corp.—Wolcotts Form 224-S

LEROY H. ROEBKE
NOTARY PUBLIC
SAN BERNARDINO COUNTY
CALIFORNIA
My Commission Expires May 11, 1979

STATE OF CALIFORNIA
COUNTY OF Madera } ss.

On this 10th day of August in the year one thousand nine hundred and -76- before me, the undersigned, a Notary Public, State of California, duly commissioned and sworn, personally appeared Denslow Green

known to me to be the person ..... whose name is subscribed to the within instrument and acknowledged to me that .....he..... executed the same.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal in the ..... County of Madera the day and year in this certificate first above written.

OFFICIAL SEAL
JOANN HERNANDES
NOTARY PUBLIC - CALIFORNIA
MADERA COUNTY
My comm. expires SEP 23, 1978
219 South "D" St., Madera, CA 93637

Notary Public, State of California

My commission expires 9-23-78

Cowdery's Form No. 32—Acknowledgement—General (C. C. Sec. 1190a) Printed 12/72

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

REDLANDS WATER COMPANY

By _____
President

_____
Secretary

Approved:

_____
Attorney

DATED June 7 1976

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

TO 449 C
(Corporation)

STATE OF CALIFORNIA
COUNTY OF San Bernardino } SS.

On June 7, 1976 before me, the undersigned, a Notary Public in and for said State, personally appeared Lloyd Yarbrough known to me to be the _____ President, and Betty Farquhar known to me to be _____ Secretary of the corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Signature Elaine V. Leathy

Elaine V. Leathy
Name (Typed or Printed)

OFFICIAL SEAL
ELAINE V. LEATHY
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires April 11, 1977

(This area for official notarial seal)

STAPLE

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

SAN BERNARDINO VALLEY
MUNICIPAL WATER DISTRICT

By _____
President

_____
Secretary

Approved:

_____
Attorney

DATED July 6, 1976

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

STATE OF CALIFORNIA,
COUNTY OF SAN BERNARDINO } ss.

ON July 6, 1976,
before me, the undersigned, a Notary Public in and for said State, personally appeared
Lloyd Yount, LeRoy Holmes, and James W. Dilworth
known to me,
to be the persons whose names are subscribed to the within Instrument,
and acknowledged to me that they executed the same.

OFFICIAL SEAL
BRENDA M. McCULLOUGH
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires July 11, 1977

WITNESS my hand and official seal.

Brenda M. McCullough
Notary Public in and for said State.

ACKNOWLEDGMENT—General—Wolcotts Form 233—Rev. 3-64

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

SAN BERNARDINO VALLEY
WATER CONSERVATION DISTRICT

By _____
President

_____
Secretary

Approved:

_____
Attorney

DATED June 7, 1976

STATE OF CALIFORNIA]
COUNTY OF SAN BERNARDINO] ss.

On June 7, 1976, before me, a Notary Public in and for said State, personally appeared ROBERT T. PAINE, known to me to be the President, and W. J. HILTGEN, known to me to be the Secretary, of SAN BERNARDINO VALLEY WATER CONSERVATION DISTRICT, the corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the said corporation, and acknowledged to me that such corporation executed the same pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

_____
RICHARD A. MULLIGAN

RICHARD A. MULLIGAN
NOTARY PUBLIC
SAN BERNARDINO COUNTY
CALIFORNIA
My Commission Expires October 30, 1977

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

STATE OF CALIFORNIA
COUNTY OF SAN BERNARDINO } ss.

ON JUNE 7, 19 76,
before me, the undersigned, a Notary Public in and for said State, personally appeared
RICHARD A. MULLIGAN

, known to me,
to be the person whose name is subscribed to the within Instrument,
and acknowledged to me that he executed the same.

WITNESS my hand and official seal.

(OFFICIAL SEAL)
SHERRY L. TUCKER
NOTARY PUBLIC - CALIFORNIA
SAN BERNARDINO COUNTY
My Commission Expires Jan. 13, 1980

Sherry L. Tucker
Notary Public in and for said State.

ACKNOWLEDGMENT—General—Wolcotts Form 231—Rev. 3-64

IN WITNESS WHEREOF, the parties do execute this Agreement herein by act of their duly authorized representatives undersigned.

YUCAIPA VALLEY COUNTY
WATER DISTRICT

By _____
President

_____
Secretary

Approved:

_____
Attorney

DATED August 26, 1976

1

SANTA ANA RIVER – MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

MAY 3, 1976

STATE OF CALIFORNIA
COUNTY OF San Bernardino } SS.

On August 26, 1976, before me, the undersigned, a Notary Public in and for said State, personally appeared Gene Gasponi known to me to be the ..... President, and Ira B. Pace, known to me to be the ..... Secretary of the ~~Corporation~~ water district* that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the same, and acknowledged to me that such Corporation executed the within Instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

* to be known as water district

(Seal)

OFFICIAL SEAL
JUNE I. HODGINS
NOTARY PUBLIC
PRINCIPAL OFFICE IN
SAN BERNARDINO COUNTY
My Commission Expires Sept. 23, 1977

June I. Hodgins
(Notary Public's Signature)

(Name - *Typed or Printed*)
Notary Public in and for said State

2307
MIS 3513 8-63* 25 Corporation Notarial Acknowledgment

EXHIBIT A

ENTITLEMENTS TO WATER

Santa Ana River

The general features for conveying Santa Ana River water are shown on Plate 2 herein.

Edison Company diverts water from the Santa Ana River at the confluence of Bear Creek and the Santa Ana River. This use of water is based on an agreement with Bear Valley and a license issued to the Edison Company by the Federal Power Commission.

Water so diverted is conveyed by the Edison Company through a series of tunnels, flumes, and canals through Santa Ana Powerhouse No. 1 and Santa Ana Powerhouse No. 2 to the forebay of Santa Ana Powerhouse No. 3.

At the forebay to Powerhouse No. 3 Bear Valley takes delivery of up to nine (9) cfs, which is conveyed through the Bear Valley High Line (capacity controlled by Crafton Heights Pipeline Company).

The remaining water in the Edison Company facility is dropped through Powerhouse No. 3. At the tailrace of Powerhouse No. 3 certain quantities of water are delivered into the facilities of North Fork and certain quantities are delivered into the Redlands Canal of Bear Valley.

There is an agreement between North Fork and Bear Valley which sets forth the entitlements to water of the respective parties. Said agreement is recorded in the official records of San Bernardino County, State of California, Agreement File E, pages 178 - 187, dated July 3, 1885.

There is an agreement between Bear Valley and Lugonia (South Fork). This agreement sets forth the entitlement to water of the respective parties.

It is the intention of this Cooperative Water Project Agreement that the Management Committee and/or Parties to this Agreement will not do anything which will in any way diminish or interfere with the quantities of water each of the Parties referred to in the two agreements above is entitled to receive as its respective proportionate share of the available supply.

The Conservation District diverts storm flows and waters in excess of the needs of the aforementioned companies at the mouth of Santa Ana Canyon for the purpose

No mention of pre-1914.

EXHIBIT A
Continued

of spreading and percolating to replenish the groundwater supply. The diversion by the Conservation District is covered by Licenses Nos. 2831 and 2832 issued by the State of California.

Redlands Water diverts water from a tunnel at the mouth of Santa Ana Canyon. Water is conveyed from the tunnel to the Redlands Aqueduct via a pipeline located on the west side of Greenspot Road.

Mill Creek

The general features of conveying Mill Creek water are shown on Plate 3 herein.

Edison Company diverts water from Mill Creek near Forest Home in Mill Creek Canyon. This use of water is based on agreements with certain water purveyors and a license issued to the Edison Company by the Federal Power Commission.

Water is conveyed through Edison Company facilities, including Mill Creek Powerhouses Nos. 3, 2, and 1.

After passing through Mill Creek Powerhouse No. 1, water is conveyed across Mill Creek to a point where it is divided; some going to Redlands, some to Crafton, and that portion above the needs of the two parties being returned to the channel of Mill Creek for spreading.

The amount of water each of the two Entities receives is based upon the ownership of "Zanja hours" per certain deeds and other factors as determined between Redlands and Crafton.

It is the intent of this Cooperative Water Project Agreement that the Management Committee and/or the Parties to this Agreement will not do anything which will in any way diminish or interfere with the quantities of water each of the Parties is entitled to receive as its respective proportionate share of the available supply.

The Conservation District has historically diverted stormflows and water in excess of the needs of Redlands and Crafton for the purpose of spreading and percolating to replenish the groundwater supply.

EXHIBIT B

ENTITLEMENT WATER

MAXIMUM INSTANTANEOUS RATES OF FLOW AND DELIVERY POINTS

(See Plates 2 and 3 attached hereto.)

Maximum Instantaneous Rates of Flow

Redlands
Crafton

32 cfs together.

Bear Valley
Lugonia
North Fork

88 cfs together.

Conservation District

The maximum instantaneous rate of flow that would be available if there was no Cooperative Water Project and all Parties were operating under Historical Conditions.

Delivery Points

Redlands - Mill Creek

Into the influent pipeline into Redlands' Henry Tate Filter Plant at a point within the Plant site located south of Mill Creek Road in the Northeast Quarter of Section 22, T. 1 S., R. 2 W., SBB&M.

Crafton - Mill Creek

Into the Zanja near the Boullioun Box and into the influent pipeline into the Redlands' Henry Tate Filter Plant.

Conservation District - Santa Ana and Mill Creek

a. Mill Creek - In the channel of Mill Creek above the existing intake structure located on the south bank of Mill Creek in the Northeast Quarter of Section 21, T. 1 S., R. 2 W., SBB&M.

EXHIBIT B
Continued

b. Santa Ana - The existing main canal of the Conservation District located on the south side of Greenspot Road in the Northeast Quarter of Section 7, T. 1 S., R. 2 W., SBB&M.

North Fork and Bear Valley - Santa Ana

At the existing North Fork Box located on the north side of the Conservation District main canal in the Southwest Quarter of the Southwest Quarter, Section 4, T. 1 S., R. 2 W., SBB&M, and up to 3 cfs at the East Highlands Company weir.

Bear Valley and Lugonia - Santa Ana

Into the Redlands Aqueduct above the Mentone Reservoir.

Redlands Water - Santa Ana

Into the Redlands Aqueduct above the Mentone Reservoir.

East San Bernardino - Santa Ana

Into the North Fork Canal at or above elevation 1720 feet.

EXHIBIT C

DETERMINATION AND MEASUREMENT OF EXCHANGEABLE WATER

Santa Ana

The quantity of water in the Santa Ana River available for exchange shall be determined as follows:

The quantity of water measured at the USGS gage on the Edison Company canal located below the tailrace of Santa Ana Powerhouse No. 2.

The amount of Santa Ana River water available for exchange shall not exceed 88 cfs.

The quantity of water in the tunnel belonging to Redlands Water available for exchange shall be as measured at the tunnel outlet located on the west side of Greenspot Road at the mouth of Santa Ana Canyon.

Mill Creek

The quantity of water in Mill Creek available for exchange shall be determined as follows:

The quantity of water that would go through Edison Company's Mill Creek No. 1 hydro-plant if there were no upstream diversion.

The total amount of Mill Creek water available for exchange shall not exceed 32 cfs.

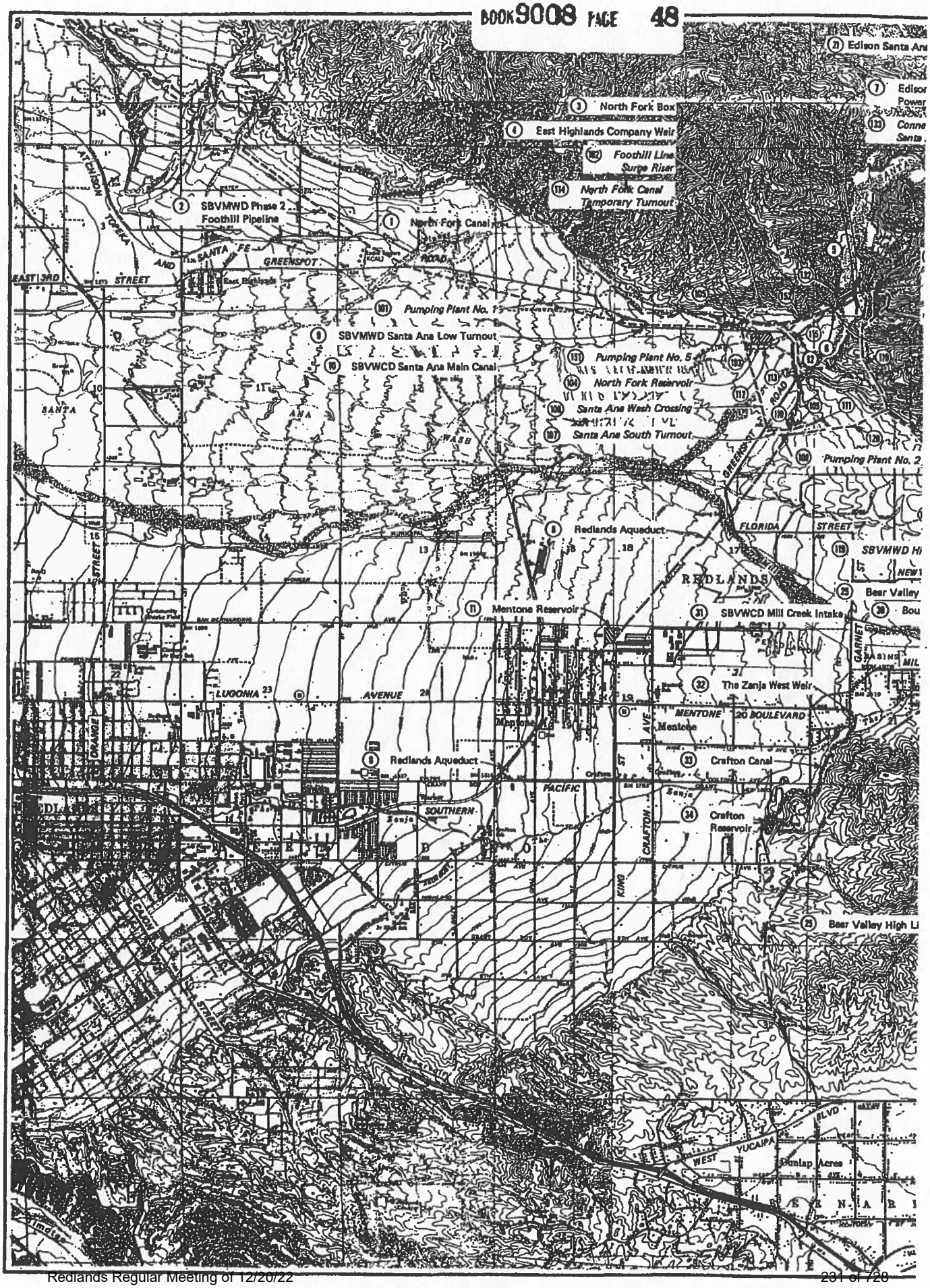
EXHIBIT D

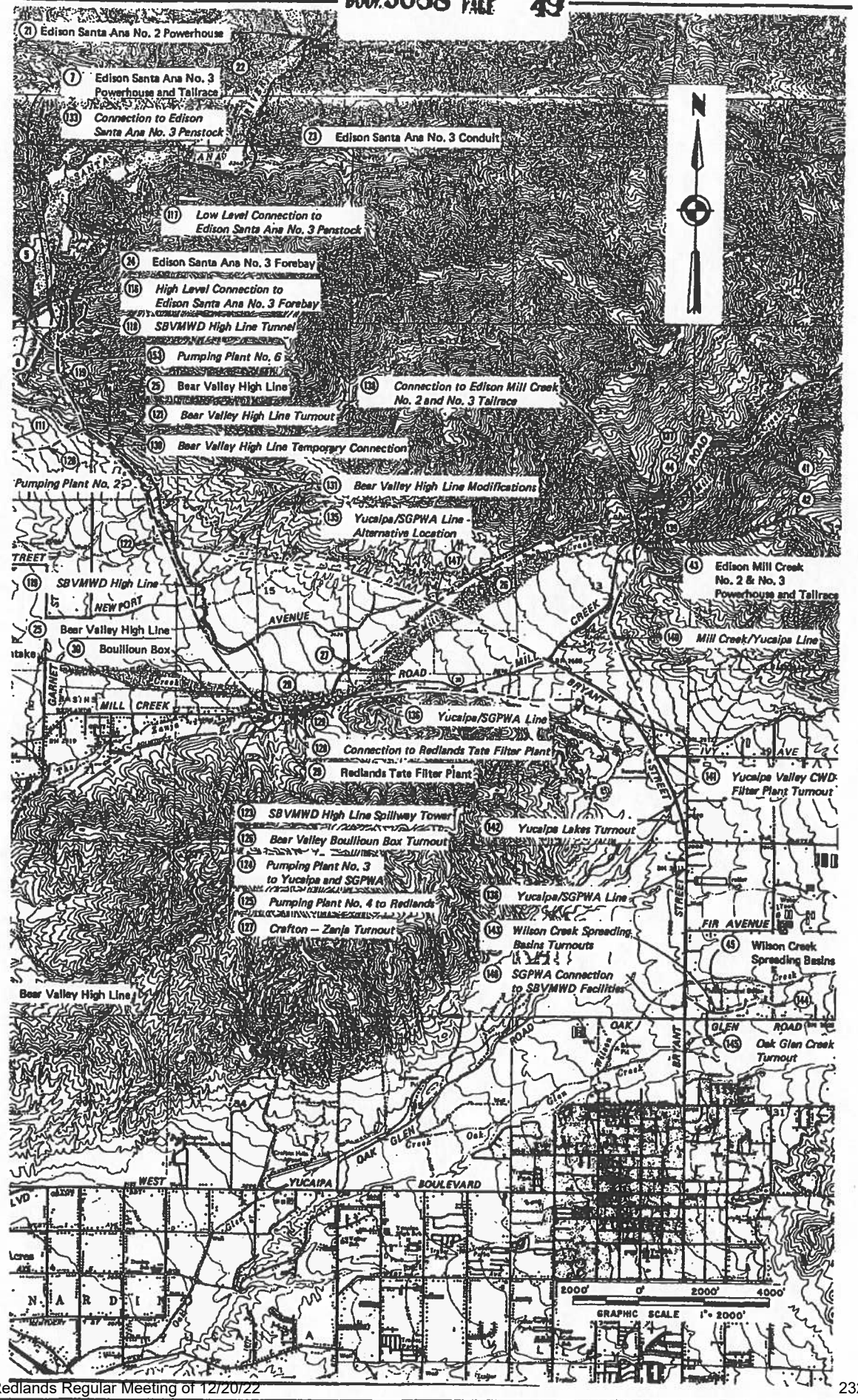
FACILITIES TO BE CONSTRUCTED AS THE FIRST INCREMENT OF THE COOPERATIVE WATER PROJECT

Description	Minimum Capacity in cfs	Key Number on Plate 1
North Fork Canal Temporary Turnout	30	114
Pumping Plant No. 5	12	151
Pumping Plant No. 5 Discharge Line	12	152
Foothill Pipeline to Redlands Aqueduct Turnout	30	115
SBVMWD High Line	25	119
Pumping Plant No. 4 to Redlands	20	125
Connection to Redlands Tate Filter Plant	32	128
Crafton - Zanja Turnout	10	127
Turnout to Mill Creek above Conservation District Spreading Intake	25	
Pumping Plants and Pipelines Connecting SBVMWD Phase 2 Foothill Pipeline to SBVMWD High Line	As Needed	See Note 1

Note 1

Precise location to be determined in final design.


3 North Fork Box
4 East Highlands Company Weir
102 Foothill Line Surge Riser
114 North Fork Canal Temporary Turnout
2 SBVMWD Phase 2 Foothill Pipeline
1 North Fork Canal
101 Pumping Plant No. 1
9 SBVMWD Santa Ana Low Turnout
10 SBVWCD Santa Ana Main Canal
151 Pumping Plant No. 5
104 North Fork Reservoir
106 Santa Ana Wash Crossing
107 Santa Ana South Turnout
100 Pumping Plant No. 2
8 Redlands Aqueduct
11 Mentone Reservoir
31 SBVWCD Mill Creek Intake
32 The Zanja West Weir
33 Crafton Canal
34 Crafton Reservoir
8 Redlands Aqueduct
25 Bear Valley High Li
21 Edison Santa An
7 Edison Power
133 Conne Santa
119 SBVMWD Hi
25 Bear Valley
30 Bou
ATCHISON TOPEKA AND SANTA FE
GREENSPOT ROAD
EAST 3RD STREET
SANTA ANA WASH
FLORIDA STREET
REDLANDS
MENTONE
LUGONIA AVENUE
20 BOULEVARD
PACIFIC SOUTHERN
CRAFTON AVE
KING ST
GARNET
ORANGE
CAJON
YUCAIPA BLVD
WEST
Dunlap Acres


21 Edison Santa Ana No. 2 Powerhouse
7 Edison Santa Ana No. 3 Powerhouse and Tailrace
133 Connection to Edison Santa Ana No. 3 Penstock
23 Edison Santa Ana No. 3 Conduit
117 Low Level Connection to Edison Santa Ana No. 3 Penstock
34 Edison Santa Ana No. 3 Forebay
116 High Level Connection to Edison Santa Ana No. 3 Forebay
118 SBVMWD High Line Tunnel
134 Pumping Plant No. 6
26 Bear Valley High Line
132 Connection to Edison Mill Creek No. 2 and No. 3 Tailrace
121 Bear Valley High Line Turnout
130 Bear Valley High Line Temporary Connection
Pumping Plant No. 25
131 Bear Valley High Line Modifications
135 Yucaipa/SGPWA Line - Alternative Location
43 Edison Mill Creek No. 2 & No. 3 Powerhouse and Tailrace
118 SBVMWD High Line
25 Bear Valley High Line
30 Boulloun Box
140 Mill Creek/Yucaipa Line
136 Yucaipa/SGPWA Line
128 Connection to Redlands Tate Filter Plant
29 Redlands Tate Filter Plant
141 Yucaipa Valley CWD Filter Plant Turnout
123 SBVMWD High Line Spillway Tower
142 Yucaipa Lakes Turnout
126 Bear Valley Boulloun Box Turnout
124 Pumping Plant No. 3 to Yucaipa and SGPWA
125 Pumping Plant No. 4 to Redlands
127 Crafton – Zanja Turnout
136 Yucaipa/SGPWA Line
143 Wilson Creek Spreading Basins Turnouts
45 Wilson Creek Spreading Basins
148 SGPWA Connection to SBVMWD Facilities
145 Oak Glen Creek Turnout
Bear Valley High Line
NEWPORT AVENUE
MILL CREEK
BRYANT STREET
FIR AVENUE
OAK GLEN ROAD
YUCAIPA BOULEVARD
N
2000' 0' 2000' 4000'
GRAPHIC SCALE 1" = 2000'

FACILITY LIST

EXISTING AND ASSOCIATED WATER FACILITIES

Key Number	Facility Description
1	North Fork Canal
2	SBVMWD Phase 2 Foothill Pipeline
3	North Fork Box
4	East Highlands Company Weir
5	SBVWCD Santa Ana Intake Headgate
6	SBVWCD Santa Ana Three Way Box
7	Edison Santa Ana No. 3 Powerhouse and Tailrace
8	Redlands Aqueduct
9	SBVMWD Santa Ana Low Turnout
10	SBVWCD Santa Ana Distribution Canal
11	Mentone Reservoir
12	Redlands Water Tunnel
21	Edison Santa Ana No. 2 Powerhouse
22	Bear Valley Santa Ana Canyon Well No. 2
23	Edison Santa Ana No. 3 Conduit
24	Edison Santa Ana No. 3 Forebay
25	Bear Valley High Line
26	Edison Mill Creek No. 2 Conduit
27	Edison Mill Creek No. 1 Powerhouse and Tailrace
28	The Zanja East Weir
29	Redlands Tate Filter Plant
30	Boullioun Box
31	SBVWCD Mill Creek Intake
32	The Zanja West Weir
33	Crafton Canal
34	Crafton Reservoir
41	Edison Mill Creek No. 2 Conduit
42	Edison Mill Creek No. 3 Conduit
43	Edison Mill Creek No. 2 & No. 3 Powerhouse and Tailrace
44	Edison Mill Creek No. 1 Stream Diversion Structures and Pipeline
45	Wilson Creek Spreading Basins

COOPERATIVE WATER PROJECT FACILITIES

Key Number	Facility Description
101	Pumping Plant No. 1
102	Foothill Line Surge Riser
103	North Fork Reservoir Inlet System
104	North Fork Reservoir
105	North Fork Reservoir Outlet System
106	Santa Ana Wash Crossing
107	Santa Ana South Turnout
108	Pumping Plant No. 2
109	Foothill Pipeline to Redlands Aqueduct Turnout
110	Redlands Aqueduct Turnout to Foothill Line
111	Pumping Plant No. 2 Surge Riser
112	SBVWCD Santa Ana Main Canal Relocation
113	Redlands Water Tunnel/North Fork Reservoir Line
114	North Fork Canal Temporary Turnout
115	Redlands Aqueduct Temporary Connection
151	Pumping Plant No. 5 to North Fork Box and Pumping Plant No. 6
152	Pumping Plant No. 5 Discharge Line
153	Pumping Plant No. 6 to SBVMWD High Line
116	High Level Connection to Edison Santa Ana No. 3 Forebay
117	Low Level Connection to Edison Santa Ana No. 3 Penstock
118	SBVMWD High Line Tunnel
119	SBVMWD High Line
120	Pumping Plant No. 2 Discharge Line
121	Bear Valley High Line Turnout
122	Pumping Plant No. 3 to Yucaipa and SGPWA - Alternative Location
123	SBVMWD High Line Spillway Tower
124	Pumping Plant No. 3 to Yucaipa and SGPWA
125	Pumping Plant No. 4 to Redlands
126	Bear Valley Boullioun Box Turnout
127	Crafton – Zanja Turnout
128	Connection to Redlands Tate Filter Plant
129	Upper Zanja Turnout
130	Bear Valley High Line Temporary Connection
131	Bear Valley High Line Modifications
132	Pumping Plant No. 6 Discharge Line
133	Connection to Edison Santa Ana No. 3 Penstock
135	Yucaipa/SGPWA Line - Alternative Location
136	Yucaipa/SGPWA Line
137	Connection to Pipeline from Edison Mill Creek No. 1 Stream Diversion
138	Connection to Edison Mill Creek No. 2 and No. 3 Tailrace
139	Upper Mill Creek/Yucaipa Line
140	Mill Creek/Yucaipa Line
141	Yucaipa Valley CWD Filter Plant Turnout
142	Yucaipa Lakes Turnout
143	Wilson Creek Spreading Basins Turnouts
144	Mill Creek/Yucaipa/SGPWA Line Surge Riser
145	Oak Glen Creek Turnout
146	SGPWA Connection to SBVMWD Facilities
147	Connection Yucaipa/SGPWA Line – Alternative Location/Edison Mill Creek No. 1 Conduit

GENERAL NOTES

1. All facilities needed for the ultimate development of the Santa Ana and Mill Creek Cooperative Water Project are shown on this Plate.
2. Locations of facilities shown on this Plate are conceptual, schematic and functional only. Final locations may be modified from those shown as a result of detailed design.
3. Alternative locations are shown for certain facilities. Evaluation and selection of alternatives will be made later as a part of detailed design.
4. Facilities will be built in increments to serve the needs of the Parties.

BECHTEL INCORPORATED
SAN FRANCISCO

SAN BERNARDINO VALLEY
MUNICIPAL WATER DISTRICT
WATER TRANSMISSION PROJECT

SANTA ANA RIVER AND MILL CREEK
COOPERATIVE WATER PROJECT AGREEMENT

CONCEPTUAL PLAN OF COOPERATIVE WATER PROJECT FACILITIES AND ASSOCIATED WATER FACILITIES

JOB NO.	DRAWING NO.	REV.
7843	PLATE 1	B

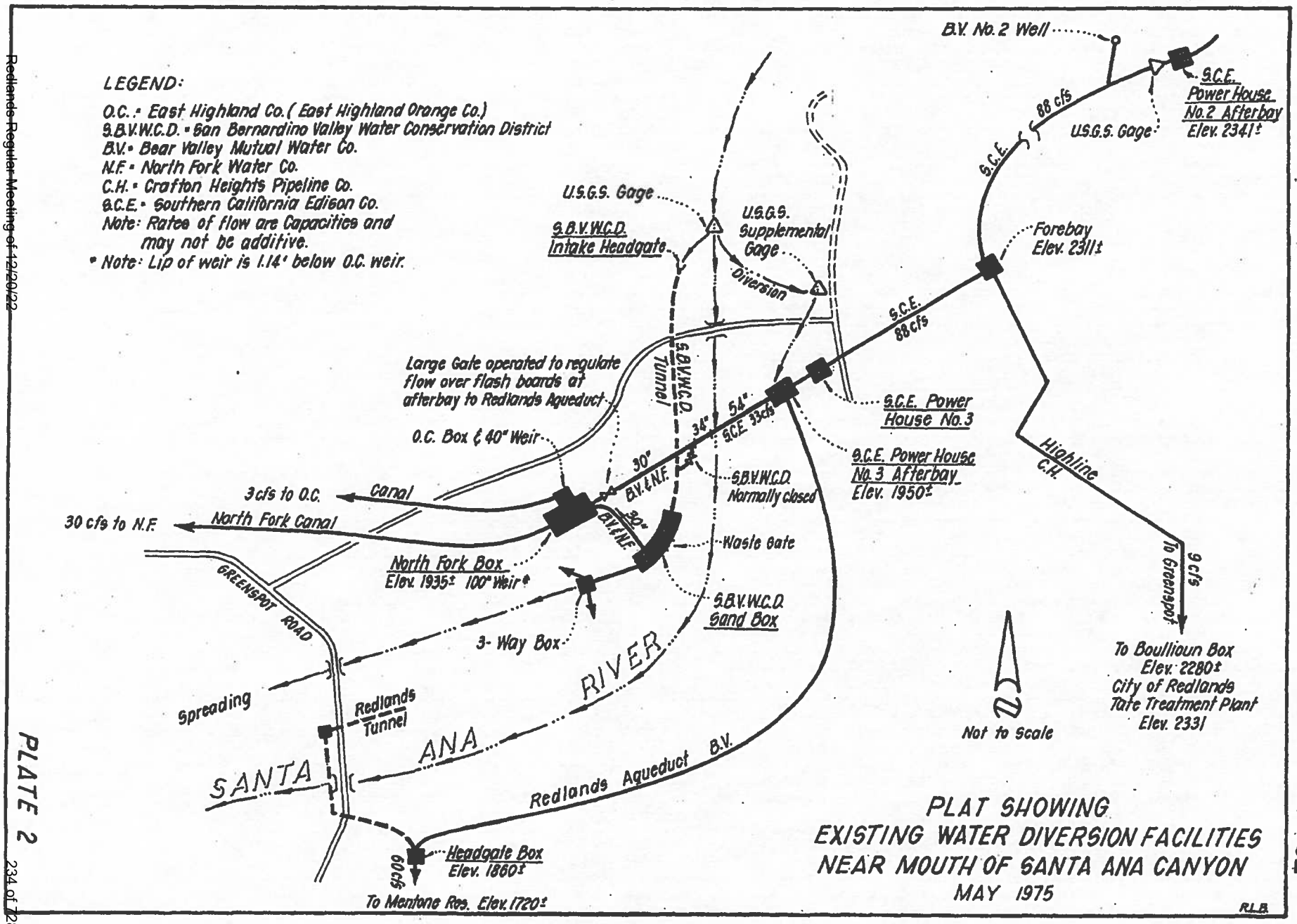
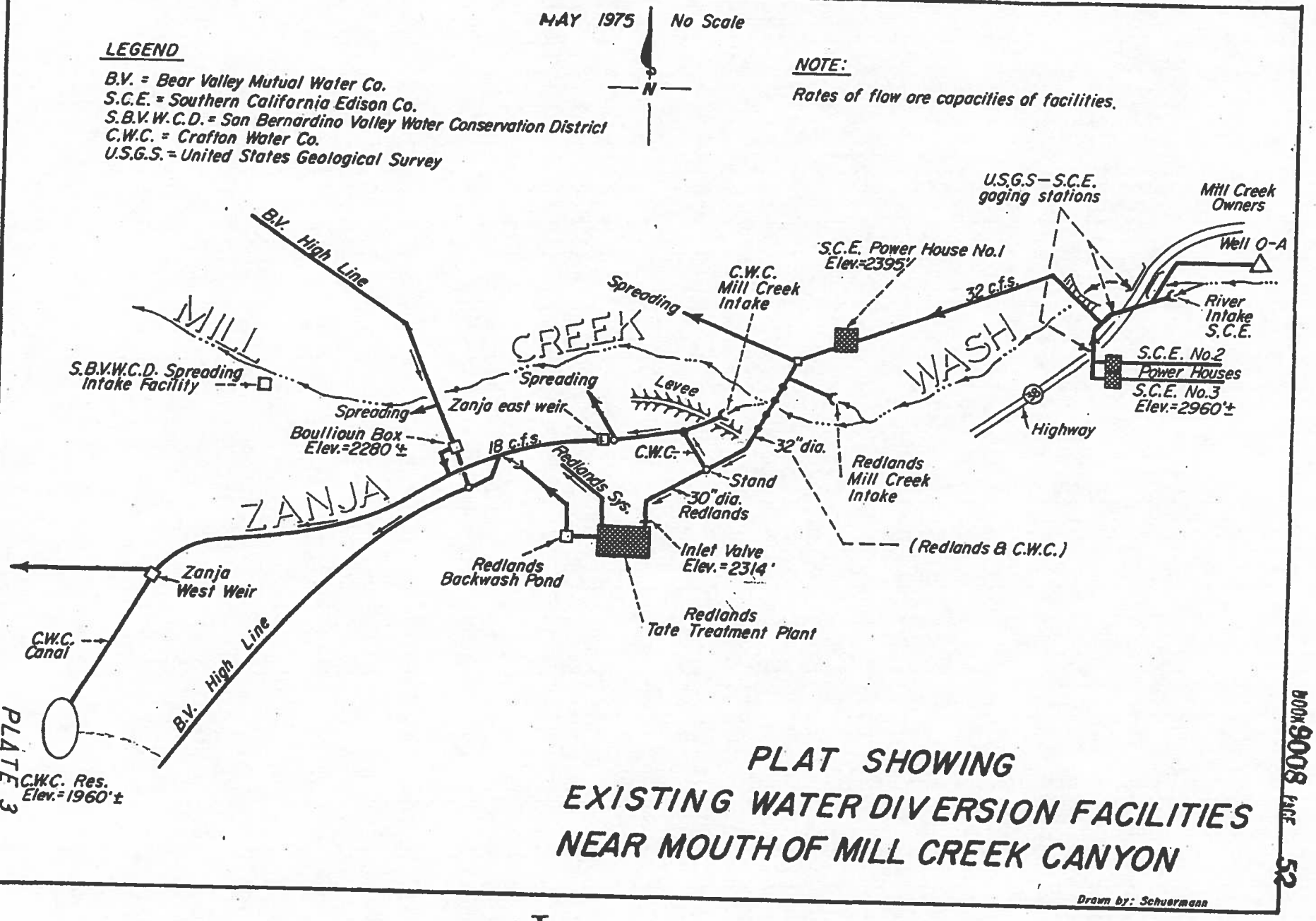
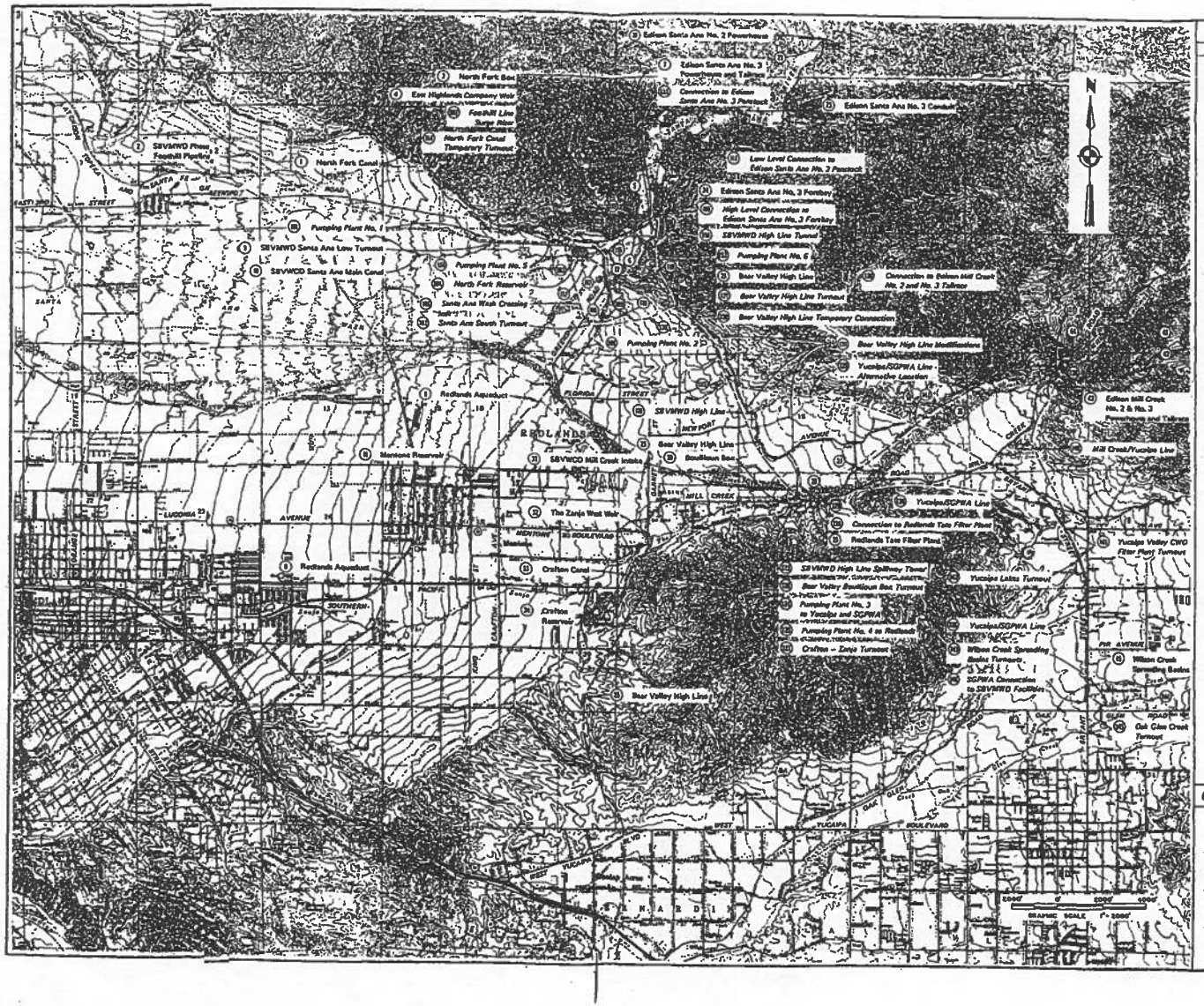

LEGEND:
O.C. = East Highland Co. (East Highland Orange Co.)
S.B.V.W.C.D. = San Bernardino Valley Water Conservation District
B.V. = Bear Valley Mutual Water Co.
N.F. = North Fork Water Co.
C.H. = Crafton Heights Pipeline Co.
S.C.E. = Southern California Edison Co.
Note: Rates of flow are Capacities and may not be additive.
* Note: Lip of weir is 1.14' below O.C. weir.
B.V. No. 2 Well
S.C.E. Power House No.2 Afterbay Elev. 2341±
88 cfs
U.S.G.S. Gage
S.C.E.
U.S.G.S. Gage
S.B.V.W.C.D. Intake Headgate
U.S.G.S. Supplemental Gage
Diversion
Forebay Elev. 2311±
S.C.E. 88 cfs
Large Gate operated to regulate flow over flash boards at afterbay to Redlands Aqueduct
S.B.V.W.C.D. Tunnel
54"
34"
S.C.E. 33cfs
S.C.E. Power House No.3
O.C. Box & 40" Weir
30"
B.V. & N.F.
S.B.V.W.C.D. Normally closed
S.C.E. Power House No.3 Afterbay Elev. 1950±
Highline C.H.
3 cfs to O.C.
Canal
30 cfs to N.F.
North Fork Canal
30"
B.V. & N.F.
Waste Gate
North Fork Box Elev. 1935± 100" Weir*
GREENSPOT ROAD
9 cfs
To Greenspot
S.B.V.W.C.D. Sand Box
3- Way Box
To Boullioun Box Elev. 2280±
City of Redlands Tate Treatment Plant Elev. 2331
Spreading
Redlands Tunnel
RIVER
SANTA ANA
Redlands Aqueduct B.V.
Not to Scale
60cfs
Headgate Box Elev. 1860±
To Mentone Res. Elev. 1720±
PLAT SHOWING
EXISTING WATER DIVERSION FACILITIES
NEAR MOUTH OF SANTA ANA CANYON
MAY 1975
R.L.B.

PLATE 2


MAY 1975
No Scale
N
LEGEND
B.V. = Bear Valley Mutual Water Co.
S.C.E. = Southern California Edison Co.
S.B.V.W.C.D. = San Bernardino Valley Water Conservation District
C.W.C. = Crafton Water Co.
U.S.G.S. = United States Geological Survey
NOTE:
Rates of flow are capacities of facilities.
U.S.G.S—S.C.E. gaging stations
Mill Creek Owners
Well O-A
S.C.E. Power House No.1 Elev.=2395'
C.W.C. Mill Creek Intake
32 c.f.s.
River Intake S.C.E.
B.V. High Line
Spreading
MILL
CREEK
WASH
S.B.V.W.C.D. Spreading Intake Facility
Spreading
Levee
S.C.E. No.2 Power Houses
S.C.E. No.3 Elev.=2960'±
Zanja east weir
Spreading
Boulloun Box Elev.=2280'±
18 c.f.s.
C.W.C.
32" dia.
Highway
Redlands Mill Creek Intake
Redlands Sys.
Stand
30" dia. Redlands
ZANJA
(Redlands & C.W.C.)
Inlet Valve Elev.=2314'
Zanja West Weir
Redlands Backwash Pond
Redlands Tate Treatment Plant
C.W.C. Canal
B.V. High Line
C.W.C. Res. Elev.=1960'±
PLATE 3
PLAT SHOWING
EXISTING WATER DIVERSION FACILITIES
NEAR MOUTH OF MILL CREEK CANYON
Drawn by: Schuermann



FACILITY LIST

EXISTING AND ASSOCIATED WATER FACILITIES

Key Number	Facility Description
1	North Fork Canal
2	SBVMWD Phase 2 Foothill Pipeline
3	North Fork Box
4	East Highlands Company Weir
5	SBVMWD Santa Ana Intake Headgate
6	SBVMWD Santa Ana Three Way Box
7	Edison Santa Ana No. 3 Powerhouse and Tailrace
8	Redlands Aqueduct
9	SBVMWD Santa Ana Low Turnout
10	SBVMWD Santa Ana Distribution Canal
11	Mentone Reservoir
12	Redlands Water Tunnel
21	Edison Santa Ana No. 2 Powerhouse
22	Bear Valley Santa Ana Canyon Weir No. 2
23	Edison Santa Ana No. 2 Conduit
24	Edison Santa Ana No. 3 Forebay
25	Bear Valley High Line
26	Edison Mill Creek No. 2 Conduit
27	Edison Mill Creek No. 1 Powerhouse and Tailrace
28	The Zanja East Weir
29	Redlands Tate Filter Plant
30	Boulibou Box
31	SBVMWD Mill Creek Intake
32	The Zanja West Weir
33	Crafton Canal
34	Crafton Reservoir
41	Edison Mill Creek No. 1 Conduit
42	Edison Mill Creek No. 2 Conduit
43	Edison Mill Creek No. 2 & No. 3 Powerhouse and Tailrace
44	Edison Mill Creek No. 1 Stream Diversion Structures and Pipeline
45	Wilson Creek Spreading Basins

COOPERATIVE WATER PROJECT FACILITIES

Key Number	Facility Description
101	Pumping Plant No. 1
102	Foothill Line Surge Riser
103	North Fork Reservoir Inlet System
104	North Fork Reservoir
105	North Fork Reservoir Outlet System
106	Santa Ana Wash Crossing
107	Santa Ana South Turnout
108	Pumping Plant No. 2
109	Foothill Pipeline to Redlands Aqueduct Turnout
110	Redlands Aqueduct Turnout to Foothill Line
111	Pumping Plant No. 3 Surge Riser
112	SBVMWD Santa Ana Main Canal Relocation
113	Redlands Water Tunnel/North Fork Reservoir Line
114	North Fork Canal Temporary Turnout
115	Redlands Aqueduct Temporary Connection
151	Pumping Plant No. 5 to North Fork Box and Pumping Plant No. 6
152	Pumping Plant No. 5 Discharge Line
153	Pumping Plant No. 6 to SBVMWD High Line
116	High Level Connection to Edison Santa Ana No. 3 Forebay
117	Low Level Connection to Edison Santa Ana No. 3 Penstock
118	SBVMWD High Line Tunnel
119	SBVMWD High Line
120	Pumping Plant No. 7 Discharge Line
121	Bear Valley High Line Turnout
122	Pumping Plant No. 3 to Yucaipa and SGPWA - Alternative Location
123	SBVMWD High Line Spillway Tower
124	Pumping Plant No. 3 to Yucaipa and SGPWA
125	Pumping Plant No. 4 to Redlands
126	Bear Valley Boulibou Box Turnout
127	Crafton – Zanja Turnout
128	Connection to Redlands Tate Filter Plant
129	Upper Zanja Turnout
130	Bear Valley High Line Temporary Connection
131	Bear Valley High Line Modifications
132	Pumping Plant No. 6 Discharge Line
133	Connection to Edison Santa Ana No. 3 Penstock
135	Yucaipa/SGPWA Line - Alternative Location
136	Yucaipa/SGPWA Line
137	Connection to Pipeline from Edison Mill Creek No. 1 Stream Diversion
138	Connection to Edison Mill Creek No. 2 and No. 3 Tailrace
139	Upper Mill Creek/Yucaipa Line
140	Mill Creek/Yucaipa Line
141	Yucaipa Valley CWD Filter Plant Turnout
142	Yucaipa Lakes Turnout
143	Wilson Creek Spreading Basins Turnout
144	Mill Creek/Yucaipa/SGPWA Line Surge Riser
145	Oak Glen Creek Turnout
146	SGPWA Connection to SBVMWD Facilities
147	Connection Yucaipa/SGPWA Line – Alternative Location/Edison Mill Creek No. 1 Conduit

GENERAL NOTES

1. All facilities needed for the ultimate development of the Santa Ana and Mill Creek Cooperative Water Project are shown on this Plan.
2. Locations of facilities shown on this Plate are conceptual, schematic and functional only. Final locations may be modified from those shown as a result of detailed design.
3. Alternative locations are shown for certain facilities. Evaluation and selection of alternatives will be made later as a part of detailed design.
4. Facilities will be built in increments to serve the needs of the Parties.

BECHTEL INCORPORATED
SAN FRANCISCO

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

WATER TRANSMISSION PROJECT

SANTA ANA RIVER AND MILL CREEK COOPERATIVE WATER PROJECT AGREEMENT

CONCEPTUAL PLAN OF COOPERATIVE WATER PROJECT FACILITIES AND ASSOCIATED WATER FACILITIES

BECHTEL	7843	PLATE 1

Redlands Regular Meeting of 12/20/22

RULES AND REGULATIONS FOR THE DELIVERY OF WATER

UNDER THE

SANTA ANA RIVER - MILL CREEK COOPERATIVE WATER PROJECT

(As adopted on April 16, 1987 by the Santa Ana River-Mill Creek Cooperative Water Project Management Committee)

These rules and regulations are made pursuant to Section 6a(1a) of the Santa Ana River-Mill Creek Cooperative Water Project Agreement (CWPA) as recorded in the official records of San Bernardino County, and are issued for the purpose of implementing the agreement. Nothing herein shall be construed as modifying or altering the CWPA or the rights and obligations of the parties thereto, and in any case where a conflict may exist the CWPA shall govern.

ARTICLE I

DEFINITIONS

Section 1.01. Definitions. As used herein the terms set forth below shall be defined as follows and shall have such meaning unless the context indicates otherwise.

a. Water Service - A delivery connection, including but not limited to, meters, piping and appurtenances.

b. Party - Any entity signatory to the CWPA.

c. Applicant - Parties to the CWPA.

d. New Connections - All connections other than those described in the CWPA.

e. Entitlement Water Delivery Points - Those delivery points and rates of flow as defined in Exhibit "B" of CWPA.

f. Supplemental Water - As defined in Section 2, page 3 of the CWPA.

g. In Lieu Water - Water deliveries by Big Bear Municipal Water District to Bear Valley in conformance with the stipulated judgment "Big Bear Municipal Water District vs. North Fork Water Company, et al, Case No. 165493 Superior Court of the State of California for San Bernardino County".

h. Emergency Conditions - Any condition that is not, or could not be, foreseen by a Party, including breakdowns, pipeline breaks or other acts not under control of the Party.

i. Miner's Inch - 1/50 of a cubic foot per second.

ARTICLE II

GENERAL

Section 2.01. Limitations of State Contract Service. All State Project water deliveries made pursuant to the Valley District's State Contract shall be subject to all of the terms and of the said State Contract and to any conditions affecting the State's source of supply.

The Project Manager shall monitor the provisions of Section 14 of the CWPA and advise the parties thereto of all requests for delivery in excess of those quantities shown in Exhibit "C" of the CWPA.

Section 2.03.1. **Weekly Water Scheduling**. Each Party shall, by 1000 hours on Tuesday of each week, submit to the Project Manager a schedule of firm flow rates for each delivery point for the seven (7) day period starting at 0800 hours on the following Friday. Project Manager shall schedule state project water in accordance with Valley District scheduling requirements.

Parties who have contracted with other Parties shall coordinate the estimates and schedules required in Sections 2.03 and this section so that duplication is eliminated and all affected Parties understand and agree to both the classification and amounts of the requested delivery.

Section 2.03.2. **Changes in Scheduled Flow Rates**. Parties requiring a change in flow rate ordered under Section 2.03 shall notify the Project Manager as soon as possible and furnish written information, except under emergency conditions, as to the change required, the effective time and date, and the reason for requesting the change.

When a request for an, unscheduled reduction in flow rate occurs, the Project Manager shall make every effort to accommodate the reduction by delivering the reduced amount to another Party. If delivery to another Party is not possible, that reduced amount shall be delivered to spreading facilities or

as otherwise directed by the Project Manager. In the event there are charges accruing for water deliveries after receiving notification to reduce flow rate, the Party requesting the reduction of flow shall be responsible for all charges until such time as the Project Manager can change the delivery rate. The Project Manager shall not deliver at any time water at a rate less than 1 cfs (50 miners-inches) or for a period of less than 24 hours. Any 24 hour period must be scheduled in accordance with Section 2.03.1.

Section 2.03.3. **Proportion of Available Supply.** The Project Manager shall have the authority to schedule all deliveries and prorate supplies in the event of shortages.

Section 2.04. **Deferred Credits.** All parties who receive deferred exchange water credits as provided for in the CWPA shall receive delivery of such credits upon request. A Party's deferred exchange water credits shall be utilized by said party within a two year period subsequent to the accumulation of said credits, unless otherwise approved by the Management Committee. Parties receiving deferred exchange water shall pay all additional delivery costs in excess of the simultaneous exchange price in effect at the time delivery of the deferred exchange water is made. All unused deferred credits shall be returned to the San Bernardino Valley Water Conservation District for groundwater recharge in the area of origin.

Section 2.04.1. **Mill Creek.** The Mill Creek parties (City of Redlands, Crafton Water Company, and the San Bernardino Valley

Water Conservation District) shall receive deferred water credits during periods of time when diversions of Mill Creek water are made by other than the parties and such water is taken out of the Mill Creek area. In no case shall the amount of exchangeable water exceed that shown in Exhibit "C" of the CWPA.

Section 2.04.2. Santa Ana River. The Santa Ana River parties (Bear Valley Mutual Water Company, Lugonia Water Company, North Fork Water Company, Redlands Water Company and the San Bernardino Valley Water Conservation District) shall receive deferred water credits during periods of time when diversions of Santa Ana River flows are made by other than the parties and such water is taken out of the Santa Ana River area. In no case shall the amount of exchangeable water exceed that shown in Exhibit "C" of the CWPA.

Section 2.05. Water Rates And Charges. All water rates for water deliveries made by the Project Manager to Parties shall be as provided for in Section 16 of the CWPA.

Section 2.06. Ownership, Operation and Maintenance. The Valley District shall own, operate and maintain all CWP facilities. Each delivery location shall define a division point between CWP facilities and the Party's facilities.

Section 2.07. Design. The Valley District shall design all CWP facilities and reserves the right to determine the size and location of such. Any right-of-way required for such facilities shall be furnished by the applicant in a form and manner approved by the Valley District.

Section 2.08. **Pressure and Flow Conditions**. All parties shall be required to accept such conditions of pressure and service as are provided by the distribution system at the location of the proposed delivery point. Further, all parties shall agree to hold the Valley District harmless for any damages from unreasonable interruptions of service of any kind arising out of low pressure/high pressure conditions.

Section 2.09. **Provisions for Payments**. Payments are due and payable at the office of the Project Manager on date of mailing of bill as provided for in the CWPA. Deliveries for other than entitlement water may be discontinued without further notice if payment is not made prior to the date such bill becomes delinquent. Bills are delinquent 30 days after the date of billing.

Section 2.10. **Indemnity and Hold Harmless Agreement**. Applicant shall agree in writing, to the full extent authorized by law, to indemnify and hold harmless the Management Committee and it's employees from any and all claims, damages, losses and expenses, including attorney's fees, arising out of or alleged to arise out of delivery of water in compliance with these rules and regulations excepting when said claims, damages, losses or expenses are the result of negligence on the part of the Management Committee or negligent action on the part of it's employees.

Section 2.11. **Amendments**. These rules and regulations may be amended, with thirty (30) days written notice to all Parties,

specifying the amendment proposed, at a regular scheduled meeting of the Management Committee.

ARTICLE III

ACCOUNTING

Section 3.01. **Issuance of Bills**. The Project Manager shall cause the following information to be printed on the bills:

a. Beginning and ending meter readings and the inclusive dates for the period.

b. Total water delivered, by type or class.

c. Total and unit cost of type or class of water delivered.

d. Amount of Deferred Exchange Credits accrued, used and balance.

e. Location of payment.

f. Delinquent date of bill.

ARTICLE IV

QUALIFICATION FOR SERVICE

Section 4.01. **Application for Service**. Any eligible entity seeking a delivery point other than provided for in the CWPA shall make application therefore in such form as may be prescribed by the Project Manager and approved by the Management Committee and Valley District. The Project Manager in cooperation with Valley District shall investigate each such application and may require submission of additional information. The application, additional information and such terms and

conditions as may be required, together with the Project Manager's recommendations thereon, shall be submitted to the Management Committee and Valley District for approval as required.

Section 4.02. New Connection to Associated Water Facilities (AWF). Requests for new connections to an AWF that affect the CWPA shall be submitted in a form approved by the Management Committee and Valley District to the Project Manager and Valley District. The Project Manager shall submit the request to the Management Committee and Valley District for review and approval or disapproval.

Section 4.02.1. Standard Conditions for New Connections to the Associated Water Facilities. The following standard conditions for connecting to an AWF requiring Management Committee approval shall apply:

a. The new connection requiring Management Committee approval shall be operated under the direction of the Project Manager. At such times as there is a conflict, delivery points in the CWPA shall have preference over deliveries at any new connections.

b. Deliveries to new connection from an AWF are interruptible at any time by the Project Manager if necessitated by commitments under the CWPA.

c. Any cost penalties to other parties shall be born by the owner of the new connection and approved by the Management Committee on a case by case basis.

Section 4.03. **New Connection to CWP-Facilities**. Requests for new connections to CWP facilities shall be submitted in writing to the Project Manager and the Valley District for approval. If approval is given by the Management Committee and Valley District, the Project Manager shall notify the applicant of such approval listing all conditions for the connections.

This copy of the Rules and Regulations combines the marked-up draft provided to the Santa Ana River-Mill Creek Cooperative Water Project Management Committee on April 16, 1987 and the amendments made as part of the approval process at that meeting.

City Council Meeting **J. 16.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve the License Agreement with the California Department of Water Resources and the San Bernardino Valley Municipal Water District (Municipal Utilities and Engineering Director Harris)

MOTION(S):

If City Council determines the staff recommendation is appropriate, the following motion is provided:

I move that City Council approve the License Agreement with the California Department of Water Resources and the San Bernardino Valley Municipal Water District.

RECOMMENDATION:

Staff recommends that City Council approve the License Agreement with the California Department of Water Resources and the San Bernardino Valley Municipal Water District.

DISCUSSION:

The Municipal Utilities and Engineering Department (MUED) staff participates with multiple municipalities, agencies, and districts throughout the region to manage water resources for long-term beneficial use within two (2) groundwater basins - the Yucaipa Basin and the Bunker Hill Basin. This effort includes monitoring surface water flows, as well as groundwater recharge and extractions. Recently, the California Department of Water Resources (DWR) and the San Bernardino Valley Municipal Water District (SBVMWD) identified an ideal location to monitor stream flows along Live Oak Canyon Creek.

The project will install a small stream gauge station along the creek channel on property owned by the City of Redlands, which requires City Council approval of

a non-exclusive License Agreement. This Agreement authorizes DWR to construct, access, operate, and maintain a small stream gauge in accordance with applicable laws and regulations. The location is just downstream of the Live Oak Canyon Road bridge along the left bank of the channel and will not adversely affect nearby properties. DWR anticipates accessing the site very infrequently for scheduled maintenance and routine data collection. SBVMWD will pay to the City a $500 fee each year for use of the property. The License Agreement will remain in effect until terminated by any of the Parties.

ALTERNATIVES:

City Council may deny the staff recommendation and provide alternate direction.

STRATEGIC PLAN:

N/A

SUBMITTED BY:
John R. Harris, Municipal Utilities and Engineering Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager

PREPARED BY:
John R. Harris, Municipal Utilities and Engineering Director

Fiscal Impact

Discussion:
There is no fiscal impact associated with this action.

Attachments

DWR License Agreement

LICENSE AGREEMENT

This License Agreement ("Agreement") is made and entered into this 20th day of December, 2022 ("Effective Date"), by and between the City of Redlands, a municipal corporation ("City"); the California Department of Water Resources ("DWR"); and the San Bernardino Valley Municipal Water District ("SBVMWD"). City, DWR, and SBVMWD are sometimes individually referred to herein as a "Party" and, together, as the "Parties."

RECITALS

WHEREAS, City is the owner of certain real property located in the City of Redlands and commonly identified as County of San Bernardino Assessor's Parcel Number 0300-231-36-0000 ("Property"), the approximate location of which is shown on Exhibit "A," titled "Site Maps and Photos," which is attached hereto and incorporated herein by this reference; and

WHEREAS, DWR has identified locations for the installation of stream gauge stations in key groundwater basins in Southern California pursuant to DWR's Sustainable Groundwater Management Program; and

WHEREAS, the Yucaipa Basin Groundwater Sustainability Agency ("YBGSA") is a groundwater sustainability agency formed and created pursuant to California law and SBVMWD is the lead agency of YBGSA; and

WHEREAS, DWR works in coordination with various groundwater sustainability agencies created under California law, including YBGSA to develop a comprehensive groundwater management plan; and

WHEREAS, the installation of a stream gauge station as provided for in this Agreement will provide YBGSA (and SBVMWD as the lead agency of YBGSA) and DWR data needed to improve water management of groundwaters within YBGSA's geographic boundaries and help protect fish and wildlife; and

WHEREAS, City desires to grant DWR a non-exclusive license, subject to termination as set forth in Sections 8 and 14, to enter upon the Property and install a stream gauge station thereon, on the terms and conditions hereinafter set forth;

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the Parties agree as follows:

AGREEMENT

Section 1. Grant of License. City hereby grants to DWR a non-exclusive license ("License"), subject to termination as set forth in Sections 8 and 14, to enter upon, travel over and through, and use, as the case may be, subject to all of the terms and conditions hereof, the entirety

of the Property for the installation, operation, and maintenance of a stream gauge station ("Project"), which stream gauge station shall be located on the Property within the approximate location shown on Exhibit A attached hereto and incorporated herein by this reference. All activities of DWR undertaken in connection with the Project shall be performed in accordance with all applicable federal and state laws and regulations.

Section 2. Acknowledgment of License and Disclaimer of Tenancy.

A. Pursuant to this Agreement DWR holds only a license to use the Property as set forth herein. DWR acknowledges and agrees that it is not a tenant or lessee of City and holds no rights of tenancy or leasehold in relation to the Property.

B. In consideration of City's grant of this License, DWR specifically and expressly waives, releases, and relinquishes any and all rights to assert any claim of right, privilege or interest in the Property other than the License expressly granted pursuant to this Agreement.

C. Any consideration paid pursuant to Section 5 of this Agreement is consistent with the value of the rights comprising the License privilege; the consideration is not consistent with the higher market value for a greater right, privilege or interest (such as a lease) in the Property.

D. DWR further acknowledges and agrees that without the representations and agreements set forth herein, City would not enter into this Agreement.

Section 3. Scope of Work. DWR shall furnish all materials and shall perform Project as more particularly described in Exhibit B, titled "Scope of Services," which is attached hereto and incorporated herein by reference, at its own expense.

Section 4. Use of Property.

A. The Property shall be used by DWR solely for the purpose of constructing, installing, operating, maintaining, and performing related activities for a stream gauge station, including travelling by vehicle and foot over, on and through the Property for such purposes. The Property is located in a key groundwater basin in Southern California and the installation and operation of a stream gauge station on the property is an important component of DWR's Sustainable Groundwater Management Program.

B. Use of the Property shall not jeopardize or endanger the health, welfare, peace or safety of persons visiting, residing, working, or conducting business in the surrounding area.

C. During the term of this Agreement, DWR shall comply with all applicable federal and state laws and regulations.

D. DWR and its contractors shall not engage in, and shall not perform any acts- that result in, nuisance activities within the Property or in close proximity of the Property, including but not limited to disturbance of the peace, illegal drug activity, public drunkenness, drinking in public, harassment of passersby, gambling, prostitution, sale of stolen goods, public urination, theft, assaults, batteries, acts of vandalism, littering, loitering, graffiti, illegal parking, excessive

loud noises especially in the late night or early morning hours, traffic violations, curfew violations, lewd conduct, or police detentions and arrests. Subject to the foregoing, the construction, installation, and maintenance of the Project shall be deemed not to be a nuisance activity.

E. DWR shall ensure that the Project's upkeep and operating characteristics are compatible with, and will not adversely affect, the livability or appropriate development of abutting properties and the surrounding neighborhood.

F. DWR will not impede the City's access to the Property, except to the extent access is impeded by the construction, installation, maintenance, operation, or presence of the Project. For avoidance of doubt, DWR hereby grants City immediate access to the Property in the event of an emergency; which is defined as any incidents that threaten loss of life or property, interruptions of public utilities, disaster, war, acts of terrorism, strikes or similar emergencies.

Section 5. License Fee. SBVMWD shall pay to City a license fee in the sum of Five Hundred Dollars ($500.00) per year ("Fee") for use of the Property. The initial Fee shall be due and payable to City within ten (10) City business days of City's approval of this Agreement. All subsequent annual Fee payments shall be made prior to the 5th day of each subsequent May during the term of this Agreement. All payments are to be made payable to the City of Redlands, Finance Department/Revenue Division, P.O. Box 3005, Redlands, California, 92373. In the consideration of SBVMWD's agreement to pay the fee as set forth herein, DWR will provide SBVMWD access to all data generated by the Project.

Section 6. Notice of Entry. DWR anticipates the necessity to access the Property two to four times per year for scheduled maintenance and routine data collection, provided, however, DWR may access the Property more frequently as reasonably necessary for the use, operation, and maintenance of the stream gauge station. DWR shall provide at a minimum two (2) City business days prior written notice to City of each date on which DWR desires to enter upon the Property for scheduled maintenance and routine data collection. Should DWR need to access the stream gauge site for unscheduled maintenance and non-routine data collection, DWR shall call notify the City via phone call prior to mobilizing to the site.

Section 7. Possession and Condition of Property Not Warranted. City does not warrant or represent that the Property is suitable for DWR's entry upon the Property or DWR's installation of a stream gauging station, or for any other purpose, and DWR agrees to enter and use, as the case may be, the Property in its "as is" condition, and install a stream gauge station thereon at its own risk, and DWR may not look to City for any claim of damages, restitution or other relief in connection with such entry or restoration.

Section 8. Commencement; Termination. This Agreement shall commence upon its Effective Date and shall continue until terminated by any Party upon sixty (60) days prior written notice to the other Parties, or as otherwise provided for herein.

Section 9. Notice. Any notice or other communication required, or which may be given, pursuant to this Agreement, shall be in writing. Any such notice shall be deemed delivered (i) on the date of delivery in person; (ii) five (5) days after deposit in first class registered mail,

with return receipt requested; (iii) on the actual delivery date if deposited with an overnight courier; or (iv) on the date sent by facsimile or electronic mail transmission (including PDF), if confirmed with a copy sent contemporaneously by first class, certified, registered or express mail; in each case properly posted and fully prepaid to the appropriate address set forth below, or such other address as a Party may provide notice in accordance with this section:

CITY:

City Clerk
City of Redlands
35 Cajon Street
PO Box 3005 (mailing)
Redlands, CA 92373
jdonaldson@cityofredlands.org
909-798-7631

DWR:

Abiodun Aderonmu
Sr. Engineer, Water Resources
770 Fairmont Avenue, Suite 200
Glendale, CA 91203
AbiodunAderonmu@water.ca.gov
818-549-2327

SBVMWD:

Matthew Howard
Water Resources Senior Planner
380 East Vanderbilt Way
San Bernardino, CA 92408
MattH@sbvmwd.com
909-387-9230

Section 10. Indemnification of City. DWR shall indemnify and hold City and its elected and appointed officials, officers, and employees free and harmless from and against all liability, loss, damage, costs or expenses (including attorneys' fees and court costs) resulting from the death of any person or any personal injury, accident, claim, loss or damage to any person or to the property of any person to the extent arising from DWR's negligent or intentional acts or omissions in exercising the rights granted under this Agreement.

Section 11. Insurance. Throughout the term of this Agreement DWR shall self-insure against liability risk by participating in the State of California's self-insurance program. In accordance with Government Code section 11007.4, the State of California has elected to be self-insured for liability exposure. Under this self-insurance, the State and its employees acting in the course and scope of their employment are insured for tort liability arising out of official State business. All claims against the State of California based on tort liability should be presented as a government claim to the Government Claims Program, P.O. Box 989052 MS 414, West Sacramento, CA 95798-9052. (See Government Code Section 900, et. seq., internet link: http://www.dgs.ca.gov/orim/Programs/GovernmentClaims.aspx. Evidence of the self-insurance program is attached hereto as Exhibit C. In the event DWR ceases in the future to participate in the State of California's self-insurance program, it shall obtain the policy(ies) of insurance and comply with the requirements listed in paragraphs A-C, below, and provide certificate(s) of insurance and endorsements evidencing such insurance prior to DWR's entry onto the Property. Any such insurance policies shall include a provision prohibiting cancellation or modification of the policy except upon thirty (30) City business days prior written notice to City.

A. Workers' Compensation and Employer's Liability insurance in the amount that

meets statutory requirements with an insurance carrier acceptable to City ,together with a completed Exhibit "D," titled "Workers' Compensation Insurance Certification," which is attached hereto and incorporated herein by this reference..

B. Comprehensive general liability insurance with carriers acceptable to City. Minimum coverage of One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) aggregate for public liability, property damage and personal injury is required. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.

C. Business auto liability coverage, with minimum limits of One Million Dollars ($1,000,000) per occurrence, combined single limit bodily injury liability and property damage liability. This coverage shall include all DWR owned vehicles used in connection with DWR's provision of the services provided for the installation of a stream gauge station on the Property, hired and non-owned vehicles, and employee non-ownership vehicles. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.

Section 12. Public Work/Prevailing Wage. In performing the work associated with the removal or the installation of a stream gauge station on the Property, DWR shall comply with all applicable federal and state laws, including but not limited to any applicable provisions of the California Labor Code. City makes no representation to DWR as to whether the work associated with the installation of a stream gauge station constitutes a "Public Work" as that term is defined by California Labor Code section 1720, and DWR acknowledges and agrees that DWR shall be solely responsible and liable for the determination of whether such work constitutes a "Public Work." DWR further acknowledges that City is not an awarding authority for any contract entered into by DWR for the work associated with the installation of a stream gauge station, nor is City otherwise undertaking any "Public Work" for purposes of California Labor Code section 1781. DWR shall indemnify and hold harmless City and its elected officials, officers and employees from and against any and all losses, damages, costs, claims, causes of action and liability based upon the assertion that City or DWR has failed to comply with any applicable provision of the California Labor Code as a direct result of DWR's undertaking of work associated with the installation of a stream gauge station on the Property. This Section 12 shall survive any termination of this Agreement.

Section 13. Independent Contractor Status. DWR is for all purposes under this Agreement an independent contractor and shall perform the services for installation of a stream gauge station on the Property as an independent contractor. Neither City nor of its agents shall have control over the conduct of DWR or DWR's employees, except as herein set forth. DWR shall supply all necessary tools and instrumentalities required to perform the services for installation of a stream gauge station on the Property. Assigned personnel employed by DWR are for its account only, and in no event shall DWR or personnel retained by it be deemed to have been employed by City or engaged by City for the account of, or on behalf of City. DWR shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent, nor shall DWR have any authority, express or implied, to bind City to any obligation.

Section 14. Assignment; Sub-Licenses. The license granted by this Agreement is personal to DWR. DWR shall not have the right to assign its rights under this Agreement except upon the prior written consent of City, which consent shall not be unreasonably withheld. Any attempt to assign the license granted by this Agreement without the prior written consent of City may, in the sole discretion of City, result in the immediate termination of this Agreement.

Section 15. Written Agreement as Entire Understanding of Parties. The making, execution and delivery of this Agreement by DWR has not been induced by any representations, statements, warranties or agreements other than those herein expressed. This Agreement embodies the entire understanding of the Parties, and there are no further or other agreements or understandings, written or oral, in effect between the Parties, relating to the grant of this License. This Agreement may be amended or modified only by a written instrument signed by the Parties.

Section 16. Attorneys' Fees and Costs. In the event any action is commenced to enforce or interpret the terms or conditions of this Agreement, the prevailing Party in any such action in addition to costs and any other relief, shall be entitled to its reasonable attorneys' fees, including fees for use of in-house counsel by a Party.

Section 17. Counterparts. This Agreement may be signed in counterparts or duplicate copies, and any signed counterpart or duplicate copy shall be equivalent to a signed original for all purposes.

Section 18. Electronic Signatures. This Agreement may be executed by electronic signature(s) and transmitted either by facsimile or in a portable document format (.pdf) version by email and such electronic signature(s) shall be deemed as original for purposes of this Agreement and shall have the same force and effect as a manually executed original.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of its Effective Date.

CITY OF REDLANDS	CALIFORNIA DEPARTMENT OF WATER RESOURCES
_____	_____
Paul T. Barich, Mayor	Linus A. Paulus, Manager Acquisition and Appraisal Section
ATTEST:	Approved as to Legal Form and Sufficiency
_____	_____
Jeanne Donaldson, City Clerk	Fritz Pahland, Attorney

SAN BERNARDING VALLEY
MUNICIPAL WATER DISTRICT

_____

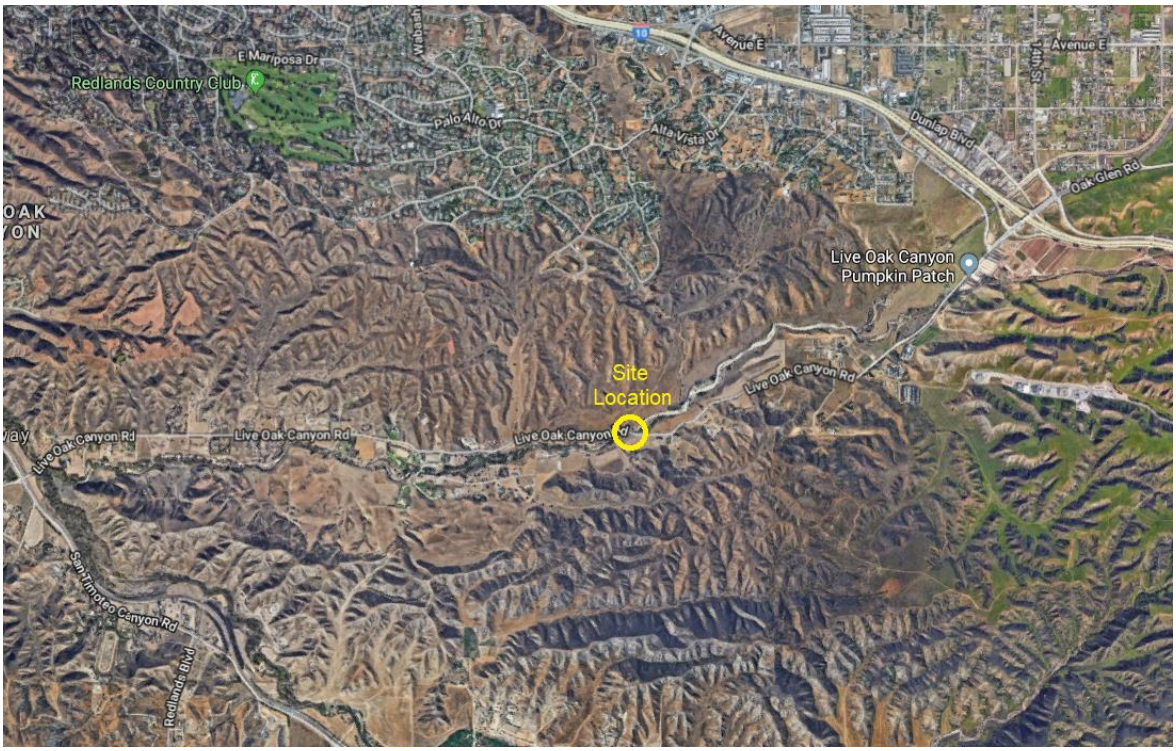
Heather Dyer,
General Manager

EXHIBIT "A"

SITE MAPS AND PHOTOS

APN 0300-231-36-0000

SITE MAPS



SITE PHOTOS

EXHIBIT "B"

SCOPE OF WORK

The gauge station will consist of monitoring equipment housed in a 30in. x 30in. x 10in. steel National Electrical Manufacturers Association (NEMA) box on the left bank of the channel. The box is mounted on two 2 in. diameter galvanized iron pipes embedded in a hole approximately 8 inches in diameter by 2 feet deep, filled with concrete. A satellite antenna, transmitter and solar panels are attached to the NEMA box. A bubbler conduit will run from the NEMA box to a low point in the channel, just downstream of the bridge.

SAMPLE STATION PHOTOS

EXHIBIT "C"

PROOF OF SELF-INSURANCE

EXHIBIT "D"

WORKERS' COMPENSATION INSURANCE CERTIFICATION

Every employer, except the State, shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.

(b) By securing from the Director of Industrial Relations, a certificate of consent to self-insure, either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.

CHECK ONE

_____I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work and activities required or permitted under this Agreement. (Labor Code §1861).

_____I affirm that at all times, in performing the work and activities required or permitted under this Agreement, I shall not employ any person in any manner such that I become subject to the workers' compensation laws of California. However, at any time, if I employ any person such that I become subject to the workers' compensation laws of California, immediately I shall provide the City with a certificate of consent to self-insure, or a certification of workers' compensation insurance.

I certify under penalty of perjury under the laws of the State of California that the information and representations made in this certificate are true and correct.

CALIFORNIA DEPARTMENT OF WATER RESOURCES

By:_____ Date: _____

Linus A. Paulus, Chief, Acquisitions and Appraisal Unit

City Council Meeting **J. 17.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Adopt Resolution No. 8416 establishing an approved contractor list pursuant to the Uniform Public Construction Cost Accounting Act and determination that approval of the Resolution is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act (Municipal Utilities and Engineering Director Harris)

MOTION(S):

If City Council determines the staff recommendation is appropriate, the following motion is provided:

I move City Council adopt Resolution No. 8416

RECOMMENDATION:

Staff recommends City Council determine approval of Resolution No. 8416 is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act, and approve Resolution No. 8416.

DISCUSSION:

The Uniform Public Construction Cost Accounting Act (Act) was enacted in 1983 and allows alternative bidding procedures when an agency performs public project work by contract in accordance with the cost accounting procedures outlined in the Cost Accounting Policies and Procedures Manual (Manual) of the California Uniform Cost Accounting Commission. California law provides public agencies relief from the formal bid process on smaller projects if the agency establishes specific administrative procedures necessary to comply with the Act. These procedures require the City to develop and annually update a qualified contractor list and adopt an ordinance providing alternative bidding procedures.

The Act provides that for public projects of $60,000 or less, the City may use its own employees or negotiate contract terms. For public works projects valued at $200,000 or less, the City may issue a contract using informal bid procedures, typically through a notice inviting informal bids, issued to listed contractors for the category of work to be bid. Using these procedures, public agencies can complete projects in a more timely manner as a result of the streamlined award process and the reduction in paperwork related to advertising and report filing.

The City is a participating agency under the Act and the alternative bidding provisions of the Act are codified in Chapter 2.16 of the Redlands Municipal Code. As part of the Act, staff is required to develop and maintain a contractor list under Public Contract Code section 22034 (a)(1). Each calendar year, the City must provide a new or updated list of qualified contractors. In October 2022, a written notice inviting contractors to be included in the City's contractor list was emailed to all construction trade journals designated under Section 22036 of the Public Contract Code. The notice invited all licensed contractors to submit the name of their firm and other required information for inclusion on the City's list of qualified bidders. The attached contractor list has been updated for calendar year 2023 to include contractors who submitted the required information. Additionally, a contractor may request to be added to the City's contractor list at any time by providing the required information.

Approval of the contractor list is exempt from environmental review under section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act because adoption of the resolution will not result in any direct or reasonably foreseeable indirect physical change in the environment.

ALTERNATIVES:

City Council may deny the staff recommendation and provide alternate direction.

STRATEGIC PLAN:

N/A

SUBMITTED BY:
John R. Harris, Municipal Utilities and Engineering Director

RECOMMENDED BY:
Charles M. Duggan, Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Goutam K. Dobey, City Engineer

PREPARED BY:
Gerard Nepomuceno, Civil Engineer

Fiscal Impact

Discussion:

There is no fiscal impact associated with the approval of the Resolution.

Attachments

Resolution No. 8416

RESOLUTION NO. 8416

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS ESTABLISHING A CONTRACTOR LIST PURSUANT TO THE UNIFORM PUBLIC CONSTRUCTION COST ACCOUNTING ACT

WHEREAS, the City established Ordinance No. 2891 amending chapter 2.16 of the Redlands Municipal Code relating to contract value limits for the purposes of soliciting bids pursuant to the California Uniform Public Construction Cost Accounting Act; and

WHEREAS, at least once per calendar year, a list of qualified contractors shall be developed and maintained by those City departments undertaking public projects in accordance with the provisions of section 22034 of the Public Contract Code;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. The City of Redlands' Contractor List pursuant to Uniform Public Construction Cost Accounting Act, attached hereto as Exhibit "A," is hereby adopted for the calendar year 2023.

ADOPTED, SIGNED AND APPROVED this 20th day of December 2022.

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing Resolution was duly adopted by the City Council at a regular meeting thereof, held on the 20th day of December 2022, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

_____
Jeanne Donaldson, City Clerk

EXHIBIT "A"

Contractor List per California Uniform Public Construction Cost Accounting Act
Above All Names Construction Services, Inc.
Alcorn Fence Company
Baker Electric, Inc.
Best Contracting Services, Inc.
Borden Excavating, Inc.
California Professional Engineering, Inc.
Color New Co.
CT&T Concrete Paving, Inc.
Deark E&C, Inc.
Econolite Systems, Inc.
Elecnor Belco Electric, Inc.
Fix Painting Company
F.M. Thomas Air Conditioning, Inc.
GCI Construction, Inc.
GM Sager Construction Co., Inc.
GSE Construction Co., Inc.
Humphrey Constructors
Integrated Demolition and Remediation Inc.
J.M. Olvera Engineering, Inc.
KASA Construction, Inc.
Kerns, Inc., A California Corp.
KSM Electric, Inc.
Layne Christensen Company
LC Paving and Sealing, Inc.
Legend Pump and Well Service, Inc.
Matich Corporation
Oakridge Energy
Oakview Constructors, Inc.
Osborne Painting Inc.
PTM General Engineering Services, Inc.
RND Contractors, Inc.
Roadway Engineering & Contracting, Inc.
S & H Civilworks
South West Pump & Drilling, Inc.
Sully-Miller Contracting Company

(Continued)
Three Peaks Corp.
Tony Painting
Tri-County Pump Company
Tryco General Engineering
TESCO Controls, Inc.
Universal Construction and Engineering
Urban Habitat
Valley Cities/Gonzales Fence, Inc.
Weber Water Resources

City Council Meeting **J. 18.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Adopt Resolution No. 8419 approving the 2022 Water Systems Master Plan and determine this action is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act (Municipal Utilities and Engineering Director Harris)

MOTION(S):

If City Council determines the staff recommendation is appropriate, the following motion is provided:

I move City Council adopt Resolution No. 8419

RECOMMENDATION:

MUNICIPAL UTILITIES AND PUBLIC WORKS COMMISSION (MUPWC) RECOMMENDATION

On October 3, 2022, the Municipal Utilities and Public Works Commission voted unanimously to recommend City Council adoption of the 2022 Water Systems Master Plan.

STAFF RECOMMENDATION

Staff recommends City Council adopt Resolution No. 8419 approving the 2022 Water Systems Master Plan and determine that this action is exempt from environmental review pursuant to Section 15061(b)(3) of the State's Guidelines implementing the California Environmental Quality Act.

DISCUSSION:

The Redlands 6-Year Strategic Plan, beginning July 1, 2022 through to June 2028, specifically sets as a Sustainability Objective (D-3) the development and implementation of a Water and Wastewater Utility Master plan to ensure that facilities are improved and maintained to meet the needs of the expanding community. A Citywide Water Systems Master Plan (Plan) is a valuable tool that City staff uses to ensure the sustainability of water infrastructure. The Plan includes short and long-term Capital Improvement Program (CIP) recommendations, as well as recommended implementation schedules. The City's last Plan update was completed in July 1998 by CH2M Hill. Since the last update, the City's population has increased significantly. The Plan will assist staff with CIP project prioritization to meet current and future customer demands. Staff completed the Plan in August 2022 and the Municipal Utilities and Public Works Commission (MUPWC) unanimously recommended City Council adoption on October 3, 2022.

Approval of Resolution No. 8419 is exempt from environmental review pursuant to Section 15061(b)(3) of the State's guidelines implementing the California Environmental Quality Act.

ALTERNATIVES:

City Council may deny the MUPWC and staff recommendations and provide alternate direction.

STRATEGIC PLAN:

Strategic Plan Priority D-3 Infrastructure: Develop and implement Water and Wastewater Utility Master Plans to ensure facilities are improved and maintained to meet the needs of our expanding community.

SUBMITTED BY:

John R. Harris, Municipal Utilities and Engineering Director

RECOMMENDED BY:

Charles M. Duggan Jr., City Manager

REVIEWED BY:

Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Goutam K. Dobey, City Engineer

PREPARED BY:
Veronica Medina, Associate Engineer

Fiscal Impact

Discussion:

There is no fiscal impact associated with this action.

Attachments

Resolution No. 8419
Exhibit "A" 2022 Water Systems Master Plan

RESOLUTION NO. 8419

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS ADOPTING 2022 WATER SYSTEMS MASTER PLAN

WHEREAS, the City of Redlands ("City") desires to plan for short and long term Capital Improvement Program ("CIP") projects and establish an infrastructure improvement schedule for the following twenty (20) years; and

WHEREAS, the Municipal Utilities and Engineering Department was authorized by the City Council on September 1st, 2020, to enter into an agreement with Michael Baker International, Inc., a professional engineering services firm, to update and develop a Citywide Water Systems Master Plan ("Plan"); and

WHEREAS, the City's consultant along with City staff has utilized the Water Master Plan prepared in 1998, and the City's records of information, in developing a comprehensive master plan; and

WHEREAS, the City's Plan will be used as the foundation for implementing structural CIP projects when funding is available; and

WHEREAS, the Plan is now complete and requires City Council adoption;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. That approval of this Resolution is exempt from review under the California Environmental Quality Act ("CEQA") pursuant to Section 15061(b)(3) of the State's Guidelines implementing CEQA.

Section 2. The City Council hereby adopts the City of Redlands' 2022 Water Systems Master Plan attached hereto as Exhibit "A."

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, do hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

EXHIBIT “A”
2022 WATER SYSTEMS MASTER PLAN

[ATTACHED]

DECEMBER 2022

WATER SYSTEMS MASTER PLAN

Municipal Utilities and Engineering Department

City of Redlands
35 Cajon Street
Redlands, CA 92373

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ABBREVIATIONS

2020 UWMP	2020 Urban Water Management Plan
2021 WSCP	2021 Water Shortage Contingency Plan
2022 WSMP	2022 Water System Master Plan
AACE	Association for the Advancement of Cost Engineering
AF	Acre-Feet
Acre-ft/d	Acre-Feet per Day
Acre-ft/yr.	Acre-Feet per Year
ADD	Average Day Demand
AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reader
ASL	Above Sea Level
AWWA	American Water Works Association
BOD	Biological Oxygen Demand
Brady	Richard Brady and Associates, Inc.
BVMWC	Bear Valley Mutual Water Company
CalOSHA	California Division of Occupational Safety and Health Agency
CalWARN	California's Water/Wastewater Agency Response Network
CCR	Consumer Confidence Report
CIP	Capital Improvement Program
City	City of Redlands Municipal Utilities and Engineering Department
CWC	Crafton Water Company
DU	Dwelling Unit
EPA	Environmental Protection Agency
EPS	Extended Period Simulation
ERNIE	Emergency Response Network of the Inland Empire
ES	Equalizing Storage
Fps	Feet Per Second
FSS	Fire Suppression Storage
FY	Fiscal Year
GIS	Geographical Information System
Gpcd	Gallons per capita day
GPD	Gallons per day
GPM	Gallons per minute
HAA5	Haloacedic Acid
Hinckley	Horace P. Hinckley Water Treatment Plant
HP	Horsepower
I-10	Interstate 10
I-210	Interstate 210
MCL	Maximum Contaminate Level
MDD	Maximum Day Demand

MG	Million Gallons
MGD	Million Gallons per day
mg/L	Milligrams per Liter
MUED	Municipal Utilities and Engineering Department
NPW	Non-Potable Water
NPWMP	2005 Non-Potable Water System Master Plan
NTU	Nephelometric Turbidity Unit
O&M	Operations and Maintenance
OPC	Opinion of Probable Cost
OS	Operational Storage
PHD	Peak Hour Demand
PPM	Parts Per Million
PRS	Pressure Reducing Stations
PSI	Pounds per Square Inch
PW	Potable Water
PWMP	1998 Potable Water System Master Plan
RW	Recycled Water
SAR	Santa Ana River
SB	Stand-by Storage
SBBA	San Bernardino Basin Area
SCADA	Supervisor Control and Data Acquisition
SCE	Southern California Edison
SOC	Synthetic Organic Compounds
SOP	Standard Operating Procedure
SWP	State Water Project
SWRCB-DDW	State Water Resources Control Board – Division of Drinking Water
Tate	Henry Tate Water Treatment Plant
TBD	To be determined
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
TTHM	Trihalomethanes
U.S.	United States
VOC	Volatile Organic Compounds
WD	Water Distribution
WP	Water Production
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plan

EXECUTIVE SUMMARY

Introduction

In 2021, the City of Redlands (City) initiated to prepare an update to the 1998 Potable Water System Master Plan (PWMP) and the 2005 Non-Potable Water System Master Plan (NPWMP). Both the PWMP and NPWMP, as well as other relevant documents were reviewed and referenced to prepare the 2022 Water Systems Master Plan (2022 WSMP). The 2022 WSMP includes the City's three (3) water systems: Non-Potable Water (NPW), Potable Water (PW), and Recycled Water (RW) Systems. The most critical outcome of the 2022 WSMP is the development of comprehensive five-year and twenty-year capital improvement program (CIP) recommendations to improve distribution efficiency, reduce non-revenue water, and accommodate growth within the City water service areas. A hydraulic model using Innovyze InfoWater software was developed to analyze existing systems, as well as the impacts of various system improvements. The City's Water Distribution and Water Production staff supplemented these efforts with decades of relative historic knowledge.

The ultimate goal for all three (3) water production and distribution systems is to ensure long-range sustainability for each of these water resources. The City intends to use recommendations developed and identified through this Master Planning process to reduce non-revenue water in each system, maximize the use of non-potable wells to extract contaminants from groundwater resources, and eventually hopes to serve all significant users with non-potable and/or recycled water for landscape irrigation and industrial uses.

The 2022 WSMP is divided into ten (10) Sections, each of which is summarized below.

Section 1 – General Information

This Section provides general information about the City and its water service area.

Section 2 - Existing Infrastructure

This Section details the City's existing NPW, PW, and RW Systems.

Section 3 - Historic Water Use

This Section quantifies and characterizes annual and seasonal water use patterns based on demand data included in the City's 2020 Urban Water Management Plan (2020 UWMP). This information was used to calibrate each hydraulic model, with particular emphasis on maintaining minimum fire protection pressure and flow under several modeling scenarios. It was also used to validate the positive impact of water conservation programs. Water demand projections through the 2045 planning horizon are provided as well.

Section 4 - Water Supply

This Section describes and quantifies the water sources for each system, and identifies various threats and production challenges associated with each system.

Section 5 - Design Criteria

This Section identifies specific water infrastructure planning and design criteria used to evaluate existing infrastructure and to develop CIP project recommendations. These include minimum storage requirements, pumping capacity, and system hydraulics for various demand scenarios.

Section 6 - Existing System Analysis

This Section summarizes development, calibration, and use of the hydraulic model to analyze the existing systems. Scenarios including historic Average Day Demands (ADD), Maximum Day Demands (MDD) with and without fire flow, and Peak Hour Demands (PHD) were modeled to identify deficiencies within each system.

Section 7 - Future System

This Section summarizes additional hydraulic modeling to identify deficiencies as project demands within each system are applied through the planning horizon. The results were used to develop CIP project recommendations for each system.

Section 8 - Water Quality Analysis

This Section summarizes regulatory requirements relative to each system, and identifies potential contamination sources, groundwater basin characteristics, and imported water quality. A distribution system water age analysis was hydraulically modeled to evaluate the potential for taste and odor complaints related to the reduction of disinfection residual over time.

Section 9 - Water System Operation and Maintenance

This Section summarizes findings of an Operation and Maintenance (O&M) practices analysis for each system, and includes recommended improvements.

Section 10 - Capital Improvement Program

This Section identifies recommended short-term (5-Years) and long-term (20-Years) CIP projects based on discussions with City staff and 2022 WSMP analyses. An Opinion of Probable Cost (OPC), in current year dollars, is provided for each CIP project recommendation. Each OPC is developed based on estimated construction quantities, actual construction costs for regional projects of similar scope and size, and vendor quotes. Finally, the OPC for each CIP project was adjusted to account for specific site conditions.

1 GENERAL INFORMATION

1.1 GENERAL DESCRIPTION

The City of Redlands is located in Southern California in the southwestern portion of the County of San Bernardino, and includes approximately 37.5 square miles of land area. The City is approximately sixty (60) miles east of the City of Los Angeles, adjacent to the eastern borders of the cities of San Bernardino and Loma Linda, adjacent to the southern border of the City of Highlands, and adjacent to the western border of the City of Yucaipa. The unincorporated areas of Mentone and Crafton, located just east of the City. The City limits are shown in Figure 1-1.

Several major transportation corridors transverse the City: Interstate 210 (I-210) crosses the western portion of the City, Interstate 10 (I-10) transverses east/west through the middle of the City, and State Route 38 begins within the City limits and transverses east through the City. The Santa Ana River and Mill Creek watersheds are located in the northern and eastern sections of the City, respectively. These watersheds are the source of approximately half of the City's total water supply.

The topography of the City generally slopes downward in the northwesterly direction. The San Bernardino Mountain range is situated to the northeast, Zanja Peak to the east, and the San Jacinto Mountain range to the south. Elevations within the City limits varies between 1,100 feet above sea level (ASL) in the northwest, to 3,300 feet ASL in the east. The City's water service area reaches 2,500 feet ASL. This broad variation in elevation requires multiple pressure zones to distribute water within accepted industry standards throughout each system.

1.2 LAND USES

Although the City is home to large employers such as ESRI, Redlands Community Hospital, and the University of Redlands, the south and east portions of the City are primarily residential communities, with undeveloped land and recreational areas in the San Jacinto foothills. The City's northwestern area is primarily comprised of industrial, commercial, and office developments. The center of the City is primarily residential communities, with small agricultural areas to the east. Most undeveloped areas are in the southern portion of the City and south of the Santa Ana River.

City's current General Plan (2017) was developed to responsibly manage residential, industrial, and commercial growth. The General Plan also considers the City's “Sphere of Influence,” which includes the unincorporated areas of Crafton and Mentone, including large Rural Living and agricultural tracts. Of the two (2), Mentone is more heavily developed, with residential communities and light industrial uses in the west, and agricultural regions in the northwest. It should be noted that the City’s sphere of influence includes small portions in the cities of San Bernardino, Loma Linda, Yucaipa, and the County of San Bernardino and are within Redlands' water service area.

The City provides potable and non-potable water to a retail sales area, commonly referred to as the “Donut Hole”, northwest of the intersection of I-10 and I-210. This area is not within the City of Redlands jurisdiction, but is an unincorporated part of the County of San Bernardino. This area is primarily developed for commercial and industrial use.

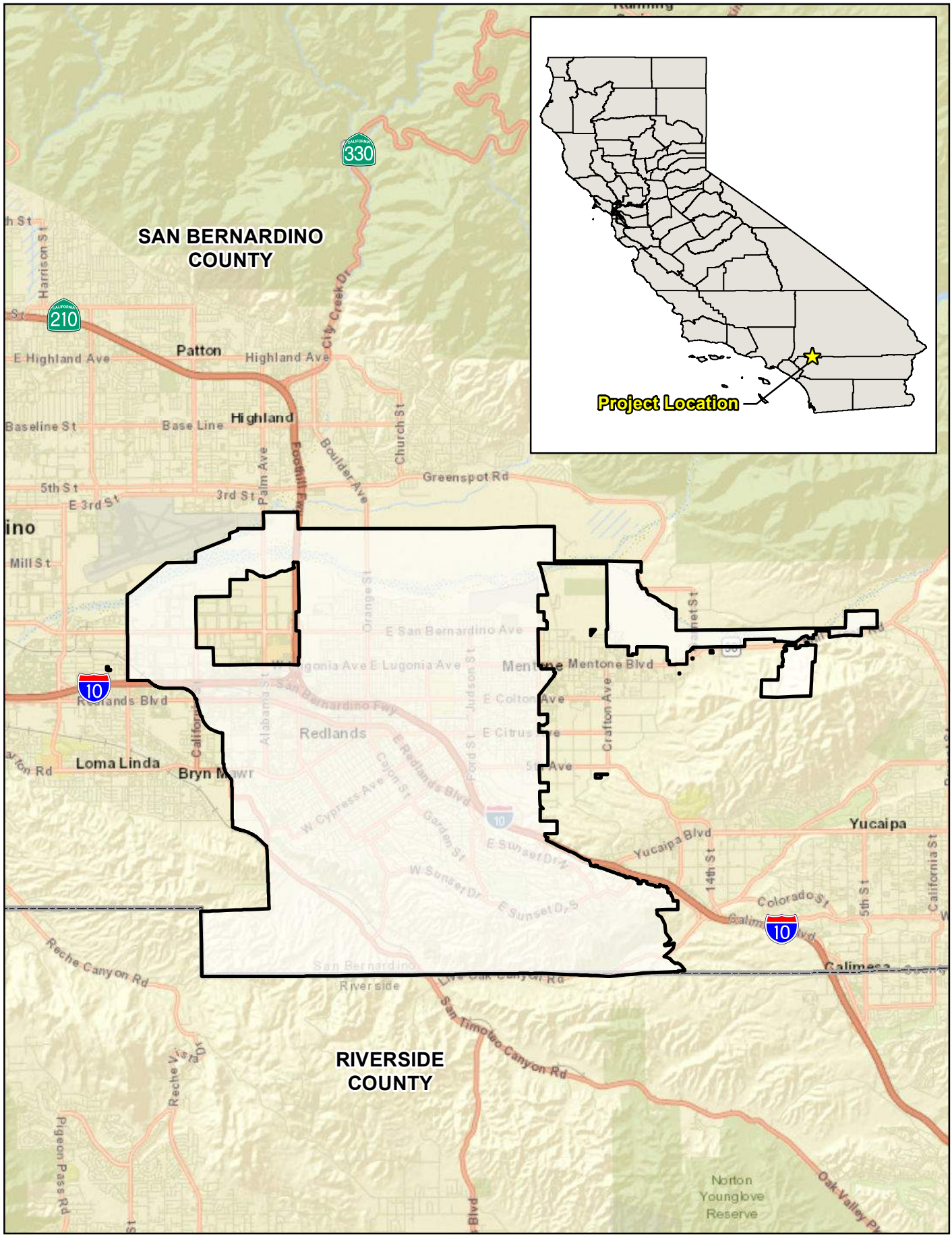


Figure 1-1
City of Redlands City Limits

Table 1-1 shows land use designations by area as identified in the General Plan. The comparative use of each category is shown graphically in Chart 1-1. The land use from the City's General Plan is shown in Figure 1-2.

Table 1-1: City of Redlands Land Use

Land Use	City of Redlands (Acres)	Sphere of Influence (Acres)	Total
Residential	6,343	4,042	10,385
Rural Living	9	2,115	2,124
Very Low Density Residential	2,694	861	3,555
Low Density Residential	2,643	574	3,217
Low Medium Density Residential	63	469	532
Medium Density Residential	520	23	543
High-Density Residential	414	-	414
Office, Commercial, Industrial	2,626	147	2,773
Office	206	-	206
Commercial	866	55	921
Commercial/Industrial	1,249	-	1,249
Light Industrial	305	92	397
Agricultural and Hillside	5,122	1,322	6,444
Agricultural	308	220	528
Hillside Conservation	23	1,102	1,125
Resource Preservation	4,791	-	4,791
Public/Institutional	1,271	130	1,401
Open Space	5,111	510	5,621
Parks & Golf Courses	600	-	600
Open Space	4,511	510	5,021
City ROW	2,881	418	3,299
Total	42,556	12,590	55,146

Note: Data from 2017 General Plan

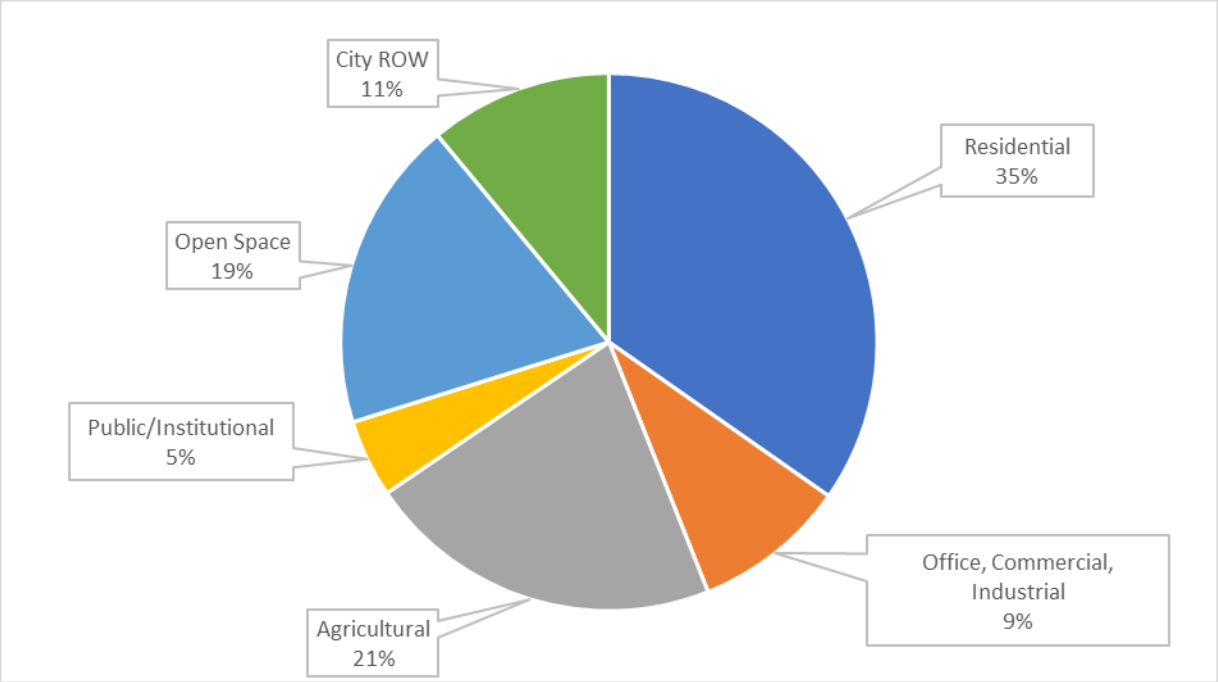


Chart 1-1: Land Use Areas

Residential development areas comprise approximately thirty-five percent (35%) of the City's total land use, and is divided into six (6) sub-categories: Rural Living, Very Low-Density Residential, Low-Density Residential, Low-Medium Density Residential, Medium-Density Residential, and High-Density Residential. Most Rural Living areas are within Crafton and allow a maximum of one (1) dwelling unit (DU) per five (5) acres of land area. These areas offer an opportunity to expand non-potable water service for agricultural uses, thereby reducing demand for potable water resources.

Office, Commercial and Industrial development areas are consolidated into a single category, and comprise approximately nine percent (9%) of the City's total land use. The General Plan considers maintenance and growth of these areas as essential to striking a balance between residential and employment areas. Office land uses include traditional office spaces and medical offices. Commercial land uses include neighborhood-serving convenience stores, retail centers, and commercial recreational areas. Industrial land use ranges from light industries such as automotive services, to research and development and heavy industry manufacturing facilities. These areas offer an opportunity to expand non-potable and recycled water service, thereby reducing demand for potable water resources.

Agricultural land uses include traditional agricultural areas, as well as areas designed for preservation and conservation of natural resources. This category comprises approximately twenty-one percent (21%) of the City's total land use. Most of this category is in mountain areas and is designated as Resource Preservation, which includes wildlife preservation and activities such as water conservation, open space recreation, and agriculture. These areas offer an opportunity to expand non-potable water service for agricultural uses, thereby reducing demand for potable water resources.

Public/Institutional land uses include developments used for public services, schools, government facilities, airports, public utilities, and facilities used or owned by the City. This category comprises approximately five percent (5%) of the City's total land use.

Open Space land uses comprise approximately nineteen percent (19%) of the City's total land use. This category is divided into parks or miscellaneous open spaces that are primarily unimproved with no immediate plans for development. These areas offer an opportunity to expand non-potable and recycled water service for outdoor irrigation, thereby reducing demand for potable water resources.

City Rights-of-Way (ROW) category is predominantly public streets, and comprises approximately eleven percent (11%) of the City's total land use.

It is important to note that there appear to be some exceptions to the generalization of the categories. For example, the City owns and maintains approximately 184 acres of Citrus Groves. These groves are surrounded by industrial and residential areas and appear to be considered in the nearby corresponding category and are not included in the Open Space category. Additionally, most of the Rural Living sub-categorized land is used for agriculture, but is classified as residential.

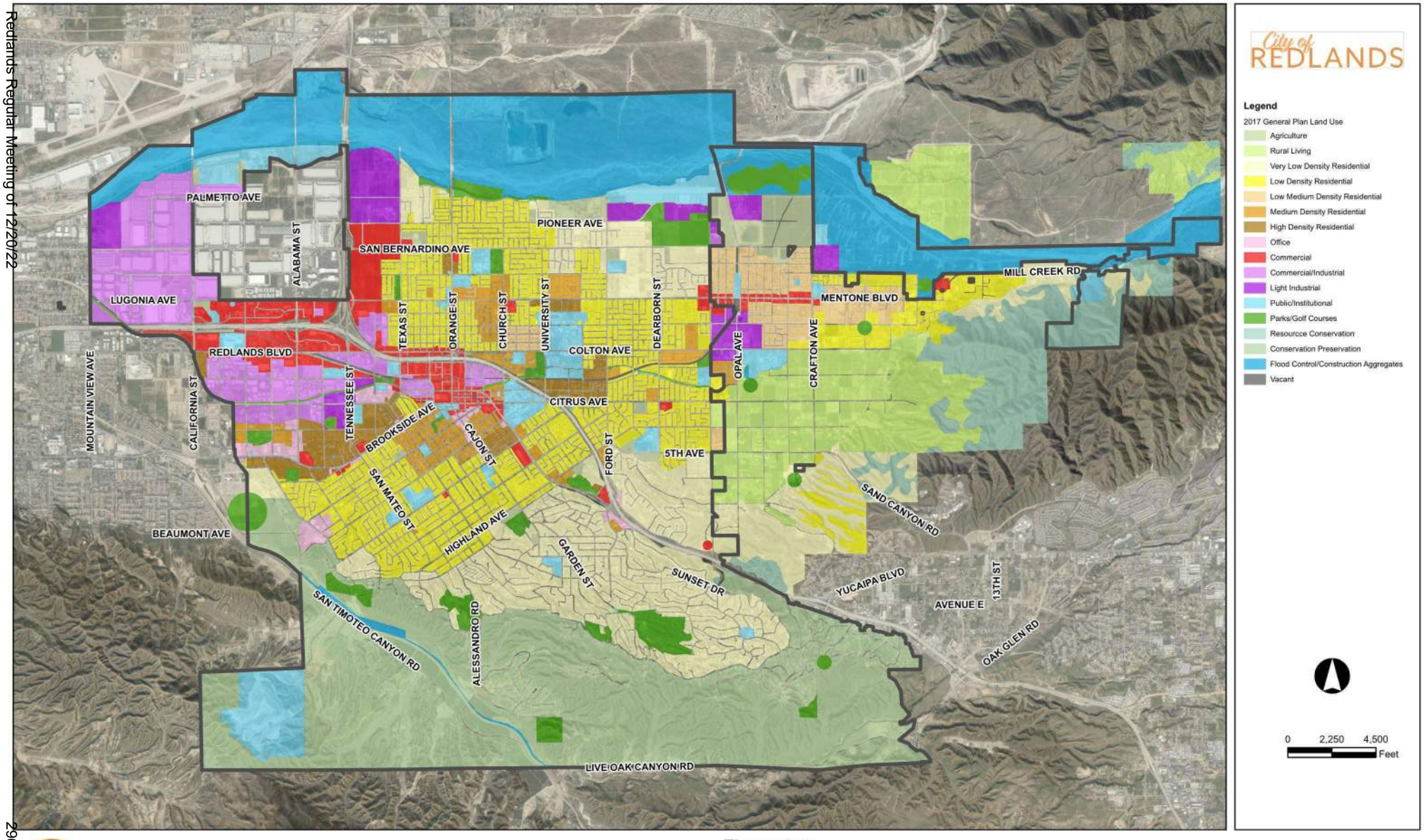


Figure 1-2
City of Redlands City Limits

1.3 WATER SERVICE AREA

The City's water system serves multiple areas within and beyond the City limits, which includes eastern portions of the cities of San Bernardino and Loma Linda, western portions of the City of Yucaipa, and the unincorporated areas of Mentone, Crafton, and the "Donut Hole". The City distributes potable water within seven (7) pressure zones, non-potable water within three (3) pressure zones, and recycled water within one (1) pressure zone to provide appropriate water pressure throughout each system. These pressure zones are detailed in Section 2. Although the recycled water distribution system is currently limited to a small area in the northwest portion of the City, the non-potable water distribution provides service to a much larger portion of the City and is separated into eight (8) detached systems.

1.4 POPULATION

The City's population has grown at a consistent pace for the last twenty (20) years. In 2020, the City population was 73,168 (2020 Unites States Census data). The General Plan predicts the population will rise to 79,000 by 2035, when the City expects to reach built-out conditions. Table 1-2 provides reported population data and growth rates since 1960.

Table 1-2: Redlands Population Growth (1960-2045)

Year	Population	Annual Growth Rate
1960	27,000	--
1970	35,000	3.0%
1980	42,000	2.0%
1990	61,000	4.5%
2000	63,591	0.4%
2005	66,342	0.9%
2010	68,747	0.7%
2015	70,112	0.4%
2020	73,168	0.9%
Note: Based on Chart 3-1 from the 2017 General Plan		

The water service area extends beyond the City limits to serve residents and businesses within the municipalities and unincorporated areas described in Section 1.3. The 2020 UWMP estimates that the portions of the water service area beyond the City limits serve an additional 10,000 residents currently, and is anticipated to increase to 16,000 by 2045 when these areas are built out. At that time, the City will serve a total population of 95,000. This projection anticipates uniform population growth. Table 1-3 shows the projected population growth of the total water service area through 2045.

Table 1-3: Water Service Area Predicted Population Growth

Year	2020	2025	2030	2035	2040	2045
Population Served	83,000	85,400	87,900	90,300	92,700	95,153
Note: From Table 4-1 in the 2020 Urban Water Management Plan						

2 EXISTING INFRASTRUCTURE

2.1 GENERAL DESCRIPTION

2.1.1 POTABLE WATER SYSTEM

The City receives surface water and groundwater from several sources. Two (2) surface water treatment plants, the Horace P. Hinckley Water Treatment Plant (Hinckley) and Henry Tate Water Treatment Plant (Tate), receive surface water primarily from the Santa Ana River (Hinckley) and Mill Creek (Tate). Both sources can also be supplemented by the State Water Project (SWP). Additionally, seventeen (17) active groundwater wells that include four (4) active wellhead treatment systems are strategically located throughout the service area to diversify the City's potable water production sources. Historically, surface water treatment accounts for approximately fifty-one percent (51%) of total annual potable water production, and groundwater treatment accounts for approximately forty-nine percent (49%) of total annual potable water production.

Potable water is stored in eighteen (18) reservoirs, and is distributed through approximately 450 miles of pipelines within seven (7) pressure zones to provide uniform service pressures. Thirty-eight (38) booster pumps and thirty (30) zone transfer control valves distribute water throughout the system while maintaining each zone's desired hydraulic grade line.

2.1.2 NON-POTABLE WATER SYSTEM

The non-potable water distribution system is limited in service area, and provides untreated groundwater primarily for outdoor landscape irrigation.

2.1.3 RECYCLED WATER SYSTEM

The recycled water distribution system is limited in service area, and provides treated effluent from the City Wastewater Treatment Plant (WWTP) to customers within a small area in the northwest portion of the City. The largest recycled water customer is the Southern California Edison (SCE) Mountain View Power Plant, which uses recycled water through a "Take-or-Pay" agreement to cool equipment. The recycled water volume in this agreement is 3,000 AF/Year.

2.2 PRESSURE ZONES

POTABLE WATER PRESSURE ZONES

The City's potable water pressure zone distribution system was first developed in 1975 and later updated in 1981. Figure 2-1 shows the seven potable water pressure zones and the locations of existing reservoirs, wells, booster pumps, and water treatment plants. The overall system hydraulic profile is shown in Figure 2-2. Each pressure zone is described in detail below.

2.2.1 ZONE 1350

Pressure Zone 1350 serves the western portion of the City's water service area. It is located west of Alabama Street, north and south of the I-10 Freeway, and west of New Jersey Street. The terrain slopes downward northwesterly, and its elevation ranges from 1,050 feet to 1,250 feet. Two (2) reservoirs are used to service this zone: Texas Street and Texas Grove Reservoirs. In addition, two (2) potable wells supply water to this pressure zone: Orange Street 1 and Orange Street 2. These wells provide groundwater directly into the Texas Street and Texas Grove Reservoirs. In addition, four (4) booster pumps labeled

1550, 1551, 1552, and 1553 are located at the Texas Street reservoir site to lift water from Zone 1350 to Zone 1570.

2.2.2 ZONE 1570

Pressure Zone 1570 is bounded by the I-10 Freeway between Alabama Street and University Street and south of I-10 Freeway between New Jersey Street and Cypress Avenue. The terrain slopes downward northwesterly, and its elevation ranges from 1,190 feet to 1,470 feet. Three (3) reservoirs are used to service this zone: Dearborn, Highland Avenue, and Smiley Heights Reservoirs. Six (6) groundwater wells supply water to this pressure zone: Well No. 10, Well No. 13, Well No. 38, Well No. 39, Church Street Well, and Orange Street Well. Well No. 10 and Well No. 13 are able to supply groundwater directly into the Highland Avenue Reservoir. However, both have been idle over the last five (5) years. Ten (10) booster pumps are used to service this zone. Two (2) booster pumps, 1783 and 1784, are located at the Smiley Reservoir and lift water into Zone 1750. Pumps 1761 and 1931 are located at the Dearborn Reservoir, where Pump 1761 lifts water to Zone 1750 and Pump 1931 lifts water to Zone 1900. Booster pumps 1720, 1721, 1722, 2174, 2176, and 2177 are located at the Highland Reservoir and lift water to Zones 1750 and 2100.

2.2.3 ZONE 1750

Pressure Zone 1750 serves the downtown area of the City of Redlands. It is bounded on the southwest by Cypress Avenue, on the northwest by University Street, and on the northeast by Bear Valley Canal and Wabash Avenue. Highland Avenue and adjoining streets cover the southeast boundary of this pressure zone. The terrain slopes downward in a northwesterly direction, and its elevation ranges from 1,390 feet to 1,661 feet. Three (3) reservoirs are used to service this zone: Agate Avenue, South Avenue, and Arroyo Reservoirs. The Hinckley Water Treatment Plant (WTP) supplies water directly into the Agate Reservoir. In addition, six (6) groundwater wells provide water to this zone: Agate 2 Well, Airport 1 Well, Airport 2 Well, Mentone Acres 2 Well, Rees Well, and Muni Well. There are ten (10) booster pumps that are located within this zone. Situated at South Reservoir, booster pumps 1927 and 1928 lift water to Zone 1900 and booster pumps 2124, 2125, and 2126 lift water to Zone 2100. Located at Agate Reservoir, booster pumps 1951, 1952, and 1953 lift water to Zone 1900. Booster pumps 1723 and 1724 are used to move water within this zone.

2.2.4 ZONE 1900

Pressure Zone 1900 is bounded to the west by Highland Avenue and Wabash Avenue, King Street south of Colton Avenue, and Crafton Avenue north of Colton Avenue on the north side of the I-10 Freeway. South of the I-10 Freeway, the zone is bordered by Highland Avenue, Sunset Drive, Center Street, Elizabeth Street, Sunridge Way, Lynne Court, and Ford Street. The terrain slopes downward in a northwesterly direction, and its elevation ranges from 1,470 feet to 1,800 feet. Two (2) reservoirs are used to service this zone: Fifth Avenue and Margarita Reservoirs. In addition, one (1) groundwater well, the Madeira Well, supplies water to this pressure zone. Booster pumps 2131, 2132, 2310, and 2311 are located at the Fifth Avenue Reservoir. Pumps 2131 and 2132 are used to lift water to Zone 2100. Pumps 2310 and 2311 are used to lift water to Zone 2340.

