



**SPECIAL BOARD MEETING AGENDA  
TRABUCO CANYON WATER DISTRICT  
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CALIFORNIA  
ADMINISTRATIVE FACILITY  
OCTOBER 29, 2025 AT 9:00 A.M.**

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**NOTICE OF SPECIAL BOARD MEETING**

*NOTICE IS HEREBY GIVEN PURSUANT TO GOVERNMENT CODE SECTION 54956 THAT A SPECIAL MEETING OF THE BOARD OF DIRECTORS OF THE TRABUCO CANYON WATER DISTRICT WILL BE HELD ON WEDNESDAY, OCTOBER 29, 2025, AT 9:00 A.M. AND WILL BE CONDUCTED IN PERSON BUT WILL BE AVAILABLE FOR PUBLIC MONITORING BY TELEPHONE AUDIO AS DESCRIBED BELOW.*

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**BOARD OF DIRECTORS**

Edward Mandich, President  
Glenn Acosta, Vice President  
Mark Anderson, Director  
John Horst, Director  
Michael Safranski, Director

**DISTRICT STAFF**

Fernando Paludi, General Manager  
Michael Perea, District Secretary  
Hanson Bridgett LLP, District General Legal Counsel

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**AGENDA NOTE:**

*Trabuco Canyon Water District (District) will make this Regular Board Meeting available by telephone audio as follows:*

**Telephone Audio:** 1 (669) 900-6833 (Toll Free)      **Access Code:** 913-8681-1652

*Persons desiring to monitor the Board meeting agenda items may download the Board meeting agenda and documents on the internet at [www.tcwd.ca.gov](http://www.tcwd.ca.gov). You may submit public comments by email to the Board at [mperea@tcwd.ca.gov](mailto:mperea@tcwd.ca.gov). In order to be part of the record, emailed comments on meeting agenda items must be received by the District, at the referenced e-mail address, not later than 8:00 a.m. (PDT) on the day of the meeting.*

**CALL MEETING TO ORDER & PLEDGE OF ALLEGIANCE**

**VISITOR PARTICIPATION**

*Members of the public wishing to address the Board regarding a particular item on the agenda are requested to submit public comments at the time of the meeting or by email to the Board at [mperea@tcwd.ca.gov](mailto:mperea@tcwd.ca.gov). Public comments may also be submitted by teleconference during the meeting. The Board President will call on the visitor following the Board's discussion about the matter. Members of the public will be given the opportunity to speak prior to the Board taking action on that item. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.*

**ORAL COMMUNICATION**

*Members of the public who wish to comment on matters not appearing on the agenda are requested to submit oral communication at the time of the meeting or by email to the Board at [mperea@tcwd.ca.gov](mailto:mperea@tcwd.ca.gov). Public comments may also be submitted by teleconference during the meeting. Under the requirements of State Law, Directors cannot act on items not identified on the agenda and will not make decisions on such matters. The Board President may direct District Staff to follow up on issues as may be deemed appropriate. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.*

**DIRECTORS' COMMENTS AND MEETING REPORTS**

**REPORT FROM THE GENERAL MANAGER**

## ACTION CALENDAR

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All matters under the Action Calendar have been reviewed by the General Manager and Staff prior to the Board's consideration.

## DISCUSSION MATTERS

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### ITEM 1: APPROVAL OF EXCLUSIVE AUTHORIZATION TO SELL WITH STADIA REALTY, INC.

**RECOMMENDED ACTION:**

Approve and authorize the General Manager to execute an Exclusive Authorization to Sell with Stadia Realty, Inc.

### ITEM 2: DISCUSSION CONCERNING TRABUCO CANYON WATER DISTRICT'S POTABLE WATER RATES AND CHARGES

**RECOMMENDED ACTION:**

Receive information at the time of the meeting and take action(s) as deemed appropriate.

### CLOSED SESSIONS: PERSONNEL MATTERS PURSUANT TO GOVERNMENT CODE § 54957

#### 1. PUBLIC EMPLOYEE PERFORMANCE EVALUATION

Title: General Counsel

#### 2. PUBLIC EMPLOYEE APPOINTMENT

Title: Special Counsel

#### 3. PUBLIC EMPLOYEE APPOINTMENT

Title: General Manager

### ITEM 2: REPORT OF ACTION(S) TAKEN IN CLOSED SESSION

**RECOMMENDED ACTION:**

Provide announcement of any action taken in Closed Sessions.

## END ACTION CALENDAR & ADJOURNMENT

### AVAILABILITY OF AGENDA MATERIALS

Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Trabuco Canyon Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the Trabuco Canyon Water District Administrative Facility, 32003 Dove Canyon Drive, Trabuco Canyon, California (District Administrative Facility) and will be posted online on the District's website located at [www.tcwd.ca.gov](http://www.tcwd.ca.gov). If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available online at [www.tcwd.ca.gov](http://www.tcwd.ca.gov) at the same time as they are distributed to the Board Members, except that, if such writings are distributed immediately prior to or during the meeting, they will be posted online on the District's website located at [www.tcwd.ca.gov](http://www.tcwd.ca.gov).



**TRABUCO CANYON WATER DISTRICT  
SPECIAL BOARD MEETING AGENDA | OCTOBER 29, 2025**

**COMPLIANCE WITH THE REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTION 54954.2**

*In compliance with California law and the Americans with Disabilities Act, if you need special disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 858-0277, at least 48 hours in advance of the scheduled Board meeting. Notification at least 48 hours prior to the meeting will assist the District in making reasonable arrangements to accommodate your request. The Board Meeting Room is wheelchair accessible.*



**TRABUCO CANYON WATER DISTRICT  
SPECIAL BOARD MEETING | OCTOBER 29, 2025**

**DISCUSSION MATTERS**

**ITEM 1: APPROVAL OF EXCLUSIVE AUTHORIZATION TO SELL WITH STADIA REALTY, INC.**

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Trabuco Canyon Water District (District) owns 120 acres of real property in Trabuco Canyon, commonly referred to as the 'Porter Property'. In February 2024, the District's Board of Directors (Board) adopted a resolution declaring the Porter Property as surplus land in accordance with the Surplus Land Act, the California law which establishes requirements for public agencies intending to sell or lease surplus property.

In July 2025, the District Properties Committee commissioned a study of the potential uses of the Porter Property that could derive benefits for the District and its ratepayers. Stadia Realty Inc. (Stadia) was retained to perform the study. At the September 3, 2025 meeting, Stadia presented their preliminary findings and recommendations to the Committee which is included as an exhibit.

On September 18, 2025, a special meeting of the Board of Directors included a presentation from Stadia on the preliminary findings and recommendations. A follow up meeting with Stadia and Wildlands was held on October 21, 2025 to discuss potential land mitigation opportunities as outlined in the final report. At this meeting, the Board considered an exclusive authorization to sell agreement with Stadia Realty and directed staff to agendize this matter for Board action.

District staff may provide additional information to the Board on this matter at the time of the meeting.

**RECOMMENDED ACTION:**

*Approve and authorize the General Manager to execute an Exclusive Authorization to Sell with Stadia Realty, Inc.*

**EXHIBIT(S):**

1. DRAFT Stadia Exclusive Authorization to Sell Agreement
2. Stadia Realty, Inc. – Trabuco Canyon Water District Final Report

**CONTACTS (staff responsible): PALUDI/PEREA**



## **EXCLUSIVE AUTHORIZATION TO SELL**

TRABUCO CANYON WATER DISTRICT ("Owner") hereby grants to Stadia Realty Inc. ("Broker") the Exclusive Authorization to Sell, for a period of 12 Months, the Vacant Land property situated in the County of Orange, and further described as:

APN's 842-061-05, 842-061-06, and 842-061-07

Approximately 120 acres of land located in Trabuco Canyon, California.

### 1. Payment

Upon signing of a purchase option agreement or purchase and sale agreement between Owner and Buyer, Buyer and Seller shall establish an escrow with a mutually agreed-upon escrow holder.

Owner agrees to pay Broker a sales commission in accordance with the appropriate provisions of the SCHEDULE OF COMMISSIONS attached hereto, upon the closing of the real estate transaction.

Alternative Transactions: If the transaction changes to any other transaction with a listed buyer or lessee, including, but not limited to, a sale, exchange, option to buy, right of first refusal, ground lease, lease, sublease, conservation easement, or assignment (collectively "Alternative Transaction"), then Broker shall automatically be Owner's sole and exclusive Broker for such Alternative Transactions and represent Owner in such Alternative Transactions under the terms and conditions of this agreement. If, during the term hereof, an Alternative Transaction is entered into, then Owner shall pay Broker a commission in accordance with the appropriate provisions set forth in the attached SCHEDULE OF COMMISSIONS.

### 2. Term

The term of this Agreement will be twelve (12) months (the "Initial Term"). Owner may extend the term of this Agreement for an additional twelve months upon prior notice to Broker prior to the end of the Initial Term.



### 3. Additional Provisions.

Owner agrees to cooperate with Broker in effecting the sale or alternative transaction of the property. All negotiations are to be through Broker for any offer procured by Broker. Broker is authorized to open escrow to accept a deposit from any prospective purchaser. Broker is further authorized to advertise the property and shall have the non-exclusive right to place a sign or signs on the property.

It is understood that it is illegal for either Owner or Broker to refuse to display, lease or sell to any person because of race, color, religion, national origin, sex, marital status, or physical disability.

This Agreement is subject to approval by the Owner's Board of Directors. Owner agrees to indemnify and hold Broker harmless from any liabilities, costs, damages and/or expenses, including without limitation attorney's fees, arising from or connected with any incorrect information supplied by Owner to Broker or to the purchaser or to prospective purchasers, any information which Owner fails to supply to Broker or to the purchaser or to prospective purchasers, or any incorrect representation of Owner related to this Authorization or to the subject property. Owner acknowledges receipt of a copy of this Authorization and the attached SCHEDULE OF COMMISSIONS, each of which Owner has read, fully understands, and has executed.

In the event of any controversy related to, concerning or arising out of this AUTHORIZATION and/or the attached SCHEDULE OF COMMISSIONS, or any facts based upon or involving the same, the prevailing party, whether in court or by way of out-of-court settlements, shall be entitled to recover from the non-prevailing party or parties such prevailing party's attorney's fees, court costs, expert witness fees and/or other expenses relating to such controversy, including attorney's fees, court costs, and/or other expenses on appeal, if any.

[SIGNATURE PAGE FOLLOWS]



IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the Effective Date.

OWNER:

**TRABUCO CANYON WATER DISTRICT**

By: \_\_\_\_\_  
Name: Fernando Paludi  
Title: General Manager  
Phone: 949-858-0277  
Email: fpaludi@tcwd.ca.gov

Date \_\_\_\_\_

BROKER:

**STADIA REALTY INC.**

By: **BRENT J. SCHARNBERG**

Date \_\_\_\_\_

*OWNER/BROKER*  
CA DRE 01477070 | CO DRE 100097130



BRENT@STADIAREALTY.COM  
714-469-9348  
540 NORTH GOLDEN CIRCLE DRIVE, SUITE 211  
SANTA ANA, CALIFORNIA 92705  
STADIAREALTY.COM

## **SCHEDULE OF COMMISSIONS**

### **For transactions in which the counterparty is Wildlands, Inc.:**

#### **SALES, EXCHANGES:**

- 1. Unimproved Property:** (acreage substantially lacking amenities necessary for urban development such as roads, utilities and zoning): 2.5% of the gross sales price
- 2. Improved Property:** 2.5% of the gross sales price.
- 3. Exchange:** Each party to the exchange shall pay a full commission in accordance with this Schedule, based upon the fair market values of the respective properties.
- 4. Joint Venture:** If a joint venture is effected in lieu of a sale, a commission shall be paid based upon the fair market value of the property contributed 6% of market value
- 5. Business Opportunity:** 2.5% of the total consideration.
- 6. Conservation Easement:** 2.5% of total consideration.

#### **LEASES:**

- 1. Ground Lease** 2.5% of the total base rental for the term of the lease.

### **For transactions in which the counterparty is any other entity:**

#### **SALES, EXCHANGES:**

- 1. Unimproved Property:** (acreage substantially lacking amenities necessary for urban development such as roads, utilities and zoning): 3% of the gross sales price
- 2. Improved Property:** 3% of the gross sales price.
- 3. Exchange:** Each party to the exchange shall pay a full commission in accordance with this Schedule, based upon the fair market values of the respective properties.
- 4. Joint Venture:** If a joint venture is effected in lieu of a sale, a commission shall be paid based upon the fair market value of the property contributed 6% of market value
- 5. Business Opportunity:** 3% of the total consideration.
- 6. Conservation Easement:** 3% of total consideration.

#### **LEASES:**

- 2. Ground Lease** 3% of the total base rental for the term of the lease.



# Trabuco Canyon Water District

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## FINAL REPORT



**Stadia Realty Inc.**  
540 N. Golden Circle Drive, STE 211  
Santa Ana, California 92705  
DRE#01988694  
CA Small Business Micro #200362

[stadiarealty.com](http://stadiarealty.com)

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## About Us

Stadia Realty, Inc. is a privately-held, national real estate advisory firm established in 2012 focused on land acquisition and project management for infrastructure projects. We're a relationship-driven business committed to offering practical solutions to our clients. We proudly serve municipalities, land owners, infrastructure & energy developers, public utilities, and agencies.



We also provide geospatial analysis and mapping services through Stadia GIS to support informed decision-making for infrastructure projects.

### MISSION STATEMENT

Brokering land, building relationships.

### VISION STATEMENT

Create a legacy of meaningful work, build relationships, and contribute to resilient communities and a sustainable future.

## Our Services

### Land Acquisition Services

Land Owner Search • Land Owner Outreach Purchase & Lease Negotiation • Eminent Domain Support  
Easement Acquisition • Land Aggregation  
Project Management

### GIS Services

Project Mapping • Custom Online Apps Geospatial  
Data Management • Property Exhibits • Project Siting  
Analysis

### Due Diligence Services

Skip Tracing • Title Abstracting • City, County, State  
Research • Permitting Research Document  
Preparation • Mailing Campaigns Rights Checks  
Project Support • Transaction Support  
Advisory Services

### Land Valuation Services

Broker Opinions of Value • Comparable Research  
(MLS + CoStar) • Valuation Modeling  
Advisory Services

# Stadia Team



## BRENT J. SCHARNBERG

Co-Founder, President/CEO

brent@stadiarealty.com

714-469-9348

### Experience

Brent is a seasoned real estate broker with 30 years' experience in the industry. He's licensed in California, Colorado, and Texas and has managed some of the largest and most complex infrastructure projects in California. With certifications as a Registered Landman and Accredited Land Consultant as well as years of internal public utility experience, Brent is positioned well to lead and partner on projects across a diverse array of specialty areas, including:

- **Real Estate Acquisition, Disposition & Development**  
Eminent Domain Expert
- **Water** Transmission & Storage
- **Sanitation**
- **Electric** Transmission, Generation, Distribution, Storage & Substations
- **Transportation** Roads, Highways, Railroads & Airports  
Oil & Gas | Mineral Rights Analysis
- **Mitigation Land** Land Bank Negotiations with Landowners & Conservation Entities

### CERTIFICATIONS

California Real Estate Broker's License DRE #01477070  
Colorado Real Estate Broker's License DRE #100097130  
Texas Real Estate License TREC #33754  
Registered Landman #00202479  
RLI Accredited Land Consultant #1625  
California Land Surveyors Association Affiliate Member  
American Land and Title Association Member  
Appraisal Institute Affiliate Member



## BRIAN J. SCHARNBERG

Co-Founder, Vice President

brian@stadiarealty.com

949-554-4832

### Experience

Brian is a seasoned real estate broker with 29 years' experience in the industry. He's licensed in California and has performed a wide range of services for both public and private sector clients. With certifications from the American Land & Title Association and memberships in recognized industry groups like the International Right of Way Association, Brian leads and partners on projects across a diverse array of specialty areas, including:

- **Real Estate Acquisition, Disposition & Development**  
Renewable Energy Expert
- **Water** Transmission & Storage
- **Sanitation**
- Electric Transmission, Generation, Distribution, Storage & Substations
- **Transportation** Roads, Highways, Railroads & Airports  
Oil & Gas | Mineral Rights Analysis
- **Mitigation Land** Land Bank Negotiations with Landowners & Conservation Entities

### CERTIFICATIONS

California Real Estate Broker's License DRE #01490840  
International Right of Way Association Chapter 57 Member  
American Land and Title Association Member  
California Land Surveyors Association Affiliate Member  
ARGUS Software Certification  
American Association of Professional Landmen 00218314

# Kit Cole Consulting Team



**KATHERINE "KIT" COLE**  
Founder of Kit Cole Consulting, LLC

kit@kitcoleconsulting.com  
818-822-6378

## Experience

Katherine is a nationally recognized expert in stakeholder engagement and community relations, specializing in working with high-impact industries and infrastructure projects. With a career spanning Fortune 200 companies, state government, and environmental policy, she brings a unique ability to navigate high-stakes, emotionally charged public discourse.

As the founder of Kit Cole Consulting, Katherine has led initiatives that bridge the gap between industry and communities, ensuring collaborative solutions that balance development with public concerns. She has served on the IAP2USA Board of Directors, shaping national standards for public participation, and has been a Governor's appointee to the California Environmental Protection Agency. In addition to her consulting work, she teaches at the University of Southern California (USC) Price School of Public Policy and lectures at Pepperdine University.

She has developed more than 15 third-party coalitions, managed teams delivering 30 major electricity transmission projects and hundreds of distribution projects, and played a key role in negotiating the first-ever Community Benefits Agreement between the City of Los Angeles and a local community for a waste facility.

Katherine has successfully led and influenced projects across a range of critical infrastructure sectors, including:

- **Stakeholder Engagement & Community Relations**
- **Infrastructure Development & Policy**
- **Environmental Justice and AB 617 Compliance**
- **Public Participation & Coalition Building**
- **Major Utility & Energy Projects**
- **Negotiated Agreements Between Industry & Local Communities**

Areas of Expertise:

- **Hostile Community Engagement**
- **Communicating About Utility-Related Infrastructure**
- **AB 617 Mandates** Including Working with Community Steering Committees
- **Risk Scenario Planning**
- **Intersection of Climate Change & Waste Management**

## EDUCATION

BA in Public Administration, UC Davis  
MA in Public Administration, USC  
EdD/PhD in Public Policy & Community Development, USC

# Michelle Holiday & Associates Team



## MICHELLE HOLIDAY

Founder of Michelle Holiday & Associates

mholiday@michelleholiday.biz

405-747-9769

## Experience

Michelle is a trusted expert in energy policy, infrastructure development, and governmental affairs, with a strong focus on Tribal consultation and stakeholder engagement. As a member of the Iowa Tribe of Oklahoma, she brings a deep understanding of Tribal governance and regulatory processes.

In 2013, Michelle founded Michelle Holiday & Associates, a consulting firm specializing in energy projects, permitting, and public involvement. She has worked nationally with Tribes, corporations, and industry associations, providing strategic guidance on complex infrastructure and energy initiatives.

Her professional experience includes serving as an energy lobbyist and Manager of Legislative and Native American Affairs at Edison International, as well as representing her Tribe in government affairs and economic development. She has successfully navigated NEPA and CEQA siting and regulatory requirements, working closely with Tribal governments, federal agencies, and state and local stakeholders.

Michelle has served on multiple national boards and is a recognized subject matter expert in Tribal energy, the permitting process, and Section 106 compliance for renewable energy projects.

Impact:

- **Successful lease negotiations** between Tribal governments and energy companies
- **Complex Tribal consultations** for Section 106 in extractive mining and renewable energy industries
- **Strategic stakeholder engagement** and public involvement initiatives

Areas of Expertise:

- **Permitting & Siting of Infrastructure Projects**
- **Governmental Affairs**
- **Stakeholder Engagement**
- **Tribal Consultation**
- **Tribal Liaison**

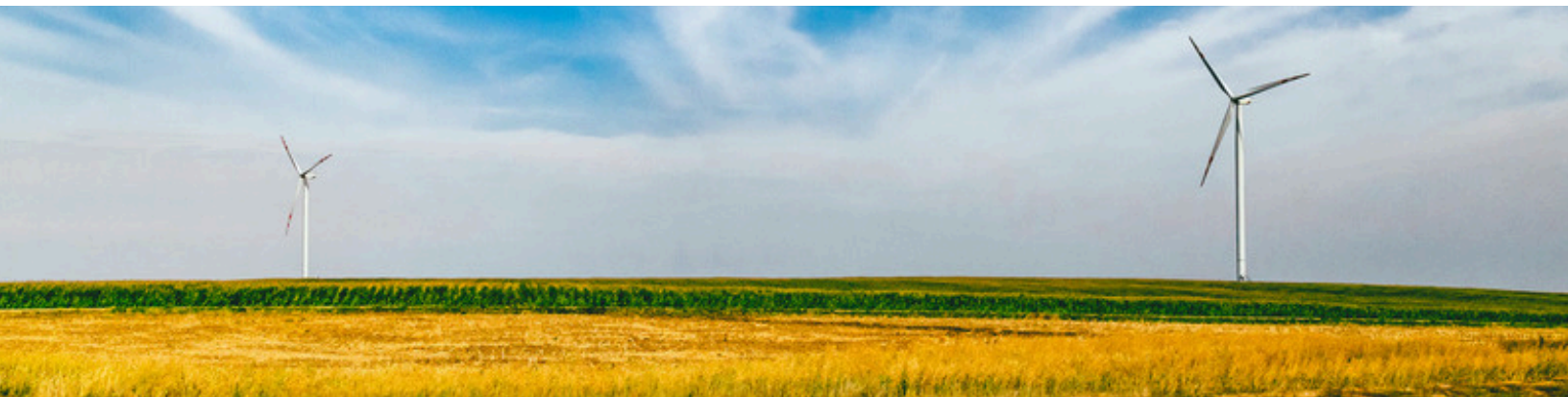
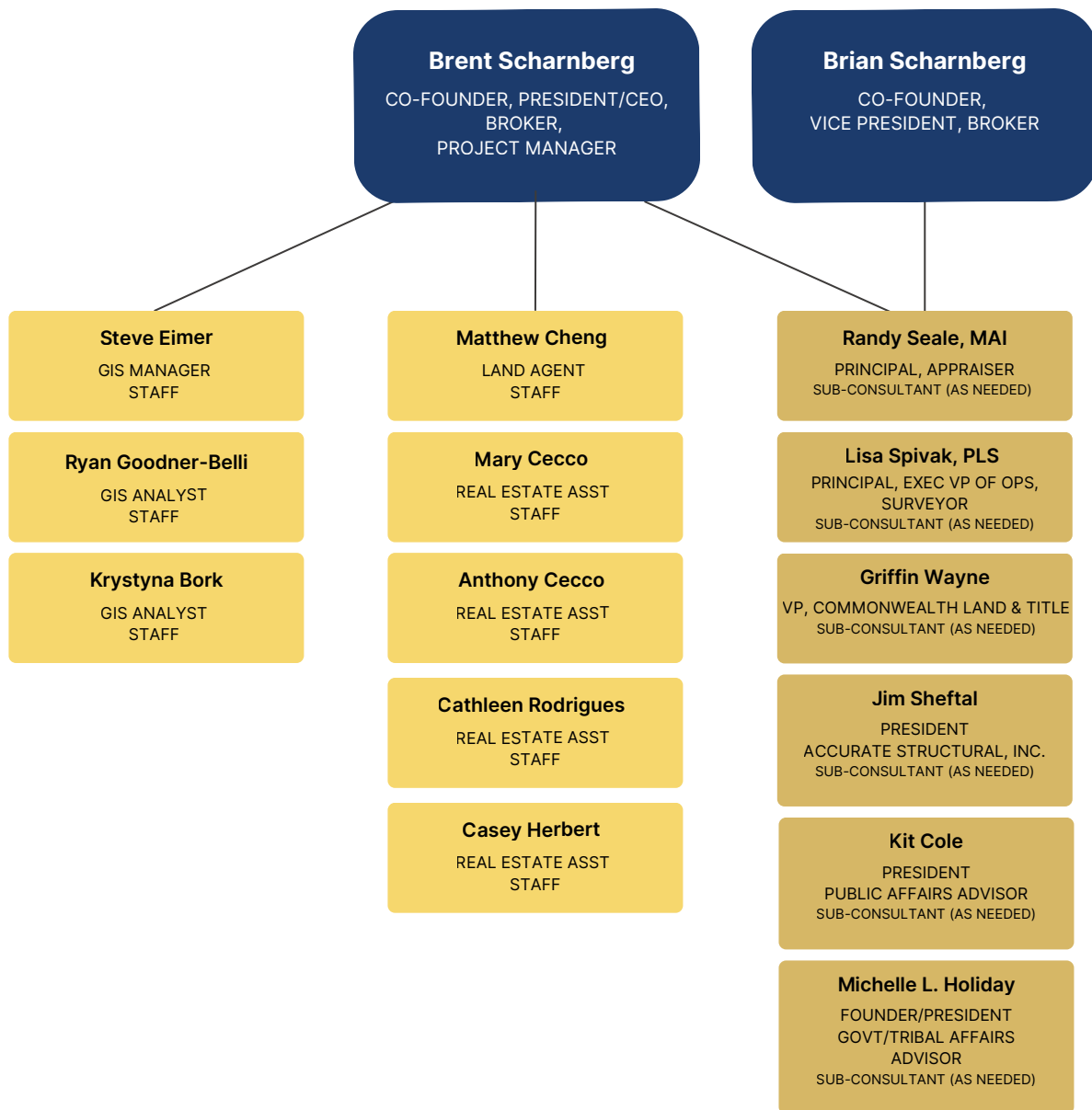
## EDUCATION

BA in Political Science & Public Administration/Minor in American Indian Studies, Cal State Long Beach

# Organizational Chart

**\*\*CONFIDENTIAL\*\***

We are a small but mighty team. Being subject-matter-experts is what sets us apart and ensures our business remains a partner of choice in a competitive industry.





# Executive Summary

## History of Trabuco Canyon

The name “Trabuco Canyon” in Orange County, California, has its roots in a historical event dating back to the Gaspar de Portolá Expedition of 1769. According to local lore, while the expedition was camped in the area on July 24–25, one of the soldiers lost his “trabuco” (Spanish for a type of musket or blunderbuss), a short-barreled firearm with a flared muzzle, commonly used in the 17th and 18th centuries. The trabuco was a valuable weapon and in memory of this loss, the nearby stream was named Trabuco, and the name eventually extended to the canyon and surrounding region. Over time, the name became associated not just with the stream but also with the mesa, canyon, and broader area, embedding this small historical mishap into the region’s identity.

Trabuco Canyon has a rich and layered history, and while it is often known for its scenic horse trails, it wasn't always designated as such.

- **Early Use:** The area was originally inhabited by the Acjachemen people, and later became part of Rancho Trabuco, a Mexican land grant given in 1846 to John (Don Juan) Forster.
- **Mission-Era Trails:** Though a mission was planned for the canyon, it was ultimately built in San Juan Capistrano. However, the trails used by missionaries and ranchers likely laid the groundwork for future equestrian paths.
- **Forest and Recreation:** In 1907, the Trabuco Canyon National Forest was established and later merged into the Cleveland National Forest, which helped preserve the area and promote recreational uses like hiking and horseback riding.



## Trabuco Canyon Water District

Established in 1962, Trabuco Canyon Water District (also referred to as “TCWD” or the “District” throughout) is a county water district organized and operating pursuant to Section 30000, and following, of the Water Code of the State of California, responsible for providing retail potable water service, groundwater filtration and treatment, wastewater collection and treatment, water recycling, and urban runoff collection and treatment services to approximately 13,500 residents through approximately 4,300 connections. TCWD’s mission is to provide high-quality water, sewer, and recycled water services to its customers.

## Project Goals & Scope of Work

In May of 2025, TCWD posted a Request for Qualifications (RFQ) seeking experienced and qualified consultants to evaluate potential uses for its 120-acre undeveloped rural property in Trabuco Canyon, north of Robinson Ranch. The stated SCOPE OF WORK was to assist TCWD in determining the best and highest potential uses for the development, conservation, or sale of the property to a public or private buyer. Potential uses considered by TCWD prior to the RFQ process included mitigation lands, renewable energy, commercial or residential development, agriculture, or public facilities.

## Why Stadia

RFQs were screened by the District and qualified firms were invited to interview. Stadia Co-Owners, Brent & Brian Scharnberg, interviewed and provided a brief presentation to District officials on June 17<sup>th</sup>, 2025, and were later selected as the partner of choice. With three decades of experience in the Real Estate industry and specializing in land acquisition, due diligence, land valuation, and GIS services, Stadia was poised to support TCWD in identifying the best and highest use for the Trabuco Canyon Property.

This final report documents the project timeline, challenges, investment, and Broker Recommendations for the property and includes our methodology for decision-making, supporting evidence, data, and documentation. We’ve also included next steps and potential future partnership opportunities should TCWD decide to move forward with the proposed best & highest use cases.

# Project Timeline



## Challenges

When collaborating with developers, agencies, or other municipalities, the Stadia team is typically allocated a timeframe of six to twelve months to conduct comprehensive research and due diligence on properties of interest—particularly those involving complex development scenarios. Due to the accelerated timeline of a one-month turnaround, this report provides a high-level overview of the research that informed our Broker Recommendations. We are confident that, even with additional time for analysis, our recommendations would remain consistent given the development constraints and the distinctive characteristics of the Trabuco Canyon property.

## Investment

TCWD invested \$10,000 (not to exceed) in a partnership with Stadia, which included the following resources in service of the Trabuco Canyon project:

<b>43.5 HOURS</b>	= BROKER
<b>11.5 HOURS</b>	= REAL ESTATE ASSISTANTS
<b>28 HOURS</b>	= GIS ANALYSTS
<b>4 HOURS</b>	= PUBLIC AFFAIRS CONSULTANT
<b>4 HOURS</b>	= GOVERNMENTAL/ NATIVE AMERICAN AFFAIRS CONSULTANT
<b>1 HOUR</b>	= ENGINEERING & GRADING CONTRACTOR
<b>1 HOUR</b>	= RESIDENTIAL DEVELOPER
<b>20 HOURS</b>	= WILDLANDS MITIGATION REVIEW

**TOTAL WORK HOURS = 113**

# Broker Recommendations

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Based on a detailed analysis of research and due diligence conducted by Stadia Realty and our trusted partners, the best and highest use cases for the Trabuco Canyon property are:

## 1 Conservation Land Sale

The Trabuco Canyon property is ecologically sensitive and includes critical habitats and high-value biological resources such as oak woodlands, coastal sage scrub, riparian habitat, designated wildlife corridors, and other habitats for federally listed species. The property is subject to the Foothill Trabuco Specific Plan (FTSP), which imposes strict development and conservation requirements. These features make the site an ideal candidate for mitigation banking or conservation acquisition. Potential for participation in mitigation credits is another opportunity for TCWD under this approach.

A conservation sale offers the most substantial monetary benefit. A mitigation land buyer may offer approximately \$50,000 - \$75,000 per acre purchase price. This opportunity equates to \$6,000,000 - \$9,000,000 in purchase money and would receive broad support from agencies and environmental organizations.

For these reasons, we recommend dedicating the entire property (120-acre parcel), or a large portion of the property (113-acre parcel) to conservation. Our partner of choice is **Wildlands**, a local leader in habitat mitigation solutions. A Wildlands proposal is included for TCWD's review in the Appendix. A deep-dive analysis of this use case and all others that were reviewed is included in the "Trabuco Canyon Development Opportunities" section of the report.

## 2 CAL FIRE Land Lease

Option 2 is a carve out from the primary conservation recommendation listed above. We recommend dedicating a 7-acre parcel (of 120 acres total) to this potential use. A CAL FIRE Land Lease provides highly stable, long-term revenue (estimated at \$168,000 - \$336,000 annually) that supports public safety infrastructure with minimal entitlement risk.

If long-term, stable cash flow is prioritized above a one-time windfall (Option 1- Conservation Land Sale), a CAL FIRE Land Lease is considered the most beneficial recurring revenue option. In addition, this option supports community resilience, public safety objectives, and aligns with the District's stewardship role. A deep-dive analysis of this use case and all others that were reviewed is included in the "Trabuco Canyon Development Opportunities" section of the report.

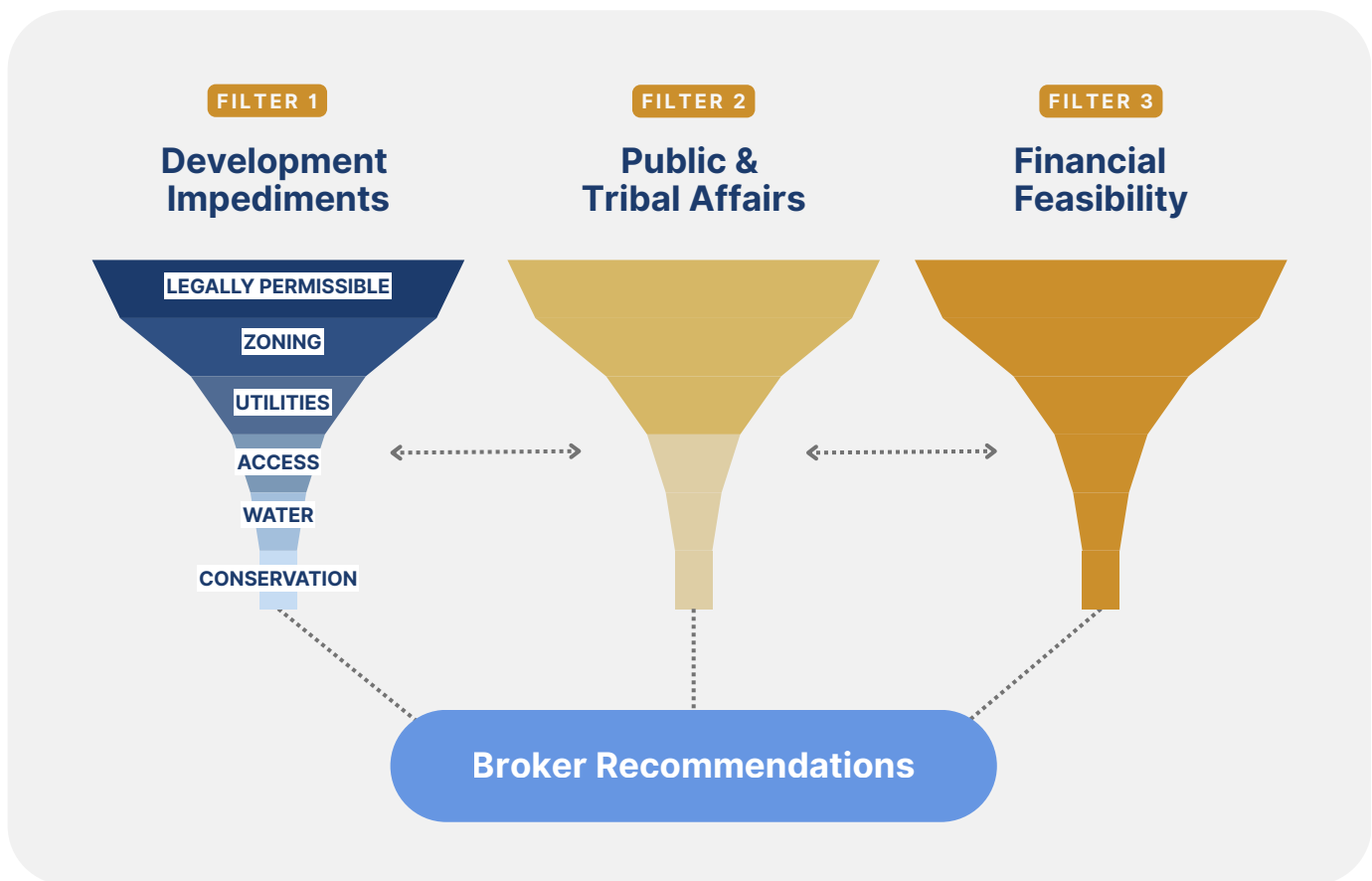
### Broker's Note:

Stadia recommends a deeper analysis to determine the boundaries of the "wildlife corridor" within the Trabuco Canyon parcels to understand potential impacts on the 7-acre carve out.

# Methodology

To determine the best and highest use of any property, we apply a structured methodology designed to inform Broker Recommendations and guide sound decision-making. Property characteristics are evaluated through a series of filters, each highlighting opportunities and constraints that shape development potential.

This step-by-step analysis produces the foundation for identifying feasible use cases. The process map below illustrates our methodology, followed by detailed explanations of each critical filter.



## FILTER 1

## Development Impediments

All development opportunities are shaped by a set of core impediments that determine whether a project can move forward. These include whether the property is legally permissible for the intended use, whether zoning regulations support the proposed development, and whether utility infrastructure can be secured to serve the site. Beyond these regulatory and infrastructure considerations, projects must also account for physical and environmental factors such as access, water, and conservation. Each impediment can independently limit feasibility, and together they form the first and most critical filter in evaluating potential use cases. A project that appears promising on market or financial grounds may ultimately be unviable if it cannot overcome one or more of these constraints.

### LEGALLY PERMISSIBLE

Legally permissible refers to whether the property can be developed in compliance with existing laws, regulations, and entitlements. This includes deed restrictions, easements, land use covenants, and any applicable federal, state, or local requirements that may limit development rights. A property may appear physically suitable for a project but remain infeasible if it cannot be lawfully entitled for the intended use.

### ZONING

Zoning defines the specific types of uses, densities, and building standards that are permitted on the property. Local zoning ordinances regulate factors such as land use categories, building heights, lot coverage, and allowable density, all of which directly shape development options. If current zoning does not align with the intended use, rezoning or variances may be required - processes that can add complexity, cost, and uncertainty to project feasibility.

Beyond legal compliance, zoning directly impacts infrastructure planning, permitting timelines, and access to streamlined entitlement pathways. For example, California legislation like SB 684 and SB 1123 offers expedited review for projects that conform to zoning standards, reducing the need for discretionary approvals and environmental assessments. In energy and infrastructure siting - such as battery storage or fire mitigation projects - zoning helps identify parcels near substations or critical facilities that meet both technical and regulatory criteria. Ultimately, zoning is not just an impediment but a strategic tool that guides responsible, efficient, and sustainable development.

### UTILITIES

Utilities are a foundational consideration in land development, as the availability and capacity of water, sewer, electricity, and gas services directly influence feasibility. Utility easements and infrastructure requirements can affect site layout, limit certain land uses, and add complexity to permitting and construction. Ensuring reliable service delivery while maintaining compliance with local and state regulations is critical to long-term project viability.

**ACCESS**

Access refers to whether the property can be physically and legally reached in a manner that supports the intended use. This includes existing roadways, easements, rights-of-way, and compliance with local transportation standards. A property without adequate access may face restrictions on construction equipment entry, resident or customer circulation, emergency vehicle reach, or compliance with county and state code requirements. In some cases, lack of access can make a property completely undevelopable until significant infrastructure or entitlement solutions are secured.

**WATER**

Equally essential is the availability and reliability of water service, as no development can proceed without a secured and sustainable supply. Water encompasses both the availability and reliability of water resources required for development. This includes potable water for residential or commercial use, irrigation supply for landscaping or agriculture, and fire flow requirements for safety. Developers must evaluate whether the water district can provide sufficient service capacity and infrastructure to meet projected demand. Without secured water rights, pipeline connections, or service agreements, even highly attractive sites may be deemed infeasible.

**CONSERVATION**

Finally, conservation refers to environmental and regulatory constraints that protect natural resources and limit development potential. This may include habitat preservation for protected species, floodplain restrictions, wetlands or riparian zones, and open space designations under state or federal law. Conservation considerations may reduce the buildable footprint, impose costly mitigation requirements, or eliminate certain use cases entirely. In essence, conservation ensures compliance with environmental stewardship obligations but simultaneously constrains development flexibility.

While legally permissible, zoning, utilities, access, water, and conservation determine whether a project is physically and environmentally feasible, development must also navigate the social, political, and cultural dimensions captured in FILTER 2: Public & Tribal Affairs.

**FILTER 2**

## Public & Tribal Affairs

Beyond physical and environmental constraints, development feasibility is also shaped by social, cultural, and political considerations. Public and Tribal Affairs form the second critical filter, as they influence whether a project can earn the approvals, support, and legitimacy needed to move forward. Public affairs address the role of community sentiment and local government priorities in shaping entitlement pathways, while tribal affairs recognize the sovereign rights and cultural resources of Native American tribes. Together, these factors can significantly affect timelines, costs, and overall viability, making proactive engagement and collaboration essential.

### **PUBLIC AFFAIRS**

Public affairs considerations encompass the influence of local communities and government bodies on development outcomes. Neighborhood sentiment, city or county priorities, and the political climate can all affect entitlement approvals, permitting timelines, and overall project support. Early engagement, clear communication, and alignment with public priorities are often essential to reducing risk and building momentum for a project.

### **TRIBAL AFFAIRS**

Tribal affairs considerations recognize the sovereign rights and cultural heritage of Native American tribes, which may directly impact a property's development potential. This includes consultation requirements, the protection of cultural or sacred sites, and adherence to state and federal regulations governing tribal lands and resources. Meaningful collaboration with tribal representatives is not only a legal necessity but also a critical component of building trust and advancing projects in a responsible and respectful way.

Once a project demonstrates social, cultural, and political viability, the next critical consideration is whether it can succeed financially - assessing costs, revenue potential, and overall economic feasibility under FILTER 3: Financial Feasibility.

#### **FILTER 3**

## **Financial Feasibility**

Financial feasibility evaluates whether a development opportunity can generate sufficient return to justify the investment and risks involved. This filter considers factors such as land acquisition costs, construction and infrastructure expenses, potential revenue streams, and market demand. Even a site that meets physical, environmental, social, and cultural requirements may be impractical if the numbers do not support a viable business case. By assessing financial feasibility, we ensure that recommended use cases are not only possible but also economically sustainable.

## **Broker Recommendations**

Insights derived from the three filters (*Development Impediments, Public & Tribal Affairs, Financial Feasibility*) form the foundation for Broker Recommendations, guiding our clients toward the most feasible and strategically advantageous development options. Broker Recommendations integrate the findings from each filter to determine the property's best and highest use. This analysis balances physical, social, and economic factors, providing our clients with informed, strategic guidance on feasible and high-value development opportunities.

In the next section of the report, you'll find a detailed analysis of the Trabuco Canyon property using this methodology.

# Trabuco Canyon Development Impediments

## LEGALLY PERMISSIBLE

As mentioned in Methodology, the determination of a property's best & highest use must begin with an evaluation of what is legally permissible. For the Trabuco Canyon parcel, this involved a detailed review of the Foothill/Trabuco Specific Plan (FTSP), which governs land use within the area and imposes strict conservation and development constraints. The FTSP outlines permitted uses within designated wildlife corridors, ridgeline setbacks, grading limits, and vegetation buffers—all of which directly impact the feasibility of proposed development types. These constraints mean that any proposed use must be carefully vetted against zoning ordinances, environmental overlays, and conservation easements to ensure legal compliance.

Stadia considered six (6) potential development types for the Trabuco Canyon property, and the following table demonstrates which opportunities are considered legally permissible:

DEVELOPMENT TYPES	LEGALLY PERMISSIBLE	NOTES
Conservation Land Sale	Yes	Permissible under FTSP
CAL FIRE Land Lease	Yes	Permissible under FTSP
Residential Development	Yes	Permissible under FTSP with restrictions
Equestrian Development	Yes	Permissible under FTSP with restrictions
Battery Energy Storage System (BESS)	Maybe	FTSP doesn't contemplate battery storage use. This development type would require county approval and a conditional use permit
Cemetery Development	Maybe	FTSP doesn't contemplate cemetery use. This development type would require county approval and a conditional use permit

## ZONING

The 120-acre Trabuco Canyon parcel is governed by Orange County's "P" zoning designation, interpreted as the Planned Development (PD) District under Section 16.209 of the Orange County Zoning Code. This designation allows for flexible land use planning, particularly for public benefit projects such as emergency infrastructure and environmental conservation. This analysis considers the suitability of the site for use as mitigation land, a CAL FIRE station, or a combination of both, and references applicable sections of the Orange County Zoning Code.

The site's location within the Foothill/Trabuco Specific Plan (FTSP) area imposes conservation-oriented development standards, including wildlife corridor setbacks, ridgeline protections, and grading limits. The Plan Development zoning supports a dual-use strategy: approximately **113-acres are proposed for mitigation land** due to its ecological value and proximity to preserved areas like the Cleveland National Forest and Trabuco Rose Preserve. **7-acres are proposed for a CAL FIRE station**, leveraging the site's wildfire history and strategic terrain. This combined use strategy aligns with both the General Plan and FTSP goals to preserve rural character and enhance public safety and environmental stewardship.

### Mitigation Land Compatibility

The property's proximity to preserved lands and its ecological value make it suitable for use as mitigation land. PD zoning allows for open space and conservation overlays, supporting this use. Section 16.102 establishes the zoning districts and confirms that such uses are consistent with the General Plan.

### CAL FIRE Station Compatibility

The Trabuco Canyon property has been identified as a strategic location for a CAL FIRE station due to its history of wildfires and high-risk terrain. Section 16.209 supports such public safety uses within PD zoning, provided they align with the General Plan and are approved through the procedures outlined in Sections 16.601–16.610.

### Zoning Code Citations

The following sections of the Orange County Zoning Code are referenced in this analysis:

- Section 16.102: Establishment of Zoning Districts
- Section 16.209: Planned Development District
- Sections 16.601–16.610: Planning Authorities and Procedures

## UTILITIES, ACCESS, WATER

In the following analysis, we've included a review of the development impediments: utilities, access, water rights, and easement provisions for parcels APNs 842-061-05, 842-061-06, and 842-061-07, based on recorded documents, including Specific Document\_2000.445000. TCWD retains access and utility easements that support water infrastructure and domestic supply, though several key water rights remain with other parties.

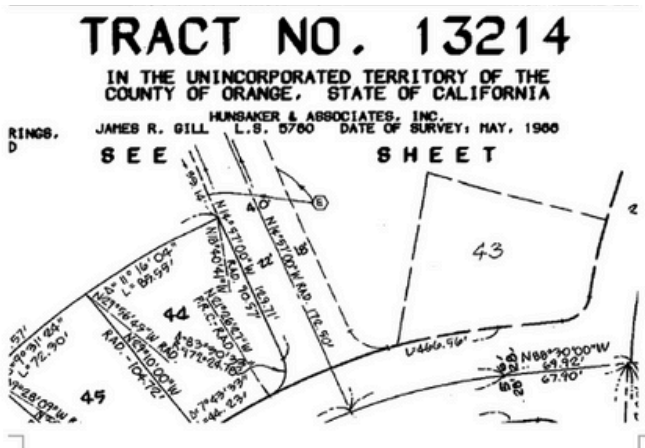
**Utility & Access Easements Retained**

TCWD retains meaningful infrastructure rights:

- 2" Pipeline Access: Authorized via a 1981 Special Use Permit from Cleveland National Forest, allowing use of Trabuco Creek Road for pipeline maintenance
- Utility Infrastructure: Easements permit installation and maintenance of underground utilities (potable water, sewer, gas, electrical, communications) for up to six single-family homes

Easement "E" Reference (Tract Map No. 13214)

- Easement "E" is a 40-foot-wide private easement for access purposes
- It is reserved in Tract Map No. 13214 and referenced in the WLC Deed
- It supplements the other easements by providing mapped and recorded right-of-way access across the Porter Properties to public roads



**Public Easements**

Three perpetual easements granted to The Trust for Public Land:

- Ridgeline Access Road (20 ft wide): Vehicular/pedestrian use; public access restricted unless grantee is a public agency
- Connector Easement: Links to a public road, governed by a 1992 WLC deed
- Trabuco Creek Access (40 ft wide): Allows public use and maintenance if grantee is a public agency

**Riparian Rights Exception**

The deed excepts an undivided 5/6th interest in riparian rights to Trabuco Creek and appurtenant water sources. These rights were originally conveyed in a 1929 deed to Anne Robinson and apply to:

- Section 6, Township 6 South, Range 6 West
- Sections 12, 13, and 14, Township 6 South, Range 7 West

**Legal & Operational Implications**

- TCWD cannot divert or extract water directly from Trabuco Creek without acquiring the retained riparian rights
- Wells tapping hydrologically connected surface water are subject to California riparian law
- Infrastructure maintenance and utility use are permitted only if sourced from non-riparian sources

**Summary Table of Retained Rights**

PROVISION	STATUS
2" Pipeline Access	Retained (1981 Special Use Permit)
Riparian Rights	Not Retained (5/6th interest excepted)
Utility Easements	Retained
Public Easement Use	Conditional (agency status required)
Development Rights	Limited (residential use only)

**Broker Recommendations:**

- Confirm TCWD’s ownership of any remaining riparian interest.
- Negotiate acquisition of the retained 5/6th riparian rights if surface water use is intended.
- Consult legal counsel before initiating new well drilling or water storage projects affecting Trabuco Creek.
- Explore alternative water sources such as imported water, recycled water, or non-connected groundwater.

**Broker’s Note:**

For Stadia to complete a full water rights study, we need title with abstracting back to patent and will request a final legal opinion based on the findings.

**CONSERVATION**

The Trabuco Canyon parcels (*APN 842-061-07 Purchased on April 12, 2002; APN 842-061-06 Purchased on April 12, 2002; APN 842-061-05 Purchased on April 12, 2002*) are situated in the cismontane foothills of the Santa Ana Mountains, bordered by O’Neill Regional Park and Cleveland National Forest. The parcels include steep ridges, moderate hillsides, and an alluvial valley bottom traversed by Trabuco Creek.

The site is part of a 31-mile “wildlife corridor” and lies within a flood zone and critical habitat for the coastal California gnatcatcher and arroyo toad. Wildlife corridors are designated to ensure the future viability and movement of wildlife by preserving necessary habitat and movement areas. They provide linkages among major habitat areas such as the Cleveland National Forest, Arroyo Trabuco, and O’Neill Regional Park.



Wildlife corridors are legally defined both at the state and federal level, and within local land use plans like FTSP. These definitions emphasize:

- Connectivity between habitats
- Movement viability for native species
- Restrictions on development and infrastructure
- Conservation compatibility

The Wildlife Corridors Conservation Act of 2019 defines a wildlife corridor as: *“A feature of the landscape or seascape that provides habitat or ecological connectivity and allows for movement or dispersal of native or noninvasive fish, wildlife, or plants.”* This federal bill, though not enacted, has influenced conservation planning and funding mechanisms across agencies and states. In California, the Wildlife Connectivity and Climate Adaptation Act (AB 2320, 2024) added Section 1346.5 to the Fish & Game Code. It defines wildlife corridors as: *“Habitat linkages that allow animal movement between areas.”* This law directs the Wildlife Conservation Board to prioritize corridor protection, restoration, and expansion.

**Wildlife Corridors: Permitted Uses and Restrictions**

- Wildlife movement and habitat preservation
- Passive recreation (hiking, bicycling, horseback riding) on designated trails during daylight hours
- Utilities and pipelines only if no alternative exist, with minimal impact
- Single residences on legal building sites existing prior to the plan, only if no alternative location exists
- Roads only if no feasible access exists, with strict design limitations
- 50-foot development setback from corridor boundary with a 25-foot native vegetation buffer
- No exterior lighting or solid fencing within the setback

Stadia reviewed the FTSP, Ridgeline Protections, and Biological Report. The results of that review are included below in the **FTSP Conservation Compliance Checklist**, and a more detailed review is included in the Appendix. This graph represents the key details to be considered for conservation in Trabuco Canyon per FTSP requirements.

## FTSP Conservation Compliance Checklist

REQUIREMENT CATEGORY	COMPLIANCE CRITERIA	REFERENCE PAGE(S)
Wildlife Corridors	Minimum 400 ft wide (100 ft near Live Oak Canyon Rd)	FTSP pp. II-10 to II-14
Wildlife Corridors	50 ft minimum setback from corridor edge	FTSP p. II-14
Wildlife Corridors	25 ft native vegetation buffer if required	FTSP Appendix A-7
Ridgeline Protection	200 ft horizontal setback from major ridgelines	FTSP p. II-21
Ridgeline Protection	50 ft vertical setback from ridgelines	FTSP p. II-21
Ridgeline Protection	Preservation easement recorded before grading or final map	FTSP p. II-21
Grading Limits	Max 3,000 cu yd per dwelling unit (avg); up to 9,000 cu yd if fewer units built	FTSP pp. III-16 to III-18
Grading Limits	Slope height: 10 ft (residential), 30 ft (roads/non-residential)	FTSP pp. III-16 to III-18
Grading Limits	Contour grading required unless more harmful	FTSP pp. III-17, III-37

**Broker’s Note:**

Stadia recommends a deeper analysis to determine the boundaries of the “wildlife corridor” within the Tabuco Canyon parcels to understand potential impacts on the 7-acre carve out.

# Trabuco Canyon

## Development Opportunities

In this section of the report, we've provided deep-dive data and analysis related to six potential development opportunities (*Conservation Land Sale, CAL FIRE Land Lease, Residential Development, Equestrian Development, Battery Energy Storage System, Cemetery Development*) for the Trabuco Canyon parcels. The following data and analysis support our final Broker Recommendations for **Conservation Land Sale** and **CAL FIRE Land Lease** as the best & highest use cases.

### Conservation Land Sale Option

The conservation sale approach values the property based on its ecological attributes and potential for generating mitigation credits. Every acre of habitat—riparian, oak woodland, coastal sage scrub, and grassland—yields a specific number of credits, each with a market price as indicated by the 2024 Mitigation Credit Price Report (MCPR).

- Formula: Total Value = Acreage × Credit Yield × Price per Credit
- Example (Riparian): 10 acres × 2.0 credits/acre × \$125,000 = \$2,500,000

Summing across all habitat types, the estimated total mitigation land bank value ranges from \$9.24 million to \$16.45 million, depending on the market price of credits. In our consultation with Wildlands, they suggested they would absorb all risks and biological studies to conserve the land. If Wildlands (or any other conservancy group) were to purchase the parcels, the range of reasonability would be between \$50,000-\$75,000/acre purchase price resulting in \$6 million-\$9 million for 120-acres.

#### Mitigation Land Conservation

Mitigation land conservation is fully compatible and encouraged within wildlife corridors. Conservation easements, habitat restoration, and passive recreation are consistent with corridor goals.

#### Roads as Wildlife Corridors

Under the Foothill Trabuco Specific Plan, roads are generally prohibited within designated wildlife corridors. However, exceptions are made only when no other feasible access to a development site exists. In such cases, the following conditions must be met:

- Roads must be limited to local collector roads intended solely for resident access.
- Roads must be designed to minimize habitat disturbance and fragmentation.
- Road alignments must cross wildlife corridors at approximately 90 degrees to reduce the impact on wildlife movement.
- Through traffic must be discouraged to preserve the corridor's function.

These restrictions are intended to maintain the integrity of wildlife corridors and ensure that any necessary infrastructure does not compromise the movement and habitat of native species.

#### Broker's Note:

Please reference **Wildlands** proposal in the Appendix for conservation land sale interest.

