AGENDA

NOTICE OF REGULAR MEETING
TIME: 6 p.m.
PLACE: Regular Meeting Place
7051 Dublin Boulevard, Dublin, CA
www.dsrsd.com

DATE: Tuesday, September 3, 2024

Our mission is to protect public health and the environment by providing reliable and sustainable water, recycled water, and wastewater services in a safe, efficient, and fiscally responsible manner.

1. CALL TO ORDER

2. PLEDGE TO THE FLAG

3. ROLL CALL

4. SPECIAL ANNOUNCEMENTS/ACTIVITIES

5. PUBLIC COMMENT (MEETING OPEN TO THE PUBLIC)
At this time those in the audience are encouraged to address the Board on any item of interest that is within the subject matter jurisdiction of the Board and not already included on tonight's agenda. Comments should not exceed five minutes. Speaker cards are available from the District Secretary and should be completed and returned to the District Secretary prior to addressing the Board. The President of the Board will recognize each speaker, at which time the speaker should proceed to the lectern. Written comments received by 3 p.m. on the day of the meeting will be provided to the Board.

6. AGENDA MANAGEMENT (CONSIDER ORDER OF ITEMS)

7. CONSENT CALENDAR
Matters listed under this item are considered routine and will be enacted by one Motion, in the form listed below. There will be no separate discussion of these items unless requested by a Member of the Board or the public prior to the time the Board votes on the Motion to adopt.

7.A. Approve Regular Meeting Minutes of August 20, 2024
Recommended Action: Approve by Motion

7.B. Update Officers Authorized to Transfer Monies in the Local Agency Investment Fund and Rescind Resolution No. 27-23
Recommended Action: Authorize by Resolution

8. BOARD BUSINESS

8.A. Receive Presentation on the Electrical Resiliency of the Wastewater and Recycled Water Treatment Plants
Recommended Action: Receive Presentation

8.B. Approve the Water Supply Assessment for the Dublin Commons Project
Recommended Action: Approve by Resolution

9. REPORTS

9.A. Boardmember Items

9.A.1. Joint Powers Authority and Committee Reports
LAVWMA Board Meeting of August 21, 2024
9.A.2. Submittal of Written Reports for Day of Service Events Attended by Directors
9.A.3. Request New Agenda Item(s) Be Placed on a Future Board or Committee Agenda

9.B. Staff Reports

10. ADJOURNMENT

All materials made available or distributed in open session at Board or Board Committee meetings are public information and are available for inspection during business hours by calling the District Secretary at (925) 828-0515. A fee may be charged for copies. District facilities and meetings comply with the Americans with Disabilities Act. If special accommodations are needed, please contact the District Secretary as soon as possible, but at least two days prior to the meeting.

DUBLIN SAN RAMON SERVICES DISTRICT
MINUTES OF A REGULAR MEETING OF THE BOARD OF DIRECTORS

August 20, 2024

1. CALL TO ORDER

A regular meeting of the Board of Directors was called to order at 6 p.m. by President Johnson.

2. PLEDGE TO THE FLAG

3. ROLL CALL

Boardmembers present at start of meeting: President Ann Marie Johnson, Vice President Arun Goel, Director Richard M. Halket, Director Dinesh Govindarao, and Director Georgean M. Vonheeder-Leopold.

District staff present: Jan Lee, General Manager/Treasurer; Michelle Gallardo, Special Assistant to the General Manager/Interim Administrative Services Director; Steve Delight, Engineering Services Director/District Engineer; Ken Spray/Financial Director, Dan Gill, Operations Director; Douglas E. Coty, General Counsel; and Nicole Genzale, Executive Services Supervisor/District Secretary.

4. SPECIAL ANNOUNCEMENTS/ACTIVITIES

4.A. New Employee Introductions
Ken Spray, Finance Director

5. PUBLIC COMMENT (MEETING OPEN TO THE PUBLIC) – 6:02 p.m. No public comment was received.

6. AGENDA MANAGEMENT (CONSIDER ORDER OF ITEMS) – No changes were made.

7. CONSENT CALENDAR

Vice President Goel MOVED for approval of the items on the Consent Calendar. Director Vonheeder-Leopold SECONDED the MOTION, which CARRIED with FIVE AYES.

7.A. Approve Regular Meeting Minutes of August 6, 2024 – Approved

7.B. Affirm No Changes to Project Cost Allocation Policy – Approved

7.C. Approve First Amendment to Telecommunications Site Lease Agreement with DISH Wireless LLC for a Telecommunications Tower at Reservoir R20 – Approved

8. BOARD BUSINESS

8.A. Receive Strategic Plan Progress Report for Fiscal Year Ending 2024

General Manager Lee introduced the item. Interim Administrative Services Director Gallardo, Engineering Services Director Delight, and Operations Director Gill reviewed

the item for the Board and gave a presentation (handed out to the Board and posted to the website as supplemental materials) providing a progress report on the 10 Strategic Plan (Plan) goals and their related action items.

The Board and staff discussed and clarified the following goal items:

- Updating of the Crane Safety Program – to specify the various crane types and their related certification requirements.
- Updating of the Cross Connection Control Plan – to comply with new regulatory requirements for residential fire sprinkler systems. Staff also indicated that more information would be provided at a future Board meeting.
- Completing the financial system conversion from Eden to Tyler Munis – the final module for utility billing is switching over this evening.

The Board requested additional information and suggested Plan and progress report enhancements in the following areas:

- Distinguish between new versus existing safety programs that are being updated
- Provide the Board the year-to-year impacts (trend) of the District's training and development programs on staff retention and recruitment
- Explore broadening the community outreach efforts by marketing Wastewater Treatment Plant facility tours to students within DSRSD's service area
- Reevaluate and ensure goals are aspirational in nature rather than routine
- Incorporate visual indicators, such as color coding, to easily identify goal progress and areas needing additional support.

The Board and staff discussed the overall progress report for fiscal year ending 2024 and noted that priorities can fluctuate over the course of the Plan's five-year timeframe. General Manager Lee stated that for the upcoming Plan update, staff plans to incorporate a schedule element to better inform staff planning efforts, manage workload expectations, and ensure alignment of priorities. She also recommended firmly incorporating infrastructure management into the refreshed Plan.

8.B. Receive Update on DSRSD Financing Corporation and Provide Direction

Finance Director Spray reviewed the item for the Board. The Board and staff discussed the history and utilization of the Financing Corporation (Corporation), the alternatives for conducting future financial transactions, and the fees, administration, and legal considerations for the two options presented:

- Option #1 – Continue the Financing Corporation. Renewal fees could range from a few hundred dollars to several thousand dollars based on various factors as determined by the Internal Revenue Service, as well as annual filing fees, Board meeting administration costs, and a potentially arduous renewal process. It is unlikely the District would require the Corporation to issue debt in the future.

- Option #2 – Dissolve the Financing Corporation. There are no fees assessed to dissolve the Corporation. A special Financing Corporation Board meeting would need to be held to perform the necessary dissolution proceedings and activities.

For future transactions, the District could directly issue debt or utilize "transaction-specific" counterparty services, with a one-time charge of approximately $5,000 to $10,000 included in the costs of issuance.

General Counsel Coty stated that he worked closely with Mr. Spray on preparing this item and recommended that the District dissolve the Corporation, as the District no longer needs this type of vehicle to conduct financial transactions. He confirmed that from a legal perspective, there are no adverse impacts to, nor benefits lost by, the District should the Board decide to dissolve the Corporation.

The Board directed staff to proceed with Option #2 to dissolve the Financing Corporation, and to schedule a special Financing Corporation Board meeting to do so.

Vice President Goel MOVED to Direct Staff to Proceed with Option #2 to Dissolve the Financing Corporation. Director Vonheeder-Leopold SECONDED the MOTION, which CARRIED with FIVE AYES.

9. REPORTS

9.A. Boardmember Items

9.A.1. Joint Powers Authority and Committee Reports

DERWA Special Board Meeting of August 12, 2024

President Johnson invited comments on recent JPA activities. Directors felt the available staff reports adequately covered the many matters considered at the JPA meeting and commented on some of the JPA activities. Director Vonheeder-Leopold announced that the DERWA Board appointed Vivian Housen as the new Authority Manager.

9.A.2. Submittal of Written Reports for Day of Service Events Attended by Directors

Director Vonheeder-Leopold submitted a written report to Executive Services Supervisor/District Secretary Genzale. She reported that she attended the virtual Alameda County Special Districts Association Executive Committee meeting on August 7. She summarized the activities and discussions at the meeting.

President Johnson submitted a written report to Executive Services Supervisor/ District Secretary Genzale. She reported that she attended the virtual California Special Districts Association Finance Committee meeting on August 16. She summarized the activities and discussions at the meeting.

9.A.3. Request New Agenda Item(s) Be Placed on a Future Board or Committee Agenda

Director Goel requested an item be scheduled for an upcoming meeting regarding annual employee retention and recruitment trends as related to District training and development programs.

9.B. Staff Reports

General Manager Lee reported on the following items:

- A LAVWMA Board meeting will be held tomorrow, August 21, at 6 p.m.
- The Tri-Valley Annual Mayors' Summit will be held on Thursday, August 22, at 10:30 a.m. in Danville.
- The regular September 3 Board meeting will be held as scheduled.
- A DSRSD/City of Dublin Liaison Committee meeting will be held on Monday, September 16, at 4 p.m.

10. CLOSED SESSION

At 7:02 p.m. the Board went into Closed Session.

10.A. Conference with Legal Counsel – Significant Exposure to Litigation Pursuant to Government Code Section 54956.9(d)(2): One Case

11. REPORT FROM CLOSED SESSION

At 7:39 p.m. the Board came out of Closed Session. President Johnson announced that there was no reportable action.

12. ADJOURNMENT

President Johnson adjourned the meeting at 7:39 p.m.

Submitted by,

Nicole Genzale, CMC
Executive Services Supervisor/District Secretary

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: September 3, 2024

TITLE: Update Officers Authorized to Transfer Monies in the Local Agency Investment Fund and Rescind Resolution No. 27-23

RECOMMENDATION:

Staff recommends the Board of Directors authorize, by Resolution, officers to transfer monies in the Local Agency Investment Fund (LAIF) and rescind Resolution No. 27-23.

DISCUSSION:

To participate in the LAIF, the District must file a resolution with the State Treasurer's Office to authorize the investment of District monies and to name the officers or their successors in office authorized to order the deposit and withdrawal of monies in the LAIF. Since the most recent adoption of such resolution, Resolution No. 27-23 adopted on July 18, 2023, the District has created the positions of Finance Supervisor and Finance Director to oversee the new Finance Department. The District Treasurer position could be either the General Manager or the Finance Director, as the Board deems appropriate. The General Manager is currently serving as the District Treasurer. The proposed resolution makes updates to the names and position titles on file with the State.

Pursuant to Chapter 730 of the Statutes of 1976, Section 16429.1 was added to the California Government Code to create the LAIF in the State Treasury for the deposit of money of a local agency for the purposes of investment by the State Treasurer. The advantages of investing a portion of the District's portfolio in the LAIF is that this is an interest-earning liquid investment with stable value that is held on the District's behalf in a larger pool. Intermediate term expenses can be drawn from this investment option. At the end of fiscal year ending 2024, about 8 percent of the District's cash assets are held in the LAIF. Under the District's Investment policy, the Treasurer may invest anywhere from 0 percent to 100 percent of the District's cash in this fund, although the LAIF "caps" DSRSD's investment at $75 million.

The proposed resolution authorizes investments of District monies in the LAIF and grants authorization to the following officers or their successors in office to deposit or withdraw monies in the LAIF:

- Jan R. Lee, General Manager
- Kenneth Spray, Finance Director
- Christine Chen, Finance Supervisor
- Thinh Lucero, Financial Analyst

Originating Department: Finance	**Contact: V. Chiu/K. Spray**	**Legal Review: Not Required**
Financial Review: Yes	**Cost and Funding Source: N/A**	
Attachments: ☐ None ☒ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☐ Other (see list on right)		

RESOLUTION NO. _____

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT AUTHORIZING INVESTMENT OF MONIES IN THE LOCAL AGENCY INVESTMENT FUND AND RESCINDING RESOLUTION NO. 27-23

WHEREAS, the Local Agency Investment Fund is established in the State Treasury under Government Code Section 16429.1 et. seq. for the deposit of monies of a local agency for the purposes of investment by the State Treasurer; and

WHEREAS, the Board of Directors does hereby find that the deposit and withdrawal of monies in the Local Agency Investment Fund in accordance with Government Code Section 16429.1 et. seq. for the purposes of investment as provided therein is in the best interests of the Dublin San Ramon Services District ("District").

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT, a public agency located in the Counties of Alameda and Contra Costa, California, that the deposit and withdrawal of District monies in the Local Agency Investment Fund in the State Treasury are authorized in accordance with Government Code Section 16429.1 et. seq. for the purpose of investment as provided therein.

BE IT FURTHER RESOLVED, as follows:

1. Resolution No. 27-23, titled "Resolution of the Board of Directors of the Dublin San Ramon Services District Authorizing Investment of District Monies in the Local Agency Investment Fund and Rescinding Resolution No. 1-17" and attached as Exhibit "A," is hereby rescinded.

2. The following District officers holding the titles specified hereinbelow or their successors in office are each hereby authorized to order the deposit or withdrawal of monies in the Local Agency Investment Fund and may execute and deliver any and all documents necessary or advisable in order to effectuate the purposes of this resolution and the transactions contemplated hereby:

Jan R. Lee	General Manager
Kenneth Spray	Finance Director
Christine Chen	Finance Supervisor
Thinh Lucero	Financial Analyst

3. This resolution shall remain in full force and effect until rescinded by the Board of Directors by resolution.

Res. No. _____

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 3rd day of September, 2024, and passed by the following vote:

AYES:

NOES:

ABSENT:

_____
Ann Marie Johnson, President

ATTEST: _____
Nicole Genzale, District Secretary

RESOLUTION NO. 27-23

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT AUTHORIZING INVESTMENT OF DISTRICT MONIES IN THE LOCAL AGENCY INVESTMENT FUND AND RESCINDING RESOLUTION NO. 1-17

WHEREAS, pursuant to Chapter 730 of the Statutes of 1976, Section 16429.1 was added to the California Government Code to create a Local Agency Investment Fund in the State Treasury for the deposit of money of a local agency for the purposes of investment by the State Treasurer; and

WHEREAS, the Board of Directors does hereby find that the deposit and withdrawal of money in the Local Agency Investment Fund in accordance with provisions of Section 16429.1 of the California Government Code for the purposes of investment as stated therein is in the best interests of the District.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT, a public agency located in the Counties of Alameda and Contra Costa, California, as follows:

1. The Board hereby authorizes the deposit and withdrawal of Dublin San Ramon Services District monies in the Local Agency Investment Fund in the State Treasury in accordance with the provisions of Section 16429.1 of the California Government Code for the purpose of investment as stated therein and verification by the State Treasurer's Office of all banking information provided in that regard.

2. The Board hereby rescinds Resolution No. 1-17, attached as Exhibit "A" and titled "Resolution of the Board of Directors of the Dublin San Ramon Services District Authorizing Investment of District Monies in the Local Agency Investment Fund and Rescinding Resolution No. 9-03."

3. That the following Dublin San Ramon Services District officers or their successors in office shall be authorized to order the deposit or withdrawal of monies in the Local Agency Investment Fund and may execute and deliver any and all documents necessary or advisable in order to effectuate the purposes of this resolution and the transactions contemplated hereby:

Daniel McIntyre	General Manager
Carol Atwood	Administrative Services Director/Treasurer
Herman Chen	Financial Services Manager
Rene Escobar	Financial Analyst

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Res. No. 27-23

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 18th day of July, 2023, and passed by the following vote:

AYES: 5 – Directors Ann Marie Johnson, Dinesh Govindarao, Richard M. Halket, Arun Goel, Georgean M. Vonheeder-Leopold

NOES: 0

ABSENT: 0

Georgean M. Vonheeder-Leopold, President

ATTEST: _____
Nicole Genzale, District Secretary

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: September 3, 2024

TITLE: Receive Presentation on the Electrical Resiliency of the Wastewater and Recycled Water Treatment Plants

RECOMMENDATION:

Staff recommends the Board of Directors receive an informational presentation on the electrical resiliency of the wastewater and recycled water treatment plants.