2.2.5 ZONE 2100

Pressure Zone 2100 is bounded by King Street south of Colton Avenue, Crafton Avenue north of Colton Avenue, Reservoir Road, and Highland Avenue, and extends southwesterly towards the I-10 Freeway. South of the I-10 Freeway, the zone is bordered by Center Street, Elizabeth Street, Sunridge Way, Lynne

Court, Ford Street, Wabash Avenue, and the Redlands Country Club. The terrain slopes downward northwesterly, and its elevation ranges from 1,640 feet to 2,060 feet. Three (3) reservoirs are used to service this zone: County Club 1, Country Club 2, and Ward Way Reservoirs. Three (3) wells supply groundwater to this pressure zone: Lugonia 3 Well, Lugonia 6 Well, and Maguet 2 Well. Booster pumps 2384, 2385, 2386, and 2387 are located at the Country Club Reservoir and lift water to Zone 2340. Booster pumps 2381 and 2382 are situated at the Ward Way Reservoir and lift water to Zone 2600.

2.2.6 ZONE 2340

Pressure Zone 2340 is bounded by Sunset Drive, the Redlands Country Club, and Wabash Avenue, south of I-10 Freeway. North of the I-10 Freeway, Zone 2340 extends southeast along Sand Canyon Road from Crafton Avenue to Colorado Street and extends along Mill Creek Road, east of Orange Lane. The terrain slopes downward northwesterly, ranging from about 1,890 feet to 2,340 feet in elevation. Two (2) reservoirs are used to service this zone: Sand Canyon and Sunset Reservoirs. The Tate WTP is located within this zone and supplies water into the Ward Way Reservoir in Zone 2100. Pumps 2610 and 2611 are located at the Sand Canyon Reservoir and lift water to Zone 2600.

2.2.7 ZONE 2600

Pressure Zone 2600 extends along Mill Creek Road, east of the Mill Creek Reservoir and Crafton Hills Reservoir, to Crafton Hills College. The terrain slopes downward northwesterly, and its elevation ranges from 2,270 feet to 2,480 feet. The Crafton, Mill Creek 1, and Mill Creek 2 Reservoirs are located in this pressure zone. Booster Pumps 2510 and 2511 A/B are situated at the Mill Creek Reservoir and transfer water within Zone 2600.

NON-POTABLE WATER SYSTEMS

2.2.8 SYSTEM 1

This non-potable water system is located in the 1350 pressure zone. The system receives recycled water from the WWTP and untreated groundwater from the California Street Well hydro pneumatic system.

2.2.9 SYSTEM 2

This non-potable water system is located in the 1570 pressure zone. Well No. 30A, Well No. 31A, and Well No. 32 provide untreated groundwater to this system. System pressure is maintained by two (2) package skid booster pumps.

2.2.10 SYSTEM 3

This non-potable water system is a gravity fed located in the 1570 pressure zone. Well No. 41 and New York Street Well provide untreated groundwater to this system. This system is a weir box gravity fed system also known as the “B” Contract system.

2.2.11 SYSTEM 4

This non-potable water system is located in the 1570 pressure zone. Well No. 11 provides untreated groundwater for landscape irrigation to Ford Park. System pressure is maintained by a hydro pneumatic tank.

2.2.12 SYSTEM 5

This non-potable water system is located in the 1570 pressure zone. Well No. 16 is a gravity fed system that provides untreated groundwater to Bear Valley Mutual Water Company (BVMWC) for non-potable deliveries within their distribution network.

2.2.13 SYSTEM 6

This non-potable water system is located in the 1750 pressure zone. Agate Well No. 1 and Crafton Well is a gravity fed system that provides untreated groundwater to BVMWC for non-potable deliveries within their distribution network.

2.2.14 SYSTEM 7

This non-potable water system is located in the 1900 pressure zone. Redland Heights Well is a gravity fed system that provides untreated groundwater for landscape irrigation to Redlands Country Club.

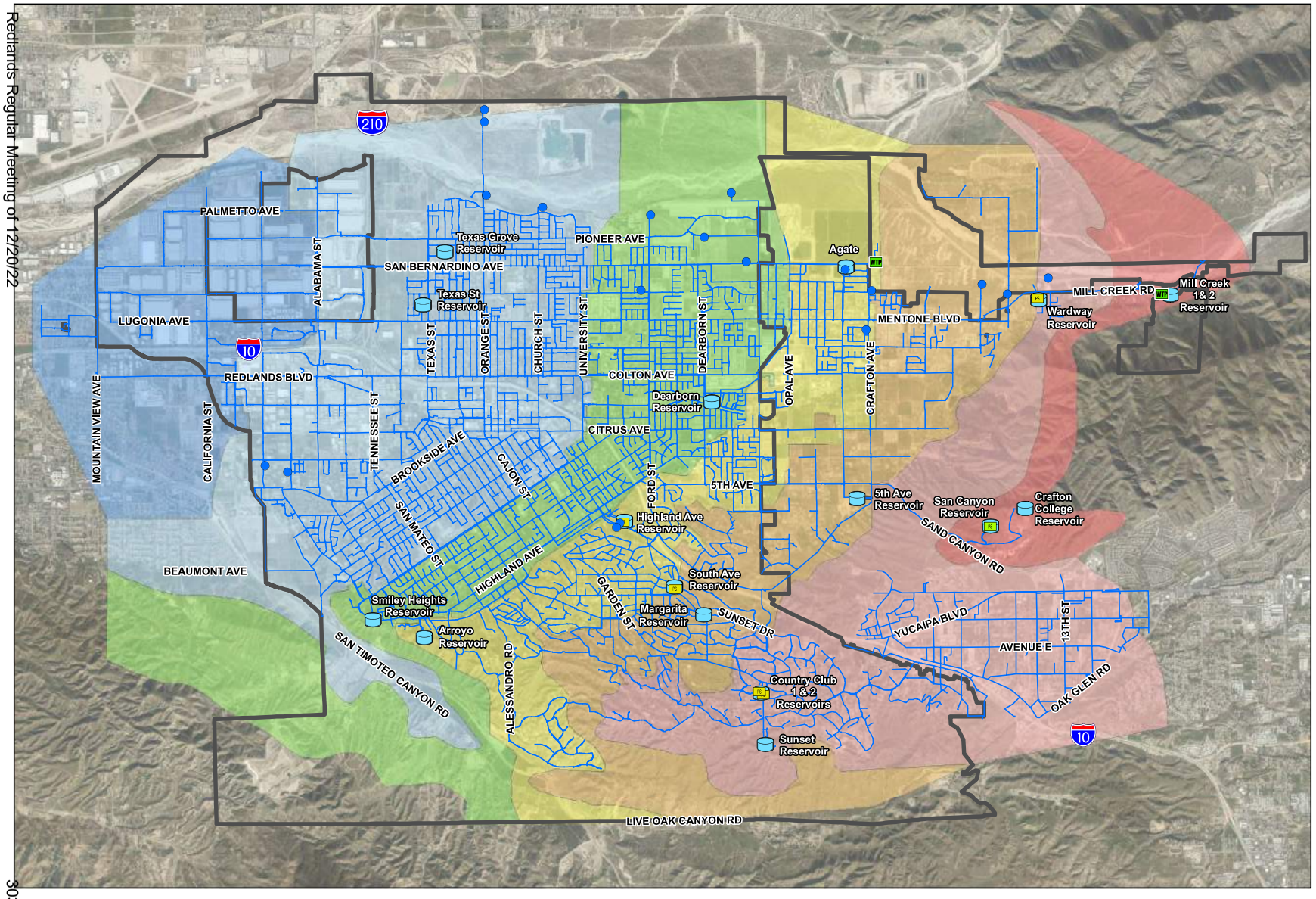
2.2.15 SYSTEM 8

This non-potable water system is located in the 1900 pressure zone. Well No. 36 is a closed loop system that provides untreated groundwater for landscape irrigation to Hillside Memorial Park.

RECYCLED WATER PRESSURE ZONES

2.2.16 ZONE 1

This recycled water pressure zone is bounded by the Santa Ana River to the north, Mountain View Avenue to the west, Citrus Avenue and I-10 to the south, and Alabama Street and New Jersey Street to the east. Treated effluent from the City WWTP is provided to customers within this small area in the northwest portion of the City. The largest recycled water customer is the SCE Mountain View Power Plant, which uses recycled water through a “Take-or-Pay” agreement to cool equipment. Although this system is capable of blending flow with untreated groundwater provided by the California Street Well, only recycled water can serve the SCE Mountain View Avenue power plant. Mountain View Power Plant has their own well that can make up to fifty percent (50%) of their cooling water needs.



Legend

Facilities

- Booster
- Pumping Plant
- Reservoir
- Water Treatment Plant
- Well
- Water Mains

Pressure Zones

- 1350
- 1570
- 1750
- 1900
- 2100
- 2340
- 2600
- City Boundary

0 2,250 4,500 Feet

Figure 2-1
City of Redlands City Limits

2.3 STORAGE RESERVOIRS

POTABLE WATER SYSTEM

The current storage system includes eighteen (18) potable reservoirs. Treated surface water from Hinckley and Tate is supplemented by treated groundwater to supply the potable water reservoirs through a series of booster pumps. These reservoirs can store a cumulative maximum of 54.3 million gallons (MG). Table 2-1 provides the storage capacity, pressure zone served, material type, construction year, minimum water surface elevation, and maximum water surface elevation for each potable water reservoir.

Table 2-1: Existing Potable Water System Storage Reservoirs

No.	Designation	Capacity (MG) (1)	Primary Zone Served (2)	Type of Construction (2)	Year Installed (2)	Min. Water Elev. (FT) (2)	Max. Water Elev. (FT) (2)
1	Texas Grove	3.9	1350	Steel	2004	1331	1350
2	Texas Street	1	1350	Steel	1956	1315.25	1350
	Zone 1350 Total	*4.9*					
3	Dearborn	10.6	1570	Concrete	1972	1552.5	1578
4	Highland	10	1570	Concrete	1976	1556.9	1584.83
5	Smiley	3	1570	Steel	1964	1538	1570
	Zone 1570 Total	*23.6*					
6	Agate	3	1750	Steel	1968	1725	1746.83
7	Arroyo	0.5	1750	Steel	1965	1710	1750
8	South	2	1750	Steel	1964	1724	1750
	Zone 1750 Total	*5.5*					
9	Fifth Avenue	5	1900	Concrete	1974	1882.5	1905
10	Margarita	2.4	1900	Concrete	1964	1878.62	1895
	Zone 1900 Total	*7.4*					
11	Country Club 1	1	2100	Steel Inside Concrete	2010	2096.67	2111
12	Country Club 2	2	2100	Concrete	1969	2101.37	2120
13	Ward Way	2	2100	Steel	1958	2068.5	2100
	Zone 2100 Total	*5*					
14	Sand Canyon	3.5	2340	Steel	1973	2314	2353.62
15	Sunset	3	2340	Steel	1967	2277	2340
	Zone 2340 Total	*6.5*					
16	Mill Creek 1	0.2	2600	Steel	1962	2375	2390
17	Mill Creek 2	0.2	2600	Steel	1987	2375	2390
18	Crafton	1	2600	Steel	1970	2560.25	2590
	Zone 2600 Total	*1.4*					
	Total Storage Capacity	**54.3**					

Note: (1) Reservoir Data Information 2018-2021; (2) Facilities Data Information 2018-2021

NON-POTABLE WATER SYSTEM

The current storage system includes two (2) small poly tanks and three (3) cement lined open air reservoir throughout the distribution system.

2.3.1 SYSTEM 1

This non-potable system provides no storage.

2.3.2 SYSTEM 2

This non-potable system utilizes two (2) 12,150-gallon poly storage tanks located at the Texas St. Reservoir site used to supply the on-site booster pump station.

2.3.3 SYSTEM 3

This non-potable system provides no storage.

2.3.4 SYSTEM 4

This non-potable system utilizes two (2) cement lined open air reservoir used for recreation within Ford Park.

2.3.5 SYSTEM 5

This non-potable system provides no storage.

2.3.6 SYSTEM 6

This non-potable system provides no storage.

2.3.7 SYSTEM 7

This non-potable system utilizes one (1) cement lined, open air reservoir used as a water feature within the Redlands Country Club golf course.

2.3.8 SYSTEM 8

This non-potable system provides no storage.

RECYCLED WATER SYSTEM

Currently, no recycled water storage reservoirs exist, which prevents the City from expanding the recycled water distribution system beyond the existing customer base. However, two (2) 1.5 MG recycled water storage reservoirs are currently being engineered for construction in the future at the City WWTP.

2.4 WELLS

POTABLE WATER SYSTEM WELLS

The City operates seventeen (17) active groundwater wells that supply treated water to the potable water distribution system. Five (5) of these wells operate seasonally during peak demand periods. Well No. 10 and Well No. 13 have not been used for several years due to elevated levels of Nitrate, Perchlorate and 1,2 Dibromo-3chloropropane. Both wells are scheduled for rehabilitation within the next three (3) years.

Table 2-2 provides the discharge zone, capacity, ground elevation, and water surface elevation for each potable water system well.

Table 2-2: Potable Water System Wells

No.	Well Name (1)	Discharge to Zone (1)	Capacity (GPM) (1)	Ground Elev. (FT) (1)	Water Surface Elev. (FT) (1)	Efficiency (%) (1)	Testing Date (1)
1	North Orange Street 1	1350	2900	3050	293	72%	4/24/2018
2	North Orange Street 2	1350	2900	3105	288	68%	4/24/2018
3	10	1570	1400	1650	80	N/A	N/A
4	13	1570	3000	1630	62	N/A	N/A
5	38	1570	1600	1634	520	75%	6/12/2018
6	39	1570	1250	1255	535	72%	9/19/2018
7	Church Street	1570	2000	2136	485	N/A	N/A
8	Orange Street	1570	1500	1165	459	68%	4/24/2018
9	Airport 1	1750	1500	1316	498	73%	4/30/2018
10	Airport 2	1750	1000	119	545	78%	4/9/2018
11	Mentone Acres 2	1750	1600	1787	491	72%	6/12/2018
12	Rees	1750	550	1964	544	76%	4/30/2018
13	Muni	1750	2200	1570	335	N/A	N/A
14	Madeira	1900	600	697	399	57	4/30/2018
15	Lugonia 3	2100	250	500	35	58%	9/19/2018
16	Lugonia 6	2100	250	1970	59	58%	9/19/2018
17	Maguet 2	2100	400	249	253	50%	10/2/2018

Note: (1) Facilities Data Information from SCE pump efficiency tests dated 2018 - 2020

NON-POTABLE WATER SYSTEM WELLS

The City operates twelve (12) wells that supply untreated groundwater to the non-potable water distribution systems, although the Agate 1 Well and Well No. 41 have not been used for several years. Additionally, untreated groundwater from the Crafton Well can be used to supplement the non-potable water system. Table 2-3 provides the discharge pressure system, flow rate, head, pumping efficiency, and most recent pump efficiency testing date for each non-potable well.

Table 2-3: Non-Potable Water System Wells

No.	Name	Discharge System	Flow (GPM)	Head (ft)	Efficiency (%)	Testing Date
1	California	1	1,344	462.8	52%	3/4/2016

No.	Name	Discharge System	Flow (GPM)	Head (ft)	Efficiency (%)	Testing Date
2	30A	2	1,296	295.4	57%	5/18/2018
3	31A	2	878	258.6	32%	4/20/2016
4	32	2	1,555	285.7	55%	5/18/2018
5	New York Street	3	575	230	57%	3/4/2016
6	41	3	1,575	N/A	N/A	N/A
7	11	4	345	176.7	54%	6/25/2018
8	16	5	680	84.7	39%	6/11/2018
9	Agate 1	6	1,075	160.1	78%	5/18/2018
10	Crafton	6	1,841	254.6	60%	10/30/2018
11	Redlands Heights	7	468	394.6	57%	6/18/2018
12	36	8	648	N/A	N/A	N/A
Note: Information from 2016-2018 Testing Data						

2.5 BOOSTER PUMPS

POTABLE WATER SYSTEM

The potable water distribution system includes twelve (12) pump stations with thirty-eight (38) individual booster pumps that transfer water between pressure zones. Table 2-4 provides the pump name, pump station, approximate elevation, pump design head, and pump design flow, and source (suction) and destination (discharge) pressure zones for each booster pump.

Table 2-4: Booster Pump Data

No.	Pump Name (1)	Pump Station (1)	Pump Elevation (FT) (1)	Design Head (FT) (1)	Design Flow (GPM) (1)	Zone (1)		Efficiency (%) (1)	Testing Date (1)
						Source	Destination		
1	1550	Texas	1320	325	2000	1350	1570	28%	5/8/2018
2	1551	Texas	1320	325	2000	1350	1570	23%	5/8/2018
3	1552	Texas	1320	280	1800	1350	1570	28%	5/8/2018
4	1553	Texas	1320	320	2000	1350	1570	75%	12/4/2018
5	1761	Dearborn	1570	150	1200	1570	1750	108%	4/25/2018
6	1931	Dearborn	1570	447	860	1570	1900	77%	4/25/2018
7	2174	HAWC	1572	810	700	1570	2100	74%	4/13/2018
8	2176	HAWC	1572	575	740	1570	2100	66%	4/13/2018
9	2177	HAWC	1572	550	700	1570	2100	58%	4/13/2018

No.	Pump Name (1)	Pump Station (1)	Pump Elevation (FT) (1)	Design Head (FT) (1)	Design Flow (GPM) (1)	Zone (1)		Efficiency (%) (1)	Testing Date (1)
						Source	Destination		
10	1720	HAWC	1572	230	170	1570	1750	45%	4/13/2018
11	1721	HAWC	1572	150	1250	1570	1750	73%	4/13/2018
12	1722	HAWC	1572	230	2300	1570	1750	96%	4/13/2018
13	1783	Smiley Heights	1548	230	300	1570	1750	51%	9/4/2018
14	1784	Smiley Heights	1552	245	420	1570	1750	53%	9/4/2018
15	1927	South	1748	185	2050	1750	1900	51%	6/19/2018
16	1928	South	1748	196	1750	1750	1900	51%	6/19/2018
17	2124	South	1748	550	980	1750	2100	48%	6/19/2018
18	2125	South	1749	410	1050	1750	2100	N/A	N/A
19	2126	South	1749	425	766	1750	2100	N/A	N/A
20	1951	Agate	1732	180	1010	1750	1900	68%	4/9/2018
21	1952	Agate	1732	193	960	1750	1900	70%	5/9/2018
22	1953	Agate	1732	191	1623	1750	1900	71%	4/9/2018
23	1724	Ford Park	1555	N/A	N/A	1750	1750	N/A	N/A
24	1723	Ford Park	1555	N/A	N/A	1750	1750	53%	12/4/2018
25	2131	Fifth Avenue	1905	250	890	1900	2100	60%	8/31/2018
26	2132	Fifth Avenue	1905	246	850	1900	2100	60%	9/4/2018
27	2310	Fifth Avenue	1909	257	463	2100	2340	52%	8/31/2018
28	2311	Fifth Avenue	1909	260	1580	2100	2340	68%	8/31/2018
29	2384	Country Club	2100	231	1038	2100	2340	N/A	N/A
30	2385	Country Club	2100	340	800	2100	2340	65%	10/2/2018
31	2386	Country Club	2105	290	357	2100	2340	68%	10/2/2018
32	2387	Country Club	2105	241	1232	2100	2340	67%	10/2/2018
33	2381	Ward Way	2076	394	150	2100	2340	58%	9/11/2018
34	2382	Ward Way	2076	420	160	2100	2340	66%	9/11/2018
35	2610	Sand Canyon	2332	284	513	2340	2600	N/A	N/A
36	2611	Sand Canyon	2332	260	1093	2340	2600	N/A	N/A
37	2510	Mill Creek	2375	N/A	N/A	2600	2600	N/A	N/A

No.	Pump Name (1)	Pump Station (1)	Pump Elevation (FT) (1)	Design Head (FT) (1)	Design Flow (GPM) (1)	Zone (1)		Efficiency (%) (1)	Testing Date (1)
						Source	Destination		
38	2511	Mill Creek	2375	N/A	N/A	2600	2600	N/A	N/A
Note: (1) Booster Pump Data: Information from SCE pump efficiency tests dated 2018 to 2020									

NON-POTABLE WATER SYSTEM

Non-potable system 2 utilizes two (2) small package skid booster pump systems to maintain system pressure within the zone.

RECYCLED WATER SYSTEM

The recycled water system is treated water through the City's WWTP Membrane Bioreactor (MBR) System and is permitted for six (6) million gallons per day (MGD) with future plans in the WWTP Phase 2 improvement project to take the total to 9.1 MGD. This system has limits imposed on phosphate levels for the SCE Mountain View Power Plant and has to maintain a minimum of 0.5 parts per million (ppm) chlorine residual. There are three (3) booster pumps that pump from the chlorine contact basin at the WWTP. The pumps are seventy-five (75) horsepower (hp) with a flow of 1,500 gallon per minute (GPM) each at 154 feet head that operate on a variable frequency drive based on demand.

2.6 WATER TREATMENT PLANTS

Hinckley and Tate WTP are both conventional treatment plants. Tate treats water from Mill Creek, while Hinckley treats water primarily from the Santa Ana River. Both can blend treated effluent with water from potable groundwater wells when necessary to meet drinking water standards and system demands. Tate is permitted for maximum daily potable water production of twenty (20) MGD, while Hinckley is permitted for maximum daily potable water production of 14.5 MGD. A condition assessment was prepared by evaluating O&M practices and identifying infrastructure needs for both plants. A summary information is provided below, and a detailed assessment report with the associated photos is included in Appendix A.

2.6.1 HORACE P. HINCKLEY WATER TREATMENT PLANT

Hinckley is a conventional WTP utilizing continuous rapid mix flocculation, sedimentation, filtration, and disinfection. The nominal plant treatment capacity is twelve (12) MGD, which is sustainable even with one (1) filter out of service. The peak flow rate through the plant is limited to 14.5 MGD, as permitted by California State Water Resource Control Board Division of Drinking Water (SWRCB-DDW). The treatment plant capacity is expandable to a maximum ultimate capacity of thirty-six (36) MGD. Hinckley primarily treats raw water from the Santa Ana River (SAR) and is capable of receiving and treating water from the SWP. Up to 100 percent (100%) of the plant's raw water can be supplied from the SAR, when available, during the winter. During hot-weather periods in the summer, twenty to forty percent (20%-40%) of the Hinckley's raw water can be supplemented with water from the SWP.

2.6.2 HENRY TATE WATER TREATMENT PLANT

The Tate WTP is a conventional WTP utilizing continuous rapid mix flocculation, sedimentation, filtration, and disinfection. The nominal plant treatment capacity is twenty (20) MGD. The peak flow rate through the plant is limited to twenty (20) MGD, as permitted by SWRCB-DDW. Tate was initially commissioned

in 1967 to treat surface water from Mill Creek, and has received several process upgrades, the latest of which installed upgrades to the chemical feed applications, clarifier, filter, backwash and sludge processes (2005). Historically, Tate received raw water exclusively from Mill Creek. However, the Mill Creek source is not typically reliable during drought periods and high turbidity events. Therefore, to increase the raw water supply reliability, the City obtained a permit amendment from the SWRCB-DDW to treat SWP and SAR source-water at Tate.

2.6.3 WASTEWATER TREATMENT PLANT

Approximately 4,480 AF of recycled water is produced annually at the City WWTP, however approximately 1,835 AF of recycled water is delivered to customers annually. This facility was constructed in 1960 to produce 9.5 MGD of secondary wastewater treatment, and was upgraded with Membrane Bioreactor (MBR) technology in early 2000 to produce six (6) MGD of high-quality recycled water. WWTP influent is screened, clarified, and settled before being divided between the MBR and the conventional treatment systems. The treated effluent typically contains less than five (5) milligrams per liter (mg/l) of biological oxygen demand (BOD), less than five (5) mg/l of total suspended solids (TSS), less than ten (10) mg/l of total nitrogen, and less than 0.2 nephelometric turbidity unit (NTU) for turbidity. Table 2-5 provides the typical tertiary treated wastewater result.

Table 2-5: City of Redlands Typical Tertiary Treated Title 22 Recycled Water

Parameter	Influent	Effluent
BOD (mg/L)	160	<5
TSS (mg/L)	130	<5
Total Nitrogen (mg/L)	24	<10
Turbidity (NTU)	NA	<0.2
Note: Data from Water Recycling/Power Generation Reuse Project		

2.7 FACILITY SEISMIC ANALYSIS

Due to the potential for seismic activity in southern California, it is essential for water facilities to be designed, equipped, and prepared for potential seismic movement. Richard Brady and Associates, Inc. (Brady) completed a Condition, Seismic, and Structural Assessment of all essential water facilities to identify potential facility risks, located in Appendix F.

City of Redlands Water System Hydraulic Schematic

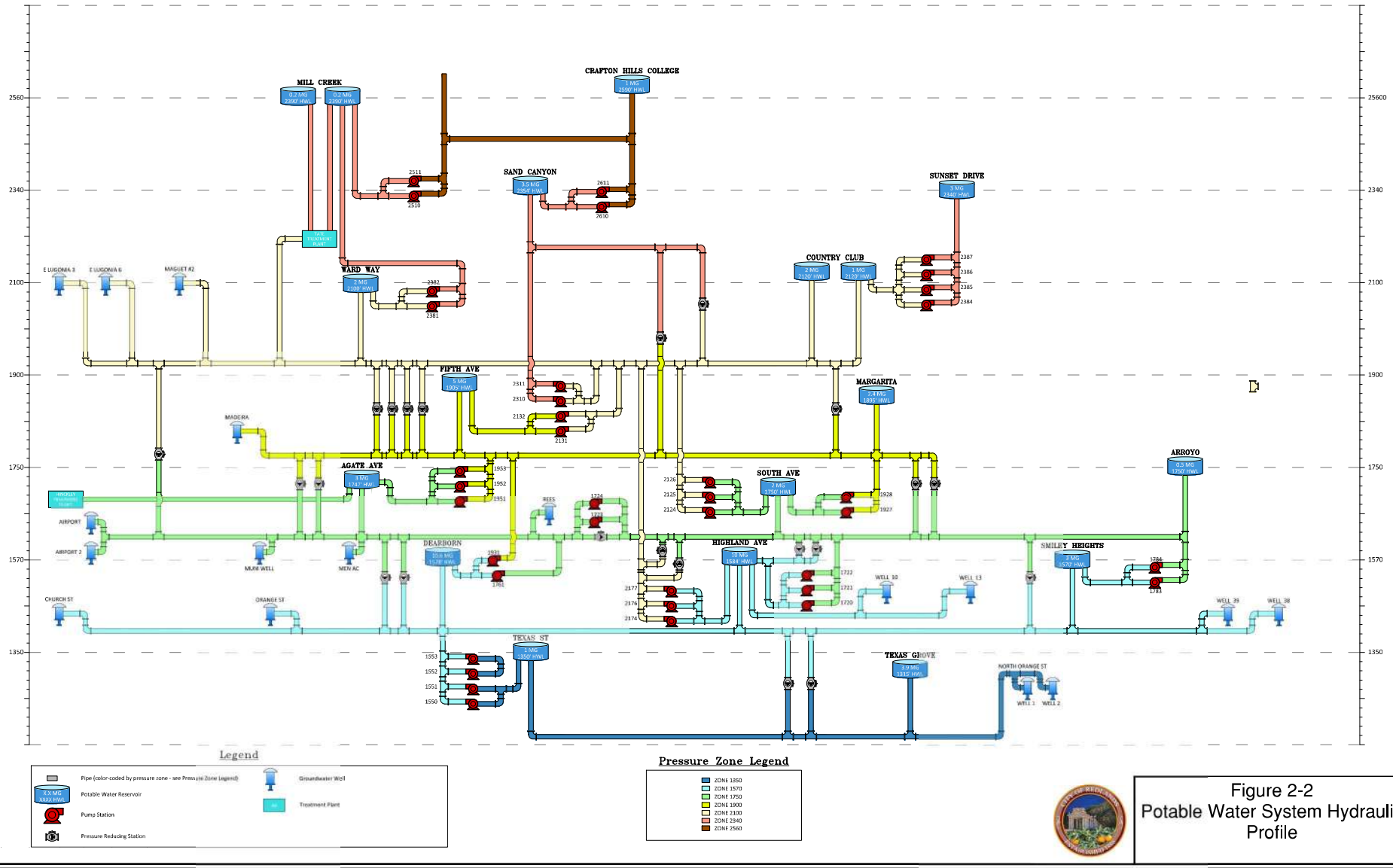


Figure 2-2
Potable Water System Hydraulic Profile

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3 WATER USE

3.1 GENERAL DESCRIPTION

This section reviews the water use characteristics for the City's water systems. The information presented in this section was used in the hydraulic models to evaluate system reliability and the ability of each system to provide sustainable water delivery service to customers. This information was also used to project future water demands and requirements to predict future operational needs.

3.2 WATER DEMAND

POTABLE WATER SYSTEM

From 2016 to 2020, the City produced an average of 22,821 AF of potable water and delivered an average of 20,770 AF of potable water each year (2020 UWMP). Table 3-1 provides annual and summary demand data within several use categories. In the table below, if the meter service does not fit in any of the general categories, it is defined as "Other". Average annual system water loss, calculated as the percentage of water delivered to water produced, was relatively high (nearly 9%) during this period. This is likely caused by system leaks and meter inaccuracies. Approximately seventy-three percent (73%) of the total demand was from residential customers, and the average per capita water usage was approximately 222.9 gallons per capita per day (gpcd) (18.5 MGD/83,000 capita). This demand data was used for water accounting and calibration of the hydraulic model, which was used to project future potable water demands through the planning horizon. The comparative use of each category is shown graphically in Chart 3-1.

Table 3-1: Historical Water Production and Demand (AF/Year)

Category	2016	2017	2018	2019	2020	Average
Single Family Residential	11,340	12,275	12,866	11,624	12,949	12,211
Multi-Family Residential	2,835	2,913	2,934	2,750	2,901	2,867
Commercial/Industrial	3,180	3,142	3,159	2,705	2,640	2,965
Landscape Irrigation	1,924	2,155	2,340	2,228	2,220	2,173
Agriculture	556	387	326	283	276	366
Other	183	253	179	174	151	188
Total Demand	20,018	21,125	21,804	19,764	21,137	20,770
Total Production	20,919	23,303	23,442	21,975	24,464	22,821
Water Loss (AF)	837	2178	1638	2211	3227	2051
Water Loss (%)	4.0%	9.3%	7.0%	10.1%	13.6%	9.0%

Note: Based on Table 4-3 in 2020 Urban Water Management Plan

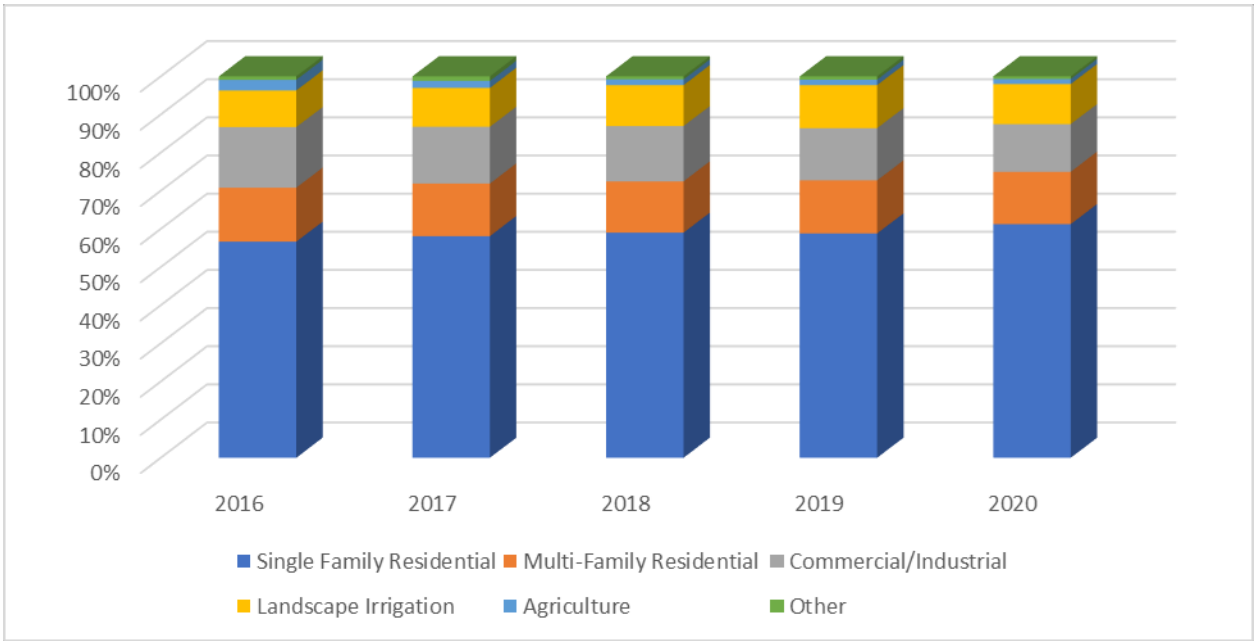

Chart 3-1: Historical Potable Water Use by Category

NON-POTABLE WATER SYSTEM

The City of Redlands produces and distributes approximately 1,868 AF of non-potable water annually. Table 3-2 provides non-potable water demands for the previous four (4) years. The non-potable water system primarily serves warehouses and commercial facilities in the northwest portion of the City. Table 3-3 provides non-potable water demand for several larger customers. Water demand for Ford Park and Hillside Memorial Park are provided as municipal use references.

Table 3-2: Historical Non-Potable Water Demand (AF/Year)

	2017	2018	2019	2020	Average
Commercial/Industrial	1,456.5	2,512.9	1,051.6	2,212.2	1,808.3
Landscape Irrigation	81.2	179.4	89.7	185.1	133.9
Agriculture	193.2	16.1	74.5	3.7	71.9
Non-Potable Demand	1,730.9	2,708.4	1,215.8	2,400.8	2,014.0

Table 3-3: 2021 Non-Potable Water Users

Users	GPD
Warehouses	396,731
Commercial Plazas	96,850
Crafton College	67,397
Park Irrigation	44,324

Users	GPD
Redlands Country Club	35,893
Agricultural	31,479
Kaiser Permanente Medical Center	15,258
Ford Park	2,167
Hillside Memorial Park	40
Note: Data Analyzed with Meter Information Provided by the City	

RECYCLED WATER SYSTEM

Recycled water is treated effluent from the City WWTP and is primarily used for equipment cooling at the SCE Mountain View Power Plant, dust control at the City landfill, and for landscape irrigation customers. The power plant generates approximately 1,056 megawatts of power, and uses a 50:50 blend of recycled and non-potable water produced by their own non-potable well. This blending is necessary because of a "Take-or-Pay" agreement that requires the power plant to use or pay for 3,000 AF of water. Currently, the City WWTP is only capable of producing approximately 4,480 AF of recycled water. Actual power plant demand varies with energy production, and averaged approximately one (1) MGD annually between 2017 and 2019. A small amount of recycled water is also used for dust control at the landfill site adjacent to the WWTP. It is anticipated that the WWTP will be able to produce approximately 6,720 AF recycled water when plant improvements are constructed in the near future and be permitted to treat up to 10,193 AF. Annual recycled water demand from 2017 through 2020 was 2,427.5 AF, 1,976 AF, 1,905.2 AF, and 1,806 AF, with an annual average of 2,028.7 AF.

3.3 FIRE FLOW

The Fire Marshall establishes minimum fire protection water requirements, including storage, pressure, and flow, within the City. These requirements were used as minimum standards when analyzing the potable water distribution system. Table 3-4 shows the minimum fire flow requirements for water delivery pressure and duration based on a Type V building construction type (wood frame). These requirements vary based on the total size of the facility and the building construction type, as defined by the California Fire Code. The storage for the highest single fire event is expected to be two (2) MG. This storage volume assumption was used to develop design criteria for the City's storage requirements.

Table 3-4: Fire Flow Criteria

Land Use	Criteria	Minimum Fire Flow (GPM)	Minimum Pressure (PSI)	Duration (HR)
Residential	Less than 3600 SqFt	1,000	20	2
Residential	Greater than 3600 SqFt	1,500	20	2
Commercial/ Industrial	Less than 11,300	1,500 – 2,750	20	2
Commercial/ Industrial	11,301 SqFt - 20,601 SqFt	3,000 – 3,750	20	4
Commercial/ Industrial	20,601 SqFt – 85,100 SqFt	4,000 – 7,750	20	4

Land Use	Criteria	Minimum Fire Flow (GPM)	Minimum Pressure (PSI)	Duration (HR)
Commercial/ Industrial	Greater than 85,101 SqFt	8,000	20	4
Note: Data provided in 2021 by the City of Redlands Fire Marshal for Type V Construction				

3.4 CONSERVATION MEASURES

The 2021 Water Shortage Contingency Plan (2021 WSCP) was developed to ensure long term sustainability of water resources.

3.4.1 WATER SHORTAGE CONTINGENCY PLAN

The City encourages and incentivizes year-round water conservation practices. Voluntary and mandatory water conservation measures for various water shortage conditions, which may be caused by climate change, infrastructure failure, source contamination, or other supply issues, are identified in 2021 WSCP, and comply with minimum California Water Code requirements. The 2021 WSCP is codified by ordinance, and includes six (6) stages, each corresponding to a specific supply shortage condition. These stages are:

Stage I: Voluntary Conservation Measures

Issued when a slight decrease in the water supply is expected

Stage II: Mandatory Compliance; Water Alert

Issued when a moderate decrease in the water supply is expected

Stage III: Mandatory Compliance; Water Warning

Issued when a significant decrease in the water supply is expected

Stage IV: Mandatory Compliance; Water Emergency

Issued when a forty percent (40%) decrease in the water supply is expected

Stage V: Mandatory Compliance; Water Emergency

Issued when a fifty percent (50%) decrease in the water supply is expected

Stage VI: Mandatory Compliance; Water Emergency

Issued when water supplies are in danger of being depleted to a point where uses such as human consumption, sanitation, and fire protection would be endangered. This would be in response to a more than fifty percent (50%) decrease in supply, most likely associated with a natural disaster.

Implementation of each stage is declared by the City Council when water demands cannot be satisfied without depleting the water supply for consumption, sanitation, and fire protection. If the City Council is unable to meet, the City Manager or his/her designee can implement the plan on an emergency basis. This implementation will be reviewed and ratified or revoked by the City Council at its next scheduled

meeting. In case of a catastrophic interruption, such as an earthquake, fire, and other emergency, the City Municipal Utilities and Engineering Department (MUED) will implement an existing emergency plan, which requires designated personnel to meet at a predefined reporting time and location for task assignments. Those who cannot reach their designated area are to offer their services to other local water providers if they are also experiencing an emergency.

3.4.2 DEMAND MANAGEMENT MEASURES

The City has achieved its 2020 water use reduction targets, and will continue efforts to reduce water waste. To minimize water waste, the City has implemented water waste prevention programs, metering programs, conservative pricing, assessed and managed distribution losses, and has increased both public education and outreach. In addition to the 2021 WSCP water use restrictions for various water supply shortage conditions, the City manages several other water conservation programs.

The City's water systems are metered to ensure accurate demand measurement. Meters are maintained routinely, and a replacement schedule was developed in 2008. Meters smaller than two inches (2") are replaced every fifteen (15) to twenty (20) years, while larger meters are periodically calibrated to ensure accuracy. In 2021, the first year of a five (5) year project to replace all water meters was initiated.

The City prices water using a tiered rate structure. This tiered system includes two (2) pricing components. The first component is a fixed service charge based on the meter size, and the second is a variable commodity charge based on the amount of water delivered. The commodity charge unit rate increases at specific use thresholds.

The City also manages comprehensive public education and outreach programs, focusing on customer accountability while incentivizing water conservation practices. Examples include:

1. Water Efficiency Rebate Program Financial Incentives:
    a. Weather-Based Irrigation Controllers
    b. Drought Tolerant Lawn Conversions
    c. Synthetic Turf Replacement
    d. Water Efficient Clothes Washers
    e. High-Efficiency Sprinkler Nozzles
    f. Low Flow Toilets
2. Design and Construction of four (4) demonstration gardens;
3. Participation in regional marketing campaign;
4. Educational outreach events;
5. Offering free water-saving products including hose nozzles, toilet leak detection tablets, lawn/plant moisture meters, low water use plants, shower timers, faucet aerators, and water efficiency educational materials.

3.5 FUTURE WATER USE

POTABLE WATER SYSTEM

The 2020 UWMP projected future potable water demand, based on expected population growth, land use development, and new connections, to be 21.53 MGD in 2040 and 22.17 MGD in 2045. These demand increases are expected to be primarily from new development within the unincorporated portions of the City water service area. Table 3-5 provides potable water demand projections through 2045 for each land

use category. Potable water demand is projected to increase by three to four percent (3%-4%) annually through 2045.

Table 3-5: Potable Water Demand Projection (AF/Year)

Land Use	2025	2030	2035	2040	2045
Single Family Residential	12,943	13,470	13,997	14,461	14,925
Multi-Family Residential	3,036	3,160	3,284	3,393	3,501
Commercial/Industrial	3,081	3,145	3,209	3,265	3,321
Landscape Irrigation	2,292	2,385	2,478	2,560	2,643
Agriculture	206	206	206	206	206
Other	206	214	223	230	238
Total Demand	21,764	22,580	23,397	24,115	24,834
Total Demand (MGD)	19.42	20.14	20.87	21.51	22.16
Demand Increase (%), 2020 base	3.0%	3.7%	3.6%	3.1%	3.0%
Note: Data in this table is from the 2020 Urban Water Management Plan table 4.5. Data for the water demand was linearly scaled for 2022 - 2042.					

NON-POTABLE WATER/RECYCLED WATER SYSTEMS

The most likely opportunity to expand the non-potable water and recycled water systems is to consolidate them into a single system capable of putting approximately four (4) MGD of excess recycled water to beneficial use. This would require the construction of additional storage reservoirs and booster pumps to convey water efficiently throughout the system. Approximately forty-five (45) water meters within pressure system 1 that include commercial areas, parks, agricultural areas, schools, and residential areas with heavy irrigation use could be connected to this expanded system. Another 200-300 water meters within pressure system 2 could also be connected to this expanded system.

Table 3-6 provides use data for various water meter billing classifications, and shows the potential for relieving pressure from the potable water system by transitioning customers to the expanded non-potable/recycled water system where possible. The residential classification includes rural agricultural areas within Crafton. Transitioning these areas to the expanded system would be difficult due to the distance from the expanded system. It is recommended that the City focuses on commercial and industrial customers clustered in pressure systems 1 and 2 to maximize the benefit of the expanded system. Selective parks and City-owned citrus groves with significant water use should also be prioritized for connection to the expanded system.

Table 3-6: Potential Non-Potable Water Users

Land Use	Water Use (GPD)
Residential	638,636
Commercial	416,113

Land Use	Water Use (GPD)
Parks	281,336
Agricultural	172,025
Public Institutions	145,143
Other	55,604
Note: Data Analyzed with Meter Information Provided by the City	

Table 3-7 provides typical water use within each system. System 1 and 2 are the most developed and are located close to the wastewater treatment facility, and transitioning customers within pressure system 2 offers the greatest opportunity to relieve pressure from the potable water system. Most of these customers are located north of Fern Avenue and south of I-10.

Table 3-7: Potential Non-Potable Water Users

System	Water Use (GPD)	Number of Meters
1	79,865	114
2	762,176	211
3	346,777	77
5 through 8	520,039	91
Total	1,708,857	413
Note: Data Analyzed with Meter Information Provided by the City		

It is likely that water demand within the expanded system will nearly double from 2.2 MGD to 3.9 MGD. The demand can be supplied from the WWTP recycled water system and non-potable water groundwater wells when customers are transitioned from the potable water system, and non-potable groundwater could supplement demand during peak periods. Expanding and improving this system could reduce potable water use by as much as 2,606 AF each year, with annual cost savings of $1M-$2M. Future developments within these pressure zones could be served by this system as well.

3.5.1 AREA-BASED DEMAND FACTORS

Table 3-8 provides the 5-year average water demand and projected potable water demand through 2045 by land use category. Assuming the demand remains constant, the City can anticipate total annual demand of approximately 25,547 AFY (22.7 MGD).

Table 3-8: Future Water Use Projections by Land Use (AF/Year)

Land Use	5-year avg (AFY)	Area in 2017 (Acre)	AFY/Acre	Area in 2045 (Acre)	2045 Water Demand
Single Family Residential	12,211	8,332	1.466	9,428	13,821

Land Use	5-year avg (AFY)	Area in 2017 (Acre)	AFY/Acre	Area in 2045 (Acre)	2045 Water Demand
Multi-Family Residential	2,867	681	4.210	958	4,033
Commercial/Industrial	2,965	2,017	1.470	2,773	4,076
Landscape Irrigation	2,173	4,138	0.525	5,622	2,952
Agriculture	366	2,180	0.168	2,180	366
Other	188	2,004	0.094	2,441	229
Total	20,770	19,352	8	23,402	25,477
Note: Information based on 2020 Urban Water Management Plan & 2017 General Plan					

3.5.2 CONNECTION-BASED DEMAND FACTORS

The City's potable water system currently includes approximately 23,545 connections. Table 3-9 provides potable water demand by connections in each land use category, and projects total system demand in year 2045. Landscape irrigation and agriculture are the most intensive uses, with 4.077 AFY per connection and 21.53 AFY per connection, respectively. The 2045 potable water system demand is projected based on linear growth projections identified in the 2020 UWMP and 2017 General Plan, and is estimated to be 23,996 AFY (21.4 MGD).

Table 3-9: Future Water Projections by Connection

Land Use	5-Year Average (AFY)	2020 Connections	Connection Demand (AFY)	2045 Connections	2045 Demand (AFY)
Single Family Residential	12,211	19,922	0.613	22,922	14,050
Multi-Family Residential	2,867	980	2.926	1,180	3,452
Commercial/Industrial	2,965	1,397	2.122	1,647	3,496
Landscape Irrigation	2,173	533	4.077	573	2,336
Agriculture	366	17	21.53	17	366
Other	188	696	0.270	1,096	296
Total	20,770	23,545	32	27,435	23,996
Note: Information based on 2020 Urban Water Management Plan & 2017 General Plan					

4 WATER SUPPLY

4.1 GENERAL DESCRIPTION

POTABLE WATER SYSTEM

The primary sources of potable water supply to the City of Redlands are groundwater (48.8%) and treated surface water (51.1%). The City may also receive raw water (0.1%) from the SWP, when it is available, and blend it with SAR and Mill Creek surface water if additional raw water is needed to meet demands. The City operates two (2) surface treatment plants that could be expanded to meet future demands. Current annual potable water production from all sources is 22,907 AF (20.45 MGD). Potable water production during the summer months is approximately three (3) times higher than in the winter months.

Potable water demand was calculated using Supervisor Control and Data Acquisition (SCADA) system data to calibrate the water model and provide a basis for future planning. The MDD is 1.7 times the ADD, and the PHD is 2.75 times the ADD. Currently, the average demand of the City's potable water system is 18.5 MGD, with a peak hour demand of almost fifty-two (52) MGD.

NON-POTABLE WATER SYSTEM

The primary non-potable water source is groundwater extracted from the Bunker Hill Basin.

RECYCLED WATER SYSTEM

The City WWTP produces approximately six (6) MGD of treated effluent through a MBR system that supplies the recycled water system.

4.2 WATER PRODUCTION

POTABLE WATER SYSTEM

Table 4-1 provides potable water production by source from 2017 to 2020. The comparative production of each source is shown graphically in Chart 4-1.

Table 4-1: Potable Water Production Sources (AF/Year)

Potable Water Source	2017 (AFY)	2018 (AFY)	2019 (AFY)	2020 (AFY)	Average (AFY)
Groundwater	11,214	12,468	9,900	12,088	11,418
Santa Ana River	4,634	6,367	5,038	5,796	5,459
Mill Creek	7,455	4,607	7,003	6,045	6,278
State Water Project	-	-	35	535	285
Total Production	23,303	23,442	21,976	24,464	23,296
Note: Data from 2017-2020 Annual Production Report					

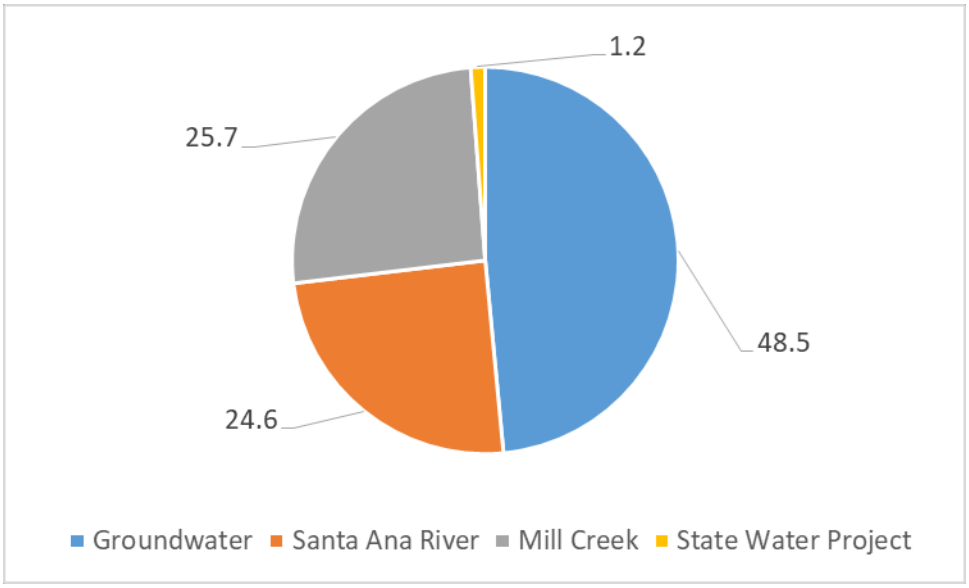

Chart 4-1: Water Production by Source

Table 4-2 provides monthly potable water production data from the 2017-2020 Annual Production Reports. The comparative production of each month and year is shown graphically in Chart 4-2. During that period, production averaged approximately 20.8 MGD from all sources. Monthly production varies seasonally, with summer season production of approximately thirty (30) MGD, and winter season production of approximately eleven (11) MGD. Annual potable water demand averages approximately 18.5 MGD. Reducing potable water system losses by replacing aging and leaking pipelines, replacing and repairing aging water meters, and implementing other improvements is a City priority.

Table 4-2: Monthly Potable Water Production

Month	2017 (MGD)	2018 (MGD)	2019 (MGD)	2020 (MGD)	Average (MGD)
January	8.2	14.0	11.4	13.1	11.7
February	8.6	16.1	8.6	16.8	12.5
March	14.7	11.8	10.4	11.4	12.1
April	21.8	20.2	20.7	13.4	19.0
May	22.9	21.4	17.9	24.6	21.7
June	26.8	25.9	25.1	27.2	26.3
July	29.4	29.7	28.8	29.8	29.4
August	27.4	29.9	29.8	31.2	29.6
September	26.0	27.5	28.4	29.4	27.8
October	24.5	22.1	24.5	26.2	24.3
November	20.0	19.9	19.4	20.1	19.9
December	18.5	12.6	9.8	18.0	14.7
Average	20.7	20.9	19.6	21.8	20.8
Note: Data from the 2017-2020 Annual Production Report					

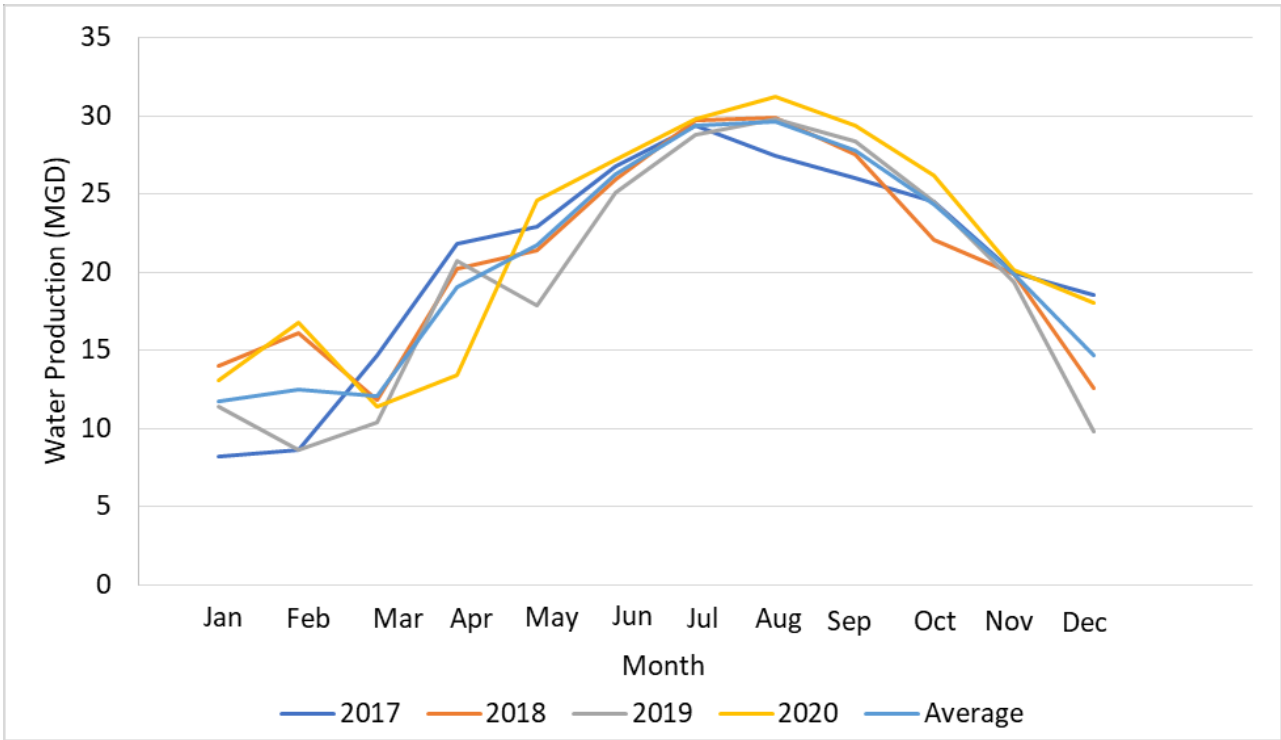

Chart 4-2: Historic Potable Water Production

NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

Table 4-3 provides monthly non-potable water and recycled water production in 2020. Although the WWTP produces approximately 4.5 – 5.0 MGD of recycled water, only 1.6 MGD is being sent to customers, which could be tripled with system improvements. Similar to potable water production, non-potable water production varies significantly during the summer season (2.57 MGD) and winter season (1.11 MGD). The combined annual production average is approximately three (3) MGD, and varies seasonally from 1.5 MGD in January to 4.5 MGD in July.

Table 4-3: Monthly Non-Potable Water & Recycled Water Production/Distribution (MGD)

Month	2017-2020 Average Well Production (MGD)	Average Recycled Water Production/Distributed to Customers (MGD)	TOTAL Average Production (MGD)
January	0.5	1.0	1.5
February	0.6	1.2	1.8
March	0.6	1.4	2.0
April	1.6	1.3	2.9
May	1.8	1.2	2.0
June	2.6	1.3	3.9
July	2.7	1.8	4.5
August	2.6	1.8	4.4
September	2.4	1.6	4.0
October	2.2	1.7	3.9
November	1.5	1.3	2.8
December	0.8	1.0	1.8

Month	2017-2020 Average Well Production (MGD)	Average Recycled Water Production/Distributed to Customers (MGD)	TOTAL Average Production (MGD)
Average	1.7	1.4	3.0

Table 4-4 provides annual average production from each non-potable groundwater well from 2017-2020. The City's non-potable groundwater wells produce a combined average of 7.3 MGD. The two (2) highest producing wells, Well No. 30A and the New York Street Well serve Systems 2 and 3. These systems account for approximately thirty percent (30%) of total groundwater extractions.

Table 4-4: Non-Potable Groundwater Well Production (MGD)

Groundwater Well	Average Water Production (GPD)	Average Water Production (MGD)
Agate 1	0	0
California	85,301	0.085
Crafton	51,779	0.052
New York	282,329.9	0.282
Redlands Heights	32,792.7	0.033
Well 11	92,912.2	0.093
Well 16	65,593.3	0.066
Well 30 A	572,337.2	0.572
Well 31A	0	0
Well 32	11,025	0.011
Well 36	134,380.1	0.134
Well 41	21,961.5	0.022
Total Non-Potable	1,350,412	1.350
Note: Data from the 2017 – 2020 Annual Production Reports		

This production data was compared to demand data for 2017-2020 to identify significant water losses of approximately forty percent (40%) within the non-potable water system. Table 4-5 summarizes that analysis.

Table 4-5: Non-Potable Water System Losses

	2017	2018	2019	2020	Average
Average Production (MGD)	4.2	3.6	3.2	3.2	3.6

	2017	2018	2019	2020	Average
Average Demand (MGD)	1.6	2.4	1.1	2.1	2.1
Water Loss (MGD)	2.6	1.2	2.1	1.1	1.4
Water Loss (%)	62%	33%	66%	34%	39%

The design on the City's non-potable water system does not alleviate the water loss issue. The non-potable water wells operate on pressure using a ClaValve. Since the non-potable water system does not include storage tanks, the excess water releases into the storm drain system when the pressure exceeds a set point. The need for the system to be operated this way results in loss of water.

It is recommended that the City investigate other potential causes of this water loss, which may include a review of record drawings and specifications, analysis of operations, site visits, and interviews with the maintenance staff before CIP projects are implemented. The City should target system water losses of approximately four to six percent (4%-6%) annually. It is estimated that reducing water losses within the non-potable water system could increase revenues by approximately $750,000 to $ 1.5M annually.

The non-potable water meters are in the process of being replaced, which is expected to be completed by June 30, 2022. Resolving this issue will further reduce water loss and contribute to the targeted system water loss.

4.3 DEMAND VARIATION

4.3.1 AVERAGE DAY DEMAND

POTABLE WATER SYSTEM

Based on 2021 meter-data provided by the City, the potable water system ADD is approximately 18.5 MGD. When accounting for losses in the system, the production needed to supply this demand is approximately 20.4 MGD.

NON-POTABLE WATER SYSTEM

The ADD from non-potable groundwater wells is approximately 2.1 MGD. Approximately ninety percent (90%) of this demand is for outdoor landscape irrigation. The remainder is used for agricultural irrigation and commercial/industrial uses.

RECYCLED WATER SYSTEM

The ADD for the recycled water system, which is exclusively used by the SCE Mountain View Power Plant, for landfill dust control adjacent to the WWTP, and irrigation customers is 1.64 MGD, and can increase periodically to 2.2 MGD. Unused recycled water is blended with non-potable water produced by the California Street Well, to supplement the non-potable water distribution system.

4.3.2 MAXIMUM DAY DEMAND

POTABLE WATER SYSTEM

The potable water system MDD was determined using 2019 SCADA information provided by the City, and was found to be 1.7 times the ADD, with a peak of approximately 2.75 times the ADD. Chart 4-3 shows

the diurnal curve for the MDD case. The maximum day typically occurs in mid-August, with peak hour demands occurring at approximately 5:30 a.m. and 11:00 p.m.

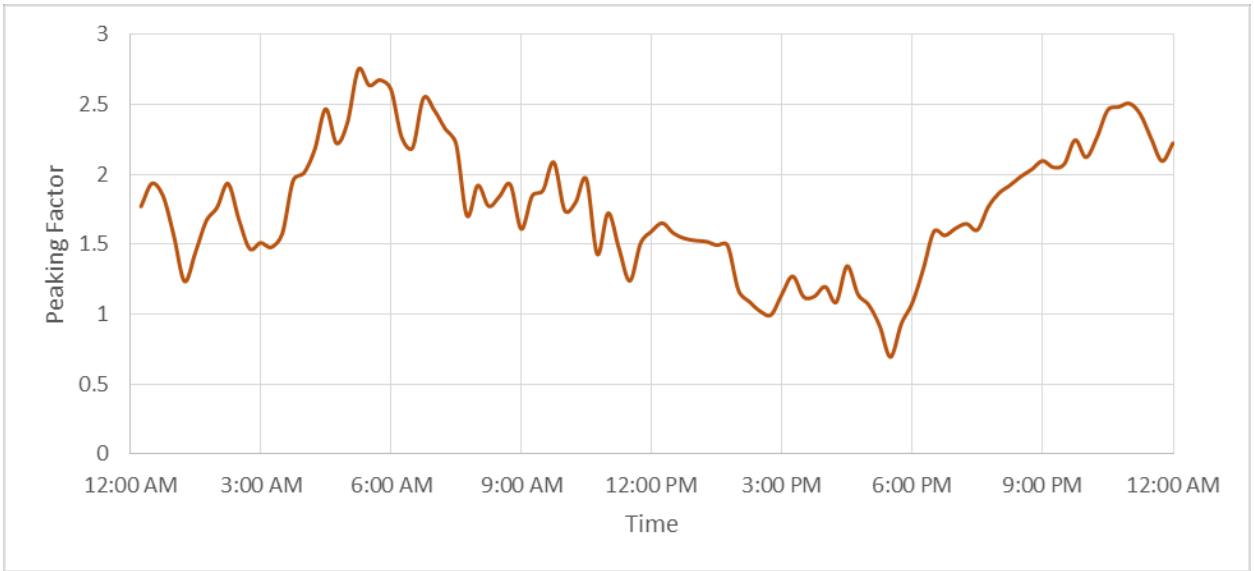

Chart 4-3: MDD Diurnal Curve for Potable Water, August 2019

NON-POTABLE WATER SYSTEM

Based on 2021 meter-data provided by the City, the non-potable water system ADD is approximately 2.1 MGD. When accounting for losses in the system, the production needed to supply this demand is approximately 3.2 MGD. The maximum day typically occurs between June and October, with peak hour demands occurring at approximately 4:30 a.m. to 7:30 a.m. when irrigation is typically applied.

RECYCLED WATER SYSTEM

Based on 2021 meter-data provided by the City, the recycled water system ADD is approximately 1.67 MGD. The maximum day of 2.2 MGD, typically occurs between June and October, with peak hour demands occurring at approximately 4:30 a.m. to 7:30 a.m. when irrigation is typically applied.

4.3.3 PEAK HOUR DEMAND

POTABLE WATER SYSTEM

Understanding the PHD is critical for sizing water mains and other facilities. During PHD, the system experiences high velocities and low service pressures in areas with undersized mains or areas that lack looped distribution pipelines. The PHD was determined using the peak water use during the peak hour of the MDD, and was found to be approximately 2.75 times the ADD, or approximately 50.9 MGD. Hinckley and Tate have a combined maximum treatment capacity of 34.5 MGD. In addition, the City's fourteen (14) active groundwater wells can produce approximately 18,350 GPM (26.4 MGD) of potable water. Therefore, the maximum potable water production capacity from all sources is approximately 58.4 MGD, which exceeds the PHD. However, existing potable water production facilities are not capable of meeting the projected 2045 PHD of sixty-one (61) MGD. It is likely that this will not become an issue until the early 2030s, and the City is currently rehabilitating several potable groundwater wells, including six (6) that are inactive due to water quality issues. Bringing these wells back into service will increase potable water production capacity to 67.2 MGD, which will provide sufficient water to meet the projected 2045 PHD and

provide additional capacity as reserve production. The inactive wells include Agate 2, Lugonia 4, Well No. 10, Well No. 13, and the Crafton Well. Table 4-6 provides the maximum potable water production capacity for each facility.

Table 4-6: Active Potable Water Production Facility Capacity

Well	Capacity (GPM)	Capacity (MGD)
Airport 1	1500	2.2
Airport 2	1000	1.4
Church Street	2000	2.9
Lugonia 3	250	0.4
Lugonia 6	250	0.4
Madeira	900	1.3
Maguet 2	325	0.5
Mentone Acres 2	1600	2.3
Muni	1700	2,4
North Orange Street 1	2900	4.2
North Orange Street 2	2900	4.2
Orange Street	1500	2.2
Rees	1200	1.7
38	1500	2.2
39	1250	1.8
10	1400	2.0
13	3300	4.8
Hinckley WTP	10,070	14.5
Tate WTP	13,888	20
Total	49,158	70.8

NON-POTABLE WATER SYSTEM

Understanding the PHD is critical for sizing water mains and other facilities. During PHD, the system experiences high velocities and low service pressures in areas with undersized mains or areas that lack looped distribution pipelines. The PHD was determined using the peak water use during the peak hour of the MDD, and was found to be approximately 5.3 times the ADD, or approximately 11.2 MGD.

RECYCLED WATER SYSTEM

Understanding the PHD is critical for sizing water mains and other facilities. During PHD, the system experiences high velocities and low service pressures in areas with undersized mains or areas that lack looped distribution pipelines. The PHD was determined using the peak water use during the peak hour of the MDD, and was found to be approximately 6.1 times the ADD, or approximately 10.2 MGD.

4.4 EMERGENCY CONNECTIONS

The City maintains emergency water connections with the City of Loma Linda and Western Heights Water Company. In addition, the City is a member of the Emergency Response Network of the Inland Empire (ERNIE) and California's Water/Wastewater Agency Response Network (CalWARN). The intent of these programs and connections is to ensure that the City is able to provide water service to its customers during emergencies.

4.5 PRODUCTION-DEMAND PROJECTION

4.5.1 PROJECTION

POTABLE WATER SYSTEM

Table 4-7 provides projected potable water system demands (ADD, MDD, and PHD) through year 2042. The current peaking factors identified in Section 4.3.3 are assumed to remain constant through the planning horizon. The ADD is expected to increase by 3.2 MG to 21.7 MGD, MDD will increase by approximately 5.5 MGD to thirty-seven (37) MGD, and the PHD will increase by 9.3 MGD to 60.2 MGD. The projected daily production is determined by the daily demand and anticipated system water loss, which was 12.8% in 2020. This is relatively high for a typical water distribution system. Reducing water loss within the distribution system will reduce the difference between water produced and water distributed, resulting in significant cost savings, estimated to be approximately $2M-$3M each year. This savings over the planning horizon will significantly offset CIP expenditures.

Table 4-7: Potable Water Demand Projections (MGD)

	2022	2027	2032	2037	2042
Projected ADD	18.5	19.2	20	20.8	21.7
Projected MDD	31.5	33.5	34.8	35.9	37.0
Projected PHD	50.9	54.2	56.3	58.1	60.2
Expected Inefficiencies	12.8%	8%	6%	4%	4%
Projected Average Daily Production Demand	20.7	20.7	21.2	21.6	22.5
Note: Projected ADD was interpolated using Table 3.3: Projected Demand for Potable Water. 2022 potable water demand was assumed to be equal to the 2020 potable water demand.					

NON-POTABLE WATER SYSTEM

As demand increases, the City will need to expand, and perhaps consolidate, the non-potable water and recycled water systems. Transitioning potable water connections to this expanded system will reduce potable water system demands by approximately 1.7 MGD. Table 4-8 shows how the decreasing water loss within the system over time reduces production necessary to meet increasing demands. This table assumes expansion and consolidation of the non-potable water and recycled water systems.

Table 4-8: Projected Production Demands Assuming Optional Expansion

	2022	2027	2032	2042
Average Projected Demand (MGD)	2.2	2.5	2.8	3.1
Assumed Water Loss (%)	40%	28%	16%	5%

	2022	2027	2032	2042
Projected Average Production (MGD)	3.7	3.5	3.3	3.3

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5 DESIGN CRITERIA

5.1 GENERAL DESCRIPTION

This section presents industry-standard guidelines for water infrastructure used to determine replacement or repair needs for the City's water distribution systems. The design criteria also outlines recommendations for the design and construction of infrastructure to ensure reliability, safety, and functionality. In addition, the criteria establish conditions that include but are not limited to water supply, treatment facilities, storage capacity, pressure, pipe velocity, and other hydraulic parameters. These criteria served as a benchmark to evaluate the City's existing infrastructure and identify potential projects for the City's future CIP projects. Data from previous sections including demand factors, water supply, existing infrastructure, and industry standards were evaluated against the design criteria to identify recommended infrastructure upgrades in the CIP. System pressures, pipeline flow velocity, and age were primary criteria of concern.

5.2 DESIGN CRITERIA

5.2.1 DEMAND

POTABLE WATER SYSTEM

Three important demand factors were used when evaluating the City's water system: ADD, MDD, and PHD. The City's potable water ADD is approximately 18.5 MGD, or approximately 222.9 gpcd, which is typical for this region. Due to very effective conservation measures, the current consumption per capita has been reduced from approximately 285 to 222.9 gpcd in the past ten (10) years. The MDD is estimated to be 1.7 times the ADD, or 31.5 MGD. The PHD is estimated to be 2.75 times ADD, or 50.9 MGD. The 1.7 MDD and 2.75 PHD peaking factors are calculated from the City's 2017-2021 SCADA information.

5.2.2 SUPPLY

POTABLE WATER SYSTEM

The City relies on groundwater wells and surface WTP for potable water production. The City supplies approximately half of its demand through groundwater wells. The other half is supplied through its surface WTP. Collectively, these facilities can meet the PHD. However, demand is expected to increase over the next few decades due to growth and further development. As the service areas and demands grow, the City may need an additional five to six (5 – 6) MGD of supply capacity to meet sixty-one (61) MGD of peak hour demand in 2045.

NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

The City relies on groundwater wells and it's WWTP to supply non-potable and recycled water. However, the City does not utilize the entirety of its WWTP effluent. Therefore, any expansion of the recycled/non-potable water system should use this excess water. The groundwater wells are also used to supply non-potable water to small, detached systems throughout the City. These areas are primarily large parks and open spaces within the City.

5.2.3 STORAGE VOLUME

POTABLE WATER SYSTEM

Fire flow during peak demands was modeled, and water storage was found to be adequate for existing and future hydraulic conditions. Based on the EPA's Effect of Water Age on Distribution System Water Quality Report, Office of Water (4601M), the water distribution system requires enough operational

storage (OS) for variation in demand, equalizing storage (ES), stand by and/or fire suppression storage (SB and FSS) and dead storage. The emergency outage storage is evaluated based on the MDD and fire flow requirements. The currently available storage of 54.3 MG is higher than the 2022 storage requirement of 38.9 MG and 2042 storage requirement of forty-five (45) MG. Since current storage is larger than the current and future emergency demand, fire protection and diurnal fluctuations can be met during the emergencies.

For operational variation during emergencies, it is recommended that the City have enough storage to store the MDD (31.5 MG) to allow fluctuating demands throughout the day. Each zone will also need to maintain fire flow capacity to fight fires. California's Fire Code Fire Flow Requirements table was used to estimate the fire flow requirements. The City's maximum fire demand is 8,000 GPM for 4 hours for one zone. This is equivalent to 1.92 MG of storage capacity. Due to the commercial/industrial areas in Zones 1350 and 1570, the required fire flow storage demand is 1.92 MG. Zones 1750, 1900, and 2100 have several large commercial sites that would require approximately 4,000 GPM for 4 hours (0.96 MG). The remaining zones are primarily residential areas with some commercial zoning. These zones require 3,000 GPM for 3 hours (0.54 MG). Emergency Storage will vary by region as it depends on the possible disaster to each water agency. Table 5-1 shows the operation and fire flow and/or emergency storage required for each zone. The overall required storage is sufficient for the City's current production.

Table 5-1: Storage Volume by Zone

	Storage Volume (MG)	2022 Operational Storage (MG)	Fire Flow Required (MG)
Zone 1350	4.9	2.46	1.92
Zone 1570	23.6	12.14	1.92
Zone 1750	5.5	7.24	0.96
Zone 1900	7.4	5.40	0.96
Zone 2100	5.0	3.14	0.96
Zone 2340	6.5	1.02	0.54
Zone 2600	1.4	0.10	0.54
Total	54.3	31.50	7.38

Also, it is essential to note that during emergencies, water could be brought from the WTP, wells, emergency connections with other systems, allowable supply that can be taken from nearby lakes and canals during the fire, and fire trucks from the Fire Department supply. Therefore, it may be difficult to estimate all emergency supply sources accurately. However, with the two (2) emergency interconnections, two (2) WTP, and natural water storage reservoirs, the 54.3 MG of total reservoir capacity is sufficient storage capacity for the planning horizon.

NON-POTABLE WATER SYSTEM

The current storage system includes two (2) small poly tanks and three (3) cement lined open air reservoir throughout the distribution system.

RECYCLED WATER SYSTEM

The City does not have any storage capacity for recycled water, but is currently engineering two (2) 1.5 MG reservoirs to be constructed at the WWTP in the future. This will allow the WWTP to store water until needed, instead of the demand-based system operation that is currently in place. The capacity of the reservoirs will be needed to maintain the operational variations that will exist as demand increases. The recycled water system only services two (2) fire hydrants located at the SCE Mountain View Power Plant and at California Street Well. Since the recycled water system does not service any other fire hydrants for firefighting or require emergency storage in case of a natural disaster, the City will only need storage capacity for its operational flow. The storage capacity is recommended to be equal to the ADD of the recycled water system, which is approximately 2.1 MG for the existing system and three (3) MG for future storage. This excludes the recycled water storage needed for the Mountain View Power Plant.

5.2.4 PUMP STATIONS

POTABLE WATER SYSTEM

Pump Stations are an essential component of the City's potable water distribution system and are required to lift water and maintain the hydraulic grade. The City must maintain emergency power equipment, capacity, and redundancy for the pump stations within the system. The list of booster stations can be found in Table 2-4. The City must maintain a flow capacity equivalent or greater than the MDD, with a three (3)-day fire flow recharge for its system. It is also recommended that the system's redundancy be able to supply the PHD when a pump station has its largest pump offline. In case of a power outage, it is recommended that there is standby power for all pumping stations.

NON-POTABLE WATER SYSTEM

Non-potable system 2 utilizes two (2) small package skid booster pump systems to maintain system pressure within the zone.

RECYCLED WATER SYSTEM

Booster pumps pump recycled water from the wastewater treatment plant's chlorine contact basin into the recycled water system. There are no booster pumps in the City's recycled water systems. The WWTP is constructed in the lowest area of the City in Zone 1. If the City expands and consolidates the non-potable water and recycled water systems, booster pumps will be necessary to transfer water to higher pressure zones. Each pump stations should provide the MDD for the zone it serves. Backup pumps must replace the single largest pump within a pump station facility. Backup power is suggested for each pump station.

5.2.5 WATER TREATMENT

Potable water must meet maximum contaminate level (MCL) standards mandated by the United States (U.S.) Environmental Protection Agency (EPA) and California's Department of Water Resources. The surface water the City utilizes needs to be treated for potential contaminants at the City's treatment plants. Groundwater wells meeting the same MCL standards can also supply potable water. Otherwise, the groundwater must be treated through onsite treatment facilities, or by blending the water with water from other sources to meet the MCL standard. Specific requirements for WTP are dependent on the purpose of the facility. The City owns and operates two surface WTP, Hinckley and Tate. The field report attached in Appendix A provides a detailed description of these facilities.

5.2.6 SYSTEM PRESSURE

POTABLE WATER SYSTEM

Based on American Water Works Association (AWWA) standards, the pressure for the water system is recommended to be between forty (40) and 150 pounds per square inch (psi). The variation within a pressure zone should be no more than twenty (20) psi, as a significant variation in pressure could lead to fatigue within the system due to repeated cycles in hydraulic stress. For example, the residual pressure for a fire hydrant is required to be at twenty (20) psi for effective firefighting. Pressure-reducing valves are required between pressure zones to maintain reliable pressure between each zone.

NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

Pressure within the non-potable water system should remain between forty (40) psi and 150 psi with a target range between forty five (45) psi to eighty (80) psi. The variation within each pressure zone should not vary by more than twenty (20) psi.

5.2.7 PIPE VELOCITY

Based on AWWA standards, the pipe velocity for the water system should not exceed ten (10) feet per second (fps) under all conditions with a desirable velocity of five (5) fps during normal operations. Pipelines should be sized to provide head losses that do not exceed 3.5 feet per 1,000 feet of pipeline under PHD or five (5) feet per 1,000 of pipeline under MDD conditions. This criteria applies to all three (3) water systems.

5.2.8 PIPELINE REDUNDANCY

Pipeline redundancy involves both avoiding dead-end pipelines and avoiding disruption in the entire system if a pipeline segment needs to be shut down. Avoiding dead ends also helps prevent water stagnation, deterioration, corrosion, and may improve water quality. In some cases, dead ends may be the best or only option to service some areas due to the cost of constructing and maintaining redundant pipelines. Therefore, it is recommended that dead-ends be looped whenever possible, or flushed annually. New water mains must be installed ten feet (10') horizontally and one foot (1') vertically from treated and untreated sewage, and recycled water, as outlined in the State of California Code of Regulations: Title 22, Division 4, Chapter 16 Article 4 Section § 64572, Water Main Separation. The City can request an exemption to this standard if a condition meets specific requirements outlined in the same sections. Distribution system pipelines should be a minimum diameter of eight inches (8") and sized appropriately. Fire hydrant laterals should be six inches (6") in diameter. This criteria applies to all three (3) water systems.

5.2.9 SUMMARY OF DESIGN CRITERIA

POTABLE WATER SYSTEM

A summary of the potable water system design criteria is provided in Table 5-2, including typical industry standards and current City standards.

Table 5-2: Design Criteria Summary – Potable Water System

Demand	Typical Industry Standards	City Standard
Maximum Day Demand[1,2]	Typical 1.5-2 times ADD	1.7 times ADD
Peak Hour Demand[1,2]	Typical 2-4 times ADD	2.75 times ADD

Demand	Typical Industry Standards	City Standard
Storage		
Reservoir Capacity[1]	Combined Operational, Fire, and Emergency Storage	Combined Operational, Fire, and Emergency Storage
Operational Capacity[2]	Maintain operation during peak demands through the day 50% of MDD	50% of MDD
Fire Storage[1]	Largest Single Fire Flow event	Largest Single Fire Flow event
Emergency Storage[1]	Dependent on Region, Typically 0.5 to 2 times the MDD	50% of MDD, with emergency connection the City maintains
Pump Station		
Pump Station Capacity[1]	Pump Station must supply MDD Booster Pumps must supply MDD and Fire Flow	
Pump Station Configuration[1]	Stand-by pump equal in size to the largest duty pump	
Pump Station Backup Power[1]	Previsions for emergency Power at all Stations	
Pipelines	Industry Standards	
Minimum Diameter Pipe	N/A	8” Diameter for Mainline 6” for hydrant laterals.
Maximum Pipe Velocities[1]	10 fps under all Conditions	10 fps under all Conditions
Maximum Pipe Head Loss[1]	3.5 ft per 1000 ft at PHD 5 ft per 1000 ft at MDD	
System Pressure		
Minimum Static Pressure[1]	40 psi at PHD	40 psi at PHD
Maximum Static Pressure[1]	150 psi at PHD	150 psi at PHD
Minimum Fire Hydrant Residual Pressure[1]	20 psi	20 psi
Maximum Dynamic Pressure Variation[1]	20 psi	20 psi

Note: [1] Industry Standards are based on the AWWA manuals for water distribution systems that include but are not limited to M22 Sizing Water Service Lines and Meters, M31 Distribution System Requirements for Fire Protection and M42 Steel Water Storage Tanks

[2] Analysis of Eastern Municipal Water District: Water System Planning & Design, and Western Municipal Water District: Design Criteria for Water Distribution Systems were used for comparison to City Standards, due to limited information provided in AWWA manuals

NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

A summary of the non-potable water system and recycled water system design criteria is provided in Table 5-3, including recommended City standards for these water systems.

Table 5-3: Design Criteria Summary - Non-potable & Recycled Water System

Storage	**Recommended City Standards**
Operational Storage	Equal to ADD
Fire Flow Storage	N/A
Emergency Storage	N/A
Pump Station	**Recommended City Standards**
Pump Station Capacity	Pump Station must supply MDD
Pump Station Configuration	Stand-by pump equal in size to the largest duty pump
Pump Station Backup Power	Previsions for emergency Power at all Stations
Pipelines	**Recommended City Standards**
Maximum Velocity	10 fps peak
Preferred Maximum Velocity	5 fps under ADD and MDD
Maximum Distribution Pipe Velocity	5 fps under all Conditions
System Pressure	**Recommended City Standards**
Minimum Static Pressure	40 psi at PHD
Maximum Static Pressure	150 psi at ADD
Maximum Dynamic Pressure Variation	20 psi
Note: Industry Standards are based on the AWWA manuals for water distribution systems that include but are not limited to M22 Sizing Water Service Lines and Meters, M31 Distribution System Requirements for Fire Protection and M42 Steel Water Storage Tanks	

5.3 PLANNING CRITERIA

5.3.1 METHODOLOGY

The design criteria outlined in this section will be used in determining what facilities need to be repaired, replaced, or constructed. The CIP also considers the age of the City's facilities and includes those facilities that exceed the average service life. Age is not necessarily an indication of current performance issues, but is an indicator that the asset's future performance is expected to deteriorate.

5.3.2 AVERAGE SERVICE LIFE

The age of each pipeline and facility was considered when evaluating service life replacement schedules. The typical service life for various water facilities and pipeline materials are provided in 5-4 and Table 5-5. This information was used to develop CIP recommendations for each water system. If a structure exceeds its average service life, it is expected to deteriorate and increase the chance of failure. The State

of California Water Board recommends replacing mainline pipelines every forty (40) years. However, pipeline service life can vary depending on the pipeline material.

Table 5-4: Water Facility Average Service Life

Equipment	State of California Water Board [1]	NMT Asset Management [2]
Source of Supply		
Wells (including appurtenances)	25 – 35	
Intake Structures	35 – 45	
Transmission Mains	35 – 40	65 - 95
Pumping Plants		
Pumping Equipment	10 – 15	15 - 25
Structures	30 – 60	50 - 100
Treatment Plants		
Chlorination Equipment	10 – 15	
Equipment	10 – 15	15 - 25
Structures	30 – 60	60 - 70
Transmission/Distribution		
Structures	30 – 60	50
Reservoirs and Tanks	30 – 60	50 - 80
Main & Distribution Pipes	35 – 40	65 - 95
Services	30 – 50	
Valves	35 – 40	
Backflow Prevention Valves	35 – 40	
Blow-off Valves	35 – 40	
Meters	10 – 15	
Hydrants	40 – 60	
General		
Structures	30 – 40	50
Electrical Systems	7 – 10	15 - 25
Equipment	10 – 15	15 - 25
Transportation Equipment	10	
Computers	5	5 - 10
Store Equipment	10	
Lab/Monitoring Equipment	5 – 7	
Tools and Shop Equipment	10 – 15	
Landscaping/Grading	40 – 60	
Power Operated Equipment	10 – 15	
Communication Equipment	10	

Note: (1) California State Water Resources: Table 1: Typical Equipment Life Expectancy; (2) Environmental Finance Center NMT-Asset management guide for water and wastewater
The life expectancy of mechanical equipment and pumps is assumed to be 20 years, and the Electrical equipment 15 years for CIP purposes

Table 5-5: Water Pipeline Average Service Life

Standard Abbreviation	Material	Service Life (Years)
ACP	Asbestos Concrete Pipe	80
CIP	Cast Iron Pipe	120
CMLC	Cement Mortar Lined and Steel Coated	100
CON	Concrete	100
DIP	Ductile Iron Pipe	100
DW	Dipped and Wrapped Steel	40
PVC	Polyvinyl Chloride	70
STL	Steel	70
Note: Based on MASC Life Expectancy of Water Distribution Lines		

5.3.3 PERFORMANCE INDICATORS

The primary performance indicators used for pipelines are the flow velocities and pressures predicted by the hydraulic model. The updated hydraulic model was used to identify pipe segments and conveyance facilities that require upgrades to meet the performance metrics presented in Section 5.2.9. Additional repair and replacement considerations include the age of water facilities and whether the City has indicated a performance issue with a specific facility.

6 EXISTING SYSTEM ANALYSIS

6.1 GENERAL DESCRIPTION

This Section discusses the hydraulic model development and calibration for the existing water systems to meet the current and future needs of the City's service area. The hydraulic model runs inside of a computer Geographic Information System (GIS) that manages and maps the individual components of the City's water infrastructure. The physical components of the hydraulic model include water pipelines, valves, storage tanks, pumping facilities, source water supplies, and water demands.

The model was calibrated with operational data used to set boundary conditions. Extended period simulations were performed using demand and supply data, along with demand patterns developed in previous sections. Settings were adjusted to calibrate the model to a reasonable representation of the system performance, and the model was considered calibrated when its output matched the collected instrumentation data.

Once calibrated, several scenarios were analyzed to evaluate operating pressure and pipeline flow velocity. Each scenario was chosen to represent the different operational conditions of the system. These scenarios included:

- Existing System operating under Average Day Demands
- Existing System operating under Maximum Day Demands with and without Fire Flow
- Existing System operating under Peak Hour Demands

Because the size of the non-potable water system and recycled water system is small, with only a well pump into the distribution pipe, the existing system will not be modeled. However, since the City is planning to construct recycled water reservoirs at the WWTP, the current system was modeled with these future reservoirs.

The results of these scenario analyses are presented in subsection 6.4. The results are summarized in color-coded maps to identify out-of-range pressure nodes and/or pipeline segments quickly. In addition, the results of these analyses are used to identify improvements to the system that will become recommended capital improvement projects.

6.2 METHODOLOGY

A detailed hydraulic model is a valuable tool used to analyze the complex operation of a water system. The general steps of a model formulation are:

1. Inputting the system's physical data in GIS format
2. Obtaining meter data to set boundary conditions in the model
3. Translating the physical data into a network of nodes and links
4. Inputting accurate water demands
5. Calibrating the model to simulate actual field conditions and system performance
6. Performing model runs based on current and future system conditions to predict performance.

The physical data required for a hydraulic model includes the geographic network of pipes, nodes, tanks, pump stations, valves, and supply sources representing the City's potable water system. The connectivity

of the pipes and nodes in GIS allows the system components in the model to be hydraulically linked. Pipe information includes the pipe diameter, length, pipe material, and associated roughness coefficient. The roughness coefficient function, known as the Hazen-Williams "C" factor (when the Hazen-Williams head loss formula is used), estimates friction losses in the system. The "C" factor is assigned based on the diameter, material, and when known, pipe age. However, "C" factors are subjective, and also based on industry best practices and operations input. Node information contains the node elevation and water demand or supply at that point in the system.

Initial hydraulic boundary conditions must be entered into the model database. Of particular importance is the initial water level for tanks and the initial open/closed setting for control valves. City water supply sources, such as pumped sources from groundwater wells and treatment plants, can be modeled as either varied or constant supplies into the water system. Understanding and adequately simulating these boundary conditions is critical to the successful calibration of the model.

Determining accurate water demands is crucial to developing an accurate hydraulic model. Metered demands, water supplies, pumped flows, and changes in tank volumes are reviewed over a given period to determine actual daily demand patterns. Annual consumption by metered account provides a spatial distribution of demand and average system usage.

Node elevations were updated using current topographic maps. Where available, as-built information was used to update the model to match existing conditions. Storage tanks were annotated with ground elevation, diameter, and height. Operational settings in the model were verified during workshops with the City staff and through a detailed review of SCADA operational data. These settings were updated in the hydraulic model. The locations of normally closed valves were also confirmed and identified in the model.

The current operational status and functionality for the City's potable water system pressure reducing stations (PRS) were obtained from City staff and updated in the hydraulic model. Settings provided by City staff represent typical conditions and may vary depending on the season, system demands, and storage conditions. For example, operations staff may change the settings to allow more water into a particular system to fill a tank or less water to turn over the tank.

6.3 HYDRAULIC MODEL CALIBRATION

The final step in developing a reliable hydraulic model is calibration. For the 2021 Master Plan, SCADA information was evaluated to provide the City with a reliable and accurate overview of its potable water system. This was necessary to analyze the water distribution system correctly. A properly calibrated model provides the confidence needed to make significant capital planning decisions and delivers a planning tool to guide operational decisions.

Macro-level calibration procedures use continuous monitoring to obtain data points to simulate system operations over an extended period. Actual field data can be obtained using SCADA records or by placing monitoring equipment in the system. For the City's potable model calibration, a week of data from August 2019 was obtained from SCADA for tank levels, pump station flows and/or status, and pressures, where available. The data was used to establish boundary conditions for the calibration period.

The hydraulic model was calibrated for an extended period simulation (EPS). EPS calibration was performed to ensure the model accurately reflects how the overall system operates over time concerning

transmission mains, pumps, tanks, and reservoir operations under normal operating conditions. A preliminary review of the model data was conducted before EPS calibration. It was believed to provide a reasonably accurate representation of actual system characteristics in water main geometry, spatial demand allocation, and pipe roughness. Precise duplication of the data recorded at all locations within the water distribution system during extended period calibration is not realistic due to many factors influencing the results. Model calibration aims to minimize the error between the SCADA and the model simulations and create a "best fit" at all locations. Some error between the SCADA and model simulations is expected; however, limits to the amount of allowable error must be made to ensure the calibrated model accurately represents the existing potable water distribution system. Based upon the size and number of facilities in the developed model, the desired accuracies of the extended period calibration for the hydraulic model are:

1. Minimum of twenty-four (24) hours is performed.
2 Tank levels must be within five feet (5') between field data and model simulations at least eighty percent (80%) of the time.
3. Tank levels must be within eight feet (8') between field data and model simulations the entire time.

A composite time-of-day demand curve was determined for each pressure zone within the potable water system for extended period calibration based on available SCADA data and plant production rates. The time-of-day diurnal demand curve is a series of 24-hour demand factors that define how water usage varies over a day. Each demand factor is defined as the ratio of the hourly demand to the daily average. The composite time-of-day calibration demand curve corresponding to each potable water pressure zone is provided in Chart 6-1.

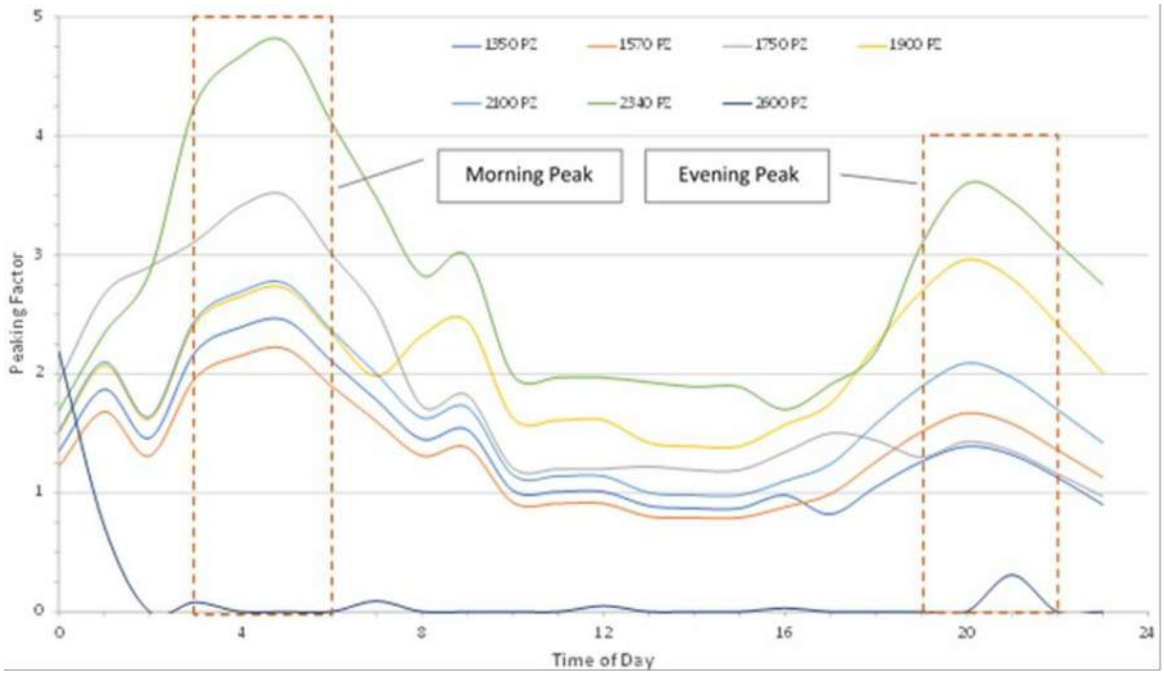

Chart 6-1: Composite Time-of-Day Demand Curve

The diurnal curves developed for model calibration closely resemble the traditional "double hump" pattern of water use throughout the day, with morning and evening peak demands. The morning peak hour demand, which occurs from 3:00 - 6:00 a.m., was 2.2 - 4.8 times the average use for the day, which represents the peak water use for the day for most of the system, with the exception for Pressure Zone 1900, where peak water use occurs during the evening.

Extended period simulations were performed on the potable water system using the demand curves developed above. In general, the tanks and SCADA points exhibited similar trending patterns in the model compared to the field data collected. Tank and pump station trending graphs resulting from the extended period calibration are included in Appendix B.

Examples of the calibration results are shown in Chart 6-2 and Chart 6-3, illustrating some of the variations between the field data and model simulations. The calibration results for these two tanks are examples of the level of accuracy between actual tank water levels observed and the model predictions throughout the system. In summary, the extended period simulation satisfies the calibration goals discussed with City staff.

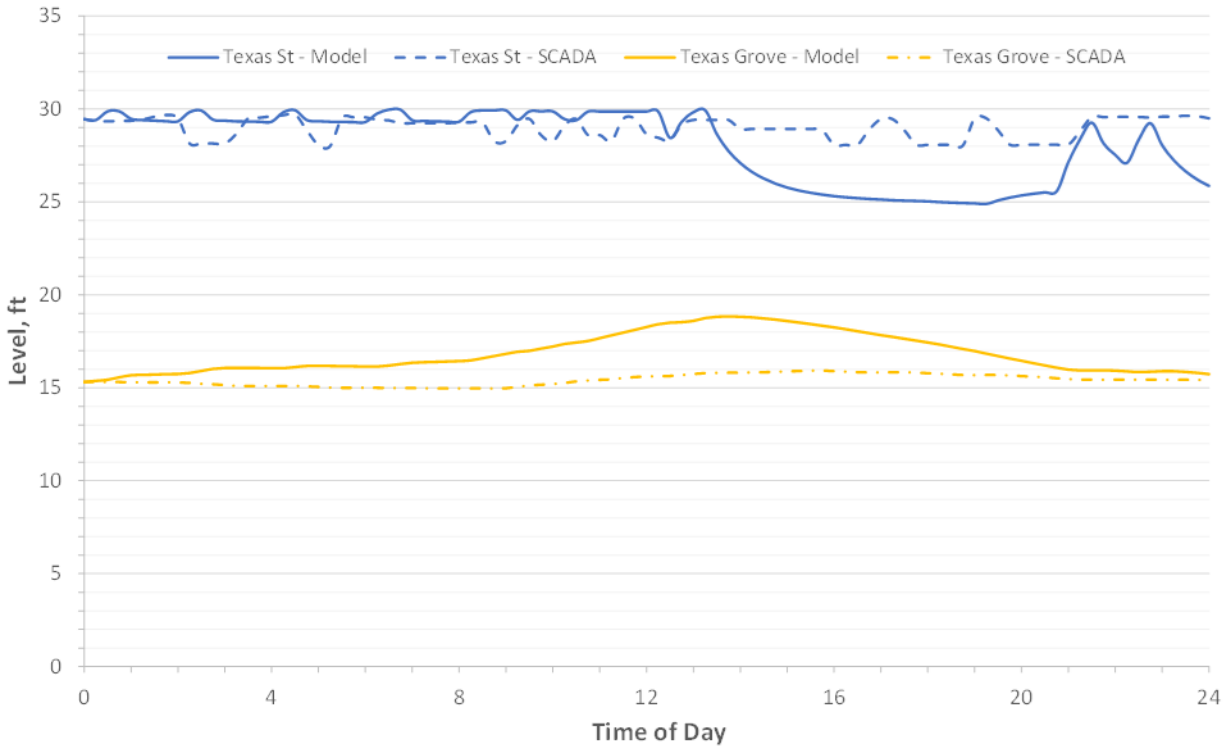

Chart 6-2: Calibration Results for 1350 PZ Tank Levels – 1

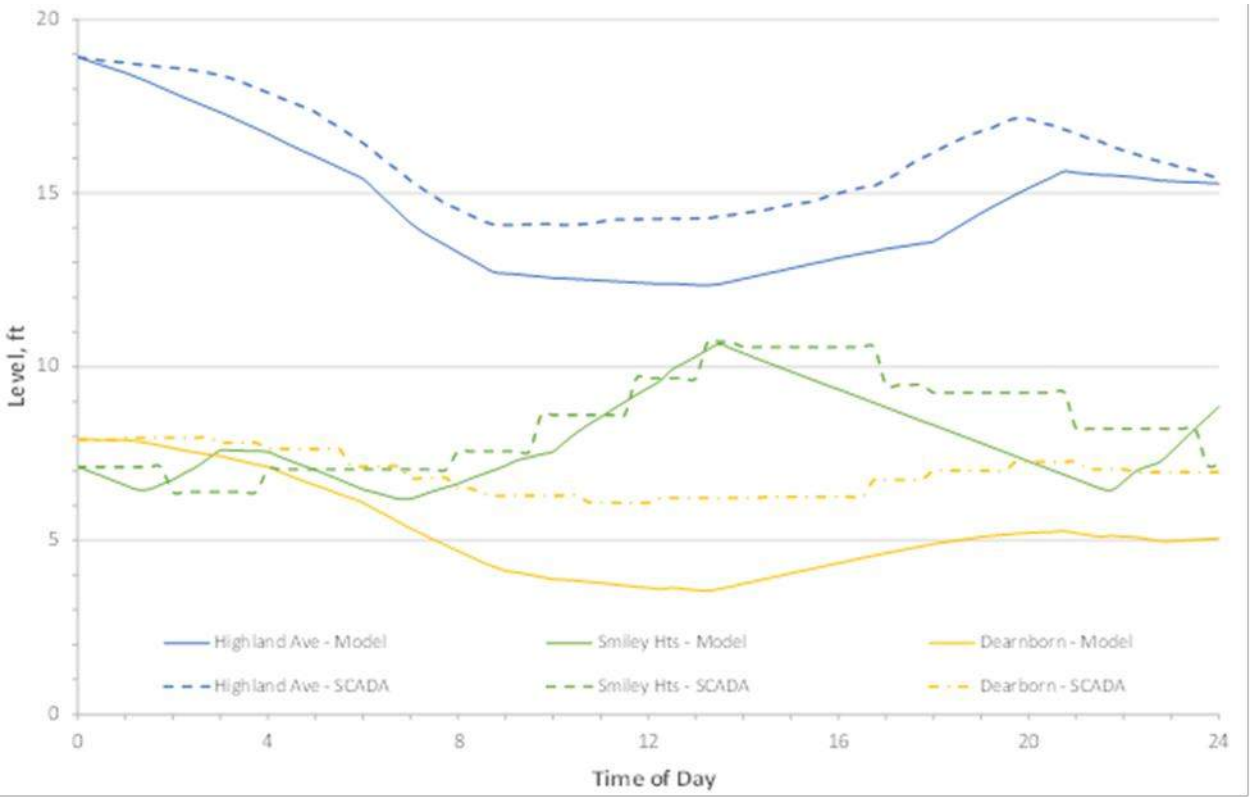

Chart 6-3: Calibration Results for 1350 PZ Tank Levels – 2

During the extended period model calibration, adjusting valve and pump settings slightly to simulate accurate tank levels was necessary. Table 6-1 includes the calibration results after localized adjustments to improve the model's accuracy. Typically, this information would include pumped flows and discharge pressures. Actual pump flows were estimated based on pump status for all sites except the Country Club Booster pump station, which was not available. The modeled flows are within ten percent (10%) of the total anticipated flow presented in SCADA. Discharge pressures were only provided for this site as well. While they are consistently less than SCADA (approximately 7 – 10%), this could be due to an elevation discrepancy, pump losses, location of the gage, and other factors.

Table 6-1: Model Calibration Accuracy

Parameter	Allowable Deviation	Minimum Acceptance Required	Acceptance Level Achieved
Tank Level Differential between field and model	2 feet	80%	70%
Tank Level Differential between field and model	5 feet	100%	97%

6.4 EXISTING SUPPLY ANALYSIS – POTABLE WATER SYSTEM

6.4.1 SCENARIO 1: EXISTING SYSTEM, ADD, EPS, MAX PRESSURE OVER 24 HOURS

This scenario models the average daily demand for the system, primarily looking at the pressure within the system. As described in the design criteria, the preferred pressures will be between forty (40) psi and 150 psi. Figure 6-1 shows the results of the analysis. Most high-pressure areas that exceed the 150 psi pressure limit are in the western portions of each pressure Zone 1570, 1700, 1900, 2100, and 2340 near the zone boundaries, which can be expected. In addition, higher pressure was also identified downstream of booster stations P-2381 and P-2382, which pump water from Ward Way Reservoirs to higher pressure zones.

6.4.2 SCENARIO 2: EXISTING SYSTEM, MDD, EPS, MAX PRESSURE OVER 24 HOURS

This scenario models the maximum daily demand for the system, primarily looking at the pressure within the system. The model as calibrated used the peak day on the maximum month for the year and is therefore considered to be the MDD. The pressure range, less than forty (40) psi and greater than 150 psi, was used to locate areas are of concern. Figure 6-2 shows the results of this analysis, with similar results as Scenario 1—a few areas with high pressure in the western portion of Zone 1900.

6.4.3 SCENARIO 3: EXISTING SYSTEM, MDD, EPS, MAX VELOCITY OVER 24 HOURS

The MDD Scenario was used to analyze the pipe velocities within the system. The maximum velocity design criteria was used to identify pipeline projects for the CIP to alleviate high system velocities. Figure 6-3 shows that very few areas exceed the maximum recommended velocity. The areas with high velocities are near pumping stations, which is expected.

6.4.4 SCENARIO 4: EXISTING SYSTEM, MDD, FIRE FLOW, RESIDUAL PRESSURE DURING FIRE EVENT (Steady State)

This scenario analyzed the residual pressure at fire hydrants during a fire flow event. To provide adequate fire flow pressure, the residual pressure should not fall below twenty (20) psi. The minimum required fire flow was generated utilizing information supplied by the City. Figure 6-4 shows the residual pressures from the fire flow scenario.

6.4.5 SCENARIO 5: EXISTING SYSTEM, PHD, STEADY-STATE SCENARIO, MIN PRESSURE

This scenario analyzed the system pressures under peak hour demand. The maximum day demand and peaking factors were used for the simulation. The pressure range used to determine adequate pressure was between forty (40) psi and 150 psi. Figure 6-5 shows the results of this analysis. The results are similar to results from Scenarios 1 and 2. The high-pressure area is located in the western portion of Zone 1900 and the west portion of the City's service area.

6.4.6 SCENARIO 6: EXISTING SYSTEM, PHD, STEADY-STATE SCENARIO, MAX VELOCITY

This scenario analyzed the velocity conditions under peak hour demand. Although a few isolated areas exceed the maximum recommended velocity, there are no significant areas with excess velocity. Generally, locations with high velocity are near pumping stations which is expected. The results are shown in Figure 6-6.

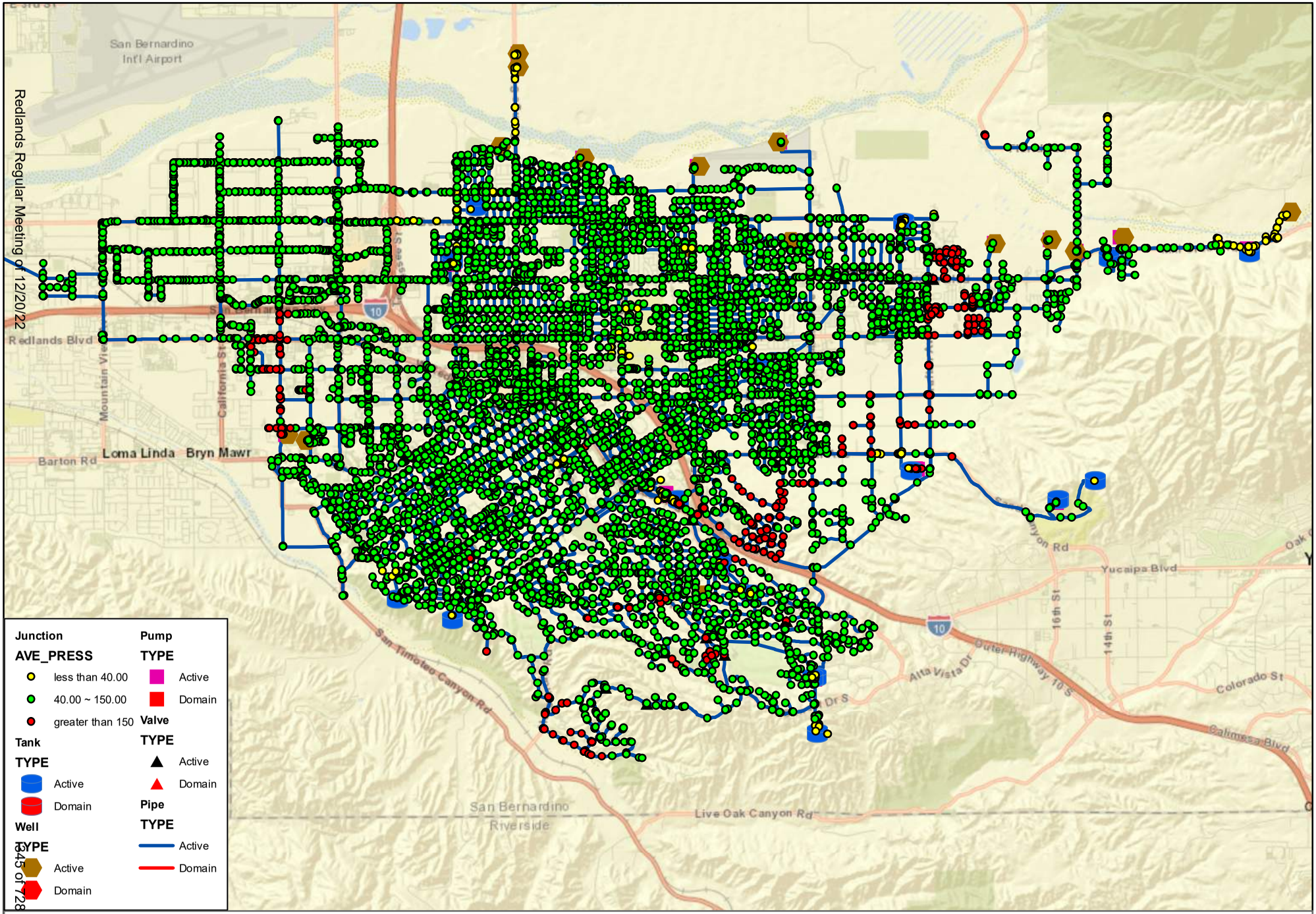

Figure 6-1
Hydraulic Capacity Evaluation
Existing System, ADD, EPS, Maximum Pressure Over 24 Hours

N

0 0.5 1 Miles

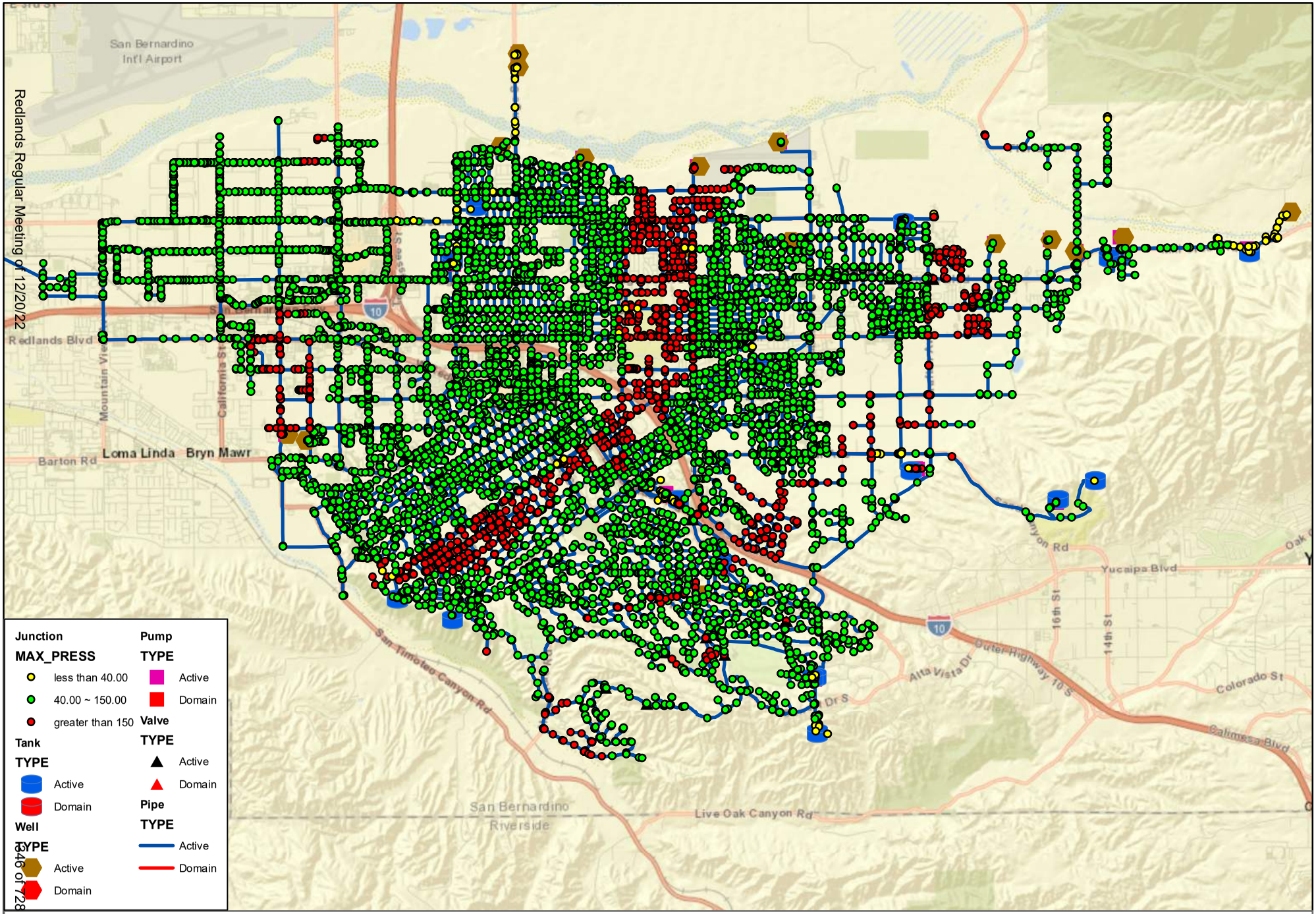

Figure 6-2
Hydraulic Capacity Evaluation
Existing System, MDD, EPS, Maximum Pressure Over 24 Hours

N

0 0.5 1 Miles

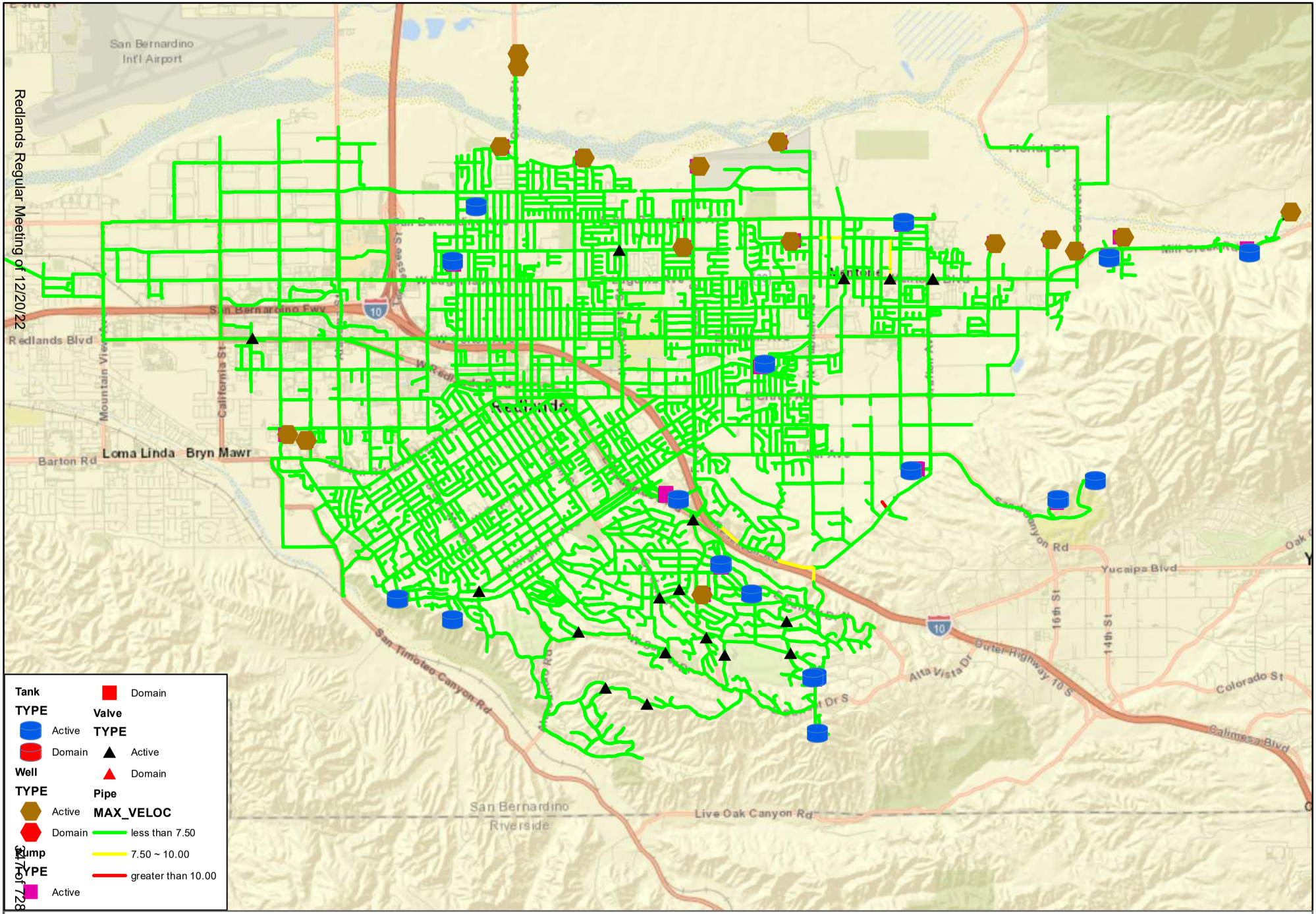

Figure 6-3
Hydraulic Capacity Evaluation
Existing System, MDD, EPS, Maximum Pipe Velocity Over 24 Hours

N

0 0.5 1 Miles

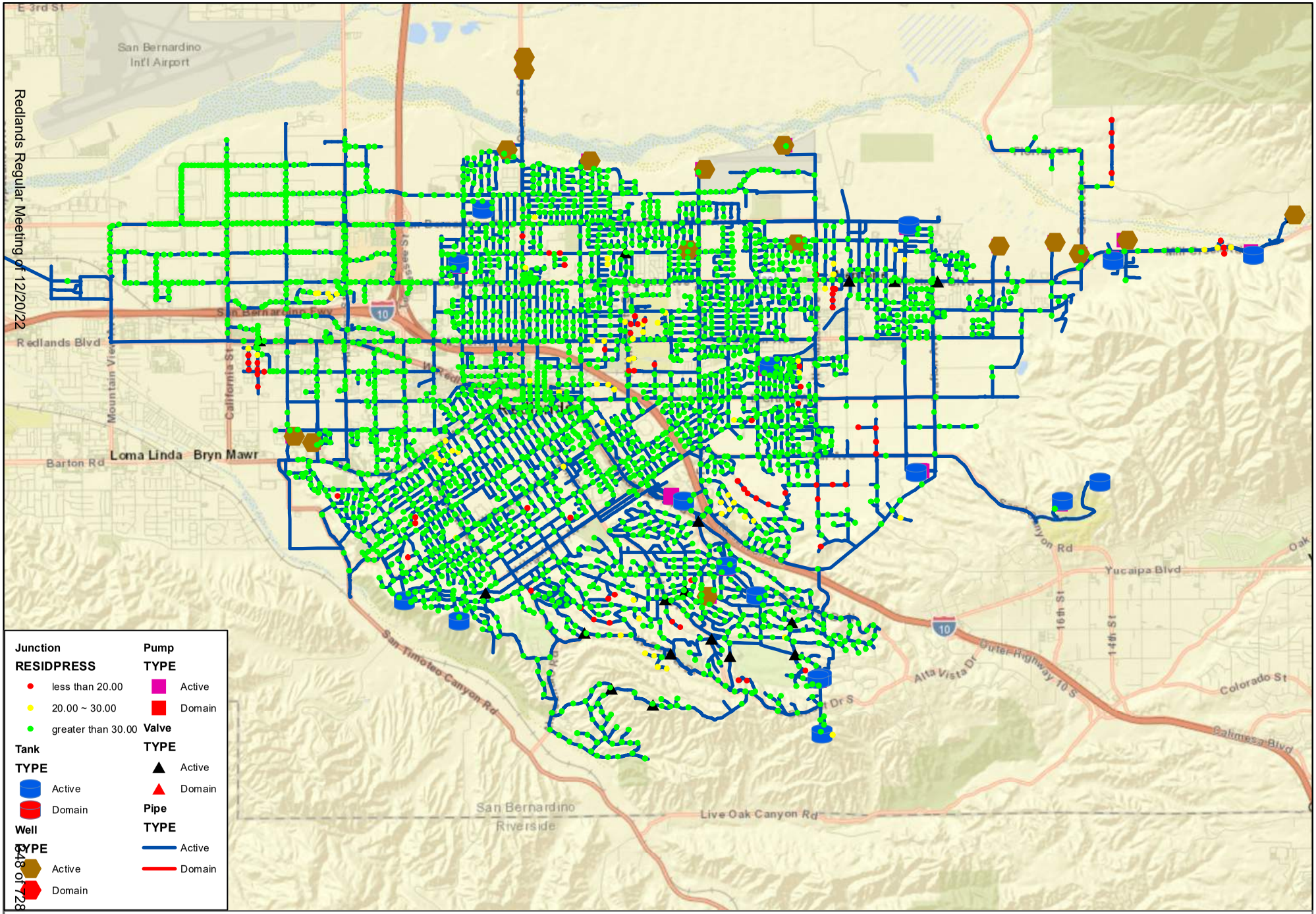

Figure 6-4
Hydraulic Capacity Evaluation
Existing System, MDD, Fireflow Scenario, Residual Pressure During Fire Event

N

0 0.5 1 Miles

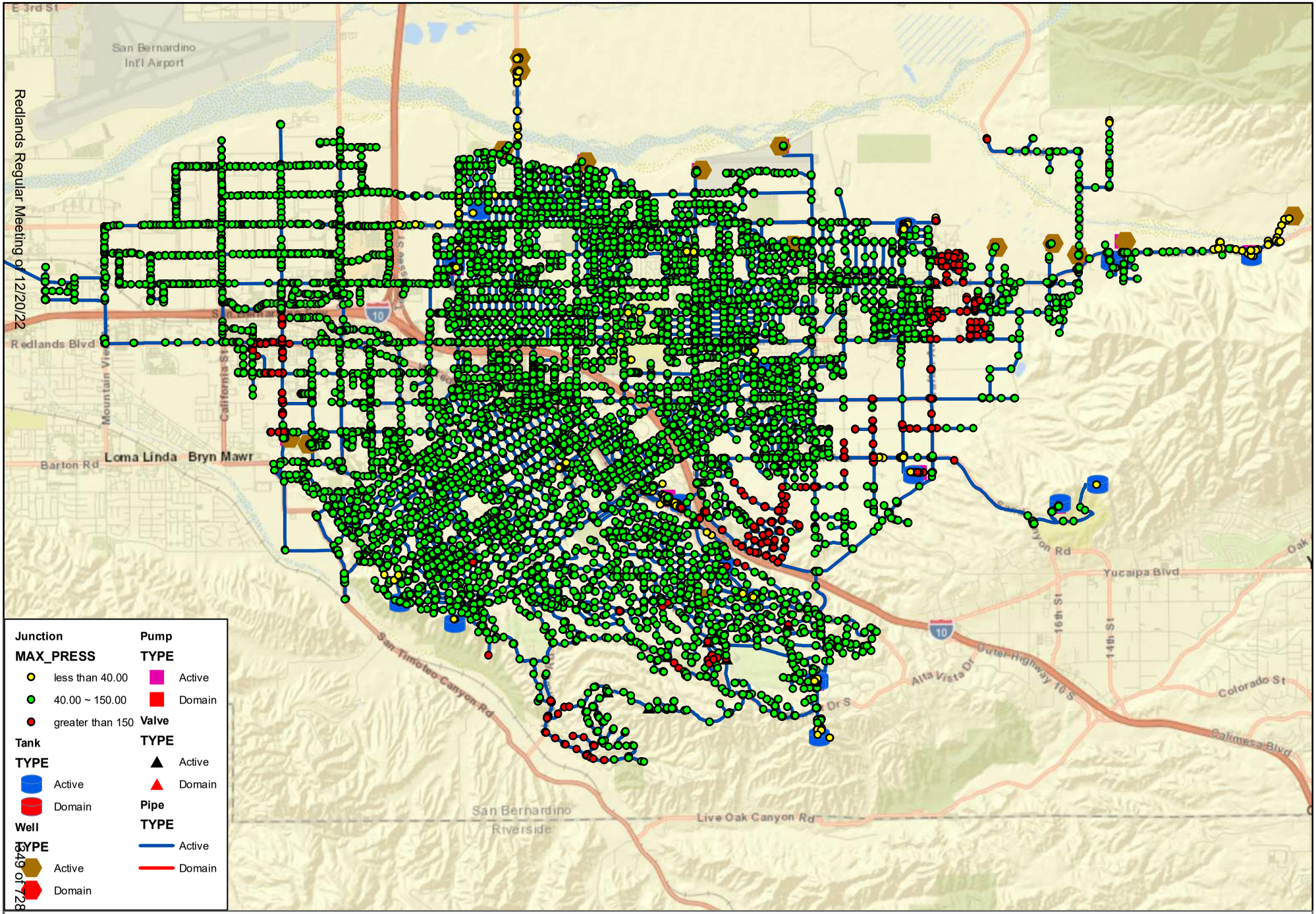

Figure 6-5
Hydraulic Capacity Evaluation
Existing System, PHD, Steady State Scenario, Maximum Pressure

N

0 0.5 1 Miles

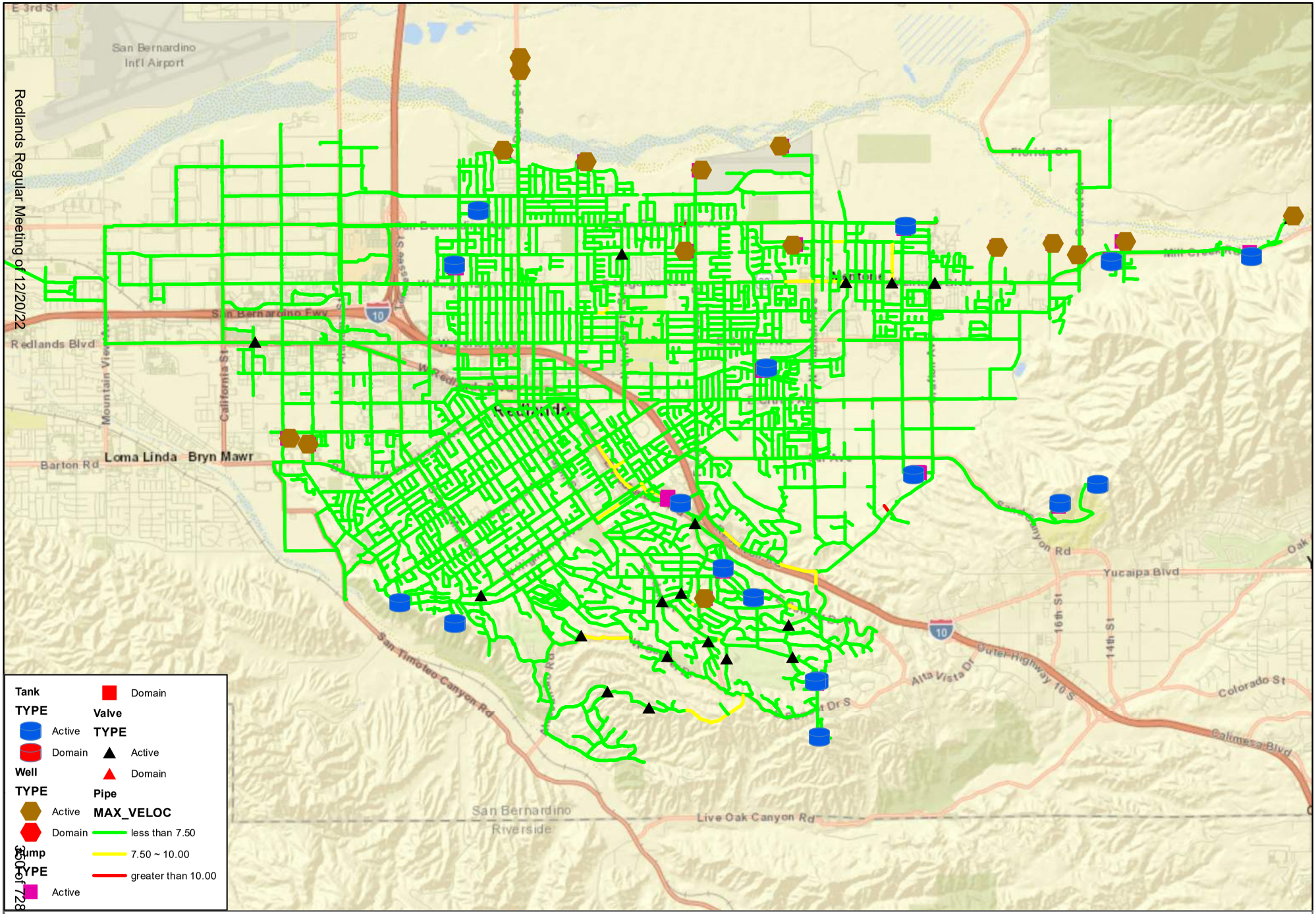

Figure 6-6
Hydraulic Capacity Evaluation
Existing System, PHD, Steady State Scenario, Maximum Velocity

N

0 0.5 1 Miles

6.5 EXISTING SUPPLY ANALYSIS – NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

6.5.1 ZONE 1 SUPPLY

Zone 1 currently contains a single well and the WWTP that primarily produces water for the SCE Mountain View Power Plant. However, some of this water is blended with the California Street Well to service Zone 1. Typically, the recycled water from the WWTP supplies Zone 1. However, when the power plant needs more water or the WWTP decreases its water production, the California Street Well increases its water production to supply this zone. It should be noted that the system does not have any storage capacity and requires the pumps to turn on and off depending on the current demand of the system. The City is currently engineering two (2) recycled water reservoirs for construction at the WWTP in the future to resolve this issue.

