NOTICE OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
ENGINEERING COMMITTEE
November 19, 2026
8:30 a.m.

Physical Address
34156 Del Obispo Street Dana Point, CA 92629

NOTICE IS HEREBY GIVEN that a Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Engineering Committee was called to be held on **November 19, 2026, at 8:30 a.m.** SOCWA staff will be present and conducting the meeting at the SOCWA Administrative Office located at 34156 Del Obispo Street, Dana Point, California.

THE SOCWA MEETING ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS, PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY'S OFFICE AT (949) 234-5400 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING TO REQUEST SUCH ACCOMMODATIONS. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING. MEMBERS OF THE PUBLIC HAVE THE OPTION TO PARTICIPATE IN AND MAY JOIN THE MEETING REMOTELY VIA VIDEO CONFERENCE FOR VISUAL INFORMATION ONLY (USE ZOOM LINK BELOW) AND BY TELECONFERENCE FOR AUDIO PARTICIPATION (USE PHONE NUMBERS BELOW). THIS IS A PHONE-CALL MEETING AND NOT A WEB-CAST MEETING, SO PLEASE REFER TO AGENDA MATERIALS AS POSTED ON THE WEBSITE AT WWW.SOCWA.COM. ON YOUR REQUEST, EVERY EFFORT WILL BE MADE TO ACCOMMODATE PARTICIPATION. FOR PARTIES PARTICIPATING REMOTELY, PUBLIC COMMENTS WILL BE TAKEN DURING THE MEETING FOR ORAL COMMUNICATION IN ADDITION TO PUBLIC COMMENTS RECEIVED BY PARTIES PARTICIPATING IN PERSON. COMMENTS MAY BE SUBMITTED PRIOR TO THE MEETING VIA EMAIL TO ASSISTANT SECRETARY LYNDA MAY AT LMAY@SOCWA.COM WITH THE SUBJECT LINE "REQUEST TO PROVIDE PUBLIC COMMENT." IN THE EMAIL, PLEASE INCLUDE YOUR NAME, THE ITEM YOU WISH TO SPEAK ABOUT, AND THE TELEPHONE NUMBER YOU WILL BE CALLING FROM SO THAT THE COORDINATOR CAN UN-MUTE YOUR LINE WHEN YOU ARE CALLED UPON TO SPEAK. THOSE MAKING PUBLIC COMMENT REQUESTS REMOTELY VIA TELEPHONE IN REAL-TIME WILL BE ASKED TO PROVIDE YOUR NAME, THE ITEM YOU WISH TO SPEAK ABOUT, AND THE TELEPHONE NUMBER THAT YOU ARE CALLING FROM SO THE COORDINATOR CAN UN-MUTE YOUR LINE WHEN YOU ARE CALLED UPON TO SPEAK. ONCE THE MEETING HAS COMMENCED, THE CHAIR WILL INVITE YOU TO SPEAK AND ASK THE COORDINATOR TO UN-MUTE YOUR LINE AT THE APPROPRIATE TIME.

AGENDA ATTACHMENTS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY ENGINEERING COMMITTEE IN CONNECTION WITH A MATTER SUBJECT FOR DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE ENGINEERING COMMITTEE ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY ADMINISTRATIVE OFFICE LOCATED AT 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE") OR BY PHONE REQUEST MADE TO THE AUTHORITY OFFICE AT 949-234-5400. IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE ENGINEERING COMMITTEE LESS THAN SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE ENGINEERING COMMITTEE AND SENT TO ANY REMOTE PARTICIPANTS REQUESTING EMAIL DELIVERY OR POSTED ON SOCWA'S WEBSITE. IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE MEETING ROOM OR IMMEDIATELY UPON VERBAL REQUEST TO BE DELIVERED VIA EMAIL TO REQUESTING PARTIES PARTICIPATING REMOTELY.

THE PUBLIC MAY PARTICIPATE REMOTELY BY VIRTUAL MEANS. FOR AUDIO OF MEETING USE THE CALL IN PHONE NUMBERS BELOW AND FOR VIDEO USE THE ZOOM LINK BELOW.

Join Zoom Meeting
https://socwa.zoom.us/

Meeting ID: 834 4251 6222
Passcode: 873401

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AGENDA

1. Call Meeting to Order

2. Public Comments

THOSE WISHING TO ADDRESS THE ENGINEERING COMMITTEE ON ANY ITEM LISTED ON THE AGENDA WILL BE REQUESTED TO IDENTIFY AT THE OPENING OF THE MEETING AND PRIOR TO THE CLOSE OF THE MEETING. THE AUTHORITY REQUESTS THAT YOU STATE YOUR NAME WHEN MAKING THE REQUEST IN ORDER THAT YOUR NAME MAY BE CALLED TO SPEAK ON THE ITEM OF INTEREST. THE CHAIR OF THE MEETING WILL RECOGNIZE SPEAKERS FOR COMMENT AND GENERAL MEETING DECORUM SHOULD BE OBSERVED IN ORDER THAT SPEAKERS ARE NOT TALKING OVER EACH OTHER DURING THE CALL.

PAGE NO.

3. Approval of Minutes.....1

   - Engineering Committee Minutes of October 15, 2026

   Recommended Action: Staff requests that the Engineering Committee approve the subject Minutes as submitted.

4. General Manager's Report 5

   Recommended Action: Committee Discussion, Direction, and Action.

5. Capital Lifecycle Policy.....7

   Recommended Action: Staff requests that the Engineering Committee recommend the Board approve Resolution No. 2026-10: A Resolution of the Board of Directors of the South Orange County Wastewater Authority Approving the Capital Lifecycle Policy; and to include the Policy in the SOCWA Policy Handbook.

6. Operations Report.....17

   Recommended Action: Information Item.

7. Capital Improvement Workplan FY 26-27 (November) 18

   Recommended Action: Committee Discussion, Direction, and Action.

8. Capital Improvement Construction Projects Progress and Change Order Report (November) [Project Committees 2 and 15] 20

   Recommended Action: Committee Discussion, Direction, and Action.

9. J.B. Latham Treatment Plant Contract Award for MCC M and Plant 1 Generator Replacement - 3252 [Project Committee 2] (Under Separate Cover)

   Recommended Action: Committee Discussion, Direction, and Action.

10. Draft CTP Regional Flow Study Update [Project Committee 15] 24

    Recommended Action: Committee Discussion, Direction, and Action.

11. Adjournment

I hereby certify that the foregoing Notice was personally emailed or mailed to each member of the SOCWA Engineering Committee at least 72 hours prior to the scheduled time of the Regular Meeting referred to above.

I hereby certify that the foregoing Notice was posted at least 72 hours prior to the time of the above-referenced Engineering Committee meeting at the usual agenda posting location of the South Orange County Wastewater Authority and at www.socwa.com.

Dated this 13th day of November 2026.

Lynda May

Lynda May, Assistant Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Engineering Committee

DRAFT

October 15, 2026

The Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Engineering Committee was held on October 15, 2026, at 8:30 a.m. in-person and via teleconferencing from the Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of the Engineering Committee were present:

DAVE REBENSDORF	City of San Clemente	[Zoom]
HANNAH FORD	El Toro Water District	[Zoom]
ROBERT GRANTHAM	Santa Margarita Water District	[Zoom]
MARC SERNA	South Coast Water District	

Absent:

TOM PEREZ	City of Laguna Beach
MIKE DUNBAR	Emerald Bay Service District

Staff Present:

AMBER BOONE	General Manager
RONI GRANT	Capital Improvement Program (CIP) Manager
JIM BURROR	Deputy GM/ Chief Engineer
MATT CLARKE	Chief Technology Officer
LYNDA MAY	Administrative Assistant/Assistant Secretary
ANNA SUTHERLAND	Accountant
DINA ASH	Human Resources Administrator
BOB CULVER	Environmental Service Manager

Also Present:

CHRIS NEWTON	South Coast Water District
TARYN KJOLSING	South Coast Water District
DUSTIN BURNSIDE	City of San Clemente

1. Call Meeting to Order

   Mr. Jim Burror, Deputy General Manager/Chief Engineer, called the meeting to order at 8:32 a.m.

2. Public Comments

   None.

3. Approval of Minutes

   - Engineering Committee Minutes of June 18, 2026.

   ACTION TAKEN
   A motion was made by Mr. Grantham and seconded by Mr. Serna to approve the Engineering Committee Minutes for June 18, 2026.

Motion carried:	Aye 3, Nay 0, Abstained 1, Absent 2	
	Mr. Dunbar	Absent
	Ms. Ford	Aye
	Mr. Perez	Absent
	Mr. Grantham	Aye
	Mr. Serna	Aye
	Mr. Rebensdorf	Abstain

4. General Manager's Report

Ms. Amber Boone, General Manager, briefed the committee on the Master Planning schedules for the JBL and CTP facilities, and the publication of VoiceSOP. Ms. Boone noted the application's expansion to Operations staff will be presented for approval at the November Board of Directors meeting.

This was an information item; no action was taken.

5. Cost Allocation Policy

An open discussion ensued on the Cost Allocation Policy, with input from the committee on updates to allocations and footnotes. A suggestion was made to have the Finance Committee accept the changes and make the approval to the Board of Directors.

ACTION TAKEN
A motion was made by Mr. Grantham and seconded by Mr. Serna to move the Cost Allocation Policy to the Finance Committee meeting to accept the redline changes and recommend the approval of the Cost Allocation Policy to the Board of Directors.

Motion carried:	Aye 4, Nay 0, Abstained 0, Absent 2	
	Mr. Dunbar	Absent
	Ms. Ford	Aye
	Mr. Perez	Absent
	Mr. Grantham	Aye
	Mr. Serna	Aye
	Mr. Rebensdorf	Aye

6. Operations Report

Mr. Jim Burror, Deputy GM/Chief Engineer, provided the operations report with an update on safety-manuals, equipment inspections, outage simulations and El Niño preparedness.

This was an information item; no action was taken.

7. Capital Improvements Workplan (October)

Mr. Burror provided an update on the workplan including a recent correction to a reported expenditure.

This was an information item; no action was taken.

8. Capital Improvement Construction Projects Progress and Change Order Report (October) [Project Committees 2 and 15]

   Mr. Burror briefed the Committee on the report, noting the JBL emergency generator project being out to bid after receiving the AQMD permit. Mr. Grantham requested SOCWA to provide lessons learned from AQMD and share with the Board.

   This was an information item; no action was taken.

9. Proposed Capital Project Chartering Process to Support Capital Improvement Planning

   An open discussion ensued on the chartering process with suggestions to incorporate appropriate right-sizing or simplification based on project size and staff-resource considerations.

   ACTION TAKEN
   A motion was made by Mr. Serna and seconded by Mr. Grantham to recommend the SOCWA Board of Directors approve the immediate implementation of the Project Charter process for the Capital Improvement Program, after the committee's suggested modifications have been made for a simplified Project Charter for smaller projects and renaming the "Project Risk" section to "Project Concerns".

   Motion carried: Aye 4, Nay 0, Abstained 0, Absent 2

Mr. Dunbar	Absent
Ms. Ford	Aye
Mr. Perez	Absent
Mr. Grantham	Aye
Mr. Serna	Aye
Mr. Rebensdorf	Aye

10. Draft CTP Regional Flow Study Update [Project Committee 15]

    A brief discussion ensued with the committee providing support and positive feedback. Due to the lack of Project Committee 15 quorum, the committee agreed to make this a staff recommendation to the Board.

    This was an information item; no action was taken.

11. Template Report for Large CIP Projects

    An open discussion on the template report with input from the committee on adding a CEQA update portion, and flexibility to adjust the format

    ACTION TAKEN
    A motion was made by Ms. Ford and seconded by Mr. Grantham to recommend that the SOCWA Board of Directors utilize the Template for Large CIP Projects reports to the Board and Engineering Committee.

Motion carried:	Aye 4, Nay 0, Abstained 0, Absent 2	
	Mr. Dunbar	Absent
	Ms. Ford	Aye
	Mr. Perez	Absent
	Mr. Grantham	Aye
	Mr. Serna	Aye
	Mr. Rebensdorf	Aye

12. Adjournment

There being no further business, Mr. Burror adjourned the meeting at 9:19 a.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Regular Meeting of the South Orange County Wastewater Authority Engineering Committee of October 15, 2026, and approved by the Engineering Committee and received and filed by the Board of Directors of the South Orange County Wastewater Authority.

_____

Lynda May, Assistant Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Agenda Item 4

Engineering Committee Meeting

Meeting Date: November 19, 2026

TO: Engineering Committee

FROM: Amber Boone, General Manager

SUBJECT: General Manager's Report

Master Schedule for CTP and JBL Master Planning Efforts

At the February 2026 SOCWA Board meeting, Board members requested that the master planning schedule be separated into respective facilities, with a completion date added to the master planning schedule and Board-related workshops. The following table represents activities planned and completed for the JB Latham (JBL) Facility Planning Assessment (FPA).

JBL Facility Planning Assessment

EVENTS	DATE	COMPLETION DATE
Kick-Off Meeting	14-Jan-26	14-Jan-26
Task 1 - Project Management	14-Jan-26	14-Jan-26
Staff Workshop 1	27-Jan-26	27-Jan-26
Task 2 - Existing Facility Evaluation	29-Jun-26 (project postponed 60 days)	29-Jun-26
Staff Workshop 2	17-Mar-26	17-Mar-26
PC2 Board Workshop	Not Previously Planned	3-Apr-26
Staff Workshop 3 - Condition Assessment	30-Jun-26	7-Jul-26
Staff Workshop 4	19-Aug-26	19-Aug-26
PC2 Board Workshop – Criteria Setting & Wastewater Alternatives	26-Oct-2026	26-Oct-2026
Task 3 - Wastewater Treatment Alternatives	17-Sep-26 (project postponed 60 days)	28-Oct-2026
Staff Workshop 5	29-Oct-26	29-Oct-2026
Task 4 - Effluent Utilization Evaluation	22-Nov-26 (project postponed 60 days)	
PC2 Board Workshop	Date not set	
Task 5 - Develop Project Alternatives	12-Dec-26 (project postponed 60 days)	
Task 6 - Facility Planning & Assessment	31-Jan-27 (project postponed 60 days)	

The following tables represent activities planned and completed for the Coastal Treatment Plant (CTP) Facility Planning Assessment (FPA) and CTP Regional Flow Study.