DISCUSSION:

The District has a Strategic Plan goal to "Improve energy efficiency and reliability for the District." In addition, the District recently adopted the Energy policy in February 2024, to provide an adaptable framework to enhance energy system resiliency and reliability, optimize energy efficiency, increase renewable energy production, comply with current and future energy and greenhouse gas mandates, and promote environmental sustainability.

On September 3, staff will provide an informational presentation on the electrical resiliency of the wastewater and recycled water treatment plants. The presentation will review the various resilient features of the electrical system that enable continuous operation of the wastewater treatment plant in the event of utility power failures and highlight future enhancements staff is pursuing that could further improve electrical resiliency and reliability, consistent with the Strategic Plan goals and the Energy policy.

Originating Department: Operations	**Contact: M. Nakamura/D. Gill**	**Legal Review: Not Required**
Financial Review: Not Required	**Cost and Funding Source: N/A**	
Attachments: ☐ None ☐ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☒ Other (see list on right)	**Attachment 1 – Presentation Slides**	

Wastewater and Recycled Water Treatment Plants Electrical Resiliency

September 3, 2024

Mike Nakamura, P.E.
Principal Electrical Engineer

Dublin San Ramon Services District
Water, wastewater, recycled water

Agenda

- Major electrical system components
- Resilient design
- Future improvements
- Discussion

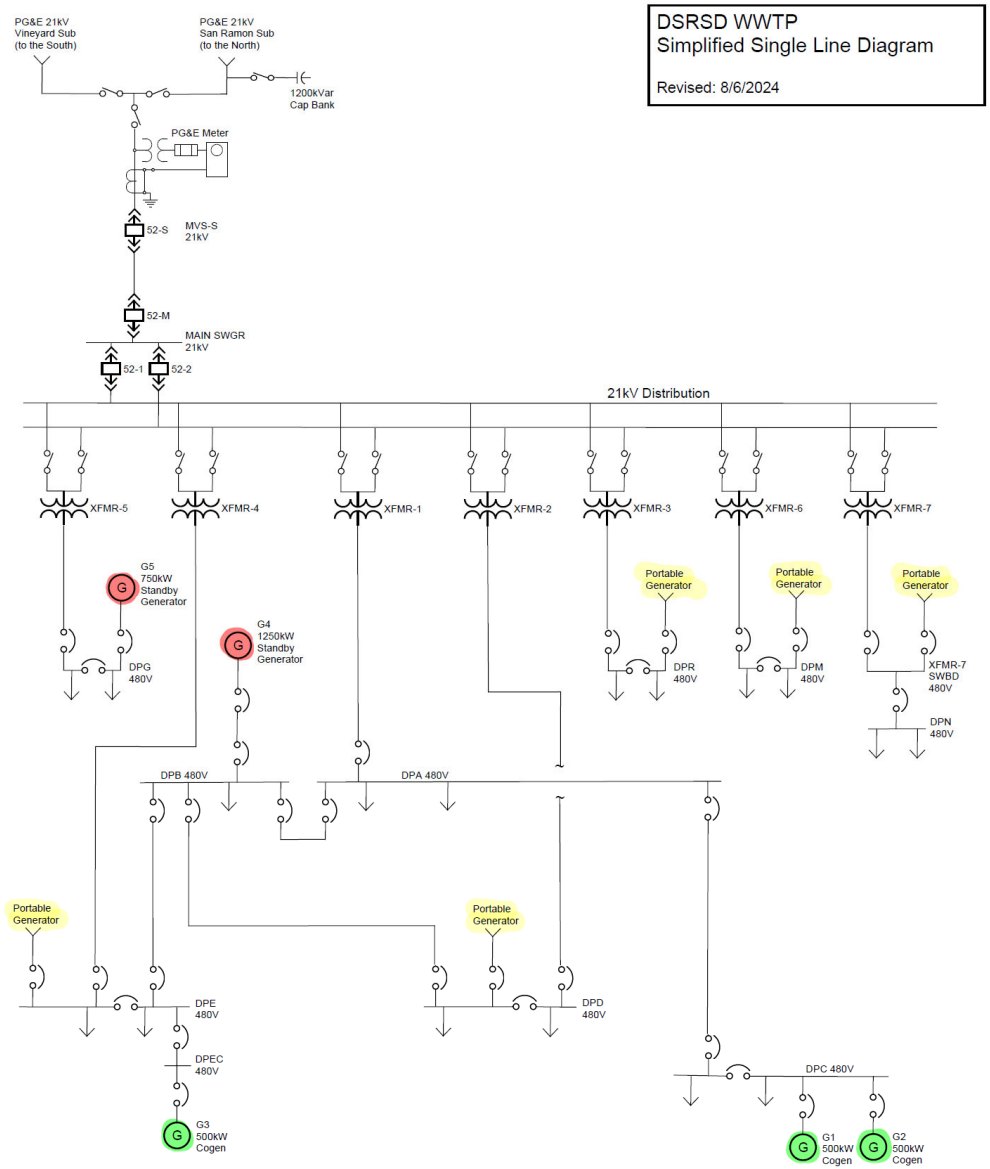
Strategic Plan Goal

- Improve energy efficiency and reliability for the District

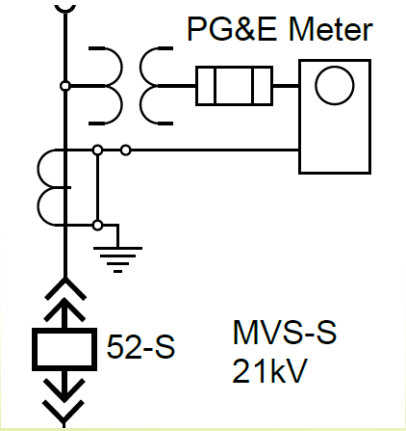
Energy Policy P200-24-1

- **Establish and manage a diverse, reliable, and resilient energy supply…**
- **Assess opportunities to include cost-effective features that enhance energy reliability and resiliency…**

Single Line Diagram

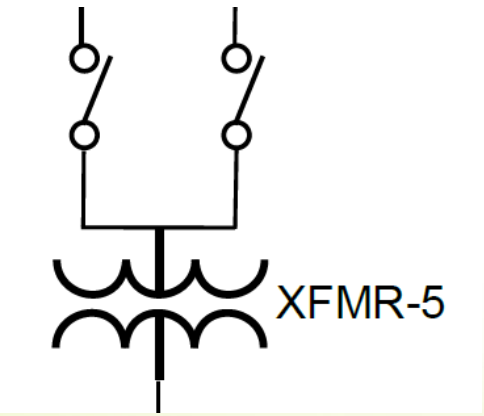


Meter

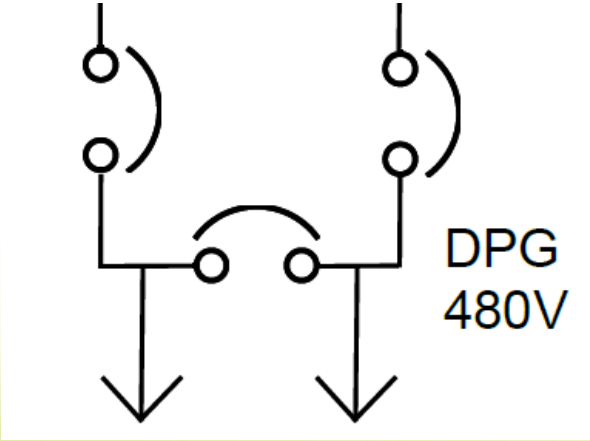

PG&E Meter
52-S
MVS-S
21kV


PG&E LOCKABLE
VISIBLE
GENERATOR
DISCONNECT
SWITCH

Transformer



Distribution Panel

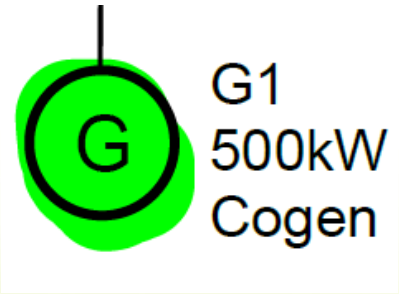


Emergency Generators

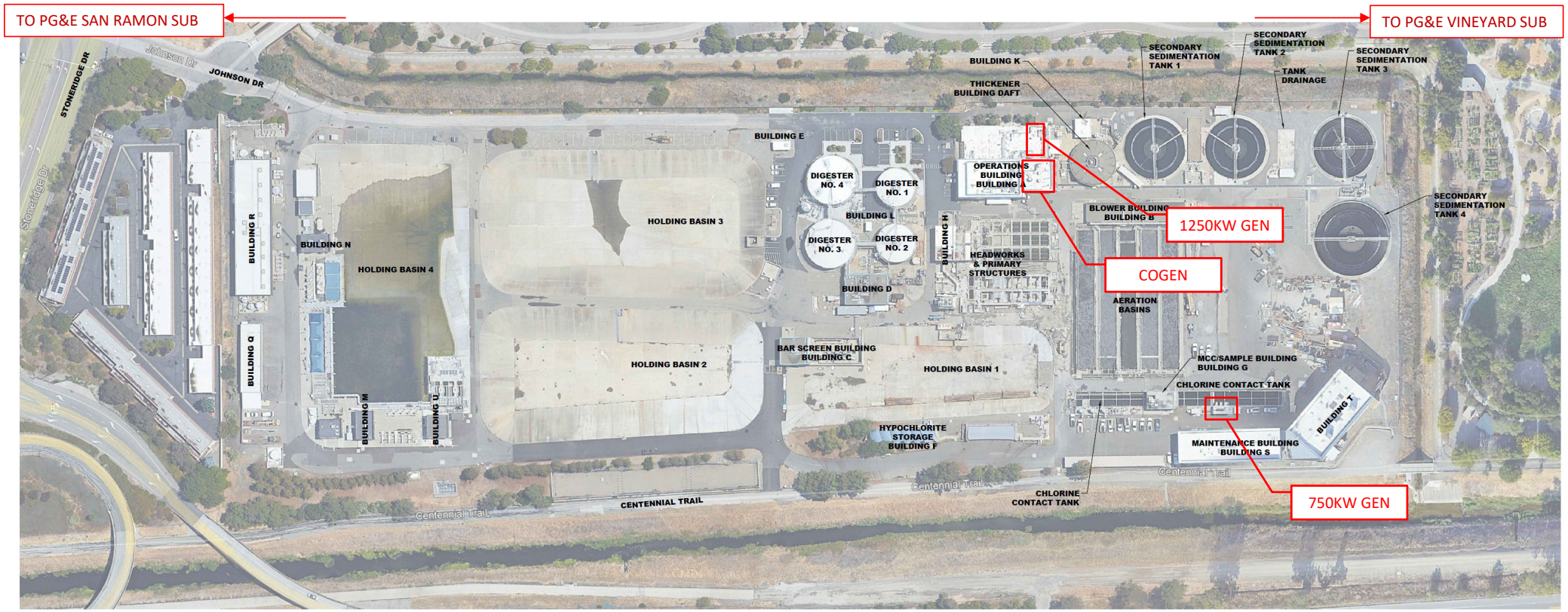
Portable Generator

G4
1250kW
Standby
Generator

Cogeneration Engine



WWTP Aerial Map



Resilient Design

» PG&E Service

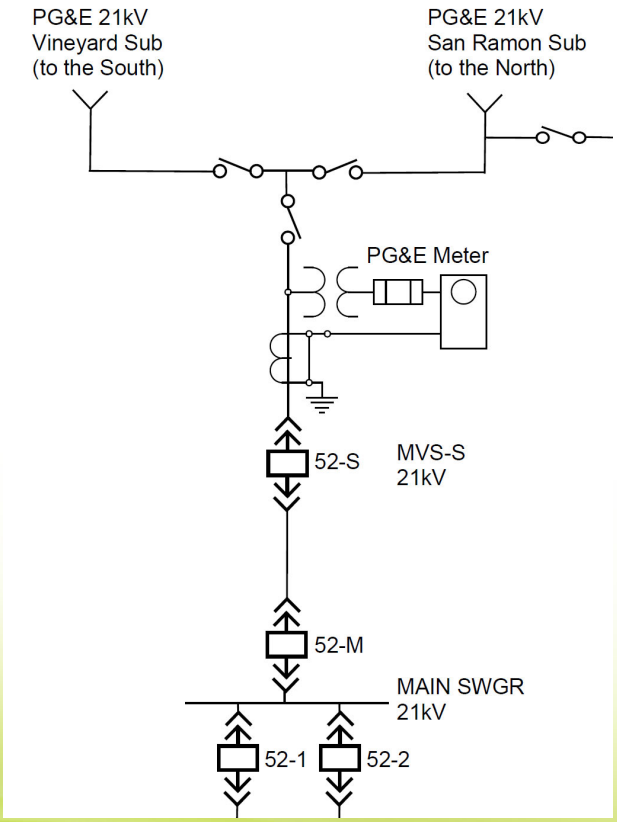
- Fed by two PG&E substations
  - Ability to switch between two circuits

» Power Distribution

- Redundant 21kV distribution
- Double-ended 480V switchgear
- Spare transformer

» Backup Power

- Two on-site, automatic standby diesel generators
- Portable generator connections at recycled water treatment plant



What happens ~~if~~ when there is a power outage?

Standby generators turn on

- Recycled Water Plant NOT powered by standby generators (requires portable generator)

Electrical loads transferred to generators

- Approx. 1-2 days of runtime before refueling is required

Electrical loads transferred back to PG&E and generators shut down once power is restored

- Time delay

All of this happens **automatically**

PG&E Outage History (2014-2024)

Future Improvements

- **Replace Aging Infrastructure** (described in Energy Facilities Master Plan)
  - Cogeneration Engine Replacement
    - Explore ability to run islanded
  - WWTP Electrical Improvements – Phase 1
    - Address issues with load and short circuit deficiencies
- **Power Quality Monitoring**
- **Explore backup power at Recycled Water Treatment Plant for nutrient compliance**

Dublin San Ramon Services District
Water, wastewater, recycled water

Discussion

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: September 3, 2024

TITLE: Approve the Water Supply Assessment for the Dublin Commons Project

RECOMMENDATION:

Staff recommends the Board of Directors approve, by Resolution, the Water Supply Assessment for the Dublin Commons Project.

SUMMARY:

The Dublin Commons Project (Project) is a 30-acre redevelopment project located within the Downtown Dublin Specific Plan (DDSP) area. In accordance with State law, the City of Dublin (City) has requested that DSRSD prepare a Water Supply Assessment (WSA) to verify that there are sufficient water supplies to serve the Project, along with existing and future planned uses, for at least the next 20 years. Estimated potable water demands for the Project are accounted for in DSRSD's 2020 Urban Water Management Plan (UWMP), which demonstrates that DSRSD has sufficient potable water supplies to meet projected demands through 2045, even during multiple dry years. Therefore, the WSA concludes that DSRSD has sufficient supplies to meet the projected potable water demands associated with the Project.

BACKGROUND:

California Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 were companion measures which sought to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of proposed projects.

SB 610 amended the California Water Code to require land use lead agencies to identify potential water suppliers and obtain a WSA from them. SB 221 amended State law to provide that approval by a city or county of certain residential subdivisions (e.g., 500 dwelling units or greater) require an affirmative written verification of sufficient water supply. The WSA is intended to demonstrate that a water provider has sufficient supplies to meet the demands of a proposed development, along with existing and planned future uses within the supplier's service area. A foundational document for compliance with both SB 610 and SB 221 is the UWMP. UWMPs are prepared by urban water suppliers every five years to support the suppliers' long-term resource planning and ensure that adequate water supplies are available to meet existing and future demands. State law repeatedly identifies the UWMP as a planning document that can be used by a water supplier to demonstrate compliance with SB 610 and SB 221.