## Conclusion

A conservation land sale represents:

- The lowest risk opportunity
- The highest reward
- The most publicly favorable use case

## CAL FIRE Land Lease Option

A CAL FIRE Land Lease (5-7 acre parcel of the 120-acre property) could provide long-term, stable revenue for Trabucco Canyon Water District, estimated at \$168,000–\$336,000 per year depending on the scope of facilities and support services included in the lease. This revenue is predictable, aligned with community interests, and does not require the extensive entitlement process associated with residential or energy uses. The information provided details CAL FIRE's statewide infrastructure, Trabucco Canyon's wildfire history, associated mutual benefits, and financial projections for both lease and sale arrangements.

### CAL FIRE Facility Overview

- 21 Operational Units
- 6 Contract Counties (including Orange County)
- 356 Fire Stations
- 44 Conservation Camps
- 13 Air Attack Bases
- 10 Helitack Bases
- 14 Demonstration State Forests

CAL FIRE facilities are strategically located to ensure rapid response across high-risk fire zones and varying terrains.

### Fire History in Trabucco Canyon

- Over 37 wildfires recorded in the past two decades
- Holy Jim Fire (2018): Originated within Trabucco Canyon, resulting in extensive damage
- Airport Fire (2024): Impacted over 5,400 acres and led to the evacuation of approximately 1,400 homes

The area's complex terrain and dry vegetation contribute significantly to frequent fire hazards. Establishing a local CAL FIRE facility would enhance early detection and coordinated emergency response, particularly in collaboration with Orange County Fire Authority (OCFA).

### Benefits of a Local CAL FIRE Facility

- Accelerated wildfire response for Trabucco Canyon and surrounding areas
- Enhanced protection for residential communities and key infrastructure
- Improved coordination with OCFA and regional emergency services
- Expansion of community education and fire prevention outreach
- Advancement of CAL FIRE's mission in high-risk environments

### Financial Projections & Transaction Models

- Lease Scenario
  - Projected annual lease revenue:
    - Low: \$25,000/year (based on rangeland lease values)
    - High: \$336,000/year (based on public agency rates)

- Sale Scenario
  - Estimated sale price: \$173,400 per acre
  - Total for 7 acres: \$1,213,800 as a one-time payment

#### Lease Estimate Basis

- Public agency leases: \$2,000–\$4,000/acre/month (\$336,000/year)
- Rangeland estimate: \$300/month/acre, totaling roughly \$25,000/year
- Land valuation aligns with an approximate 1.4% annual return, consistent with public land lease standards

#### Sale Estimate Basis

- Comparable sales (CoStar): \$173,400/acre (lowest in a 10-mile radius)
- Regional market listings: \$125,000–\$200,000/acre
- Conservative estimate for 7 acres: \$1,213,800 total

#### Regional Land & Lease Trends

- Less than 4% of Orange County land is agricultural
- 2023 crop value: \$75.7M (a decrease from \$115M in 2017)
- Nursery products constitute over 50% of crop value, primarily on transitional land
- Rents: Cropland—\$350–\$2,000/acre/year; Public safety infrastructure—\$2,000–\$4,000/month/acre

These lease rates are supported by regional and sector-specific data. Reports and databases consistently indicate that prime Southern California cropland commands \$350 - \$2,000/acre/year. Influencing factors include water access, soil quality, location, and crop selection. Parcels offering reliable irrigation and close market access typically secure higher rents, while less optimal lands fetch lower rates.

For public safety and infrastructure, higher lease rates (\$2,000 to \$4,000/month/acre) reflect the unique operational requirements and strategic importance of such sites. Agencies - including CAL FIRE- are prepared to pay premiums for locations with specialized improvements and accessibility. Lease agreements for comparable facilities frequently align with these figures due to their critical function and the scarcity of appropriate land. These conclusions are validated through public records and regional listings, which show steady agricultural lease rates alongside substantial premiums for public safety infrastructure. The underlying assumptions for this proposal are thereby substantiated by prevailing market practices.

#### Fire Response & Community Resilience

This section presents a strategic use case for TCWD's 7-acre parcel, encompassing three integrated components:

- A CAL FIRE helicopter pad designed for rapid aerial deployment
- Designated water drop pathways for efficient wildfire suppression
- A fire demonstration garden dedicated to community education and engagement

Combined, these features will reinforce regional resilience, support CAL FIRE and OCFA operations, and align with TCWD's commitment to responsible stewardship.

#### CAL FIRE Helicopter Pad

The site provides level terrain suitable for establishing a helitack base, enabling CAL FIRE to deploy helicopters for wildfire incidents. Key benefits include:

- Reduced emergency response times for Trabucco Canyon and neighboring areas

- Enhanced coordination with OCFA and emergency response teams
- Functionality as a tactical hub during peak fire seasons
- Proximity to Trabucco Creek and established TCWD reservoirs ensures efficient water access for aerial firefighting.

### Water Drop Paths

Situated within the San Juan Hydrologic Unit and adjacent to Trabucco Creek, the parcel enables strategic planning of water drop corridors that:

- Link the helipad to natural and engineered water sources such as Dove Lake and TCWD reservoirs
- Are mapped to safeguard sensitive habitats and meet FTSP conservation requirements
- Facilitate real-time suppression efforts during wildfire events, especially in rugged terrain

### Fire Demonstration Garden

A portion of the 7-acre site could feature a fire-wise demonstration garden, inspired by successful models such as Santa Barbara's Firehouse #7. This garden would:

- Exhibit defensible space designs utilizing fire-resistant plants and advanced irrigation techniques
- Educate local residents about wildfire preparedness and best landscaping practices
- Function as a platform for community engagement, including workshops and educational signage

The garden initiative would integrate seamlessly with TCWD's broader conservation objectives, supporting outreach initiatives and school programs.

### Community & District Benefits

This multi-use strategy yields several measurable benefits:

- Public Safety: Enhanced speed and effectiveness of fire response capabilities
- Education: Increased community awareness and proactive fire prevention
  - Environmental Stewardship: Adherence to FTSP standards and preservation of wildlife corridors
  - Revenue Generation: Potential to earn \$1.05M–\$1.21M via site sale or \$25K–\$336K annually through leasing arrangements

### MOU or Joint Powers Authority Requirement for Trabucco Canyon 7-Acre Use Case

To advance the recommended use scenario - which includes a CAL FIRE helicopter pad, water drop routes, and a demonstration garden - TCWD must enter into a formal agreement with CAL FIRE. This agreement could be structured as either a Memorandum of Understanding (MOU) or a Joint Powers Authority (JPA).

### Purpose of MOU or JPA

An MOU or JPA provides a comprehensive framework defining roles, responsibilities, and standard operating protocols between TCWD and CAL FIRE. Such agreements clarify the management, maintenance, and authorized uses of the 7-acre site for emergency response and public safety purposes.

### Benefits of Entering into an Agreement

- Defines clear governance and operational procedures for shared assets
- Facilitates coordinated resource planning and deployment
- Strengthens emergency response systems and overall community resilience
- Establishes the legal foundation for funding, liability allocation, and ongoing site management

### Facilitating Collaboration and Operational Readiness

Through a formalized agreement, TCWD and CAL FIRE can collaborate on detailed protocols regarding water utilization, helicopter operations, and public education initiatives. This partnership ensures the 5-7-acre site's facilities are effectively mobilized during wildfire incidents and supports continuous community engagement through educational projects like the fire demonstration garden.

## Conclusion

A CAL FIRE facility situated on Trabuco Canyon land will:

- Strengthen regional wildfire protection efforts
- Provide new revenue streams
- Support sustainable land stewardship and further CAL FIRE's mission

## Residential Development Option

As part of our due diligence, we interviewed a local Orange County custom home residential developer about the possibility of allocating some or all the Trabuco Canyon parcels to residential development. The following are the results and recommendations from the interview.

1. Developer was the fee owner of the property that was sold to Orange County Transportation Authority. He was originally planning an equestrian estate development on over 400 acres northwest of the subject property. Approximately 160 homes specifically for equestrian estates. He ultimately sold this land as mitigation land for the Orange County Transportation Authority. The developer is very familiar with the area and was able to give insights into multiple development approaches.
2. Primary concern with this property is access for residential development.
3. Without 2 sources of access a residential developer cannot develop the property. The county conditions the site development on 2 access points. A developer would not pay the highest price for the land without 2 predetermined access points.
  - The developer referenced a home development currently south of this area that has not been approved for many years because it did not have 2 points of access for fire safety.
4. The developer suggests building 3-4 custom homes with a shared recreational stable, managed by an HOA or related CC&Rs. He believes TCWD could develop a total of 5 parcels.
  - This would be conditioned on the ability of obtaining water for the development, a second access point, sanitation and electricity extended to the site. All of which would be costly. Diminishing the land sale value.
    - An additional problematic issue for home development would be the grading restrictions in the governing Foothill Trabuco Plan.
    - Setback requirements from ridgeline from the border of forest and the definition of animal corridors in California all constrain the residential development approach.
    - Property may sit on the market if no entitlements in place. County may be more kind to the district than a developer in obtaining access and entitlements.
  - Estimated home sales if 3-4 custom homes were built would be \$3M-\$4M per home after the land is developed.
  - The developer uses a land residual value model to determine the purchase price.
  - Equestrian homes would continue the equestrian tradition of the land in the canyon

5. Concern- County requires Clean Water Act participation for all equestrian development sites. It would be harder to get horse properties approved in Orange County because of this ruling.

6. Examples of equestrian properties can be found throughout Orange Park Acres, Rancho Santa Fe

7. Alternatively, instead of housing an equestrian recreational facility performed under a ground lease could bring revenue to Trabucco Canyon Water District. The developer believes the rent per horse would be \$750 per month (HB Equestrian is \$881 per month for a stall, feed and cleaning monthly) and a site this size could hold approximately 75 horses. Equated to \$56,000 a month for that business based on \$750 per month per horse.

- Examples of equestrian facilities are OC Fairground, HB Equestrian facility

The residential development scenario models the construction of four custom homes on a 7-acre parcel, each expected to sell for \$4 million. The developer's land residual value model incorporates all costs, profit, and entitlement risk.

- Total Revenue: \$16,000,000 (4 homes × \$4,000,000 each)
- Construction Cost: \$4,000,000
- Soft Costs (20%): \$800,000
- Developer Profit (20%): \$3,200,000

Residual Land Value Calculations:

- With 10% Entitlement Risk: Max Purchase Price = \$7,200,000
- With 20% Entitlement Risk: Max Purchase Price = \$6,400,000

Housing development is highly restricted within wildlife corridors. Only single residences on pre-existing legal sites may be allowed, and only if no alternative location exists. A 50-foot setback and 25-foot buffer are required. Most housing must be sited outside the corridor. Factors such as access (2 access points required), entitlement risk, regulatory complexity, and Clean Water Act participation requirements make this option less attractive which is why it's not included in our Broker Recommendations as the best & highest use.

## Conclusion

A residential development on the Trabucco Canyon land:

- Is possible but highly unlikely due to restrictions
- Faces challenges based on current access and utilities
- Faces potential challenges with wildlife corridors

## Equestrian Lease Option

We've outlined the financial and operational feasibility of developing a 7-acre equestrian facility in Trabucco Canyon, CA. It includes comparative analysis of existing Orange County equestrian centers, cost and profit breakdowns, land lease structures, and revenue projections.

### Comparative Analysis of OC Equestrian Facilities

#### 2.1 Huntington Central Park Equestrian Center (HCPEC)

Located on 25 acres in Huntington Beach, HCPEC houses over 400 horses with 420 stalls, 9 arenas, 6 turnouts, and access to 150 acres of trails. Monthly rates are \$881 for box stalls and \$651 for pipe corrals. Services include boarding, training, trail rides, and events.

## 2.2 The Ranch Community Equine Center (OC Fairgrounds)

Rebranded in 2024, The Ranch emphasizes community programming and equine-assisted therapy. It offers boarding and training with a public-facing mission. Standard stall rates are \$979/month. The facility includes lighted arenas and hosts lessons, camps, and therapy programs.

## 2.3 Peacock Hill Equestrian Center

Located inside Irvine Regional Park, Peacock Hill offers full-service boarding and training with access to scenic trails. It supports multiple disciplines including hunter/jumper and dressage. The facility is known for its rustic atmosphere and community engagement.

## 3. Cost and Profit Breakdown

Based on the \$881/month rate at HCPEC, estimated monthly costs per horse include:

- Feed: \$90
- Bedding: \$176
- Labor: \$300
- Overhead: \$100

Total estimated cost: \$666

Estimated monthly profit per horse: \$215

Profit margin: 24.4%

## 4. Land Lease Structure

Suggested lease terms for a 7-acre parcel in Trabuco Canyon:

- Triple Net Lease
- \$800/acre/month = \$5,600/month
- 10–20 year lease with 5-year renewal options
- 3–6 month rent abatement during construction
- Optional revenue sharing: 5–10% of gross revenue over \$25,000/month

## 5. Revenue Projections

SCENARIO	HORSES	MONTHLY REVENUE	MONTHLY COSTS	MONTHLY PROFIT	ANNUAL REVENUE	ANNUAL PROFIT
Low Capacity	24	\$21,144	\$15,984	\$5,160	\$253,728	\$61,920
Target Capacity	28	\$24,668	\$18,648	\$6,020	\$296,016	\$72,240
High Capacity	32	\$28,192	\$21,312	\$6,880	\$338,304	\$82,560

## 6. Insurance Considerations

Insurance premiums for equestrian facilities in California fire zones range from \$5,000 to \$12,000 annually. Monthly costs may be \$417–\$1,000. Facilities may use the California FAIR Plan if private coverage is unavailable. Mitigation strategies like fire-resistant materials and defensible space can reduce premiums.

## Conclusion

Equestrian facilities on Trabucco Canyon land:

- Would be negatively impacted by the FTSP requirements
- Would be impacted by the Clean Water Act
- Would be impacted by wildlife corridors

## Battery Energy Storage System (BESS) Option

Evaluation of the property as a battery storage facility entailed discussions with leading energy developers. However, the site's distance from electric circuits and high interconnection costs, combined with unfavorable local sentiment, significantly reduce feasibility.

- Lease Model: 20-year lease at \$0.50–\$1.40 per square foot per year.
- Sale Model: One-time sale at \$10–\$20 per square foot.
- Example (Lease): 6 acres × 43,560 sq ft/acre × \$1.00 × 20 = \$5,227,200
- Estimated Value: \$2.4M–\$6.72M (lease) or \$1.5M–\$4.2M (sale)

## Conclusion

Battery Energy Storage Systems on Trabucco Canyon land:

- Are not a viable option given the combination of regulatory, financial, and community constraints
- Are not a viable option based on the distance to the substation
- Are not a viable option due to the cost of system upgrades

## Cemetery Option

TCWD expressed interest during our introductory meeting in potential cemetery development within the Trabucco Canyon parcels. The following evaluation of that potential development option considers environmental regulations, land use compatibility, infrastructure limitations, and community impact.

### 1. Environmental and Regulatory Constraints

The proposed site lies within the Foothill/Trabucco Specific Plan (FTSP) area, which imposes stringent conservation and development controls. The land includes critical habitats for federally listed species such as the coastal California gnatcatcher and arroyo toad. Additionally, the area contains riparian corridors, oak woodlands, and coastal sage scrub each protected under FTSP guidelines. These ecological sensitivities suggest that the land is more appropriate for conservation or mitigation banking rather than development intensive uses like cemeteries.

### 2. Land Use Compatibility

The proposed cemetery may conflict with the character and expectations of adjacent high-end residential developments. Luxury homebuyers typically prioritize privacy, unobstructed viewsheds, and control over adjacent land use. A cemetery may be perceived as a visual or emotional deterrent and could introduce ceremonial activity and traffic inconsistent with the quiet, exclusive nature of estate-style living.

### 3. Infrastructure and Utility Limitations

The site is constrained by limited potable water availability, which currently supports only six single-family residences despite the existence of potential eight legal parcels. Cemetery operations typically require irrigation and maintenance water, which may not be feasible under current utility allocations.

### 4. Legal and Easement Considerations

Access to the site is governed by Easement 'E' from Tract Map No. 13214. This easement restricts vehicular access to owners, household employees, and up to 25 guests per event. It also limits the number of legal parcels served and the type of development permitted. These constraints may complicate public access and operational logistics for a cemetery.

### 5. Community Impact and Precedent

While no direct community opposition has been documented, the precedent of El Toro Memorial Park in nearby Lake Forest illustrates the importance of context. That cemetery is well-maintained and serene but is not located adjacent to luxury homes. This suggests that location and surrounding land use are critical to public acceptance and long-term compatibility.

## Conclusion

- Given the environmental sensitivities, regulatory constraints, infrastructure limitations, and potential incompatibility with adjacent high end residential use, the proposed cemetery site warrants careful reconsideration
- Trabucco Canyon Water district is encouraged to evaluate alternative land uses that align more closely with the Foothill/Trabucco Specific Plan and community expectations

# Final Summary of Trabucco Canyon Development Opportunities

In summary, our comparative analysis demonstrates that while residential, equestrian, battery storage, and cemetery use present theoretical opportunities, each is constrained by access, infrastructure costs, environmental regulations, or community compatibility. By contrast, **Conservation Land Sale** and **CAL FIRE Land Lease** align with both market realities and the District's stewardship priorities, offering strong financial outcomes while supporting ecological preservation and public safety. Together, these two pathways provide TCWD with actionable strategies that balance fiscal responsibility, regulatory compliance, and long-term community benefit.

## FILTER 2

# Public & Tribal Affairs

As referenced in the Methodology section of the report, while legal, zoning, physical and environmental constraints define what is possible on paper, public and tribal affairs determine whether a project can earn the social and political license to move forward in practice. Community sentiment, local government priorities, and the sovereign rights of Native American tribes all have the power to influence entitlement approvals, project timelines, and long-term success. Projects that overlook these considerations often face delays, opposition, or costly re-designs, while those that engage stakeholders early and respectfully are more likely to secure durable support.

Stadia Realty is fortunate to partner with seasoned and highly respected experts in the fields of public, governmental & tribal affairs to support our work and Broker Recommendations. In this section of the report, we have included supplemental considerations and recommended next steps for the Trabuco Canyon parcels written by Dr. Kit Cole and Ms. Michelle Holiday. You'll find Dr. Cole and Ms. Holiday's credentials and experience listed in the "Resumes" section of the report.





July 23, 2025

TO: Trabuco Canyon Water District  
FR: Kit Cole and Michelle Holiday  
RE: Surplus Land - Public Affairs Considerations

We have worked extensively in California and Orange County (for a variety of clients, including Southern California Edison) and wanted to provide some additional factors for the District to consider as it makes decisions regarding the surplus land.

### **County of Orange**

The County is publicly committed to open lands conservation. They demonstrate this commitment through programs such as the Open Space Fund, which provides funding for the acquisition of property through fee simple, development rights, or conservation easements, and the Measure M2 Freeway Environmental Mitigation Program, which allocates funds to acquire and restore habitat in exchange for streamlined project approvals.

Orange County also participates in the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) to protect natural habitat and wildlife. As a result, natural open space reserves have been set aside in the coastal and central portions of Orange County which, when combined with National Forest lands, total approximately 163,000 acres of conserved habitat.

The Foothill/Trabuco Specific Plan was adopted by the County in 1991 with a goal of preserving the rural character of the area and providing a buffer between urban development and the Cleveland National Forest. The County Board of Supervisors has created the Foothill/Trabuco Specific Plan Review Board (FTSPRB) to review and comment on proposed land development projects within the geographic area of Foothill/Trabuco. The Board consists of property owners or residents in the area.

Trabuco Canyon sits partially in Orange County's 3<sup>rd</sup> Supervisorial District and partly in the 5<sup>th</sup> Supervisorial District. The 3<sup>rd</sup> District is led by Don Wagner. A former Mayor of Irvine and State Assemblymember, Wagner has traditionally been a staunch supporter of business and is not as involved in environmental issues. He serves on several Boards and Commissions, among them the Orange County Fire Authority, Orange County Transportation Authority and Transportation Corridor Agencies. The 5<sup>th</sup> District is led by Katrina Foley. Foley has publicly stated her commitment to "ensuring that Orange County will continue to be a leader in environmental protection." She is also an advocate for renewable energy and reaching the state's net-zero energy goals by 2025 and favors a regional approach to power distribution.

An interesting case study is the recent Banning Ranch/Randall Preserve area of Newport Beach. This area, privately owned, was originally slated for development, but was vehemently opposed by residents and conservationists about a decade ago and was then sold to several conservation groups in 2022. The groups have recently held public meetings related to public access and resource management, which have been attended by hundreds of interested parties, most opposed to any alterations to the land.

### **Orange County Transportation Agency (OCTA)**

As part of the Measure M2 Freeway Environmental Mitigation Program, OCTA purchased the Trabuco Rose Preserve, formerly known as Ferber Ranch, a 396-acre parcel located northwest of the City of Rancho Santa Margarita in Trabuco Canyon. Before OCTA purchased the area, Trabuco Rose had a land use designation that would have allowed the construction of 188 dwelling units, however, OCTA's acquisition of this property enabled this core segment of the Trabuco Canyon area to be preserved as permanent open space.

OCTA has an Environmental Oversight Committee tasked with overseeing the implementation of its environmental mitigation program. This group primarily consists of representatives from various environmental and conservation groups, including the following:

- Chair Jamey Federico – City Councilmember, Dana Point
- Vice Chair Melanie Schlotterbeck - Hills for Everyone
- Jeniffer Aleman-Zometa - US Army Corps of Engineers
- Melanie Burlaza - CA Department of Fish and Wildlife
- Derek McGregor – Public Member
- William Miller - US Fish and Wildlife Service
- Joe Navari – Wildlife Conservation Board
- Michael Neben - Taxpayer Oversight Committee Representative
- Bev Perry – Public Member
- Alben Phung - California Department of Transportation, District 12
- Dan Silver - Endangered Habitats League
- Mark Tettermer - OCTA Board of Directors

### **National Audubon Society**

The National Audubon Society's Starr Ranch Sanctuary is located at 100 Bell Canyon Road in Trabuco Canyon. It is a 4,000-acre preserve protecting diverse ecosystems including coastal sage scrub, grassland, oak woodland, riparian woodland and chaparral. The land was gifted to the Audubon Society in 1973 by the original owner. The Audubon Society uses this preserve mainly for conservation and education, including field trips for students, family nature workshops, a "Junior Biologist" program for teens and various volunteer opportunities.



### **Private Residents**

There are several homeowner's associations and resident community groups in Trabuco Canyon, including the Trabuco Highlands Community Association, the Portola Hills HOA and the Rancho Cielo HOA. Recently a group of residents attended a Board of Supervisors meeting to protest the Saddleback Meadows project, a 181-unit residential development project. In addition, the Saddleback Canyons Conservancy, a non-profit dedicated to protecting the Foothill-Trabuco area, also spoke out against the plan. While the Board ultimately approved the plan for the project, residents voiced concerns about potential environmental impacts, especially concerns regarding wildlife, wildfires and traffic congestion. (See Board Agenda, Item 14)[SS1]

### Recommended Next Steps

1. Facilitated conversation with District Board members and staff to determine:
2. For these parcels of "surplus" land – what's the "P&O" (purpose and outcomes)?

### Questions

1. Is there consensus on the purpose and outcomes desired for this land?
2. Financial benefits to the District
3. Land preservation/habitat preservation

Prepared by:

Dr. Katherine "Kit" Cole  
Kit Cole Consulting, LLC  
818-822-6378 Cell



### **Cultural Resources, Research, and Tribal Affairs**

This is an overview of the Trabuco Canyon in Orange County, California, which has the Foothill Trabuco Specific Plan (1991) related to the 120-acre parcel of land, including cultural resources considerations, the history of the aboriginal land of the Acjachemen, organizational contacts, and legal resources for cultural resource management laws.

The Cultural Resources in the plan refers to the O’Neill Regional Park for the Foothill Trabuco Specific Plan; however, the aboriginal lands near the park are important to the unrecognized (federal and state recognition) of the Acjachemen tribal descendants, who are actively engaged through local advocacy indigenous nonprofits, participating in tribal consultations with state and local agency about the historical archaeological sites, landscape, ceremonial locations, plants, rock formations and artifacts. The current trails are historic routes from the mountains to the sea for the many mission Indians, and do not have burial grounds in the area.

The indigenous history of Trabuco Canyon is deeply connected to the Acjachemen (Juaneño) people. The Acjachemen occupied the area for thousands of years before European contact. The canyon served as a significant travel corridor between coastal and inland regions. Several village sites were located along Trabuco Creek and its tributaries, with bedrock mortars (grinding holes) that can still be found in the canyon. Their traditional practices include gathering acorns from local oak groves, collecting medicinal plants like white sage and yerba, seasonal hunting grounds for deer and smaller game, and traditional water management systems.

Over time, the region witnessed waves of change, from the era of Spanish exploration through missionization, ranching, and the eventual settlement by American pioneers. Yet, amidst these transitions, the enduring connection of the Acjachemen people to Trabuco Canyon has remained steadfast. Archaeological evidence, including artifacts and landscape features, continues to reveal the longstanding presence and adaptability of these communities. Today, their descendants champion the protection of these ancient sites—balancing heritage stewardship with modern development pressures—while striving to revitalize traditional practices and uphold their cultural legacy in the broader narrative of Orange County’s history. The springs and water sources hold spiritual importance, and traditional stories for specific locations are still acknowledged.

The area has cultural significance to the Juaneño Band of Mission Indians, Acjachemen people, and they continue to maintain the cultural ties. Some sites are protected under cultural resource management laws, and the seasonal ceremonies continue by some tribal members. There are several notable cultural resources, such as the Trabuco Adobe site (late 1800s), old mining settlements from the late 19th century, and the name of the canyon originated from a Spanish soldier's lost trabuco (blunderbuss gun) in 1769.



## **Recommendation**

The current preservation efforts under AB 52 (2014)- CEQA Tribal Cultural Resources require early consultation with tribes for projects affecting tribal cultural resources, and now mandate notification, consultation, and mitigation of impacts. Following the CEQA guidelines to identify and evaluate cultural resources is part of the public engagement process. Early and respectful engagement is essential, and understanding the cultural knowledge is a good starting point in the environmental review process.

Contemporary preservation efforts are tribal monitoring of development projects, documentation of oral histories related to the canyon, educational programs about traditional ecological knowledge, collaboration with park services for site protection, regular ceremonial gatherings at preserved locations, and efforts to protect native plants used in traditional practices.

Preservation and acknowledgment of these resources require collaboration between governmental agencies, tribal representatives, and local organizations. Active involvement from Acjachemen descendants has ensured that their voices are included in land use decisions and environmental reviews. Public education programs, site monitoring, and community events help promote awareness of the canyon's indigenous heritage and support the ongoing stewardship of sacred landscapes.

To facilitate respectful consultation and to coordinate preservation initiatives, it is important to know the primary points of contact among the Acjachemen/Juaneño community. Here are the main points of contact for the active Acjachemen/Juaneño groups working in the Trabuco Canyon area:

### **Official Organizational Contacts:**

- Juaneño Band of Mission Indians, Acjachemen Nation-Belardes
  - Chairwoman Teresa Romero
  - Cultural Resources Office: (949) 488-3484 Based in San Juan Capistrano
  - Email: [acjachemenbelardes@gmail.com](mailto:acjachemenbelardes@gmail.com)
- Blas Aguilar Adobe Museum and Acjachemen Cultural Center
  - Located at 31806 El Camino Real, San Juan Capistrano
  - Museum Office: (949) 751-7258
  - Educational Programs Coordinator
  - Cultural Programs Office



### **Agency Liaison Contacts:**

- O'Neill Regional Park
  - Park Office: (949) 923-2260
  - Park Ranger
  - Park Ranger Station
- Cleveland National Forest
  - Heritage Resource Program: (858) 674-2901
  - Tribal Relations Program
  - Forest Supervisor's Office

### **For Cultural Resource Monitoring:**

- Contact through the Native American Heritage Commission (NAHC)
- South Central Coastal Information Center (SCCIC)
- Orange County Planning Department

Note: For specific individual contact information and current tribal representatives, it's best to contact the organizations directly, as positions and contact information may change.

### **Preservation References**

#### **Federal Laws:**

- National Historic Preservation Act (NHPA)
  - Section 106 requires federal agencies to consider effects on historic properties
  - Allows for listing significant sites on the National Register of Historic Places
  - Mandates consultation with Native American tribes
- Archaeological Resources Protection Act (ARPA)
  - Protects archaeological sites on federal lands
  - Requires permits for excavation
  - Provides criminal penalties for looting
- Native American Graves Protection and Repatriation Act (NAGPRA)
  - Protects Native American cultural items and human remains
  - Requires consultation for discoveries on federal/tribal lands
  - Establishes ownership and control procedures

#### **California State Laws:**

- California Environmental Quality Act (CEQA)
  - Requires assessment of impacts to cultural resources
  - Mandates mitigation measures for significant impacts
  - Includes Native American consultation requirements
- California Public Resources Code
  - Section 5097.9 (Native American historic sites)
  - Section 5097.993 (Penalties for vandalism)
  - Section 5097.98 (Treatment of Native American remains)



**Local Protections:**

- Orange County Historic Preservation
  - Local ordinances protecting historic sites
  - Cultural resource management requirements
  - Development review procedures

Prepared by:

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# Financial Feasibility

Even when a property clears regulatory, environmental, and social hurdles, its ultimate viability depends on whether it makes financial sense. Financial feasibility is the lens through which development opportunities are tested against market realities, investment thresholds, and long-term sustainability. This filter goes beyond simply measuring costs and revenues - it evaluates risk, timing, capital requirements, and competitive positioning to determine whether a project can attract investors and deliver adequate returns. Without this analysis, a development that appears promising in theory may fail to perform in practice. For this reason, financial feasibility is a cornerstone of Broker Recommendations, ensuring that clients pursue strategies that balance ambition with economic prudence.

Below we've included a refined valuation model for the 113-acre conservation portion of the 120-acre Trabuco Canyon parcel. The model incorporates actual habitat data from biological assessments and recent mitigation credit sales data from the 2024 Mitigation Credit Price Report (MCPR).

## Habitat Composition and Credit Yields

The following table summarizes the habitat types, estimated acreage, credit yield per acre, and market price ranges for mitigation credits:

HABITAT TYPE	ACREAGE	CREDIT YIELD	PRICE LOW	PRICE HIGH	TOTAL CREDITS	VALUE LOW	VALUE HIGH
Riparian	10.00	2.00	\$125,000.00	\$250,000.00	20.00	\$2,500,000.00	\$5,000,000.00
Oak Woodland	25.00	1.50	\$90,000.00	\$150,000.00	37.50	\$3,375,000.00	\$5,625,000.00
Coastal Sage Scrub	40.00	1.00	\$65,000.00	\$110,000.00	40.00	\$2,600,000.00	\$4,400,000.00
Grassland	38.00	0.50	\$40,000.00	\$75,000.00	19.00	\$760,000.00	\$1,425,000.00
<b>TOTAL</b>	113.00	4	\$320,000	\$585,000	116.50	\$9,235,000.00	\$16,450,000.00

Total credits are calculated by multiplying the acreage of each habitat type by its respective credit yield. The estimated value range is then derived by multiplying the total credits by the low and high market prices per credit.

### Comparative Land Use Valuation Table

The following table compares the six development options we analyzed as potential land use strategies for the Trabuco Canyon parcels. The analysis evaluates the financial return of each strategy using valuation ranges, mathematical logic, and real-world assumptions. The goal is to determine the most economically appealing option for the Trabuco Canyon Water District.

DEVELOPMENT TYPES	LOGIC & ASSUMPTIONS	ESTIMATED VALUE	BROKER NOTES
<p>Conservation Land Sale</p>	<p>Valuation is based on habitat-specific mitigation credit yields and market prices from the 2024 Mitigation Credit Price Report (MCPR)</p> <p>For example, 40 acres of Coastal Sage Scrub habitat at 1 credit/acre and \$65k-\$110k per credit yields \$2.6M-\$4.4M</p>	<p>Total estimated value across all habitat types (riparian, oak woodland, CSS, grassland) is \$9.2M-\$16.45M</p> <p>Potential purchase price at \$50,000/acre or \$75,000/acre = \$6-9M</p>	<p>As referenced throughout the report, conservation land sale (113 acres) is considered one of the best and highest use cases for the Trabuco Canyon parcels because of the biological qualities of the land, the amount of land in Orange County, and the financial feasibility which supports our Broker Recommendation</p>
<p>CAL FIRE Land Lease</p>	<p>Public agency leases: \$2,000-\$4,000/acre/month</p>	<p>Low-end estimated annual income = \$168,000</p> <p>High-end estimated annual income = \$336,000</p>	<p>As referenced throughout the report, CAL FIRE Land Lease (5-7 acres) is considered one of the best and highest use cases for the Trabuco Canyon parcels because of historical fire locations, the strategic position for fighting wildfires in Orange County and the financial feasibility which supports our Broker Recommendation</p>

<p>Residential Development</p>	<p>Residual Land Value (RLV) model used. Assumes \$4M home sale price, variable development cost per lot per scenario, and 20% profit margin</p>	<p>Max land purchase price would reasonably range from \$6.4M to \$7.2M</p> <p>Developers may only pay \$1M-\$2M for this property because of risk</p>	<p>Residential developers will not pay top price for this land because it only has one access point and there are major entitlement challenges which means this property will likely sit on the market or developers will offer much less to offset the risks</p>
<p>Equestrian Development Land Lease</p>	<p>Suggested lease terms for a 7-acre parcel in Trabuco Canyon:</p> <ul style="list-style-type: none"> <li>- Triple Net Lease</li> <li>- \$800/acre/month = \$5,600/month</li> <li>- 10-20 year lease with 5-year renewal options</li> <li>- 3-6 month rent abatement during construction</li> <li>- Optional revenue sharing: 5-10% of gross revenue over \$25,000/month</li> </ul>	<p>Annual Revenue Projection = \$253,728 - \$338,304</p>	<p>The FTSP may not allow a commercial equestrian facility</p>
<p>Battery Energy Storage System (BESS) Lease or Sale</p>	<p>Assumes 5-7 acres leased for 20 years at \$24k-\$48k per acre per year</p>	<p>Total estimated yield is \$2.4M-\$6.72M. Alternatively, a one-time land sale could yield \$1.5M-\$4.2M depending on proximity to infrastructure and entitlement status</p>	<p>Not considered a feasible option because of the distance from the substation and the cost of system upgrades</p>
<p>Cemetery Development</p>	<p>N/A</p>	<p>N/A</p>	<p>Not considered a feasible option because of environmental sensitivities, regulatory constraints, infrastructure limitations, and potential incompatibility with adjacent high-end residential use</p>

## Financial Feasibility Summary

Taken together, the financial modeling underscores that while multiple land use pathways are theoretically possible for the Trabuco Canyon parcels, only **Conservation Land Sale** and the **CAL FIRE Land Lease** demonstrate both market-supported value and long-term economic stability. The conservation sale leverages the site's ecological assets into a high-value mitigation credit opportunity, offering the District a clear path to significant near-term revenue. In parallel, a CAL FIRE land lease delivers steady, reliable annual income with strong alignment to public safety priorities, making it a low risk complement to the conservation strategy. By combining these two uses, the District maximizes financial return while minimizing speculative risk - representing the best and highest use of the property and ensuring that our Broker Recommendations are grounded in both prudent economics and sustainable stewardship.

# Next Steps & Future Partnership Opportunities

As the Trabuco Canyon Water District considers its path forward, Stadia Realty is prepared to serve as a full-service partner in executing whichever strategy you determine best aligns with your long-term goals. With a proven track record in complex land transactions and conservation-based deals, Stadia brings both the brokerage expertise and the stakeholder facilitation skills needed to help the District achieve outcomes that are financially sound, politically viable, and community-supported.

Should the District elect to pursue a **Conservation Land Sale**, Stadia is ready to broker the transaction, including the specialized process of marketing to and negotiating with qualified conservation banks. This next phase would require a new brokerage agreement tailored to land sale terms, and we encourage you to review the proposal from **Wildlands** included in the Appendix for a direct example of buyer interest.

If the District considers a dual-use option and prioritizes a **CAL FIRE Land Lease**, Stadia is equally prepared to support by structuring and brokering a land lease agreement that maximizes long-term financial benefit while aligning with CAL FIRE's operational needs. Like a sale, this option would also require a new brokerage agreement to move forward.

Beyond transactional support, Stadia can provide critical value in stakeholder management throughout any selected pathway. Our team includes master-trained facilitators experienced in guiding negotiations with counties, cities, agencies, Tribal Nations, and community stakeholders. By managing these conversations effectively, we help ensure that outcomes are not only financially viable but also politically and socially durable.

## Potential Timeline for Consideration

### Immediate (0–60 Days)

- TCWD officials review the Stadia Final Report, including Broker Recommendations, best & highest use cases, financial feasibility analysis and comparative land use valuations.
- Stadia Principals meet with TCWD officials to answer questions.
- TCWD to determine priority pathway: Conservation Land Sale, CAL FIRE Land Lease, or dual use.
- Review Wildlands proposal in Appendix for conservation sale interest.

### Short-Term (60–120 Days)

- Execute a new brokerage agreement with Stadia Realty tailored to the chosen pathway.
- Initiate preliminary discussions with target counterparties (Wildlands and/or CAL FIRE).
- Begin stakeholder engagement planning to align agencies, Tribal Nations, and community partners.

### Long-Term (120+ Days)

- Formalize transaction negotiations (sale or lease terms).
- Facilitate stakeholder meetings to resolve outstanding political, cultural, or community considerations.
- Finalize and execute agreements to secure long-term financial, environmental, and community benefit.

# Brokering land, building relationships.

We look forward to supporting your project.



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# Appendix - Table of Contents



**Stadia GIS Maps** (pages 47-79)



**Sanborn Map Report** (page 81)



**Wildlands Conservation Proposal** (pages 83-84)

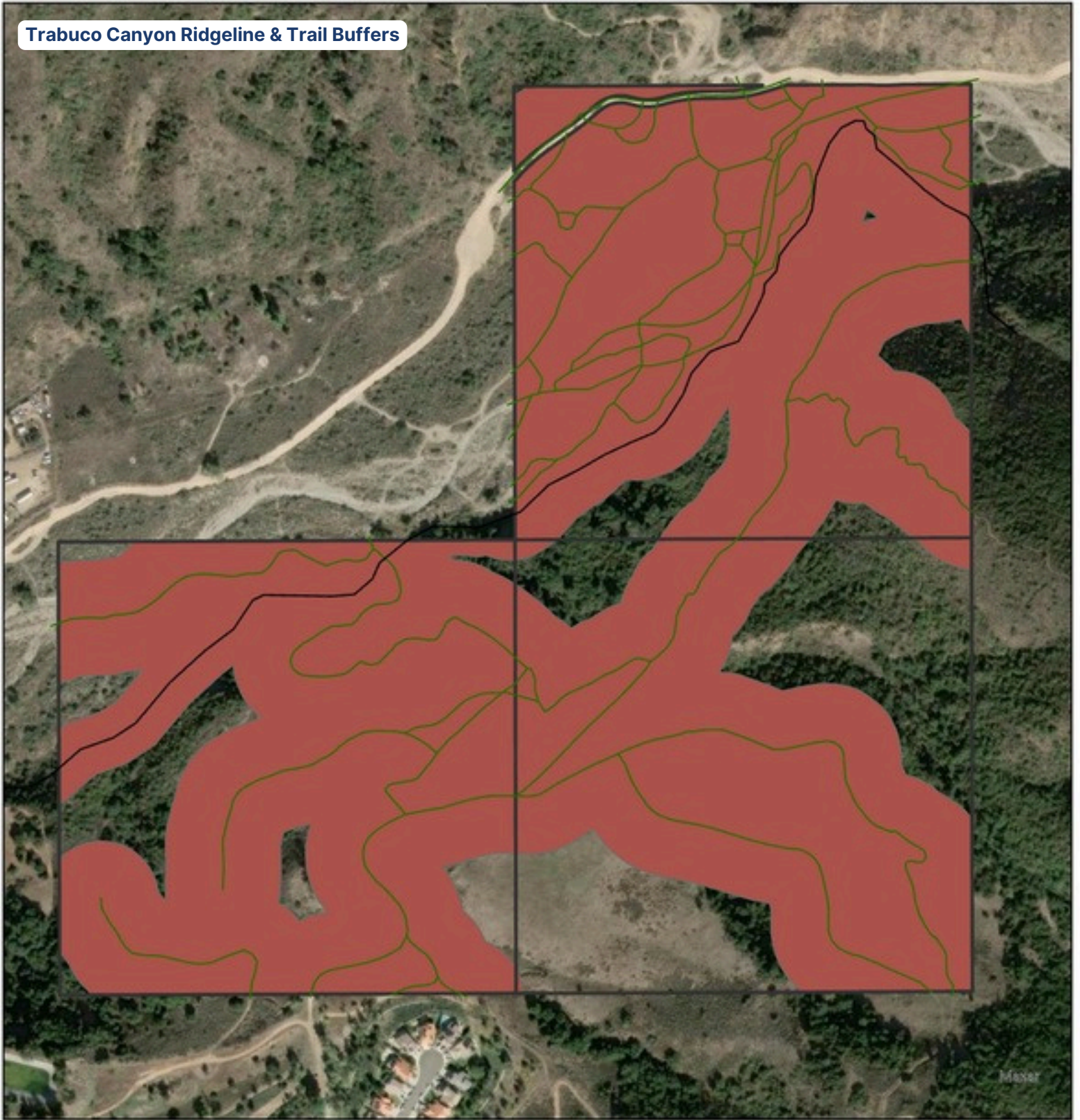


**Wildlands - About Us** (pages 85-86)

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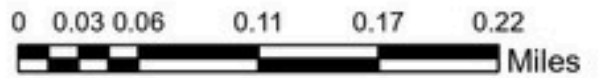
## Stadia GIS Maps

**Trabuco Canyon Ridgeline & Trail Buffers**



**Legend**

- Buffers
- Impacted Parcels
- Trails
- Ridgeline

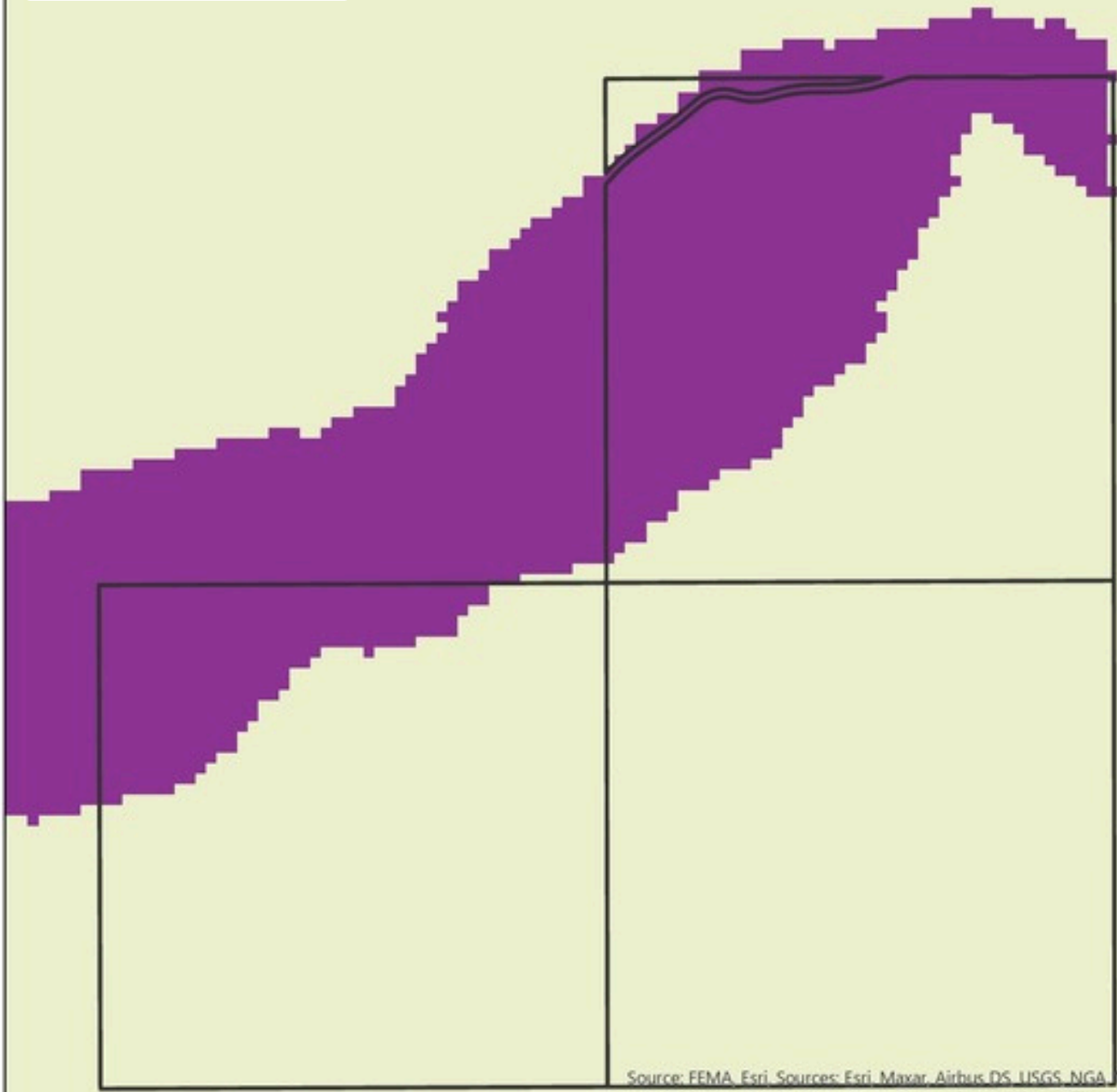


\*Features depicted herein are planning level accuracy, and intended for informational purposes only. Distances and locations may be distorted at this scale. Always consult with the proper legal documents or agencies regarding such features.

APN: 842-061-05, 842-061-06, 842-061-07		OWNER: N/A
SITE ADDRESS: N/A		
CITY: Trabuco Canyon	ACRES: 119	
STATE: CA	COUNTY: Orange	
ZIP: 92679	DATE: 8/13/25	



# Trabuco Canyon Flood Zones



Source: FEMA, Esri, Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community, Esri Community Maps Contributors, County of Riverside, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

## Legend

- |                               |                                     |                                   |
|-------------------------------|-------------------------------------|-----------------------------------|
| <b>USA Flood Hazard Areas</b> | Regulatory Floodway                 | Area of Undetermined Flood Hazard |
| <b>ClassName</b>              | Area with Reduced Risk Due to Levee | Area of Minimal Flood Hazard      |
| 1% Annual Chance Flood Hazard | Special Floodway                    | 0.2% Annual Chance Flood Hazard   |
|                               | Not Mapped                          | Future Conditions 1%              |

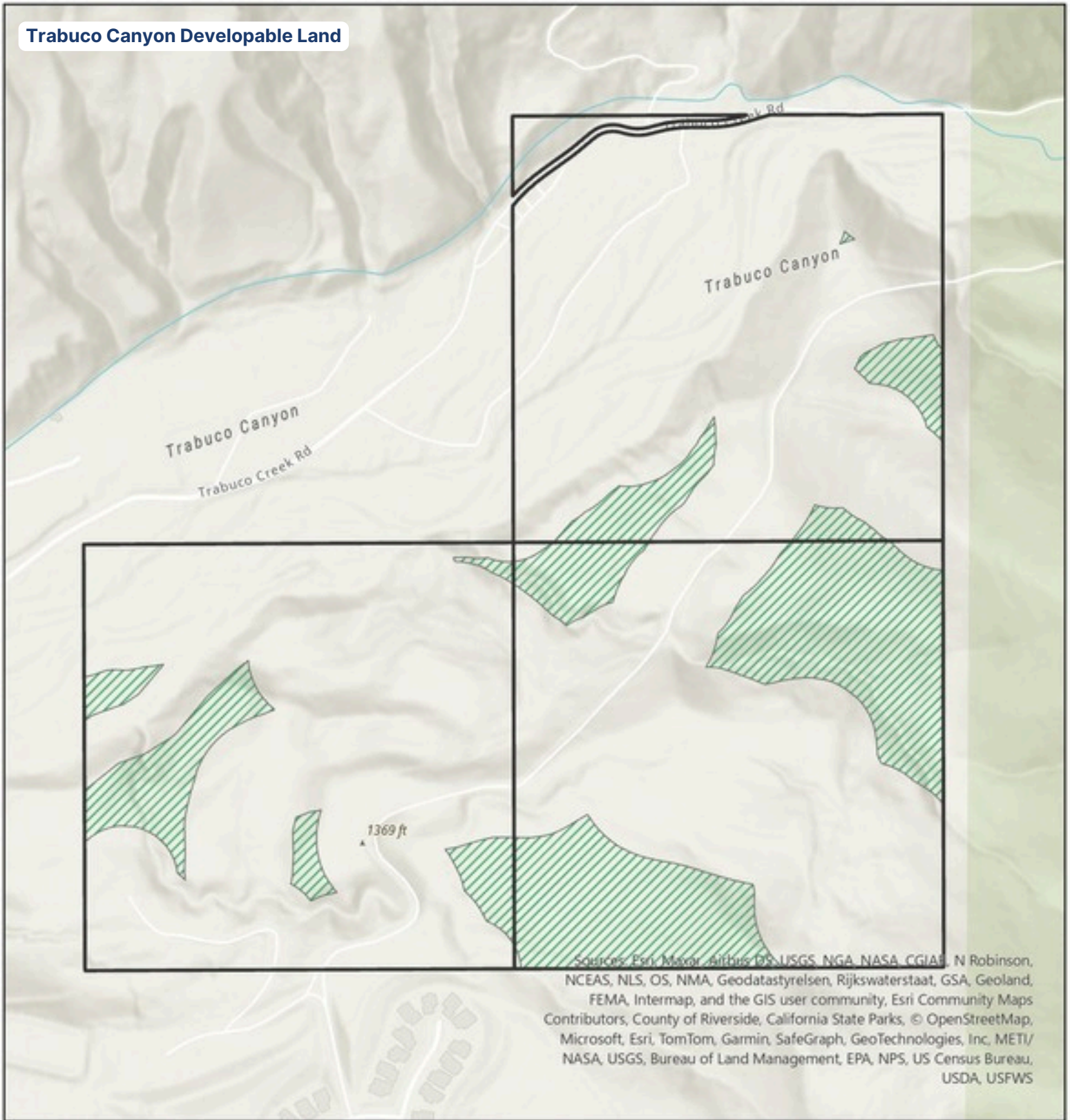


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APN: 842-061-05, 842-061-06, 842-061-07		OWNER: N/A
SITE ADDRESS: N/A		
CITY: Trabuco Canyon	ACRES: 119	
STATE: CA	COUNTY: Orange	
ZIP: 92679	DATE: 8/14/25	



**Trabuco Canyon Developable Land**



Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatasystrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community, Esri Community Maps Contributors, County of Riverside, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

**Legend**

- Impacted Parcels
- Developable Land
- Developable Land
- Impacted Parcels

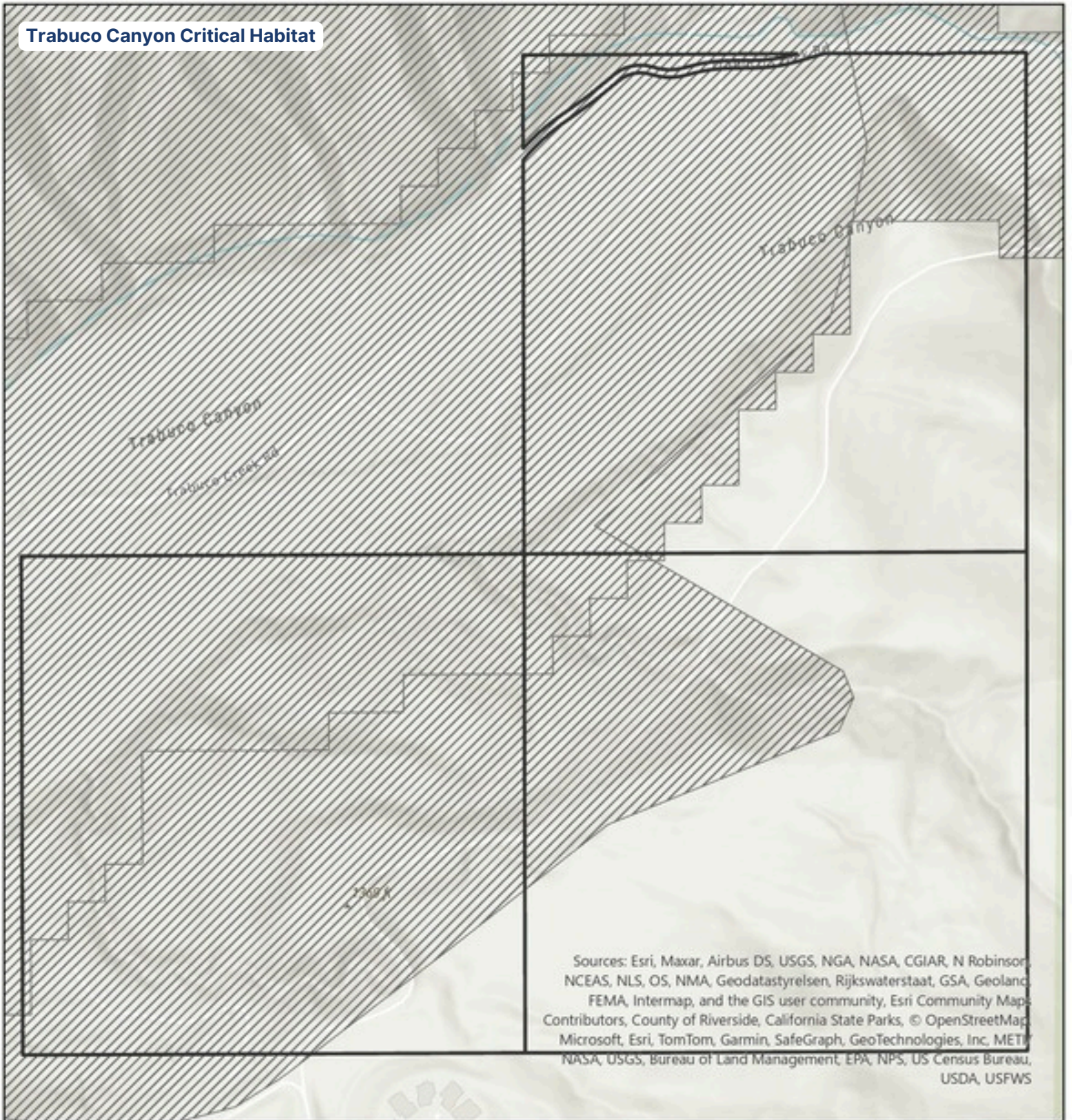


\*Features depicted herein are planning level accuracy, and intended for informational purposes only. Distances and locations may be distorted at this scale. Always consult with the proper legal documents or agencies regarding such features.