CTP Facility Planning Assessment

EVENTS	DATE	COMPLETION DATE
Issue RFP	November 7, 2025	November 7, 2025
Mandatory Pre-Proposal Meeting	November 20, 2025	November 20, 2025
Deadline for Questions and Supplemental Information	December 11, 2025	December 11, 2025
Proposal Submission Deadline	January 15, 2026	January 15, 2026
Interviews	January 22, 2026	January 29, 2026
Contract Award	February 12, 2026	March 5, 2026
NTP	April 1, 2026	May 28, 2026 (w/ CTP Regional Flow Study PE4 workshop per PC15 Board)
Kick-Off Meeting	May 28, 2026	PM's on May 28, 2026 & Stakeholder Group on June 11, 2026
Task 1 - Project Management	May 28, 2026	May 28, 2026
Task 2 - Existing Facility Evaluation	~~July 13, 2026~~ September 25, 2026	TM 2 received 9/25/2026. Review Workshop 10/21/26 with PC15 Engineering Committee Members and stakeholders.
PC15 Board Workshop 1	December 10, 2026	
Task 3 - Wastewater Treatment Alternatives	~~November 2, 2026~~ December 31, 2026	
Task 4 - Effluent Utilization Evaluation	~~November 2, 2026~~ December 31, 2026	
Task 5 - Develop Project Alternatives	~~January 12, 2027~~ December 31, 2026	
PC15 Board Workshop 2	~~March 5, 2027~~ February 3, 2027	
Task 6 – Facility Planning & Assessment, Admin Draft Report	February 16, 2027	
Project Draft Final Report	~~February 28, 2027~~ March 1, 2027	
PC15 Board Workshop 3	~~April 2, 2027~~ March 4, 2027	
Project Final Report	April 2, 2027	

Recommended Action: Committee Discussion, Direction and Action.

Agenda Item 5

Engineering Committee Meeting
Legal Counsel Review: Yes
Meeting Date: November 19, 2026

TO: Engineering Committee

FROM: Amber Boone, General Manager

SUBJECT: Capital Lifecycle Policy

Summary

At the September Finance and Engineering Committees, SOCWA staff provided a capital program update for discussion and review through the updating of the capital program. Through the review of the emerging program and review of the current policies included in the SOCWA Policy Handbook, it was recognized by staff that there should be a centralized policy to ensure cohesion and strengthen fiduciary oversight. At the October 13, 2026 SOCWA Executive Committee meeting, staff reviewed the policy gap analysis with Executive Committee members with direction to bring the policy for the SOCWA Board to review. At the November 5, 2026 Board meeting, the Board requested the Engineering and Finance Committees review the Policy and provide comments.

Discussion

Staff performed a gap analysis of needed Board oversight of the following relevant SOCWA policies: Uniform Purchasing Policy, Capitalization and Depreciation Policy, Budget Policy, Cost Allocation Policy, Investment Policy, Disposal of Surplus Property and Document Management Policy. These policies address pieces of procurement, accounting, high-level planning, and cost sharing but leave capital program fiduciary responsibility and Board/Project Committee oversight diffuse. No single location establishes cohesive cradle-to-grave governance, mandatory formal acceptance steps, or project-level charters.

The following related policy items were discussed at the Executive Committee:

- Full cradle-to-grave lifecycle stages as Board policy
- Formal project-level charters
- Mandatory Board (or Project Committee) acceptance of completed work, Notice of Completion, and retention/escrow release
- Integrated multi-year CIP planning, annual cash-request budgeting, and cash-flow management
- Project budget composition standards and full-cost tracking
- Capital-specific approval authority matrix and amendment controls
- Pre-purchase authorization for long-lead items
- Interfund transfers, capital cash transparency, and unbudgeted expenditure rules specific to the CIP
- Risk-based prioritization and asset-management linkage as policy
- Standardized closeout, capitalization trigger, lessons-learned, and reporting cadence
- Alignment with existing policies and external requirements

Recommended Action: Staff recommends that the Engineering Committee recommends to the SOCWA Board of Directors include the Capital Lifecycle Policy in the SOCWA Policy Handbook.

Attachment: Capital Lifecycle Policy

Capital Lifecycle Policy

Purpose of Policy

This Policy establishes a cohesive, Board-level framework for the cradle-to-grave governance, fiduciary oversight, planning, delivery, acceptance, capitalization, and retirement of the South Orange County Wastewater Authority's ("Authority" or "SOCWA") capital assets and Capital Improvement Program (CIP). Existing policies address pieces of procurement, accounting, high-level planning, and cost sharing but leave capital program fiduciary responsibility and Board/Project Committee oversight diffuse. This Policy fills that gap by centralizing capital program fiduciary responsibility, mandating formal project-level controls (including charters), and ensuring integrated Board (or Project Committee) oversight in a single location.

It applies to all capital projects and assets funded through or associated with the CIP, including large capital projects (multi-year facility upgrades and major replacements), small capital and equipment, non-capital studies and assessments that may lead to capital construction, and projects executed under any Project Committee (PC) agreement. The Policy is intended to align with the California Public Contract Code, Civil Code (including stop payment notices, payment bond claims, and Notice of Completion effects), Government Code, GASB standards, the Joint Powers Agreement, and existing SOCWA policies.

Scope

This Policy applies to:

- All capital improvement projects, capital equipment, studies leading to capital work, and related activities funded through the CIP or otherwise creating capital assets, across all Project Committees.
- Staff, consultants, contractors, and others involved in the planning, procurement, delivery, acceptance, capitalization, or retirement of capital assets.

Alignment with Existing Policies and External Requirements

This Policy is designed for cohesion with the following and defers to them where they specifically control:

- **Uniform Purchasing Policy**: Procurement thresholds (generally ≤ $25,000 open market/one written quote; $25,001–$100,000 informal quotes; > $100,000 formal competitive), General Manager authority for contracts under $100,000 and ≤ 5 years, Board approval above those limits and for unbudgeted capital expenditures ≥ $100,000, emergency/sole-source procedures, and public works/professional services distinctions.

- **Capitalization and Depreciation Policy**: $5,000 threshold (individual or grouped for integrated systems), useful life generally > 3 years (or > 1 year for certain intangibles), full project cost capitalization (studies, design, construction, equipment, construction management, legal, and administration) upon completion and start-up, straight-line depreciation, and GASB compliance.
- **Budget Policy and Cost Allocation Policy**: Multi-year CIP integration with annual O&M + CIP budget adoption; capital costs allocated by Participating Member Agencies' percentage share of ownership of capacity in Project facilities (Joint Powers Agreement § 6.3.1); changes to CIP cost-allocation methodology require unanimous consent of Participating Member Agencies.
- **Investment Policy, Disposal of Surplus Property Policy, and Document Management Policy**: Cash management and reserves support CIP cash flow; surplus disposition (General Manager authority ≤ $50,000 residual salvage value, Board above, excluding real property, water rights, easements, and rights of way); permanent or long-term retention of CIP records, plans, contracts, and as-builts as vital records.
- External requirements include the California Public Contract Code (bidding, design-build, retention/escrow, Notice of Completion), Civil Code, Government Code, GASB Statements, and peer agency practices.

In the event of conflict, applicable law controls, followed by the Joint Powers Agreement, then this Policy (for capital program matters), then other SOCWA policies.

Full Cradle-to-Grave Lifecycle Stages

All capital projects shall proceed through the following stages, with appropriate documentation and approvals:

1. **Needs Identification & Prioritization** – Condition assessments, Facility Planning Assessments/Master Plans, regulatory drivers, operational recommendations, risk rankings (Likelihood of Failure × Consequence of Failure), and Member Agency requests via Project Committee.
2. **Planning & Charter** – Project charter development, preliminary scope, risk assessment, multi-year cash-flow estimate, and inclusion in the 10-Year CIP.
3. **Design** – Preliminary and final design, specifications, CEQA/permitting, engineer's estimate, and identification of long-lead items.
4. **Procurement & Award** – Solicitation per the Uniform Purchasing Policy; award and contract execution.
5. **Construction/Implementation** – Notice to Proceed, construction management/ inspection, change-order control, progress reporting, and staff charges.

6. **Substantial Completion, Formal Acceptance, Notice of Completion & Retention/Escrow Release** – Punch-list completion; Board or Project Committee acceptance of the work as complete; recording of a Notice of Completion with the Orange County Recorder within 15 days after acceptance; and release of retention or escrow funds within the time required by Public Contract Code Section 7107 (generally within 60 days after completion), subject to withholding permitted by law for disputed amounts and for stop payment notices timely served following recordation of the Notice of Completion. This stage is mandatory.

7. **Capitalization & Commissioning Close-out** – Upon beneficial use/start-up and formal Board or Project Committee acceptance (including authorization of Notice of Completion and retention/escrow release), Finance capitalizes the full project cost per the Capitalization and Depreciation Policy and begins straight-line depreciation. Useful life is determined by the Chief Engineer or designated Department Head. O&M manuals, training, warranties, as-builts, and spare parts are finalized; the asset is transferred to the relevant Project Committee's operating inventory.

8. **Operation, Maintenance & Monitoring** – Asset enters the relevant Project Committee's O&M program; condition monitoring and performance tracking continue.

9. ~~**Mid-Life**~~ **Intervention or Replacement Planning** – Risk or regulatory triggers return the asset to Stage 1; residual book value and life-extension opportunities are considered.

10. **Retirement / Disposal** – Asset is taken out of service; surplus disposition occurs per the Disposal of Surplus Property Policy; records are retained per the Document Management Policy; gains/losses are recognized per GASB.

Formal Project-Level Charters

Every capital project (or logical group of related small capital items) with an estimated total cost of $100,000 or greater, or any project involving multi-year delivery, regulatory drivers, or significant Member Agency cost shares, shall have a formal Project Charter approved at the appropriate level (Engineering Committee recommendation, Project Committee, or Board as applicable) prior to significant expenditure beyond planning/studies.

The Charter shall include at minimum:

- Project ID, title, category (Liquids/Solids/Common/AWT/Outfall), and Project Committee affiliation.
- Purpose, scope boundaries, and success criteria.
- Estimated total budget by major cost category and multi-year cash-flow phasing.

- Funding sources and cost-allocation basis (capacity ownership shares).
- Key risks, assumptions, and constraints.
- Project Manager / CIP Manager and key roles.
- Approval authorities and change-control thresholds.
- Reporting cadence and closeout requirements.
- Linkage to asset management risk ranking.

Charters shall be updated for material scope or budget changes and retained as part of the project file.

Mandatory Board (or Project Committee) Acceptance, Notice of Completion, and Retention/Escrow Release

Formal acceptance of completed work, authorization to record a Notice of Completion, and authorization to release retention or escrow funds are reserved Board (or, where applicable under Project Committee agreements, Project Committee) actions. Staff recommendations shall route through the Engineering Committee for review and recommendation.

The closeout package for Board/Project Committee action shall include:

- Certification of substantial/final completion and punch-list resolution.
- Conditional and unconditional waivers and releases in the statutory forms required by Civil Code Sections 8132 through 8138, as applicable.
- Confirmation of no outstanding stop notices or claims.
- As-built status, O&M manuals, and training completion.
- Final cost reconciliation against budget and contingency.
- Recommendation for capitalization.

This requirement is intended to support compliance with the Public Contract Code and Civil Code obligations and to provide clear fiduciary accountability. Sample resolution language may be maintained in administrative procedures.

Integrated Multi-Year CIP Planning, Annual Cash-Request Budgeting, and Cash-Flow Management

- Engineering staff shall annually update a Ten-Year Capital Improvement Plan with unique Project IDs, categories, total estimated budgets, expenditures to date, remaining budgets, and cash-request phasing by fiscal year.

- The Engineering Committee reviews the draft CIP list and multi-year cash-flow projections.
- The Finance Committee evaluates affordability, cash-on-hand, reserves, rate impacts, and UAL/OPEB interactions.
- Relevant Project Committees review and recommend Project Committee-specific requests.
- The full Board adopts the combined O&M + CIP budget (typically May/June), authorizing expenditure within the adopted cash request.
- Increases beyond approved contingency or material scope changes require Board or Project Committee action.
- Cash-flow is monitored continuously; excess cash-on-hand may reduce subsequent requests. Multi-year phasing aligns with design, procurement, construction, and Member Agency rate cycles.

Project Budget Composition Standards and Full-Cost Tracking

Every capital project budget shall capture the full cost necessary to deliver the asset ready for beneficial use, consistent with the Capitalization and Depreciation Policy. Standard cost categories include:

- Planning & Studies / Facility Planning Assessments
- Design (preliminary and final, including specifications and cost estimating)
- Permitting & Regulatory (including CEQA, AQMD, Coastal Commission, RWQCB, etc.)
- Pre-Purchase / Long-Lead Equipment
- Construction Contract
- Construction Management & Inspection (in-house and/or consultant)
- SOCWA Staff Charges (engineering, operations, safety, administrative + fringe)
- Legal & Administrative
- Contingency (typically 5–10% of construction, higher for complex/rehab work)
- Owner-Furnished Materials / Temporary Facilities
- Close-out, Commissioning, Training, O&M Manuals, Startup Testing

Budgets are tracked by Project ID. Full costs (including used contingency) are capitalized and depreciated at the close of each fiscal year.

Capital-Specific Approval Authority Matrix and Amendment Controls

Action	Engineering Committee	Finance Committee	Project Committee	Board ~~/ General Manager~~
CIP Prioritization & 10-Year Plan	Review		Review	Approve
Annual CIP Budget / Cash Request	Recommend	Recommend	Review	Approve
Budget / Scope Amendments	Review	Review	Review	Approve
Contract Award (within delegated)	Review		As Required	~~GM /~~ Board
Notice of Completion	Review		Recommend	Approve
Retention/Escrow Release	Review		Recommend	Approve
Project Closeout	Review		Recommend	Approve
Capitalization	Inform	Inform		Inform
Unbudgeted CIP Expenditure ≥ $100,000	Review	Review	Review	Approve

Amendments exceeding contingency or materially changing scope, schedule, or Member Agency cost shares require the same level of approval as the original action. Serial purchases to circumvent thresholds are prohibited per the Uniform Purchasing Policy.

Pre-Purchase Authorization for Long-Lead Items

Long-lead equipment (e.g., motor control centers, generators, specialized process equipment, major pumps, SCADA hardware with lead times exceeding 12 months) may be pre-purchased under Board or Project Committee authorization prior to full construction award when:

- Identified during preliminary or final design with documented critical-path impact.
- An independent cost estimate and technical specifications suitable for competitive procurement are prepared.
- Funding and contingency are identified within the project budget or via amendment.
- Procurement follows Uniform Purchasing Policy methods.

Pre-purchase authorizations shall be explicit in the staff report and Board/Project Committee action.

Interfund Transfers, Capital Cash Transparency, and Unbudgeted Expenditure Rules Specific to the CIP

- Capital project funds are accounted separately; large projects accumulate Member Agency cash advances drawn against balances.
- Interfund transfers (fringe benefits, IT allocations, administrative overhead, staff time to capital, project-to-project within Project Committees) shall be documented in the budget book and monthly/quarterly reports and disclosed to the relevant Committee and Board as appropriate.
- Transparency requirements include: Capital cash requests by Project Committee and Member Agency in the Annual Budget Book; monthly or quarterly CIP Workplan/Progress Reports (funds collected/spent, remaining balance, percent complete, schedule status); change-order summaries; updates to quarterly billings; and final acceptance/Notice of Completion/retention actions in the public record.
- Unbudgeted CIP expenditures of $100,000 or greater require Board approval, with identification of funding source, contingency impact, effects on Member Agencies, and any required CIP cash-request adjustments.

~~Risk-Based~~ Prioritization and Asset-Management Linkage

Projects shall be prioritized using multi-criteria factors aligned with asset-management best practices:

- Safety & Regulatory Compliance (immediate risks or permit deadlines)
- Asset Criticality & Condition (Consequence of Failure × Likelihood of Failure)
- Operational Reliability (impact on capacity, energy, chemicals)
- Lifecycle Cost Efficiency
- Regional / Inter-Agency Coordination
- Funding Affordability & Cash Flow
- Constructability & Lead Times

Condition assessments, risk rankings, and Master Plans/Facility Planning Assessments shall inform CIP development. Residual book value and life-extension opportunities shall be considered at mid-life and retirement stages.