In May 2024, the City of Dublin requested DSRSD prepare a WSA for the Project to satisfy the requirements of SB 610 and SB 221, as the Project does include a residential subdivision with more than 500 dwelling units.

DISCUSSION:

The Project is located in Downtown Dublin and within the DDSP area. Adopted by the City Council in February 2011, the DDSP seeks to create a commercial and mixed-use center. As shown on Attachment 1, the Project is part of the

Originating Department: Engineering and Technical Services	**Contact: R. Chu/S. Delight**	**Legal Review: Not Required**
Financial Review: Not Required	**Cost and Funding Source: N/A**	
Attachments: ☐ None ☒ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☒ Other (see list on right)	**Attachment 1 – Proposed Project Location**	

Downtown Dublin Preferred Vision (a roadmap for improving the Retail District of the DDSP) and will redevelop approximately 30 acres of the existing Dublin Plaza Center, bounded by Amador Valley Boulevard to the north, Amador Plaza Road to the east, Dublin Boulevard to the south, and Regional Street to the west. The Project's current land use plan includes 1,510 high density dwelling units, 275,000 square feet (SF) of retail space (155,000 SF new and 120,000 SF existing), 535,000 SF of life science space, and approximately 1.1 acres of park space.

Because this is a redevelopment project, estimating the potable water demand for the Project requires comparing existing and future water use at the Project site. For instance, if the new building is expected to use the same volume of water as the structure it replaces, there will be no increase in water usage. In addition, the Project site currently utilizes recycled water, and it is anticipated that recycled water use will continue at a similar amount post-redevelopment. Therefore, recycled water is available to offset outdoor water demands that would otherwise be met with potable water. After accounting for existing potable and recycled water use at the Project site, the Project's potable water demand is approximately 318 acre-feet per year (AFY).

DSRSD's 2020 UWMP accounts for projected potable water use for the entire DDSP area, including the Project. Since a portion of the DDSP was already constructed prior to when DSRSD began preparing its 2020 UWMP, only those units yet to be constructed were included as future new potable water demands in the 2020 UWMP. As shown in the table below, when comparing the projected potable water demands for the remaining DDSP area that were accounted for in the 2020 UWMP versus the estimated demands in the 2024 WSA, which include the Project, the projected demands in the 2020 UWMP are higher. The higher demands estimated in the UWMP are due to differences in land use assumptions and lower water use factors used in the 2024 WSA that reflect improved water use efficiency over time.

Comparison of Remaining DDSP Area Potable Water Demands Based on 2020 UWMP versus 2024 WSA

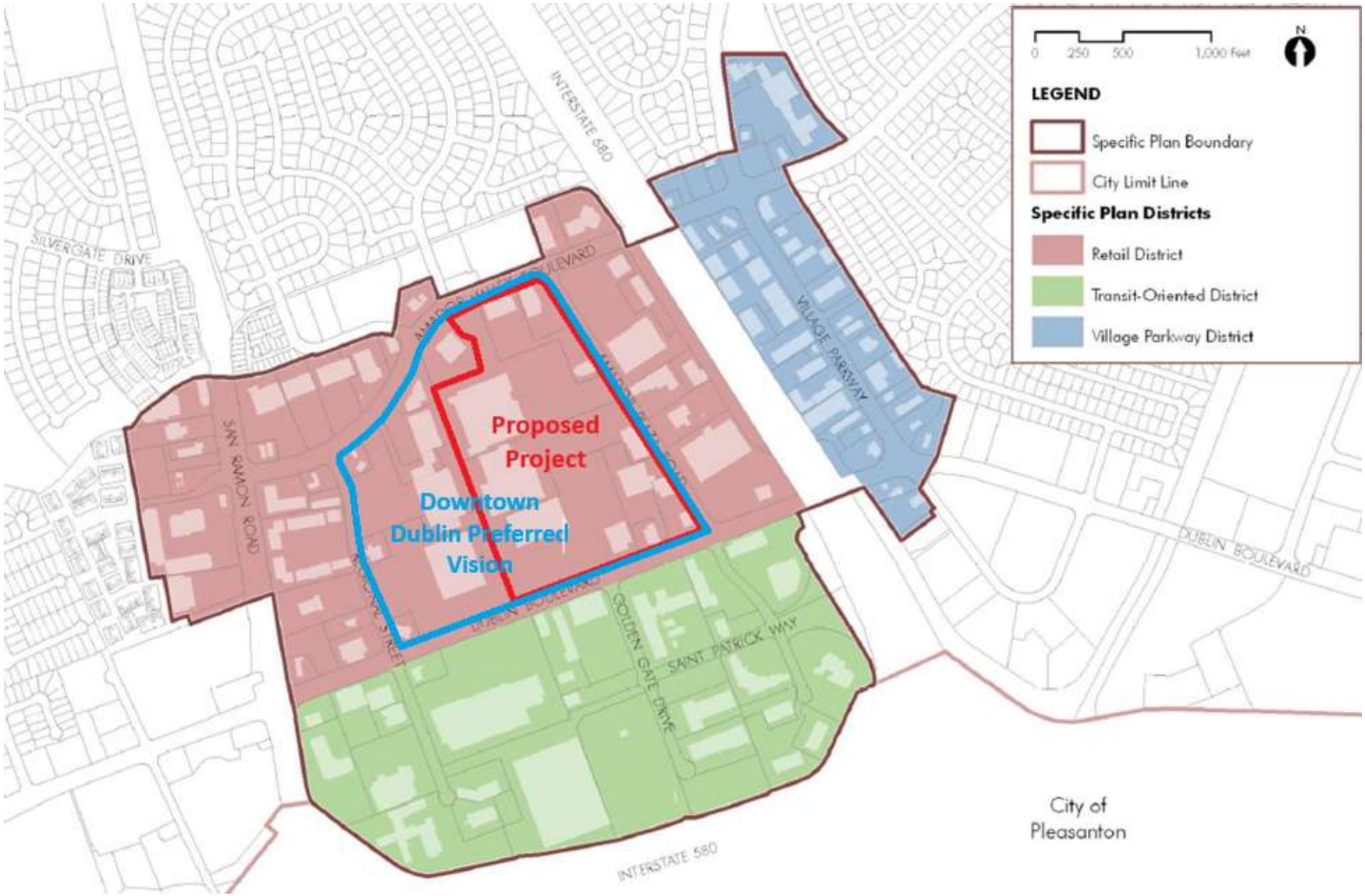
	Demand, AFY
Proposed Project	318
Remaining Developing in DDSP Area	54
2024 WSA – Estimated Demand	372
2020 UWMP – Estimated Demand	522
Difference (2020 UWMP – 2024 WSA)	**+150**

DSRSD purchases all of its water supplies from the Zone 7 Water Agency (Zone 7). The availability and reliability of DSRSD's water supplies are based on information contained in DSRSD's 2020 UWMP and Zone 7's UWMP, which demonstrate that DSRSD has sufficient supplies to meet future potable water demands through 2045 in normal, single dry, and multiple dry years. Based on the analysis in DSRSD's 2020 UWMP and because the Project demands are accounted for in the 2020 UWMP, the WSA demonstrates that DSRSD has sufficient water supply to meet the potable water demands for the Project, along with existing and planned future uses.

NEXT STEPS:

Upon approval by DSRSD's Board of Directors, the WSA will be delivered to the City and will be considered as part of the Project approval.

Proposed Project Location



RESOLUTION NO. _____

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT APPROVING THE WATER SUPPLY ASSESSMENT FOR THE DUBLIN COMMONS PROJECT

WHEREAS, under the 2001 Senate Bill 610 (SB 610), development projects consisting of residential projects with greater than 500 units and commercial projects employing more than 1,000 persons or having greater than 250,000 square feet require a project-specific water supply assessment prior to project approval; and

WHEREAS, under the 2001 Senate Bill 221 (SB 221), development projects consisting of subdivisions of more than 500 dwelling units require written verification of sufficient water supply prior to project approval; and

WHEREAS, on May 9, 2024, the City, as the lead agency, requested a project-specific water supply assessment for the Dublin Commons Project (Project) and verification of water supply in accordance with SB 610 and SB 221; and

WHEREAS, the land use plan for the Project consists of up to 1,510 dwelling units, 275,000 square feet (SF) of retail space (155,000 SF new and 120,000 SF existing), 535,000 SF of life science space, and 1.13 acres of park space, and therefore, the Project requires an SB 610 water supply assessment and an SB 221 verification of sufficient water supply; and

WHEREAS, as the water supplier for the Project, the District is required to verify that water supply is sufficient for the Project in accordance with SB 610 and SB 221 and approve the water supply assessment; and

WHEREAS, the District has completed the water supply assessment and water supply verification in accordance with SB 610 and SB 221; and

WHEREAS, the Project demands are accounted for in the District's 2020 Urban Water Management Plan (UWMP), which demonstrates that the District has sufficient water supply to meet the potable water demands through 2045 in normal, single-dry, and multiple dry years; and

WHEREAS, based on technical analyses in the District's UWMP, the water supply assessment demonstrates that the District has sufficient water supply to meet the potable water demands for the Project, along with existing and planned future uses.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT, a public agency located in the Counties of Alameda and Contra Costa, California, as follows:

The Dublin Commons Project Water Supply Assessment, attached hereto and incorporated herein as Exhibit "A," is hereby approved, and the General Manager is authorized to submit the Dublin Commons Project Water Supply Assessment to the City.

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 3rd day of September, 2024, and passed by the following vote:

AYES:

NOES:

ABSENT:

_____
Ann Marie Johnson, President

ATTEST: _____
Nicole Genzale, District Secretary

Dublin Commons Project

Water Supply Assessment

August 29, 2024

Dublin San Ramon Services District

Water, wastewater, recycled water

Prepared By: Roger Chu Digitally signed by Roger Chu Date: 2024.08.30 08:04:24 -07'00'

Roger Chu, PE
Associate Engineer

Reviewed By: Irene Suroso Digitally signed by Irene Suroso Date: 2024.08.30 08:22:54 -07'00'

Irene Suroso, PE
Senior Engineer

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Acronyms and Abbreviations

ACWD	Alameda County Water District
AF	acre-feet
AFY	acre-feet per year
Board	Board of Directors
Cawelo	Cawelo Water District
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	cubic feet per second
City	City of Dublin
COA	Coordinated Operations Agreement
Cr(VI)	hexavalent chromium
CVP	Central Valley Project
DBPs	disinfection byproducts
DCP	Delta Conveyance Project
DCR	Delivery Capability Report
DDSP	Downtown Dublin Specific Plan
Delta	Sacramento-San Joaquin Delta
DERWA	DSRSD-EBMUD Recycled Water Authority
DOC	dissolved organic carbon
DSRSD	Dublin San Ramon Services District
DU	dwelling units
DWR	California Department of Water Resources
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
GMP	Groundwater Management Plan
gpd	gallons per day
GPQ	groundwater pumping quota
InSAR	Interferometric Synthetic Aperture Radar
M&I	municipal and industrial
Main Basin	Livermore Valley Main Basin

MCL	maximum contaminant level
mgd	million gallons per day
MGDP	Mocho Groundwater Demineralization Plant
NRW	non-revenue water
PFAS	per- and polyfluoroalkyl substances
Proposed Project	Dublin Commons Project
SB	Senate Bill
SBA	South Bay Aqueduct
Semitropic	Semitropic Water Storage District
SF	square feet
SGMA	Sustainable Groundwater Management Act
SRVRWP	San Ramon Valley Recycled Water Program
SWP	State Water Project
T&O	taste and odor
TDS	total dissolved solids
TM	technical memorandum
TOC	total organic carbon
UWMP	Urban Water Management Plan
Water Code	California Water Code
WSA	Water Supply Assessment
WSCP	Water Shortage Contingency Plan
Yuba Accord	Lower Yuba River Accord
Zone 7	Zone 7 Water Agency

EXECUTIVE SUMMARY

Background and Overview

In 2002, the State of California began requiring local water suppliers and cities and counties to collaborate on planning efforts by requiring a Water Supply Assessment (WSA) to be provided to city and county decision-makers prior to approving certain large development projects. The City of Dublin (City) requested that Dublin San Ramon Services District (DSRSD) prepare this WSA for the Dublin Commons Project (Proposed Project) in accordance with California Water Code sections 10910 through 10915. The Proposed Project is located in Downtown Dublin and is within the Downtown Dublin Specific Plan (DDSP) area.

Adopted by the City Council in February 2011 (Resolution No. 09-11), the DDSP seeks to create a commercial and mixed-use center. The DDSP area is 284 acres and consists of three districts (Retail, Transit-Oriented, and Village Parkway), each with its own development standards. Net new development potential in the DDSP area includes almost 2 million square feet of non-residential space, over 3,300 dwelling units (DU), and 150 hotel rooms.

As shown on Figure ES-1, the Proposed Project is part of the Downtown Dublin Preferred Vision (a roadmap for improving the Retail District of the DDSP) and will redevelop approximately 30 acres of the existing Dublin Plaza Center. Development potential for the Proposed Project includes up to 275,000 square feet (SF) retail (155,000 SF of new retail and 120,000 SF of existing retail), 535,000 SF of life science, 1,510 multifamily residential DU, and two new parks.

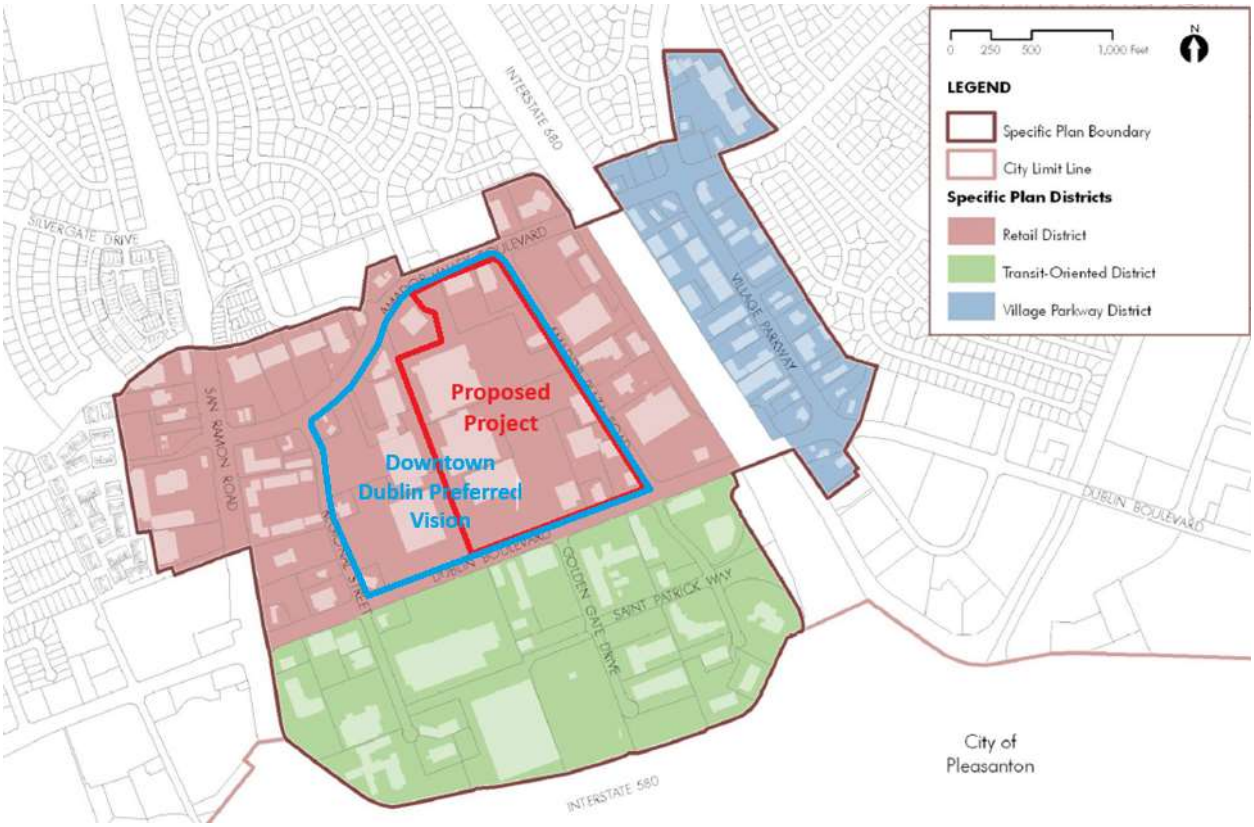


Figure ES-1. Proposed Project Location within the Downtown Dublin Specific Plan Area

Projected Potable Water Demands

This WSA assumes the Proposed Project will use a combination of potable and recycled water. Although there is currently a moratorium on new recycled water connections due to limited recycled water supply, the Proposed Project site has an existing recycled water connection and currently utilizes recycled water for outdoor irrigation. Following redevelopment, the Proposed Project site could still utilize the existing recycled water connection. Expanded recycled water use at the Proposed Project site may be possible in the future, pending additional recycled water supply.