APN: 842-061-05, 842-061-06, 842-061-07		OWNER: N/A
SITE ADDRESS: N/A		
CITY: Trabuco Canyon	ACRES: 23	
STATE: CA	COUNTY: Orange	
ZIP: 92679	DATE: 8/14/25	



# Trabuco Canyon Critical Habitat



## Legend

-  Impacted Parcels
-  Critical Habitat



\*Features depicted herein are planning level accuracy, and intended for informational purposes only. Distances and locations may be distorted at this scale. Always consult with the proper legal documents or agencies regarding such features.

APN: 842-061-05, 842-061-06, 842-061-07		OWNER: N/A
SITE ADDRESS: N/A		
CITY: Trabuco Canyon	ACRES: 119	
STATE: CA	COUNTY: Orange	
ZIP: 92679	DATE: 8/14/25	



Trabuco Canyon Aerial (1946)



INQUIRY #: 8066120.4

YEAR: 1946

— = 500'



Trabuco Canyon Aerial (1967)



INQUIRY #: 8066120.4

YEAR: 1967

— = 500'



Trabuco Canyon Aerial (1953)



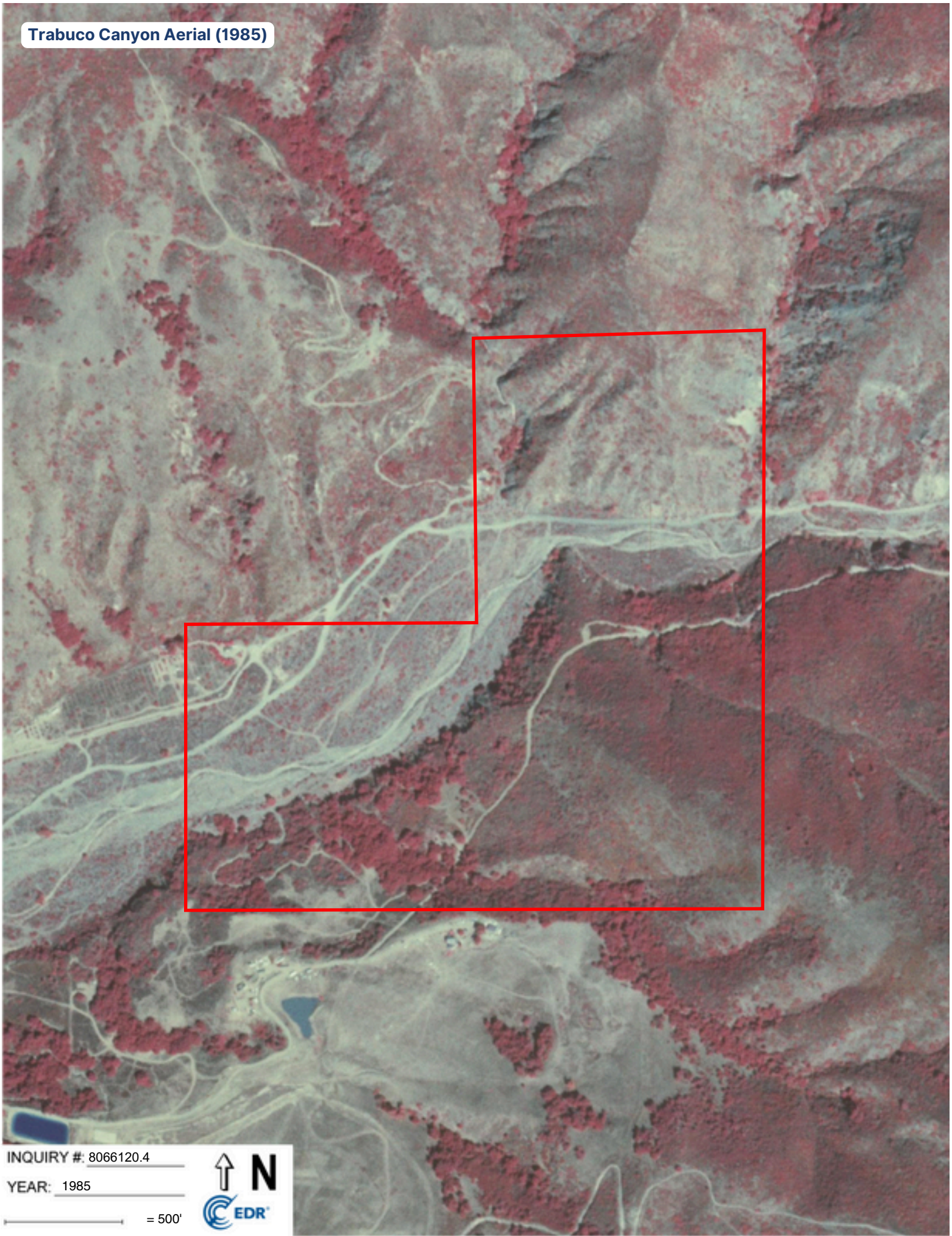
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YEAR: 1953

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Trabuco Canyon Aerial (1985)



INQUIRY #: 8066120.4

YEAR: 1985

— = 500'



Trabuco Canyon Aerial (1974)



INQUIRY #: 8066120.4

YEAR: 1974

— = 500'



Trabuco Canyon Aerial (1989)



INQUIRY #: 8066120.4

YEAR: 1989

— = 500'



Trabuco Canyon Aerial (1990)



INQUIRY #: 8066120.4

YEAR: 1990

— = 500'





Trabuco Canyon Aerial (1995)



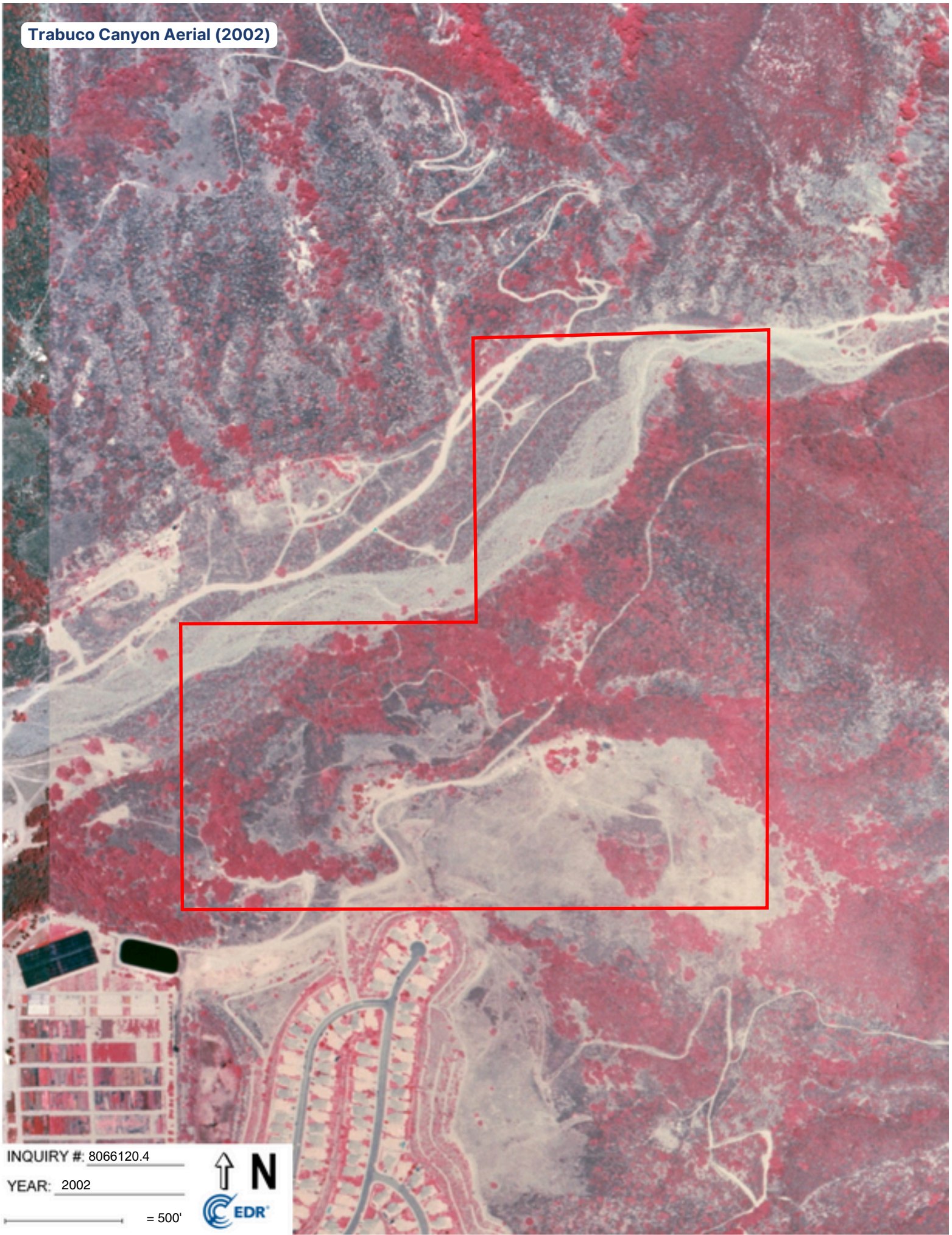
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YEAR: 1995

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Trabuco Canyon Aerial (2002)



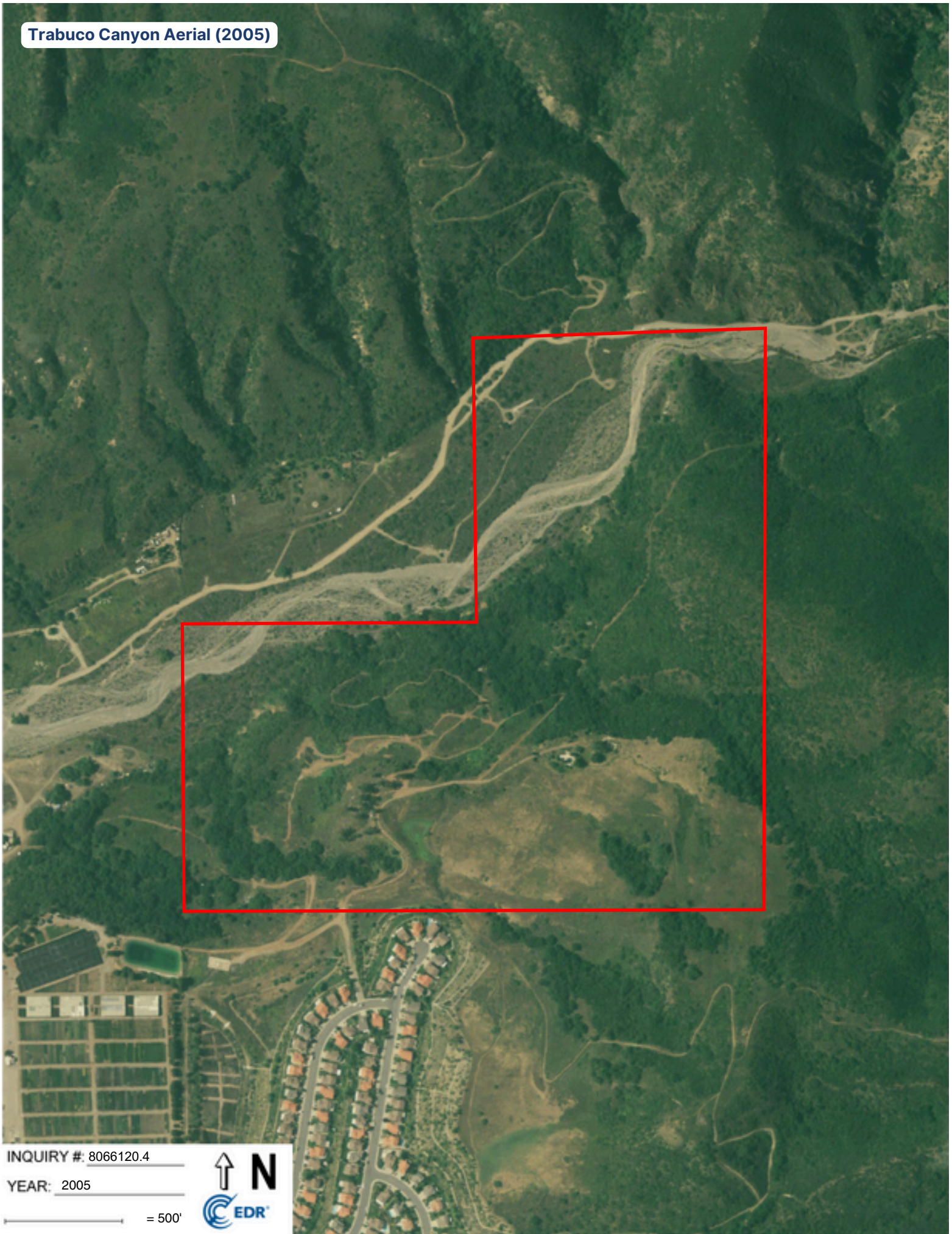
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YEAR: 2002

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Trabuco Canyon Aerial (2005)



INQUIRY #: 8066120.4

YEAR: 2005

— = 500'



Trabuco Canyon Aerial (2010)



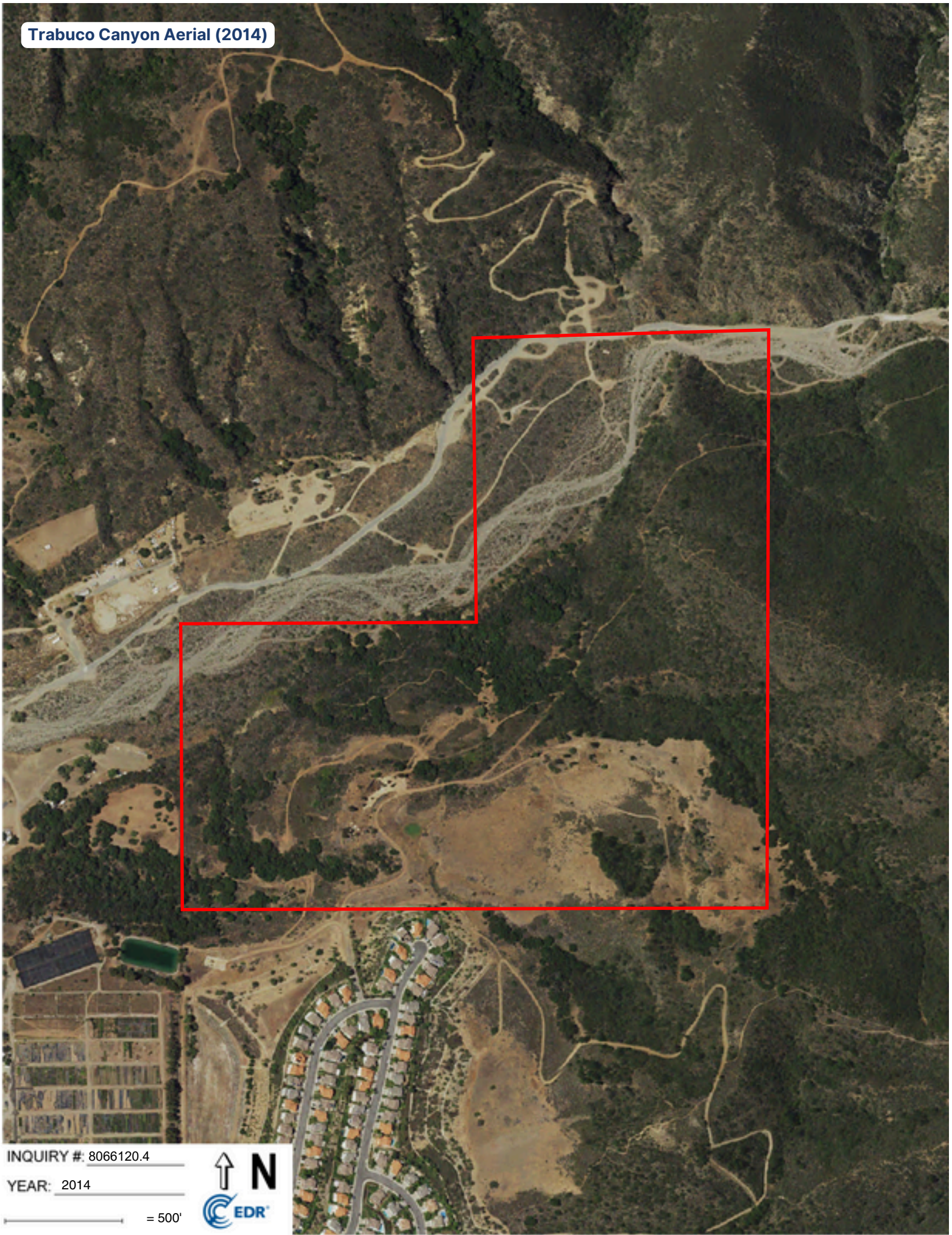
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YEAR: 2010

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Trabuco Canyon Aerial (2014)

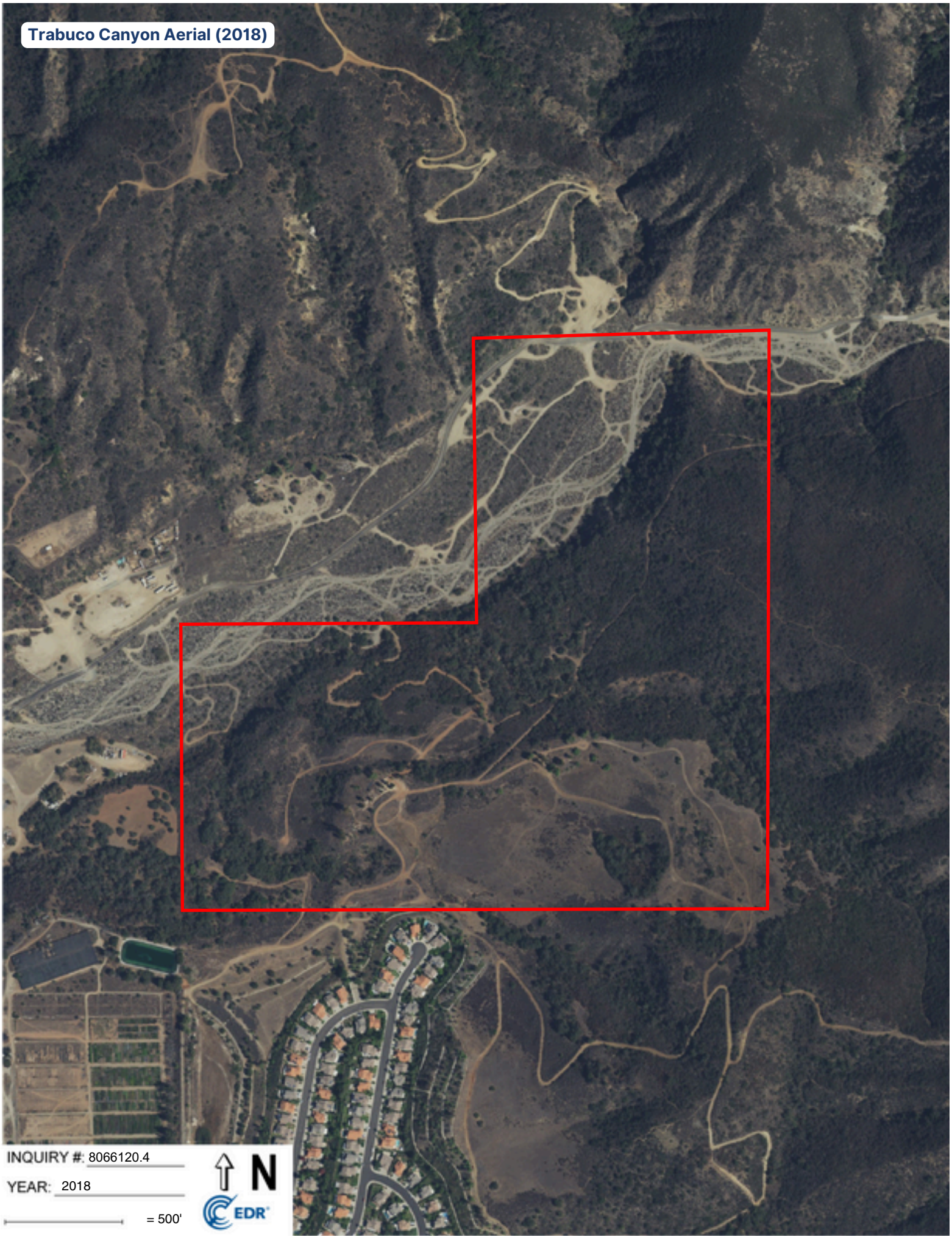


INQUIRY #: 8066120.4

YEAR: 2014

— = 500'





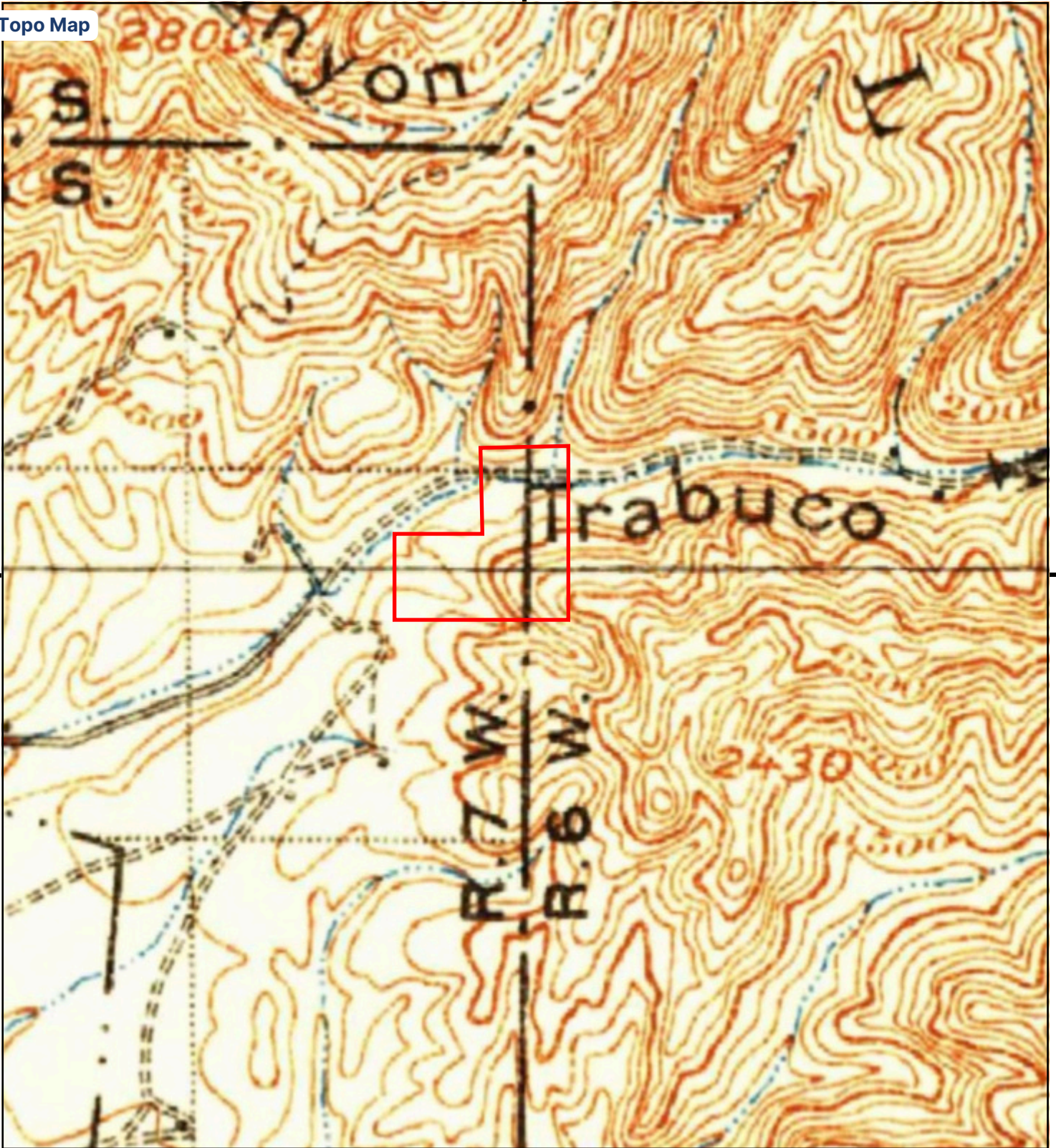
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YEAR: 2018

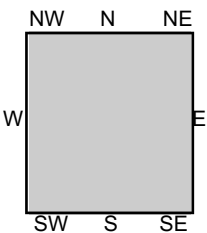
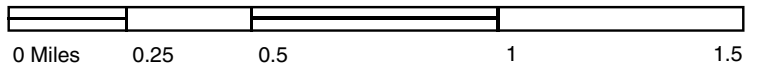
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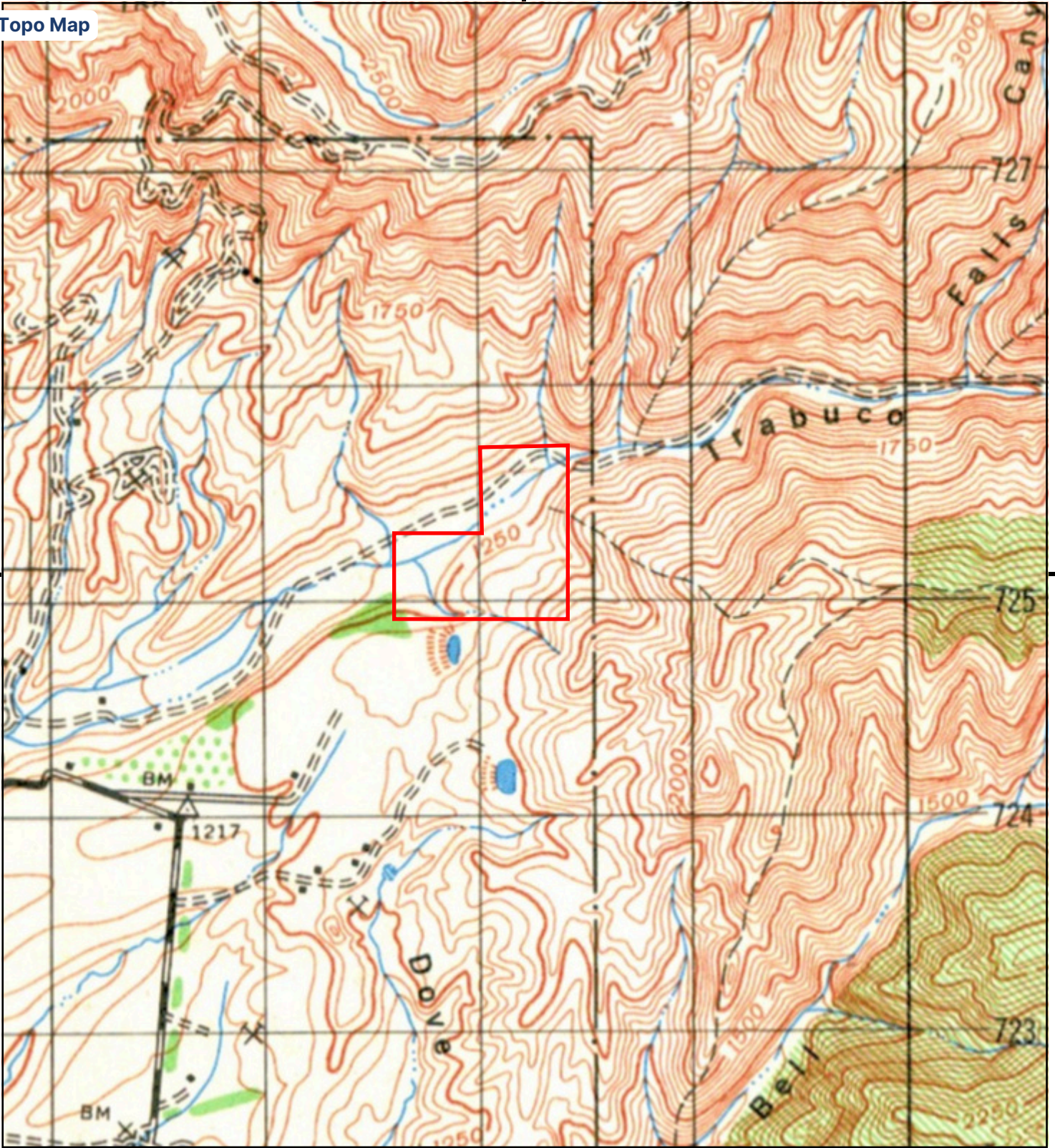


TP, Corona, 1902, 30-minute

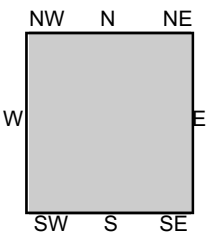
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 ADDRESS: Not Reported  
 TRABUCO CANYON, CA 92679  
 CLIENT: Stadia Realty Inc.



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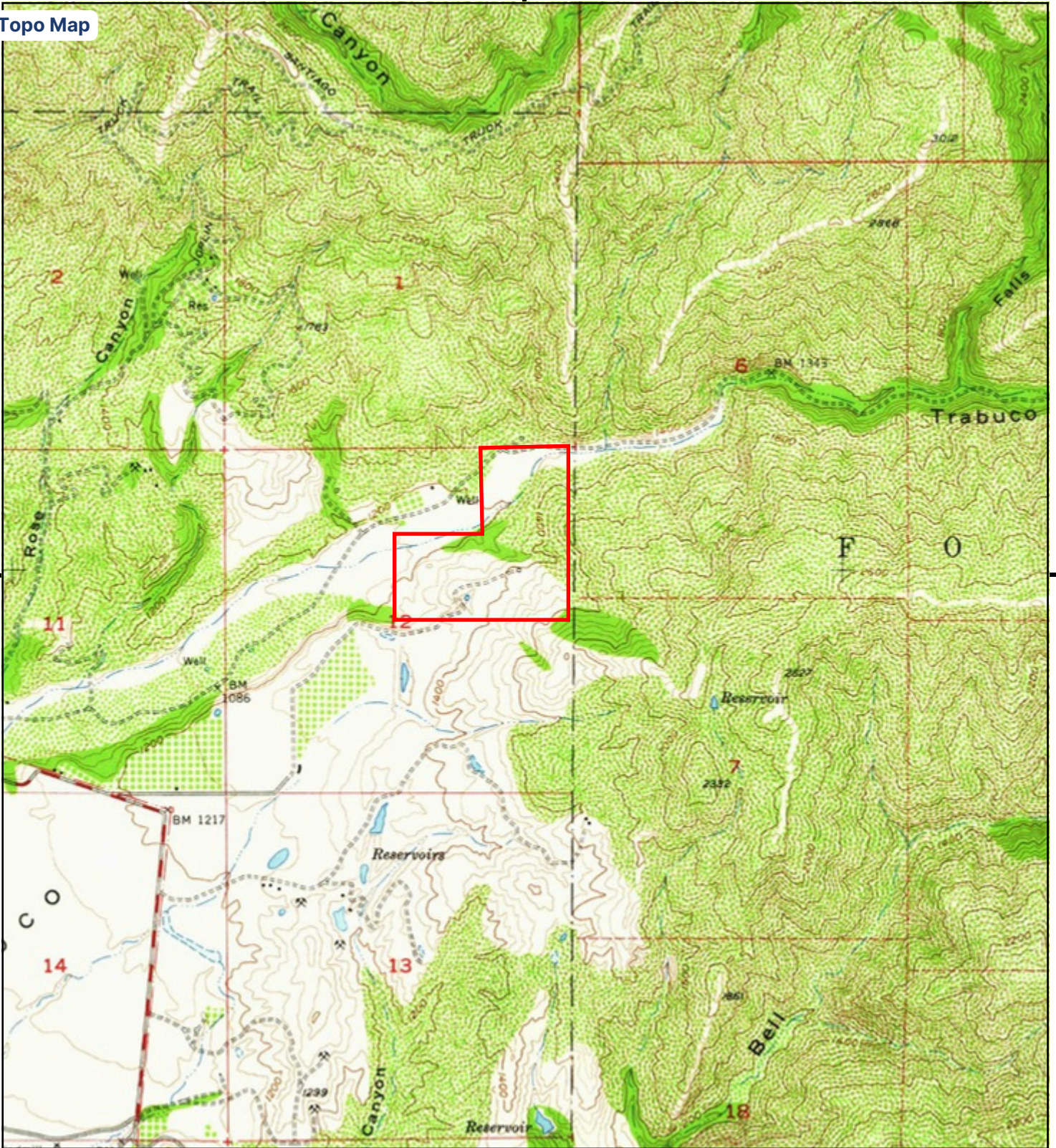


TP, SANTIAGO PEAK, 1942, 15-minute

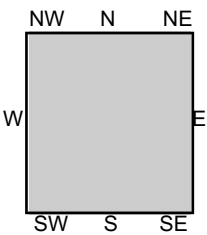
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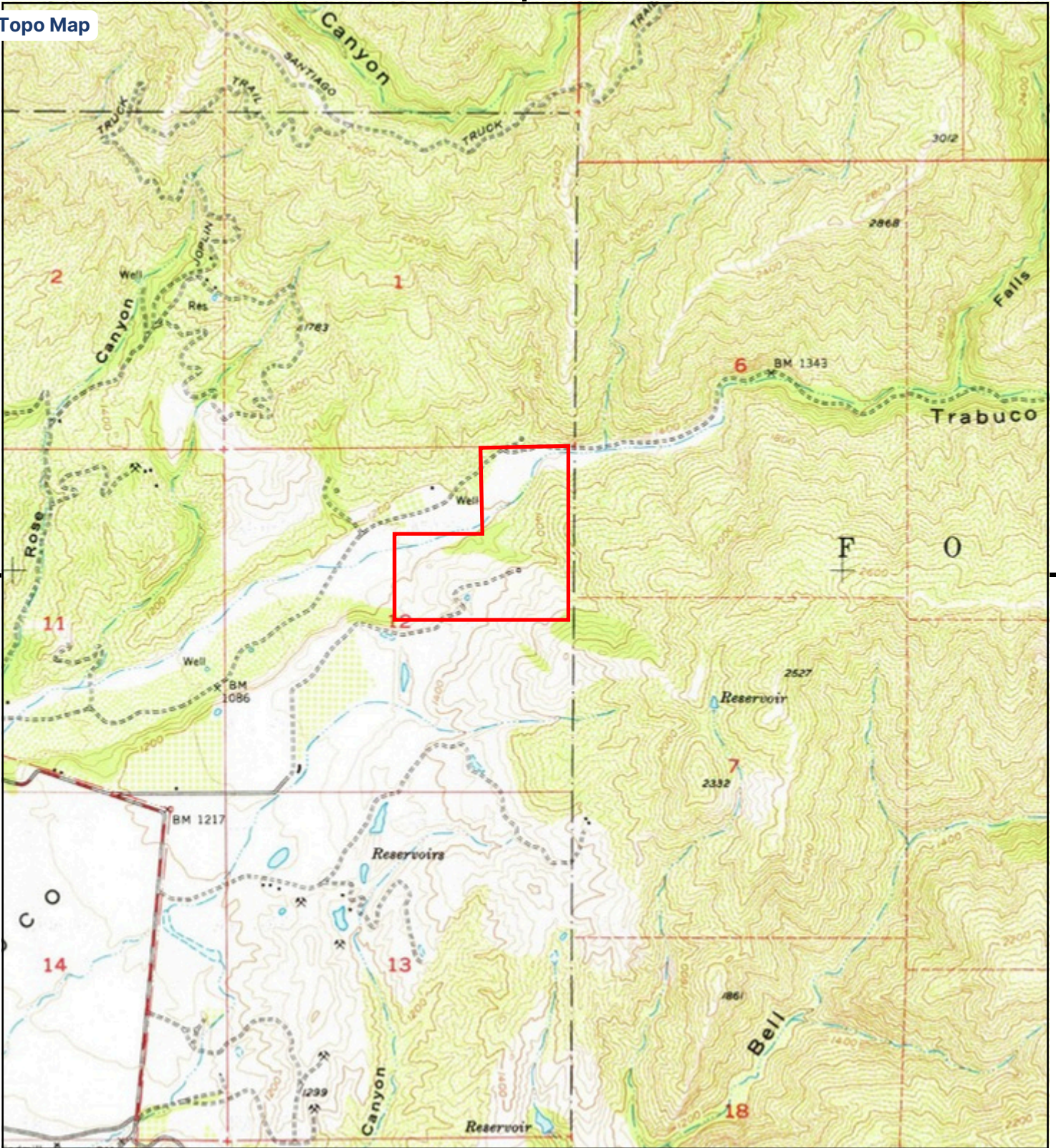


TP, Santiago Peak, 1954, 7.5-minute

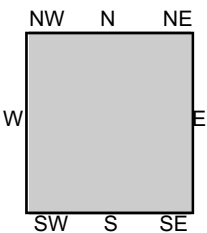
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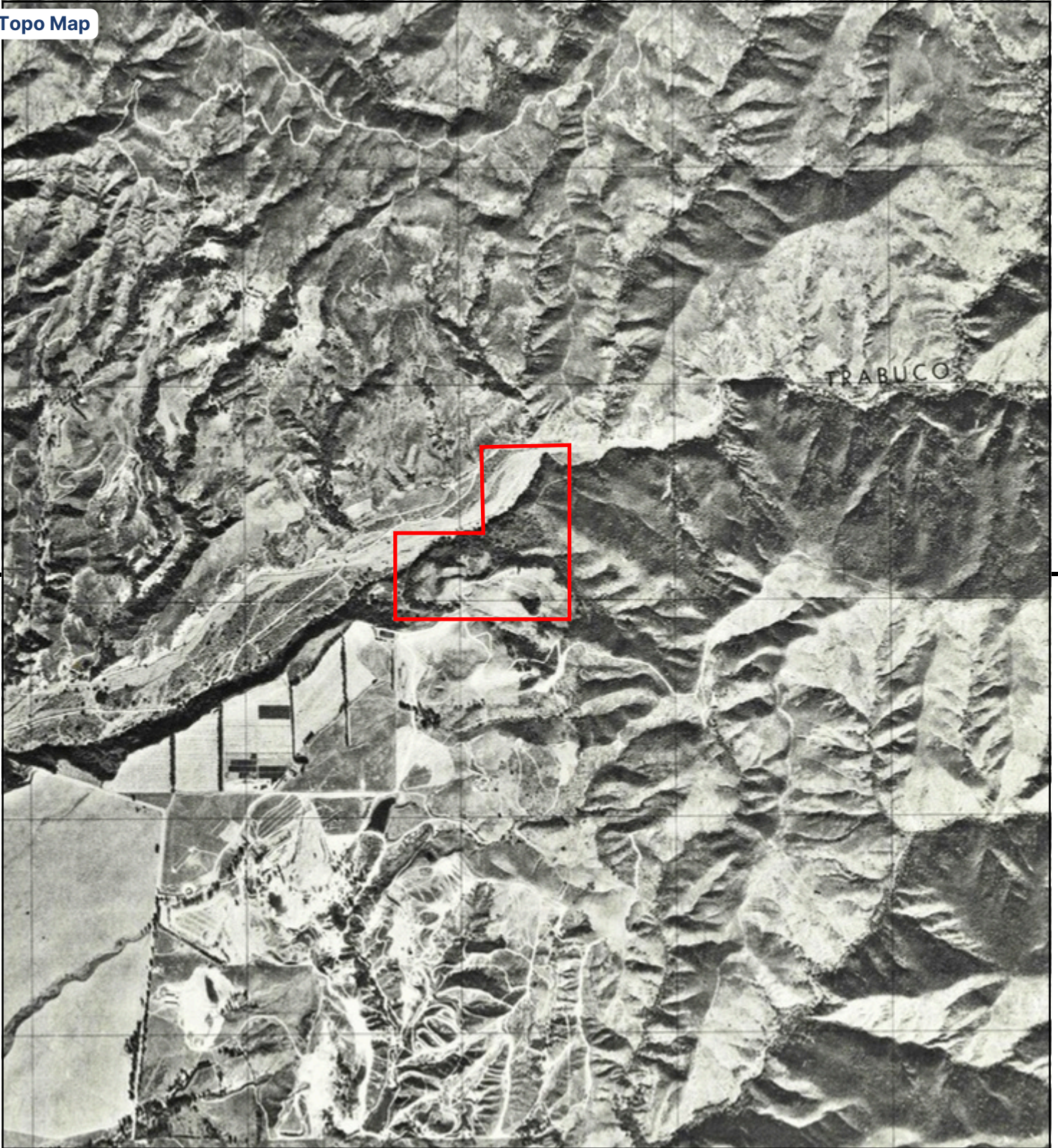


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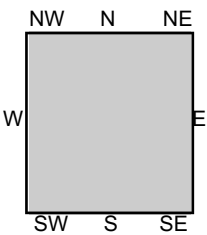
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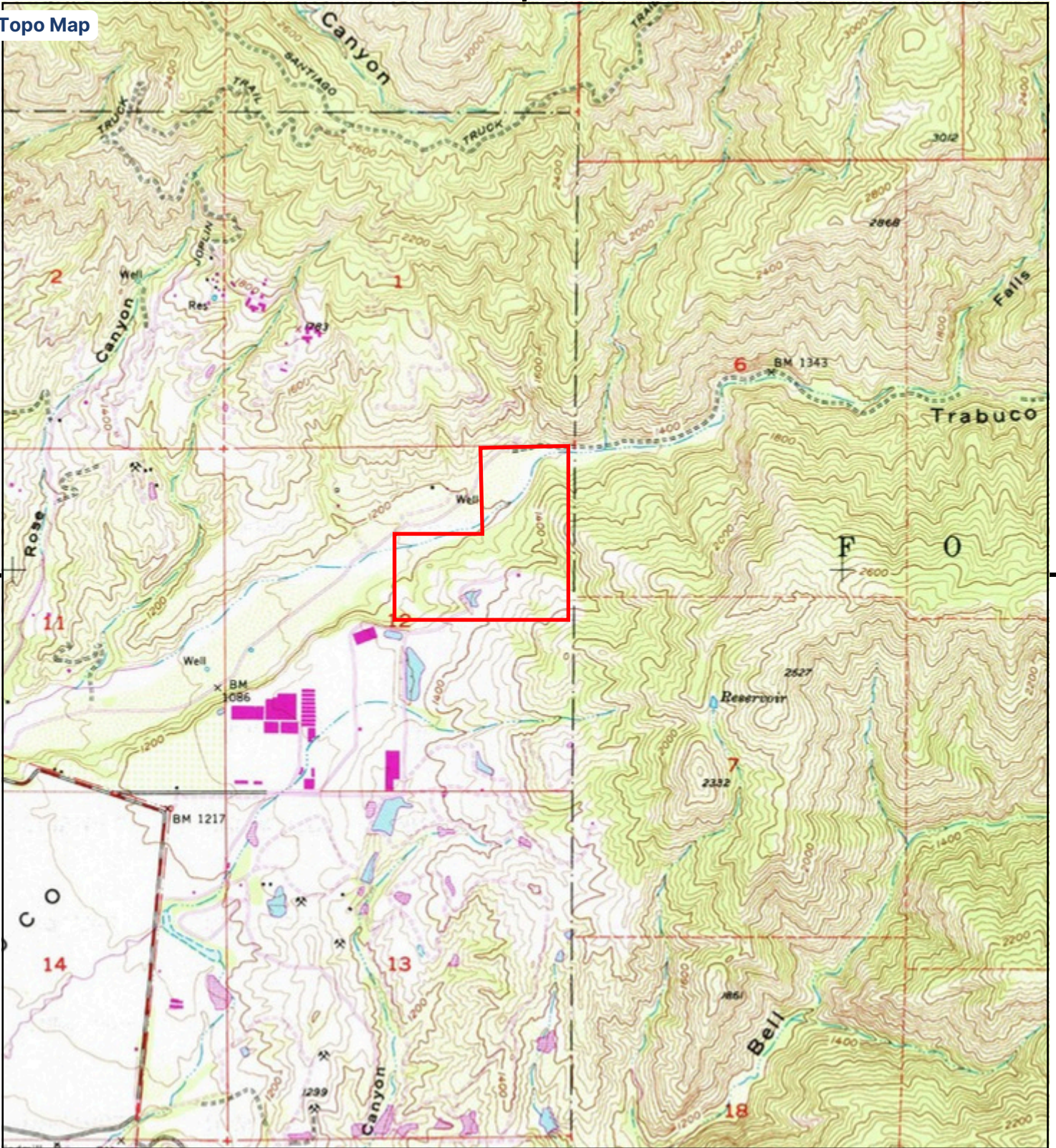


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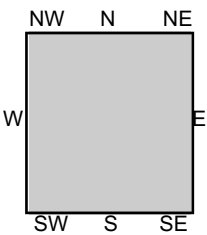
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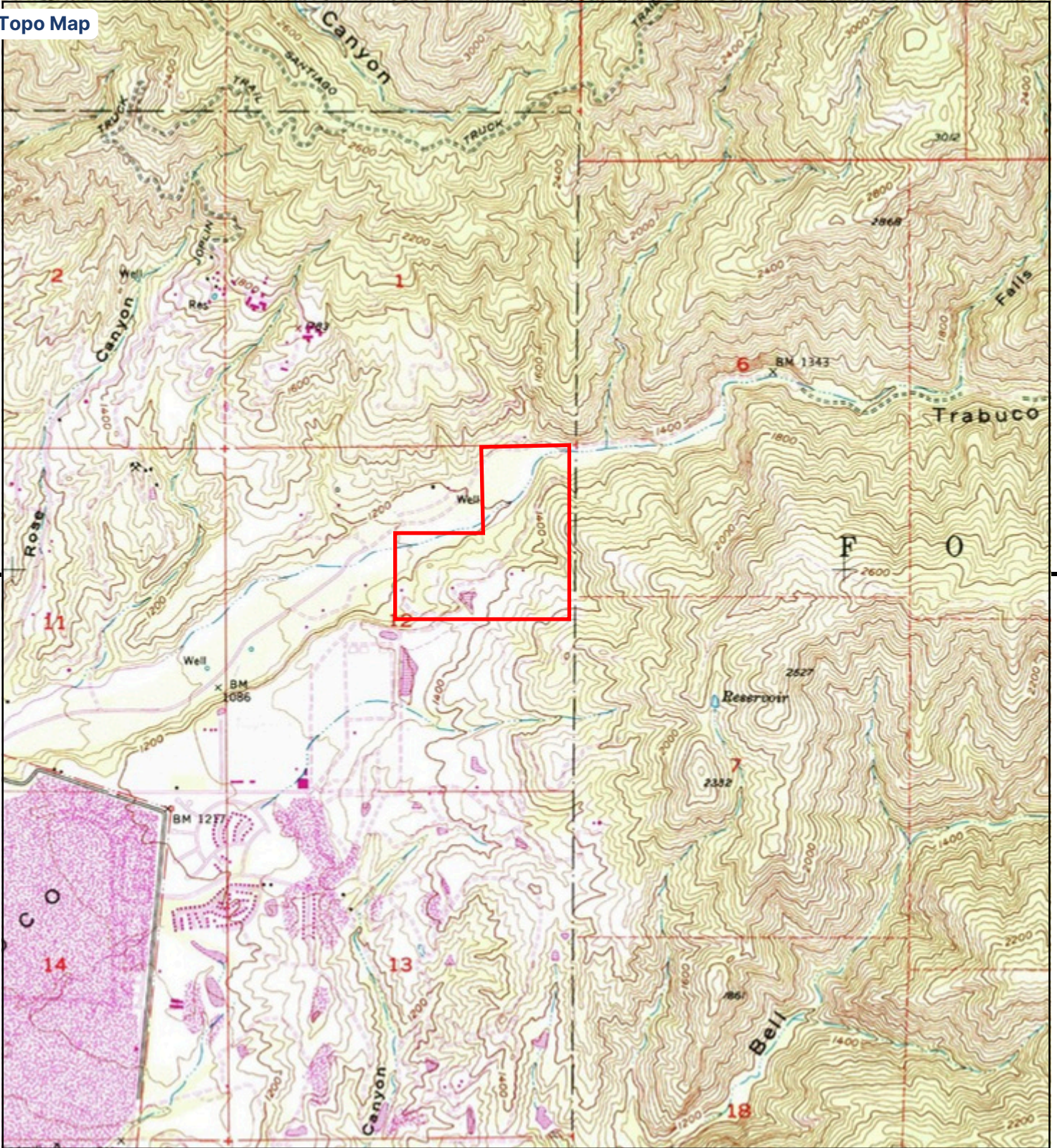


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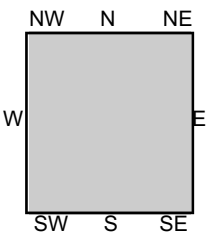
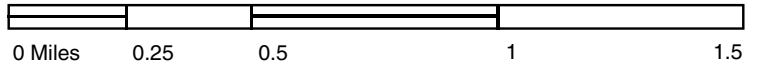
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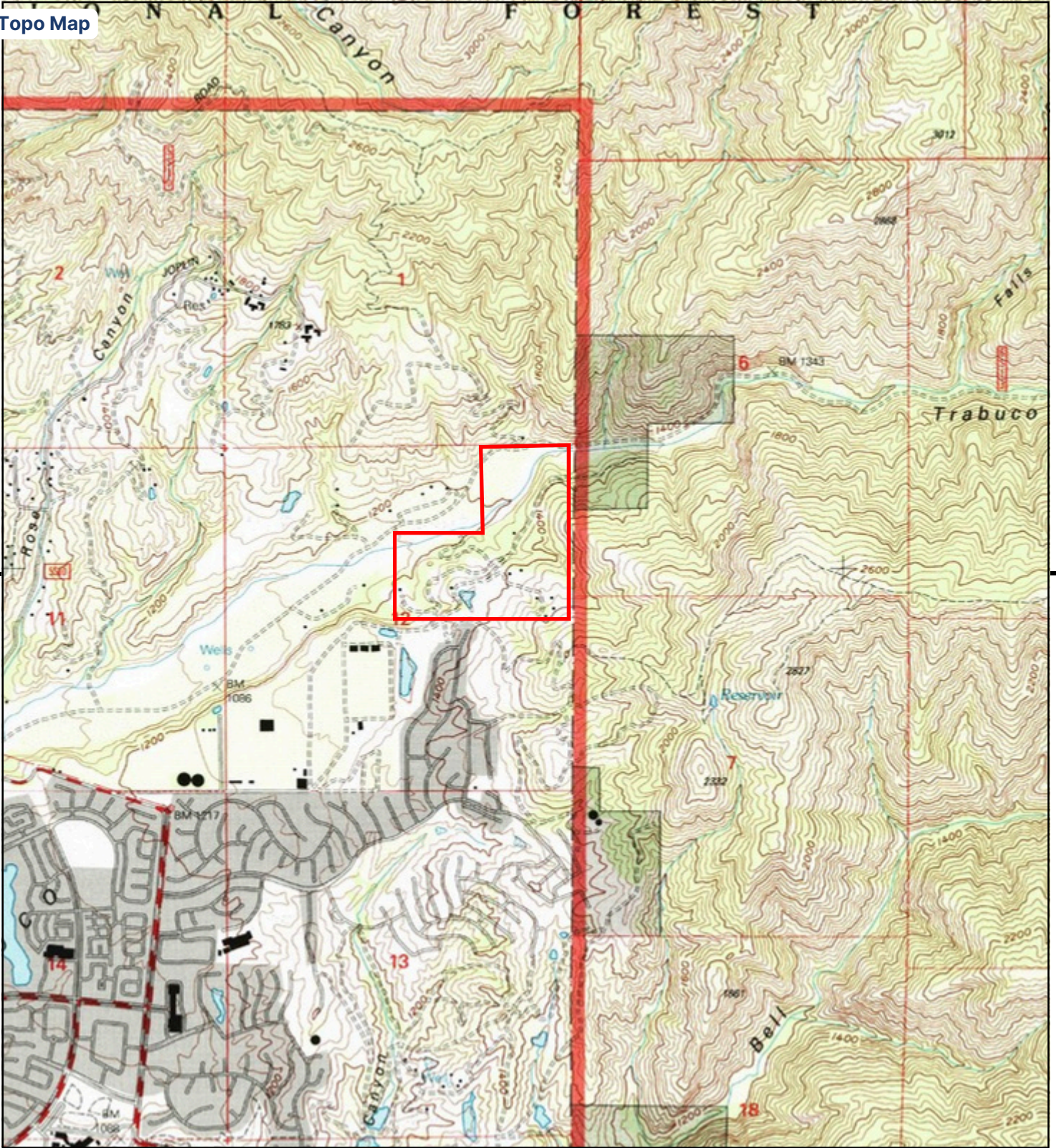


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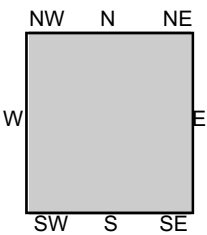
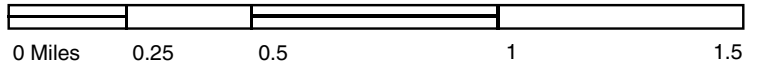
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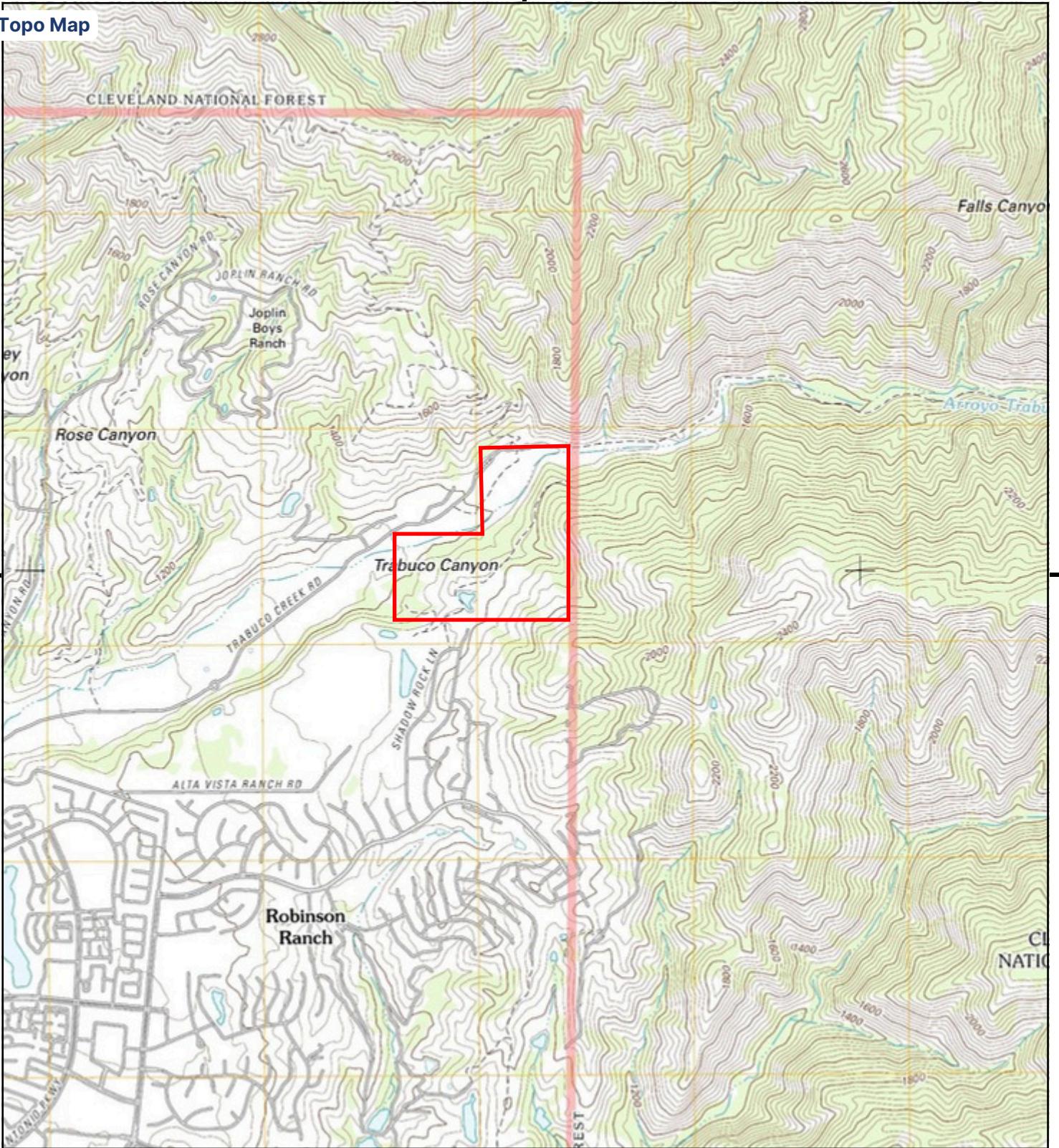