6.5.2 SYSTEM 2 SUPPLY

System 2 is currently supplied by five (5) wells: Well No. 30A, Well No. 31, Well No. 32, Well No. 41, and the New York Street Well, although Well No. 30A and the New York Street Well are the primary supply wells. Well No. 30A is typically the primary yearly source. The New York Street Well supplements production during spring and summer months and decreases production during autumn. It should be noted that the system does not have any storage capacity and requires the pumps to turn on and off depending on the current demand of the system. In addition to on and off control of pumps the pressure is regulated with the use of Cla-Valves. There will be instances where water will be discharged to the storm drain while maintaining the system pressure for end users.

6.5.3 SYSTEM 3 SUPPLY

There are no existing non-potable sources in this system. However, BVMWC does supply some parts of the northern part of this system, which include the University of Redlands and Redlands Sports Park. This is provided through the open-air BVMWC Reservoir at Agate.

6.5.4 DETACHED SYSTEMS

The detached systems typically include a well, a single pipeline, and the end-user. The purpose of these wells is to provide groundwater to a specific single end-user, such as a park or golf course.

6.5.5 SCENARIO 1, EXISTING SYSTEM, ADD, EPS, MAX PRESSURE OVER 24 HOURS

This scenario looks at the pressure of the existing system and the future reservoirs. As Figure 6-7 shows, the existing system operates with some low-pressure areas in the east part of Zone 1. These areas are primarily due to low demand within the system.

6.5.6 SCENARIO 2, EXISTING SYSTEM, MDD, EPS, MAX PIPE VELOCITY OVER 24 HOURS

This scenario looks at the MDD for the existing system modeled with the future reservoirs to check for excess velocity. Velocity below ten (10) fps is acceptable, with a preferred velocity of five (5) fps. As Figure 6-8 shows, four (4) areas exceed ten (10) fps and should be upsized. These projects are shown and explained further in Table 6-2.

Table 6-2: Undersized Non-Potable Water System Pipelines

	Street	From	To	Existing Material	Length (ft)	Existing Diameter (in)	Proposed Diameter (in)	New Material
NP-CIP-1	Pioneer Ave	Nevada St	Alabama St	DIP	2608	6	12	DIP
	Alabama St	Pioneer Ave	625' South of Pioneer St	DIP/PVC	624	6	12	DIP
Subtotal					**3232**			
NP-CIP-2	Orange Tree Ln	California St	Oregon St	PVC	1900	6	8	DIP
	Orange Tree Ln	Oregon St	240' East of Plum Ln	PVC	1468	6	10	DIP
Subtotal					**3368**			
NP-CIP-3	Texonia Park	N//A	N//A	DIP	1006	10 & 12	16	DIP
	W Lugonia Ave	Texas St	Lawton St	STL/PVC	1200	6,8, & 10	12	DIP
Subtotal					**2206**			

6.5.7 OTHER AGENCIES

Currently, three (3) other agencies operate non-potable water sources within the City water service area and its sphere of influence. The Crafton Water Company (CWC), BVMWC, and Western Height Water agencies. These water agencies primarily irrigate City-owned agricultural and landscape areas within the City and its sphere of influence. The City has partial ownership of these and several other local water companies. Additional water stock information is available on the City website. The City owns 184 acres of citrus groves divided into twenty-three (23) separate groves. BVMWC provides irrigation water for seven (7) of these groves and some nearby parks. CWC provides irrigation water for two (2) groves and parts of Crafton. These groves and the water providers are listed in Table 6-3.

Table 6-3: City-Owned Citrus Groves

No.	Name[1]	Water Provider[2]	Acres[1]
1	Mullin	Bear Valley	8.5
2	Judson	Bear Valley	13.1
3	Lugonia	Bear Valley	18
4	Pioneer & Judson East	Bear Valley	2.7

No.	Name[1]	Water Provider[2]	Acres[1]
5	Pioneer & Judson West	Bear Valley	4.3
6	Dearborn & Pioneer	Bear Valley	8.6
7	Granite	Bear Valley	2.7
	Subtotal		57.9
8	Fifth Ave	C.W.C.	10.6
9	Jacinto Memorial	C.W.C.	4.2
	Subtotal		14.8
10	Riverview	Groves on Wells	5.9
11	University Grove	Groves on Wells	23.5
	Subtotal		29.4
12	Ramirez	Recycled Water	4.6
13	Daniels	Recycled Water	4.9
	Subtotal		9.5
14	Beal Park	City	0.4
15	California	City	4.8
16	Fire Station 262	City	0.04
17	Mountain View	City	13.9
18	Olive	City	3.7
19	Prospect	City	25
20	Texas	City	12.5
21	Wabash	City	1.4
22	West Redlands Gateway	City	6.4
23	West Riverview	City	4.3
	Subtotal		72.44
	Total		**184.04**

Note: (1) From City Owned Citrus Grove Map provided by the City; (2) Provided by the City.

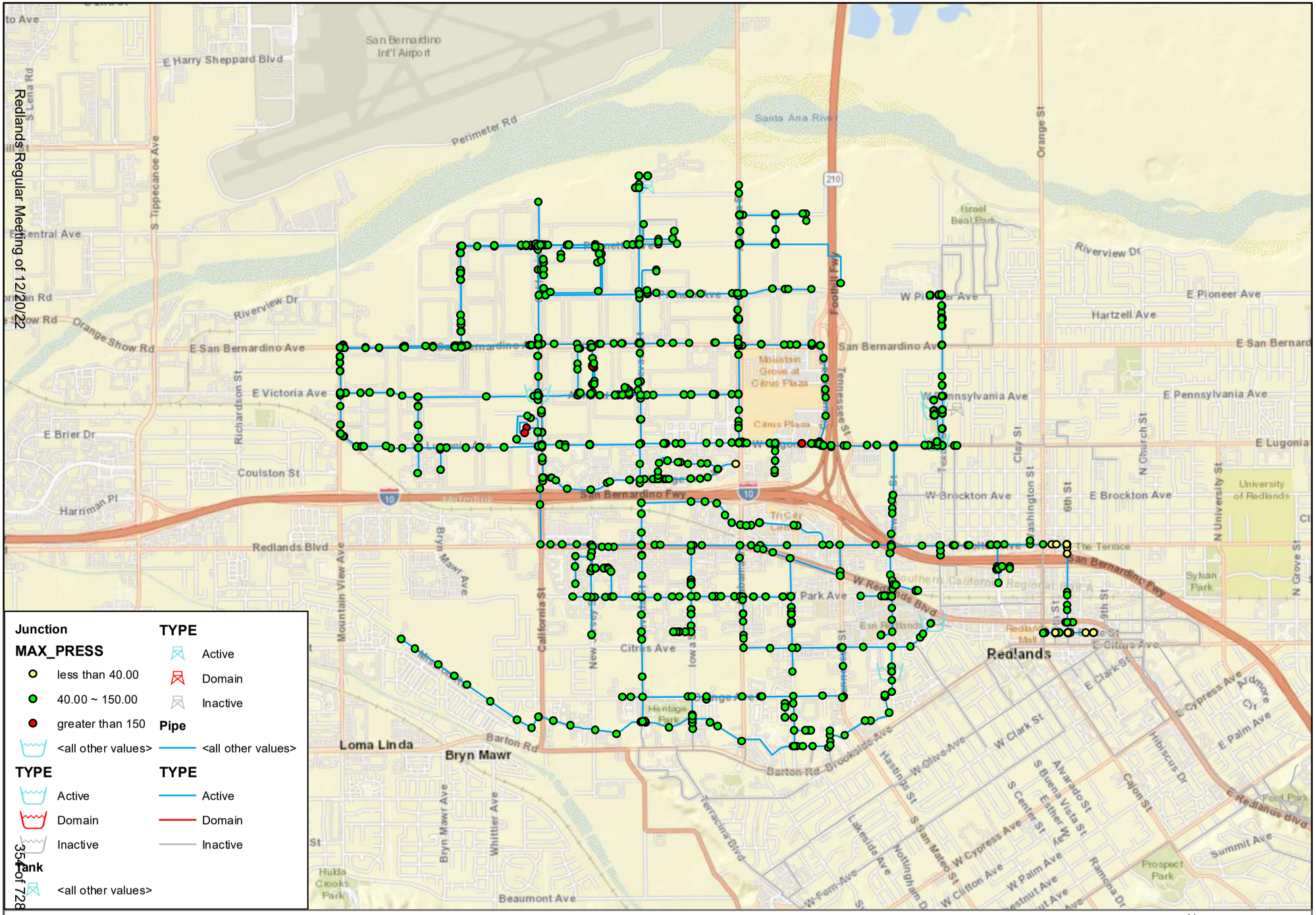

Figure 6-7
Hydraulic Capacity Evaluation
Existing System, ADD, EPS, Maximum Pressure Over 24 Hours

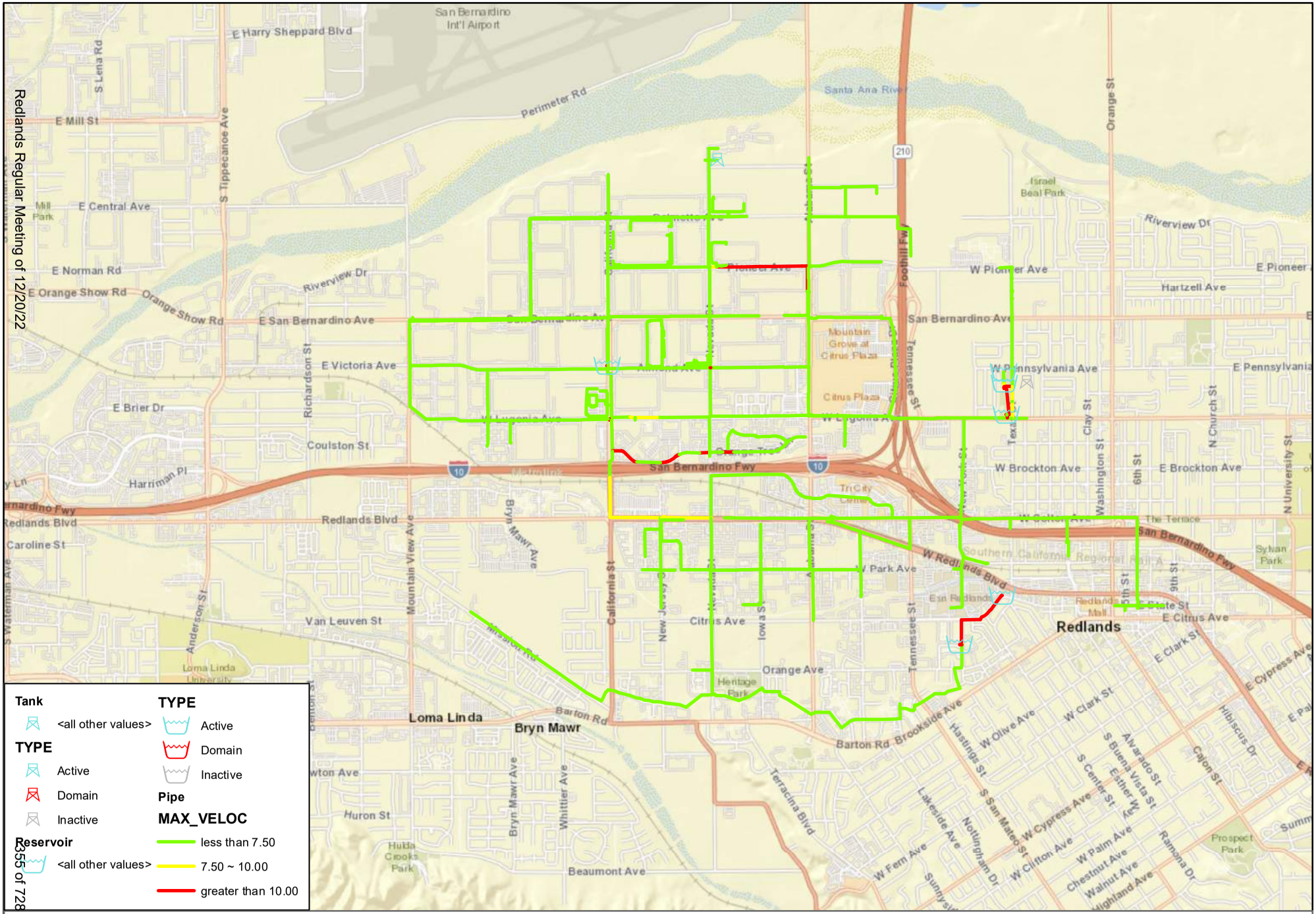

Figure 6-8
Hydraulic Capacity Evaluation
Existing System, MDD, EPS, Maximum Pipe Velocity Over 24 Hours

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7 FUTURE SYSTEM

7.1 GENERAL DESCRIPTION

Several additional potable water system scenarios were analyzed to evaluate future operating conditions and evaluate pressure and pipeline flow velocity under these conditions. The future conditions were selected to represent 2042 projected water demands, assuming that all improvements identified in Section 6 are completed. Five (5) scenarios were analyzed, including ADD, MDD, PHD, and fire flow conditions. The results are summarized in color-coded maps to quickly identify out-of-range pressure nodes and/or undersized pipeline segments. Additional CIP project recommendations were developed based on this analysis.

The City's existing non-potable water system was analyzed to develop a future water system to decrease potable water use and better serve the City's existing recycled/non-potable water system. Scenarios were modeled to evaluate system pressure and velocity under various conditions, and evaluated against the design criteria. Utility billing data was used to identify potential customers for expansion of the system. When possible, meters providing agricultural or landscape irrigation water were read to supplement the utility billing data. New pipelines are assumed to be eight inches (8”) in diameter, and the hydraulic model assumed construction of the WWTP recycled water storage reservoirs was complete.

7.2 FUTURE SUPPLY ANALYSIS – POTABLE WATER SYSTEM

7.2.1 SCENARIO 1 FUTURE DEMAND, EXISTING SYSTEM, MDD, FIRE FLOW SCENARIO, RESIDUAL PRESSURE DURING FIRE HOURS.

This scenario used the predicted future MDD of approximately thirty-seven (37) MGD to analyze fire flow and used the minimum of twenty (20) psi of residual pressure for fire hydrants. Figure 7-1 shows areas of concern that appear similar to the existing demand analysis. The pipe sections with deficiencies are included in the CIP list in Table 7-1.

7.2.2 SCENARIO 2 FUTURE DEMAND, EXISTING SYSTEM, MDD, EPS SCENARIO, MAX PRESSURE OVER 24 HOURS.

This scenario used the existing system under the future MDD of approximately thirty-seven (37) MGD to predict the distribution of pressure within the system. Figure 7-2 shows the results of this analysis. Areas of high pressure were identified primarily in the west sized of Zone 1570, portions of Zone 1750, and in the western portions of Zone 2100.

7.2.3 SCENARIO 3 FUTURE DEMAND, ADD, EPS SCENARIO, MAX PRESSURE OVER 24 HOURS

This scenario analyzed the future ADD and the maximum pressure in the system. The simulation identified pressures higher than 150 psi within the western portion of Pressure Zones 1570, 1900, and 2340. The results are shown in Figure 7-3.

7.2.4 SCENARIO 4 FUTURE DEMAND, MDD, EPS SCENARIO, MIN PRESSURE OVER 24 HOURS

This scenario analyzed the future MDD to locate minimum pressures. It shows that the low-pressure system area is primarily in the western portion of Pressure Zone 2100. The western parts of Pressure Zone 1570 and 2340 still have high pressures. The results are shown in Figure 7-4.

7.2.5 SCENARIO 5 FUTURE DEMAND, MDD, EPS SCENARIO, MAX VELOCITY OVER 24 HOURS

This scenario analyzed the future MDD velocities within the existing system. It shows isolated areas where velocities are above 10 feet per second. These pipelines are included in the CIP list in Table 7-1. The results are shown in Figure 7-5.

7.2.6 SCENARIO 6 FUTURE DEMAND, FUTURE SYSTEM, MDD, FIRE FLOW SCENARIO, RESIDUAL PRESSURE DURING FIRE HOURS.

This scenario analyzed the future MDD of the system during a fire flow event. The low residual pressures are included in the CIP list in Table 7-1. The results are shown in Figure 7-6.

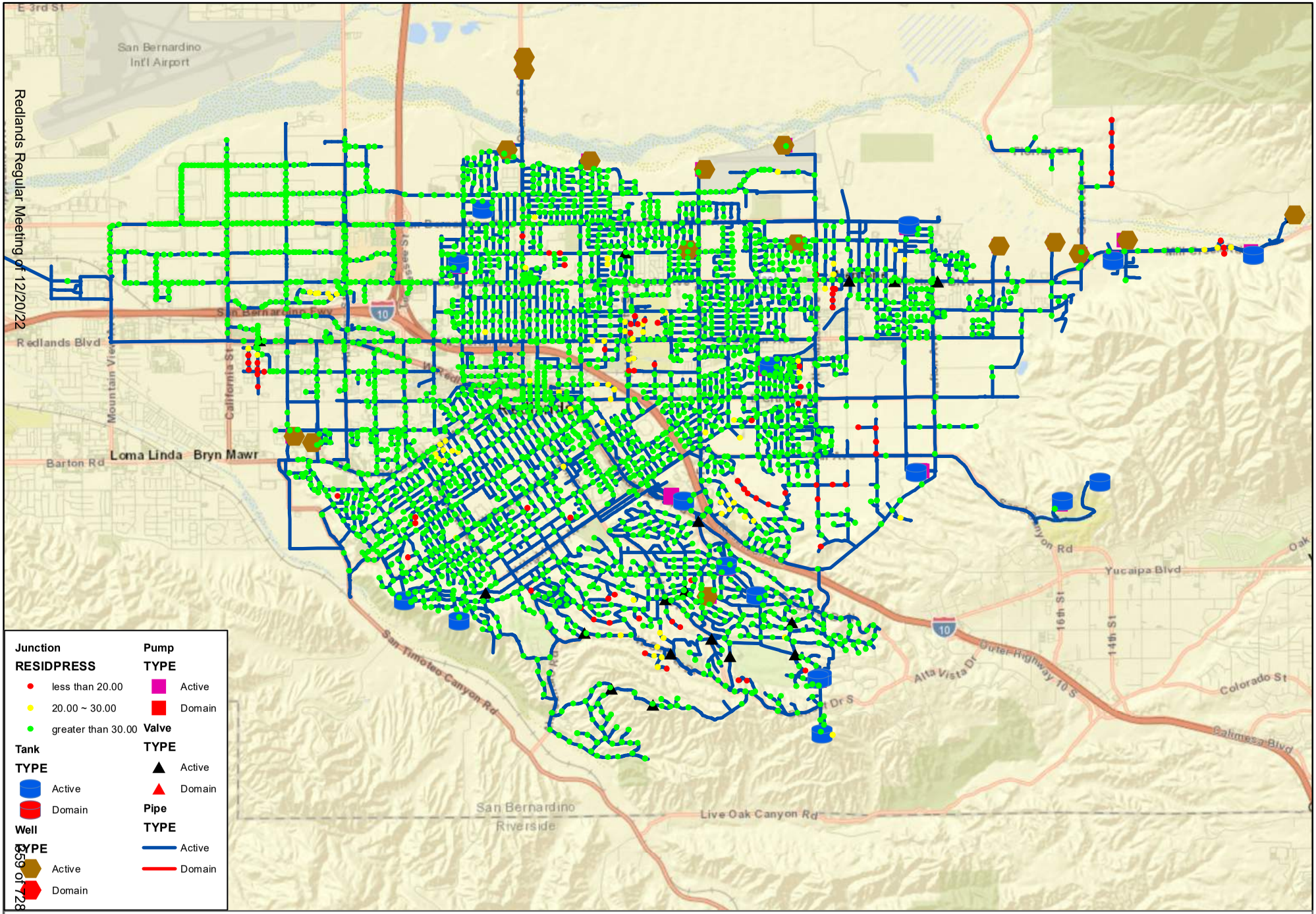

Figure 7-1
Hydraulic Capacity Evaluation
Future Demand, Existing System, MDD, Fireflow Scenario, Residual Pressure During Fire Event

N

0 0.5 1 Miles

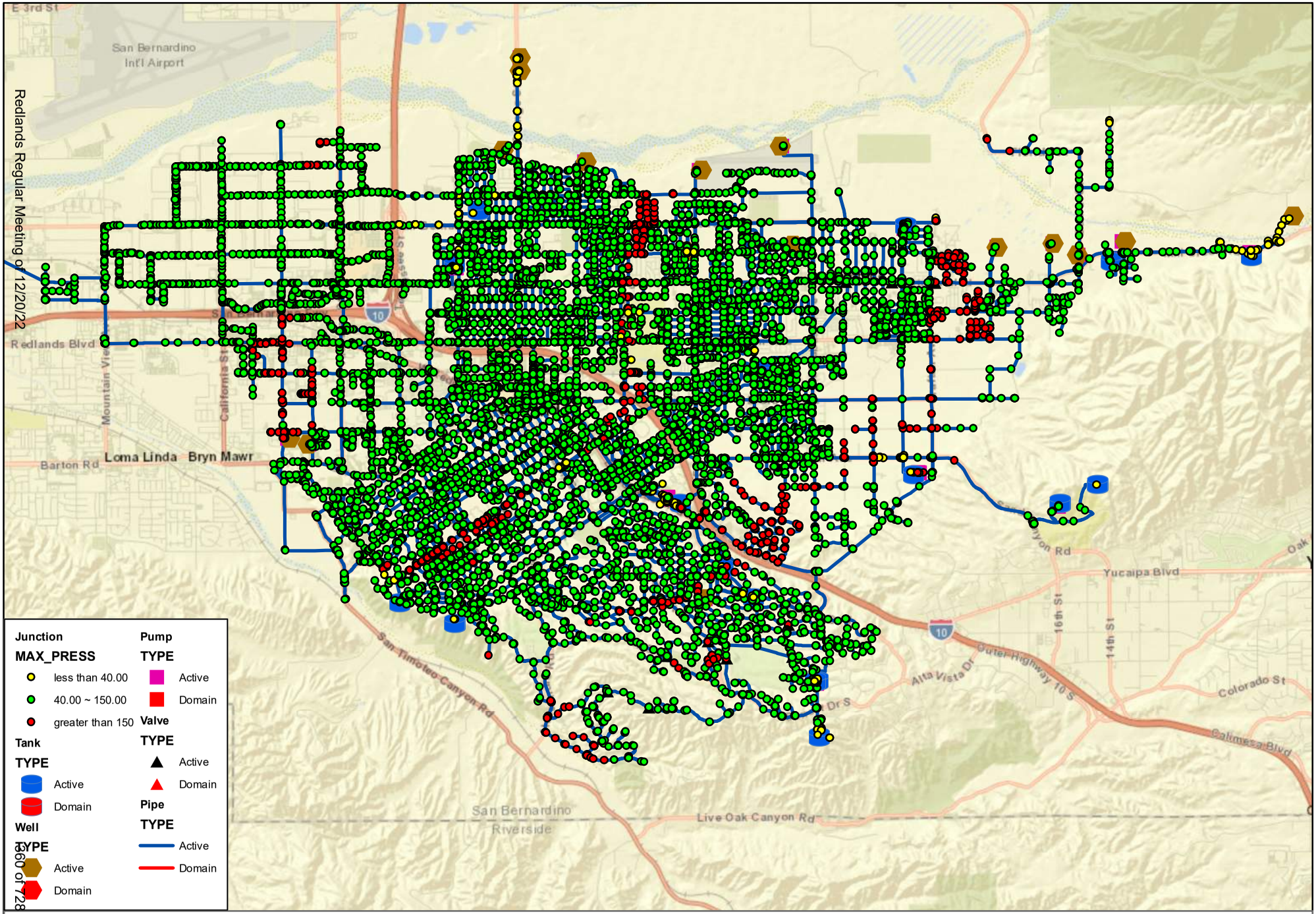

Figure 7-2
Hydraulic Capacity Evaluation
Future Demand, Existing System, MDD, EPS, Maximum Pressure Over 24 Hours

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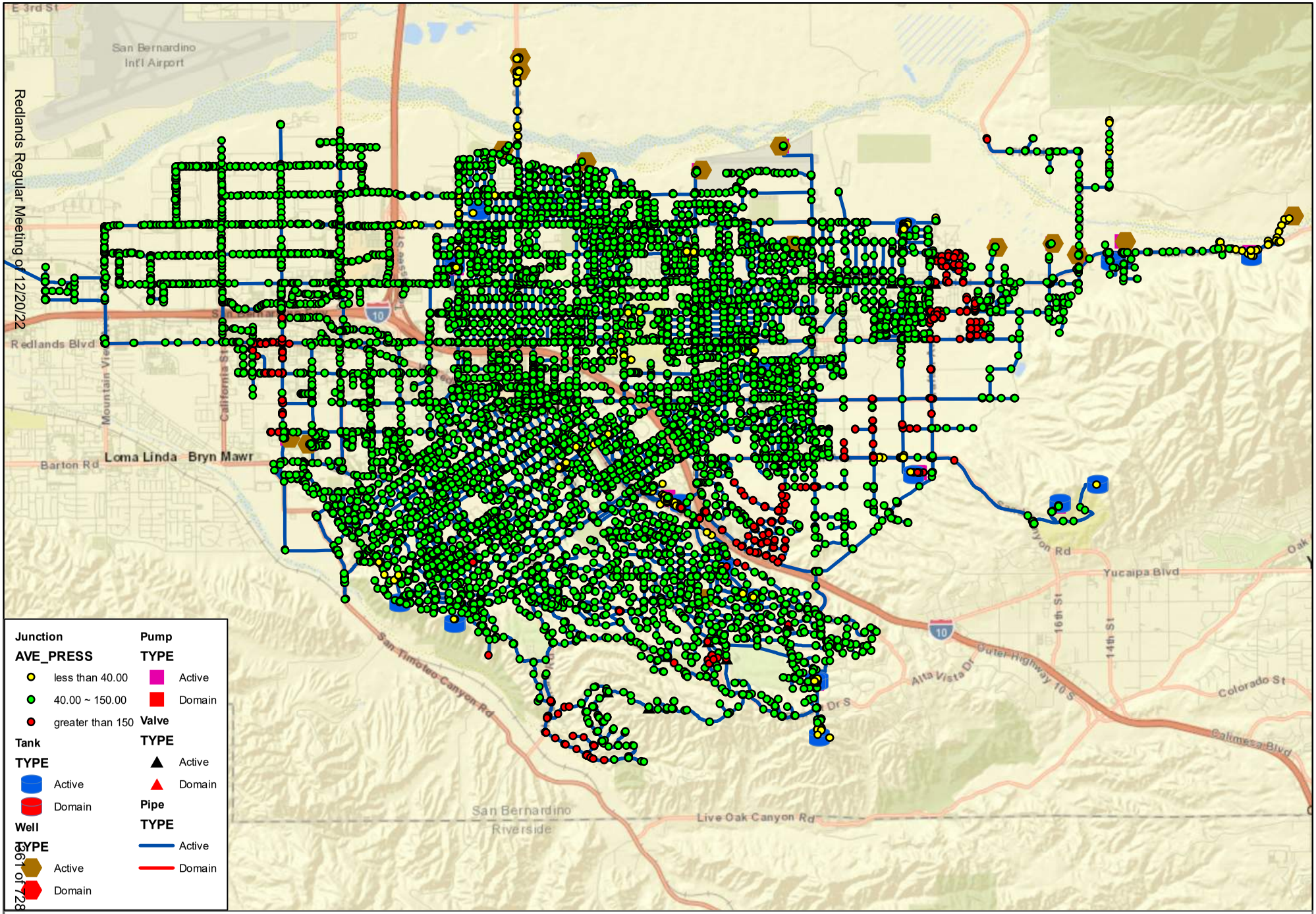

Figure 7-3
Hydraulic Capacity Evaluation
Future Demand, Future System, ADD, EPS, Maximum Pressure Over 24 Hours

N

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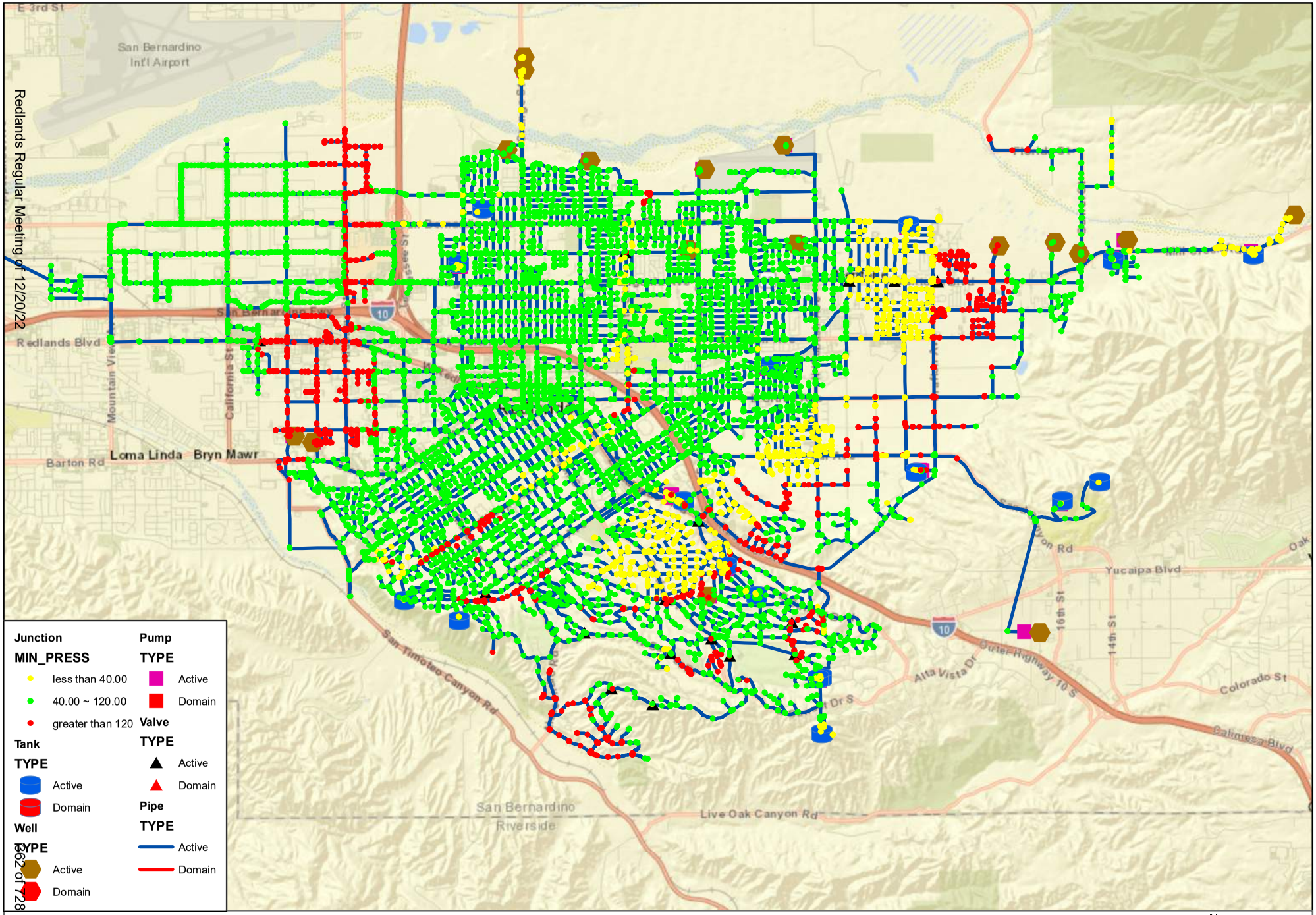

Figure 7-4
Hydraulic Capacity Evaluation
Future Demand, Future System, MDD, EPS Scenario, Minimum Pressure Over 24 Hours

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0 0.5 1 Miles

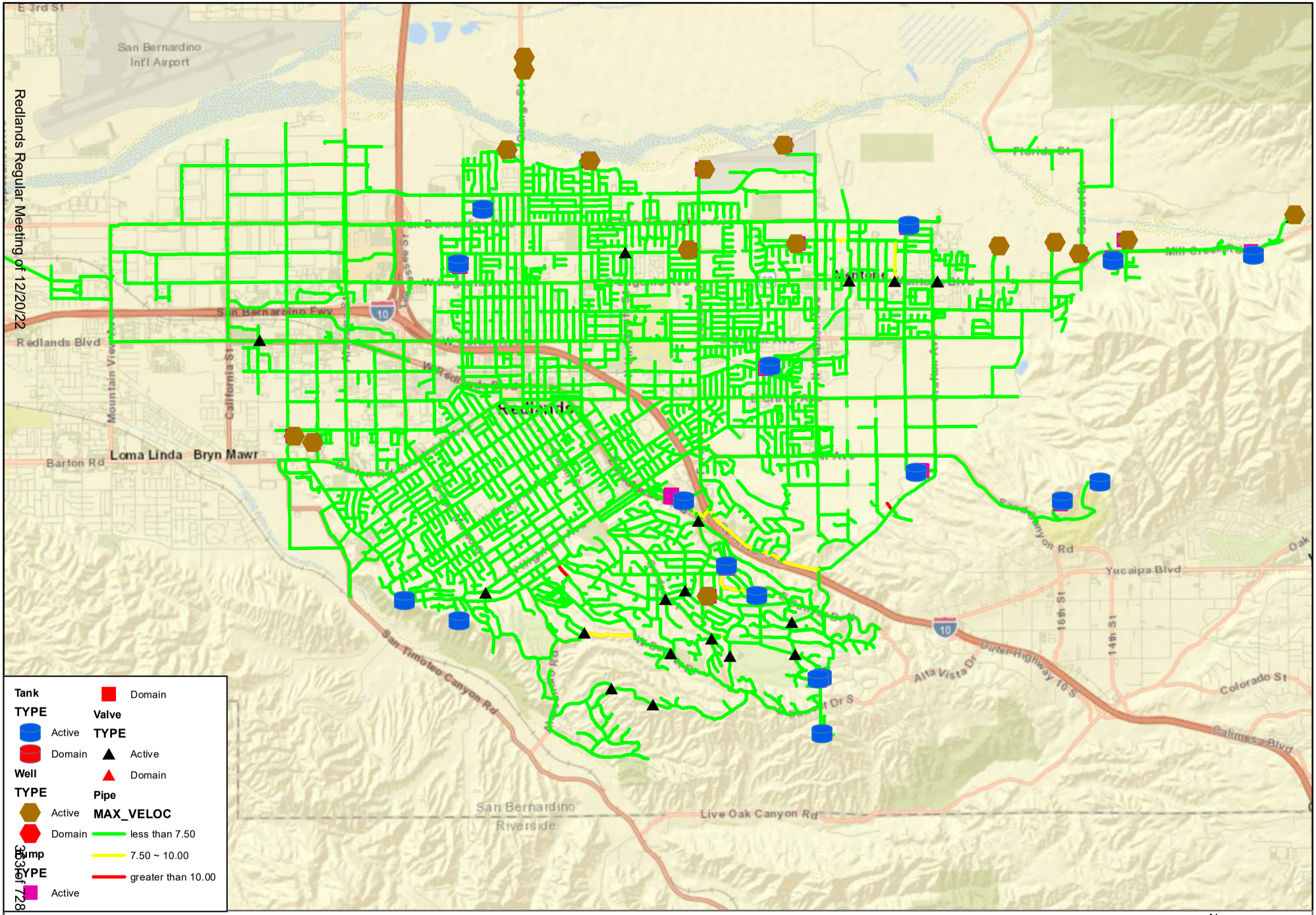

Figure 7-5
Hydraulic Capacity Evaluation
Future System, MDD, EPS Scenario, Maximum Velocity Over 24 Hours

N

0 0.5 1 Miles

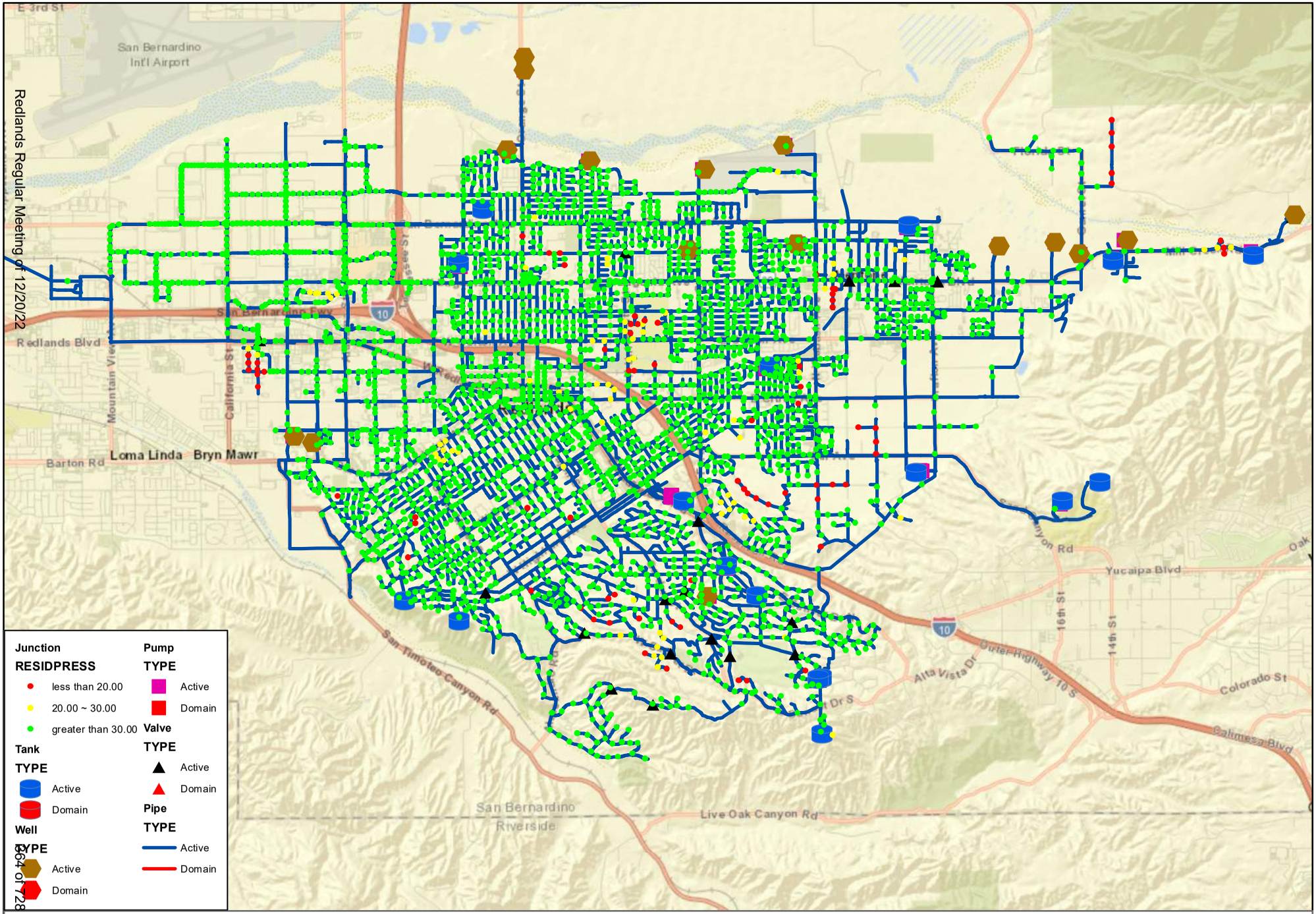

Figure 7-6
Hydraulic Capacity Evaluation
Future System, Future System, MDD, Fireflow Scenario, Residual Pressure During Fire Hours

N

0 0.5 1 Miles

7.3 FUTURE SUPPLY ANALYSIS – NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

7.3.1 SCENARIO 1, FUTURE SYSTEM, ADD, EPS, MAX PRESSURE OVER 24 HOURS

As Figure 7-7 shows, the expanded system is within the forty (40) psi and 150 psi pressure design criteria. This will prevent loud noise and fatigue due to high water pressure, and will provide adequate water pressure to the City's customers.

7.3.2 SCENARIO 2, FUTURE SYSTEM, ADD, EPS, MAX PIPE VELOCITY OVER 24 HOURS

This scenario looks at the ADD for the expanded system to check for high velocities. As Figure 7-8 shows, the developed system will result in a few pipelines that will exceed the maximum acceptable velocity of ten (10) fps.

7.3.3 SCENARIO 3, FUTURE SYSTEM, MDD, EPS, MAX PRESSURE OVER 24 HOURS

The maximum pressure scenario was run to determine the system's pressure during the MDD. Figure 7-9 shows that most of the system will have adequate demand, with a few areas that slightly exceed the recommended pressure range of forty (40) psi and 150 psi.

7.3.4 SCENARIO 4, FUTURE SYSTEM, MDD, EPS, MAX PIPE VELOCITY OVER 24 HOURS

This scenario looks at the PHD for the expanded system to check for high velocities, and assumes a MDD peaking factor of 2.7. As Figure 7-10 shows, the developed system will result in a few pipelines that will exceed the maximum acceptable velocity of ten (10) fps. However, these pipelines are the same as those in the existing system analysis.

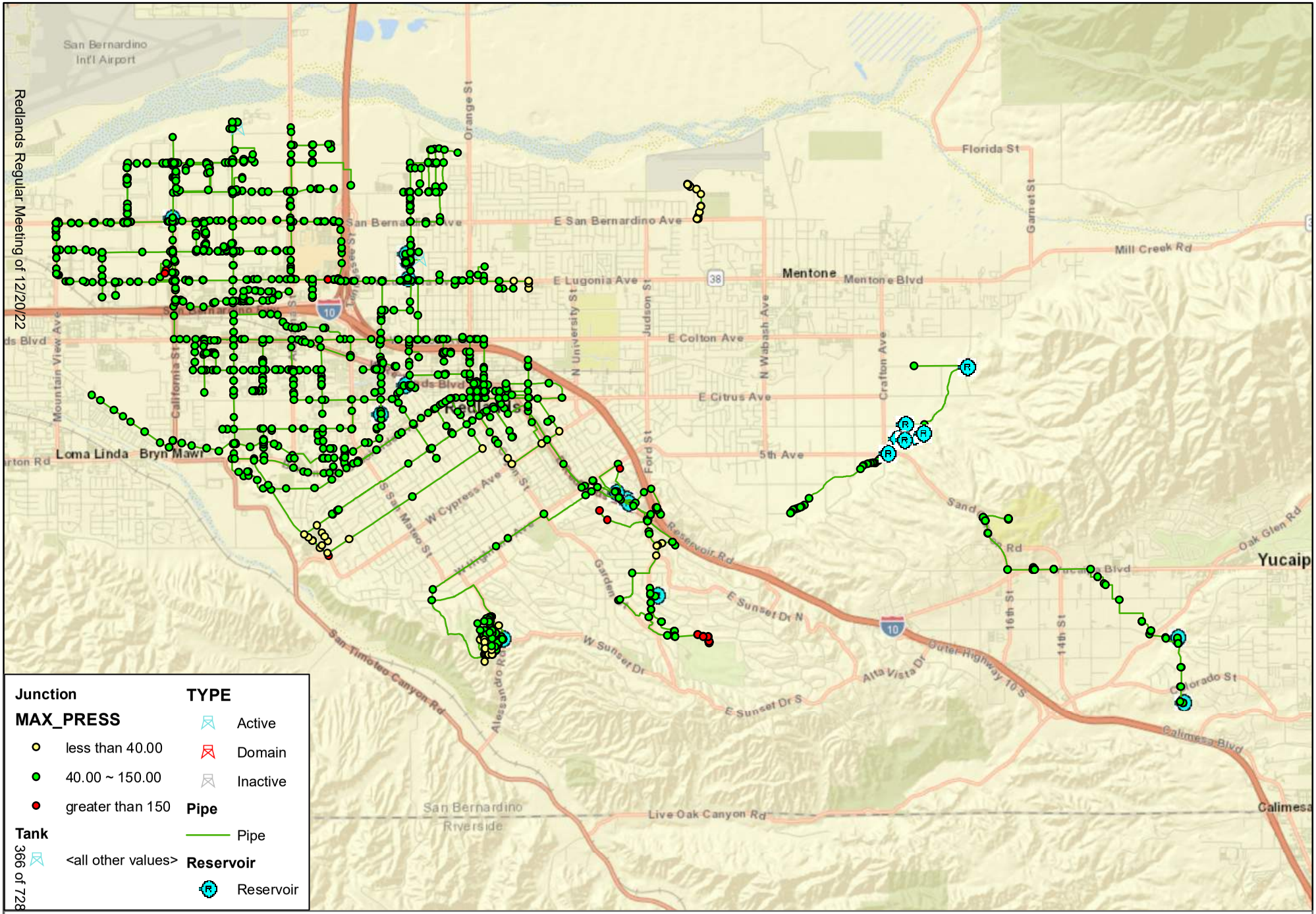

Figure 7-7
Hydraulic Capacity Evaluation
Proposed Future System, ADD, EPS, Maximum Pressure Over 24 Hours

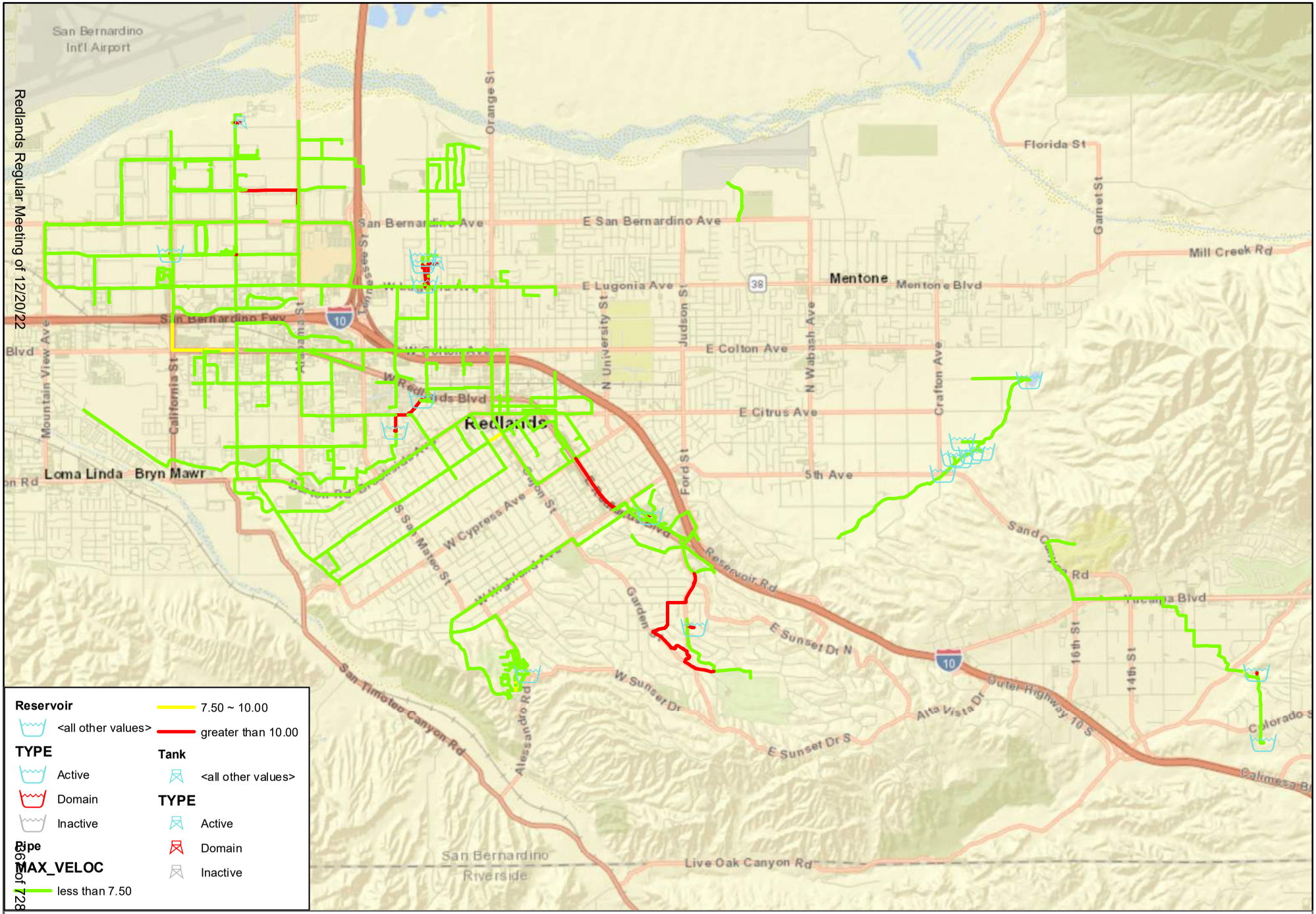

Figure 7-8
Hydraulic Capacity Evaluation
Proposed Future System, ADD, EPS, Maximum Pipe Velocity Over 24 Hours

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0 0.5 1 Miles

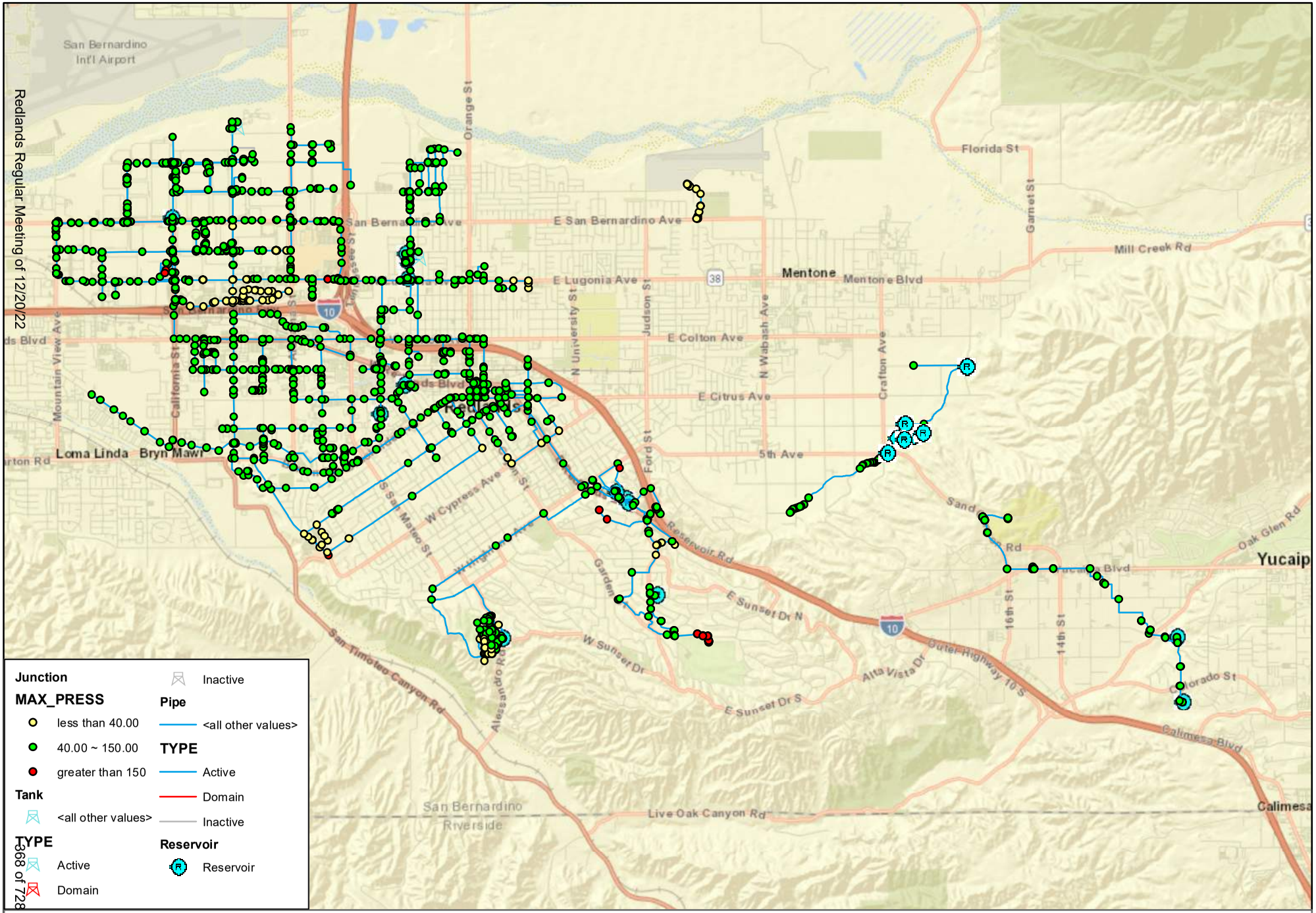

Figure 7-9
Hydraulic Capacity Evaluation
Proposed Future System, MDD, EPS, Maximum Pressure Over 24 Hours

N
0 0.5 1 Miles

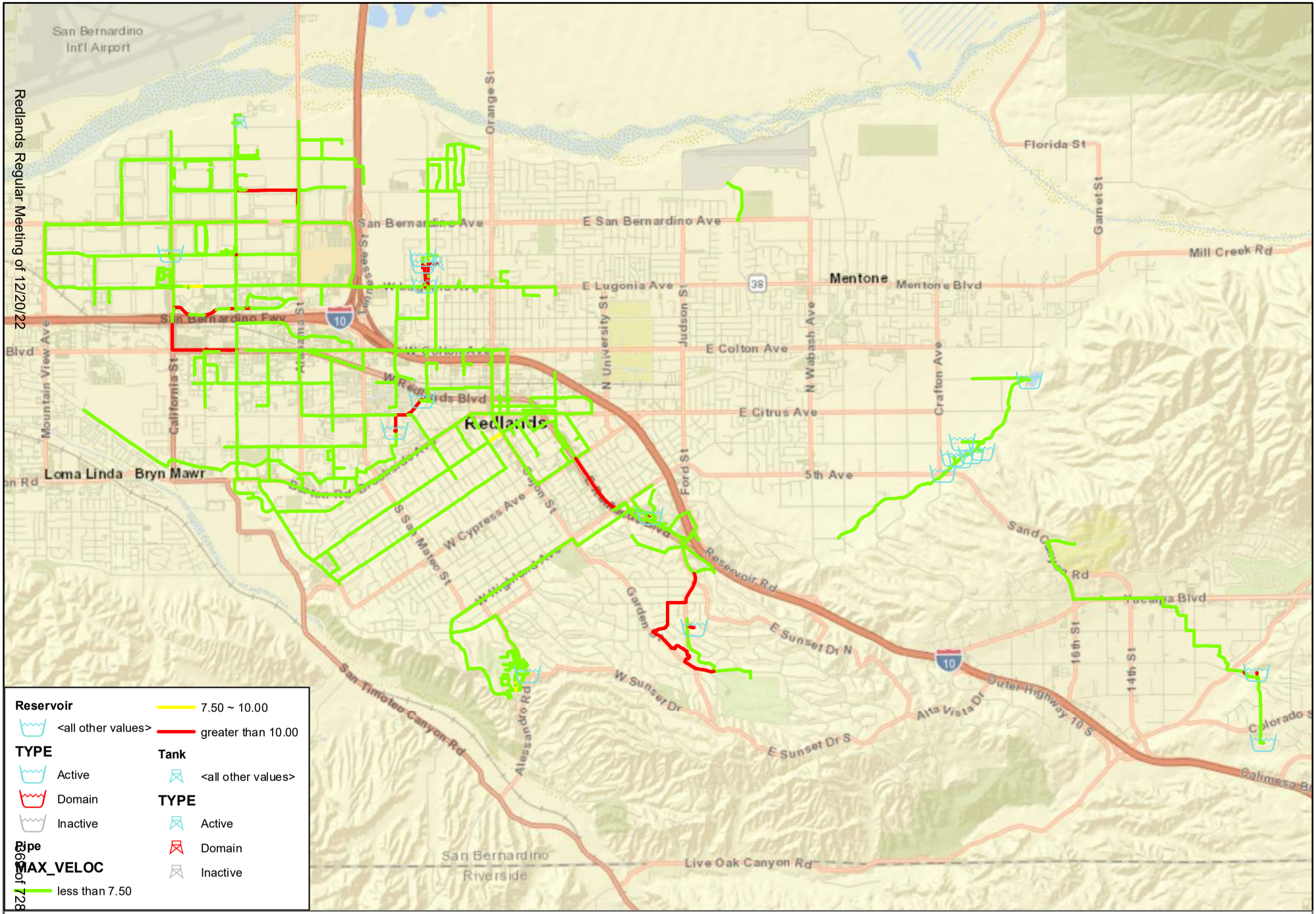

Figure 7-10
Hydraulic Capacity Evaluation
Proposed Future System, MDD, EPS, Maximum Pipe Velocity Over 24 Hours

N
0 0.5 1 Miles

7.4 SUMMARY OF DEFICIENCIES

7.4.1 POTABLE WATER SYSTEM

Twelve (12) potable water system deficiencies were identified, and each were recommended a CIP project to resolve the issue. These deficiencies are related to high velocities, low fire flow pressure, and undersized pipelines. The list of deficiencies discovered is shown in Table 7-1.

Table 7-1: Potable Water System Deficiencies

CIP	Location	Reason	Comments
CIP-1	San Bernardino Ave from Agate Ave to Crafton Ave	Maximum velocity > 10 fps	Replace with larger pipe
CIP-2	Mill Creek Rd near Mill Creek Reservoir	Maximum velocity > 10 fps	Dead ends removed from CIP due to no demand. Extended Pipeline replacement to Mill Creek Rd.
CIP-3	Jasper Ave from Mentone Blvd to Nice Ave	Fire Flow Pressure Issues	Looping dead-end to Nice St to fix issue.
	Opal Way from Naples Ave to Mentone Blvd		
	Naples Ave from Jaspar Ave to Opal Way		
CIP-4	Opal Ave from 6th Ave to end of Pipeline	Fire Flow Pressure Issues	Complex Project, Changing contingency of project from 30% to 40%.
	6th Ave from Opal Ave to Marion Rd		
	Marion Rd/Marvin Ave from Camelot Dr to Pleasantview Dr		
	Wabash Ave from 6th Ave to end of Pipeline		
CIP-5	Pennsylvania Ave from Lassen St to Church St	Fire Flow Pressure Issues	Replace with larger pipe
CIP-6	University Station/ Orange Blossom Trail from University St to Grove St	Pipe Diameter Size too small	Replace with larger pipe
	Cook St from University Station to Sylvan Blvd		
CIP-7	End of Pipeline from St Catherine St to Valencia Drive	Maximum velocity > 10 fps	Assumed to be a Lateral due to the pipe being a dead-end and small diameter
CIP-8	San Bernardino Ave from Nelson St to Judson St	Maximum velocity > 10 fps	Small Diameter Size causing high velocity, assumed to be error
CIP-9	Park Ave from City limits to Essex Ct	Fire Flow Pressure Issues	Fire flow was determined to be lower than assumed

CIP	Location	Reason	Comments
	Amigos Dr from Park Ave to Rancho Dr		
	Rancho Dr from end of Pipeline to New Jersey St		
	New Jersey St from Park Ave to Redlands Blvd		
CIP-10	Emerald Ave from Newport Ave to Tres Lagos St	Fire Flow Pressure Issues	Low pressure due to elevation. A subzone may be needed to fix issue
	Newport Ave from Garnet St to Emerald Ave		
CIP-11	Fairmont Dr from Sunset Dr to end of Pipeline	Fire Flow Pressure Issues	Low pressure due to elevation. A subzone may be needed to fix issue
	Manzanita Rd from end of Pipeline to Fairmont Dr		

7.4.2 NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

Currently, no storage reservoirs exist within the recycled water system. The City is currently engineering two (2) 1.5 MG recycled water reservoirs for future construction at the WWTP. Additional system storage will be necessary as demand increases. Also, the detached non-potable water systems are not efficient and should be connected in the future. Doing so allows additional connections to be transitioned to the non-potable water system, which will reduce potable water system demand.

7.5 MITIGATION OF DEFICIENCIES

7.5.1 METHODOLOGY

The primary method of correcting high velocity or low pressure associated with fire flow demand is to increase the pipe diameter or loop dead ends, where possible. The issues found in the potable water system modeling can be corrected by increasing pipe diameters or looping in some areas. The non-potable water system and recycled water system can be improved by adding storage capacity and joining disconnected systems.

7.5.2 PROJECTS FOR FUTURE CONDITIONS – POTABLE WATER SYSTEM

Deficient pipeline segments are listed in Table 7-2 along with the recommended replacement pipeline diameter, the segment length, and the estimated cost for each. The cost estimate includes labor, equipment, materials, for each project, and a budget for unanticipated construction issues. The approach to developing cost estimates is explained in Section 10. The total length of all projects is five (5) miles and is estimated to cost approximately $3.7M. Figure 7-11 shows the locations of each deficient pipeline segment. Figure 7-12 and Figure 7-13 show the anticipated system hydraulic improvements if all deficiencies are resolved.

Table 7-2: Recommended CIP to Correct Deficiencies

CIP	New Diameter (in)	Replacement Material	Length (LF)	Cost Estimate
CIP-1	24	DIP	2046	$654,720

CIP	New Diameter (in)	Replacement Material	Length (LF)	Cost Estimate
CIP-2	8	DIP	203	$33,000
CIP-3	8	DIP	649	$104,000
CIP-4	12	DIP	11979	$2,395,800
CIP-5	8	DIP	1142	$183,000
CIP-6	8	DIP	1569	$251,000
CIP-7	N/A	DIP	TBD	TBD
CIP-8	N/A	DIP	TBD	TBD
CIP-9	N/A	DIP	TBD	TBD
CIP-10	N/A	DIP	TBD	TBD
CIP-11	N/A	DIP	TBD	TBD
Totals			**27,193**	**$ 3,621,520**

7.5.3 PROJECTS FOR FUTURE CONDITIONS – NON-POTABLE WATER SYSTEM & RECYCLED WATER SYSTEM

Currently, no storage reservoirs exist within the recycled water system. The City is currently engineering two (2) 1.5 MG recycled water reservoirs for future construction at the WWTP. It is recommended that another reservoir be constructed in Zone 1. The specific location for this reservoir requires additional analysis. It is recommended that the minimum storage capacity for the expanded system be three (3) MG.

It is also recommended that detached systems be connected where practical. Connecting all detached systems would require approximately sixty (60) miles of eight inch (8”) diameter pipelines, and a small amount of twelve inch (12”) pipelines, throughout the west and southwest portions of the City. Connecting the Redlands Country Club, Hillside Memorial Park, and Redlands Dog Park systems would allow additional connection transitions to the Pressure System 2 of the non-potable water system, potentially reducing potable water system demand by 0.9 MGD.

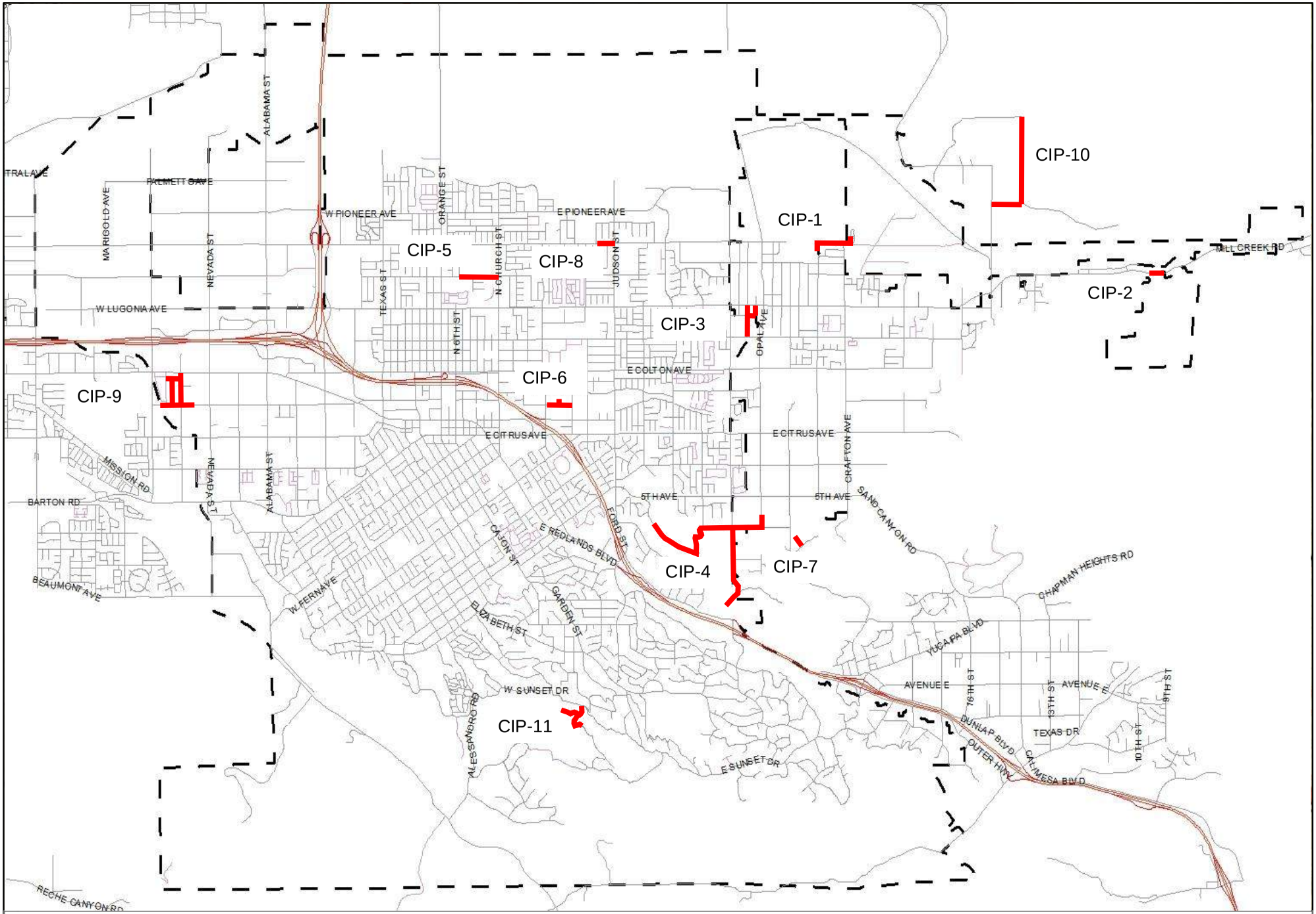

Figure 7-11
Capital Improvement Programs

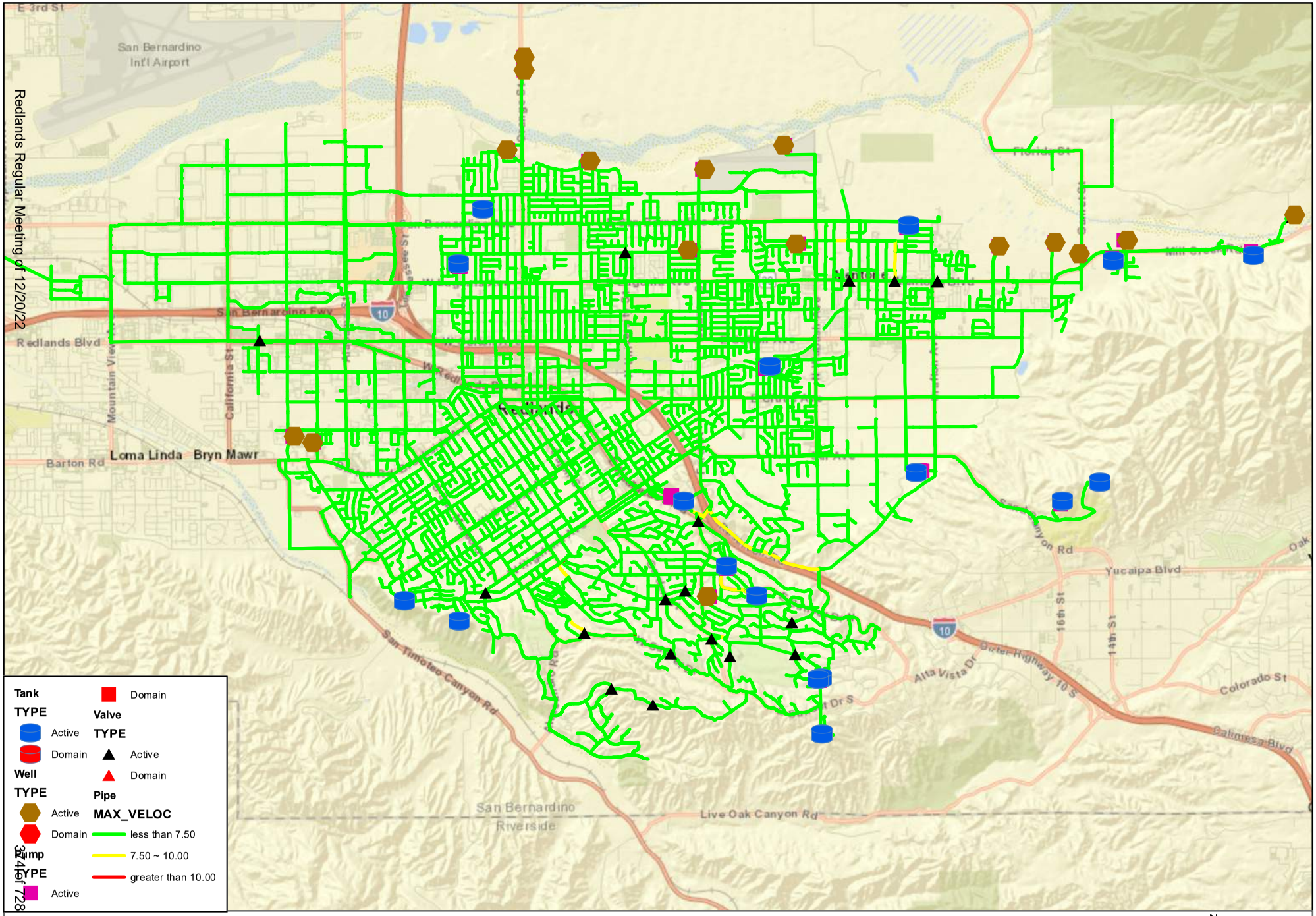

Figure 7-12
Capital Improvement Programs
Future System, MDD, EPS Scenario, Maximum Velocity Over 24 Hours

N

0 0.5 1 Miles

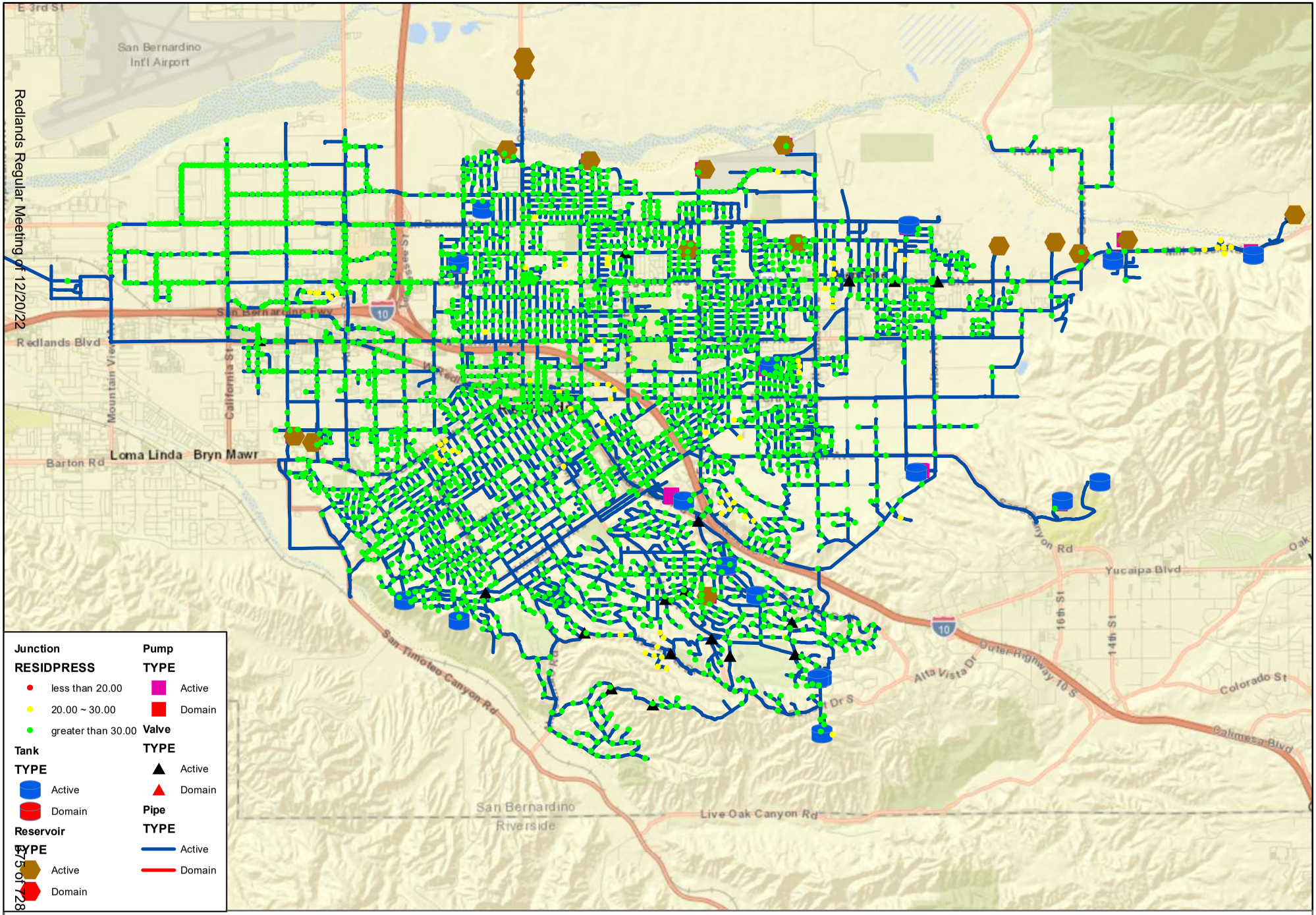

Figure 7-13
Capital Improvement Programs,
Future System, Future System, MDD, Fireflow Scenario, Residual Pressure During Fire Hours

N

0 0.5 1 Miles

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8 WATER QUALITY

8.1 METHODOLOGY

A common water quality concern in potable water distribution systems is water age. Water quality degrades over time and the loss of disinfection residual often leads to customer taste and odor complaints. Though not as strict as the requirements for potable water, the non-potable and recycled water systems must meet specific state and federal regulatory requirements for irrigation, agricultural, and commercial/industrial uses. Due to the lack of storage reservoirs in the existing non-potable water system and recycled water system, water age is not a good indicator of water quality, and should be analyzed when reservoirs are added to the systems.

8.2 REGULATORY REQUIREMENTS

The State of California and the U.S. EPA require potable water to meet rigid water quality standards prior to distribution. The City obtains water from surface and groundwater sources. Groundwater sources typically contain more microbial contaminants, inorganic contaminants, pesticides, herbicides, and industrial chemical byproducts. As a result, wells are closely monitored to make sure that the water being pumped from the Bunker Hill groundwater basin meets all regulatory requirements.

Recycled water regulations are identified in the California Code of Regulations 2018 Title 22 – Division 4 Chapter 3. Because the WWTP process includes tertiary treatment and disinfection, the following recycled water common uses are allowed:

1. Irrigation of food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop;
2. Irrigation of parks and playgrounds;
3. Irrigation of school yards;
4. Irrigation of residential landscaping;
5. Irrigation of golf courses;
6. Any other irrigation uses not specified in this section and not prohibited by different areas of the California Code of Regulations.

Tertiary water is also allowed for industrial and commercial cooling, and is used at the SCE Mountain View Power Plant. Groundwater extracted by the non-potable water wells is typically classified as un-disinfected secondary water, and can be used for surface irrigation. However, more rigid water quality standards may apply when this groundwater may be reasonably expected to contact the edible portion of food crops.

8.3 GOALS AND PREFERENCES

The City must not exceed potable water MCL established by the state and federal regulatory agencies for coliform bacteria, turbidity, metals like aluminum and lead, nitrates, fluoride, and other contaminants. State and federal regulatory agencies also establish Primary Drinking Water Standards to regulate other pollutants. Finally, the U.S. EPA has established secondary standards for drinking water aesthetics. The City has not violated any of these regulations or standards. Disinfected tertiary recycled water standards are identified in the State of California Code of Regulations.

8.4 ASBESTOS

The City water distribution systems include approximately 200 miles of asbestos cement pipelines, which can release asbestos fibers into the water supply if the pipeline has deteriorated. Asbestos is a known carcinogen that can cause breathing problems, lung cancer, Mesothelioma, and a host of other health problems when certain exposure conditions exist. State regulatory agencies have established a limit of seven (7) million asbestos fibers per liter of water. It is recommended that these pipelines are evaluated for replacement if they exceed their service life or are found to have integrity issues that could cause asbestos to enter the water system.

8.5 GROUNDWATER QUALITY

The Upper Santa Ana Valley Groundwater Basin is an alluvial groundwater basin fed by multiple tributaries, including the Santa Ana River and Mill Creek, which are located within the City's water service area. The Bunker Hill Sub-basin, also known as the San Bernardino Basin Area (SBBA), lies within a portion of the Upper Santa Ana Valley Groundwater Basin and has a surface area of approximately 89,600 acres and a groundwater storage capacity of 5,976,000 acre-feet.

8.5.1 BUNKER HILL SUBBASIN/SBB

Based on the State's Department of Water Resources, *Upper Santa Ana Valley Groundwater Basin, Bunker Hill Sub-basin Report*, the SBBA is part of the northeastern portion of the Upper Santa Ana Valley Basin. The Santa Ana River, Mill Creek, and Lytle Creek are the main tributaries for this sub-basin, which is bordered by the San Gabriel Mountains, San Bernardino Mountains, and Crafton Hills. The Banning fault, Redlands Fault, San Andrea Fault, San Jacinto Fault, and the Glen Helen fault are located within the SBBA as well. The total dissolved solids (TDS) of the SBBA groundwater is typically 155 mg/l - 1,140 mg/l, and some portions of the SBBA frequently exceed MCL standards for nitrates, perchlorates, volatile organic compounds (VOC), and Synthetic Organic Compounds (SOC).

The City is located in the southern portion of the SBBA, and extracts SBBA groundwater for potable water and non-potable water production. SBBA water meeting state and federal water quality standards does not need additional treatment or disinfection for potable use. Alternatively, extracted groundwater exceeding nitrate or perchlorate MCLs may be distributed for non-potable use.

8.6 SOURCE WATER QUALITY

When available, the Hinckley and Tate raw water influent may be supplemented with SWP water for treatment and potable water distribution. The City has ownership in various private and mutual water companies to supply water to the City's Tate and Hinckley WTP. SWP water is not always available, and is only used as a last resort. SWP water often includes organics and sediment that are difficult to treat, so it is typically blended with raw water influent from other sources prior to treatment.

The quality of non-potable water varies depending on the extraction location. Groundwater extracted from one (1) location may be blended with groundwater extracted from another location to improve water quality within the non-potable water distribution system.

The City WWTP typically produces recycled water with less than five (5) mg/l BOD, five (5) mg/l TSS, ten (10) mg/l total nitrogen, and 0.2 NTU turbidity. This water can be blended with non-potable water to further improve water quality. Constructing recycled water storage reservoirs will create additional opportunities to improve water quality.

8.7 DISINFECTION

The City disinfects water with Sodium Hypochlorite and chlorine gas to prevent microbial contaminant migration into the potable water system. The disinfectant residual typically ranges from 0.8 mg/l -1.2 mg/l.

8.8 WATER AGE

The water age in water supply systems depends primarily on maintaining an efficient demand and supply balance through the use of SCADA, providing adequate water storage volume, and operation and maintenance practices. The potable water system is designed to provide storage reserve to support emergency relief efforts such as fire suppression and earthquake damage.

The Water Industry Database (AWWA and AWWA RF 1992) indicates an average potable water distribution system retention time of 1.3 days and a maximum retention time of twenty-four (24) days based on a survey of more than 800 U.S. utilities. In addition, the literature cites examples of both "short" (less than three days) and "long" (greater than three days) water ages. Several water age recommendations published in the literature are summarized below in Table 8-1.

Table 8-1: Water Age Recommendations

Population Served	Water Main Length (mi)	Water Ages (Days)	Method of Determination
800,000	2,750	3 to 7	Hydraulic Model
300,000	1,100	1 to 3	Fluoride tracer
80,000	358	More than 16	Chloramine Conversion
24,000	86	12 to 24	Hydraulic Model
Note: Source is USEPA Effects of Water Age on Distribution System Water Quality, August 15, 2002			

Several smaller cities with populations between 50,000 - 100,000 report water age of three (3) to sixteen (16).

8.9 WATER AGE POTENTIAL HEALTH IMPACTS

Potential health impacts associated with the water age-related chemical and biological issues are identified in Table 8-2.

Table 8-2: Potential Water Age Issues

Chemical Issues	Biological Issues	Physical Issues
Disinfection By-Product Formation	Disinfection By-Product Biodegradation	Temperature Increase
Disinfectant Decay	Nitrification	Sediment Deposition
Corrosion Control Effectiveness	Microbial Regrowth/Recovery/Shielding	Color
Taste and Odor	Taste and Odor	
Note: (1) The source is USEPA Effects of Water Age on Distribution System Water Quality, August 15, 2002; (2) The Chemical Health Effects Tables (U.S. EPA, 2002a) summarizes potential adverse health effects from high/long-term exposure to hazardous chemicals in drinking water.		

The Microbial Health Effects Tables (U.S. EPA, 2002b) summarizes potential health effects from exposure to waterborne pathogens, the most concerning of which are the formation of disinfection by-products, presence of haloacedic acid (HAA5) and trihalomethanes (TTHM), and nitrification and microbial regrowth after disinfectant depletion.

8.10 WATER AGE DETERMINATION

Water age can be predicted by conducting hydraulic modeling and analysis, mathematical modeling and fluid dynamics computations, and tracer studies using fluoride, sodium chloride, calcium chloride, lithium chloride, pulsed chlorine, and coagulants. Mathematical modeling is arguably the least accurate of these methods.

8.11 CITY OF REDLANDS WATER SUPPLY SYSTEM AGE

An ADD potable water age analysis was conducted using the hydraulic model, as shown in Figure 8-1, and indicated typical water age is three (3) days, and increases to twelve (12) days at the edges of the water system and in the potable water storage reservoirs. More specifically, water age within the potable water system distribution system piping is typically one to three (1 – 3) days, and storage reservoir water age is typically seven to twelve (7 – 12) days.

Water age is primarily a function of the system size, operation, SCADA automation, and design. As water demand increases, the amount of residence time in the distribution system decreases. Demand is related to land use patterns, types of commercial-industrial activity present in a community, weather, the general living conditions (pandemic, work from home, etc.), and community water use habits (water conservation practices, reuse practices, etc.). Cities with effective water conservation programs typically experience greater water age when all other factors are constant, due to reduced demands.

The water age analysis, water quality data review, and site visits did not indicate water quality issues within the City potable water supply system. This finding is consistent with the annual Consumer Confidence Report (CCR) prepared and distributed to all potable water customers to provide specific water quality characteristics. The CCR complies with state and federal regulatory agency requirements. The installation of mechanical mixers in potable water storage reservoirs is recommended to prevent water quality issues related to longer retention times. Table 8-3 summarizes the storage reservoir hydraulic model water age evaluation.

Table 8-3: Storage Reservoir Water Age

Reservoir	Percent Full (%)	Level (ft)	Water Age (days)
5th Ave	53	11.92	11.3
Agate	72	18.04	7.0
Arroyo	59	23.74	11.0
Country Club Reservoirs	66	12.6	11.1
Crafton	19	5.63	11.7
Dearborn	31	7.9	11.7
Highland	68	18.91	11.3
Margarita	85	11.96	11.7
Mill Creek	58	11.57	11.2
Sand Canyon	29	11.37	11.7
Smiley	32	7.12	10.1
South Ave	75	19.53	10.7
Sunset	39	24.5	11.6

Reservoir	Percent Full (%)	Level (ft)	Water Age (days)
Texas Grove	77	15.32	11.4
Texas St	84	29.45	11.5
Ward Way Reservoirs	51	15.92	11.7

8.12 INDICATORS OF HIGH WATER AGE

Aesthetic issues such as discoloration, poor taste, and noxious odors may be caused by water age, deteriorating pipeline materials, treatment and disinfection practices, and turbidity. No aesthetic issues were noted during the site visits and contacts with the Operations staff.

Redlands Regular Meeting of 12/20/22

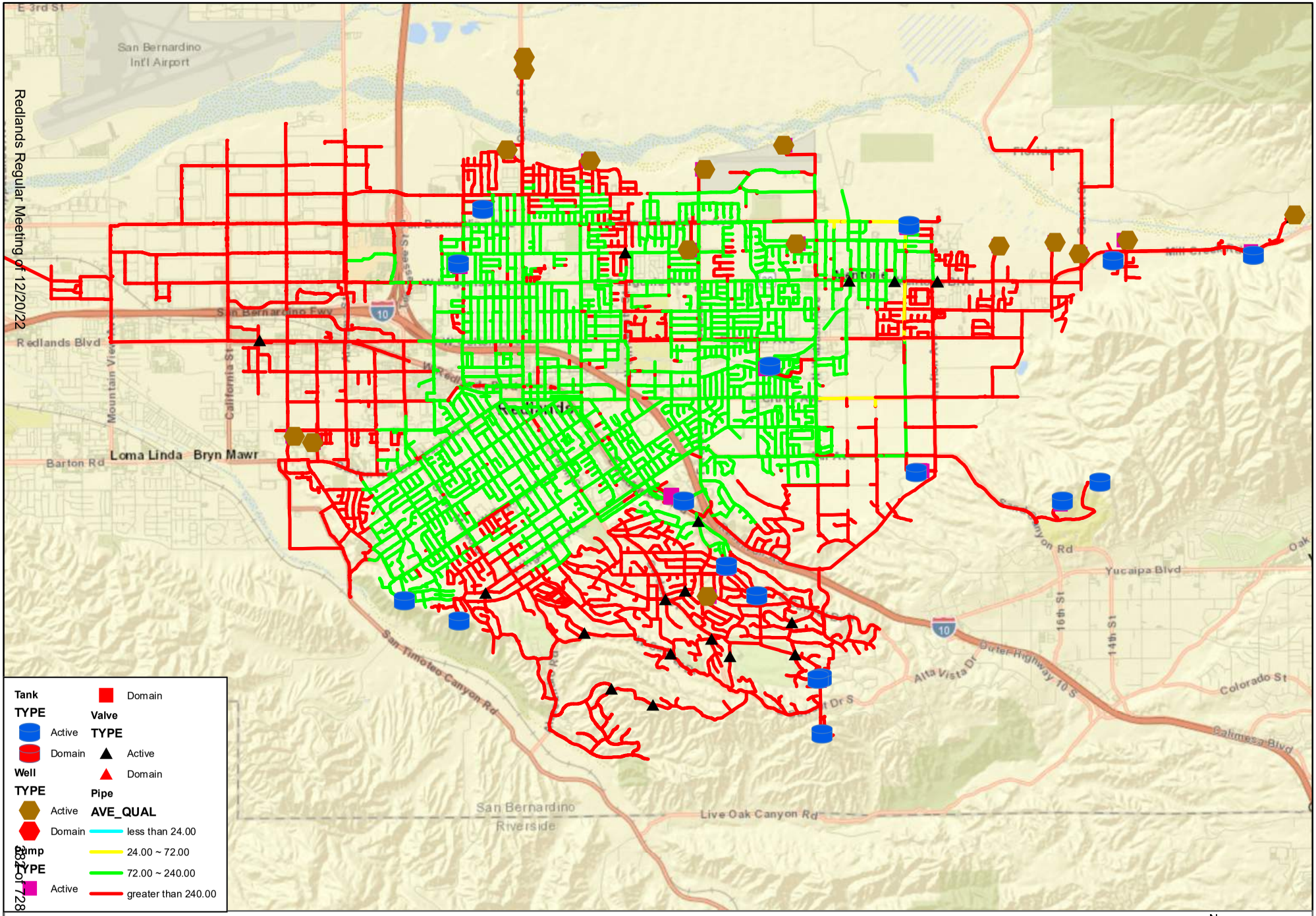

Figure 8-1
Hydraulic Capacity Evaluation
Existing System, ADD, Water Age Analysis Scenario WQ- A

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9 WATER SYSTEM OPERATION AND MAINTENANCE

9.1 GENERAL DESCRIPTION

Operations and maintenance practices for all water systems were reviewed to develop improvement recommendations. This included a review of available records and operating procedures during several site visits and MUED staff workshops.

9.2 SCADA

Water Production Operators monitor and operate the water system through a comprehensive SCADA system. SCADA is used to gather and analyze real-time or near real-time sensor data, which is used for monitoring treatment plants, transmission, and distribution processes. The system monitors pressure and flow, storage reservoir levels, and treatment processes. SCADA is also useful for collecting regulatory reporting data, obtaining operational information for planning purposes, optimizing energy and chemical use, identifying water loss, and improving various maintenance practices. The City is developing Standard Operating Procedures (SOP) for the operation, security, and long-term maintenance of the SCADA system.

9.3 WORK ORDER PROCESS

The City is currently implementing an electronic asset management system to improve work order processing efficiency. This system populates a database that will be used to accurately determine operation and maintenance resource needs and associated costs, including labor, equipment, materials, price, date, and location tracking.

9.4 INSPECTION AND MAINTENANCE

The MUED staff inspects water production and distribution facilities routinely and has inspection and maintenance protocols in place for treatment plants, storage reservoirs, wells, booster pumps, and other equipment. Preventive maintenance activities are conducted in accordance with manufacturer recommendations. The CIP project recommendations include regularly scheduled mechanical and electrical equipment maintenance and replacement, storage reservoir inspection and maintenance, and other routine practices to ensure the water systems continue to function efficiently.

9.5 WATER SYSTEM STAFF AND MANAGEMENT

The MUED organization includes Water Distribution (WD), Water Production (WP), and WWTP Divisions to operate and maintain the water systems. The Utilities Operations Manager oversees all water and wastewater production, distribution, operation, and maintenance practices, and is supported by a Regulatory Compliance Officer and an Administrative Assistant.

The WD Division includes Water Distribution System Operators and Field Technicians. The Field Technicians are primarily responsible for servicing and reading water meters for water utility billing. Most water meters are read manually or with an Automated Meter Reader (AMR) system, both of which are labor intensive. This group includes the following staff positions:

- Senior Customer Service Field Technician (1)
- Customer Service Field Technician (1)
- Meter Readers (3)

The Water Distribution Operators maintain the water distribution systems. This group includes the following staff positions:

- Water Distribution Superintendent (1)
- Cross Connection Control Inspector (1)
- Water Distribution Supervisor (1)
- Water Distribution Crew Leaders (4)
- Water Distribution Operators (12)

The Water Production Division operates and maintains all water production facilities, including WTP, storage reservoirs, groundwater wells, pressure reducing valves, and booster pumps. This group includes the following staff positions:

- Water Production Superintendent (1)
- Administrative Assistant (1)
- Water Production Supervisor (1)
- Water Maintenance Supervisor (1)
- Maintenance Foreperson (1)
- Water Treatment Operator (8)
- Water Quality Technician (3)
- Plant Mechanic (3)
- Maintenance Worker (3)
- Electrical & Instrumentation Technician (2)

The WWTP Division is responsible for recycled water production from the City WWTP effluent. This group includes the following staff positions:

- Wastewater Operations Superintendent (1)
- Administrative Assistant (1)
- Wastewater Operations Supervisor (1)
- Wastewater Collections Supervisor (1)
- Maintenance Foreperson (1)
- Wastewater Facilities Operator (6)
- Plant Mechanic (3)
- Maintenance Worker (2)
- Line Maintenance Worker (7)
- Laboratory Manager (1)
- Laboratory Analyst (4)

MUED staffing for operation and maintenance of the potable water system, non-potable water system, and recycled water system is appropriate for the size and complexity of each system, and meets general

guidance provided in the U.S. EPA Public Water System Classification and Staffing Requirements and AWWA M5 manual.

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10 CAPITAL IMPROVEMENT PROGRAM

10.1 GENERAL DESCRIPTION

This section presents the proposed capital improvements for the next five (5) years and a general description of the improvements recommended through 2042. This section also recommends recurring annual capital expenditures to repair or replace aging and outdated infrastructure, including meter and pipeline replacements. The water systems analysis described in sections 6 and 7 was used as the basis for identifying CIP project recommendations. The CIP project recommendations are based on a review of the existing City CIP, as well as deficiencies predicted by the hydraulic model in the existing infrastructure for current conditions and projected future growth conditions.

The CIP projects were evaluated based on the following:

- Hydraulic analysis of existing and projected water supply systems requirements;
- Condition assessment based on the visual inspection of the Hinckley and Tate WTP, reservoir sites with booster pumps, and associated electrical and mechanical equipment;
- Risk-based asset register database evaluation.

The hierarchy of projects is established using several methodologies. The first methodology employed is a hydraulic analysis of existing and future water supply systems. The highest priority projects are those with hydraulic deficiencies and/or regulatory compliance issues. These are planned for the first five-year period. The following criticality methodology relies on the well and booster pump efficiency analysis and the distribution systems age. The third methodology uses condition assessment based on the site visits.

10.1.1 APPROACH TO PLANNING LEVEL COSTS

Each CIP project recommendation includes an OPC based on planning level quantity estimates. Unit costs are based on vendor quotes and actual bid prices for projects of similar scope and size. In some cases, the OPC was adjusted to account for specific site conditions. Each OPC includes standard mark-ups for contingencies, engineering fees, legal fees, administrative costs, and other soft costs to provide a complete budget level prediction of project costs. Table 10-1 summarizes OPC assumptions for each CIP project recommendation.

Table 10-1: CIP Project Recommendation OPC Assumptions

OPC Item	Markup Assumption
Construction Contingency	10%-25% [1]
Engineering	15%
Legal & Administration	5%
TOTAL	1.30x-1.45x Construction Cost [1]
Note: (1) Varies based on the complexity of the project.	

Many of the recommended projects consist of replacing water pipelines, rehabilitation of existing well sites and equipment, booster pump repair or replacement, or rehabilitation of reservoir facilities. Modifications and upgrades to existing pumping facilities tend to be more complex than pipeline replacement projects, and higher contingency and soft cost factors were used for these facilities. All cost

opinions are shown in 2022 dollar values, and should be escalated for project implementation in future years. Each OPC is considered a Class 5 Construction Cost Opinion as defined by the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R-97. Table 10-2 below defines the various cost opinion classes defined by AACE International.

Table 10-2: AACE Construction Cost Classes

COST OPINION CLASS	Primary Characteristic	Secondary Characteristic			
	Level of Project Definition	End Usage	Methodology	Expected Accuracy Range	Preparation Effort
	Expressed as % of Complete Definition	Typical Purpose of Cost Opinion	Typical Estimating Method	Typical Variation in Low and High ranges (a)	Typical Degree of effort relative To Least Cost Index of 1(b)
Class 5	0% to 2%	Concept Screening	Capacity Factored. Parametric Models. Judgment or Analogy	L: -20% to -50% H: +30% to +100%	1
Class 4	1% to 15%	Study or Feasibility	Equipment Factored or Parametric Model	L: -15% to -30% H: +20% to +50%	2 to 4
Class 3	10% to 40%	Budget Authorization , or Control	Semi-Detailed Unit Costs with Assembly Level Line Items	L: -10% to -20% H: +10% to +30%	3 to 10
Class 2	30% to 70%	Control or Bid/ Tender	Detailed Unit Cost with Forced Detailed Take-Off	L: -5% to -15% H: +5% to +20%	4 to 20
Class 1	50% to 100%	Check Estimate or Bid/Tender	Detailed Unit Cost with Detailed Take-Off	L: -3% to -10% H: +3% to +15%	5 to 100

Note: (1) The state of process technology and applicable reference cost data availability affects the range markedly. The +/- value represents typical percentage variation of actual costs from the cost estimate after applying contingency (typically at a 50% level of confidence) for a given scope.
(2) If the range index value of "1" represents 0.005% of project costs, then an index value of 100 represents 0.5%. Estimate preparation effort depends on the size of the Project and the quality of estimating data and tools.

10.2 OPINION OF PROBABLE COST

The CIP projects consist of specific project recommendations to repair, replace, or upgrade existing facilities. Recurring consumable replacement and preventive maintenance requirements are generally excluded and not considered a capital improvement. The CIP projects for potable water have been divided into six (6) broad categories, sorted by the facility type. Each category is described below.

10.2.1 CIP ITEM W1: POTABLE WATER DISTRIBUTION SYSTEM

CIP item W1 includes projects that are part of the potable water distribution system, including pipelines, pipeline appurtenances, and metering infrastructure.

The potable water system elements are proposed for replacement because of the 12.8% water loss reported in 2020. The losses include meter inaccuracies and other possible contributors such as unaccounted connections. Reductions in water loss after successfully implementing the proposed CIP could significantly offset the initial investment. The City has replaced aging pipelines annually since 2010, totaling to more than eighty-nine (89) miles of replaced pipeline. In 2015, the City developed a funding plan that included revenue increases to continue this practice annually. Metering of the distribution system is also included in the W1 project list. The potable water distribution system is fully metered and the City has a meter replacement and maintenance plan in place. Meters smaller than 2" are replaced every fifteen to twenty (15 – 20) years, and all meters over two inches (2") are calibrated and repaired if necessary to ensure accuracy. In 2021, the City began a five year project to replace all water meters within its service area.

Additionally, from 2014 to 2015, MUED staff conducted an audit on all commercial properties/accounts to ensure all connections were accounted for in the City's billing system. This allowed the City to decrease unaccounted for water loss and the associated loss in revenue. The City is currently implementing Advanced Metering Infrastructure (AMI) system to improve efficiency in the meter readings.

10.2.2 CIP ITEM W2: HINCKLEY TREATMENT PLANT

CIP item W2 includes projects located at the Hinckley WTP. As Hinckley ages, equipment will need to be repaired, replaced, and upgraded. CIP project recommendations are related to the following:

- Sludge Presses
- Generators
- MCC Installations
- Aging Mechanical Equipment

10.2.3 CIP ITEM W3: TATE TREATMENT PLANT

CIP item W3 includes projects identified at the Tate WTP. As Tate ages, equipment will need to be repaired, replaced, and upgraded. CIP project recommendations are related to the following:

- Raw Water Influent Line
- Clarifier Coating Systems
- Clarifier Covers
- Influent Flash Mixer

- NaOCl Disinfection System
- EIMCO Settlers
- MCC Installations
- Aging Mechanical Equipment

10.2.4 CIP ITEM W4: POTABLE WATER BOOSTER PUMP STATIONS

CIP item W4 includes projects located at the City's potable water booster pump stations. These projects primarily focus on station refurbishment or rehabilitation but may require other capital improvements. Maintaining and improving these booster stations can increase energy and water treatment efficiency. Booster pump stations will require rehabilitation as equipment ages and efficiency declines. CIP project recommendations assume a typical service life of twenty (20) years. Projects should be scheduled on a rotating basis to distribute the financial impact over the planning horizon. Brady completed a condition, seismic, and structural assessment of all water facilities, which should be used to supplement these CIP project recommendations. The executive summary of the assessment can be found in Appendix F.

10.2.5 CIP ITEM W5: POTABLE WATER STORAGE RESERVOIRS

CIP item W5 includes projects related to both the concrete and steel potable water storage reservoirs, including refurbishment and upgrades to meet current standards. Also included are projects to increase facility reliability, correct known deficiencies, and improve water quality within the tank. Brady completed a condition, seismic, and structural assessment of all water facilities, which should be used to supplement these CIP project recommendations. The executive summary of the assessment can be found in Appendix F.

Corrosion is visible on some equipment and steel storage reservoir exterior walls. Although the cathodic protection cabinets at some reservoirs are showing signs of aging, they are still functional and in working condition but are nearing the end of their service life. Steel storage reservoirs should be inspected, maintained, and retrofitted with corrosion protection or replaced. Steel storage reservoirs typically require recoating and corrosion repairs every twenty (20) years. After recoating, the steel tanks must be dewatered, inspected, and minor coating repairs made at regular intervals during the coating life. Concrete storage reservoirs typically require less frequent replacement and maintenance.

10.2.6 CIP ITEM W6: GROUNDWATER WELLS

CIP item W6 includes project recommendations related to groundwater wells. As groundwater wells age, they need to be repaired, replaced, and upgraded. In addition to physical wear, some wells may require improvements to resolve groundwater contaminant issues. Perchlorate has been detected at some groundwater wells, and the City will need to assess the need for perchlorate treatment at several well sites. This evaluation will determine the level and type of treatment necessary at each site. Currently Perchlorate levels at Well No. 38 and Well No. 39 will require design of a wellhead treatment system beginning in 2022.

By 2030 – 2035, additional potable water supply will be needed to meet demands. The use of groundwater wells will be less costly than the expansion of surface WTP. It is recommended that inactive well sites be assessed for rehabilitation, including measures to mitigate groundwater contamination where necessary, and returned to active status to increase potable water supply.

10.2.7 FUTURE WATER SUPPLY PLANNING

The City may need to increase water treatment capacity at Hinckley and/or Tate to meet future demands unless potable water use is decreased, or groundwater wells are refurbished and reactivated. However, to increase capacity at the Tate WTP will require an assessment and improvement to the distribution system to eliminate the bottleneck presently existing at the discharge from the Tate WTP. The extent of these capacity upgrades will be determined based on the expansion of the recycled water system and future demands. The need to increase treatment capacity will also be affected by the future availability of surface water and the number of active groundwater sources. CIP project recommendations that affect water supply and production should be scheduled and implemented before planning year 2035, when potable water demand could exceed available supply.

10.2.8 CIP NP1: NON-POTABLE WATER SYSTEM IMPROVEMENTS

CIP item NP1 includes project recommendations related to the repair, replacement, and improvement of non-potable wells, non-potable meter replacements, and general system deficiencies. Non-potable groundwater well sites should be inspected and maintained regularly, and rehabilitated every ten (10) years. Meters should be inspected and maintained regularly, including periodic accuracy verification, and replaced in accordance with manufacturer recommendations. The non-potable water system could be improved by implementing an AMI system to reduce operating costs. Three (3) CIP project recommendations will improve system hydraulics. These projects are recommended for completion within the next five (5) years.

Also included in NP1 are recommendations to expand and consolidate the non-potable water system at the City's discretion. This would include construction of new pipelines, along with associated booster stations and other necessary equipment.

10.2.9 CIP NP2: RECYCLED WATER SYSTEM IMPROVEMENTS

CIP NP2 includes project recommendations related to the repair, replacement, improvement, and expansion of the recycled water system. This includes the construction of two (2) storage reservoirs and several pipeline additions and replacements, and assumes all pipelines will be replaced within seventy (70) years

Also included in NP2 are recommendations to expand and consolidate the recycled water system at the City's discretion. This would include construction of new pipelines, including a transmission line from the WWTP's proposed storage reservoirs located in System 1 to System 2 at the Texas St. non-potable pumping station. It will also be necessary to construct a new non-potable reservoir or repurpose the existing potable water reservoir at this site. Improvements are also needed for other pipelines, associated booster stations, and other necessary equipment.

10.3 PROJECTS AND COSTS

10.3.1 POTABLE WATER SYSTEM CIP PROJECT RECOMMENDATIONS

Potable water system 5-year CIP project recommendations and estimated costs are provided in Table 10-3, and summarized by category in Chart 10-1.