The existing recycled water use is assumed to be split evenly - 50% associated with retail space that will remain and 50% associated with space that will be redeveloped as part of the Proposed Project. Therefore, half of the current recycled water use can be applied to meet future outdoor water demands in the redeveloped areas.

Potable water demands for the Proposed Project are estimated based on land use and recently developed water use factors. After accounting for recycled water and existing potable water demands at the Proposed Project site, the additional potable water supply required to serve the Proposed Project is approximately 0.28 million gallons per day (mgd), or 318 acre-feet per year (AFY).

The 2020 Urban Water Management Plan (UWMP) prepared by DSRSD accounts for the potable water demands of the entire DDSP area, including the Proposed Project. However, due to limited detailed information on the redevelopment plans when the 2020 UWMP was prepared, DSRSD made a moderately conservative assumption to estimate the potable water demands for the Proposed Project. As a result, the potable water demands for the Proposed Project are higher in the UWMP than in this current WSA. Therefore, this WSA relies on the water supply analyses from DSRSD's 2020 UWMP to determine the potable water supply sufficiency for the Proposed Project.

Potable Water Supply Availability and Reliability

The availability and reliability of DSRSD's potable water supplies, as described in this WSA, are based primarily on DSRSD's 2020 UWMP and Zone 7's 2020 UWMP. DSRSD's primary water supply source is purchased potable water from Zone 7 Water Agency (Zone 7). Zone 7 is a State Water Project (SWP) contractor wholesaling treated water to four retail water agencies (DSRSD, City of Pleasanton, City of Livermore, and Cal Water Livermore District). DSRSD's water supply is augmented with recycled water from a recycled water treatment plant owned and operated by DSRSD.

On average, imported surface water provides 80 percent of Zone 7's supplies, while local watershed runoff accounts for 10 percent, and the remaining 10 percent is derived from previously imported water stored in the local groundwater. All of Zone 7's imported water is conveyed through the Sacramento-San Joaquin Delta (Delta) and the South Bay Aqueduct (SBA), making the challenges associated with the Delta—such as aging levees, saltwater intrusion, and various water quality issues—particularly significant for Zone 7. Additionally, Zone 7 actively monitors and manages groundwater quality, especially for total dissolved solids, hexavalent chromium, and per-and polyfluoroalkyl substances (PFAS).

Despite these challenges, Zone 7's 2020 UWMP projects water supplies will be sufficient to meet future demands, including those of DSRSD and other retailers, through 2045, even during single and multiple dry years. Therefore, DSRSD's 2020 UWMP also projects sufficient water supplies to meet future demands through 2045, even in single dry and multiple dry years. Since DSRSD's 2020 UWMP includes demands for the Proposed Project, DSRSD finds that projected potable water supplies during normal, single dry, and multiple dry water years over the next 25 years will meet the projected potable water demand associated with the Proposed Project, in addition to existing and planned future uses.

1.0 INTRODUCTION

1.1 Legal Requirement for Water Supply Assessment

California Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 were companion measures that sought to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision-makers prior to approval of certain large development projects. This coordination ensures that prudent water supply planning has been conducted and that planned water supplies are adequate to meet existing demands and anticipated demands from approved projects, tentative maps, and proposed projects.

SB 610 amended California Water Code (Water Code) sections 10910 through 10915 (inclusive) to require land use lead agencies to:

- Identify any public water purveyor that may supply water for a proposed development project
- Request a Water Supply Assessment (WSA)

SB 221 amended State law (California Government Code Section 66473.7) to require that approval by a city or county of certain residential subdivisions (i.e., a proposed residential development of more than 500 dwelling units) requires an affirmative written verification of sufficient water supply. SB 221 was intended as a fail-safe mechanism to ensure that collaboration on finding the needed water supplies to serve a new, large residential subdivision occurs before construction begins.

1.2 Need for and Purpose of Water Supply Assessment

A WSA's purpose is to demonstrate that a water purveyor's supplies are sufficient to satisfy the water demands of a proposed project, in addition to existing and planned future uses. The City of Dublin (City) has requested that Dublin San Ramon Services District (DSRSD) prepare a WSA as required by Water Code sections 10910 through 10915 in connection with the proposed Dublin Commons Project (Proposed Project).

The WSA does not reserve water or function as a "will serve" letter or any other form of commitment to supply water (see Water Code Section 10914). Water service provision will continue to be undertaken in a manner consistent with applicable policies and procedures and existing laws.

1.3 Water Supply Assessment Preparation, Format, and Organization

To clearly demonstrate compliance with the specific WSA requirements, this WSA is formatted to follow Water Code sections 10910 through 10915 and includes the following sections:

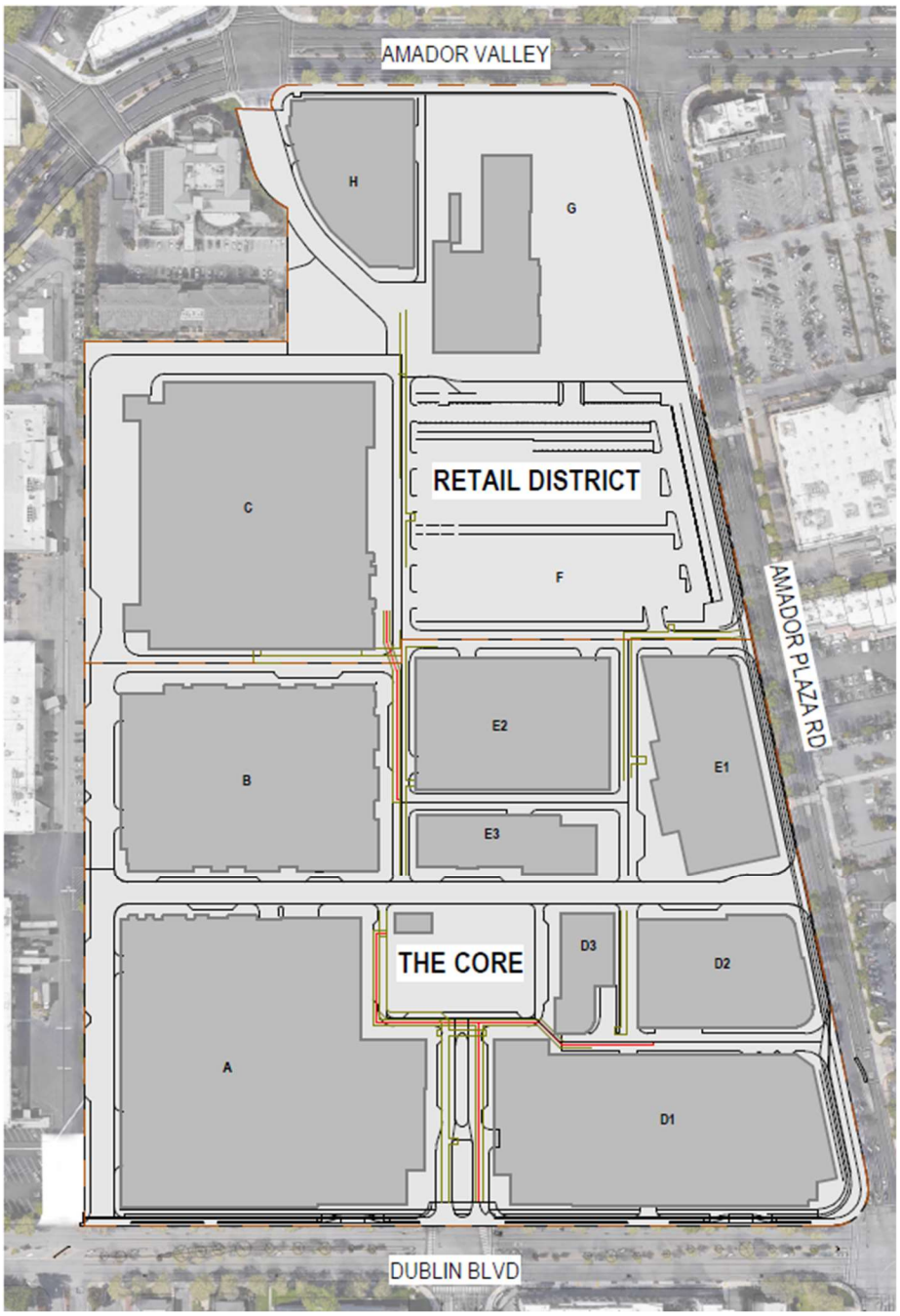
- Section 1: Introduction
- Section 2: Description of Proposed Project
- Section 3: Required SB 610 Determinations
- Section 4: DSRSD Potable Water Demands
- Section 5: DSRSD Potable Water Supplies
- Section 6: Water Supply Reliability

- Section 7: Determination of Water Supply Sufficiency Based on the Requirements of SB 610
- Section 8: Verification of Sufficient Water Supply Based on the Requirements of SB 221
- Section 9: Water Supply Assessment and Verification Approval Process
- Section 10: References

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Proposed Project Location and Background

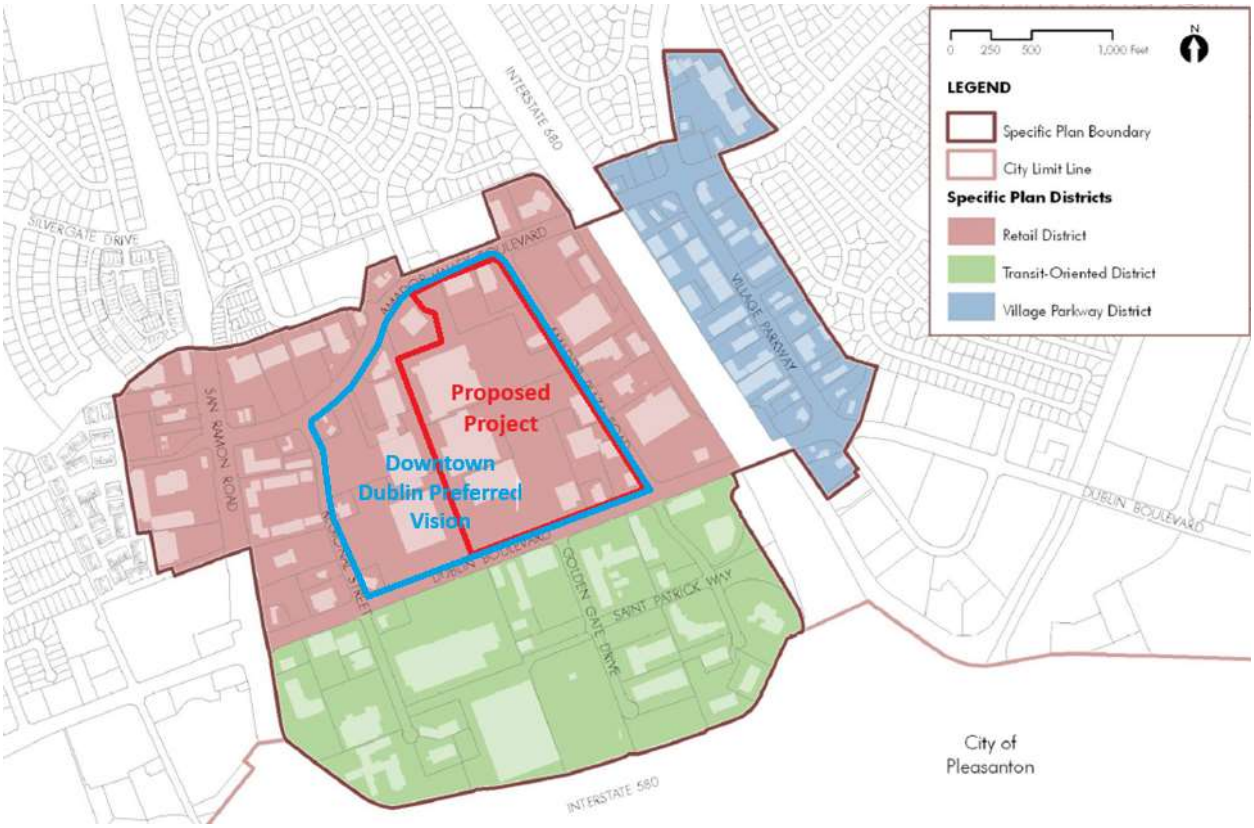
The Proposed Project is located in Alameda County, California, within City limits and DSRSD's potable water service area. As shown on Figure 2-1, the Proposed Project is bounded by Amador Valley Boulevard to the north, Amador Plaza Road to the east, Dublin Boulevard to the south, and Dublin Plaza Center to the west.



Source: Hines & ARA, May 2024. Site Development Review Entitlements Review #2.

Figure 2-1. Proposed Project Location

The Proposed Project is within the Retail District of the Downtown Dublin Specific Plan (DDSP). Adopted by the City Council in February 2011 (Resolution No. 09-11), the DDSP seeks to create a "vibrant and dynamic commercial and mixed-use center" (City of Dublin, January 2024) across 284 acres of the City's original central business district. The DDSP includes three districts (Retail, Transit-Oriented, and Village Parkway), each with its own development standards. Figure 2-2 shows the DDSP districts and the Proposed Project.



Adapted from Figure 3-1 of the Downtown Dublin Specific Plan (City of Dublin, January 2024)

Figure 2-2. Downtown Dublin Specific Plan Districts

In November 2019, the City Council approved the Downtown Dublin Preferred Vision (Resolution No. 115-19), a roadmap for improving the Retail District of the DDSP over the next 30 to 50 years. The Downtown Dublin Preferred Vision includes the Proposed Project (as shown on Figure 2-2) and focuses on:

- Siting of the town square intended to be the City's social center
- A new street grid network
- Downtown Character (four blocks of mixed-use buildings around the proposed town square)

2.2 Proposed Project Land Uses

Table 2-1 summarizes the land uses for the Proposed Project, which will redevelop approximately 30 acres of the existing Dublin Plaza Center (retail/office use) into mixed-use space. Development potential for the Proposed Project includes up to 275,000 square feet (SF) retail (155,000 SF of new retail and 120,000 SF of existing retail), 535,000 SF of life science, 1,510 multifamily residential dwelling units (DU), and two new parks.

Table 2-1. Land Use Summary for Proposed Project[(a)]	
Land Use	**Development Potential**
High Density Residential	1,510 DU
Retail	275,000 SF (155,000 SF new and 120,000 SF existing)
Life Science	535,000 SF
Park	1.13 acres

(a) Based on the "Dublin Commons DSRD Data Request" spreadsheet provided to DSRSD in June 2024.

2.3 Projected Potable Water Demand

2.3.1 Demand Assumptions

This WSA assumes the Proposed Project will use a combination of potable and recycled water. Although there is currently a moratorium on new recycled water connections due to limited recycled water supply, the Proposed Project site has an existing recycled water connection and currently utilizes recycled water. Following redevelopment, the Proposed Project site could still utilize the existing recycled water connection for outdoor irrigation. Expanded recycled water use at the Proposed Project site may be possible in the future, pending additional recycled water supply.