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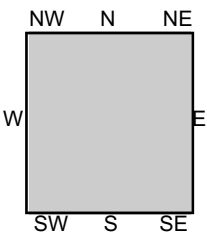
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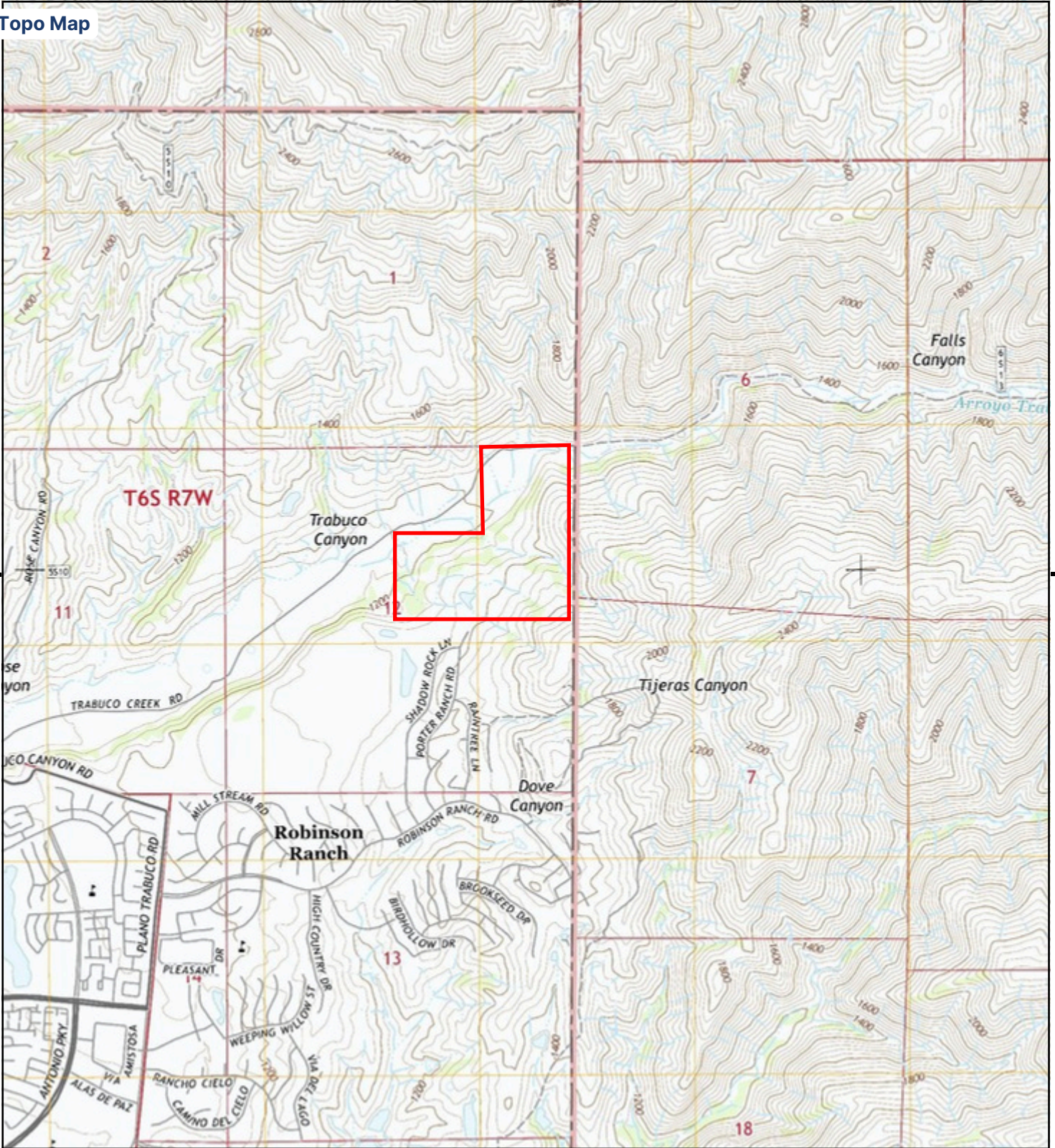


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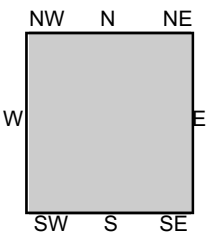
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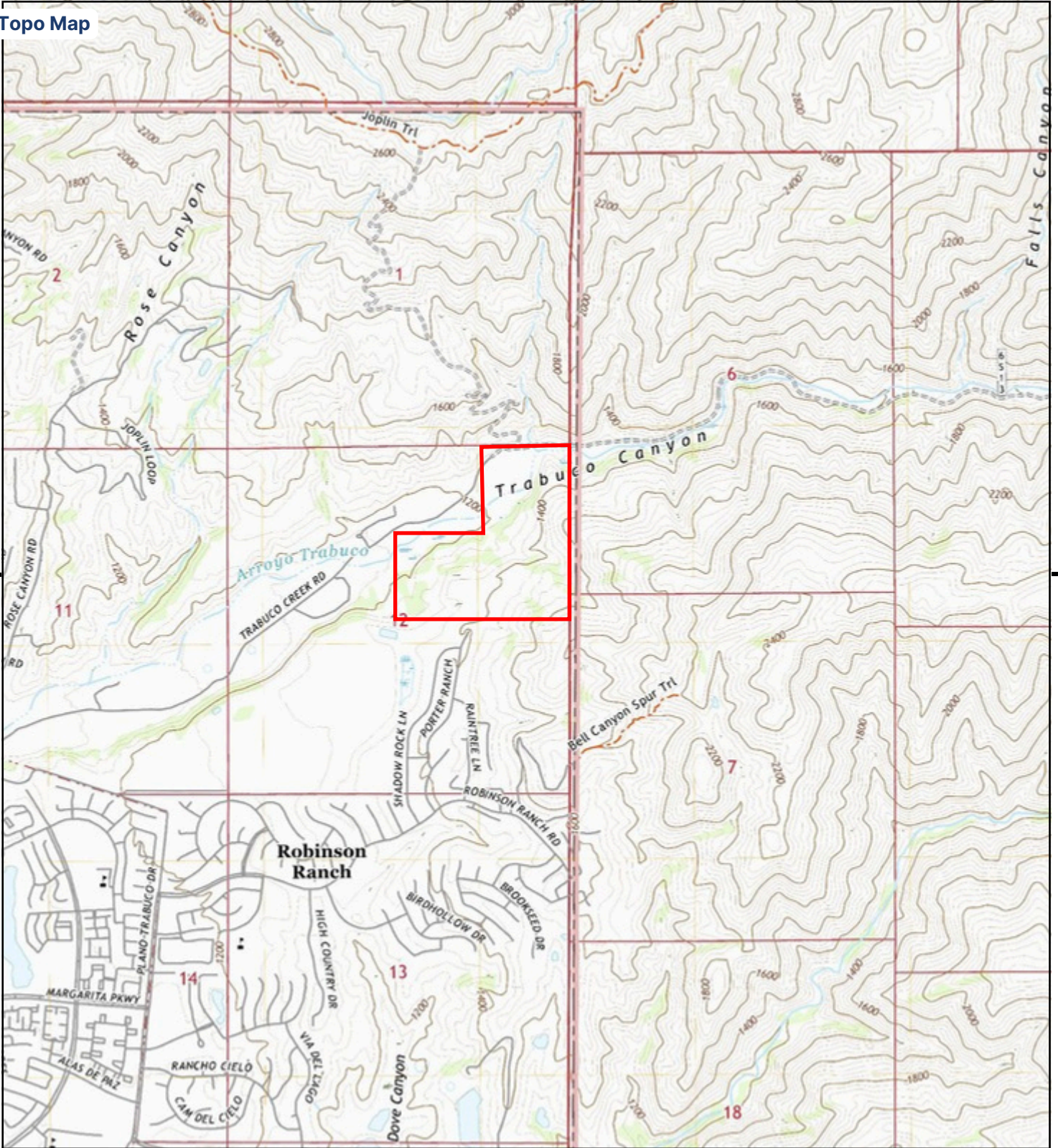


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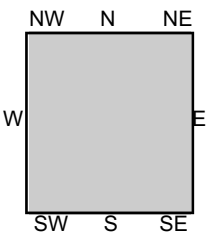
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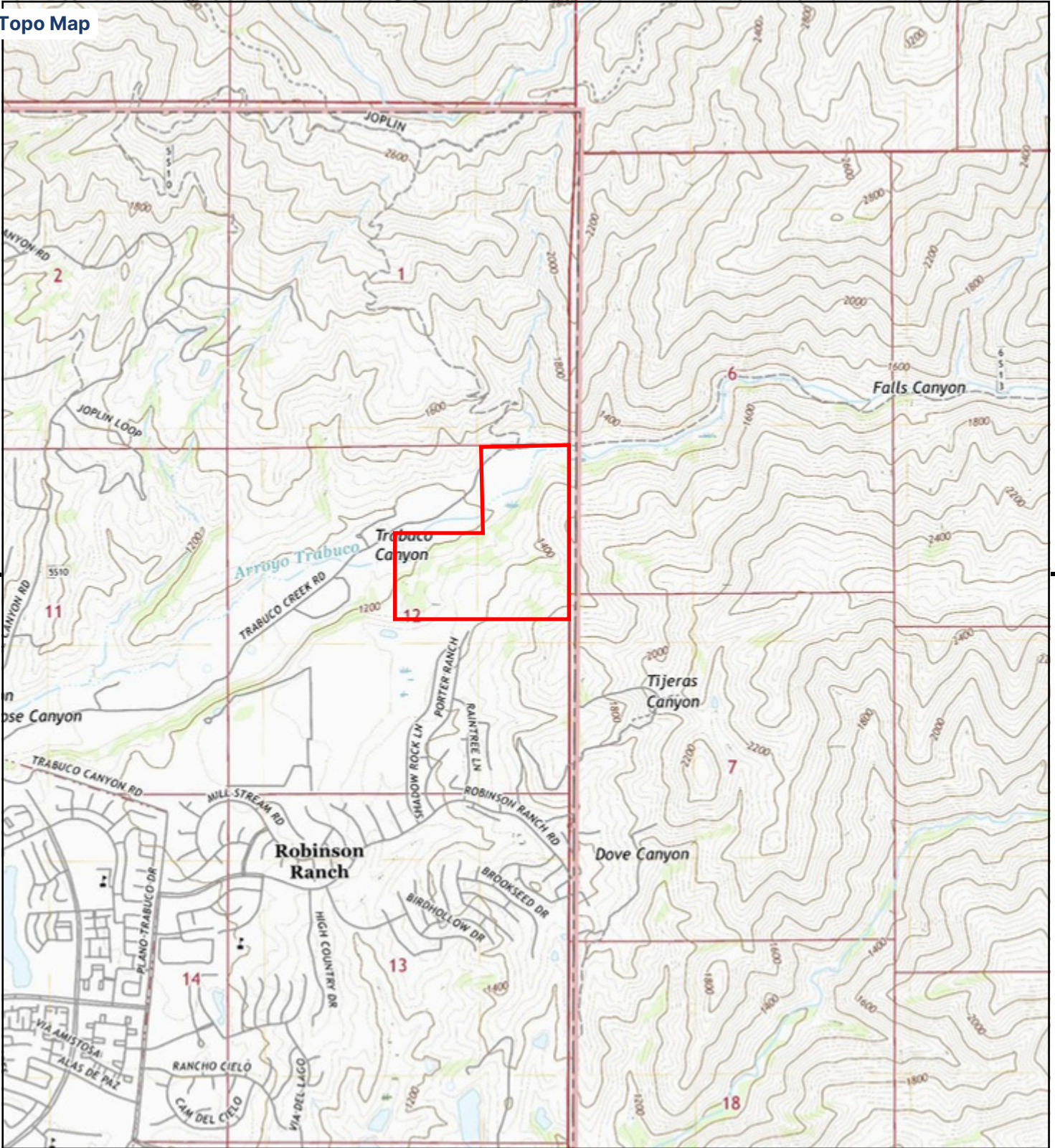


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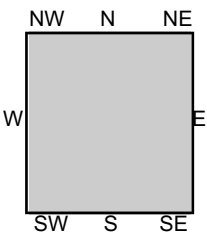
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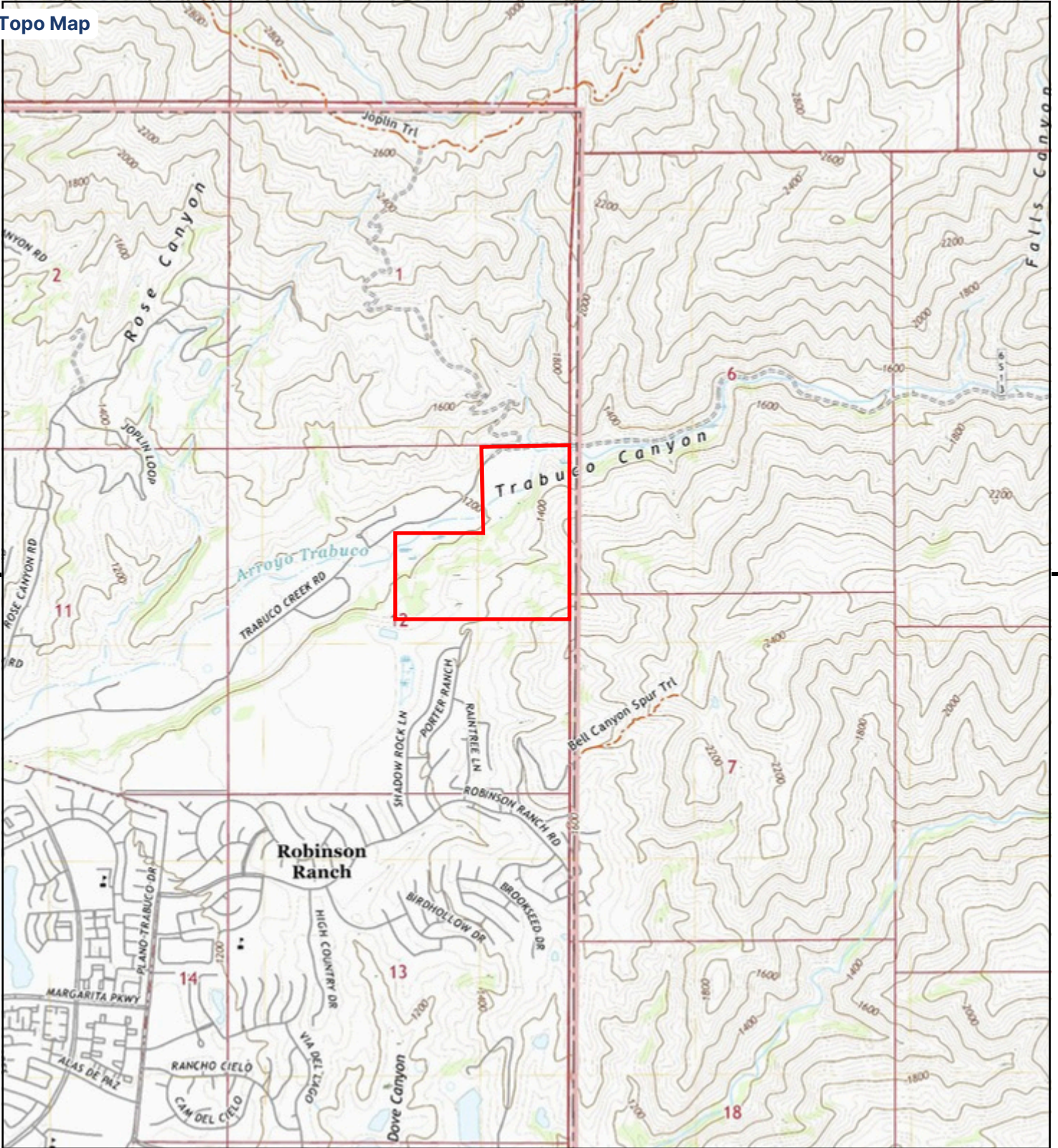


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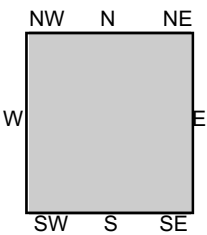
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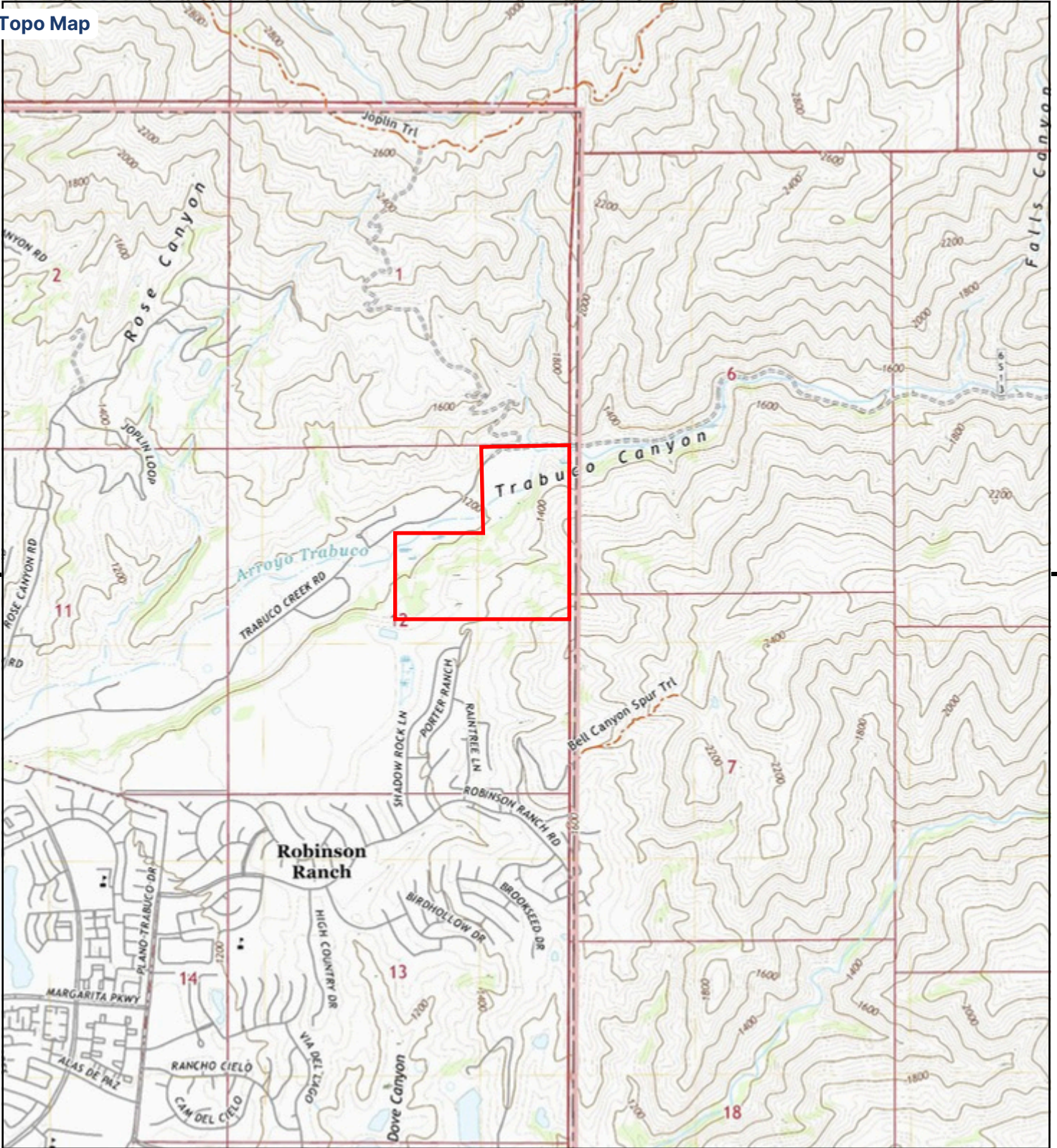


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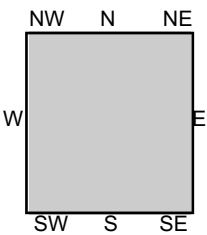
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This report includes information from the following map sheet(s).



TP, Santiago Peak, 2022, 7.5-minute

SITE NAME: Trabuco Canyon  
 ADDRESS: Not Reported  
 TRABUCO CANYON, CA 92679  
 CLIENT: Stadia Realty Inc.



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## Sanborn Map Report

# Certified Sanborn® Map Report

08/01/25

**Site Name:**

Trabuco Canyon  
Not Reported  
TRABUCO CANYON, CA 9267  
EDR Inquiry # 8066120.2

**Client Name:**

Stadia Realty Inc.  
540 NORTH GOLDEN CIRCLE DRIVE, S  
Santa Ana, CA 92705  
Contact: Brent Scharnberg



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Stadia Realty Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting [www.edrnet.com/sanborn](http://www.edrnet.com/sanborn).

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## Certified Sanborn Results:

**Certification #** B9E1-4555-8E84  
**PO #** NA  
**Project** Trabuco Canyon Water District



Sanborn® Library search results

Certification #: B9E1-4555-8E84

### UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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# Wildlands Conservation Proposal



## **Overview**

Wildlands has been asked by Stadia Realty to investigate the potential for creating mitigation values at the 120-acre Trabuco Canyon Water District (District) property located in southern Orange County, California. Wildlands has an extensive track record in providing mitigation solutions to developers throughout California. Our qualifications are attached to the report.

Wildlands visited the District property on August 4, 2025 to investigate its potential mitigation suitability. Based on the brief two-hour site tour and internal mapping evaluation, Wildlands determined the property presents high conservation value and would be looked upon favorably by the U.S. Fish and Wildlife Service (FWS) and California Department of Fish and Wildlife (CDFW) as suitable for mitigation.

The site is very unique simply based on its size and proximity to other protected lands in the region. It is Wildlands' assessment that the Property presents high mitigation value and there are several exit strategies to extract value from the District property.

## **Mitigation and Conservation Options**

### **Conservation Bank**

A conservation bank is a pre-established agency approved preserve authorized to sell mitigation credits to permittees who are required offset to their permitted development impacts. The establishment of "credits" at the Property would allow public and private development projects to seamlessly address impacts on a piecemeal basis. This could potentially include impacts from the District for capital improvement projects or operations and maintenance projects which may require mitigation.

The conservation bank entitlement process is timely but would yield a high return to the District through the sale of individual credits to permit applicants. The benefit of a conservation bank is that the land is permanently protected, and management would be funded through a non-wasting management endowment to ensure protection, all funded by the credit purchasers.

Credits such as gnatcatcher would command a price estimated at \$125,000 per credit-acre. Other credits types could include state waters, oak trees and chapparal impacts which could command similar pricing.

### **Permittee Responsible Mitigation (PRM)**

The Property also presents a unique opportunity to mitigate one or two large projects that require mitigation in south Orange County. Several residential, commercial, industrial and public projects may have needs sufficient to absorb all the mitigation values on the property.

Similar to a conservation bank, the property would be protected with a permanent conservation easement and management would be funded through a non-wasting endowment to ensure habitat integrity.

The estimated value to a PRM user would be between \$50,000-\$70,000 per acre in a singular transaction.

### **REPI program**

Another alternative to bank or PRM mitigation is participating in the Readiness and Environmental Protection Integration Program (REPI) with Marine Corps Base, Camp Pendleton. Wildlands is one of two private entities in California contracted to work with the REPI program.

Established in 2002, the Department of Defense's (DOD) REPI Program preserves military missions by supporting cost-sharing agreements between the Military Services, other Federal agencies, state and local governments, and private organizations to avoid land use conflicts near military installations, address environmental restrictions that limit military activities, and increase military installation resilience.

The REPI program would use their funding dollars to protect the property and perhaps mitigate impacts at Marine Corps Base, Camp Pendleton. REPI would require an appraisal and funding would be based on appraised value of the property. The District could maintain ownership or convey to third-party for permanent protection and management of the property.

### **Conclusion**

The site overall should be considered highly favorable for conservation by FWS and CDFW.

Additional focused species and habitat survey are recommended. If involved, Wildlands would be responsible for funding studies and entitling mitigation upon agreement with the District. Further, Wildlands would take the lead on negotiating with third-party end users for the property.

In the conservation bank option, the District could benefit by retaining mitigation for its own use and have the flexibility to sell to third parties. In the PRM option, the District could realize faster returns by selling to a singular party for its specific needs.





## **Wildlands Qualifications & Experience**

Wildlands is a habitat conservation and land management company dedicated to the restoration and preservation of wetlands and special-status species habitats. The company has completed 100 large-scale projects throughout California, Oregon and Washington. In business since 1991, Wildlands is a national leader in establishing wetland mitigation banks, special status species conservation banks, and project-specific habitat mitigation preserves that protect wetland and wildlife habitat in perpetuity. The result of our focus on providing mitigation solutions is the permanent protection and management of over 65,000 acres of sensitive habitat mitigation landscapes.

Our mission is to help create a legacy of thriving and protected natural habitat through ecological and economic cooperation.

Wildlands has a substantial track record providing habitat mitigation solutions for public and private development project impacts to special-status species and sensitive native communities in California. Wildlands owns and manages over 50 agency-approved habitat preserves comprising nearly 50,000 acres in Southern California. Our vertically integrated team of land use experts, land managers and biologists not only ensure we are selecting superior habitat to meet mitigation requirements, but they are managed in perpetuity for the benefit of the species and their habitat. As a result, Wildlands has developed exceptional relationships with the natural resource permitting agencies and land trusts. We work closely with California Department of Fish and Wildlife ("CDFW"), Regional Water Quality Control Board ("RWQCB"), Bureau of Land Management ("BLM"), U.S. Fish and Wildlife Service ("USFWS") and non-profits which can lead to an expedited review and approval process.

## **Full-Delivery Private Lands Mitigation Solutions**

Wildlands has the full service capabilities to provide habitat mitigation solutions by developing project specific preserves, or through use of our mitigation and conservation banks throughout California.

For large projects, Wildlands develops project specific habitat mitigation solutions where we undertake all aspects of developing mitigation for our clients, including purchasing and owning the land, entitling the mitigation with the multiple permitting agencies and taking on the responsibility of ensuring the mitigation properties remain as suitable habitat in



perpetuity. Wildlands has the financial capability to acquire lands in advance and on behalf of our project proponent clients. Our approach allows our clients projects to fully comply with their permits, stay on schedule, on budget, cap liability, avoid lawsuits and create value for the project.

We offer a mitigation solution for a fixed price per acre with zero trailing costs or obligations to the applicant. All costs associated with the land, agency approvals, easement and endowment are included in the fixed total price.

The Wildlands full-delivery private lands mitigation solution includes the following:

- Acquire, own and manage suitable private lands sufficient to meet project mitigation requirements.
- Develop a detailed biological resource report justifying the suitability of the private lands to meet project mitigation requirements.
- Coordinate Phase I Environmental Site Assessment and mineral rights assessments.
- Perform required Property Title Assessments.
- Develop required Interim and Long-term Habitat Management Plans.
- Coordinate with third party conservation easement holders.
- Draft and record conservation easement over mitigation property.
- Fund endowment with certified third-party non-profit endowment holder.
- Conduct Property Analysis Record (PAR) for endowment funding calculation.
- Fund endowment based on the PAR.
- Implement Habitat Management Plans
- Manage mitigation lands in accordance with conservation easement
- Relieve applicant from any future obligations or costs associated with owning or maintaining mitigation lands.

**TRABUCO CANYON WATER DISTRICT  
SPECIAL BOARD MEETING | OCTOBER 29, 2025**

**DISCUSSION MATTERS**

**ITEM 2: DISCUSSION CONCERNING TRABUCO CANYON WATER DISTRICT'S POTABLE WATER RATES AND CHARGES**

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Trabuco Canyon Water District's (TCWD or District) potable water rates and charges are determined through a rigorous rate-setting process that adheres to the cost-of-service provisions of Proposition 218. The District's most recent rate study, included as an Exhibit, was completed in early 2023 and established the five-year potable water rate schedule beginning fiscal year (FY) 2024 through FY 2028.

TCWD's potable water rates include both fixed charges and commodity, or consumption-based, rates that reflect the cost of providing potable water service to customers. Fixed charges recover District costs that don't vary with the quantity of water delivered and are allocated to customers based on the service demands that each place on the system.

Based on recent questions from District Board members, the Board directed staff at the September Regular Board Meeting to schedule a Special Board Meeting focused on explaining the major components of the current water rate structure as well as a potential timeline and resources for an updated rate study. The District's rate study consultant will assist with the presentation.

More information will be provided at the time of the meeting.

**RECOMMENDED ACTION:**

*Receive information at the time of the meeting and take action(s) as deemed appropriate.*

**EXHIBIT(S):**

1. Trabuco Canyon Water District 2023 Cost-of-Service Study, IB Consulting, June 29, 2023

**CONTACTS (staff responsible): PALUDI/COLLINS/BERG**

Public Hearing  
June 29, 2023

*Trabuco Canyon Water District  
2023 Cost-of-Service Study*



IB Consulting, LLC

31938 Temecula Parkway, Suite A #350

Temecula, CA. 92592

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

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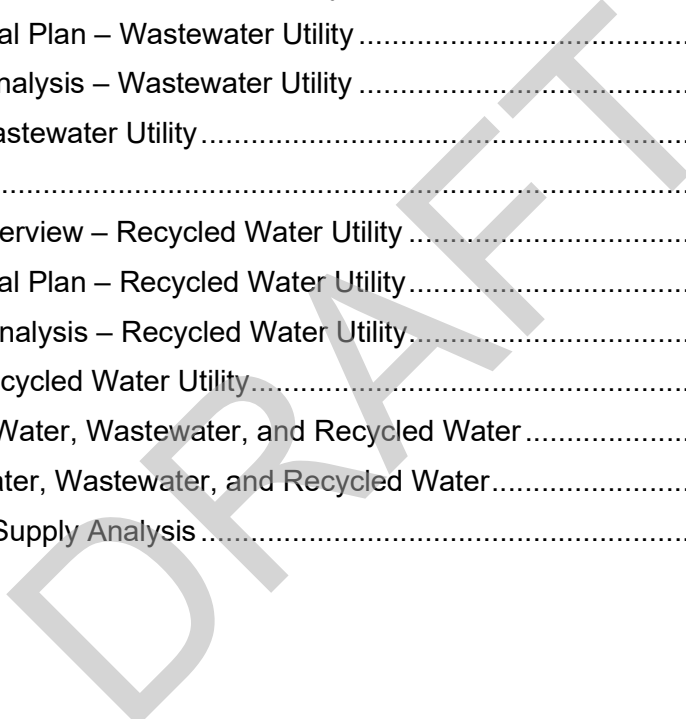
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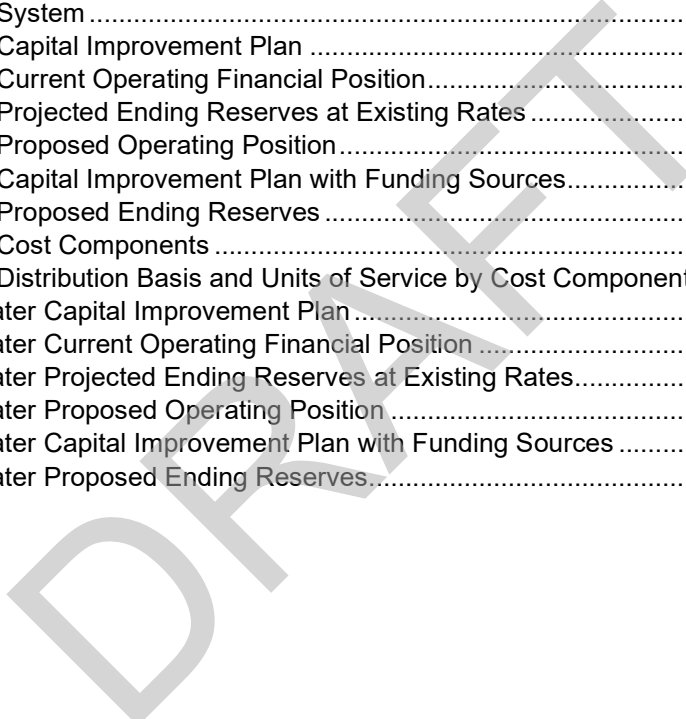
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## Executive Summary

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The Trabuco Canyon Water District (District) is a local public agency that provides water, wastewater, and recycled water services to customers in portions of the cities of Rancho Santa Margarita, Mission Viejo, Lake Forest, and unincorporated Orange County. The District provides these services to its customers at cost and does not have shareholders or derive any profit. The District must collect sufficient revenues from its customers to pay the costs to (1) prudently operate and maintain each of its three enterprise systems or “utilities” - water, wastewater, and recycled water; (2) build, renew, replace, and upgrade its infrastructure, which includes pipelines, treatment plants, reservoirs, and pumps, as well as administration buildings and related facilities; and (3) ensure a prudent reserve of funds.

The District collects revenues primarily through user fees (rates and charges) that are designed to ensure that each customer pays their fair share of their total use of the District’s systems. This Cost-of-Service Study is intended to (1) establish the total projected cost for each system over a five-year period (the financial plan); (2) allocate those costs among customers in a way that ensures that each customer pays its fair share of those costs in compliance with California Constitution Article XIII D, section 6, also known as Proposition 218 (the rate structure).

The District’s most recent 5-year rate schedule was adopted in December 2020. Due to increases in capital expenses and the recent hyper-inflationary climate, the District determined that the financial plan needed to be updated to reflect increased costs, and that rate increases would be needed to replace the current noticed rates for Fiscal Year 2023-24 (FY 2024) and FY 2025. The District selected IB Consulting to conduct a comprehensive cost-of-service analysis to establish rates for the District’s three systems for the 5-year period from FY 2024 through FY 2028 (Rate Setting Period). That analysis is set forth below.

## Water Utility Summary

### Financial Plan

Updating the water utility’s long-term financial plan and performing a comprehensive cost-of-service analysis is a prudent business practice to ensure that the District can fully fund its revenue needs through FY 2028 and beyond. In reviewing and updating water rates, the first step is to thoroughly check the financial health of the District’s water utility. Based on a financial review of the water utility at current rates and noticed rates through FY 2025, the District is projected to end FY 2024 with an operating deficit of \$833k, which will grow to approximately \$1.48M by FY 2028. Separate from operating expenses, the water utility also has significant capital projects over the next five years totaling \$13.2M, which includes a transmission pipeline upsizing (\$2.5M) and a new reservoir at Harris Grade (\$5.9M). The District has an existing loan with almost \$3M of available funding remaining to support the planned capital projects, with the balance of funding coming from reserves. However, without increases to rates, reserves would be depleted by FY 2026. The proposed financial plan generates an additional \$21.3M in rate revenue, phased in over the Rate Setting Period. In addition, a new debt issuance is proposed to occur in FY 2024 that will convert the District’s existing short-term credit line into long-term debt over a 30-year amortization schedule, and will provide additional proceeds of \$3M to cover the capital expenses projected for FY 2025 and a portion of FY 2026 capital projects. The new debt issue and related proceeds will allow rate revenue to increase more slowly over time and fund capital on a Pay-As-You-Go (PAYGO) basis by FY 2027.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

The total proposed debt issue, covering all three utilities, is expected to equal \$18M, with \$10M for the water utility (\$7M of short-term debt refinanced and \$3M in new money), \$7M for the wastewater utility (\$2.5M of short-term debt refinanced and \$4.5M in new money), and \$1M for the recycled water utility (\$500k of short-term debt refinanced and \$500k in new money). The debt financing assumes a 30-year term at a 5% annual interest rate, with a 10% debt reserve requirement and 2% in cost of issuance. As such, to generate \$10M in proceeds, the total debt amount is estimated at \$11.4M.

## Rate Structure

The District's water rate structure has both fixed and variable components. The fixed component includes a base fixed charge and a separate Water Reliability and Emergency Storage (WRES) fixed charge. Both fixed charges vary by meter size and are charged to all customers, except that customers in the area known as Portola Hills no longer pay the WRES (the Portola Hills area was only obligated to pay the WRES fixed charge through FY 2018 for that area's share of certain applicable project costs).

Variable rates differ by customer class due to variations in their use of the system and therefore the costs to serve those customer classes. Single-Family customers are currently subject to a four-tiered rate structure, charged in Hundred Cubic Feet<sup>1</sup> (HCF) increments. All other customer classes pay their proportionate share of costs through uniform rates per HCF. The District also has variable pumping rates for certain areas of the District that require booster pumps (and hence additional energy costs) to cover the cost of conveying water up to the higher elevations.

The detailed cost-of-service analysis within this report includes adjustments to the existing rate structure. The WRES will sunset after FY 2023 as the remaining facilities associated with the WRES-dedicated funding are part of this rate cycle's capital improvement plan. However, fixed charges will continue to fund a portion of capital needs and will be adjusted upward to recover approximately 40% of total rate revenue to ensure revenue stability. Single-Family tiers will reduce from four tiers to a three-tiered rate structure reflecting water usage characteristics throughout the year (Tier 1 = winter average, Tier 2 = summer average, and Tier 3 = greater than Tier 2). The differentials between the proposed tiered rates have been adjusted and solely reflect the differences in water supply costs as allocated among the tiers. A detailed analysis of the District's water supplies was conducted to determine the variable unit cost of water supply. The District's four water supplies include water from the Baker Water Treatment Plant (operated by Irvine Ranch Water District or IRWD), Dimension Water Treatment Plant (owned and operated by the District), imported treated water from IRWD (IRWD – Treated) and imported treated water from Santa Margarita Water District (SMWD – Treated).

The total projected water demand within each tier is served by first allocating the lowest cost water supplies among all Single-Family customers up to the winter average consumption volume, representing average indoor water use among all Single-Family customers. Each successively more expensive source of water is then allocated among all Single-Family customers up to the summer average consumption (representing average indoor + outdoor water use among all Single-Family customers), and then up to the most expensive source of water. In some cases, multiple water supplies are needed to serve the total demand within each tier and a weighted unit rate is derived.

Multi-Family customers will adjust to a 2-tiered rate structure based on usage characteristics (Tier 1 = winter average and Tier 2 = usage above Tier 1). This rate structure reflects the assumption that multi-family customers have minimal irrigation water uses. Due to the broad spectrum of land uses within the Commercial category, the Commercial rate structure will maintain a uniform rate to ensure equity between accounts within the customer class and a blended water supply unit rate is applied to ensure Commercial customers are paying their proportionate share of costs. The Portola Hills uniform rate has been adjusted to account for

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<sup>1</sup> 1 HCF = 748 gallons

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

operational costs of the District to distribute water to Portola Hills, in line with all other customers, but this area only receives water from Irvine Ranch Water District (IRWD) and is not subject to treatment-related costs from the Dimension water treatment plant. The District’s variable pumping rates have been recalibrated based on the most recent known current energy costs, except for the Portola Hills pumping charge, which has been eliminated and incorporated into a fully loaded water supply unit rate.

If customers as a whole were able to limit their water use levels, then the District would not need to purchase more expensive sources of supply. Allocating water costs to customer classes, including to residential tiers ensures that the burden of the District’s costs to buy more expensive water supplies are borne by those creating the demand, and avoids lower-volume users from subsidizing higher-volume users.

By adopting the proposed financial plan and approving rates through FY 2028, the water utility will generate positive net income above operating expenses, cover its system reinvestments and exceed its minimum reserve requirement by FY 2028.

The proposed rates have been incorporated into a Proposition 218 Notice and mailed to each customer. A Public Hearing is scheduled for June 29, 2023, on the proposed rates identified in Table 1 through Table 3. If there is no majority protest, and the Board of Directors approves this Cost-of-Service study and the proposed rates, then the proposed rates for FY 2024 will go into effect on July 1, 2023, with subsequent adjustments occurring each July 1st thereafter.

*Table 1: Proposed Monthly Water Fixed Charges*

Potable Fixed Meter Charges (\$/Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$ 46.84	\$ 55.28	\$ 65.24	\$ 71.77	\$ 78.95
3/4"	46.84	55.28	65.24	71.77	78.95
1"	94.93	112.02	132.19	145.41	159.96
1 1/2"	175.08	206.60	243.79	268.17	294.99
2"	271.26	320.09	377.71	415.49	457.04
3"	575.83	679.48	801.79	881.97	970.17
4"	1,024.67	1,209.12	1,426.77	1,569.45	1,726.40
6"	2,098.68	2,476.45	2,922.22	3,214.45	3,535.90

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 2: Proposed Variable Water Rates

Potable Variable Rates (\$/HCF)						
Customer Class	Tier Definitions (HCF)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Single-Family</b>						
Tier 1	0 - 13	\$ 4.40	\$ 5.20	\$ 6.14	\$ 6.76	\$ 7.44
Tier 2	14 - 21	5.12	6.05	7.14	7.86	8.65
Tier 3	>21	5.64	6.66	7.86	8.65	9.52
<b>Multi-Family</b>						
Tier 1	0 - 6	\$ 4.62	\$ 5.46	\$ 6.45	\$ 7.10	\$ 7.81
Tier 2	>6	5.64	6.66	7.86	8.65	9.52
<b>Commercial</b>		\$ 4.73	\$ 5.59	\$ 6.60	\$ 7.26	\$ 7.99
<b>Irrigation</b>		\$ 4.73	\$ 5.59	\$ 6.60	\$ 7.26	\$ 7.99
<b>Agricultural</b>		\$ 4.73	\$ 5.59	\$ 6.60	\$ 7.26	\$ 7.99
<b>Portola Hills</b>		\$ 5.25	\$ 6.20	\$ 7.32	\$ 8.06	\$ 8.87

Table 3: Variable Pumping Water Rates

Pumping Variable Rates (\$/HCF)					
Pumping Zone	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Zone 1 - Base	\$ -	\$ -	\$ -	\$ -	\$ -
Zone 2 - Topanga / Saddlecrest	0.53	0.63	0.75	0.83	0.92
Zone 3 - Canyon Creek	0.94	1.11	1.31	1.45	1.60
Zone 4 - Falcon	1.44	1.70	2.01	2.22	2.45
Zone 5 - Joplin	0.14	0.17	0.21	0.24	0.27

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Wastewater Utility Summary

Based on a financial review of the wastewater utility at current rates and approved rates through FY 2025, the District will cover operating expenses and generate positive net income for each fiscal year over the Financial Plan Period. However, net annual operating income alone cannot cover the capital spending needs for system reinvestment. Therefore, additional rate revenue is needed to fund system reinvestment and build up reserves to satisfy the utility’s minimum reserve requirements. The proposed financial plan and recommended adjustments would generate an additional \$5.285M over the Rate Setting Period, and the proposed FY 2024 debt issuance would provide \$4.5M in new money to fund capital costs in FY 2024 and FY 2025. The proposed financial plan would leverage debt to fund capital in the short-term, while rate revenue increases through a phase-in approach to cover the capital spending needs on a PAYGO by FY 2026.

The District's existing wastewater rate structure consists of flat monthly fixed charges to residential customers for each dwelling unit that vary between Single-Family and Multi-Family. Commercial customers are charged a monthly fixed charge and variable rates based on the level of strength concentration generated by the type of commercial use. Variable rates are categorized between three Low, Medium, and High.

The proposed wastewater rates derived within this report include a restructuring of wastewater rates. All residential customers will be charged the same monthly rate as the residential density factors in the area reflect 2.75 people per household (pph), based on population statistics from the E-5 Table of the Department of Finance and the multi-family complex within the District’s service area does not have any age restrictions limiting the household size. Residential rates are currently noticed and collected on a monthly basis but will transition to recovery on the Property Tax Bill. The Residential charges herein will still be derived as a monthly charge for comparison to existing rates. Within the Proposition 218 Notice, residential charges will show the month charge as well as the annual amount levied and collected on the Property Tax Bill. Commercial customers will continue to be a monthly fixed charge and variable rates that vary between Low, Medium, and High. However, the current monthly fixed charge to Commercial is low (\$5.69 per month) and will be recalibrated to generate slightly more fixed revenue. The recommended wastewater rates are included within the Proposition 218 Notice, and a Public Hearing is scheduled for June 29, 2023, on the proposed rates identified in Table 4. If there's not a majority protest, proposed rates for FY 2024 will go into effect on July 1, 2023, with subsequent adjustments occurring each July 1st thereafter.

Table 4: Proposed Wastewater Rates

Flat Charges (\$/Month)						
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	
Residential	\$ 45.92	\$ 53.27	\$ 61.80	\$ 69.22	\$ 77.53	
Commercial	\$ 12.58	\$ 14.60	\$ 16.94	\$ 18.98	\$ 21.26	

Variable Rates (\$/HCF)						
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	
<b>Commercial</b>						
Low	\$ 4.78	\$ 5.55	\$ 6.44	\$ 7.22	\$ 8.09	
Medium	8.00	9.28	10.77	12.07	13.52	
High	12.36	14.34	16.64	18.64	20.88	

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Recycled Water Utility

Based on a financial review of the recycled water utility at current rates and approved rates through FY 2025, the recycled water utility generates sufficient revenue to cover operating expenses and \$1.2M in net income over the Rate Setting Period, but the capital improvement plan for recycled water over the same period exceeds \$2.5M with an additional \$1.7M in capital projects the following year (FY 2029) related to the Dove Dam Outlet Replacement. With these critical capital needs, rate increases are needed to cover the system reinvestment and build up reserve to satisfy minimum reserve requirements. The proposed financial plan and recommended adjustments would generate \$4.1M in additional revenue over the Rate Setting Period and \$500k in debt proceeds from the proposed FY 2024 debt issuance. Collectively, the increased rate revenue and debt-financing would cover the utility’s revenue requirements and build up reserves to the ideal target by FY 2028 in anticipation of drawing it down for the Dove Dam project.

The District's recycled water rates include the same fixed charges as potable rates and a uniform variable rate. The proposed recycled water rates will continue to be pegged to the proposed potable meter charges, equal to 55% of potable meter charges and variable rates will remain as a uniform rate applied to all recycled water customers. The recommended recycled water rates are included within the Proposition 218 Notice, and a Public Hearing is scheduled for June 29, 2023, on the proposed rates identified in Table 5 and Table 6. If there is no majority protest, then the Board may adopt the proposed rates for FY 2024, which will go into effect on July 1, 2023, with subsequent adjustments occurring each July 1st thereafter.

*Table 5: Proposed Recycled Water Fixed Charges*

Recycled Fixed Meter Charges (\$/Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$ 25.76	\$ 30.40	\$ 35.88	\$ 39.47	\$ 43.42
3/4"	25.76	30.40	35.88	39.47	43.42
1"	52.21	61.61	72.70	79.98	87.98
1 1/2"	96.29	113.63	134.08	147.49	162.24
2"	149.19	176.05	207.74	228.52	251.37
3"	316.71	373.71	440.98	485.08	533.59
4"	563.57	665.02	784.72	863.20	949.52
6"	1,154.27	1,362.05	1,607.22	1,767.95	1,944.75
8"	2,476.75	2,922.57	3,448.63	3,793.50	4,172.85
10"	3,711.06	4,379.05	5,167.28	5,684.01	6,252.42

*Table 6: Proposed Recycled Water Variable Rates*

Proposed Recycled Variable Rates (\$/HCF)					
Variable Rates	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recycled	\$4.08	\$4.90	\$5.89	\$6.81	\$7.49

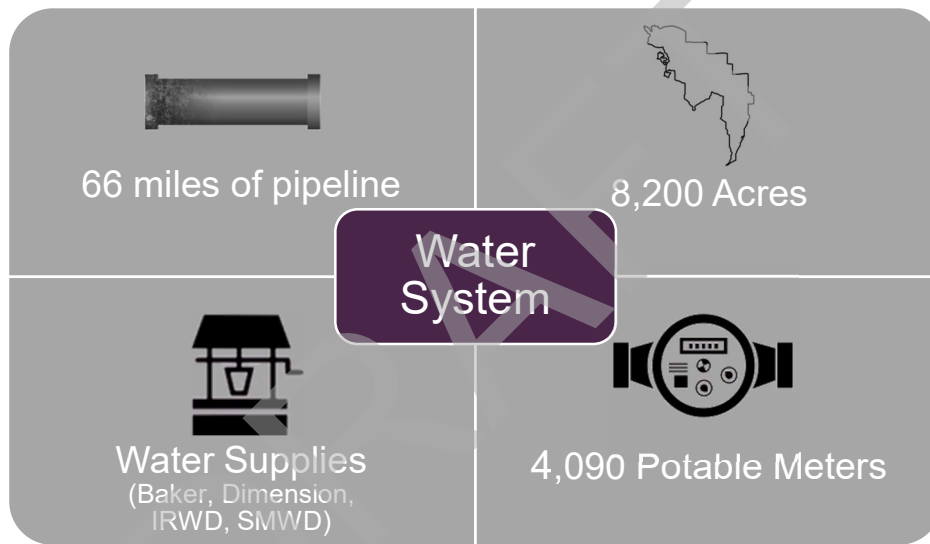
# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Water Utility

### Water System

The District encompasses an area of approximately 8,200 acres in the southeastern portion of Orange County at the foothills of the Santa Ana Mountains and its service area includes communities within the City of Rancho Santa Margarita, City of Lake Forest, City of Mission Viejo, Trabuco Canyon and other areas of unincorporated Orange County. The District is a regional partner in the Baker Water Treatment Plant and operates the Dimension Water Treatment Plant. The District water facilities also include two wells, nine pump stations, eight treated water storage reservoirs and 66 miles of water distribution pipelines with approximately 4,090 service connections (excluding temporary construction meters).

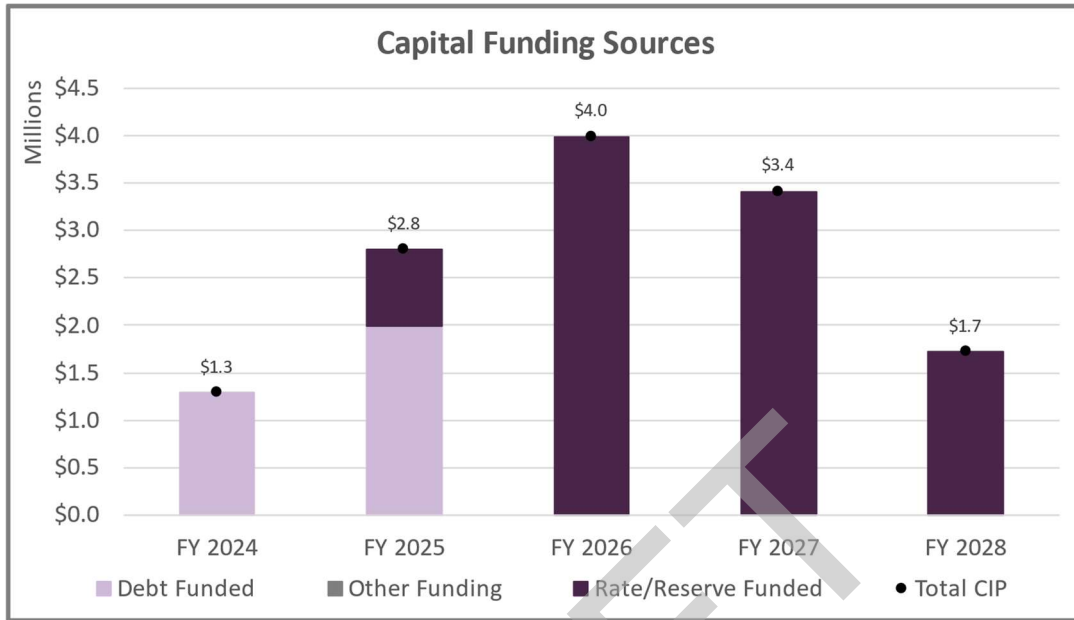
Figure 1: District Water System



The District recently completed a new asset management plan that identified capital project needs of \$30M over the next ten years. Through the District's review of the asset management plan and prioritizing projects between critical, less critical, and non-critical improvements, a final proposed Capital Improvement Plan (CIP) for this study was provided requiring \$13.2M in capital spending over the Rate Setting Period. Figure 2 shows the District's CIP through FY 2028 with current funding sources.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 2: Water Capital Improvement Plan



## Customers

The District serves 4,090 water meters, with over 80% of accounts classified as residential. Table 7 provides a summary of meters by meter size.