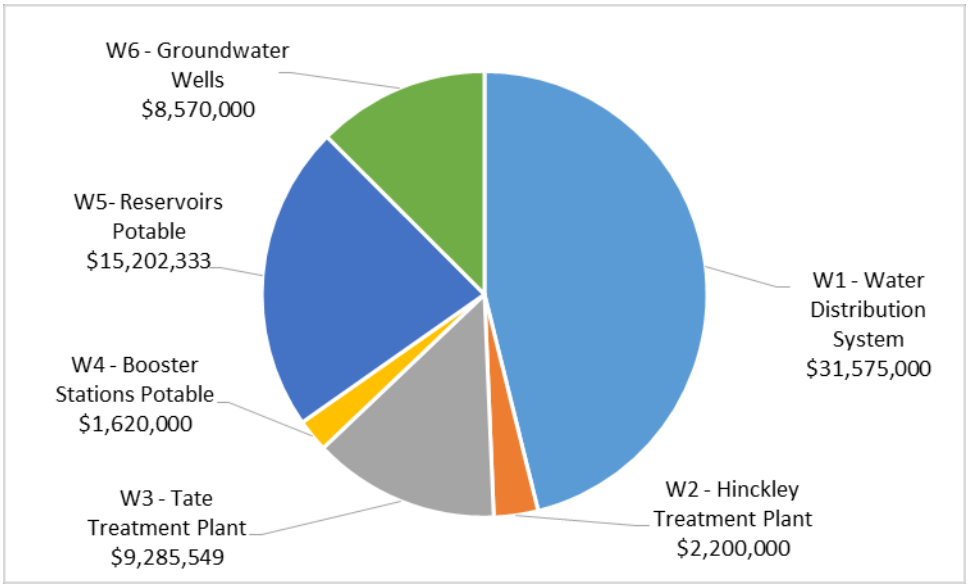

Chart 10-1: Potable Water System 5-Year CIP Cost Summary

Table 10-3: 5-Year Potable Water CIP Recommendations

W1	Water Distribution System	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
W1-1	Pipeline Replacement	$4,500,000	$4,500,000	$4,500,000	$4,500,000	$4,500,000	$22,500,000
W1-2	Water Meter Replacements	$1,815,000	$1,815,000	$1,815,000	$1,815,000	$1,815,000	$9,075,000
CIP W1 Subtotal		**$6,315,000**	**$6,315,000**	**$6,315,000**	**$6,315,000**	**$6,315,000**	**$31,575,000**

W2	Hinckley Treatment Plant	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
W2-1	Hinckley Sludge Press	$355,000	$345,000	$0	$0	$0	$700,000
W2-2	Replace Aging Mechanical & MCC Equipment	$0	$90,000	$470,000	$470,000	$470,000	$1,500,000
CIP W2 Subtotal		**$355,000**	**$435,000**	**$470,000**	**$470,000**	**$470,000**	**$2,200,000**

W3	Tate Treatment Plant	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
W3-1	Tate Transmission Line Replacement	$835,549	$1,900,000	$1,900,000	$0	$0	$4,635,549
W3-2	Tate Clarifier Recoating	$0	$1,000,000	$0	$0	$0	$1,000,000
W3-3	Tate Clarifier Covers	$0	$1,560,000	$0	$0	$0	$1,560,000
W3-4	Tate Influent Flash Mixer	$0	$0	$180,000	$0	$0	$180,000
W3-5	Tate NaOCl Disinfection System	$0	$0	$360,000	$0	$0	$360,000
W3-6	Replace Aging Mechanical & MCC Equipment	$0	$90,000	$470,000	$470,000	$520,000	$1,550,000
CIP W3 Subtotal		**$835,549**	**$4,550,000**	**$2,910,000**	**$470,000**	**$520,000**	**$9,285,549**

W4	Booster Stations	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
W4-1	1750 Blend Manifold Replacement	$120,000	$0	$0	$0	$0	$120,000
W4-2	Booster Pump Station Rehabilitation	$300,000	$300,000	$300,000	$300,000	$300,000	$1,500,000
CIP W4 Subtotal		**$420,000**	**$300,000**	**$300,000**	**$300,000**	**$300,000**	**$1,620,000**

W5	Reservoirs - Potable	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
W5-1	Reservoir Sites Fixed Generators	$0	$750,000	$300,000	$300,000	$300,000	$1,650,000
W5-2	Sunset Reservoir Replacement	$2,000,000	$6,000,000	$0	$0	$0	$8,000,000

W5-4	Seismic Assessment Improvements	$1,000,000	$2,891,000	$0	$1,571,333	$0	$5,462,333
W5-5	Texas Grove Reservoir Stair Installation	$0	$0	$0	$90,000	$0	$90,000
CIP W5 Subtotal		**$3,000,000**	**$9,641,000**	**$300,000**	**$1,961,333**	**$300,000**	**$15,202,333**

W6	Groundwater Wells	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
W6-1	Groundwater Well Equipping Rehabilitation	$514,000	$506,000	$600,000	$600,000	$600,000	$2,820,000
W6-2	East Lugonia Well 3 Replacement	$0	$0	$3,000,000	$0	$0	$3,000,000
W6-3	Groundwater Contamination Mitigation	$575,000	$575,000	$1,000,000	$0	$0	$2,150,000
W6-4	Entrained Air Treatment Assessment	$0	$0	$600,000	$0	$0	$600,000
CIP W6 Subtotal		**$1,089,000**	**$1,081,000**	**$5,200,000**	**$600,000**	**$600,000**	**$8,570,000**

Potable water system 20-year CIP project recommendations and estimated costs are provided in Table 10-4, and summarized by category in Chart 10-2. Annually recurring projects are assumed to have the same costs each year. Figure 10-1 provides a map depicting the remaining service life of the potable water system facilities.

Table 10-4: 20-Year Potable Water CIP Recommendations

Project	2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
W1 - Water Distribution System	$31,575,000	$31,575,000	$31,575,000	$31,575,000	$126,300,000
W2 - Hinckley Treatment Plant[1]	$2,200,00	N/A	N/A	N/A	$2,200,00
W3 - Tate Treatment Plant[1]	$9,285,549	N/A	N/A	N/A	$9,285,549
W4 - Booster Stations - Potable	$1,620,000	$3,883,690	$1,620,000	$1,620,000	$8,743,690
W5 - Reservoirs - Potable	$15,202,333	$5,198,000	$180,000	$180,000	$20,760,333
W6 - Groundwater Wells[2]	$8,570,000	$7,912,500	$5,487,500	$6,750,000	$28,720,000
Total	**$68,452,882**	**$48,569,190**	**$38,862,500**	**$40,125,000**	**$196,009,572**

Note: (1) A condition assessment was performed in 2021 on the Hinckley and Tate Treatment Plants based on current conditions. Hinckley is 36-year-old, and Tate is 55 years old. The mechanical and electrical equipment may need to be replaced in the future, but the information is not included and is labeled as Optional. The cost opinion for replacing mechanical and electrical equipment was based on the 2022 economic indices. The potential cost for each plant's electrical and mechanical replacement is estimated at 1-2 million dollars per year in the CIP planning horizon. Therefore, a detailed conditional mechanical and electrical equipment assessment is needed to determine accurate mechanical and electrical CIP elements. (2) The 20-year cost for W6 - Wellhead Treatment is dependent on the Wellhead Evaluation.

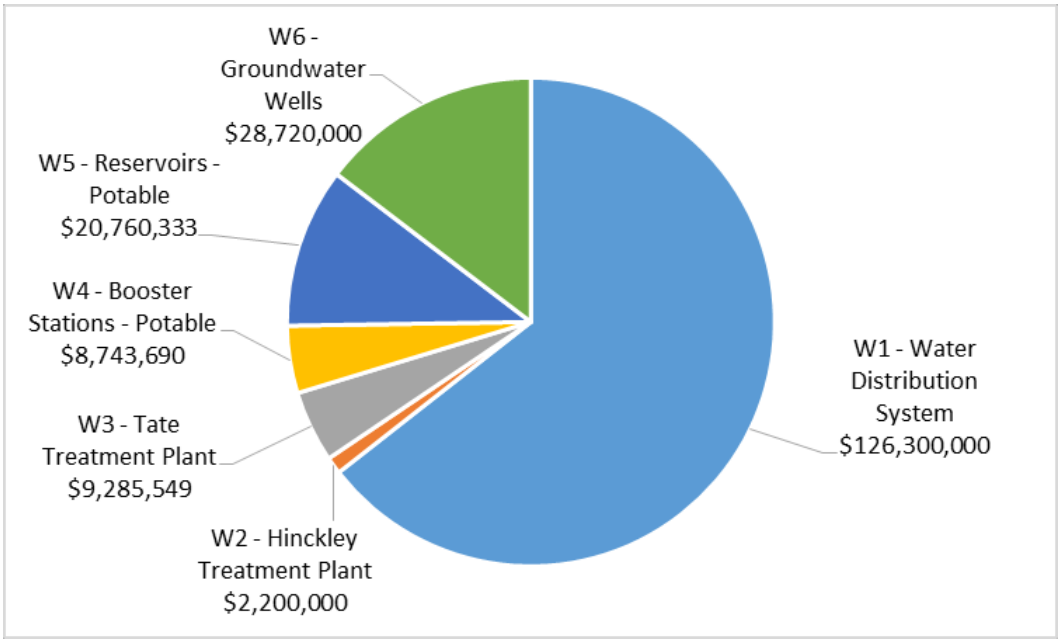

Chart 10-2: Potable Water System 20-Year CIP Cost Summary

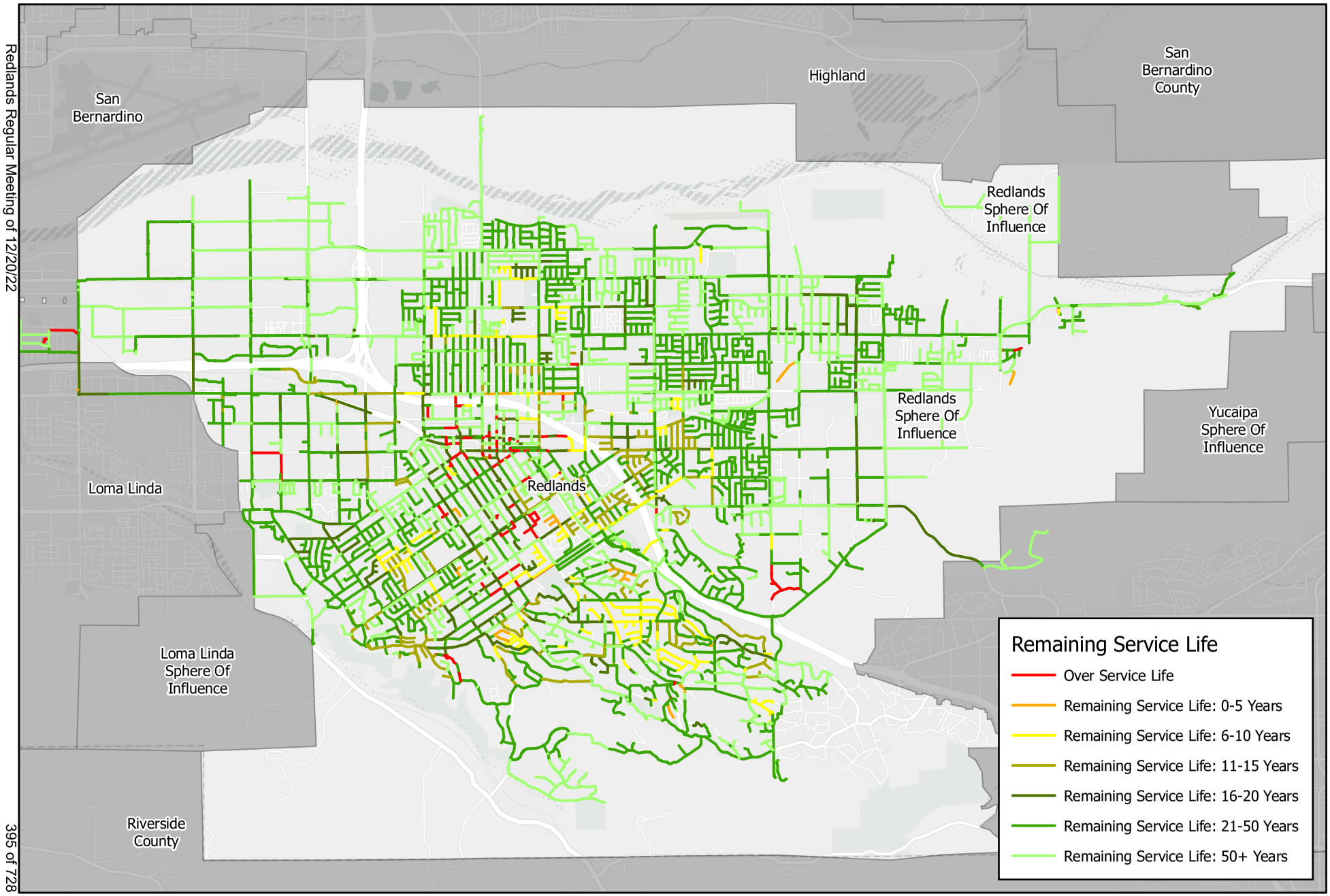

Figure 10-1
Redlands Potable Water Pipeline Remaining Service Life

10.3.2 NON-POTABLE WATER SYSTEM CIP PROJECT RECOMMENDATIONS

Non-potable water system 5-year CIP project recommendations and estimated costs are provided in Table 10-5.

Table 10-5: 5-Year Non-Potable Water CIP Recommendations

NP 1	Non-potable Water Improvements	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
NP 1.1	Pipeline Replacement and Expansion	$0	$0	TBD	TBD	TBD	TBD
NP 1.2	Groundwater Well Equipment Rehabilitation	$267,000	$136,000	$375,000	$375,000	$375,000	$1,528,000
CIP NP 1 Subtotal		**$267,000**	**$136,000**	**$375,000**	**$375,000**	**$375,000**	**$1,528,000**

NP 2	Recycled Water Improvements	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	5-year Total
NP 2.1	Recycle Water Reservoirs - design two & build in phases	$734,839	$0	$3,000,000	$0	$3,000,000	$6,734,839
NP 2.2	Pipeline Replacement and Expansion	$0	$0	$750,000	$750,000	$3,000,000	$1,500,000
CIP NP 2 Subtotal		**$734,839**	**$0**	**$3,750,000**	**$750,000**	**$3,000,000**	**$8,234,839**

Non-potable water system 20-year CIP project recommendations and estimated costs are provided in Table 10-6. Annually recurring projects are assumed to have the same costs each year. Figure 10-2 provides a map depicting the remaining service life of the non-potable and recycled water systems facilities.

Table 10-6: 20-Year Non-Potable Water CIP Recommendations

NP 1	Non-potable Water Improvements	2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
NP 1.1	Pipeline Replacement and Expansion	TBD	$1,000,000	$1,000,000	$1,000,000	$3,000,000
NP 1.2	Groundwater Well Equipment Rehabilitation	$1,528,000	1,007,800	$1,108,600	$1,219,500	$4,863,900
NP 1.3	Meter Replacement	$0	$0	$55,000	$55,000	$110,000
CIP NP 1 Subtotal		**$1,528,000**	**$2,007,800**	**$2,163,600**	**$2,274,500**	**$7,973,900**

NP 2	Recycled Water Improvements	2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
NP 2.1	Recycle Water Reservoirs - design two & build in phases	$6,734,839	$0	$0	$0	$6,734,839
NP 2.2	Pipeline Replacement and Expansion	$1,500,000	$1,000,000	$1,000,000	$1,000,000	$4,500,000
CIP NP 2 Subtotal		**$8,234,839**	**$1,000,000**	**$1,000,000**	**$1,000,000**	**$11,234,839**
CIP NP Total		**$9,762,839**	**$3,007,800**	**$3,163,600**	**$3,274,500**	**$19,208,739**

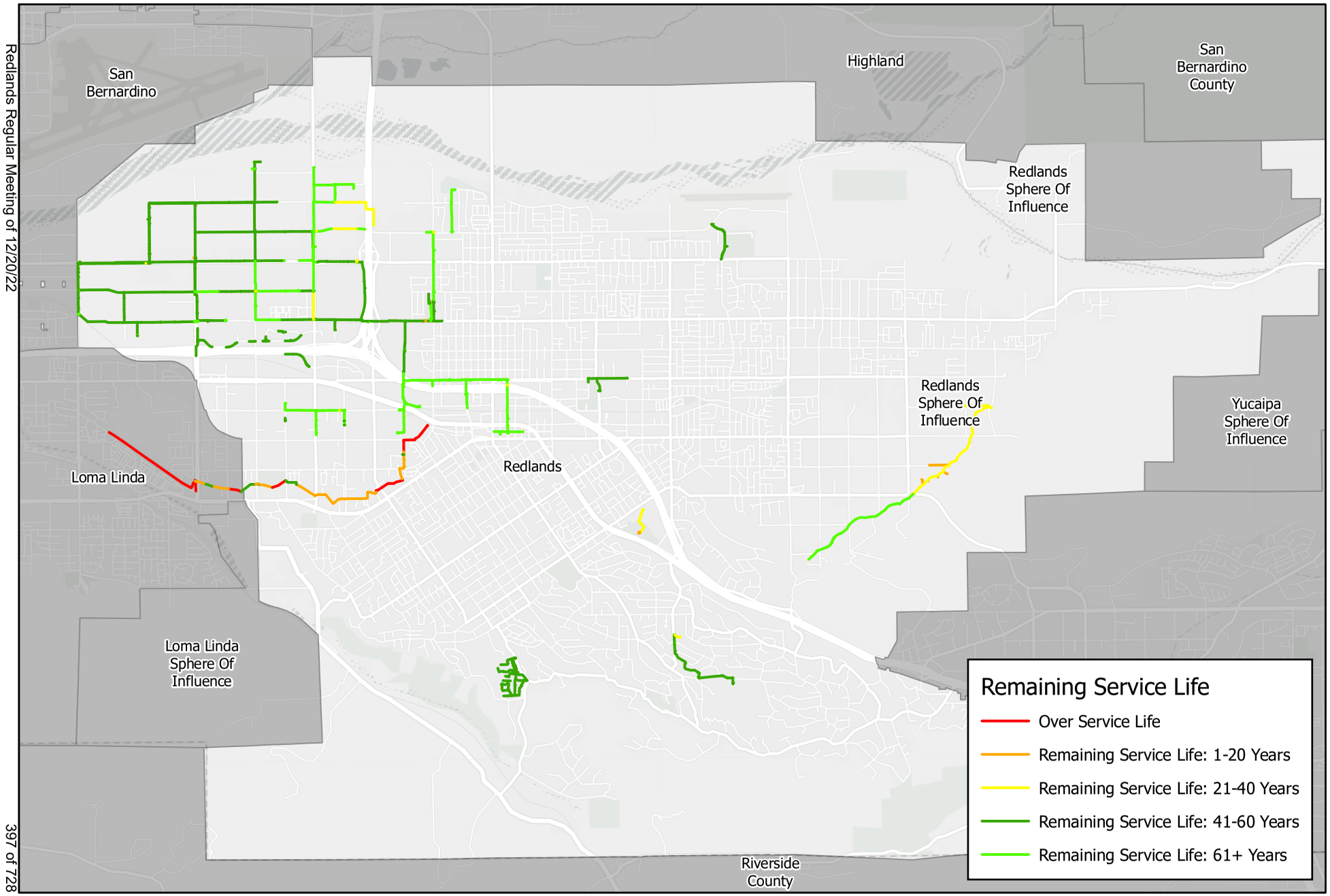

Figure 10-2
Redlands Non-Potable Water Pipeline Remaining Service Life

10.4 THE CAPITAL IMPROVEMENT PROJECTS

The CIP project recommendations assume that projects that meet regulatory compliance requirements and resolve hydraulic deficiencies will be constructed first. Project priorities are likely to change as economic conditions and community demographics change. A comprehensive analysis of each project is necessary prior to implementation. Cost estimates are provided in 2022 dollars, and assume no property acquisition is necessary.

10.4.1 POTABLE WATER SYSTEM CIP PROJECT DESCRIPTIONS

CIP W1-1: Water Pipeline Replacements - Hydraulics

5-Year Budget Allocation: $22,500,000

Priority: High

It is recommended that the City consider an annual project to replace pipelines to resolve hydraulic deficiencies as provided in Table 10-7. The first three (3) years should focus on replacing existing pipes with deficiencies that create high velocities and/or low pressures within the system. This project replaces approximately 27,193 LF of existing undersized pipelines with new eight inch (8”), twelve inch (12”), and twenty-four inch (24”) diameter pipelines at twelve (12) locations.

Table 10-7: Pipeline Replacement

CIP	New Diameter (in)	Length (ft)	Location	Issue	Budget	Year
CIP-1	24	2046	San Bernardino Ave/Agate Ave	High Velocity	$654,720	2024
CIP-2	8	203	Mill Creek Rd	High Velocity	$33,000	2022
CIP-3	8	649	Naples Ave/Jasper Ave	Fire Flow	$104,000	2023
CIP-4	12	11979	Wabash Ave/6th Ave	Fire Flow	$2,395,800	2024
CIP-5	8	1142	Pennsylvania Ave/De Anza St	Fire Flow	$183,000	2022
CIP-6	8	1569	Park Ave/Cook St	Under-Sized	$251,000	2023
CIP-7	N/A	TBD	Valencia Dr	High Velocity	TBD	TBD
CIP-8	N/A	TBD	San Bernardino Ave	High Velocity	TBD	TBD
CIP-9	N/A	TBD	Park Ave/New Jersey St	Fire Flow	TBD	TBD
CIP-10	N/A	TBD	Emerald Ave/Newport Ave	Fire Flow	TBD	TBD
CIP-11	N/A	TBD	Sunset Dr/Fairmont Dr	Fire Flow	TBD	TBD

Approximately 34,320 LF (6.5 miles) of the City's 382 miles of water distribution pipelines are currently beyond the expected service life of the pipe material. It is recommended that the City continue to proactively replace aging pipelines once the material service life is reached. Chart 10-3 shows the service life distribution remaining in the City's pipelines.

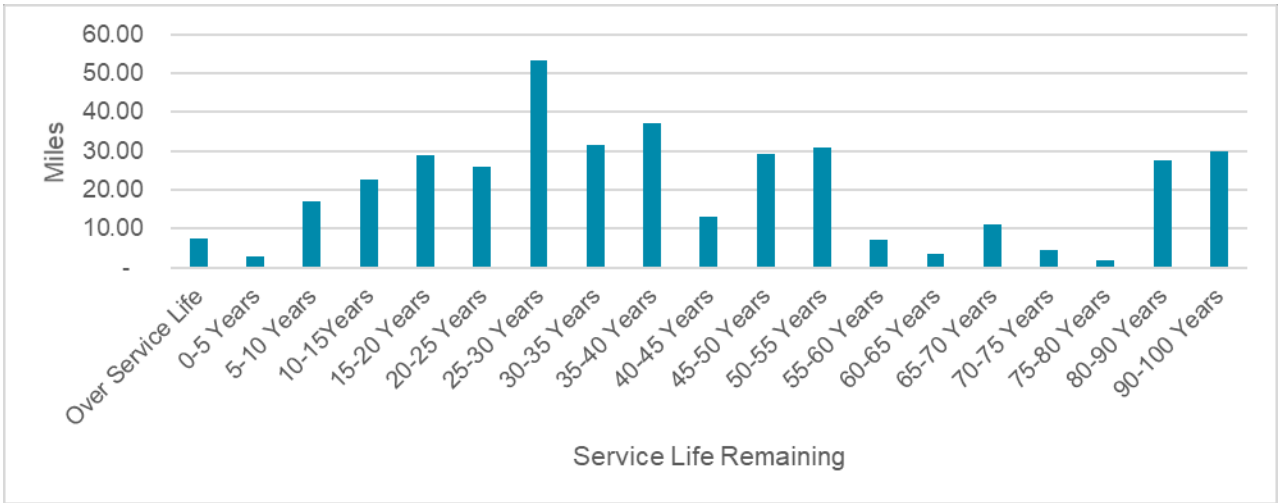

Chart 10-3: Potable Water Pipeline Remaining Service Life

Most of the City's pipelines have twenty to fifty (20-50) years of remaining service life, with about seventy (70) miles of pipeline service life ending in the next twenty (20) years. The City should continue to replace a portion of these lines each year, with a replacement goal of approximately 28,000 LF each year, which will replace all pipelines within seventy (70) years. Pipeline segments with hydraulic deficiencies are recommended to be replaced first, followed by aging asbestos-cement pipelines. All new pipelines should a minimum of eight inches (8") in diameter. Replacement pipeline segments should be selected yearly based on age and maintenance history, and coordinated with other projects, such as scheduled street rehabilitation projects.

CIP W1-2: Water Meter Replacement

5-year Budget Allocation: $9,075,000

Priority: Medium

In 2021, the City began a five (5) year annual project to replace all water meters. Table 10-8 provides the meter size and number of meters being replaced and Table 10-9 provides the number of meter size and number of meters being retro-fitted. It is recommended that this project be continued to reduce water loss within the system, and significantly increase revenue. After completion of the project, water meter accuracy testing should be conducted annually, meters will be replaced based on the test results, not on a predetermined length of time.

In 2022, the City began to update its meters to Advanced Metering Infrastructure (AMI) to maintain accurate billing and analysis data. AMI will encourage water conservation and reap benefits for business and residential customers by allowing them the ability of real time water consumption.

Table 10-8: Meter Replacement

Meter Size (in)	Number of Meters
5/8"	117
3/4"	4,682
1"	7,415
1 1/2"	521

Meter Size (in)	Number of Meters
2"	497
3"	50
4"	30
6"	13
8"	8
12"	1
Total	**13,334**

Table 10-9: Meter Retro-Fit

Meter Size (in)	Number of Meters
5/8"	60
3/4"	3,417
1"	4,346
1 1/2"	233
2"	259
3"	27
4"	22
6"	14
8"	6
Total	**8,384**

CIP W2-1: Hinckley Sludge Press

5-Year Budget Allocation: $700,000

Priority: Medium

This project engineers and installs a sludge press at Hinckley to reduce labor, equipment, and disposal costs associated with processing sludge residual to the treatment process.

CIP W2-2: Replace Aging Mechanical & MCC Equipment

5-Year Budget Allocation: $1,500,000

Priority: Medium

This project replaces and upgrades electrical and mechanical equipment at Hinckley as necessary. A comprehensive condition assessment should be completed annually to identify the remaining service life of equipment in order to prepare for replacement.

CIP W3-1: Tate Transmission Line Replacement

5-Year Budget Allocation: $4,635,549

Priority: High

A Condition, Structural, & Seismic Assessment completed by Brady identified this as a top-priority project. The City selected a consultant to engineer the replacement of this raw water influent line, with the goal of constructing the project in the near-future.

CIP W3-2: Tate Clarifier Recoating

5-Year Budget Allocation: $1,000,000

Priority: Medium

The Tate Clarifier Recoating project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this CIP is $1,000,000.

CIP W3-3: Tate Clarifier Covers

5-Year Budget Allocation: $1,560,000

Priority: Medium

The Tate Clarifier Covers project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this CIP is $1,560,000.

CIP W3-4: Tate Influent Flash Mixers

5-Year Budget Allocation: $180,000

Priority: Low

The Tate Influent Flash Mixers project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this CIP is $180,000.

CIP W3-5: Tate NaOCl Disinfection System

5-Year Budget Allocation: $360,000

Priority: Low

The Tate NaOCl Disinfection System project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this CIP is $360,000.

CIP W3-6: Replace Aging Mechanical & MCC Equipment

5-Year Budget Allocation: $1,550,000

Priority: Medium

This project replaces and upgrades electrical and mechanical equipment at Tate, as necessary. A comprehensive condition assessment should be completed annually to identify the remaining service life of equipment in order to prepare for replacement.

Coating loss and corrosion are present on the EIMCO settlers at the plant. To maintain the equipment from metal loss and eventual failure from corrosion, the ferrous surfaces should be abrasively blasted and recoated.

CIP W4-1: 1750 Blend Manifold Replacement

5-Year Budget Allocation: $120,000

Priority: High

The 1750 Blend Manifold Replacement project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this CIP is $120,000.

CIP W4-2: Booster Pump Station Rehabilitation

5-Year Budget Allocation: $1,500,000

Priority: Medium

The booster pump stations will need rehabilitation and refurbishment once they approach the end of their service life. Their typical service life is based on 20-year equipment life. It is recommended the City rehabilitate a single pump station each year, and the station refurbishments can be placed on a 15-year cycle. It is recommended the station priority be based on efficiency, condition, and age. Table 10-10 provides a list prioritized on efficiency from SCE pump tests.

Table 10-10: Booster Pump Stations Rehabilitation

Name	Total Num. Pumps	Cumulative HP	Average Efficiency
South	5	800	49.8
Fifth Avenue	4	450	59.2
HAWC	6	975	66.6
Sand Canyon	2	200	66.7
Country Club	4	550	68.1
Agate	3	300	68.7
Dearborn	2	300	69.9
Texas	4	1000	73.5
Smiley Heights	2	80	52.0
Ford Park	2	N/A	N/A
Ward Way	2	100	56
Mill Creek	2	125	56.0

CIP W5-1: Reservoir Sites Fixed Generators

5-Year Budget Allocation: $1,650,000

Priority: High

The Reservoir Sites Fixed Generators project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this CIP is $1,650,000

CIP W5-2: Sunset Reservoir Replacement

5-Year Budget Allocation: $8,000,000

Priority: High

This project engineers and replaces a three (3) MG potable water storage reservoir that is seismically deficient.

CIP W5-4: Seismic Assessment Improvements

5-Year Budget Allocation: $5,462,333

Priority: Medium

The City currently owns and operates eighteen (18) storage tanks ranging from 0.2 to 10.6 MG, provided in Table 10-11. The total budget varies every year based on the recommendations from Brady.

In the first year, the City should conduct a preliminary inspection of each reservoir to assess the interior and exterior coating conditions and determine if additional upgrades are required to meet current seismic design standards and California Division of Occupational Safety and Health Agency (CalOSHA) requirements. The priority of the projects should be based on the recommendations from Brady.

Table 10-11: Storage Tank Reservoirs

Priority	Name	Capacity (MG)	Type	Year Constructed
1	Texas Grove	3.9	Steel	2004
2	Ward Way	2	Steel	1958
3	Mill Creek 1	0.2	Steel	1962
4	Smiley	3	Steel	1964
5	South	2	Steel	1964
6	Arroyo	0.5	Steel	1965
7	Sunset	3	Steel	1967
8	Agate	3	Steel	1968
9	Crafton	3.5	Steel	1970
10	Sand Canyon	3.5	Steel	1973
11	Mill Creek 2	0.2	Steel	1987
12	Texas Street	1	Steel	1956
13	Highland	10	Concrete	1976
14	Country Club 1	1	Concrete	1924
15	Country Club 2	2	Concrete	1969
16	Margarita	2.4	Concrete	1964
17	Dearborn	10.6	Concrete	1974
18	Fifth Avenue	5	Concrete	1974

Table 10-12 provides the reservoirs Brady proposes need replacing.

Table 10-12: Replacement per Seismic Study

Priority	Name	Capacity (MG)	Type	Year Constructed	Seismic Replacement Budget	Replacement Year
1	Sunset	3	Steel	1967	$8,000,000	2023

CIP W5-5: Texas Grove Reservoir Stair Installation

5-Year Budget Allocation: $90,000

Priority: TBD

The Texas Grove Reservoir Stair project is on the City's CIP list and scheduled for 2022. Therefore, it is recommended that this project remains in the CIP, and the cost be escalated twenty percent (20%) to bring the prices to the year 2022 dollars. The recommended budget in this CIP is $90,000.

CIP W6-1: Groundwater Well Equipping Rehabilitation

5-Year Budget Allocation: $2,820,000

Priority: High

The groundwater well pumping equipment will need rehabilitation and refurbishment once they approach the end of their service life. Their typical service life is based on 20-year equipment life. It is recommended the City rehabilitate one or more groundwater well-pumping equipment each year, provided in Table 10-13. Once all wells are rehabilitated, the City should evaluate the oldest wells to determine when the next rehabilitation should start. It is recommended the station priority be based on efficiency, condition, and age. The list below is prioritized on efficiency from SCE pump tests. The costs below represent above-ground equipment only and do not include subsurface improvements.

Table 10-13: Groundwater Wells

Name	Capacity (GPM)	Status in 2019	Efficiency	HP	Rehab Budget	Rehab Year
Well 10	1400	IDLE	0.27	75	$120,000	2025
Maguet 2	400	IN USE	0.35	25	$50,000	2025
Rees	550	IN USE	0.43	250	$112,640	2024
Lugonia 3	250	IN USE	0.43	25	$35,010	2022
Madeira	600	IN USE	0.62	150	$119,058	2023
Crafton	1700	IDLE	0.65	200	$280,000	2026
Airport 2	1000	IN USE	0.68	300	$133,760	2024
Airport 1	1500	IN USE	0.70	350	$124,907	2022
Mentone Acres 2	1600	IN USE	0.71	300	$138,502	2023
Orange Street	1500	IN USE	0.74	300	$280,000	2027
North Orange Street 1	2900	IN USE	0.77	350	$128,460	2022
Church Street	2000	IN USE	0.77	400	$139,304	2024
Well 39	1250	IN USE	0.78	250	$133,030	2023
North Orange Street 2	2900	IN USE	0.78	350	$275,000	2031

Name	Capacity (GPM)	Status in 2019	Efficiency	HP	Rehab Budget	Rehab Year
Well 38	1600	IN USE	0.78	300	$123,230	2023
Agate 2	1750	IDLE	0.79	200	$175,000	2023
Lugonia 6	1300	IDLE	UNK	75	$67,850	2022
Muni	2200	IN USE	UNK	300	$314,000	2022
Well 13	3300	IDLE	UNK	300	$120,000	2025
Mill Creek 2 - Surface Water	850	IN USE	0.64	75	$225,000	2025
Mill Creek 2A - Surface Water	600	IN USE	.49	50	$67,200	2024
Note: (1) UNK-Un known; (2) Mill Creek 2 and 2A are detached potable wells used to deliver water to the Mill Creek Mutual Water System located on Highway 38.						

CIP W6-2: East Lugonia Well 3 Replacement

5-Year Budget Allocation: $3,000,000

Priority: Low

The East Lugonia Well 3 Replacement project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this $2,600,000.

CIP W6-3: Groundwater Contaminate Mitigation

5-Year Budget Allocation: $2,150,000

Priority: Medium

The City currently has wells with contaminates that exceed or are close to exceeding mandated MCLs. Although these wells are not currently used for potable water production, they will eventually be needed. It is recommended that the City implement a study to determine the water quality and the most appropriate treatment process for the specific contaminants identified, provided in Table 10-14. The project's first phase would be implementing a study, followed by treatment implementation for one set of wells each year. This approach would complete all projects by 2035 to meet future demands. The costs assume blending treatment could not be used to meet MCLs. Typically, SWRCB-DDW no longer permits blending as an alternative, but requires best available technology to achieve MCL regulation limits. Furthermore, many emerging constituents of concern could most likely become regulated as a MCL. Therefore, the budget costs should be revisited once the study is complete.

Table 10-14: Well Study and Treatment

Study and Evaluation	Cost
Wellhead Treatment Design for Wells 38, 39, Church St, and Orange	$575,000
Wellhead Treatment Design for Agate 1 and 2, Crafton, Wells 10 and 13	$575,000
Wellhead Treatment and Implementation for Wells 38 and 39	$1,000,000

CIP W6-4: Entrained Air Treatment Assessment

5-Year Budget Allocation: $600,000

Priority: Low

The Entrained Air Treatment Assessment project is on the City's CIP list. Therefore, it is recommended that this project remains in the CIP. The recommended budget for this $600,000. It is recommended that the City elaborates the entrained air issue further to capture the urgency and cost estimate better.

10.4.2 NON-POTABLE WATER SYSTEM CIP PROJECT DESCRIPTIONS

CIP NP1-1 Pipeline Replacement and Expansion

5-Year Budget Allocation: TBD

Priority: Low

It is recommended that the City budget for hydraulically deficient pipeline replacements, provided in Table 10-15. The NPW CIP should be focused heavily on replacing existing pipes with deficiencies that create high velocities or pressures as predicted by the hydraulic model performed for this Master Plan. The replacement of this pipeline is divided into 4 separate areas, grouped by segments in the exact physical location.

Table 10-15: Non-Potable Pipeline Replacement

CIP	New Diameter (in)	Length (ft)	Street	Issue	Budget
NP-CIP-1	12	2,608	Pioneer Ave	High Flow Velocity	$610,000
	12	624	Alabama St	High Flow Velocity	$146,000
Subtotal		**3,232**			**$756,000**
NP-CIP-2	8	1,900	Orange Tree Ln	High Flow Velocity	$296,000
	10	1,468	Orange Tree Ln	High Flow Velocity	$286,000
Subtotal		**3,368**			**$582,000**
NP-CIP-3	16	1,006	Texonia Park	High Flow Velocity	$314,000
	12	1,200	W Lugonia Ave	High Flow Velocity	$281,000
Subtotal		**2,206**			**$595,000**
Total		**8,806**			**$1,933,000**

This NPW CIP includes the expansion of the City's non-potable water system. This would include expanding non-potable water in System 2 and the connection of the Hillside Memorial Park, Ford Park, and Redlands Country Club to the system. This will also leave the potential for the City to connect to the Bear Valley non-potable water system if the City chooses.

CIP NP1-2 Groundwater Well Equipping Rehabilitation

5-Year Budget Allocation: $1,528,000

Priority: Medium

The City has eleven (11) non-potable wells. These wells will need rehabilitation and refurbishment once they approach the end of their service life, provided in Table 10-16. Their typical service life is based on 20-year equipment life. It is recommended the City rehabilitate at least one pump each year. Once all wells are rehabilitated, the City should evaluate the oldest wells to determine when the subsequent rehabilitation should start. It is recommended the stations priority be based on efficiency, condition, and age. The list below is prioritized on efficiency from SCE pumps tests. The cost below represents above-ground equipment only and does not include subsurface improvements.

Table 10-16: Ground Water Well CIP list with the Cost Opinion

Name	Capacity (gpm)	Status in 2019	Efficiency	HP	Rehab Budget	NPW CIP Year
Well 31A	850	Idle	31.9%	450	$195,230	2022
Well 11	300	In Use	47.9%	60	$64,180	2023
California	500	In Use	52.0%	100	$100,000	2024
Well 16	1500	In Use	53.2%	150	$280,000	2025
New York Street	1500	In Use	54.9%	150	$111,050	2023
Well 41	800	In Use	Unknown	100	$280,000	2027
Well 14	2200	In Use	Unknown	125	$280,000	2028/2029
Crafton	1750	idle	59.8%	200	$280,000	2030/2031
Well 32	1850	In Use	60.5%	200	$119,122	2022
Well 30A	1500	In Use	61.2%	150	$280,000	2034/2035
Agate 1	1800	Idle	77.5%	200	$350,000	2038

CIP NP2-1: Recycle Water Reservoirs

5-Year Budget Allocation: $6,734,839

Priority: Medium

This NPW CIP was included in the City's NPW CIP list and focuses on designing two steel reservoirs to improve the management and operation of the City's recycled water system. In addition, the City plans to construct one reservoir near the WWTP to store reclaimed water from the treatment facility. These reservoirs could significantly increase the efficiency of the recycled/non-potable water system.

CIP NP2-2: Pipeline Replacement and Expansion

5-Year Budget Allocation: $1,500,000

Priority: Medium

Approximately 10,000 LF of the City's recycled/non-potable pipelines are over the service life. Another 9,200 LF of the pipeline will reach the end of their service life within 20 years. There is also another 31,300 LF of pipeline that material or installation data is unknown and may need to be replaced. The figure below shows the remaining service life based on the material and age of the pipe. Chart 10-4 shows the service life distribution remaining in the City's pipelines.

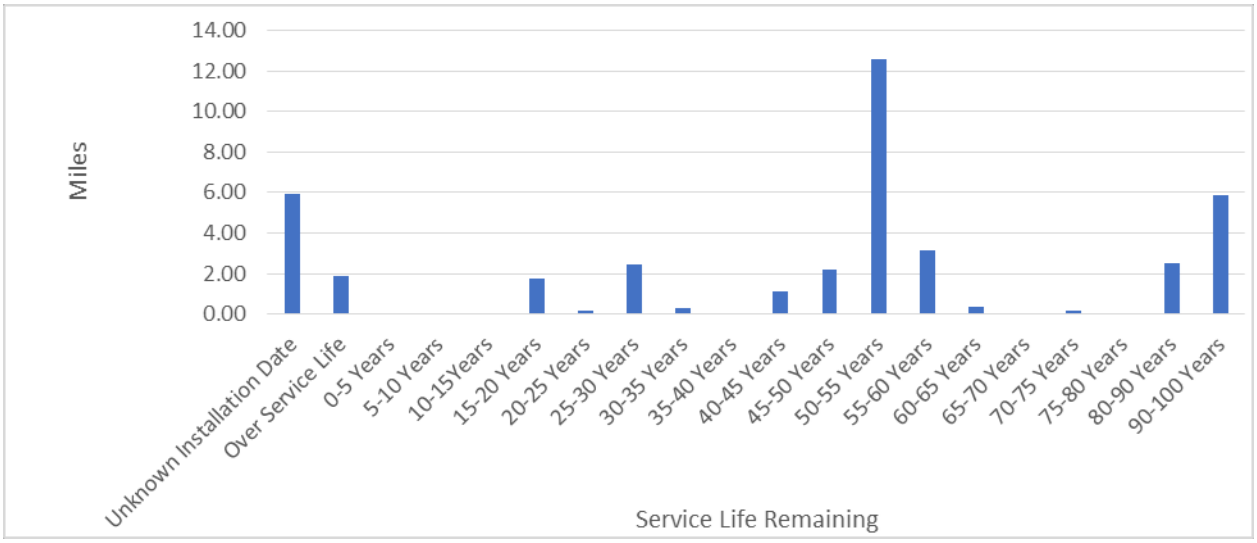

Chart 10-4: Recycled/Non-potable Water Pipeline Remaining Service Life

Most of the City's recycled/non-potable pipelines have a remaining service life of forty to sixty (40-60) years left. To replace all pipelines in 70 years, the City would need to replace approximately 3,100 LF of pipelines. However, due to the number of pipelines with unknown service age, a pipeline over the service life, and pipeline found during the hydraulic modeling, the first five years increase funding to $1,500,000 to replace these pipelines. For the following 15 years, the funding needed is $2,000,000. It is recommended that the City first replace the short pipelines identified in CIP NP1-1 and then prioritize replacing aging pipelines. Pipelines less than 8 inches in diameter should be replaced with 8-inch diameter pipelines. Replacement of pipeline segments should be selected yearly based on age breakage history and coordinated with other CIP projects, such as street improvements or pavement replacement. As a result, the City can benefit from upcoming pavement replacement or avoid replacement in freshly paved streets.

This NPW CIP includes the expansion of the City's recycled water system. The construction of the new pipelines in the first five-year period would primarily include the 8-inch pipelines, with a few pipeline segments more significant than 8 inches where needed.

11 LIST OF APPENDICES

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City of Redlands' Hinckley and Tate Water Treatment Plants, Agate and Sunset reservoirs and site booster pumps, wells and ancillary equipment Condition Assessment

APPENDIX B

Hydraulic Model Calibration Results

APPENDIX C

CIP Cost Tables

APPENDIX D

Water System Inefficiency Cost Opinion

APPENDIX E

CIP Projects Remaining After Quality Control

APPENDIX F

Condition, Seismic, and Structural Assessment Executive Summary

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APPENDIX A

Condition Assessment: City of Redlands' Water Treatment Plants

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CONDITION ASSESSMENT

City of Redland's Water Treatment Plants

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Introduction

The City of Redlands Water System utilizes two (2) surface water treatment plants.

The total combined capacity of these facilities is approximately 32 million gallons per day (MGD). Below is a plant process summary based on the site visit with an outline of identified CIP projects:

2 The Horace P. Hinckley Water Treatment Plant

The Horace P. Hinckley Water Treatment Plant (Hinckley WTP) is a conventional water

treatment plant (WTP) utilizing rapid mix flocculation, sedimentation, filtration, and disinfection continuously. The nominal plant capacity is 12 MGD. The peak flow rate is limited to 14.5 MGD based on a maximum filtration rate of 6 gallons per minute per square foot (gpm/sq ft) based on the California Department of Public Health (CDPH). The "firm" capacity is 12 MGD with one filter out-of-service. The treatment plant capacity is expandable to a maximum ultimate capacity of 36 MGD.

The Hinckley WTP treats raw water from the Santa Ana River (SAR), Mill Creek, and State Water Project (SWP). Santa Ana River is the primary source for the plant. Up to 100 percent of the plant's raw water can be supplied from the Santa Ana River during the winter. During hot-weather periods in the summer, the source of 20 to 40 percent of the plant's raw water can be SWP.

2.1 Treatment Process

The first step in the conventional water treatment is the pre-treatment. In this stage, the three chemicals injected into the static mixer's first stage are chlorine, aluminum sulfate, and cationic polymer—the aluminum sulfate and cationic polymer act as a coagulant to help the creation of the floc. Chemical dosages are selected based on historical data (water quality versus required chemical dose), operator experience, and jar test data. However, suppose the raw water quality should change to that for which no historical chemical dosage data is available. In that case, the primary coagulant, coagulant aid, and filter aid dosages should be determined by performing jar and filterability index tests on the raw water. The chlorine dosing will start the disinfection process, prevent the bio growth on the filter and pipes, and assist with any taste and odor issues that the plant could have. The influent flow is conveyed and controlled through the off-site piping and valving influent flowmeter, control valve, and influent static mixer. Though part of the influent meter and mixing process, the flow splitter box is not used, as Hinckley WTP has not been expanded. The primary coagulant aluminum chlorohydrate (ACH), coagulant aid cationic polymer (C308), and disinfectant sodium hypochlorite (NaOCl) may be added to the raw water upstream and downstream of the inline mechanical and static mixer before the flocculation/sedimentation basins.

The second step is coagulation, and flocculation is when suspended solids get together to form larger particles called the "floc." Flocculation is achieved through two flocculation basins, each designed for a flow of 9 mgd. Each flocculation basin has three stages and contains vertical shaft flocculation rotated by an external gear reducer powered by electric motors. The electric motors can run at various speeds using six variable frequency drives (VFDs). Cationic polymer C308 can be added to the third-stage flocculation basin, as needed, to increase the efficiency of the flocculation process.

The third step is sedimentation. In this step, larger particulates settle to the floor of the sedimentation basin. The chemicals added in the first step assist the sedimentation process in helping the particulates settle at the floor of the settling tank. Solids separation is achieved through the sedimentation basins located close to the flocculation basins. Each sedimentation basin is designed for a flow of 9 mgd and includes inclined plate settlers and an aluminum-supported fabric cover to reduce the disinfection dose being affected by sunlight.

The fourth step is filtration. The media filtration system consists of three media filters (anthracite over sand and gravel) equipped with an automated backwash system. The individual filters are designed for a 2.4 mgd (6 gpm per sq. ft) flow and are equal-loading, declining-rate, self-backwashing types with an air scour system and a filter-to-waste system. However, usually, backwashes are manually initiated by the operators.

The fifth step is post-disinfection. We add chlorine to treated water to complete disinfection before it is discharged into the distribution system.

The sixth step is the backwash. The particulates and polymer in the filters are attached to media and then clog them up. The backwash process starts by draining the filters to pre-set point and then air scouring for approximately ten minutes, breaking down any particulates stuck in the system. Finally, backwashing is performed to clean the filters to keep their continuous operation and prevent water from overflowing. The recycled wash water system consists of a waste wash water basin, recycle pump station, recycle wash water treatment plant, and a polymer feed room. The recycled wash water system receives flow primarily from the waste wash water discharged during filter backwashing. A smaller fraction of flow is obtained intermittently from the flocculation and sedimentation basins drainage and overflows lines, from chemical feed room drainage lines, sludge decant pond, and water quality sample pump discharge (grab samples from the laboratory sink). Spent filter backwash wash water flows by gravity from each filter to the waste wash water recovery basin located at the west end of the plant site. The waste wash water basin has a concrete bottom with concrete and soil cement sidewall and a capacity of 0.15 MG. The basin can hold wash water from three consecutive filter backwashes (based on a volume per backwash of 46,500 gallons). A sump on the basin floor located at the north end removes the sludge that settles in the basin. The sump pump in the floor of the basin discharges into the sludge drying ponds. Sludge is removed from the wash water recovery basin as needed, and no less than annually, to prevent large amounts of sludge buildup.

The operation of the filtration process determines flows into the wash water basin. When a filter is backwashed, the basin receives the backwash flow. Decanted supernatant water from the sludge lagoons is pumped from the decant structures to the wash water recovery basin. On occasions when the wash water package treatment plant is out of service, the wash water is sent to a series of percolation ponds located to the north of the sludge drying ponds.

The recycle treatment plant system can treat 1,000 gpm (1.5 mgd) if the influent flow rate permits. The recycle treatment plant system consists of a single-impeller flash mixer first stage and a twin-impeller second stage flocculation mixer followed by an incline plate settler to enhance sludge removal. Anionic polymer A6320 (A6320) is used as the primary coagulant. Anionic polymer A210 (A210) is used for the dewatering of sludge. Anionic polymer is stored and prepared in the utility building. Jar tests are performed to set the optimum dose. Typical dose rates of 0.5 to 2.0 milligrams per liter (mg/L) for the primary coagulant A6320. The SCADA system sends an alarm to the operator when effluent turbidity from the recycle wash water treatment plant is 2.0 nephelometric turbidity units (NTU) or higher. Flow and turbidity are monitored and recorded continuously.

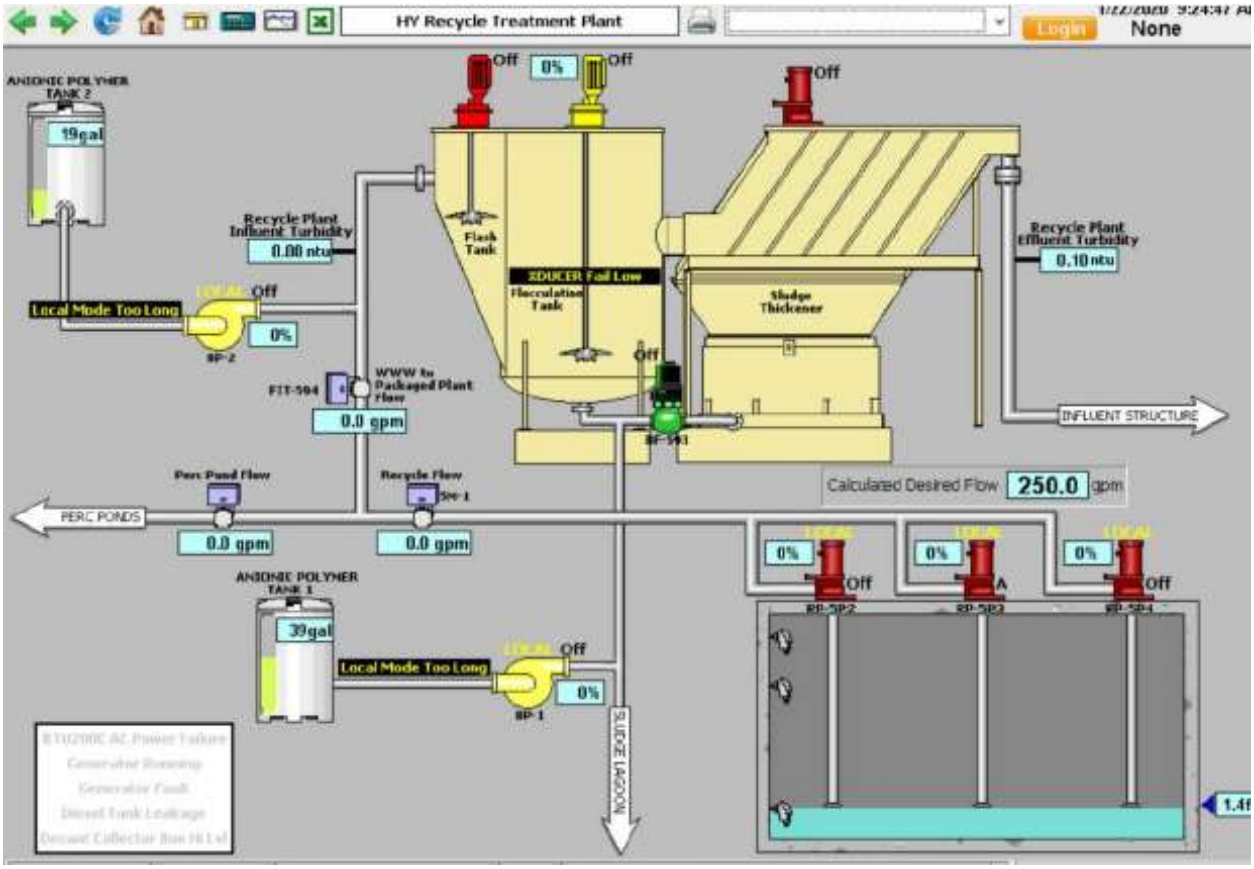

Figure 1 The Wash Water Recycled Water Treatment Plant

The recycle treatment plant effluent is continually monitored by SCADA and grab samples are pulled daily for comparison. The effluent of the recycling plant is returned to the influent structure ahead of the chemical feed application. The recycle treatment plant is shown in the above Figure. The SCADA system enables the operator to:

- Adjust the operating condition of the three washwater return pumps.
- Control and monitor the recycle flow rate.
- Control and monitor the flocculator (mixer) drive.
- Control and monitor the polymer feed system.
- Control and monitor the waste discharge valve and related instrumentation monitoring
- and online analysis results.

The chlorine is injected after combined filter effluent before going to the Agate storage reservoir. Solids removed from the sedimentation basin flow by gravity to four sludge lagoons located at the northwest end of the plant site. Each lagoon has a capacity of 40,000 cubic feet and provides one hundred thirty-one days of sludge storage at a nominal plant capacity of 12 MGD. Sludge production at a plant flow rate of 12 MGD is estimated to be approximately 305 cu ft of dry sludge per day. On a monthly basis, the sludge in each lagoon is dried and removed by mechanical means for off-site disposal to a landfill. The supernatant from the sludge ponds flows by gravity to a collection box.

From the collection box, the supernatant is pumped to the wash water basin influent. A process schematic of the Hinckley WTP is presented in ***Figure 2***.

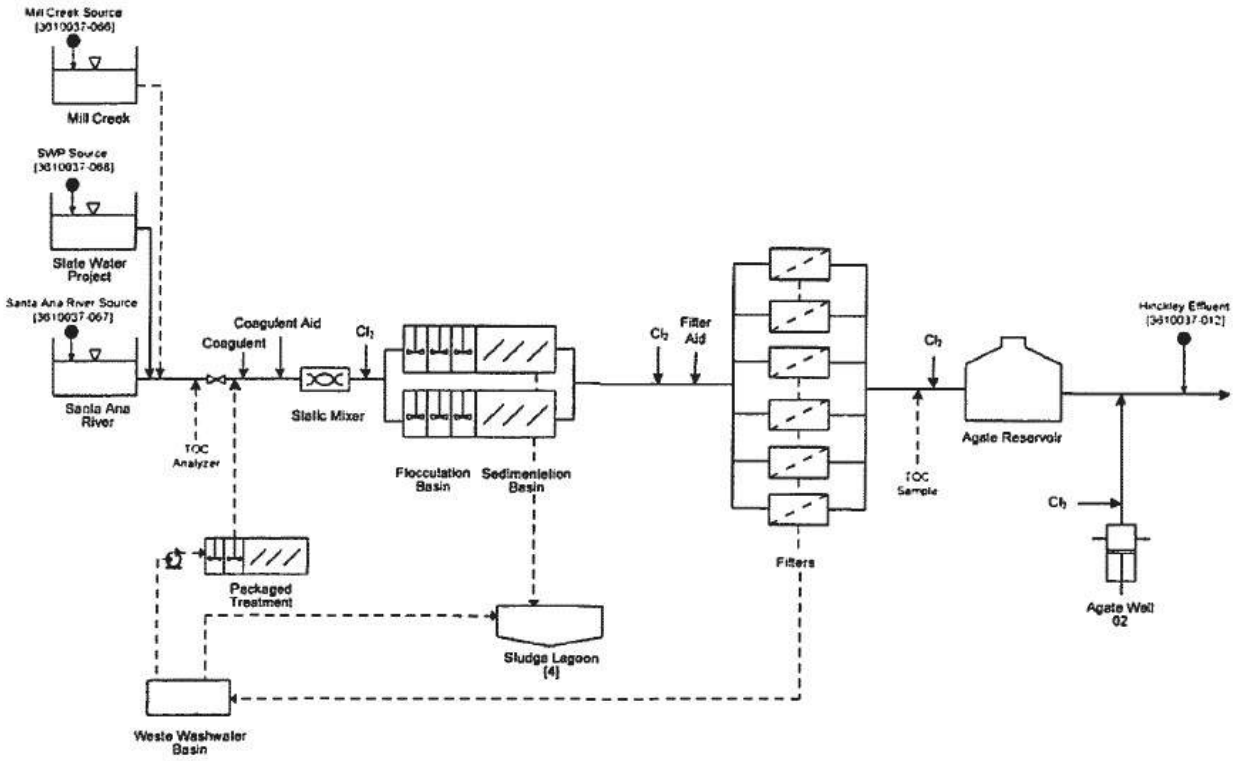

Figure 2 Hinckley WTP

2.2 CIP Recommendations

2.2.1 CIP 1

The package wash water treatment plant is installed to treat the filter wash water effluent. The operator shared the concern with the age of installed equipment, the installed capacity, and operation complexity. The replacement unit (s) may be furnished with the new technology to provide adequate capacity. The operator thought that a dissolved air flotation or filter technology might be applicable. The cost of the proposed replacement technology could be $2M for the 1.5 mgd capacity. The final capacity would be 4.5 mgd with a refurbishment price tag of $6 M.

2.2.2 CIP 2

Capacity upgrade. The current plant capacity is sufficient for the current demand. However, with the population increase in the future, the demand increase would require additional plant capacity. Therefore, the capacity could be increased in 12 mgd increments in phases 1 and Phase 2. The Phase 1 increase could cost $25M, with a similar estimate for Phase 2.

2.2.3 CIP 3

Remove provisional support of seismic flex tend at the reservoir and provide permanent support. The cost of this upgrade maybe $25,000.

2.2.4 CIP 4

Upgrade MCC and replace dated electrical equipment at the cost of $500,000.

2.2.5 CIP 5

Replace dated mechanical equipment at the cost of $1M.

2.3 Hinckley Water Treatment Plant Facilities

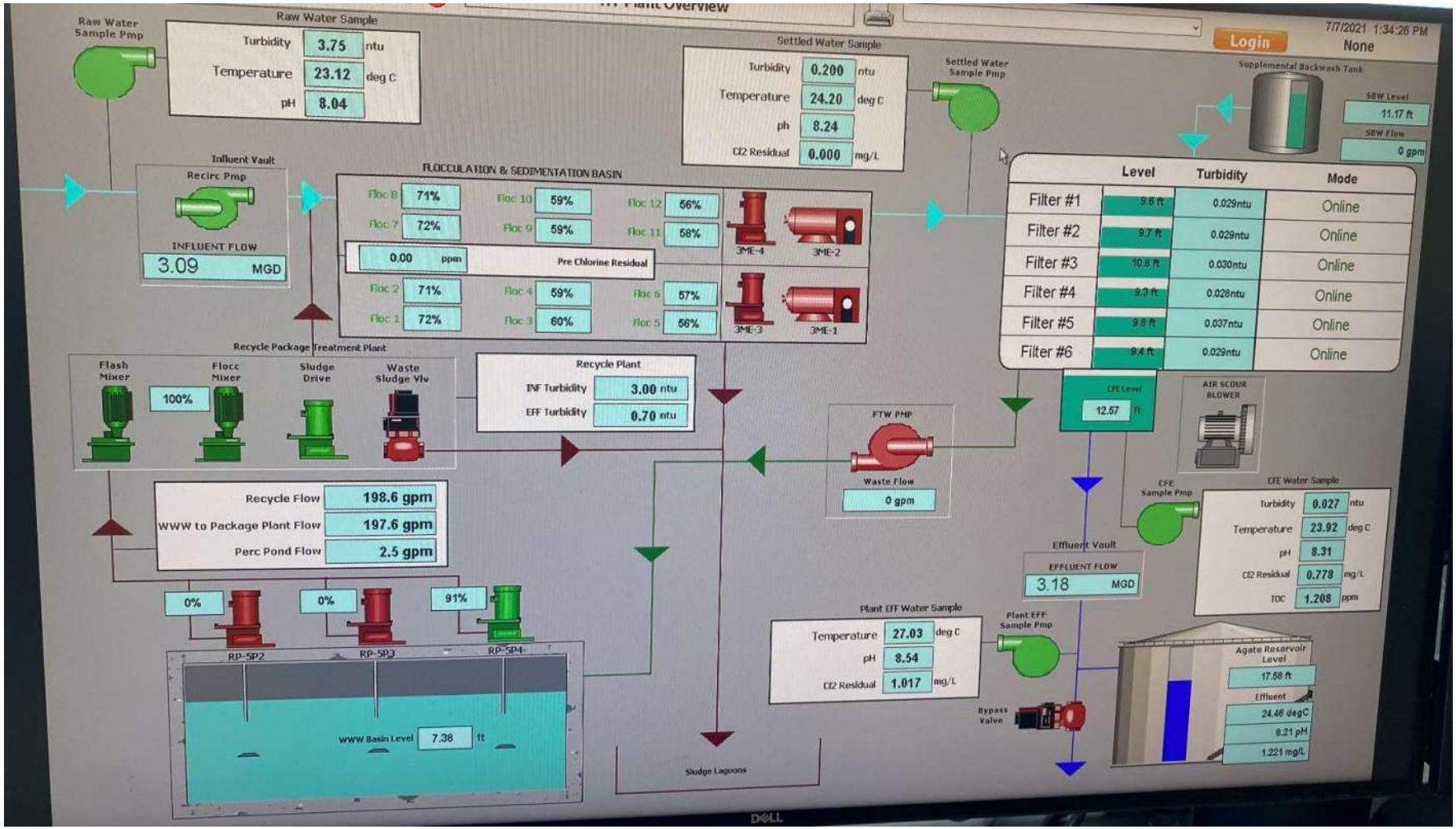

Figure 3 The City of Redlands Hinckley WTP SCADA

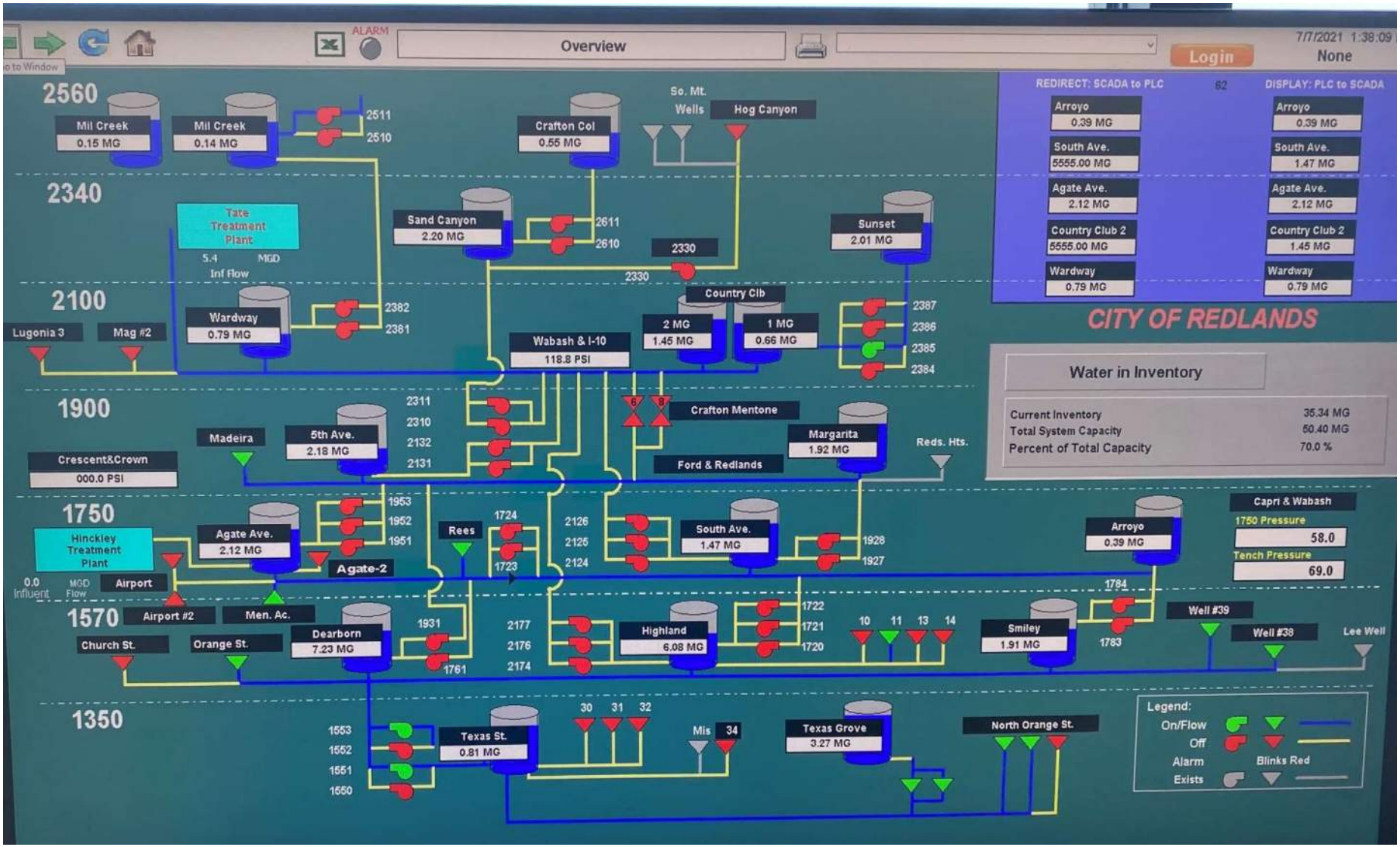

Figure 4 The City of Redlands Water Supply System Supervisory and Data Control System

Figure 5 Hinckley WTP Flocculation and Sedimentation Basin Inlet

Figure 6 Hinckley WTP Filters

Figure 7 Hinckley WTP Filters Layout

Figure 8 Hinckley WTP Flocculation/Sedimentation/Settling

Figure 9 Hinckley WTP Flocculation/Sedimentation/Settling

Figure 10 Settler Sludge Lagoons

Figure 11 Hinckley WTP Filter Backwash Basin

Figure 12 Hinckley WTP Generator Building

2.3.1 Agate Reservoir

Filtered water is discharged to the 3-million-gallon (MG) Agate Reservoir before entering the utility distribution system. The Agate Reservoir includes a baffle system to increase detention time. An engineered blending plan was added to blend three wells' water with the Hinckley WTP effluent. These blending wells are Agate No. 1, Agate No. 2, and the Crafton, well as combining sources. Agate reservoir is a 3 mg steel tank with an average detention time of 7.2 hrs, a nominal detention time of 5 hours, and an ultimate detention time of 3.6 hrs.

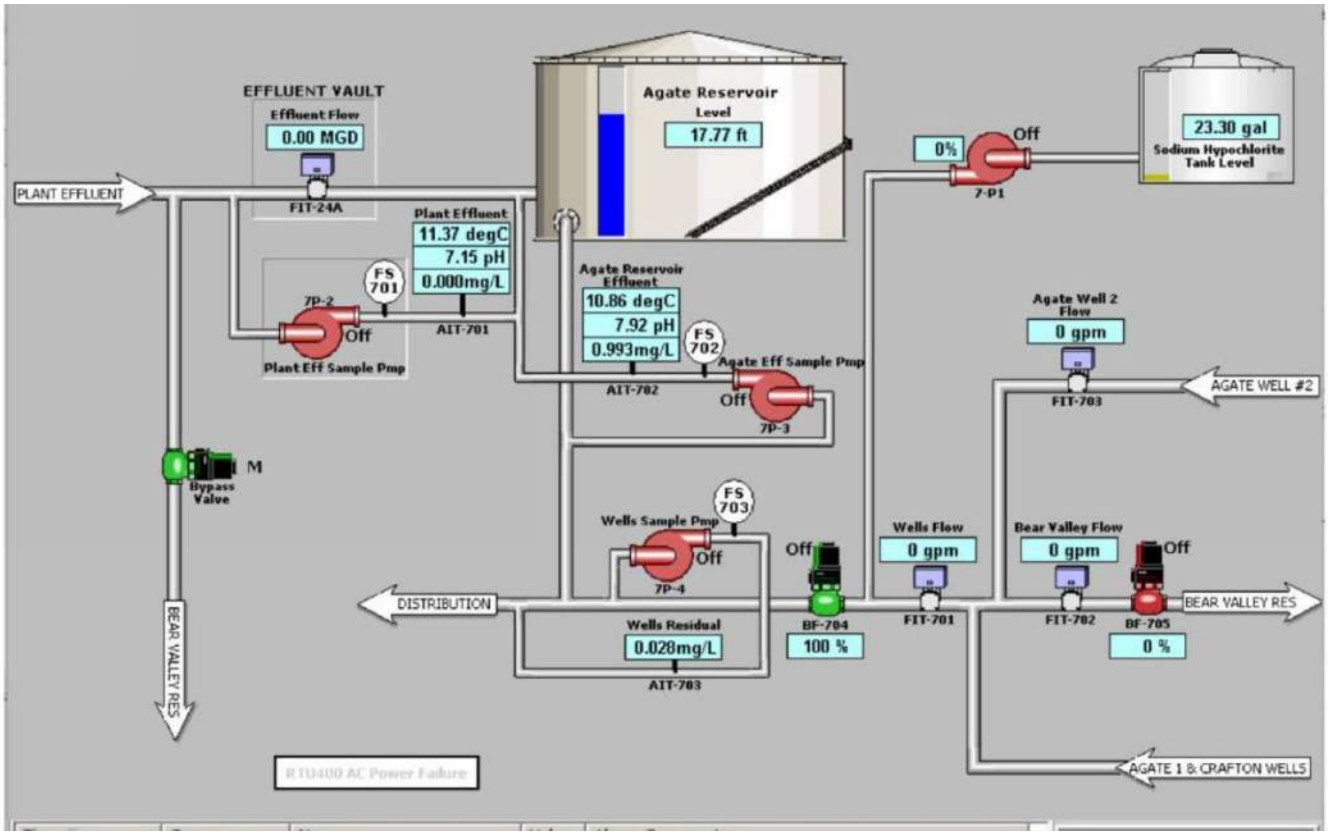

Figure 13 Agate Reservoir SCADA Layout

Figure 14 Agate Reservoir and Booster PS

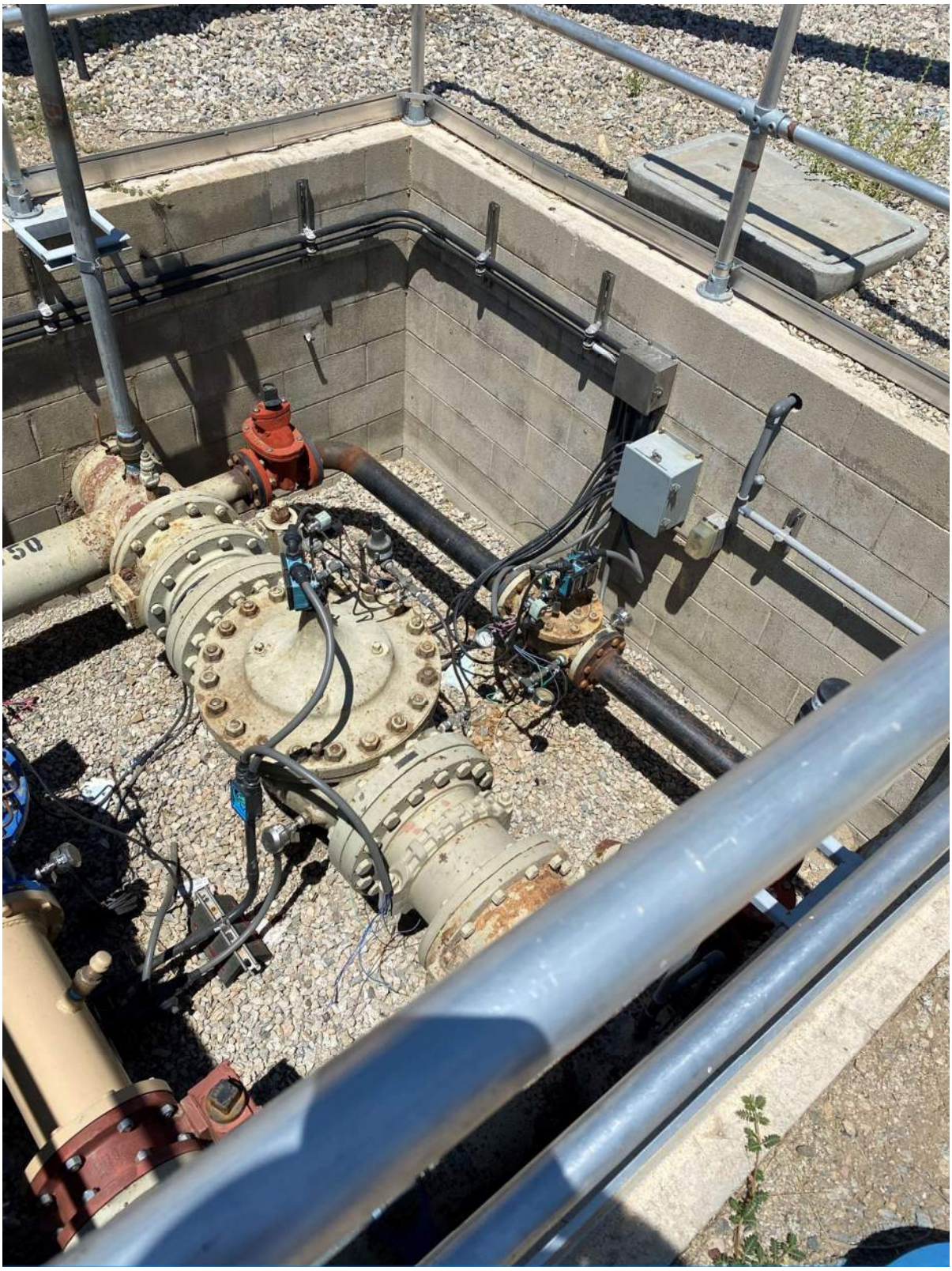

Figure 15 Cla-Valve Flow Control Valve at Agate Reservoir

Figure 16 Agate Reservoir Seismic Expansion Unit Supported Off the Concrete Slab

Figure 17 Agate Reservoir Roof

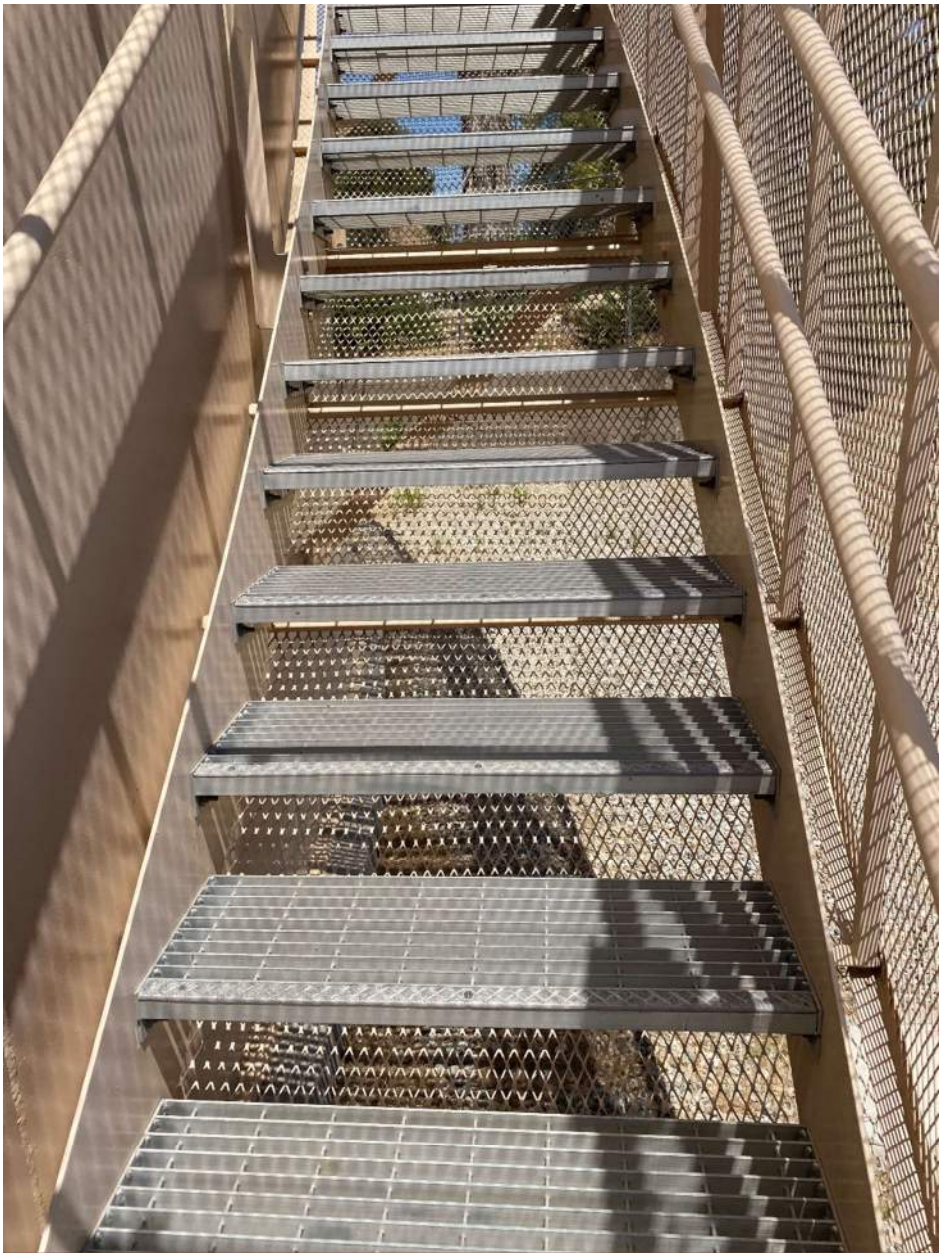

Figure 18 Agate Access Stairway with Partial Enclosure Safety Cage

Figure 19 MCC Center for Agate Reservoir PS

Figure 20 Agate Reservoir Pre-Treatment

Figure 21 Disinfectant Storage at Agate Site

Figure 22 Chemical Storage

Figure 23 Booster PS Discharge Valves and Pressure Gauges

3 The Tate Water Treatment Plant

The Tate Water Treatment Plant (Tate WTP) was initially commissioned in 1967 to treat surface water from Mill Creek. Since then, several process upgrades have been implemented, with the latest being completed in June 2005. Tate WTP consists of chemical treatment, chemical mixing through an inline static mixer, flocculation, and sedimentation through two EIMCO reactor clarifiers (each equipped with four adjustable speed, vertical turbine flocculation), filtration with four dual media gravity filters (anthracite over sand), and chlorine disinfection. The maximum plant flow rate is 20 MGD with all filters online and 14.9 MGD with one filter offline for backwashing.

A process schematic of the Tate WTP is presented on a SCADA screen in the Figure below.

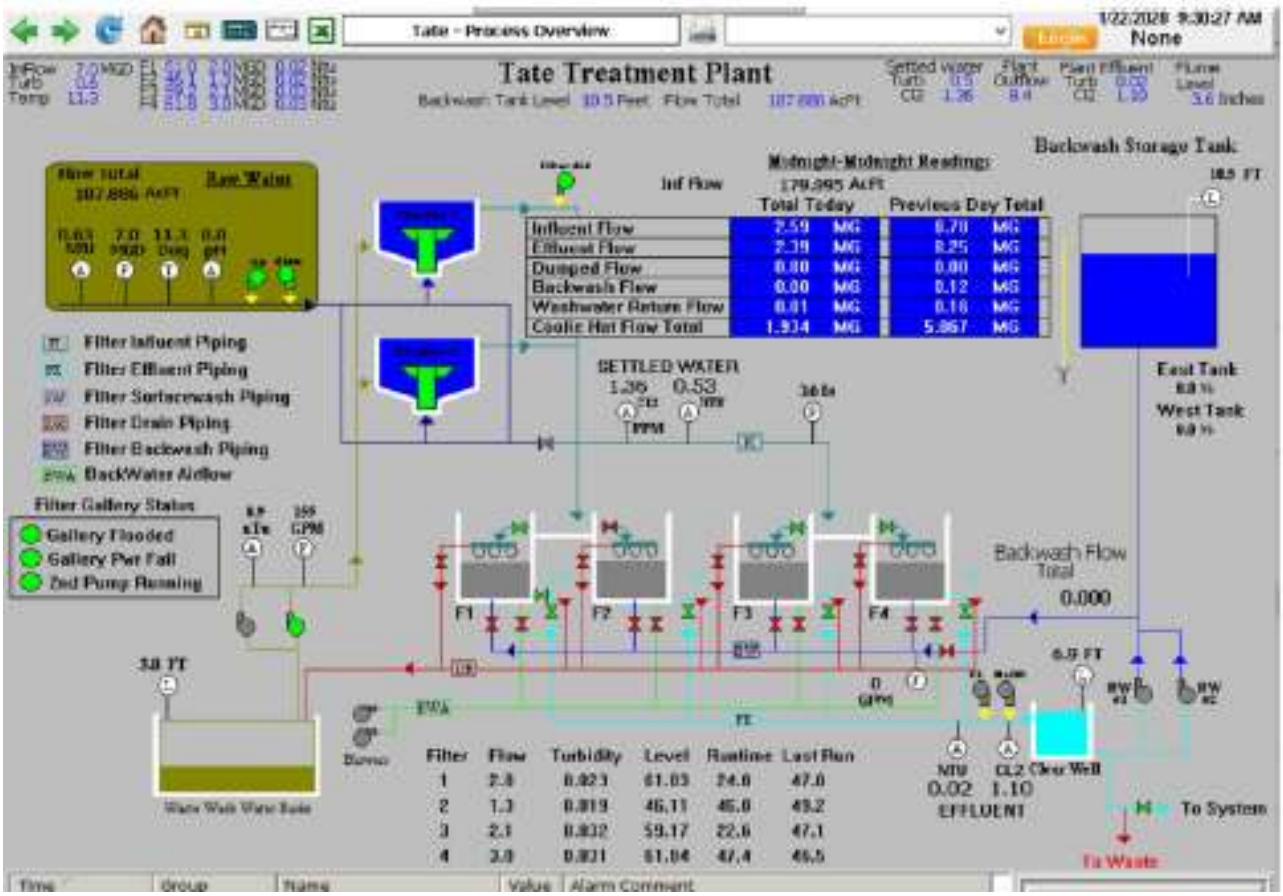

Figure 24 Tate WTP SCADA Screen

Historically, Tate WTP had received its raw water supply exclusively from Mill Creek. However, the availability of the Mill Creek supply had been reduced during drought periods and is subject to interruptions during high turbidity events. To increase the raw water supply reliability, the City obtained a permit amendment from the CDPH to treat State Water Project (SWP) and Santa Ana River (SAR) water at Tate WTP.

3.1 Treatment Process

The first step in the conventional water treatment is the pre-treatment. Flow is conveyed and controlled through off-site piping and valving, influent flowmeter and control valve, influent sampling system, influent static mixer, and flow splitter box. Chemical mixing of primary coagulant, aluminum chlorohydrate (ACH), and coagulant aid (C-308P) are achieved by the static mixer before reactor clarifiers. Chlorine is also added for disinfection.

The second step is coagulation, and flocculation is when suspended solids get together to form larger particles called the "floc." Flocculation and sedimentation are achieved through two EIMCO reactor clarifiers, each equipped with four adjustable speed vertical turbine flocculation that operates in a continuous operation mode.

The third step is sedimentation. In this step, larger particulates settle to the floor of the sedimentation basin. The chemicals added in the first step assist the sedimentation process in helping the particulates settle at the floor of the settling tank. Solids separation is achieved through the sedimentation basins located close to the flocculation basins. There are two settlers, ten mgd in capacity each, 106 ft in dia, four flocculation, vertical turbine type, adjustable frequency drive, 5 HP motor, 30 min detention time, 50 ft in dia with 3.2 hr detention time.

The fourth step is filtration. The media filtration system consists of dual media filters (anthracite over sand), a filter backwash system, and an air scour system operated continuously. During normal operations, the total flow rate is equally distributed across the four online filters, and filters are only taken offline for backwash and maintenance. The filtered air scours system and backwash system operate during the filter backwash process. ClariFloc A-6320 anionic polymer (filter aid) is added upstream of dual media filters and chlorine for disinfection as needed. There are four filters, each five mgd in capacity, with a six mgd design loading rate, 13.75x41.8 ft with 9.5 side water depth. Media surface area is 575 sqft, with 30 inches of anthracite and 8 inches of sand depth.

The fifth step is post-disinfection. Again, the chlorine is added to treated water to complete disinfection before discharge into the distribution system.

The sixth step is the backwash. The particulates and polymer in the filters are attached to media and then clog them up. The backwash process starts by draining the filters to pre-set point and then air scouring for approximately ten minutes, breaking down any particulates stuck in the system. Finally, backwashing is performed to clean the filters to keep their continuous operation and prevent water from overflowing. The recycled wash water system consists of a waste wash water basin, recycle pump station, recycle wash water treatment plant, and a polymer feed room. The recycled wash water system receives flow primarily from the waste wash water discharged during filter backwashing.

3.2 CIP Recommendations

3.2.1 CIP 1

EIMCO settlers could be refurbished, and corrosion of the mechanical equipment could be addressed. Just sandblasting and repainting both using would be appx $50,000. The replacement cost would be $1M.

3.2.2 CIP 2

Capacity upgrade. The current plant capacity is sufficient for the current demand. However, with the population increase in the future, the demand increase would require additional plant capacity. Therefore, the capacity could be increased in 10 mgd increments in phases 1 and Phase 2. The Phase 1 increase could cost $20M, with a similar estimate for Phase 2.

3.3 Tate Water Treatment Plant Facilities

Figure 25 Historical Artifact Wooden Pipeline Used at the District in the 19th Century

Figure 26 MCC and Communications Equipment

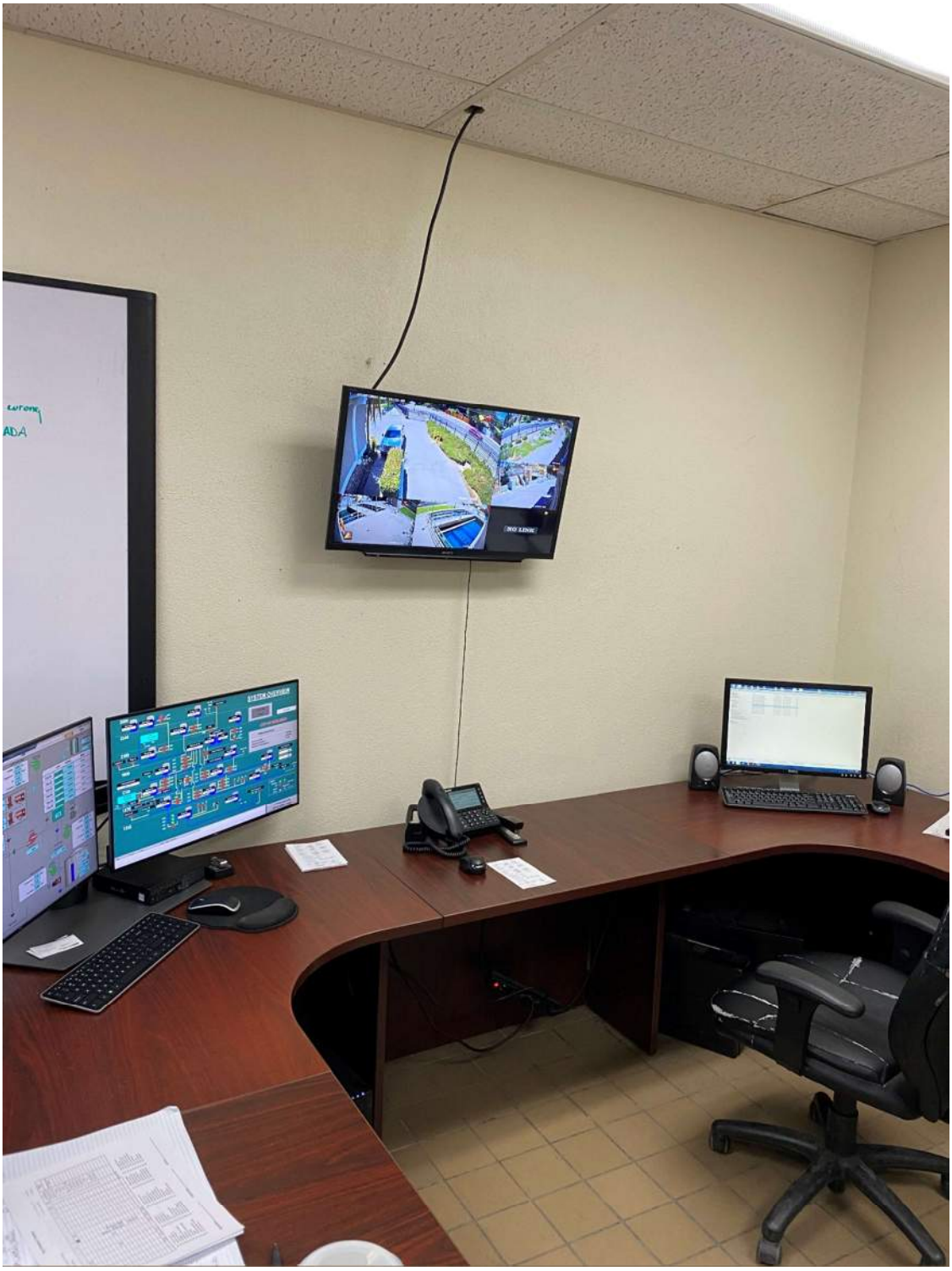

Figure 27 Control Room-Excellent Working Condition

Figure 28 Onsite Lab-In Excellent Working Condition

Figure 29 Two Chlorinators in Duty Mode, With Safety Enclosure

Figure 30 Safety Enclosure of the Chlorinators

Figure 31 Chlorine Cylinders Stored Onsite

Figure 32 Safety Cylinder Operation

Figure 33 Standby Diesel Generator Set

Figure 34 Effluent Reservoir Onsite

Figure 35 Chemical Storage Area with Concrete Containment-In Good Working Condition

Figure 36 Eimco Settler (Signs of Aging and Corrosion of Mechanical Equipment)

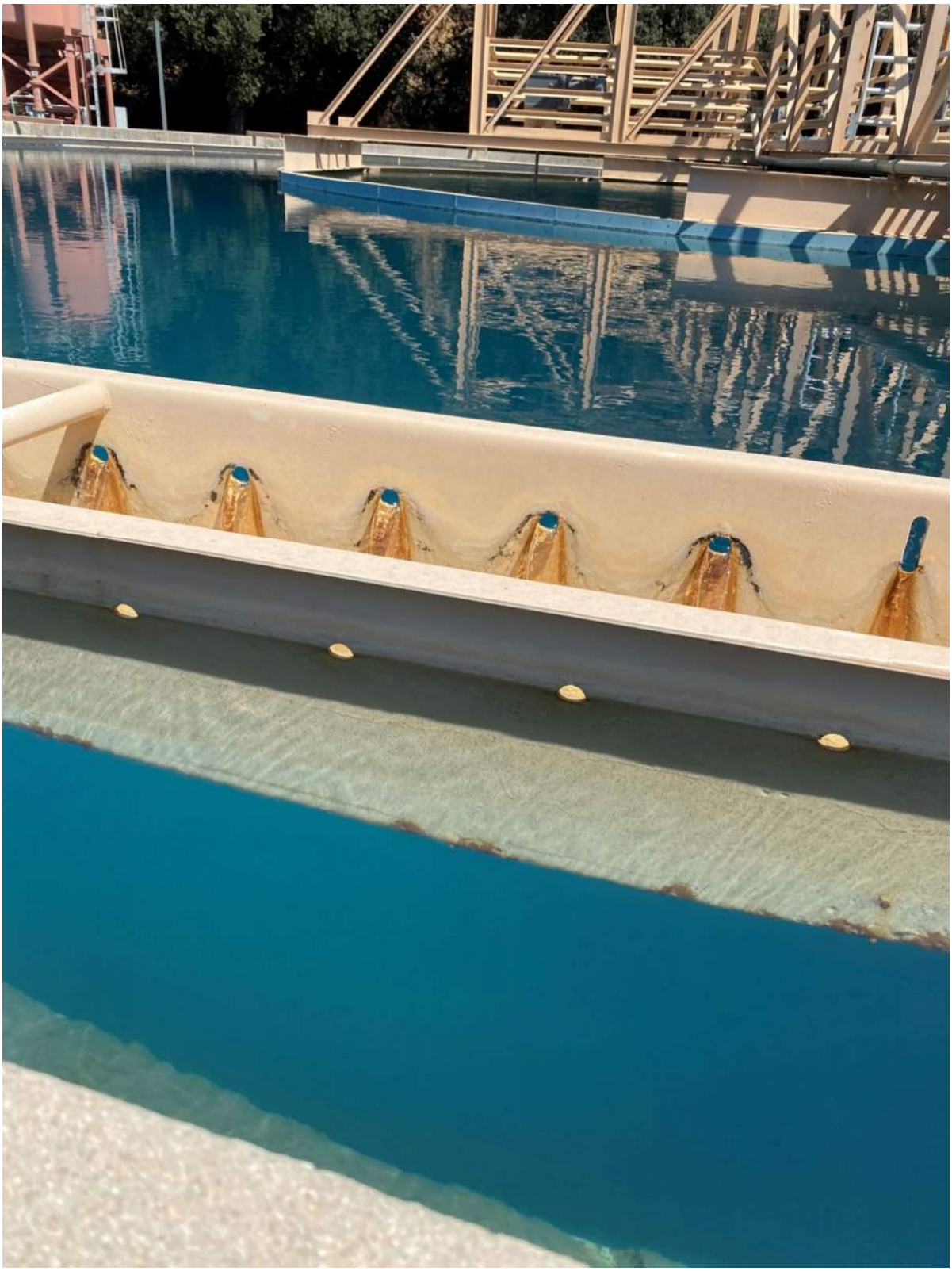

Figure 37 Eimco Settler (Signs of Aging and Corrosion of Mechanical Equipment)

Figure 38 Filter Equipment (Seems to be an Excellent Working Condition)

Figure 39 Filter Equipment (Seems to be in Excellent Working Condition)

Figure 40 Washwater Reservoir (seems to be in excellent working condition)

4 Sunset reservoir

The reservoir is located in a remote location on the southwest side of the City. The reservoir does not have a backup, and it has not been Inspected since it was erected in the 1970s. The reservoir is of welded steel construction; it is 60 ft tall and 90 ft in diameter and has 3 mg capacity. The seismic safety provisions are not visible and likely not provided. Also, corrosion is visible on equipment and reservoir shells. The corrosion protection cabinet is antiquated but is functional and in working condition. The inspection of the tank inside is not possible since the reservoir does not have a backup capacity. However, the diver could inspect by completing the videotaping and establishing the condition baseline without the reservoir operation interruption.

4.1 CIP Recommendations

4.1.1 CIP 1

Increase water supply system reliability by providing reservoirs with redundancy. Depending on the system hydraulic analysis, the pool may be replaced with a reservoir of the same volume at the exact location or similar location. The replacement cost is estimated at $6M.

Figure 41 Signs of Aging and Corrosion are Evident

Figure 42 Communication Antenna of Service Provider Erected Onsite

Figure 43 Steel Shell is Spot Corroded-Attached Ladders are Rusted Beyond Repair

Figure 44 Reservoir Corrosion Protection Cabinet (seems antiquated)

Figure 45 Close-Up of Corrosion Detail

Figure 46 Reservoir Base (surrounding asphalt is cracking and evidence of deterioration)

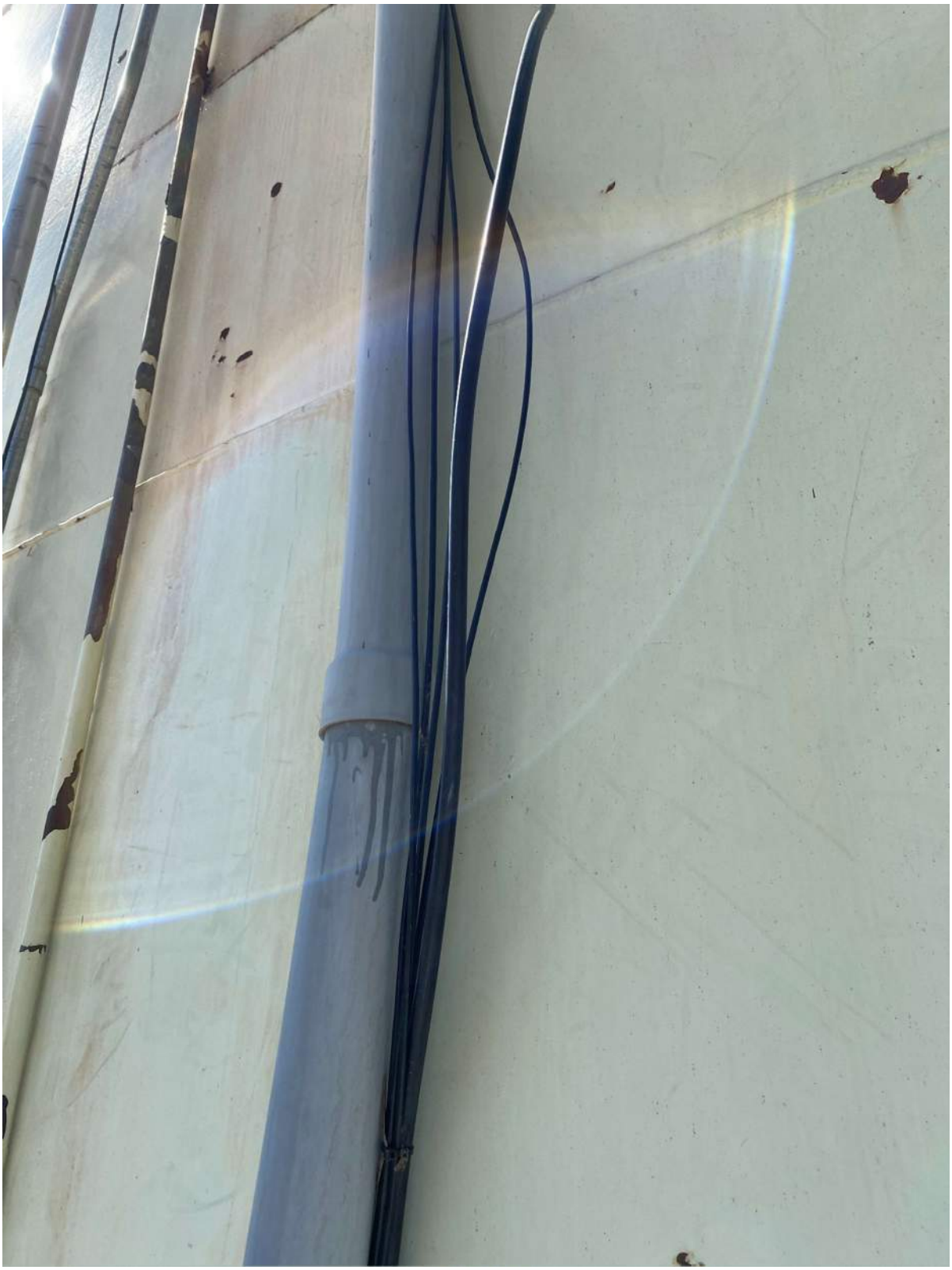

Figure 47 Reservoir Control Wires are Dangling on the Side of the Reservoir

Figure 48 Access Manhole Valve is Corroded

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APPENDIX B

Hydraulic Model Calibration Results

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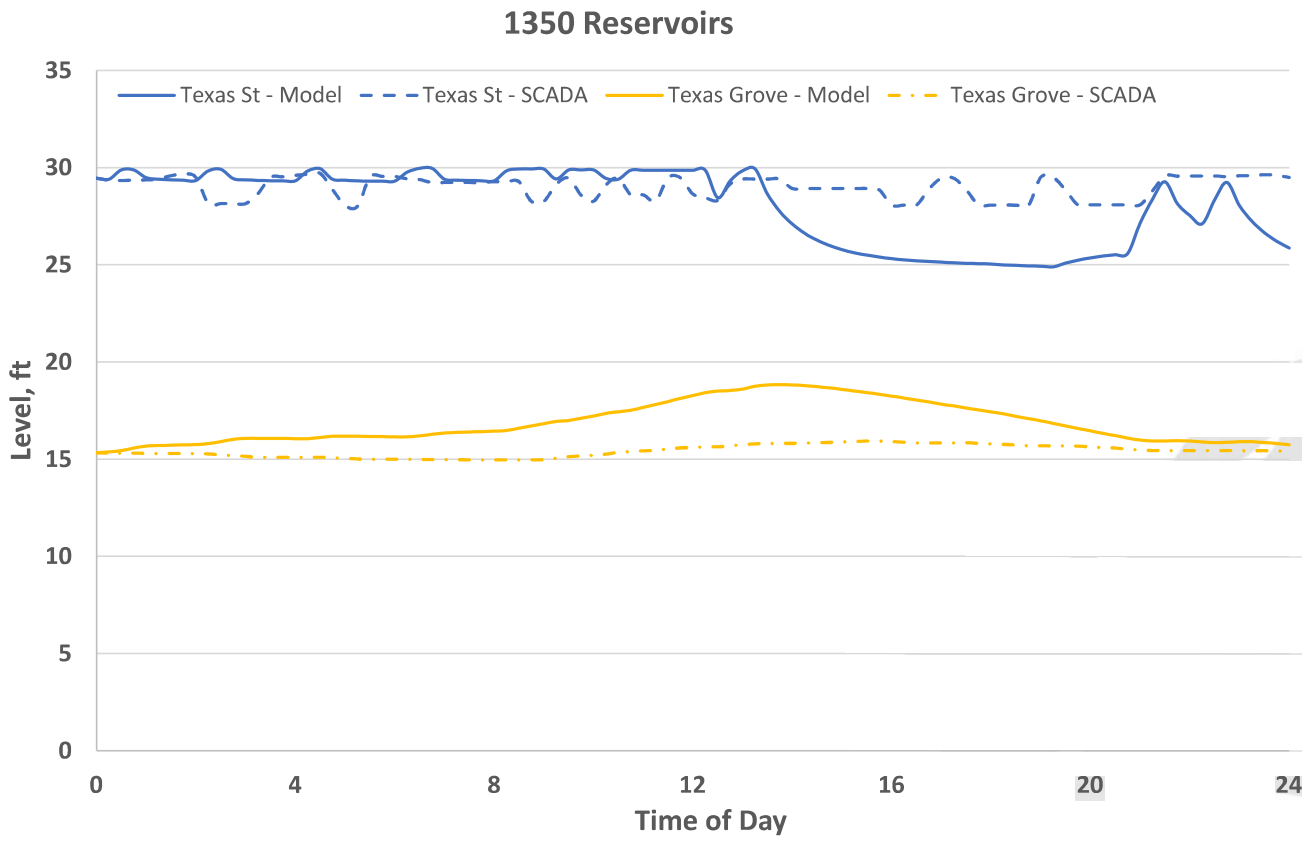
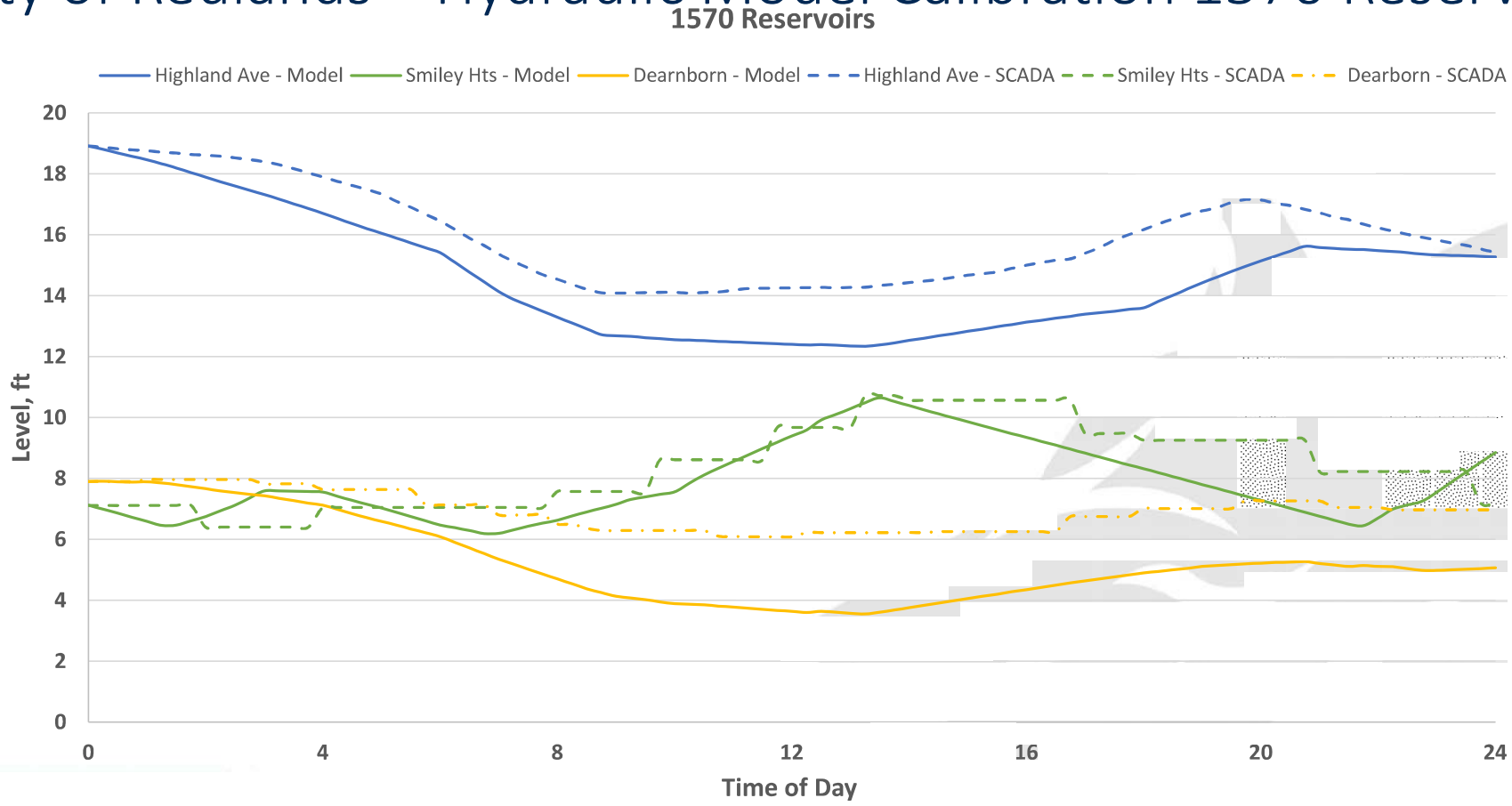
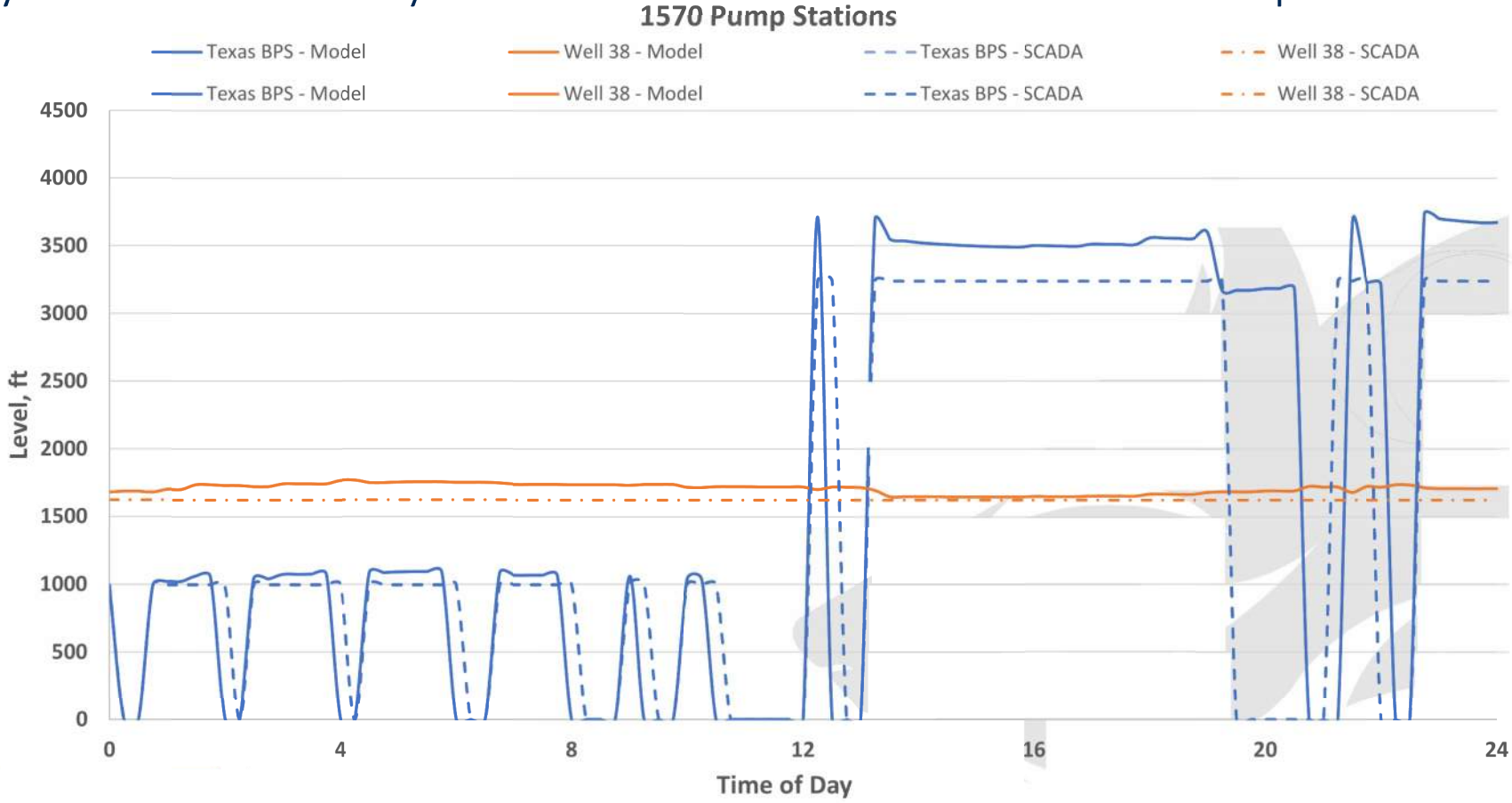
City of Redlands – Hydraulic Model Calibration 1350 reservoirs



City of Redlands – Hydraulic Model Calibration 1570 Reservoirs

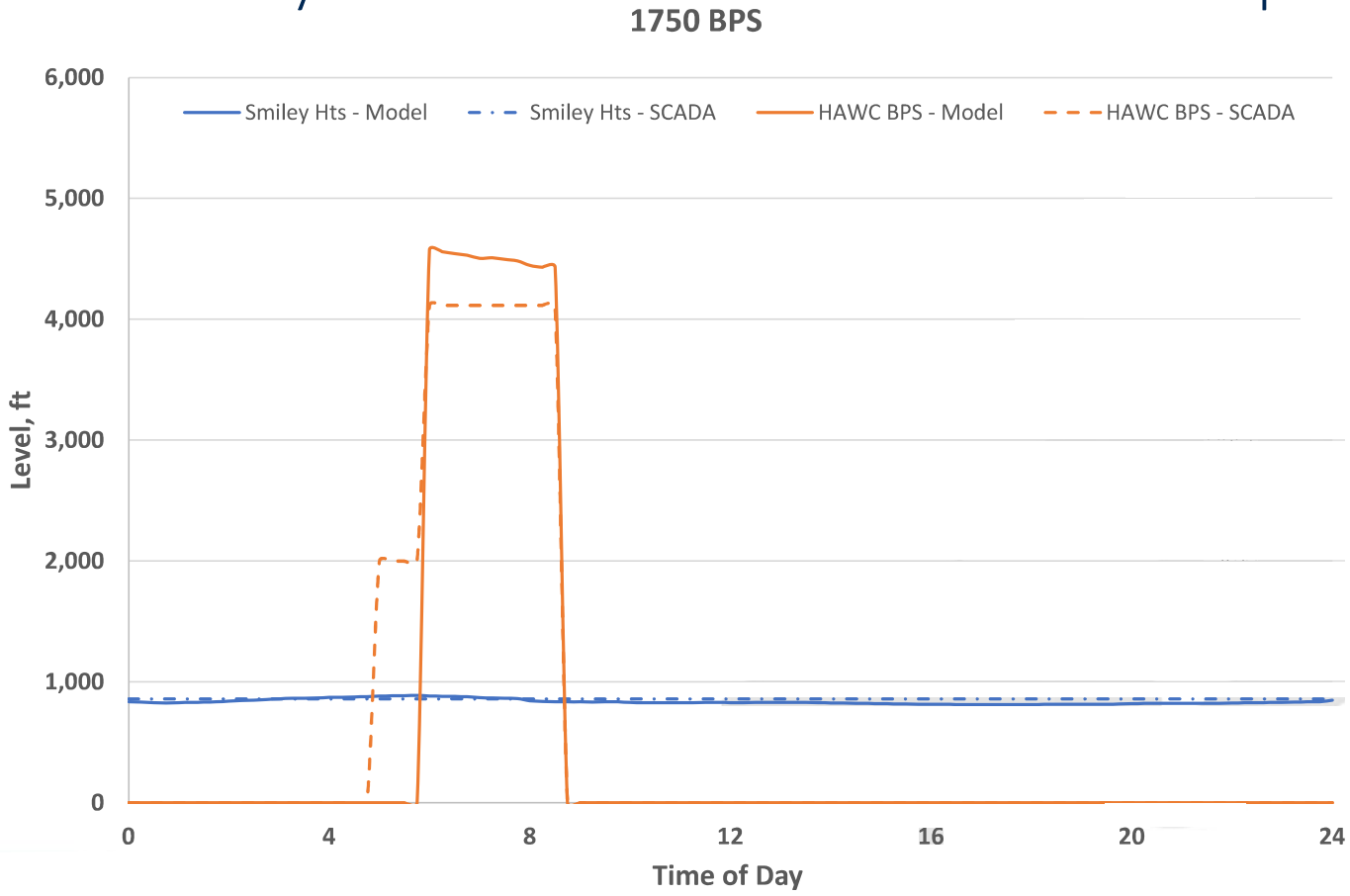


City of Redlands – Hydraulic Model Calibration 1570 Pump stations

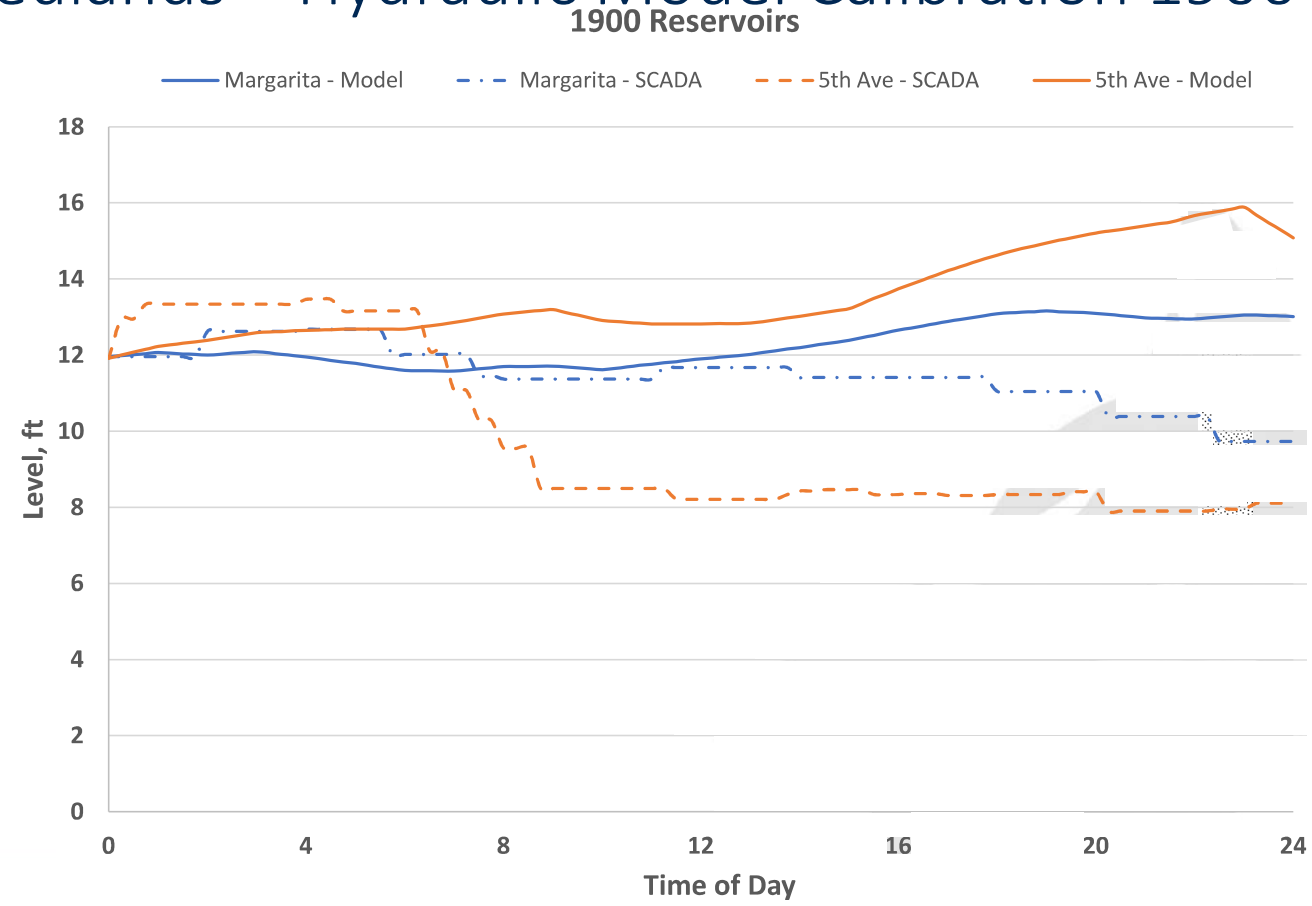


City of Redlands – Hydraulic Model Calibration 1750 reservoirs

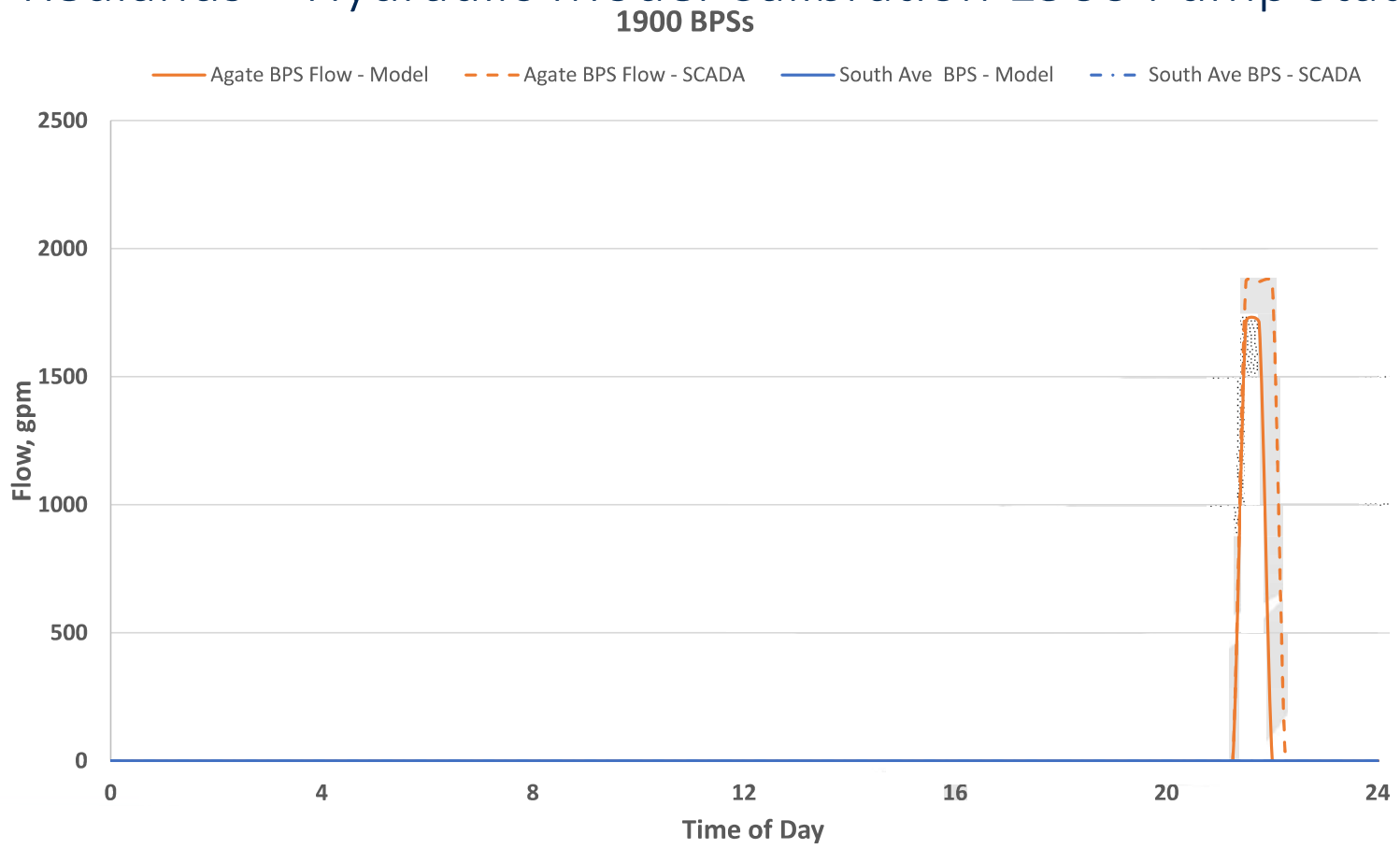
City of Redlands – Hydraulic Model Calibration 1750 Pump Stations