The existing recycled water use is assumed to be split evenly – 50 percent associated with retail space that will remain and 50 percent associated with space that will be redeveloped as part of the Proposed Project. Therefore, half of the current recycled water use can be applied to meet future outdoor water demands in the redeveloped areas.

2.3.2 Potable Water Use Factors

DSRSD estimates future potable water demands by applying potable water use factors (also referred to as demand factors) to proposed land uses. In its 2016 Water System Master Plan, DSRSD developed water use factors based on 2013 billing data. In 2024, DSRSD completed the Potable Water Demand Projections Update technical memorandum[1] (2024 Demand Projection TM), which updated water use factors based on 2018-2022 water use data. This WSA uses the water use factors from the 2024 Demand Projection TM to estimate potable water demands for the Proposed Project.

Table 2-2 presents the potable water use factors relevant to the Proposed Project in gallons per day (gpd) per land use unit. Residential land use units are DU, while commercial and park land use units are building SF and acres, respectively. As shown in Table 2-2, it is assumed that the Commercial Office water use factor can be used for the Proposed Project's Life Science space. The potable water use factors presented in Table 2-2 do not include non-revenue water (NRW), which is assumed to be 7 percent per the 2024 Demand Projection TM.

[1] West Yost, May 2024. Potable Water Demand Projections Update Technical Memorandum.

Table 2-2. Potable Water Use Factors Applicable to the Proposed Project			
Land Use		**Potable Water Use Factor**	
From Proposed Project Plans	**From Potable Water Use Factor Table[a]**	**Value**	**Units**
High Density Residential	High Density Residential (City of Dublin)	135	gpd/DU
Retail	Commercial Retail	0.16	gpd/SF
Life Science	Commercial Office[b]	0.10	gpd/SF
Park	Park	2,678	gpd/acre

(a) Per Table 11 of the 2024 Demand Projection TM.
(b) Water use for Life Science buildings is assumed to be similar to Commercial Office buildings.

2.3.3 Calculation of Potable Water Demands

Table 2-3 shows the calculated potable water demands for the Proposed Project for each land use and overall. Since the Proposed Project will redevelop part of the existing Dublin Plaza Center, existing potable water demands at the Proposed Project location must be removed from the Proposed Project's potable water demands to determine the impact of the Proposed Project on DSRSD's potable water supplies. Since water use factors include indoor and outdoor use and recycled water is available at the Proposed Project site, the available recycled water (i.e., existing outdoor use) must also be removed from the Proposed Project's potable water demands. As shown in Table 2-3, the Proposed Project's net calculated potable water demand (i.e., after removing existing demands and recycled water and adjusting for NRW) is approximately 0.28 million gallons per day (mgd) or 318 acre-feet per year (AFY).

Table 2-3. Potable Water Demands for the Proposed Project			
Land Use	**Development Potential[a]**	**Water Use Factor[b]**	**Demand, mgd**
High Density Residential	1,510 DU	135 gpd/DU	0.204
Retail	155,000 SF[c]	0.16 gpd/SF	0.025
Life Science	535,000 SF	0.10 gpd/SF	0.054
Park	1.13 acres	2,678 gpd/acre	0.003
		Proposed Project Subtotal	0.285
		Existing Indoor Use[d]	(0.017)
		Existing Outdoor Use[e]	(0.003)
		Proposed Project Net (subtotal less existing)	0.264
		Non-Revenue Water (7 percent)	0.020
		Proposed Project Net with NRW	**0.284**

(a) Refer to Table 2-1.
(b) Refer to Table 2-2.
(c) New retail SF only.
(d) Per Table B-2 of the 2024 Demand Projection TM. Existing demand is based on 2021 meter data and excludes the existing retail space that will remain as part of the Proposed Project. Only the existing demand for sites that will be redeveloped should be removed to calculate net demand.
(e) Equal to half of the five-year average of billed consumption associated with recycled water meter serving the Proposed Project site. It is assumed that 50 percent of the recycled water consumption is associated with the space that will be redeveloped as part of the Proposed Project.

2.3.4 Comparison with Demand Calculations in the 2020 Urban Water Management Plan

DSRSD's 2020 Urban Water Management Plan (UWMP) includes projected demands for the Proposed Project based on information available at the time. The Proposed Project is part of the DDSP, and the City's General Plan identified 2,500 DU in the DDSP area. Some of these 2,500 total DU had already been constructed before DSRSD began preparing its 2020 UWMP; only those yet to be constructed would be counted in assessing future new potable water demands. According to a January 2019 Staff Report to the City Council, there were 1,717 DU still remaining in the DDSP area. As a result, land use assumptions for the DDSP area in DSRSD's 2020 UWMP consist of the following:

- Existing retail/commercial uses would remain (i.e., no change to retail/commercial sites)
- 1,717 remaining DU (conservatively assumed to be medium density residential)

Therefore, the remaining additional potable water demand for the DDSP area in the 2020 UWMP consists only of the potable water demand associated with the 1,717 DU. Table 2-4 presents the potable water demand calculations for the DDSP area used in DSRSD's 2020 UWMP. As shown in Table 2-4, DSRSD's 2020 UWMP estimated the remaining additional potable water demand for the DDSP area at approximately 0.47 mgd.

Table 2-4. Downtown Dublin Specific Plan Area – Future Additional Potable Water Demands

Land Use	Dwelling Units	Water Use Factor[(a)]	Demand, mgd
Medium Density Residential	1,717	255 gpd/DU	0.438
		Non-Revenue Water (6 percent)[(b)]	0.028
		Future Downtown Dublin Specific Plan Area Total	**0.466**

(a) From Table 3-16 of DSRSD's 2016 Water System Master Plan.
(b) The 2020 UWMP assumed NRW was 6 percent (based on DSRSD's 2016 Water System Master Plan).

Since the Proposed Project is only a portion of the DDSP area, properly comparing potable water demands between this WSA and DSRSD's 2020 UWMP requires estimating demands for the remainder of the DDSP area. With 1,717 DU remaining in the DDSP area and 1,510 DU included in the Proposed Project, there are 207 DU left in the DDSP area that are not part of the Proposed Project. By conservatively assuming medium density residential land use, the potable water demand for these 207 DU is projected to be approximately 0.05 mgd.

With the Proposed Project and the 207 medium density DU remaining, the total additional potable water demand for the DDSP area is estimated at 0.33 mgd (371 AFY). Table 2-5 compares the total additional potable water demand for the DDSP area between this WSA and the 2020 UWMP. As shown in Table 2-5, the remaining potable water demands for the DDSP area were approximately 0.13 mgd higher in the DSRSD's 2020 UWMP than in this WSA.

Table 2-5. Comparison of Remaining Potable Water Demands for the DDSP Area	
	Demand, mgd
Proposed Project[(a)]	0.284
Remaining DU in DDSP Area[(b)]	0.048
DDSP Area Total Remaining (2024 WSA)	0.332
DDSP Area Total Remaining (2020 UWMP)[(c)]	0.466
Difference (2020 UWMP - 2024 WSA)	**0.134**

(a) Refer to Table 2-3.
(b) Based on 217 medium density DU remaining, a water use factor of 215 gpd/DU, and 7 percent non-revenue water.
(c) Refer to Table 2-4.

This difference is due to higher density residential land use and generally lower water use over time. With only general land use information available when preparing the 2020 UWMP, it was conservatively assumed the new DU for the Proposed Project would be medium density residential. The Proposed Project's DUs are currently planned to be high density residential, which has a lower water use factor than medium density residential. In general, water use factors have also decreased over time. Potable water demand projections in the 2020 UWMP use water use factors from DSRSD's 2016 Water System Master Plan, while this WSA uses water use factors from the 2024 Demand Projection TM. For context, the water use factor for medium density residential has seen a reduction of approximately 16 percent from the 2016 Water System Master Plan to the 2024 Demand Projection TM, decreasing from 255 gpd/DU to 215 gpd/DU.

In short, the increased residential density and more recent water use factors more than make up for the non-residential development (i.e., retail, life science, and park) that were not included in the Proposed Project in the 2020 UWMP. The result is lower net potable water demands for the Proposed Project (and the DDSP area overall) in this WSA compared to the 2020 UWMP.

3.0 REQUIRED SB 610 DETERMINATIONS

3.1 Does SB 610 Apply to the Proposed Project?

SB 610 applies to any development that qualifies as a "Project." Per Water Code Section 10912(a), a "Project" means any of the following:

- Residential development of more than 500 DU.
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 SF of floor space.
- Commercial office building employing more than 1,000 persons or having more than 250,000 SF of floor space.
- Hotel or motel, or both, having more than 500 rooms.
- Industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 SF of floor area.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-DU project.

With more than 500 DU and 250,000 SF of commercial office (i.e., Life Science) space, the Proposed Project meets the definition of a "Project."

3.2 Does SB 221 Apply to the Proposed Project?

SB 221 applies to residential subdivisions, defined by California Government Code Section 66473.7(a)(1) as proposed residential developments with more than 500 DU. Since the Proposed Project may develop up to 1,510 residential DU, it is subject to the requirements of SB 221. Section 8.0 of this WSA provides the required written verification of sufficient water supply.

3.3 Who is the Identified Public Water System?

The Proposed Project is located within DSRSD's potable water service area. Therefore, DSRSD is the identified public water system for the Proposed Project.

3.4 Does DSRSD have an adopted Urban Water Management Plan that includes projected water demands for the Proposed Project?

DSRSD's 2020 UWMP was adopted by its Board of Directors in June 2021 and includes projected water demands for the Proposed Project. As discussed in Section 2.3.4, projected demands for the DDSP area (including the Proposed Project) have decreased since the 2020 UWMP.

4.0 DSRSD POTABLE WATER DEMANDS

Since DSRSD's 2020 UWMP includes projected water demands associated with the Proposed Project, this section is based on information presented in DSRSD's 2020 UWMP.

4.1 Historical Potable Water Demands

Table 4-1 presents DSRSD's historical potable water demands in acre-feet (AF) and by use type. Drought-related restrictions significantly reduced water use in 2015.

Table 4-1. Historical Potable Water Demands

Use Type	2010,[(a)] AF	2015,[(a)] AF	2020,[(b)] AF
Single Family	4,566	3,618	5,784
Multifamily	1,226	1,418	1,869
Commercial	835	699	651
Industrial	0	0	0
Institutional/ Governmental	798	105	492
Landscape	1,376	482	1,011
Agricultural	0	0	0
Other	0	696	10[(c)]
Losses	463	421	513
Total	**9,264**	**7,439**	**10,330**

(a) Per Table 4-1 of DSRSD's 2020 UWMP.
(b) Per Table 4-2 of DSRSD's 2020 UWMP.
(c) Fireline meters, ranch owners, and supplemental water for recycled water demand.

4.2 Future Potable Water Demands

Table 4-2 summarizes DSRSD's total projected future potable water demands in AF, including an estimated 6 percent[2] of NRW (i.e., unaccounted-for water). Water demand projections in DSRSD's 2020 UWMP are based on future development within DSRSD's service area.

For conservative planning purposes, DSRSD's 2020 UWMP and this WSA assume no demand reductions in single dry years or multiple dry years. However, it is important to note that DSRSD may implement its Water Shortage Contingency Plan in response to dry conditions, leading to reduced demands (as was the case in 2015; see Table 4-1).

[2] NRW is currently assumed to be 7 percent based on the 2024 Demand Projection TM.

Table 4-2. Projected Potable Water Demands						
	Demand Reduction[a]	**2025**	**2030**	**2035**	**2040**	**2045**
Normal Year[b]	-	11,993	13,363	13,807	13,820	14,034
Single Dry Year[c]	0%	11,993	13,363	13,807	13,820	14,034
Multiple Dry Years[d]	0%	11,993	13,363	13,807	13,820	14,034

(a) Implementation of DSRSD's Water Shortage Contingency Plan may reduce demands, but this WSA conservatively assumes no demand reduction will occur in dry years.
(b) Per Table 4-3 of DSRSD's 2020 UWMP.
(c) Per Table 7-5 of DSRSD's 2020 UWMP.
(d) Per Table 7-6 of DSRSD's 2020 UWMP, after removing 3,044 AFY of recycled water demands.

5.0 DSRSD POTABLE WATER SUPPLIES

This section is based on information presented in DSRSD's 2020 UWMP.

5.1 Water Supply Overview

DSRSD's primary water supply source is purchased potable water from Zone 7 Water Agency (Zone 7), which oversees water-related issues in the Livermore-Amador Valley. Zone 7 is a State Water Project (SWP) contractor that wholesales treated water to four retail water agencies (DSRSD, City of Pleasanton, City of Livermore, and Cal Water Livermore District). In addition, Zone 7 retails non-potable and potable water to several direct customers, provides and maintains flood control facilities, and manages groundwater and surface water supplies in its service area.

DSRSD also has a groundwater pumping quota (GPQ) of 645 AFY in the Livermore Valley Main Basin (Main Basin). Zone 7 pumps groundwater on DSRSD's behalf. Pursuant to Water Code Section 10910(f), because DSRSD may receive groundwater from Zone 7 to supply the Proposed Project, Section 5.3 describes the groundwater basin, groundwater management, historical and projected pumping levels, and monitoring efforts.

DSRSD's water supply is augmented with recycled water from a recycled water treatment plant, which is owned and operated by DSRSD. DSRSD and the East Bay Municipal Utility District (EBMUD) operate the San Ramon Valley Recycled Water Program (SRVRWP) under a joint powers authority known as the DSRSD-EBMUD Recycled Water Authority (DERWA). The SRVRWP is a multi-phased project that distributes recycled water from the recycled water treatment plant to portions of the DSRSD and EBMUD service areas and by contract to the City of Pleasanton. Due to limited recycled water supplies during peak months, DSRSD implemented a moratorium on new recycled water connections starting in 2019.

5.2 Potable Water Supplies from Zone 7

Zone 7's water supply has two major components: 1) incoming water supplies available through contracts and water rights each year, and 2) accumulated water supplies in storage derived from previous years. Incoming water supplies typically consist of annually allocated imported surface water supply and local surface water runoff. Accumulated or "banked" water supplies are available in local and non-local storage locations.

To optimize its local resources, Zone 7 practices conjunctive use of the Main Basin. Zone 7 also stores local runoff from the Arroyo Valle watershed in the local reservoir (Lake Del Valle), which is owned and operated by the California Department of Water Resources (DWR). Two long-term water storage ("banking") agreements with agencies south of Zone 7's service area in Kern County (Semitropic Water Storage District and Cawelo Water District) provide additional flexibility in managing annual supply fluctuations.

The following sections detail each of these supplies.

5.2.1 State Water Project (SWP)

Imported water from the SWP, which is owned and operated by DWR, is by far Zone 7's largest water source, providing approximately 90 percent of the treated water supplied to its customers on an annual average basis. SWP water (and carryover water, water banked in non-local storage, and transfer water) travels to Zone 7 through the Sacramento-San Joaquin Delta (Delta).

SWP water originates within the Feather River watershed, is captured in and released from Lake Oroville, and flows through the Delta before it is conveyed by the South Bay Aqueduct (SBA) to Zone 7 and two other water agencies (Valley Water and Alameda County Water District [ACWD]). Much of the SWP water continues to southern California via the California Aqueduct. Lake Del Valle is part of the SBA system and is used for storage of SWP water and local runoff.

For Zone 7, SWP water meets treated water demands from municipal and industrial (M&I) customers—primarily wholesale to water retailers and some direct retail customers—and untreated water demands from agricultural customers. It is also used to recharge the local groundwater basin and fill non-local groundwater storage in Kern County.

The following sections describe Zone 7's contract with DWR for SWP water and the types of water Zone 7 receives under this contract.

5.2.1.1 Contract with DWR

DWR provides SWP water to 29 contractors, including Zone 7, in exchange for contractor payment of all costs associated with providing that supply. DWR and each of the SWP contractors entered into substantially uniform long-term water supply contracts in the 1960s with 75-year terms. The first set of contracts would originally terminate in 2035, and most of the remaining contracts would terminate within three years after that. Zone 7's original contract was executed in 1961 and was set to expire in 2036. Recently, there have been several key amendments to the SWP contracts, including reaching an agreement in principle to extend SWP contracts, improve water management tools for SWP contractors, and participate in the Delta Conveyance Project. Zone 7's 2020 UWMP further details its contract with DWR.