Table 7: Water Meters by Meter Size

Meter Size	Single-Family	Multi-Family	Commercial	Irrigation	Agricultural	Portola Hills	Total
5/8"	2,143	0	17	1	0	463	2,624
3/4"	795	0	7	0	1	68	871
1"	359	18	15	1	1	0	394
1 1/2"	19	13	7	4	1	0	44
2"	45	0	30	70	0	0	145
3"	1	0	1	5	0	0	7
4"	0	0	1	0	2	0	3
6"	0	0	2	0	0	0	2
<b>Total</b>	<b>3,362</b>	<b>31</b>	<b>80</b>	<b>81</b>	<b>5</b>	<b>531</b>	<b>4,090</b>

As previously mentioned, the existing rate structure consists of a base monthly fixed meter charge, a WRES fixed charge for capital spending, and variable rates that vary by customer class, with Single-Family subject to a four-tiered rate structure. Current monthly fixed charges are identified in Table 8 and Table 9, followed by variable rates shown in Table 10 and Table 11.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 8: FY 2023 Monthly Base Fixed Water Charges

Base Fixed Meter Charges (\$/Month)	
Meter Size	Existing
5/8"	\$ 21.04
3/4"	21.04
1"	30.70
1 1/2"	54.85
2"	83.81
3"	175.57
4"	310.77
6"	779.18

Table 9: FY 2023 Monthly WRES Fixed Water Charges

WRES Fixed Meter Charges (\$/Month)	
Meter Size	Existing
5/8"	\$ 16.04
3/4"	16.04
1"	25.25
1 1/2"	38.48
2"	51.30
3"	76.95
4"	102.60
6"	153.90

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 10: FY 2023 Variable Water Rates

Potable Variable Rates (\$/HCF)	
Customer Class	Existing
<b>Single-Family</b>	
Tier 1	\$ 2.92
Tier 2	3.72
Tier 3	7.06
Tier 4	9.16
<b>Multi-Family</b>	\$ 3.43
<b>Commercial</b>	\$ 3.76
<b>Irrigation</b>	\$ 4.86
<b>Agricultural</b>	\$ 6.17
<b>Portola Hills</b>	\$ 2.56

Table 11: FY 2023 Variable Water Pumping Rates

Pumping Variable Rates (\$/HCF)	
Pumping Zone	Existing
Zone 1 - Base	\$ -
Zone 2 - Topanga / Saddlecrest	0.99
Zone 3 - Canyon Creek	4.36
Zone 4 - Falcon	2.08
Zone 5 - Joplin	1.69
Zone 6 - Portola Hills	0.35

## Financial Plan Overview – Water Utility

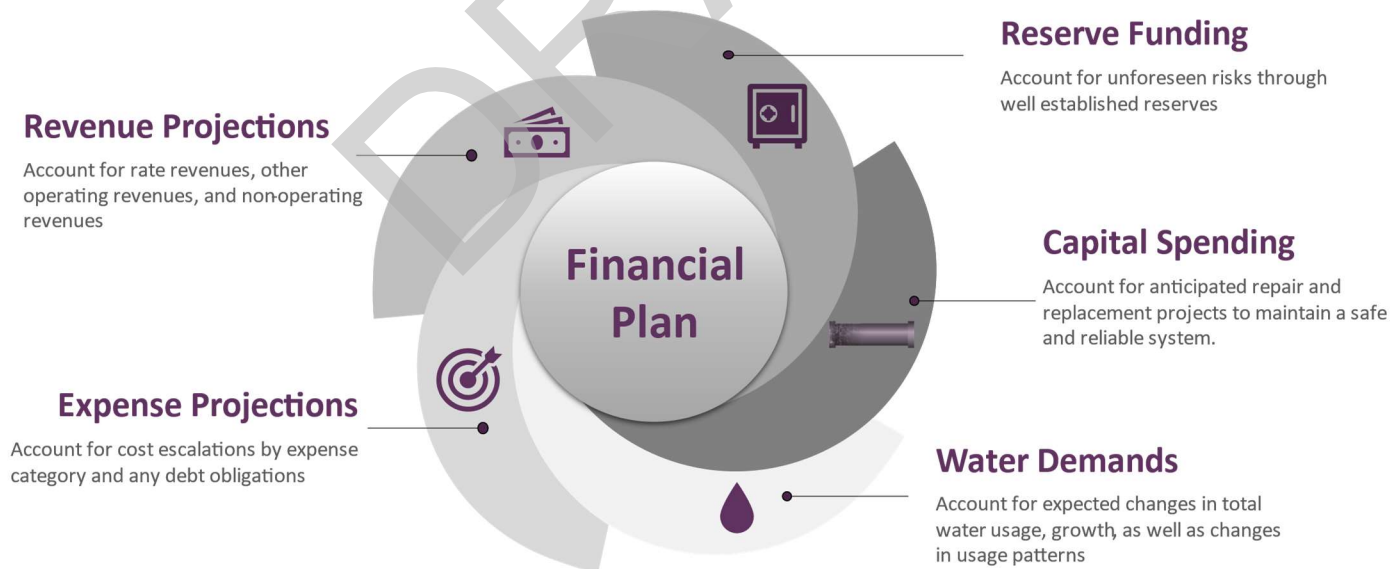
### Financial Planning

Financial planning incorporates numerous considerations, including projecting revenues and forecasting expected costs using various inflationary adjustments. Utilities also need to account for changes in water demand driven by variations in weather, changes to water supplies and water availability, state mandates, growth, and economic factors. In addition, system maintenance and reinvestment, reserves, and debt service requirements all influence the revenues needed in future years. Therefore, a comprehensive financial plan reviews the following:

- 1) Historical water sales and consumption patterns to determine an appropriate usage level for projecting future water demands.
- 2) Operational costs that may change over the planning period because of inflation, unique circumstances of the agency, new expenditures added to meet strategic goals, state mandates, or changes in operations.
- 3) Multi-year system improvement needs, and scheduling based on priority. This review also considers available funding sources to complete projects such as PAYGO, grants, loans, and debt financing.
- 4) Reserve funding to meet adopted reserve policies. The goal is to generate adequate cash on hand to mitigate financial risks related to operating cashflow needs, unexpected increases in expenses, shortages in system reinvestment, and mitigating potential system failures.

Figure 3 illustrates the key elements when developing a long-term financial plan.

Figure 3: Financial Plan Key Elements



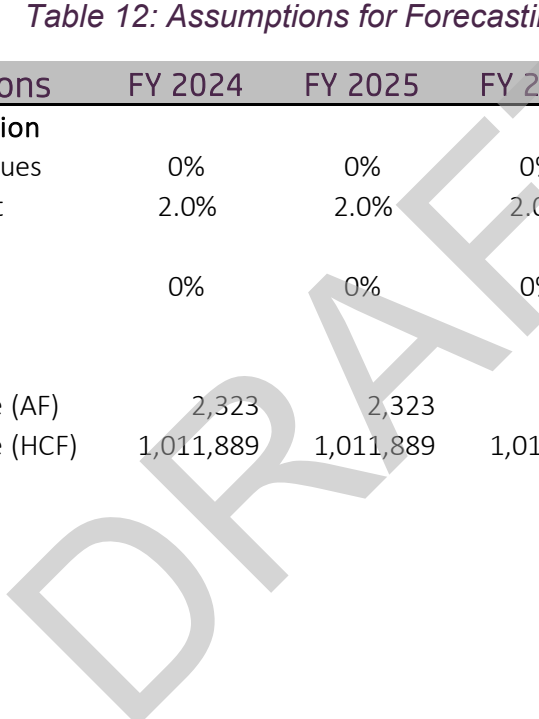
# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Financial Planning Assumptions

Developing a long-term financial plan requires an understanding of the District’s financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, existing debt requirements, and reserve policies. With these considerations, certain assumptions are required for projecting revenues, expenses, and expected ending fund balances. Through discussions with staff and their understanding of historical budget data and future obligations, Table 12 identifies assumptions used for forecasting revenues. Table 13 provides details on the number of accounts by meter size and Table 14 identifies projected usage by customer class and tier. For forecasting revenues, our analysis assumes no growth in accounts as a conservative assumption so projected revenues do not rely on growth to occur. In addition, water sales assume a slight reduction to 2,323 AF for FY 2024 and beyond. Table 15 identifies the amount of projected usage through each elevation zone.

*Table 12: Assumptions for Forecasting Revenues*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Revenue Escalation</b>					
Non-Rate Revenues	0%	0%	0%	0%	0%
Reserve Interest	2.0%	2.0%	2.0%	2.0%	2.0%
<b>Account Growth</b>	0%	0%	0%	0%	0%
<b>Water Sales</b>					
Customer Usage (AF)	2,323	2,323	2,323	2,323	2,323
Customer Usage (HCF)	1,011,889	1,011,889	1,011,889	1,011,889	1,011,889



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 13: Accounts by Meter Size – FY 2024 through FY 2028

Customer Accounts	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>All Potable Meters</b>					
Meter Size					
5/8"	2,624	2,624	2,624	2,624	2,624
3/4"	871	871	871	871	871
1"	394	394	394	394	394
1 1/2"	44	44	44	44	44
2"	145	145	145	145	145
3"	7	7	7	7	7
4"	3	3	3	3	3
6"	2	2	2	2	2
<b>Total All Potable Meters</b>	<b>4,090</b>	<b>4,090</b>	<b>4,090</b>	<b>4,090</b>	<b>4,090</b>

Table 14: Projected Consumption (HCF) – FY 2024 through FY 2028

Consumption by Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Single-Family</b>					
Tier 1	297,504	297,504	297,504	297,504	297,504
Tier 2	229,662	229,662	229,662	229,662	229,662
Tier 3	95,704	95,704	95,704	95,704	95,704
Tier 4	40,603	40,603	40,603	40,603	40,603
<b>Subtotal Single-Family Consumption (HCF)</b>	<b>663,473</b>	<b>663,473</b>	<b>663,473</b>	<b>663,473</b>	<b>663,473</b>
<b>Multi-Family</b>	12,075	12,075	12,075	12,075	12,075
<b>Commercial</b>	34,008	34,008	34,008	34,008	34,008
<b>Irrigation</b>	143,718	143,718	143,718	143,718	143,718
<b>Agricultural</b>	95,593	95,593	95,593	95,593	95,593
<b>Portola Hills</b>	63,022	63,022	63,022	63,022	63,022
<b>Total Potable Consumption (HCF)</b>	<b>1,011,889</b>	<b>1,011,889</b>	<b>1,011,889</b>	<b>1,011,889</b>	<b>1,011,889</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 15: Projected Pumping Consumption (HCF) – FY 2024 through FY 2028

Potable Consumption by Pumping Zone	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Pumping Zone</b>					
Zone 1 - Base	932,738	932,738	932,738	932,738	932,738
Zone 2 - Topanga / Saddlecrest	8,282	8,282	8,282	8,282	8,282
Zone 3 - Canyon Creek	2,179	2,179	2,179	2,179	2,179
Zone 4 - Falcon	2,632	2,632	2,632	2,632	2,632
Zone 5 - Joplin	3,036	3,036	3,036	3,036	3,036
Zone 6 - Portola Hills	63,022	63,022	63,022	63,022	63,022
<b>Total Potable Consumption by Pumping Zone (HCF)</b>	<b>1,011,889</b>	<b>1,011,889</b>	<b>1,011,889</b>	<b>1,011,889</b>	<b>1,011,889</b>

Table 16 identifies assumptions used for forecasting increases in expenses over the Rate Setting Period. Purchased water costs are held constant and any increases will be captured through the pass-through provisions of Government Code section 53756.

Table 16: Assumptions for Forecasting Expense Requirements<sup>2</sup>

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Expenditure Escalation</b>					
Benefits	7.00%	7.00%	7.00%	7.00%	7.00%
Capital Construction	6.63%	3.93%	3.93%	3.93%	3.93%
Energy Costs	8.00%	8.00%	5.00%	5.00%	5.00%
Fuel	20.00%	20.00%	5.00%	5.00%	5.00%
General Costs	6.20%	3.95%	3.95%	3.95%	3.95%
Retirement	5.00%	5.00%	5.00%	5.00%	5.00%
Salaries	5.00%	5.00%	5.00%	5.00%	5.00%
Water Purchases	Pass-Through	Pass-Through	Pass-Through	Pass-Through	Pass-Through

## Current Financial Position

### Revenues

Based on the forecasting assumptions, fixed revenues were calculated using account data by meter size (Table 13) and existing fixed charges (Table 8 and Table 9<sup>3</sup>). Variable revenues were calculated using existing variable rates (Table 10 and Table 11) and projected total water sales by customer class (Table 14) and projected usage by pumping zone (Table 15). Table 17 shows the calculated rate revenues through the Rate Setting Period. Table 18 summarizes calculated rate revenues from Table 17 and other operating and non-rate revenues available through the Rate Setting Period with projections rounded to the nearest thousands.

<sup>2</sup> Capital Construction inflation and General Costs for FY 2024 were increased to 6.63% and 6.2%, respectively, to account for recent increases due to inflation. Outer years reduce to 3.93% and 3.95%, reflecting the 5-year average of the Engineering News-Record – Construction Cost index and the Los Angeles Area Consumer Price Index, respectively.

<sup>3</sup> Portola Hills customers do not get charged the WRES fixed charge.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 17: Water Calculated Rate Revenues

Potable Fixed Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Meter Flat Rates</b>					
Single-Family	\$ 933,912	\$ 933,912	\$ 933,912	\$ 933,912	\$ 933,912
Multi-Family	15,188	15,188	15,188	15,188	15,188
Commercial	70,901	70,901	70,901	70,901	70,901
Irrigation	84,188	84,188	84,188	84,188	84,188
Agricultural	8,738	8,738	8,738	8,738	8,738
Portola Hills	134,067	134,067	134,067	134,067	134,067
<b>Total Meter Flat Rates</b>	<b>\$ 1,246,993</b>	<b>\$ 1,246,993</b>	<b>\$ 1,246,993</b>	<b>\$ 1,246,993</b>	<b>\$ 1,246,993</b>
<b>WRES Fees</b>					
Single-Family	\$ 711,682	\$ 711,682	\$ 711,682	\$ 711,682	\$ 711,682
Multi-Family	11,457	11,457	11,457	11,457	11,457
Commercial	36,713	36,713	36,713	36,713	36,713
Irrigation	50,052	50,052	50,052	50,052	50,052
Agricultural	3,420	3,420	3,420	3,420	3,420
Portola Hills	0	0	0	0	0
<b>Total WRES Fees</b>	<b>\$ 813,323</b>	<b>\$ 813,323</b>	<b>\$ 813,323</b>	<b>\$ 813,323</b>	<b>\$ 813,323</b>
Variable Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Single-Family</b>					
Tier 1	\$ 868,712	\$ 868,712	\$ 868,712	\$ 868,712	\$ 868,712
Tier 2	854,343	854,343	854,343	854,343	854,343
Tier 3	675,670	675,670	675,670	675,670	675,670
Tier 4	371,923	371,923	371,923	371,923	371,923
<b>Single-Family Variable Revenue</b>	<b>\$ 2,770,648</b>	<b>\$ 2,770,648</b>	<b>\$ 2,770,648</b>	<b>\$ 2,770,648</b>	<b>\$ 2,770,648</b>
<b>Multi-Family</b>	<b>\$ 41,417</b>	<b>\$ 41,417</b>	<b>\$ 41,417</b>	<b>\$ 41,417</b>	<b>\$ 41,417</b>
<b>Commercial</b>	<b>\$ 127,870</b>	<b>\$ 127,870</b>	<b>\$ 127,870</b>	<b>\$ 127,870</b>	<b>\$ 127,870</b>
<b>Irrigation</b>	<b>\$ 698,469</b>	<b>\$ 698,469</b>	<b>\$ 698,469</b>	<b>\$ 698,469</b>	<b>\$ 698,469</b>
<b>Agricultural</b>	<b>\$ 589,809</b>	<b>\$ 589,809</b>	<b>\$ 589,809</b>	<b>\$ 589,809</b>	<b>\$ 589,809</b>
<b>Portola Hills</b>	<b>\$ 161,462</b>	<b>\$ 161,462</b>	<b>\$ 161,462</b>	<b>\$ 161,462</b>	<b>\$ 161,462</b>
<b>Total Potable Variable Rate Revenue</b>	<b>\$ 4,389,676</b>	<b>\$ 4,389,676</b>	<b>\$ 4,389,676</b>	<b>\$ 4,389,676</b>	<b>\$ 4,389,676</b>
<b>Pumping - Variable</b>					
Zone 1 - Base	\$ -	\$ -	\$ -	\$ -	\$ -
Zone 2 - Topanga / Saddlecrest	8,199	8,199	8,199	8,199	8,199
Zone 3 - Canyon Creek	9,500	9,500	9,500	9,500	9,500
Zone 4 - Falcon	5,475	5,475	5,475	5,475	5,475
Zone 5 - Joplin	5,131	5,131	5,131	5,131	5,131
Zone 6 - Portola Hills	22,058	22,058	22,058	22,058	22,058
<b>Total Variable Pumping Revenue</b>	<b>\$ 50,363</b>	<b>\$ 50,363</b>	<b>\$ 50,363</b>	<b>\$ 50,363</b>	<b>\$ 50,363</b>
<b>Total Rate Revenue</b>	<b>\$ 6,541,772</b>	<b>\$ 6,541,772</b>	<b>\$ 6,541,772</b>	<b>\$ 6,541,772</b>	<b>\$ 6,541,772</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 18: Water Projected Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>					
Fixed Revenue	\$ 1,247,000	\$ 1,247,000	\$ 1,247,000	\$ 1,247,000	\$ 1,247,000
Variable Revenue	4,440,000	4,440,000	4,440,000	4,440,000	4,440,000
WRES Revenue	813,000	813,000	813,000	813,000	813,000
<b>Subtotal Rate Revenues</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>
<b>Operating Revenues</b>					
Backflow/Fireflow Test	\$ 11,000	\$ 11,000	\$ 11,000	\$ 11,000	\$ 11,000
Late Charges	143,000	143,000	143,000	143,000	143,000
New Account Fee	2,000	2,000	2,000	2,000	2,000
Standby Charges	46,000	46,000	46,000	46,000	46,000
BTP Water Sales	717,000	717,000	717,000	717,000	717,000
BTP Sales - O&M	225,000	225,000	225,000	225,000	225,000
BTP Sales - Capital	167,000	167,000	167,000	167,000	167,000
<b>Subtotal Operating Revenues</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>
<b>Non-Operating Revenues</b>					
Uncollectable Accounts	(26,000)	(26,000)	(26,000)	(26,000)	(26,000)
Property Taxes	1,070,000	1,070,000	1,070,000	1,070,000	1,070,000
Other Non-Operating Revenue	59,000	59,000	59,000	59,000	59,000
Interest Revenue	0	0	25,000	16,000	0
<b>Subtotal Non-Operating Revenues</b>	<b>\$ 1,103,000</b>	<b>\$ 1,103,000</b>	<b>\$ 1,128,000</b>	<b>\$ 1,119,000</b>	<b>\$ 1,103,000</b>
<b>Total Revenues</b>	<b>\$ 8,914,000</b>	<b>\$ 8,914,000</b>	<b>\$ 8,939,000</b>	<b>\$ 8,930,000</b>	<b>\$ 8,914,000</b>

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Expenses

The FY 2023 budget was used as the baseline expenses of the utility and adjusted in subsequent years based on the escalation factors shown in Table 16. Table 19 provides projected Operational & Maintenance (O&M) costs through the Rate Setting Period, with future projections (except for debt) rounded to the nearest thousands. Each O&M expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor for forecasting how costs will increase over time. The projected price of purchased water for FY 2024 is held constant for all years because any increase will be captured through the pass-through provisions of Government Code section 53756 and will be identified within the Proposition 218 notice.

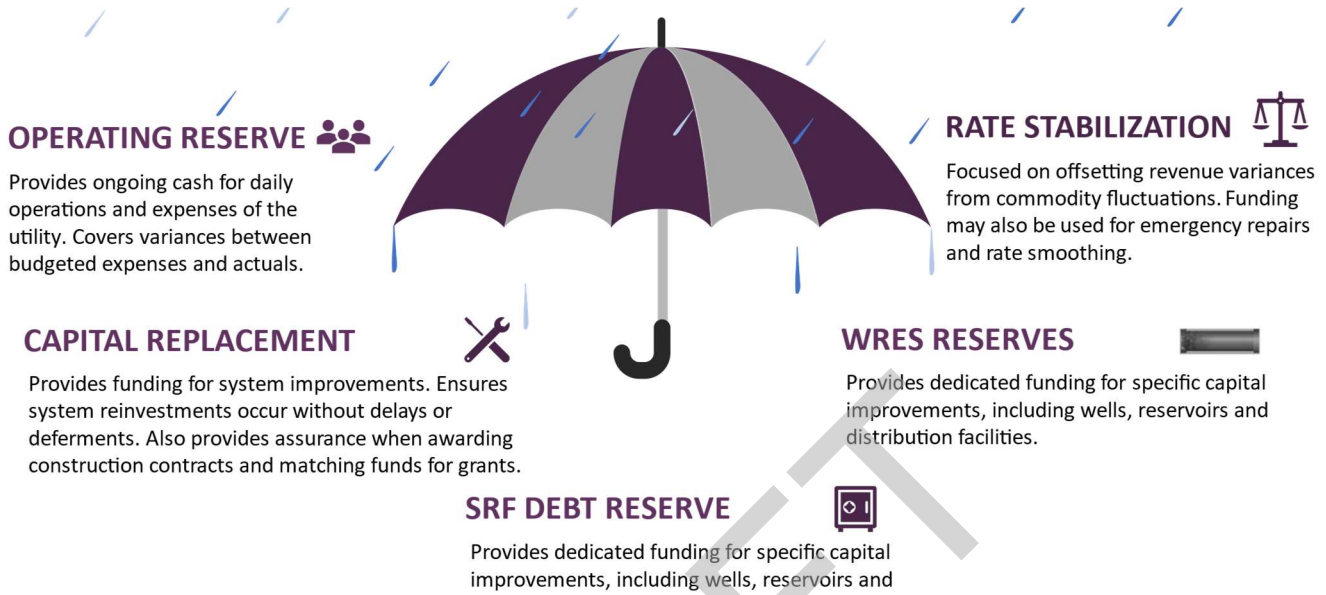
*Table 19: Projected O&M Expenses*

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Water Supply Costs</b>					
<b>Fixed Purchased Water Costs</b>					
MWDOC	\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000
SMWD	16,000	16,000	16,000	16,000	16,000
IRWD	320,000	320,000	320,000	320,000	320,000
Portola Hills	44,000	44,000	44,000	44,000	44,000
<b>Subtotal Fixed Purchased Water Costs</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>
<b>Variable Purchased Water Costs</b>					
TCWD					
Baker (BTP)	320,000	320,000	320,000	320,000	320,000
SMWD - Treated	32,000	32,000	32,000	32,000	32,000
IRWD - Treated	805,000	805,000	805,000	805,000	805,000
Dimension (DWTP)	1,168,000	1,168,000	1,168,000	1,168,000	1,168,000
Portola Hills	202,000	202,000	202,000	202,000	202,000
Water Sales - BTP	742,000	742,000	742,000	742,000	742,000
<b>Subtotal Variable Purchased Water Cos</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>
<b>Pumping Costs</b>					
T&D - Electricity	\$ 264,000	\$ 285,000	\$ 299,000	\$ 314,000	\$ 330,000
<b>Subtotal Pumping Costs</b>	<b>\$ 264,000</b>	<b>\$ 285,000</b>	<b>\$ 299,000</b>	<b>\$ 314,000</b>	<b>\$ 330,000</b>
<b>Water Supply Costs</b>	<b>\$ 4,194,000</b>	<b>\$ 4,215,000</b>	<b>\$ 4,229,000</b>	<b>\$ 4,244,000</b>	<b>\$ 4,260,000</b>
<b>Operating Expenses</b>					
General and Administrative	\$ 1,279,000	\$ 1,338,000	\$ 1,400,000	\$ 1,464,000	\$ 1,531,000
Salaries & Benefits	2,878,000	3,036,000	3,203,000	3,379,000	3,565,000
Transmission & Distribution	438,000	465,000	484,000	504,000	524,000
Treatment	284,000	303,000	317,000	331,000	347,000
CalPERS & OPEB	169,000	163,000	152,000	140,000	125,000
<b>Subtotal Operating Expenses</b>	<b>\$ 5,048,000</b>	<b>\$ 5,305,000</b>	<b>\$ 5,556,000</b>	<b>\$ 5,818,000</b>	<b>\$ 6,092,000</b>
<b>Debt Service</b>					
SRF Loan	\$ 230,382	\$ 230,380	\$ 230,380	\$ 230,381	\$ 230,382
Refinancing/Proposed New Debt	397,727	517,455	517,455	517,455	517,455
<b>Subtotal Debt Service</b>	<b>\$ 628,109</b>	<b>\$ 747,835</b>	<b>\$ 747,835</b>	<b>\$ 747,836</b>	<b>\$ 747,837</b>
<b>Total Expenses</b>	<b>\$ 9,870,109</b>	<b>\$ 10,267,835</b>	<b>\$ 10,532,835</b>	<b>\$ 10,809,836</b>	<b>\$ 11,099,837</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Reserves

Figure 4: Water Utility Reserves



Established reserves include Operating, Capital Replacement, Rate Stabilization, SFR Debt, and WRES. These reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations, cover funding for annual system improvements, and secure outstanding debt obligations. In addition, these reserves help smooth rates and mitigate rate spikes due to emergencies or above-average system costs. The WRES Reserves will be closed, and remaining funds will be transferred to the Operating Reserve because the remaining facilities associated with the WRES dedicated funding are part of this rate cycle’s CIP. Table 20 summarizes the minimum reserve requirements and ideal targets of each reserve.

Table 20: Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
<b>Unrestricted</b>		
Operating	90 days of operating expenses	180 days of operating expenses
Capital Replacement	Annual CIP costs based on 5-year average	2 years of CIP costs based on 5-year average
Rate Stabilization	10% of operating revenue	N/A
<b>Restricted</b>		
WRES	N/A	N/A
SFR Debt	Annual debt payment	N/A

The reserve balance as of July 1, 2022, equaled approximately \$4.0M, excluding the debt reserve.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from current rates and the noticed rates through FY 2025 will not cover operating expenses. In addition, capital spending towards repair & replacement would require the use of reserves as the primary funding source once the remaining debt proceeds are expended, which is not sustainable. Table 21 forecasts existing revenues and expenses through the Rate Setting Period. Table 22 identifies reserve transfers and reserve activity, with projected FY 2024 starting reserve balances shown for each reserve.

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 21: Water Financial Plan at Existing Rates

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>						
Fixed Revenue		\$ 1,247,000	\$ 1,247,000	\$ 1,247,000	\$ 1,247,000	\$ 1,247,000
Variable Revenue	Table 18	4,440,000	4,440,000	4,440,000	4,440,000	4,440,000
WRES Revenue		813,000	813,000	813,000	813,000	813,000
<b>Total Rate Revenues</b>		<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>
<b>Operating Revenues</b>						
Backflow/Fireflow Test		\$ 11,000	\$ 11,000	\$ 11,000	\$ 11,000	\$ 11,000
Late Charges		143,000	143,000	143,000	143,000	143,000
New Account Fee		2,000	2,000	2,000	2,000	2,000
Standby Charges	Table 18	46,000	46,000	46,000	46,000	46,000
BTP Water Sales		717,000	717,000	717,000	717,000	717,000
BTP Sales - O&M		225,000	225,000	225,000	225,000	225,000
BTP Sales - Capital		167,000	167,000	167,000	167,000	167,000
<b>Subtotal Operating Revenues</b>		<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>
<b>Non-Operating Revenues</b>						
Supplemental Water DIF		\$ -	\$ -	\$ -	\$ -	\$ -
Uncollectable Accounts	Table 18	(26,000)	(26,000)	(26,000)	(26,000)	(26,000)
Property Taxes		1,070,000	1,070,000	1,070,000	1,070,000	1,070,000
Other Non-Operating Revenue		59,000	59,000	59,000	59,000	59,000
<b>Subtotal Non-Operating Revenues</b>		<b>\$ 1,103,000</b>	<b>\$ 1,103,000</b>	<b>\$ 1,103,000</b>	<b>\$ 1,103,000</b>	<b>\$ 1,103,000</b>
<b>Total Revenues</b>		<b>\$ 8,914,000</b>	<b>\$ 8,914,000</b>	<b>\$ 8,914,000</b>	<b>\$ 8,914,000</b>	<b>\$ 8,914,000</b>
<b>O&amp;M Expenses</b>						
<b>Water Supply Costs</b>						
<b>Fixed Purchased Water Costs</b>						
MWDOC		\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000
SMWD	Table 19	16,000	16,000	16,000	16,000	16,000
IRWD		320,000	320,000	320,000	320,000	320,000
Portola Hills		44,000	44,000	44,000	44,000	44,000
<b>Subtotal Fixed Purchased Water Costs</b>		<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>
<b>Variable Purchased Water Costs</b>						
<b>TCWD</b>						
Baker (BTP)		320,000	320,000	320,000	320,000	320,000
SMWD - Treated		32,000	32,000	32,000	32,000	32,000
IRWD - Treated	Table 19	805,000	805,000	805,000	805,000	805,000
Dimension (DWTP)		1,168,000	1,168,000	1,168,000	1,168,000	1,168,000
Portola Hills		202,000	202,000	202,000	202,000	202,000
Water Sales - BTP		742,000	742,000	742,000	742,000	742,000
<b>Subtotal Variable Purchased Water Costs</b>		<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>
<b>Pumping Costs</b>						
T&D - Electricity	Table 19	\$ 264,000	\$ 285,000	\$ 299,000	\$ 314,000	\$ 330,000
<b>Subtotal Pumping Costs</b>		<b>\$ 264,000</b>	<b>\$ 285,000</b>	<b>\$ 299,000</b>	<b>\$ 314,000</b>	<b>\$ 330,000</b>
<b>Water Supply Costs</b>		<b>\$ 4,194,000</b>	<b>\$ 4,215,000</b>	<b>\$ 4,229,000</b>	<b>\$ 4,244,000</b>	<b>\$ 4,260,000</b>
<b>Operating Expenses</b>						
General and Administrative		\$ 1,279,000	\$ 1,338,000	\$ 1,400,000	\$ 1,464,000	\$ 1,531,000
Salaries & Benefits		2,878,000	3,036,000	3,203,000	3,379,000	3,565,000
Transmission & Distribution	Table 19	438,000	465,000	484,000	504,000	524,000
Treatment		284,000	303,000	317,000	331,000	347,000
CalPERS & OPEB		169,000	163,000	152,000	140,000	125,000
<b>Subtotal Operating Expenses</b>		<b>\$ 5,048,000</b>	<b>\$ 5,305,000</b>	<b>\$ 5,556,000</b>	<b>\$ 5,818,000</b>	<b>\$ 6,092,000</b>
<b>Debt Service</b>						
SRF Loan		\$ 230,382	\$ 230,380	\$ 230,380	\$ 230,381	\$ 230,382
Credit Line	Table 19	101,500	50,750	-	-	-
Refinancing/Proposed New Debt		397,727	517,455	517,455	517,455	517,455
<b>Subtotal Debt Service</b>		<b>\$ 729,609</b>	<b>\$ 798,585</b>	<b>\$ 747,835</b>	<b>\$ 747,836</b>	<b>\$ 747,837</b>
<b>Total Expenses</b>		<b>\$ 9,971,609</b>	<b>\$ 10,318,585</b>	<b>\$ 10,532,835</b>	<b>\$ 10,809,836</b>	<b>\$ 11,099,837</b>
<b>Net Cashflow</b>		<b>\$ (1,057,609)</b>	<b>\$ (1,404,585)</b>	<b>\$ (1,618,835)</b>	<b>\$ (1,895,836)</b>	<b>\$ (2,185,837)</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

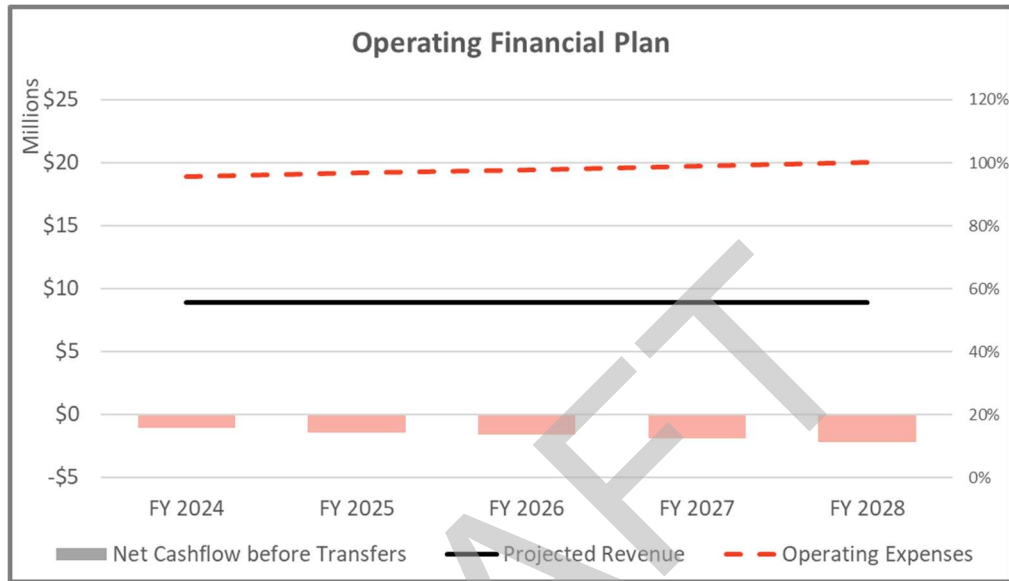
Table 22: Water – Transfers and Reserve Activity at Existing Rates

Transfers	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Net Cashflow	\$ (1,057,609)	\$ (1,404,585)	\$ (1,618,835)	\$ (1,895,836)	\$ (2,185,837)
<b>Transfers to Reserves</b>					
Water Storage DIF	\$0	\$0	\$1,051,427	\$0	\$0
WRES - Wells	1,629,973	0	0	0	0
WRES - Res/DIST	2,676,069	0	0	0	0
<b>Subtotal Transfers to Reserves</b>	<b>\$4,306,041</b>	<b>\$0</b>	<b>\$1,051,427</b>	<b>\$0</b>	<b>\$0</b>
<b>Net Cashflow (after Transfers)</b>	<b>\$ 3,248,432</b>	<b>\$ (1,404,585)</b>	<b>\$ (567,408)</b>	<b>\$ (1,895,836)</b>	<b>\$ (2,185,837)</b>
<b>Operating Reserve</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Beginning Balance</b>	\$ (1,936,270)	\$ 1,312,161	\$ (92,423)	\$ (659,831)	\$ (2,555,667)
Transfers (Net Cashflow)	3,248,432	(1,404,585)	(567,408)	(1,895,836)	(2,185,837)
Transfers from/(to) Capital Reserve	-	-	-	-	-
<b>Ending Balance</b>	<b>\$ 1,312,161</b>	<b>\$ (92,423)</b>	<b>\$ (659,831)</b>	<b>\$ (2,555,667)</b>	<b>\$ (4,741,503)</b>
<b>Capital Reserve</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Beginning Balance</b>	\$ 328,403	\$ 2,010,989	\$ (786,870)	\$ (4,775,416)	\$ (8,184,555)
<b>Plus:</b>					
Use of Existing Debt Proceeds	2,947,600	-	-	-	-
<b>Less:</b>					
CIP	(1,288,176)	(2,797,858)	(3,988,546)	(3,409,139)	(1,717,060)
Transfers from/(to) Water Rate Stabilization	-	-	-	-	-
<b>Subtotal Capital Reserve</b>	<b>\$ 1,987,826</b>	<b>\$ (786,870)</b>	<b>\$ (4,775,416)</b>	<b>\$ (8,184,555)</b>	<b>\$ (9,901,615)</b>
Interest Earnings	23,162	-	-	-	-
<b>Ending Balance</b>	<b>\$ 2,010,989</b>	<b>\$ (786,870)</b>	<b>\$ (4,775,416)</b>	<b>\$ (8,184,555)</b>	<b>\$ (9,901,615)</b>
<b>Water Rate Stabilization Reserve</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Beginning Balance</b>	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers from/(to) Capital Reserve	-	-	-	-	-
<b>Ending Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Ending Unrestricted Reserves Balance</b>	<b>\$ 3,323,150</b>	<b>\$ (879,293)</b>	<b>\$ (5,435,247)</b>	<b>\$ (10,740,222)</b>	<b>\$ (14,643,118)</b>
<b>Restricted Reserves</b>					
<b>Water Storage DIF</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Beginning Balance</b>	\$ 1,051,427	\$ 1,051,427	\$ 1,051,427	\$ -	\$ -
Direct Transfer	-	-	(1,051,427)	-	-
<b>Ending Balance</b>	<b>\$ 1,051,427</b>	<b>\$ 1,051,427</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>WRES - Wells</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Beginning Balance</b>	\$ 1,629,973	\$ -	\$ -	\$ -	\$ -
Direct Transfer	(1,629,973)	-	-	-	-
<b>Ending Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>WRES - Res/Dist</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Beginning Balance</b>	\$ 2,676,069	\$ -	\$ -	\$ -	\$ -
Direct Transfer	(2,676,069)	-	-	-	-
<b>Ending Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>SRF Loan</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Beginning Balance</b>	\$ 236,996	\$ 236,996	\$ 236,996	\$ 236,996	\$ 236,996
Direct Transfer	-	-	-	-	-
<b>Subtotal SRF Loan</b>	<b>\$ 236,996</b>	<b>\$ 236,996</b>	<b>\$ 236,996</b>	<b>\$ 236,996</b>	<b>\$ 236,996</b>
Release of Final Debt Payment	-	-	-	-	-
<b>Ending Balance</b>	<b>\$236,996</b>	<b>\$236,996</b>	<b>\$236,996</b>	<b>\$236,996</b>	<b>\$236,996</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

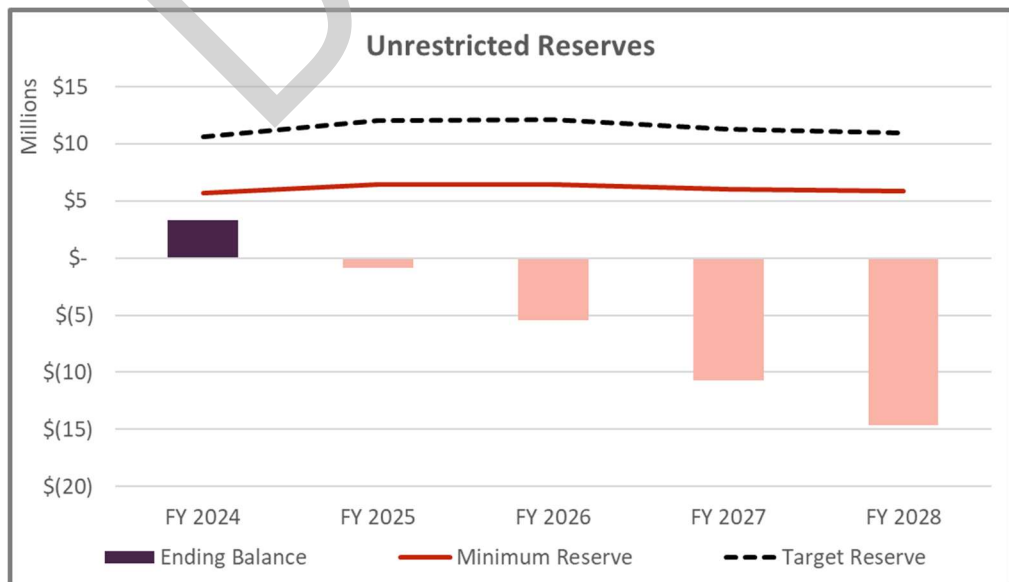
Figure 5 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the net operating income, with grey bars reflecting positive net income for capital spending and reserve funding and red bars reflecting an operating deficit absorbed by reserves.

Figure 5: Current Operating Financial Position



With capital spending of \$13.2M over the Rate Setting Period, as shown in Figure 2, reserves would be depleted and there would be no capital funding available by FY 2025. Figure 6 reflects the projected ending balances of undesignated reserves after funding operating and capital projects. Undesignated reserves include Operating, Replacement, Rate Stabilization, and the release of WRES reserves.

Figure 6: Projected Ending Reserves at Existing Rates



## Proposed Financial Plan – Water Utility

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From our review of the utility's financial outlook at existing rates, a proposed financial plan is developed to fund the multi-year revenue requirements. The proposed financial plan generates approximately \$24.2M in additional revenue over the Rate Setting Period. The additional revenue generates positive net operating income each year to go towards capital spending and satisfy reserve requirements. Table 23 forecasts projected revenues, **with annual revenue adjustments**, and expenses through FY 2028, including \$10M in proposed debt that converts the existing short-term debt of \$7M to long-term debt plus an additional \$3M in new proceeds. Table 24 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 23, transfers between reserves, use of capacity fees, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 23: Proposed Water Financial Plan

Revenue			FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>							
Fixed Revenue			\$ 1,247,000	\$ 1,247,000	\$ 1,247,000	\$ 1,247,000	\$ 1,247,000
Variable Revenue	Table 18		4,440,000	4,440,000	4,440,000	4,440,000	4,440,000
WRES Revenue			813,000	813,000	813,000	813,000	813,000
<b>Total Rate Revenues</b>			<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>	<b>\$ 6,500,000</b>
<b>Additional Revenue (from revenue adjustments):</b>							
<b>Fiscal Year</b>	<b>Revenue Adjustment</b>	<b>Effective Month</b>					
FY 2024	22.0%	July	1,430,000	1,430,000	1,430,000	1,430,000	1,430,000
FY 2025	18.0%	July		1,427,000	1,427,000	1,427,000	1,427,000
FY 2026	18.0%	July			1,684,000	1,684,000	1,684,000
FY 2027	10.0%	July				1,104,000	1,104,000
FY 2028	10.0%	July					1,214,000
<b>Total Additional Revenue</b>			<b>\$ 1,430,000</b>	<b>\$ 2,857,000</b>	<b>\$ 4,541,000</b>	<b>\$ 5,645,000</b>	<b>\$ 6,859,000</b>
<b>Projected Rate Revenues</b>			<b>\$ 7,930,000</b>	<b>\$ 9,357,000</b>	<b>\$ 11,041,000</b>	<b>\$ 12,145,000</b>	<b>\$ 13,359,000</b>
<b>Operating Revenues</b>							
Backflow/Fireflow Test			\$ 11,000	\$ 11,000	\$ 11,000	\$ 11,000	\$ 11,000
Late Charges			143,000	143,000	143,000	143,000	143,000
New Account Fee			2,000	2,000	2,000	2,000	2,000
Standby Charges	Table 18		46,000	46,000	46,000	46,000	46,000
BTP Water Sales			717,000	717,000	717,000	717,000	717,000
BTP Sales - O&M			225,000	225,000	225,000	225,000	225,000
BTP Sales - Capital			167,000	167,000	167,000	167,000	167,000
<b>Subtotal Operating Revenues</b>			<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>	<b>\$ 1,311,000</b>
<b>Non-Operating Revenues</b>							
Supplemental Water DIF			\$ -	\$ -	\$ -	\$ -	\$ -
Uncollectable Accounts	Table 18		(26,000)	(26,000)	(26,000)	(26,000)	(26,000)
Property Taxes			1,070,000	1,070,000	1,070,000	1,070,000	1,070,000
Other Non-Operating Revenue			59,000	59,000	59,000	59,000	59,000
<b>Subtotal Non-Operating Revenues</b>			<b>\$ 1,103,000</b>	<b>\$ 1,106,000</b>	<b>\$ 1,149,000</b>	<b>\$ 1,151,000</b>	<b>\$ 1,152,000</b>
<b>Total Revenues</b>			<b>\$10,344,000</b>	<b>\$11,774,000</b>	<b>\$ 13,501,000</b>	<b>\$ 14,607,000</b>	<b>\$ 15,822,000</b>
<b>O&amp;M Expenses</b>			<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Water Supply Costs</b>							
<b>Fixed Purchased Water Costs</b>							
MWDOC			\$ 281,000	281,000	281,000	281,000	281,000
SMWD	Table 19		16,000	16,000	16,000	16,000	16,000
IRWD			320,000	320,000	320,000	320,000	320,000
Portola Hills			44,000	44,000	44,000	44,000	44,000
<b>Subtotal Fixed Purchased Water Costs</b>			<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>
<b>Variable Purchased Water Costs</b>							
TCWD							
Baker (BTP)			320,000	320,000	320,000	320,000	320,000
SMWD - Treated			32,000	32,000	32,000	32,000	32,000
IRWD - Treated	Table 19		805,000	805,000	805,000	805,000	805,000
Dimension (DWTP)			1,168,000	1,168,000	1,168,000	1,168,000	1,168,000
Portola Hills			202,000	202,000	202,000	202,000	202,000
Water Sales - BTP			742,000	742,000	742,000	742,000	742,000
<b>Subtotal Variable Purchased Water Costs</b>			<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>
<b>Pumping Costs</b>							
T&D - Electricity	Table 19		\$ 264,000	\$ 285,000	\$ 299,000	\$ 314,000	\$ 330,000
<b>Subtotal Pumping Costs</b>			<b>\$ 264,000</b>	<b>\$ 285,000</b>	<b>\$ 299,000</b>	<b>\$ 314,000</b>	<b>\$ 330,000</b>
<b>Water Supply Costs</b>			<b>\$ 4,194,000</b>	<b>\$ 4,215,000</b>	<b>\$ 4,229,000</b>	<b>\$ 4,244,000</b>	<b>\$ 4,260,000</b>
<b>Operating Expenses</b>							
General and Administrative			\$ 1,279,000	\$ 1,338,000	\$ 1,400,000	\$ 1,464,000	\$ 1,531,000
Salaries & Benefits			2,878,000	3,036,000	3,203,000	3,379,000	3,565,000
Transmission & Distribution	Table 19		438,000	465,000	484,000	504,000	524,000
Treatment			284,000	303,000	317,000	331,000	347,000
CalPERS & OPEB			169,000	163,000	152,000	140,000	125,000
<b>Subtotal Operating Expenses</b>			<b>\$ 5,048,000</b>	<b>\$ 5,305,000</b>	<b>\$ 5,556,000</b>	<b>\$ 5,818,000</b>	<b>\$ 6,092,000</b>
<b>Debt Service</b>							
SRF Loan			\$ 230,382	\$ 230,380	\$ 230,380	\$ 230,381	\$ 230,382
Credit Line	Table 19		101,500	50,750	-	-	-
Refinancing/Proposed New Debt			568,182	739,221	739,221	739,221	739,221
<b>Subtotal Debt Service</b>			<b>\$ 900,064</b>	<b>\$ 1,020,351</b>	<b>\$ 969,601</b>	<b>\$ 969,602</b>	<b>\$ 969,603</b>
<b>Total Expenses</b>			<b>\$10,142,064</b>	<b>\$10,540,351</b>	<b>\$ 10,754,601</b>	<b>\$ 11,031,602</b>	<b>\$ 11,321,603</b>
<b>Net Cashflow</b>			<b>\$ 201,936</b>	<b>\$ 1,233,649</b>	<b>\$ 2,746,399</b>	<b>\$ 3,575,398</b>	<b>\$ 4,500,397</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 24: Water – Transfers and Reserves Activity through FY 2028

Transfers	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Net Cashflow		\$ 201,936	\$ 1,233,649	\$ 2,746,399	\$ 3,575,398	\$ 4,500,397
<b>Transfers to Reserves</b>						
Water Storage DIF	(Dashboard)	\$0	\$0	\$1,051,427	\$0	\$0
WRES - Wells	(Dashboard)	1,629,973	0	0	0	0
WRES - Res/DIST	(Dashboard)	2,676,069	0	0	0	0
<b>Subtotal Transfers to Reserves</b>		<b>\$4,306,041</b>	<b>\$0</b>	<b>\$1,051,427</b>	<b>\$0</b>	<b>\$0</b>
<b>Net Cashflow (after Transfers)</b>		<b>\$ 4,507,977</b>	<b>\$ 1,233,649</b>	<b>\$ 3,797,826</b>	<b>\$ 3,575,398</b>	<b>\$ 4,500,397</b>
Operating Reserve	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	(Input Tab)	\$ (1,936,270)	\$ 2,278,849	\$ 2,347,397	\$ 2,412,740	\$ 2,481,041
Transfers (Net Cashflow )	(Formula)	4,507,977	1,233,649	3,797,826	3,575,398	4,500,397
Transfers from/(to) Capita	(Formula)	(292,857)	(1,165,101)	(3,732,484)	(3,507,097)	(4,428,890)
<b>Ending Balance</b>		<b>\$ 2,278,849</b>	<b>\$ 2,347,397</b>	<b>\$ 2,412,740</b>	<b>\$ 2,481,041</b>	<b>\$ 2,552,548</b>
Capital Reserve	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	(Input Tab)	\$ 328,403	\$ 5,336,399	\$ 3,794,043	\$ 3,611,300	\$ 3,782,463
<b>Plus:</b>						
Use of Existing Debt Proce	(Input Tab)	2,947,600	-	-	-	-
<b>Less:</b>						
CIP	(CIP Tab)	(1,288,176)	(2,797,858)	(3,988,546)	(3,409,139)	(1,717,060)
Transfers from/(to) Water	(Formula)	(372)	-	-	-	(1,454,218)
<b>Subtotal Capital Reserve</b>		<b>\$ 5,280,312</b>	<b>\$ 3,703,642</b>	<b>\$ 3,537,980</b>	<b>\$ 3,709,258</b>	<b>\$ 5,040,076</b>
Interest Earnings		56,087	90,400	73,320	73,206	88,225
<b>Ending Balance</b>		<b>\$ 5,336,399</b>	<b>\$ 3,794,043</b>	<b>\$ 3,611,300</b>	<b>\$ 3,782,463</b>	<b>\$ 5,128,301</b>
Water Rate Stabiliza	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	(Input Tab)	\$ -	\$ 372	\$ 372	\$ 372	\$ 372
Transfers from/(to) Capita	(Formula)	372	-	-	-	1,454,218
<b>Ending Balance</b>		<b>\$ 372</b>	<b>\$ 372</b>	<b>\$ 372</b>	<b>\$ 372</b>	<b>\$ 1,454,590</b>
<b>Ending Unrestricted Reserves Balance</b>		<b>\$ 7,615,620</b>	<b>\$ 6,141,812</b>	<b>\$ 6,024,412</b>	<b>\$ 6,263,876</b>	<b>\$ 9,135,439</b>
Restricted Reserves						
Water Storage DIF	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	(Input Tab)	\$ 1,051,427	\$ 1,051,427	\$ 1,051,427	\$ -	\$ -
Direct Transfer	(Dashboard)	-	-	(1,051,427)	-	-
<b>Ending Balance</b>		<b>\$ 1,051,427</b>	<b>\$ 1,051,427</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
WRES - Wells	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	(Input Tab)	\$ 1,629,973	\$ -	\$ -	\$ -	\$ -
Direct Transfer	(Dashboard)	(1,629,973)	-	-	-	-
<b>Ending Balance</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
WRES - Res/Dist	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	(Input Tab)	\$ 2,676,069	\$ -	\$ -	\$ -	\$ -
Direct Transfer	(Dashboard)	(2,676,069)	-	-	-	-
<b>Ending Balance</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
SRF Loan	Source	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	(Input Tab)	\$ 236,996	\$ 236,996	\$ 236,996	\$ 236,996	\$ 236,996
Direct Transfer	(Dashboard)	-	-	-	-	-
<b>Subtotal SRF Loan</b>		<b>\$ 236,996</b>	<b>\$ 236,996</b>	<b>\$ 236,996</b>	<b>\$ 236,996</b>	<b>\$ 236,996</b>
Release of Final Debt Payn	(Formula)	-	-	-	-	-
<b>Ending Balance</b>		<b>\$236,996</b>	<b>\$236,996</b>	<b>\$236,996</b>	<b>\$236,996</b>	<b>\$236,996</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

The operating position based on the proposed financial plan is identified in Figure 7, including debt service coverage. Figure 8 and Figure 9 show the capital plan with funding sources and projected ending reserve balances, respectively.