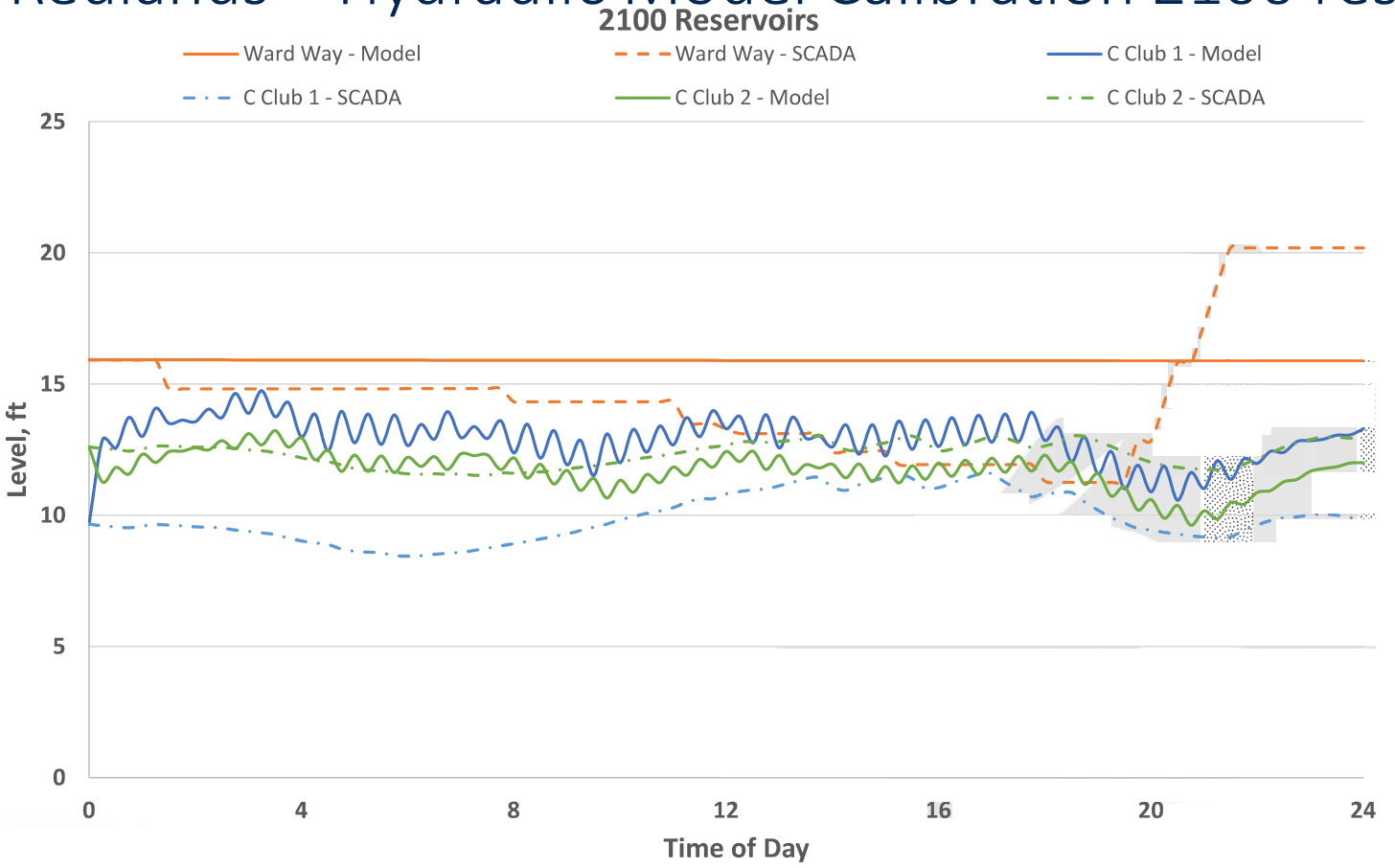
City of Redlands – Hydraulic Model Calibration 1900 reservoirs



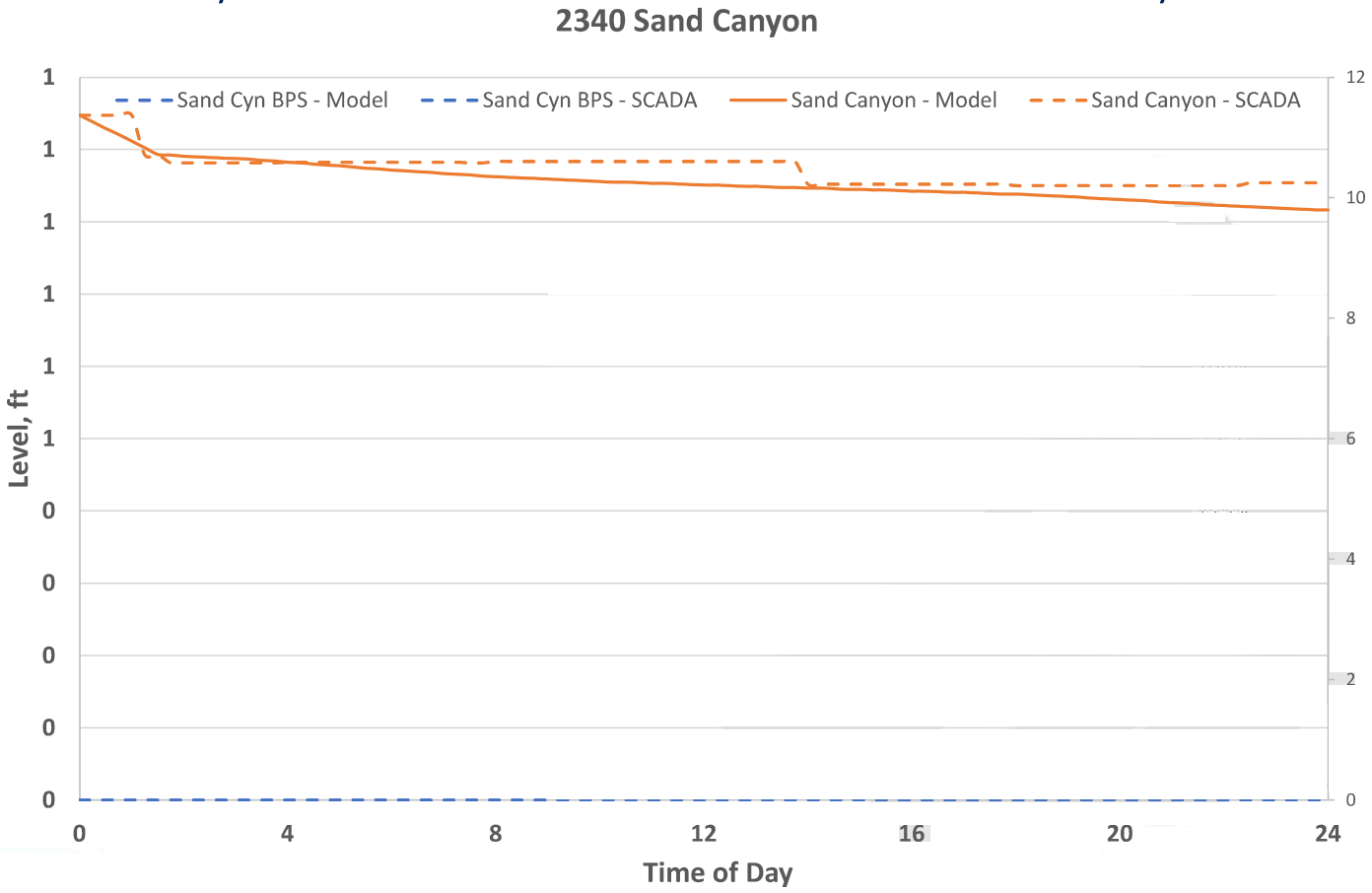
City of Redlands – Hydraulic Model Calibration 1900 Pump Stations



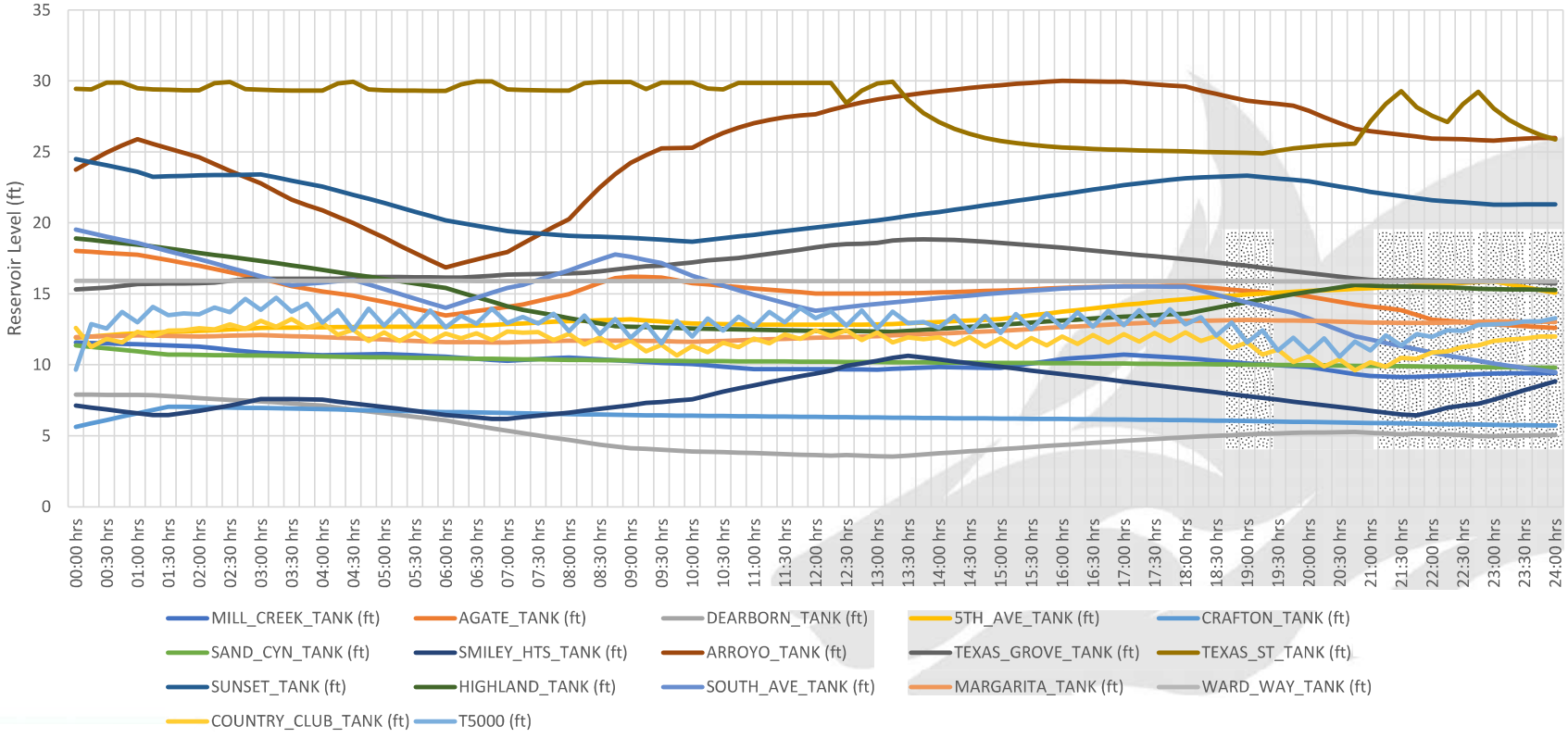
City of Redlands – Hydraulic Model Calibration 2100 reservoirs



City of Redlands – Hydraulic Model Calibration 2340 Sand Canyon reservoirs



Model Tanks Water Level Fluctuations (ft)



APPENDIX C

CIP Cost Tables

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REDLANDS CIP ROLLUP CALCULATION SUMMARY

		5-Year CIP						20-year CIP				
W1	Water Distribution System	2022	2023	2024	2025	2026	5-year Total	2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
W1-1	Water Pipeline Replacement Due to Hydraulic D	$2,158,000	$1,122,000	$3,019,000	$0	$0	$6,299,000	$ 6,299,000	$ -	$ -	$ -	$ 6,299,000
W1-2	Reoccuring Water Pipeline Replacement Over Li	$3,942,000	$4,978,000	$3,081,000	$6,100,000	$6,100,000	$24,201,000	$ 24,201,000	$ 30,500,000	$ 30,500,000	$ 30,500,000	$ 115,701,000
W1-3	Citywide Pavement Repair for Water Facilities	$500,000	$500,000	$500,000	$500,000	$500,000	$2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 10,000,000
W1-4	2-inch and Smaller Meter Replacement	$645,000	$645,000	$645,000	$645,000	$645,000	$3,225,000	$ 3,225,000	$ 3,225,000	$ 3,225,000	$ 3,225,000	$ 12,900,000
W1-5	Greater than 2-inch Meter Refurbishment	$55,000	$55,000	$55,000	$55,000	$55,000	$275,000	$ 275,000	$ 275,000	$ 275,000	$ 275,000	$ 1,100,000
W1-6	Dead End Bypass and Hydrant Flushing	$0	$0	$0	$0	$0	$0	$ -	$ -	$ -	$ -	$ -
W1-7	Automated Metering Infrastructure (AMI) Optic	$0	$0	$0	$0	$0	$0	$ -	$ -	$ -	$ -	$ -
	CIP W1 Subtotal	$7,300,000	$7,300,000	$7,300,000	$7,300,000	$7,300,000	$36,500,000	$ 36,500,000	$ 36,500,000	$ 36,500,000	$ 36,500,000	$ 146,000,000
W2	Hinckley Treatment Plant	2022	2023	2024	2025	2026	5-year Total	2022-2026	2027-2031	2032-2036	2037-2041	
W2-1	Hinckley Transmission Line Replacement	$0	$4,800,000	$0	$0	$0	$4,800,000	$ 4,800,000				$ 4,800,000
W2-2	Hinckley/Tate Roof Repair	$0	$0	$0	$0	$0	$0	$ -				$ -
W2-3	Hinckley WTP Safety Fencing	$0	$0	$0	$0	$0	$0	$ -				$ -
W2-4	Hinckley Sludge Press	$360,000	$0	$0	$0	$0	$360,000	$ 360,000				$ 360,000
W2-5	Hinckley Generator Replacement	$0	$0	$0	$0	$0	$0	$ -				$ -
W2-6	Hinckley WTP Paving	$0	$180,000	$0	$0	$0	$180,000	$ 180,000				$ 180,000
W2-7	Wash Water treatment plant replacement	$0	$0	$0	$6,000,000	$0	$6,000,000	$ 6,000,000				$ 6,000,000
W2-8	Flexible joint support replacement	$0	$0	$0	$50,000	$0	$50,000	$ 50,000				$ 50,000
W2-9	Upgrade MCC and replace dated electrical insta	$0	$50,000	$150,000	$150,000	$150,000	$500,000	$ 500,000				$ 500,000
W2-10	Replace aging mechanical equipment	$0	$40,000	$320,000	$320,000	$320,000	$1,000,000	$ 1,000,000				$ 1,000,000
W2-11	Capacity upgrade 12MGD+12MGD - Not Include	$0	$0	$0	$0	$0	$0	$ -				$ -
	CIP W2 Subtotal	$360,000	$5,070,000	$470,000	$6,520,000	$470,000	$12,890,000	$ 12,890,000	$ -	$ -	$ -	$ 12,890,000
W3	Tate Treatment Plant	2022	2023	2024	2025	2026	5-year Total	2022-2026	2027-2031	2032-2036	2037-2041	
W3-1	Tate Transmission Line Assessment	$0	$0	$4,800,000	$0	$0	$4,800,000	$ 4,800,000				$ 4,800,000
W3-2	Tate ACH Tank Replacement	$0	$0	$0	$0	$0	$0	$ -				$ -
W3-3	Tate Clarifier Recoating	$0	$0	$0	$0	$0	$0	$ -				$ -
W3-4	Tate Clarifier Covers	$1,560,000	$0	$0	$0	$0	$1,560,000	$ 1,560,000				$ 1,560,000
W3-5	Tate Influent Static Mixer	$0	$0	$180,000	$0	$0	$180,000	$ 180,000				$ 180,000
W3-6	Tate NaOCl Disinfection System	$360,000	$0	$0	$0	$0	$360,000	$ 360,000				$ 360,000
W3-7	Tate PLC Replacement	$0	$0	$0	$0	$0	$0	$ -				$ -
W3-8	PRV Station Replacement (Redlands Blvd. & New	$120,000	$300,000	$0	$0	$0	$420,000	$ 420,000				$ 420,000
W3-9	Settler equipment corrosion refurbishment	$0	$0	$0	$0	$50,000	$50,000	$ 50,000				$ 50,000
W3-10	Upgrade MCC and replace dated electrical insta	$0	$50,000	$150,000	$150,000	$150,000	$500,000	$ 500,000				$ 500,000
W3-11	Replace aging mechanical equipment	$0	$40,000	$320,000	$320,000	$320,000	$1,000,000	$ 1,000,000				$ 1,000,000
W3-12	Capacity upgrade 12 mgd - Not Included in CIP	$0	$0	$0	$0	$0	$0	$ -				$ -
	CIP W3 Subtotal	$2,040,000	$390,000	$5,450,000	$470,000	$520,000	$8,870,000	$ 8,870,000	$ -	$ -	$ -	$ 8,870,000
W4	Booster Stations - Potable	2022	2023	2024	2025	2026	5-year Total	2022-2026	2027-2031	2032-2036	2037-2041	
W4-1	1750 Blend Manifold Replacement	$120,000	$0	$0	$0	$0	$120,000	$ 120,000	$ -		$ -	$ 120,000
W4-2	Booster Pump Station Rehabilitation	$3,270,000	$1,960,000	$2,125,000	$2,125,000	$870,000	$10,350,000	$ 10,350,000	$ 9,580,000	$ 5,900,000	$ 10,350,000	$ 36,180,000
	CIP W4 Subtotal	$3,390,000	$1,960,000	$2,125,000	$2,125,000	$870,000	$10,470,000	$ 10,470,000	$ 9,580,000	$ 5,900,000	$ 10,350,000	$ 36,300,000
W5	Reservoirs - Potable	2022	2023	2024	2025	2026	5-year Total	2022-2026	2027-2031	2032-2036	2037-2041	
W5-1	Reservoir Sites Fixed Generators	$0	$0	$0	$0	$0	$0	$ -	$ -	$ -	$ -	$ -
W5-2	Sunset Reservoir Seismic Rehab	$3,000,000	$3,000,000	$0	$0	$0	$6,000,000	$ 6,000,000	$ -	$ -	$ -	$ 6,000,000
W5-3	Texas St. Reservoir & booster station	$0	$0	$0	$0	$0	$0	$ -	$ -	$ -	$ -	$ -
W5-4	Crafton Hills & Property-One Reservoir	$0	$0	$0	$0	$0	$0	$ -	$ -	$ -	$ -	$ -
W5-5	Agate Reservoir TTHM Treatment System	$900,000	$0	$0	$0	$0	$900,000	$ 900,000	$ -	$ -	$ -	$ 900,000
W5-6	Reservoir Mixing System						$0	$ -	$ -	$ -	$ -	$ -
W5-7	Texas Grove Reservoir stair installation	$90,000	$0	$0	$0	$0	$90,000	$ 90,000	$ -	$ -	$ -	$ 90,000
W5-8	Emerald Main Line Isolation	$0	$0	$0	$0	$0	$0	$ -				$ -
W5-9	Steel Reservoir Rehabilitation	$100,000	$2,891,000	$1,568,000	$1,225,000	$1,470,000	$7,254,000	$ 7,254,000	$ 4,998,000			$ 12,252,000
W5-10	Steel Reservoir Inspection and Minor Repairs	$0	$0	$0	$0	$0	$0	$ -	$ 110,000	$ 180,000	$ 180,000	$ 470,000
W5-11	Concrete Reservoir Inspection and Minor Repair	$44,000	$45,000	$34,000	$56,000	$50,000	$229,000	$ 229,000	$ 90,000			$ 319,000
	CIP W5 Subtotal	$4,134,000	$5,936,000	$1,602,000	$1,281,000	$1,520,000	$14,473,000	$ 14,473,000	$ 5,198,000	$ 180,000	$ 180,000	$ 20,031,000
W6	Groundwater Wells	2022	2023	2024	2025	2026	5-year Total	2022-2026	2027-2031	2032-2036	2037-2041	
W6-1	Groundwater Well Equipping Rehabilitation	$1,350,000	$1,050,000	$1,275,000	$1,875,000	$1,200,000	$6,750,000	$ 6,750,000	$ 7,912,500	$ 5,487,500	$ 6,750,000	$ 26,900,000
W6-2	East Lugonia Well 3 Repalcement	$0	$0	$3,000,000	$0	$0	$3,000,000	$ 3,000,000	$ -	$ -	$ -	$ 3,000,000
W6-3	Groundwater Contamination Mitigation	$150,000	$575,000	$575,000	$575,000	$575,000	$2,450,000	$ 2,450,000	$ -	$ -	$ -	$ 2,450,000
W6-4	Entrained Air Treatment Assessment	$0	$0	$600,000	$0	$0	$600,000	$ 600,000				
	CIP W7 Subtotal	$1,500,000	$1,625,000	$5,450,000	$2,450,000	$1,775,000	$12,800,000	$ 12,200,000	$ 7,912,500	$ 5,487,500	$ 6,750,000	$ 32,350,000
W7	Water Use Improvements	2022	2023	2024	2025	2026	5-year Total	2022-2026	2027-2031	2032-2036	2037-2041	

W7-1	Brookside Median-Water Efficient Landscape Im	$0	$0	$0	$0	$0	$0	$	-				$ -
W7-2	WBIC/Smart Irrigation Controllers-City facilities	$0	$0	$0	$0	$0	$0	$	-				$ -
W7-3	Water Efficiency Upgrades- City Facility Landsca	$300,000	$300,000	$300,000	$300,000	$300,000	$1,500,000	$	1,500,000				$ 1,500,000
	CIP W8 Subtotal	$300,000	$300,000	$300,000	$300,000	$300,000	$1,500,000	$	1,500,000	$ -	$ -	$ -	$ 1,500,000

$	19,024,000	$ 22,581,000	$ 22,697,000	$ 20,446,000	$ 12,755,000	$ 97,503,000

5 year CIP Totals

W1 - Water Distribution System	$ 36,500,000
W2 - Hinckley Treatment Plant	$ 12,890,000
W3 - Tate Treatment Plant	$ 8,870,000
W4 - Booster Stations - Potable	$ 10,470,000
W5 - Reservoirs - Potable	$ 14,473,000
W6 - Groundwater Wells	$ 12,800,000
W7 - Water Use Improvements	$ 1,500,000

20 year CIP Totals

Projec	2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
W1 -	$36,500,000	$36,500,000	$36,500,000	$36,500,000	$146,000,000
W2 -	$12,890,000	$0	$0	$0	$12,890,000
W3 -	$8,870,000	$0	$0	$0	$8,870,000
W4 -	$10,470,000	$9,580,000	$5,900,000	$10,350,000	$36,300,000
W5 -	$14,473,000	$5,198,000	$180,000	$180,000	$20,031,000
W6 -	$12,200,000	$7,912,500	$5,487,500	$6,750,000	$32,350,000
W7 -	$1,500,000	$0	$0	$0	$1,500,000
Total	$96,903,000	$59,190,500	$48,067,500	$53,780,000	$257,941,000

Note: 1) the 20-year cost for W6 - Wellhead Treatment is dependant on the Wellhead Evaluation

W1-1 CALCUALTION SUMMARY TABLES

Materials	CIP	Replacement Diameter (in)	Length (ft)	Probable Cost Calculation	Issue	Location	Year
DIP	CIP-1		0	$0	High Flow Velocity	Center St. & Crecent Ave.	
DIP	CIP-2		0	$0	High Flow Velocity	Valencia Dr.	
DIP	CIP-3	24	2,046	$982,195	High Flow Velocity	San Bernardino Ave. & Agate Ave.	2022
DIP	CIP-4	8	203.37	$32,539	High Flow Velocity	Mill Creek Rd.	2022
DIP	CIP-5	0	0	$0	High Flow Velocity	San Bernaridino Ave	
DIP	CIP-6	0	0	$0	Fire Flow Defecient	Park Ave. & New Jersey ST.	
DIP	CIP-7	8	242	$38,723	Fire Flow Defecient	University St. & Colton Ave	2023
DIP	CIP-8	8	1,267	$202,776	Fire Flow Defecient	Highland Ave. & Walnut St.	2022
DIP	CIP-9	0	0	$0	Fire Flow Defecient	Emerald Ave & Newport Ave.	
DIP	CIP-10	8	649	$103,814	Fire Flow Defecient	Naples Ave. & Jasper Ave.	2023
DIP	CIP-11	12	11,979	$3,018,731	Fire Flow Defecient	Wabash Ave. & 6th Ave.	2024
DIP	CIP-12	0	0	$0	Fire Flow Defecient	Sunset Dr. Fairmont Dr.	
DIP	CIP-13	8	503	$80,530	Fire Flow Defecient	Sierra Vista Ave. & Escondido Rd.	2022
DIP	CIP-14	8	4,217	$674,698	Fire Flow Defecient	Pacific St. ,Center Crest Dr. & Benita Marie Crest	2022
DIP	CIP-15	8	1,142	$182,685	Fire Flow Defecient	Pennsylvania Ave. De Anza St	2022
DIP	CIP-16	0	0	$0	Small Diameter	Monterey Ave	
DIP	CIP-17	8	1,569	$250,998	Small Diameter	Park Ave & Cook ST.	2023
DIP	CIP-18	8	1,045	$167,250	Small Diameter	Madeira Ave. & Agate Ave	2023
DIP	CIP-19	12	2,330	$559,140	Small Diameter	Sunset Dr.	2023
			27,193	6,294,079			

REPORT FORMAT

	CIP	Replacement Diameter (in)	Length (ft)	Location	Issue	Budget Cost Calculation	Year
	CIP-1	N/A	-	Center St. & Crecent Ave.	High Flow Velocity	N/A	N/A
	CIP-2	N/A	-	Valencia Dr.	High Flow Velocity	N/A	N/A
	CIP-3	24	2,046	San Bernardino Ave. & Agate Ave.	High Flow Velocity	$983,000	2022
	CIP-4	8	203	Mill Creek Rd.	High Flow Velocity	$33,000	2022
	CIP-5	N/A	-	San Bernaridino Ave	High Flow Velocity	N/A	N/A
	CIP-6	N/A	-	Park Ave. & New Jersey ST.	Fire Flow Defecient	N/A	N/A
	CIP-7	8	242	University St. & Colton Ave	Fire Flow Defecient	$39,000	2023
	CIP-8	8	1,267	Highland Ave. & Walnut St.	Fire Flow Defecient	$203,000	2022
	CIP-9	N/A	-	Emerald Ave & Newport Ave.	Fire Flow Defecient	N/A	N/A
	CIP-10	8	649	Naples Ave. & Jasper Ave.	Fire Flow Defecient	$104,000	2023
	CIP-11	12	11,979	Wabash Ave. & 6th Ave.	Fire Flow Defecient	$3,019,000	2024
	CIP-12	N/A	-	Sunset Dr. Fairmont Dr.	Fire Flow Defecient	N/A	N/A
	CIP-13	8	503	Sierra Vista Ave. & Escondido Rd.	Fire Flow Defecient	$81,000	2022
	CIP-14	8	4,217	Pacific St. ,Center Crest Dr. & Benita Marie Crest	Fire Flow Defecient	$675,000	2022
	CIP-15	8	1,142	Pennsylvania Ave. De Anza St	Fire Flow Defecient	$183,000	2022
	CIP-16	N/A	-	Monterey Ave	Small Diameter	N/A	N/A
	CIP-17	8	1,569	Park Ave & Cook ST.	Small Diameter	$251,000	2023
	CIP-18	8	1,045	Madeira Ave. & Agate Ave	Small Diameter	$168,000	2023
	CIP-19	12	2,330	Sunset Dr.	Small Diameter	$560,000	2023

W1-2 CALCUALTION SUMMARY TABLES

LF of pipe, diameter, and when it reaches end service life

			Length (ft) (columns below)																				
Diameter ---> This row across	ERROR CHECK	TOTAL LF	1	1.5	2	3	4	4.5	6	8	10	12	14	15	16	18	20	24	30	32	36	Unknown
Error (lower than -100)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Less than 0 Greater or equal to -100	34,567	34,567	1,317	2,696	2,748	184	7,869	-	5,602	7,991	-	4,064	-	89	1,994	-	14	-	-	-	-	-
Less than or equal to 5 and greater than or equal to 0	14,734	14,734	-	-	3,630	-	862	-	3,500	4,979	-	1,546	-	-	216	-	-	-	-	-	-	-
Greater than 5 less than or equal to 10	89,411	89,411	-	-	2,971	317	2,418	-	37,925	21,435	1,758	21,431	-	-	748	220	188	-	-	-	-	-
Greater than 10 less than or equal to 15	118,997	118,997	-	-	-	-	3,326	-	48,932	50,107	-	16,632	-	-	-	-	-	-	-	-	-	-
Greater than 15 less than or equal to 20	151,992	151,992	-	215	1,082	-	1,981	1,809	20,295	58,570	3,920	46,596	-	-	5,080	-	-	12,444	-	-	-	-
Greater than 20 less than or equal to 25	137,680	137,680	215	-	3,050	-	3,823	-	44,735	63,839	438	15,651	-	-	5,212	718	-	-	-	-	-	-
Greater than 25 less than or equal to 30	277,802	277,802	291	944	3,118	2,165	6,830	-	86,603	112,749	2,873	57,560	-	-	4,670	-	-	-	-	-	-	-
Greater than 30 less than or equal to 35	165,927	165,927	511	-	1,407	-	8,477	-	44,321	80,313	1,067	29,258	-	-	456	-	102	15	-	-	-	-
Greater than 35 less than or equal to 40	195,763	195,763	-	629	3,965	-	5,509	-	13,206	93,760	2,322	41,717	-	4,761	18,186	-	10,815	43	850	-	-	-
Greater than 40 less than or equal to 45	68,593	68,593	-	-	434	-	215	-	9,950	12,056	44	12,626	-	-	11,462	-	13,458	5,175	2,306	867	-	-
Greater than 45 less than or equal to 50	155,063	155,063	21	778	3,904	-	1,162	-	3,808	45,871	60	56,532	5,195	360	17,147	-	6,462	9,845	2,744	47	1,125	-
Greater than 50 less than or equal to 55	163,129	163,129	-	-	1,082	-	691	-	2,471	103,090	-	44,865	-	-	616	-	3,321	1,162	5,831	-	-	-
Greater than 55 less than or equal to 60	38,506	38,506	-	-	2,137	-	203	-	1,876	13,952	-	6,891	-	-	156	-	443	12,849	-	-	-	-
Greater than 60 less than or equal to 65	18,343	18,343	413	-	-	-	1,298	-	147	3,023	-	2,684	-	-	3,236	-	6,845	140	-	-	556	-
Greater than 65 less than or equal to 70	58,093	58,093	-	-	77	214	9	-	1,201	3,594	749	14,380	63	-	1,315	-	4,825	16,835	14,833	-	-	-
Greater than 70 less than or equal to 75	21,516	21,516	-	-	-	-	-	-	354	7,153	-	11,804	-	-	2,204	-	-	-	-	-	-	-
Greater than 75 less than or equal to 80	9,277	9,277	-	-	12	2	2,334	-	649	2,386	132	3,752	-	-	12	-	-	-	-	-	-	-
Greater than 80 less than or equal to 90	137,929	137,929	-	-	70	-	132	-	991	53,709	165	38,937	5,536	-	17,079	197	-	8,520	12,592	-	-	-
Greater than 90 less than or equal to 100	158,822	158,822	-	-	73	12	16	-	1,337	116,632	-	18,559	-	-	3,622	-	23	17,121	-	-	-	1,428
Error (greater than 100)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2,016,144	2,016,144	2,768	5,262	29,761	2,893	47,154	1,809	327,903	855,208	13,528	445,486	10,794	5,211	93,410	1,135	46,494	84,149	39,155	914	1,682	1,428
Error Check	-		2,768	8,030	37,790	40,683	87,838	89,647	417,550	1,272,758	1,286,286	1,731,772	1,742,566	1,747,777	1,841,187	1,842,322	1,888,816	1,972,965	2,012,120	2,013,034	2,014,716	2,016,144

Asbestos Concrete Pipe																						
			Length (ft)																			
Pipe Diameter	LENGTH (LF)	TOTALCOST	1	1.5	2	3	4	4.5	6	8	10	12	14	15	16	18	20	24	30	32	36	Unknown
Pipe Replacement Diameter			8	8	8	8	8	8	8	8	10	12	14	15	16	18	20	24	30	32	36	16
Error (lower than -100)	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Less than 0 Greater or equal to -100	34,567	$ 4,643,000.25	$ 157,982	$ 323,559	$ 329,768	$ 22,025	$ 944,301	$ -	$ 672,260	$ 958,915	$ -	$ 731,606	$ -	$ 20,038	$ 478,443	$ -	$ 4,104	$ -	$ -	$ -	$ -	$ -
Less than or equal to 5 and greater than or equal to 0	14,734	$ 1,886,804.31	$ -	$ -	$ 435,633	$ -	$ 103,403	$ -	$ 419,958	$ 597,523	$ -	$ 278,361	$ -	$ -	$ 51,927	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greater than 5 less than or equal to 10	89,411	$ 12,224,515.88	$ -	$ -	$ 356,525	$ 38,007	$ 290,168	$ -	$ 4,551,030	$ 2,572,159	$ 263,719	$ 3,857,635	$ -	$ -	$ 179,572	$ 59,369	$ 56,332	$ -	$ -	$ -	$ -	$ -
Greater than 10 less than or equal to 15	118,997	$ 15,277,503.62	$ -	$ -	$ -	$ -	$ 399,153	$ -	$ 5,871,840	$ 6,012,834	$ -	$ 2,993,677	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greater than 15 less than or equal to 20	151,992	$ 24,748,544.16	$ -	$ 25,811	$ 129,869	$ -	$ 237,661	$ 217,108	$ 2,435,436	$ 7,028,436	$ 587,977	$ 8,387,227	$ -	$ -	$ 1,219,206	$ -	$ -	$ 4,479,813	$ -	$ -	$ -	$ -
Greater than 20 less than or equal to 25	137,680	$ 18,206,819.05	$ 25,797	$ -	$ 365,982	$ -	$ 458,802	$ -	$ 5,368,229	$ 7,660,676	$ 65,633	$ 2,817,167	$ -	$ -	$ 1,250,765	$ 193,768	$ -	$ -	$ -	$ -	$ -	$ -
Greater than 25 less than or equal to 30	277,802	$ 37,436,442.00	$ 34,954	$ 113,224	$ 374,203	$ 259,749	$ 819,604	$ -	$ 10,392,408	$ 13,529,862	$ 430,910	$ 10,360,749	$ -	$ -	$ 1,120,779	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greater than 30 less than or equal to 35	165,927	$ 21,775,328.54	$ 61,362	$ -	$ 168,882	$ -	$ 1,017,214	$ -	$ 5,318,479	$ 9,637,604	$ 160,009	$ 5,266,415	$ -	$ -	$ 109,485	$ -	$ 30,450	$ 5,429	$ -	$ -	$ -	$ -
Greater than 35 less than or equal to 40	195,763	$ 30,983,881.69	$ -	$ 75,507	$ 475,793	$ -	$ 661,136	$ -	$ 1,584,731	$ 11,251,141	$ 348,234	$ 7,509,098	$ -	$ 1,071,277	$ 4,364,551	$ -	$ 3,244,370	$ 15,587	$ 382,456	$ -	$ -	$ -
Greater than 40 less than or equal to 45	68,593	$ 15,103,151.17	$ -	$ -	$ 52,057	$ -	$ 25,829	$ -	$ 1,193,979	$ 1,446,701	$ 6,624	$ 2,272,621	$ -	$ -	$ 2,750,993	$ -	$ 4,037,341	$ 1,863,163	$ 1,037,590	$ 416,253	$ -	$ -
Greater than 45 less than or equal to 50	155,063	$ 29,485,391.72	$ 2,508	$ 93,355	$ 468,439	$ -	$ 139,447	$ -	$ 456,946	$ 5,504,539	$ 9,066	$ 10,175,831	$ 1,091,027	$ 81,070	$ 4,115,350	$ -	$ 1,938,609	$ 3,544,328	$ 1,234,599	$ 22,616	$ 607,661	$ -
Greater than 50 less than or equal to 55	163,129	$ 25,142,080.18	$ -	$ -	$ 129,895	$ -	$ 82,917	$ -	$ 296,523	$ 12,370,819	$ -	$ 8,075,667	$ -	$ -	$ 147,789	$ -	$ 996,251	$ 418,256	$ 2,623,963	$ -	$ -	$ -
Greater than 55 less than or equal to 60	38,506	$ 8,216,305.91	$ -	$ -	$ 256,479	$ -	$ 24,301	$ -	$ 225,114	$ 1,674,189	$ -	$ 1,240,419	$ -	$ -	$ 37,378	$ -	$ 132,890	$ 4,625,536	$ -	$ -	$ -	$ -
Greater than 60 less than or equal to 65	18,343	$ 4,250,010.14	$ 49,511	$ -	$ -	$ -	$ 155,796	$ -	$ 17,661	$ 362,784	$ -	$ 483,209	$ -	$ -	$ 776,569	$ -	$ 2,053,560	$ 50,526	$ -	$ -	$ 300,394	$ -
Greater than 65 less than or equal to 70	58,093	$ 17,823,429.06	$ -	$ -	$ 9,202	$ 25,645	$ 1,080	$ -	$ 144,066	$ 431,265	$ 112,415	$ 2,588,384	$ 13,156	$ -	$ 315,485	$ -	$ 1,447,546	$ 6,060,462	$ 6,674,723	$ -	$ -	$ -
Greater than 70 less than or equal to 75	21,516	$ 3,554,639.30	$ -	$ -	$ -	$ -	$ -	$ -	$ 42,482	$ 858,356	$ -	$ 2,124,760	$ -	$ -	$ 529,042	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greater than 75 less than or equal to 80	9,277	$ 1,343,722.34	$ -	$ -	$ 1,399	$ 240	$ 280,026	$ -	$ 77,836	$ 286,325	$ 19,812	$ 675,311	$ -	$ -	$ 2,772	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Greater than 80 less than or equal to 90	137,929	$ 27,670,155.40	$ -	$ -	$ 8,431	$ -	$ 15,804	$ -	$ 118,875	$ 6,445,081	$ 24,800	$ 7,008,650	$ 1,162,608	$ -	$ 4,099,050	$ 53,243	$ -	$ 3,067,247	$ 5,666,366	$ -	$ -	$ -
Greater than 90 less than or equal to 100	158,822	$ 24,869,779.95	$ -	$ -	$ 8,718	$ 1,484	$ 1,880	$ -	$ 160,471	$ 13,995,795	$ -	$ 3,340,667	$ -	$ -	$ 869,276	$ -	$ 6,805	$ 6,163,453	$ -	$ -	$ -	$ 321,230.51
Error (greater than 100)	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total	2,016,144	$ 324,641,504.68	$ 332,113.70	$ 631,456.41	$ 3,571,275.52	$ 347,150.07	$ 5,658,522.08	$ 217,107.78	$ 39,348,323.17	$ 102,625,005.48	$ 2,029,199.41	$ 80,187,453.47	$ 2,266,790.54	$ 1,172,384.89	$ 22,418,430.32	$ 306,380.26	$ 13,948,258.95	$ 30,293,800.93	$ 17,619,696.51	$ 438,869.63	$ 908,055.04	$ 321,230.51
Error Check	-																					

	Material Average Service Life	SERVICE LIFE (YEARS)
ACP	Asbestos Concrete Pipe	70
CIP	Cast Iron Pipe	120
CMLC	Cement Mortar Lined and Coated	100
CMLDIP	Cement Mortar Lined Ductile Iron Pipe	100
CMLSTL	Cement Mortar Lined Steel Pipe	100
CON	Concrete	100
COP	Copper	50
DIP	Ductile Iron Pipe	100
DW	Dipped and Wrapped	40
HDPE	High Density Polyethylene	50
OTH	Other	40
PVC	Polyvinyl Chloride	70
RCP	Reincforced Concrete Pipe	100
STL	Steel	100
Unk	Unknown	40
VCP	Vitrified Clay Pipe	50
	Total	

W1-4 & W1-5 CALCUALTION SUMMARY TABLES

Assume they want to repalce all meters less than 2" and including 2" over 20 years

METER REPALCEMENT — Meter Repalce Unit Cost

Qty of meters looked up in GIS — Rounded

Size (in)	Number of meters	Unit Cost	Total Cost
5/8"	169	$ 428.47	72,411
3/4"	7,938	$ 459.51	3,647,598
1"	12,493	$ 545.00	6,808,673
1 1/2"	833	$ 1,298.10	1,081,319
2"	859	$ 1,495.60	1,284,721
Total	22,292		12,894,722

Yearly Cost over 20 years

644,736.10 per year when done over 20 years

645000 Assume $515,000 when rounded up

1,114.60 About 1,100 meter per year

586.36 approx unit cost per meter

Assume a Recalibrate Every 10 Years

METER CALIBRATION — Cost taken from City

Size (in)	Number of meters	Rehab Costs	Total
2.5"	1		
3"	66	550	36,300
4"	182	550	100,100
6"	154	550	84,700
8"	174	550	95,700
10"	115	550	63,250
Unknown	265	550	145,750
Total	957		525,800.00

Yearly Cost

52,580.00 Per year when done over 10 years

55000 Assume $55,000 when rounded up

95.70 About 100 meters per year

REFERENCE INFORMAIOTN ON METER REPLACEMENT COSTS

Meter Replacement Costs from City			
	Total Cost	Qty	Unit Cost
5/8"	$ 4,614.26	14	$ 428.47
3/4"	$ 182,743.99	517	$ 459.51
1"	$ 206,680.39	493	$ 545.00
1 1/2"	$ 108,840.86	109	$ 1,298.10
2"	$ 197,879.51	172	$ 1,495.60

Meter Replacement Costs from City Not used			
3	13	21585.33	1660.41
3	59	197879.51	3353.89
4	13	26670.41	2051.57
4	17	69042.1	4061.3
6	1	4446.69	4446.69
6	15	114734.25	7648.95
8	1	6258.35	6258.35
6x8	0	12064.93	12064.93
4	0	11635.46	11635.46
6	0	16221.78	16221.78
8	8	157530	19691.25
10	0	22987.57	22987.57

REFERENCE INFORMATION ON METER REHAB COSTS FROM CITY BIDS

Cost to rehab, form the City					
Meter Size	Total Cost	Qty	Unit Cost	Assumed Unit Cost	
3"	7997.1	19	420.9	550	
4"	12627	30	420.9	550	
6"	7997.1	19	420.9	550	
8"	2104.5	5	420.9	550	

W4-2 CALCUALTION SUMMARY TABLES

Station Count (13 Stations)	Pump Count (39 Pumps)	Pump Station (1)	Pump Name (1)	Test #	HP	Head	Capacity	Overall Eff	Improved Eff	Total KwH	Kw Input	Cost per Kwh	Average cost per Acre Ft	Estimated cost of Rehab ($1,000 per HP)	Total per Station for Mechanical	For Elec. and civil/coatings	Instalaltion Labor	Soft Costs	Total
1	1	Texas	1550	1	250	252	2805	74		175200	180	0.16	55.76	$250,000					
	2	Texas	1551	1	250	387.4	1780	72.6		522096	178.8	0.16	87.28	$250,000					
				2	250	335	2260	73.5											
				3	250	231.5	2706	62											
	3	Texas	1552											$250,000					
	4	Texas	1553	1	250	267.3	3143	80.7		608388	196	0.17	57.57	$250,000					
				2	250	249.2	3240	78.4							$1,000,000	$1,000,000.00	$1,000,000.00	$1,350,000.00	$4,350,000
		Texas	4		1000			73.53333333											
2	5	Dearborn	1761	1	100	161.2	1490	54.2	70	65052	83.5	0.2	59.96	$100,000					
	6	Dearborn	1931	1	200	373.8	1516	76.5		108588	139.4	0.2	98.38	$200,000					
				2	200	397.1	1380	75.2											
				3	200	420	1244	73.7							$300,000	$300,000.00	$300,000.00	$405,000.00	$1,305,000
		Dearborn	2		300			69.9											
3	7	HAWC	2174	1	200	544.2	1103	73.6		44088	153.6	0.16	118.74	$200,000					
	8	HAWC	2176	1	200	539.6	875	65.8		35796	135.1	0.16	161.65	$200,000					
	9	HAWC	2177	1	150	534.8	691	58.1	70	106776	119.7	0.16	147.7	$150,000					
	10	HAWC	1720	1	75	166.3	525	44.9	65	30120	36.6	0.16	59.44	$75,000					
	11	HAWC	1721	1	150	185.5	2130	73.4		143640	101.3	0.16	40.55	$150,000					
				2	150	205.4	2000	78											
	12	HAWC	1722	1	200	183.4	2045	69		76368	102.3	0.16	42.65	$200,000					
				2	200	179.7	2115	69.6							$975,000	$975,000.00	$975,000.00	$1,316,250.00	$4,241,250
		HAWC	6		975			66.55											
4	13	Smiley Heights	1783											$150,000					
	14	Smiley Heights	1784											$150,000	$300,000	$300,000.00	$300,000.00	$405,000.00	$1,305,000
		Smiley Heights	2		UNK			UNK											
5	15	South	1927	1	100	200.5	1103	50.7	70	57336	82.2	0.18	73.66	$100,000					
	16	South	1928	1	150	163.5	1780	51.2	70	177876	107	0.18	59.42	$150,000					
	17	South	2124	1	200	389.9	980	47.6	70	36540	151.2	0.18	152.5	$200,000					
	18	South	2125		200									$150,000					
	19	South	2126		150									$150,000	$750,000	$750,000.00	$750,000.00	$1,012,500.00	$3,262,500
		South	5		800			49.83333333											
6	20	Agate	1951	1	100	155.2	1780	67.6		29532	77	0.16	36.41	$100,000					
				2	100	186.6	1519	68.3											
				3	100	204	1335	65.3											
	21	Agate	1952	1	100	157.1	1870	70.4		171948	78.6	0.16	35.38	$100,000					
				2	100	176.7	1684	70.9											
				3	100	213.7	1305	66.3											
	22	Agate	1953	1	100	153.6	1905	71		55440	77.6	0.16	34.29	$100,000					
				2	100	181.6	1623	71.1											
				3	100	205.4	1362	67.6							$300,000	$300,000.00	$300,000.00	$405,000.00	$1,305,000
		Agate	3		300			68.72222222											
7	23	Rees	1724											$150,000					
	24	Rees	1723											$150,000	$300,000	$300,000.00	$300,000.00	$405,000.00	$1,305,000
		Rees	2		UNK			UNK											
8	25	Fifth Avenue	2131	1	125	225.1	1018	59.9	72	148644	72	0.21	79.48	$125,000					
	26	Fifth Avenue	2132	1	125	236.7	1020	61.9	72	43369	110.97	0.24	93.79	$125,000					
				2	125	263.3	775	54.1											
	27	Fifth Avenue	2310	1	50	204.2	520	51.9	65	39240	38.5	0.21	83.2	$50,000					
				2	50	224.5	465	55.4											
				3	50	238.4	401	52.8											
	28	Fifth Avenue	2311	1	150	239.5	2337	68		21096	155	0.21	74.53	$150,000					
				2	150	262.6	2129	69.7							$450,000	$450,000.00	$450,000.00	$607,500.00	$1,957,500
		Fifth Avenue	4		450			59.2125											
9	29	Country Club	2384		100									$150,000					
	30	Country Club	2385	1	100	214.8	1134	65.4		42636	70.1	0.15	51.59	$100,000					
				2	100	234.5	1071	68.3											
				3	100	259.2	956	69.3											
	31	Country Club	2386	1	150	233.5	1777	68.1		244224	114.7	0.15	53.94	$150,000					
				2	150	259.9	1603	69.9											
	32	Country Club	2387	1	200	258.3	2264	67.4		57972	163.4	0.15	60.24	$200,000					
				2	200	281.6	2109	68.4											
				3	200	306.6	1932	68							$600,000	$600,000.00	$600,000.00	$810,000.00	$2,610,000
		Counrty Club	4		550			68.1											
10	33	Ward Way	2381											$150,000					
	34	Ward Way	2382											$150,000	$300,000	$300,000.00	$300,000.00	$405,000.00	$1,305,000
		Ward Way	2		UNK			UNK											
11	35	Sand Canyon	2610	1	50	253.9	539	66.2						$50,000					
	36	Sand Canyon	2611	1	150	318.5	1362	67.2						$150,000	$200,000	$200,000.00	$200,000.00	$270,000.00	$870,000
		Sand Canyon	2		200			66.7											
12	37	Yucaipa	2330											$150,000	$150,000	$150,000.00	$150,000.00	$202,500.00	$652,500
		Yucaipa	1		UNK			UNK											
13	38	Mill Creek	2510											$150,000					
	39	Mill Creek	2511											$150,000	$300,000	$300,000.00	$300,000.00	$405,000.00	$1,305,000
		Mill Creek	2		UNK			UNK											

	Name	Num. Pum	Total HP	Eff.	Rehab Cost	Rounded	Year
1	South	5	800	49.8	$3,262,500	$3,270,000	2022
2	Fifth Avenue	4	450	59.2	$1,957,500	$1,960,000	2023
3	HAWC	6	975	66.6	$4,241,250	$4,250,000	2024/2025
4	Sand Canyon	2	200	66.7	$870,000	$870,000	2026
5	Counrty Club	4	550	68.1	$2,610,000	$2,610,000	2027
6	Agate	3	300	68.7	$1,305,000	$1,310,000	2028
7	Dearborn	2	300	69.9	$1,305,000	$1,310,000	2029'
8	Texas	4	1000	73.5	$4,350,000	$4,350,000	2030/2031
9	Smiley Heights	2	UNK	UNK	$1,305,000	$1,310,000	2032
10	Rees	2	UNK	UNK	$1,305,000	$1,310,000	2033
11	Ward Way	2	UNK	UNK	$1,305,000	$1,310,000	2034
12	Yucaipa	1	UNK	UNK	$652,500	$660,000	2035
13	Mill Creek	2	UNK	UNK	$1,305,000	$1,310,000	2036

W5-6 CALCUALTION SUMMARY TABLES

Name	Capacity (MG)	Type	Year	Budget	
Texas Grove	3.9	Steel	1956	$ 30,000	
Agate	3	Steel	1968	$ 30,000	
Arroyo	0.5	Steel	1965	$ 30,000	
South	2	Steel	1964	$ 30,000	
Ward Way	2	Steel	1958	$ 30,000	
Sunset	3	Steel	1967	$ 30,000	
Mill Creek 1	0.2	Steel	1962	$ 30,000	
Mill Creek 2	0.2	Steel	1987	$ 30,000	
Crafton	3.5	Steel	1970	$ 30,000	
Texas Street	1	TBD	TBD	$ 30,000	
Dearborn	10	Concrete	1972	$ 30,000	
Highland	10	Concrete	1976	$ 30,000	
Country Club 1	1	Concrete	1969	$ 30,000	
Country Club 2	2	Concrete	1924	$ 30,000	

Total $ 420,000
over 5 year $ 84,000 per year

Smiley	3	Steel	1964	Complete 2021
Sand Canyon	3.5	Steel	1973	Complete 2021
Fifth Avenue	5	Concrete	1974	Complete 2021
Margarita	2.4	Concrete	1964	Complete 2021

W5-9, W5-10, W5-11 CALCUALTION SUMMARY TABLES

Priority	ID	Name	Capacity (MG)	Type	Year	Rehab Budget	Rehab Year	Rehab Year	Inspection Budget	Inspection Year	Inspection Year	Inspection Year	Rehab Again Year
1	1	Texas Grove	3.9	Steel	1956	$ 1,911,000	2023	2043	$ 20,000	2028	2033	2038	2043
2	13	Ward Way	2	Steel	1958	$ 980,000	2023	2043	$ 15,000	2028	2033	2038	2043
3	16	Mill Creek 1	0.2	Steel	1962	$ 98,000	2024	2044	$ 10,000	2029	2034	2039	2044
4	5	Smiley	3	Steel	1964	$ 1,470,000	2024	2044	$ 20,000	2029	2034	2039	2044
5	8	South	2	Steel	1964	$ 980,000	2025	2045	$ 15,000	2030	2035	2040	2045
6	7	Arroyo	0.5	Steel	1965	$ 245,000	2025	2045	$ 10,000	2030	2035	2040	2045
7	15	Sunset	3	Steel	1967	$ 1,470,000	2026	2046	$ 20,000	2031	2036	2041	2046
8	6	Agate	3	Steel	1968	$ 1,470,000	2027	2047	$ 20,000	2032	2037	2042	2047
9	18	Crafton	3.5	Steel	1970	$ 1,715,000	2028	2048	$ 20,000	2033	2038	2043	2048
10	14	Sand Canyon	3.5	Steel	1973	$ 1,715,000	2029	2049	$ 20,000	2034	2039	2044	2049
11	17	Mill Creek 2	0.2	Steel	1987	$ 98,000	2029	2049	$ 10,000	2034	2039	2044	2049

Tank Rehabilitation

CIP Budget per year	2022	$0	1
	2023	$ 2,891,000	2
	2024	$ 1,568,000	3
	2025	$ 1,225,000	4
	2026	$ 1,470,000	5
	2027	$ 1,470,000	6
	2028	$ 1,715,000	7
	2029	$ 1,813,000	8

CONCRETE TANKS		Designation	Capacity (MG)	Type	Year	Cost
1		Country Club 2	2	Concrete	1924	$ 44,000
2		Margarita	2.4	Concrete	1964	$ 45,000
3		Country Club 1	1	Concrete	1969	$ 34,000
4		Dearborn	10	Concrete	1972	$ 56,000
5		Fifth Avenue	5	Concrete	1974	$ 50,000
6		Highland	10	Concrete	1976	$ 56,000
7		Texas Street	1	TBD		$ 34,000
					Total	$ 319,000

W6-1 CALCUALTION SUMMARY TABLES

	LIST OF WELLS FROM REPORT TABLE				
#	Name	Discharge to Z	Capacity (GPM)	Ground Elev. (FT)	Water Surface Elev. (FT)
1	North Orange Street 1	1350	2900	3050	293
2	North Orange Street 2	1350	2900	3105	288
3	10	1570	1500	1650	80
4	13	1570	3000	3006	171
5	38	1570	1500	1634	520
6	39	1570	1250	1255	535
7	Church Street	1570	2000	2136	485
8	Orange Street	1570	1500	1165	459
9	Agate 2	1750	1500	1646	299
10	Airport 1	1750	1700	1316	498
11	Airport 2	1750	1100	119	545
12	Mentone Acres 2	1750	1900	1787	491
13	Rees	1750	1200	1964	544
14	Muni	1750	N/A	N/A	N/A
15	Madeira	1900	750	697	399
16	Lugonia 3	2100	250	500	N/A
17	Lugonia 4 - INACTIVE?	2100	1300	UNK	UNK
18	Lugonia 6	2100	250	N/A	N/A
19	Maguet 2	2100	300	249	253
20	Crafton	2100	1600	N/A	N/A
The City of Redlands Facilities Data Information					

	THIS IS THE TABLE FOR THE CIP - WELL REHABILITATION						
Index	LIST OF WELLS THAT DANIEL SENT	Zone?	Capacity GPM	Efficiency	HP	Rehab Budget	Rehab Year
18	Well 10	1570	1400	0.27	75	$1,050,000	2022
12	Maguet 2	2100	400	0.35	25	$300,000	2022
17	Rees	1750	550	0.43	250	$412,500	2023
9	Lugonia 3	2100	250	0.43	25	$0	2023
10	Lugonia 6	2100	250	0.60	30	$187,500	2023
11	Madeira	1900	600	0.62	150	$450,000	2023
3	Crafton	2100	1700	0.65	200	$1,275,000	2024
7	Airport 2	1750	1000	0.68	300	$750,000	2025
6	Airport 1	1750	1500	0.70	350	$1,125,000	2025
13	Mentone Acres 2	1750	1600	0.71	300	$1,200,000	2026
5	Orange Street	1570	1500	0.74	300	$1,125,000	2027
1	North Orange Street 1	1350	2900	0.77	350	$2,175,000	2028
8	Church Street	1570	2000	0.77	400	$1,500,000	2029
21	Well 39	1570	1250	0.78	250	$937,500	2030
4	North Orange Street 2	1350	2900	0.78	350	$2,175,000	2031
20	Well 38	1570	1600	0.78	300	$1,200,000	2032
2	Agate 2	1750	1750	0.79	200	$1,312,500	2033
20	Lugonia 4		1300	UNK	UNK	$975,000	2034
16	Muni	1750	UNK	UNK	UNK	$1,000,000	2035
19	Well 13	1570	UNK	UNK	UNK	$1,000,000	2036
14	Mill Creek 2 - Surface Water		UNK	UNK	UNK	$1,000,000	2037
15	Mill Cereek 2A - Surface Water		UNK	UNK	UNK	$1,000,000	2038

NP 1	Non-potable Water Improvements	2022	2023	2024	2025	2026	5-year Total		2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
NP 1.1	Pipeline Replacement for Future System	$ 756,000	$ 991,000	$ 1,177,000			$ 2,924,000		$ 2,924,000	$ -	$ -	$ -	$ 2,924,000
NP 1.2	Groundwater Well Equipment Rehabilitation	$ 637,500	$ 225,000	$ 375,000	$ 1,125,000	$ 1,125,000	$ 3,487,500		$ 3,487,500	$ 3,562,500	$ 2,962,500	$ 2,062,500	$ 12,075,000
NP 1.3	Meter replacement and calibration	$ 11,000	$ 11,000	$ 11,000	$ 11,000	$ 11,000	$ 55,000		$ 55,000	$ 55,000	$ 55,000	$ 55,000	$ 220,000
CIP NP 1	Subtotal	$ 1,404,500	$ 1,227,000	$ 1,563,000	$ 1,136,000	$ 1,136,000	$ 6,466,500		$ 6,466,500	$ 3,617,500	$ 3,017,500	$ 2,117,500	$ 15,219,000
NP 2	Recycled Water Improvements	2022	2023	2024	2025	2026	5-year Total		2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
NP 2.1	Recycle Water Reservoirs - design two & build in	$ 200,000	$ 1,400,000	$ -	$ 200,000	$ 1,400,000	$ 3,200,000		$ 3,200,000				$ 3,200,000
CIP NP 2	Subtotal	$ 844,000	$ 1,809,000	$ 223,000	$ 1,600,000	$ 2,800,000	$ 7,276,000		$ 7,276,000	$ 3,700,000	$ 3,700,000	$ 3,700,000	$ 18,376,000
	Optional Expansion	2022	2023	2024	2025	2026	5-year Total		2022-2026	2027-2031	2032-2036	2037-2041	20-year Total
	Expansion of the Recycled/Non-pootable Water	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 12,500,000		$ 12,500,000	$ 12,500,000	$ 12,500,000	$ 12,500,000	$ 50,000,000
CIP Optio	Subtotal	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 12,500,000		$ 12,500,000	$ 12,500,000	$ 12,500,000	$ 12,500,000	$ 50,000,000

Proje	2022-2026	2027-2031	2032-2036	2037-2041	20-year Total CIP Cost
NP 1	$ 6,466,500	$ 3,617,500	$ 3,017,500	$ 2,117,500	$ 15,219,000
NP 2	$ 7,276,000	$ 3,700,000	$ 3,700,000	$ 3,700,000	$ 18,376,000
NP 3	$ 12,500,000	$ 12,500,000	$ 12,500,000	$ 12,500,000	$ 50,000,000
Tota	$ 13,742,500	$ 7,317,500	$ 6,717,500	$ 5,817,500	$ 33,595,000

CIP NP 1-2 Groundwater Well Equipment Rehabilitation

	Name	Discharge to Zone	Test #	HP	Head	Capacity	Overall Eff	Improved Eff	Total KwH	Kw Input	Cost per Kwh	Average cost per Acre Ft
1	California	1	1	100	462.80	519	52.00%	68.00%	215784	87	0.14	129.09
4	New York Street	2	1	150	226.1	1429	57.00%	70.00%	536952	106.8	0.13	51.59
			2	150	235.30	1558	52.80%					
7	30A	2	1	150	254.00	1566	60.90%	70.00%	118356	123	0.16	66.41
			2	150	276.50	1463	61.40%					
7	31A	2	1	450	258.60	878	31.90%	72.00%	475248	134	0.13	107.75
7	32	2	1	200	269.80	1854	60.50%	Half of the data in this file is for pump 36				
9	41	2	1	100		825			74940	73.7	0.25	122.5
6	11	detached systems	1	60	176.80	311	47.90%	65.00%	39804	21.6	0.17	64.12
6	14	detached systems	1	125	125.20	2261						
			2	125	138.60	2176						
			3	125	149.30	2152						
6	16	detached systems	1	150	103.80	1202	50.50%	71.00%	99744	46.5	0.15	31.62
			2	150	143.80	1879	55.90%					
10	Agate 1	detached systems	1	200	307.10	1816	77.50%		177240	135.5	0.16	62.81
2	Chicken Hill	detached systems	1	75	233.60	653	61.50%		5496	46.7	0.5	193.74
			2	75	252.80	618	63.20%					
			3	75	272.50	578	64.20%					
3	Crafton	detached systems	1	200	254.60	1754	59.80%	70.00%	42830	120.11	0.37	161.68
11	Hog Canyon	detached systems	1	100	282.70	950	66.40%		121	76.2	15.23	6641.61
									These values do not make sense.			

Name	Capacity	Status in 2019	Efficiency	HP	Rehab Budget	CIP Year
31A	850	idle	31.9%	450	$637,500	2022
11	300	In Use	47.9%	60	$225,000	2023
California	500	In Use	52.0%	100	$375,000	2024
16	1500	In Use	53.2%	150	$1,125,000	2025
New York Street	1500	In Use	54.9%	150	$1,125,000	2026
41	800	In Use	N/A	100	$600,000	2027
14	2200	In Use	N/A	125	$1,650,000	2028/2029
Crafton	1750	idle	59.8%	200	$1,312,500	2030/2031
32	1850	In Use	60.5%	200	$1,387,500	2032/2033
30A	1500	In Use	61.2%	150	$1,125,000	2034/2035
Chicken Hill	600	In Use	63.0%	75	$450,000	2036
Hog Canyon	950	Idle	66.4%	100	$712,500	2037
Agate 1	1800	Idle	77.5%	200	$1,350,000	2038
					$12,075,000	

CIP NP 1-3 Meter Replacement

Size (in)	r of meters	Cost per m	Total Cost	Meter Cost	Strainer	Lid	Install
3/4""	8	$ 350	$ 2,800	229.14		45	79.36
1""	22	$ 420	$ 9,240	294.9		45	79.36
1 1/2""	27	$ 1,000	$ 27,000	503.55		100	396.77
2""	117	$ 1,140	$ 133,380	646.5		100	396.77
4""	4	$ 3,050	$ 12,200	2000	450		595.15
6""	2	$ 7,650	$ 15,300	4900	770		1984
Unknown	4	$ 2,500	$ 10,000	1000	500		1000
Total	184						1.03

				Meter Calibration	
4""	4	$ 380	$ 1,520	300	80
6""	2	$ 380	$ 760	300	80
			$ 212,200		

Non-potable /Recycled Water Pipeline Analysis

Material Average Service Life			Age	Length																	
Abv.	Material	Service Life	Diameter (in)	Error Check		1	1.5	2	3	4	6	8	10	12	14	15	16	18	20	24	UNK
ACP	Asbestos Concrete Pipe	70	Error (lower than -100)	31324.65896	31324.65896	170.0532008	0	7650.993724	5.960794973	129.7816831	0	1503.606909	2838.241313	1635.244562	0	4479.447815	7375.907811	0	0	0	5535.421146
CIP	Cast Iron Pipe	120	Less than 0 Greater or equal to -100	9941.277878	9941.277878	0	0	0	0	38.47763056	0	0	0	0	0	0	528.9785146	678.2402007	8695.581532	0	0
CMLC	Cement Mortar Lined and Coated	100	Less than or equal to 5 and greater than or equal to 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CMLDIP	Cement Mortar Lined Ductile Iron Pipe	100	Greater than 5 less than or equal to 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CMLSTL	Cement Mortar Lined Steel Pipe	100	Greater than 10 less than or equal to 15	32.99984171	32.99984171	0	0	32.99984171	0	0	0	0	0	0	0	0	0	0	0	0	0
CON	Concrete	100	Greater than 15 less than or equal to 20	9145.788628	9145.788628	0	0	0	0	145.6934138	347.4828578	1153.894925	0	66.26587706	0	1074.792121	0	792.4039506	5564.24105	0	1.014433667
COP	Copper	50	Greater than 20 less than or equal to 25	724.4704218	724.4704218	0	0	11.41977579	0	0	0	586.0381374	10.08172033	0	0	0	0	0	116.9307883	0	0
DIP	Ductile Iron Pipe	100	Greater than 25 less than or equal to 30	13025.334	13025.334	0	0	115.1688049	0	1272.288579	2737.98753	702.37107	0	924.2124762	7273.305542	0	0	0	0	0	0
DW	Dipped and Wrapped	40	Greater than 30 less than or equal to 35	1501.374678	1501.374678	0	0	1198.626349	0	0	10.27101633	292.4773135	0	0	0	0	0	0	0	0	0
HDPE	High Density Polyethylene	50	Greater than 35 less than or equal to 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OTH	Other	40	Greater than 40 less than or equal to 45	5913.238597	5913.238597	0	0	0	0	2116.021845	0	328.2039271	0	0	0	0	3016.261109	310.5901137	142.1616023	0	0
PVC	Polyvinyl Chloride	70	Greater than 45 less than or equal to 50	11713.52697	11713.52697	0	0	0	0	0	10926.02914	0	0	0	0	0	754.1529482	0	33.34487264	0	0
RCP	Reinforced Concrete Pipe	100	Greater than 50 less than or equal to 55	66463.12701	66463.12701	0	0	6573.923512	0	127.1116537	22100.41276	5988.10909	1660.127735	12660.13005	0	470.0535481	3565.89249	0	609.0151693	12708.351	0
STL	Steel	100	Greater than 55 less than or equal to 60	16751.61504	16751.61504	0	0	0	0	0	10603.10546	1178.507472	0	3415.056614	0	0	1554.945491	0	0	0	0
Unk	Unknown	40	Greater than 60 less than or equal to 65	1893.355577	1893.355577	0	0	178.0873316	0	20.85264859	0	0	0	1694.415597	0	0	0	0	0	0	0
VCP	Vitrified Clay Pipe	50	Greater than 65 less than or equal to 70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Greater than 70 less than or equal to 75	972.2601155	972.2601155	0	0	0	0	0	39.99993194	0	0	932.2601835	0	0	0	0	0	0	0
			Greater than 75 less than or equal to 80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Greater than 80 less than or equal to 90	13262.0683	13262.0683	0	0	413.138807	0	330.6263726	7587.508824	425.2161629	1357.952259	12.9633912	0	0	3125.475221	0	0	9.187265354	0
			Greater than 90 less than or equal to 100	30975.44527	30975.44527	126.6871248	11.26999086	981.7236462	0	33.61925957	3826.239269	13558.25638	0	12437.6496	0	0	0	0	0	0	0
			Error (greater than 100)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Total	213640.5413	213640.5413	296.7403256	11.26999086	17156.08179	5.960794973	4214.473086	58179.03679	25716.68138	5866.403027	33778.19836	7273.305542	6024.293484	19921.61358	1781.234265	15161.27501	12717.53826	5536.48558
		Cost ($/in-ft)	Total (miles)	40.46222373	3052.007733																
		19.5																			

Age	Length																			
Diameter (in)			8	8	8	8	8	8	8	10	12	14	15	16	18	20	24	30		
Error (lower than -100)	31324.65896	$ 9,261,669.20	$ 26,528.30	$ -	$ 1,193,555.02	$ 929.88	$ 20,245.94	$ -	$ 234,562.68	$ 553,457.06	$ 382,647.23	$ -	$ 1,310,238.49	$ 2,301,283.24	$ -	$ -	$ -	$ 3,238,221.37		
Less than 0 Greater or equal to -100	9941.277878	$ 3,800,382.91	$ -	$ -	$ -	$ -	$ 6,002.51	$ -	$ -	$ -	$ -	$ -	$ -	$ 165,041.30	$ 238,062.31	$ 3,391,276.80	$ -	$ -		
Less than or equal to 5 and greater than or equal to 0	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 5 less than or equal to 10	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 10 less than or equal to 15	32.99984171	$ 5,147.98	$ -	$ -	$ 5,147.98	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 15 less than or equal to 20	9145.788628	$ 3,035,607.26	$ -	$ -	$ -	$ -	$ 22,728.17	$ 54,207.33	$ 180,007.61	$ -	$ 15,506.22	$ -	$ 314,376.70	$ -	$ 278,133.79	$ 2,170,054.01	$ -	$ 593.44		
Greater than 20 less than or equal to 25	724.4704218	$ 140,772.38	$ -	$ -	$ 1,781.49	$ -	$ -	$ -	$ 91,421.95	$ 1,965.94	$ -	$ -	$ -	$ -	$ -	$ 45,603.01	$ -	$ -		
Greater than 25 less than or equal to 30	13025.334	$ 2,955,017.43	$ -	$ -	$ 17,966.33	$ -	$ 198,477.02	$ 427,126.05	$ 109,569.89	$ -	$ 216,265.72	$ 1,985,612.41	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 30 less than or equal to 35	1501.374678	$ 234,214.45	$ -	$ -	$ 186,985.71	$ -	$ -	$ 1,602.28	$ 45,626.46	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 35 less than or equal to 40	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 40 less than or equal to 45	5913.238597	$ 1,486,832.84	$ -	$ -	$ -	$ -	$ 330,099.41	$ -	$ 51,199.81	$ -	$ -	$ -	$ -	$ 941,073.47	$ 109,017.13	$ 55,443.02	$ -	$ -		
Greater than 45 less than or equal to 50	11713.52697	$ 1,952,760.77	$ -	$ -	$ -	$ -	$ -	$ 1,704,460.55	$ -	$ -	$ -	$ -	$ -	$ 235,295.72	$ -	$ 13,004.50	$ -	$ -		
Greater than 50 less than or equal to 55	66463.12701	$ 16,148,439.54	$ -	$ -	$ 1,025,532.07	$ -	$ 19,829.42	$ 3,447,664.39	$ 934,145.02	$ 323,724.91	$ 2,962,470.43	$ -	$ 137,490.66	$ 1,112,558.46	$ -	$ 237,515.92	$ 5,947,508.27	$ -		
Greater than 55 less than or equal to 60	16751.61504	$ 3,122,197.86	$ -	$ -	$ -	$ -	$ -	$ 1,654,084.45	$ 183,847.17	$ -	$ 799,123.25	$ -	$ -	$ 485,142.99	$ -	$ -	$ -	$ -		
Greater than 60 less than or equal to 65	1893.355577	$ 427,527.89	$ -	$ -	$ 27,781.62	$ -	$ 3,253.01	$ -	$ -	$ -	$ 396,493.25	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 65 less than or equal to 70	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 70 less than or equal to 75	972.2601155	$ 224,388.87	$ -	$ -	$ -	$ -	$ -	$ 6,239.99	$ -	$ -	$ 218,148.88	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 75 less than or equal to 80	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Greater than 80 less than or equal to 90	13262.0683	$ 2,613,294.50	$ -	$ -	$ 64,449.65	$ -	$ 51,577.71	$ 1,183,651.38	$ 66,333.72	$ 264,800.69	$ 3,033.43	$ -	$ -	$ 975,148.27	$ -	$ -	$ 4,299.64	$ -		
Greater than 90 less than or equal to 100	30975.44527	$ 5,802,306.13	$ 19,763.19	$ 1,758.12	$ 153,148.89	$ -	$ 5,244.60	$ 596,893.33	$ 2,115,087.99	$ -	$ 2,910,410.01	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Error (greater than 100)	0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Total	213640.5413	$ 51,210,559.99	$ 46,291.49	$ 1,758.12	$ 2,676,348.76	$ 929.88	$ 657,457.80	$ 9,075,929.74	$ 4,011,802.30	$ 1,143,948.59	$ 7,904,098.42	$ 1,985,612.41	$ 1,762,105.84	$ 6,215,543.44	$ 625,213.23	$ 5,912,897.26	$ 5,951,807.91	$ 3,238,814.81		

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APPENDIX D

Water System Inefficiency Cost Opinion

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					Interpulation						
2020	**2022**	**2025**	**2027**	**2030**	**2032**	**2035**	**2037**	**2040**	**2042**	**2045**
18.90	19.10	19.40	19.72	20.20	20.48	20.90	21.14	21.50	21.78	22.20

	2022*	**2027**	**2032**	**2037**	**2042**
Projected ADD	18.90	19.72	20.48	21.14	21.78
Projected MDD	32.13	33.52	34.82	35.94	37.03
Projected PHD	51.98	54.23	56.32	58.14	59.90
Expected Inefficiencies (%)	**12.8**	**8**	**6**	**4**	**3**
Projected ADD production	21.32	21.30	21.71	21.99	22.43
Delta inefficiencies	2.42	1.58	1.23	0.85	0.65
Delta inefficiencies (afy)	2,710	1,767	1,376	947	732
inEfficiencies Monetization					
Delta inefficiencies Lost Billing Charges ($)	2,333,439	1,521,674	1,185,239	815,623	630,237
Delta inefficiencies Lost Purchase Charges ($), based on $500 $/(afy)well water price	1,354,752	883,456	688,128	473,536	365,904
Delta inefficiencies Power Use ($) 60% of Billing charges	1,400,063	913,004	711,143	489,374	378,142
Delta inefficiencies O&M ($) 30% of B illing charges	700,032	456,502	355,572	244,687	189,071
Delta inefficiencies New Capacity Planning ($) 30% of B illing charges	700,032	456,502	355,572	244,687	189,071
TOTAL Monatized Inefficienices	6,488,318	4,231,139	3,295,654	2,267,907	1,752,425
AVERAGE Monatized Inefficienices	3,607,089				
Reduction in inefficiencies ($)	-	2,257,179	3,192,664	4,220,411	4,735,893
AVERAGE Monatized Reduction in Inefficienices	**$ 2,881,229**				

Where

* 2020 Urban water management plan water supply data was used to approximate the 2022 base line level

1,000,000 gpd 1,120 afyr

City of Redlands 2021 Water use rate 1 mg

($)

1.46	100	cft	748	gal	1,952
1.78			748		2,380
2.69			748		3,596
Average					2,643

City of Redlands 2021 MP Data	ADD	PDD
	(mgd)	(mgd)
2022	18.9	32.13
2042	21.78	37.026

The City of Redlands
CIP implementation and Water Supply Inefficiencies reduction 2022 to 2042

	2022*	2027	2032	2037	2042
Projected ADD	18.90	19.72	20.48	21.14	21.78
Projected MDD	32.13	33.52	34.82	35.94	37.03
Projected PHD	51.98	54.23	56.32	58.14	59.90
Expected Inefficiencies (%)	**12.8**	**10**	**8**	**6**	**4**
Projected ADD production	21.32	21.69	22.12	22.41	22.65
Delta inefficiencies	2.42	1.97	1.64	1.27	0.87
Delta inefficiencies (afy)	2,710	2,209	1,835	1,421	976
inEfficiencies Monetization					
Delta inefficiencies Lost Billing Charges ($)	2,333,439	1,902,092	1,580,319	1,223,435	840,316
Delta inefficiencies Lost Purchase Charges ($), based on $500 $/(afy)well water price	1,354,752	1,104,320	917,504	710,304	487,872
Delta inefficiencies Power Use ($) 60% of Billing charges	1,400,063	1,141,255	948,191	734,061	504,190
Delta inefficiencies O&M ($) 30% of B illing charges	700,032	570,628	474,096	367,031	252,095
Delta inefficiencies New Capacity Planning ($) 30% of B illing charges	700,032	570,628	474,096	367,031	252,095
TOTAL Monatized Inefficienices	6,488,318	5,288,923	4,394,205	3,401,861	2,336,567
AVERAGE Monatized Inefficienices	4,381,975				
Reduction in inefficiencies ($)	-	1,199,395	2,094,113	3,086,457	4,151,751
AVERAGE Monatized Reduction in Inefficienices	**$ 2,106,343**				

Where
* 2020 urban water management plan water supply data was used to approximate the 2022 base line level

1,000,000 gpd 1,120 afyr

City of Redlands 2021 Water use rate 1 mg
($)

1.46	100	cft	748	gal	1,952
1.78			748		2,380
2.69			748		3,596
Average					2,643

	ADD	PDD
	(mgd)	(mgd)
2022	18.9	32.13
2042	22.17	37.689

APPENDIX E

CIP Projects Remaining After Quality Control

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City of Redlands

CIP project list based on QA/QC feedback review

CIP_1_Removed

CIP_2_Removed

CIP_3

MOID	MATERIAL	LENGTH	DIAMETER
14486	STL	1877.16	24
14487	STL	62.16	24
14488	STL	29.21	24
14490	STL	31.13	24
14491	STL	5.00	24
14492	STL	31.13	24
14493	STL	5.00	24
14485	STL	5.45	24

CIP_4

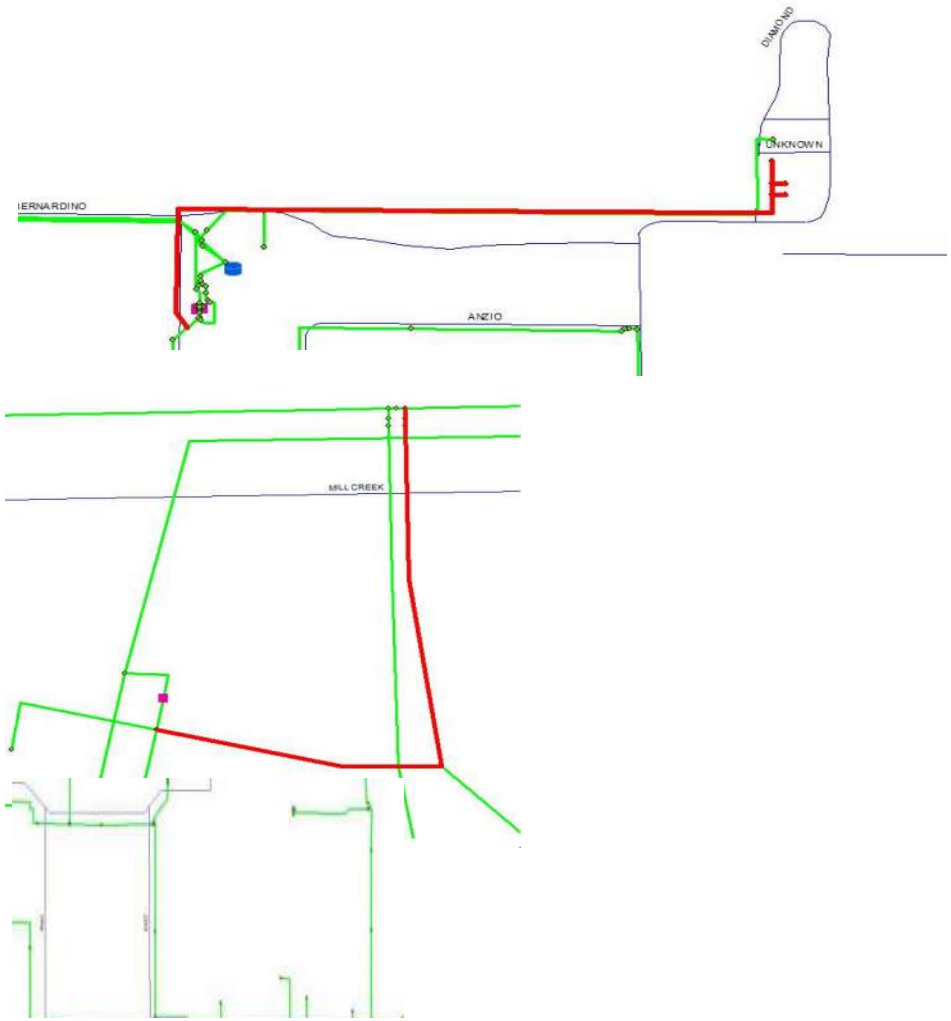
MOID	MATERIAL	LENGTH	DIAMETER
18405	STL	112.16	6
18406	ACP	85.52	8
23657	DIP	2.43	6
22928	DIP	3.26	6

CIP_5_Removed

CIP_6_Removed

CIP_7

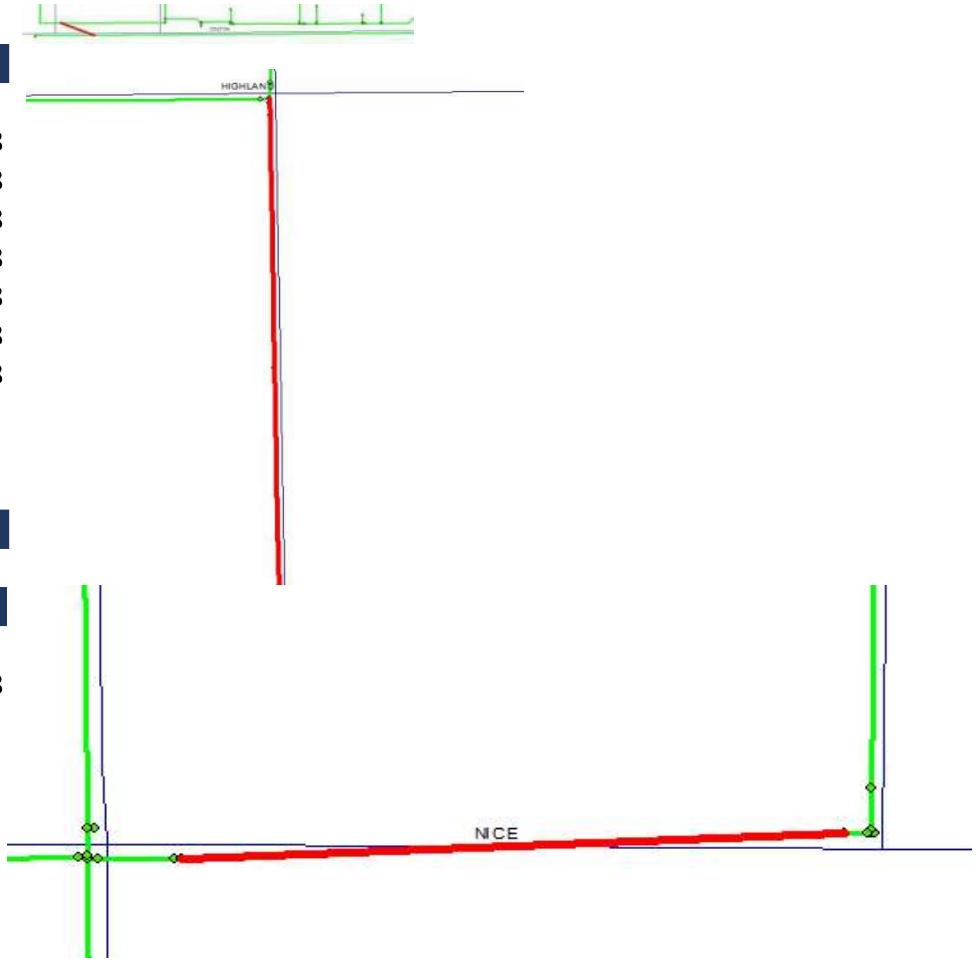
MOID	MATERIAL	LENGTH	DIAMETER
P839	PVC	76.03	8
P841	DIP	165.99	8



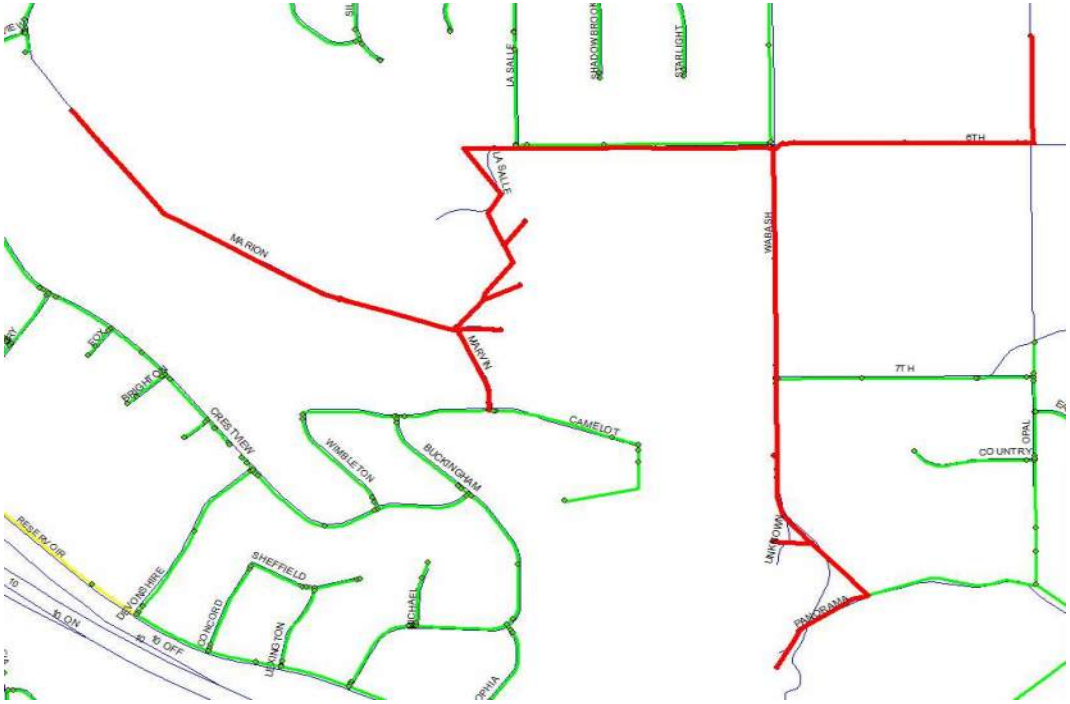
CIP_8			
MOID	MATERIAL	LENGTH	DIAMETER
404	ACP	10.23	8
3647	STL	48.24	8
3648	STL	15.52	8
3940	ACP	537.53	8
3946	ACP	620.80	8
3948	ACP	30.02	8
8150	STL	5.01	8

CIP_9_Removed

CIP_10			
MOID	MATERIAL	LENGTH	DIAMETER
P843	ACP	648.84	8



CIP_11			
MOID	MATERIAL	LENGTH	DIAMETER
290	ACP	20.11	12
292	ACP	10.00	12
1557	STL	374.44	12
3535	ACP	241.62	12
3536	ACP	418.31	12
3539	ACP	403.12	12
3646	ACP	41.92	12
3656	ACP	577.24	12
7463	ACP	43.91	12
7473	ACP	425.62	12
7474	ACP	28.04	12
7476	ACP	221.41	12
7477	STL	202.35	12
7478	STL	175.55	12
7510	STL	217.72	12
7539	STL	212.98	12
7540	ACP	4.72	12
7541	ACP	3.94	12
10016	ACP	211.18	12
10017	ACP	352.80	12
10018	ACP	569.41	12
10019	PVC	56.86	12
10021	PVC	5.00	12
10022	PVC	829.56	12
10023	STL	584.89	12
10024	PVC	3.33	12
13970	ACP	28.03	12
13975	ACP	424.89	12
13976	ACP	17.74	12
13978	ACP	65.80	12



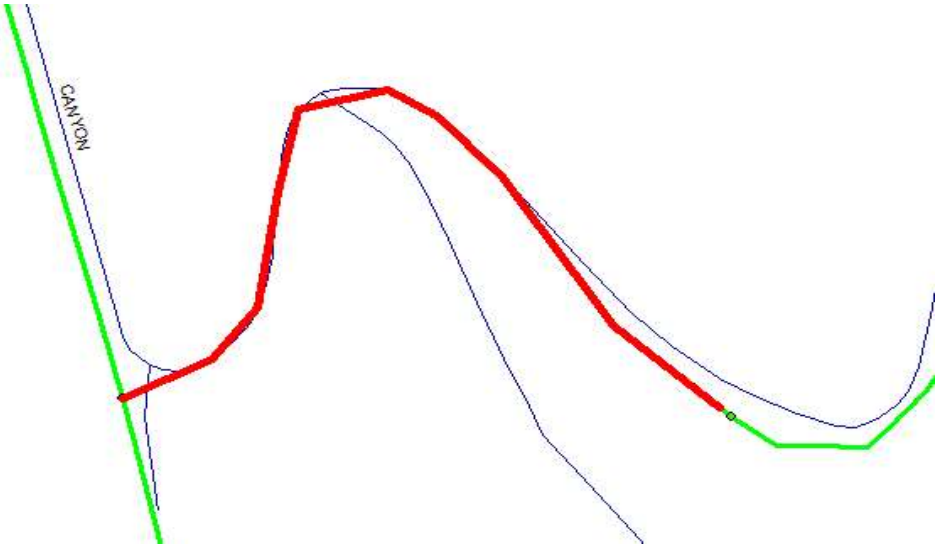
13980	ACP	431.04	12
13983	STL	612.84	12
13984	PVC	57.76	12
13985	PVC	6.31	12
13986	ACP	38.85	12
13987	PVC	4.16	12
13988	PVC	3.73	12
13989	PVC	3.64	12
13990	ACP	626.46	12
14057	ACP	182.44	12
18275	STL	69.05	12
18276	STL	5.94	12
22955	DIP	11.79	12
22958	DIP	478.79	12
22961	DIP	260.12	12
22964	DIP	438.68	12
22967	DIP	603.16	12
22968	DIP	2.69	12
22969	DIP	1.13	12
22970	DIP	11.14	12
22973	DIP	611.55	12
22974	DIP	3.56	12
22975	DIP	3.38	12
22976	DIP	5.38	12
22977	DIP	9.43	12
22978	DIP	1.32	12
22979	DIP	6.13	12
24762	CMLC	33.77	12
24755	CMLC	4.95	12
24756	CMLC	5.03	12
24757	CMLC	1.32	12
24761	CMLC	602.56	12
24758	CMLC	2.40	12
P523	ACP	49.32	12

P525	ACP	14.37	12
P745	DIP	2.41	12

CIP_12_Removed

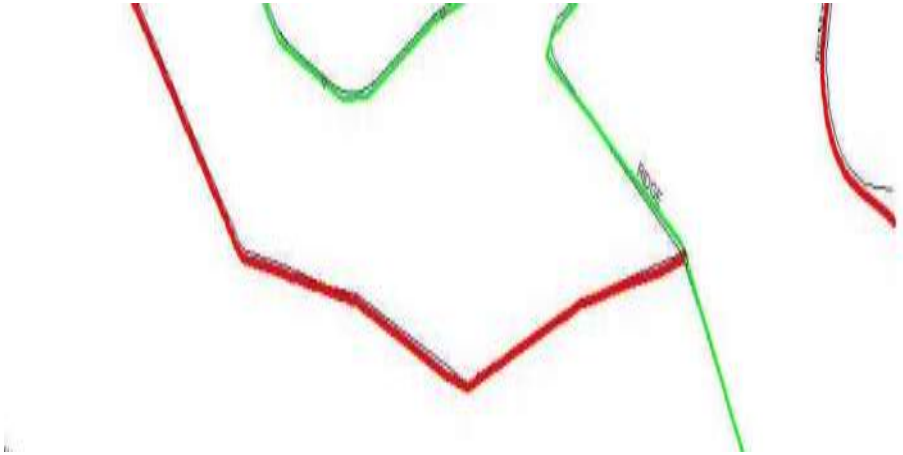
CIP_13

MOID	MATERIAL	LENGTH	DIAMETER
P845	DIP	503.31	6



CIP_14

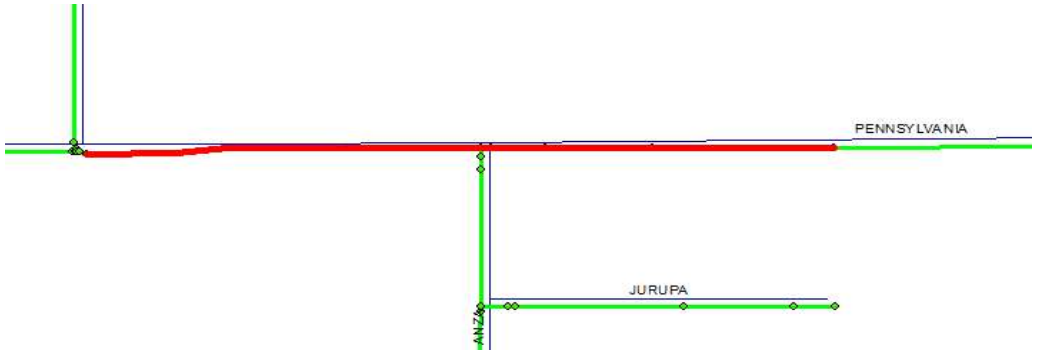
MOID	MATERIAL	LENGTH	DIAMETER
2104	ACP	490.32	8
2106	CMLC	262.70	8
2170	ACP	461.71	8
2190	ACP	28.35	8
7739	CMLC	7.01	8
7745	CMLC	5.66	6
7907	ACP	59.19	8
7908	ACP	288.88	8
7915	ACP	28.03	8
7916	ACP	19.93	8
7945	ACP	647.21	8
9325	ACP	552.38	8



9647	ACP	757.98	8
9651	STL	607.51	8

CIP_15

MOID	MATERIAL	LENGTH	DIAMETER
11929	ACP	275.74	8
11930	ACP	398.94	8
11932	ACP	204.19	8
11996	ACP	84.25	8
11997	ACP	163.35	8
23545	ACP	15.31	8



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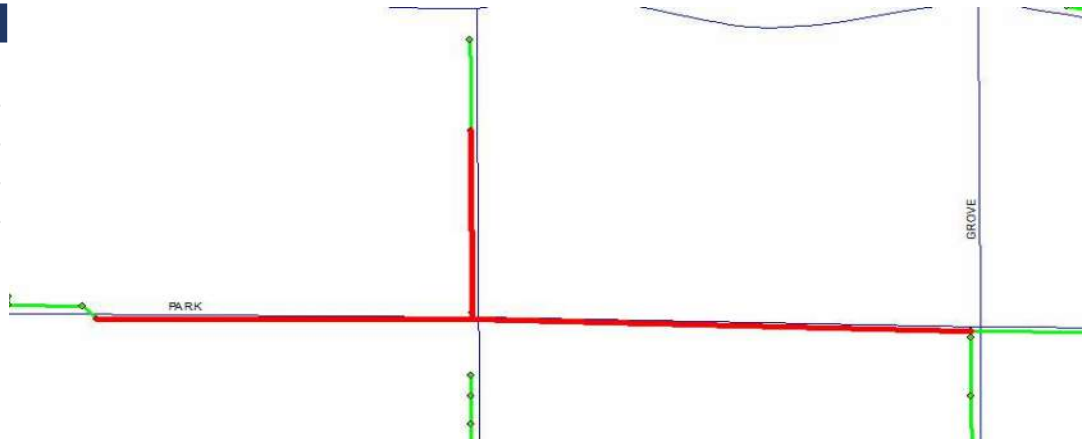
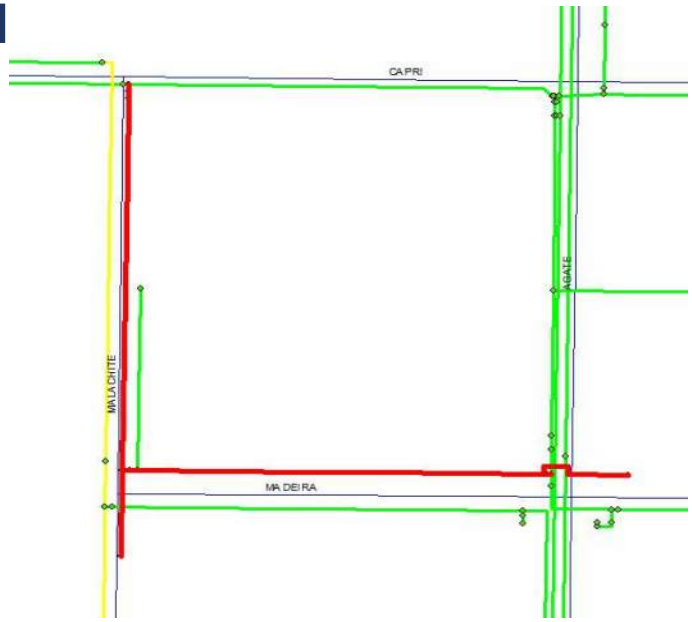
CIP_17

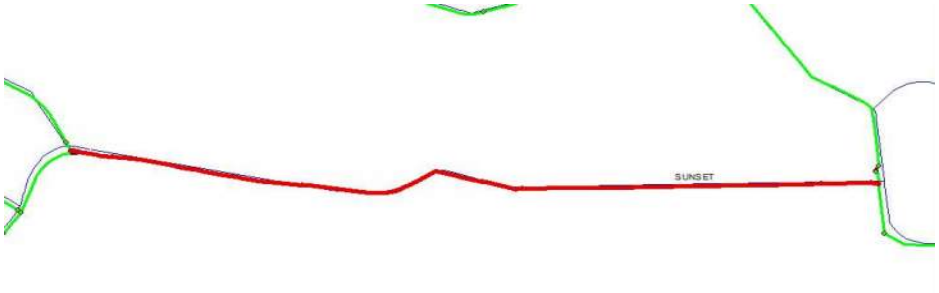
MOID	MATERIAL	LENGTH	DIAMETER
12966	STL	723.06	8
12950	STL	291.39	8
12953	STL	11.43	8
12962	STL	542.86	8



CIP_18			
MOID	MATERIAL	LENGTH	DIAMETER
900	STL	7.50	8
1040	STL	7.51	8
5768	STL	94.55	8
5783	STL	7.48	8
5784	STL	408.92	8
18315	PVC	8.00	8
18221	STL	402.48	8
18225	STL	3.56	8
18226	STL	3.56	8
18229	STL	101.75	8



CIP_19			
MOID	MATERIAL	LENGTH	DIAMETER
2192	ACP	481.89	12
7905	ACP	116.79	12
7906	ACP	369.41	12
7951	ACP	141.08	12
10728	ACP	11.73	12
16321	ACP	543.18	12
16323	ACP	96.76	12
16327	ACP	536.67	12
21695	DIP	21.53	12
P133	ACP	10.71	12



NP- CIP_1

MOID	MATERIAL	LENGTH	DIAMETER
644	PVC	187.23	6
645	PVC	463.27	6
646	PVC	658.44	6
780	PVC	108.75	6
781	PVC	282.83	6
782	PVC	835.55	6
783	DIP	15.00	6
784	DIP	21.00	6
785	DIP	15.00	6
786	DIP	21.00	6
788	PVC	389.33	6
789	PVC	234.42	6

NP- CIP_2

MOID	MATERIAL	LENGTH	DIAMETER
268	PVC	20.91	6
269	PVC	273.46	6
758	PVC	144.27	6
759	PVC	39.67	6
760	PVC	1.52	6
761	PVC	4.00	6
762	PVC	95.47	6
763	PVC	5.00	6
768	PVC	478.41	6
770	PVC	75.26	6
834	PVC	22.59	6
839	PVC	43.17	6
840	PVC	178.15	6
841	PVC	10.00	6
848	PVC	113.93	6
849	PVC	393.77	6
1850	<Null>	617.72	8
1851	<Null>	532.52	8
1859	<Null>	102.09	8
1860	<Null>	216.25	8

NP- CIP_3

MOID	MATERIAL	LENGTH	DIAMETER
104	PVC	5.00	12
112	PVC	171.06	10
114	PVC	4.99	10
399	PVC	436.19	12
400	PVC	389.27	12
701	ACP	115.23	20

707	STL	93.05	12	
708	STL	5.00	12	
709	UNK	5.08	10	
710	STL	4.29	12	
712	STL	5.64	12	
715	STL	11.10	12	
716	STL	16.00	12	
717	STL	781.62	12	
720	STL	12.37	12	
721	STL	2.97	12	
723	STL	4.00	6	
724	STL	11.00	6	
725	STL	5.50	6	
726	STL	5.50	6	
727	STL	7.00	8	
728	STL	6.44	8	
729	STL	6.50	8	
730	STL	8.96	8	
731	STL	8.96	8	
732	STL	6.00	8	
733	PVC	8.20	8	
734	STL	6.00	8	
735	STL	16.14	8	
736	STL	16.14	8	
737	PVC	19.66	10	
739	PVC	2.97	8	
740	PVC	8.58	10	

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APPENDIX F

Condition, Seismic, and Structural Assessment Executive Summary

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CONDITION, SEISMIC, AND STRUCTURAL ASSESSMENTS FOR THE WATER FACILITIES INFRASTRUCTURE

City of Redlands

Executive Summary

June 30, 2022

BRADY
Water • Power • Transportation

FINAL

Executive Summary

From: **Richard Brady, P.E., BCEE, CEO, Richard Brady & Associates, Inc.**
Project Manager

To: **Veronica Medina, EIT, Project Manager**
Paul Mariscal, Water Production Operations Superintendent

Date: June 30, 2022

Subject: Condition Assessment Summary and Recommended Action Plan

EXECUTIVE SUMMARY

Scope of Work

BRADY's Scope of Work was to provide professional engineering services to perform condition, seismic, and structural assessments for the City of Redlands water facilities infrastructure. The infrastructure evaluated included 18 reservoirs, 9 pump stations, and two pipelines.

Recommended Capital Improvement Projects

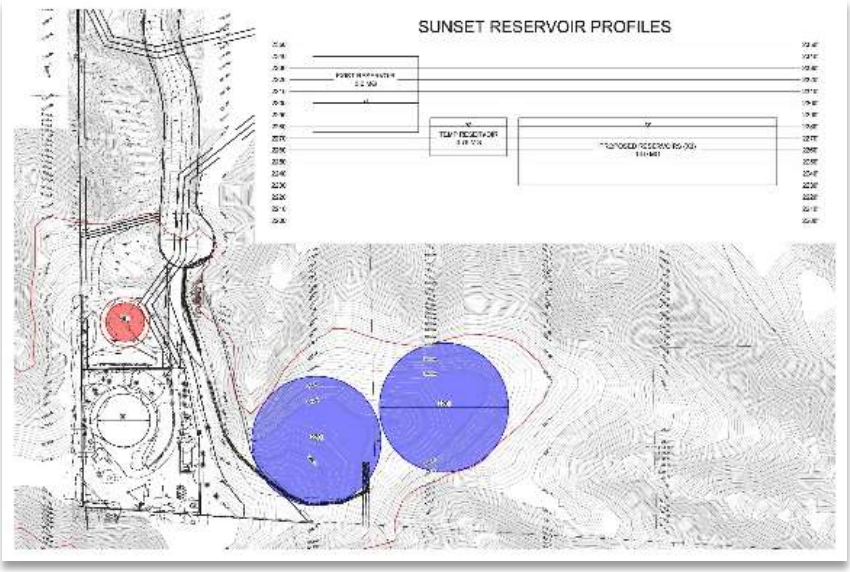
In summation, in order of priority, the recommended capital improvement projects that require the City's action to improve water security in a future seismic event are as follows:

1. **New Sunset Reservoir(s)**. The Sunset Reservoir dates to 1967. It is in extremely poor condition with no seismic restraint and has a lead paint coated interior. The soil below the reservoir is fractured granite and potentially unstable. A new reservoir in this location would require the top ten feet of soil to be removed. Large Verizon cell towers have been installed adjacent to the reservoir. In a major seismic event, the Sunset Reservoir is in danger of either tipping over into the canyon below, or in the other direction, into the cell towers that would affect cell phone communications for the region, causing critical problems if the towers were damaged. The recommendation is broken into two separate phases.

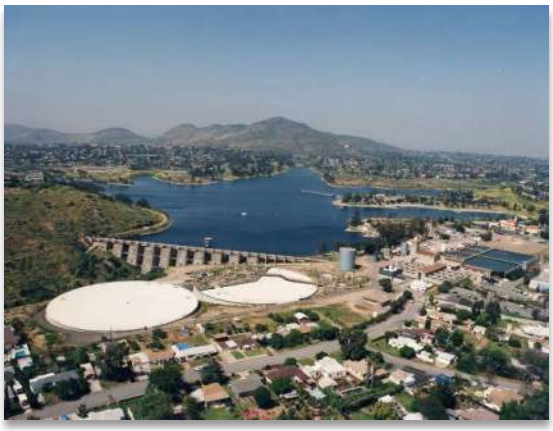
Given the lack of seismic anchorage and likely overturning in a major seismic event, the first phase is to erect a temporary 750,000-gallon bolted steel tank on the parcel north of existing reservoir. The City can purchase this temporary tank, which can be disassembled, stored, and re-used in the future where needed in the system, possibly as a reclaimed water tank in the Crafton Hills college area. This action is necessary because the Sunset Reservoir has no back-up reservoir to service the 2340 service Zone in this area. The Sand Canyon Reservoir also services the 2340 Zone, but it not hydraulically connected to the Sunset service area; they operate independently of one another.

We have studied an option to construct a new partially buried prestressed concrete reservoir in an adjacent parcel that the City may purchase assuming a successful negotiation is concluded. If the land purchase is not successful, then the recommendation is to construct a new 3 MG prestressed concrete reservoir on the existing tank site.

If the negotiation is successful, the second phase is to construct a new partially buried 10 MG prestressed concrete reservoir in the City's parcel adjacent to the existing Sunset site. The property has 4 separate but adjoining parcels, 22 acres in total. The new reservoir can comfortably be constructed in this 22-acre parcel, with room for a possible second 10 million gallon (MG) reservoir at some future date. These are the largest reservoirs that can be constructed at this site at the right hydraulic elevation. The existing Sunset Reservoir is only 3 MG but the additional 7 MG at this location will account for the 6 MG of lost storage in the City due to reduced high-water levels (HWL) to meet current seismic codes. The other major benefit will be to significantly improve the City's water reliability and resiliency by having a large water volume that can serve the City by gravity in the instance that power is lost in a seismic event. The additional 6 MG of storage is a placeholder for more storage that will be lost if a reservoir consolidation plan is accepted by the City and other stakeholders (Municipal Utilities/Public Works Commission). Sunset Reservoir is one of the City's most valuable assets as it sits at the highest elevation in the City, allowing gravity flow to 97% of the City's



population. The recommended size is 10 MG. A proposed layout is illustrated in the image to the right. The layout shows a potential second reservoir, if needed, to meet water demands at some future date. These two reservoirs are illustrated in blue; the temporary 750,00-gallon tank is illustrated in red.

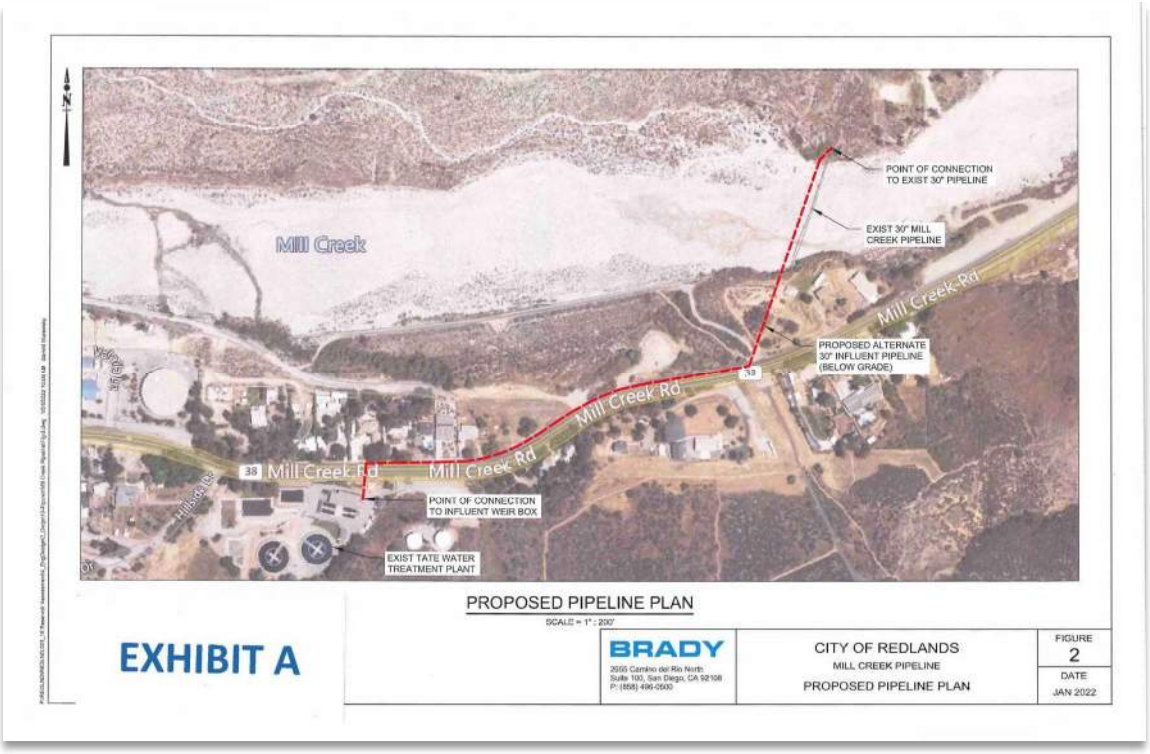


The proposed layout would be similar to a 1994 BRADY design for two new 21 MG prestressed concrete reservoirs at the Alvarado Water Treatment Plant (WTP) in the City of San Diego. The adjacent photo of the completed project will help visualize what this could look like. The reservoir on the right includes a Native Plant Demonstration Garden on the reservoir for public education purposes of native, drought tolerant landscaping. Similar joint public use can be considered for the new Sunset Reservoir site, which provides an impressive 360-degree view of the area.