5.2.1.2 Table A Allocation

Each SWP contractor is limited to a maximum annual contract amount as specified in Article 6(c) and Table A of the SWP Contract; this amount is therefore commonly referred to as "Table A." As the SWP expanded and Zone 7 demands grew, Zone 7's Table A amount increased, reaching 46,000 AFY in 1997. Since then, Zone 7 has increased its supply from the SWP through five permanent transfers. In December 1999, Zone 7 secured Table A allocations of 15,000 AFY and 7,000 AFY from Lost Hills Water District and Berrenda Mesa Water District, respectively. Water secured from the Berrenda Mesa Water District serves the Dougherty Valley portion of DSRSD's service area. In December 2000, Zone 7 acquired 10,000 AFY of SWP allocation from Belridge Water Storage District. An additional 2,219 AFY was obtained from the same source in October 2003. Finally, 400 AFY of water was acquired from the Tulare Lake Basin Water Storage District in 2003. Together, these transfers have raised Zone 7's current Table A allocation to 80,619 AFY.

Actual Table A supplies are typically less than the Table A allocation and vary annually due to hydrologic conditions, water demands of other contractors, existing SWP stored water, SWP facility capacity, and environmental/regulatory requirements. SWP reliability is defined based on the long-term average Table A allocation. DWR prepares a biennial Delivery Capability Report (DCR) to assist SWP contractors and local planners in assessing the availability of supplies from the SWP for existing and future conditions.

DWR's estimates of SWP deliveries are based on a computer model that simulates monthly operations of the SWP and Central Valley Project (CVP) systems. Key inputs to the model include system facilities, hydrologic inflows to the system, regulatory and operational constraints on system operations, and

contractor demands for SWP water. In conducting its model studies, DWR must make assumptions regarding each of these key inputs.

In the 2019 DCR model for existing (2020) conditions, DWR assumed: existing facilities, hydrologic inflows to the model based on 82 years of historical inflows (1922 through 2003), current regulatory and operational constraints, and contractor demands at maximum Table A amounts. Note that the regulatory and operational constraints include the 2018 Coordinated Operations Agreement (COA) Amendment, 2019 Biological Opinions, and 2020 Incidental Take Permit. The 2018 COA Amendment lays out the terms under which the CVP operates with the SWP. The 2019 Biological Opinions for the Long-Term Operation of the CVP and SWP reflect the federal government's (U.S. Fish and Wildlife Service's) opinion as to whether or not the operation of the CVP and SWP is likely to jeopardize the continued existence of threatened and endangered species or result in the destruction or adverse modification of critical habitat. Finally, the 2020 Incidental Take Permit is a requirement for the SWP's California Endangered Species Act (CESA) compliance with regards to state-protected longfin smelt and state- and federally-protected delta smelt, winter-run Chinook, and spring-run Chinook.

To evaluate SWP supply availability under future conditions, the 2019 DCR included a model study representing hydrologic and sea-level rise conditions in 2040. The future condition study used the same model assumptions as the study under existing conditions while adding climate change impacts, specifically, projected temperature and precipitation changes centered around 2035 (2020 to 2049) and a 45-cm sea-level rise.

For Zone 7's Table A supply, the 2019 DCR's existing condition was assumed to represent 2020 (59 percent Table A reliability, 47,600 AFY), and the future condition (54 percent Table A reliability, 43,500 AFY) was applied to 2040; the years in between were interpolated between these two bookends. Note that the effect of the proposed Delta Conveyance Project on SWP water supply yield is still being analyzed and has not been included.

As a SWP contractor, Zone 7 has the option to store unused Table A water in the SWP's San Luis Reservoir (storage capacity permitting). This "carryover" water is also called Article 12e or 56c water, in reference to the relevant contract terms. Article 12e water must be taken by March 31 of the following year, but Article 56c water may remain as carryover while San Luis Reservoir storage is available. Zone 7's 2020 UWMP assumes Zone 7 carries over 10,000 AF of water each year on average.

5.2.1.3 Article 21 Water (interruptible or Surplus Water)

Under Article 21 of Zone 7's SWP contract, Zone 7 has access to excess water supply from the SWP that is available only if: 1) it does not interfere with SWP operations or Table A allocations, 2) excess water is available in the Delta, and 3) it will not be stored in the SWP system. As described in the 2019 DCR, Article 21 water deliveries are highly variable and only available during short windows in the wet season when there is excess water in the system (due to storms) that DWR cannot store in San Luis Reservoir. When Article 21 water becomes available, it is distributed among requesting SWP contractors generally in proportion to the Table A contract amounts of those contractors requesting delivery. Delivery of Article 21 water requires accessible storage during very wet conditions and/or the ability to use the water directly without impacting Table A deliveries to Zone 7. Historically, these conditions have been difficult to meet for Zone 7 and have resulted in infrequent and low yields. Therefore, Zone 7 is currently not assuming any water supply yield from Article 21. As Zone 7 increases its local storage and ability to capture Article 21 water (e.g., via the Chain of Lakes project), Zone 7 will re-evaluate the potential increase in Article 21 yield.

5.2.1.4 Article 56d Water (Turnback Pool Water)

Article 56d is a contract provision that allows SWP contractors with unused Table A water to sell that water to other SWP contractors via a "turnback pool" administered by DWR on an annual basis. Historically, only a few SWP contractors have been able to make turnback pool water available for purchase, particularly in normal or dry years.

With the enhanced ability to directly transfer or exchange SWP water from one SWP contractor to another under the Water Management Tools contract amendment described earlier, it is expected that there will not be much water available under Article 56d in the future. Zone 7 is therefore assuming no supplies are available from this source under normal conditions.

5.2.1.5 Yuba Accord

In 2008, Zone 7 entered into a contract with DWR to purchase additional water under the Lower Yuba River Accord (Yuba Accord). The original contract expires in 2025, and several amendments have been made to the original agreement, including a new pricing agreement executed in 2020.

There are four different types ("Components") of Yuba Accord water made available as a water purchase or transfer; Zone 7 has the option to purchase Components 1, 2, and 3 water during drought conditions, and Component 4 water when the Yuba County Water Agency has determined that it has water supply available to sell.

Water is primarily available during dry years under the Yuba Accord, and the amount is highly variable: 400 AF in 2014, approximately 300 AF in 2015, and 3,000 AF in 2020. For planning purposes, Zone 7 currently does not assume any water supply yield specifically from the Yuba Accord, although water transfers obtained by Zone 7 could potentially include supplies from the Yuba Accord.

5.2.2 Local Surface Water Runoff

Zone 7, along with ACWD, has a water right (Permit 11319 [Application 17002]) to divert flows from Arroyo Valle. Runoff from the Arroyo Valle watershed is stored in Lake Del Valle, which is managed by DWR as part of the SWP. Lake Del Valle also stores imported surface water deliveries from the SWP and provides both flood control and recreational benefits. In late fall, DWR typically lowers lake levels in anticipation of runoff from winter storm events. Lake Del Valle water is made available to Zone 7 via the SBA through operating agreements with DWR. Inflows to Lake Del Valle, after accounting for permit conditions, are equally divided between ACWD and Zone 7 under their respective permits.

Zone 7's latest modeling forecasts future average yields from Arroyo Valle to Zone 7 at approximately 5,500 AFY, using historical hydrology adjusted for climate change impacts. Previous planning documents, including Zone 7's 2015 UWMP, assumed an average yield of 7,300 AFY, and the ten-year calendar year average (2011-2020) has been 3,500 AFY. Local climate change effects on the watershed—specifically a net average reduction in precipitation—are expected to reduce the yield over time. Construction of the Chain of Lakes Arroyo Valle diversion structure and pipeline will allow Zone 7 to capture more of the storm releases from Lake Del Valle and likely increase future yields. The conservative average yield estimate of 5,500 AFY will be re-evaluated as more climate change information is developed and as the Chain of Lakes projects progress.

5.2.3 Local Storage

Zone 7 has two existing local storage options: Lake Del Valle and the Main Basin. Lake Del Valle stores both runoff from the Arroyo Valle watershed and imported surface water deliveries from the SWP. Zone 7 can store up to about 7,500 AF of its share of Arroyo Valle runoff in Lake Del Valle. Runoff collected in any given year is required to be delivered to Zone 7 by the end of the following year. The Main Basin has an operational storage capacity of 126,000 AF and is used conjunctively and is artificially recharged with SWP water.

5.2.4 Non-Local Storage

In addition to local storage, Zone 7 also participates in two non-local (also called "out-of-basin") groundwater banking programs located in Kern County. While these banking programs provide a water source during drought years, they contain water previously stored from Zone 7's surface water supplies during wet years. Therefore, they do not have a net contribution to Zone 7's water supply over the long-term and in fact result in some operational losses as described below. While the out-of-basin groundwater banks significantly enhance system reliability, this banked water supply requires Banks Pumping Plant in the Delta and the SBA to be operational; low SWP Table A allocations (and generally low levels of water movement in the SWP system) can limit the delivery of these banked supplies via exchange.

Point of Delivery Agreements with DWR and Kern County Water Agency, a SWP contractor, allow Zone 7 to store SWP water in and recover water from Semitropic Water Storage District (Semitropic) and Cawelo Water District (Cawelo). Semitropic and Cawelo are member units of Kern County Water Agency, which manages water deliveries to these agencies. Zone 7 has been storing water in the water banks operated by Semitropic since 1998 and by Cawelo since 2006. In November 2020, the Zone 7 Board of Directors (Zone 7 Board) authorized the execution of amendments to existing Point of Delivery Agreements that would extend water delivery terms for storage in Semitropic and Cawelo through 2030 and recovery of banked water through 2035.

5.2.4.1 Semitropic Water Storage District

In 1998, Zone 7 acquired a storage capacity of 65,000 AF in the Semitropic groundwater banking program. Subsequently, Zone 7 agreed to participate in Semitropic's Stored Water Recovery Unit, which increased pumpback capacity and allowed Zone 7 to contractually store an additional 13,000 AF. Currently, Zone 7 has a total of 78,000 AF of groundwater banking storage capacity available to augment water supplies during drought and emergency conditions and as needed. Zone 7 can store up to 5,883 AFY in the Semitropic groundwater bank. Note that a 10 percent loss is associated with water stored in Semitropic.

Under the contract terms, Zone 7 can request up to 9,100 AF of pumpback and up to 8,645 AF of exchange water. Pumpback is water pumped out of the Semitropic aquifer and into the SWP system. Exchange water is water transferred between Zone 7 and Semitropic by adjusting the amounts of Table A water delivered to Zone 7 and Semitropic; the availability of this type of water depends on the SWP allocation. During the 2012-2016 drought, Zone 7 was able to recover 9,900 AF in 2014 and about 12,800 AF in 2015.

5.2.4.2 Cawelo Water District

Per a 2006 agreement, Zone 7 has 120,000 AF of groundwater banking storage capacity available with Cawelo. Zone 7 can store up to 5,000 AFY in the bank and can request up to 10,000 AFY of pumpback (or SWP exchange water) from Cawelo. During the 2012-2016 drought, Zone 7 was able to recover 10,000 AF,

delivered evenly over 2014 and 2015. Most of this water was used directly, while the rest was stored in San Luis Reservoir for use the following year. Zone 7 only accumulates 50 percent of the water sent to storage in Cawelo; the other 50 percent goes towards water loss and compensation to Cawelo.

5.3 Groundwater Supply

This section describes the Main Basin and Zone 7's associated Groundwater Management Plan (GMP). Each year, Zone 7 prepares an Annual Report for the Groundwater Management Program.

DSRSD does not itself extract groundwater. By contract, Zone 7 pumps groundwater from local storage on behalf of DSRSD. This groundwater supply is then blended with Zone 7's other water supplies and delivered to DSRSD. Zone 7 does not have a GPQ, and it can only pump groundwater it has recharged from its other supplies.

The following sections describe DSRSD's groundwater resource.

5.3.1 Groundwater Basin Description

Zone 7 has managed local surface water and groundwater resources for beneficial uses in the Main Basin for more than 50 years. Consistent with its management responsibilities, duties, and powers, Zone 7 is designated in the 2014 Sustainable Groundwater Management Act (SGMA) as the exclusive Groundwater Sustainability Agency within its jurisdictional boundaries.

As defined in DWR Bulletin 118 Update 2003 (California's Groundwater), the Main Basin (DWR Basin 2-10) covers 69,600 acres (109 square miles), extending from the Pleasanton Ridge east to the Altamont Hills and from the Livermore Uplands north to the Tassajara Uplands. The Main Basin is not adjudicated, and DWR has identified it as medium priority—it is not identified as either in overdraft or expected to be in overdraft. Surface drainage features include Arroyo Valle, Arroyo Mocho, and Arroyo Las Positas as principal streams, with Alamo Creek, South San Ramon Creek and Tassajara Creek as minor streams. All streams converge on the west side of the basin to form Arroyo de la Laguna, which flows south and joins Alameda Creek in Sunol Valley and ultimately drains to the San Francisco Bay. Some geologic structures restrict the lateral movement of groundwater, but the general groundwater gradient is from east to west, towards Arroyo de la Laguna, and from north to south along South San Ramon Creek and Arroyo de la Laguna.

The entire floor of the Livermore Valley and portions of the upland areas on all sides of the valley overlie groundwater-bearing materials. The materials are primarily continental deposits from alluvial fans, outwash plains, and lakes. They include valley-fill materials, the Livermore Formation, and the Tassajara Formation. Under most conditions, the valley-fill and Livermore Formation yield adequate to large quantities of groundwater to all types of wells, with the larger supply wells being in the Main Basin. The Main Basin is composed of the Castle, Bernal, Amador, and Mocho II sub-basins, with an estimated total storage capacity of 254,000 AF.

5.3.2 Groundwater Management

Zone 7's GMP documents all of Zone 7's then-current groundwater management policies and programs and was developed to satisfy the requirements set forth in the California Groundwater Management Planning Act (Water Code Sections 10750, et seq.). More recently, a Salt and Nutrient Management Plan has been incorporated into the GMP. Zone 7 prepares annual reports that summarize the results of the groundwater monitoring, evaluation, and management efforts by water year. In addition to annual

reports, Zone 7 completed the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin in 2016, as required under SGMA.

For Zone 7's operations, the Main Basin is considered a storage facility and not a long-term water supply, because Zone 7 does not have access to naturally recharged water ("sustainable yield"). Zone 7 only pumps groundwater that has been artificially recharged with surface water supplies. As part of this conjunctive use program, Zone 7's policy maintains groundwater levels above historic lows in the Main Basin to minimize the risk of inducing land subsidence. Currently, this is accomplished by releasing SWP water to the arroyos for percolation and replenishment of the aquifers and by managing pumping activities.

Zone 7 established historic lows based on the lowest measured groundwater elevations in various wells in the Main Basin. The difference between water surface elevations when the Main Basin is full and water surface elevations when the Main Basin is at historic lows define Zone 7's operational storage. Of the estimated total storage capacity of 254,000 AF, operational storage is about 126,000 AF based on Zone 7's experience operating the Main Basin, with the remaining 128,000 AF considered emergency reserve storage.

5.3.3 Current Sustainable Yield and Groundwater Pumping Quotas

Long-term natural sustainable yield is contractually defined as the average amount of groundwater annually replenished in the Main Basin by natural recharge—percolation of rainfall, natural stream flow, irrigation waters, and inflow of subsurface waters—and which can therefore be pumped without lowering the long-term average groundwater volume in storage. In contrast, "artificial recharge" is the aquifer replenishment that occurs from artificially induced or enhanced stream flow. With artificial recharge, more groundwater can be sustainably extracted from the Main Basin each year. Zone 7 only uses groundwater that has been artificially recharged by Zone 7.