Figure 7: Water – Proposed Operating Position

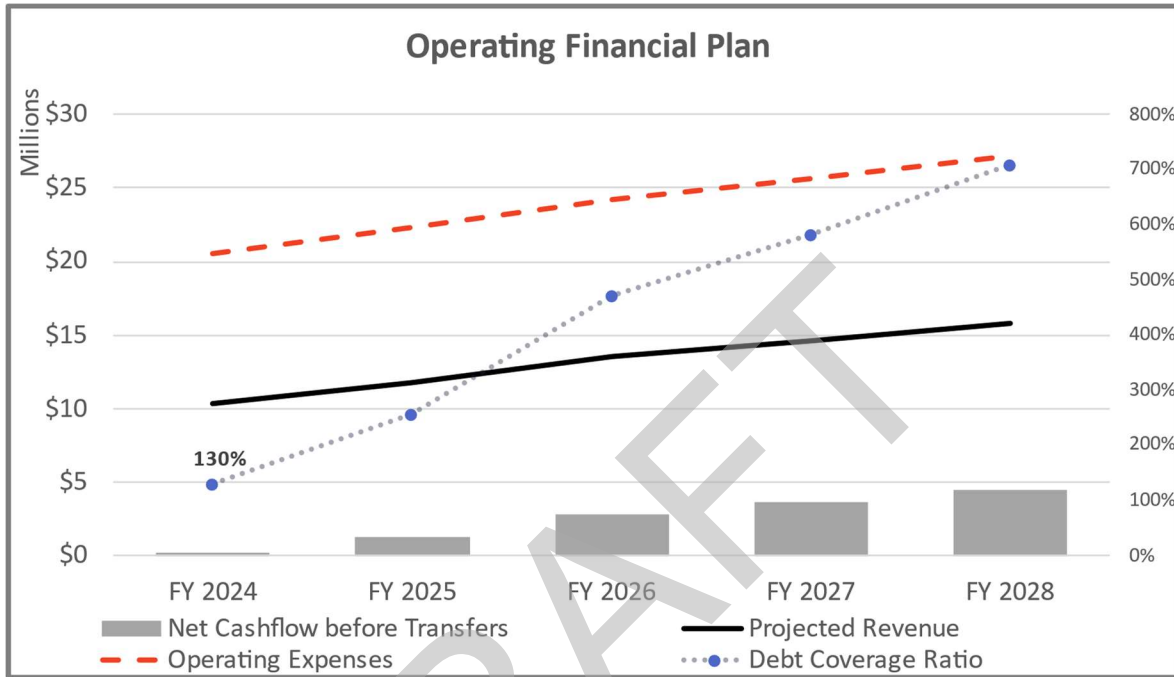
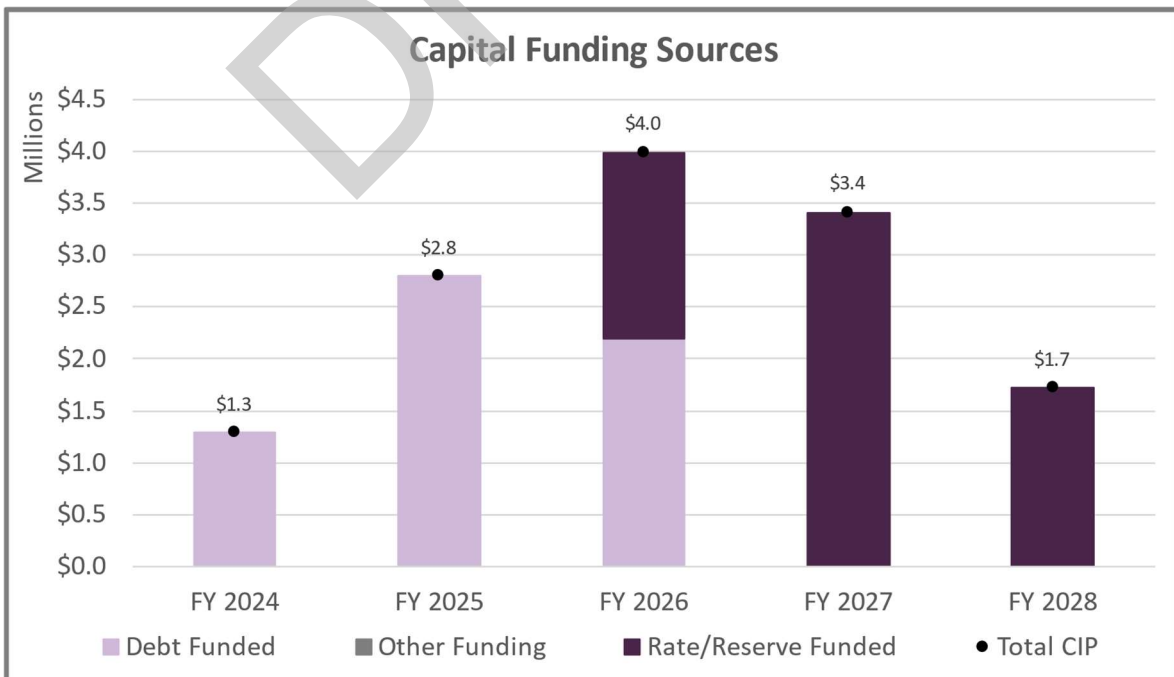
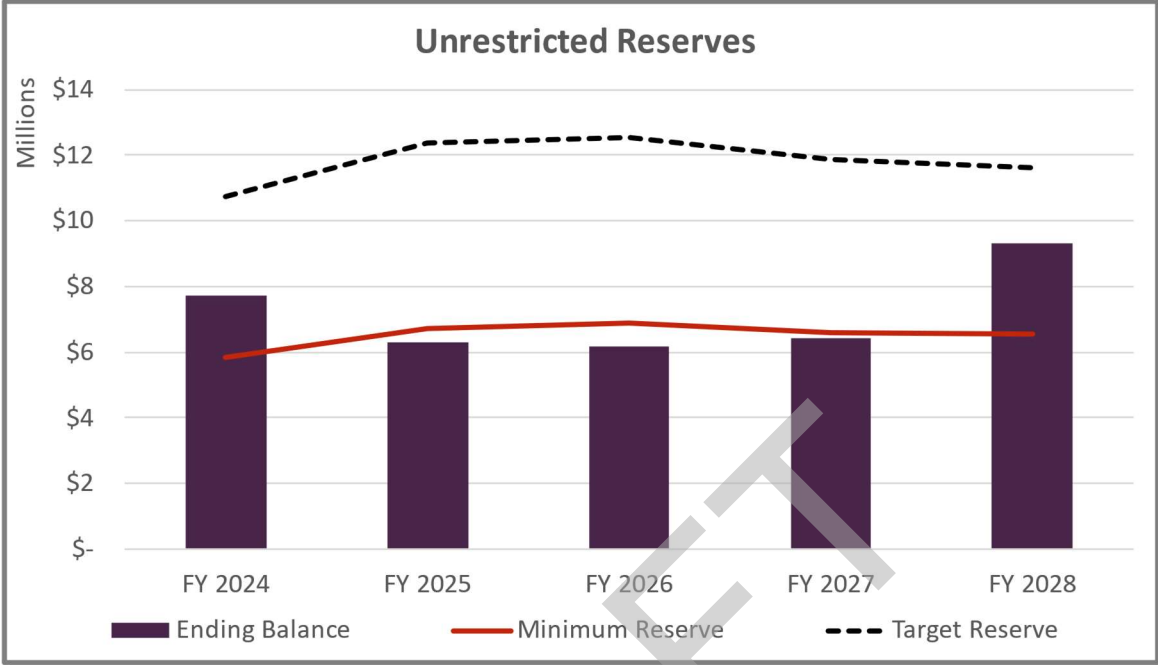


Figure 8: Water – Capital Improvement Plan with Funding Sources



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 9: Water – Proposed Ending Reserves



DRAFT

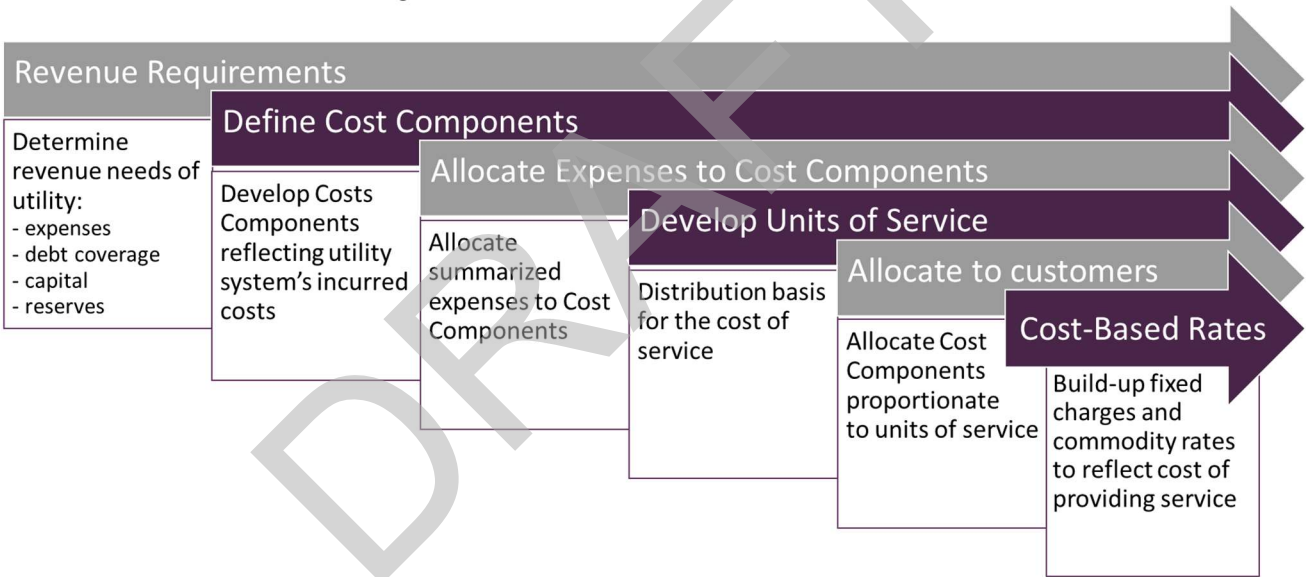
## Cost-of-Service Analysis – Water Utility

### Cost-of-Service Process

The next step in developing rates is to perform a cost-of-service analysis. This step develops proposed water rates that are cost-based and equitable. Meeting the requirements of Proposition 218 is of paramount importance in developing utility rates. Proposition 218 does not provide a particular methodology for establishing cost-based rates. This study and analysis herein, allocates costs proportionately to each parcel served by the District and derives water rates that adheres to the cost-of-service provisions of Proposition 218.

It is important to understand **how** costs are incurred to determine the most appropriate way to recover them. The following graphic summarizes the cost-of-service process. This process allocates costs incurred to customer classes and tiers based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to deliver water service to all customers.

Figure 10: Cost-of-Service Process



### Revenue Requirements

With FY 2024 as the first year of the proposed rate schedule, revenue requirements are determined for FY 2024 and used for the cost-of-service. Revenue requirements include O&M expenses, available offsets from other operating and non-operating revenues, annual net income, and any mid-year adjustments if rates are implemented after the start of the fiscal year. The proposed revenue adjustments and corresponding rates collectively accumulate the necessary funding over the Rate Setting Period to fund total revenue requirements, including capital, while meeting minimum reserve requirements by FY 2028. The results of the financial plan analysis are summarized in Table 25 and represent the revenue required from rates over the Rate Setting Period.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 25: Water Revenue Requirements

Revenue Requirements	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	Total	Total	Total	Total	Total
<b>Water Supply Costs</b>					
<i>Fixed Purchased Water Costs</i>					
MWDOC	\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000
SMWD	16,000	16,000	16,000	16,000	16,000
IRWD	320,000	320,000	320,000	320,000	320,000
Portola Hills	44,000	44,000	44,000	44,000	44,000
<i>Variable Purchased Water Costs</i>					
TCWD					
Baker (BTP)	320,000	320,000	320,000	320,000	320,000
SMWD - Treated	32,000	32,000	32,000	32,000	32,000
IRWD - Treated	805,000	805,000	805,000	805,000	805,000
Dimension (DWTP)	1,168,000	1,168,000	1,168,000	1,168,000	1,168,000
Portola Hills	202,000	202,000	202,000	202,000	202,000
Water Sales - BTP	742,000	742,000	742,000	742,000	742,000
<i>Pumping Costs</i>					
T&D - Electricity	264,000	285,000	299,000	314,000	330,000
<b>Total Water Supply Costs</b>	<b>\$ 4,194,000</b>	<b>\$ 4,215,000</b>	<b>\$ 4,229,000</b>	<b>\$ 4,244,000</b>	<b>\$ 4,260,000</b>
<b>Operating Expenses</b>					
General and Administrative	\$ 1,279,000	\$ 1,338,000	\$ 1,400,000	\$ 1,464,000	\$ 1,531,000
Salaries & Benefits	2,878,000	3,036,000	3,203,000	3,379,000	3,565,000
Transmission & Distribution	438,000	465,000	484,000	504,000	524,000
Treatment	284,000	303,000	317,000	331,000	347,000
CalPERS & OPEB	169,000	163,000	152,000	140,000	125,000
<b>Total Operating Expenses</b>	<b>\$ 5,048,000</b>	<b>\$ 5,305,000</b>	<b>\$ 5,556,000</b>	<b>\$ 5,818,000</b>	<b>\$ 6,092,000</b>
<b>Debt Service</b>					
SRF Loan	\$ 230,382	\$ 230,380	\$ 230,380	\$ 230,381	\$ 230,382
Credit Line	101,500	50,750	-	-	-
Refinancing/Proposed New Debt	568,182	739,221	739,221	739,221	739,221
<b>Total Debt Service</b>	<b>\$ 900,064</b>	<b>\$ 1,020,351</b>	<b>\$ 969,601</b>	<b>\$ 969,602</b>	<b>\$ 969,603</b>
<b>Other Funding</b>					
<i>Revenue Offsets</i>					
Operating Revenues	(202,000)	(202,000)	(202,000)	(202,000)	(202,000)
BTP Sales	(1,109,000)	(1,109,000)	(1,109,000)	(1,109,000)	(1,109,000)
Non-Operating Revenues	(1,103,000)	(1,106,000)	(1,149,000)	(1,151,000)	(1,152,000)
<i>Subtotal Revenue Offsets</i>	<i>\$ (2,414,000)</i>	<i>\$ (2,417,000)</i>	<i>\$ (2,460,000)</i>	<i>\$ (2,462,000)</i>	<i>\$ (2,463,000)</i>
<i>Adjustments</i>					
Reserve Funding	\$ 201,936	\$ 1,233,649	\$ 2,746,399	\$ 3,575,398	\$ 4,500,397
<i>Subtotal Adjustments</i>	<i>\$ 201,936</i>	<i>\$ 1,233,649</i>	<i>\$ 2,746,399</i>	<i>\$ 3,575,398</i>	<i>\$ 4,500,397</i>
<b>Total Other Funding</b>	<b>\$ (2,212,064)</b>	<b>\$ (1,183,351)</b>	<b>\$ 286,399</b>	<b>\$ 1,113,398</b>	<b>\$ 2,037,397</b>
<b>Revenue Requirement from Rates</b>	<b>\$ 7,930,000</b>	<b>\$ 9,357,000</b>	<b>\$ 11,041,000</b>	<b>\$ 12,145,000</b>	<b>\$ 13,359,000</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Define Cost Components

The utility incurs costs to accommodate total water demand throughout the year, including water supply costs, treatment, operating expenses, and pumping to name a few. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified to allocate expenses based on how they are incurred. The cost components shown in Figure 11 reflect the cost components used for this study.

Figure 11: Cost Components



*Fixed Purchased Water* – Fixed monthly water supply costs incurred by the District from its water wholesalers.

*Account Services* – Fixed expenses that do not necessarily fluctuate based on usage or meter size.

*Meter Capacity* – O&M expenses, including an executive staff, legal, professional services, and a portion of capital and reserves.

*Water Supplies* – variable costs related to the District's four water supplies.

*Portola Hills* – A subsection of the District's service area that allows specific costs allocations to the area.

*Delivery* – Operating and capital expenses of the water system associated with conveying water to customers throughout the year. These costs tend to vary with the total water used.

*Treatment* – Treatment costs associated with water from the Dimension water treatment plant.

*Pumping* – Energy costs incurred to pump water to the five elevation zones.

## Allocate Expenses to Cost Components

When allocating expenses to the defined costs components, it is important to have a sound basis as to why an expense was allocated to a certain fixed cost component versus a variable cost component or split between both fixed and variable. The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**. A description of each expense category is identified on the next page.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## O&M Expense Categories:

**Fixed Purchased Water Costs:** Fixed charges from the various water supplies of the District that are incurred irrespective of water usage.

**Variable Purchased Water Costs:** Variable charges from the various water supplies of the District that vary with total water demand.

**Pumping:** Energy costs to pump water to higher elevations.

**General and Administrative:** Administrative expenses associated with the District as a whole, including office supplies, insurance, financial services, legal, professional services, and other miscellaneous expenses.

**General and Administrative:** Personnel costs of the District

**Transmission & Distribution:** Costs associated with the daily operation of the water system and related facilities, including capital outlay, lab testing, fuel, tools, and vehicles.

**Treatment:** Costs associated with the treatment of water from the District’s treatment plant, including energy, chemicals, and repairs & maintenance.

**CalPERS & OPEB:** Retirement related obligations of the District.

Table 26 summarizes the percent allocation of water supply costs to the water supply cost components. Table 27 reflects the dollars to each cost component based on the percent allocations in Table 26. All the fixed charges are allocated to the Fixed Purchased Water cost component and each variable water supply expense is allocated 100% to its respective water supply cost component to clearly identify the variable cost of each water supply and provide the ability to develop unit rates for each. Pumping costs is also included and allocated between Delivery and Pumping cost components. The amount of electricity costs to pump water to the surface level was allocated to Delivery (96%) with the remainder of 4% allocated to Pumping, which is the costs incurred to pump water to the higher elevations.

Table 26: Water Supply and Pumping Expense Allocation to Cost Components (%)

Water Supply Costs	Methodology / Allocation Basis	Fixed Purchased Water	Baker (BTP)	SMWD - Treated	IRWD - Treated	Dimension (DWTP)	Portola Hills	Delivery	Pumping	Total
<i>Fixed Purchased Water Costs</i>										
MWDOC	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
SMWD	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
IRWD	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Portola Hills	Specific	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
<i>Variable Purchased Water Costs</i>										
<i>TCWD</i>										
IRWD - Untreated	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Baker (BTP)	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
SMWD - Treated	Specific	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
IRWD - Treated	Specific	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100%
Dimension (DWTP)	Specific	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100%
Portola Hills	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100%
Water Sales - BTP	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100%
<i>Pumping Costs</i>										
T&D - Electricity	Specific	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	96.0%	4.0%	100%

# Trabuco Canyon Water District – 2023 Cost-of-Service Rate Study

Table 27: Water Supply and Pumping Expense Allocation to Cost Components (\$)

Water Supply Costs	Methodology / Allocation Basis	Fixed Purchased Water	Baker (BTP)	SMWD - Treated	IRWD - Treated	Dimension (DWTP)	Portola Hills	Delivery	Pumping	Total
<i>Fixed Purchased Water Costs</i>										
MWDOC	Specific	\$ 281,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 281,000
SMWD	Specific	16,000	0	0	0	0	0	0	0	16,000
IRWD	Specific	320,000	0	0	0	0	0	0	0	320,000
Portola Hills	Specific	44,000	0	0	0	0	0	0	0	44,000
<i>Variable Purchased Water Costs</i>										
<i>TCWD</i>										
IRWD - Untreated	Specific	0	0	0	0	0	0	0	0	0
Baker (BTP)	Specific	0	320,000	0	0	0	0	0	0	320,000
SMWD - Treated	Specific	0	0	32,000	0	0	0	0	0	32,000
IRWD - Treated	Specific	0	0	0	805,000	0	0	0	0	805,000
Dimension (DWTP)	Specific	0	0	0	0	1,168,000	0	0	0	1,168,000
Portola Hills	Specific	0	0	0	0	0	202,000	0	0	202,000
Water Sales - BTP	Specific	0	0	0	0	0	0	742,000	0	742,000
<i>Pumping Costs</i>										
T&D - Electricity	Specific	0	0	0	0	0	0	253,445	10,555	264,000
<b>Total Allocation (\$)</b>		<b>\$ 661,000</b>	<b>\$ 320,000</b>	<b>\$ 32,000</b>	<b>\$ 805,000</b>	<b>\$ 1,168,000</b>	<b>\$ 202,000</b>	<b>\$ 995,445</b>	<b>\$ 10,555</b>	<b>\$ 4,194,000</b>

Table 28 summarizes the percent allocation of O&M revenue requirements to the cost components, and Table 29 uses the percent allocations in Table 28 to allocate expenses in dollars to each cost component. The General and Administrative expense is allocated 100% to the fixed cost components of Account Services and Meter Capacity, with the percentage of cost associated with legal and professional services assigned to Meter Capacity (40.7%), with the remaining 59.3% allocated to Account Services. Legal and Professional Services encompass matters of the entire system and therefore, assigned to Meter Capacity, which reflects the demand on the entire system. Salaries & Benefits were split between fixed and variable, with executive staff, such as the General Manager and the Assistance General Manager, assigned to Meter Capacity and the remainder of District staffing allocated to Delivery. Executive Staff accounts for 35% of total personnel costs and 65% includes staffing in the field.

Table 28: O&M Expense Allocation to Cost Components (%)

Operating Expenses	Methodology / Allocation Basis	Fixed Purchased Water	Account Services	Meter Capacity	Delivery	Treatment	Total
General and Administrative	Specific	0.0%	59.3%	40.7%	0.0%	0.0%	100%
Salaries & Benefits	Specific	0.0%	0.0%	35.0%	65.0%	0.0%	100%
Transmission & Distribution	Average Day	0.0%	0.0%	0.0%	100.0%	0.0%	100%
Treatment	Specific	0.0%	0.0%	0.0%	0.0%	100.0%	100%
CalPERS & OPEB	Specific	0.0%	100.0%	0.0%	0.0%	0.0%	100%

Table 29: O&M Expense Allocation to Cost Components (\$)

Operating Expenses	Methodology / Allocation Basis	Fixed Purchased Water	Account Services	Meter Capacity	Delivery	Treatment	Total
General and Administrative	Specific	\$ -	\$ 759,000	\$ 520,000	\$ -	\$ -	\$ 1,279,000
Salaries & Benefits	Specific	0	0	1,007,300	1,870,700	0	2,878,000
Transmission & Distribution	Average Day	0	0	0	438,000	0	438,000
Treatment	Specific	0	0	0	0	284,000	284,000
CalPERS & OPEB	Specific	0	169,000	0	0	0	169,000
<b>Total Allocation (\$)</b>		<b>\$ -</b>	<b>\$ 928,000</b>	<b>\$ 1,527,300</b>	<b>\$ 2,308,700</b>	<b>\$ 284,000</b>	<b>\$ 5,048,000</b>
<b>O&amp;M Allocation (%)</b>		<b>0.0%</b>	<b>18.4%</b>	<b>30.3%</b>	<b>45.7%</b>	<b>5.6%</b>	<b>100%</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

The District's debt was allocated to Meter Capacity because the debt is used for capital improvements of the water system, and Meter Capacity is a fixed cost recovery component that reflects the demand each meter places on the water system. Table 30 identifies the percent allocation of the debt expense to the cost components, and Table 31 reflects the debt expense in dollars.

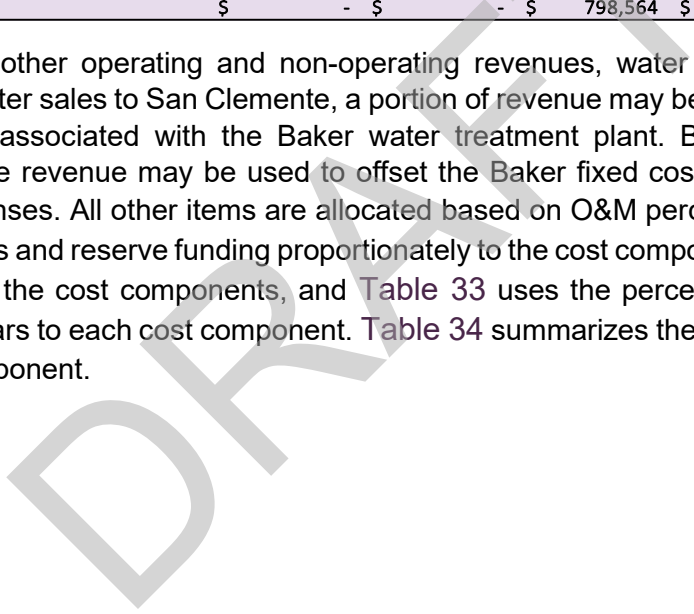
*Table 30: Water Debt Allocation to Cost Components (%)*

Debt Service	Methodology / Allocation Basis	Fixed Purchased Water	Account Services	Meter Capacity	Delivery	Treatment	Total
SRF Loan	Specific	0.0%	0.0%	100.0%	0.0%	0.0%	100%
Refinancing/Proposed New Debt	Specific	0.0%	0.0%	100.0%	0.0%	0.0%	100%

*Table 31: Water Debt Allocation to Cost Components (\$)*

Debt Service	Methodology / Allocation Basis	Fixed Purchased Water	Account Services	Meter Capacity	Delivery	Treatment	Total
SRF Loan	Specific	\$ -	\$ -	\$ 230,382	\$ -	\$ -	\$ 230,382
Refinancing/Proposed New Debt	Specific	0	0	568,182	0	0	568,182
<b>Total Allocation (\$)</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ 798,564</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 798,564</b>

Other Funding includes other operating and non-operating revenues, water sales to San Clemente and Reserve Funding. For water sales to San Clemente, a portion of revenue may be used to offset the fixed costs incurred by the District associated with the Baker water treatment plant. Based on these water sales, approximately 33% of the revenue may be used to offset the Baker fixed costs and the remaining amount covers the variable expenses. All other items are allocated based on O&M percentages derived in Table 29 to allocate revenue offsets and reserve funding proportionately to the cost components. Table 32 summarizes the percent allocation to the cost components, and Table 33 uses the percent allocations in Table 32 to allocate expenses in dollars to each cost component. Table 34 summarizes the revenue requirement derived in Table 25 by cost component.



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 32: Other Funding to Cost Components (%)

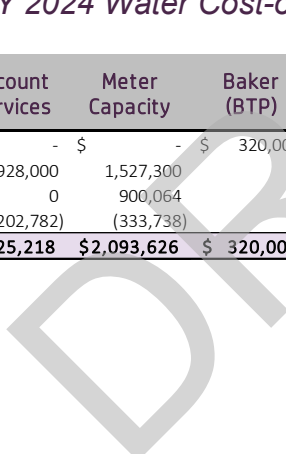
Other Funding	Methodology / Allocation Basis	Fixed Purchased Water	Account Services	Meter Capacity	Delivery	Treatment	Total
<i>Revenue Offsets</i>							
Operating Revenues	O&M Allocation	0.0%	18.4%	30.3%	45.7%	5.6%	100%
BTP Sales	Specific	33.1%	0.0%	0.0%	66.9%	0.0%	100%
Non-Operating Revenues	O&M Allocation	0.0%	18.4%	30.3%	45.7%	5.6%	100%
<i>Adjustments</i>							
Reserve Funding	O&M Allocation	0.0%	18.4%	30.3%	45.7%	5.6%	100%

Table 33: Other Funding Allocation to Cost Components (\$)

Other Funding	Methodology / Allocation Basis	Fixed Purchased Water	Account Services	Meter Capacity	Delivery	Treatment	Total
<i>Revenue Offsets</i>							
Operating Revenues	O&M Allocation	\$ -	\$ (37,135)	\$ (61,116)	\$ (92,385)	\$ (11,365)	\$ (202,000)
BTP Sales	Specific	(367,000)	0	0	(742,000)	0	(1,109,000)
Non-Operating Revenues	O&M Allocation	0	(202,770)	(333,719)	(504,456)	(62,055)	(1,103,000)
<i>Adjustments</i>							
Reserve Funding	O&M Allocation	0	55,782	91,806	138,776	17,071	303,436
<b>Total Allocation (\$)</b>		<b>\$ (367,000)</b>	<b>\$ (184,123)</b>	<b>\$ (303,029)</b>	<b>\$ (1,200,065)</b>	<b>\$ (56,348)</b>	<b>\$ (2,110,564)</b>

Table 34: FY 2024 Water Cost-of-Service Requirements by Cost Component

Revenue Requirement	Fixed Purchased Water	Account Services	Meter Capacity	Baker (BTP)	SMWD - Treated	IRWD - Treated	Dimension (DWTP)	Portola Hills	Delivery	Pumping	Total
Water Supply	\$ 661,000	\$ -	\$ -	\$ 320,000	\$ 32,000	\$ 805,000	\$ 1,168,000	\$ 202,000	\$ 995,445	\$ 10,555	\$ 4,194,000
Operating	0	928,000	1,527,300	0	0	0	0	0	2,308,700	0	5,048,000
Debt Service	0	0	900,064	0	0	0	0	0	0	0	900,064
Other Funding	(367,000)	(202,782)	(333,738)	0	0	0	0	0	(1,246,486)	0	(2,212,064)
<b>COS Requirement</b>	<b>\$ 294,000</b>	<b>\$ 725,218</b>	<b>\$ 2,093,626</b>	<b>\$ 320,000</b>	<b>\$ 32,000</b>	<b>\$ 805,000</b>	<b>\$ 1,168,000</b>	<b>\$ 202,000</b>	<b>\$ 2,057,659</b>	<b>\$ 10,555</b>	<b>\$ 7,930,000</b>



## Rate Design – Water Utility

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### Develop Units of Service

Unit rates for each cost component are derived by spreading the corresponding revenue requirements over appropriate units of service (distribution basis). This approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class, corresponding tier, and customer account. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a rate structure that is cost-based and in compliance with Proposition 218. The previous section summarized costs by expense category and then allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. The method of apportionment considers each customer's share of system costs and is reflected by the units of service used to equitably distribute the cost components to each customer account. The distribution basis varies by cost component and includes total accounts, Meter Equivalents (MEs), which reflect demand placed on the system based on meter size, total water sales, and usage by tier. In Table 35 each meter size was assigned an equivalency factor using the flow characteristics of a 5/8" meter. The District's meter inventory was reviewed, and 3/4" meters were used in the past by a developer for 871 accounts, but it wasn't a requirement, and these accounts could've been served by a 5/8" meter. Therefore, historically, 3/4" meters have been assigned the same gallons per minute (gpm) as a 5/8". Based on the District's meter inventory, the safe maximum operating flow capacity for these meter types, as identified in the AWWA M1 Manual, 6<sup>th</sup> Edition, Table B-2, were used for determining meter equivalencies.

The safe maximum operating flow capacity for each meter was divided by the 5/8" meters' safe operating flow capacity of 20 gpm to determine the equivalent meter ratio. In other words, the calculations convert all larger sized meters to an equivalent number of 5/8" meters based on the safe operating flow capacity of 20 gpm. The Capacity Ratio represent the potential flow through each meter size compared to the flow through the base 5/8" meter to establish parity between meter sizes. Total MEs are determined by multiplying the number of meters by the Capacity Ratio and then multiplying the result by the billing periods in a year (12 billing periods)<sup>4</sup>. Table 35 summarizes the units of service related to Total Annual Bills and Annual MEs.

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<sup>4</sup> The District bills customers on a monthly basis; therefore, there are 12 billing periods during the fiscal year.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 35: Accounts and Meter Equivalents

Meter Size	AWWA Capacity (gpm)	Capacity Ratio	Number of Accounts	Meter Equivalents
	[A]	[B] = A ÷ 20	[C]	[D] = B x C
5/8"	20	1.00	2,624	2,624
3/4"	20	1.00	871	871
1"	50	2.50	394	985
1 1/2"	100	5.00	44	220
2"	160	8.00	145	1,160
3"	350	17.50	7	123
4"	630	31.50	3	95
6"	1,300	65.00	2	130
Total			4,090	6,207
Annual Units (Total x 12 Bills)			49,080	74,484

Total usage by customer class and tier must be known to derive the units of service for allocating variable costs. Table 36 provides the projected usage for FY 2024 from Table 12, broken out by customer class and proposed tiers for Single-Family and Multi-Family.

Table 36: Projected Usage by Customer Class and Tier (HCF)

Customer Class & Tier	Tier Definitions (HCF)	Projected Usage (HCF)
<b>Single-Family</b>		
Tier 1	0 - 13	436,062
Tier 2	14 - 21	127,345
Tier 3	>21	100,066
<b>Multi-Family</b>		
Tier 1	0 - 6	10,829
Tier 2	>6	1,246
Commercial	Uniform	34,008
Irrigation	Uniform	143,718
Agricultural	Uniform	95,593
Portola Hills	Uniform	63,022
<b>Total</b>		<b>1,011,889</b>

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Table 37: Projected Usage by Pumping Zone (HCF)

Pump Zone	All Pumping Usage (HCF)
Zone 1 - Base	932,738
Zone 2 - Topanga / Saddlecrest	8,282
Zone 3 - Canyon Creek	2,179
Zone 4 - Falcon	2,632
Zone 5 - Joplin	3,036
<b>Total</b>	<b>948,867</b>

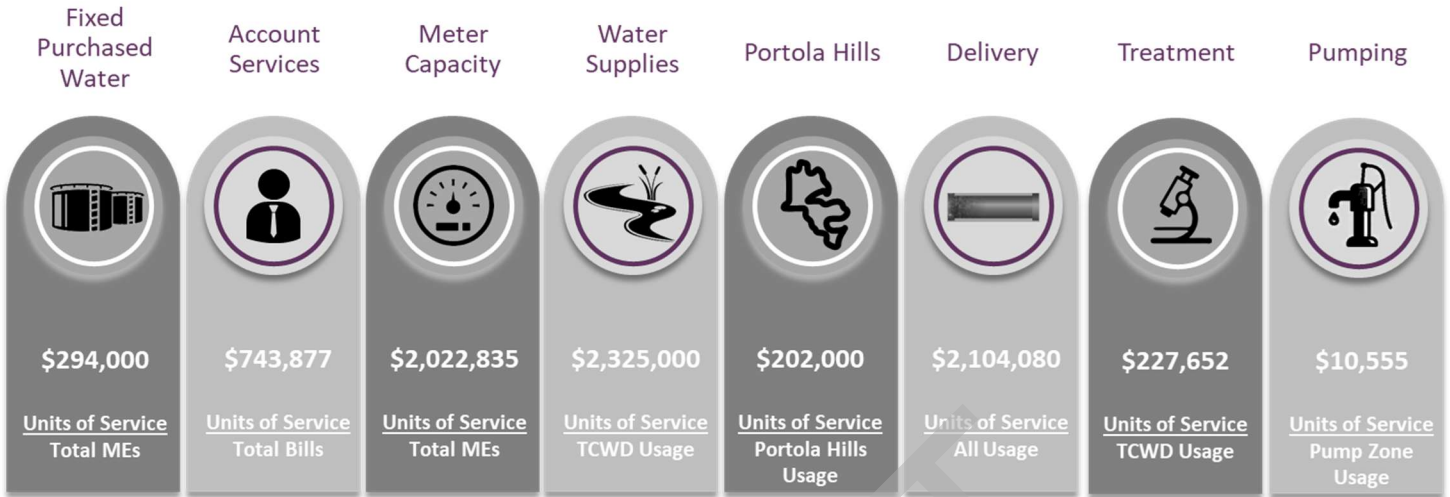
Table 36 identifies the tiered usage for Single-Family and Multi-Family based on the revised tiered allotments. The Tier 1 allotments for both residential customer classes are based on the lowest winter usage period, primarily comprised of indoor use, as outdoor watering needs are limited in the winter. Single-Family Residential Tier 1 equals 13 HCF per dwelling unit, and Multi-Family Residential equals 6 HCF per dwelling unit. Single-Family Residential also includes two additional tiers, with Tier 2 covering the maximum month (August) usage per dwelling unit equal to 21 HCF, and Tier 3 capturing all remaining usage over Tier 2.

Multi-Family only includes two tiers because multi-family units have limited outdoor needs. Therefore, a two-tiered rate structure is recommended and proposed as part of this study. The tiered usage characteristics will be used to further apportion the total variable costs allocated to each residential customer class to the corresponding tiers. Allocating variable costs to customer classes first, then to tiers, ensures each customer class is only recovering its proportionate share of costs. The proposed Commercial, Irrigation, Agricultural, and Portola Hills rate structure reflects a uniform rate that captures each customer class's proportional share of the revenue requirements over its corresponding usage. A uniform rate is recommended for Commercial to enhance equity between accounts within the customer class due to the broad spectrum of commercial uses that vary substantially with water needs that wouldn't fit into one tiered rate structure applied to all. Irrigation and Agricultural are also structured as uniform rates because the landscape areas and crop areas, respectively, would need to be known for structuring appropriate tiered rates. Lastly, Portola Hills is structured as a uniform a rate because they currently only receive one water supply source, and a tiered rate structure would not reflect different rates as each tier would reflect the same water supply.

With the units of service shown in Table 35, Table 36, and Table 38, we can select the appropriate distribution basis for each cost component. Figure 12 identifies the total revenue requirements by cost component from Table 34 and the corresponding units of service.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 12: Distribution Basis and Units of Service by Cost Component



Using the FY 2024 revenue requirements, the cost-of-service allocates expenses to customers based on the service demands that each place on the system (cost causation). This approach ensures that each customer proportionately shares in the financial obligation of the water utility. For the following unit rate computations for each cost component, unit rates were rounded up to the nearest penny.

## Fixed Cost Recovery

### Fixed Purchased Water

Fixed costs are incurred by the District from its various available water supplies regardless of total amount of water used. Therefore, these costs are spread based on meter size similar to how the costs are incurred by the District. The revenue requirement for Fixed Purchased Water is apportioned based on meter size as represented by total annual MEs (Table 35) in Table 39.

Table 38: FY 2024 Fixed Purchased Water Monthly Unit Rate

Fixed Purchased Water Component Unit Rate	
Revenue Requirement	\$ 294,000
÷ Total ME's	74,484
<b>Monthly Unit Rate</b>	<b>\$3.95</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Account Services

Each customer incurs Account Services costs regardless of the type of land use, meter size, or total amount of water used. These costs should be spread equally across all accounts. This is achieved by using the distribution basis of Total Bills. Total Bills are determined by multiplying the total accounts by the number of billing periods over the fiscal year (12 billing periods). Therefore, the revenue requirement for Account Services is apportioned based on the Total Bills (Table 35) to determine the monthly unit cost-of-service shown in Table 39.

*Table 39: FY 2024 Account Services Monthly Unit Rate*

Account Services Component Unit Rate	
Revenue Requirement	\$ 725,218
÷ Total Bills	49,080
<b>Monthly Unit Rate</b>	<b>\$14.78</b>

## Meter Capacity

The Meter Capacity Component includes operational costs, debt and a portion of system-wide operations capital and reserve funding. The revenue requirement for Meter Capacity is apportioned based on meter size. Larger sized meters can generate a greater demand on the system from the amount of potential water flow that may pass through the meter in gpm. The revenue requirement for Meter Capacity is apportioned to meter size as represented by total annual MEs as shown in Table 40.

*Table 40: FY 2024 Meter Capacity Monthly Unit Rate*

Meter Capacity Component Unit Rate	
Revenue Requirement	\$ 2,093,626
÷ Total ME's	74,484
<b>Monthly Unit Rate</b>	<b>\$28.11</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Variable Cost Recovery

The remaining cost components are recovered through the variable rates. The proposed variable rate structure includes tiers for Single-Family Residential and Multi-Family Residential and a uniform rate for Non-Residential. Tiered rates differ solely by water supplies available to serve each tier, with the lowest water supply unit rate applied to tier 1 followed by more expensive water supplies as total water demand increases through the higher tiers. As part of this study, a detailed analysis was conducted to first separate fixed costs and variable costs of each water supply, and then a decoupling of variable costs between each water supply source to derive water supply unit rates. Through this approach, water supply variable costs were separated between Baker Treatment Plant (BTP), SMWD Treated, IRWD – Treated, and Dimension Treatment Plant (DWTP). The District’s water loss is 7.1%, which is caused by evaporation, exfiltration, and leaks/breaks in the distribution system. The water loss percentage was applied to the water production to derive the net amount of each water supply available to serve customer demands. Table 41 summarizes the unit rates for each water supply available to the District. Appendix A includes a detailed analysis of water supply costs.

*Table 41: FY 2024 Water Supply Unit Rates per HCF*

Water Supplies	Production/Purchases [A] = Acre Feet	Water Loss [B]	Net Water Supply [C] = A x (1-B)	Available Supply (AS) [D] = C x 435.6	Revenue Requirement [E]	Unit Rate [F] = E ÷ D
Baker (BTP)	368	7.1%	342	149,104	\$ 320,000	\$2.15
SMWD - Treated	26	7.1%	24	10,519	32,000	\$3.04
IRWD - Treated	591	7.1%	549	239,280	805,000	\$3.36
Dimension (DWTP)	1,359	7.1%	1,263	549,964	1,168,000	\$2.12
<b>Total Water Supply</b>	<b>2,344</b>		<b>2,178</b>	<b>948,867</b>	<b>\$ 2,325,000</b>	

Unit rates must be determined for each tier that corresponds to the water source serving the usage within each tier. Table 42 summarizes the amount of water - by source - used to serve total water demand in each tier and the corresponding unit rate rounded up to the nearest penny. Each customer class is allocated a proportionate share of each water supply (except Portola Hills which only receives water from IRWD as a pass through and is shown separately) based on percentage of total water sales. As such, irrespective of a customer class rate structure reflecting tiers or uniform rates, each customer class is receiving and paying its fair share of water supplies. As shown in Table 42, Dimension (DWTP) cannot cover the total demand in Tier 1 of Single-Family on its own and a portion of Baker (BTP) is required to meet the total demand in Single-Family Tier 1. Similarly, Single-Family Tier 2 requires Baker (BTP), all of SMWD – Treated, and a portion of IRWD – Treated to meet total demand. Single-Family Tier 3 uses IRWD – Treated as all other water supplies are no longer available. This approach is also applied to Multi-Family. For non-residential customer classes (Commercial, Irrigation, and Agricultural), all four water supplies are applied to each customer class based on their percentage of total water demand (Table 42 – Column B).

# Trabuco Canyon Water District – 2023 Cost-of-Service Rate Study

Table 42: FY 2024 Customer Class and Tier Water Supply Unit Rates per HCF

Water Supply Allocation	Projected Usage (HCF) [A]	% Allocation [B] = A as %	Dimension (DWTP) [C] = AS x B	Baker (BTP) [D] = AS x B	SMWD - Treated [E] = AS x B	IRWD - Treated [F] = AS x B	Total Cost [G] = Sum Product (Unit Rate x Usage)	Unit rate [H] = G ÷ A
Available Supply (AS)			549,964	149,104	10,519	239,280		
Effective Unit Cost (\$/HCF)			\$2.12	\$2.15	\$3.04	\$3.36		
Single-Family								
Tier 1	436,062		384,550	51,512	-	-	\$ 927,250	\$2.13
Tier 2	127,345		-	52,745	7,355	67,244	361,802	\$2.85
Tier 3	100,066		-	-	-	100,066	336,649	\$3.37
<b>Subtotal Single-Family</b>	<b>663,473</b>	<b>69.9%</b>	<b>384,550</b>	<b>104,258</b>	<b>7,355</b>	<b>167,311</b>	<b>1,625,702</b>	
Multi-Family								
Tier 1	10,829		6,999	1,897	134	1,799	\$ 25,396	\$2.35
Tier 2	1,246		-	-	-	1,246	4,192	\$3.37
<b>Subtotal Multi-Family</b>	<b>12,075</b>	<b>1.3%</b>	<b>6,999</b>	<b>1,897</b>	<b>134</b>	<b>3,045</b>	<b>29,587</b>	
Commercial	34,008	3.6%	19,711	5,344	377	8,576	\$ 83,329	\$2.46
Irrigation	143,718	15.1%	83,299	22,584	1,593	36,242	\$ 352,151	\$2.46
Agricultural	95,593	10.1%	55,406	15,021	1,060	24,106	\$ 234,231	\$2.46
<b>Total</b>	<b>948,867</b>	<b>100%</b>	<b>549,964</b>	<b>149,104</b>	<b>10,519</b>	<b>239,280</b>	<b>\$ 2,325,000</b>	

## Portola Hills

Based on the location of Portola Hills and connectivity to IRWD, this area of the District only receives water from IRWD as a fully-loaded pass through. Therefore, the Portola Hills cost component isolates water supply costs attributable to Portola Hills customers. The cost includes a 5% surcharge by IRWD for water loss and cost associated with pumping. The revenue requirement for Portola Hills is apportioned based on the projected total potable usage identified in Table 36 to determine the unit cost-of-service, as shown in Table 44.

Table 43: FY 2024 Portola Hills Cost Unit Rate per HCF

### Portola Hills Component Unit Rate

Revenue Requirement	\$	202,000
÷ Portola Usage		63,022
<b>Unit Rate</b>		<b>\$3.21</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Delivery

Delivery costs are incurred based on the total volume of water produced and delivered to customers throughout the year. Therefore, the revenue requirement for Delivery is apportioned based on the projected total potable usage identified in Table 36 to determine the unit cost-of-service, irrespective of tier, as shown in Table 44.

*Table 44: FY 2024 Delivery Cost Unit Rate per HCF*

Delivery Component Unit Rate		
Revenue Requirement	\$	2,057,659
÷ All Usage		1,011,889
<b>Unit Rate</b>		<b>\$2.04</b>

## Treatment

Treatment costs of the District are associated with the operations of the Dimension water treatment plant. These costs are recovered over all water usage, except for Portola Hills as their primary water source is Irvine Ranch Water District. Therefore, the revenue requirement for Treatment is apportioned over projected total usage identified in Table 36, less Portola Hills (TCWD Usage) to determine the unit cost-of-service, as shown in Table 45.

*Table 45: FY 2024 Treatment Unit Rate per HCF*

Treatment Component Unit Rate		
Revenue Requirement	\$	221,942
÷ TCWD Usage		948,867
<b>Unit Rate</b>		<b>\$0.23</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## FY 2024 Cost-of-Service Rates – Water Utility

### Proposed FY 2024 Monthly Fixed Charges

Table 46 reflects the combined charges of the District's proposed fixed charge of Fixed Purchased Water, Account Services and Meter Capacity. Account Services are constant for all meter sizes. Fixed Purchased Water and Meter Capacity are multiplied by the corresponding Capacity Ratios of each meter size to derive the FY 2024 fixed charges.

Table 46: FY 2024 Monthly Fixed Charges by Meter Size

Meter Size	Capacity Ratio	TCWD Meters	Fixed Purchased Water	Account Services	Meter Capacity	FY 2024 Proposed Base Fixed Charge
	[A]		[B] = \$3.95 x A	[C] = \$15.16	[D] = 27.16 x A	[E] = B+C+D
5/8"	1.00	2,161	\$ 3.95	\$ 14.78	\$ 28.11	\$ 46.84
3/4"	1.00	803	3.95	14.78	28.11	46.84
1"	2.50	394	9.88	14.78	70.28	94.93
1 1/2"	5.00	44	19.75	14.78	140.55	175.08
2"	8.00	145	31.60	14.78	224.88	271.26
3"	17.50	7	69.13	14.78	491.93	575.83
4"	31.50	3	124.43	14.78	885.47	1,024.67
6"	65.00	2	256.75	14.78	1,827.15	2,098.68

### Proposed FY 2024 Variable Rates

The proposed variable rates for FY 2024 are shown in Table 47 for each customer class and tier, reflecting the combined rate components of Water Supply, Portola Hills, Delivery and Treatment.

Table 47: FY 2024 Variable Rates by Customer Class and Tier (HCF)

Customer Class & Tier	Tier Definitions (HCF)	Projected Usage (HCF)	Water Supply [A]	Portola Hills [B]	Delivery [C]	Treatment [D]	FY 2024 Proposed Base Variable Rate [E] = A+B+C+D
<b>Single-Family</b>							
Tier 1	0 - 13	436,062	\$ 2.13	\$ -	\$ 2.04	\$ 0.23	\$ 4.40
Tier 2	14 - 21	127,345	2.85	-	2.04	0.23	5.12
Tier 3	>21	100,066	3.37	-	2.04	0.23	5.64
<b>Multi-Family</b>							
Tier 1	0 - 6	10,829	\$ 2.35	\$ -	\$ 2.04	\$ 0.23	\$ 4.62
Tier 2	>6	1,246	3.37	-	2.04	0.23	5.64
<b>Commercial</b>	Uniform	34,008	\$ 2.46	\$ -	\$ 2.04	\$ 0.23	\$ 4.73
<b>Irrigation</b>	Uniform	143,718	\$ 2.46	\$ -	\$ 2.04	\$ 0.23	\$ 4.73
<b>Agricultural</b>	Uniform	95,593	\$ 2.46	\$ -	\$ 2.04	\$ 0.23	\$ 4.73
<b>Portola Hills</b>	Uniform	63,022	\$ -	\$ 3.21	\$ 2.04	\$ -	\$ 5.25

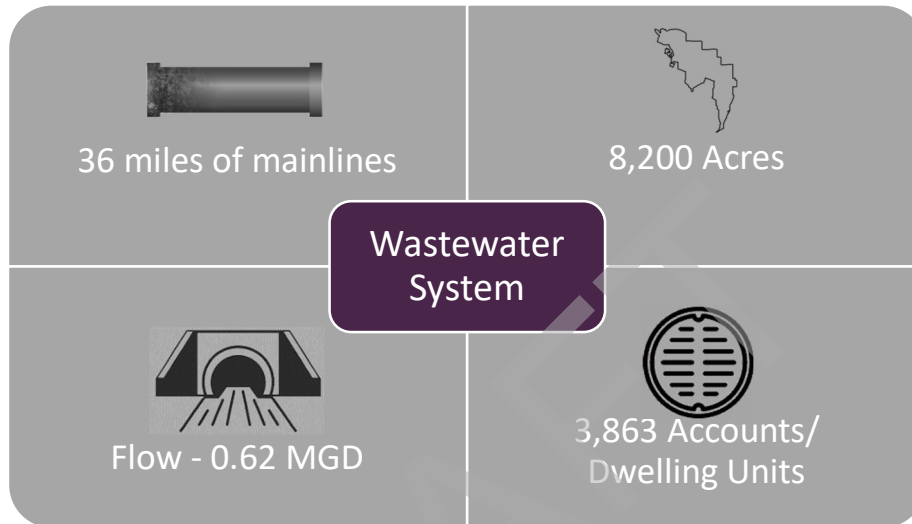
# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Wastewater Utility

### Wastewater System

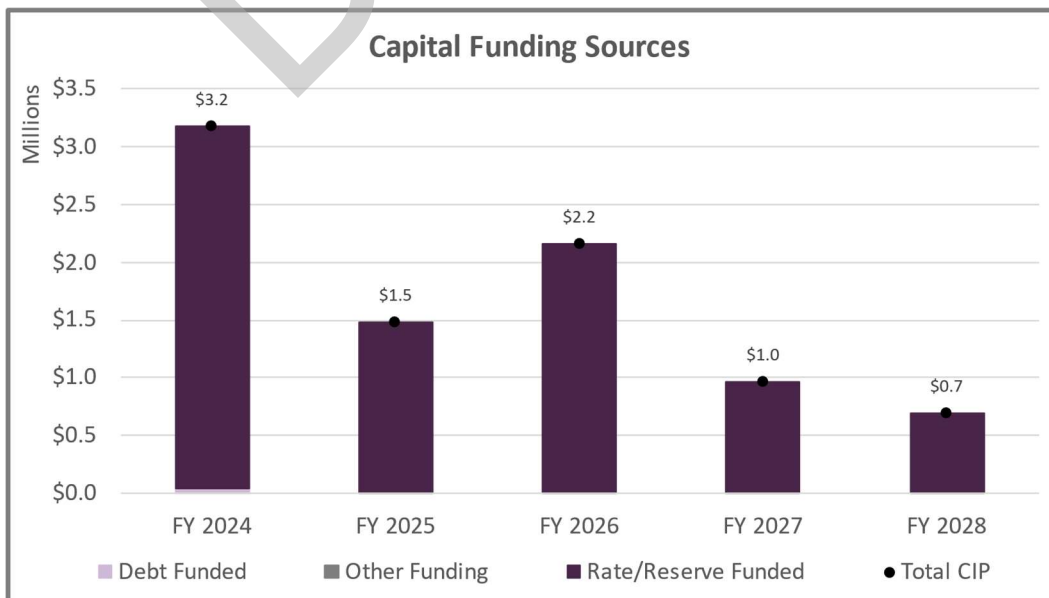
The District owns and operates gravity sewer pipelines and force mains, sewer lift stations, and pump stations and treats collected wastewater at its Robinson Wastewater Treatment Plant (WWTP) and Chiquita WWTP.

Figure 13: Wastewater System



The District recently completed asset management plan identified capital project needs of \$15M over the next ten years. Through the District's review of the asset management plan and prioritizing projects between critical, less critical, and non-critical improvements, a final proposed Capital Improvement Plan (CIP) for this study was provided requiring \$15M in capital spending over the next ten years, of which \$8.5M is needed during the Rate Setting Period. Figure 14 shows the District's CIP through FY 2028 with funding sources.

Figure 14: Wastewater Capital Improvement Plan



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Customers

At the start of FY 2023, the District had 3,863 active billable units, which includes total residential dwelling units and commercial accounts. Table 48 provides a summary of billable units by customer class.

Table 48: Wastewater Billable Units by Customer Class

Customer Class	Accounts [A]	Billing Units [B]	Annual Billing Units [C] = B x 12
Residential	3,664	3,819	45,828
Commercial	44	44	528
<b>Total</b>	<b>3,708</b>	<b>3,863</b>	<b>46,356</b>

The current wastewater rate structure consists of monthly fixed charges charged against each billing unit, which includes accounts and additional dwelling units, and variable rates charged against commercial accounts. Variable rates are separated into three different categories of strength levels of discharge – Low, Medium, and High. Existing charges and rates are identified in Table 49.

Table 49: Existing Wastewater Monthly Fixed Charges

Flat Charges (\$/Month)	
Customer Class	Existing
Residential	\$ 39.56
Commercial	\$ 5.14

Variable Rates (\$/HCF)	
Customer Class	Existing
<b>Commercial</b>	
Low	\$ 5.69
Medium	7.21
High	9.44

## Financial Plan Overview - Wastewater Utility

### Financial Planning Assumptions

Developing a long-term financial plan requires understanding the utility's financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, new strategic objectives, and reserve policies. These considerations require certain assumptions for projecting revenues, expenses, and expected ending fund balances. Table 50 identifies assumptions used for forecasting revenues, and Table 51 identifies assumptions used for forecasting increases in expenses through the Rate Setting Period.

*Table 50: Wastewater Assumptions for Forecasting Revenues*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Revenue Escalation</b>					
Non-Rate Revenues	0%	0%	0%	0%	0%
Reserve Interest	2.0%	2.0%	2.0%	2.0%	2.0%
<b>Account Growth</b>	0%	0%	0%	0%	0%
Billing Units	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	3,633	3,633	3,633	3,633	3,633
Multi-Family	186	186	186	186	186
Commercial	44	44	44	44	44
<b>Total Billing Units</b>	<b>3,863</b>	<b>3,863</b>	<b>3,863</b>	<b>3,863</b>	<b>3,863</b>
Billed Flow by Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Commercial</b>					
Low	7,784	7,784	7,784	7,784	7,784
Medium	5,752	5,752	5,752	5,752	5,752
High	1,615	1,615	1,615	1,615	1,615
<b>Total Billed Flow (HCF)</b>	<b>15,151</b>	<b>15,151</b>	<b>15,151</b>	<b>15,151</b>	<b>15,151</b>

*Table 51: Wastewater Assumptions for Forecasting Expense Requirements<sup>5</sup>*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Expenditure Escalation</b>					
Benefits	7.00%	7.00%	7.00%	7.00%	7.00%
Capital Construction	6.63%	3.93%	3.93%	3.93%	3.93%
Energy Costs	8.00%	8.00%	5.00%	5.00%	5.00%
Fuel	20.00%	20.00%	5.00%	5.00%	5.00%
General Costs	6.20%	3.95%	3.95%	3.95%	3.95%
Non-Inflated	0.00%	0.00%	0.00%	0.00%	0.00%
Retirement	5.00%	5.00%	5.00%	5.00%	5.00%
Salaries	5.00%	5.00%	5.00%	5.00%	5.00%

<sup>5</sup> Capital Construction inflation and General Costs for FY 2024 and FY 2025 were increased to 6.6% and 6.2%, respectively to account for recent annual increase due to inflation. Outer years reduce to 3.93% and 3.95%, reflecting the 5-year average of the Engineer's News Record – CCI index and the LA Consumer Price Index, respectively.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Current Financial Position

### Revenues

Based on the forecasting assumptions, revenues were calculated using billable units (Table 48) and existing wastewater rates (Table 49). Table 52 shows the calculated revenues for FY 2024 through the Rate Setting Period. Table 53 summarizes calculated rate revenues (rounded to thousands) and other non-rate revenues available through the Rate Setting Period.