2. **(a) Second Mill Creek Pipeline**. The poor condition of this pipe presents a significant concern about the extended operating life of this asset. The pipe is elevated above Mill Creek on concrete piers spaced approximately 40 feet apart. Numerous large boulders span the length and width of Mill Creek. The chance of failure of this pipe during a major seismic event is significant, as well as during a major storm event where large boulders could damage the piers. Historical boulder impacts to the existing support piers are visually evident. To improve overall reliability of this critical asset, several pipe replacement alternatives will be considered. A second pipeline is only one of these

alternatives. The Mill Creek Pipeline delivers raw water for treatment at Tate WTP. This pipeline is critically important to the City's water security because the Tate WTP can serve more than 85% of the City's entire population by gravity flow. Maintaining continuous operations of the Tate WTP is therefore essential in a future major seismic event. A possible solution is to construct a second 30-inch diameter inlet pipeline parallel to the existing pipeline **under** Mill Creek. The pipe should parallel the existing pipe in Mill Creek Road all the way to the inlet structure at the Tate WTP. A dedicated inlet structure should be constructed to receive this new pipeline, and then connect to the existing inlet box for distribution to the reactor clarifiers. The new pipeline should also have a dedicated flow meter located at the plant site. A concept sketch is included below. The City has issued a Request for Proposals (RFP) for the design of this pipeline. Proposals are due February 29, 2022. The consultant selected to predesign and design this pipeline will also be tasked with developing a project budget. Therefore, our cost table below will not include a price for the new pipeline given this cost will be developed by others at some future date.

Additionally, once the new pipeline is in operation, the existing piers should be reinforced as necessary to provide additional security against catastrophic failure. Flexible expansion joints should be provided on each side of the creek where the pipe comes out of and re-enters the ground.



Once the new pipeline is constructed below Mill Creek, and the existing pipeline is rehabilitated with improvements to protect the support piers, the Tate WTP will have two independent pipelines delivering raw water to the plant. This is the ideal outcome for a water treatment facility as important as Tate – two separate ways to keep the plant in service during a major seismic event.

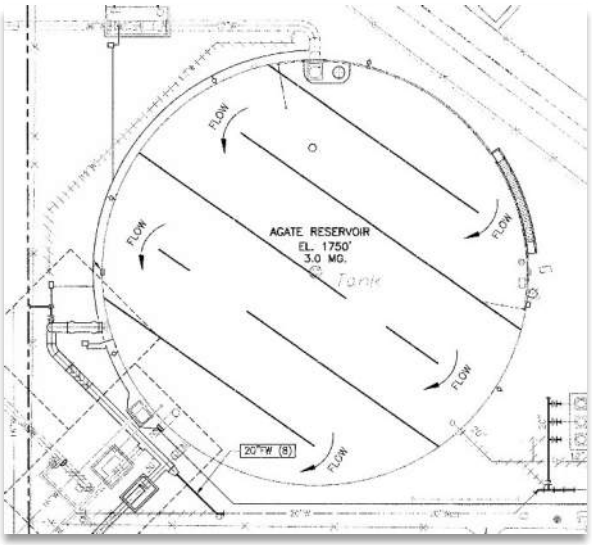
(b) Mill Creek 1 and 2 Tanks. The Mill Creek 1 and 2 tanks were erected in 2005 at 200,000 gallons each. The tanks are redundant to each other, so a minimum of 200,000 gallons of storage is needed at all times to provide the desired benefit – supplemental backwash supply to the Tate WTP.

Structural calculations to bring Mill Creek 1 and 2 into code compliance would require a significant reduction in operating volumes. Each tank would see a reduction from the design volume of 200,000 gallons to 90,420 gallons, to 45% of the original volume. The Mill Creek 1 and 2 tanks were not provided with seismic anchorage, are in danger of overturning in a seismic event, and lack sufficient freeboard to protect the tanks from damage due to sloshing.

Given the importance of the Tate WTP to the City in a major seismic event, and due to the critical importance of maintaining the assets needed to allow filter backwashing under low plant production rates, the Mill Creek 1 and 2 tanks are in need of rehabilitation. The easiest approach is to build a third Mill Creek tank, but space at the site is very limited. Though it is not a proven industry solution, serious consideration should be given to raising the reservoir roofs as needed to restore the operating volumes of each tank to 200,00 gallons. Seismic anchorage is also required. Using cost figures we recently developed for California American Water, a rehabilitation budget cost of $2.50 per gallon is the approximate cost per tank. Therefore, a budget figure of $500,000 is recommended per tank, $1M total, to resolve this problem as quickly as possible.

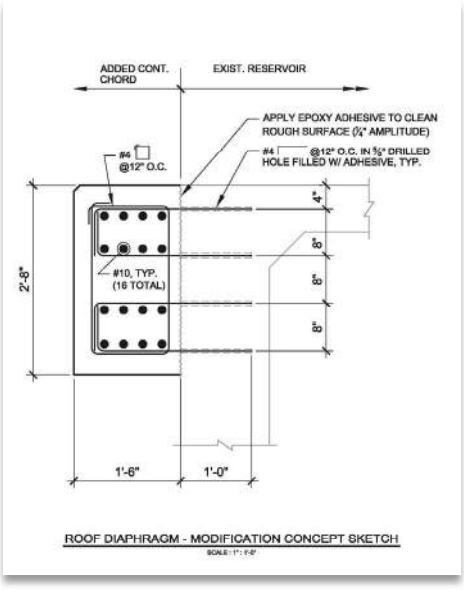
3. **Optimize Agate Reservoir and Construct New 60-inch Pipeline**. The Agate Reservoir dates to 1968 and serves as the clearwell reservoir for the Hinckley WTP. The reservoir does not meet current seismic design codes, but can be brought into compliance by reducing the operating capacity to 2,163,000 gallons, which will decrease stresses in the steel shell and increase the freeboard to allow for sloshing. However, the operating volume of the Agate Reservoir is critically important as the City achieves regulatory CT compliance (disinfectant concentration x time) inside of Agate Reservoir. The reservoir was retro-fitted in 2010. Hanging hypalon curtains were secured to the reservoir roof and floor to create a serpentine flow pattern inside reservoir to promote improved mixing for the purposes of obtaining the regulatory mandated CT credit. The City uses free chlorine as their primary and secondary disinfection method. The strength of a chemical disinfectant (chlorine) for inactivating pathogens when in contact with water can be measured by its CT value. The Hypalon curtains are shown in the figure at the right. There are many unintended consequences that have resulted from the installation of the baffle curtains. In a major seismic event, the sloshing forces of the water will act on the curtains, which in turn will collapse the roof, leading to complete reservoir failure. The curtains may also become dislodged and plug the outlet pipe serving gravity flow supply to the City's largest reservoirs – Dearborn at 10.6 MG and Highland at 10.0 MG. The possibility of this occurring will result in losing the Hinckley WTP supply as all of the plant effluent flows through Agate Reservoir. Hinckley provides gravity flow to 40% of the City's population.

Hypalon curtains shown anchored to the



A new 60-inch diameter pipe parallel to the existing 30-inch plant effluent pipeline will allow the City to achieve CT compliance in piping, not a baffled circular reservoir where the flow circulation pattern is not ideal. Together with the existing 30-inch pipeline, CT can be achieved in pipe, with no future reliance on the hypalon curtains hanging from the reservoir roof. Once the new pipe is installed, the hypalon curtains can be removed to protect the reservoir and the system so the existing Agate Reservoir can remain in service at a reduced operating level. The 60-inch pipe will also provide a supplemental storage volume of 0.22 MG.

4. **Highland Reservoir Seismic Upgrade**. The 10 MG rectangular concrete reservoir is in fair condition, but does require immediate action to correct a minor seismic deficiency. The Highland design has some unique structural features due to the presence of recreational activities on the reservoir roof. As a result of anticipating the associated live loads from these activities, the structure generally meets current seismic design codes. The problem to be solved relates to the roof diaphragm. The presence of slip dowels in the existing roof design (designed to allow for thermal expansion/contraction) do not transfer seismic loads from the roof diaphragm to the perimeter walls. In a (horizontal) seismic event, the roof slab could collapse. A structural beam



(reinforced with 16- #10 bars) around the entire perimeter will contain and transfer diaphragm loads to walls per the detail shown at the right.

5. **New 5th Ave Reservoir and Pump Station**. The 5 MG Fifth Avenue Reservoir is the only City reservoir that is near an active fault. This reservoir is a key reservoir for the Tate WTP as water transfers into the lower elevations. Water stored in Fifth Avenue is also pumped to the 2340 Zone (Sand Canyon Reservoir). The loss of Fifth Avenue for any reason would restrict operations. The site of the Fifth Avenue reservoir and pump station is located within a County Fault Zone for the Reservoir Canyon fault, which was adopted in the Countywide Policy Map in October 2020. As shown in the figures at the left and below, the edge of the County Fault Zone passes through the middle of the Fifth Avenue property. The Reservoir Canyon Fault is a normal fault that is part of the Crafton Hills Fault Zone. The fault trace is mapped about 400 feet away from the closest location to the Fifth Avenue reservoir.

The purple shaded zone on the County of San Bernardino fault map is a County Fault Zone – which is a zone of required investigation defined by the County of San Bernardino around the surface trace of an active fault that poses a risk of surface fault rupture in the future. Based on the Alquist-Priolo Act, fault zones are generally defined about 500 feet away from either side of a known fault (approximately 1,000 ft in width total) to account for the possibility that faults are not precisely identified and may occur in more than one branch in that area. The width of a fault zone can vary, for example, where faults are very well-defined at the surface, have narrow zones of deformation, and have vertical to sub-vertical inclinations, the zone can be narrower. Where faults are not well defined, contain wide zones of deformation, are segmented, or inclined at shallow angles, the fault zone may be wider to reflect this uncertainty. For the Reservoir Canyon Fault, the County Fault Zone appears to be about

1,200 feet in width (about 600 feet on either side of the inferred fault trace). The 400-foot distance described in the report is the distance between the Fifth Avenue Reservoir and the edge of the mapped fault zone, not the width of the fault zone itself.

The intent of earthquake fault zones is primarily to prevent the "location of developments and structures for human occupancy across the trace of active faults." This is primarily to eliminate the risk of surface fault rupture damage to the structure. This does not mean no development can occur in a fault zone. Instead, it means that a site-specific fault investigation must be performed to determine if an active fault crosses the site, locate it with as much precision as possible, and recommend appropriate structural setbacks from the active fault trace. The intent of the proposed exploratory fault trench is to investigate the undeveloped portion of the site that is within the County Fault Zone of required investigation. This investigation would be used to determine whether a fault is present at the site that may impact siting of a future reservoir.

Construction of a new tank at the site may be governed by the City of Redlands Development Code. However, for surface fault rupture hazards, the lead agency may be either the City of Redlands, or the County of San Bernardino, depending on who is generally tasked with reviewing site-specific fault investigations. Depending on the agency, local jurisdictions may defer to the County or State for these reviews."

Therefore, there may be potential for surface rupture, or associated off-fault deformations at the site from movement of the Reservoir Canyon fault reaching the ground surface at the Fifth Avenue site. The County of San Bernardino Development Code, Chapter 82.15.040 (b) requires that construction of any new structure used for critical facilities (such as a reservoir) be located 150 feet or farther from any active earthquake fault trace. As required by codes, new structures or improvements at the Fifth Avenue site will require a site-specific surface fault rupture investigation. We recommend excavating the fault trench location shown on the figure to the right as a part of any future reservoir improvement plan. The trench excavation will be approximately 3 feet wide and up to 10 feet deep.

Fortunately, the existing reservoir walls are completely buried with a column supported exposed concrete roof. Major structure damage that may occur in an earthquake will not result in a tidal wave of water causing damage to other structures. However, the loss of Fifth Avenue will cause an operational challenge for City staff. Replacing this reservoir with a prestressed concrete reservoir designed to AWWA D110, Type 1 (cast in place concrete walls) provides the City with the best protection in a future seismic event.

A Brief Clarification of Risk at the Fifth Avenue Reservoir Site

It should be noted that throughout the City's system, compliance with current seismic codes is clearly the goal, however, compliance with current code does not guarantee that a reservoir constructed before 1994 (Northridge earthquake, the last regional earthquake of significance) would not be seriously damaged in an earthquake. For example, most of the City's 12 steel tanks can be made code compliant by simply lowering the operating levels. Various recommendations to bring structures "up to code" only addresses the hazard of strong ground shaking. In no way does it mitigate the hazard of surface fault rupture.

As noted above, the 5th Ave reservoir is mapped in very close proximity to Reservoir Canyon Fault. If that fault were to rupture, there would potentially be feet of displacement that could occur both horizontally and vertically. The existing reservoir could not withstand that level of movement and would be severely damaged. If you want to strengthen the existing reservoir for both ground shaking and surface fault rupture, a much more intensive structural strengthening would be required. Even without design drawings to review, our structural team believes you would have to replace the foundation with a rigid mat foundation and also consider strengthening the walls. There may also be other options to consider, like placement of geofoam or some sort of compressible foam behind the walls to reduce pressures and allow some movement without damage to the walls.

The City should assume the currently mapped fault location unless an exploratory excavation proves otherwise.

In light of these facts, we recommend that the best path forward is to abandon the existing structure and replace it with a 5 MG prestressed concrete reservoir designed to withstand the likelihood of significant ground movement in this location. A new Fifth Avenue Pump Station, adjacent to the new reservoir at grade, should be designed to lift water from the Fifth Avenue Reservoir directly up to Sunset Reservoir. A proposed location of the new reservoir and is shown in the figure above.

It should be noted that any modifications to any of the reservoirs will trigger the requirement to bring the reservoir up to all codes per the California Water Resources Control Board Department of Drinking Water. The plans would need to be submitted to the Water Board for approval and permitting.

6. **Improve Margarita or replace storage elsewhere.** The 2.4 MG rectangular concrete reservoir is in poor condition and requires immediate attention to correct structural and seismic deficiencies. The roof and walls do not meet current seismic codes. The roof will likely collapse in a major seismic event. The only practical upgrade solution is to construct a "tank within a tank" by first removing the roof and then constructing new walls, footing, and floor. In this solution, the wall height can be increased to provide more storage in this footprint if desired. The new roof can either be concrete or an aluminum dome. Alternatively, pending the results of the reservoir consolidation study, it is highly likely we can eliminate this reservoir by constructing more storage at a higher hydraulic gradient (Sunset). The reservoir could then be demolished and the property sold for residential use. It is recommended that any action regarding Margarita be postponed until the consolidation study is complete and accepted by the City and other stakeholders.

7. **Lower operating levels in steel tanks and replace lost storage elsewhere.** The City has 12 steel tanks distributed throughout the system. To better understand the seismic resilience of these steel tanks, a series of calculations was performed based on AWWA D100-11 standards to check for three primary failure mechanisms within the steel tank structure: (1) adequate freeboard and sloshing, (2) seismic overturning, and (3) allowable stress development in the shell. Although all of the tanks satisfied static standards, they failed when subjected to design level earthquake standards.

   The tanks without seismic anchorage along their perimeters usually failed in both seismic overturning and stress development in the shell. Additionally, the tank shells were not constructed with sufficient freeboard to contain the calculated sloshing. Retrofitting is not required if the HWL is lowered to the recommended values. The 12 steel tanks collectively provide 20.4 MG of storage volume in their current operating mode. Lowering the elevations as recommended will result in the loss of more than 6 MG of storage. This supports the idea of consolidation, as this storage can be replaced in properly designed prestressed concrete tanks – the best seismic designed tank in the industry today – at the highest elevation possible, which makes the Sunset site the ideal location. The majority

of the City's steel tanks are also very old; Texas Street dates to 1956 and only three have been erected since 1973, which makes all of the steel tanks close to 50 years old or older. The industry standard for the useful operating life of steel tanks is 50 years, so we recommend that no further investments be made in this infrastructure.

The City's recently updated hydraulic model was utilized to study the consequences of lowering the maximum high water elevations in the City's steel tanks. The primary concern is potential impacts on meeting pressure and fire code requirements. Each pressure zone was analyzed. The modeling efforts revealed deficiencies in individual tanks, but the deficiencies were offset by excess storage in other reservoirs serving the same pressure zone. For example, the Smiley Heights reservoir shows a deficiency of 3.05 million gallons, but fortunately this reservoir is in the same pressure zone with the Dearborn and Highland Reservoirs, the City's largest reservoirs at 10.6 MG and 10 MG, respectively. Sunset Reservoir also show a deficiency of 1.04 million gallons, but this deficiency will be resolved when the new Sunset Reservoir is constructed. The only two tanks needing immediate attention is Mill Creek 1 and 2. Proposed upgrades were described above as project 2(b).

8. **Replace Texas St. Reservoir in the existing footprint or abandon and replace storage elsewhere**. The reservoir is in poor condition. The reservoir could possibly be replaced in the existing reservoir footprint at a size no less than 1 MG and as large as 2.4 MG to make up for the storage deficiency at Texas Grove, due to the need to operate at a lower height to meet seismic codes. In the short term to meet current seismic codes, the reservoir high water elevation needs to be reduced by 38% (13.4 feet), resulting in a revised operating volume of 619,000 gallons. This is a significant loss of storage. Lowering the operating depth is necessary to increase freeboard for sloshing and to decrease the extreme steel shell stress under seismic conditions. It is therefore recommended that the reservoir not be operated at full capacity. The possibility for overturning, sliding, and water loss being released are high in a seismic event, if operated at full capacity. Given the size and age of this tank, retroactively equipping the tank with seismic anchorage is not recommended. Replacement or abandonment is recommended. The final decision about Texas Street should be postponed until the reservoir consolidation study is complete and accepted by the City and other stakeholders. If the reservoir is eventually abandoned, the pump station would need to be relocated to the Texas Grove Reservoir site.

9. **Maintain Dearborn and Country Club reservoirs.** The City's concrete reservoirs are in much better condition than the steel tanks. The 10 MG Dearborn Reservoir (photo at right), a rectangular concrete design, is in fair condition and requires no immediate attention or action to correct any structural or seismic deficiencies, especially since the completion of structural and seismic improvements in 2014. At that time, the original seventy-seven (77) columns were structurally enhanced and a new interior footing was placed around the entire reservoir interior, which protects the roof from collapse (unlike Highland Reservoir).

The other concrete reservoirs that appear to be code compliant without modifications in operating elevations are Country Club 1 and 2. Country Club 1 Reservoir is 20 feet high, with a diameter of 102.42 feet. The reservoir is buried with an exposed roof. The reservoir was built as a conventionally reinforced concrete tank in 1924 and is the City's oldest reservoir. An aluminum roof was added in 1980 and the tank was lined with steel plates in 2010, so technically the reservoir can now be considered a steel tank. The new steel tank rests within the old concrete structure and, overall, is in fairly good condition. However, the steel wall and old concrete wall are not structurally connected. It appears that the steel tank improvement was implemented strictly to resolve a leakage problem with the old concrete reservoir and is effectively a liner. The roof was also replaced for the second time. Due to the improvements in the reservoir that have been implemented in the past 40 years, and because the reservoir walls are completely below ground, the reservoir is in fair condition and does not require immediate attention or action. The reservoir passes all seismic requirements outlined by AWWA D100-11. Country Club 2 Reservoir dates back to 1969; it is in fair condition and does not require any maintenance at this time. Given the age and size of this reservoir, no further investment should be made at this site.

Both Country Club 1 and 2 should be maintained in service to provide additional water security to the City. The reservoirs are very high in the City's hydraulic profile and pump water up to the Sunset Reservoir area. Beyond the water treatment plants, Sunset will become the City's most valuable water asset; having at least two ways to get water up

the "hill" is critical. Improvements to the Country Club pump station should be made as a necessary improvement to assure the reliability of this facility. A new permanent emergency generator is in the City's current plans, so no further action is needed at the County Club site. Overall, the City's concrete reservoirs have done the job they were designed to do and have long useful lives ahead.

10. **Pump Stations.** The pump stations located at the Texas Street, Ward Way, Dearborn, South, Sand Canyon, Highland, 5th Avenue, Smiley Heights and Country Club reservoirs were evaluated by a team of experts in the mechanical, electrical, civil and structural engineering disciplines. Visual and prominent operational conditions were observed, and additional structural assessments (with supporting calculations) were provided when warranted. Consideration was given to each structure with respect to fire hardening, and the presence of hazardous materials onsite was investigated and documented in the August 2021 Limited Asbestos and Lead Survey prepared by Group Delta Consultants, Inc. The only pump station needing immediate attention is at Ward Way, where new pumps have been recently installed, but the building above the pumps needs to be replaced. The photo below is from a recent pump station project that BRADY designed for the City of Fountain Valley. The proposed pump station building at the Ward Way site should look something like the structure shown in the photo. This pump station house four vertical turbine pumps and a 500 KW diesel generator.

Project Costs

Opinions of Probable Construction Cost (OPCC) are summarized in Table 1 on the following page. The detailed estimating backup for each capital project is included in a separate technical memorandum but is summarized in this Executive Summary. OPCC's are summarized in the following separate categories:

1. Base cost of the capital project based on historical cost information for similar projects, supplemented where necessary with RS Means historical cost information.
2. Variable costs such as contractor general conditions costs (10%), and overhead and profit costs (15%), as a percentage of the OPCC.
3. Engineering and administrative cost as a percentage of the OPCC (soft costs).
4. Class 5 estimating contingency (+30%).

Recommended Capital Improvement Projects

Name	Recommended Improvement	Construction Cost (1)	Soft Costs (2) 25%	Recommended Project Budget	Comments
Sunset Reservoir	New 15 MG Reservoir	$21,761,910	$5,440,477	$27,202,387	AWWA D110, Type 1 design
Mill Creek Pipeline	Construct a new 30-inch parallel pipeline under Mill Creek	Cost of be developed by the consultant selected by the City to prepare the predesign and design documents for this project			RFP has been issued for predesign and design, cost TBD
Mill Creek Steel Tanks	Raise reservoir walls to restore volume to original design	$1,000,000			Will require a detailed structural evaluation and pricing before moving forward
Agate Reservoir	Construct a new 60-inch pipeline to achieve CT in a pipe; remove hypalon curtains	$3,726,854	$931,714	$4,658,568	Parallel existing 30-inch from Hinckley to Agate site, retain existing reservoir at reduced operating level
Highland Reservoir	Construct grade beam around reservoir exterior perimeter	$1,257,067	$314,267	$1,571,333	
Fifth Avenue Reservoir	New 5 MG Reservoir (min.)	$9,484,401	$2,371,100	$11,855,502	AWWA D110, Type 1 design
Fifth Avenue Pump Station	New pump station to lift water to Sunset	$9,867,988	$2,466,997	$12,334,986	Above ground, 4 vertical turbine pumps, emergency generator
Texas Street	Replace with 1.5 MG or abandon	Decision on Texas Street should be deferred until a future reservoir consolidation study is complete			AWWA D110, Type 1 design
Ward Way Pump Station	Erect new building over existing pumps	$3,106,952	$776,738	$3,883,690	Masonry block building, concrete roof
Note 1	Cost includes no project contingency but +30% for budgeting purposes				
Note 2	Soft costs include non-City project management, design, and construction phase services at 25%				

Respectfully submitted,

Richard Brady

Richard Brady, P.E., BCEE

CEO, Richard Brady & Associates

Project Manager and Engineer of Record

Additional background information is included in the following sections.

Section 1 – Historical Background of the City's Water Assets

Section 2 – Seismic Background

Section 3 – Recommended Capital Improvement Program

Section 4 – Pump Station Assessments

Section 5 – Prestressed Concrete Reservoir Design

Appendix A – City Response to the Draft Executive Summary dated February 27, 2022

Appendix B – BRADY Response to City's Draft Executive Summary Comments dated May 3, 2022

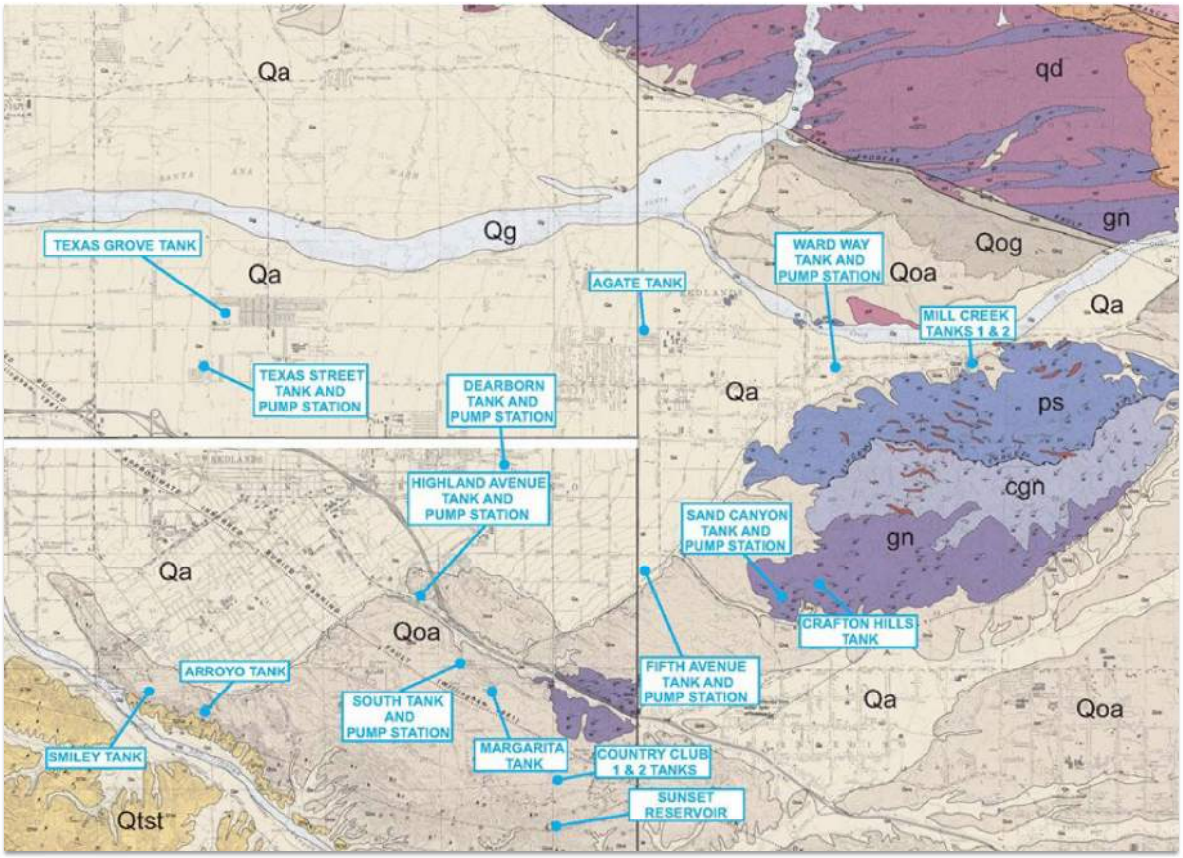
Appendix C – Steel Tank Capacity Analysis

Appendix D – Summary Table

SECTION 1 – HISTORICAL BACKGROUND OF THE CITY'S WATER ASSETS

The City's water assets evaluated in BRADY's work are summarized in the table below and figures are provided on the following pages.

Name	Type	Year	Size
Country Club 1	Concrete	1924	1
Country Club 2	Concrete	1969	2
Dearborn	Concrete	1972	10.6
Fifth Avenue	Concrete	1974	5
Highland	Concrete	1976	10
Margarita	Concrete	1964	2.4
Agate Reservoir	Steel	1968	3
Arroyo Reservoir	Steel	1965	0.5
Crafton Hills	Steel	1970	1
Mill Creek 1	Steel	2005	0.2
Mill Creek 2	Steel	2005	0.2
Sand Canyon	Steel	1973	3.5
Smiley	Steel	1964	3
South	Steel	1964	2
Sunset	Steel	1967	3
Texas Grove	Steel	2004	4
Texas Street	Steel	1956	1
Ward Way	Steel	1958	2
Hinckley Pipeline	ML&CSP*	1987	36 inches
Mill Creek Pipeline	Steel	1968	30 inches
Dearborn Pump Station			2000 gpm
Fifth Avenue Pump Station			3000 gpm
Highland Pump Station			4500 gpm
Sand Canyon Pump Station			1500 gpm
South Pump Station			4000 gpm
Texas Grove Pump Station			5800 gpm
Ward Way Pump Station			150 gpm
* Mortar lined and coated steel pipe			


Qa
qd
gn
Qg
Qog
TEXAS GROVE TANK
Qa
AGATE TANK
WARD WAY TANK AND PUMP STATION
Qoa
Qa
MILL CREEK TANKS 1 & 2
TEXAS STREET TANK AND PUMP STATION
DEARBORN TANK AND PUMP STATION
Qa
ps
HIGHLAND AVENUE TANK AND PUMP STATION
cgn
SAND CANYON TANK AND PUMP STATION
gn
Qa
CRAFTON HILLS TANK
Qoa
FIFTH AVENUE TANK AND PUMP STATION
ARROYO TANK
SOUTH TANK AND PUMP STATION
Qa
Qoa
MARGARITA TANK
COUNTRY CLUB 1 & 2 TANKS
SMILEY TANK
SUNSET RESERVOIR
Qtst

Brief Assessment Summary

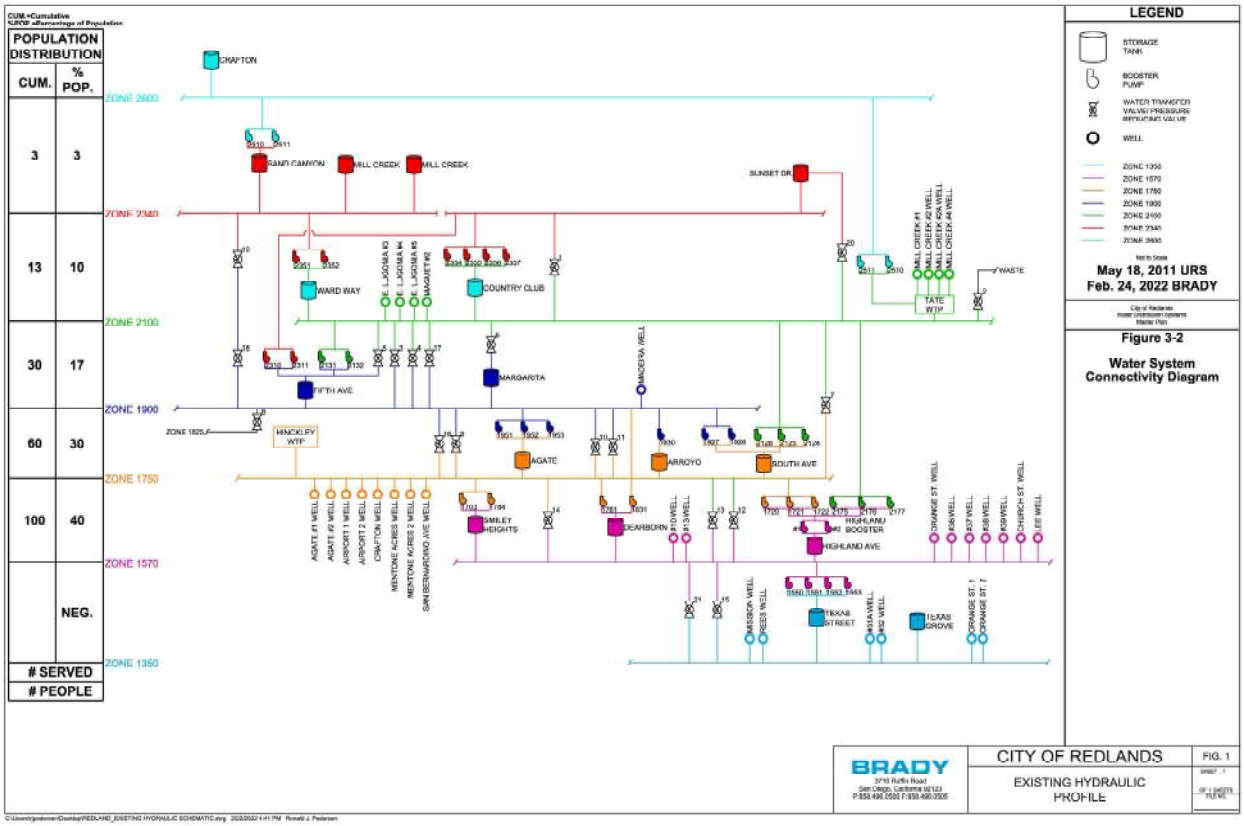
As both the table and graph below illustrate, the City's reservoirs range in age from 1924 to 2005. The majority of the City's reservoirs were constructed before the 1971 San Fernando earthquake. Therefore, it is not a surprise that only a few of the City's 18 reservoirs meet current seismic codes. However, the City is very fortunate that only one reservoir – the 5 million gallon (MG) Fifth Avenue Reservoir -- is in close proximity to an active fault that requires special care and attention, as discussed in detail herein.

Existing Hydraulic Profile

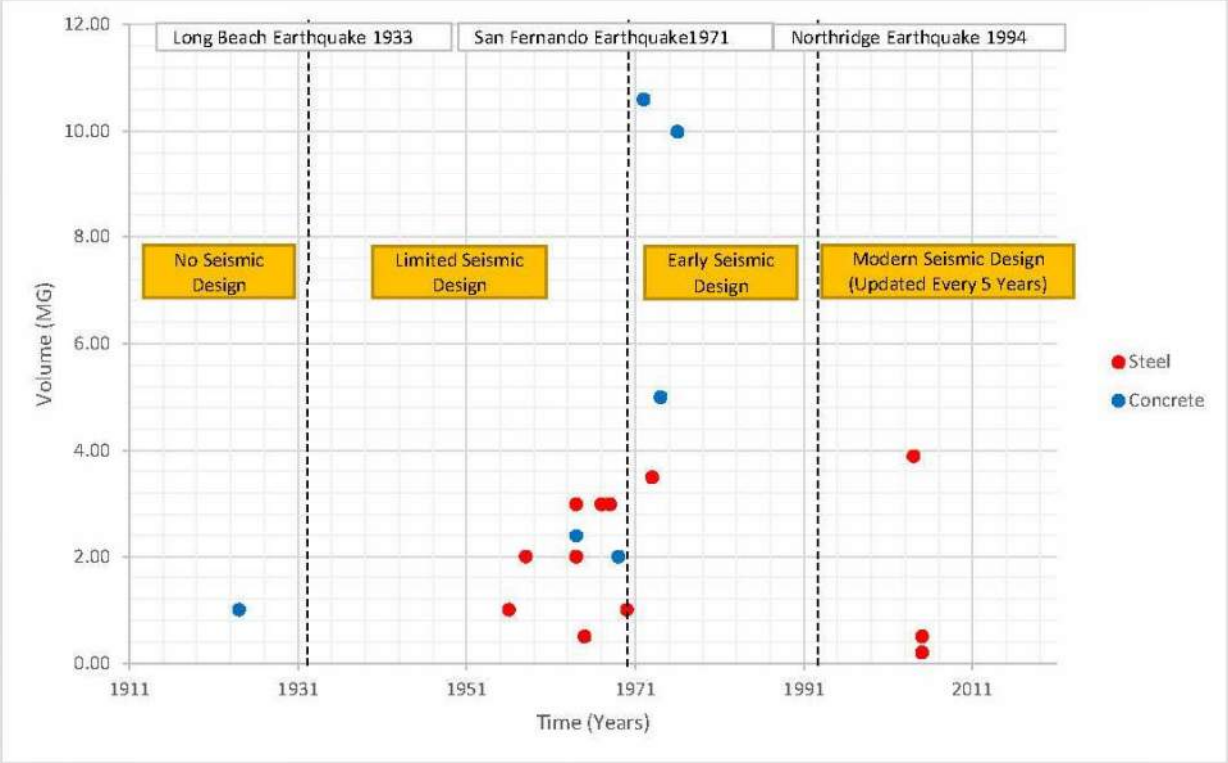
The hydraulic profile of the City's entire treatment, pumping, storage, and distribution system is graphically illustrated on the Hydraulic Profile image below. This figure was obtained from the City's last Water Facilities Master Plan (Master Plan) from 2011, a report that was not finalized. At the moment, the City has contracted with Michael Baker International to update the Master Plan. As of finalizing our efforts under our contract, the Master Plan has not yet been accepted by the City. The Master Plan should include an updated Hydraulic Profile as well as recommendations regarding the amount of storage the City should have for current needs and for at least 10 years into the future. We may revise some of our recommendations once we have an opportunity to review the recommendations of the Master Plan.

In our efforts, we spent considerable time trying to understand the hydraulic profile. As noted in the Title Block, this is truly a "Water System Connectivity Diagram" where all of the City's water assets can be review in one image. The City's system is very well interconnected with numerous ways to move water around the City in the event of disruption in service due to a major seismic event. As we studied the Hydraulic Profile and asked questions of City Operations Staff over the past year, a few discrepancies were discovered that are now reflected in our updated diagram (February 24, 2022) shown in the image below, and described herein:

1. The Sand Canyon and Sunset Reservoir both serve the highest zone in the City (2340), but are not hydraulically interconnected. Both tanks are steel with no second tank as backup. This the reason why a temporary tank is needed at the Sunset site, to allow the existing tank to be taken off-line while a new permanent reservoir is constructed on the adjacent property.
2. The Mill Creek steel tanks are not connected to Sunset as well. These are small steel tanks that are primarily used as a supplemental filter backwash source at the Tate WTP.
3. The majority of City storage is consolidated in the 1750 and 1570 pressure zones, serving 40 percent of the City's population by gravity. The City's largest reservoirs are Dearborn (10.6 MG) and Highland (10 MG), that sit at the bottom of the hydraulic profile.
4. The City has 18 reservoirs spread throughout the distribution system. Compared to other similarly size cities (population 75,000), 18 reservoirs are on the high end, with many older small steel tanks. The opportunity for consolidation of storage is promising, by aggregating more storage at the Sunset and Fifth Avenue sites.


CUM.=Cumulative
%POP.=Percentage of Population
POPULATION DISTRIBUTION
CUM.
% POP.
3
3
13
10
30
17
60
30
100
40
NEG.
SERVED
PEOPLE
ZONE 2600
ZONE 2340
ZONE 2100
ZONE 1900
ZONE 1750
ZONE 1570
ZONE 1350
CRAFTON
SAND CANYON
MILL CREEK
MILL CREEK
SUNSET DR
WARD WAY
COUNTRY CLUB
TATE WTP
WASTE
FIFTH AVE
MARGARITA
MINDERA WELL
ZONE 1825
HINCKLEY WTP
AGATE
ARROYO
SOUTH AVE
SMILEY HEIGHTS
DEARBORN
HIGHLAND BOOSTER
HIGHLAND AVE
TEXAS STREET
TEXAS GROVE
LEGEND
STORAGE TANK
BOOSTER PUMP
WATER TRANSFER VALVE/ PRESSURE REDUCING VALVE
WELL
ZONE 1350
ZONE 1570
ZONE 1750
ZONE 1900
ZONE 2100
ZONE 2340
ZONE 2600
May 18, 2011 URS
Feb. 24, 2022 BRADY
Figure 3-2
Water System Connectivity Diagram
BRADY
CITY OF REDLANDS
EXISTING HYDRAULIC PROFILE
FIG. 1

Steel			Concrete		
Tank Name	Year Built	Volume (MG)	Tank Name	Year Built	Volume (MG)
Agate Reservoir	1968	3.00	Country Club 1	1924	1.00
Arroyo Reservoir	1965	0.50	Country Club 2	1969	2.00
Crafton Hills	1970	1.00	Dearborn	1972	10.60
Mill Creek 1	2005	0.20	Fifth Avenue	1974	5.00
Mill Creek 2	2005	0.50	Highland	1976	10.00
Sand Canyon	1973	3.50	Margarita	1964	2.40
Smiley	1964	3.00			
South Avenue	1964	2.00			
Sunset	1967	3.00			
Texas Grove	2004	3.90			
Texas Street	1956	1.00			
Ward Way	1958	2.00			



Section 2 – Seismic Background

The Inconvenient Truth – Significant Seismic Risk in Redlands is Real

The City of Redlands is located in an area with very high seismic activity. Two of California's most highly active fault zones, the internationally known San Andreas Fault Zone and the San Jacinto Fault Zone, flank the City of Redlands. These two fault zones consist of multiple fault segments and branches that have the potential for larger earthquakes when they rupture in combination. A regional fault map is shown in the figure below, followed by additional information concerning these faults.

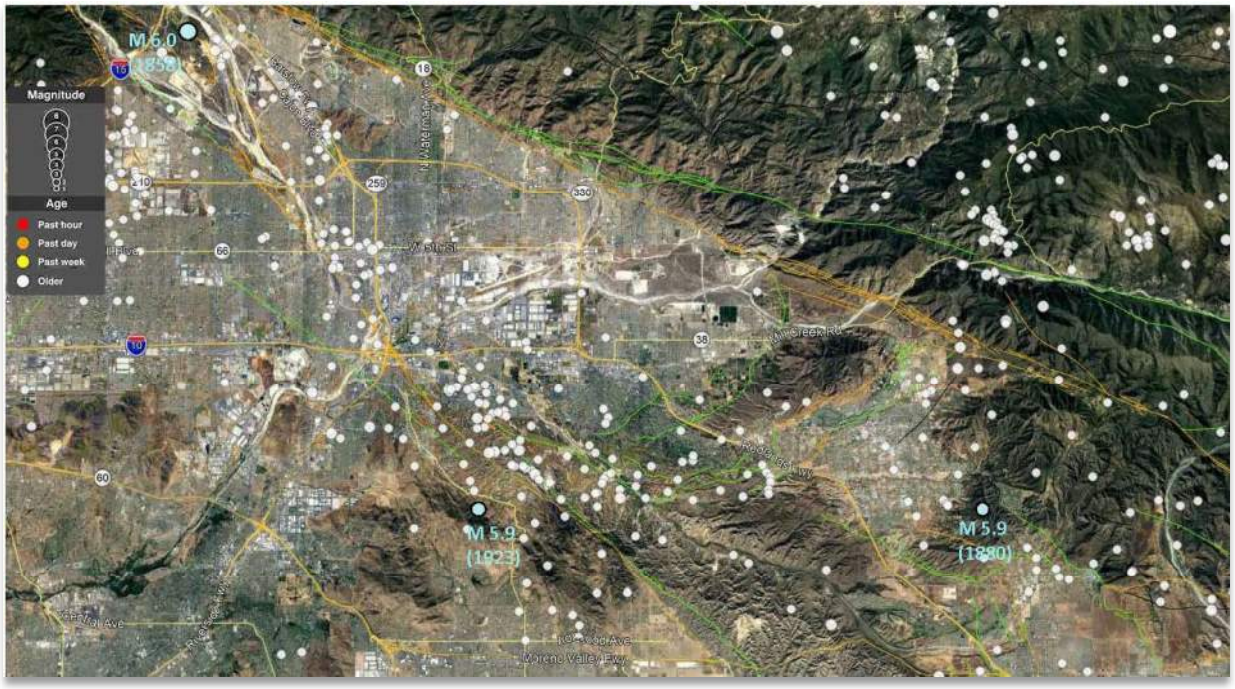
San Andreas Fault

The San Andreas Fault Zone is a right-lateral strike slip fault system that extends a total length of 315 miles through California. This fault system forms the boundary between the Pacific Plate and the North American Plate. The Southern San Andreas section of the fault system extends from Parkfield down to its termination at the Salton Sea. The Southern San Andreas section is estimated to be capable of producing earthquakes with a maximum magnitude (MW) of 8.2. In the area of Redlands and Yucaipa, the structure of the San Andreas fault becomes very complex where it has interacted with other faults over the millennia, resulting in fractured segments and discontinuous branches. Recurrence intervals between ground-rupturing earthquakes vary on the San Andreas fault system depending on location. Near Redlands this interval is estimated to be 175 to 200 years (USGS, 2017).

San Jacinto Fault

The San Jacinto Fault Zone is a right-lateral strike slip fault with a total length of about 125 miles, extending from San Bernardino down to Superstition Mountain. At the northern end of the fault, it connects with the San Andreas fault Zone. It is estimated to be capable of producing earthquakes with a maximum magnitude (MW) of 7.8, when all of the segments rupture in combination from San Bernardino to Superstition Mountain. The San Jacinto fault has a typical recurrence interval for ground-rupturing earthquakes of 100 to 300 years. Given the proximity of the sites to the San Jacinto and San Andreas fault systems, there have been a number of moderate to large earthquakes that have occurred close to the City of Redlands. A historical earthquake search was performed using the Advanced National Seismic System (ANSS) Comprehensive Earthquake Catalog (ComCat) (USGS, 2021). This search included earthquakes with magnitudes 5.0+ with epicentral distances of 100 miles of the center of the project sites in Redlands (approximately at the location of Dearborn Reservoir).

The earthquakes with epicenters closest to the City of Redlands water facilities are the 1923 magnitude 6.0 Greater Los Angeles Area earthquake south of Redlands, the 1880 magnitude 5.9 earthquake near Yucaipa, and the 1858 magnitude 6.0 earthquake near San Bernardino, northwest of Redlands. An interesting figure of historical seismic activity in the region is included below. Each white dot represents an historical seismic event.


M 6.0
(1858)
Magnitude
Age
Past hour
Past day
Past week
Older
M 5.9
(1923)
M 5.9
(1880)

Section 3 – Recommended Capital Improvement Program

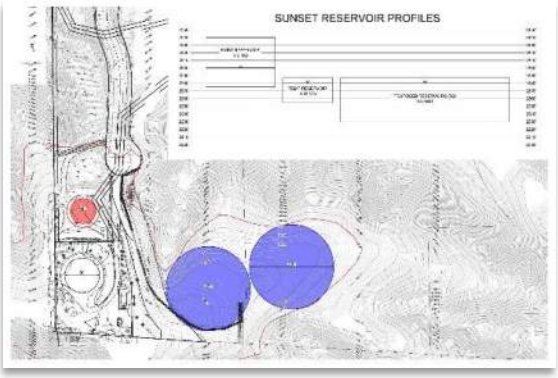
Recommended program to improve the seismic resiliency of this system, in order of priority:

1. **Sunset Reservoir.** The Sunset Reservoir dates to 1967. It is in extremely poor condition with no seismic restraint and a lead paint coated interior. The soil below the reservoir is fractured granite and potentially unstable. A new reservoir in this location would require the top ten feet of soil to be removed. Large Verizon cell towers have been installed adjacent to the reservoir. In a major seismic event, the Sunset Reservoir is in danger of either tipping over into the canyon below, or in the other direction, into the cell towers that would affect cell phone communications, causing critical problem s if the towers were damaged. For these reasons, the reservoir should be relocated to a more suitable, safer location.

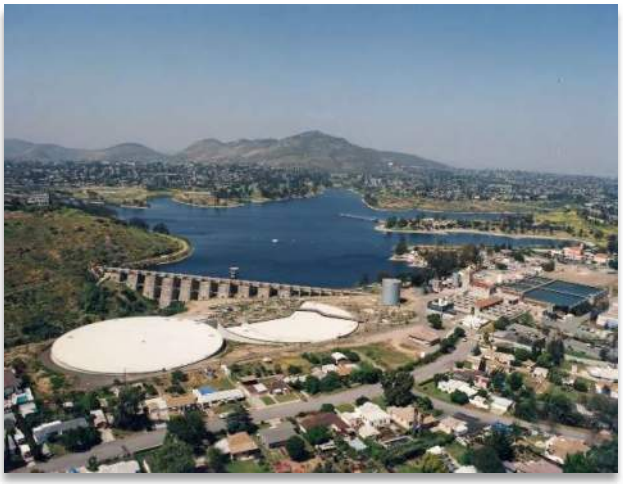
The recommendation is broken into two separate phases.

Given the lack of seismic anchorage and likely overturning in a major seismic event, the first phase is to erect a temporary 750,000-gallon bolted steel tank on the parcel north of existing reservoir. The City can purchase this temporary tank, which can be disassembled, stored, and re-used in the future where needed in the system, possibly as a reclaimed water tank in the Crafton Hills college area. This action is necessary because the Sunset Reservoir has no back-up reservoir to service the 2340 service Zone in this area. The Sand Canyon Reservoir also services the 2340 Zone, but it not hydraulically connected to the Sunset service area; they operate independently of one another.

We have studied an option to construct a new partially buried prestressed concrete reservoir in an adjacent parcel that the City may purchase assuming a successful negotiation is concluded. If the land purchase is not successful, then the recommendation is to construct a new 3 MG prestressed concrete reservoir on the existing tank site.



If the negotiation is successful, the second phase is to construct a new partially buried prestressed 10 MG concrete reservoir in the City's parcel adjacent to the existing Sunset site. The property has 4 separate but adjoining parcels, 22 acres in total. The new reservoir can comfortably be constructed in this 22-acre parcel, with room for a possible second 10 MG reservoir at some future date. These are the largest reservoirs that can be constructed at this site at the right hydraulic elevation. The existing Sunset Reservoir is only 3 MG but the additional 7 MG at this location will account for the 6 MG of lost storage in the City due to reduced high-water levels (HWL) to meet current seismic codes. The second phase is to construct a new partially buried prestressed concrete reservoir in the City's newly acquired parcel adjacent to the existing Sunset site. Sunset Reservoir is one of the City's most valuable assets as it sits at the highest elevation in the City, allowing gravity flow to 97% of the City's population. The recommended size is 10 million gallons (MG). A proposed layout is illustrated in the image to the right. The layout shows a potential second reservoir if needed to meet water demands at some future date. These two reservoirs are illustrated in blue; the temporary 750,00-gallon tank is illustrated in red.



The proposed layout would be similar to a 1994 BRADY design for two new 21 MG prestressed concrete reservoirs at the Alvarado WTP in the City of San Diego. The adjacent photo of the completed project will help visualize what this could look like. The reservoir on the right includes a Native Plant Demonstration Garden on the reservoir for public education purposes of native, drought tolerant landscaping. Similar joint public use can be considered for the new Sunset Reservoir site, which provides an impressive 360-degree view of the area.

2. **(a) Mill Creek Pipeline.** The poor condition of this pipe presents a significant concern about the extended operating life of this asset. The pipe is elevated above Mill Creek on concrete piers spaced approximately 40 feet apart. Numerous large boulders span the length and width of Mill Creek. The chance of failure of this pipe during a major seismic event is significant, as well as during a major storm event where large boulders could damage the piers. Historical boulder impacts to the existing support piers are visually evident.

To improve overall reliability of this critical asset, several pipe replacement alternatives will be considered. A second pipeline is only one of these alternatives. The Mill Creek Pipeline delivers raw water for treatment at Tate WTP. This pipeline is critically important to the City's water security because the Tate WTP can serve more than 85% of the City's entire population by gravity flow. Maintaining continuous operations of the Tate WTP is therefore essential in a future major seismic event. A possible solution is to construct a second 30-inch diameter inlet pipeline parallel to the existing pipeline under Mill Creek. The pipe should parallel the existing pipe in Mill Creek Road all the way to the inlet structure at the Tate WTP. A dedicated inlet structure should be constructed to receive this new pipeline, and then connect to the existing inlet box for distribution to the reactor clarifiers. The new pipeline should also have a dedicated flow meter located at the plant site. A concept sketch is included below. The City has issued a Request for Proposals (RFP) for the design of this pipeline. Proposals are due February 29, 2022. The consultant selected to predesign and design this pipeline will also be tasked with developing a project budget. Therefore, our cost table below will not include a price for the new pipeline given this cost will be developed by others at some future date.

Additionally, once the new pipeline is in operation, the existing piers should be reinforced as necessary to provide additional security against catastrophic failure. Flexible expansion joints should be provided on each side of the creek where the pipe comes out of and re-enters the ground.

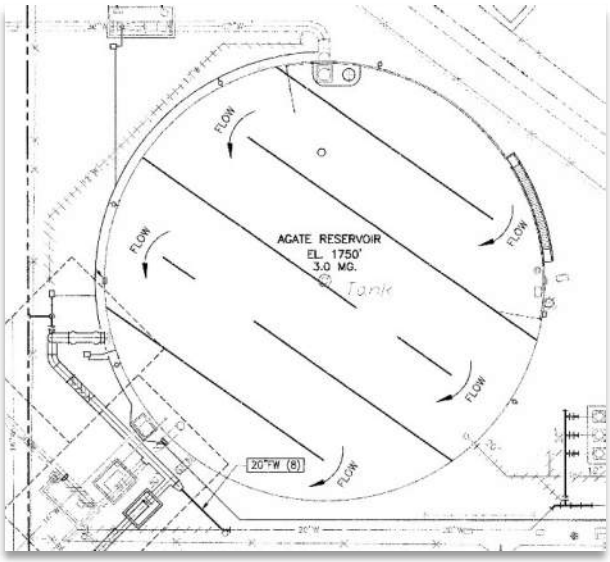
(b) Mill Creek 1 and 2 Tanks. The Mill Creek 1 and 2 tanks were erected in 2005 at 200,000 gallons each. The tanks are redundant to each other, so a minimum of 200,000 gallons of storage is needed at all times to provide the desired benefit – supplemental backwash supply to the Tate WTP.

Structural calculations to bring Mill Creek 1 and 2 into code compliance would require a significant reduction in operating volumes. Each tank would see a reduction from the design volume of 200,000 gallons to 90,420 gallons, to 45% of the original volume. The Mill Creek 1 and 2 tanks were not provided with seismic anchorage, are in danger of overturning in a seismic event, and lack sufficient freeboard to protect the tanks from damage due to sloshing.

Given the importance of the Tate WTP to the City in a major seismic event, and due to the critical importance of maintaining the assets needed to allow filter backwashing under low plant production rates, the Mill Creek 1 and 2 tanks are in need of rehabilitation. The easiest approach is to build a third Mill Creek tank, but space at the site is very limited. Though it is not a proven industry solution, serious consideration should be given to raising the reservoir roofs as needed to restore the operating volumes of each tank to 200,00 gallons. Seismic anchorage is also required. A budget figure of $500,000 is recommended to resolve this problem as quickly as possible.

3. **Agate Reservoir**. The Agate Reservoir dates to 1968 and serves as the clearwell reservoir for the Hinckley Water Treatment Plant (WTP). The reservoir does not meet current seismic design codes, but can be brought into compliance by reducing the operating capacity to 2,163,000 gallons which will decrease stresses in the steel shell and increase the freeboard to allow for sloshing. However, the operating volume of the Agate Reservoir is critically important as the City achieves regulatory CT compliance (concentration x time) inside of Agate Reservoir. The reservoir was retro-fitted in 2010. Hanging hypalon curtains were secured to the reservoir roof and floor to create a serpentine flow pattern inside reservoir to promote improved mixing for the purposes of obtaining the regulatory mandated CT credit. The City uses free chlorine as their primary and secondary disinfection method. The strength of a chemical disinfectant (chlorine) for inactivating pathogens when in contact with water can be measured by its CT value. CT values are used to evaluate the inactivation of pathogens by disinfection using a logarithmic scale, thus it is referred to as “log inactivation.”

Hypalon curtains shown anchored to the



Log inactivation is simply the order of magnitude in which inactivation of unwanted organisms occurs and relates to the percentage of organisms inactivated. The Hypalon curtains are shown in the figure at the right. There are many unintended consequences that have resulted from the installation of the baffle curtains. In a major seismic event, the sloshing forces of the water will act on the curtains, which in turn will collapse the roof, leading to complete reservoir failure. The curtains may also become dislodged and plug the outlet pipe serving gravity flow supply to the City's largest reservoirs – Dearborn at 10.6 MG and Highland at 10.0 MG. The possibility of this occurring will result in losing the Hinckley WTP supply as all of the plant effluent flows through Agate Reservoir. Hinckley provides gravity flow to 40% of the City's population.

We recommend no further financial investments be made at the Agate Reservoir. A new 60-inch diameter pipe parallel to the existing 30-inch plant effluent pipeline will allow the City to achieve CT compliance in piping, not a baffled circular reservoir where the flow circulation pattern is not ideal. Ideal situations are not present in a water storage tank. Depending on the degree of short -circuiting, baffling factors can be anywhere from the ideal pipe plug flow of 1, to less than 0.1 for a poorly designed system. Higher baffling factors mean less short circuiting, a higher CT, and a better disinfection outcome. Recent CT tracer studies indicate that baffles provide a baffling factor of 0.68, but come with the risk of reservoir failure.

An extract from the USEPA Manual of Disinfection Profiling and Benchmarking (1999) is provided below and gives baffling factors for various types of tanks. As noted above, these examples show that a pipe is the ideal system and an un-baffled tank is the worst.

Baffling Condition	Baffling Factor	Description
Unbaffled (mixed flow)	0.1	None, agitated basin, very low length to width ratio, high inlet and outlet flow velocities. Can be approximately achieved in flask mix tank.
Poor	0.3	Single or multiple inlets and outlets, no intra-basin baffles
Average	0.5	Baffled inlet or outlet with some intra-basin baffles
Superior	0.7	Perforated inlet baffle, serpentine or perforated intra-basin baffles, outlet weir or perforated launders
Perfect (plug flow)	1	Very high length to width ratio (pipeline flow) (greater than 40:1), perforated inlet, outlet, and intra basin baffles

Unbaffling CT

Disinfection of water with chlorine requires time for the chemical to react with and kill the target microbial pathogens. Ideally, the time for the reaction is provided in a purpose-built reactor or contact tank specifically designed for this purpose and which provides a controllable process. However, the reality of how to implement an ideal solution is quite different. Most water supplies rely on disinfection to occur in tanks and reservoirs of various sizes, with various arrangements of inlet and outlet structures and varying levels of short-circuiting. The effective contact time is often less than is assumed.

An Idea that is Too Good to Ignore – Obtain CT in a Pipe

When water flows in a pipe at a constant flowrate, there is very little mixing along the length of the pipe, such that a volume of water entering the pipe at one end will exit the pipe at virtually the same time and condition at the end of the pipe. There is also no possibility of water entering

Plug flow in a pipe. An ideal situation for disinfection.

the pipe to short-circuit to the outlet any faster than the rest of the water. This 'no mixing and no short-circuiting" option is the **ideal** situation and is called **plug flow**.

As all the water passes down the pipe at the same time, the time that the first 10% leaves the pipe is very similar to the time that all the water leaves the pipe. **This means the baffling factor is 1:** the ideal contact tank.

Flow Rate (MGD) =	14.5
Flow Rate (ft^3/sec) =	26.94
Temperature (deg C) =	13.6
pH =	8.4
Residual Chlorine (mg/L) =	1
Baffling Factor =	1
Log Removal =	0.5
Contact Time (min*mg/L) =	24.2

Actual Detention Time (min) =	24.2
Theoretical Detention Time (min) =	24.2
Volume (ft^3) =	32,532
Gallons =	243,347

Pipe Diameter (in) =	60
Pipe Area (ft^2) =	19.6
Length of Pipe (ft) =	**1657**

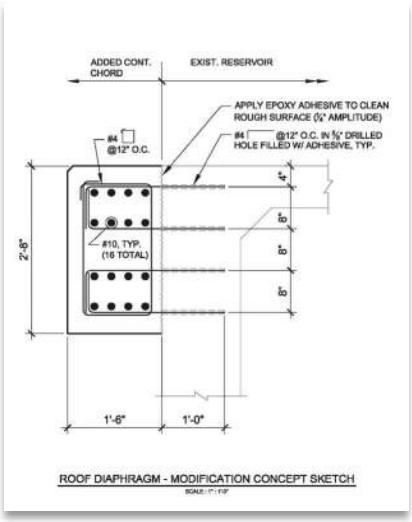
Since the new 60-inch pipe will parallel the existing 30-inch pipe, both pipes will contribute to achieving CT compliance. The equivalent diameter of a 60-inch and 30-inch pipe is 64.04 inches. Using this larger equivalent pipe diameter, the new 60-inch minimum length is 1,454 feet. More than adequate room is available to achieve this outcome. The City will have a long-term solution where CT is always achieved, 100% of the time without a contribution from the seismically challenged Agate Reservoir. Once the new pipe is installed, the hypalon curtains can be removed to protect the reservoir and the system so the existing Agate Reservoir can remain in service at a reduced operating level. The 60-inch pipe will also provide a supplemental storage volume of 0.22 MG. The estimated construction cost of the new proposed 60-inch pipeline is approximately $3,725,000. This estimate includes a 15% estimating contingency. The City can therefore avoid the $5M plus cost to replace Agate with a new tank.

Proposed Layout

Fortunately, there is adequate space to construct a new 60-inch pipeline parallel to the existing 30-inch pipe to achieve CT between the filter effluent control structure at the Hinckley WTP and the meter located on the east side of the Agate Reservoir. The proposed layout is shown in the figure to the right.

The existing meter can be retained. A second effluent weir will be needed downstream of the meter to provide submergence for flow measuring accuracy. Two pipes will exit the weir structure and connect to existing piping for delivery to the system and the 10.6 MG Dearborn and 10 MG Highland Reservoirs down gradient.

4. Highland Reservoir. The rectangular concrete reservoir is in fair condition, but does require immediate action to correct a minor seismic deficiency. The Highland design has some unique structural features due to the presence of recreational activities on the reservoir roof. As a result of anticipating the associated live loads from these activities, the structure generally meets current seismic design codes. The problem to be solved relates to the roof diaphragm. The presence of slip dowels in the existing roof design (although designed to allow for thermal expansion/contraction), do not transfer seismic loads from roof diaphragm to walls. In a (horizontal) seismic event, the roof slab could collapse. A structural beam (reinforced with 16- #10 bars) around the entire perimeter will contain and transfer diaphragm loads to walls per the detail shown at the right.



5. Fifth Avenue Reservoir. The only reservoir at risk is the 5 MG Fifth Avenue Reservoir. This reservoir is a key storage reservoir for the Tate WTP as water transfers into the lower system elevations. Water stored in Fifth Avenue is pumped to the 2340 Zone (Sand Canyon Reservoirs).

The loss of Fifth Avenue for any reason would restrict operations. The site of the Fifth Avenue reservoir and pump station is located within a County Fault Zone for the Reservoir Canyon fault, which was adopted in the Countywide Policy Map in October 2020. As shown in the figures at the left and below, the edge of the County Fault Zone passes through the middle of the Fifth Avenue property. The Reservoir Canyon Fault is a normal fault that is part of the Crafton Hills Fault Zone. The fault trace is mapped about 400 feet away from the closest location to the Fifth Avenue reservoir. Therefore, there may be potential for surface rupture, or associated off-fault deformations at the site from movement of the Reservoir Canyon fault reaching the ground surface at the Fifth Avenue site. The County of San Bernardino Development Code, Chapter 82.15.040 (b) requires that a structure used for critical facilities (such as a reservoir) be located 150 feet or farther from any active earthquake fault trace. Additionally, the San Bernardino County-Wide Plan (County of San Bernardino, 2020) for mitigation of natural environmental hazards states in Policy HZ-6:

> "We require **new** critical and essential facilities to be located outside of hazard areas, whenever feasible."

Per Table S-2 of the County of San Bernardino General Plan, Land Use Compatibility Chart in Fault Hazard Zones, essential land uses are "restricted" in fault hazard Zones, which is defined as:

> "Restricted unless alternative sites are not available or feasible and it is demonstrated through a site investigation that, although mitigation may be difficult, hazards will be adequately mitigated."

However, the restricted use and requirements for earthquake fault Zones have generally applied to new structures or any existing structures where the alterations/additions to the structure are greater than 50 percent of the value of the structure. Since the Fifth Avenue Reservoir was constructed in 1974, and design drawings were not located in the City's records, we cannot confidently prepare design improvements to the existing structure that would be needed to satisfy the likely very restrictive design criteria.

Fifth Avenue is the only City reservoir that is near an active fault. As required by codes, new structures or improvements at the Fifth Avenue site will require a site-specific surface fault rupture investigation performed in accordance with *California Geological Survey (CGS) Note 49, Guidelines for Evaluating the Hazard of Surface Fault Rupture*. We recommend excavating the fault trench location shown on the figure to the right. The trench excavation will be approximately 3 feet wide and up to 10 feet deep.

Fortunately, the reservoir walls are completely buried with a column supported exposed concrete roof. Major structure damage that may occur in an earthquake will fortunately not result in a tidal wave of water causing damage to other structures. However, the loss of Fifth Avenue will cause an operational nightmare for City staff. Replacing this reservoir with a prestressed concrete reservoir designed to AWWA D110, Type 1 (cast in place concrete walls) provides the City with the best protection in a future seismic event. Fortunately, there is available space on the existing site for a new reservoir. Though the guidance suggests we find an alternate site for a new reservoir positioned a safe distance away from the Reservoir Canyon Fault, there do not appear to be any other suitable sites available that meet the hydraulic reality. Fifth Avenue was likely designed by James M. Montgomery (JMM), the dominant reservoir design firm of this era, and the shape and burial fit the JMM standard design in the 1970s. Dearborn and Highland also have completely buried walls and exposed concrete roofs and were designed by JMM. They were all constructed in the 1970s within a four-year span. (Dearborn 1972, Fifth Avenue 1974, and Highland 1976). Fifth Avenue sits in the ground because of the way it is designed, not because of hydraulics.

The Tate WTP serves the 2100 Zone, supplies water to Fifth Avenue by gravity to serve the 1900 Zone below Fifth Avenue. The existing reservoir is below ground, not for hydraulic reasons, but required by the type of design in 1974. Non-circular reservoir shapes are rarely constructed at grade. With the significant static head available (200 feet) the new reservoir can sit at grade, 30-40 feet higher than the existing HWL elevation in Fifth Avenue. The hydraulic model confirmed this change is possible.

The geophysical survey conducted at the site indicates that the upper 3 to 8 feet at the site are more disturbed and/or less dense (likely fill). Below 10 feet, the shear wave velocities increase with depth, indicating the soils increase in stiffness and become denser, with shear wave velocities ranging from about 900 ft/s to about 1,400 ft/s. Based on the seismic velocity measurements obtained, the resulting average VS,30 is 1,156 ft/s (352 m/s).

A Brief Clarification of Risk at the Fifth Avenue Reservoir Site

It should be noted that throughout the City's system, compliance with current seismic codes is clearly the goal, however, compliance with current code does not guarantee that a reservoir constructed before 1994 (Northridge earthquake, the last regional earthquake of significance) would not be seriously damaged in an earthquake. For example, most of the City's 12 steel tanks can be made code compliant by simply lowering the operating levels. Various recommendations to bring structures "up to code" only addresses the hazard of strong ground shaking. In no way does it mitigate the hazard of surface fault rupture.

It should be noted that any modifications to any of the reservoirs will trigger the requirement to bring the reservoir up to all codes per the California Water Resources Control Board Department of Drinking Water. The plans would need to be submitted to the Water Board for approval and permitting.

The 5th Ave reservoir is mapped in very close proximity to Reservoir Canyon Fault. If that fault were to rupture, there would potentially be feet of displacement that could occur both horizontally and vertically. The existing reservoir could not withstand that level of movement, it would be severely damaged. If you want to strengthen the existing reservoir for both ground shaking and surface fault rupture, a much more intensive structural strengthening would be required. Even without design drawings to review, our structural team believes you would have to replace the foundation with a rigid mat foundation, and also consider strengthening the walls. There may also be other options to consider, like placement of geofoam or some sort of compressible foam behind the walls, to reduce pressures and allow some movement without damage to the walls.

For some additional background - there has been some research on the topic of designing or strengthening structures to cross active faults, and observations from prior earthquakes. These studies suggest that continuous, rigid foundations perform better when spanning over a fault. There have been a couple of documented case histories from Turkey to support this, as well as numerical modeling studies. Also, UC Berkeley performed a seismic retrofit of Bowles Hall in 2008 and a portion of the building was found to span across the Hayward fault. They performed studies to identify the fault, estimate fault displacement, and then they designed the area with a new mat foundation and flexible retaining walls that could deform as part of the retrofit. At this stage of our dialogue we suggest the City considering locating the fault as soon as possible; at this moment we need to assume it is right there where it is mapped.

In light of these facts, we recommend that the best path forward is to abandon the existing structure and replace it with a 5-million-gallon prestressed concrete reservoir designed to withstand the likelihood of significant ground movement in this location. A new Fifth Avenue Pump Station, adjacent to the new reservoir at grade, should be designed to lift water from the Fifth Avenue Reservoir directly up to Sunset Reservoir. A proposed location of the new reservoir and new pipeline is shown on the figures above and below.

6. Margarita Reservoir. The rectangular concrete reservoir is in poor condition and requires immediate attention to correct structural or seismic deficiencies. The roof and walls do not meet current seismic codes. The roof will likely collapse in a major seismic event. The walls are deficient for combined hydrostatic and seismic loading. The only practical upgrade solution is to construct a "tank within a tank" by first removing the roof and then constructing new walls, footing, and floor. In this solution, the wall height can be increased to provide more storage in this footprint if desired. The new roof can either be concrete or an aluminum dome. Alternatively, pending the results of the reservoir consolidation study, it is highly likely we can eliminate this reservoir by constructing more storage at a higher hydraulic gradient (Sunset). The reservoir could then be demolished and the property sold for residential use. It is recommended that any action regarding Margarita be postponed until the consolidate study is complete and accepted by the City and other stakeholders.

7. Steel Tanks.

A Brief History of Southern California Steel Tanks Designs – Why does Redlands have so many?

Over the past century, the decision on what type of tank to design has depended primarily on the entity that is paying the initial costs. Steel was an easy early choice because most tanks built for developing cities were small, typically 1 MG or less, and had low initial capital costs. As cities continued to grow, larger tank volumes were needed that made steel less practical for sizes of 3 MG or greater. This is likely the City's history as well.

Steel was scarce during World War II; concrete was the only practical choice. Advances in the understanding of how concrete behaves in hydraulic structures led to tank size increases up to

40 MG. The explosive growth in California after World War II led to considerable urban growth. Cities and agencies began tasking residential developers with the responsibility – and costs – of developing water infrastructure. Developers typically choose the lowest cost options, thus resulting in hundreds of small steel tanks being constructed from San Diego to Santa Barbara.

Once in service, operations and maintenance responsibilities and expenses were transferred to the end utility. This is primarily why the City eventually has so many small steel tanks, with the associated high maintenance cost (corrosion control, painting). Twelve of the City's 18 storage tanks are steel, representing approximate 66% of the total storage, however after the HWL's are lowered, they will provide only 31 % (14.1 MG) of the City's total storage volume of 45.1 MG. The City's six concrete reservoirs provide 31 MG of storage.

Seismic Assessment of the City's 12 Steel Tanks

Design of the City's welded steel tanks likely followed American Water Works Association's Standard D100 – Welded Carbon Steel Tanks for Water Storage, which has a history dating back to 1941. Steel tank evaluations are fairly straightforward compared to reinforced concrete (RC) because the entire tank exterior is visible as well as the inside when drained; only the underside of the floor is hidden from view. Typical problems in older tanks erected prior to 1978 are the possible presence of lead paint and coal tar enamel coatings on the interior. Corrosion of the steel over the decades is another obvious major concern. As we have determined from our structural calculations, very few of the City's steel tanks meet current seismic design codes.

In order to better understand the seismic resilience of the City's steel tanks, a series of calculations was performed based on AWWA D100-11 standards. These calculations are used to check for three primary failure mechanisms within the steel tank structure: (1) adequate freeboard and sloshing, (2) seismic overturning, and (3) allowable stress development in the shell. A table representing these findings in both the seismic and static case is provided on the following page. Although all of the tanks satisfied static standards, they failed when subjected to design level earthquake standards. The tanks without seismic anchorage along their perimeters usually failed in both seismic overturning and stress development in the shell. Additionally, the tank shells were not constructed with sufficient freeboard to contain the calculated sloshing. If the high-water lines (HWL) of the tanks cannot be lowered sufficiently, then seismic retrofitting would be required (i.e., mechanical anchorage, increased shell thickness, or increased shell height). Retrofitting is not required if the HWL is lowered to the recommended values provided in the table below.

Tank	Date Constructed	Overall Grade	Diameter	Height of Shell	Height to Diameter Ratio
Agate Reservoir	1968	C	143'-0"	25'-6"	0.18
Arroyo	1965	D	46'-6"	40'-6"	0.87
Crafton Hills	1970	C	76'-0"	30'-6"	0.40
Mill Creek E	2005	B	47'-0"	16'-0"	0.34
Mill Creek W	2005	B	47'-0"	16'-0"	0.34
Sand Canyon	1973	C	122'-0"	40'-0"	0.33
Smiley	1964	C	127'-0"	32'-6"	0.26
South	1964	C	111'-0"	26'-6"	0.24
Texas Grove	2004	B	180'-0"	25'-0"	0.14
Texas Street	1956	D	70'-0"	35'-3"	0.50
Ward Way	1958	D	104'-0"	32'-0"	0.31

The recommended reductions in operating levels at each of the City's steel tanks, including the justification for the reduction, is summarized in the table on the following page.

Tank	Current Operating Volume	Operating Volume to Meet Code	Operational Capacity %	Reduction Justification
Agate Reservoir	3,000,000	2,163,000	72%	Extreme Stresses Developed in 1st and 2nd layer plates when subjected to seismic loading
Arroyo	500,000	194,400	39%	Seismic anchorage required to resist overturning and not enough freeboard
Crafton Hills	1,000,000	780,500	78%	Extreme stresses in multiple layers of tank shell under seismic loading and insufficient freeboard.
Mill Creek E	200,000	90,420	45%	Seismic anchorage required to resist overturning and not enough freeboard
Mill Creek W	200,000	90,420	45%	Seismic anchorage required to resist overturning and not enough freeboard
Sand Canyon	3,500,000	2,658,000	76%	Extreme stresses in multiple layers of tank shell in both seismic and static case, freeboard was also not sufficient
Smiley	3,000,000	2,037,000	68%	Extreme stress in first layer of tank shell in seismic case, freeboard was also not sufficient
South	2,000,000	1,412,000	71%	Freeboard not sufficient
Texas Grove	4,000,000	2,760,000	69%	Extreme stresses in multiple layers of tank shell in both seismic and static case, freeboard was also not sufficient
Texas Street	1,000,000	642,000	64%	Seismic anchorage required to resist overturning and not enough freeboard
Ward Way	2,000,000	1,322,000	66%	Freeboard not sufficient
Total:	20,400,000	14,149,740	69%	Entire system will be reduced 30% in order to meet seismic standards

*Seismic reductions based on AWWA D100-11 and do not consider hydraulic or fire requirements

Hydraulic and fire flow demands were not considered in this structural analysis; lowering the tank operating level may cause the tanks to be deficient in meeting those requirements. As noted in the table, the steel tanks provide 20.4 MG of storage volume in their current operating mode. Lowering the elevations as recommend will result in the loss of more than 6 MG of storage. This supports the idea of consolidation, as this storage can be replaced in properly designed prestressed concrete tanks – the best seismic designed tank in the industry today – at the highest elevation possible, which makes the Sunset site the ideal location. The steel tanks could be seismically retrofitted with mechanical anchorage; however, this would only alleviate the issues in overturning and would not satisfy the freeboard requirements. The steel tank shells could have a dual retrofit by raising the tank shells and anchoring the systems. This process would require the excavation of the existing foundations to be replaced by deeper foundations and the tank being structurally modified, which is very cost prohibitive and not recommended. The majority of the City's tanks are also very old, Texas Street dates to 1956 and only three have been erected since 1973, which makes all of the steel tanks close to 50 years old or older. The industry standard for steel tanks is 50 years, so we recommend no further investments be made in this infrastructure.

8. Texas Street Steel Tank. The reservoir is in poor condition. The reservoir could possibly be replaced in the existing reservoir footprint at a size not less than 1 MG and as large as 2.4 MG to make up for the storage deficiency at Texas Grove due to need to operate at a lower height to meet seismic codes. In the short term to meet current seismic codes, the reservoir high water elevation needs to be reduced by 38% (13.4 feet), resulting in a revised operating volume of 619,000 gallons. This is a significant loss of storage. Lowering the operating depth is necessary to increase freeboard for sloshing and to decrease the extreme steel shell stress under seismic conditions. It is therefore recommended that the reservoir not be operated at full capacity. The possibility for overturning, sliding, and water loss being released are high in a seismic event if operated at full capacity. Given the size and age of this tank, retroactively equipping the tank with seismic anchorage is not recommended. Replacement or abandonment is recommended. The final decision about Texas Street should be postponed until the reservoir consolidation study is complete and accepted by the City and other stakeholders. If the reservoir is eventually abandoned, the pump station would need to be relocated to the Texas Grove Reservoir site.

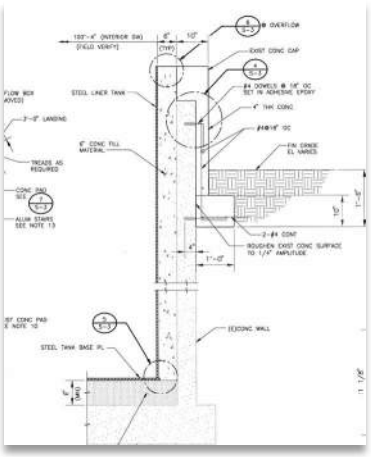
In the table below, an overall grade has been established to provide an easy means for understanding the condition of all City reservoirs. The tanks noted with a B Grade were relatively recently constructed, but still require a reduction in operating high water levels. However, due to the age of these tanks, they are in decent shape, recently painted, and in the case of Texas

Grove, seismic anchors were installed. The Mill Creek E and W tanks, with an age of less than 20 years, are, unfortunately, seismically deficient. This is important as they provide supplemental backwash storage supply for the self-backwashing filters at the Tate WTP. Sufficient storage for this purpose is still available, but both tanks must be added together to make this work. Even though there are two tanks, there is no backup tank now with the reduced volumes.

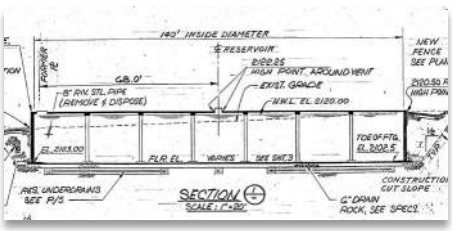
8. The Good News Regarding the City's Concrete Reservoirs. The City's concrete reservoirs are in much better condition than the steel tanks. The 10 MG Dearborn Reservoir is a rectangular concrete design, is in fair condition and requires no immediate attention or action to correct any structural or seismic deficiencies. Dearborn also has completely buried walls and exposed concrete roofs and were designed by JMM, the dominant reservoir designer of that era. Structural and seismic improvements were also implemented in 2014. The design was very conservative. The original seventy-seven (77) columns were structurally enhanced and a new interior footing was placed around the entire reservoir interior. Unlike Highland, the roof is now protected from collapse with the new interior footing. The original 14-inch square columns were enlarged to 30-inch square columns. The columns were accessed by cutting 54-inch square holes in the roof. Forms were placed around the existing columns and concrete was placed from the top. The holes in the roof were patched with concrete. The reservoir circulation design could be improved. Short-circuiting is likely occurring, as there are no barriers to stop the inlet water from flowing directly to the outlet sump. All other water outside of this "river" is not moving and will become stagnant over time. This lack of baffling, has resulted in a significant dead Zone above the inlet pipe, a layer of water that is 13.75 feet deep (centerline elevation 1564.25 feet to the high-water elevation 1578.00 feet).

Inserting baffles is not recommended. It is unnecessarily costly and will require anchorage to the existing columns, a seismic loading condition that is not recommended. A simple reconfiguration of the inlet pipeline to include better flow distribution can be considered. A Computational Flow Dynamics (CFD) Model was developed to examine potential inlet pipe improvements. At a minimum, a simple raising of the inlet pipe discharge elevation to force a "top to bottom" flow pattern should be considered.

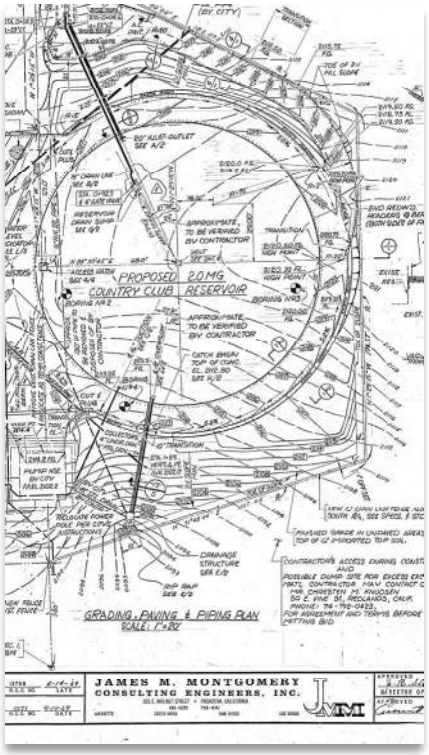
The other concrete reservoirs that appear to be safe are Country Club 1 and 2. Country Club 1 Reservoir is the City's oldest reservoir dating back to 1924. The reservoir is 20 feet high, with a diameter of 102.42 feet. The reservoir is buried with an exposed roof. The reservoir was built as a conventionally reinforced concrete tank in 1924. An aluminum roof was added in 1980 and the tank was lined with steel plates in 2010, so technically the



reservoir can now be considered a steel tank. The new steel tank rests within the old concrete structure and overall is in fairly good condition. However, the steel wall and old concrete wall are not structurally connected. It appears the steel tank improvement was implemented strictly to resolve a leakage problem with the old concrete reservoir and is technically a liner. The roof was also replaced for the second time. Due to the improvements in the reservoir that have been in the past 40, and because the reservoir walls are completely below ground, the reservoir is in fair condition and does not require immediate attention or action. The reservoir passes all seismic requirements outlined by AWWA D100-11. The interior of the tank had no major notable issues other than sediment build up on the tank floor.



Country Club 2 Reservoir dates back to 1969. The reservoir is a conventionally reinforced concrete structure, 16.25 feet high, with a diameter of 140 feet. The reservoir is buried with an exposed concrete roof. The reservoir was designed by James M. Montgomery (JMM). JMM was the dominant design firm in Southern California at the time of this design (1974) and the characteristics of this reservoir follows the JMM standard concrete reservoir design. The existing concrete reservoir is in fair condition and does not require any immediate maintenance at this time. Given the age and size of this reservoir, no further investment should be made at this site. Both Country 1 and 2 should be maintained in service to provide additional water security to the City. The reservoirs are very high in the City's hydraulic profile and pump water up to the Sunset Reservoir area. Beyond the water treatment plants, Sunset will become the City's most valuable water asset and having at least two ways to get water up the "hill" is critical. The other Sunset supply source will be the new reservoir and pump station at the Fifth Avenue Reservoir site. Improvements to the Country Club pump station should be made a necessary to assure the reliability of this facility. A new permanent emergency generator is in the City's current plans, so no further action is needed at the County Club site.



Overall, the City's concrete reservoirs have done the job they were designed to do, and have long useful lives ahead.

Section 4 – Pump Station Assessments

The pump stations were evaluated by a team of experts in the mechanical, electrical, civil and structural engineering disciplines. Visual and prominent operational conditions were observed and additional structural assessments (with supporting calculations) were provided when warranted. Consideration was given to each structure with respect to fire hardening, which typically resulted in the recommendation to clear adjacent landscaping to minimize any fire risk. Lack of emergency power was not identified; it was assumed that portable emergency generators are utilized as needed. The presence of hazardous materials onsite was investigated and documented in the August *2021 Limited Asbestos and Lead Survey* prepared by Group Delta Consultants, Inc.

It should be noted that because of the importance of the Country Club and Highland Reservoirs (serving as a "control hub for many other components"); the March 2011 draft *Master Plan* prepared by URS recommended particular "focus on the operations of these two most complex reservoir systems and their associated PRV and booster systems".

Following is a summary of our findings and recommendations.

1. Texas St. Pump Station. Station consists of four exposed electric driven vertical turbine pumps (circa 1960's) that are generally in good condition with a capacity to deliver 7800 gpm from Zone 1350 to Zone 1570. The March 2011 draft *Master Plan* prepared by URS recommends (pg. 92) "further examining" the idea of upsizing all four existing pumps.

The reinforced CMU structure houses electrical controls/equipment and does not meet current seismic code; additional reinforcement is required. Replacement of the main 5kV distribution switchgear, general housekeeping within the structure and minor mechanical/electrical modifications are recommended; as well as minor site improvements including paving, security, lighting and maintenance to minimize fire risk.

The pump station shares a large site with the Texas Reservoir, a potable water well and treatment equipment and an extensive filter treatment chain which is no longer in full-time service but occupies most of the site. The plant is still used to supplement non-potable water storage needs. To discourage vandalism and related problems as recently experienced, removal of equipment/facilities no longer in use is recommended. Additionally, re-evaluating and possibly re-purposing the entire site should be considered, potentially relocating/upsizing pumping equipment to the Texas Grove Reservoir site.

2. Ward Way Pump Station. Station consists of two electric driven pumps contained within a very small metal structure, with a capacity to deliver 310 gpm from Zone 2100 to Zone 2340. Although pumps appear to have been very recently replaced, the structure is severely undersized and in a state of disrepair; with an inefficient piping layout and limited accessibility for equipment maintenance/installation/removal. The roof, walls and floor are in a state of disrepair with deteriorating soundproofing the likely cause of neighbors' noise complaints. A structural

assessment was not performed because the recommendation is to replace the entire structure with a larger, quieter, code complaint structure that can accommodate equipment and provide access for operations and maintenance.

Site paving improvements, lighting and security are recommended, as well as the replacement of the electrical equipment and instrumentation.

3. Dearborn Pump Station. Station consists of two exposed electric driven vertical turbine pumps with a capacity to deliver 2060gpm from Zone 1570 to Zones 1750 and 1900, a piping/valve vault, exposed electrical cabinets, and a small CMU structure that houses electrical controls/equipment.

Pumps appeared to be in satisfactory condition, with some leakage observed. No major concerns were noted. The construction of asphalt or concrete paving is recommended adjacent to the pumps and electrical equipment to protect equipment and facilitate maintenance. Site lighting and security improvements are also suggested, as well as modifications to piping appurtenances and electrical equipment for enhanced operator convenience.

Chrysotile ACM, Crocidolite AMC, lead, chromium and zinc were detected on site. The Chrysotile ACM and Crocidolite AMC were found on a piece of transite pipe that was at the site (debris on the ground) near the pump station shed. The chromium, lead and zinc were found on paint chip samples.

South, Sand Canyon, Highland and 5th Avenue Pump Stations

The pumping stations at the South, Sand Canyon, Highland and 5th Avenue reservoirs share a common piping layout and equipment design, contained within an enclosed steel moment frame structure. These structures are generally in good condition and can withstand gravity loading, but **additional lateral structural support is required to meet seismic code**. This is true for each of the four pump stations; a "benefit-cost" decision is necessary to determine if these structural improvements are worth the capital cost. It may be concluded that failure of the structure is acceptable following a seismic event, as long as the station continues pumping water.

Equipment at each of these four stations is in varying stages of replacement need, with some parts nearly obsolete. When appropriate, it is recommended that they be replaced with newer (preferably off the shelf) versions for inventory availability, flexibility and uniformity.

The structures do not typically contain combustible materials, nor are there openings for errant flying embers, however routine clearing of nearby dry vegetation will reduce fire risk. Lead, chromium and zinc were found at all locations. Chrysotile ACM was also detected at each of these sites with the exception of the Highland facility, where no evidence of asbestos was reported. The Chrysotile ACM and Crocidolite AMC were found on a piece of transite pipe that was at the site (debris on the ground) near the pump station shed. The chromium, lead and zinc were found on paint chip samples.

Additional characteristics and conclusions unique to each of these four stations are identified below.

4. South Pump Station. Station consists of five pumps (circa 1962-1968); three contained within a steel moment frame structure (circa 1964). These four-horizontal split-case and one vertical turbine pump have the capacity to deliver 5956 gpm from Zone 1750. Pumps P-1927 and P-1928 deliver to Zone 1900. Pumps P-2124, P-2125, and P-2126 deliver to Zone 2100. The March 2011 draft *Master Plan* prepared by URS states that, "Additional pumps are recommended for P-1927".

Upgrading the vertical turbine applications with premium efficient motors and heavy-duty bearings is recommended to support the significant investment of VFD controllers. Replacement of the pump starter panels for P-1927 and P-2126, is also recommended, as well as reconstruction of the failing retaining walls. Paving, security and other site improvements, as well as replacement/upgrade of miscellaneous equipment and parts are also suggested.

5. 5th Avenue Pump Station. Two horizontal split-case pumps installed in late 1969 are contained within a steel moment frame structure; two vertical turbine pumps with a barrel to accommodate a third vertical turbine pump assembly are located outside the structure. Record drawings show natural gas engine conversions to electric motors in late 1997.

The pump station, pumps and motors generally appear to be in good condition with only minor improvements suggested, however, paving improvements for the access road are recommended for improved access, particularly in an emergency situation. Interior piping appears to be in good condition with no signs of deterioration, corrosion or leakage; however significant condensation near meter was observed which might veil leakage around connections. Exterior piping shows signs of above grade spalling, potentially indicating a more serious problem below grade. Recommend improving access to valves in below grade vault for operator convenience.

6. Sand Canyon Pump Station. Station consists of two electric driven horizontal split-case pumps (circa 1972) with a capacity to deliver 3783gpm from Zone 2340 to Zone 2600.

We recommend immediate replacement of pump starter panels, additional lighting, and site paving/drainage improvements to better control offsite runoff and extend life of pavement. Minor equipment/parts replacement as well as minor mechanical/electrical modifications are also recommended to enhance operator convenience.

7. Highland Pump Station. Station consists of six electric driven horizontal split-case pumps (circa 1961-62) and two booster pumps (circa 1976) and a steel moment frame structure constructed in 1966 with a combined capacity to deliver 6600gpm from Zone 1570 to Zones 1750

and Zone 2100.

Minor maintenance and painting are recommended, as well as regular housekeeping/monitoring of miscellaneous stockpiled items to avoid interference with pumping operations. Minor site paving and drainage improvements are suggested, and minor mechanical/electrical modifications to enhance operator convenience. Extending the vertical turbine booster pump can and motor base to above grade (leaving discharge at existing elevation) will offer better protection if vault floods.

OTHER

The pumping operations at the Country Club and Smiley Heights reservoirs were also visited, although all pumping equipment is exposed and there are no structures located onsite. General observations and recommendations are provided below.

8. Country Club Pump Station. The pumping equipment at the Country Club Reservoir site consists of three electrically driven submersible pumps and one vertical turbine pump that appear to be in good working order and together have the capacity to deliver 3427gpm from Zone 2100 to Zone 2340. There also exists an abandoned underground pump station on the south side of the site, between the two reservoirs. Piping and appurtenances appear to be in good working order, with no leakage or evidence of malfunction observed. Minor recommendations regarding site drainage, lighting and security are suggested.

The existing electrical system is generally in good condition, including a 600V, 800A, 3-phase, 60HZ manual/automatic transfer switch with an external generator connection capable of connecting a 600kW portable generator; enough capacity to fully support the complete site electrical system in an emergency/stand-by power situation.

Site not tested for asbestos; lead, chromium and zinc were detected on site.

9. Smiley Heights Pump Station. The two exposed electric driven submersible pumps have the capacity to deliver 720gpm from Zone 1570 to Zone 1750 and are generally in good condition, requiring no immediate attention. Minor recommendations regarding security, lighting, landscaping and electrical and piping modifications to enhance operator convenience are suggested.

Site not tested for asbestos; lead, chromium and zinc were detected on site.

Section 5 – Prestressed Concrete Reservoir Design

Closing Words – Why is BRADY's Support for Prestressed Concrete Reservoir Design So Strong?

BRADY's corporate knowledge regarding reservoir design preferences has been shaped by the many decades key members of our design team have spent in the planning, design, and construction of reservoirs of all shapes, sizes, and materials. BRADY's structural team also includes Max Dykmans, P.E., S.E., the former President and Owner of DYK, prior to their merger with Natgun in 2011 to form what is known as DN Tanks today. A summary of this experience is included in the table below:

Name	Years of Experience	Comments
Richard Brady, P.E., BCEE	41	Design experience with all reservoir types, shapes, and size; largest tank, conventional rectangular concrete, 52 MG (Sydney, Australia)
Karl Kuebitz, P.E.	22	Former Design Manager for DYK/DN Tanks; world's largest prestressed concrete reservoirs, 4 @ 42 MG
Lee Biggers, P.E., S.E.	55	Mr. Biggers was inducted as a Fellow of the Structural Engineers Association of California in 2010; Structural Engineer of Record for more than 50 circular prestressed and conventional concrete reservoirs
Max Dykmans, P.E., S.E.	46	Former Owner and President of DYK; builder of more than 3,000 prestressed concrete reservoirs over 40 years

The professional experience of Mr. Dykmans and Mr. Kuebitz is primarily as designers of prestressed concrete reservoirs designed to AWWA D110, Type 1 spanning back to the 1970's. Mr. Brady and Mr. Biggers have experience in all reservoir types, shapes, and sizes ranging from 630,000 gallons to 52 MG. At one time Mr. Brady was the designer of the largest prestressed reservoir in California when he was the designer of 2-21 MG reservoirs at the City of San Diego's Alvarado WTP in 1994. Mr. Brady eclipsed his California record and the entire world, when his 35 MG Earl Thomas Reservoir began construction in 2001 for the City of San Diego (photo at the right). All three reservoirs are shown in the picture at the right.

Our company's Engineer Manager, Karl Kuebitz, P.E. was also the leader of our structural efforts on this project. Mr. Kuebitz, P.E. has been involved in the site development, design and construction of hundreds of Type 1 prestressed concrete tanks over 20-years, including the largest in the World at 42 Million Gallons (MG). And not just one, but four at this size.

There is no doubt we favor the prestressed design, for the reasons discussed herein., Below is a short history of what we have collectively learned after all of these years for the benefit of the City of Redlands.

What Have We Learned as a Group After all These Years?

1. Circular shapes are best for storing water. Very easy to design, all forces are radial and circumferential.
2. Avoid odd shapes (trapezoids) where structural design forces are difficult to analyze. A catastrophic failure of a 30 MG conventionally reinforced tank in the initial hydrostatic test in 1994 was a true "lesson learned" for the water industry (see photo, right). It didn't take long to figure out this was a design error. (Not a BRADY project.)

3. In areas of seismic concern, the premier reservoir design choice is prestressed concrete designed to AWWA D110, Type 1.
4. Avoid attempts to make something cheaper. A prestressed design concept developed in the 1960's, known in the industry as the "Pritzker System", became notorious because of a 5 MG reservoir failure in 1998. Pritzker Tanks were a proprietary system that enjoyed moderate success in the 1960's, building around two dozen tanks in the United States, most of which in Southern California. The Pritzker System relied on 8'-0" wide by 2'-8" deep "U" shaped precast panels. The "U" shape varied from 4 to 8 inches in thickness. Although relatively thin, the "U" shape was to

provide the required stiffness to span from floor to roof. The precast panels were stacked next to each other to form a circle and then an internal tendon ring beam was cast at the top and bottom of the wall. There was no continuity or reinforcing between any of the panels, instead the hoop force was entirely taken at the top and bottom of the wall in the ring beam. The 5.0 MG Westminster Reservoir that failed on September 21, 1998, at 5:45 a.m. was a Pritzker design (see photo, above). The tank failed quickly through a single wall panel, releasing its entire contents in a matter of minutes, resulting in significant property damage and several minor injuries. Fortunately, there were no fatalities. It is believed that a poor detail used in the bottom ring beam was the cause of the failure.

5. Minimize construction joints to reduce the amount of waterstop needed. Most reservoirs that experience excessive leakage is often the result of a folded waterstop, not cracks. Cracks can be fixed; folded waterstops are difficult to locate and a challenge to fix.

6. If possible, complete burial of reservoirs constructed out of concrete is preferred. A conventionally reinforced concrete reservoir should be completely buried for an equivalent comparison to a prestressed concrete reservoir. Due to inherent design advantages of a prestressed concrete reservoir (core wall is continuously kept in compression), this type of reservoir can be fully exposed, partially buried, or completely buried with no change in performance. Advantages of buried reservoirs include:

    a. Temperature conditions are stabilized. The thermal environment created by burial is beneficial to a longer structure life.

    b. Expansion and contraction problems are minimized. Less leakage should be expected.

    c. Removing the roof and walls from exposure to direct sunlight improves the life of the structure.

    d. Leakage that might occur is not visible (out of sight, out of mind).

    e. Security is improved.

    f. Chlorine residual will likely last longer due to more stable temperature conditions.

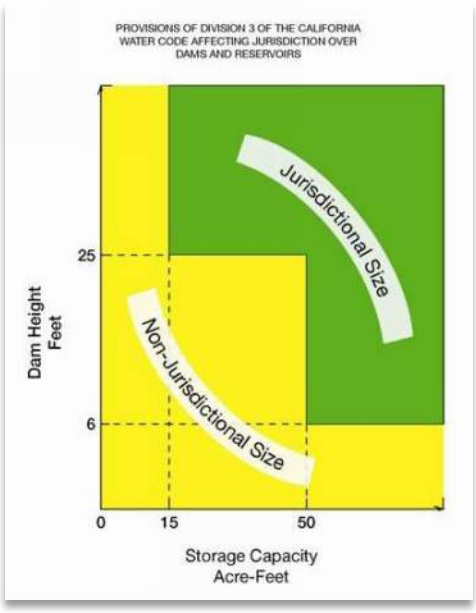
7. The region wide datum change that has occurred since 1962 should be watched carefully. It is critically important that we clarify where we are in the real world at the start, with an entire new survey at the outset. All elevations must be confirmed with an accurate land survey, not by simply referencing a historical document.

8. Before a reservoir is taken out of service for rehabilitation work, scenarios should be discussed with the City's operations staff including "what if" failure and recovery plans, to try to foresee any potential problems, and try to uncover unintended consequences.

9. The best solution is almost never the lowest cost solution. Reservoir projects are civil engineering projects at their finest, with hydraulics being the primary and most critical problem to be solved. Structural engineering is just a discipline, not the project.

The Advantage of Circular Concrete Reservoirs

Nearly 69% of the City's storage resides in rectangular or square reinforced concrete (RC) reservoirs. The beauty of the design of RC reservoirs is that because no special forms were needed, they could be partially or completely buried, making them relatively economical; providing significant cost/gallon savings over other reservoir types, such as steel. Wall height was typically kept to a maximum of 22-feet, to keep wall thickness within reason, and columns were spaced every 20- to 25-feet. A center dividing wall with a height of 10-14 feet was a common design feature in larger tanks to create two storage compartments, allowing for flexible operation during routine maintenance. As shown on the Chart to the left; non-circular shapes with a wall height of either 25 feet or higher, or a storage capacity greater than 50 acre-feet (16 MG), falls within their jurisdiction size.



Even though all of the City's RC reservoirs have exposed roofs, the more common and current RC reservoir roofs were typically buried in two feet of soil; sloping in one direction for drainage (crown at the ridge line). For the same reason, the floor would slope in the other direction to the outlet pipe. The result was that every column from row-to-row was a different height, creating erection and quality challenges for the contractor. Columns were heavily reinforced to carry soil and live loads on the roof. If not properly supported with spacers (i.e., "dobies"), the reinforcement cage could be displaced during the placement of concrete down the cage. Floor and roof slabs were placed in a "checkerboard" fashion, with alternating pours. Walls were placed in a non-consecutive fashion, a single wall would be erected, leaving spacing between walls, which would be filled in after a 7- day curing period. Corners were placed last. The primary objective was to minimize shrinkage and resulting cracking of the concrete. The concrete mix design was carefully specified to these issues; sand content was limited to 41%; water addition was tightly controlled; and 28-day shrinkage was limited to 0.042%.

By the very nature of the material, over time many RC tanks experienced problems with cracking and chloride corrosion of the reinforcing steel. Concrete in a conventionally reinforced tank wall is allowed to develop tension. Concrete in a circular or rectangular conventionally reinforced tank wall will be placed into tension under hydrostatic, hydro-dynamic, and thermal conditions. Concrete experiencing high levels of tension can result in the yielding of steel reinforcement, cracking of concrete, and subsequent leakage. Cracking can also provide an easy avenue for the

intrusion of salts, which can further corrode steel reinforcement. This corrosion creates expansion of the reinforcing which creates further tension in the concrete cover, possibly leading to delamination of concrete from areas of the tank wall. RC tanks were often buried for a reason – out of sight, out of mind. Significant leakage has even been known to occur during the initial hydrostatic test. Besides these structural issues; age of water, poor circulation, and loss of chlorine residual are other common problems of RC reservoir designs.

In prestressed concrete reservoirs, the balance in determining the optimum geometry is wall height to diameter ratio. Slabs on grade are the easiest and least expensive; however, maximizing diameter to provide a high slab on grade construction effort is offset by the most expensive element in tank construction – the roof and supporting column structure. For conventional concrete reservoir designs, the most cost-effective wall should not exceed 22 feet in height to keep wall thicknesses and reinforcing steel requirements within reason. For prestressed concrete designs, 30 feet is the historical water elevation. However, improvements to prestressing technologies over the past 30 years, heights of 40 feet and above have been economically achieved. This has allowed for diameters to be reduced and expensive roof areas to be minimized.

Reservoir Types and Shapes

For reservoir shapes, three reservoir design types are available for consideration:

1. Prestressed concrete (PC);
2. Conventional concrete, circular or rectangular (RC);
3. Steel.

For reservoirs less than 1 MG, steel is the traditional choice, primarily because of the lower cost and because reservoirs in this volume range are considered less critical to uninterrupted operations. For sizes 1-5 MG, circular prestressed concrete and rectangular conventionally reinforced concrete remain the traditional choices. Non-circular shapes are not considered to be cost effective to design or construct in sizes less than 5 MG, and ideally require complete burial. The variable loading conditions that directly result due to the non-circumferential loadings can cause excessive cracking and leakage to occur, particularly in designs that are exposed to natural sunlight. For reservoirs larger than 5 MG, concrete is the traditional choice.

Steel. For reservoirs larger than 1 MG, a steel tank option can be easily dismissed at the initial stage of evaluation for numerous reasons. A steel tank should not be considered if the tank cannot be constructed at grade; partial burial of a steel tank is not recommended. Additionally, for reservoirs critical to the City's water operation, tank types that will require future removal from service for an extended duration to allow re-painting of the interior, may not meet the City's operational needs. It should be expected that a steel tank will need interior re-painting/re-coating at least every 12-15 years, and a period of at least six months should be anticipated for this activity for larger size tanks. To further aggravate the problem with steel, strict seasonal

requirements for steel tank coating system applications coincide with the peak demand summer months when a water tank is needed most. With the ever-increasing regulations regarding water and air quality, the potential for more stringent steel tank painting regulations is significant. Due to the inevitable stricter environmental regulations to contain and recollect abrasive blast material and removed coatings, it may be necessary to include tank "shrouding" in future maintenance costs. In sizes above 1 MG, a steel tank option would be an extremely poor choice.

Concrete. With regards to concrete, either rectangular conventional or prestressed concrete can be considered. Prestressed concrete reservoirs are typically constructed in the 30-35 feet wall height range but are also very economical for any water depth/wall height.

A circular prestressed concrete tank is an extremely efficient system to hold water. For a given water depth, a circular tank requires the least wall area of any shape to contain the desired capacity. A circular prestressed tank wall has the corewall in pure axial compression and the prestressing steel in pure axial tension, thereby utilizing 100 percent of both materials in their most efficient state of stress.

Rectangular versus Round. Both prestressed concrete and rectangular conventionally reinforced tanks use concrete as their primary component. However, there are vast differences in performance between the two alternatives.

The most obvious, and most significant, difference between the two types of tanks is that the concrete is allowed to go into tension in one type and continuously kept in compression in the other. A properly designed prestressed tank will have its corewall held in compression, not only under hydrostatic loading, but under thermal and seismic loadings as well. In contrast, the concrete in a rectangular conventionally reinforced tank will be placed into tension under these same conditions. Under hydrostatic, thermal, and seismic loads, reinforced concrete walls are put into a state of tension, which can result in yielding of steel reinforcement, cracking of concrete and subsequent leakage. Cracking can also provide an easy avenue for the intrusion of salts, which can corrode the steel reinforcement. Unfortunately, reinforced concrete under large liquid pressure loads behaves chaotically due to the large amount of tension in the concrete. Reinforced concrete in this condition frequently cracks even when designed to current Codes.

Even if concrete and reinforcement tensile stresses are kept low and steel reinforcement is closely spaced to minimize cracking, over long periods of time the small cracks that do develop will tend to migrate toward one another. This will take place when localized bond failures occurring along the reinforcing bars result in larger, potentially troublesome cracks.

In a rectangular conventionally reinforced concrete tank, hydrostatic loads are not resisted by uniform hoop stress, as they are in a circular prestressed concrete tank. Instead, the water must be held back by a retaining wall cantilevered off the floor. Although fixed connections between the wall and wall footing can save cost, this cantilevered wall produces large moments in the floor and wall, which promotes subsequent cracking and leakage. Since it is very difficult to fully resist the water load just by a cantilever from the floor, the wall is often also tied to the roof so

it is fixed at its base and top. Although this helps the wall carry the water load, it can also promote significant problems in the roof when subjected to thermal expansion.

A major place of concern is caused by the stress concentrations that occur at the sharp corners of the tank, which are extremely difficult to accurately analyze and design for. This is one reason why you normally see pressure vessels for gas and other liquids follow the form of a circle, not a square. All these stress concentrations and moment conditions that produce tension can ultimately result in leakage. In the United States, the vast majority of large concrete tanks are built as circular prestressed concrete. In fact, in this country, it is very uncommon for large conventionally reinforced concrete tanks to be built above grade. History has shown that the allowable leakage loss rate can equal the full capacity of the tank each year.

Even though circular prestressed concrete tanks could receive short term cost benefits by using rigid connections, a Type 1 prestressed concrete tank design incorporates free connections at the base and top of the wall. Even with free moving connections, tank walls are still subject to some circumferential and vertical bending moments, caused by differential temperature and differential dryness conditions between the inside and outside of the wall. To counteract these effects, circular prestressed concrete design adds vertical prestressing plus circumferential prestressing above and beyond that required for the hydrostatic loads. This keeps the concrete crack-free in both the vertical and circumferential directions, unlike a conventionally reinforced concrete tank.

Most Type 1 prestressed concrete tank designs use a floor with a slight upward cone shape that promotes drainage and will actually help keep the floor in compression. In comparison, many rectangular conventionally reinforced concrete tanks use hopper floors or sloped floors, which are prone to cracking and leakage.

Constructability

Placement of RC Tank Walls:

A RC tank wall will require two or three curtains of reinforcement steel in both the horizontal and vertical directions. Because of this reinforcing steel congestion, contractors typically pour the RC tank walls by dropping and vibrating the concrete from the top of the wall. Besides losing the advantage of being able to visually inspect the concrete placement (which is possible in the PC tank walls), the dropping of concrete from the top of the wall can result in concrete segregation and inadequate consolidation. Hollow areas and voids that may develop at the bottom of the wall, which is the most critical area of the tank, can result in subsequent leakage.

RC tanks must have the slabs poured in a checkerboard fashion to manage shrinkage. Placements are scheduled one week apart to allow 7-day shrinkage, typically equal to 50% of 28-day shrinkage. It would not be practical to wait four weeks between placements.

Placement of PC Tank Walls:

A Type I PC tank wall typically has a low abundance of steel in the corewall, since circumferential prestressing is added after the wall has been poured. The concrete for PC tank walls is normally placed through pouring openings in the side of the wall forms, thereby allowing the contractor to properly vibrate and place it. Visual inspection of the concrete placement and consolidation is possible through the wall form openings. A denser, homogeneous corewall should result due to these measures.

Unlike Rectangular Conventionally Reinforced Concrete Tanks, Circular Prestressed Concrete Tanks:

- Are designed under a comprehensive national tank code.
- Allow for the design of seismic and thermal loadings.
- Use galvanized material for their principal horizontal reinforcement.
- Incorporate flexible wall-to-base and wall-to-roof connections by using neoprene pads.
- Incorporate seismic cables between the wall-to-base and the wall-to-roof.
- Incorporate waterstops in all floor, wall, and roof joints.
- Use low-chloride concrete to prevent corrosion of the reinforcing steel.
- Use exterior wall coatings to prevent the intrusion of salts into the concrete.
- Use exterior roof membranes to counteract thermal cracking in the roof.
- Do not require coating of internal concrete surfaces.

SUMMARY OF BENEFITS OF PRESTRESSED CONCRETE TANKS:

In the United States, the vast majority of concrete tanks built today are circular prestressed concrete. Conventionally reinforced tanks, whether or not they are rectangular or circular, and whether or not they are above or below ground, are not normally the first choice of municipalities. Therefore, for critically important reservoirs, prestressed concrete is by far the premium choice for the following reasons.

- Enhanced operational and seismic performance as roof and footings do not have fixed connections. Floor to wall and wall to roof are designed utilizing an “anchored flexible base.” This allows for all three components of the tank structure to move independently of each other.
- Fewer joints in floor slabs, walls, and roofs for less potential of leakage.
- Walls are virtually crack-free, since they are in compression both vertically and horizontally. This provides less likelihood of leakage and corrosion of steel reinforcing.

- Significantly improved wall pouring capabilities. Conventionally cast-in-place concrete tanks typically have significant amounts of reinforcing in the walls. With standard forms for conventional cast-in-place tanks, pours are commonly required from the top of the form. This poses a significant challenge to properly consolidating the full height of a potentially 20' to 30' tall wall with congested reinforcing steel. These challenges have a high likelihood of reducing the quality of the wall. With reduced need for mild reinforcing in a prestressed concrete tank wall, pour windows can be easily utilized, which greatly enhances the final product.

- Prestressed concrete tank walls are in bi-axial permanent compression. Tanks are designed to be in 200 psi residual compression, ensuring a long-lasting leak free wall.

- Prestressed concrete tanks have excellent performance with temperature and dryness stress variations. As the wall to roof also utilizes an anchored flexible connection, the slab is free to expand and contract with the thermal variations. This is opposed to a conventionally reinforced concrete tank where thermal loads in the roof can induce bending moments when rigidly connected.

- Circular prestressed concrete tanks provide enhanced water quality. The circular shape provides for natural and efficient turnover of water in the tank with no dead spots. This is opposed to square or rectangular concrete tanks which can have "dead zones" towards the corners of the tank, creating a significant water quality issue and promoting bacteria growth.

- Prestressed concrete tanks allow for efficient construction operations, with concurrent construction of floor, wall, roof and columns. This results in an optimized construction schedule, often significantly decreasing durations as compared to a reinforced concrete tank.

Life Cycle Costs

Prestressed concrete is the lowest life cycle alternative. Though the initial cost of a steel tank is traditionally lower, over the 50-year span of a steel tank's useful life, it will require periodic replacement of the interior and exterior coating systems. For example, though the initial cost of the steel tank is only $3.6 million, when considering life cycle costs associated with maintaining the steel option over 100 years (the expected life of a prestressed concrete tank), the cost of steel is nearly $10 million. The cost for prestressed concrete is less than half this amount. Constructing a circular prestressed concrete reservoir will provide reliable storage with minimal maintenance for the next 75-100 years.

Operations and Maintenance Issues

Concrete is superior to steel with respect to operations and maintenance issues. Considerably less downtime for maintenance is needed (one day per year). Concrete does not require any

protective coatings when used for storing potable water. Steel requires regular maintenance, attention to interior and exterior coatings, and cathodic protection systems. These traditional coatings have fallen out of favor in many parts of the United States due to the potential health and taste problems sometimes attributed to volatile organic compounds leaching out of the coatings and into the water.

Seismic Risk Assessment

Prestressed concrete design is by far the better choice for seismic Zone considerations. The footings, walls, and roof of a prestressed concrete tank are not adjoined with fixed connections. This allows for all three components of the tank structure to move independently of each other, should an earthquake occur. The wall sections sit on neoprene bearing pads and are secured to the footing with seismic cables. In the event of an earthquake, the wall may undergo limited displacement in any direction and return to its original location regardless of the horizontal and vertical force accelerations. This would not be the case for a steel tank design that uses fixed connections. Prestressed concrete is also more resilient against wildfires and errant gun fire compared to steel.

An important component to consider for reservoirs located in seismically active zones is their capacity to absorb energy and to sustain cyclic loading during a seismic event. The design of prestressed concrete tanks takes into consideration horizontal and vertical ground accelerations, the sloshing of the water, and the overturning moments. With the majority of new generation prestressed concreted tanks located in the Western United States in areas of high seismic activity, Type 1 prestressed designs have not experienced earthquake-induced problems in the past 50 plus years. During both the 1971 San Fernando and the 1994 Northridge earthquakes, there were numerous Type 1 tanks located in close proximity to the respective epicenters. None of these tanks exhibited any major structural damage.

Possibly the most dramatic test of a Type 1 prestressed tank was a 10 MG, 40-foot-tall tank located within a couple miles of the epicenter of the Northridge earthquake. This tank is completely above ground and was full at the time of the earthquake. In addition to this tank, there were approximately two dozen Type 1 tanks within a 20-mile radius of the epicenter that performed excellently. In contrast, many steel tanks were severely damaged. The typical problem experienced was the buckling of the steel tank walls. More than twenty steel tanks were damaged in this natural disaster.

Reliability

Prestressed concrete offers the most reliable design. As noted in this report, the prestressed concrete reservoir design is the superior choice for seismic considerations. Since no coatings are required, the time required for operations and maintenance activities are considerably reduced. Prestressed concrete is a proven design for Seismic Zone 4 in California.

In summary, a prestressed concrete reservoir is considered “Best Value” for the following reasons:

- ✓ Prestressed concrete requires minimal maintenance over the 100-year expected life cycle of the reservoir.
- ✓ Prestressed concrete is superior for seismic conditions and is considerably less susceptible to earthquake damage.
- ✓ Prestressed concrete can be fully or partially buried, thereby reducing earthwork requirements, while minimizing environmental impacts.
- ✓ Prestressed concrete provides superior reliability compared to all other options.

Overall, the City has a well-connected water delivery system operated by a knowledgeable and dedicated operations team. System seismic vulnerabilities are primarily entirely due to the age of the City’s water infrastructure assets, not because of neglect or poor attention to proactive maintenance. We have very much enjoyed this extremely challenging engineering engagement that would not have come together without the assistance and support of City engineering and operations staff.

THE END

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City of
REDLANDS
"A City That Works"

City Council Meeting **J. 19.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Adopt Resolution No. 8420 authorizing the submittal of a grant application to the California Department of Water Resources for the 2022 Urban Community Drought Relief Funding Program requesting supplemental funding for the engineering and replacement of the Sunset Reservoir (Municipal Utilities and Engineering Director Harris)

MOTION(S):

If City Council determines the staff recommendation is appropriate, the following motion is provided:

I move to adopt Resolution No. 8420.

RECOMMENDATION:

Staff recommends City Council adopt Resolution No. 8420.

DISCUSSION:

To ensure compliance with the California State Water Resources Control Board 2021 mandate for utility providers to assess and evaluate the condition, ability to resist seismic failure, and structural security of water infrastructure, the City employed Brady & Associates to perform the assessment and evaluation of the City's water facilities in 2022. The assessment findings included recommendations for rehabilitating and/or replacing facilities that are subject to catastrophic failure during a seismic event and analyzed opportunities to improve drought resiliency by increasing storage capacity. The highest priority project recommendation is the replacement and expansion of the 3 MG Sunset Reservoir. This riveted steel reservoir was originally constructed in 1967 and the height-to-width ratio (tall and slender) along with the lack of any seismic restraint system makes complete failure during a local seismic event likely. This reservoir

is located at one of the highest elevations within the City and provides critical water storage for a large portion of the City. The City is currently negotiating with owners of an adjacent undeveloped property to purchase the property for the construction of a new, larger reservoir.

Recently, the California Department of Water Resources issued a notice of funding availability through its 2022 Urban Community Drought Relief Program. The Program will provide as much as $300M for eligible projects that will improve drought resiliency within urban communities. Staff has determined that the Sunset Reservoir Replacement Project meets the criteria for this grant program, and proposes submitting a grant application for engineering, permitting, and construction supplemental funding. The total project cost is estimated to be $24M. The proposed grant application requests $16,050,000 in Program funding. If approved, the City will provide $7,950,000 in matching project funds.

ALTERNATIVES:

City Council may deny the staff recommendation.

STRATEGIC PLAN:

Strategic Plan Priority D (3) - Develop and implement Water and Wastewater Utility Master Plans to ensure facilities are improved and maintained to meet the needs of our expanding community.

SUBMITTED BY:
John R. Harris, Municipal Utilities and Engineering Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director
Maira Durazo, Grants Coordinator

PREPARED BY:
John R. Harris, Municipal Utilities and Engineering Director

Fiscal Impact

Discussion:

There is no fiscal impact associated with approval of this Resolution.