Standardized Closeout, Capitalization Trigger, Lessons-Learned, and Reporting Cadence

- **Closeout**: Follow the sequence in the Mandatory Acceptance section above. Finance capitalizes only after Board/Project Committee acceptance and beneficial use.
- **Lessons-Learned**: Within 60 days of capitalization, the Project Manager shall document lessons-learned (scope, schedule, cost, risks, process improvements) and share with Engineering, Finance, and relevant Project Committees. Significant findings shall be reported to the Engineering Committee.
- **Reporting Cadence**: Monthly or quarterly CIP Progress Reports to the Engineering Committee and Board. Annual CIP update as part of the budget process. Board reporting of General Manager-authorized purchases between $25,000 and $100,000 per the Uniform Purchasing Policy. Annual report on surplus dispositions. Physical inventory of capital assets at least every two years. Lessons-learned summary in annual CIP materials as appropriate.

Policy Administration

The General Manager, with support from the Chief Engineer and Finance, shall implement this Policy through administrative procedures and standard operating procedures (including bid checklists, closeout packages, and charter templates).

For multi-Project Committee projects, acceptance, cost allocation, and related actions shall follow the applicable provisions of the Joint Powers Agreement and Project Committee agreements.

This Policy is intended for inclusion in the SOCWA Policy Handbook.

Policy Revisions

This document will be maintained and revised by the executive management staff in consultation with the Authority's legal counsel. Revisions will occur whenever applicable federal, state or local regulations change or otherwise as the need arises, but no less frequently than every five years.

Policy Approval and Adoption

This Policy has been reviewed by the Authority's Board of Directors and adopted by Resolution No. 2026-~~10 on November 5,~~ 2026, superseding all previous versions.

Agenda Item 6

Engineering Committee Meeting
Meeting Date: November 19, 2026

TO: Engineering Committee

FROM: Amber Boone, General Manager

STAFF CONTACT: Jim Burror, Deputy General Manager/Chief Engineer
James Jones, Operations Superintendent

SUBJECT: Operations Report

Overview

Verbal update on operations and maintenance activities.

Recommended Action: Information Item.

Agenda Item 7

Engineering Committee Meeting

Meeting Date: November 19, 2026

TO: Engineering Committee

FROM: Amber Boone, General Manager

STAFF CONTACT: Jim Burror, Deputy General Manager / Chief Engineer
Roni Grant, Capital Improvement Program Manager

SUBJECT: SOCWA Capital Improvement Program Workplan FY 26-27 (November)
[All Project Committees]

Staff is providing this update on the status of the Capital Improvement Program (CIP), including project budgets, expenditures, progress, upcoming FY 26-27 funding requests, and key risks. The majority of active projects are progressing as planned, with several nearing completion. A portion of the CIP remains deferred pending the outcome of the master planning effort to ensure infrastructure investments are strategically aligned. Primary challenges affecting schedule and delivery include regulatory permitting, long equipment lead times, and coordination with external agencies.

At its November 2026 meeting, the SOCWA Board requested that future CIP reporting be made more concise, clear, and transparent to better support Board decision-making. Because the Engineering Committee serves as the advisory committee to the Board on CIP projects and related contract awards, Staff is seeking the Committee's input on potential report updates and modifications.

Staff will also present suggested updates for Committee consideration during the meeting discussion.

Recommended Action: Committee Discussion, Direction, and Action.

Attachment: CIP Workplan FY 26-27

SOCWA CIP Workplan

Project Number	Project Name	Ten Year CIP Project Budget	Funds Collected as of FY 26/27 Q1*	Funds Spent as of November 2026**	Funds Remaining	Percent Spent	FY 26-27 Funds Request	Projects Approved by the Board	Status	Project Anticipated Completion	Challenges/Delays	Q1	Q2	Q3	Q4
PC 2 - J.B. Latham Treatment Plant															
3252	MCC M and Plant 1 Generator Replacement	$ 4,232,843	$ 1,759,881	$ 1,060,603	$ 699,278	60%	$ 500,000	Pending	Bid received 11/12/2026	June 2028	Bids exceeded the cost opinion.	D	B&A	C	C
3285	Main Plant Drain Line Reconstruction	$ 1,000,000	$ 573,375	$ 137,209	$ 436,166	24%	$ 568,833	October 2024	Final design underway	July 2027		D	D	B&A	C
32232S/32234S /32244S	Buried Digester Piping Reconstruction	$ 2,001,490	$ 678,171	$ 538,627	$ 139,544	79%	$ 1,500,000	July 2026	NTP issued. Submittal process started.	July 2027		B&A	C	C	C
32275S	Digester 3 and 4 Upgrades and Coating	$ 1,000,000	$ 50,000	$ -	$ 50,000	0%	$ 200,000		Planning underway	June 2027			P	P	D
PC 15 - Coastal Treatment Plant															
3541	Export Sludge Environmental Mitigation	$ 1,392,000	$ 189,750	$ 63,852	$ 125,898	34%	$ 291,900	Feb 2022	Mitigation permitting ongoing	July 2027	Pending regulatory agencies and OC Parks approval s	ENV	ENV	ENV	ENV
35229L/35235L	Odor Control Scrubber/Foul Air System Reconstruction	$ 1,500,000	$ 719,308	$ 434,764	$ 284,544	60%	$ 222,323	November 2024	Final design underway	September 2027	Long equipment lead time	D	D	D	B&A
3522AL	Drainage Pump Station/ Storm Drain Improvement	$ 4,200,000	$ 1,286,085	$ 792,161	$ 493,924	62%	$ 279,980	September 2024/March 2026	DPS final design underway/ Storm Drain Improvements near completion	December 2027	Will address more pressing issues until the master planning effort is done.	D	D	B&A	C
35248L	Access Road Repaving	$ 1,199,999	$ 1,199,999	$ 293,393	$ 906,606	24%	$ -	July 2026	Spot repairs completed. Larger project on hold during cost share discussion with OC Parks	December 2027	Discussing cost share with OC Parks	C	C	on hold	
PC 21 - Effluent Transmission Main															
3105/3106 /3107/3108	Air Valve Replacement	$ 784,000	$ 619,742	$ 294,214	$ 325,528	47%	$ 229,132	November 2020	Design/permitting underway	July 2027	Pending amended permit from resource agencies	D	ENV	ENV	ENV
31222B	Reach B Techite Pipe Replacement	$ 7,891,000	$ 297,500	$ 372,015	$ (74,515)	125%	$ 1,190,000	February 2026	Design/ CEQA efforts underway	Sept 2027	City of Laguna Woods requested street alignment construction to be complete by October 2027	D	D	B&A	C
3101/31221B	Trail Bridge Crossing	$ 1,241,771	$ 480,438	$ 449,119	$ 31,319	93%	$ 14,000	March 2018	On hold pending FEMA funding determination.	June 2028	Seeking FEMA grant funding	P	P	P	P
PC 24 - Aliso Creek Ocean Outfall															
34222O	Golf Course Road	$ 45,000	$ 22,500	$ 88	$ 22,412	0%	$ 45,000		Planning underway	June 2027	Coordination with OC Parks	P	D	B&A	C
All Project Committees															
37271C	Lab Reconstruction Feasibility Phase II	$ 100,000	$ 25,000	$ -	$ 25,000	0%	$ 100,000		Scope preparation	June 2027		P	P	P	P
32271C	SCADA Integration Upgrade Project	$ 525,000	$ -	$ -	$ -	0%	$ 525,000		Scope preparation	June 2027		P	P	B&A	C
32272C	Business Network Server Replacement Project	$ 525,000	$ -	$ -	$ -	0%	$ 525,000		Scope preparation	March 2027		B&A	C	C	
32273C	Firewall Reliability Upgrades	$ 27,000	$ -	$ -	$ -	0%	$ 27,000		Installation underway - go live 11-20-2026	November 2026		B&A	C		
32274C	WIMS Server Replacement	$ 60,000	$ -	$ -	$ -	0%	$ 60,000		Installation being planned	December 2026		B&A	C		

P	Planning
CA	Condition Assessment
ENV	Environmental/Permitting
D	Design
B&A	Bidding and Award
C	Construction

* Based on member agencies quarterly billing

** Based on invoices received and approved

Agenda Item 8

Engineering Committee Meeting

Meeting Date: November 19, 2026

TO: Engineering Committee

FROM: Amber Boone, General Manager

STAFF CONTACT: Jim Burror, Deputy General Manager/Chief Engineer
Roni Grant, Capital Improvement Program Manager

SUBJECT: Capital Improvement Construction Projects Progress and Change Order Report (November*)* [Project Committees 2 and 15]

Overview

This agenda item provides a status update on active construction projects, including any associated change orders. Updated Capital Improvement Program (CIP) reports are attached for reference.

Project Updates

JBL Electrical Upgrades

The construction bid was received on 11-12-2026.

JBL Buried Digester Piping Reconstruction

The construction contract for the buried pipe elements of the project has started; construction is anticipated to be completed by July 2027. The Flare replacement project elements remain on hold pending completion of the JBL Facility Plan Assessment (FPA) Project, per PC2 direction.

CTP Storm Drain Improvements

Construction is currently in progress for the storm drain project elements. This construction is anticipated to be completed by December 2026. The Drainage Pump Station project elements remain on hold pending completion of the CTP Facility Plan Assessment (FPA) Project, per PC15 direction.

CTP Access Road Repaving

The construction contract for the short-term repairs was completed in September 2026. The construction update was removed from this report and will be added back to the report following the ongoing cost-share discussions with OC Parks.

At its November 2026 meeting, the SOCWA Board requested that future CIP reporting be made more concise, clear, and transparent to better support Board decision-making. Because the Engineering Committee serves as the advisory committee to the Board on CIP projects and related contract awards, Staff is seeking the Committee's input on potential report updates and modifications.

Staff will also present suggested updates for Committee consideration during the meeting discussion.

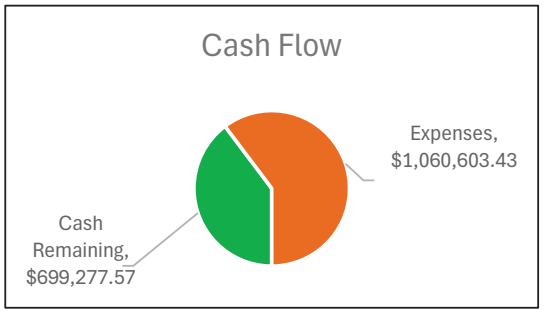
Recommended Action: Committee Discussion, Direction, and Action.

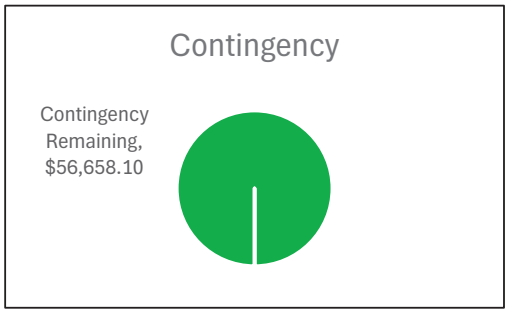
Project Financial Status

Project Committee	2
Project Name	Electrical System Upgrades - 3252
Project Description	Electrical System upgrades including MCC and Plant 1 Generator

Data Last Updated

November 18, 2026





Project Budget

$	4,232,843.12	Budget
Design was 3215-000		Design Phase Costs
$	1,060,603.43	Constr Costs to Date
$	272,985.97	Constr Encumbered
$	2,899,253.72	$'s Remaining
	68.49%	% Remaining

Cash Flow

Collected	$	1,759,881.00
Expenses	$	1,060,603.43

Project Completion

Schedule	40%	
Contract Payments	60%	(includes prepurchases)

Construction Contracts and Related Expenses

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
Quinn Power	20975	$ 414,940.00	$ 8,738.40		$ 423,678.40	$ 423,678.40
Pacific Parts	20561	$ 239,025.00			$ 239,025.00	$ 211,975.25
Hazen	14331	$ 520,886.00			$ 520,886.00	$ 363,309.75
SOCWA Staff Time	3252	$ 150,000.00			$ 150,000.00	$ 61,640.03
		$ 1,324,851.00	**$ 8,738.40**	**$ -**	**$ 1,333,589.40**	**$ 1,060,603.43**

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	3252	$ 65,396.50	$ 8,738.40	$ 56,658.10	13.4%
		$ 65,396.50	**$ 8,738.40**	**$ 56,658.10**	**13.4%**

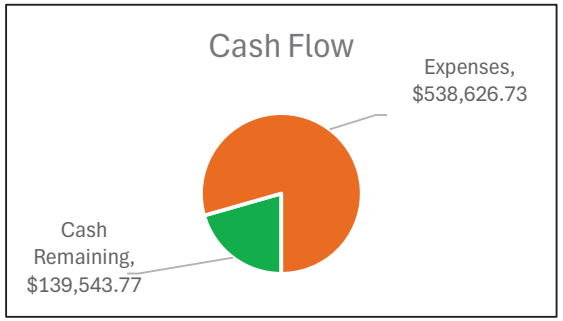
Change Order No.	Vendor Name	Project ID	Description	Status Date	Days	Amount
1	Quinn Power	3252	Additional storage fee and taxes	8/24/2026	0	$ 8,738.40
						$ 8,738.40

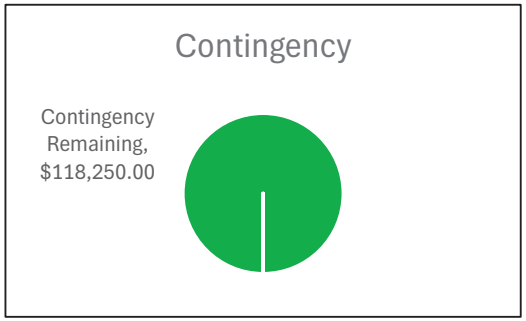
Project Financial Status

Project Committee	2
Project Name	Digester Underground Piping - 32232S/32234S/32244S
Project Description	Digester underground piping improvements

Data Last Updated

November 18, 2026





Project Budget

$2,001,490	Budget
includes below	Design Phase Costs
$ 538,626.73	Constr Costs to Date
$ 1,196,188.27	Constr Encumbered
$ 266,675.00	$'s Remaining
13.32%	% Remaining

Cash Flow

Collected	$ 678,170.50
Expenses	$ 538,626.73

Project Completion

Schedule	22%
Contract Payments	31.05%

Construction Contracts and Related Expenses

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
SS Mechanical	22187	$ 1,182,241.00			$ 1,182,241.00	$ 90,710.00
Ardurra	21242	$ 286,902.00			$ 286,902.00	$ 234,948.35
Ardurra	22243	$ 10,000.00			$ 10,000.00	$ 3,969.00
Carollo	21494	$ 57,168.00			$ 57,168.00	$ 57,168.00
Lee & Ro	21766	$ 81,544.00			$ 81,544.00	$ 78,885.40
Project Partners	20739	$ 16,960.00			$ 16,960.00	$ 16,960.00
Project Partners	22240	$ 10,000.00			$ 10,000.00	$ 7,857.00
SOCWA Staff Time	32232S/32234S/32244S	$ 90,000.00			$ 90,000.00	$ 48,128.98
		$ 1,734,815.00	**$ -**	**$ -**	**$ 1,734,815.00**	**$ 538,626.73**