The natural sustainable yield of the Main Basin has been determined to be about 13,400 AFY, which is about 11 percent of the operational storage. This long-term natural sustainable yield is based on over a century of hydrologic records and projections of future recharge conditions.

Each Zone 7 retailer has an established GPQ, formerly referred to as the "Independent Quota" in the original Municipal and Industrial water supply contract between Zone 7 and each retailer. GPQs are 3,069 AFY for Cal Water Livermore District, 645 AFY for DSRSD, and 3,500 AFY for the City of Pleasanton. The City of Pleasanton and Cal Water Livermore District pump their own GPQ, while Zone 7 pumps DSRSD's GPQ. The City of Livermore has not had any groundwater pumping capability for many years and has, therefore, not been using its GPQ.

Pumping averages are maintained by the allowance of "carryover"—limited to 20 percent of the GPQ—when less than the GPQ is used in a given year. A retailer must pay a "recharge fee" for all groundwater pumped exceeding their GPQ and any carryover. This practice helps avoid a repeat of historical over-drafting of the basin by the larger municipal users. The fee covers the cost of importing and recharging additional water into the Main Basin. The balance of the natural sustainable yield is pumped for other municipal, agricultural, and gravel mining uses.

Zone 7's groundwater extraction for its treated water system does not use the natural sustainable yield from the Main Basin; instead, Zone 7 pumps only water that has been recharged as part of its artificial recharge program using its available surface water supplies. During high-demand periods, groundwater is

used to supplement the surface water supply delivered via the SBA. Groundwater is also used when key facilities (e.g., SBA or Zone 7's water treatment plants) are out of service or operating under reduced capacity due to maintenance or improvements. Finally, Zone 7 taps into its stored groundwater under emergency or drought conditions, when there may be insufficient surface water supply available.

Zone 7 also pumps groundwater out of the Main Basin during normal water years to help reduce the salt loading in the Main Basin in accordance with Zone 7's Salt Management Plan. The Mocho Groundwater Demineralization Plant (MGDP) has been in operation since 2009 to achieve additional salt removal. During emergency or drought conditions, MGDP operations may be reduced to maximize available water supply and avoid water loss due to brine disposal.

On average, Zone 7 plans to recharge about 9,200 AFY in the future, which means that Zone 7 can pump an equivalent 9,200 AFY from the Main Basin on average.

5.3.4 Artificial Recharge and Groundwater Extraction by Zone 7

Before the construction of the SWP in the early 1960s, groundwater was the sole water source for the Livermore-Amador Valley. This resource has gone through several periods of extended withdrawal and subsequent recovery. The Main Basin was over-drafted in the 1960s when approximately 110,000 AF of groundwater was extracted. The Main Basin was allowed to recover from 1962 to 1983. During this era, Zone 7 first conducted a program of groundwater replenishment by recharging imported surface water via its streams or arroyos ("in-stream recharge" or "artificial recharge") for storage in the Main Basin, began supplying treated surface water to customers to augment groundwater supplies, and began regulating municipal pumping by other users.

Zone 7's operational policy is to maintain the balance between the combination of natural and artificial recharge and withdrawal or pumping to maintain groundwater levels above the emergency reserve storage. Recently, Zone 7 has generally been able to pump as much groundwater as it has needed; however, during the 2012-2016 drought, decreases in groundwater elevation did noticeably affect the production of certain wells. Zone 7 is continuing to study the groundwater basin and developing new tools (such as an improved groundwater model) to better understand the levels of groundwater extraction possible under various conditions and contributing factors such as groundwater connectivity, spatial distribution of groundwater in the Main Basin, and others.

Between 1974 and 2020, Zone 7 artificially recharged over 67,000 AF more water than it pumped, helping to offset demands and keeping the Main Basin's groundwater levels above the historical lows. Between 2007 and 2020, Zone 7 artificially recharged about 3,000 AF less than it pumped, primarily due to construction work on the SBA, drought conditions, and below-average SWP allocations. Overall net groundwater storage remains significantly above historical lows.

Zone 7 plans to augment its current groundwater in-stream recharge capacity with off-stream recharge using the future Chain of Lakes.

5.3.5 Groundwater Quality Monitoring and Protection

The Main Basin generally contains good-quality groundwater that meets all state and federal drinking water standards; groundwater is chloraminated to match the disinfectant residual in the transmission system. Zone 7 has several groundwater wells with naturally-occurring hexavalent chromium (Cr(VI)) concentrations near the maximum contaminant level (MCL) and per- and polyfluoroalkyl substances

(PFAS) above the notification limit. Zone 7 is proactively managing flows from these impacted wells and adjusting its operations accordingly (e.g., increased use of surface water and installation of ion exchange facilities for PFAS removal).

Over the last few decades, there has been a slow degradation of groundwater quality, as evidenced by rising total dissolved solids (TDS) and hardness levels. To address this problem, Zone 7 developed a Salt Management Plan, which was approved by the Regional Water Quality Control Board in 2004, satisfying a condition of the Master Water Recycling Permit. Salinity levels are being addressed primarily through groundwater pumping and demineralization. In 2009, Zone 7 completed construction of the 6.1-mgd MGDP, which simultaneously allows for the removal and export of concentrated minerals or salts from the Main Basin and the delivery of treated water with reduced TDS and hardness levels to Zone 7's customers.

Zone 7 implements a wastewater and recycled water monitoring program as part of the GMP. In the 2020 water year, about 14 percent (1,036 AF) of the recycled water produced in the Tri-Valley area was applied to landscapes over the Main Basin; the remainder was applied to areas outside of the Main Basin, primarily to areas overlying the Dublin and Camp fringe basins and the Tassajara uplands. There is also a small amount of untreated wastewater (681 AF in the 2020 water year) that is discharged to the Main Basin as leachate from wastewater treatment ponds located in southern Livermore, from onsite domestic wastewater systems (septic systems), and from leaking wastewater and recycled water pipelines that run throughout the Basin.

Nitrates and salinity have historically been the primary water quality constituents of concern in wastewater and recycled water. In 2015, Zone 7 completed a Nutrient Management Plan, which assesses the existing and future groundwater nutrient concentrations relative to the current and planned expansion of recycled water projects and future development in the Livermore Valley. The Nutrient Management Plan also presents planned actions for addressing positive nutrient loads and high groundwater nitrate concentrations in localized Areas of Concern where septic systems are the predominant method for sewage disposal.

Under the Toxic Sites Surveillance Program, Zone 7 documents and tracks polluted sites across the groundwater basin that pose a potential threat to drinking water and interfaces with lead agencies to ensure that the Main Basin is protected. Information is gathered from state, county, and local agencies, as well as from Zone 7's well-permitting program and the State Water Resources Control Board's GeoTracker website, and compiled in a geographic information systems database. In general, there are two types of spills potentially threatening the Main Basin: petroleum-based fuel products and industrial chemical contaminants. In the 2020 water year, Zone 7 tracked the progress of 38 active sites where contamination has been detected in groundwater or is threatening groundwater. More details on the affected sites and their remediation can be found in the annual report.

5.3.6 Land Surface Elevation Monitoring Program

Zone 7's Land Surface Elevation Monitoring Program began by contracting with a licensed land surveyor to measure land surface elevations within the Main Basin boundary twice per year. The program included a network of approximately 40 elevation benchmarks encompassing Zone 7's production wellfields and spanning the Bernal and Amador Subareas within the Main Basin.

In the 2016 water year, Zone 7 contracted with TRE Altamira to evaluate Interferometric Synthetic Aperture Radar (InSAR) as an alternative to land surveying for subsidence monitoring. TRE Altamira

analyzed InSAR data from three different satellites 24 years (from 1992 to 2016), including approximately 120 satellite images with between 415 and 1,202 measuring points per square mile. Each measuring point contains a deformation time series, including cumulative displacement, average deformation rate, acceleration, and seasonal amplitude. The study results correlated well with topographic surface measurements taken by land surveys within the same time period. An added benefit of the InSAR dataset was that it included a larger area (i.e., the entire Main Basin) than the land surveying.

Starting in the 2019 water year, Zone 7 retired the land surveying program and transitioned to InSAR for monitoring land subsidence. In general, observed land surface elevation changes between September 2018 to September 2019 near Zone 7's municipal wells were within the range Zone 7 considers to be "elastic deformation" (i.e., rebounds to their original location when groundwater levels return to previous levels).

5.4 Summary of Projected Future Potable Water Supplies

Table 5-1 summarizes DSRSD's future projected potable water supplies available from Zone 7.

Table 5-1. Projected Potable Water Supplies[(a)]

Supply Source	2025	2030	2035	2040	2045
Purchased from Zone 7, AFY	11,993	13,363	13,807	13,820	14,034

(a) Per Table 6-12 of DSRSD's 2020 UWMP.

6.0 WATER SUPPLY RELIABILITY

6.1 Zone 7 Reliability Policy for Municipal & Industrial Water Supplies

The reliability of DSRSD's potable water supply is based on its water supply contract with Zone 7 and Zone 7's water supply reliability policy. On October 17, 2012, the Zone 7 Board approved a revised Water Supply Reliability Policy that adopts the following level of service goals to guide the management of Zone 7's treated water supplies and infrastructure:

- Goal 1: Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent UWMP, during normal, average, and drought conditions, as follows:
    - At least 85 percent of M&I water demands 99 percent of the time
    - 100 percent of M&I water demands 90 percent of the time
- Goal 2: Provide sufficient treated water production capacity and infrastructure to meet at least 80 percent of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

6.2 Zone 7 Water Supply Reliability

One of the main limitations of Zone 7's water system is the lack of interties. All of Zone 7's imported water supplies are conveyed through the Delta and the SBA (including Arroyo Valle water). Zone 7 has been working closely with DWR, Valley Water, and ACWD to improve the reliability of the SBA. Between 2003 and 2012, DWR made improvements to the SBA within Zone 7's service area, including constructing a new pump station (180 cubic feet per second [cfs], inline reservoir [500 AF]) and increasing the canal carrying capacity to 380 cfs. As part of this project, Zone 7 installed an emergency slide gate to maintain service upstream in the event of a pipeline rupture downstream. Zone 7 will continue coordinating with DWR and SBA contractors to improve the reliability of the entire SBA system.

In addition, Zone 7 is pursuing the following projects to diversify its conveyance options:

- **Reliability Intertie** – Zone 7 is also planning to construct a reliability intertie with another major water agency that would provide an alternative means of conveying water to Zone 7's service area when the Delta and/or the SBA experience an outage. For example, an intertie with EBMUD could convey the treated water supply to the western portion of Zone 7's service area.
- **Chain of Lakes Pipeline** – This pipeline would allow for access to water stored in the Chain of Lakes as an alternative local water supply; water would be accessible to the Del Valle Water Treatment Plant via one of the SBA turnouts.

Specific constraints for each of Zone 7's supplies are discussed in the following sections.

6.2.1 State Water Project

Two key constraints on imported water from the SWP are Delta conveyance and water quality. Each constraint is detailed below.

6.2.1.1 Delta Conveyance

Zone 7's long-term contract with DWR for SWP water provides Zone 7 access to Table A water (and Article 56c water or carryover), Article 21 water, Article 56d water, and Yuba Accord water. As a SWP contractor, Zone 7 is also able to use SWP facilities for conveying water transfers or exchanges of SWP water (from another contractor) or from another water agency outside of the SWP system. SWP water moves through the Delta before it is conveyed by the California Aqueduct and the SBA to Zone 7's water facilities.

The instability of the aging levees in the Delta (including their vulnerability to seismic events and climate change), regulatory uncertainty, water quality issues including saltwater intrusion, and the declining health of the Delta ecosystem all challenge the long-term reliability of the SWP and, more generally, the water conveyance capability of the Delta. These issues directly challenge Tri-Valley's long-term water supply reliability since a majority of Zone 7's water supply is and will continue to be tied to the Delta and SWP system.

In 2018, DWR published its Delta Flood Emergency Management Plan, which provides strategies for responding to Delta levee failures. This plan recommends:

- Establishing an emergency freshwater pathway from the central Delta along the Middle River and Victoria Canal to the export pumps in the south Delta
- Pre-positioning emergency construction materials (e.g., rock, sheet pile) at existing and new stockpile and warehouse sites in the Delta to streamline repairs from multiple earthquake-generated levee breaches and levee slumping along the freshwater pathway.

The DWR Delta Levees Subventions and Special Projects Programs have prioritized, funded, and implemented levee improvements along the emergency freshwater pathway and other water supply corridors in the central and south Delta. These efforts are complementary to the Delta Flood Emergency Management Plan, which, along with pre-positioned emergency flood-fighting materials, ensures the reasonable seismic performance of levees and timely pathway restoration after a severe earthquake.

Zone 7 and other SWP contractors are also currently working with DWR and other key stakeholders to address the many complex issues undermining the Delta through the proposed Delta Conveyance Project (DCP). The proposed new diversion structure in the northern Delta provides alternative intakes in case the Delta is affected by an earthquake, levee failure, or some other catastrophic event that impacts water quality and prevents pumping from the Delta. The DCP would also provide alternative intakes that could be used to minimize harm to endangered and threatened species in the Delta. DWR is working closely with regulatory and natural resource agencies to address regulatory uncertainty and protect the Delta ecosystem under an adaptive management framework based on the best available science. With these benefits, the DCP is expected to significantly alleviate constraints on SWP operation and improve water supply reliability.

Zone 7 is also participating in the Los Vaqueros Reservoir Expansion project, which includes the construction of the Transfer Bethany Pipeline. This pipeline would provide an alternative means of conveying water supply to Zone 7 when the Delta is inaccessible. More details can be found in Chapter 6 of Zone 7's 2020 UWMP.

6.2.1.2 Water Quality

There are water quality concerns associated with transport through the Delta. In 1982, DWR formed the Interagency Delta Health Aspects Monitoring Program to monitor water quality in the Delta and protect human health. The program was renamed the Municipal Water Quality Investigations Program in 1990. From a municipal water supply perspective, water quality issues in the Delta are associated with salinity from seawater intrusion, wastewater effluent discharges, agricultural drainage from the islands, and recreational activities. Water quality issues of specific concern to Zone 7 are:

- **Algal byproducts** – Parameters of concern include compounds that cause taste and odor (T&O) and algal toxins. T&O is primarily a problem in the warmer months when algal blooms may be present. It can affect supplies from the Delta and from Lake Del Valle (which stores SWP water). Algae produce geosmin and 2-methylisoborneol, which are key T&O-causing compounds in the surface water supply. Algal toxins derived from blue-green algae can also be a concern. Zone 7's new ozonation facilities (recently installed at the Del Valle Water Treatment Plant and the Patterson Pass Water Treatment Plant) effectively treat algal byproducts. Without ozonation, high levels of algal byproducts in both Delta and Lake Del Valle supplies may necessitate temporarily switching to groundwater supplies; blending of sources is also an option depending on the source of algal byproducts and severity.
- **Total and dissolved organic carbon (TOC/DOC)** – since Zone 7 treats organic carbon with coagulant and disinfectant chemicals, higher levels of organic carbon increase costs. In addition, TOC/DOC helps form disinfectant byproducts (DBPs), which are regulated compounds in drinking water. Historically, Zone 7's water treatment plants have managed high TOC/DOC by increasing coagulant dosages. However, this operational change results in greater sludge production and limits plant production. The use of ozone reduces coagulant and chlorine demands, resulting in reduced chlorination DBPs. However, the use of ozone forms ozonation DBPs (e.g., bromate), which will need to be controlled.
- **Turbidity** – like TOC/DOC, turbidity affects the amount of chemicals used in treatment and Zone 7's ability to meet drinking water standards. It also can reduce the production capacities of Zone 7's water treatment plants, requiring increased groundwater production under high demands. Coagulant dosages can be adjusted to address high turbidity (which can happen after big storms), but if filters require more frequent backwashing, production may decrease.
- **Salinity or TDS** – salinity has significant impacts on SWP operations and the availability of water. To meet the salinity objectives in the Delta, water exports from the Delta may be restricted, reducing the amount of water supply available during certain times of the year. Salinity intrusion can be a problem during dry years, when there is insufficient freshwater to repel salinity. Sea level rise due to climate change is also expected to increase salinity in Delta. Finally, levee breaks—due to earthquakes and other factors—would result in significant saltwater intrusion from the Bay as water floods affected islands in the Delta that are below sea level.
- **Algal blooms** – in addition to T&O and the threat of algal toxins, algal blooms can significantly degrade filter performance through clogging. This reduces water treatment plant production capacities and could require supplemental groundwater use.