Attachments

Resolution No. 8420
Self-Certification Form
Grant Budget
Grant Schedule
Grant Wholesaler Summary Sheet
Underrepresented Communities Sheet
Project Location Map
Underrepresented Community Benefits

RESOLUTION NO. 8420

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS, CALIFORNIA AUTHORIZING APPLICATION TO AND PARTICIPATION IN THE URBAN DROUGHT 2022 GRANT FOR THE CITY OF REDLANDS SUNSET RESERVOIR REPLACEMENT PROJECT

WHEREAS The City of Redlands proposes to implement the Urban Drought 2022 City of Redlands Sunset Reservoir Replacement Project; and

WHEREAS The City of Redlands has the legal authority and is authorized to enter into a funding agreement with the State of California; and

WHEREAS The City of Redlands intends to apply for grant funding from the California Department of Water Resources for the Urban Drought 2022 City of Redlands Sunset Reservoir Replacement Project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. The above recitals are true and correct and are incorporated herein by this reference.

Section 2. That pursuant and subject to all of the terms and provisions of Budget Act of 2021 (Stats. 2021, ch. 240, § 80), the City of Redlands Municipal Utilities and Engineering Director, or designee is hereby authorized and directed to prepare and file an application for funding with the Department of Water Resources and take such other actions necessary or appropriate to obtain grant funding.

Section 3. The City of Redlands Municipal Utilities and Engineering Director or designee is hereby authorized and directed to execute the funding agreement with the Department of Water Resources and any amendments thereto.

Section 4. The City of Redlands Municipal Utilities and Engineering Director or designee is hereby authorized and directed to submit any required documents, invoices, and reports required to obtain grant funding.

Section 5. If a grant award is made by the California Department of Water Resources, the City commits to providing up to 25% in matching funds for the City of Redlands Sunset Reservoir Replacement Project plus any remaining balance noted in the funding plan.

Section 6. Applicant acknowledges and agrees that it shall be subject to the terms and conditions specified in the Agreement, and that the NOFO and Application will be incorporated in the Agreement by reference and made a part thereof. Any and all activities, expenditures,

information, and timelines represented in the Application are enforceable through the Agreement. Funds are to be used for the allowable expenditures and activities identified in the Agreement.

Section 7. Effective Date. This Resolution shall become effective immediately

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____

Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof, held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

Eligibility Criteria Self-Certification Form

As an applicant with the Department of Water Resources' (DWRs) Financial Assistance Branch, you must complete this self-certification form as a condition to enter into a Grant Agreement with DWR to receive grant funds. This form should be filled out for the applicant and each Local Project Sponsor. Failure to meet and continue to comply with these conditions and requirements may result in DWR revoking the grant award, withholding grant funding, stopping invoice payment, and/or terminating the Grant Agreement. An answer of "No" to certain questions below may make you ineligible to enter into an agreement with DWR. If any question is going to be answered as "No" please contact DWR at urbandrought@water.ca.gov.

---

1. Applicant Eligibility

Applicant/Local Project Sponsor Name	Applicant/Local Project Sponsor Entity Type
City of Redlands	**Municipality**

Applicant Name: **City of Redlands**
Applicant Entity Type: **Municipality**

If the Applicant or any Local Project Sponsor is a mutual water company or public utility, does their proposed project have a clear and definite public purpose that benefits the customers of the water system or other public utility and not the investors?

Yes ☒ No ☐

If yes, please state the public purpose and explain how it benefits the customers:

This project proposes to engineer and construct a new 10 MG potable water reservoir to replace an existing 3 MG riveted steel reservoir constructed in 1967. The condition of the existing reservoir was assessed by Brady & Associates in 2021 and was determined to be at risk of catastrophic failure during a significant local seismic event. Construction of a larger concrete reservoir will ensure continuity of services to the Redlands water utility customers during and after future seismic events and will reduce future drought impacts by allowing the City to increase storage during higher precipitation periods.

2. Authorizing Resolution

A resolution adopted by the applicant's governing body authorizing the application for a grant under this program that designates a representative to sign the application, and in the event of an award of grant funds, a representative to execute the funding agreement and all necessary documentation (e.g., invoices, progress reports, etc.) is required. A signed, certified resolution must be received prior to the execution of a grant agreement with the State.

Is the authorizing resolution complete and included with the application? If there is not a resolution included at time of application, please provide an estimate for when it will be complete.

On December 20, 2022, the Redlands City Council adopted Resolution No. **XXXX** authorizing the Municipal Utilities and Engineering Director to submit all required grant application documents on behalf of the City.

3. Urban Water Management Compliance

List the urban water suppliers (UWS), as defined by Water Code section 10617, that will receive funding if the application is awarded funds. Does each UWS have a current Urban Water Management Plan (UWMP) verified by DWR that addresses the requirements of the California Water Code? Each UWS must also have a complete and validated water loss audit report verified by DWR in accordance with Senate Bill (SB) No. 555 (Stats. 2015, ch. 679). Additionally, each UWS proposing wastewater projects, water use efficiency projects, or drinking water projects must be compliant with the water metering requirements contained in Water Code section 525 et seq.

Urban Water Supplier	Date UWMP verified by DWR
City of Redlands	July 13, 2022

Are all Urban Water Suppliers compliant with all requirements for Urban Water Suppliers including but not limited to metering requirements (Water Code, § 525 et seq.), water loss audits, and monthly reporting to the State Water Resources Control Board (SWRCB)?

Yes ☒ No ☐

If a supplier isn't compliant with the requirements, please explain:

N/A

4. Water Shortage Contingency Plan (WSCP)

Each Urban Water Supplier that will receive funding if the application is awarded funds must have a current Water Shortage Contingency Plan activated to a Stage 2 or equivalent in compliance with the SWRCB's Emergency Water Conservation Regulations (Cal. Code Regs., tit. 23, §§ 995-996) and any amendments thereto. DWR will verify compliance for retailers. For wholesalers, the Water Shortage Contingency Plan stage will be determined by looking at the activation stages of their individual suppliers. Please fill out a Wholesaler summary form for each wholesaler in the application and attach it to the application.

5. Agricultural Water Management and Measurement Compliance

List the agricultural water suppliers, as defined by Water Code section 10608.12(a), that will receive funding if the application is awarded funds. If there are none, please indicate so. Each supplier must have a completed Agricultural Water Management Plan (AWMP) that has been verified by DWR. If the supplier provides less than 25,000 irrigated acres, they will be exempt from the AWMP requirement.

Agricultural Water Supplier	Date AWMP verified by DWR, or exempt
NONE	

Are all Agricultural Water Suppliers compliant with all other requirements of an Agricultural Water Supplier including but not limited to farm gate delivery reports, Efficient Water Management Practices, Water Measurement regulations, etc.?

Yes ☐ No ☐

If a supplier isn't compliant with the requirements, please explain:

N/A

6. **Surface Water Diverter Compliance**
List the surface water diverters that will receive funding if the application is awarded funds. If there are none, please indicate so. For the listed surface water diverters, state whether each diverter has submitted their latest annual and monthly surface water diversion reports in compliance with requirements outlined in Water Code section 5100 et seq., and their Use Reports as set forth in the California Code of Regulations, title 23, section 907 et seq., to the SWRCB.

Surface Water Diverter	Has Surface Water Diverter submitted all required reports to SWRCB to remain up to date? (Yes/No)
NONE	

7. **Groundwater Management Compliance**
List any projects that directly affect groundwater levels or quality. Please attach a support letter from the appropriate Groundwater Sustainability Agency for any projects affecting groundwater in high or medium basins. For adjudicated basins, please submit a support letter from the watermaster. You can find your groundwater basin and the priority by going to the following link:

https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels%C2%A0

Project Name	Grantee/Local Project Sponsor	Groundwater Basin	Priority of the basin

8. Groundwater Management Compliance Self-Certification

Groundwater Management Compliance: The Applicant and any Local Project Sponsors must maintain continuing eligibility with the current Sustainable Groundwater Management Act (SGMA, Water Code, § 10720 et seq.) requirements as they come into effect.

X Yes, the Applicant and Local Project Sponsors agree to maintain continuing eligibility with the most current SGMA requirements, as applicable.
☐ No, the Applicant and Local Project Sponsors do not agree to maintain continuing eligibility with the most current SGMA requirements, as applicable. DWR cannot enter into a Grant Agreement.

9. California Statewide Groundwater Elevation Monitoring (CASGEM) Compliance

Please fill out the following table for any projects located in a high or medium priority groundwater basin as identified by the CASGEM program. Projects in high and medium priority groundwater basins that do not have a CASGEM monitoring entity will not be eligible for funding if the grant applicant and Local Project Sponsor are listed as potential monitoring entities in Water Code section 10927. The same applies to counties whose jurisdictions include unmonitored high and medium priority groundwater basins (Water Code, § 10933.7(a)).

Project	Basin Monitoring Entity	If there is no monitoring entity, is the Local Project Sponsor is an eligible monitoring entity per Water Code section 10928?
N/A		

10. Stormwater Projects

If a project is a stormwater and/or dry weather runoff capture project, is it included in a Stormwater Resource Plan or functionally equivalent plan (FEP) if applicable? Projects that benefit a DAC with a population of 20,000 or less are exempt from this requirement. However, they must not be a co-permittee for a municipal separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) permit issued to a municipality with a population greater than 20,000 (Water Code, § 10563(c)(2)(B)).

Project (only list stormwater and/or dry weather runoff capture projects)	Project Included in a Stormwater Resource Plan or FEP?
N/A	

11. Agreement Template

Have you and your counsel reviewed the agreement template and all terms and conditions?

Yes ☒ No ☐

I understand that the Department of Water Resources will rely on this signed certification in order to approve funding and that false and/or inaccurate representations in this Self-Certification may result in revocation of the award of funds or loss of all funds awarded to the Grantee. and that reimbursement of any grant funds is reliant upon the Grantee and all local project sponsors to meet and maintain all eligibility requirements outlined within this Self-Certification form, the 2022 Urban Community Drought Relief Program Guideline and Proposal Solicitation Package, and the Grant Agreement terms and conditions. Additionally, for the aforementioned reasons, the Department of Water Resources may withhold disbursement of grant funds and/or pursue any other applicable legal remedies

John R. Harris	Signature
Municipal Utilities & Engineering Director, City of Redlands	Date

Each applicant must complete and submit a Budget attachment for the projects in their proposal. The Budget attachment must be submitted in the original word format with the forms intact. Please enter whole numbers for each budget.

AGREEMENT BUDGET SUMMARY

	PROJECTS	Grant Amount	Non State Cost Share	All Other Cost	Total Cost
	Grant Administration	$	$	$	**$**
1	Project 1: <Title>	$	$	$	**$**
X	Project X: <Title>	$	$	$	**$**
	GRAND TOTAL	**$**	**$**	**$**	**$**

Instructions: If requesting Grant Administration costs, complete the following table. Grant Administration is the Grantee's cost for meeting the requirements associated with the administering of the grant funds, including coordinating with project managers for implementing the grant projects, and combining reports and invoices to submit to DWR. This is independent of Project Administration and is not the same or a sum of the Project Administration amounts. Applicants are not required to include a Grant Administration project, and may not want to, if only requesting funds for a single project. Please enter whole numbers for each budget box.

Grant Administration

	BUDGET CATEGORY	Grant Amount	Non State Cost Share	All Other Cost	Total Cost
(a)	Grant Administration	$0	$0	$0	**$0**
	TOTAL COSTS	**$0**	**$0**	**$0**	**$0**

Attachment 3 - Budget Form

Instructions: Please complete the following budget table for each project. All Other Costs should total the remaining costs of implementing the project beyond the grant amount and non state cost share. If you are submitting an application for more than one project, please copy additional tables below.

PROJECT: Urban Drought 2022 City of Redlands Sunset Reservoir Replacement Project

Implementing Agency: City of Redlands

	BUDGET CATEGORY	Grant Amount	Non State Cost Share*	All Other Cost*	Total Cost
(a)	Project Administration	$0	$0	$0	**$0**
(b)	Land Purchase / Easement	$0	$0	$0	**$0**
(c)	Planning / Design / Engineering / Environmental Documentation	$1,750,000	$750,000	$0	**$2,500,000**
(d)	Construction / Implementation	$14,300,000	$7,200,000	$0	**$21,500,000**
	TOTAL COSTS	**$16,050,000**	**7,950,000**	**0**	**24,000,000**

Attachment 4 - Schedule Form

Each applicant must complete and submit a Schedule attachment for the projects in their proposal. The attachment must be submitted in the original word format with the forms intact. Please complete the schedule below for the project(s). Applications with multiple projects will complete a schedule for each project. Projects must be complete by December 31, 2026 including all reporting and retention, to allow time for final invoice processing and retention payment before the State funds expire on June 30, 2027. Project/grant administration should end at least three months after construction. Dates should be entered at M/D/YYYY.

Grant Administration

	BUDGET CATEGORY	Start Date	End Date
a	Project Administration	1/4/2024	6/1/2026

PROJECT: Urban Drought 2022 City of Redlands Sunset Reservoir Replacement Project

	BUDGET CATEGORY	Start Date	End Date
a	Project Administration	1/4/2024	6/1/2026
b	Land Purchase / Easement	10/1/2022	5/1/2023
c	Planning / Design / Engineering / Environmental Documentation	2/1/2024	12/31/2024
d	Construction / Implementation	3/1/2025	6/1/2026

Attachment 5 Wholesaler Summary Sheet Form

Please note: If an applicant is an Urban Water Supplier wholesaler and does not submit the Wholesaler Summary Sheet, they will not be considered for award under Priority 2.

Wholesaler Agency:

Retail Agency Name	**Percentage of wholesaler supply by each retail agency**
N/A	

Appendix H – Underrepresented Communities

For the purposes of this GL/PSP, Disadvantaged Communities (DACs), SDACs (Severely Disadvantaged Communities), EDAs (Economically Distressed Area), Tribes, Environmentally Disadvantaged Communities (EnvDACs), and Fringe Communities are collectively referred to as Underrepresented Communities (URCs). DWR will use the information presented in the applications to evaluate whether the project provides benefits to an Underrepresented Community and to determine whether the project is eligible for the Underrepresented Community Funding. The Underrepresented Community Funding is available to projects providing at least 50% of the primary benefit directly to an Underrepresented Community or Tribe.

Applicants seeking this determination must include in their grant application, supporting documentation that identifies the Project benefit area and location(s) of the Underrepresented Communities, identifies how the proposed Project provides benefits to an Underrepresented Community, and indicates the total project benefits provided.

Underrepresented Community Classifications

Disadvantaged Communities (DACs)

A disadvantaged community (DAC) is a community with an annual median household income (MHI) that is less than 80% of the Statewide annual median household income. Using the U.S. Census Bureau American Community Survey (ACS) data for the years 2012 -2016, 80% of the California Statewide MHI is $51,026.

Applicants must provide the following information for each project claiming benefits to a DAC(s):

- Percentage of the project benefits provided to a DAC, by geographic area or population.
- Information that supports the project benefits a DAC(s), such as a map or shapefile that shows the project benefit area and the location of the DAC(s).
- Where there is a lack of representative census data that adequately represents the community that can be documented, alternative studies (local income surveys, a subset of a block group, older (ACS) data, etc.) may be substituted in the attachment. Include justification for the use of alternate data.

The ACS data gives estimates of MHI for different census geographies, such as states, counties, census places (incorporated cities and unincorporated towns), census tracts, and census block groups.

DWR has developed a tool which utilizes the most current ACS data to show the location and boundaries of DACs and Severely Disadvantaged Communities (SDACs) in the State, at the census place, tract, and block group level. The tool allows users to view different geographies or combinations of geographies, using different base maps and to zoom in to various scales. The DAC tool can be found at the following link: https://water.ca.gov/Work-With-Us/Grants-And-Loans/mapping-tools. For individuals with Geographic Information System (GIS) capabilities, also provided at this link are GIS files representing the ACS data (and DAC status) for the three census geographies.

The applicant may use ACS data at the census place, census tract, or census block group geography levels to show whether a project serves a DAC, based on what geography is the most representative for that community. For DACs, the allowable alternative geographies are, respectively:

Severely Disadvantaged Communities (SDACs*)*

A severely disadvantaged community (SDAC) is a community with a median household income of less than 60% of the Statewide average.

Applicants must provide the following information for each project claiming benefits to a SDAC(s):

- Percentage of the project benefits provided to an SDAC, by geographic area or population.
- Information that supports the project benefits an SDAC(s), such as a map or shapefile that shows the project benefit area and the location of the SDAC(s).

If a project is serving a DAC or SDAC, is divided among several contiguous census tracts or block groups and some of the project area tracts or block groups do not meet the DAC or SDAC criterion, then the project will be considered a DAC project for the purpose of waiving cost share requirements in proportion to the population served that meets the DAC criterion. The DAC tool described in the previous section can also be used to identify SDAC locations in California.

Economically Distressed Areas (EDAs)

An economically distressed area (EDA) is a municipality with a population of 20,000 persons or less, a rural county, or a reasonably isolated and divisible segment of a larger municipality where the segment of the population is 20,000 persons or less, with an annual median household income that is less than 85% of the Statewide median household income, and with one or more of the following conditions as determined by the DWR: (1) financial hardship, (2) Unemployment rate at least 2% higher than the Statewide average, or (3) low population density.

Applicants must provide the following information for each project claiming benefits to an EDA(s):

- Percentage of the project benefits provided to an EDA, by geographic area or population.
- Include information that supports the project benefits an EDA(s), such as a map or shapefile that shows the project benefit area and the location of the EDA(s).
- Where the lack of representative census data that adequately represents the community can be documented, alternative studies (local income surveys, a subset of a block group, etc.) may be substituted in the attachment.
- In determining the MHI for EDAs, applicants may use a single type of census geography or combinations of census geographies that best represent the EDA.

The EDA Mapping Tool is an interactive map that allows users to overlay multiple geographies as separate data layers. Go to https://water.ca.gov/Work-With-Us/Grants-And-Loans/mapping-tools to access the EDA mapping tool.

Environmentally Disadvantaged Communities (EnvDACs)

The California Environmental Protection Agency (CalEPA) designates the top 25% scoring census tracts as DACs. Census tracts that score the highest 5% of Pollution Burden scores, but do not have an overall CalEnviroScreen score because of unreliable socioeconomic or health data, are also designated as DACs (found to be 22 census tracts in the 2021 CalEnviroScreen version 4.0).

CalEPA (through the Office of Environmental Health Hazard Assessment (OEHHA)) developed a mapping tool that assesses environmental, health, and socioeconomic indicators to produce a score for each census tract in the State. Each tract receives a Pollution Burden score (Exposures and Environmental Effects) and a Population Characteristics score (Sensitive Populations and Socioeconomic Factors). The average Pollution Burden and Population Characteristics scores are multiplied together to produce an overall CalEnviroScreen score.

There are two tools available to verify if a census tract is considered an EnvDACs:

OPTION 1: CalEnviroScreen 4.0 Mapping Tool

The CalEnviroScreen 4.0 Mapping Tool is an interactive map that allows users to overlay Census Tracts.

Go to https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40 and scroll down to access the CalEnviroScreen 4.0 Mapping Tool.

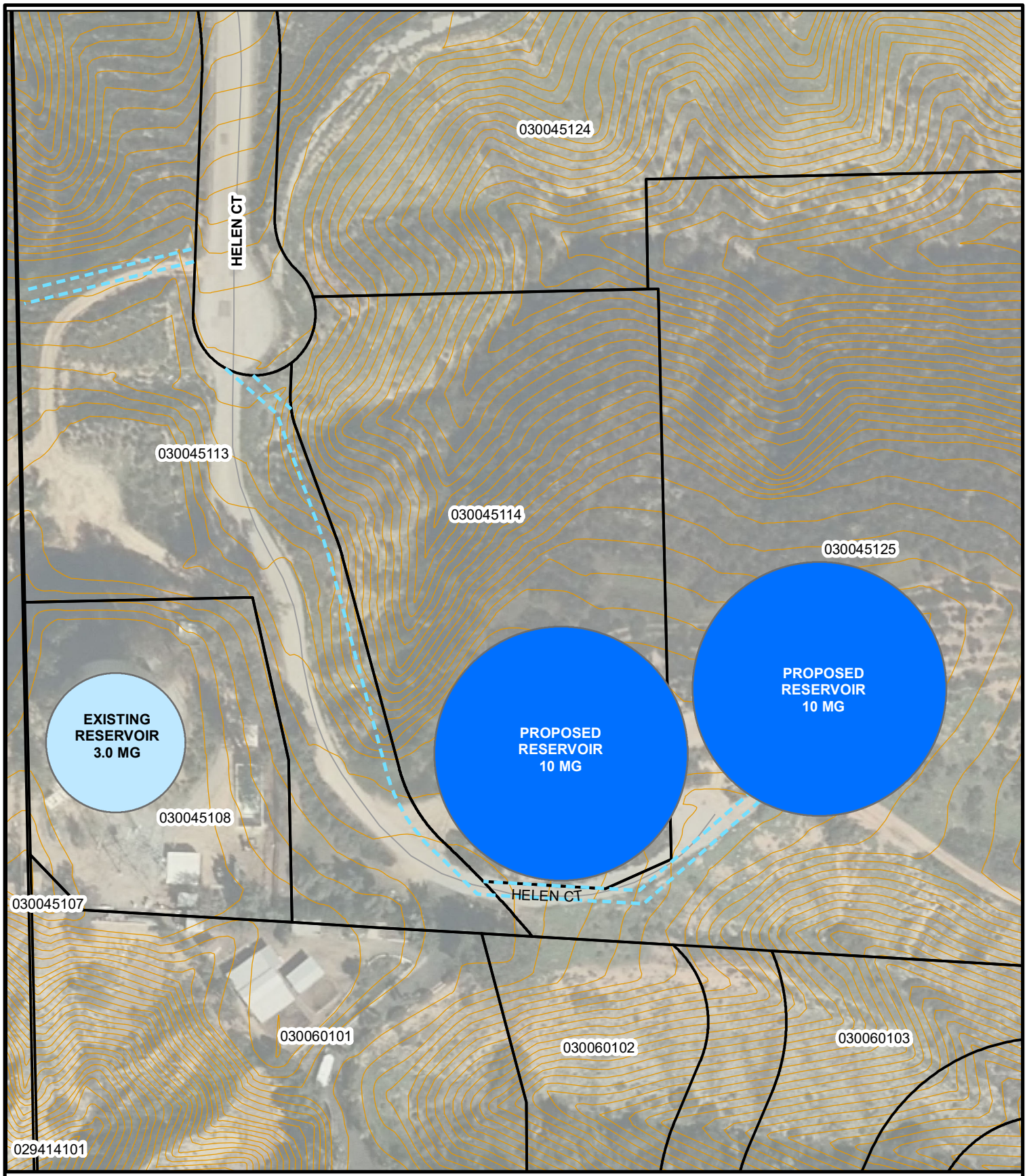
OPTION 2: CalEnviroScreen 4.0 Results Excel Sheet

The CalEnviroScreen 4.0 Results Excel Sheet is a sortable spreadsheet that contains all CalEnviroScreen 4.0 scores.

Go to https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40 and scroll down to Data and Additional Materials.

Fringe Communities

Fringe Communities are those communities that do not meet the established DAC, SDAC, and EDA definitions, but can show that they score in the top 25% of either the Pollution Burden or Population Characteristics score, using the CalEnviroScreen version 4.0 linked above.



SUNSET RESERVOIR

SITE MAP

N
W E
S

A disadvantaged community (DAC) is a community with an annual median household income (MHI) that is less than 80% of the Statewide annual median household income. Using the U.S. Census Bureau American Community Survey (ACS) data for the years 2016 -2020, 80% of the California Statewide MHI of $78,672 is $62,937.

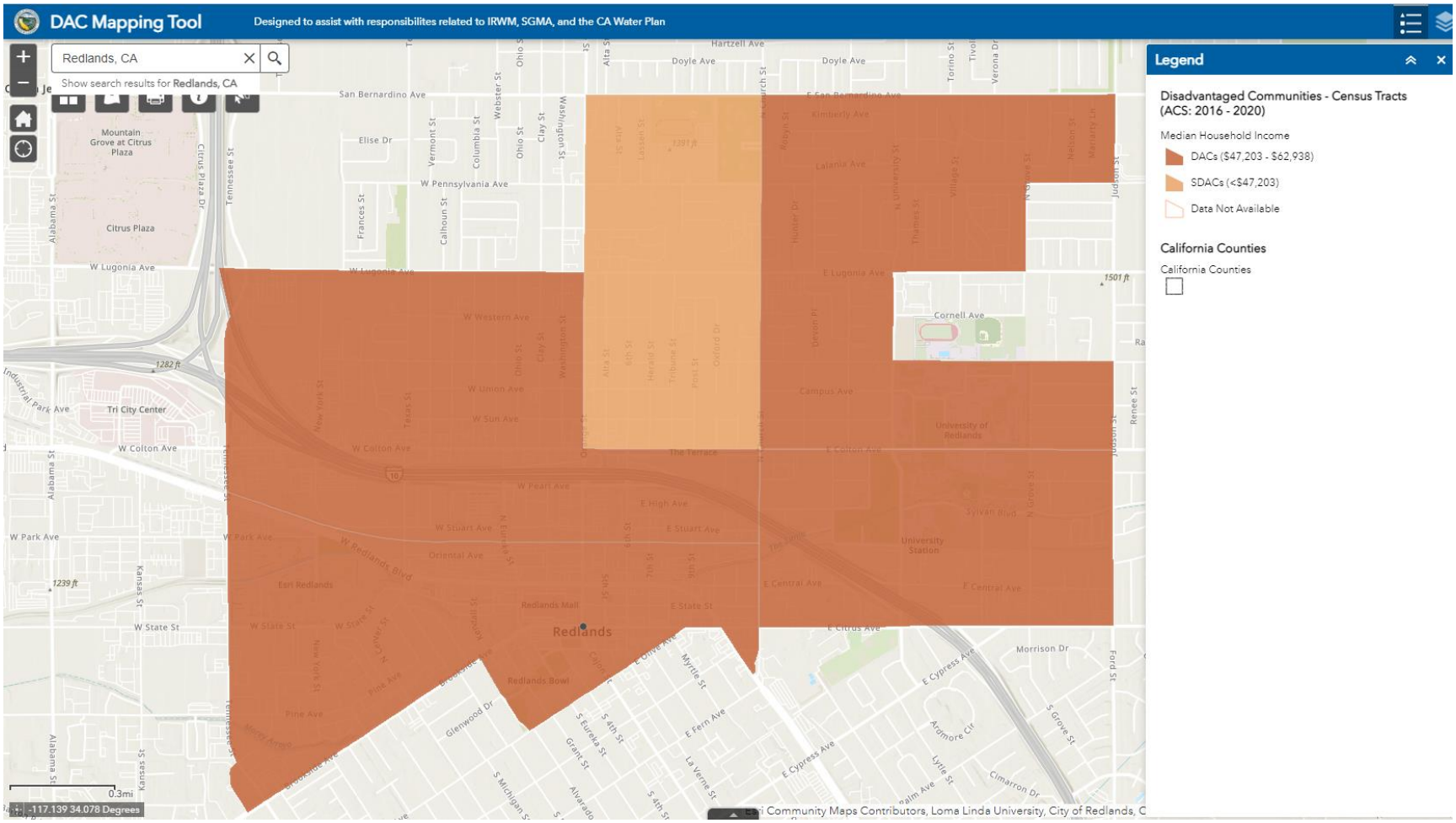
According to the Disadvantaged Communities (DAC) Mapping Tool, five disadvantaged community census tracts are within the City of Redlands affected project area consisting of 6,085 households, making up approximately 26% project benefit. Over 1,100 households within the identified DAC area have a median household income of under $35,000 and the remaining households have a median household income of less than $61,000.

The city's underserved community share a geographic area of North Redlands that include two HUD designated Qualified Census Tracts (QCT). Communities receive this designation when at least 50% of households have incomes that are less than 60% of the Area Median Gross Income (AGMI) or have a poverty rate of 25% or more. HUD recognized QCTs are eligible to receive a State and local Low-Income Housing Tax Credit (LIHTC) – the most important resource for the creation of affordable housing nationwide. LIHTC is focused on issuing tax credits for the acquisition, rehabilitation, or new construction of rental housing for use by lower-income households. The two QCTs that meet this designation will benefit as a direct result of this Project.

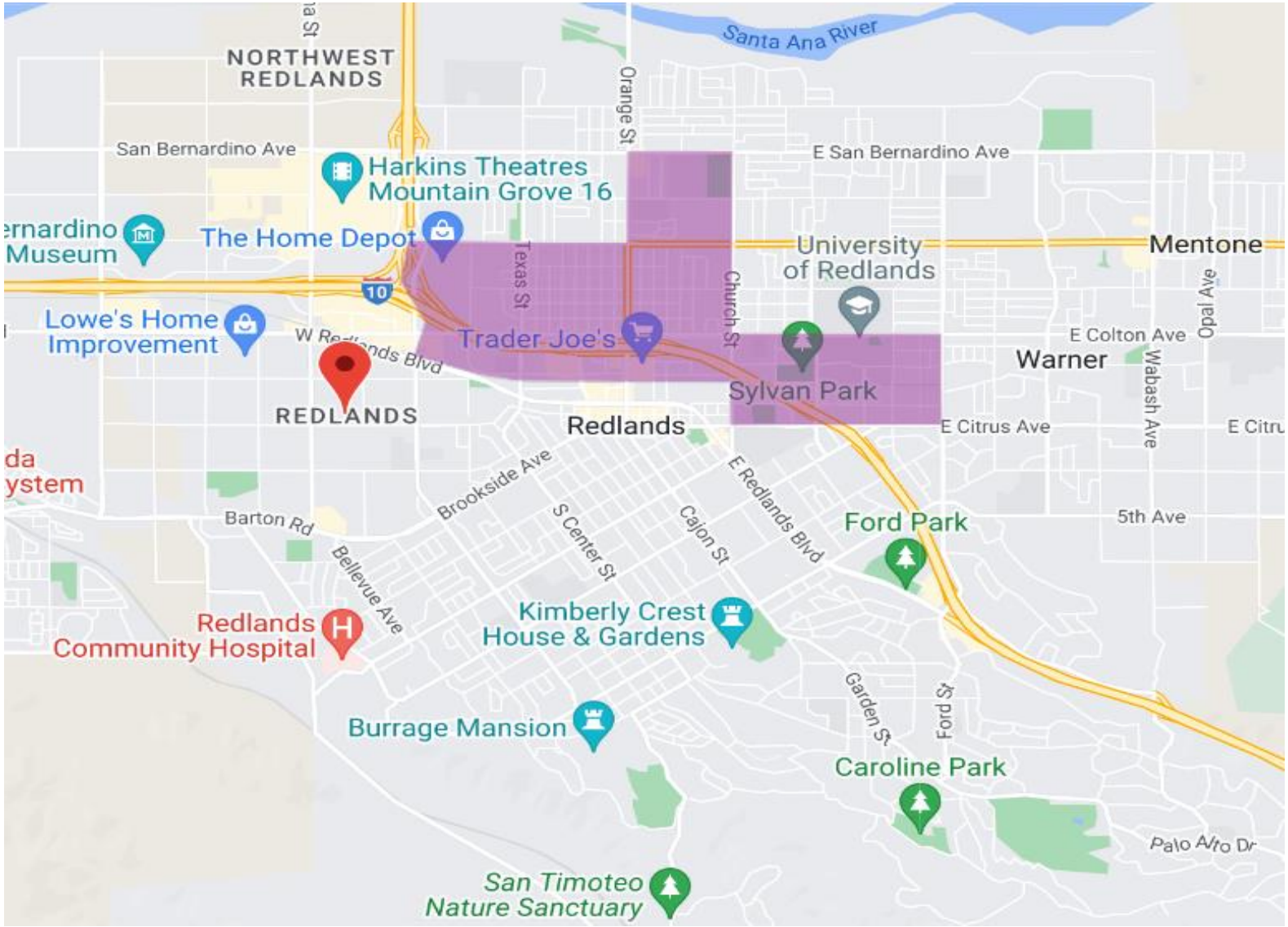
The Project will benefit the City's disadvantaged and underserved community by harnessing more than three (3) times as much stored water for distribution during peak demand periods. This extra storage will increase reliability of future water supplies both during a seismic event and during persistent drought periods. The additional benefits of this project may include possibly minimizing water rate increases that might otherwise be required to mitigate the long-term effects of an emergency situation. Any efforts to avoid water rate increases will have a meaningful impact on disadvantaged and underrepresented communities who may already struggle with making ends meet.

Maps depicting the City's DAC and QCT project benefit area are included below.

Department Of Water Resources Mapping Tool Demonstrating Project Benefits DACs



City of Redlands HUD Designated Qualified Census Tracts (QCTs)



City Council Meeting **J. 20.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve the Additional Services Agreement with the Flock Group, Inc. for the lease of automated license plate recognition cameras in the amount of $69,550 for two years (Deputy Police Chief Martinez)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to approve the Additional Services Agreement with the Flock Group, Inc. for the lease of automated license plate recognition cameras in the amount of $69,550 for two years.

RECOMMENDATION:

Staff recommends that Council approve the Additional Services Agreement with the Flock Group, Inc. for the lease of automated license plate recognition cameras in the amount of $69,550 for two years.

DISCUSSION:

The City of Redlands' two year budget that was approved by Council in June 2022 funded the purchase and installation of additional automated license plate recognition cameras (ALPR) around the city. The Redlands Police Department has adopted the strategy of installing ALPRs at various egress points of the City to enhance its crime control measures. The ALPRs have been instrumental in providing crucial leads in numerous crimes including robbery, burglary, and sexual assault.

The automated license plate recognition program is a series of high-speed camera systems that photograph license plates, convert the numbers and letters into machine-readable text, tag them with the time and location, and upload that

data into a database for retrieval. This database will then be accessible to all law enforcement agencies in California. Regionally, law enforcement agencies that use ALPR cameras compare plates to a "hot list" of plates suspected of being connected to violent crimes, child abduction, and terrorist activity. Cities throughout San Bernardino County are already participating in ALPR information sharing. The Redlands Police Department has already successfully implemented an ALPR program to include 40 camera systems. This project will allow the City of Redlands to expand the program and contribute more data to the regional ALPR system to assist in solving crimes in the City of Redlands and throughout our region.

The proposed Additional Services Agreement will provide for an additional 13 cameras at locations in the eastern area of the City. The annual cost for each camera is $2,500 with an installation cost of $350 each. The first year cost will be $37,050 and the second year cost will be $32,500 for a total of $69,550.

ALTERNATIVES:

Do not approve the agreement

STRATEGIC PLAN:

Not applicable

SUBMITTED BY:
Christopher R. Catren, Chief of Police

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director

PREPARED BY:
Travis Martinez, Deputy Chief of Police

Fiscal Impact

Fiscal Year:	22/23
Revenue Generating:	N
Appropriation Required Y/N:	N
Amount:	$37,050
Budgeted Y/N:	Y

Discussion:

The funding for these cameras has already been approved in the FY 22/23 budget.

Fiscal Year:	23/24
Revenue Generating:	N
Appropriation Required Y/N:	N
Amount:	$32,500
Budgeted Y/N:	Y

Discussion:

The funding for these cameras has already been approved in the FY 23/24 budget.

Attachments

Flock Agreement-Additional Services

Original Flock Agreement

FLOCK GROUP INC.

ADDITIONAL SERVICES AGREEMENT

This Agreement combined with the existing agreement referenced in **Exhibit A** describe the relationship between Flock Group Inc. ("**Flock**") and the customer identified below ("**Customer**") (each of Flock and Customer, a "**Party**"). This order form ("**Order Form**") hereby incorporates and includes the terms of the previously executed agreement (the "**Terms**") which describe and set forth the general legal terms governing the relationship (collectively, the "**Agreement"**). The Terms contain, among other things, warranty disclaimers, liability limitations and use limitations.

This additional services Agreement will be effective when this Order Form is executed by both Parties (the "**Effective Date**").

Agency: CA - Redlands PD **Legal Entity Name:**	**Contact Name:** Christopher Catren
Address: Po Box 3005 Redlands, California 92373	**Phone:** (909) 798-7681 **E-Mail:** chief@redlandspolice.org
Expected Payment Method:	**Billing Contact:** (if different than above)

Initial Term: 24 months **Renewal Term:** 24 months	**Billing Term:** Annual payment due Net 30 per terms and conditions

Sales tax will be added to all fees as applicable. **If your organization is tax exempt, please check this box:**
and email your Sales Tax Exemption Certificate to billing@flocksafety.com.

Professional Services and One-Time Purchases

Name	Price/Usage Fee	QTY	Subtotal
Professional Services - Standard Implementation Fee	$350.00	13.00	$4,550.00

Hardware and Software Products

Annual recurring amounts over subscription term

Name	Price/Usage Fee	QTY	Subtotal
Falcon	$2,500.00	13.00	$32,500.00

Subtotal Year 1:	$37,050.00
Subscription Term:	24 Months
Annual Recurring Total:	$32,500.00
Estimated Sales Tax:	$0.00
Total Contract Amount:	$69,550.00

By executing this Order Form, Agency represents and warrants that it has read and agrees to all of the terms and conditions contained in the Terms attached. The Parties have executed this Agreement as of the dates set forth below.

FLOCK GROUP, INC.		**Agency: CA - Redlands PD**	
By:		By:	
Name:		Name:	
Title:		Title:	
Date:		Date:	

EXHIBIT A

This agreement is governed by the terms as set out in this attached agreement that has been previously executed by both parties.

REDLANDS "A City That Works"

Sole Source/ Single Source/ Standardization Form

For procurement of supplies, equipment and services valued at $5,000 and over

NOTE: Every question must be answered with appropriate documentation attached; incomplete forms will be immediately rejected by Purchasing.

Date: 08-28-2018

TO: Purchasing Division

FROM: Travis Martinez

Purchase Requisition # 75998

Estimated Total Cost: $ 7500

Proposed Vendor: Flock Safety

Request Term: _____

This form must accompany the purchase document whenever an exception to the competitive process is requested. Requests for goods and/or services from a specific vendor or limited to a specific brand, where substitutes to the recommended vendor or brand are unacceptable, must be accompanied by a written justification explaining the circumstances that make alternatives unacceptable.

The City Manager will determine whether the justification is appropriate. Requests for exception must be supported by factual statements that will pass an audit.

Received
--PURCHASING--
AUG 30 2018
Rene Nunez

~~Received~~ TO
--PURCHASING-- C/M
SEP 04 2018
Rene Nunez

INSTRUCTIONS

1. Please check all applicable categories (a. through i.) below and provide additional information where indicated.

☐ a. The requested product is an integral repair part or accessory compatible with existing equipment.

Existing Equipment: _____

Manufacturer/Model Number: _____

Age: _____

Current Estimated Value: _____

☒ b. The requested product has unique design/performance specifications or quality requirements that are not available in comparable products.

☐ c. I have standardized the requested product and the use of another brand/model would require considerable time and funding to evaluate.

☐ d. The requested product is one in which I (and/or my staff) have specialized training and/or extensive expertise. Retraining would incur substantial cost in time and/or funding.

☐ e. The requested product is used or demonstration equipment available at a lower-than-new cost.

☐ f. Repair/Maintenance service is available only from manufacturer or designated service representative.

☐ g. Upgrade to or enhancement of existing software is available only from manufacturer.

☐ h. Service proposed by vendor is unique; therefore, competitive bids are not available or applicable.

☐ i. Other factors (provide detailed explanation in #2 below).

2. Provide a detailed explanation and pertinent documentation *for each category* checked in item 1 above. Attach additional sheets if necessary:

Flock Safety is the sole manufacturer and developer of the Flock Safety Camera. Flock Safety is also the sole provider of the comprehensive monitoring, processing, and machine vision services which integrate with the Flock Safety Camera.
Description of Cameras:

- Wireless deployment of license plate reading cameras with integrated solar and cellular networks (other cameras have to be hard wired to electricity and/or internet)
- Wireless ALPR camera in total weighing less than 5lbs
- On device machine processing to limit LTE bandwidth consumption
- Covert industrial design for minimizing visual pollution
- Machine vision to analyze vehicle license plate, vehicle color, and vehicle make
- Machine vision to detect persons, animals, vehicles, and other cars
- Privacy controls to enable certain vehicles to "opt-out" of being captured on film
- Cloud storage of footage
- Web based footage retrieval tool with filtering capabilities such as vehicle color, partial/full license plate, and object detection
- Performance monitoring software to predict potential failures, obstructions, tilts, and other critical or minor issues

3. Was an evaluation of other equipment, products, or services performed?
☒ Yes ☐ No
If yes, please explain the type of evaluation performed and provide all supporting documentation:

A demo camera was installed in the neighborhood near Crestview/Ford. RPD Staff worked with the company to work out a couple of bugs. RPD Staff is confident the technology can be valuable to RPD's community policing strategy.

4. List below the name of each individual who was involved in the evaluation, if conducted, and in making the recommendation to procure this product or service. Attach additional information, if necessary.
Travis Martinez Amy Varela

5. **Explain what action(s) the department would take if the sole/single source services were no longer available**

We would obtain bids from other companies that manufacture ALPR cameras. We have not found another company that manufactures solar powered ALPR cameras that have built in cellular networks.

6. I certify that the above information is accurate to the best of my knowledge, and a signed copy of this document will be kept on file and available for audit in my department

Signature 8/25/18 Date — Travis Martinez Printed Name

08/28/2018 Department Name — 08/28/2018 Title

Purchasing Approvals

Purchasing Agent Approval / Date 9/4/18

City Manager Approval / Date 9/4/18

ATTEST:

Jeanne Donaldson, City Clerk

SAAS ORDER FORM

Customer: Redlands Police Department	Contact: Travis Martinez
Address: 30 Cajon Street Redlands, CA 92373	Phone: 909-557-6583
	E-Mail: tmartinez@redlandspolice.org
Services: Flock's software for automatic license plate detection of video recorded by the Flock Gate Cameras (the "Hardware"), searching image records, and a platform for sharing those records with Customer, in the form such software is provided by Flock to Customer ("Service(s)"). For clarity, the Services are reliant on use of the Hardware.	
Fees: $7,500 per Year **Number of Cameras**: 5	**Service Term**: 12 The initial term of this Agreement shall be 12 months, subject to early termination (the "Initial Service Term"). Following the Initial Service Term, this Agreement will automatically renew for successive renewal terms of 0 months subject to early termination (each, a "Renewal Term", and together with the Initial Term, the "Service Term") unless either party gives the other party notice of non-renewal at least ninety (90) days prior to the end of the then-current term.
Payment Schedule: [Payable thirty (30) days in advance of each time period indicated above, subject to the terms of Section 5 herein.]	**Method of Payment**: ACH or Check
[**Implementation Services**: Company will use commercially reasonable efforts to provide Customer the services described in the Statement of Work ("SOW") attached as Exhibit A hereto ("Implementation Services"), and Customer shall pay Company the Implementation Fee in accordance with the terms herein. **Implementation Fee (one-time)**: $0	

SAAS SERVICES AGREEMENT

This SaaS Services Agreement ("Agreement") is entered into on this 30 day of August, 2018 (the "Effective Date") between Flock Group Inc with a place of business at 2588 Winslow Drive, Atlanta, GA 30305 ("Company"), and the Customer listed above ("Customer"). This Agreement includes and incorporates the above Order Form, as well as the attached Terms and Conditions and contains, among other things, warranty disclaimers, liability limitations and use limitations. There shall be no force or effect to any different terms of any related purchase order or similar form even if signed by the parties after the date hereof.

Flock Group Inc:

By: Garrett Langley

Name: Garrett Langley

Title: CEO

Customer Name:

By: N. Enrique Martinez

Name: N. ENRIQUE MARTINEZ

Title: CITY MANAGER

ATTEST:

Jeanne Donaldson

Jeanne Donaldson, City Clerk

GDSVF&H\3180736.5

TERMS AND CONDITIONS

1. SERVICES AND SUPPORT

1.1 Subject to the terms of this Agreement, Company will use commercially reasonable efforts to provide Customer the Services. The Services include access to a platform for viewing video footage (the "Recordings"). The Recordings will be available for Customer to access for 30 days. Customer may be required to sign up for an account, and select a password and user name ("Company User ID").

1.2 Subject to the terms hereof, Company will provide Customer with reasonable technical and on-site support and maintenance services ("On-Site Services") in-person or by email at hello@flocksafety.com. Company will use commercially reasonable efforts to respond to requests for support.

1.3 Customer agrees to provide Company with accurate, complete, and updated registration information. Customer may not select as its Company User ID a name that Customer does not have the right to use, or another person's name with the intent to impersonate that person. Customer may not transfer its account to anyone else without prior written permission. Customer will not share its account or password with anyone, and must protect the security of its account and password. Customer is responsible for any activity associated with its account.

2. RESTRICTIONS AND RESPONSIBILITIES

2.1 Customer will not, directly or indirectly: reverse engineer, decompile, disassemble or otherwise attempt to discover the source code, object code or underlying structure, ideas, know-how or algorithms relevant to the Services, certain software embedded on the Hardware by Company ("Embedded Software"), or any other software or documentation or data related to the Services (collectively, "Software") (except that such prohibition shall not apply to the extent applicable law prohibits such restriction); modify, translate, or create derivative works based on the Services, Hardware or any Software (except to the extent expressly permitted by Company or authorized within the Services); use the Services, Hardware or any Software for timesharing or service bureau purposes or otherwise for the benefit of a third party; or remove any proprietary notices or labels.

2.2 Further, Customer may not remove or export from the United States or allow the export or re-export of the Services, Hardware, Software or anything related thereto, or any direct product thereof in violation of any restrictions, laws or regulations of the United States Department of Commerce, the United States Department of Treasury Office of Foreign Assets Control, or any other United States or foreign agency or authority. As defined in FAR section 2.101, the Software and documentation are "commercial items" and according to DFAR section 252.2277014(a)(1) and (5) are deemed to be "commercial computer software" and "commercial computer software documentation." Consistent with DFAR section 227.7202 and FAR section 12.212, any use, modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

2.3 Customer represents, covenants, and warrants that Customer will use the Services only in compliance with this Agreement and all applicable laws and regulations, including but not limited to any laws relating to the recording or sharing of video or audio content. Customer hereby agrees to indemnify and hold harmless Company against any damages, losses, liabilities, settlements and expenses (including without limitation costs and attorneys' fees) in connection with any claim or action that arises from an alleged violation of the foregoing or otherwise from Customer's use of the Services, Hardware and any Software, including any claim that such actions violate any applicable law or third party right. Although Company has no obligation to monitor Customer's use of the Services, Company may do so and may prohibit any use of the Services it believes may be (or alleged to be) in violation of the foregoing.

2.4 Customer shall be responsible for obtaining and maintaining any equipment and ancillary services needed to connect to, access or otherwise use the Services. References to the "Unit" herein mean Hardware together with Embedded Software, while references to "Hardware" mean such hardware alone, excluding any software or firmware of any kind. Customer will not be able to access the Services except through the Unit, and the Unit will no longer function when this Agreement is terminated. Upon termination of this Agreement, Company will collect all Units.

3. CONFIDENTIALITY; PROPRIETARY RIGHTS

3.1 Each party (the "Receiving Party") understands that the other party (the "Disclosing Party") has disclosed or may disclose business, technical or financial information relating to the Disclosing Party's business (hereinafter referred to as "Proprietary Information" of the Disclosing Party). Proprietary Information of Company includes non-public information regarding features, functionality and performance of the Services. Proprietary Information of Customer includes non-public data provided by Customer to Company or collected by Company via the Unit, including the Recordings, to enable the provision of the Services, which includes but is not limited to geolocation information and environmental data collected by sensors built into the Units ("Customer Data"). The Receiving Party agrees: (i) to take the same security precautions to protect against disclosure or unauthorized use of such Proprietary Information that the party takes with its own proprietary information, but in no event will a party apply less than reasonable precautions to protect such Proprietary Information, and (ii) not to use (except in performance of the Services or as otherwise permitted herein) or divulge to any third person any such Proprietary Information. Company's use of the Proprietary Information may include processing the Proprietary Information to send Customer alerts, such as when a car exits Customer's neighborhood, or to analyze the data collected to identify motion or other events. The Disclosing Party agrees that the foregoing shall not apply with respect to any information that the Receiving Party can document (a) is or becomes generally available to the public, or (b) was in its possession or known by it prior to receipt from the Disclosing Party, or (c) was rightfully disclosed to it without restriction by a third party, or (d) was independently developed without use of any Proprietary Information of the Disclosing Party. Nothing in this Agreement will prevent the Receiving Party from disclosing the Proprietary Information pursuant to any judicial or governmental order, provided that the Receiving Party gives the Disclosing Party reasonable prior notice of such disclosure to contest such order. For clarity, Company may access, use, preserve and/or disclose the Recordings to law enforcement authorities, government officials, and/or third parties, if legally required to do so or if Company has a good faith belief that such access, use, preservation or disclosure is reasonably necessary to: (a) comply with a legal process or request; (b) enforce this Agreement, including investigation of any potential violation thereof; (c) detect, prevent or otherwise address security, fraud or technical issues; or (d) protect the rights, property or safety of Company, its users, a third party, or the public as required or permitted by law, including respond to an emergency situation. Company may store deleted Recordings in order to comply with certain legal obligations but such retained Recordings will not be retrievable without a valid court order.

3.2 Customer shall own all right, title and interest in and to the Customer Data. Company shall own and retain all right, title and interest in and to (a) the Services, Hardware and Software, all improvements, enhancements or modifications thereto, (b) any software, applications, inventions or other technology developed in connection with Implementation Services or On-site Services, and (c) all intellectual property rights related to any of the foregoing. If Customer provides any suggestions, ideas, enhancement requests, feedback, recommendations or other information relating to the subject matter hereunder, Customer hereby assigns (and will cause its agents and representatives to assign) to Company all right, title and interest (including intellectual property rights) with respect to or resulting from any of the foregoing.

3.3 Subject to all terms and conditions of this Agreement, Company grants Customer a limited, non-exclusive, non-transferable, non-sublicensable, revocable right to use (a) the Embedded Software as installed in the Unit by Company and (b) any other Software provided by Company hereunder, solely in the form provided by Company; in each case, solely as necessary for Customer to use the Services. This Agreement is a license, not a sale, of Software (including any Embedded Software) and does not convey to Customer any rights of ownership in or related to the Software. For clarity, this Agreement also does not convey to Customer any rights of ownership in or related to the Hardware.

3.4 Notwithstanding anything to the contrary, Company shall have the right to collect and analyze data and other information relating to the provision, use and performance of various aspects of the Services and related systems and technologies (including, without limitation, information concerning Customer Data and data derived therefrom), and Company will be free (during and after the term hereof) to (i) use such information and data to improve and enhance the Services and for other development, diagnostic and corrective purposes

in connection with the Services and other Company offerings, and (ii) disclose such data solely in aggregate or other de-identified form in connection with its business. No rights or licenses are granted except as expressly set forth herein.

4. PAYMENT OF FEES

4.1 Customer will pay Company the applicable fees as set forth on the Order Form (the "Fees"). All payments will be made in accordance with the Payment Schedule and the Method of Payment. If not otherwise specified, payments will be due within thirty (30) days of invoice and are nonrefundable.

4.2 Company reserves the right to change the Fees or applicable charges and to institute new charges and Fees at the end of the Initial Service Term or then current renewal term, upon thirty (30) days prior notice to Customer (which may be sent by email). If Customer believes that Company has billed Customer incorrectly, Customer must contact Company no later than sixty (60) days after the closing date on the first billing statement in which the error or problem appeared, in order to receive an adjustment or credit. Inquiries should be directed to Company's customer support department.

4.3 Company may choose to bill through an invoice, in which case, full payment for invoices issued in any given month must be received by Company thirty (30) days after the mailing date of the invoice. Unpaid amounts are subject to a finance charge of 1.5% per month on any outstanding balance, or the maximum permitted by law, whichever is lower, plus all expenses of collection, and may result in immediate termination of Service. Customer shall be responsible for all taxes associated with Services other than U.S. taxes based on Company's net income.

5. TERM AND TERMINATION

5.1 Subject to earlier termination as provided below, this Agreement is for the Service Term as specified in the Order Form.

5.2 In the event of any material breach of this Agreement, the non-breaching party may terminate this Agreement prior to the end of the Service Term by giving thirty (30) days prior written notice to the breaching party; provided, however, that this Agreement will not terminate if the breaching party has cured the breach prior to the expiration of such thirty-day period. Either party may terminate this Agreement, without notice, (i) upon the institution by or against the other party of insolvency, receivership or bankruptcy proceedings, (ii) upon the other party's making an assignment for the benefit of creditors, or (iii) upon the other party's dissolution or ceasing to do business. Upon termination for Company's breach, Company will refund to Customer a pro-rata portion of the pre-paid Fees for Services not received due to such termination.

5.3 Upon any termination, Company will collect all Units, delete all Customer Data and Customer's right to access or use any Software, and all licenses granted by Company hereunder will immediately cease.

5.4 The following sections will survive termination: 2.1, 2.2, 2.3, 5 (with respect to any accrued rights to payment) and 6-8.

6. REMEDY; WARRANTY AND DISCLAIMER

6.1 Upon a malfunction or failure of Hardware or Embedded Software (a "Defect"), Customer must first make commercially reasonable efforts to address the problem by contacting Company's technical support as described in Section 1.2 above. If such efforts do not correct the Defect, Company shall, or shall instruct one of its contractors to, in its sole discretion, repair or replace the Hardware or Embedded Software suffering from the Defect. Company reserves the right to refuse or delay replacement or its choice of remedy for a Defect until after it has inspected and tested the affected Unit; provided that such inspection and test shall occur within 72 hours after Customer notifies the Company of defect. Company agrees to replace cameras once at no cost to Customer in the event of theft or damage. Subsequent replacement due to damage or theft will be at Customer's own expense with a replacement cost of $300 per camera.

6.2 Company will not provide the remedy described in Section 6.1 above if any of the following exclusions apply: (a) misuse of the Hardware or Embedded Software in any manner, including operation of the Hardware or Embedded Software in any way that does not strictly comply with any applicable specifications, documentation, or other restrictions on use provided by Company; (b) damage, alteration, or modification of the Hardware or Embedded Software in any way; or (c) combination of the Hardware or Embedded Software with software, hardware or other technology that was not expressly authorized by Company.

6.3 Company shall use reasonable efforts consistent with prevailing industry standards to maintain the Services in a manner which minimizes errors and interruptions in the Services and shall perform the Implementation Services in a professional and workmanlike manner. Services may be temporarily unavailable for scheduled maintenance or for unscheduled emergency maintenance, either by Company or by third-party providers, or because of other causes beyond Company's reasonable control, but Company shall use reasonable efforts to provide advance notice in writing or by e-mail of any scheduled service disruption. HOWEVER, THE REMEDY DESCRIBED IN SECTION 6.1 ABOVE IS CUSTOMER'S SOLE REMEDY, AND COMPANY'S SOLE LIABILITY, WITH RESPECT TO DEFECTIVE HARDWARE AND/OR EMBEDDED SOFTWARE. THE COMPANY DOES NOT WARRANT THAT THE SERVICES WILL BE UNINTERRUPTED OR ERROR FREE; NOR DOES IT MAKE ANY WARRANTY AS TO THE RESULTS THAT MAY BE OBTAINED FROM USE OF THE SERVICES. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION, THE SERVICES AND IMPLEMENTATION SERVICES ARE PROVIDED "AS IS" AND COMPANY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

7. LIMITATION OF LIABILITY

NOTWITHSTANDING ANYTHING TO THE CONTRARY, EXCEPT FOR BODILY INJURY OF A PERSON, COMPANY AND ITS SUPPLIERS (INCLUDING BUT NOT LIMITED TO ALL HARDWARE AND TECHNOLOGY SUPPLIERS), OFFICERS, AFFILIATES, REPRESENTATIVES, CONTRACTORS AND EMPLOYEES SHALL NOT BE RESPONSIBLE OR LIABLE WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT OR TERMS AND CONDITIONS RELATED THERETO UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER THEORY: (A) FOR ERROR OR INTERRUPTION OF USE OR FOR LOSS OR INACCURACY OR CORRUPTION OF DATA OR COST OF PROCUREMENT OF SUBSTITUTE GOODS, SERVICES OR TECHNOLOGY OR LOSS OF BUSINESS; (B) FOR ANY INDIRECT, EXEMPLARY, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES; (C) FOR ANY MATTER BEYOND COMPANY'S REASONABLE CONTROL; OR (D) FOR ANY AMOUNTS THAT, TOGETHER WITH AMOUNTS ASSOCIATED WITH ALL OTHER CLAIMS, EXCEED THE FEES PAID AND/OR PAYABLE BY CUSTOMER TO COMPANY FOR THE SERVICES UNDER THIS AGREEMENT IN THE 12 MONTHS PRIOR TO THE ACT THAT GAVE RISE TO THE LIABILITY, IN EACH CASE, WHETHER OR NOT COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN THE EVENT OF AN EMERGENCY, CUSTOMER SHOULD CONTACT 911 AND SHOULD NOT RELY ON THE SERVICES.

8. MISCELLANEOUS

8.1 If any provision of this Agreement is found to be unenforceable or invalid, that provision will be limited or eliminated to the minimum extent necessary so that this Agreement will otherwise remain in full force and effect and enforceable.

8.2 This Agreement is not assignable, transferable or sublicensable by Customer except with Company's prior written consent. Company may transfer and assign any of its rights and obligations under this Agreement without consent.

8.3 This Agreement is the complete and exclusive statement of the mutual understanding of the parties and supersedes and cancels all previous written and oral agreements, communications and other understandings relating to the subject matter of this Agreement, and that all waivers and modifications must be in a writing signed by both parties, except as otherwise provided herein.

8.4 No agency, partnership, joint venture, or employment is created as a result of this Agreement and Customer does not have any authority of any kind to bind Company in any respect whatsoever. In any action or proceeding to enforce rights under this Agreement, the prevailing party will be entitled to recover costs and attorneys' fees.

8.5 All notices under this Agreement will be in writing and will be deemed to have been duly given when received, if personally delivered; when receipt is electronically confirmed, if transmitted by facsimile or e-mail; the day after it is sent, if sent for next day delivery by recognized overnight delivery service; and upon receipt, if sent by certified or registered mail, return receipt requested.

8.6 This Agreement shall be governed by the laws of the State of Georgia without regard to its conflict of laws provisions. The federal and state courts sitting in Atlanta, Georgia will have proper and exclusive jurisdiction and venue with respect to any disputes arising from or related to the subject matter of this Agreement.

8.7 Customer grants Company permission to install cameras and signage at agreed upon locations and to perform labor at agreed upon locations.

EXHIBIT A

Statement of Work

Installation of Flock Gate Cameras

Installation of Flock signage

Installation of N/A foot poles (one for each camera)

Training for installation of camera on existing poles to employees

SAAS ORDER FORM

Customer: Redlands Police Department	Contact: Travis Martinez
Address: 30 Cajon Street Redlands, CA 92373	Phone: 909-557-6583
	E-Mail: tmartinez@redlandspolice.org

Services: Flock's software for automatic license plate detection of video recorded by the Flock Gate Cameras (the "Hardware"), searching image records, and a platform for sharing those records with Customer, in the form such software is provided by Flock to Customer ("Service(s)"). For clarity, the Services are reliant on use of the Hardware.

Fees: $ 7,500 per Year **Number of Cameras**: 5	**Service Term**: 12 The initial term of this Agreement shall be 12 months, subject to early termination (the "Initial Service Term"). Following the Initial Service Term, this Agreement will automatically renew for successive renewal terms of 0 months subject to early termination (each, a "Renewal Term", and together with the Initial Term, the "Service Term") unless either party gives the other party notice of non-renewal at least ninety (90) days prior to the end of the then-current term.
Payment Schedule: [Payable thirty (30) days in advance of each time period indicated above, subject to the terms of Section 5 herein.]	**Method of Payment**: ACH or Check

[**Implementation Services**: Company will use commercially reasonable efforts to provide Customer the services described in the Statement of Work ("SOW") attached as Exhibit A hereto ("Implementation Services"), and Customer shall pay Company the Implementation Fee in accordance with the terms herein.

Implementation Fee (one-time): $ 0

SAAS SERVICES AGREEMENT

This SaaS Services Agreement ("Agreement") is entered into on this 30 day of August, 2018 (the "Effective Date") between Flock Group Inc with a place of business at 2588 Winslow Drive, Atlanta, GA 30305 ("Company"), and the Customer listed above ("Customer"). This Agreement includes and incorporates the above Order Form, as well as the attached Terms and Conditions and contains, among other things, warranty disclaimers, liability limitations and use limitations. There shall be no force or effect to any different terms of any related purchase order or similar form even if signed by the parties after the date hereof.

Flock Group Inc:

Garrett Langley

By: _____

Name: Garrett Langley

Title: CEO

Customer Name:

By: _____

Name: N. ENRIQUE MARTINEZ

Title: CITY MANAGER

ATTEST:

_____

Jeanne Donaldson, City Clerk

TERMS AND CONDITIONS

1. SERVICES AND SUPPORT

1.1 Subject to the terms of this Agreement, Company will use commercially reasonable efforts to provide Customer the Services. The Services include access to a platform for viewing video footage (the "Recordings"). The Recordings will be available for Customer to access for 30 days. Customer may be required to sign up for an account, and select a password and user name ("Company User ID").

1.2 Subject to the terms hereof, Company will provide Customer with reasonable technical and on-site support and maintenance services ("On-Site Services") in-person or by email at hello@flocksafety.com. Company will use commercially reasonable efforts to respond to requests for support.

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2. RESTRICTIONS AND RESPONSIBILITIES

2.1 Customer will not, directly or indirectly: reverse engineer, decompile, disassemble or otherwise attempt to discover the source code, object code or underlying structure, ideas, know-how or algorithms relevant to the Services, certain software embedded on the Hardware by Company ("Embedded Software"), or any other software or documentation or data related to the Services (collectively, "Software") (except that such prohibition shall not apply to the extent applicable law prohibits such restriction); modify, translate, or create derivative works based on the Services, Hardware or any Software (except to the extent expressly permitted by Company or authorized within the Services); use the Services, Hardware or any Software for timesharing or service bureau purposes or otherwise for the benefit of a third party; or remove any proprietary notices or labels.

2.2 Further, Customer may not remove or export from the United States or allow the export or re-export of the Services, Hardware, Software or anything related thereto, or any direct product thereof in violation of any restrictions, laws or regulations of the United States Department of Commerce, the United States Department of Treasury Office of Foreign Assets Control, or any other United States or foreign agency or authority. As defined in FAR section 2.101, the Software and documentation are "commercial items" and according to DFAR section 252.2277014(a)(1) and (5) are deemed to be "commercial computer software" and "commercial computer software documentation." Consistent with DFAR section 227.7202 and FAR section 12.212, any use, modification, reproduction, release, performance, display, or disclosure of such commercial software or commercial software documentation by the U.S. Government will be governed solely by the terms of this Agreement and will be prohibited except to the extent expressly permitted by the terms of this Agreement.

2.3 Customer represents, covenants, and warrants that Customer will use the Services only in compliance with this Agreement and all applicable laws and regulations, including but not limited to any laws relating to the recording or sharing of video or audio content. Customer hereby agrees to indemnify and hold harmless Company against any damages, losses, liabilities, settlements and expenses (including without limitation costs and attorneys' fees) in connection with any claim or action that arises from an alleged violation of the foregoing or otherwise from Customer's use of the Services, Hardware and any Software, including any claim that such actions violate any applicable law or third party right. Although Company has no obligation to monitor Customer's use of the Services, Company may do so and may prohibit any use of the Services it believes may be (or alleged to be) in violation of the foregoing.

2.4 Customer shall be responsible for obtaining and maintaining any equipment and ancillary services needed to connect to, access or otherwise use the Services. References to the "Unit" herein mean Hardware together with Embedded Software, while references to "Hardware" mean such hardware alone, excluding any software or firmware of any kind. Customer will not be able to access the Services except through the Unit, and the Unit will no longer function when this Agreement is terminated. Upon termination of this Agreement, Company will collect all Units.

3. CONFIDENTIALITY; PROPRIETARY RIGHTS

3.1 Each party (the "Receiving Party") understands that the other party (the "Disclosing Party") has disclosed or may disclose business, technical or financial information relating to the Disclosing Party's business (hereinafter referred to as "Proprietary Information" of the Disclosing Party). Proprietary Information of Company includes non-public information regarding features, functionality and performance of the Services. Proprietary Information of Customer includes non-public data provided by Customer to Company or collected by Company via the Unit, including the Recordings, to enable the provision of the Services, which includes but is not limited to geolocation information and environmental data collected by sensors built into the Units ("Customer Data"). The Receiving Party agrees: (i) to take the same security precautions to protect against disclosure or unauthorized use of such Proprietary Information that the party takes with its own proprietary information, but in no event will a party apply less than reasonable precautions to protect such Proprietary Information, and (ii) not to use (except in performance of the Services or as otherwise permitted herein) or divulge to any third person any such Proprietary Information. Company's use of the Proprietary Information may include processing the Proprietary Information to send Customer alerts, such as when a car exits Customer's neighborhood, or to analyze the data collected to identify motion or other events. The Disclosing Party agrees that the foregoing shall not apply with respect to any information that the Receiving Party can document (a) is or becomes generally available to the public, or (b) was in its possession or known by it prior to receipt from the Disclosing Party, or (c) was rightfully disclosed to it without restriction by a third party, or (d) was independently developed without use of any Proprietary Information of the Disclosing Party. Nothing in this Agreement will prevent the Receiving Party from disclosing the Proprietary Information pursuant to any judicial or governmental order, provided that the Receiving Party gives the Disclosing Party reasonable prior notice of such disclosure to contest such order. For clarity, Company may access, use, preserve and/or disclose the Recordings to law enforcement authorities, government officials, and/or third parties, if legally required to do so or if Company has a good faith belief that such access, use, preservation or disclosure is reasonably necessary to: (a) comply with a legal process or request; (b) enforce this Agreement, including investigation of any potential violation thereof; (c) detect, prevent or otherwise address security, fraud or technical issues; or (d) protect the rights, property or safety of Company, its users, a third party, or the public as required or permitted by law, including respond to an emergency situation. Company may store deleted Recordings in order to comply with certain legal obligations but such retained Recordings will not be retrievable without a valid court order.

3.2 Customer shall own all right, title and interest in and to the Customer Data. Company shall own and retain all right, title and interest in and to (a) the Services, Hardware and Software, all improvements, enhancements or modifications thereto, (b) any software, applications, inventions or other technology developed in connection with Implementation Services or On-site Services, and (c) all intellectual property rights related to any of the foregoing. If Customer provides any suggestions, ideas, enhancement requests, feedback, recommendations or other information relating to the subject matter hereunder, Customer hereby assigns (and will cause its agents and representatives to assign) to Company all right, title and interest (including intellectual property rights) with respect to or resulting from any of the foregoing.

3.3 Subject to all terms and conditions of this Agreement, Company grants Customer a limited, non-exclusive, non-transferable, non-sublicensable, revocable right to use (a) the Embedded Software as installed in the Unit by Company and (b) any other Software provided by Company hereunder, solely in the form provided by Company; in each case, solely as necessary for Customer to use the Services. This Agreement is a license, not a sale, of Software (including any Embedded Software) and does not convey to Customer any rights of ownership in or related to the Software. For clarity, this Agreement also does not convey to Customer any rights of ownership in or related to the Hardware.

3.4 Notwithstanding anything to the contrary, Company shall have the right to collect and analyze data and other information relating to the provision, use and performance of various aspects of the Services and related systems and technologies (including, without limitation, information concerning Customer Data and data derived therefrom), and Company will be free (during and after the term hereof) to (i) use such information and data to improve and enhance the Services and for other development, diagnostic and corrective purposes

in connection with the Services and other Company offerings, and (ii) disclose such data solely in aggregate or other de-identified form in connection with its business. No rights or licenses are granted except as expressly set forth herein.

4. PAYMENT OF FEES

4.1 Customer will pay Company the applicable fees as set forth on the Order Form (the "Fees"). All payments will be made in accordance with the Payment Schedule and the Method of Payment. If not otherwise specified, payments will be due within thirty (30) days of invoice and are nonrefundable.

4.2 Company reserves the right to change the Fees or applicable charges and to institute new charges and Fees at the end of the Initial Service Term or then current renewal term, upon thirty (30) days prior notice to Customer (which may be sent by email). If Customer believes that Company has billed Customer incorrectly, Customer must contact Company no later than sixty (60) days after the closing date on the first billing statement in which the error or problem appeared, in order to receive an adjustment or credit. Inquiries should be directed to Company's customer support department.

4.3 Company may choose to bill through an invoice, in which case, full payment for invoices issued in any given month must be received by Company thirty (30) days after the mailing date of the invoice. Unpaid amounts are subject to a finance charge of 1.5% per month on any outstanding balance, or the maximum permitted by law, whichever is lower, plus all expenses of collection, and may result in immediate termination of Service. Customer shall be responsible for all taxes associated with Services other than U.S. taxes based on Company's net income.

5. TERM AND TERMINATION

5.1 Subject to earlier termination as provided below, this Agreement is for the Service Term as specified in the Order Form.

5.2 In the event of any material breach of this Agreement, the non-breaching party may terminate this Agreement prior to the end of the Service Term by giving thirty (30) days prior written notice to the breaching party; provided, however, that this Agreement will not terminate if the breaching party has cured the breach prior to the expiration of such thirty-day period. Either party may terminate this Agreement, without notice, (i) upon the institution by or against the other party of insolvency, receivership or bankruptcy proceedings, (ii) upon the other party's making an assignment for the benefit of creditors, or (iii) upon the other party's dissolution or ceasing to do business. Upon termination for Company's breach, Company will refund to Customer a pro-rata portion of the pre-paid Fees for Services not received due to such termination.

5.3 Upon any termination, Company will collect all Units, delete all Customer Data and Customer's right to access or use any Software, and all licenses granted by Company hereunder will immediately cease.

5.4 The following sections will survive termination: 2.1, 2.2, 2.3, 5 (with respect to any accrued rights to payment) and 6-8.

6. REMEDY; WARRANTY AND DISCLAIMER

6.1 Upon a malfunction or failure of Hardware or Embedded Software (a "Defect"), Customer must first make commercially reasonable efforts to address the problem by contacting Company's technical support as described in Section 1.2 above. If such efforts do not correct the Defect, Company shall, or shall instruct one of its contractors to, in its sole discretion, repair or replace the Hardware or Embedded Software suffering from the Defect. Company reserves the right to refuse or delay replacement or its choice of remedy for a Defect until after it has inspected and tested the affected Unit; provided that such inspection and test shall occur within 72 hours after Customer notifies the Company of defect. Company agrees to replace cameras once at no cost to Customer in the event of theft or damage. Subsequent replacement due to damage or theft will be at Customer's own expense with a replacement cost of $300 per camera.

6.2 Company will not provide the remedy described in Section 6.1 above if any of the following exclusions apply: (a) misuse of the Hardware or Embedded Software in any manner, including operation of the Hardware or Embedded Software in any way that does not strictly comply with any applicable specifications, documentation, or other restrictions on use provided by Company; (b) damage, alteration, or modification of the Hardware or Embedded Software in any way; or (c) combination of the Hardware or Embedded Software with software, hardware or other technology that was not expressly authorized by Company.

6.3 Company shall use reasonable efforts consistent with prevailing industry standards to maintain the Services in a manner which minimizes errors and interruptions in the Services and shall perform the Implementation Services in a professional and workmanlike manner. Services may be temporarily unavailable for scheduled maintenance or for unscheduled emergency maintenance, either by Company or by third-party providers, or because of other causes beyond Company's reasonable control, but Company shall use reasonable efforts to provide advance notice in writing or by e-mail of any scheduled service disruption. HOWEVER, THE REMEDY DESCRIBED IN SECTION 6.1 ABOVE IS CUSTOMER'S SOLE REMEDY, AND COMPANY'S SOLE LIABILITY, WITH RESPECT TO DEFECTIVE HARDWARE AND/OR EMBEDDED SOFTWARE. THE COMPANY DOES NOT WARRANT THAT THE SERVICES WILL BE UNINTERRUPTED OR ERROR FREE; NOR DOES IT MAKE ANY WARRANTY AS TO THE RESULTS THAT MAY BE OBTAINED FROM USE OF THE SERVICES. EXCEPT AS EXPRESSLY SET FORTH IN THIS SECTION, THE SERVICES AND IMPLEMENTATION SERVICES ARE PROVIDED "AS IS" AND COMPANY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

7. LIMITATION OF LIABILITY

NOTWITHSTANDING ANYTHING TO THE CONTRARY, EXCEPT FOR BODILY INJURY OF A PERSON, COMPANY AND ITS SUPPLIERS (INCLUDING BUT NOT LIMITED TO ALL HARDWARE AND TECHNOLOGY SUPPLIERS), OFFICERS, AFFILIATES, REPRESENTATIVES, CONTRACTORS AND EMPLOYEES SHALL NOT BE RESPONSIBLE OR LIABLE WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT OR TERMS AND CONDITIONS RELATED THERETO UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER THEORY: (A) FOR ERROR OR INTERRUPTION OF USE OR FOR LOSS OR INACCURACY OR CORRUPTION OF DATA OR COST OF PROCUREMENT OF SUBSTITUTE GOODS, SERVICES OR TECHNOLOGY OR LOSS OF BUSINESS; (B) FOR ANY INDIRECT, EXEMPLARY, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES; (C) FOR ANY MATTER BEYOND COMPANY'S REASONABLE CONTROL; OR (D) FOR ANY AMOUNTS THAT, TOGETHER WITH AMOUNTS ASSOCIATED WITH ALL OTHER CLAIMS, EXCEED THE FEES PAID AND/OR PAYABLE BY CUSTOMER TO COMPANY FOR THE SERVICES UNDER THIS AGREEMENT IN THE 12 MONTHS PRIOR TO THE ACT THAT GAVE RISE TO THE LIABILITY, IN EACH CASE, WHETHER OR NOT COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN THE EVENT OF AN EMERGENCY, CUSTOMER SHOULD CONTACT 911 AND SHOULD NOT RELY ON THE SERVICES.

8. MISCELLANEOUS

8.1 If any provision of this Agreement is found to be unenforceable or invalid, that provision will be limited or eliminated to the minimum extent necessary so that this Agreement will otherwise remain in full force and effect and enforceable.

8.2 This Agreement is not assignable, transferable or sublicensable by Customer except with Company's prior written consent. Company may transfer and assign any of its rights and obligations under this Agreement without consent.

8.3 This Agreement is the complete and exclusive statement of the mutual understanding of the parties and supersedes and cancels all previous written and oral agreements, communications and other understandings relating to the subject matter of this Agreement, and that all waivers and modifications must be in a writing signed by both parties, except as otherwise provided herein.

8.4 No agency, partnership, joint venture, or employment is created as a result of this Agreement and Customer does not have any authority of any kind to bind Company in any respect whatsoever. In any action or proceeding to enforce rights under this Agreement, the prevailing party will be entitled to recover costs and attorneys' fees.

8.5 All notices under this Agreement will be in writing and will be deemed to have been duly given when received, if personally delivered; when receipt is electronically confirmed, if transmitted by facsimile or e-mail; the day after it is sent, if sent for next day delivery by recognized overnight delivery service; and upon receipt, if sent by certified or registered mail, return receipt requested.

8.6 This Agreement shall be governed by the laws of the State of Georgia without regard to its conflict of laws provisions. The federal and state courts sitting in Atlanta, Georgia will have proper and exclusive jurisdiction and venue with respect to any disputes arising from or related to the subject matter of this Agreement.

8.7 Customer grants Company permission to install cameras and signage at agreed upon locations and to perform labor at agreed upon locations.

EXHIBIT A

Statement of Work

Installation of Flock Gate Cameras

Installation of Flock signage

Installation of N/A foot poles (one for each camera)

Training for installation of camera on existing poles to employees

City Council Meeting **J. 21.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve the First Amendment to the Agreement with Universal Protection Service, LP, DBA Allied Universal Security Services to amend the total to an amount not to exceed $135,785.28 (Assistant City Manager Boatman)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to approve the First Amendment to the Agreement with Universal Protection Service, LP, DBA Allied Universal Security Services to amend the total to an amount not to exceed $135,785.28.

RECOMMENDATION:

Staff recommends that the City Council approve the First Amendment to the Agreement with Universal Protection Service, LP, DBA Allied Universal Security Services to amend the total to an amount not to exceed $135,785.28.

DISCUSSION:

In September 2021, the City Council approved an Assignment and Assumption Agreement (Agreement) with Redlands Community Investment Corporation which allowed the City to assume the existing service contracts and tenant agreements for the newly acquired facility located at 300 E. State Street. Included within the Agreement was the services of Universal Protection Service, LP, /DBA Allied Universal Security Services (Allied Universal) for security services at the facility.

In June, 2022, the City Council approved an Agreement and Sole Source Purchase Order with Allied Universal in a not to exceed amount of $107,549 for security services. Effective January 1, 2023, the State of California will raise the minimum wage, requiring a higher per hour rate for security services. Based on these changes, an amendment to the agreement and modification to the purchase order are required to provide for expenses that will be incurred through June 30, 2023.

ALTERNATIVES:

City Council may elect not to approve the modification to the purchase orders and direct staff accordingly.

STRATEGIC PLAN:

Not applicable

SUBMITTED BY:
Chris Boatman, Assistant City Manager

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director
Dana Abramovitz-Daniel, Procurement Manager

PREPARED BY:
Tricia Swope, Manager, Facilities & Community Services

Fiscal Impact

Fiscal Year:	FY 2022-23
Amount:	135,785.28
Budgeted Y/N:	Y
Account No.:	101310

Discussion:

Sufficient funding for these services are included in the City Hall State Street (101310) budget for Fiscal Year 2022-23 as approved by City Council.

Attachments

A. 1st Amendment to Agreement

B. Agreement with Universal Protection Services

FIRST AMENDMENT TO AGREEMENT TO PERFORM NON-PROFESSIONAL SERVICES FOR EQUIPMENT AND SUPPLIES

This first amendment ("First Amendment") to the agreement for professional security services ("Agreement"), dated June 21, 2022, by and between the City of Redlands, a municipal corporation and a general law city ("City"), and Universal Protection Service, LP dba Allied Universal Security Services ("Contractor"), is made and entered into this 20th day of December, 2022.

RECITALS

WHEREAS, it is the desire of the City and Consultant to amend their existing Agreement, specifically the schedule and total compensation for Contractor's performance of the Services;

NOW, THEREFORE, for good and valuable consideration in the receipt of which is hereby acknowledge City and Contractor agree as follows:

AGREEMENT

Section 1. Section 5.1 of the Agreement is hereby amended to read as follows:

"Total compensation for Contractor's performance of the Services shall not exceed the amount of One Hundred Thirty-Five Thousand Seven Hundred Eight-Five Dollars and Twenty-Eight Cents ($135,785.28). City shall pay Contractor on a time and materials basis up the not to exceed amount in accordance with Exhibit "B" title "Fee Schedule," which is attached hereto and incorporated herein by this reference."

Section 2. Exhibit "A" entitled "Scope of Services" and Exhibit "B" entitled "Fee Schedule" set forth in the Agreement are hereby replaced with a new Exhibit "A" and Exhibit "B"which are attached hereto and incorporated into the Agreement by this reference.

Section 3. All other provisions of the Agreement shall remain unchanged by this First Amendment and in effect.

IN WITNESS WHEREOF, the parties have executed this First Amendment, to be effective as of January 1, 2023.

[Signatures on the Next Page]

CITY OF REDLANDS

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

UNIVERSAL PROTECTION SERVICE, LP, dba ALLIED UNIVERSAL SECURITY SERVICES

By: _____
Steve Clayton, President Southwest Region

EXHIBIT "A"
SCOPE OF SERVICES

Provide unarmed, uniformed professional security officers who are capable of exercising good judgement, will be highly visible at all times, deter crime, and perform other duties as outlined by the City.

SCHEDULE

	FRI	SAT	SUN	MON	TUES	WED	THUR
7AM – 3PM	1 officer	1 officer	-	1 officer	1 officer	1 officer	1 officer
3PM – 11PM	1 officer	-	-	1 officer	1 officer	1 officer	1 officer

HOLIDAYS

New Year's Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

EXHIBIT "B"
FEE SCHEDULE

Staff	Weekly Hours	Bill Rate	Holiday / O.T. Rate
Security Professionals	88	$30.01	$45.02

AGREEMENT TO PERFORM NON-PROFESSIONAL SERVICES
FOR EQUIPMENT AND SUPPLIES

This agreement for the provision of professional security services ("Agreement") is made and entered in this 21st day of June, 2022("Effective Date"), by and between the City of Redlands, a municipal corporation ("City") and Universal Protection Service, LP dba Allied Universal Security Services ("Contractor"). City and Consultant are sometimes individually referred to herein as a "Party" and, together, as the "Parties." In consideration of the mutual promises contained herein, City and Consultant agree as follows:

ARTICLE 1 – ENGAGEMENT OF CONTRACTOR

1.1 City hereby engages Contractor to perform provide unarmed, uniformed professional security officers services for City (the "Services").

1.2 The Services shall be performed by Contractor in a professional manner, and Contractor represents that it has the skill and the professional expertise necessary to provide the Services to City at a level of competency presently maintained by other practicing professional Contractors in the industry providing like and similar types of Services.

ARTICLE 2 – SERVICES OF CONTRACTOR

2.1 The Services that Contractor shall perform are more particularly described in Exhibit "A," titled "Scope of Services," which is attached hereto and incorporated herein by this reference.

2.2 Contractor shall comply with applicable federal, state and local laws and regulations in the performance of this agreement including, but not limited to, any applicable State prevailing wage laws.

ARTICLE 3 – RESPONSIBILITIES OF CITY

3.1 City shall make available to Contractor information in its possession that may reasonably assist Contractor in performing the Services.

3.2 City designates Chris Boatman, Assistant City Manager Director, as City's representative with respect to performance of the Services, and such person shall have the authority to transmit instructions, receive information, interpret and define City's policies and decisions with respect to performance of the Services.

ARTICLE 4 – PERFORMANCE OF SERVICES

4.1 Contractor shall perform and complete the Services in a prompt and diligent manner in accordance with the schedule set forth in Exhibit "A," titled "Scope of Services," which is attached hereto and incorporated herein by this reference.

4.1 The term of this Agreement shall be for a period of one (1) year commencing on July 1, 2022, unless terminated earlier as provided herein.

4.2 If Contractor's Services include deliverable electronic visual presentation materials, such materials shall be delivered in a form, and made available to City, consistent with City Council-adopted policy for the same. It shall be the obligation of Contractor to obtain a copy of such policy from City staff.

ARTICLE 5 – PAYMENTS TO CONTRACTOR

5.1 Total compensation for Contractor's performance of the Services shall not exceed the amount One Hundred Seven Thousand Five Hundred Forty-Nine Dollars ($107,549). City shall pay Contractor on a time and materials basis up to the not to exceed amount in accordance with Exhibit "B," titled "Fee Schedule," which is attached hereto and incorporated herein by this reference.

5.2 Contractor shall submit monthly invoices to City describing the Services performed during the preceding month. Contractor's invoices shall include a brief description of the Services performed, the dates the Services were performed, the number of hours spent and by whom. City shall pay Contractor no later than thirty (30) days after receipt and approval by City of Contractor's invoice.

5.3 Any notice or other communication required, or which may be given, pursuant to this Agreement, shall be in writing. Any such notice shall be deemed delivered (i) on the date of delivery in person; (ii) five (5) days after deposit in first class registered mail, with return receipt requested; (iii) on the actual delivery date if deposited with an overnight courier; or (iv) on the date sent by facsimile or electronic mail transmission (including PDF), if confirmed with a copy sent contemporaneously by first class, certified, registered or express mail; in each case properly posted and fully prepaid to the appropriate address set forth below, or such other address as a Party may provide notice in accordance with this section:

CITY	CONTRACTOR
City Clerk City of Redlands 35 Cajon Street P.O. Box 3005 (mailing) Redlands, CA 92373 jdonaldson@cityofredlands.org (909) 798-7531	Steve Claton, President, Southwest Region Universal Protection Service, LP dba Allied Universal Security Services PO Box 31001-2374 Pasadena, CA 91110-2374 Steve.Claton@aus.com 951-552-9120

ARTICLE 6 – INSURANCE AND INDEMNIFICATION

6.1 The following insurance coverage required by this Agreement shall be maintained by Contractor for the duration of its performance of the Services. Contractor shall not perform any Services unless and until the required insurance listed below is obtained by Contractor. Contractor shall provide City with certificates of insurance and endorsements evidencing such insurance prior to commencement of the Services. Insurance policies shall include a

provision prohibiting cancellation or modification of the policy except upon thirty (30) days prior written notice to City.

A. Workers' Compensation and Employer's Liability insurance in the amount that meets statutory requirements with an insurance carrier acceptable to City, or certification to City that Contractor is self-insured or exempt from the workers' compensation laws of the State of California. Contractor shall execute and provide City with Exhibit "C," titled "Workers' Compensation Insurance Certification," which is attached hereto and incorporated herein by this reference, prior to performance of the Services.

B. Comprehensive General Liability insurance with carriers acceptable to City in the minimum amount of One Million Dollars ($1,000,000) per occurrence and Two Million Dollars ($2,000,000) aggregate, for public liability, property damage and personal injury is required. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.

C. Business Auto Liability coverage, with minimum limits of One Million Dollars ($1,000,000) per occurrence, combined single limit bodily injury liability and property damage liability. This coverage shall include all Contractor owned vehicles used in connection with Contractor's provision of the Services, hired and non-owned vehicles, and employee non-ownership vehicles. City shall be named as an additional insured and such insurance shall be primary and non-contributing to any insurance or self-insurance maintained by City.

6.2 Contractor shall defend, indemnify, and hold harmless City and its elected and appointed officials, employees and agents from and against any and all claims, losses and liability, including attorneys' fees, arising from injury or death to persons or damage to property occasioned by any negligent act or omission by, or the willful misconduct of, Contractor, or its officers, employees and agents in performing the Services.

ARTICLE 7 – CONFLICTS OF INTEREST

7.1 Contractor covenants and represents that it does not have any investment or interest in any real property that may be the subject of this Agreement or any other source of income, interest in real property or investment that would be affected in any manner or degree by the performance of Contractor's Services. Contractor further covenants and represents that in the performance of its duties hereunder, no person having any such interest shall perform any Services under this Agreement.

7.2 Contractor agrees it is not a designated employee within the meaning of the Political Reform Act because Contractor:

A. Does not make a governmental decision whether to:

(i) approve a rate, rule or regulation, or adopt or enforce a City law;
(ii) issue, deny, suspend or revoke any City permit, license, application, certification, approval, order or similar authorization or entitlement;
(iii) authorize City to enter into, modify or renew a contract;

(iv) grant City approval to a contract that requires City approval and to which City is a party, or to the specifications for such a contract;
(v) grant City approval to a plan, design, report, study or similar item;
(vi) adopt, or grant City approval of, policies, standards or guidelines for City or for any subdivision thereof.

B. Does not serve in a staff capacity with City and, in that capacity, participate in making a governmental decision or otherwise perform the same or substantially the same duties for City that would otherwise be performed by an individual holding a position specified in City's Conflict of Interest Code under Government Code section 87302.

7.3 In the event City determines that Contractor must disclose its financial interests, Contractor shall complete and file a Fair Political Practices Commission Form 700, Statement of Economic Interests, with the City Clerk's office pursuant to the written instructions provided by the City Clerk.

ARTICLE 8 – GENERAL CONSIDERATIONS

8.1 In the event any action is commenced to enforce or interpret any of the terms or conditions of this Agreement the prevailing Party shall, in addition to any costs and other relief, be entitled to the recovery of its reasonable attorneys' fees, including fees for the use of in-house counsel by a Party.

8.2 Contractor shall not assign any of the Services, except with the prior written approval of City and in strict compliance with the terms and conditions of this Agreement. Any assignment or attempted assignment without such prior written consent may, in the sole discretion of City, results in City's immediate termination of this Agreement.

8.3 Contractor is for all purposes under this Agreement an independent contractor and shall perform the Services as an independent contractor. Neither City nor any of its agents shall have control over the conduct of Contractor or Contractor's employees, except as herein set forth. Contractor shall supply all necessary tools and instrumentalities required to perform the Services. Assigned personnel employed by Contractor are for its account only, and in no event shall Contractor or personnel retained by it be deemed to have been employed by City or engaged by City for the account of, or on behalf of City. Contractor shall have no authority, express or implied, to act on behalf of City in any capacity whatsoever as an agent, nor shall Contractor have any authority, express or implied, to bind City to any obligation.

8.4 This Agreement may be terminated by City, in its sole discretion, by providing not less than ten (10) days prior written notice to Contractor of City's intent to terminate. If this Agreement is terminated by City, an adjustment to Contractor's compensation shall be made, but (1) no amount shall be allowed for anticipated profit or unperformed Services, and (2) any payment due Contractor at the time of termination may be adjusted to the extent of any additional costs to City occasioned by any default by Contractor. Upon receipt of a termination notice, Contractor shall immediately discontinue its provision of the Services and, within five (5) days of the date of the termination notice, deliver or otherwise make available to City, copies (in both hard copy and electronic form, where applicable) of

project related data, drawings, specifications, reports, summaries and such other information and materials as may have been accumulated by Contractor in performing the Services. Contractor shall be compensated on a pro-rata basis for Services completed up to the date of termination.

8.5 Contractor shall maintain books, ledgers, invoices, accounts and other records and documents evidencing costs and expenses related to the Services for a period of three (3) years, or for any longer period required by law, from the date of final payment to Contractor pursuant to this Agreement. Such books shall be available at reasonable times for examination by City at the office of Contractor.

8.6 This Agreement, including the Exhibits incorporated herein by reference, represents the entire agreement and understanding between the Parties as to the matters contained herein, and any prior negotiations, written proposals or verbal agreements relating to such matters are superseded by this Agreement. Except as otherwise provided for herein, any amendment to this Agreement shall be in writing, approved by City and signed by City and Contractor.

8.7 This Agreement shall be governed by and construed in accordance with the laws of the State of California, without regard to its conflicts of laws provisions. The Parties agree that all actions or proceedings arising in connection with this Agreement shall be tried and litigated only in the state courts located in San Bernardino County, California, and the federal courts located in Riverside County, California.

8.8 If one or more of the sentences, clauses, paragraphs or sections contained in this Agreement is declared invalid, void or unenforceable by a court of competent jurisdiction, the same shall be deemed severable from the remainder of this Agreement and shall not affect, impair or invalidate the remaining sentences, clauses, paragraphs or sections contained herein, unless to do so would deprive a Party of a material benefit of its bargain under this Agreement.

IN WITNESS WHEREOF, duly authorized representatives of City and Contractor have signed in confirmation of this Agreement.

CITY OF REDLANDS

By: _____
Paul T. Barich, Mayor

UNIVERSAL PROTECTION SERVICE, LP dba ALLIED UNIVERSAL SECURITY SERVICES

By: _____
Steve Claton, President Southwest Region

ATTEST:

_____
Jeanne Donaldson, City Clerk

EXHIBIT "A"

SCOPE OF SERVICES

Provide unarmed, uniformed professional security officers who are capable of exercising good judgement, will be highly visible at all times, deter crime, and perform other duties as outlined by the City.

SCHEDULE

	FRI	SAT	SUN	MON	TUES	WED	THUR
3PM – 11PM	1 officer	-	-	1 officer	1 officer	1 officer	1 officer
6AM – 2PM	-	1 officer	1 officer	-	-	-	-
2PM – 10PM	-	1 officer	1 officer	-	-	-	-

-

HOLIDAYS

New Years Day
President's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

EXHIBIT "B"

FEE SCHEDULE

FEE SCHEDULE

Staff	Weekly Hours	Bill Rate	Holiday / O.T. Rate
Security Professionals	72	$27.92	$41.89
Total			

EXHIBIT "C"

WORKERS' COMPENSATION INSURANCE CERTIFICATION

Every employer, except the State, shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.

(b) By securing from the Director of Industrial Relations, a certificate of consent to self-insure, either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.

CHECK ONE

_____I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work and activities required or permitted under this Agreement. (Labor Code §1861).

_____I affirm that at all times, in performing the work and activities required or permitted under this Agreement, I shall not employ any person in any manner such that I become subject to the workers' compensation laws of California. However, at any time, if I employ any person such that I become subject to the workers' compensation laws of California, immediately I shall provide the City with a certificate of consent to self-insure, or a certification of workers' compensation insurance.

I certify under penalty of perjury under the laws of the State of California that the information and representations made in this certificate are true and correct.

UNIVERSAL PROTECTION SERVICE, LP
dba ALLIED UNIVERSAL SECURITY SERVICES

By:_____ Date: _____
Steve Claton, President, Southwest Region

City Council Meeting **J. 22.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Approve the in-kind support for use of the Redlands Sports Park in the amount of $66,584 for Redlands Region 50 of the American Youth Soccer Organization (Assistant City Manager Boatman)

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motions are provided:

I move to approve the in-kind support for use of the Redlands Sports Park in the amount of $66,584 for Redlands Region 50 of the American Youth Soccer Organization.

RECOMMENDATION:

Staff recommends that the City Council approve the contribution of in-kind support for use of the Redlands Sports Park in the amount of $66,584 for Redlands Region 50 of the American Youth Soccer Organization.

DISCUSSION:

Redlands Region 50 of American Youth Soccer Organization ("AYSO") is a long-standing non-profit group that has continually offered recreational soccer programming to the Redlands community for many years. The City considers AYSO a valued partner in providing these opportunities and is committed to ensuring the continued success of AYSO in Redlands.

The City has been meeting with AYSO to negotiate a new agreement for use of the Redlands Sports Park. AYSO's previous agreement was terminated on December 14, 2022, to be replaced by the new agreement. The City plans to issue a one-year permit to AYSO to allow continued and uninterrupted use of the Sports Park while negotiations proceed. The previous agreement included the

use of all fields during all usable hours. Consequently, AYSO would normally be subject to a significantly higher fee under the City's current fee structure than it previously paid. Therefore, a contribution of in-kind support is necessary to allow AYSO to use the fields for a fee comparable to its previous rent.

AYSO's previous agreement included the use of all 8 fields of the sports park from 4:30 p.m. through 10:00 p.m., Monday through Friday, use of all fields on Saturdays and Sundays from 6:00 a.m. through 10:00 p.m., and exclusive use of the snack bar. Based on this schedule, the usage equates to 476 hours per week or 24,752 hours per year. The City's current fee schedule includes a $5 per hour charge per field for traditional Rec Leagues. Applying this fee, the total charge for the year would equate to $123,760. Other fees would typically apply, such as non-resident fees, club team fees, and tournament fees. However, staff is only applying the Rec League fee for the purpose of this calculation. Under the previous agreement, AYSO paid an annual rent of $57,175, with an annual payment of $37,175 per year and pre-paid rent of $20,000 per year. Therefore, in order to maintain AYSO's previous rent, an in-kind contribution of $66,584 is necessary in the form of a park fee credit to maintain the rent of $57,175.

ALTERNATIVES:

The City Council may choose to deny the contribution of in-kind support. In this case, AYSO would be subject to the standard City fees for use of the Sports Park.

STRATEGIC PLAN:

Not applicable

SUBMITTED BY:
Chris Boatman, Assistant City Manager

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director
Yvette M. Abich Garcia, City Attorney

PREPARED BY:
Don Craw, Senior Manager FCS

Fiscal Impact

Fiscal Year: FY 2022-23
Revenue Generating: N
Appropriation Required Y/N: N
Amount: 66,584
Budgeted Y/N: Y
Discussion:

In anticipation of the City Council's consideration of this request, staff has compiled the following table outlining costs related to fees established by resolution of the City Council and departmental charges pertaining to personnel and equipment resources necessary for the support of the event. The departmental charges are costs outside of normal city operations that would not be incurred by the City if the special event was not taking place.

Departmental Charges (Personnel & Equipment)	Amount	Type
Personnel & Equipment Subtotal		
Fees Established by City Council Resolution		
Sports Field Reservation	$66,584	Soft Cost
Fees Subtotal	$66,584	
Total Departmental Charges and Fees	$66,584	

[1]Personnel costs are calculated conservatively assuming the highest staff cost scenario. Actual costs may vary on the day of the event based on the actual staff present. Actual costs will be confirmed following the event and will be included in a reconciliation report presented to the City Council.

The following table summarizes the total estimated costs associated with the use of City resources and in-kind support approved for events scheduled during Fiscal Year 2022-23 to date:

TABLE 2: FY 2022-23 Fee Waivers to date

Hard Costs	**Soft Costs**	**Deposits Refunded**	**In-kind support Amount**	**Net Amount**
$171,216	$5,751.50	$5,500	$182,467.50	$176,967.50

Attachments

A. Verification of nonprofit

American Youth Soccer Organization

EIN: 95-6205398 | Torrance, California, United States

Publication 78 Data

Organizations eligible to receive tax-deductible charitable contributions. Users may rely on this list in determining deductibility of their contributions.

On Publication 78 Data List: Yes

Deductibility Code: PC

Form 990-N (e-Postcard)

Organizations who have filed a 990-N (e-Postcard) annual electronic notice. Most small organizations that receive less than $50,000 fall into this category.

Tax Period:
2009 (01/01/2009-12/31/2009)

EIN:
95-6205398

Organization Name (Doing Business as):
AMERICAN YOUTH SOCCER ORGANIZATION

Mailing Address:
PO BOX 1882
CHULA VISTA, CA 91912
United States

Principal Officer's Name and Address:

STACY PAYNE

PO BOX 1882
CHULA VISTA, CA 91912
United States

Gross receipts not greater than:
$50,000

Organization has terminated:

City Council Meeting **K. 1.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Discussion and possible action relating to the selection of two City Council representatives to serve on the San Bernardino Valley Municipal Water District Regional Recycled Water Ad Hoc Committee (Mayor Barich)

MOTION:

1. I move to designate _____ to serve as a Redlands City Council representative on the San Bernardino Valley Municipal Water District Regional Recycled Water Ad Hoc Committee.

2. I move to designate _____ to serve as a Redlands City Council representative on the San Bernardino Valley Municipal Water District Regional Recycled Water Ad Hoc Committee.

DISCUSSION:

Like many agencies within the basin, Redlands is engineering recycled water projects to increase percolation back into the basin. The process increases salt loading and eventually will require some type of mitigation. Rather than placing the full mitigation burden on a single entity, the wastewater agencies within the San Bernardino Valley Municipal Water District (SBVMWD) service area are working together to identify a regional solution in which all parties would financially participate.

On June 16, 2015, the SBVMWD Board authorized the development of a Regional Recycled Water Plan. Later on August 4, 2015, the San Bernardino Valley Municipal Water District voted unanimously to create a Regional Recycled Water Ad Hoc Committee to assist in developing the Regional Recycled Water Plan.

The Ad Hoc would consist of two elected officials of agencies partnering with the District on the Recycled Water Project, who would meet on an as-needed basis.

SUBMITTED BY:

John R. Harris, Municipal Utilities and Engineering Director

Attachments

SBVMWD Regular Board Meeting Minutes Aug. 4, 2015

MINUTES
OF
THE
REGULAR BOARD MEETING
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

August 4, 2015

Directors Present: Mark Bulot, Steve Copelan, Ed Killgore, Gil Navarro, and Susan Longville

Directors Absent: None

Staff Present: Douglas Headrick, Bob Tincher, Wen Huang, Cindy Saks, Mike Esquer, Heather Dyer, Eric Dang, Bruce Varner, and Lillian Hernandez

Registered Guests:

Alan G. Dyer, West Valley Water District

Joseph L. Mays, Jr., Public

John Jeter, San Gorgonio Pass Water Agency

Ron Coats, East Valley Water District

Charles Roberts, Highland Community News

Cris Fealy, Fontana Water Company

Benjamin G. Kelly, Western Heights Water Company

Melody McDonald, San Bernardino Valley Water Conservation District

The regular meeting of the Board of Directors was called to order by President Bulot at 2:30 p.m. at the District office, 380 E. Vanderbilt Way, San Bernardino. A quorum was noted present.

Agenda Item 1. Public Comments.

President Bulot invited any members of the public to address the Board. Alan Dyer announced that West Valley Water District selected Matt Litchfield as their new assistant general manager. Mr. Litchfield will begin his employment in mid to late August 2015. The meeting proceeded with the published agenda items.

Agenda Item 2. Approval of Minutes of the July 7, 2015, and July 21, 2015, Board Meetings.

Director Longville moved to approve the July 7, 2015, and July 21, 2015, Board meeting minutes. Director Killgore seconded. The motion was unanimously adopted.

Agenda Item 3. Discussion and Possible Action Items.

3 a) Consider Regional Recycled Water Ad Hoc Committee Appointment. Douglas Headrick stated that on June 16th the Board authorized the development of a Regional Recycled Water Plan and that work is ongoing. They have had full participation by all the wastewater agencies within the District's service area and the work is on schedule. As part of the work, the participants think it is important for the group to fully engage elected councils and boards of those agencies that are partnering with the District on the Regional Recycled Water Project. There have been a lot of opportunities for funding and different types of relationships so staff thought it would be a good idea for the Board to appoint an Ad Hoc Committee that could meet with similar Ad Hoc Committees of the partner agencies to go over the results of this study. It has already been requested by East Valley Water District (EVWD) and the City of Rialto to begin this process. Staff believes it should be broader than that and recommended that the Board appoint two members to be on an Ad Hoc Committee then staff would coordinate meetings. President Bulot suggested that he and Director Copelan be appointed to the Ad Hoc Committee due to their knowledge and relationship with the participants. Director Navarro indicated that he would like to be appointed to the committee. Director Longville indicated that in the future she hopes the Board committee list could be reviewed and new board members given greater opportunities to learn.

President Bulot moved approval of forming a Regional Recycled Water Ad Hoc Committee and appointing himself and Director Copelan members of the Ad Hoc Committee. Director Longville seconded. The motion was unanimously adopted.

3 b) Consider Financial Support for the Santa Ana Watershed Project Authority Basin Management Task Force. Bob Tincher stated that during a workshop held on February 4, 2015, the Board members that were in attendance asked that staff place a line item in this year's budget to participate in the Santa Ana Watershed Project Authority (SAWPA) Basin Management Task Force. Staff completed that request. This task force monitors the nitrogen and total dissolved solids (TDS) in the watershed and compares that to the 2004 basin plan amendment for the Santa Ana Regional Water Quality Control Board. This task force is primarily, but not exclusively, made up of wastewater dischargers. The District has a tie to water quality in the watershed being a regional agency and also through the Orange County judgement which does have a tie to TDS in the river. If TDS in the river goes up, the District's obligations go up. Staff recommended that the District participate in the task force and the monitoring that the task force conducts. The Amendment 2 to the Task Force Agreement adds the District, the San Gorgonio Pass Water Agency, Beaumont Cherry Valley Water District, and the City of Banning. The Amendment was reviewed by house counsel and approved as to form. Staff recommended that the Board authorize participation in the task force a not-to-exceed amount of $13,924 and execute Amendment No. 2 to the

City Council Meeting **K. 2.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Discussion and possible action on Ordinance No. 2954 and Resolution No. 8429 relating to the process for filling vacancies on the City Council (Mayor Pro Tem Tejeda)

MOTION:

Should the City Council concur with Mayor Pro Tem Tejeda's recommendation, the following motions are provided:

Mayor requests the City Clerk to read the title of proposed Ordinance No. 2954.

1. I move to waive further reading of, and to introduce, Ordinance No. 2954.
2. I move to approve Resolution No. 8429.

RECOMMENDATION:

Staff recommends that the City Council introduce Ordinance No. 2954 and approve Resolution No. 8429.

DISCUSSION:

When a City Council vacancy occurs, cities generally have the option of filling the vacancy by either appointing a person or holding a special election. If the City Council elects to make an appointment, the appointment must be made within sixty (60) days of the effective date of the vacancy.

State law does not mandate that the City Council use any particular method of appointment. It is common in such situations for the Council to post a notice of vacancy and invite applications from eligible persons to apply, followed by an interview of applicants. Deliberations by the Council and the appointment must be done at a public meeting, though it can be done at a special or regular meeting.

Mayor Pro Tem Tejeda proposes that the City Council adopt a procedure for making appointments should there be a vacancy on the City Council in the future. The proposal would amend the Redlands Municipal Code Chapter 2.02 (Ordinance No. 2954) and set forth the appointment process by City Council Resolution (Resolution No. 8429). Establishing the appointment process by Resolution would allow the Council to readily make changes should there be changes in the law or to accommodate the changing needs of the City Council.

The proposed appointment process would require that the City Council first consider the appointment of any interested former council member who lives in the district of the vacated council seat. If no former council member is interested in the appointment or lives in the district, the City Council would open the process to any interested resident living in the district. Interested residents would submit an application and participate in an interview process conducted by the City Council during an open and public meeting. The appointment would be made by the Council at a special meeting.

SUBMITTED BY:
Yvette Abich Garcia, City Attorney

REVIEWED BY:
Charles M. Duggan, Jr., City Manager
Janice McConnell, Assistant City Manager

PREPARED BY:
Larry Alms, Administrative Analyst

Fiscal Impact

Discussion:

There is no fiscal impact with the receipt and filing of the 2022 National Community Survey.

Attachments

Resolution No. 8429

Ordinance No. 2954

RESOLUTION NO. 8429

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS ESTABLISHING THE APPOINTMENT PROCESS FOR FILLING A VACANCY ON THE CITY COUNCIL

WHEREAS, under Government Code Section 36512, the City Council must fill a vacancy on the City Council within sixty (60) days from the effective date of the vacancy by special election or by appointment; and

WHEREAS, the City Council added Section 2.02.060 to the Redlands Municipal Code titled, "Filling Vacancies on the City Council", incorporating by reference Government Code Section 36512 and authorizing the City Council to establish an appointment process for filling a vacancy on the City Council by resolution; and

WHEREAS, the City Council finds that calling a special election provides the citizens of the City of Redlands the greatest level of transparency for filling a vacancy on the city council, but the City may, at times, not have the funds to cover the cost of a special election; and

WHEREAS, the City Council finds that there is a cost benefit to filling a vacancy by way of appointment; and

WHEREAS, it is in the City's best interest to establish an orderly process for filling a vacancy on the city council and require the city council to follow such process whenever a vacancy occurs.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. The City Council hereby adopts a process for filling a vacancy on the City Council by appointment as follows:

A. Upon the effective date of a vacancy on the city council, city staff shall identify former members of the city council who live within the boundaries of the council district where the vacancy occurred. The mayor or a designee shall contact and interview such persons to ascertain the level of interest and availability to fill such vacancy. Once all interviews have been completed, but no later than seven (7) business days from the effective date of the vacancy, the mayor or a designee shall report any findings to the city council during an open session. The city council will schedule a special meeting to discuss the results of the findings and act to formally fill the city council vacancy with a former council member by way of a majority vote of the total membership of the city council.

B. Only when a vacancy cannot be filled by appointing a former member of the city council, the city council shall accept applications submitted by eligible citizens of the City of Redlands who are interested in filling the vacancy.

C. Applications must be accompanied by a resume and a letter of interest that describes the applicant's community involvement and service.

D. Applicants must live within the boundaries of the council district where a vacancy has occurred. The application period shall be five (5) business days not including any holidays or days in which city offices are closed.

E. A special meeting will be called by the city council to interview all applicants. During the interview process, council members may only ask questions related to an applicant's knowledge of city matters, knowledge of issues of concern for the city, community involvement, leadership experiences, community service experience, public or military service or other work or professional experiences that readily translates to public service.

F. The City Clerk shall be the presiding officer over the process to fill a vacancy during the special meeting and therefore has full discretion over all matters related to such process. Furthermore, and dependent upon the number of applicants, the City Clerk shall have full discretion over the process for council member nominations of applicants, the quantity of nominations council members may make, the ranking of applicants by preference, and the quantity of voting rounds to complete the voting process.

G. Once an applicant is appointed by a majority vote of the total membership of the city council, the applicant shall be sworn-in by the City Clerk.

Section 2. This Resolution shall take effect on the effective date of City of Redlands Ordinance No. 2954.

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Mayor, City of Redlands

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

ORDINANCE NO. 2954

AN ORDINANCE OF THE CITY OF REDLANDS AMENDING CHAPTER 2.02 OF THE REDLANDS MUNICIPAL CODE RELATING TO THE FILLING OF VACANCIES ON THE CITY COUNCIL

WHEREAS, Government Code Section 36512 grants authority to the city council to fill vacancies on the city council either by appointment or special election;" and

WHEREAS, Government Code Section 36512(b) states, "[i]f a vacancy occurs in an elective office provided for in this chapter, the council shall, within 60 days from the commencement of the vacancy, either fill the vacancy by appointment or call a special election to fill the vacancy;" and

WHEREAS, Government Code Section 36512(b)(1) states, "[i]f the council calls a special election, the special election shall be held on the next regularly established election date not less than 114 days from the call of the special election. A person elected to fill a vacancy holds office for the unexpired term of the former incumbent;" and

WHEREAS, Government Code Section 36512(b)(2) states, "[i]f the council fills the vacancy by appointment, the person appointed to fill the vacancy shall hold office pursuant to one of the following:

(A) If the vacancy occurs in the first half of a term of office and at least 130 days prior to the next general municipal election, the person appointed to fill the vacancy shall hold office until the next general municipal election that is scheduled 130 or more days after the date the council is notified of the vacancy, and thereafter until the person who is elected at that election to fill the vacancy has been qualified. The person elected to fill the vacancy shall hold office for the unexpired balance of the term of office.

(B) If the vacancy occurs in the first half of a term of office, but less than 130 days prior to the next general municipal election, or if the vacancy occurs in the second half of a term of office, the person appointed to fill the vacancy shall hold office for the unexpired term of the former incumbent;" and

WHEREAS, Government Code Section 36512(c)(1) states that a city may enact an ordinance that "[r]equires that a special election be called immediately to fill every city council vacancy and the office of mayor designated pursuant to Section 34902. The ordinance shall provide that the special election shall be held on the next regularly established election date not less than 114 days from the call of the special election;" and

WHEREAS, Government Code Section 36512(c)(3) states that a city may enact an ordinance that "[p]rovides that a person appointed to fill a vacancy on the city council holds office only until the date of a special election which shall immediately be called to fill the remainder of the term. The special election may be held on the date of the next regularly established election or regularly scheduled municipal election to be held throughout the city not less than 114 days from the call of the special election;" and

WHEREAS, the Government Code does not outline a process for filling a vacancy on the city council by appointment; and

WHEREAS, the purpose of this Ordinance is to incorporate by reference the requirements of Government Code Section 36512 and authorize the City Council to establish a process for filling a council vacancy by resolution.

THE CITY COUNCIL OF THE CITY OF REDLANDS DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 2.02 of the Redlands Municipal Code, titled "City Council," is hereby amended to add Section 2.02.060 to read as follows:

"2.02.060: FILLING VACANCIES ON THE CITY COUNCIL

If a vacancy occurs in the office of a member of the city council, the city council may appoint or call a special election in order to fill the city council vacancy, in conformance with the provisions of Government Code Section 36512, as that section may be amended. If the city council decides to fill the vacancy by appointment, the appointment shall be made pursuant to an appointment process set forth in a separate resolution of the city council, which resolution may be amended from time to time."

Section 2. If any section, subsection, subdivision, paragraph, sentence, clause or phrase, or portion of this Ordinance is, for any reason, held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Ordinance or any part thereof. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, paragraph, sentence, clause or phrase of this Ordinance irrespective of the fact that one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional or invalid or ineffective. To this end the provisions of this Ordinance are declared to be severable.

Section 3. The Mayor shall sign this ordinance and the City Clerk shall certify to the adoption of this ordinance and shall cause it, or a summary of it, to be published once in a newspaper of general circulation within the City, and thereafter, this ordinance shall take effect as provided by law.

_____
Mayor, City of Redlands

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk, City of Redlands, hereby certify that the foregoing Ordinance was duly adopted by the City Council at the regular meeting thereof, held on the __ day of _____, 2023, by the following vote:

AYES:
NOES:
ABSENT:

_____
Jeanne Donaldson, City Clerk

City Council Meeting **L. 1.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Resolution No. 8427
(Mayor to declare meeting open as a public hearing)

a. Public Hearing to consider Resolution No. 8427 - A request for approval of Street Vacation No. 186 to vacate an excess public right-of-way that is three (3) feet wide and 404 feet in length along the westerly side of Jasper Avenue, and along the eastern property line of the commercial property located at the southwest corner of the Naples Avenue Jasper Avenue intersection (APN: 0298-051-07-0000) (Applicant: Madison Capital Group) (Development Services Director Desatnik)

PROCEDURE FOR PUBLIC HEARING:

1. Mayor declares the meeting open as a public hearing.
2. Mayor calls upon Department Director for report.
3. Mayor calls for questions/comments from members of the City Council.
4. Mayor calls for comments/questions/testimony from members of the public (3 minutes per speaker).
5. Mayor calls upon City Clerk to note any written comments received.
6. Mayor closes the public hearing.
7. City Council considers the motion and votes.

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to adopt Resolution No. 8427 to vacate the portion of Jasper Avenue along the east property line street frontage of the parcel located at the southwest corner of Naples Avenue and Jasper Avenue.

RECOMMENDATION:

On October 5, 2022, the Planning Commission reviewed the proposal to vacate three (3’0”) feet of public right-of-way along the Jasper Avenue frontage and voted 6 to 0 to adopt Planning Commission Resolution No. 1591, and determined the street vacation is in conformance with the 2035 General Plan.

DISCUSSION:

A) Background

The applicant, Madison Capital Group, has filed an application to vacate excess street right-of-way along the entire street frontage of the subject property along Jasper Avenue (see Attachment A – Location Map and Aerial Photo). The proposed area for vacation has dimensions of 3 feet in width and approximately 404 feet in length. The existing street is 66 feet wide (i.e., half-width of 33 feet from street centerline to the property line). The proposal would reduce the street half-width to 30 feet along the subject site’s frontage on Jasper Avenue, consistent with the 30-foot half-width standard for local streets in the City’s General Plan. The legal description and associated exhibit showing the proposed vacation areas is provided Exhibits A and B to Resolution No. 8427.

The project site is currently vacant and undeveloped. On November 15, 2022, the City Council approved entitlements for the development of a 123,456 square-foot self-storage facility consisting of eleven detached buildings, 835 storage units, and a 700 square-foot leasing office with related site improvements on a 6.34-acre parcel. At the same meeting, the Council also adopted a resolution stating the intent to vacate the 3 feet of excess roadway along Jasper Avenue along the project site's frontage.

Jasper Avenue adjacent to the project site is identified as a Local Road in the city's General Plan. With approval of the requested street vacation, the Jasper Avenue right-of-way would become 60 feet wide. The General Plan defines a Local Road as a two-lane street with 60 feet of right-of-way, and the proposal would be consistent with the General Plan. The City’s Land Use Engineering Division has evaluated the proposal and 60 feet of width is acceptable for traffic circulation purposes.

B) Analysis

Pursuant to State law, the City may regulate traffic on its public streets, alleys, and walkways only to the extent expressly authorized. The law permits the City to vacate a street, alley, or walkway upon a finding supported by substantial evidence that the right-of-way is no longer needed for vehicular or pedestrian traffic and is unnecessary for present or prospective use. As previously noted,

on November 15, 2022, City Council adopted Resolution No. 8403 (Attachment B) declaring its intent to vacate the subject 3 feet of public right-of-way, which initiated all noticing requirements for the requested street vacation.

C) Environmental Review

The proposed self-storage project with the associated street vacation is subject to the California Environmental Quality Act (CEQA), and the City prepared an Initial Study to evaluate the required environmental topics. The Initial Study was posted on the State Clearinghouse website, the City's website, and Planning Division office. The 30-day public review and comment period began on August 18, 2022, and ended on September 19, 2022. One comment letter was received from the County Department of Public Works (regarding the need for a County encroachment permit for construction activities) and no other comments were received.