Construction Contingency

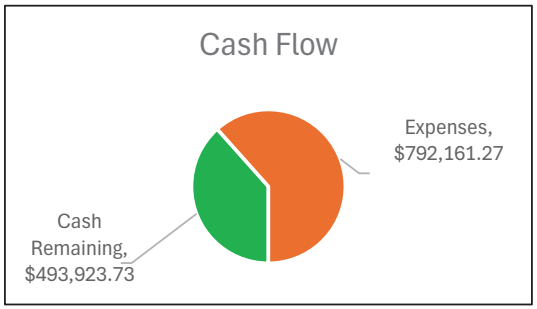
Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Solids	32232S/32234S/32244S	$ 118,250.00	$ -	$ 118,250.00	0.0%
		$ 118,250.00	**$ -**	**$ 118,250.00**	**0.0%**

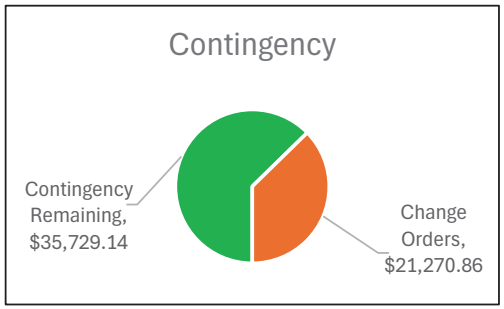
Project Financial Status

Project Committee	15
Project Name	Drainage Pump Station/ Storm Drain System Improvements - 3522AL
Project Description	Modification to the storm drainage system

Data Last Updated

November 18, 2026





Project Budget

$ 4,200,000.00	Budget
$ 416,000.00	Design Phase Costs
$ 441,097.52	Constr Costs to Date
$ 471,248.59	Constr Encumbered
$ 2,871,653.89	$'s Remaining
68.37%	% Remaining

Cash Flow

Collected	$ 1,286,085.00
Expenses	$ 792,161.27

Project Completion

Schedule	60%
Budget	62%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
T.E. Roberts	21809	$ 570,059.00	$ 21,270.86		$ 591,329.86	$ 283,697.46
Project Partners	21451	$ 15,000.00			$ 15,000.00	$ 12,077.00
Project Partners	22243	$ 10,000.00			$ 10,000.00	$ 7,452.00
Tetra Tech	20560	$ 380,000.00			$ 380,000.00	$ 315,063.75
Tetra Tech	21078	$ 36,000.00			$ 36,000.00	$ 36,000.00
Tetra Tech	21845	$ 57,000.00			$ 57,000.00	$ 14,692.50
Ninyo & Moore	22031	$ 28,080.00			$ 28,080.00	$ 2,273.50
AKM	21972	$ 46,000.00			$ 46,000.00	$ 34,825.00
SOCWA Staff Time	3522AL	$ 100,000.00			$ 100,000.00	$ 86,080.06
		$ 1,242,139.00	**$ 21,270.86**	**$ -**	**$ 1,263,409.86**	**$ 792,161.27**

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	3522AL	$ 57,000.00	$ 21,270.86	$ 35,729.14	37.3%
		$ 57,000.00	**$ 21,270.86**	**$ 35,729.14**	**37.3%**

Change Order No.	Vendor Name	Project ID	Description	Status Date	Days	Amount
1	T.E. Roberts	3522AL	Replacement of Corrugated Steel Drain Pipe Section by the VSB	7/23/2026		$ 21,270.86
						$ 21,270.86

Agenda Item 10

Engineering Committee Meeting
Meeting Date: November 19, 2026

TO: Engineering Committee

FROM: Amber Boone, General Manager

STAFF CONTACT: Jim Burror, Deputy General Manager/Chief Engineer

SUBJECT: Draft CTP Regional Flow Study Update [Project Committee 15]

Executive Summary

On May 14, 2026, the SOCWA Board's Project Committee 15 (PC-15) reviewed the draft report and presentation for the CTP Regional Flow Study.

The study evaluates three regional alternatives against the baseline of SOCWA continuing to operate the Coastal Treatment Plant (CTP):

1. Redirection to Orange County Sanitation District (OC San) Plant No. 2 (CLB and EBSD) and the MNWD's Regional Treatment Plant (RTP)(SCWD);
2. Redirection to the JB Latham Treatment Plant (JBL); and
3. Redirection to RTP.

The Board requested the following updates:

1. Revise the Table 4-1 scoring consistent with Board direction provided at the meeting;
2. Add Appendix C containing a log of comments received during the various report reviews; and
3. Add Appendix D containing the May 14, 2026 Board presentation slides.

Discussion and Analysis

The requested revisions have been incorporated into the attached report.

The revisions to Table 4-1 changed the weighted scores as summarized below. While several scores changed, the Baseline Alternative—continued operation of CTP—remains the highest-scoring alternative. The RTP alternative moved from third to second, while the combined OC San/RTP alternative moved from second to third. The JBL alternative remained fourth. The PC15 members concurred that further evaluation of this fourth option was not necessary.

Table 4-1: Results Before and After May 14, 2026 Board Meeting

Project Alternative	**Post 5-14-26 Weighted Scores (Rank)**	**Pre 5-14-26 Weighted Scores (Rank)**
Baseline	260 (1)	225 (1)
Redirect flows to OCSD (CLB and EBSD) and RTP (SCWD)	210 (2)	195 (3)
Redirect flows to JBL	170 (4)	170 (4)
Redirect flows to MNWD's RTP	200 (3)	220 (2)

Fiscal Impact

None

Recommended Action: Committee Discussion, Direction, and Action

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SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

COASTAL TREATMENT PLANT REGIONAL PLANNING STUDY

AUGUST 27, 2026

PREPARED FOR:

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
34156 DEL OBISPO STREET
DANA POINT, CA 92629

PREPARED BY:

MKN
16310 BAKE PARKWAY
IRVINE, CA 92618
714.213.9758



MKNASSOCIATES.US

DRAFT

EXECUTIVE SUMMARY

This section provides a concise overview of the key findings and recommendations contained within the Coastal Treatment Plant (CTP) Regional Planning Study.

PROJECT UNDERSTANDING

The South Orange County Wastewater Authority (SOCWA) initiated the Regional Planning Study to evaluate long-term strategies for wastewater treatment, conveyance, and recycled water supply within the coastal service area. This study is focused on the potential future decommissioning of the CTP and the redirection of flows to other regional treatment facilities, with a planning-level evaluation conducted for three regional alternatives compared to a baseline condition in which the CTP remains in operation. The analysis contained in the study is intended to support future decision-making by identifying key tradeoffs related to cost, technical feasibility, regulatory considerations, and implementation complexity.

PROJECT APPROACH

The following provides an overview of the approach used to evaluate each alternative against the baseline condition.

Evaluation Framework. Alternatives were evaluated using a consistent framework developed in coordination with SOCWA staff and member agencies. The evaluation incorporates both quantitative and qualitative criteria, including capital cost, operation and maintenance (O&M) cost, technical feasibility, regulatory and permitting risk, schedule and implementation complexity, interagency coordination, and recycled water impacts.

Technical Assessment. Conceptual evaluation was performed for the following alternatives:

- Alternative 1 – Flow Redirection to OC San Plant No. 2 and Moulton Niguel Water District (MNWD) Regional Treatment Plant (RTP)
- Alternative 2 – Flow Redirection to SOCWA JB Latham Treatment Plant (JBL)
- Alternative 3 – Flow Redirection to MNWD RTP

Each alternative was evaluated to identify infrastructure improvement requirements, operational impacts, and key constraints. A summary of infrastructure improvements for each alternative is provided in **Table ES-1**.

Table ES-1: Alternative Infrastructure Improvements

Category	Alt 1 - OC San + RTP	Alt 2 - JBL	Alt 3 - RTP
New Pipelines	• 7,410-ft 20-in. force main • 28,080-ft 16-in. force main • 22,465-ft 12-in. force main • 720-ft 8-in. force main • 1,390-ft 27-in. gravity main • 2,005-ft 16-in. gravity main	• 24,265-ft 24-in. force main • 6,810-ft 30-in. force main • 5,015-ft 12-in. distribution main	• 16,760-ft 16-in. force main • 100-ft 12-in. distribution main

DRAFT

Table ES-1: Alternative Infrastructure Improvements			
Category	**Alt 1 - OC San + RTP**	**Alt 2 - JBL**	**Alt 3 - RTP**
	• 100-ft 12-in. distribution main		
New Lift Stations / Pump Stations	• New Transfer Lift Station (LS) – (3) 125 Horsepower (HP) pumps • New CTP LS – (3) 50 HP pumps	New JBL Recycled Water Booster Pump Station – 1.07 MGD design capacity	New CTP LS – (4)125 HP pumps
New Equalization Basin	• New Transfer LS – 650,000 gallons storage • New CTP LS – 300,000 gallons storage	None	New CTP LS – 750,000 gallons storage
Existing Lift Station Modifications	• City of Laguna Beach (CLB) Crescent Bay LS Pump Replacement • CLB Fairview LS Pump Replacement • CLB Main Beach LS Pump Replacement • CLB Laguna SOCWA LS Pump Replacement • CLB Anita LS Pump Replacement • CLB Bluebird SOCWA LS Pump Replacement • CLB Nye's Place LS Pump Replacement • MNWD Regional LS Capacity Buy-In	• South Coast Water District (SCWD) LS No. 2 Major Improvements • SCWD LS No. 6 Major Improvements	None
Regional Treatment Facilities	• OC San Plant No. 2 Wastewater Capacity Buy-In • MNWD RTP Wastewater and Recycled Water Capacity Buy-In	SOCWA JBL Wastewater Capacity Buy-In and Recycled Water Expansion	MNWD RTP Wastewater and Recycled Water Capacity Buy-In
CTP Facility Modifications	Full abandonment	Full abandonment	Full abandonment

Cost Evaluation. A 40-year lifecycle cost analysis, including capital and O&M costs, was performed for both the baseline and the three alternative scenarios to support a comparative financial evaluation across all scenarios. A summary of undiscounted and net present value (NPV) 40-year cumulative costs is provided in **Table ES-2**. The cost range shown reflects the upper and lower bounds of the analysis.

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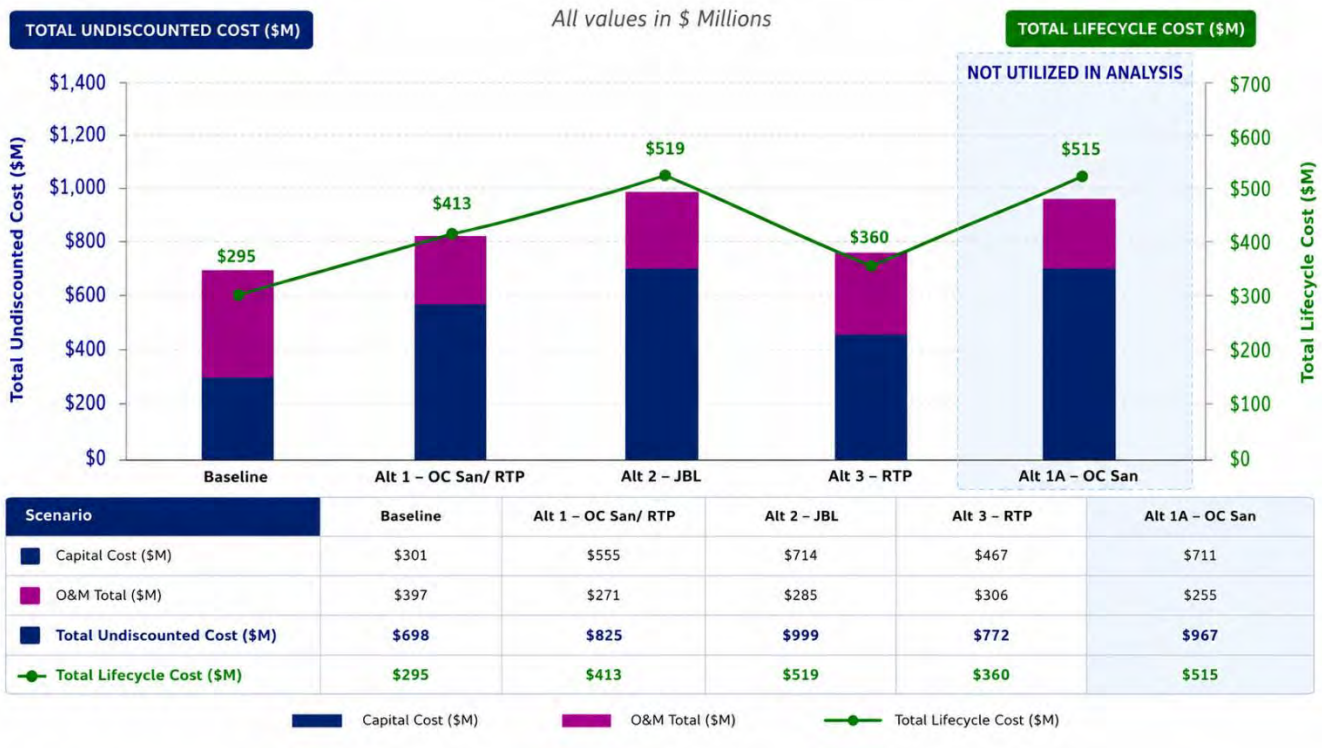
Table ES-2: 40-Year Cumulative Cost Comparison				
Cost Component	**Baseline**	**Alt 1 - OC San + RTP**	**Alt 2 - JBL**	**Alt 3 - RTP**
Undiscounted Capital ($M)	**$205 - 301**	**$494 - 555**	**$646 - 714**	**$390 - 467**
CLB	$136 - 200	$305 - 335	$464 - 509	$259 - 310
EBSD	$4 – 6	$10 - 11	$13 - 15	$7 - 9
SCWD	$65 - 96	$180 - 209	$169 - 190	$124 - 148
Undiscounted O&M ($M)	**$364 - 397**	**$271**	**$285**	**$306**
CLB	$242 - 264	$170	$189	$203
EBSD	$7	$5	$5	$6
SCWD	$116 - 126	$96	$90	$97
Total Undiscounted ($M)	**$569 - 698**	**$765 - 825**	**$931 - 999**	**$696 - 772**
Total NPV ($M)	**$227 - 295**	**$387 - 413**	**$489 - 519**	**$326 - 360**

Figure ES-1 presents a comparison of the alternatives using the upper-bound results summarized in **Table ES-2**. The figure also includes a conceptual modification to Alternative 1, labeled as *Alt 1A – OC San*, which represents redirecting all flow to OC San.

This concept was part of the original project scope but was refined during early stages of the study due to several constraints: (1) OC San identified a 4 MGD conveyance limitation within existing infrastructure; (2) OCWD indicated challenges associated with return water supply; and (3) the availability of the abandoned Coastal Supply Pipeline could not be confirmed.