Table 52: Wastewater Calculated Rate Revenues

Fixed Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Base Fixed Charge</b>					
Single-Family	\$ 1,724,658	\$ 1,724,658	\$ 1,724,658	\$ 1,724,658	\$ 1,724,658
Multi-Family	79,169	79,169	79,169	79,169	79,169
Commercial	2,714	2,714	2,714	2,714	2,714
<b>Total Base Fixed Charge</b>	<b>\$ 1,806,541</b>	<b>\$ 1,806,541</b>	<b>\$ 1,806,541</b>	<b>\$ 1,806,541</b>	<b>\$ 1,806,541</b>
<b>Variable Revenues</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>
<b>Commercial</b>					
Low	\$ 44,291	\$ 44,291	\$ 44,291	\$ 44,291	\$ 44,291
Medium	41,472	41,472	41,472	41,472	41,472
High	15,246	15,246	15,246	15,246	15,246
<b>Total Non-Potable Variable Rate Revenue</b>	<b>\$ 101,008</b>	<b>\$ 101,008</b>	<b>\$ 101,008</b>	<b>\$ 101,008</b>	<b>\$ 101,008</b>
<b>Total Rate Revenue</b>	<b>\$ 1,907,549</b>	<b>\$ 1,907,549</b>	<b>\$ 1,907,549</b>	<b>\$ 1,907,549</b>	<b>\$ 1,907,549</b>

Table 53: Wastewater Projected Wastewater Revenues

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>					
Residential	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000
Commercial	104,000	104,000	104,000	104,000	104,000
<b>Subtotal Rate Revenues</b>	<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>
<b>Operating Revenues</b>					
Late Charges	\$ 39,000	\$ 39,000	\$ 39,000	\$ 39,000	\$ 39,000
New Account Fee	2,000	2,000	2,000	2,000	2,000
Wastewater Discharge Permit	1,000	1,000	1,000	1,000	1,000
Sewer Contracts	53,000	53,000	53,000	53,000	53,000
Chiquita/El Toro Fixed Cost	64,000	64,000	64,000	64,000	64,000
ETRLS (SMWD)	92,000	92,000	92,000	92,000	92,000
<b>Subtotal Operating Revenues</b>	<b>\$ 251,000</b>	<b>\$ 251,000</b>	<b>\$ 251,000</b>	<b>\$ 251,000</b>	<b>\$ 251,000</b>
<b>Non-Operating Revenues</b>					
Uncollectable Accounts	\$ (1,000)	\$ (1,000)	\$ (1,000)	\$ (1,000)	\$ (1,000)
Property Taxes	780,000	790,000	800,000	810,000	820,000
Other Non-Operating Revenue	16,000	16,000	16,000	16,000	16,000
Interest Revenue	14,000	12,000	12,000	13,000	13,000
<b>Subtotal Non-Operating Revenues</b>	<b>\$ 809,000</b>	<b>\$ 817,000</b>	<b>\$ 827,000</b>	<b>\$ 838,000</b>	<b>\$ 848,000</b>
<b>Total Revenues</b>	<b>\$ 2,968,000</b>	<b>\$ 2,976,000</b>	<b>\$ 2,986,000</b>	<b>\$ 2,997,000</b>	<b>\$ 3,007,000</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Expenses

The FY 2023 budget was used as the utility's baseline expenses and adjusted over the Rate Setting Period based on the escalation factors shown in Table 51. Table 54 provides projected O&M expenses through the Rate Setting Period (rounded to thousands). Each expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor to use for forecasting how costs will increase over time.

*Table 54: Wastewater Projected O&M Expenses*

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Operating Expenses</b>					
General and Administrative	563,000	589,000	616,000	645,000	675,000
Salaries & Benefits	1,242,000	1,310,000	1,382,000	1,459,000	1,539,000
Treatment	539,000	573,000	598,000	624,000	652,000
CalPERS & OPEB	74,000	71,000	66,000	61,000	55,000
<b>Subtotal Operating Expenses</b>	<b>\$2,418,000</b>	<b>\$2,543,000</b>	<b>\$2,662,000</b>	<b>\$2,789,000</b>	<b>\$2,921,000</b>
<b>Debt Service</b>					
Credit Line	\$ -	\$ -	\$ -	\$ -	\$ -
Refinancing/New Proposed Debt	184,805	184,805	184,805	184,805	184,805
<b>Subtotal Debt Service</b>	<b>\$ 184,805</b>	<b>\$ 184,805</b>	<b>\$ 184,805</b>	<b>\$ 184,805</b>	<b>\$ 184,805</b>
<b>Total Expenses</b>	<b>\$2,602,805</b>	<b>\$2,727,805</b>	<b>\$2,846,805</b>	<b>\$2,973,805</b>	<b>\$3,105,805</b>

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Reserves

The wastewater utility reserves include Operating, Replacement and Emergency. Similar to the water utility, these reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements, including unforeseen system failures. Table 55 summarizes the minimum reserve requirements and the ideal funding targets of each reserve.

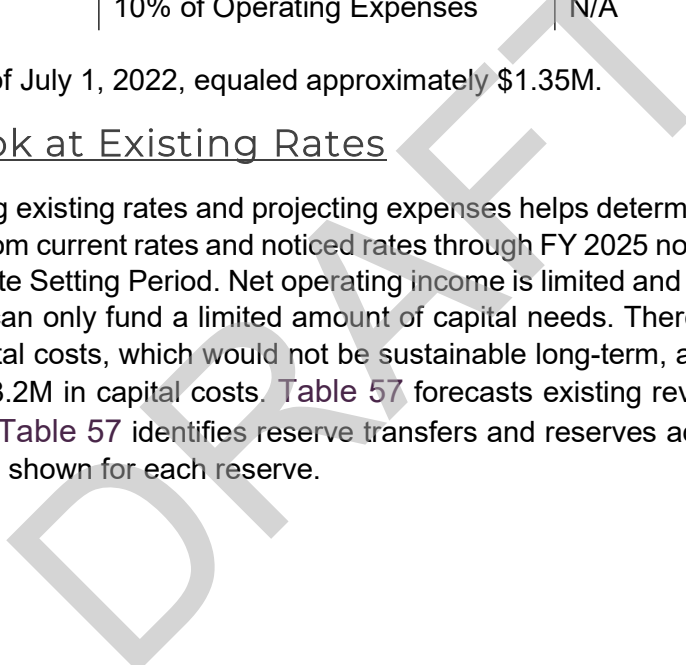
*Table 55: Wastewater Reserve Requirements and Targets*

Reserve	Minimum Requirement	Reserve Target
Operating	90 days of operating expenses	120 days of operating expenses
Capital Replacement	Annual CIP costs based on 5-year average	2 years of CIP costs based on 5-year average
Rate Stabilization	10% of Operating Expenses	N/A

The reserve balance as of July 1, 2022, equaled approximately \$1.35M.

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from current rates and noticed rates through FY 2025 noticed rates will cover operating expenses through the Rate Setting Period. Net operating income is limited and reduces annually as projected expenses increase and can only fund a limited amount of capital needs. Therefore, reserves would need to cover the remaining capital costs, which would not be sustainable long-term, as reserves would be depleted in FY 2024 due to the \$3.2M in capital costs. Table 57 forecasts existing revenues and expenses through the Rate Setting Period. Table 57 identifies reserve transfers and reserves activity, with projected FY 2024 starting reserve balances shown for each reserve.



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 56: Wastewater Financial Plan at Existing Rates

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>						
Residential	Table 53	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000
Commercial		104,000	104,000	104,000	104,000	104,000
Total Rate Revenues		\$ 1,908,000	\$ 1,908,000	\$ 1,908,000	\$ 1,908,000	\$ 1,908,000
<b>Projected Rate Revenues</b>		<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>	<b>\$ 1,908,000</b>
<b>Operating Revenues</b>						
Late Charges		\$ 39,000	\$ 39,000	\$ 39,000	\$ 39,000	\$ 39,000
New Account Fee		2,000	2,000	2,000	2,000	2,000
Wastewater Discharge Permit	Table 53	1,000	1,000	1,000	1,000	1,000
Sewer Contracts		53,000	53,000	53,000	53,000	53,000
Chiquita/El Toro Fixed Cost		64,000	64,000	64,000	64,000	64,000
ETRLS (SMWD)		92,000	92,000	92,000	92,000	92,000
<b>Subtotal Operating Revenues</b>		<b>\$ 251,000</b>	<b>\$ 251,000</b>	<b>\$ 251,000</b>	<b>\$ 251,000</b>	<b>\$ 251,000</b>
<b>Non-Operating Revenues</b>						
Uncollectable Accounts		\$ (1,000)	\$ (1,000)	\$ (1,000)	\$ (1,000)	\$ (1,000)
Property Taxes	Table 53	780,000	790,000	800,000	810,000	820,000
Other Non-Operating Revenue		16,000	16,000	16,000	16,000	16,000
Interest Revenue		14,000	12,000	12,000	13,000	13,000
<b>Subtotal Non-Operating Revenues</b>		<b>\$ 809,000</b>	<b>\$ 817,000</b>	<b>\$ 827,000</b>	<b>\$ 838,000</b>	<b>\$ 848,000</b>
<b>Total Revenues</b>		<b>\$ 2,968,000</b>	<b>\$ 2,976,000</b>	<b>\$ 2,986,000</b>	<b>\$ 2,997,000</b>	<b>\$ 3,007,000</b>
<b>O&amp;M Expenses</b>						
<b>Operating Expenses</b>						
General and Administrative		563,000	589,000	616,000	645,000	675,000
Salaries & Benefits	Table 54	1,242,000	1,310,000	1,382,000	1,459,000	1,539,000
Treatment		539,000	573,000	598,000	624,000	652,000
CalPERS & OPEB		74,000	71,000	66,000	61,000	55,000
<b>Subtotal Operating Expenses</b>		<b>\$ 2,418,000</b>	<b>\$ 2,543,000</b>	<b>\$ 2,662,000</b>	<b>\$ 2,789,000</b>	<b>\$ 2,921,000</b>
<b>Debt Service</b>						
Credit Line	Table 54	\$ 36,250	\$ 18,125	\$ -	\$ -	\$ -
Refinancing/New Proposed Debt		184,805	184,805	184,805	184,805	184,805
<b>Subtotal Debt Service</b>		<b>\$ 221,055</b>	<b>\$ 202,930</b>	<b>\$ 184,805</b>	<b>\$ 184,805</b>	<b>\$ 184,805</b>
<b>Total Expenses</b>		<b>\$ 2,639,055</b>	<b>\$ 2,745,930</b>	<b>\$ 2,846,805</b>	<b>\$ 2,973,805</b>	<b>\$ 3,105,805</b>
<b>Net Cashflow</b>		<b>\$ 328,945</b>	<b>\$ 230,070</b>	<b>\$ 139,195</b>	<b>\$ 23,195</b>	<b>\$ (98,805)</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 57: Wastewater – Transfers and Reserve Activity at Existing Rates

Operating/Working Capital	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	\$ 566,384	\$ 596,219	\$ 627,041	\$ 656,384	\$ 679,578
Transfers (Net Cashflow)	328,945	230,070	139,195	23,195	(98,805)
Transfers from/(to) Capital Reserve	(299,109)	(199,248)	(109,852)	0	0
<b>Ending Balance</b>	<b>\$ 596,219</b>	<b>\$ 627,041</b>	<b>\$ 656,384</b>	<b>\$ 679,578</b>	<b>\$ 580,773</b>

Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	\$ 1,472,018	\$ (1,406,662)	\$ (2,690,309)	\$ (4,742,213)	\$ (5,712,473)
<u>Plus:</u>					
Transfers from/(to) Operating/Working Capital	299,109	199,248	109,852	0	0
<u>Less:</u>					
CIP	(3,177,790)	(1,482,895)	(2,161,756)	(970,260)	(693,336)
Transfers from/(to) Sewer Rate Stabilization Reserve	-	-	-	-	-
<b>Subtotal Capital Reserve</b>	<b>\$ (1,406,662)</b>	<b>\$ (2,690,309)</b>	<b>\$ (4,742,213)</b>	<b>\$ (5,712,473)</b>	<b>\$ (6,405,808)</b>
Interest Earnings	0	0	0	0	0
<b>Ending Balance</b>	<b>\$ (1,406,662)</b>	<b>\$ (2,690,309)</b>	<b>\$ (4,742,213)</b>	<b>\$ (5,712,473)</b>	<b>\$ (6,405,808)</b>

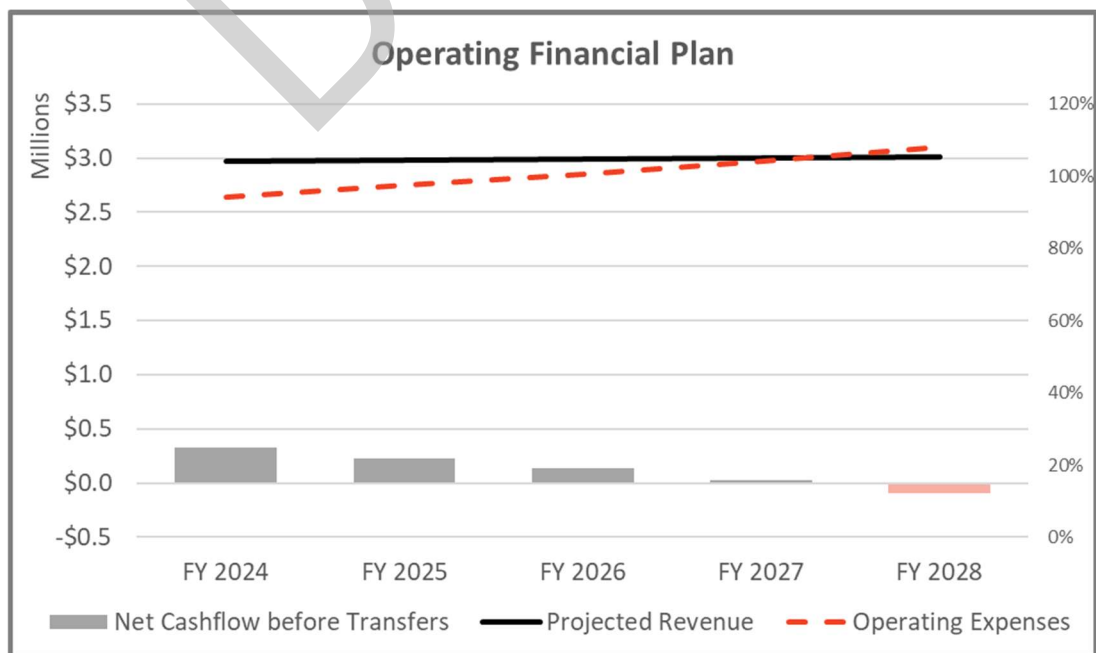
Sewer Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers from/(to) Capital Reserve	-	-	-	-	-
<b>Ending Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

<b>Ending Unrestricted Reserve Balance</b>	<b>\$ (810,443)</b>	<b>\$ (2,063,268)</b>	<b>\$ (4,085,829)</b>	<b>\$ (5,032,895)</b>	<b>\$ (5,825,035)</b>
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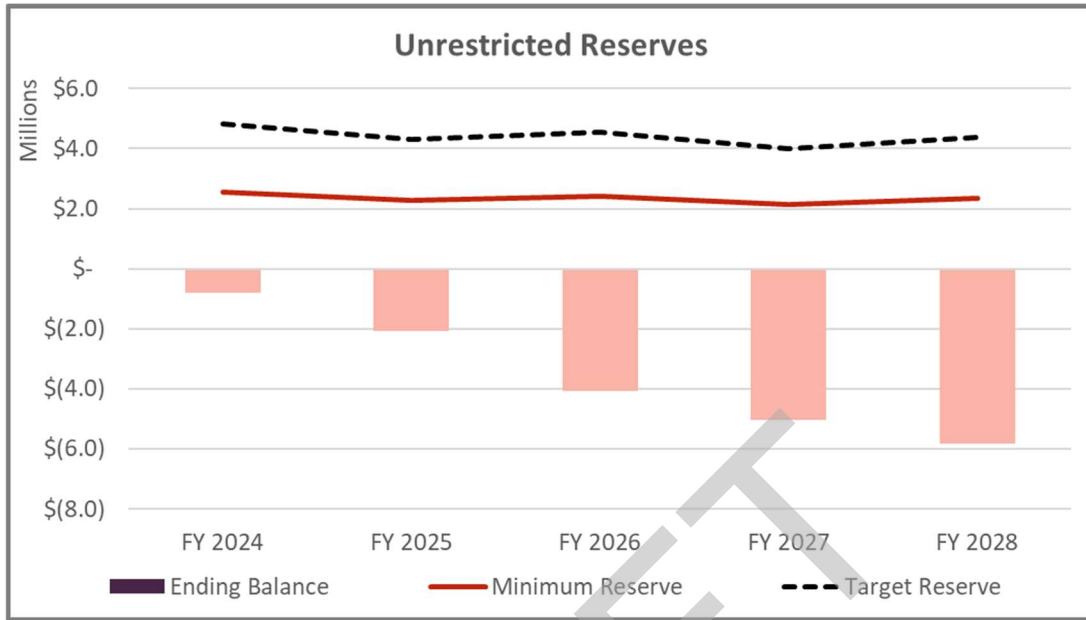
Figure 15 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the amount of net operating income available. Figure 16 reflects the projected ending balances of unrestricted reserves after funding operating and capital projects through the Rate Setting Period. Unrestricted reserves include the Operating, Capital Replacement, and Rate Stabilization reserves.

Figure 15: Wastewater Current Operating Financial Position



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 16: Wastewater Projected Ending Reserves at Existing Rates



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## Proposed Financial Plan – Wastewater Utility

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From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements, while meeting reserve requirements. The proposed financial plan generates approximately \$5.285M in additional revenue over the Rate Setting Period. The additional revenue generates positive net operating income each year to go towards capital spending and satisfy reserve requirements. Table 23 forecasts projected revenues, **with annual revenue adjustments**, and expenses through FY 2028, including \$7M in proposed debt that converts the existing short-term debt of \$2.5M to long-term debt plus an additional \$4.5M in new proceeds. Table 24 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 23, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 58: Proposed Wastewater Financial Plan

Revenue			FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Rate Revenues</b>							
Residential	Table 53		\$ 1,804,000	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000	\$ 1,804,000
Commercial			104,000	104,000	104,000	104,000	104,000
Total Rate Revenues			\$ 1,908,000	\$ 1,908,000	\$ 1,908,000	\$ 1,908,000	\$ 1,908,000
<b>Additional Revenue (from revenue adjustments):</b>							
Fiscal Year	Revenue Adjustment	Effective Month					
FY 2024	16.0%	July	305,000	305,000	305,000	305,000	305,000
FY 2025	16.0%	July		354,000	354,000	354,000	354,000
FY 2026	16.0%	July			410,000	410,000	410,000
FY 2027	12.0%	July				357,000	357,000
FY 2028	12.0%	July					400,000
Total Additional Revenue			\$ 305,000	\$ 659,000	\$ 1,069,000	\$ 1,426,000	\$ 1,826,000
<b>Projected Rate Revenues</b>			\$ 2,213,000	\$ 2,567,000	\$ 2,977,000	\$ 3,334,000	\$ 3,734,000
<b>Operating Revenues</b>							
Late Charges	Table 53		\$ 39,000	\$ 39,000	\$ 39,000	\$ 39,000	\$ 39,000
New Account Fee			2,000	2,000	2,000	2,000	2,000
Wastewater Discharge Permit			1,000	1,000	1,000	1,000	1,000
Sewer Contracts			53,000	53,000	53,000	53,000	53,000
Chiquita/El Toro Fixed Cost			64,000	64,000	64,000	64,000	64,000
ETRLS (SMWD)			92,000	92,000	92,000	92,000	92,000
<b>Subtotal Operating Revenues</b>			\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000	\$ 251,000
<b>Non-Operating Revenues</b>							
Uncollectable Accounts	Table 53		\$ (1,000)	\$ (1,000)	\$ (1,000)	\$ (1,000)	\$ (1,000)
Property Taxes			780,000	790,000	800,000	810,000	820,000
Other Non-Operating Revenue			16,000	16,000	16,000	16,000	16,000
Interest Revenue			14,000	12,000	12,000	13,000	13,000
<b>Subtotal Non-Operating Revenues</b>			\$ 809,000	\$ 817,000	\$ 827,000	\$ 838,000	\$ 848,000
<b>Total Revenues</b>			\$ 3,273,000	\$ 3,635,000	\$ 4,055,000	\$ 4,423,000	\$ 4,833,000
<b>O&amp;M Expenses</b>							
<b>Operating Expenses</b>							
General and Administrative	Table 54		563,000	589,000	616,000	645,000	675,000
Salaries & Benefits			1,242,000	1,310,000	1,382,000	1,459,000	1,539,000
Treatment			539,000	573,000	598,000	624,000	652,000
CalPERS & OPEB			74,000	71,000	66,000	61,000	55,000
<b>Subtotal Operating Expenses</b>			\$ 2,418,000	\$ 2,543,000	\$ 2,662,000	\$ 2,789,000	\$ 2,921,000
<b>Debt Service</b>							
Credit Line	Table 54		\$ 36,250	\$ 18,125	\$ -	\$ -	\$ -
Refinancing/New Proposed Debt			517,455	517,455	517,455	517,455	517,455
<b>Subtotal Debt Service</b>			\$ 553,705	\$ 535,580	\$ 517,455	\$ 517,455	\$ 517,455
<b>Total Expenses</b>			\$ 2,971,705	\$ 3,078,580	\$ 3,179,455	\$ 3,306,455	\$ 3,438,455
<b>Net Cashflow</b>			\$ 301,295	\$ 556,420	\$ 875,545	\$ 1,116,545	\$ 1,394,545

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 59: Wastewater – Undesignated Reserves Activity through FY 2028

Operating/Working Capital	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	\$ 566,384	\$ 596,219	\$ 627,041	\$ 656,384	\$ 687,699
Transfers (Net Cashflow )	301,295	556,420	875,545	1,116,545	1,394,545
Transfers from/(to) Capital Reserve	(271,460)	(525,598)	(846,203)	(1,085,230)	(1,361,997)
<b>Ending Balance</b>	<b>\$ 596,219</b>	<b>\$ 627,041</b>	<b>\$ 656,384</b>	<b>\$ 687,699</b>	<b>\$ 720,247</b>
Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	\$ 1,472,018	\$ 3,111,065	\$ 2,206,417	\$ 921,837	\$ 1,056,394
<u>Plus:</u>					
Transfers from/(to) Operating/Working Capital	271,460	525,598	846,203	1,085,230	1,361,997
<u>Less:</u>					
CIP	(3,177,790)	(1,482,895)	(2,161,756)	(970,260)	(693,336)
Transfers from/(to) Sewer Rate Stabilization Reserve	-	-	-	-	(403,479)
Subtotal Capital Reserve	\$ 3,065,688	\$ 2,153,769	\$ 890,865	\$ 1,036,808	\$ 1,321,577
Interest Earnings	45,377	52,648	30,973	19,586	23,780
<b>Ending Balance</b>	<b>\$ 3,111,065</b>	<b>\$ 2,206,417</b>	<b>\$ 921,837</b>	<b>\$ 1,056,394</b>	<b>\$ 1,345,356</b>
Sewer Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Beginning Balance</b>	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers from/(to) Capital Reserve	-	-	-	-	403,479
<b>Ending Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 403,479</b>
<b>Ending Unrestricted Reserves Balance</b>	<b>\$ 3,707,284</b>	<b>\$ 2,833,458</b>	<b>\$ 1,578,221</b>	<b>\$ 1,744,093</b>	<b>\$ 2,469,082</b>

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

The operating position based on the proposed financial plan is identified in Figure 17, including debt service coverage. Figure 18 shows the capital plan with funding sources. Figure 19 identifies the ending undesignated reserve balances after funding capital expenses.

Figure 17: Wastewater Proposed Operating Position

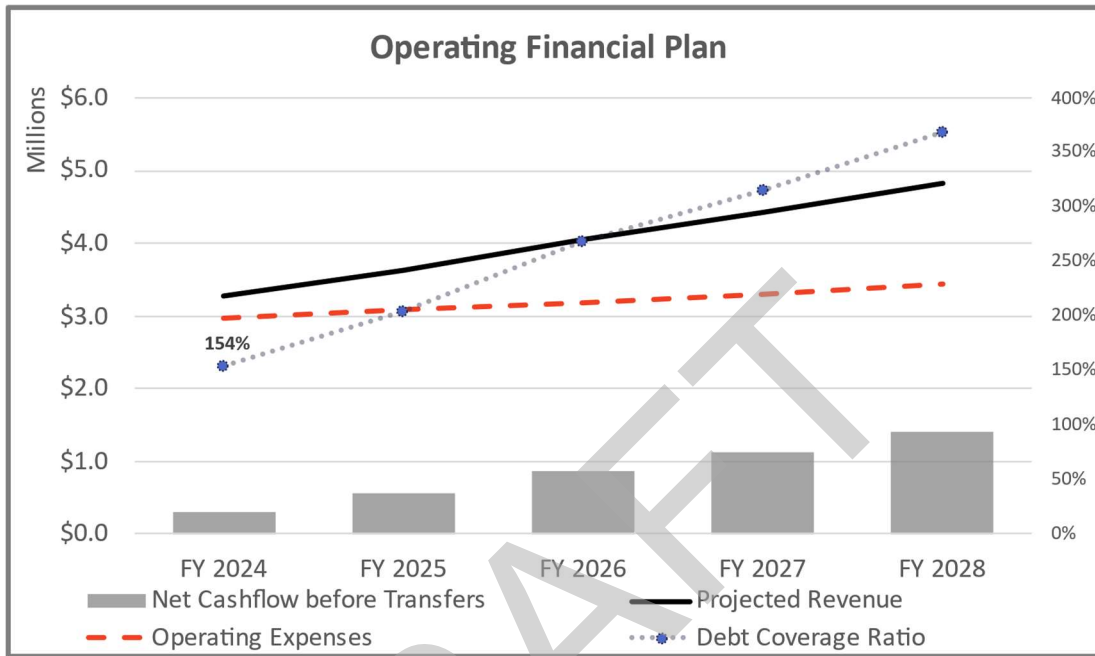
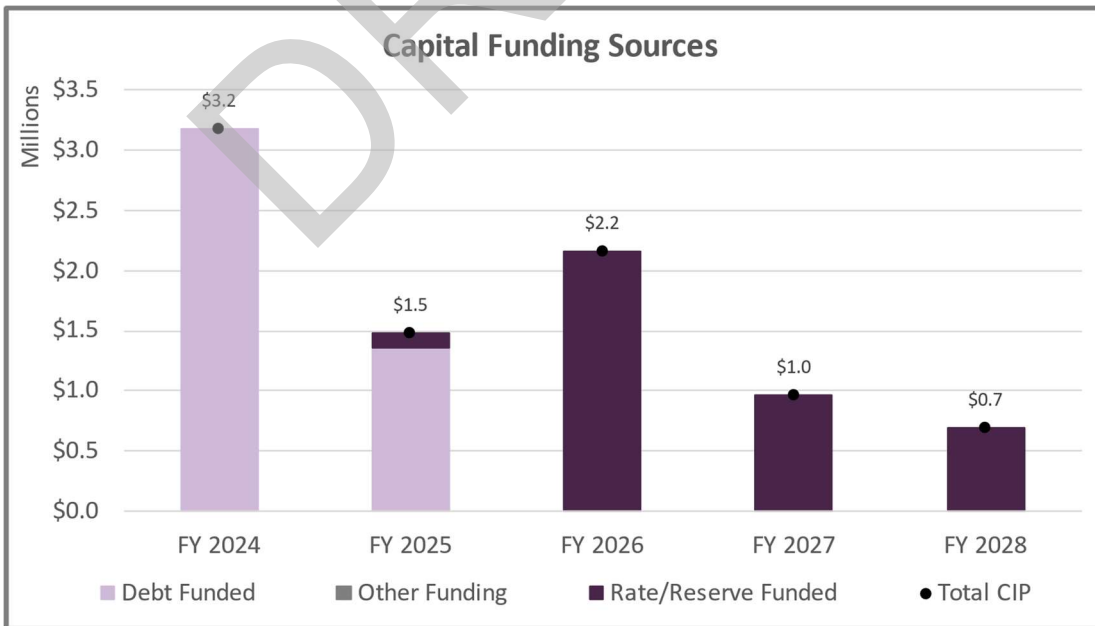
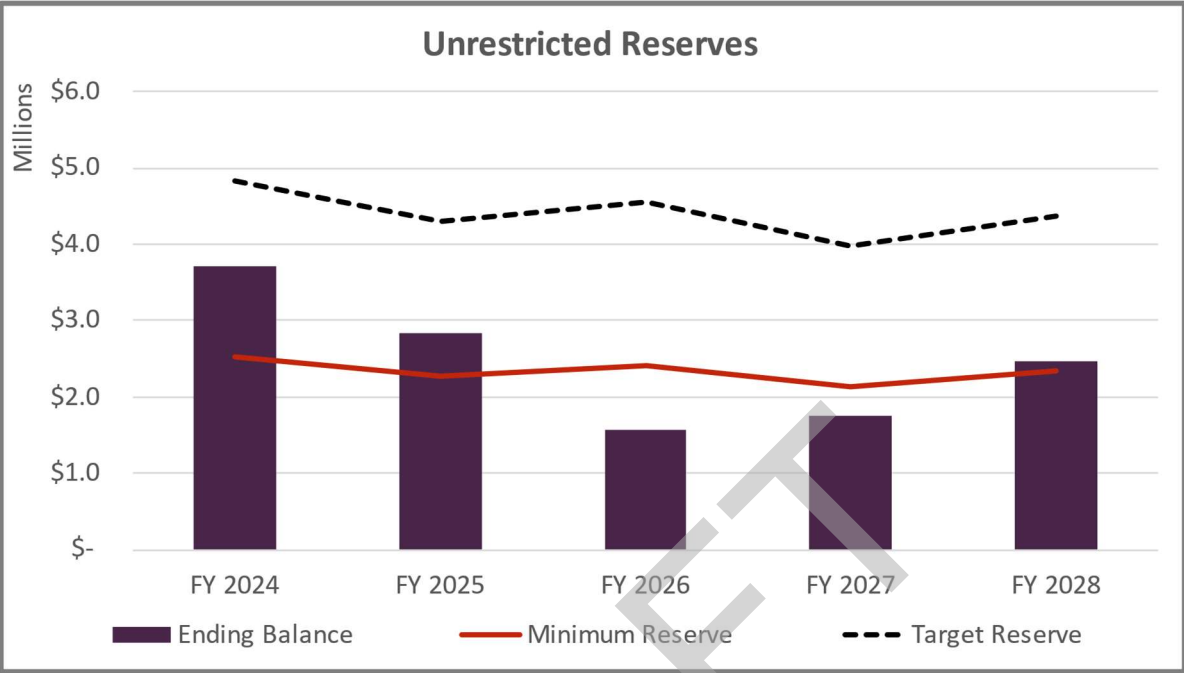


Figure 18: Wastewater Capital Improvement Plan with Funding Sources



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 19: Wastewater Proposed Ending Reserves



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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Cost of Service Analysis – Wastewater Utility

### Cost of Service Process

The next step in developing wastewater rates is to perform a cost-of-service analysis. Through this process, costs incurred are allocated to customer classes based on their proportional share. As a result, proposed rates are cost-based and reflect the costs incurred to provide service to customers.

### Revenue Requirements

FY 2024 revenue requirements were used for the cost-of-service analysis. Revenue requirements include O&M expenses, treatment expenses, available revenue offsets, non-rate revenues, and reserve funding. The proposed revenue adjustments and corresponding rates accumulate the necessary funding over the Rate Setting Period to fund O&M, capital projects, and meet minimum reserve requirements. The results of the financial plan analysis are summarized in Table 60 and represent the revenue required from rates over the Rate Setting Period.

Table 60: Wastewater Revenue Requirements

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Requirements	Total	Total	Total	Total	Total
<b>Operating Expenses</b>					
General and Administrative	\$ 563,000	\$ 589,000	\$ 616,000	\$ 645,000	\$ 675,000
Salaries & Benefits	1,242,000	1,310,000	1,382,000	1,459,000	1,539,000
Treatment	539,000	573,000	598,000	624,000	652,000
CalPERS & OPEB	74,000	71,000	66,000	61,000	55,000
<b>Total Operating Expenses</b>	<b>\$ 2,418,000</b>	<b>\$ 2,543,000</b>	<b>\$ 2,662,000</b>	<b>\$ 2,789,000</b>	<b>\$ 2,921,000</b>
<b>Debt Service</b>					
Credit Line	\$ 36,250	\$ 18,125	\$ -	\$ -	\$ -
Refinancing/New Proposed Debt	517,455	517,455	517,455	517,455	517,455
<b>Total Debt Service</b>	<b>\$ 553,705</b>	<b>\$ 535,580</b>	<b>\$ 517,455</b>	<b>\$ 517,455</b>	<b>\$ 517,455</b>
<b>Other Funding</b>					
<b>Revenue Offsets</b>					
Operating Revenues	\$ (251,000)	\$ (251,000)	\$ (251,000)	\$ (251,000)	\$ (251,000)
Non-Operating Revenues	(809,000)	(817,000)	(827,000)	(838,000)	(848,000)
<b>Total Revenue Offsets</b>	<b>\$ (1,060,000)</b>	<b>\$ (1,068,000)</b>	<b>\$ (1,078,000)</b>	<b>\$ (1,089,000)</b>	<b>\$ (1,099,000)</b>
<b>Adjustments</b>					
Reserve Funding	\$ 301,295	\$ 556,420	\$ 875,545	\$ 1,116,545	\$ 1,394,545
<b>Total Adjustments</b>	<b>\$ 301,295</b>	<b>\$ 556,420</b>	<b>\$ 875,545</b>	<b>\$ 1,116,545</b>	<b>\$ 1,394,545</b>
<b>Subtotal Other Funding</b>	<b>\$ (758,705)</b>	<b>\$ (511,580)</b>	<b>\$ (202,455)</b>	<b>\$ 27,545</b>	<b>\$ 295,545</b>
<b>Revenue Requirement from Rates</b>	<b>\$2,213,000</b>	<b>\$2,567,000</b>	<b>\$2,977,000</b>	<b>\$3,334,000</b>	<b>\$3,734,000</b>

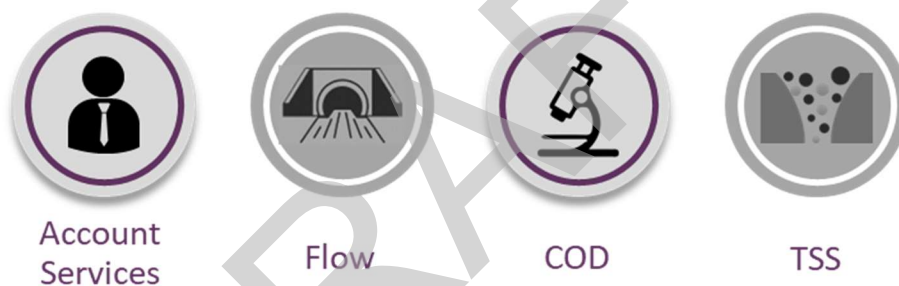
# Trabuco Canyon Water District – 2023 Cost-of-Service Rate Study

## Define Cost Components

The District's wastewater cost-of-service requirements were allocated to cost components and then to customers classes to develop cost-based rates in compliance with Proposition 218. The utility incurs costs to accommodate the total flow demand generated by different customer classes. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified and used to allocate expenses based on how they are incurred. Through our review of the revenue requirements and understanding of the wastewater system, the cost-of-service allocation documented in this report is based on total billing units (accounts plus additional dwelling units), flow (volume influent in HCF), and the strength characteristics of each customer class.

Strength loading factors for chemical oxygen demand (COD) and total suspended solids (TSS) are based on the Los Angeles County Sanitation District (LACSD) 2007 update. The LACSD's 2007 update reflects a substantial dataset of the most up-to-date discharge characteristics for various commercial uses, which typically would not vary by geographical location. The cost components shown in Figure 20 are used within the cost-of-service to allocate costs to customer classes in relation to the demand that each place on the system.

Figure 20: Wastewater Cost Components



*Account Services* – Fixed expenses related to the collection system and treatment plants that do not necessarily fluctuate based on flow. Administration, utility billing services, and overhead costs are incurred based on having an account. In addition, a portion of maintenance is recovered as part of Account Services.

*Flow* – Expenses associated with the collection system and volume of flow treated at the WWTPs.

*COD* – Expenses associated with treating microbial and organic compounds at the WWTP.

*TSS* – Expenses associated with treating TSS at the WWTP.

## Allocate Expenses to Cost Components

When allocating expenses to the defined cost components, it is important to have a sound basis as to why an expense was allocated to a certain fixed cost component versus a variable cost component or split between both fixed and variable. The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**. A description of each expense category is identified below.

Table 61 summarizes the percent allocation of Operating expenses to the cost components with Account Services as a fixed component and Flow, COD, and TSS as variable cost components. General and Administration and CalPERS & OPEB were allocated to the cost component of Account Services. Salaries & Benefits and Treatment expense categories are associated with the daily operating costs of the treatment plants and allocated to Flow, COD and TSS based on the District's review of its treatment plant processes

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

and how costs are incurred at the plants in treated influent, equal to 20% Flow, 40% COD and 40% TSS. Table 62 uses the percent allocations in Table 61 to allocate expenses in dollars to each cost component.

*Table 61: Wastewater O&M Expense Allocation to Cost Components (%)*

Operating Expenses	Methodology / Allocation Basis	Account Services	Flow	COD	TSS	Total
General and Administrative	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Salaries & Benefits	Treatment	0.0%	20.0%	40.0%	40.0%	100.0%
Treatment	Treatment	0.0%	20.0%	40.0%	40.0%	100.0%
CalPERS & OPEB	Specific	100.0%	0.0%	0.0%	0.0%	100.0%

*Table 62: Wastewater O&M Expense Allocation to Cost Components (\$)*

Operating Expenses	Methodology / Allocation Basis	Account Services	Flow	COD	TSS	Total
General and Administrative	Specific	\$ 563,000	\$ -	\$ -	\$ -	\$ 563,000
Salaries & Benefits	Treatment	-	248,400	496,800	496,800	1,242,000
Treatment	Treatment	-	107,800	215,600	215,600	539,000
CalPERS & OPEB	Specific	74,000	-	-	-	74,000
<b>Total Allocation (\$)</b>		<b>\$ 637,000</b>	<b>\$ 356,200</b>	<b>\$ 712,400</b>	<b>\$ 712,400</b>	<b>\$ 2,418,000</b>
<b>O&amp;M Allocation (%)</b>		<b>26.3%</b>	<b>14.7%</b>	<b>29.5%</b>	<b>29.5%</b>	<b>100.0%</b>

The District's debt was allocated based on O&M percentages derived in Table 62 to equitable charge commercial customers their proportionate share of debt based on their percentage of total flow and strength, instead of solely based on percentage of accounts. Table 30 identifies the percent allocation of the debt expense to the cost components, and Table 31 reflects the debt expense in dollars.

*Table 63: Wastewater Debt Allocation to Cost Components (%)*

Debt Service	Methodology / Allocation Basis	Account Services	Flow	COD	TSS	Total
Credit Line	O&M Allocation	26.3%	14.7%	29.5%	29.5%	100.0%
Refinancing/New Proposed Debt	O&M Allocation	26.3%	14.7%	29.5%	29.5%	100.0%

*Table 64: Wastewater Debt Allocation to Cost Components (\$)*

Debt Service	Methodology / Allocation Basis	Account Services	Flow	COD	TSS	Total
Credit Line	O&M Allocation	\$ 9,550	\$ 5,340	\$ 10,680	\$ 10,680	\$ 36,250
Refinancing/New Proposed Debt	O&M Allocation	136,319	76,227	152,454	152,454	517,455
<b>Total Allocation (\$)</b>		<b>\$ 145,868</b>	<b>\$ 81,567</b>	<b>\$ 163,134</b>	<b>\$ 163,134</b>	<b>\$ 553,705</b>

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Other Funding includes other operating revenue, non-operating revenue, and reserve funding. All line items under "Other Funding" are allocated based on O&M percentages derived in Table 62 to allocate each line item to the cost components proportionately. Table 65 summarizes the percent allocation to the cost components, and Table 66 uses the percent allocations in Table 65 to allocate expenses in dollars to each cost component. Table 67 summarizes the FY 2024 revenue requirement derived in Table 60 by cost component

*Table 65: Wastewater Other Funding to Cost Components (%)*

Other Funding	Methodology / Allocation Basis	Account Services	Flow	COD	TSS	Total
<i>Revenue Offsets</i>						
Operating Revenues	O&M Allocation	26.3%	14.7%	29.5%	29.5%	100.0%
Non-Operating Revenues	O&M Allocation	26.3%	14.7%	29.5%	29.5%	100.0%
<i>Adjustments</i>						
Reserve Funding	O&M Allocation	26.3%	14.7%	29.5%	29.5%	100.0%
Adjustment for Mid-Year Increase	O&M Allocation	26.3%	14.7%	29.5%	29.5%	100.0%

*Table 66: Wastewater Other Funding to Cost Components (\$)*

Other Funding	Methodology / Allocation Basis	Account Services	Flow	COD	TSS	Total
<i>Revenue Offsets</i>						
Operating Revenues	O&M Allocation	\$ (66,124)	\$ (36,975)	\$ (73,951)	\$ (73,951)	\$ (251,000)
Non-Operating Revenues	O&M Allocation	(213,124)	(119,175)	(238,351)	(238,351)	(809,000)
<i>Adjustments</i>						
Reserve Funding	O&M Allocation	79,374	44,384	88,769	88,769	301,295
<b>Total Allocation (\$)</b>		<b>\$ (199,874)</b>	<b>\$ (111,766)</b>	<b>\$ (223,532)</b>	<b>\$ (223,532)</b>	<b>\$ (758,705)</b>

*Table 67: FY 2024 Wastewater Cost-of-Service Requirements by Cost Component*

Revenue Requirement	Account Services	Flow	COD	TSS	Total
Operating	\$ 637,000	\$ 356,200	\$ 712,400	\$ 712,400	\$ 2,418,000
Debt Service	145,868	81,567	163,134	163,134	553,705
Other Funding	(199,874)	(111,766)	(223,532)	(223,532)	(758,705)
<b>COS Requirement</b>	<b>\$ 582,995</b>	<b>\$ 326,001</b>	<b>\$ 652,002</b>	<b>\$ 652,002</b>	<b>\$ 2,213,000</b>

## Rate Design – Wastewater Utility

### Develop Units of Service

Residential customer flows were projected using expected indoor use based on a gallons per capita per day (gpcd) and people per household (pph) basis. Residential pph was based on the Department of Finance E-5 report for 2022, reflecting 2.75 pph, which is the weighted average based on population of Lake Forest, Mission Viejo, and Rancho Santa Margarita. Residential projected flows were based on 55 gpcd for indoor use with a 95% return factor ( $55 \text{ gpcd} \times 0.95 = 52.3 \text{ gpcd}$ ). The 5% reduction accounts for indoor water use that does not return to the collection system (i.e., does not go down the drain). The annual residential flow reflects the product of Net Flow GPCD, total residential billing units, and 365 days. The result is then converted to HCF for a total annual projected residential flow of 268,201 HCF, as shown in Table 68.

*Table 68: Residential Projected Flows*

Residential Flow Projections	Assumptions
Gallons per capita per day (GPCD)	55.0
Projected indoor return factor	95%
<b>Net Flow GPCD</b>	<b>52.3</b>
× People per household (Residential)	2.75
× Number of Residential accounts	3,819
<b>Projected Residential Flow</b>	<b>549,665 GPD</b>
Annual Residential Flow (× 365)	200,627,556
<b>Converted to HCF (÷ 748.05)</b>	<b>268,201</b>

Commercial customer flows were determined by estimating flow return factors for the Commercial customer class. To determine the appropriate flow return factor, we used the amount of total influent conveyed in FY 2022 to the District wastewater treatment plants of Robinson WWTP and Chiquita WWTP. The total treated influent is reduced by percentage of infiltration/inflow (known as I/I, which is a measure of the amount of water that enters the collection system that is not sewage, such as stormwater or groundwater that infiltrates into the collection system), equal to 7%, and less the projected residential flow derived in Table 68. The remainder is the estimated amount generated by Commercial customers. Table 69 provides the calculations used to derive the amount of projected flow expected to be generated by Commercial customers.

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Table 69: Non-Residential Projected Flows (HCF)

Flow Assumptions (HCF)		FY 2022
Total Treated Flow		302,506
Less: Inflow and Infiltration (I&I)	7.0%	(21,175)
<b>Flow from Customers</b>		<b>281,330</b>
Less Projected Residential Flow		268,201
<b>Projected Non-Residential Flows</b>		<b>13,130</b>

Customer Class	Water Usage [A]	Flow Return [B]	Projected Flow [C] = A x B
Commercial	15,151	86.7%	13,130

Applying a return factor of 86.7% against Commercial water usage generates a calculated flow of 13,130 HCF, which is in-line with what is expected when compared to the amount of projected treated flow from Commercial.

Unit rates for the cost components are derived by identifying the units of service for each cost component (distribution basis). The distribution basis varies by cost component and includes billable units (total accounts/dwelling units) and projected flow, weighted COD, and weighted TSS. Table 70 summarizes the units of service for each cost component. Strength concentrations are weighted by total flow in Million Gallons (MG) to develop COD units of service (Weighted COD) and TSS units of service (Weighted TSS).

Table 70: Wastewater Units of Service

Annual Fixed Units of Service

Customer Class	Accounts [A]	Billing Units [B]	Annual Billing Units [C] = B x 12
Residential	3,664	3,819	45,828
Commercial	44	44	528
<b>Total</b>	<b>3,708</b>	<b>3,863</b>	<b>46,356</b>

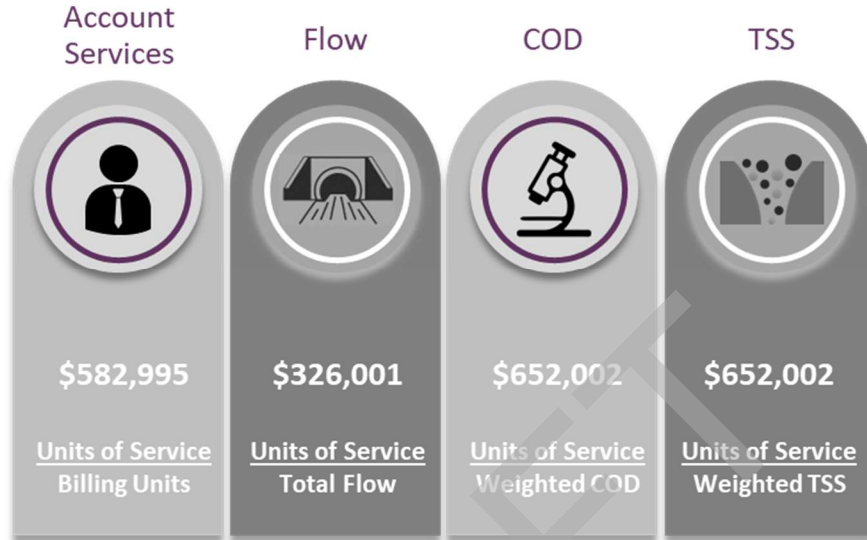
Annual Variable Units of Service

Customer Class	Commercial Water Usage (HCF) [A]	Return Factor [B]	Projected Flow (HCF) [C] = (A x B)	Conversion Factor (HCF to MG) [D]	COD (ppm) [E]	TSS (ppm) [F]	Weighted COD [G] = (C x D x E)	Weighted TSS [H] = (C x D x F)
Residential			268,201	0.075%	562	272	112,805	54,553
Commercial								
Low	7,784	86.7%	6,746	0.075%	515	271	2,597	1,370
Medium	5,752	86.7%	4,985	0.075%	1,106	431	4,124	1,609
High	1,615	86.7%	1,400	0.075%	1,798	699	1,883	732
<b>Total</b>	<b>15,151</b>		<b>281,331</b>				<b>121,410</b>	<b>58,264</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Rate Study

With the units of service shown in Table 70, the distribution basis can be identified for each cost component. The total revenue requirements by cost component from Table 67 is shown in Figure 21 with the corresponding units of service.

Figure 21: Wastewater Distribution Basis and Units of Service by Cost Component



## Allocate to Customer Class

Using the FY 2024 revenue requirements, the cost-of-service allocates expenses to customer classes based on the service demands that each place on the system (cost causation). Using this approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a cost-based rate structure in compliance with Proposition 218. In the previous section, costs were summarized by expense category and allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. This ensures that each customer proportionately shares in the financial obligation of the wastewater utility. For the following unit rate computations, unit rates were rounded up to the nearest penny.

## Fixed Cost Recovery

### Account Services

Account Services costs are spread equally across all billable units over 12 months. Therefore, the revenue requirement for Account Services is apportioned based on the annual billing units to determine the monthly unit cost-of-service shown in Table 71.

Table 71: FY 2024 Wastewater Account Services Monthly Unit Rate

Account Services Component - Unit Rate	
Revenue Requirement	\$ 582,995
÷ Annual Billing Units	46,356
<b>Monthly Unit Rate</b>	<b>\$12.58</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Variable Cost Recovery

### Flow

Flow is a function of total volume of influent conveyed through the collection system and pumped through the treatment plants. Therefore, the revenue requirement for Flow is apportioned to each customer class based on their percentage of the total projected flow, as summarized in Table 72.

*Table 72: FY 2024 Wastewater Collection Allocation by Customer Class*

Flow Charge Component - Unit Rate	
Revenue Requirement (RR)	\$ 326,001
÷ Projected Flow (HCF)	281,331
<b>Monthly Unit Rate</b>	<b>\$1.16</b>

Customer Class	Projected Flow (HCF) [A]	% Allocation [B] = A as a %	Revenue Requirement [C] = RR x B
Residential	268,201	95.3%	\$ 310,786
Commercial			
Low	6,746	2.4%	7,817
Medium	4,985	1.8%	5,776
High	1,400	0.5%	1,622
<b>Total</b>	<b>281,331</b>	<b>100%</b>	<b>\$ 326,001</b>

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## COD

COD costs relate to the treatment process of breaking down organic material in wastewater. Higher COD strengths require increased costs and longer periods of treatment time to dilute the high levels of COD prior to discharging effluent into waterways. Therefore, the revenue requirement for COD is apportioned based on Weighted COD for each customer class, as shown in Table 73.

*Table 73: FY 2024 Wastewater COD Allocation by Customer Class*

COD Charge Component - Unit Rate	
Revenue Requirement (RR)	\$ 652,002
÷ Weighted COD	121,410
<b>Monthly Unit Rate</b>	<b>\$5.38</b>

Customer Class	Weighted COD [A]	% Allocation [B] = A as a %	Revenue Requirement [C] = RR x B
Residential	112,805	92.9%	\$ 605,794
Commercial			
Low	2,597	2.1%	13,949
Medium	4,124	3.4%	22,149
High	1,883	1.6%	10,110
<b>Total</b>	<b>121,410</b>	<b>100%</b>	<b>\$ 652,002</b>

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## TSS

TSS costs relate to the treatment process of removing solids from wastewater through settling, screening, and filtering. Higher TSS strengths require increased costs and additional filtration to treat and remove the high levels of TSS prior to discharging effluent into waterways. Therefore, the revenue requirement for TSS is apportioned based on Weighted TSS for each customer class, as shown in Table 74.

*Table 74: FY 2024 Wastewater TSS Allocation by Customer Class*

TSS Charge Component - Unit Rate	
Revenue Requirement (RR) \$	652,002
÷ Weighted TSS	58,264
<b>Monthly Unit Rate</b>	<b>\$11.20</b>

Customer Class	Weighted TSS [A]	% Allocation [B] = A as a %	Revenue Requirement [C] = RR x B
Residential	54,553	93.6%	\$ 610,483
Commercial			
Low	1,370	2.4%	15,329
Medium	1,609	2.8%	18,000
High	732	1.3%	8,189
<b>Total</b>	<b>58,264</b>	<b>100%</b>	<b>\$ 652,002</b>

Collectively, the total allocation of costs associated with Account Services, Flow, COS and TSS (Total Revenue Requirement) derives the cost of providing service to each customer class. Table 75 summarizes the combined revenue requirement by customer class.

*Table 75: FY 2024 Wastewater Total Revenue Requirement by Customer Class*

Customer Class	Account Services	Flow	COD	TSS	Allocated Revenue Requirements
Residential	\$ 576,354	\$ 310,786	\$ 605,794	\$ 610,483	\$ 2,103,418
Commercial	6,640	-	-	-	6,640
Low		7,817	13,949	15,329	37,095
Medium		5,776	22,149	18,000	45,926
High		1,622	10,110	8,189	19,921
<b>Total</b>	<b>\$ 582,995</b>	<b>\$ 326,001</b>	<b>\$ 652,002</b>	<b>\$ 652,002</b>	<b>\$ 2,213,000</b>

The revenue requirements for residential customers are noticed as flat monthly charges as residential flows are relatively constant throughout the year and will be collected on the property tax bill. Table 76 derives the monthly flat charges for Residential customers.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 76: FY 2024 Residential Flat Monthly Charge

Customer Class	Account Services	Flow	COD	TSS	Total Monthly Flat Charge
<b>Residential</b>					
Revenue Requirement	\$ 576,354	\$ 310,786	\$ 605,794	\$ 610,483	
÷ Units of Service	45,828	45,828	45,828	45,828	
<b>Unit Rate</b>	<b>\$12.58</b>	<b>\$6.79</b>	<b>\$13.22</b>	<b>\$13.33</b>	<b>\$45.92</b>

For Commercial customer classes, each account is charged a monthly fixed amount for Account Services and commodity rates that vary between the categories of Low, Medium, and High. Variable rates are derived for the variable components of Flow, COD, and TSS by dividing the total allocated cost by total water usage as wastewater flows are not metered. Table 77 and Table 78 derives the monthly fixed charges and variable rates for Commercial, respectively.

Table 77: FY 2024 Commercial Monthly Fixed Charge

Customer Class	Annual Billing Units	Account Services	Total Monthly Fixed Charge
	[A]	[B]	[C] = B ÷ A
Commercial	528	\$ 6,640	<b>\$12.58</b>

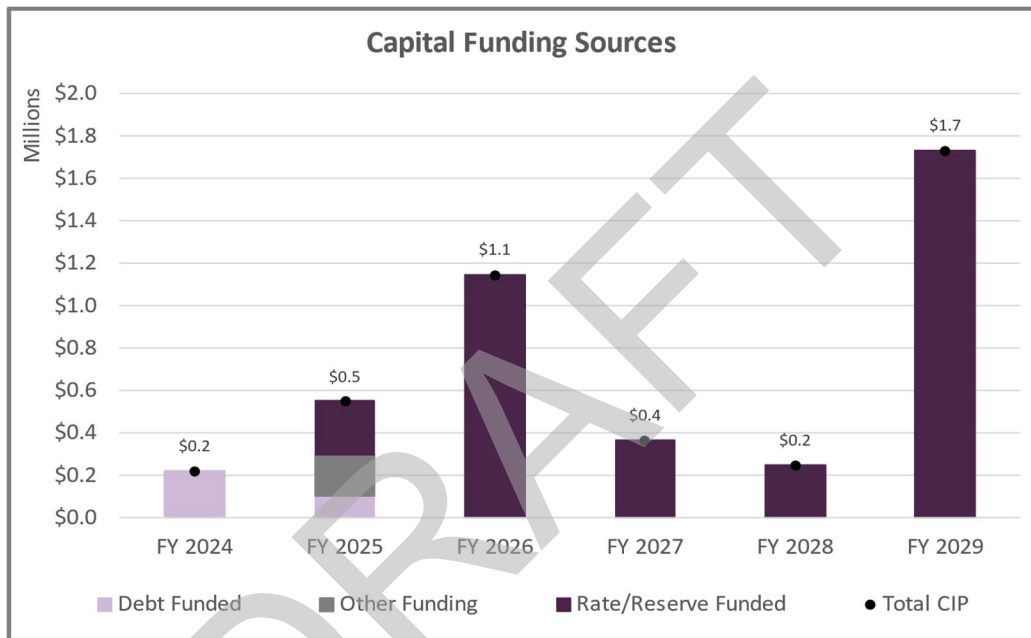
Table 78: FY 2024 Commercial Variable Rates

Customer Class	Commercial Water Usage (HCF)	Flow	COD	TSS	Flow	COD	TSS	Total Variable Rates
	[A]	[B]	[C]	[D]	[E] = B ÷ A	[F] = C ÷ A	[G] = D ÷ A	[H] = E + F + G
<b>Commercial</b>								
Low	7,784	\$ 7,817	\$ 13,949	\$ 15,329	\$ 1.01	\$ 1.80	\$ 1.97	<b>\$4.78</b>
Medium	5,752	5,776	22,149	18,000	1.01	3.86	3.13	<b>\$8.00</b>
High	1,615	1,622	10,110	8,189	1.01	6.27	5.08	<b>\$12.36</b>

## Recycled Water

The wastewater system produces approximately 800 AF of recycled water annually. The District has major repair and replacement projects over the next six years, including Booster Station Improvements, Dove Creek Pump Station Improvement and the Dove Lake Dam Outlet Works Replacement planned in FY 2029. With the significant Dove Dam replacement project occurring outside the Rate Setting Period, the financial plan tables and related charts extend through FY 2029 (Financial Plan Period). Figure 22 shows the District’s CIP through the Financial Plan Period.