There is no substantial evidence that the proposed project may have a significant effect on the environment; therefore, the City Council adopted a Mitigated Negative Declaration for the project in accordance with the State CEQA Guidelines on November 15, 2022. Subsequently, the Notice of Determination for the project was posted with the San Bernardino County Clerk’s office on November 21, 2022. No further environmental review is required.

ALTERNATIVES:

1. Continue the matter to a subsequent meeting to allow for additional information.
2. Not adopt the Resolution and not approve the requested street vacation.

SUBMITTED BY:
Brian Desatnik, Development Services Director

RECOMMENDED BY:
Charles M. Duggan Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
Danielle Garcia, Management Services/Finance Director

PREPARED BY:
Emily Elliott, Contract Planner

Fiscal Impact

Fiscal Year: 22-23

Appropriation Required Y/N: No

Discussion:

There is no fiscal impact associated with this request. The applicant paid the applicable Planning application fees.

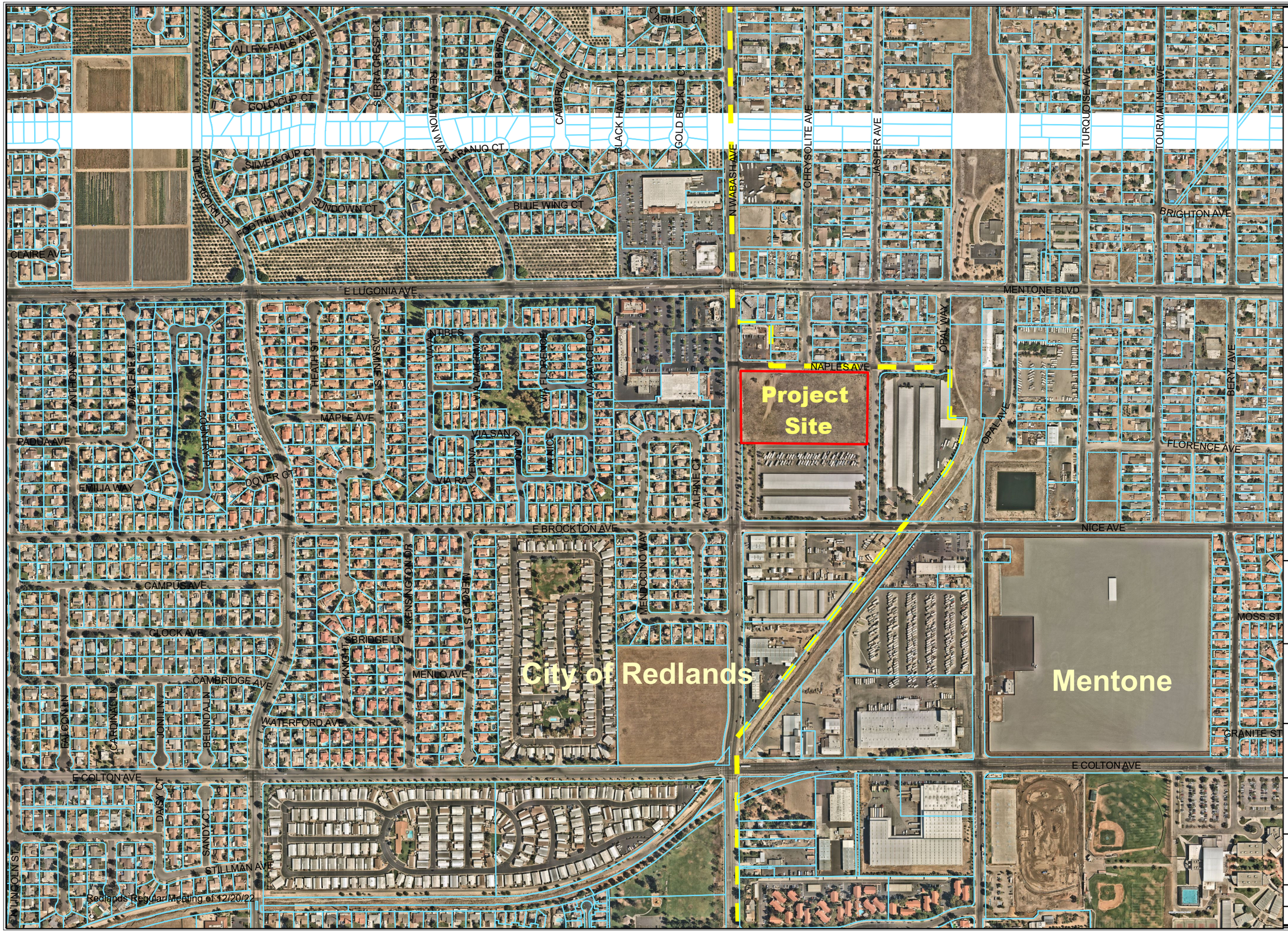
Attachments

Attachment A: Location Map & Aerial Photo

Attachment B: Resolution No. 8403

Attachment C-1: Resolution No. 8427

Attachment C-2: Exhibits A & B (Legal Description and Plat)



Location Map

This map was produced by the City of Redlands, Geographic Information System.
The City of Redlands assumes no warranty or legal responsibility for the information contained on this map.
The data used to generate this map is dynamic in nature, therefore the information shown may or may not be the most current.

N
W E
S

Scale
0 390 780
Feet

City of Redlands
Department of Innovation & Technology
Geographic Information Systems

City of REDLANDS "A City That Works"

September 26, 2022

OneStop.mxd

Aerial Photo

This map was produced by the City of Redlands, Geographic Information System.
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N
W E
S

Scale

0 90 180
Feet

City of Redlands
Department of Innovation & Technology
Geographic Information Systems

City of Redlands "A City That Works"

September 26, 2022

OneStop.mxd

RESOLUTION NO. 8403

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS DECLARING ITS INTENTION TO VACATE THE STREET RIGHT-OF-WAY LOCATED AT JASPER AVENUE (CITY OF REDLANDS STREET VACATION NO. 186)

WHEREAS, Madison Capital Group ("Applicant"), has filed an application for Ordinance Text Amendment No. 363 to add "Self-Storage or mini-storage facilities on a project site a minimum size of five (5) acres" as a use that requires a Conditional Use Permit in the C-4 district, Street Vacation No. 186 proposing to vacate roadway along Jasper Avenue approximately four hundred and four (404) feet in length by three (3) feet in width, and Conditional Use Permit No. 1168 to construct a 123,456 square foot storage facility consisting of 11 detached buildings that will contain 835 storage units and a 700 square foot leasing office with related site improvements including parking lot, walls and fences, landscape, and lighting on a 6.34-acre parcel. The project site is located on the south side of Naples Avenue between Wabash Avenue and Jasper Avenue in the Highway Commercial (C-4) District (APN: 0298-051-07-0000); and

WHEREAS, the City is authorized to vacate all or part of a public street pursuant to California Streets and Highway Code section 8300 et seq.; and

WHEREAS, pursuant to section 8340 of the California Streets and Highways Code, the City may, for public convenience and necessity, reserve and except public service easements from a street vacation; and

WHEREAS, at its meeting on October 5, 2022, the City's Planning Commission made its report to the City Council that the proposed street vacation will conform to the City's General Plan; and

WHEREAS, The City Council adopted Resolution No. 8402 on November 15, 2022 for the proposed project and determined a Mitigated Negative Declaration is the appropriate environmental determination for the project; and

WHEREAS, the City Council intends to vacate the excess right-of-way, as more particularly described in Exhibits "A" and "B" to this resolution;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. The City Council hereby declares its intention to vacate the right-of way roadway along Jasper Avenue approximately four hundred and four (404) feet in length by three (3) feet in width adjacent to APN 0298-051-07-0000, and as described in Exhibits "A" and "B," which are attached hereto and incorporated herein by reference.

Section 2. The City Council adopted Resolution No. 8402 on November 15, 2022 for the proposed project and determined a Mitigated Negative Declaration is the appropriate environmental determination for the project.

Section 3. The City Council will conduct a public hearing on the proposed street vacation at a regularly scheduled public meeting of the City Council on December 20, 2022, beginning at 6:00 p.m., or as soon thereafter as the matter may be heard, to be held in the City Council Chambers located at 35 Cajon Street, Suite 2, Redlands, California 92373.

Section 4. The City Clark shall give notice of the public hearing on the public hearing on the proposed vacation by:

A. Publishing notice in a newspaper of general circulation, for two successive weeks prior to the hearing; and

B. Posting notices of the proposed street vacation conspicuously at Jasper Avenue at least two weeks prior to the date set for the public hearing. The notices shall be posted no more than 300 feet apart, and at least three such notices shall be posted. The notices shall reference the adoption of this Resolution of Intention and shall state the date, time, and place of the street vacation hearing.

ADOPTED, SIGNED AND APPROVED this 15th day of November, 2022.

Paul T. Barich, Mayor

ATTEST:

Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, do hereby certify that the foregoing Resolution was duly adopted by the City Council at a regular meeting thereof held on the 15th day of November, 2022, by the following vote:

AYES: Councilmembers Tejeda, Davis, Guzman-Lowery, Gallagher; Mayor Barich
NOES: None
ABSENT: None
ABSTAINED: None

Jeanne Donaldson, City Clerk

I:\Resolutions\Res 8400-8499\8403_Intent_to_Vacate_Self Storage.docx

EXHIBIT 'A'

DESCRIPTION OF PROPERTY

REAL PROPERTY LOCATED IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

THAT PORTION OF JASPER AVENUE AS SHOWN ON TRACT NO. 7076, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 91 OF MAPS, PAGES 43 AND 44, OFFICIAL RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY PROLONGATION OF THE EAST LINE OF LOT "D" OF SAID TRACT NO. 7076 AND THE CENTERLINE OF FLORENCE AVENUE VACATED PER DOCUMENT RECORDED JUNE 24, 1964, IN BOOK 6176 OF DEEDS, PAGE 690, RECORDS OF SAID COUNTY;

THENCE EAST ALONG THE CENTERLINE OF SAID FLORENCE AVENUE, NORTH 89°57'23" EAST, 7.00 FEET TO THE **POINT OF BEGINNING**, SAID POINT BEING 33.00 FEET WEST, MEASURED AT RIGHT ANGLES, FROM THE CENTERLINE OF SAID JASPER AVENUE, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF THAT PORTION OF JASPER AVENUE VACATED BY RESOLUTION NO. 90-294 OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, RECORDED JUNE 27, 1990, AS INSTURMENT NO. 90-251131, OFFICIAL RECORDS OF SAID COUNTY;

THENCE NORTH ALONG EAST LINE OF SAID DOCUMENT NO. 90-251131, NORTH 00°01'57" WEST, 375.18 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTHWEST AND HAVING A RADIUS OF 20.00 FEET, SAID BEGINNING OF CURVE BEING DESCRIBED IN DOCUMENT RECORDED JULY 6, 1990, AS INSTRUMENT NO. 90-264542, OFFICIAL RECORDS OF SAID COUNTY;

THENCE NORTHWESTERLY ALONG SAID CURVE AN ARC DISTANCE OF 31.41 FEET THROUGH A CENTRAL ANGLE OF 89°58'35" TO A POINT OF CUSP, THE RADIAL OF WHICH BEARS NORTH 00°00'32" WEST, SAID POINT BEING ON THE SOUTH RIGHT OF WAY OF NAPLES AVENUE AS SHOWN ON SAID TRACT NO. 7076, SAID POINT ALSO BEING 30.00 FEET SOUTH, MEASURED AT RIGHT ANGLES, FROM THE CENTERLINE OF SAID NAPLES AVENUE;

THENCE EAST ALONG THE SOUTH RIGHT OF WAY OF SAID NAPLES AVENUE, NORTH 89°59'28" EAST, 10.00 FEET;

THENCE SOUTH 43°56'25" EAST, 18.74 FEET TO A POINT THAT IS WEST 30.00', MEASURED AT RIGHT ANGLES, FROM THE CENTERLINE OF SAID JASPER AVENUE;

THENCE SOUTH ALONG A LINE THAT IS PARALLEL WITH AND 30.00 FEET WEST FROM THE CENTERLINE OF SAID JASPER AVENUE, SOUTH 00°01'57" EAST, 381.67 FEET TO A POINT ON THE CENTERLINE OF SAID FLORENCE AVENUE;

THENCE WEST ALONG THE CENTERLINE OF SAID FLORENCE AVENUE, SOUTH 89°57'23" WEST, 3.00 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 1,183.58 SQ. FT. (0.027 ACRES)

PREPARED BY:

MARK S. WHITMER, L.S. 5535

DATE: 04/12/2022

I:\Resolutions\Res 8400-8499\8403_Intent_to_Vacate_Self Storage.docx

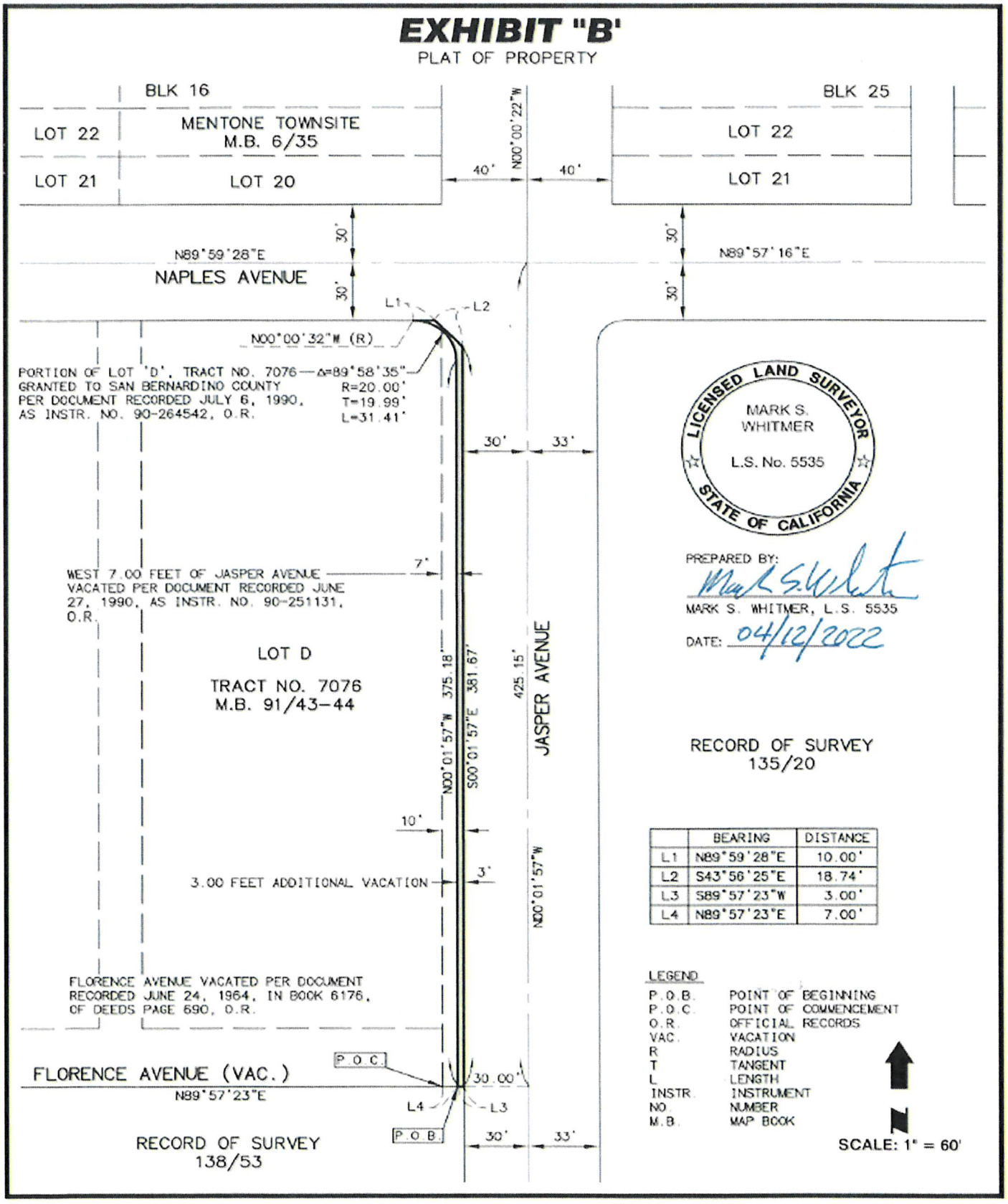


EXHIBIT "B'
PLAT OF PROPERTY
BLK 16
LOT 22
MENTONE TOWNSITE
M.B. 6/35
LOT 21
LOT 20
BLK 25
LOT 22
LOT 21
N00°00'22"W
40'
40'
30'
30'
N89°59'28"E
NAPLES AVENUE
N89°57'16"E
L1
L2
N00°00'32"W (R)
PORTION OF LOT 'D', TRACT NO. 7076 GRANTED TO SAN BERNARDINO COUNTY PER DOCUMENT RECORDED JULY 6, 1990, AS INSTR. NO. 90-264542, O.R.
Δ=89°58'35"
R=20.00'
T=19.99'
L=31.41'
30'
33'
LICENSED LAND SURVEYOR
MARK S. WHITMER
L.S. No. 5535
STATE OF CALIFORNIA
PREPARED BY:
MARK S. WHITMER, L.S. 5535
DATE: 04/12/2022
7'
WEST 7.00 FEET OF JASPER AVENUE VACATED PER DOCUMENT RECORDED JUNE 27, 1990, AS INSTR. NO. 90-251131, O.R.
LOT D
TRACT NO. 7076
M.B. 91/43-44
N00°01'57"W 375.18'
S00°01'57"E 381.67'
425.15'
JASPER AVENUE
10'
3'
3.00 FEET ADDITIONAL VACATION
N00°01'57"W
RECORD OF SURVEY
135/20
BEARING
DISTANCE
L1 N89°59'28"E 10.00'
L2 S43°56'25"E 18.74'
L3 S89°57'23"W 3.00'
L4 N89°57'23"E 7.00'
LEGEND
P.O.B. POINT OF BEGINNING
P.O.C. POINT OF COMMENCEMENT
O.R. OFFICIAL RECORDS
VAC. VACATION
R RADIUS
T TANGENT
L LENGTH
INSTR. INSTRUMENT
NO. NUMBER
M.B. MAP BOOK
FLORENCE AVENUE VACATED PER DOCUMENT RECORDED JUNE 24, 1964, IN BOOK 6176, OF DEEDS PAGE 690, O.R.
P.O.C.
FLORENCE AVENUE (VAC.)
N89°57'23"E
30.00'
L4
L3
P.O.B.
30'
33'
RECORD OF SURVEY
138/53
SCALE: 1" = 60'

Recording requested by and
when recorded return to:

CITY CLERK'S OFFICE
CITY OF REDLANDS
P.O. BOX 3005
REDLANDS, CA 92373

(THIS SPACE FOR RECORDER'S USE ONLY)

RESOLUTION NO. 8427

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS FINDING THAT A 3-FOOT WIDE PORTION OF STREET RIGHT OF WAY ALONG JASPER AVENUE AT THE SOUTHWEST CORNER OF JASPER AVENUE AND NAPLES AVENUE (APN: 0298-051-07-0000) IS UNNECESSARY FOR PRESENT OR PROSPECTIVE STREET PURPOSES AND ORDERING THE VACATION OF A PORTION OF SAID EXCESS RIGHT-OF-WAY (CITY OF REDLANDS STREET VACATION NO. 186)

WHEREAS, Madison Capital Group, property owner of the vacant subject property (APN: 0298-051-07-0000) located at the southwest corner of Naples Avenue and Jasper Avenue, has submitted an application requesting the vacation of excess public right-of-way three feet (3'0") in width and approximately 404 feet in length along the frontage of the property as more specifically described in Exhibit "A", which is attached hereto and made part hereto (the "Street Vacation"); and

WHEREAS, the City is authorized to vacate all or part of a public street easement within the City pursuant to Streets and Highway Code section 8300 et seq.; and

WHEREAS, pursuant to Streets and Highway Code section 8340, the City may, for public convenience and necessity, reserve and except public service easements from the Street Vacation; and

WHEREAS, at its meeting on October 5, 2022, as required by Government Code Section 65402, the Planning Commission made a determination that the Street Vacation conforms to the City's General Plan; and

WHEREAS, on November 15, 2022, the City Council of the City of Redlands adopted Resolution No. 8403 declaring its intention to vacate such portion of Jasper Avenue, and set a public hearing date and time for the proposed Street Vacation; and

WHEREAS, the proposed Street Vacation is exempt from environmental review under the California Environmental Quality Act ("CEQA"), pursuant to section 15061(b)(3) of the CEQA Guidelines for projects where there is no possibility of any environmental effects; and

WHEREAS, pursuant to Streets and Highways Code section 8320, the Redlands City Clerk published notice in the Redlands Daily Facts, for two successive weeks prior to the hearing, and caused the posting of notices along the proposed Street Vacation two weeks prior to the date set for the public hearing, no more than 300 feet apart, with at least three notices posted; and

WHEREAS, on December 20, 2022, the City Council held a duly noticed public hearing on the Street Vacation and considered all verbal and written testimony provided by City staff and all interested persons.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. The City Council adopted Resolution No. 8402 on November 15, 2022, for the proposed project certifying and adopting a Mitigated Negative Declaration for the project, including Street Vacation No. 186.

Section 2. The City Council having elected to proceed under the provisions of Streets and Highways Code Section 8300 et seq., and having held a public hearing as provided therein, finds from all evidence submitted that the Street Vacation is unnecessary for present or prospective public use, and that the public interest and convenience require the Street Vacation.

Section 3. Pursuant to Streets and Highways Code Section 8340, the City reserves and excepts from the Street Vacation a permanent easement for in-place and future public utility facilities.

Section 4. Pursuant to Streets and Highways Code section 892, the portion of Jasper Avenue (Street Vacation No. 186) to be vacated is not useful as a non-motorized transportation facility.

Section 5. Pursuant to Streets and Highways Code section 8325, the City Clerk is hereby directed to cause a certified copy of this resolution to be recorded in the official records of the county of San Bernardino.

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof, held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

EXHIBIT “A”
LEGAL DESCRIPTION

[Attached]

EXHIBIT “B”
PLAT MAP

[Attached]

EXHIBIT 'A'

DESCRIPTION OF PROPERTY

REAL PROPERTY LOCATED IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

THAT PORTION OF JASPER AVENUE AS SHOWN ON TRACT NO. 7076, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 91 OF MAPS, PAGES 43 AND 44, OFFICIAL RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE SOUTHERLY PROLONGATION OF THE EAST LINE OF LOT "D" OF SAID TRACT NO. 7076 AND THE CENTERLINE OF FLORENCE AVENUE VACATED PER DOCUMENT RECORDED JUNE 24, 1964, IN BOOK 6176 OF DEEDS, PAGE 690, RECORDS OF SAID COUNTY;

THENCE EAST ALONG THE CENTERLINE OF SAID FLORENCE AVENUE, NORTH 89°57'23" EAST, 7.00 FEET TO THE **POINT OF BEGINNING**, SAID POINT BEING 33.00 FEET WEST, MEASURED AT RIGHT ANGLES, FROM THE CENTERLINE OF SAID JASPER AVENUE, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF THAT PORTION OF JASPER AVENUE VACATED BY RESOLUTION NO. 90-294 OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, RECORDED JUNE 27, 1990, AS INSTURMENT NO. 90-251131, OFFICIAL RECORDS OF SAID COUNTY;

THENCE NORTH ALONG EAST LINE OF SAID DOCUMENT NO. 90-251131, NORTH 00°01'57" WEST, 375.18 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE SOUTHWEST AND HAVING A RADIUS OF 20.00 FEET, SAID BEGINNING OF CURVE BEING DESCRIBED IN DOCUMENT RECORDED JULY 6, 1990, AS INSTRUMENT NO. 90-264542, OFFICIAL RECORDS OF SAID COUNTY;

THENCE NORTHWESTERLY ALONG SAID CURVE AN ARC DISTANCE OF 31.41 FEET THROUGH A CENTRAL ANGLE OF 89°58'35" TO A POINT OF CUSP, THE RADIAL OF WHICH BEARS NORTH 00°00'32" WEST, SAID POINT BEING ON THE SOUTH RIGHT OF WAY OF NAPLES AVENUE AS SHOWN ON SAID TRACT NO. 7076, SAID POINT ALSO BEING 30.00 FEET SOUTH, MEASURED AT RIGHT ANGLES, FROM THE CENTERLINE OF SAID NAPLES AVENUE;

THENCE EAST ALONG THE SOUTH RIGHT OF WAY OF SAID NAPLES AVENUE, NORTH 89°59'28" EAST, 10.00 FEET;

THENCE SOUTH 43°56'25" EAST, 18.74 FEET TO A POINT THAT IS WEST 30.00', MEASURED AT RIGHT ANGLES, FROM THE CENTERLINE OF SAID JASPER AVENUE;

THENCE SOUTH ALONG A LINE THAT IS PARALLEL WITH AND 30.00 FEET WEST FROM THE CENTERLINE OF SAID JASPER AVENUE, SOUTH 00°01'57" EAST, 381.67 FEET TO A POINT ON THE CENTERLINE OF SAID FLORENCE AVENUE;

THENCE WEST ALONG THE CENTERLINE OF SAID FLORENCE AVENUE, SOUTH 89°57'23" WEST, 3.00 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 1,183.58 SQ. FT. (0.027 ACRES)

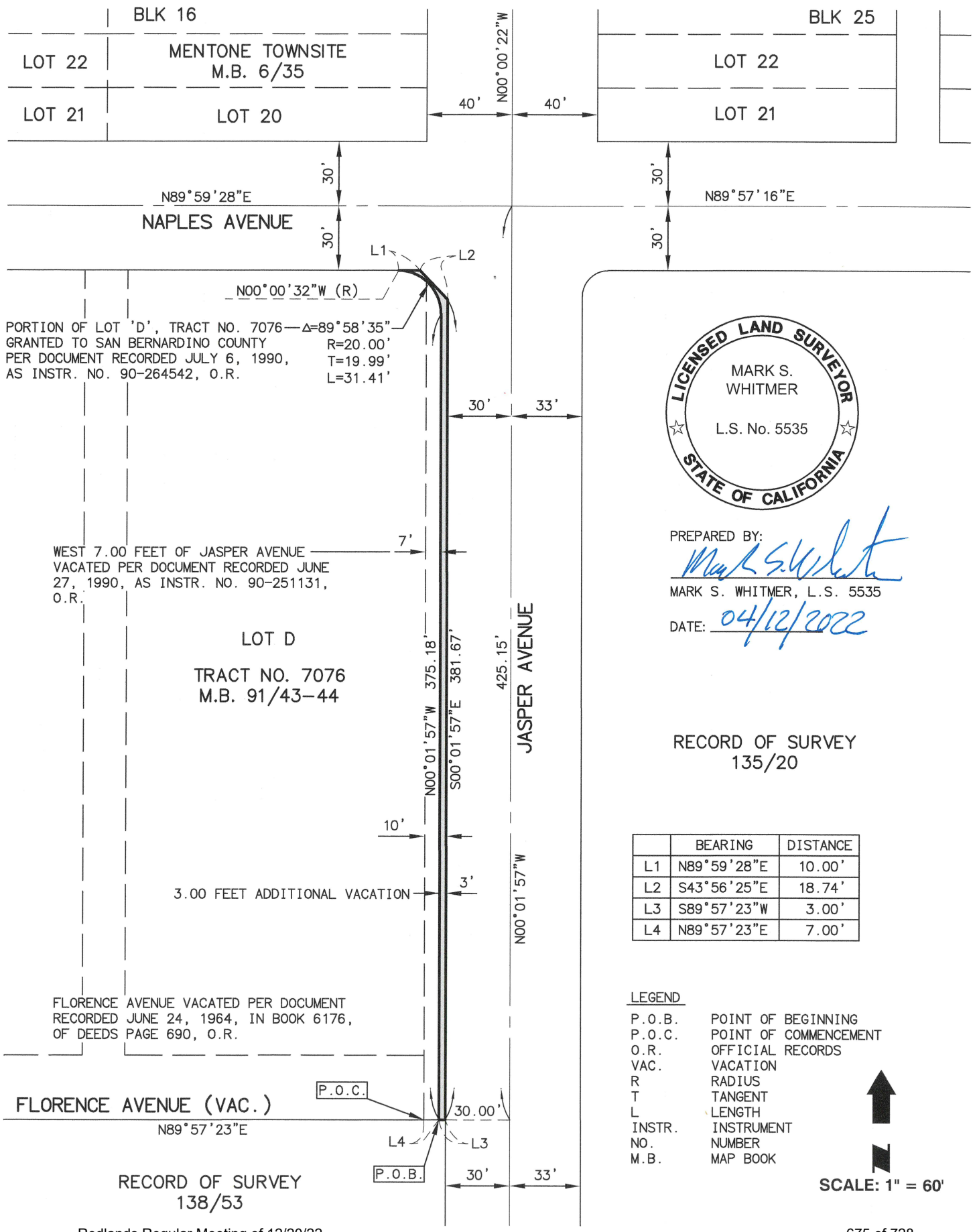
PREPARED BY:

MARK S. WHITMER, L.S. 5535

DATE: 04/12/2022

EXHIBIT "B'

PLAT OF PROPERTY



LICENSED LAND SURVEYOR
MARK S. WHITMER
L.S. No. 5535
STATE OF CALIFORNIA

PREPARED BY:

MARK S. WHITMER, L.S. 5535

DATE: 04/12/2022

RECORD OF SURVEY
135/20

	BEARING	DISTANCE
L1	N89°59'28"E	10.00'
L2	S43°56'25"E	18.74'
L3	S89°57'23"W	3.00'
L4	N89°57'23"E	7.00'

LEGEND

P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
O.R.	OFFICIAL RECORDS
VAC.	VACATION
R	RADIUS
T	TANGENT
L	LENGTH
INSTR.	INSTRUMENT
NO.	NUMBER
M.B.	MAP BOOK

SCALE: 1" = 60'

City Council Meeting **L. 2.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Resolution No. 8424
(Mayor to declare meeting open as a public hearing)

a. Public Hearing to consider Resolution No. 8424 - A request for approval of Street Vacation No. 187 to vacate an excess public right-of-way that is four (4) feet wide and 152.91 feet in length along the easterly side of North Church Street, and across the front property line of the residential property located 710 North Church Street (APNs: 0170-071-03-0000 and 0170-071-04-0000) (Michael Frazier, Applicant) (Development Services Director Desatnik)

PROCEDURE FOR PUBLIC HEARING:

1. Mayor declares the meeting open as a public hearing.
2. Mayor calls upon Department Director for report.
3. Mayor calls for questions/comments from members of the City Council.
4. Mayor calls upon applicant, or his/her representative, for comments and testimony.
5. Mayor calls for comments/questions/testimony from members of the public (3 minutes per speaker).
6. Mayor calls upon City Clerk to note any written comments received.
7. Mayor calls upon the applicant, or representative, for rebuttal comments (5 minutes).
8. Mayor closes the public hearing.
9. City Council considers the motion and votes.

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to adopt Resolution No. 8424 to vacate the portion of North Church Street along the frontage of the property located at 710 North Church Street.

RECOMMENDATION:

On October 5, 2022, the Planning Commission reviewed the proposal to vacate excess street right-of-way in front of 710 North Church Street and voted 6 to 0 to adopt Planning Commission Resolution No. 1590, and determined the street vacation is in conformance with the 2035 General Plan.

DISCUSSION:

A) Background

The applicant, Michael Frazier, has filed an application to vacate excess street right-of-way in front of 710 North Church Street (see Attachment A-1 – Location Map and Aerial Photo) with dimensions of 4 feet wide and 152.91 feet in length. The proposed area for vacation contains an existing low retaining wall (approximately up to 4'0" high) and ADA ramp that were built a few years ago to serve the existing property (see Attachment A-2). Currently, the subject property is a Supportive Housing facility serving senior residents (i.e., assisted living facility).

The subject property was previously a group home for boys. According to available street view photographs, an approximately 4'0" high retaining wall, stairs, and wrought iron fence existed at the front of the property (and within the public right-of-way) since at least 2008. Since this property was developed in the 1970s, it is likely that the retaining wall, steps, and wrought iron fence were built much earlier than 2008, although staff was not able to find building permit records on these original improvements. It was likely that the prior owner was unaware that the improvements were constructed within the public right-of-way.

The current property owner purchased the property in 2019 to establish an assisted living facility for seniors (i.e., supportive housing). As required by the Americans with Disabilities Act (ADA), senior assisted living facilities are required to provide an ADA-accessible ramp at the front of the property. Therefore, the applicant constructed the ADA ramp following the fence line established by the previous property owner, not knowing that the area is within public right-of-way.

The City's Land Use Engineering Division evaluated the existing conditions, and does not have any concerns regarding the request to vacate four feet (4'0") of public right-of-way so that the ADA ramp and related improvements will be owned and maintained by the property owner (and the City will not be responsible for maintaining the existing improvements). Furthermore, there is already a 6-foot wide sidewalk along the property's frontage on Church Street, and therefore, the City does not need the excess 4'0" wide right-of-way for future public sidewalk purposes.

On November 15, 2022, the City Council adopted Resolution No. 8407 (Attachment B) declaring its intent to vacate the subject 4 feet of public right-of-way, which initiated all noticing requirements for the requested street vacation.

B) Analysis

Pursuant to State law, the City may regulate traffic on its public streets, alleys, and walkways only to the extent expressly authorized. The law permits the City to vacate a street, alley, or walkway upon a finding supported by substantial evidence that the right-of-way is no longer needed for vehicular or pedestrian traffic, and is unnecessary for present or prospective use.

C) Environmental Review

The proposal is exempt from environmental review in accordance with the California Environmental Quality Act (CEQA) pursuant to Section 15061(b)(3) of the State CEQA Guidelines for projects where there is no possibility of any significant environmental effects. Adoption of the resolution and vacation of public right-of-way will not result in any potentially significant environmental effects.

ALTERNATIVES:

1. Continue the matter to a subsequent meeting to allow for additional information.
2. Not adopt the Resolution and not approve the requested street vacation.

SUBMITTED BY:

Brian Desatnik, Development Services Director

RECOMMENDED BY:

Charles M. Duggan, Jr., City Manager

REVIEWED BY:
Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
John Harris, Municipal Utilities and Engineering Director

PREPARED BY:
Catherine Lin, AICP, Principal Planner

Fiscal Impact

Fiscal Year: 22-23

Appropriation Required Y/N: No

Discussion:

The applicant paid the applicable filing fee for the Street Vacation application. Approval of this request will not result in any fiscal impact.

Attachments

Attachment A-1: Location Map & Aerial Photo
Attachment A-2: Site Photos
Attachment B: Resolution No. 8407 (Notice of Intention to Vacate)
Attachment C-1: City Council Resolution No. 8424
Attachment C-2: Exhibits A & B (Legal Description and Plat)

Redlands Regular Meeting of 12/20/22

Location Map

Street Vacation
No. 187

This map was produced by the City of Redlands, Geographic Information System.
The City of Redlands assumes no warranty or legal responsibility for the information contained on this map.
The data used to generate this map is dynamic in nature, therefore the information shown may or may not be the most current.

N
W E
S

Scale
0 160 320
Feet

City of Redlands
Department of Innovation & Technology
Geographic Information Systems

City of REDLANDS "A City That Works"

September 15, 2022

OneStop.mxd

Aerial Photo

Street Vacation
No. 187

This map was produced by the City of Redlands, Geographic Information System.
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The data used to generate this map is dynamic in nature, therefore the information shown may or may not be the most current.

N
W E
S

Scale
0 10 20
Feet

City of Redlands
Department of Innovation & Technology
Geographic Information Systems

City of REDLANDS "A City That Works"

September 15, 2022

OneStop.mxd

SITE PHOTOS

Source: Google Streetview (Feb. 2022)

SITE PHOTOS

Source: Google Streetview (Feb. 2022)

RESOLUTION NO. 8407

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS DECLARING ITS INTENTION TO VACATE THE STREET RIGHT-OF-WAY AT 710 N. CHURCH STREET

WHEREAS, Mr. Mike Frazier, as the authorized representative for the property owner of 710 North Church Street (APNs: 0170-071-03-0000 and 0170-071-04-0000) has submitted an application requesting vacation of the excess street right-of-way that is four (4) feet wide and 152.91 feet in length along the frontage of the subject property; and,

WHEREAS, the City may vacate all or part of a public street pursuant to Street and Highway Code Section 8300 et. Seq. and, pursuant to Streets and Highways Code Section 8340, the City may for public convenience and necessity reserve and exempt public service easements from a street vacation; and

WHEREAS, the proposed street vacation qualifies for an exemption from environmental review in accordance with the California Environmental Quality Act ("CEQA"), pursuant to Section 15061(b)(3) of the State CEQA Guidelines for projects where there is no possibility of any significant environmental effects; and

WHEREAS, on October 5, 2022, the Redlands Planning Commission reviewed the proposal and determined that the proposed street vacation will conform to the City's General Plan including the Connected City chapter; and

WHEREAS, the City Council intends to vacate the excess right-of-way, as more particularly described in Exhibit "A" to this resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

SECTION 1. The City Council of the City of Redlands hereby declares its intention to vacate the excess street right-of-way that is four (4) feet wide and 152.91 feet in length located across the front property line at the property located at 710 North Church Street, and further described in the legal description contained in Exhibit "A" attached hereto.

SECTION 2. The proposed street vacation of the right-of-way for 710 N. Church Street is exempt from environmental review in accordance with Section 15061(b)(3) of the State CEQA Guidelines, as there is no possibility of any potentially significant environmental effects.

SECTION 3. The City Council will conduct a public hearing on the proposed street vacation at a regularly schedule public meeting of the City Council on December 20, 2022, beginning at 6:00 p.m., or as soon thereafter as the matter may be heard, to be held in the City Council Chambers located at 35 Cajon Street, Suite 2, Redlands, California 92373.

SECTION 4. The City Clerk shall give notice of the public hearing on the public hearing on the proposed vacation by:

A. Publishing notice in the Redlands Daily Facts, for two successive weeks prior to the hearing; and

B. Posting notices of the proposed street vacation conspicuously at 710 N. Church Street at least two weeks prior to the date set for the public hearing. The notice shall be posted no more than 300 feet apart, and at least three such notices shall be posted. The notice shall reference the adoption of this Resolution of Intention and shall state the date, time, and place of the street vacation hearing.

ADOPTED, SIGNED AND APPROVED this 15th day of November, 2022.

Paul T. Barich, Mayor

ATTEST:

Jeanne Donaldson,
City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, do hereby certify that the foregoing Resolution was duly adopted by the City Council at a regular meeting thereof held on the 15th day of November, 2022, by the following vote:

AYES: Councilmembers Tejeda, Davis, Guzman-Lowery, Gallagher; Mayor Barich
NOES: None
ABSENT: None
ABSTAINED: None

Jeanne Donaldson, City Clerk

EXHIBIT A
LEGAL DESCRIPTION AND PLAT

[Attached]

EXHIBIT "A"

STREET VACATION

LEGAL DESCRIPTION

THE FOLLOWING REAL DESCRIBED PROPERTY IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA:

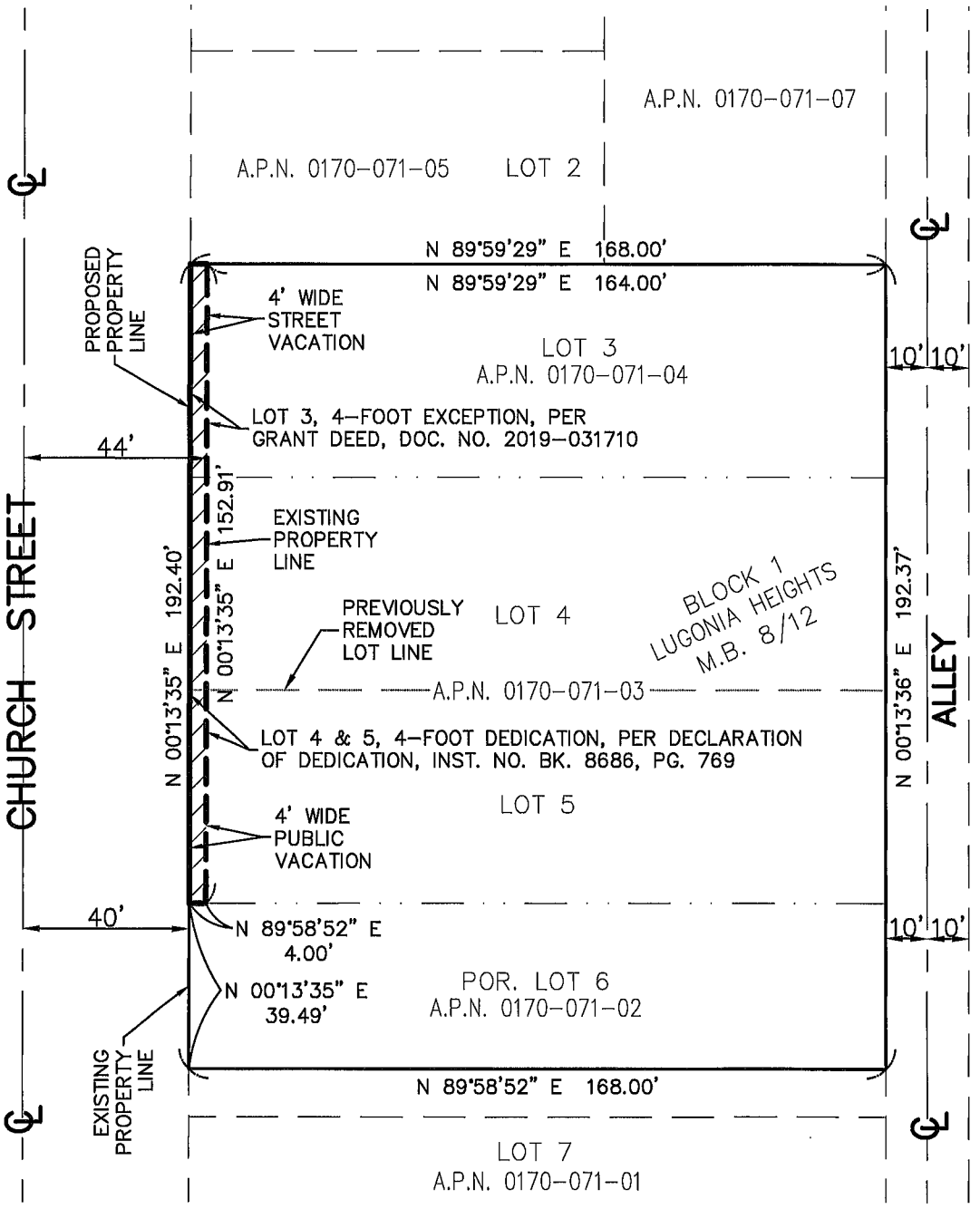
THE WEST 4 FEET OF LOTS 3, 4 & 5 OF BLOCK 1 OF LUGONIA HEIGHTS AS PER MAP RECORDED IN BOOK 8, PAGE(S) 12 INCLUSIVE OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXHIBIT "B"

STREET VACATION

PLAT

SCALE: 1"=40'



LEGEND:

- — — — — INDICATES STREET CENTERLINE
- ——— INDICATES PROPOSED BOUNDARY LINE BY LOT MERGER PER SEPARATE DOCUMENT
- — · — INDICATES EXISTING LOT LINE TO REMOVED BY LOT MERGER PER SEPARATE DOCUMENT
- — — — INDICATES EXISTING LOT LINE
- INDICATES PORTION OF STREET VACATION HEREON 611.6 SQ. FT.

LICENSED LAND SURVEYOR
BERNHARD K. MAYER
NO. 7319
Exp. 6-30-23
STATE OF CALIFORNIA

Recording requested by and
when recorded return to:

CITY CLERK'S OFFICE
CITY OF REDLANDS
P.O. BOX 3005
REDLANDS, CA 92373

(THIS SPACE FOR RECORDER'S USE ONLY)

RESOLUTION NO. 8424

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS FINDING THAT A 4-FOOT STREET RIGHT OF WAY AT 710 N. CHURCH STREET IS UNNECESSARY FOR PRESENT OR PROSPECTIVE STREET PURPOSES AND ORDERING THE VACATION OF A PORTION OF SAID EXCESS RIGHT-OF-WAY (CITY OF REDLANDS STREET VACATION NO. 187)

WHEREAS, Mr. Mike Frazier, as agent for the owner of 710 N. Church Street, has submitted an application requesting the vacation of excess public right-of-way, 4 feet in width and approximately 152.91 feet in length along the frontage of the property as more specifically described in Exhibit "A", which is attached hereto and made part hereto (the "Street Vacation"); and,

WHEREAS, the City is authorized to vacate all or part of a public street easement within the City pursuant to Streets and Highway Code section 8300 et seq.; and

WHEREAS, pursuant to Streets and Highway Code section 8340, the City may, for public convenience and necessity, reserve and except public service easements from the Street Vacation; and

WHEREAS, at its meeting on October 5, 2022, as required by Government Code Section 65402, the Planning Commission made a determination that the Street Vacation conforms to the City's General Plan; and

WHEREAS, on November 15, 2022, the City Council of the City of Redlands adopted Resolution No. 8407, declaring its intention to vacate such portion of N. Church Street, and set a public hearing date and time for the proposed Street Vacation; and

WHEREAS, City staff has recommended that the proposed Street Vacation is exempt from environmental review under the California Environmental Quality Act ("CEQA"), pursuant to section 15061(b)(3) of the CEQA Guidelines for projects where there is no possibility of any environmental effects; and

WHEREAS, pursuant to Streets and Highways Code section 8320, the Redlands City Clerk published notice in the Redlands Daily Facts, for two successive weeks prior to the hearing, and caused the posting of notices along the proposed Street Vacation two weeks prior to the date set for the public hearing, no more than 300 feet apart, with at least three notices posted; and

WHEREAS, on December 20, 2022, the City Council held a duly noticed public hearing on the Street Vacation and considered all verbal and written testimony provided by City staff and all interested persons;

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS as follows:

Section 1. Approval of the Street Vacation is exempt from environmental review in accordance with the California Environmental Quality Act ("CEQA"), pursuant to section 15061(b)(3) of the State's CEQA Guidelines because, based on the information in the staff report and presented at this hearing, it can be seen with certainty that the approval of the Street Vacation will have no physical effect on the environment.

Section 2. The City Council having elected to proceed under the provisions of Streets and Highways Code Section 8300 et seq., and having held a public hearing as provided therein, finds from all evidence submitted that the Street Vacation is unnecessary for present or prospective public use, and that the public interest and convenience require the Street Vacation.

Section 3. Pursuant to Streets and Highways Code Section 8340, the City reserves and excepts from the Street Vacation a permanent easement for in-place and future public utility facilities.

Section 4. Pursuant to Streets and Highways Code section 892, the portion of the Street Vacation to be vacated is not useful as a non-motorized transportation facility.

Section 5. Pursuant to Streets and Highways Code section 8325, the City Clerk is hereby directed to cause a certified copy of this resolution to be recorded in the official records of the county of San Bernardino.

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof, held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

EXHIBIT “A”
LEGAL DESCRIPTION

[Attached]

EXHIBIT “B”
MAP EXHIBIT

[Attached]

EXHIBIT "A"

STREET VACATION

LEGAL DESCRIPTION

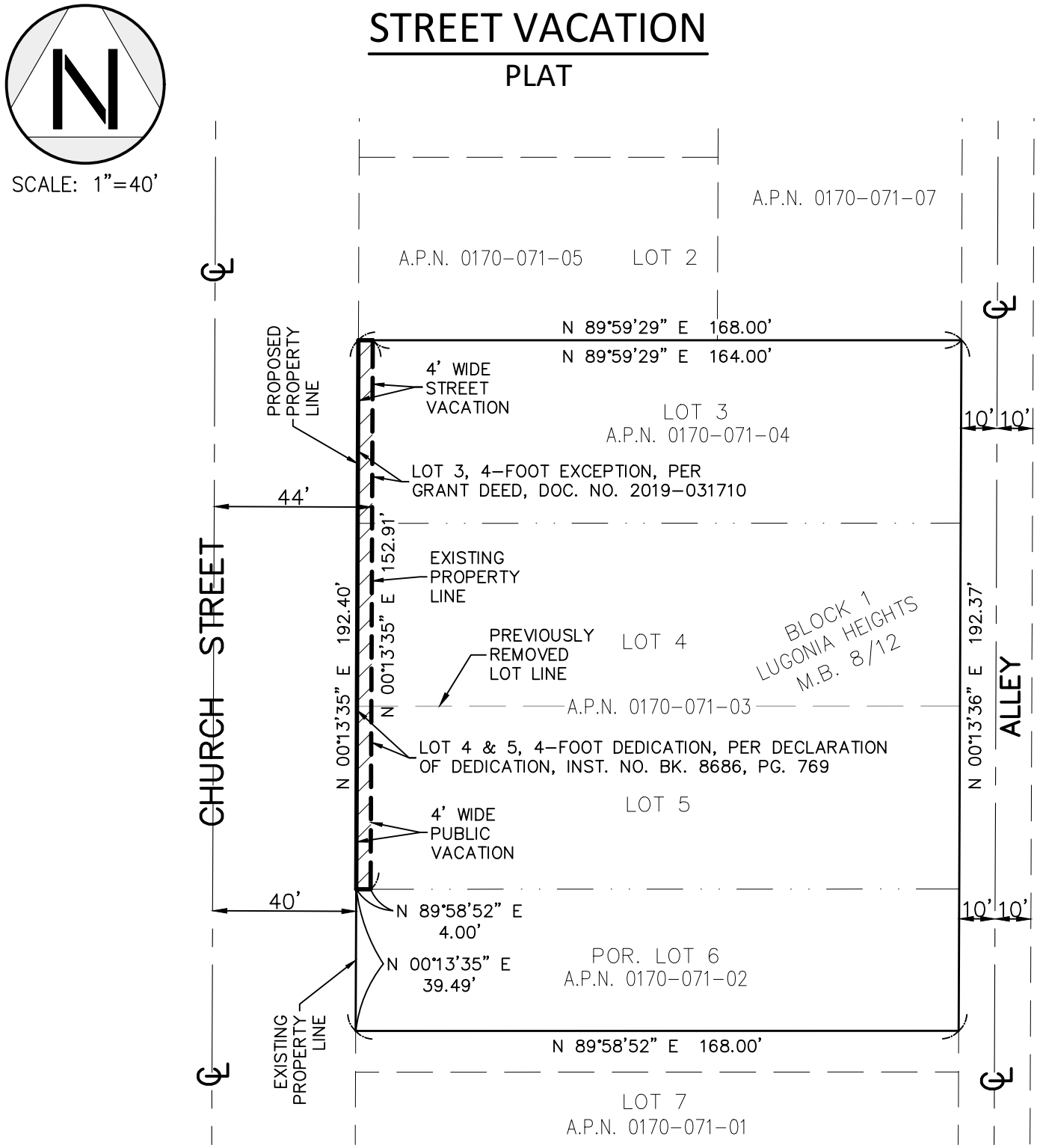
THE FOLLOWING REAL DESCRIBED PROPERTY IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA:

THE WEST 4 FEET OF LOTS 3, 4 & 5 OF BLOCK 1 OF LUGONIA HEIGHTS AS PER MAP RECORDED IN BOOK 8, PAGE(S) 12 INCLUSIVE OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXHIBIT "B"

STREET VACATION

PLAT



LEGEND:

- INDICATES STREET CENTERLINE
- INDICATES PROPOSED BOUNDARY LINE BY LOT MERGER PER SEPARATE DOCUMENT
- INDICATES EXISTING LOT LINE TO REMOVED BY LOT MERGER PER SEPARATE DOCUMENT
- INDICATES EXISTING LOT LINE
- INDICATES PORTION OF STREET VACATION HEREON 611.6 SQ. FT.

LICENSED LAND SURVEYOR
BERNHARD K. MAYER
NO. 7319
Exp. 6-30-23
STATE OF CALIFORNIA

City Council Meeting **L. 3.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Resolution No. 8425
(Mayor to declare meeting open as a public hearing)

a. Public Hearing to consider Resolution No. 8425 - A request to vacate excess public right-of-way along East Highland Avenue, which is ten (10) feet wide and 998 feet in length, along the southerly side of East Highland Avenue and approximately 50 feet west of Redlands Street/South Lincoln Street, along the entire frontage of the previously approved Tract Map No. 20065 (APN: 0174-161-25-0000) (Hicks and Hartwick, Inc., Applicant) (Development Services Director Desatnik)

PROCEDURE FOR PUBLIC HEARING:

1. Mayor declares the meeting open as a public hearing.
2. Mayor calls upon Department Director for report.
3. Mayor calls for questions/comments from members of the City Council.
4. Mayor calls upon applicant, or his/her representative, for comments and testimony.
5. Mayor calls for comments/questions/testimony from members of the public (3 minutes per speaker).
6. Mayor calls upon City Clerk to note any written comments received.
7. Mayor calls upon the applicant, or representative, for rebuttal comments (5 minutes).
8. Mayor closes the public hearing.
9. City Council considers the motion and votes.

MOTION(S):

If the City Council determines that staff's recommendation is appropriate, the following motion is provided:

I move to adopt Resolution No. 8425 to vacate a portion of East Highland Avenue along the frontage of Tract No. 20065.

RECOMMENDATION:

On October 11, 2022, the Planning Commission reviewed the proposal to vacate a portion of East Highland Ave. along the frontage of Tract No. 20065 and voted 6 to 0 to adopt Planning Commission Resolution No. 1598, and determined the street vacation is in conformance with the 2035 General Plan.

DISCUSSION:

A) Background

The applicant, Hicks and Hartwick, Inc., has filed an application to vacate an unneeded excess portion of public right-of-way across the frontage of Tract Map No. 20065, located on the south side of East Highland Avenue between Redlands Street and Ford Street (see Attachment A). The project that was previously approved with Commission Review & Approval (CRA) No. 937 will construct a total of 29 new lots and single-family homes on Tract 20065. The project site is currently being graded, and construction of the subdivision has begun. The Final Map for Tract 20065 has been recorded by San Bernardino County, and the Final Map shows that the front boundary of the tract is 40 feet from the centerline of the street (i.e., shown the approved Tract Map but without an approved Street Vacation). A note on the approved Site Plan for Tract 20065 indicates the Street Vacation area (see Attachment B).

East Highland Avenue is the northerly boundary of Tract No. 20065, and currently the front (northerly) property line of Tract 20065 is placed 50 feet from the centerline of East Highland Avenue. However, at this location, the ultimate half-width of Highland Avenue is supposed to be 40 feet from the centerline of the street. For this reason, there exists 10 feet of excess right-of-way along the frontage of Tract No. 20065, which may be determined to be excess public right-of-way (i.e., not needed for roadway purposes or public access) and may be vacated.

Therefore, the applicant has applied for Street Vacation No. 188 to vacate the ten feet (10'0") of excess public right-of-way for East Highland Avenue along the frontage of Tract Map No. 20065, so that the City can achieve the ultimate width

of the street at this location and to reconcile the location of the front property line of the new lots to match the recorded Tract Map.

On November 15th, the City Council adopted Resolution No. 8408 (Attachment C) declaring its intent to vacate the subject excess public right-of-way, which initiated all noticing requirements for the requested street vacation.

B) Analysis

Pursuant to State law, the City may regulate traffic on its public streets, alleys, and walkways only to the extent expressly authorized. The law permits the City to vacate a street, alley, or walkway upon a finding supported by substantial evidence that the right-of-way is no longer needed for vehicular or pedestrian traffic, and is unnecessary for present or prospective use.

C) Environmental Review

The proposal is exempt from environmental review in accordance with the California Environmental Quality Act (CEQA) pursuant to Section 15061(b)(3) of the State CEQA Guidelines for projects where there is no possibility of any significant environmental effects. Adoption of the resolution and vacation of public right-of-way will not result in any potentially significant environmental effects.

ALTERNATIVES:

The City Council may:

1. Continue the matter to allow for additional information; or,
2. Not adopt the Resolution and not approve the street vacation.

SUBMITTED BY:

Brian Desatnik, Development Services Director

RECOMMENDED BY:

Charles M. Duggan Jr., City Manager

REVIEWED BY:

Yvette M. Abich Garcia, City Attorney
Janice McConnell, Assistant City Manager
John Harris, Municipal Utilities and Engineering Director

PREPARED BY:

Catherine Lin, AICP, Principal Planner

Fiscal Impact

Fiscal Year: 22-23

Appropriation Required Y/N: No

Discussion:

The applicant paid the applicable filing fee for the Street Vacation application. Approval of this request will not result in any fiscal impact.

Attachments

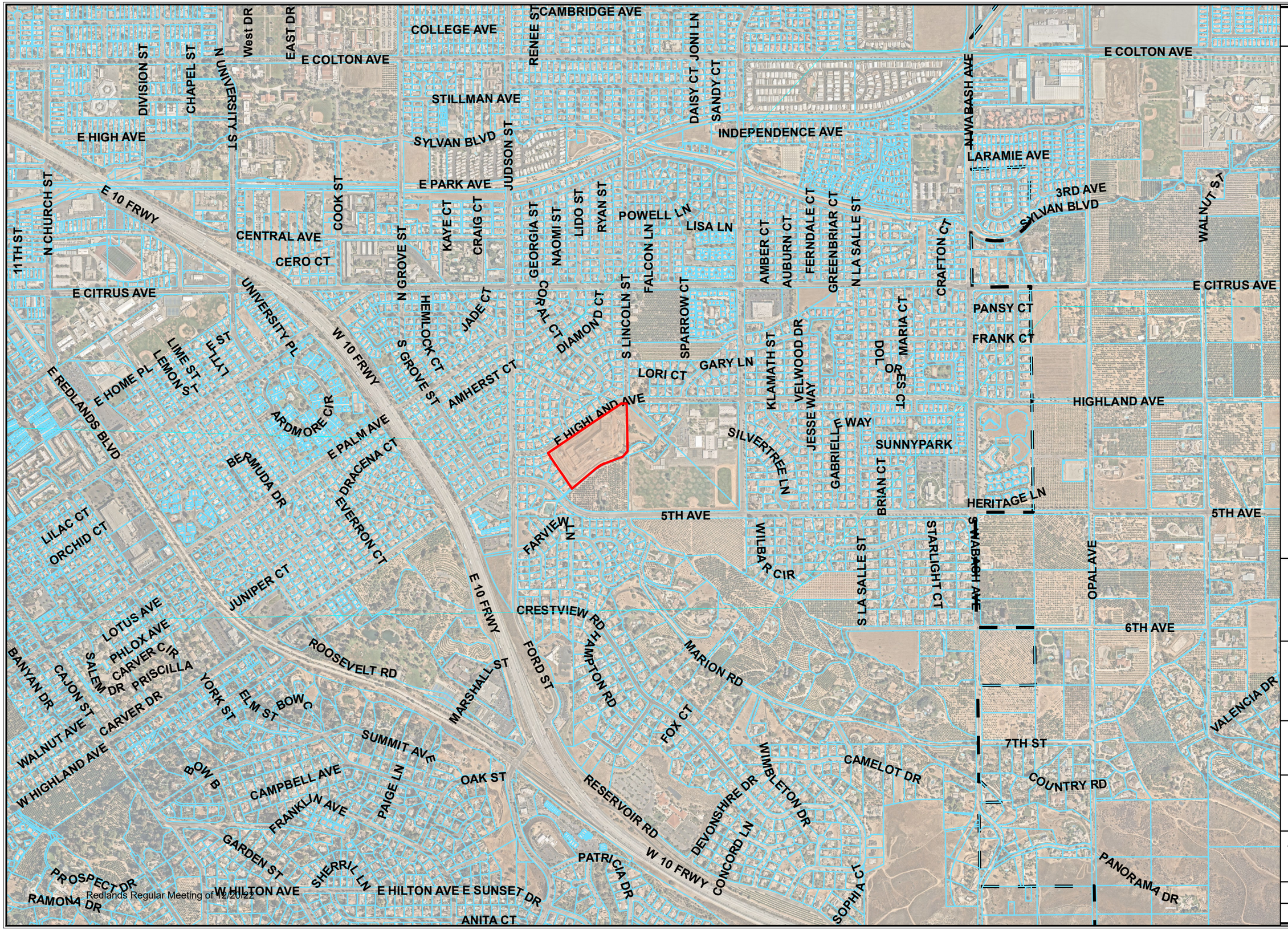
Attachment A: Location Map & Aerial Photo

Attachment B: Site Plan for Tract 20065

Attachment C: Resolution No. 8408 (Notice of Intention to Vacate)

Attachment D-1: City Council Resolution No. 8425

Attachment D-2: Exhibits A & B (Legal Description and Plat)



Location Map

Street Vacation No. 188

This map was produced by the City of Redlands, Geographic Information System.
The City of Redlands assumes no warranty or legal responsibility for the information contained on this map.
The data used to generate this map is dynamic in nature, therefore the information shown may or may not be the most current.

N
W E
S

Scale
0 800 1,600
Feet

City of Redlands
Department of Innovation & Technology
Geographic Information Systems

City of REDLANDS "A City That Works"

September 23, 2022

OneStop.mxd

Aerial Photo

Street Vacation No. 188

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N
W E
S

Scale
0 80 160
Feet

City of Redlands
Department of Innovation & Technology
Geographic Information Systems

City of REDLANDS "A City That Works"

September 26, 2022

OneStop.mxd

TENTATIVE TRACT No. 20065
PRELIMINARY GRADING

IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA

PORTION OF BLOCK XXXV OF ADDITION NO. 1, TO THE SECOND PRELIMINARY MAP OF REDLANDS, ER PLAT RECORDED IN BOOK 5, OF MAPS, PAGE 4, AND THAT PORTION OF SUB LOT 10, OF LOT G AND 10, BLOCK 77, RANCHO SAN BERNARDINO, PER MAP OF EAST REDLANDS, PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 47, RECORDS OF SAID COUNTY.

OWNER / APPLICANT

DANIEL J. BUOYE
9225 CANYON CREST DRIVE
RIVERSIDE, CA 92507
PH: (951) 316-0487

URBAN PLANNER

URBAN ENVIRONS
307 BROOKSIDE AVENUE
REDLANDS, CA 92373
PH: (909) 798-4446

CIVIL ENGINEER

HICKS & HARTWICK, INC.
37 EAST OLIVE AVENUE, SUITE C
REDLANDS, CA 92373
PHONE: (909) 793-2257

TENTATIVE MAP PREPARED BY:

Hicks & Hartwick, Inc.
37 East Olive Ave, Ste C
Redlands, CA, 92373
909.793.2257

LICENSED LAND SURVEYOR
MATTHEW C. HICKS
L.S. No. 7644
STATE OF CALIFORNIA

REQUIREMENTS FOR TRACT MAPS

PER CITY OF REDLANDS DEVELOPMENT APPLICATION (SEPTEMBER, 2017)

1. DATE OF MAP PREPARATION: 03-14-2018
   NORTH ARROW: SHOWN ON MAP
   SCALE: 1" = 60'
   ADJACENT SUBDIVISION INFO: SHOWN ON MAP
2. ALL PAVEMENT AND RIGHT-OF-WAY WIDTHS, GRADE, AND NAME OF EXISTING AND PROPOSED STREETS OR HIGHWAYS: SHOWN ON MAP
3. LOCATION, SIZE AND PURPOSE, AND IDENTITY OF ALL EASEMENTS: SHOWN ON MAP
4. LOCATION AND SIZE OF EXISTING SANITARY SEWERS, FIRE HYDRANTS, WATER MAINS AND STORM DRAINS INCLUDING THE APPROXIMATE SLOPE OF EXISTING SEWERS AND STORM DRAINS: SHOWN ON MAP
5. LOCATION OF EXISTING OVERHEAD UTILITY LINES ON PERIPHERAL STREETS: SHOWN ON MAP
6. REQUIREMENTS PERTAINING TO IMPROVEMENTS: SHOWN ON MAP
7. REQUIREMENTS PERTAINING TO LOTS AND BUILDING SITES: SHOWN ON MAP
8. LOCATION OF PROPOSED RECREATION SITES, TRAILS AND PARKS FOR PRIVATE OR PUBLIC USE, LOCATION OF COMMON AREAS, AND AREAS TO BE DEDICATED TO PUBLIC OPEN SPACE: SHOWN ON MAP, IF ANY
9. LOCATION, SIZE, SLOPE, AND ELEVATION OF SANITARY SEWERS, FIRE HYDRANTS, WATER MAINS AND STORM DRAINS: SHOWN ON MAP
10. ROUTING OF STORMWATER RUNOFF GENERATED BY A ONE-HUNDRED (100) YEAR FLOOD: SHOWN ON MAP
11. STATEMENT AS TO THE INTENTION OF THE SUBDIVIDER IN REGARD TO SLOPE PLANTING AND EROSION CONTROL: FACES OF FINISHED CUT AND FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO CONTROL AGAINST EROSION. DEVELOPER INTENDS TO PROVIDE ADEQUATE EROSION CONTROL AND PROTECTION FOR THE SLOPES PER CALIFORNIA SWPPP AND WATER QUALITY STANDARD.
12. VICINITY MAP: SHOWN ON MAP
13. CONTOUR INTERVAL: 1' CONTOURS
14. ALL EXISTING STRUCTURES AND TREES TO REMAIN OR TO BE REMOVED: SHOWN ON MAP
15. APPROXIMATE LOCATION OF ALL AREAS OF POTENTIAL STORMWATER OVERFLOW, THE LOCATION, WIDTH AND DIRECTION OF FLOW OF EACH WATERCOURSE: SHOWN ON MAP
    FLOOD ZONE PER FIRM MAP NUMBER 06071C8713H, MAP REVISED AUGUST 28, 2008 AREA DESIGNATION: ZONE X

EXHIBIT REQUIREMENTS - PART ONE

PER CITY OF REDLANDS DEVELOPMENT APPLICATION (SEPTEMBER, 2017)

INDEX MAP ON ALL SHEETS: DOES NOT APPLY
NAME AND ADDRESS OF OWNER/APPLICANT/MAP PREPARER:
1. DELINEATED ON MAP AS REQUIRED
2. ACREAGE, NORTH ARROW, VICINITY MAP, DATE OF PREPARATION: DELINEATED ON MAP AS REQUIRED
3. DIMENSIONS AND PROPERTY LINES FOR EACH LOT: DELINEATED ON MAP AS REQUIRED
4. NAMES OF ADJOINING SUBDIVISIONS AND LANDOWNERS AND LAND USES DELINEATED ON MAP AS REQUIRED
5. LANDS DEDICATED FOR PUBLIC USE: DELINEATED ON MAP AS REQUIRED POINTS OF INGRESS AND EGRESS: HIGHLAND AVENUE
6. PRELIMINARY GRADING, INCLUDING PAD ELEVATIONS AND FLOW LINES WITH LOCATION OF ALL CUT AND FILL SLOPES IDENTIFIED
7. DELINEATED ON MAP AS REQUIRED

EXHIBIT REQUIREMENTS - PART TWO

PER CITY OF REDLANDS DEVELOPMENT APPLICATION (SEPTEMBER, 2017)
PUBLIC WORKS REQUIREMENTS FOR SITE PLANS

1. LOCATIONS, NAME, AND WIDTH OF STREETS AND ADJACENT STREETS ALSO SHOW WIDTH OF ALLEYS, IF APPLICABLE
2. PROPOSED STREET GRADES AND GRADES FOR STREETS 100 FEET BEYOND APPLICANTS PROPERTY. DELINEATED ON MAP AS REQUIRED
3. CROSS SECTION OF PROPOSED STREET IMPROVEMENTS IF DIFFERENT FROM STANDARD: NOT APPLICABLE
4. WIDTH AND PURPOSE OF EASEMENTS. DELINEATED ON MAP AS REQUIRED
5. LOCATION OF EXISTING PUBLIC UTILITIES, CULVERTS, DRAIN PIPES, AND WATER COURSES: DELINEATED ON MAP AS REQUIRED
6. APPROXIMATE RADIUS OF CURVES: DELINEATED ON MAP AS REQUIRED
7. TOPOGRAPHICAL DATA TO MAKE CLEAR THE EFFECT OF THE PROPOSAL. ALSO SHOW WIDTH OF ALLEYS IF APPLICABLE: DELINEATED ON MAP. 2' CONTOURS AT GRADES 5% OR LESS: 1FI CONTOUR INTERVAL USED.

ADDITIONAL GENERAL NOTES

1. TOTAL PROJECT AREA: 454,682 SF (10.44 AC)
2. TOTAL NUMBER OF NUMBERED LOTS: 29 TOTAL
3. NUMBER OF LETTERED LOTS: 1
4. APN: 0174-161-25
5. EXISTING LAND USE: VACANT
6. EXISTING ZONING: ZONE E (EDUCATIONAL DISTRICT)
7. EXISTING GENERAL PLAN: LOW DENSITY RESIDENTIAL
8. PROPOSED ZONING: R-S (RESIDENTIAL SUBURBAN)

PRELIMINARY EARTHWORK

	CUT (C.Y.)	FILL (C.Y.)
RAW	25,400	27,800
SUBSIDENCE	-1,700	
SHRINKAGE (10%)	-2,500	
ADJUSTED VOLUME	21,200	27,800

BENCH MARK

BENCHMARK: THE CITY OF REDLANDS BM R63-BRASS DISK IN TOP OF CURB AT THE SW CORNER OF DEARBORN STREET AND CITRUS AVENUE.
ELEVATION = 1584.855

BASIS OF BEARINGS

BASIS OF BEARINGS: THE CENTERLINE OF FIFTH AVENUE AS SHOWN ON RS 154/10, BEING N89°46'50"E

PUBLIC UTILITY COMPANIES

SOUTHERN CALIFORNIA EDISON COMPANY
SERVICE PLANNING DEPARTMENT
287 TENNESSEE STREET
REDLANDS, CA 92373
CONTACT: BUD KORN
909.307.6731

SOUTHERN CALIFORNIA GAS COMPANY
PLANNING DEPARTMENT
1981 W. LUGONIA AVENUE
REDLANDS, CA 92374
CONTACT: ARTURO MORIEL
909.335.7844

FRONTIER COMMUNICATIONS
PLANNING AND CONSTRUCTION DEPARTMENT
1980 ORANGE TREE LANE, SUITE 100,
REDLANDS, CA 92374
CONTACT: TERRANCE LAURY
909.255.4251

CHARTER COMMUNICATION
CONSTRUCTION DEPARTMENT
1500 AUTO CENTER DRIVE
ONTARIO, CA 91761
CONTACT: ROD MESA
909.634.3223

WATER AND SEWER
CITY OF REDLANDS
P.O. BOX 8505
REDLANDS, CA 92375-0803
909.798.7516

ADJACENT PROPERTY OWNERS

(01) APN: 0173-451-51 EDWARDS, MARK ED: 02/04/2005
(02) APN: 0173-451-52 FORD, APRIL K. ED: 09/22/1998
(03) APN: 0173-461-01 BRASSFIELD SAMUEL E. BRASSFIELD CHRISTINE E. ED: 01/30/1997
(04) APN: 0173-461-02 DAMAZO, DEBORAH J. TR 5-20-10 ED: 08/17/2010
(05) APN: 0173-461-03 KENGERDINE, LOTTIE C. SNELLINGS, KELLY D. ED: 08/05/2005
(06) APN: 0173-461-04 YAMAMOTO FAMILY TRUST ED: 05/22/2014
(07) APN: 0173-461-05 CRAFT, E. DARRYL CRAFT, ESTELLA M. ED: 02/15/1996
(08) APN: 0173-461-06 WONG, SHU K. WONG, POPENG S. ED: 05/08/1992
(09) APN: 0173-461-13 HUGHES, JOSEPH A ETAL HUGHES, ELIZABETH A. ED: 03/10/2009
(10) APN: 0173-461-14 LOPEZ, STEVEN E. & TERESA R. REV TR 3/2004 ED: 04/04/2012
(11) APN: 0173-461-15 CROWLEY TRUST ED: 10/07/2008
(12) APN: 0173-461-16 EDWARDS FAMILY TRUST ED: 09/22/2016
(13) APN: 0174-0161-27 BIDART FAMILY TRUST ED: 10/19/2012
(14) APN: 0174-161-03 CASTANEDA, ANTONIO G. ED: 01/07/1999
(15) APN: 0174-181-37 BEAR VALLEY MUTUAL WATER COMPANY ED: 01/30/2014
(16) APN: 0174-161-38 GREENWOOD DEVELOPMENT COMPANY ED: 2/16/1981
(17) APN: 0174-381-01 ARMSTRONG REVOCABLE TRUST 2/29/12 ED: 03/15/2012
(18) APN: 0174-381-02 BELLERMANN, FREDRICH W. ED: 11/06/1995
(19) APN: 0174-381-03 ENGELSMAN, TOM E. ENGELSMAN, ANITA ED: 04/13/1991
(20) APN: 0174-381-04 SIBLEY, TIMOTHY R. SIBLEY, PAMELA D. ED: 08/20/1998
(21) APN: 0174-381-12 RALEY, DAVID E. RALEY, DIANE K. ED: 10/17/1975
(22) APN: 0174-161-34 GOTO, TOSHIKO TRUST ED: 04/22/2014

UTILITY LEGEND

ALL PROPOSED UTILITIES SUBJECT TO CHANGE PER IMPROVEMENT PLANS.

- PROPOSED WATER MAIN (SIZE AS SHOWN)
- PROPOSED SEWER (SIZE AS SHOWN)
- (WTR) EXISTING WATER MAIN (SIZE AS SHOWN)
- (SEW) EXISTING SEWER (SIZE AS SHOWN)
- EXISTING STORM DRAIN (SIZE AS SHOWN)
- EXISTING UNDERGROUND UTILITY AS SHOWN
- (PP) EXISTING POWER POLE
- (OH) OVERHEAD UTILITY LINES
- PROPOSED FIRE HYDRANT
- PROPOSED STORM DRAIN PIPE
- DIRECTION OF FLOW

LEGEND

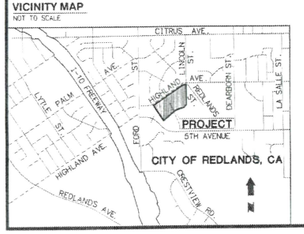
- EX. 5' CONTOUR
- EX. 1' CONTOUR
- PROP. 5' CONTOUR
- PROP. 1' CONTOUR
- DAYLIGHT LINE
- PROP. WALL
- ASPHALT PAVEMENT
- CONCRETE
- XX LOT NUMBER
- X,XXX SF LOT AREA
- PAD=86.6 PAD ELEVATION
- OPEN SPACE & LANDSCAPING
- 2:1 SLOPE OR LESS

ABBREVIATIONS

AC	ASPHALT PAVEMENT
APN	ASSESSORS PARCEL NUMBER
AV	AIR VAC
AVE	AVENUE
BO	BLOW-OFF
BVMWC	BEAR VALLEY MUTUAL WATER COMPANY
CB	CATCH BASIN
CL/℄	CENTERLINE
CLF	CHAIN LINK FENCE
CO	CLEANOUT
DOC	DOCUMENT
ED	EFFECTIVE DATE
EOP	EDGE OF PAVEMENT
EG	EXISTING GRADE
EL	ELEVATION
ESMT	EASEMENT
FG	FINISHED GRADE
FL	FLOWLINE
OH	OVERHEAD
OR	OFFICIAL RECORDS
PROP	PROPOSED
MAX	MAXIMUM
MIN	MINIMUM
NG	NATURAL GROUND
PP	POWER POLE
RD	ROAD
R/W	RIGHT OF WAY
SD	STORM DRAIN
SF	SQUARE FEET
SFR	SINGLE FAMILY RESIDENTS
SMH	SEWER MANHOLE
ST	STREET
STLT	STREET LIGHT
TC	TOP OF CURB
TW	TOP OF WALL

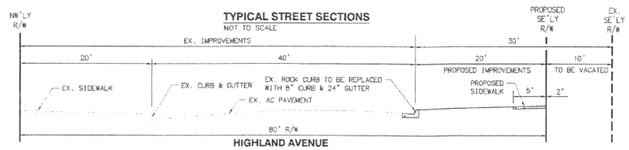
VICINITY MAP

NOT TO SCALE



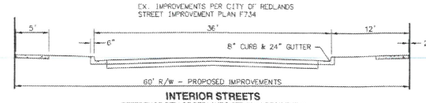
TYPICAL STREET SECTIONS

NOT TO SCALE



HIGHLAND AVENUE

EX. IMPROVEMENTS PER CITY OF REDLANDS STREET IMPROVEMENT PLAN 7734



INTERIOR STREETS

REFERENCE CITY OF REDLANDS STD 701-0 RESIDENTIAL

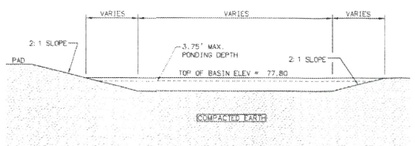
CURVE DATA TABLE

	DELTA	RADIUS	LENGTH
(A)	02°07'18"	340'	12.59'
(B)	90°00'00"	25'	39.27'
(C)	19°34'10"	455'	155'
(D)	70°43'24"	43'	53'
(E)	33°03'56"	150'	87'
(F)	90°00'00"	43'	68'
(G)	05°46'50"	600'	61'

RECEIVED
MAR 21 2018
One Stop Permit Center

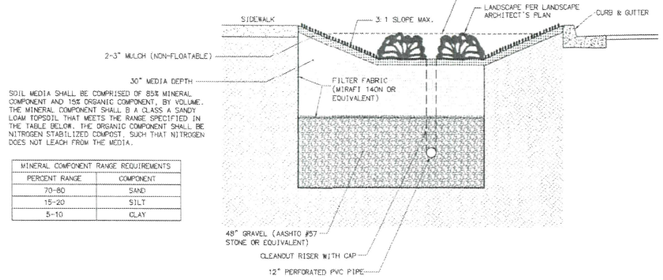
INFILTRATION BASIN

NOT TO SCALE



BIOINFILTRATION TRENCH

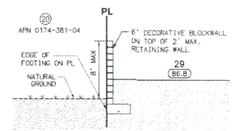
NOT TO SCALE



MINERAL COMPONENT RANGE REQUIREMENTS	
PERCENT RANGE	COMPONENT
70-80	SAND
15-20	SILT
5-10	CLAY

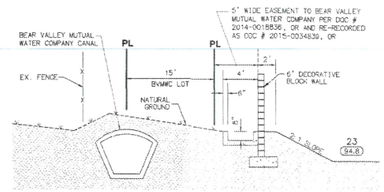
SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE



SECTION C-C

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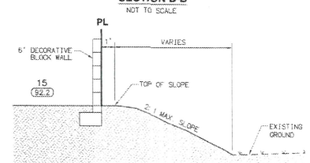
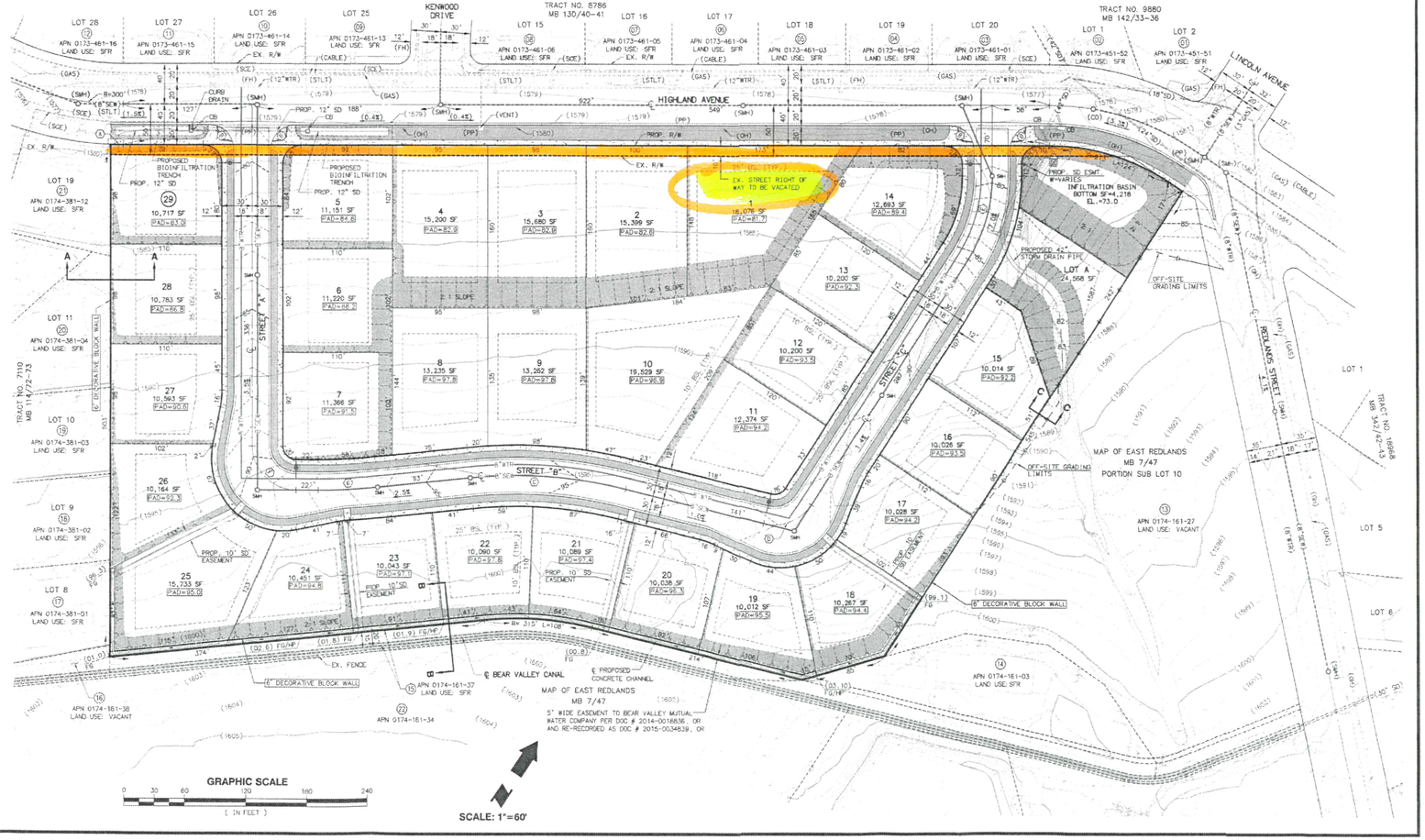




RESOLUTION NO. 8408

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS DECLARING ITS INTENTION TO VACATE A PORTION OF STREET RIGHT-OF-WAY ON EAST HIGHLAND AVENUE BEGINNING WESTERLY OF REDLANDS STREET, AND ALONG THE ENTIRE FRONTAGE OF TRACT MAP NO. 20065 (APN: 0174-161-25-0000)

WHEREAS, Hicks & Hartwick, Inc., authorized representative, has submitted an application requesting vacation of the excess street right of way along East Highland Avenue that is ten (10) feet wide and 998 feet in length, along the southerly side of East Highland Avenue and approximately 50 feet west of Redlands Street, along the entire frontage of the previously-approved Tract Map No. 20065 (APN: 0174-161-25-0000); and

WHEREAS, the City may vacate all or part of a public street pursuant to Street and Highway Code Section 8300 et. Seq. and, pursuant to Streets and Highways Code Section 8340, the City may for public convenience and necessity reserve and exempt public service easements from a street vacation; and

WHEREAS, the proposed street vacation qualifies for an exemption from environmental review in accordance with the California Environmental Quality Act ("CEQA"), pursuant to Section 15061(b)(3) of the State CEQA Guidelines for projects where there is no possibility of any significant environmental effects; and

WHEREAS, at its meeting on October 11, 2022, the Redlands Planning Commission reviewed the proposal and determined that the proposed street vacation will conform to the City's General Plan including the Connected City chapter; and

WHEREAS, the City Council intends to vacate the excess right-of-way, as more particularly described in Exhibit "A" attached to this resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

SECTION 1. The City Council of the City of Redlands hereby declares its intention to vacate the excess street right-of-way along East Highland Avenue that is ten (10) feet wide and 998 feet in length, along the southerly side of East Highland Avenue and approximately 50 feet west of Redlands Street, along the entire frontage of the previously-approved Tract Map No. 20065 (APN: 0174-161-25-0000) described in the legal description contained in Exhibit "A" attached hereto.

SECTION 2. The proposed street vacation of the right-of-way for the previously approved Tract Map No. 20065 is exempt from environmental review in accordance with Section 15061(b)(3) of the State CEQA Guidelines, as there is no possibility of any potentially significant environmental effects.

SECTION 3. The City Council will conduct a public hearing on the proposed street vacation at a regularly schedule public meeting of the City Council on December 20, 2022, beginning at 6:00 p.m., or as soon thereafter as the matter may be heard, to be held in the City Council Chambers located at 35 Cajon Street, Suite 2, Redlands, California 92373.

SECTION 4. The City Clerk shall give notice of the public hearing on the public hearing on the proposed vacation by:

A. Publishing notice in the Redlands Daily Facts, for two successive weeks prior to the hearing; and

B. Posting notices of the proposed street vacation conspicuously at the frontage of Tract Map No. 20065 at least two weeks prior to the date set for the public hearing. The notice shall be posted no more than 300 feet apart, and at least three such notices shall be posted. The notice shall reference the adoption of this Resolution of Intention and shall state the date, time, and place of the street vacation hearing.

ADOPTED, SIGNED AND APPROVED this 15th day of November, 2022.

Paul T. Barich, Mayor

ATTEST:

Jeanne Donaldson,
City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, do hereby certify that the foregoing Resolution was duly adopted by the City Council at a regular meeting thereof held on the 15th day of November, 2022, by the following vote:

AYES: Councilmembers Tejeda, Davis, Guzman-Lowery, Gallagher; Mayor Barich
NOES: None
ABSENT: None
ABSTAINED: None

Jeanne Donaldson, City Clerk

EXHIBIT A
LEGAL DESCRIPTION AND PLAT

[Attached]

EXHIBIT "A"

DESCRIPTION OF PROPERTY

THAT PORTION OF BLOCK 35 OF ADDITION NO. 1 TO THE SECOND PRELIMINARY MAP OF REDLANDS, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 5 OF MAPS, PAGE 4, AND THAT PORTION OF SUB LOT 10 OF LOTS 9 AND 10, BLOCK 77, RANCHO SAN BERNARDINO, IN THE CITY OF REDLANDS, ACCORDING TO MAP OF REDLANDS, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 47, BOTH RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF LOT 19 OF TRACT NO. 7110 AS PER PLAT RECORDED IN BOOK 114 OF MAPS, PAGES 72 AND 73, RECORDS OF SAID COUNTY;

THENCE SOUTHEASTERLY ALONG THE NORTHEASTERLY LINE OF SAID LOT 19, SOUTH 33°39'32" EAST (RECORDED AS SOUTH 33°40'00" EAST PER SAID TRACT NO. 7110), 10.23 FEET TO A POINT THAT IS 50.00 FEET SOUTHEASTERLY OF THE CENTERLINE TANGENT OF HIGHLAND AVENUE, MEASURED AT RIGHT ANGLES AS SHOWN ON SAID TRACT NO. 7110;

THENCE NORTHEASTERLY, PARALLEL WITH AND 50.00 FEET SOUTHEASTERLY FROM THE CENTERLINE OF SAID HIGHLAND AVENUE, NORTH 56°20'08" EAST, 998.64 FEET TO A POINT OF CUSP WITH A NON-TANGENT CURVE, CONCAVE SOUTHEASTERLY AND HAVING A RADIUS OF 213.00 FEET, THE INITIAL RADIAL OF WHICH BEARS NORTH 16°02'18" WEST;

THENCE SOUTHWESTERLY ALONG SAID CURVE AN ARC DISTANCE OF 65.53 FEET THROUGH A CENTRAL ANGLE OF 17°37'34" TO A POINT THAT IS 40.00 FEET SOUTHEASTERLY, MEASURED AT RIGHT ANGLES, TO THE CENTERLINE OF SAID HIGHLAND AVENUE;

THENCE SOUTHWESTERLY, PARALLEL WITH AND 40.00 FEET SOUTHEASTERLY FROM THE CENTERLINE OF SAID HIGHLAND AVENUE, SOUTH 56°20'08" WEST, 921.56 FEET TO THE BEGINNING OF A CURVE CONCAVE NORTHWESTERLY AND HAVING A RADIUS OF 340.00 FEET;

THENCE SOUTHWESTERLY ALONG SAID CURVE AND ARC DISTANCE OF 12.59 FEET THROUGH A CENTRAL ANGLE OF 02°07'18" TO THE **POINT OF BEGINNING**, A RADIAL TO SAID POINT BEARS SOUTH 31°32'34" EAST.

AREA: 9774.49 SQ FT (0.22 AC)

PREPARED BY: Mark S. Whitmer

DATE: 08/10/2022

EXHIBIT "B"
PLAT OF PROPERTY

LINE DATA TABLE		
LINE	BEARING	LENGTH
L1	S33°39'32"E	10.23'

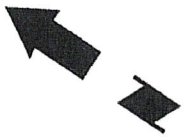
CURVE DATA TABLE

C1 Δ=17°37'34"
R=213.00'
T=33.02'
L=65.53'

C2 Δ=02°07'18"
R=340.00'
T=6.30'
L=12.59'

C3 Δ=32°46'50"
R=300.00'
T=88.24'
L=171.64'

C4 Δ=33°23'47"
R=253.00'
T=75.89'
L=147.47'



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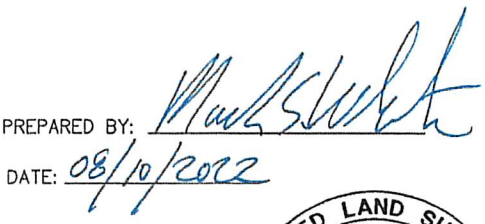
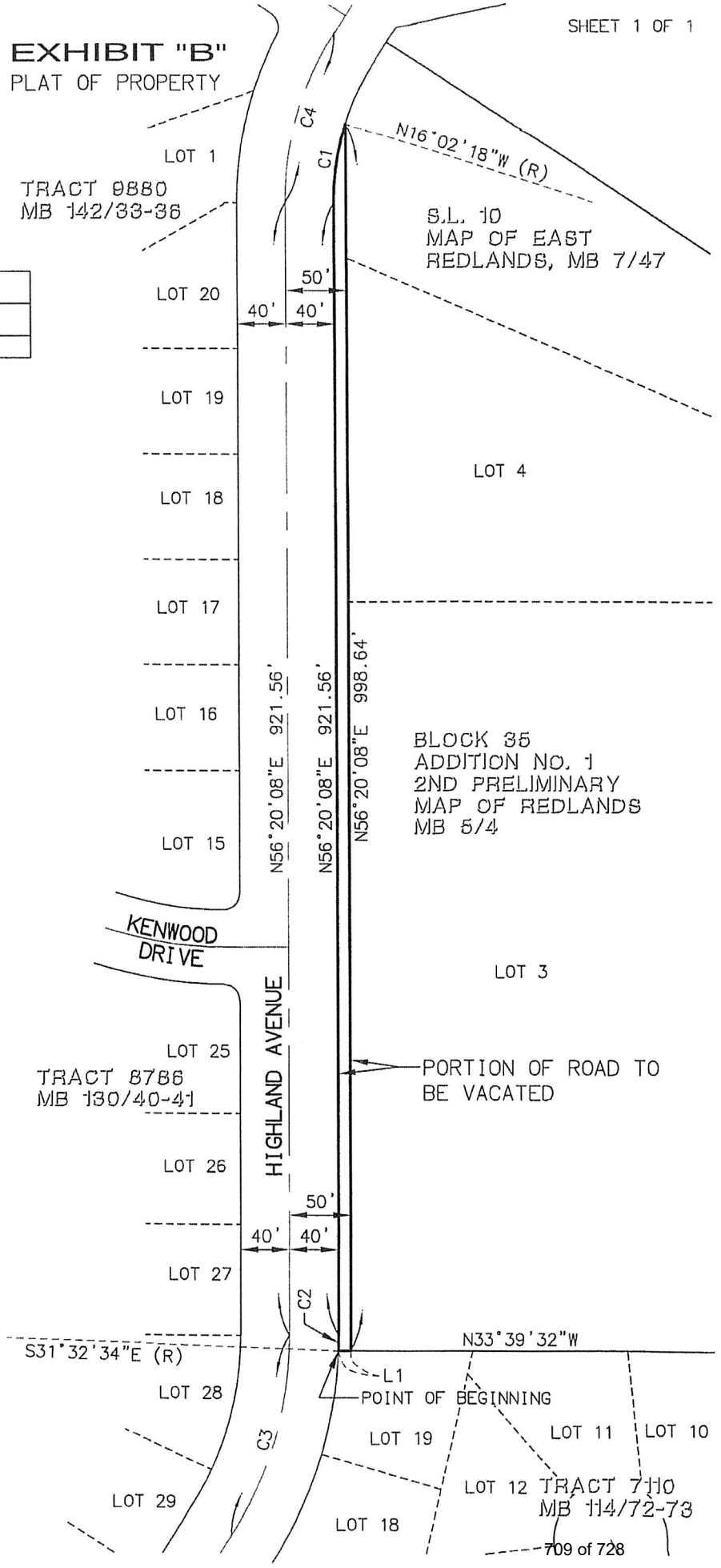


PREPARED BY:

DATE: 08/10/2022



Recording requested by and
when recorded return to:

CITY CLERK'S OFFICE
CITY OF REDLANDS
P.O. BOX 3005
REDLANDS, CA 92373

(THIS SPACE FOR RECORDER'S USE ONLY)

RESOLUTION NO. 8425

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS FINDING THAT A 10-FOOT WIDE PORTION OF STREET RIGHT-OF-WAY ON EAST HIGHLAND AVENUE ALONG THE FRONTAGE OF TRACT NO. 20065 IS UNNECESSARY FOR PRESENT OR PROSPECTIVE STREET PURPOSES AND ORDERING THE VACATION OF A PORTION OF SAID EXCESS RIGHT-OF-WAY (CITY OF REDLANDS STREET VACATION NO. 188)

WHEREAS, Hicks & Hartwick, Inc., authorized representative, has submitted an application requesting vacation of the excess street right of way along East Highland Avenue that is ten (10) feet wide and 998 feet in length, along the south side of East Highland Avenue and approximately 50 feet west of South Lincoln Avenue/Redlands Street, along the entire frontage of the previously approved Tract Map No. 20065 (APN: 0174-161-25-0000), as more specifically described in Exhibit "A", which is attached hereto and made part hereto (the "Street Vacation"); and

WHEREAS, the City is authorized to vacate all or part of a public street easement within the City pursuant to Streets and Highway Code section 8300 et seq.; and

WHEREAS, pursuant to Streets and Highway Code section 8340, the City may, for public convenience and necessity, reserve and except public service easements from the Street Vacation; and

WHEREAS, at its meeting on October 11, 2022, as required by Government Code Section 65402, the Planning Commission made a determination that the Street Vacation conforms to the City's General Plan; and

WHEREAS, on November 15, 2022, the City Council of the City of Redlands adopted Resolution No. 8408 declaring its intention to vacate such portion of East Highland Avenue, and set a public hearing date and time for the proposed Street Vacation; and

WHEREAS, City staff has recommended that the proposed Street Vacation is exempt from environmental review under the California Environmental Quality Act ("CEQA"), pursuant to section 15061(b)(3) of the CEQA Guidelines for projects where there is no possibility of any environmental effects; and

WHEREAS, pursuant to Streets and Highways Code section 8320, the Redlands City Clerk published notice in the Redlands Daily Facts, for two successive weeks prior to the hearing, and caused the posting of notices along the proposed Street Vacation two weeks prior to the date set for the public hearing, no more than 300 feet apart, with at least three notices posted; and

WHEREAS, on December 20, 2022, the City Council held a duly noticed public hearing on the Street Vacation and considered all verbal and written testimony provided by City staff and all interested persons.

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section 1. Approval of the Street Vacation is exempt from environmental review in accordance with the California Environmental Quality Act ("CEQA"), pursuant to section 15061(b)(3) of the State's CEQA Guidelines because, based on the information in the staff report and presented at this hearing, it can be seen with certainty that the approval of the Street Vacation will have no physical effect on the environment.

Section 2. The City Council having elected to proceed under the provisions of Streets and Highways Code Section 8300 et seq., and having held a public hearing as provided therein, finds from all evidence submitted that the Street Vacation is unnecessary for present or prospective public use, and that the public interest and convenience require the Street Vacation.

Section 3. Pursuant to Streets and Highways Code Section 8340, the City reserves and excepts from the Street Vacation a permanent easement for in-place and future public utility facilities.

Section 4. Pursuant to Streets and Highways Code section 892, the portion of the Street Vacation to be vacated is not useful as a non-motorized transportation facility.

Section 5. Pursuant to Streets and Highways Code section 8325, the City Clerk is hereby directed to cause a certified copy of this resolution to be recorded in the official records of the county of San Bernardino.

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Paul T. Barich, Mayor

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof, held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

EXHIBIT “A”
LEGAL DESCRIPTION

[Attached]

EXHIBIT “B”
PLAT MAP

[Attached]

EXHIBIT "A"

DESCRIPTION OF PROPERTY

THAT PORTION OF BLOCK 35 OF ADDITION NO. 1 TO THE SECOND PRELIMINARY MAP OF REDLANDS, IN THE CITY OF REDLANDS, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 5 OF MAPS, PAGE 4, AND THAT PORTION OF SUB LOT 10 OF LOTS 9 AND 10, BLOCK 77, RANCHO SAN BERNARDINO, IN THE CITY OF REDLANDS, ACCORDING TO MAP OF REDLANDS, AS PER PLAT RECORDED IN BOOK 7 OF MAPS, PAGE 47, BOTH RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

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AREA: 9774.49 SQ FT (0.22 AC)

PREPARED BY: Mark S. Whitmer

DATE: 08/10/2022

EXHIBIT "B"

PLAT OF PROPERTY

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CURVE DATA TABLE

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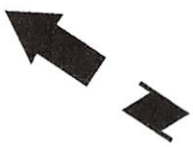
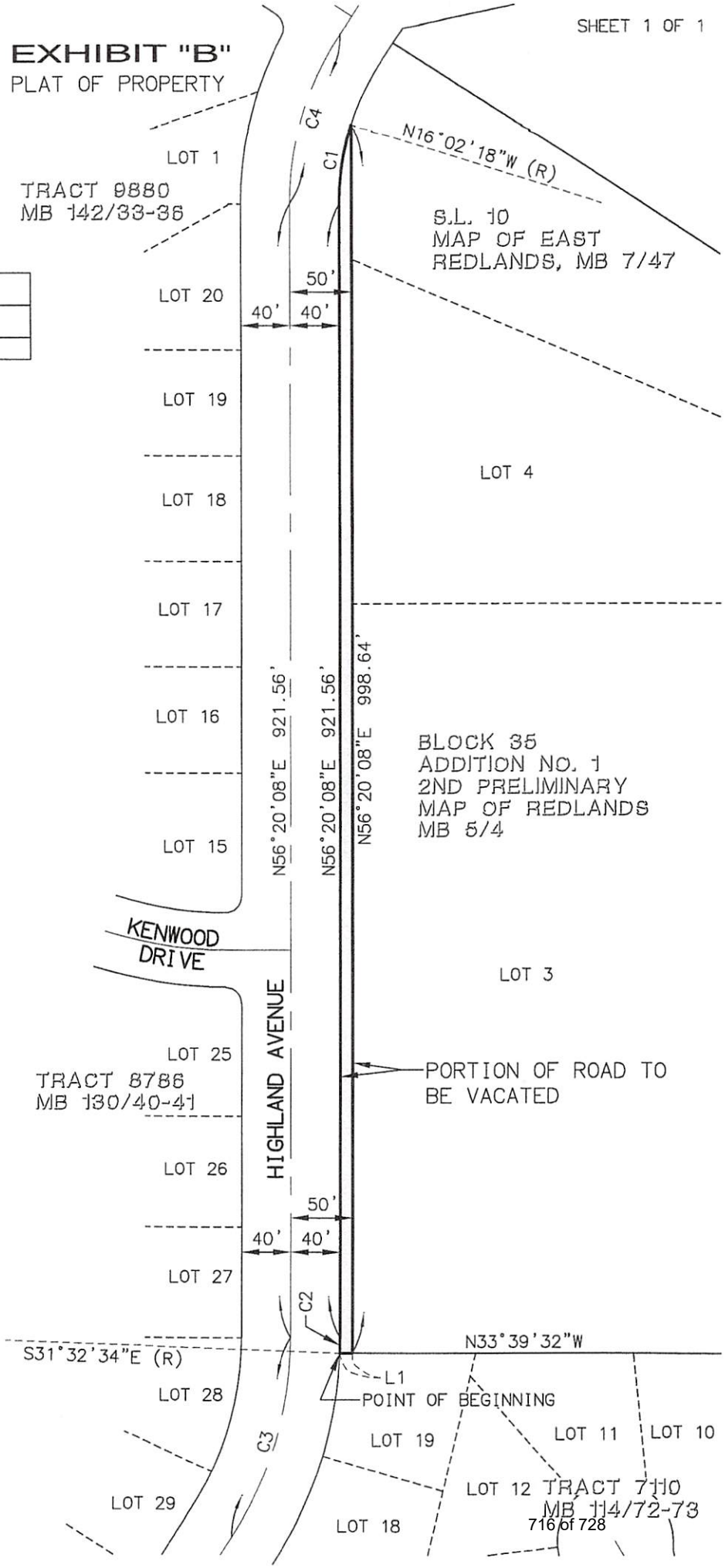


SCALE: 1" = 120'



PREPARED BY: Mark S. Whitmer

DATE: 08/10/2022

LICENSED LAND SURVEYOR
MARK S. WHITMER
L.S. No. 5535
STATE OF CALIFORNIA

City Council Meeting **M. 1.**

DATE: 12/20/2022

TO: Honorable Mayor and City Council Members

SUBJECT: Consideration of Ordinance No. 2953 changing Chapter 2.02 of the Redlands Municipal Code relating to the selection of the Mayor and Mayor Pro Tempore, their respective terms of office, and adoption of Resolution No. 8414 (Council Member Davis)

MOTION:

If the City Council determines that staff's recommendation is appropriate, the following motions are provided:

1. Mayor requests the City Clerk to read the title of Ordinance No. 2953.

   I move to waive further reading of, and to introduce Ordinance No. 2953.

2. I move to adopt Resolution No. 8414.

RECOMMENDATION:

Staff recommends adoption of Ordinance No. 2953, and Resolution No. 8414.

DISCUSSION:

At the December 6, 2022, City Council Meeting, Council Member Davis proposed an alternative method for the selection of the Mayor and Mayor Pro Tempore, and the length of their respective terms. Council Member Davis' proposal outlined a 1-year seniority-based rotation with the most senior Council Member becoming Mayor, and the 2nd most senior serving as Mayor Pro Tem. At the end of the 1-year term, the Mayor Pro Tem would then rotate into the role of Mayor. Included in the proposal was an "opt-out" clause allowing a Council Member to decline serving as Mayor.

City Council moved to direct staff to bring forth changes to the City's Municipal Code as it pertains to the selection of the Mayor and Mayor Pro Tem. Ordinance No. 2953 removes language concerning the selection of Mayor and Mayor Pro Tempore and their terms of office from the municipal code. Resolution No. 8414 replaces the previous selection process, describes the seniority based rotation, and will take effect on the effective date of Ordinance No. 2953.

SUBMITTED BY:

Janice McConnell, Assistant City Manager

REVIEWED BY:

Charles M. Duggan, Jr., City Manager
Yvette M. Abich Garcia, City Attorney

Attachments

Resolution No. 8414

Ordinance No. 2953 Legislative

Ordinance No. 2953 Clean

RESOLUTION NO. 8414

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDLANDS ESTABLISHING THE PROCESS FOR THE SELECTION OF THE MAYOR AND MAYOR PRO TEMPORE AND THEIR RESPECTIVE TERMS OF OFFICE

WHEREAS, Section 2.02.020 of the Redlands Municipal Code, titled "Selection of Mayor and Mayor Pro Tempore; Terms of Office," presently establishes a process whereby the City's Mayor and Mayor Pro Tempore are selected, individually, by their colleagues of the City Council for a two-year term; and

WHEREAS, the process for the selection of Mayor and Mayor Pro Tempore has been codified in the Redlands Municipal Code, without substantive change for more than 35 years, since 1985 and, in uncodified ordinance form, without substantive change, since 1955; and

WHEREAS, this Resolution relating to the selection of the Mayor and Mayor Pro Tempore is the first substantive governmental business action taken by the City Council during this century when the residents of Redlands are fully represented by their respective selection of five individuals, from five council member districts; and

WHEREAS, because this is a historic time for Redlands and its City Council, this City Council believes the first action taken by the City Council should be one of unanimity, reflecting the Council members acting as a whole without regard to the districts they were selected from; and one of vision, choosing its leadership not only now for the following year, but also for, the next four years for continuity and good government purposes; and

WHEREAS, the process established by this Resolution is transparent, open, and performed in a manner which avoids randomness or adherence to numbers or labels, and instead provides certainty; and

WHEREAS, the process established by this Resolution ensures that each City Council member voting on this Resolution who has not yet had an opportunity to serve as the Mayor of Redlands is given that opportunity; and

WHEREAS, the process established by this Resolution recognizes the natural hierarchal ascension of officers in governmental and non-governmental organizations, and private business entities; and further takes advantage of Council member wisdom gained through experience in the ascension to the role of Mayor; and

WHEREAS, this City Council has decided to change the process for the selection of the Mayor and Mayor Pro Tempore and will hold a first reading of, and introduce, Ordinance No. 2953 to amend section 2.02.020 of the Redlands Municipal Code relating to such process for purposes of efficiency, and to promulgate good government practices as stated herein;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF REDLANDS AS FOLLOWS:

Section1. The Mayor and Mayor Pro Tempore shall be chosen by the City Council December of each calendar year upon the affirmative vote of the majority of the total membership of the City Council. The Mayor and Mayor Pro Tempore serve at the pleasure of the City Council.

Section 2. At its regular meeting in December 2023, the selection of a Mayor and Mayor Pro Tempore shall be determined by seniority based on a Council Member's continuous length of service on the City Council without having served as Mayor. The Council Member with the longest continuous service on the City Council without having served as Mayor shall be appointed to serve as Mayor. The Council Member with the second longest continuous length of service on the City Council without having served as Mayor shall be appointed to serve as Mayor Pro Tempore. In the event two or more Council Members have equal seniority based upon their continuous length of service on the City Council without having served as Mayor, the Council Member with the higher vote count in his or her most recent election is considered to have higher seniority and shall be selected Mayor. The Council Member with the second highest vote count in his or her most recent election is considered to have the second highest seniority and shall be selected Mayor Pro Tempore.

Section 3. At its regular meeting in December 2024, the current Mayor Pro Tempore shall automatically succeed to the position of Mayor. The Council Member with the next longest continuous service on the City Council who has not yet served as Mayor shall be selected as Mayor Pro Tempore. Council Members having equal seniority shall be selected in the same manner as set forth in Section 2.

Section 4. The Mayor and Mayor Pro Tempore shall hold office from the date of their selection, until their identified successors take office or their successors are chosen. In the event a Council Member resigns from the position of Mayor or resigns from the City Council, the Mayor Pro Tempore shall automatically succeed to the position of Mayor. In the event a Council Member resigns from the position of Mayor Pro Tempore or resigns from the City Council, the position of Mayor Pro Tempore shall be filled in the same manner as set forth in Section 2.

Section 5. A Council Member may decline the position of Mayor or Mayor Pro Tempore. In that event, priority shall be given to the next most senior Council Member based on his or her length of service on the City Council without having served as Mayor.

Section 6. In the event that application of these rules would result in no Council Member being eligible to fill either the Mayor or Mayor Pro Tempore position, then the City Council may vote to appoint any one of its members to serve.

Section 7. This Resolution shall take effect on the effective date of City of Redlands Ordinance No. 2953.

ADOPTED, SIGNED AND APPROVED this 20th day of December, 2022.

_____
Mayor, City of Redlands

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk of the City of Redlands, hereby certify that the foregoing resolution was duly adopted by the City Council at a regular meeting thereof held on the 20th day of December, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jeanne Donaldson, City Clerk

ORDINANCE NO. 2953

AN ORDINANCE OF THE CITY OF REDLANDS AMENDING CHAPTER 2.02 OF THE REDLANDS MUNICIPAL CODE RELATING TO THE SELECTION OF THE MAYOR AND MAYOR PRO TEMPORE AND THEIR RESPECTIVE TERMS OF OFFICE

THE CITY COUNCIL OF THE CITY OF REDLANDS DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 2.02 of the Redlands Municipal Code, titled "City Council," is hereby amended to read as follows:

"CHAPTER 2.02
CITY COUNCIL

SECTION:

2.02.010: Time and Place of Meetings
2.02.020: Selection of Mayor and Mayor Pro Tempore; Terms of Office
2.02.030: Compensation; Schedule
2.02.040: Compensation; Determination of Population
2.02.050: Compensation; Increase Procedure

2.02.010: TIME AND PLACE OF MEETINGS:

The time for holding the regular meetings of the city council shall be the first and third Tuesday of each month at five o'clock (5:00) P.M. in the council chambers, Civic Center, 35 Cajon Street, Suite 2, Redlands, California. If any such regular meeting falls on a legal holiday, the meeting shall be held on the next city business day.

2.02.020: SELECTION OF MAYOR AND MAYOR PRO TEMPORE; TERMS OF OFFICE:

~~A.~~ The city council shall ~~meet after each general municipal election and~~ choose one of its members as mayor, and one of its members as mayor pro tempore ~~. The terms of office of the mayor and mayor pro tempore shall be for two (2) years, except as provided in subsection B of this section.~~ pursuant to a process set forth in a separate resolution of the city council, which resolution may be amended from time to time

~~B. In the event the terms of the council members are shortened or extended, as a result of any change in the election date for city council members, the terms of the mayor and mayor pro tempore shall be correspondingly shortened or, in the case of an extension of the council members' terms, the city council shall meet and select one of its members to serve as mayor and one of its members to serve as mayor pro tempore for the period of time the council members' terms are extended until the next municipal election.~~

~~C. The mayor and mayor pro tempore shall hold office from the date of their selection and until their successors are chosen.~~

2.02.030: COMPENSATION; SCHEDULE:

Members of the city council shall be compensated according to the following schedule:

A. When the population of Redlands is up to and including thirty five thousand (35,000) in population, three hundred dollars ($300.00) per month;

B. When the population of Redlands is over thirty five thousand (35,000) up to and including fifty thousand (50,000) in population, four hundred dollars ($400.00) per month;

C. When the population of Redlands is over fifty thousand (50,000) up to and including seventy five thousand (75,000) in population, five hundred dollars ($500.00) per month;

D. When the population of Redlands is over seventy five thousand (75,000) up to and including one hundred fifty thousand (150,000) in population, six hundred dollars ($600.00) per month.

2.02.040: COMPENSATION; DETERMINATION OF POPULATION:

For the purposes of sections 2.02.030 through 2.02.050 of this chapter, the population of the city shall be determined either by the last preceding federal census, or by any subsequent census, or by an estimate validated by the state of California department of finance.

2.02.050: COMPENSATION; INCREASE PROCEDURE:

A. The compensation of city council members may be increased beyond the amount provided in section 2.02.030 of this chapter by an ordinance, or by an amendment to an ordinance, but the amount of the increase may not exceed an amount equal to five percent (5%) for each calendar year from the operative date of the last adjustment of the salary in effect when the ordinance, or ordinance amendment, is enacted. No salary ordinance shall be enacted or amended which provides for automatic future increases in salary.

B. Pursuant to City of Redlands Ordinance No. 2886 adopted in accordance with this section 2.02.030, and notwithstanding any other provision of this chapter, the compensation of city council members shall be fourteen hundred dollars ($1,400.00) per month, commencing with the first full City pay period after January 1, 2023.

Section 2. The Mayor shall sign this ordinance and the City Clerk shall certify to the adoption of this ordinance and shall cause it, or a summary of it, to be published once in ~~the Redlands Daily Facts,~~ a newspaper of general circulation within the City, and thereafter, this ordinance shall take effect as provided by law.

_____

Mayor, City of Redlands

ATTEST:

_____

Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk, City of Redlands, hereby certify that the foregoing Ordinance was duly adopted by the City Council at the regular meeting thereof, held on the __ day of _____, 2022, by the following vote:

AYES:
NOES:
ABSENT:

_____
Jeanne Donaldson, City Clerk

ORDINANCE NO. 2953

AN ORDINANCE OF THE CITY OF REDLANDS AMENDING CHAPTER 2.02 OF THE REDLANDS MUNICIPAL CODE RELATING TO THE SELECTION OF THE MAYOR AND MAYOR PRO TEMPORE AND THEIR RESPECTIVE TERMS OF OFFICE

THE CITY COUNCIL OF THE CITY OF REDLANDS DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 2.02 of the Redlands Municipal Code, titled "City Council," is hereby amended to read as follows:

"CHAPTER 2.02
CITY COUNCIL

SECTION:

2.02.010: Time and Place of Meetings
2.02.020: Selection of Mayor and Mayor Pro Tempore; Terms of Office
2.02.030: Compensation; Schedule
2.02.040: Compensation; Determination of Population
2.02.050: Compensation; Increase Procedure

2.02.010: TIME AND PLACE OF MEETINGS:

The time for holding the regular meetings of the city council shall be the first and third Tuesday of each month at five o'clock (5:00) P.M. in the council chambers, Civic Center, 35 Cajon Street, Suite 2, Redlands, California. If any such regular meeting falls on a legal holiday, the meeting shall be held on the next city business day.

2.02.020: SELECTION OF MAYOR AND MAYOR PRO TEMPORE; TERMS OF OFFICE:

The city council shall choose one of its members as mayor, and one of its members as mayor pro tempore pursuant to a process set forth in a separate resolution of the city council, which resolution may be amended from time to time

2.02.030: COMPENSATION; SCHEDULE:

Members of the city council shall be compensated according to the following schedule:

A. When the population of Redlands is up to and including thirty five thousand (35,000) in population, three hundred dollars ($300.00) per month;

B. When the population of Redlands is over thirty five thousand (35,000) up to and including fifty thousand (50,000) in population, four hundred dollars ($400.00) per month;

C. When the population of Redlands is over fifty thousand (50,000) up to and including seventy five thousand (75,000) in population, five hundred dollars ($500.00) per month;

D. When the population of Redlands is over seventy five thousand (75,000) up to and including one hundred fifty thousand (150,000) in population, six hundred dollars ($600.00) per month.

2.02.040: COMPENSATION; DETERMINATION OF POPULATION:

For the purposes of sections 2.02.030 through 2.02.050 of this chapter, the population of the city shall be determined either by the last preceding federal census, or by any subsequent census, or by an estimate validated by the state of California department of finance.

2.02.050: COMPENSATION; INCREASE PROCEDURE:

A. The compensation of city council members may be increased beyond the amount provided in section 2.02.030 of this chapter by an ordinance, or by an amendment to an ordinance, but the amount of the increase may not exceed an amount equal to five percent (5%) for each calendar year from the operative date of the last adjustment of the salary in effect when the ordinance, or ordinance amendment, is enacted. No salary ordinance shall be enacted or amended which provides for automatic future increases in salary.

B. Pursuant to City of Redlands Ordinance No. 2886 adopted in accordance with this section 2.02.030, and notwithstanding any other provision of this chapter, the compensation of city council members shall be fourteen hundred dollars ($1,400.00) per month, commencing with the first full City pay period after January 1, 2023.

Section 2. The Mayor shall sign this ordinance and the City Clerk shall certify to the adoption of this ordinance and shall cause it, or a summary of it, to be published once in a newspaper of general circulation within the City, and thereafter, this ordinance shall take effect as provided by law.

_____
Mayor, City of Redlands

ATTEST:

_____
Jeanne Donaldson, City Clerk

I, Jeanne Donaldson, City Clerk, City of Redlands, hereby certify that the foregoing Ordinance was duly adopted by the City Council at the regular meeting thereof, held on the __ day of _____, 2022, by the following vote:

AYES:
NOES:
ABSENT:

_____
Jeanne Donaldson, City Clerk