The costs shown for Alt 1A are conceptual in nature and are included to illustrate its comparatively high cost.

Figure ES-1: Upper Bound Cost Comparison



Scenario	Baseline	Alt 1 – OC San/ RTP	Alt 2 – JBL	Alt 3 – RTP	Alt 1A – OC San
Capital Cost ($M)	$301	$555	$714	$467	$711
O&M Total ($M)	$397	$271	$285	$306	$255
Total Undiscounted Cost ($M)	**$698**	**$825**	**$999**	**$772**	**$967**
Total Lifecycle Cost ($M)	**$295**	**$413**	**$519**	**$360**	**$515**

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Alternatives Analysis. Findings from the technical assessment and cost evaluation were integrated into a comparative scoring evaluation to identify key tradeoffs and inform recommendations. **Table ES-3** summarizes the results of the alternatives analysis.

Table ES-3: Alternative Analysis Results

Evaluation Criteria	Baseline (SOCWA CTP)	Alternative 1 (OC San Plant No. 2 and MNWD RTP)	Alternative 2 (SOCWA JBL)	Alternative 3 (MNWD RTP)	Scoring Methodology
Capital Cost (Weight: 20)	**3** *$205 – 301M*	**2** *$494 – 555M*	**1** *$646 – 714M*	**2** *$390 – 467M*	Based on 40-year undiscounted capital cost ranges
O&M Cost Impact (Weight: 20)	**1** *$364 - 397M*	**3** *$271M*	**3** *$285M*	**2** *$306M*	Based on 40-year undiscounted O&M cost ranges
Technical Feasibility (Weight: 15)	**3**	**2**	**1**	**2**	Considers ability to convey and treat flows given existing capacities and infrastructure constraints. Higher score = fewer constraints and less fatal flaws
Regulatory & Permitting Risk (Weight: 15)	**3**	**2**	**1**	**2**	Considers permitting complexity (NPDES, CEQA, LAFCO, annexation, agreements, etc.). Higher score = lower regulatory risk and fewer new hurdles
Schedule & Implementation Complexity (Weight: 10)	**3**	**2**	**1**	**2**	Considers estimated time, property needs, design / construction complexity, and transition planning. Higher score = shorter and less complex timeline
Regional / Interagency Coordination (Weight: 10)	**3**	**2**	**3**	**2**	Considers the ability to rely on existing agreements and minimize new interagency agreements. Higher score = fewer new agreements and simpler agreements
Recycled Water Impacts (Weight: 10)	**3**	**1**	**2**	**2**	Considers effect on existing and future recycled water production and reliability. Higher score = preservation or enhancement of supply
Total Unweighted (Max = 21)	**19**	**14**	**12**	**14**	Higher weighted score indicates a more favorable overall alternative
Total Weighted (Max = 300)	**260**	**210**	**170**	**200**	

Notes:

1. *Scoring Scale:* **3** *= High / most favorable;* **2** *= Moderate;* ***1*** *= Low / least favorable*
2. *Cost values are undiscounted*

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KEY FINDINGS

The following provides a summary of the key findings informed by the alternative analysis.

Cost. The Baseline scenario results in the lowest capital cost but the highest long-term O&M costs due to continued operation of the CTP. Of the alternatives, Alternative 3 provides the lowest lifecycle cost under both lower- and upper-bound assumptions and is comparable to the Baseline on a total undiscounted basis. Alternative 2 results in the highest overall cost, driven by significant conveyance infrastructure and treatment expansion requirements.

Technical Feasibility. The Baseline scenario represents the lowest-risk option from a technical perspective as it maintains existing operations. Alternatives 1 and 3 are feasible but require substantial conveyance infrastructure and integration with regional systems. Alternative 2 presents greater feasibility challenges associated with hydraulic limitations and treatment capacity constraints.

Regulatory and Implementation Considerations. The Baseline presents the lowest risk because it maintains existing operations and requires limited new permitting. Alternatives 1 and 3 present moderate risk due to new infrastructure, permitting, and coordination requirements, although Alternative 1 offers long-term regulatory benefits through OC San. Alternative 2 presents the highest risk without the same regional risk-sharing benefits.

Capital vs. O&M Tradeoff. All alternatives require higher near-term capital investment relative to the Baseline but result in reduced long-term O&M costs. This tradeoff represents a key consideration in evaluating long-term regional strategy.

CONCLUSIONS

The following are the conclusions of the CTP Regional Flow Study:

1. ***Elimination of Alternative 2.*** Alternative 2 presents potential fatal flaws related to system constraints and has the highest capital and overall lifecycle cost. Therefore, it is not recommended for further consideration.
2. ***Viable Pathways.*** Alternative 3 provides the lowest lifecycle cost among the flow-redirection alternatives, while Alternative 1 receives the highest overall weighted score among those alternatives. Both Alternatives 1 and 3 warrant additional refinement.
3. ***Baseline Consideration.*** The Baseline scenario remains a viable near-term option due to its lower capital requirements and reduced implementation risk; however, it does not provide the long-term regional and operational benefits associated with flow redirection.

RECOMMENDED ACTIONS AND NEXT STEPS

Based on the key findings and conclusions of the study, it is recommended that SOCWA pursue the following actions:

1. **Action 1** – Eliminate Alternative 2 from further consideration

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2. **Action 2** - Complete the CTP Master Plan to refine baseline assumptions and incorporate future capital needs.

3. **Action 3** - Conduct additional refinement of Alternatives 1 and 3. Address the following considerations:

    a) Potential ocean outfall rehabilitation requirements
    b) Capacity buy-in and treatment costs at regional facilities
    c) Opportunities to utilize existing infrastructure corridors
    d) Coastal construction constraints and right-of-way limitations
    e) Future regulatory requirements
    f) Additional alternative configurations
    g) Potential benefits associated with CTP conversion or repurposing

4. **Action 4** - Update the economic model and scoring based on refined inputs.

After completion of the recommended actions and should SOCWA elect to advance a flow redirection alternative, the following next steps are recommended:

- **Confirm Capacity and Partnership Framework.** Coordinate with OC San and/or MNWD to confirm available capacity and identify required system improvements.
- **Develop Interagency Agreements.** Establish governance structure, cost-sharing approaches, and operational responsibilities.
- **Advance Program Development.** Refine conceptual design, cost assumptions, permitting strategy, and funding approach to support implementation.

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List of Abbreviations

AACE	Association for the Advancement of Cost Engineering
ACWRF	Aliso Creek Water Reclamation Facility
AFY	Acre-Feet per Year
AWT	Advanced Water Treatment
BPS	Booster Pump Station
c/o	Care Of
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CLB	City of Laguna Beach
CMLCS	Cement Mortar Lined and Coated Steel
CSC	City of San Clemente
CTP	Coastal Treatment Plant
d/D	Depth-to-Diameter (Ratio)
DPR	Direct Potable Reuse
EBSD	Emerald Bay Service District
EIR	Environmental Impact Report
ETM	Effluent Transmission Main
ETWD	El Toro Water District
ft	Feet
ft/s	Feet per Second
FY	Fiscal Year
GIS	Geographic Information System
gpd	Gallons per Day
gph	Gallons per Hour
gpm	Gallons per Minute
GWRS	Ground Water Replenishment System
HDPE	High-Density Polyethylene
HP	Horsepower
in.	Inches
IRWD	Irvine Ranch Water District / Irvine Water District
JBL	JB Latham Treatment Plant
kWh	Kilowatt-Hours
LAFCO	Local Agency Formation Commission of Orange County
LBCWD	Laguna Beach County Water District
LF	Linear Feet
LS	Lift Station
MBR	Membrane Bioreactor
MG	Million Gallons
MGD	Million Gallons per Day
mi	Miles
MKN	Michael K. Nunley and Associates, LLP
MNWD	Moulton Niguel Water District
NCI	North Coast Interceptor
NPDES	National Pollutant Discharge Elimination System
NPV	Net Present Value
O&M	Operations and Maintenance
OASIS	Optimized Adaptive Sustainable Integrated Supply
OC San	Orange County Sanitation District
OCWD	Orange County Water District
PC	Project Committee
PVC	Polyvinyl Chloride
ROW	Right-of-Way
RTP	Regional Treatment Plant
RWQCB	Regional Water Quality Control Board
SCWD	South Coast Water District
SMWD	Santa Margarita Water District
SOCWA	South Orange County Wastewater Authority
TDH	Total Dynamic Head
TDS	Total Dissolved Solids
UV	Ultraviolet
VCP	Vitrified Clay Pipe
WDR	Waste Discharge Requirement

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Previous Studies and Reports

The following studies, reports, and other materials were reviewed during the preparation of this Report:

1. City of Laguna Beach Sewer Master Plan (Dudek, 2025)
2. Fiscal Year 2025–26 Budget (SOCWA, 2025)
3. Emerald Bay Service District Lift Station Condition Assessment Summary (MKN, 2021)
4. Coastal Treatment Plant Future Alternatives Feasibility Study (Hazen, 2021)
5. Coastal Treatment Plant Export Sludge Force Main Replacement (Dudek, 2020)
6. North Coast Interceptor – Reliability Assessment & Analysis, Revision No. 1 (Dudek, 2022)
7. Aliso Creek Estuary Restoration – Conceptual Restoration Plan (ESA, 2018)
8. South Coast Water District Infrastructure Master Plan Update (AECOM, 2017)
9. Coastal Treatment Plant Facility Plan (CH2M Hill, 2014)
10. Export Sludge Forcemain Replacement for the South Coast Water District – Phase I Laguna Niguel Regional Park Section (HYA Consulting Engineers, 1998)
11. Coast Supply Line Replacement – Section 1A (James M. Montgomery, 1991)
12. Coast Supply Line Replacement – Section 3 (James M. Montgomery, 1990)
13. JBTLP Package B Planning – Technical Memorandum No. 1 Liquid Treatment Train Analysis (Carollo, 2017)
14. CTP Daily Influent Flows from January 2020 to December 2025 (SOCWA, 2026)

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1.0 BACKGROUND AND ASSUMPTIONS

This section provides the foundational context for the Coastal Treatment Plant (CTP) Regional Planning Study and establishes the framework used to evaluate potential project alternatives. It summarizes the project background, defines the study objectives, identifies existing infrastructure, and documents key assumptions and evaluation criteria used in the technical and cost analyses.

The information presented reflects currently available data, stakeholder input, and the planning-level nature of this evaluation of regional flow and treatment alternatives.

1.1 Project Background

The South Orange County Wastewater Authority (SOCWA) operates regional wastewater treatment and conveyance facilities that serve multiple member agencies in southern Orange County, including the Cities of Laguna Beach (CLB) and San Clemente (CSC); Emerald Bay Service District (EBSD); South Coast Water District (SCWD); Santa Margarita Water District (SMWD); and El Toro Water District (ETWD). The CTP has historically provided wastewater treatment and recycled water production for portions of the coastal service area. Over time, evolving regulatory requirements, aging infrastructure, and changing regional capital priorities have prompted consideration of long-term strategies for treatment, conveyance, and recycled water supply within the South Orange County service area.

In parallel with these considerations, several regional infrastructure projects and planning efforts are underway that influence future system configuration. These include ongoing investments in conveyance systems such as the North Coast Interceptor (NCI) and improvements to the SCWD tunnel infrastructure, as well as broader discussions regarding treatment capacity, recycled water demands, and interagency coordination across South Orange County. These factors create an opportunity to evaluate how existing and planned infrastructure can support future regional wastewater management strategies, including redirection of flows among facilities.

This report documents a planning-level evaluation of regional wastewater flow and treatment considerations associated with the CTP. The analysis relies on available system data, planning documents, and stakeholder input to characterize existing conditions, identify key infrastructure relationships, and provide context for evaluating potential regional conveyance and treatment configurations. The information presented herein is intended to support ongoing coordination among SOCWA and its member agencies as they consider long-term infrastructure and operational planning for the region.

1.2 Objective

The following objectives define the key outcomes this planning-level evaluation is intended to inform.

- **Decommissioning:** Evaluate high-level regional considerations associated with potential future decommissioning of CTP.
- **Redirection:** Assess conceptual and hydraulic feasibility of redirecting wastewater flows to alternative regional treatment facilities.
- **Infrastructure:** Identify major infrastructure needs, constraints, and operational risks associated with potential alternatives.

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- **Costs:** Develop planning-level cost information to support comparison of regional strategies.
- **Next Steps:** Provide information to support future decision-making and potential follow-up studies.

1.3 Existing Infrastructure

Using Geographic Information System (GIS), as-builts, and input from agency staff, Michael K. Nunley and Associates, LLP (MKN), an Ardurra Group, Inc. company, prepared **Figure 1-1** through **Figure 1-3** to identify relevant infrastructure owned by CLB, EBSD, Orange County Sanitation District (OC San), Moulton Niguel Water District (MNWD), SCWD, and SOCWA associated with the alternative scenarios evaluated in this study. The following subsections provide additional information related to the key components shown in the figures.

1.3.1 Regional Wastewater Treatment and Outfall Facilities

This section provides a high-level overview of the four regional wastewater treatment facilities considered in the proposed alternative scenarios.

1.3.1.1 *Coastal Treatment Plant (SOCWA)*

Constructed in 1967 and expanded in 1983, the CTP is a SOCWA regional wastewater treatment facility located within the City of Laguna Niguel's sphere of influence that treats wastewater from CLB, EBSD, and a portion of SCWD. The CTP is managed by SOCWA Project Committee No. 15 (PC-15). The facility can treat up to 6.7 million gallons per day (MGD) of wastewater and has the capacity to produce up to 1.5 MGD of recycled water for use in SCWD's recycled water system. Besides the treatment processes, key components of the facility include a sludge export pipeline and the Aliso Creek Ocean Outfall as described in the following subsections. **Figure 1-4** illustrates the CTP process schematic.

Sludge Export Pipeline

The sludge export system between the CTP and the Regional Treatment Plant (RTP) was originally constructed as part of the 1983 CTP expansion and consisted of two parallel 4-inch (in.) ductile iron force mains that extended 23,000 feet (ft) or 4.4 miles (mi) along the Aliso Creek corridor adjacent to Reach E of SOCWA's effluent transmission main (ETM). The 4-in. pipelines have since been abandoned and replaced by a newer sludge force main system, constructed over two phases.

- *Phase I* – Completed in 1998, Phase I includes 7,900 ft (1.5 mi) of 6-in. ductile iron force main extending from Alicia Parkway to the RTP within a 25-ft MNWD easement.
- *Phase II* – Completed in 2022, Phase II includes 16,400 ft (3.1 mi) of 6-in. high-density polyethylene (HDPE) force main extending from the CTP to Alicia Parkway on the eastern side of Aliso Creek within ETM Reach E's 30-ft easement.