Figure 22: Recycled Water Capital Improvement Plan



## Customers

As of July 1, 2022, the District serves a total of 28 recycled water accounts as shown in Table 79 by meter size.

Table 79: Recycled Water Accounts by Meter Size

Meter Size	Number of Accounts
1 1/2"	4
2"	17
3"	3
4"	2
10"	2
<b>Total</b>	<b>28</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Rate Study

The current recycled water rate structure is charged the same monthly base and WRES fixed charges as potable customers and a uniform variable rate. Existing meter charges and variable rate are identified in Table 80 through Table 82.

Table 80: FY 2023 Recycled Water Monthly Base Fixed Charges

Base Fixed Meter Charges (\$/Month)	
Meter Size	Existing
5/8"	\$ 21.04
3/4"	21.04
1"	30.70
1 1/2"	54.85
2"	83.81
3"	175.57
4"	310.77
6"	779.18

Table 81: FY 2023 Recycled Water Monthly WRES Fixed Charges

WRES Fixed Meter Charges (\$/Month)	
Meter Size	Existing
5/8"	\$ 16.04
3/4"	16.04
1"	25.25
1 1/2"	38.48
2"	51.30
3"	76.95
4"	102.60
6"	153.90

Table 82: FY 2023 Recycled Water Variable Rate

Recycled Variable Rates (\$/HCF)	
Customer Class	Existing
Recycled	3.47

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Financial Plan Overview – Recycled Water Utility

### Financial Planning Assumptions

Similar to the other utilities, certain assumptions are required for projecting revenues, expenses, and expected ending fund balances for the recycled water utility. Table 83 identifies assumptions used for forecasting revenues. Table 84 identifies assumptions used for forecasting increases in expenses through the Financial Plan Period.

*Table 83: Recycled Water Assumptions for Forecasting Revenues*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Revenue Escalation</b>						
Non-Rate Revenues	0%	0%	0%	0%	0%	0%
Reserve Interest	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
<b>Account Growth</b>	0%	0%	0%	0%	0%	0%
<b>All Non-Potable Meters</b>						
Meter Size						
1 1/2"	4	4	4	4	4	4
2"	17	17	17	17	17	17
3"	3	3	3	3	3	3
4"	2	2	2	2	2	2
10"	2	2	2	2	2	2
<b>Total All Non-Potable Meters</b>	<b>28</b>	<b>28</b>	<b>28</b>	<b>28</b>	<b>28</b>	<b>28</b>
<b>Total Non-Potable Consumption (HCF)</b>	<b>306,630</b>	<b>306,630</b>	<b>306,630</b>	<b>306,630</b>	<b>306,630</b>	<b>306,630</b>

*Table 84: Recycled Water Assumptions for Forecasting Expenses<sup>6</sup>*

Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Expenditure Escalation</b>						
Benefits	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Capital Construction	6.6%	3.9%	3.9%	3.9%	3.9%	3.9%
Energy Costs	8.0%	8.0%	5.0%	5.0%	5.0%	5.0%
Fuel	20.0%	20.0%	5.0%	5.0%	5.0%	5.0%
General Costs	6.2%	4.0%	4.0%	4.0%	4.0%	4.0%
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retirement	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Salaries	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Water Purchases (Fixed)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Water Purchases SMWD - Recycled	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

<sup>6</sup> Capital Construction inflation and General Costs for FY 2024 were increased to 6.63% and 6.2%, respectively, to account for recent increases due to inflation. Outer years reduce to 3.93% and 3.95%, reflecting the 5-year average of the Engineer's News Record – CCI index and the LA Consumer Price Index, respectively.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Current Financial Position

### Revenues

Based on the forecasting assumptions, revenues were calculated using existing fixed charges (Table 80 and Table 81), multiplied by meters by size and variable rates (Table 83) multiplied by recycled water usage. Table 85 shows the calculated revenues through the Financial Plan Period. Table 86 provides a summary of calculated rate revenues and other non-rate revenues available through the Financial Plan Period (rounded to thousands).

*Table 85: Recycled Water Calculated Rate Revenues*

Calculated Recycled Revenue	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Rate Revenues</b>						
Fixed Revenue	\$ 82,342	\$ 82,342	\$ 82,342	\$ 82,342	\$ 82,342	\$ 82,342
Variable Revenue	1,064,006	1,064,006	1,064,006	1,064,006	1,064,006	1,064,006
WRES Revenue	20,145	20,145	20,145	20,145	20,145	20,145
<b>Total Rate Revenues</b>	<b>\$ 1,166,493</b>	<b>\$ 1,166,493</b>	<b>\$ 1,166,493</b>	<b>\$ 1,166,493</b>	<b>\$ 1,166,493</b>	<b>\$ 1,166,493</b>

*Table 86: Recycled Water Projected Revenues*

Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Rate Revenues</b>						
Fixed Revenue	\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000
Variable Revenue	1,064,000	1,064,000	1,064,000	1,064,000	1,064,000	1,064,000
WRES Revenue	20,000	20,000	20,000	20,000	20,000	20,000
<b>Subtotal Rate Revenues</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>
<b>Operating Revenues</b>						
Late Charges	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
<b>Subtotal Operating Revenues</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>
<b>Non-Operating Revenues</b>						
Other Non-Operating Revenue	1,000	1,000	1,000	1,000	1,000	1,000
Interest Revenue	-	-	-	4,000	6,000	6,000
Property Tax	290,000	280,000	270,000	260,000	250,000	250,000
<b>Subtotal Non-Operating Revenue:</b>	<b>\$ 291,000</b>	<b>\$ 281,000</b>	<b>\$ 271,000</b>	<b>\$ 265,000</b>	<b>\$ 257,000</b>	<b>\$ 257,000</b>
<b>Total Revenues</b>	<b>\$ 1,460,000</b>	<b>\$ 1,450,000</b>	<b>\$ 1,440,000</b>	<b>\$ 1,434,000</b>	<b>\$ 1,426,000</b>	<b>\$ 1,426,000</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Expenses

The FY 2023 budget was used as the utility's baseline expenses and adjusted in subsequent years based on the escalation factors shown in Table 84. Table 87 provides projected O&M expenses through the Financial Plan Period (rounded to thousands). Each expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor to use for forecasting how costs will increase over time.

*Table 87: Recycled Water Projected O&M Expenses*

O&M Expenses	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Operating Expenses</b>						
Source of Supply	\$ 64,000	\$ 67,000	\$ 70,000	\$ 73,000	\$ 77,000	\$ 80,000
General and Administrative	115,000	120,000	125,000	131,000	137,000	143,000
Salaries & Benefits	316,000	333,000	352,000	372,000	392,000	414,000
Transmission & Distribution	459,000	491,000	514,000	538,000	563,000	589,000
CalPERS & OPEB	17,000	16,000	15,000	14,000	13,000	13,000
Other Expenses	69,000	72,000	75,000	78,000	81,000	84,000
<b>Subtotal Operating Expenses</b>	<b>\$ 1,040,000</b>	<b>\$ 1,099,000</b>	<b>\$ 1,151,000</b>	<b>\$ 1,206,000</b>	<b>\$ 1,263,000</b>	<b>\$ 1,323,000</b>
<b>Debt Service</b>						
Refinancing/New Proposed Debt	36,961	36,961	36,961	36,961	36,961	36,961
<b>Subtotal Debt Service</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>
<b>Total Expenses</b>	<b>\$ 1,076,961</b>	<b>\$ 1,135,961</b>	<b>\$ 1,187,961</b>	<b>\$ 1,242,961</b>	<b>\$ 1,299,961</b>	<b>\$ 1,359,961</b>

## Reserves

For financial planning, similar reserve targets for water and wastewater were used, except for the rehabilitation fund. The rehabilitation target was set at a rolling 5-year average of upcoming capital due to the increase in capital spending planned. These reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements. These reserves help smooth rates and mitigate rate spikes due to emergencies or above-average system costs. Table 88 summarizes the recommended minimum reserve requirements and the ideal funding targets of each reserve.

*Table 88: Recycled Water Reserve Requirements and Targets*

Reserve	Minimum Requirement	Reserve Target
Operating	90 days of operating expenses	180 days of operating expenses
Capital Replacement	Annual CIP costs based on 5-year average	2 years of CIP costs based on 5-year average
Rate Stabilization	20% of operating revenues	N/A

The reserve balance as of July 1, 2022, reflected a deficit of approximately (\$908k).

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from existing rates are sufficient to fund O&M through the Financial Plan Period. However, only a portion of the system rehabilitation needs can be funded with projected net operating income resulting in a growing deficit shown as a negative reserve ending balance. Without rate increases, there would not be available funding for capital spending. Table 89 forecasts existing revenues and expenses through the Financial Plan Period. Table 90 identifies reserve transfers and reserves activity, with projected FY 2024 starting reserve balances shown for each reserve.

*Table 89: Recycled Water Financial Plan at Existing Rates*

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Rate Revenues</b>							
Fixed Revenue		\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000
Variable Revenue	Table 86	1,064,000	1,064,000	1,064,000	1,064,000	1,064,000	1,064,000
WRES Revenue		20,000	20,000	20,000	20,000	20,000	20,000
<b>Total Rate Revenues</b>		<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>
<b>Operating Revenues</b>							
Late Charges	Table 86	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
<b>Subtotal Operating Revenues</b>		<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>
<b>Non-Operating Revenues</b>							
Other Non-Operating Revenue		\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Property Tax	Table 86	290,000	280,000	270,000	260,000	250,000	250,000
<b>Subtotal Non-Operating Revenues</b>		<b>\$ 291,000</b>	<b>\$ 281,000</b>	<b>\$ 271,000</b>	<b>\$ 265,000</b>	<b>\$ 257,000</b>	<b>\$ 257,000</b>
<b>Total Revenues</b>		<b>\$ 1,460,000</b>	<b>\$ 1,450,000</b>	<b>\$ 1,440,000</b>	<b>\$ 1,434,000</b>	<b>\$ 1,426,000</b>	<b>\$ 1,426,000</b>
<b>O&amp;M Expenses</b>							
<b>Operating Expenses</b>							
Source of Supply		\$ 64,000	\$ 67,000	\$ 70,000	\$ 73,000	\$ 77,000	\$ 80,000
General and Administrative		115,000	120,000	125,000	131,000	137,000	143,000
Salaries & Benefits	Table 87	316,000	333,000	352,000	372,000	392,000	414,000
Transmission & Distribution		459,000	491,000	514,000	538,000	563,000	589,000
CalPERS & OPEB		17,000	16,000	15,000	14,000	13,000	13,000
Other Expenses		69,000	72,000	75,000	78,000	81,000	84,000
<b>Subtotal Operating Expenses</b>		<b>\$ 1,040,000</b>	<b>\$ 1,099,000</b>	<b>\$ 1,151,000</b>	<b>\$ 1,206,000</b>	<b>\$ 1,263,000</b>	<b>\$ 1,323,000</b>
<b>Debt Service</b>							
Credit Line		\$ 7,250	\$ 3,625	\$ -	\$ -	\$ -	\$ -
Refinancing/New Proposed Debt	Table 87	\$ 36,961	\$ 36,961	\$ 36,961	\$ 36,961	\$ 36,961	\$ 36,961
<b>Subtotal Debt Service</b>		<b>\$ 44,211</b>	<b>\$ 40,586</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>	<b>\$ 36,961</b>
<b>Total Expenses</b>		<b>\$ 1,084,211</b>	<b>\$ 1,139,586</b>	<b>\$ 1,187,961</b>	<b>\$ 1,242,961</b>	<b>\$ 1,299,961</b>	<b>\$ 1,359,961</b>
<b>Net Cashflow</b>		<b>\$ 375,789</b>	<b>\$ 310,414</b>	<b>\$ 252,039</b>	<b>\$ 191,039</b>	<b>\$ 126,039</b>	<b>\$ 66,039</b>

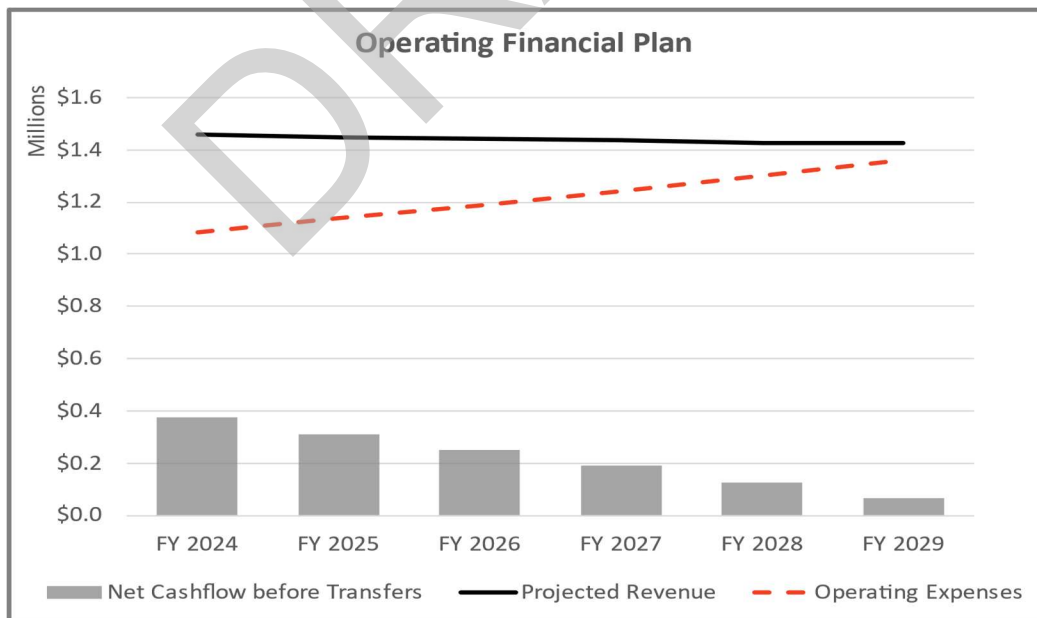
# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 90: Recycled Water – Transfers and Reserve Activity at Existing Rates

Operating/Working Capital	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Beginning Balance</b>	\$ (542,569)	\$ (166,780)	\$ 143,634	\$ 283,808	\$ 297,370	\$ 311,425
Transfers (Net Cashflow)	375,789	310,414	252,039	191,039	126,039	66,039
Transfers from/(to) Capital Reserve	-	-	(111,865)	(177,477)	(111,984)	(51,244)
<b>Ending Balance</b>	<b>\$ (166,780)</b>	<b>\$ 143,634</b>	<b>\$ 283,808</b>	<b>\$ 297,370</b>	<b>\$ 311,425</b>	<b>\$ 326,219</b>
Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Beginning Balance</b>	\$ (221,206)	\$ (221,206)	\$ (475,246)	\$ (1,507,215)	\$ (1,696,653)	\$ (1,833,509)
<u>Plus:</u>						
Transfers from/(to) Operating/Working Capital	-	-	111,865	177,477	111,984	51,244
Grant Revenue	-	194,750	-	-	-	-
Use of Existing Debt Proceeds	220,347	100,353	-	-	-	-
<u>Less:</u>						
CIP	(220,347)	(549,143)	(1,143,834)	(366,915)	(248,840)	(1,733,318)
Transfers from/(to) Recycled Water Rate Stabilization Reserve	-	-	-	-	-	-
Subtotal Capital Reserve	\$ (221,206)	\$ (475,246)	\$ (1,507,215)	\$ (1,696,653)	\$ (1,833,509)	\$ (3,515,582)
Interest Earnings	-	-	-	-	-	-
<b>Ending Balance</b>	<b>\$ (221,206)</b>	<b>\$ (475,246)</b>	<b>\$ (1,507,215)</b>	<b>\$ (1,696,653)</b>	<b>\$ (1,833,509)</b>	<b>\$ (3,515,582)</b>
Recycled Water Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Beginning Balance</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers from/(to) Capital Reserve	-	-	-	-	-	-
<b>Ending Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Ending Unrestricted Reserves Balance</b>	<b>\$ (387,986)</b>	<b>\$ (331,612)</b>	<b>\$ (1,223,407)</b>	<b>\$ (1,399,283)</b>	<b>\$ (1,522,084)</b>	<b>\$ (3,189,363)</b>

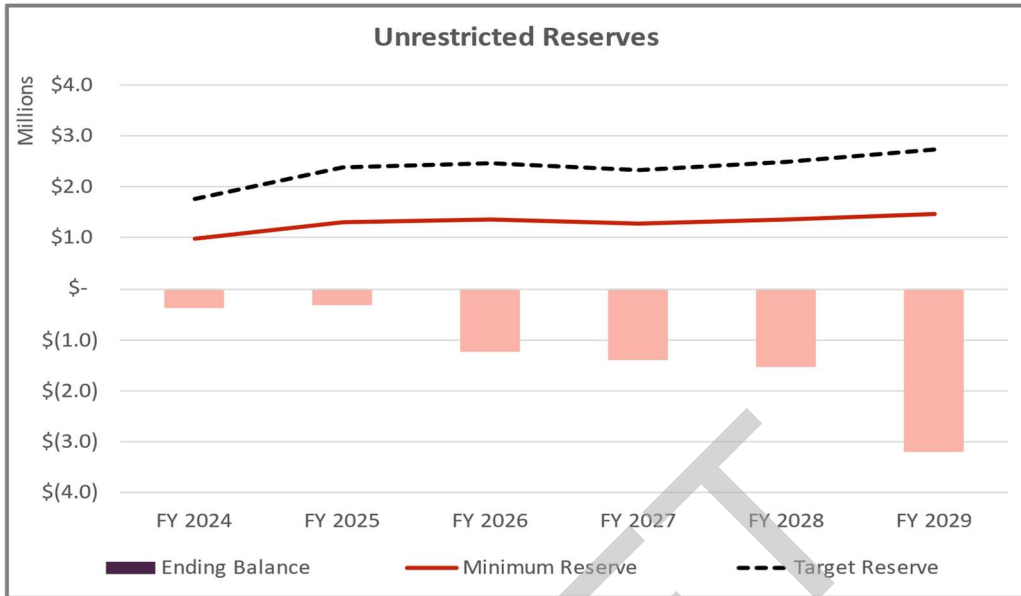
Figure 23 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and total revenues at existing rates are shown by the horizontal black trendline. The bars represent the amount of net operating income available. Figure 24 reflects the projected ending balances of reserves after operating, and capital projects are funded through the Financial Plan Period.

Figure 23: Recycled Water Current Operating Financial Position



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 24: Recycled Water Projected Ending Reserves at Existing Rates



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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Proposed Financial Plan – Recycled Water Utility

From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements while meeting reserve requirements. Based on funding the capital plan and ensuring reserves meet minimum targets over the Rate Setting Period, Table 91 forecasts projected revenues and expenses over the Financial Plan Period.

*Table 91: Recycled Water Proposed Financial Plan*

Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Rate Revenues</b>							
Fixed Revenue		\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000	\$ 82,000
Variable Revenue	Table 86	1,064,000	1,064,000	1,064,000	1,064,000	1,064,000	1,064,000
WRES Revenue		20,000	20,000	20,000	20,000	20,000	20,000
<b>Total Rate Revenues</b>		<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>	<b>\$ 1,166,000</b>
<b>Additional Revenue (from revenue adjustments):</b>							
<b>Fiscal Year</b>	<b>Revenue Adjustment</b>	<b>Effective Month</b>					
FY 2024	20.0%	July	233,000	233,000	233,000	233,000	233,000
FY 2025	20.0%	July		279,000	279,000	279,000	279,000
FY 2026	20.0%	July			335,000	335,000	335,000
FY 2027	15.0%	July				301,000	301,000
FY 2028	10.0%	July					231,000
FY 2029	0.0%	July					-
<b>Total Additional Revenue</b>		<b>\$ 233,000</b>	<b>\$ 512,000</b>	<b>\$ 847,000</b>	<b>\$ 1,148,000</b>	<b>\$ 1,379,000</b>	<b>\$ 1,379,000</b>
<b>Projected Rate Revenues</b>		<b>\$ 1,399,000</b>	<b>\$ 1,678,000</b>	<b>\$ 2,013,000</b>	<b>\$ 2,314,000</b>	<b>\$ 2,545,000</b>	<b>\$ 2,545,000</b>
<b>Operating Revenues</b>							
Late Charges	Table 86	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
<b>Subtotal Operating Revenues</b>		<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>
<b>Non-Operating Revenues</b>							
Other Non-Operating Revenue	Table 86	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Property Tax		290,000	280,000	270,000	260,000	250,000	250,000
<b>Subtotal Non-Operating Revenues</b>		<b>\$ 291,000</b>	<b>\$ 281,000</b>	<b>\$ 274,000</b>	<b>\$ 267,000</b>	<b>\$ 257,000</b>	<b>\$ 267,000</b>
<b>Total Revenues</b>		<b>\$ 1,693,000</b>	<b>\$ 1,962,000</b>	<b>\$ 2,290,000</b>	<b>\$ 2,584,000</b>	<b>\$ 2,805,000</b>	<b>\$ 2,815,000</b>
<b>O&amp;M Expenses</b>							
<b>Operating Expenses</b>							
Source of Supply		\$ 64,000	\$ 67,000	\$ 70,000	\$ 73,000	\$ 77,000	\$ 80,000
General and Administrative		115,000	120,000	125,000	131,000	137,000	143,000
Salaries & Benefits	Table 87	316,000	333,000	352,000	372,000	392,000	414,000
Transmission & Distribution		459,000	491,000	514,000	538,000	563,000	589,000
CalPERS & OPEB		17,000	16,000	15,000	14,000	13,000	13,000
Other Expenses		69,000	72,000	75,000	78,000	81,000	84,000
<b>Subtotal Operating Expenses</b>		<b>\$ 1,040,000</b>	<b>\$ 1,099,000</b>	<b>\$ 1,151,000</b>	<b>\$ 1,206,000</b>	<b>\$ 1,263,000</b>	<b>\$ 1,323,000</b>
<b>Debt Service</b>							
Credit Line	Table 87	\$ 7,250	\$ 3,625	\$ -	\$ -	\$ -	\$ -
Refinancing/New Proposed Debt		73,922	73,922	73,922	73,922	73,922	73,922
<b>Subtotal Debt Service</b>		<b>\$ 81,172</b>	<b>\$ 77,547</b>	<b>\$ 73,922</b>	<b>\$ 73,922</b>	<b>\$ 73,922</b>	<b>\$ 73,922</b>
<b>Total Expenses</b>		<b>\$ 1,121,172</b>	<b>\$ 1,176,547</b>	<b>\$ 1,224,922</b>	<b>\$ 1,279,922</b>	<b>\$ 1,336,922</b>	<b>\$ 1,396,922</b>
<b>Net Cashflow</b>		<b>\$ 571,828</b>	<b>\$ 785,453</b>	<b>\$ 1,065,078</b>	<b>\$ 1,304,078</b>	<b>\$ 1,468,078</b>	<b>\$ 1,418,078</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 92: Recycled Water Transfers and Reserve Activity

Operating/Working Capital	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Beginning Balance</b>	\$ (542,569)	\$ 29,259	\$ 270,986	\$ 283,808	\$ 297,370	\$ 311,425
Transfers (Net Cashflow )	571,828	785,453	1,065,078	1,304,078	1,468,078	1,418,078
Transfers from/(to) Capital Reserve	-	(543,726)	(1,052,256)	(1,290,516)	(1,454,023)	(1,403,283)
<b>Ending Balance</b>	<b>\$ 29,259</b>	<b>\$ 270,986</b>	<b>\$ 283,808</b>	<b>\$ 297,370</b>	<b>\$ 311,425</b>	<b>\$ 326,219</b>
Capital Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Beginning Balance</b>	\$ (221,206)	\$ 279,370	\$ 577,540	\$ 496,597	\$ 1,439,366	\$ 1,662,101
<u>Plus:</u>						
Transfers from/(to) Operating/Working Capital	-	543,726	1,052,256	1,290,516	1,454,023	1,403,283
Grant Revenue	-	194,750	-	-	-	-
Use of Existing Debt Proceeds	220,347	100,353	-	-	-	-
<u>Less:</u>						
CIP	(220,347)	(549,143)	(1,143,834)	(366,915)	(248,840)	(1,733,318)
Transfers from/(to) Recycled Water Rate Stabilization Reserve	-	-	-	-	(1,013,155)	-
Subtotal Capital Reserve	\$ 278,794	\$ 569,055	\$ 485,962	\$ 1,420,198	\$ 1,631,394	\$ 1,332,067
Interest Earnings	576	8,484	10,635	19,168	30,708	29,942
<b>Ending Balance</b>	<b>\$ 279,370</b>	<b>\$ 577,540</b>	<b>\$ 496,597</b>	<b>\$ 1,439,366</b>	<b>\$ 1,662,101</b>	<b>\$ 1,362,009</b>
Recycled Water Rate Stabilization Reserve	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
<b>Beginning Balance</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,013,155
Transfers from/(to) Capital Reserve	-	-	-	-	1,013,155	-
<b>Ending Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,013,155</b>	<b>\$ 1,013,155</b>
<b>Ending Unrestricted Reserves Balance</b>	<b>\$ 308,629</b>	<b>\$ 848,526</b>	<b>\$ 780,405</b>	<b>\$ 1,736,736</b>	<b>\$ 2,986,681</b>	<b>\$ 2,701,383</b>

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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 25 identifies the operating position based on the proposed financial plan, and Figure 26 show the capital plan with funding sources. Figure 27 identifies the ending reserve balances.

Figure 25: Recycled Water Proposed Operating Position

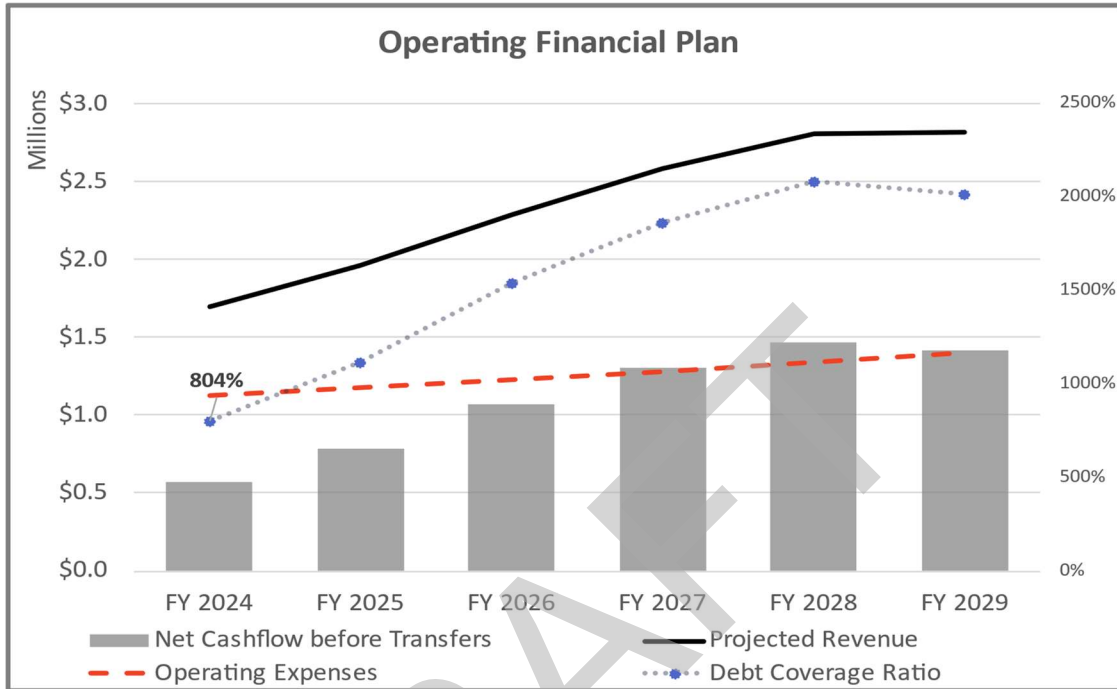
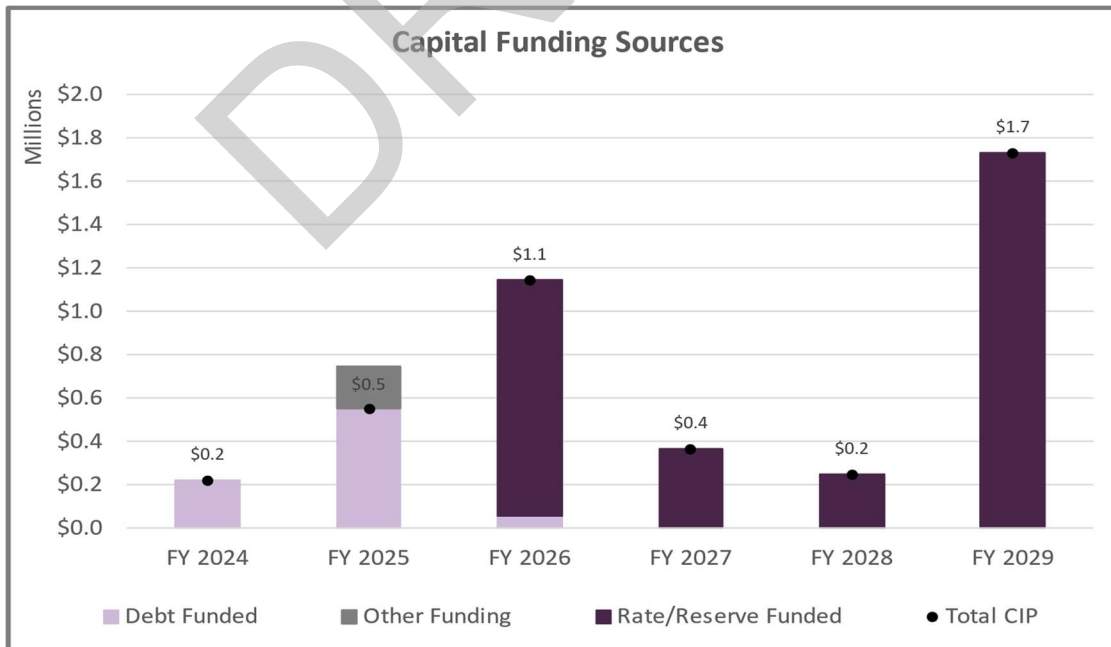
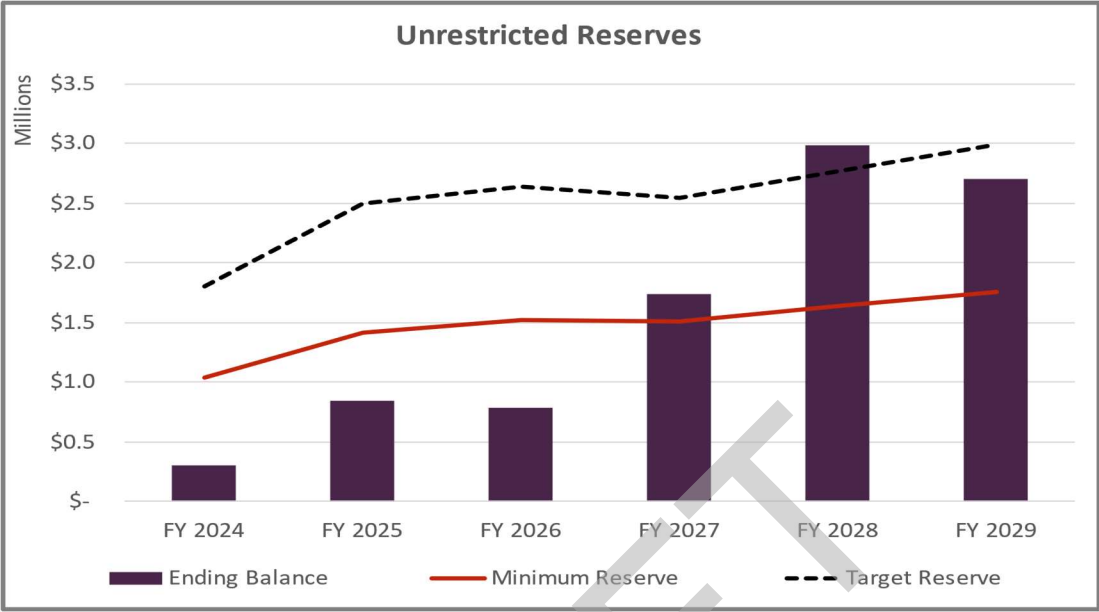


Figure 26: Recycled Water Capital Improvement Plan with Funding Sources



# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Figure 27: Recycled Water Proposed Ending Reserves



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# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Cost-of-Service Analysis – Recycled Water Utility

### Cost-of-Service Process

The next step in developing recycled water rates is to perform a cost-of-service analysis. Through this process, costs incurred are allocated to customers based on their proportional share. As a result, proposed rates are cost-based and reflect the costs incurred to provide service to customers.

### Revenue Requirements

FY 2024 revenue requirements were used for the cost-of-service analysis. Revenue requirements include O&M expenses, treatment plant expenses, debt, revenue offsets, and reserve funding. The proposed revenue adjustments and corresponding rates accumulate the necessary funding over the Rate Setting Period to fund O&M, capital projects, and comply with minimum reserve requirements by FY 2027. The results of the financial plan analysis are summarized in Table 93 and represent the revenue required from rates over the Rate Setting Period.

Table 93: Recycled Water Revenue Requirements

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Requirements	Total	Total	Total	Total	Total
<b>Operating Expenses</b>					
Source of Supply	\$ 64,000	\$ 67,000	\$ 70,000	\$ 73,000	\$ 77,000
General and Administrative	115,000	120,000	125,000	131,000	137,000
Salaries & Benefits	316,000	333,000	352,000	372,000	392,000
Transmission & Distribution	459,000	491,000	514,000	538,000	563,000
CalPERS & OPEB	17,000	16,000	15,000	14,000	13,000
Other Expenses	69,000	72,000	75,000	78,000	81,000
<b>Total Operating Expenses</b>	<b>\$ 1,040,000</b>	<b>\$ 1,099,000</b>	<b>\$ 1,151,000</b>	<b>\$ 1,206,000</b>	<b>\$ 1,263,000</b>
<b>Debt Service</b>					
Credit Line	\$ 7,250	\$ 3,625	\$ -	\$ -	\$ -
Refinancing/New Proposed Debt	73,922	73,922	73,922	73,922	73,922
<b>Total Debt Service</b>	<b>\$ 81,172</b>	<b>\$ 77,547</b>	<b>\$ 73,922</b>	<b>\$ 73,922</b>	<b>\$ 73,922</b>
<b>Total Operating Expenditures</b>	<b>\$ 1,121,172</b>	<b>\$ 1,176,547</b>	<b>\$ 1,224,922</b>	<b>\$ 1,279,922</b>	<b>\$ 1,336,922</b>
<b>Revenue Offsets</b>					
Operating Revenues	\$ (3,000)	\$ (3,000)	\$ (3,000)	\$ (3,000)	\$ (3,000)
Non-Operating Revenues	(291,000)	(281,000)	(274,000)	(267,000)	(257,000)
<b>Total Revenue Offsets</b>	<b>\$ (294,000)</b>	<b>\$ (284,000)</b>	<b>\$ (277,000)</b>	<b>\$ (270,000)</b>	<b>\$ (260,000)</b>
<b>Adjustments</b>					
Reserve Funding	\$ 571,828	\$ 785,453	\$ 1,065,078	\$ 1,304,078	\$ 1,468,078
<b>Total Adjustments</b>	<b>\$ 571,828</b>	<b>\$ 785,453</b>	<b>\$ 1,065,078</b>	<b>\$ 1,304,078</b>	<b>\$ 1,468,078</b>
<b>Revenue Requirement from Rates</b>	<b>\$1,399,000</b>	<b>\$1,678,000</b>	<b>\$2,013,000</b>	<b>\$2,314,000</b>	<b>\$2,545,000</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Rate Design – Recycled Water Utility

Currently, recycled water fixed charges are set at 100% of potable fixed charges; however, given the proposed revenue adjustments within the water utility and the shift in fixed cost recovery from 31% up to approximately 40%, maintaining the 100% equivalency would cause recycled water variable rates to reduce substantially. Therefore, based on direction from District Staff, recycled water fixed charges will be set to 55% of potable, with the remaining multi-year revenue requirements recovered from variable rates. to cover the cost of providing service. Therefore, the amount of annual revenues generated by the meter rates for each fiscal year are determined and then used to derive variable rates for the Rate Setting Period.

### Fixed Cost Recovery

Table 94 derives the recycled water monthly meter charges based on 55% potable meter charges over the Rate Setting Period and calculates total revenue generated by the proposed fixed charges based on the meter counts by size in Table 83.

Table 94: Proposed Recycled Water Monthly Meter Charges

Potable Fixed Meter Charges (\$/Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$ 46.84	\$ 55.28	\$ 65.24	\$ 71.77	\$ 78.95
3/4"	46.84	55.28	65.24	71.77	78.95
1"	94.93	112.02	132.19	145.41	159.96
1 1/2"	175.08	206.60	243.79	268.17	294.99
2"	271.26	320.09	377.71	415.49	457.04
3"	575.83	679.48	801.79	881.97	970.17
4"	1024.67	1,209.12	1,426.77	1,569.45	1,726.40
6"	2098.68	2,476.45	2,922.22	3,214.45	3,535.90
8"	4503.18	5,313.76	6,270.24	6,897.27	7,587.00
10"	6747.38	7,961.91	9,395.06	10,334.57	11,368.03
% of Potable	55.0%	55.0%	55.0%	55.0%	55.0%
Recycled Fixed Meter Charges (\$/Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$ 25.76	\$ 30.40	\$ 35.88	\$ 39.47	\$ 43.42
3/4"	25.76	30.40	35.88	39.47	43.42
1"	52.21	61.61	72.70	79.98	87.98
1 1/2"	96.29	113.63	134.08	147.49	162.24
2"	149.19	176.05	207.74	228.52	251.37
3"	316.71	373.71	440.98	485.08	533.59
4"	563.57	665.02	784.72	863.20	949.52
6"	1,154.27	1,362.05	1,607.22	1,767.95	1,944.75
8"	2,476.75	2,922.57	3,448.63	3,793.50	4,172.85
10"	3,711.06	4,379.05	5,167.28	5,684.01	6,252.42
<b>Total</b>	<b>\$149,050</b>	<b>\$175,880</b>	<b>\$207,539</b>	<b>\$228,294</b>	<b>\$251,123</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Variable Cost Recovery

Table 95 derives the proposed variable rates by taking the total revenue requirement identified in Table 93 and reducing the amount by total fixed revenue calculated in Table 94. The net amount is divided by total recycled water sales to determine the recycled water variable rate for the Rate Setting Period.

Table 95: Proposed Recycled Water Variable Rates

Proposed Recycled Variable Rates (\$/HCF)					
Variable Rates	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recycled Revenue Requirement	\$ 1,399,000	\$ 1,678,000	\$ 2,013,000	\$ 2,314,000	\$ 2,545,000
Less: Projected Revenue from Fixed	(149,050)	(175,880)	(207,539)	(228,294)	(251,123)
Variable Revenue Requirement	\$ 1,249,950	\$ 1,502,120	\$ 1,805,461	\$ 2,085,706	\$ 2,293,877
÷ Units of Service (Projected Non-Potable Usage)	306,630	306,630	306,630	306,630	306,630
<b>Recycled</b>	<b>\$4.08</b>	<b>\$4.90</b>	<b>\$5.89</b>	<b>\$6.81</b>	<b>\$7.49</b>

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## Cost-Based Rates – Water, Wastewater, and Recycled Water

### Cost-of-Service and Rate Summary

The comprehensive cost-of-service analysis and rate development meet the requirements of Proposition 218 and identify the cost components that make up the proposed water, wastewater, and recycled water fixed charges and variable rates. Proposition 218 requires the following conditions:

1. An agency cannot collect revenue beyond what is necessary to provide service.  
*The long-term financial plan identifies the District's revenue requirements for each utility, including operating expenses, capital improvement programs, debt, and reserves.*
2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.  
*The District's water, wastewater, and recycled water utilities are analyzed as separate business enterprises to track revenues and expenses and do not fund services other than those necessary for the provision of water, wastewater, and recycled water, respectively.*
3. The amount of the fee may not exceed the proportional cost-of-service for the parcel.  
*The comprehensive cost-of-service analysis, updated fixed charges, and variable rates reflect each customer's fair share of water, wastewater, and recycled water costs, respectively. Through this updated analysis, each customer will pay the proportional cost of providing service to that parcel.*
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of a property.  
*Only properties that are actually receiving utility service or have service immediately available to them are required to pay the fixed and variable charges described in this study.*
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing.  
*Notices were mailed to each affected parcel owner on May 15, 2023 which is 45 days before the June 29, 2023, Public Hearing.*

The proposed water, wastewater, and recycled water 5-year rate schedules (FY 2024 through FY 2028) are shown in the following section. If a majority protest does not occur by or at the June 29<sup>th</sup> Public Hearing, the District Board may adopt the rates with an effective date of July 1, 2023.

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Rate Schedules – Water, Wastewater, and Recycled Water

### Water

Table 96 through Table 98 provide the five-year water rate schedule over the Rate Setting Period for monthly fixed charges, variable rates, and variable pumping rates, respectively. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

*Table 96: Proposed Water Monthly Fixed Charge (FY 2024 – FY 2028)*

Potable Fixed Meter Charges (\$/Month)					
Revenue Adjustment:	18%		10%		10%
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$ 46.84	\$ 55.28	\$ 65.24	\$ 71.77	\$ 78.95
3/4"	46.84	55.28	65.24	71.77	78.95
1"	94.93	112.02	132.19	145.41	159.96
1 1/2"	175.08	206.60	243.79	268.17	294.99
2"	271.26	320.09	377.71	415.49	457.04
3"	575.83	679.48	801.79	881.97	970.17
4"	1,024.67	1,209.12	1,426.77	1,569.45	1,726.40
6"	2,098.68	2,476.45	2,922.22	3,214.45	3,535.90

*Table 97: Proposed Water Variable Charge (FY 2024 – FY 2028)*

Potable Variable Rates (\$/HCF)					
Revenue Adjustment:	18%		10%		10%
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Single-Family</b>					
Tier 1	\$ 4.40	\$ 5.20	\$ 6.14	\$ 6.76	\$ 7.44
Tier 2	5.12	6.05	7.14	7.86	8.65
Tier 3	5.64	6.66	7.86	8.65	9.52
<b>Multi-Family</b>					
Tier 1	\$ 4.62	\$ 5.46	\$ 6.45	\$ 7.10	\$ 7.81
Tier 2	5.64	6.66	7.86	8.65	9.52
<b>Commercial</b>	\$ 4.73	\$ 5.59	\$ 6.60	\$ 7.26	\$ 7.99
<b>Irrigation</b>	\$ 4.73	\$ 5.59	\$ 6.60	\$ 7.26	\$ 7.99
<b>Agricultural</b>	\$ 4.73	\$ 5.59	\$ 6.60	\$ 7.26	\$ 7.99
<b>Portola Hills</b>	\$ 5.25	\$ 6.20	\$ 7.32	\$ 8.06	\$ 8.87

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 98: Proposed Water Variable Pumping Rates (FY 2024 – FY 2028)

Pumping Variable Rates (\$/HCF)					
Revenue Adjustment:		18%	18%	10%	10%
Pumping Zone	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Zone 1 - Base	\$ -	\$ -	\$ -	\$ -	\$ -
Zone 2 - Topanga / Saddlecrest	0.53	0.63	0.75	0.83	0.92
Zone 3 - Canyon Creek	0.94	1.11	1.31	1.45	1.60
Zone 4 - Falcon	1.44	1.70	2.01	2.22	2.45
Zone 5 - Joplin	0.14	0.17	0.21	0.24	0.27

## Wastewater

Table 99 provides the five-year wastewater rate schedule over the Rate Setting Period for monthly fixed charges and variable rates. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

Table 99: Proposed Wastewater Monthly Fixed Charge (FY 2024 – FY 2028)

Wastewater Rates					
Revenue Adjustment:		16.0%	16.0%	12.0%	12.0%
Flat Charges (\$/Month)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Residential	\$ 45.92	\$ 53.27	\$ 61.80	\$ 69.22	\$ 77.53
Commercial	\$ 12.58	\$ 14.60	\$ 16.94	\$ 18.98	\$ 21.26
Variable Rates (\$/HCF)					
<b>Commercial</b>					
Low	\$ 4.78	\$ 5.55	\$ 6.44	\$ 7.22	\$ 8.09
Medium	8.00	9.28	10.77	12.07	13.52
High	12.36	14.34	16.64	18.64	20.88

# Trabuco Canyon Water District – 2023 Cost-of-Service Rate Study

## Recycled Water

Table 100 and Table 101 provide the five-year recycled water fixed charges and variable rates over the Rate Setting Period, respectively. For FY 2025 through FY 2028, fixed charges are 55% of potable rates and the remaining revenue requirements for recycled water services are recovered from the variable rates.

*Table 100: Proposed Recycled Water Monthly Fixed Charge (FY 2024 – FY 2028)*

% of Potable	55.0%	55.0%	55.0%	55.0%	55.0%
<b>Non-Potable Fixed Meter Charges (\$/Month)</b>					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	\$ 25.45	\$ 30.03	\$ 35.44	\$ 38.98	\$ 42.88
3/4"	25.45	30.03	35.44	38.98	42.88
1"	51.11	60.32	71.18	78.30	86.14
1 1/2"	93.89	110.79	130.74	143.81	158.19
2"	145.22	171.36	202.21	222.44	244.68
3"	307.77	363.18	428.55	471.41	518.55
4"	547.32	645.84	762.09	838.30	922.14
6"	1,120.52	1,322.22	1,560.22	1,716.24	1,887.87
8"	2,403.81	2,836.50	3,347.07	3,681.78	4,049.96
10"	3,601.54	4,249.82	5,014.80	5,516.28	6,067.91
<b>Total</b>	<b>\$144,784</b>	<b>\$170,846</b>	<b>\$201,600</b>	<b>\$221,760</b>	<b>\$243,937</b>

*Table 101: Proposed Recycled Water Variable Rates (FY 2024 – FY 2028)*

<b>Proposed Recycled Variable Rates (\$/HCF)</b>					
Variable Rate Analysis	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Recycled Revenue Requirement	\$ 1,399,000	\$ 1,678,000	\$ 2,013,000	\$ 2,314,000	\$ 2,545,000
Less: Projected Revenue from Fixed	(144,784)	(170,846)	(201,600)	(221,760)	(243,937)
Variable Revenue Requirement	\$ 1,254,216	\$ 1,507,154	\$ 1,811,400	\$ 2,092,240	\$ 2,301,063
÷ Units of Service (Projected Non-Potable Usage)	306,630	306,630	306,630	306,630	306,630
<b>Proposed Variable Rates</b>	<b>\$4.10</b>	<b>\$4.92</b>	<b>\$5.91</b>	<b>\$6.83</b>	<b>\$7.51</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

## Appendix A – Water Supply Analysis

Table 102: Water Supply Analysis

Key Inputs / Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Water Loss	7.1%	7.1%	7.1%	7.1%	7.1%
<b>Purchased Water Rates</b>					
<b>Variable Purchased Water Costs (\$/AF)</b>					
<b>Baker (BTP)</b>					
Commodity Rate	\$ 858	\$ 858	\$ 858	\$ 858	\$ 858
SAC Operational Surcharge	0.97	0.97	0.97	0.97	0.97
SCP Operational Surcharge	8.14	8.14	8.14	8.14	8.14
<b>SMWD - Treated</b>					
Commodity Rate	\$ 1,209	\$ 1,209	\$ 1,209	\$ 1,209	\$ 1,209
SCP Operational Surcharge	8.14	8.14	8.14	8.14	8.14
<b>IRWD - Treated</b>					
Treated Commodity Rate	\$ 1,209	\$ 1,209	\$ 1,209	\$ 1,209	\$ 1,209
SCP Operational Surcharge	0.00	0.00	0.00	0.00	0.00
Pumping Surcharge	152	152	152	152	152
<b>Dimension (DWTP)</b>					
Untreated Commodity Rate	\$ 858	\$ 858	\$ 858	\$ 858	\$ 858
SAC Operational Surcharge	0.97	0.97	0.97	0.97	0.97
<b>Portola Hills</b>					
Commodity Rate	\$ 1,396	\$ 1,396	\$ 1,396	\$ 1,396	\$ 1,396
<b>City of San Clemente</b>					
BTP Commodity Rate	\$ 855	\$ 855	\$ 855	\$ 855	\$ 855
<b>Fixed Purchased Water Costs</b>					
<b>MWDOC</b>					
Capacity Charge - 1st Half (Jul - Dec)	\$ 28,796	\$ 28,796	\$ 28,796	\$ 28,796	\$ 28,796
Capacity Charge - 2nd Half (Jan - Jun)	28,796	28,796	28,796	28,796	28,796
Readiness to Serve	166,838	166,838	166,838	166,838	166,838
Annual Connection Fees	56,073	56,073	56,073	56,073	56,073
<b>SMWD</b>					
Chiquita Fixed O&M	12,191	12,191	12,191	12,191	12,191
Chiquita Variable O&M	2,952	2,952	2,952	2,952	2,952
<b>IRWD</b>					
BTP O&M	305,227	305,227	305,227	305,227	305,227
BTP Standby Charge	13,878	13,878	13,878	13,878	13,878
<b>Portola Hills</b>					
Fixed Charge	43,541	43,541	43,541	43,541	43,541
<b>Subtotal Fixed Purchased Water Costs</b>	<b>\$ 658,291</b>	<b>\$ 658,291</b>	<b>\$ 658,291</b>	<b>\$ 658,291</b>	<b>\$ 658,291</b>
<b>Variable Purchased Water Costs</b>					
<b>Total Billings/Sales (AF)</b>	<b>2,323 AF</b>	<b>2,323 AF</b>	<b>2,323 AF</b>	<b>2,323 AF</b>	<b>2,323 AF</b>
Portola Sales (AF)	145 AF	145 AF	145 AF	145 AF	145 AF
<b>Sales less Portola</b>	<b>2,178 AF</b>	<b>2,178 AF</b>	<b>2,178 AF</b>	<b>2,178 AF</b>	<b>2,178 AF</b>
<b>Water Purchases (AF)</b>					
<b>TCWD Demand (AF) (including water loss)</b>	<b>2,344 AF</b>	<b>2,344 AF</b>	<b>2,344 AF</b>	<b>2,344 AF</b>	<b>2,344 AF</b>
Baker (BTP)	368 AF	368 AF	368 AF	368 AF	368 AF
SMWD - Treated	26 AF	26 AF	26 AF	26 AF	26 AF
IRWD - Treated	591 AF	591 AF	591 AF	591 AF	591 AF
Dimension (DWTP)	1,359 AF	1,359 AF	1,359 AF	1,359 AF	1,359 AF
<b>Portola Hills</b>					
<b>Water Sales - BTP</b>	<b>867 AF</b>	<b>867 AF</b>	<b>867 AF</b>	<b>867 AF</b>	<b>867 AF</b>
<b>Calculated Variable Purchased Water Costs</b>					
<b>TCWD</b>					
Baker (BTP)	\$ 319,442	\$ 319,442	\$ 319,442	\$ 319,442	\$ 319,442
SMWD - Treated	31,633	31,633	31,633	31,633	31,633
IRWD - Treated	804,895	804,895	804,895	804,895	804,895
Dimension (DWTP)	1,167,189	1,167,189	1,167,189	1,167,189	1,167,189
<b>Portola Hills</b>					
<b>Water Sales - BTP</b>	<b>741,392</b>	<b>741,392</b>	<b>741,392</b>	<b>741,392</b>	<b>741,392</b>
<b>Total Calculated Variable Purchased Water Costs</b>	<b>\$ 3,266,506</b>	<b>\$ 3,266,506</b>	<b>\$ 3,266,506</b>	<b>\$ 3,266,506</b>	<b>\$ 3,266,506</b>
<b>Pumping Costs</b>					
T&D - Electricity	\$ 263,412	\$ 284,485	\$ 298,709	\$ 313,645	\$ 329,327
<b>Subtotal Pumping Costs</b>	<b>\$ 263,412</b>	<b>\$ 284,485</b>	<b>\$ 298,709</b>	<b>\$ 313,645</b>	<b>\$ 329,327</b>

# Trabuco Canyon Water District – 2023 Cost-of-Service Study

Table 103: Water Supply Analysis Summary

Purchased Water Costs Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
<b>Fixed Purchased Water Costs</b>					
MWDOC	\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000	\$ 281,000
SMWD	16,000	16,000	16,000	16,000	16,000
IRWD	320,000	320,000	320,000	320,000	320,000
Portola Hills	44,000	44,000	44,000	44,000	44,000
<b>Subtotal Fixed Purchased Water Costs</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>	<b>\$ 661,000</b>
<b>Variable Purchased Water Costs</b>					
TCWD					
Baker (BTP)	\$ 320,000	\$ 320,000	\$ 320,000	\$ 320,000	\$ 320,000
SMWD - Treated	32,000	32,000	32,000	32,000	32,000
IRWD - Treated	805,000	805,000	805,000	805,000	805,000
Dimension (DWTP)	1,168,000	1,168,000	1,168,000	1,168,000	1,168,000
Portola Hills	202,000	202,000	202,000	202,000	202,000
Water Sales - BTP	742,000	742,000	742,000	742,000	742,000
<b>Subtotal Variable Purchased Water Costs</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>	<b>\$ 3,269,000</b>
<b>Pumping Costs</b>					
T&D - Electricity	\$ 264,000	\$ 285,000	\$ 299,000	\$ 314,000	\$ 330,000
<b>Subtotal Pumping Costs</b>	<b>\$ 264,000</b>	<b>\$ 285,000</b>	<b>\$ 299,000</b>	<b>\$ 314,000</b>	<b>\$ 330,000</b>
<b>Total Water Supply Costs</b>	<b>\$ 4,194,000</b>	<b>\$ 4,215,000</b>	<b>\$ 4,229,000</b>	<b>\$ 4,244,000</b>	<b>\$ 4,260,000</b>

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**TRABUCO CANYON WATER DISTRICT  
SPECIAL BOARD MEETING | OCTOBER 29, 2025**

**DISCUSSION MATTERS**

**ITEM 3: REPORT OF ACTION(S) TAKEN IN CLOSED SESSION**

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**RECOMMENDED ACTION:**

*Provide announcement of any action taken in Closed Sessions.*

**CONTACTS (staff responsible): PALUDI/COLLINS**