As noted above, Zone 7's state-of-the-art ozonation facilities improve the treatment of T&O, TOC/DOC, turbidity, and algal blooms and significantly increase the surface water system's reliability.

In 2008, the SBA contractors (ACWD, Valley Water, and Zone 7) developed the SBA Watershed Protection Program to protect water quality once the water from the Delta reaches the SBA. The primary objectives

of the SBA Watershed Protection Program include developing a Watershed Management Program for the SBA system, including Lake Del Valle and Bethany Reservoir, and protecting local drinking water and water resources from identified contaminant sources (e.g., septic tanks) for urban, agricultural, recreational, and environmental uses.

6.2.2 Arroyo Valle and Lake Del Valle

ACWD and Zone 7 both have water rights to divert water from the Arroyo Valle. This water is captured and stored in Lake Del Valle, which is owned and operated by DWR. Since Lake Del Valle is used for water supply storage, flood control, and recreation, access to water from the lake needs to be coordinated with the lake's other uses. Typically, DWR lowers the lake elevation each year after Labor Day for flood control purposes, allowing Zone 7 and ACWD to put runoff from the Arroyo Valle to beneficial use. In the summer months, lake elevations are raised for recreational purposes. Historically, access to Zone 7's stored water in Lake Del Valle has not been problematic, unless there is an outage on the Del Valle Branch pipeline. Zone 7 closely coordinates the use of Arroyo Valle water with both ACWD and DWR.

Water collected from the local watershed is protected under the SBA Watershed Protection Program Plan. In general, the water quality of Arroyo Valle runoff is good and does not affect the reliability of this water supply; however, as noted above, T&O can also affect supplies from Lake Del Valle. Zone 7 treats T&O using ozonation, although a switch to groundwater supplies is sometimes necessary under excessive levels of T&O compounds. Algal blooms in the lake can also reduce production capacities, though new ozonation facilities at the Del Valle Water Treatment Plant have significantly reduced the impact.

6.2.3 Chain of Lakes

The future Chain of Lakes will provide significant local storage, but uncertainty surrounds its complete transfer to Zone 7. Favorable economic conditions could extend gravel mining operations, and even after mining ceases, reclamation must occur. This could delay a full transition of the Chain of Lakes to Zone 7 to about 2060. Zone 7 continues to work closely with the mining companies and quarry operators so planning efforts can be coordinated.

With future completion of the Chain of Lakes Pipeline, Zone 7 can begin to use the available lakes to store imported or local surface water. This will also enhance groundwater recharge in the Main Basin.

6.2.4 Non-Local Storage

Access to banked water in Semitropic and Cawelo—both located downstream of Zone 7—requires exchange(s) with other SWP contractors located south of Kern County (e.g., Metropolitan Water District). There must be sufficient water flowing through the Delta and California Aqueduct system to facilitate these exchanges, which could be challenging during a drought. Furthermore, the banked water must be conveyed through the Delta, rendering this supply susceptible to the Delta disruptions described in Section 6.2.1.

During the 2012-2016 drought, access to banked water became uncertain because of the historically low Table A allocation (leading to minimal amounts of water moving through the SWP) and the potential cessation of pumping in the Delta to control salinity intrusion. DWR was able to manage salinity so that Delta pumping could continue, and, with coordination among stakeholders including Zone 7, DWR prioritized the delivery of banked water to Zone 7 and other SBA contractors. Ultimately, even during serious drought conditions and a 5-percent SWP allocation in 2014, Zone 7 was able to successfully

recover almost 15,000 AF, or approximately 78 percent of the maximum recovery requested by Zone 7. In 2015, Zone 7 recovered approximately 18,000 AF from non-local storage.

Zone 7 will continue to coordinate closely with DWR, other SWP contractors, Semitropic, and Cawelo to ensure the future reliability of the banked water supplies.

Some of Semitropic's wells are affected by arsenic. This condition is currently being managed through treatment before the affected groundwater water is pumped into the California Aqueduct. Arsenic criteria have been established for this "pump-in" by the DWR Facilitation Group to mitigate any impacts to the downstream SWP contractors. Semitropic and the banking partners have developed a coordination process for discussing arsenic treatment. While the presence of arsenic in the Semitropic groundwater bank is likely to increase the cost of this water storage option, it is not likely to affect its overall reliability.

6.2.5 Groundwater

Section 5.3 of this WSA details the issues affecting DSRSD and Zone 7's use of the Main Basin, specifically water quality management and prevention of overdraft.

Zone 7 is actively implementing its Salt and Nutrient Management Plan. Salinity levels are being addressed primarily through groundwater pumping and demineralization using the MGDP in the Mocho wellfield. The facility simultaneously allows for the export of concentrated minerals or salts from the Main Basin while improving the water quality of treated water.

Zone 7 has several groundwater wells with naturally occurring Cr(VI) concentrations near the MCL and PFAS above the notification limit. In response, Zone 7 is proactively managing flows from the affected wells. Ion exchange PFAS treatment has been installed at the Stoneridge Well facility and Zone 7 is planning to install PFAS treatment at the Chain of Lakes facility. Conceptual design for a Mocho PFAS treatment facility has also begun. Conditions are regularly monitored, and management actions may change in the future.

Zone 7 continues to study the groundwater basin and develop new tools (e.g., an improved groundwater model) to better understand the levels of groundwater extraction possible under various conditions while maintaining levels above historic lows. Zone 7 also plans to augment its ability to recharge the Main Basin (e.g., through the Chain of Lakes) to increase local storage and pumping, which will improve both water supply reliability and salt management. Zone 7 plans to build an additional demineralization facility to continue to decrease the salt content of the Main Basin.

Finally, Zone 7 plans to build additional wells to allow for improved management of groundwater levels and to increase groundwater production capacity during droughts and surface water related outages.

7.0 DETERMINATION OF WATER SUPPLY SUFFICIENCY BASED ON THE REQUIREMENTS OF SB 610

Projected potable water demands for the Proposed Project are included in DSRSD's 2020 UWMP, which demonstrates that potable water supplies are sufficient to meet existing and future demands for the next 25 years, even in single dry and multiple dry years. Pursuant to Water Code Section 10910(c)(4) and based on the technical analyses presented in DSRSD's 2020 UWMP, Zone 7's 2020 UWMP, and in this WSA, DSRSD finds that the projected potable water supplies determined to be available for the Proposed Project during normal, single dry, and multiple dry water years during a 25-year projection will meet the projected water demand associated with the Proposed Project, in addition to existing and planned future uses.

Zone 7 is DSRSD's sole potable water supplier and is aggressively planning for water supply programs and projects to reliably meet the future water demands of its retail customers. According to Zone 7's 2020 UWMP, Zone 7 does not anticipate any water supply shortage during normal, single dry, or multiple dry years through 2045.

Table 7-1 summarizes the projected availability of DSRSD's existing and planned future potable water supplies and DSRSD's projected water demands in normal, single dry, and multiple dry years through 2045. As shown in Table 7-1, DSRSD's water supplies are expected to be sufficient to meet its water demands during all water year types between 2025 and 2045.

Table 7-1. Summary of Potable Water Supply Sufficiency During Different Hydrologic Conditions						
		AFY				
Hydrologic Condition		**2025**	**2030**	**2035**	**2040**	**2045**
Normal Year						
Available Supply[(a)]		11,993	13,363	13,807	13,820	14,034
Total Demand[(b)]		11,993	13,363	13,807	13,820	14,034
Potential Surplus (Deficit)		0	0	0	0	0
Percent Shortfall		-	-	-	-	-
Single Dry Year[(c)]						
Available Supply		11,993	13,363	13,807	13,820	14,034
Total Demand		11,993	13,363	13,807	13,820	14,034
Potential Surplus (Deficit)		0	0	0	0	0
Percent Shortfall		-	-	-	-	-
Multiple Dry Years[(d)]						
Year 1	Available Supply	11,993	13,363	13,807	13,820	14,034
	Total Demand	11,993	13,363	13,807	13,820	14,034
	Potential Surplus (Deficit)	0	0	0	0	0
	Percent Shortfall	-	-	-	-	-
Year 2	Available Supply	12,267	13,452	13,810	13,863	14,034
	Total Demand	12,267	13,452	13,810	13,863	14,034
	Potential Surplus (Deficit)	0	0	0	0	0
	Percent Shortfall	-	-	-	-	-
Year 3	Available Supply	12,541	13,541	13,812	13,906	14,034
	Total Demand	12,541	13,541	13,812	13,906	14,034
	Potential Surplus (Deficit)	0	0	0	0	0
	Percent Shortfall	-	-	-	-	-
Year 4	Available Supply	12,815	13,629	13,815	13,948	14,034
	Total Demand	12,815	13,629	13,815	13,948	14,034
	Potential Surplus (Deficit)	0	0	0	0	0
	Percent Shortfall	-	-	-	-	-
Year 5	Available Supply	13,089	13,718	13,818	13,991	14,034
	Total Demand	13,089	13,718	13,818	13,991	14,034
	Potential Surplus (Deficit)	0	0	0	0	0
	Percent Shortfall	-	-	-	-	-

(a) Per Table 6-12 of DSRSD's 2020 UWMP.
(b) Per Table 4-3 of DSRSD's 2020 UWMP.
(c) Per Table 7-5 of DSRSD's 2020 UWMP.
(d) After removing 3,044 AFY of recycled water supply and demand from totals in Table 7-6 of DSRSD's 2020 UWMP.

8.0 VERIFICATION OF SUFFICIENT WATER SUPPLY BASED ON THE REQUIREMENTS OF SB 221

Since the Proposed Project may develop up to 1,510 residential DU, it is subject to the requirements of SB 221: verifying sufficient water supply by demonstrating that water supplies available during normal, single dry, and multiple dry years within a 20-year projection will meet the demand associated with the Proposed Project, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. In determining sufficiency, the following must be considered:

- Historical water deliveries for the previous 20 years
- Urban water shortage contingency analysis prepared for the UWMP
- Supply reduction for specific water use sectors
- Amount of water expected from supply projects

This WSA complies with SB 221 and demonstrates that DSRSD's supplies are sufficient to meet the projected demand associated with the Proposed Project, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses. The specific considerations for determining water supply sufficiency are described in the following sections.

8.1 Historical Potable Water Deliveries

Section 5.0 of this WSA describes DSRSD's potable water supplies. Table 8-1 summarizes DSRSD's historical potable water supplies in 5-year increments from 2000 through 2020. Per DSRSD's water supply agreement with Zone 7, Zone 7 pumps DSRSD's groundwater supply from local storage. DSRSD's groundwater supply is blended with Zone 7's other water supply sources and delivered to DSRSD. Section 5.3 of this WSA describes DSRSD's groundwater supply.

Table 8-1. Historical Potable Water Supplies for DSRSD

	AFY				
Potable Water Supply Source	**2000[a]**	**2005[b]**	**2010[b]**	**2015[c]**	**2020[c]**
Groundwater Pumped by Zone 7[d]	645	645	645	645	645
Other Water Purchased from Zone 7	6,724	9,489	8,619	6,794	9,685
Total	7,369	10,134	9,264	7,439	10,330

(a) Per Table 6-1 of DSRSD's 2005 UWMP.
(b) Per Table 4-1 of DSRSD's 2015 UWMP.
(c) Per Table 4-1 and Table 4-2 of DSRSD's 2020 UWMP.
(d) Zone 7 pumps groundwater from local storage on behalf of DSRSD. DSRSD's GPQ is 645 AFY.

Section 6.0 of this WSA describes the reliability of Zone 7's (i.e., DSRSD's) water supplies, and Section 7.0 of this WSA summarizes DSRSD's water supply availability during normal, single dry, and multiple dry years through 2045.

8.2 Water Shortage Contingency Analysis

DSRSD's Water Shortage Contingency Plan (WSCP) is provided as Appendix M to its 2020 UWMP and describes how DSRSD will prepare for and respond to water shortages. Adopted by the DSRSD Board in June 2021, the WSCP defines six standard water shortage levels and associated actions, including demand reduction, supply augmentation, and operational changes. Water shortage stages range from Level 1 (up

to 10 percent shortage with voluntary demand reductions) to Level 6 (over 50 percent shortage requiring critical demand reductions).

In any water shortage level, all DSRSD customers, including those within the Proposed Project, would be subject to the same water conservation measures and water use restrictions as defined in DSRSD's WSCP.

8.3 Projected Potable Water Demand by Customer Sector

Section 4.2 of this WSA discusses DSRSD's projected potable water demands. Table 8-2 breaks down these potable water demand projections by customer sector (i.e., use type).

Table 8-2. Projected Potable Water Demands by Use Type[(a)]

	AFY				
Use Type	**2025**	**2030**	**2035**	**2040**	**2045**
Single Family	6,236	6,983	7,226	7,342	7,458
Multifamily	2,043	2,287	2,367	2,405	2,443
Commercial	649	727	752	764	776
Institutional/Governmental	522	584	604	614	624
Landscape	1,329	1,489	1,540	1,565	1,590
Other - Construction	376	376	376	188	188
Other - Fireline meters	1	1	1	2	2
Other - Ranch owner	2	3	3	3	4
Other - Unmetered sales	136	136	136	136	136
Other - Supplemental water for recycled water demand	21	21	21	21	21
Losses	678	755	780	781	793
Total	11,993	13,363	13,807	13,820	14,034

(a) Per Table 4-3 of DSRSD's 2020 UWMP.

8.4 Water Expected from Supply Projects

As discussed in Section 5.0 of this WSA, Zone 7 supplies all of DSRSD's potable water. Table 8-3 summarizes the potable water supply projects Zone 7 is considering, along with estimated additional supply/storage and anticipated completion date. While DSRSD is not actively pursuing potable water supply projects itself, DSRSD is evaluating recycled water supply options.

Table 8-3. Potable Water Supply Projects Under Consideration by Zone 7[a]			
Project	**Average New Supply, AFY**	**New Storage, AF**	**Online Date**
Sites Reservoir	8,000	62,340	2030
Bay Area Regional Desalination Project[b]	5,600	-	2030
Potable Reuse	8,800 - 9,600	-	2030[c]
Transfers	10,000	-	2023-2030
Los Vaqueros Reservoir Expansion[d]		10,000	2030
Delta Conveyance Project[e]	6,500		2040

(a) Adapted from Table ES-1-1 from Zone 7's 2022 Water Supply Evaluation Update.
(b) Proposed brackish water desalination plant in eastern Contra Costa County. Conveyance options include (1) exchanging raw water with Contra Costa Water District via the South Bay Aqueduct, (2) receiving treated water via a proposed 30-inch diameter reliability intertie with EBMUD, and (3) receiving raw water through Los Vaqueros Reservoir Expansion facilities.
(c) Expansion in 2040.
(d) Conveyance requires the Transfer-Bethany Pipeline with a total capacity of 300 cfs.
(e) Assumes a single tunnel with a total capacity of 6,000 cfs.

8.5 Verification of Sufficient Water Supply

As presented in Section 7.0 of this WSA, DSRSD's water supplies are sufficient to meet the projected potable water demands associated with the Proposed Project, in addition to DSRSD's existing and planned future uses.

9.0 WATER SUPPLY ASSESSMENT AND VERIFICATION APPROVAL PROCESS

The DSRSD Board must approve this WSA at a regular or special meeting and provide it to the City of Dublin.

10.0 REFERENCES

City of Dublin, January 2024. Downtown Dublin Specific Plan.

Hazen and Sawyer and EKI Environment & Water, May 2023. Zone 7 2022 Water Supply Evaluation Update.

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West Yost, May 2024. DSRSD Potable Water Demand Projections Update.