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South Orange County Wastewater Authority

CTP Regional Flow Study

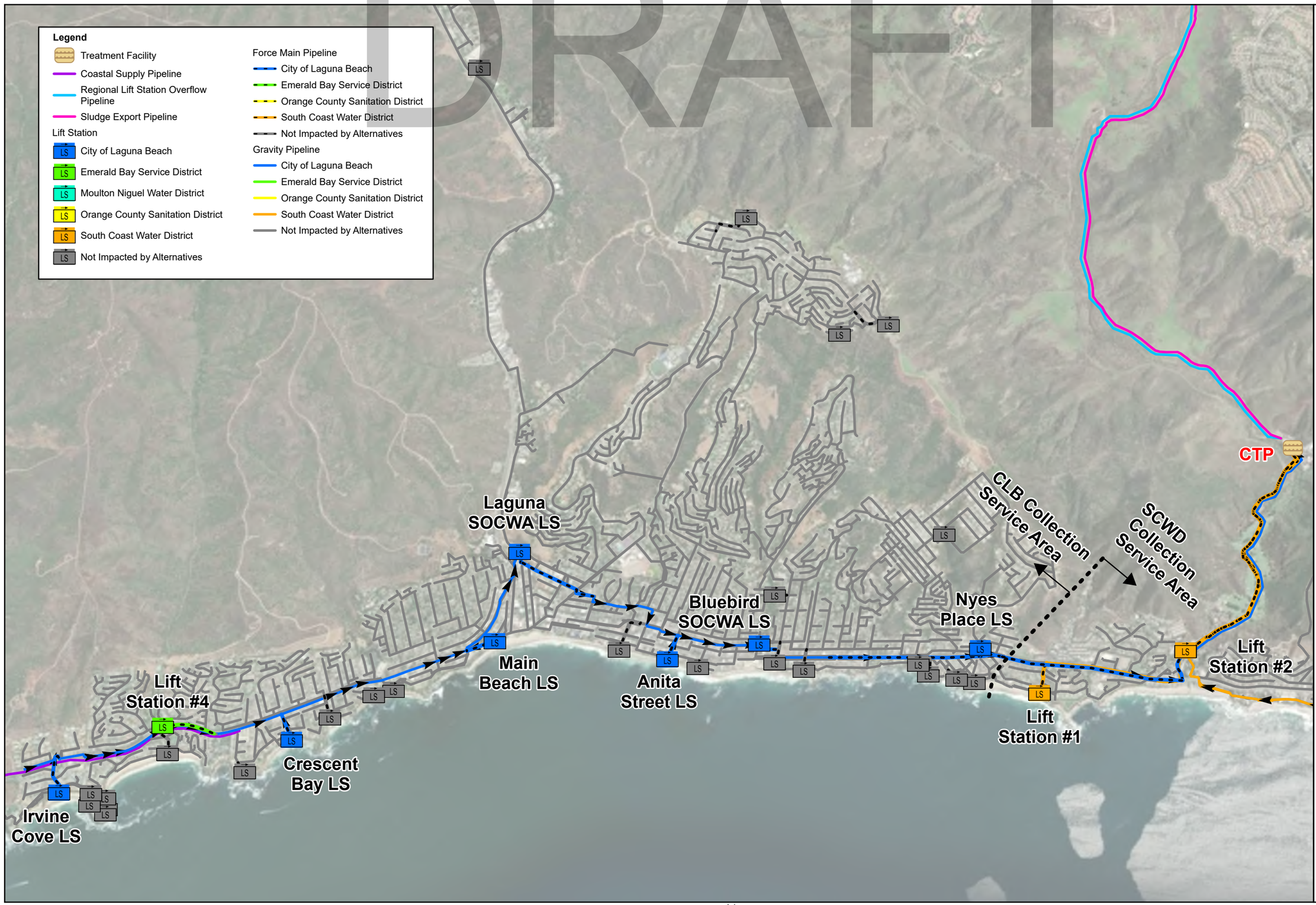
Figure 1-1

Orange County Sanitation District Relevant Infrastructure

1 inch = 4,200 feet

0 2,100 4,200

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South Orange County Wastewater Authority

CTP Regional Flow Study

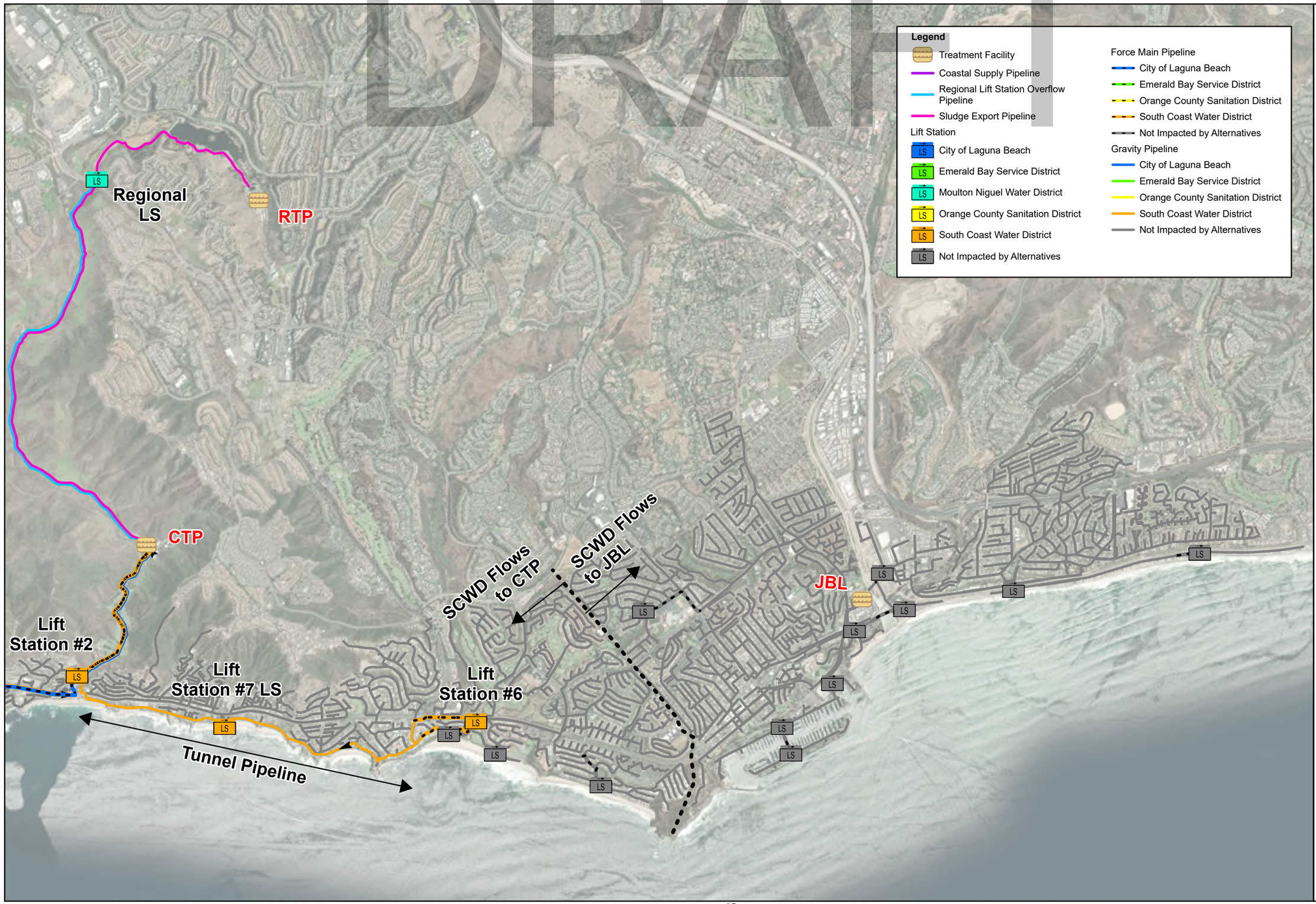
Figure 1-2

City of Laguna Beach and Emerald Bay Service District Relevant Infrastructure

1 inch = 2,200 feet

0 1,100 2,200

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South Orange County Wastewater Authority

CTP Regional Flow Study

Figure 1-3

South Coast Water District Relevant Infrastructure

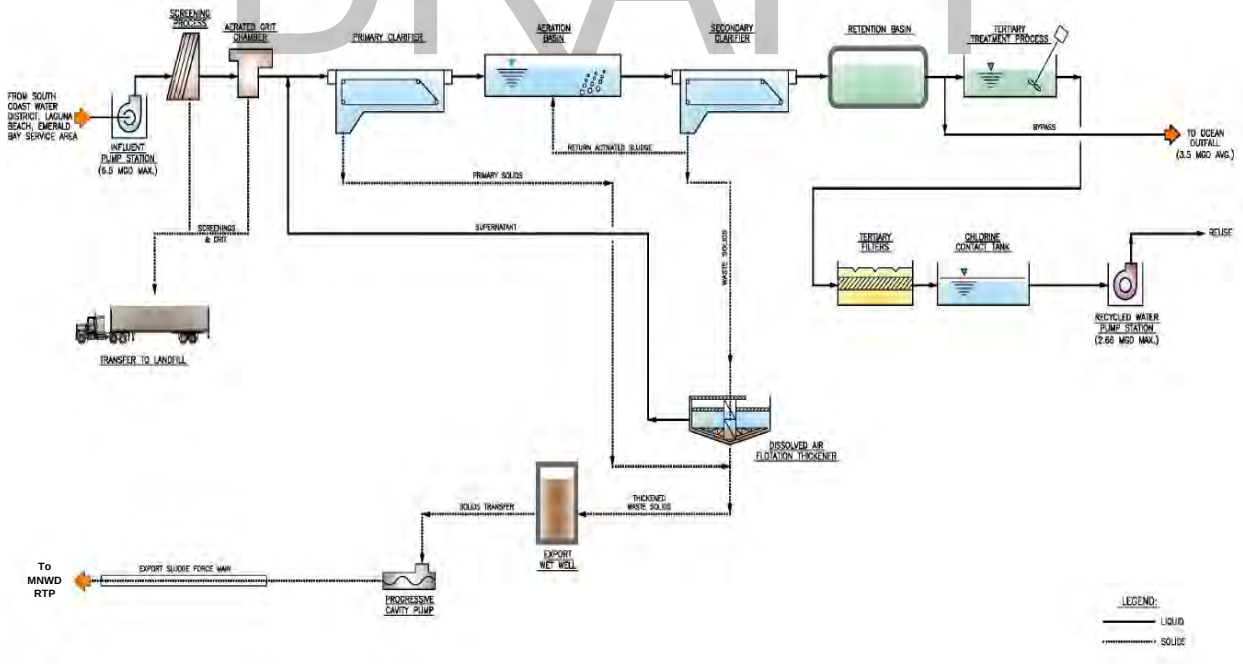
1 inch = 3,400 feet

0 1,700 3,400

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Figure 1-4: CTP Process Schematic



Source: National Pollutant Discharge Elimination System (NPDES) No. CA0107611

Aliso Creek Ocean Outfall

The Aliso Creek Ocean Outfall was constructed in 1979 and consists of 8,700 ft (1.5 mi) of 36-in.-diameter pipeline extending from the CTP to offshore of Aliso Creek Beach within CLB. The outfall is managed by SOCWA PC-24. The outfall conveys treated effluent from the CTP and treated effluent from the ETM produced by ETWD, Irvine Water District (IRWD), and MNWD. The hydraulic capacity of the outfall is approximately 50 MGD and has split capacity ownership between users per **Table 1-1.**

Table 1-1: Aliso Creek Ocean Outfall (PC-24) Ownership		
Agency	**Hydraulic Capacity (MGD)**	**Capacity Ownership**
CLB	5.500	11.00%
EBSD	0.390	0.78%
ETWD	8.151	16.30%
IRWD (c/o ETWD)[1]	7.880	15.76%
MNWD (c/o ETWD)[1]	21.924	43.85%
SCWD	6.155	12.31%
Total	**50.000**	**100.00%**

Note:

1. *As part of negotiated agreements for the exit of MNWD and IRWD from participation in SOCWA, capacity rights for the Aliso Creek Ocean Outfall have been reassigned. Historical capacity shares for IRWD and MNWD are identified as "care of" (c/o) ETWD, reflecting the transfer of participation in SOCWA facilities.*

Agency staff indicated that ETM flows upstream of the CTP have elevated total dissolved solids (TDS) and are not suitable for recycled water use without additional treatment.

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1.3.1.2 *JB Latham Treatment Plant*

Originally constructed in 1964 with major expansions in 1974, 1978, and 1985, the JB Latham Treatment Plant (JBL) is a SOCWA regional wastewater treatment facility located in the City of Dana Point that treats wastewater from City of San Juan Capistrano (C/O SMWD), MNWD (C/O SCWD), and SCWD. JBL is managed by SOCWA PC-2. The facility's treatment processes include screening, grit removal, primary treatment, secondary treatment, secondary clarification, anaerobic digestion, and solids dewatering and can treat up to a capacity of 18 MGD. Besides the treatment processes, the facility also includes the San Juan Creek Ocean Outfall constructed in 1978 to discharge treated effluent approximately 10,300 ft (2.2 mi) off Doheny State Beach.

1.3.1.3 *Plant No. 2*

Reclamation Plant No. 2 (Plant No. 2) is an OC San regional wastewater treatment facility located in the City of Huntington Beach, adjacent to the Santa Ana River and east of Pacific Coast Highway. The facility's treatment processes include screening, grit removal, primary treatment, secondary treatment, anaerobic digestion, and solids dewatering. Plant No. 2 operates in a separated stream mode, splitting non-reclaimable and reclaimable streams. Secondary effluent that is reclaimable is diverted to the Orange County Water District's (OCWD's) Ground Water Replenishment System (GWRS) and non-reclaimable secondary effluent is discharged to the ocean outfall system.

1.3.1.4 *Regional Treatment Plant*

Constructed in 1982, the RTP is a MNWD regional wastewater treatment facility located in the City of Laguna Niguel that treats wastewater from MNWD, solids pumped from the CTP, and solids trucked from ETWD. The facility's treatment processes include preliminary treatment, primary treatment, secondary treatment, tertiary filtration, anaerobic digestion, solids dewatering, and co-generation. Additionally, the RTP has the capacity to produce recycled water for use in MNWD's recycled water system.

1.3.2 Regional Wastewater Collection Systems

This section provides a high-level overview of the regional wastewater collection systems considered in the proposed alternative scenarios.

1.3.2.1 *City of Laguna Beach*

CLB's wastewater collection system services approximately 23,000 residents and is comprised of 102 mi of gravity and force main pipeline, 25 active urban water diversion structures, and 25 LSs. CLB does not treat the wastewater generated within its service area and instead conveys all wastewater to either the Laguna SOCWA LS or the Bluebird SOCWA LS to be pumped through the NCI (PC-23) to the CTP. The following subsections provide more information on CLB's LSs and the NCI.

Relevant Lift Stations

Table 1-2 provides a summary of CLB LSs anticipated to be impacted by one or more of the evaluated alternatives.

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Table 1-2: CLB Relevant LSs					
LS Name	Location	Year Constructed or Rehabilitated	Design Capacity		Force Main Diameter (in.)
			gpm	MGD	
Anita Street	End of Anita St	1950[1]	375	0.54	6
Bluebird SOCWA	1521 Galen Dr	2019	7,080	10.20	27
Cresent Bay	1301 Cliff Dr	2003	325	0.47	6
Fairview	998 Cliff Dr	2008	325	0.47	6
Laguna SOCWA	276 Loma Terrace	2018	5,260	7.57	24
Main Beach	175 N Pacific Coast Hwy	2012	1,600	2.30	8
Nye's Place	210 Nye's Pl	2019	650	0.94	8

Notes:
1. *Replacement of LS anticipated to be completed in 2027.*
2. *Data per the City of Laguna Beach Sewer Master Plan (November 2025, Dudek).*

North Coast Interceptor (PC-23)

The NCI is a 21-in.- to 27-in.-diameter 4-mi pipeline conveyance system comprised of two LSs (Laguna SOCWA LS and Bluebird SOCWA LS), two sewer force main reaches (Reaches 1 and 3), two gravity sewer reaches with relatively short inverted siphons (Reaches 2 and 4), and a long inverted siphon discharging to the CTP (Reach 5). North of Nye's Place LS, the NCI represents the sole conveyance system for wastewater collected from EBSD and CLB to the CTP. In 2022, CLB completed the North Coast Interceptor – Reliability Assessment & Analysis (April 2022, Dudek) to evaluate options to rehabilitate the NCI system and replacement of Reach 5 of the NCI is slated to begin this fiscal year (FY) pending the results of this study.

1.3.2.2 ***Emerald Bay Service District***

EBSD is a special district founded in 1961 to provide potable water, wastewater collection, trash, street, recreation, and public safety services to the community of Emerald Bay. EBSD's wastewater collection system is comprised of approximately 6 mi of gravity and force main pipeline, four low flow diversions, and seven LSs. EBSD does not treat the wastewater generated within its service area and instead conveys wastewater to CLB's system through LS No. 4, which is then collected and conveyed via the Laguna SOCWA LS and Bluebird SOCWA LS to the CTP.

LS No. 4 is the only relevant infrastructure from EBSD considered in this study and is summarized as follows:

- Location – Intersection of the Pacific Coast Highway and Emerald Bay
- Year Constructed – 1950s
- Design Capacity – Estimated at 260 gpm / 0.37 MGD
- Force Main Diameter – 8-in.

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1.3.2.3 *Moulton Niguel Water District*

The MNWD Regional LS is located in the City of Laguna Niguel near the intersection of Aliso Creek and Alicia Parkway. The LS pumps to the RTP via two parallel force mains, approximately 2 mi in length, which are currently being replaced. MNWD staff indicated that the LS pumping ranges from approximately 1,000 gpm to 6,500 gpm under an average daily diurnal and up to 7,200 gpm during peak weekend flows. The Regional LS has a total design capacity of 15,500 gpm / 22.32 MGD to meet the historical maximum observed flow.

An existing 18-in. vitrified clay pipe (VCP) sewer pipeline extends downhill from the MNWD Regional LS to CTP and has on rare occasions served as an overflow. While the pipeline is currently plugged, it could be made available for future use, subject to the execution of any necessary agreements and receipt of all appropriate approvals.

1.3.2.4 *Orange County Sanitation District*

OC San is a special district founded in 1952 that provides wastewater collection, treatment, and recycling services for approximately 2.6 million people in central and northwest Orange County. OC San's wastewater collection system consists of 380 mi of gravity and force main pipeline and 15 LSs. OC San treats all its wastewater through its two wastewater treatment and reclamation facilities – Reclamation Plant No. 1 and Plant No. 2. **Table 1-3** provides a summary of OC San LSs anticipated to be impacted by one or more of the evaluated alternatives.

Table 1-3: OC San Relevant LSs

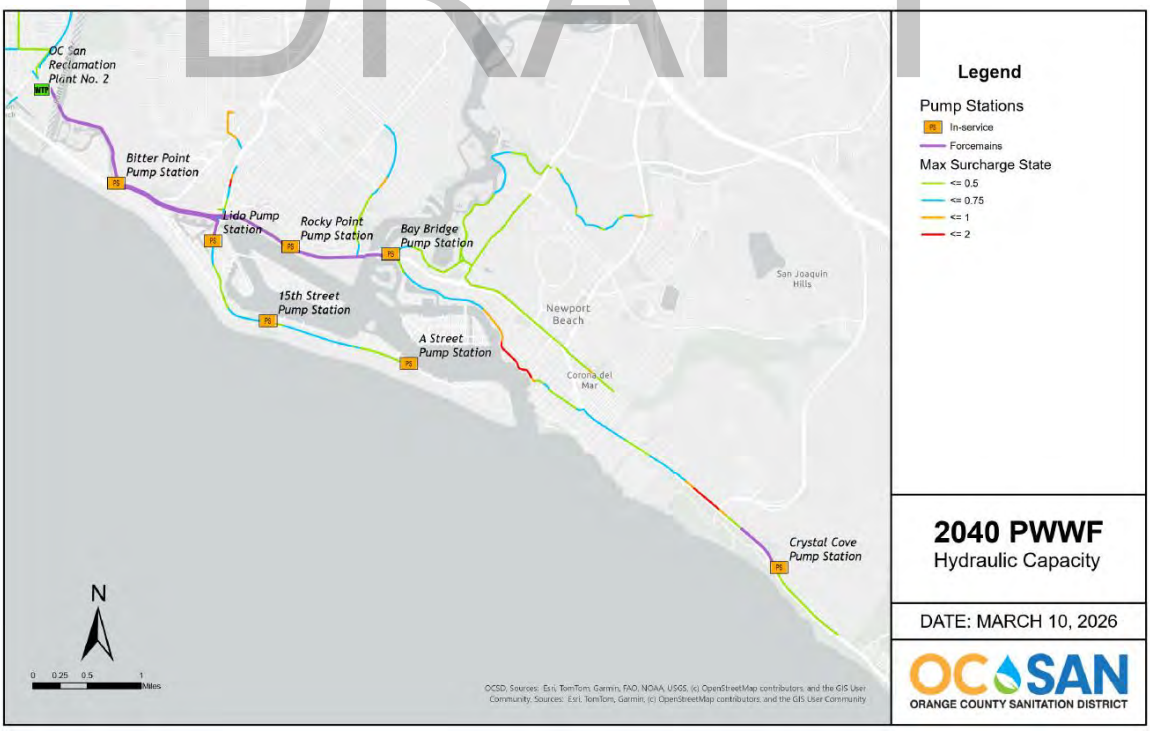
LS Name	Location	Year Constructed or Rehabilitated	Design Capacity		Force Main Diameter (in.)
			gpm	MGD	
Bay Bridge	300 E Coast Hwy	1966[1]	12,600	18.20	24
Bitter Point	Industrial Park Way and Pacific Coast Hwy	2012	27,400	39.40	42

Notes:
1. *Rehabilitation of LS anticipated to be completed in 2030.*
2. *Data per input from OC San staff.*

OC San provided **Figure 1-5**, which illustrates the available capacity within the collection system serving the coastal areas north of the SOCWA service area.

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Figure 1-5: OC San Collection System Capacity



1.3.2.5 *South Coast Water District*

SCWD is a special district founded in 1932 to provide potable water, recycled water, and wastewater collection services to approximately 40,000 residents of Dana Point, South Laguna Beach, and areas of San Clemente and San Juan Capistrano. SCWD's wastewater collection system is comprised of 143 mi of gravity and force main pipeline, including a unique sewer tunnel and main in South Laguna Beach, 31 flow diversions, and 13 LSs. SCWD does not treat the wastewater generated within its service area and instead conveys wastewater to either CTP or JBL. The following subsections provide more information on SCWD's LSs and the pipeline tunnel.

Relevant Lift Stations

Table 1-4 provides a summary of SCWD LSs anticipated to be impacted by one or more of the evaluated alternatives.

Table 1-4: SCWD Relevant LSs

LS Name	Location	Year Constructed or Rehabilitated	Design Capacity		Force Main Diameter (in.)
			gpm	MGD	
LS No. 1	111 Blue Lagoon	1967	400	0.58	6
LS No. 2	Country Club Dr	1963[1]	2,200	3.17	16
LS No. 6	33103 Pacific Coast Hwy	1983	1,360	1.96	18

Notes:
1. *Replacement of LS anticipated to be completed in 2027.*
2. *Data per the South Coast Water District Infrastructure Master Plan Update (AECOM, 2017)*

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Pipeline Tunnel

Constructed in 1954, the SCWD tunnel is an approximately 2-mi gravity pipeline that conveys wastewater from LS No. 6 and LS No. 7 to LS No. 2 for conveyance to the CTP. In March 2024, SCWD completed the Tunnel Stabilization and Sewer Pipeline Replacement project to correct undersized and deteriorating portions of the infrastructure. Project elements included the following:

- Tunnel Stabilization – The tunnel was enlarged from its existing size of 5 ft x 5 ft to 9 ft x 9 ft. Permanent shotcrete lining and steel supports were also installed throughout the tunnel.
- Pipeline Replacement – A new 24-in. pipeline was installed throughout the tunnel, with the old 24-in. pipeline encased in concrete and retained for redundancy and emergency use.

1.3.3 Regional Recycled Water Systems

This section provides a high-level overview of the regional recycled water systems considered in the proposed alternative scenarios.

1.3.3.1 *South Coast Water District*

SCWD's recycled water system is comprised of 15 mi of distribution pipeline, three booster pump stations (BPSs), and three reservoirs. Recycled water is provided by the advanced water treatment (AWT) facility owned by SCWD and operated by SOCWA at the CTP with a design capacity of 2,300 gpm / 3.3 MGD. Recycled water is then further polished for high TDS at the Aliso Creek Water Reclamation Facility (ACWRF) to increase water quality at a design capacity of 350 gpm / 0.5 MGD using ultra filtration and reverse osmosis treatment. The ACWRF operates at Reservoir No. 1, pulling directly from the tank, treating and then delivering product water back to the tank. Additionally, the ACWRF can extract water from Aliso Creek for treatment and use of recycled water, but the minimum bypass flow requirement makes it difficult for SCWD to reliably extract water from the creek. In accordance with the 2017 Infrastructure Master Plan, the future recycled water demand is anticipated to be 1,200 acre-feet per year (AFY) / 1.07 MGD at full buildout.

Reservoir No. 3 (Joint Reservoir) is the highest recycled water reservoir in the system and storage capacity is shared by both SCWD and MNWD's recycled water systems. Through this reservoir, SCWD is contracted to supply up to 1.44 MGD to MNWD. However, agency staff have indicated that the two agencies manage the reservoir using a "net zero" approach, in which either user is obligated to return the volume of recycled water used form the reservoir.

1.3.3.2 *Moulton Niguel Water District*

MNWD's recycled water is provided by the RTP and 3A Treatment Plant and is conveyed through 142 mi of distribution pipeline, 10 BPSs, and 11 reservoirs. Additionally, MNWD owns 1,000 acre-feet of capacity rights in the Upper Oso recycled water reservoir owned by SMWD. As explained in the previous subsection, MNWD shares the joint reservoir storage capacity with SCWD. MNWD is currently advancing the Optimized Adaptive Sustainable Integrated Supply (OASIS) Water Resource Center Project, which will use effluent from RTP to supply a new direct potable reuse (DPR) treatment system. The project is expected to be operational by approximately 2040.

Based on discussions with MNWD staff, the following key considerations were identified:

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- **Source Control Considerations.** Conveyance of raw wastewater to the RTP may introduce additional coordination requirements related to source control programs. These challenges could be minimized or avoided by providing treated recycled water in lieu of raw influent.
- **Outfall Capacity Constraints.** Staff identified limitations in outfall capacity during wet weather events. Under these conditions, the tertiary treatment facilities have on rare occasion been operated at or near full capacity to prevent surcharge of RTP's reach of the ocean outfall. While introducing more wastewater flow to RTP may warrant a capacity study of RTP's reach of the ocean outfall, it is appropriate to note that implementation of the OASIS project would reduce daily flow to the ocean outfall.
- **Potential Water Supply Opportunities.** MNWD indicated that if SOCWA member agencies participate in the OASIS project, there may be opportunities to negotiate a return of a portion of the produced potable water supply as part of a broader regional partnership.

1.3.4 Coast Supply Pipeline

Constructed by the Laguna Beach County Water District (LBCWD) in the mid-20th century, the original Coast Supply Pipeline was a 30-in.-diameter steel pipeline extending from the City of Newport Beach near the intersection of Fernleaf Avenue and Pacific Coast Highway to CLB near Ledroit Street. Replacement of the Coast Supply Pipeline was completed in multiple phases during the late 1980s and early 1990s and generally consisted of a series of 24-in. and 27-in. cement mortar lined and coated steel (CMLCS) transmission pipelines installed within the Pacific Coast Highway corridor.

Per the as-built drawings for the replacement project, the original transmission main was abandoned in place, with some segments removed or filled depending on location and constructability constraints. The replacement pipeline is currently used by LBCWD to convey groundwater from the City of Newport Beach's system to LBCWD's system.

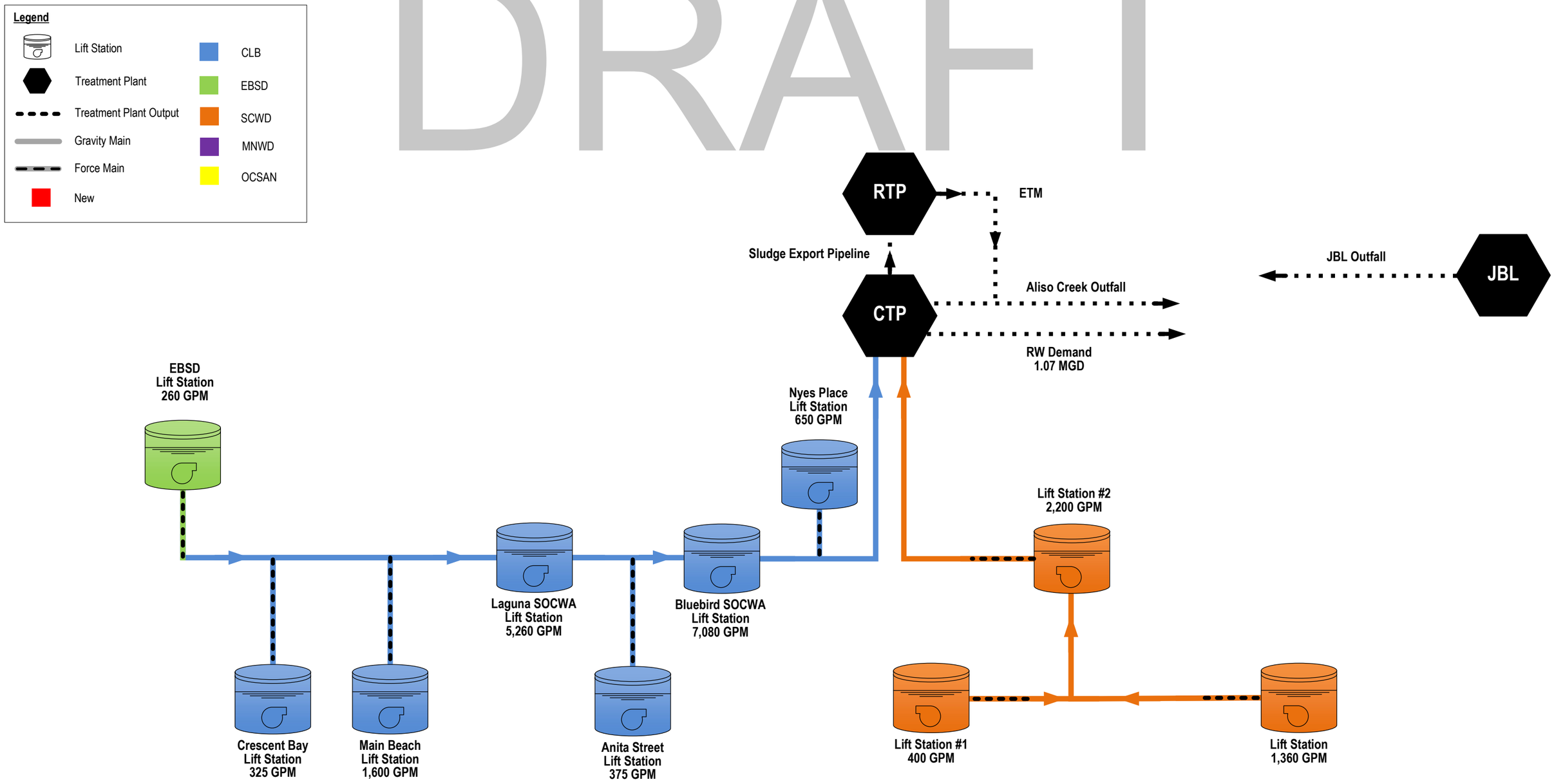
1.4 Project Assumptions

This section summarizes the key project assumptions used as the basis for the analyses presented in this report. These assumptions establish the baseline conditions for the evaluation, including factors such as estimated wastewater flows, treatment plant capacities, and cost.

1.4.1 Wastewater Flow and Treatment Plant Capacities

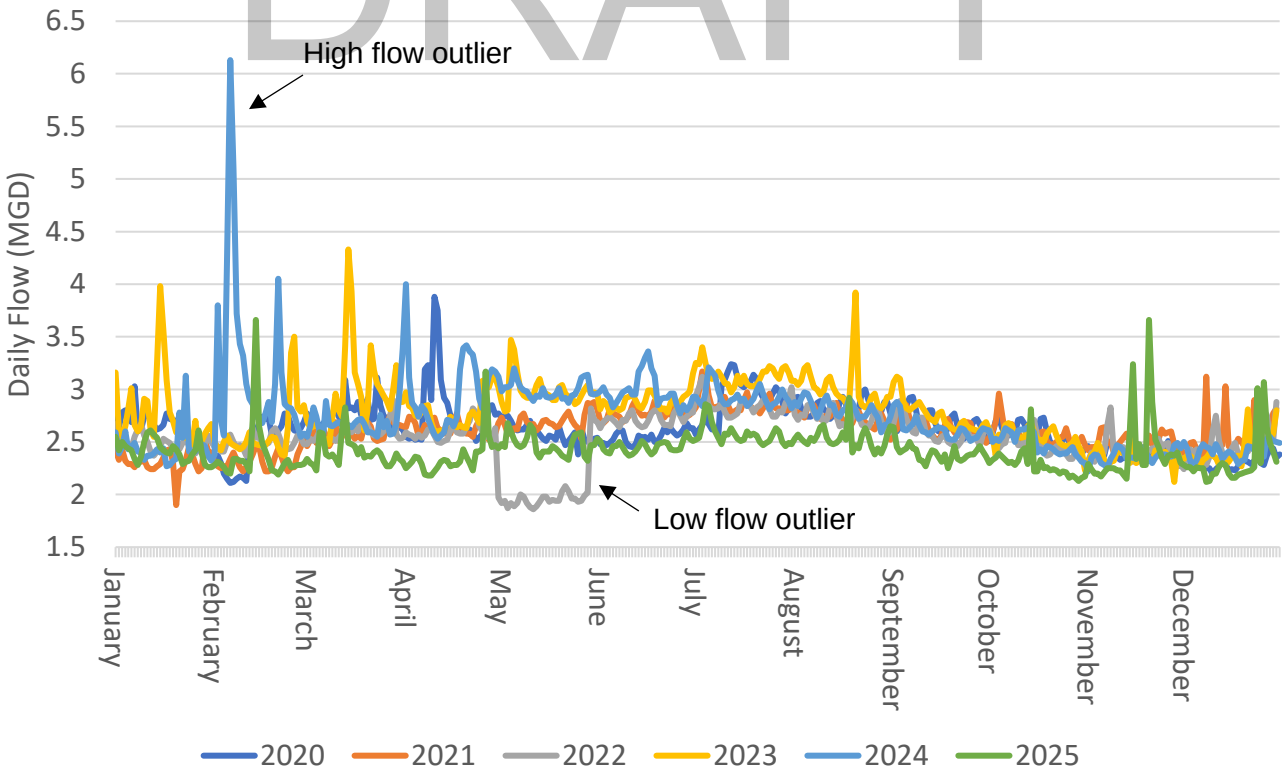
This section summarizes the wastewater flow path and flow values observed from each individual member agency to CTP, as well as flows and capacities observed at each of the regional wastewater treatment plant. **Figure 1-6** provides a schematic showing the existing wastewater flow path from EBSD, CLB, and SCWD to the CTP and JBL. **Figure 1-7** was prepared based on daily influent data provided by SOCWA for the years 2020 through 2025.

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Legend
Lift Station
Treatment Plant
Treatment Plant Output
Gravity Main
Force Main
New
CLB
EBSD
SCWD
MNWD
OCSAN
RTP
ETM
Sludge Export Pipeline
JBL Outfall
JBL
CTP
Aliso Creek Outfall
RW Demand
1.07 MGD
EBSD
Lift Station
260 GPM
Nyes Place
Lift Station
650 GPM
Lift Station #2
2,200 GPM
Laguna SOCWA
Lift Station
5,260 GPM
Bluebird SOCWA
Lift Station
7,080 GPM
Crescent Bay
Lift Station
325 GPM
Main Beach
Lift Station
1,600 GPM
Anita Street
Lift Station
375 GPM
Lift Station #1
400 GPM
Lift Station
1,360 GPM

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Figure 1-7: Historical CTP Influent

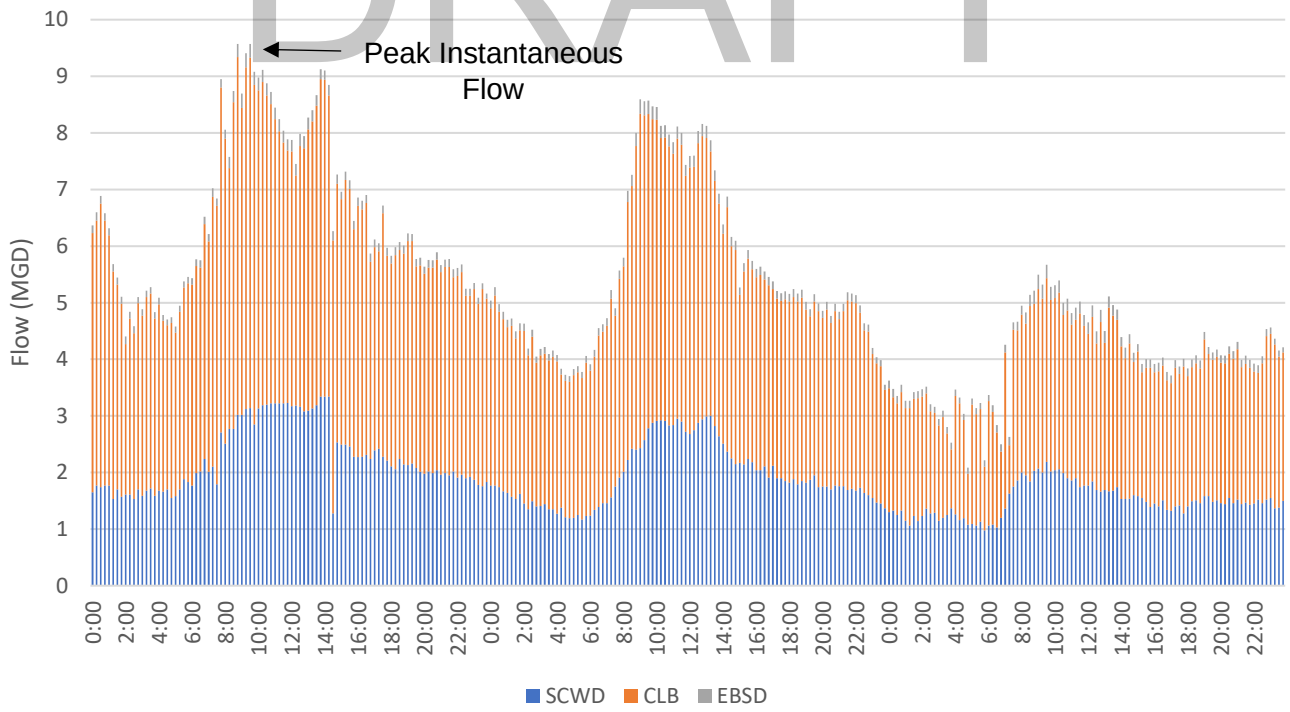


For this 6-year period, the average day flow has remained stable, with a high of 2.8 MGD (2023) and low of 2.4 MGD (2025). The maximum average daily wet weather flow during this period is noted as 6.1 MGD on February 6, 2024. This rain event was a Category 3 atmospheric river with an estimated multi-day precipitation of 3–5 in., which would approximately correspond with a 10–25-year storm event.

Figure 1-8 presents 15-minute flow data for the February 2024 maximum daily wet weather event, developed using metered influent data to the CTP from SCWD and CLB. Flows for EBSD were estimated based on an assumed average of 150,000 gallons per day (gpd) and a diurnal pattern consistent with CLB. This approach was necessary as EBSD does not maintain instantaneous flow data. EBSD staff indicated that typical wastewater flows from the service area range between 50,000 and 100,000 gpd, with higher flow occurring during summer weekends and special events.

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Figure 1-8: February 6th, 2024 Peak Wet Weather Flow



The peak instantaneous flow recorded during this event is noted as 9.5 MGD, with 3.0 MGD from SCWD, 6.3 MGD from CLB, and 0.2 MGD from EBSD.

SOCWA staff also provided data beyond the most recent 5-year period, including historical peak wet weather events. The most significant of these occurred on January 23, 2017, during which precipitation reached approximately 4.5 in. and the peak estimated instantaneous influent flow was approximately 15 MGD. **Table 1-5** summarizes the corresponding flow data by agency.

Table 1-5: Agency Flow Contributions to CTP

Description	Units	EBSD	SCWD	CLB	Total
Average Dry Weather Flow[1]	MGD	0.05	0.85	1.78	**2.68**
Peak Dry Weather Flow[1]	MGD	0.10	1.71	3.55	**5.36**
Peak Dry Weather Flow[1]	gpm	69	1,187	2,466	**3,722**
Peak Wet Weather Flow – 2024 (instantaneous peak)	MGD	0.15	3.02	6.32	**9.50**
	gpm	104	2,097	4,389	**6,597**
Peak Wet Weather Flow – 2017 (instantaneous peak)	MGD	0.25	4.77	9.98	**15.00**
	gpm	175	3,311	6,930	**10,417**
Flow Ownership	%	3.00	42.70	54.30	**100**

Notes:
1. *6-year average for the years 2020 through 2025*

1.4.1.1 ***Regional Wastewater Treatment Facility Capacity***

A summary of treatment facility capacities for relevant treatment facilities is provided in **Table 1-6**.

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Table 1-6: Treatment Plant Capacities (MGD)				
Capacity Description	**CTP (SOCWA)**	**JBL (SOCWA)**	**Plant No. 2 (OC San)**	**RTP (MNWD)**
Permitted	6.7	13.0	150.0	12.0
Design	14.0	26.0	317.0	27.2
Recycled Water Production	3.3	-	All Reclaimable Flows	9.0

1.4.2 Costs

This section summarizes operating costs, capital costs, and other related assumptions that will be used as part of the economic feasibility evaluation.

1.4.2.1 ***Operating Costs***

This section provides an overview of operating cost assumptions.

1.4.2.1.1 *Treatment Facility O&M Costs*

Table 1-7 summarizes the planning-level unit costs used to quantify wastewater operating costs for each treatment facility based on FY 2025-26 budgeted total O&M and estimated annual flow. Unit costs provided in the table do not include O&M for recycled water production.

Table 1-7: Treatment Plant Wastewater Operating Costs			
Treatment Facility	**FY 2025-26 Budgeted O&M[1]**	**FY 2025-26 Estimated Flow (MGD)**	**Unit Cost ($/MG)[2]**
MNWD RTP	$9,286,800[3]	7.28	$3,495
OC San Plant No. 2	-	-	$2,848[4]
SOCWA CTP	$4,500,000[5]	2.92	$4,222
SOCWA JBL	$8,616,000	7.34	$3,216

Notes:

1. *Includes administrative costs*
2. *Unit Cost = Budgeted O&M cost O&M ÷ (estimated flow x 365 days)*
3. *Includes a 6.5% escalation for administrative costs*
4. *Unit cost for "treatment-only" O&M provided by OC San staff used in lieu of FY 2025-25 budgeted O&M and estimated flow calculation methodology*
5. *Total CTP O&M = $3,095,692 liquids O&M per FY 2025-26 SOCWA Budget and $1,404,683 solids per FY 2025-26 MNWD solids O&M*

1.4.2.1.2 *Lift Station O&M Costs*

Table 1-8 summarizes the O&M unit costs applied to conceptual lift station infrastructure improvements identified for alternatives.

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Table 1-8: Lift Station Operating Costs		
Pump Horsepower (HP)	**Unit**	**Unit Cost ($/Unit)[1]**
15	HP/Yr	$7,000
20		$9,000
30		$14,000
50		$23,000
75		$35,000
125		$58,000
170		$78,000
200		$92,000
250		$115,000

Notes:
1. *Assumes a daily pump run time of 8 hours, 85% pump motor efficiency, and an average SoCal electricity rate of $0.18/kWh*

1.4.2.2 ***Capital Costs***

This section provides an overview of capital cost assumptions.

1.4.2.2.1 *Existing Capital Improvement Plan Projects*

Table 1-9 summarizes existing capital improvement plan (CIP) projects planned by agencies included in this study that would be impacted by the proposed alternatives.

Table 1-9: Impacted CIP Projects for FY 2025/26 to FY 2035/36										
Agency	**Project Name**	**Year 1[1]**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8 - 10**	**Total**
CLB	NCI Reach 5 Replacement	$9.0								**$9.0**
	NCI Reaches 1–4 Replacements						$5.0	$5.0	$21.9	**$31.9**
SOCWA	CTP Projects	$4.1	$6.5	$4.5	$10.7	$4.8	$7.3	$3.6	$7.2	**$48.7**

Notes:
1. *Year 1 = FY 2025/26*
2. *All CLB costs are from the approved FY 25/26 Budget and CLB 2025 Sewer Master Plan.*

1.4.2.2.2 *Treatment Facility Capacity Buy-In*

Table 1-10 presents the unit costs used to quantify anticipated buy-in cost for wastewater treatment and recycled water production capacity at other treatment facilities should wastewater flows be redirected from the CTP.

Table 1-10: Treatment Facility Capacity Buy-In		
Cost Component	**Unit**	**Unit Cost ($/Unit)**
MNWD RTP Liquids and Solids	MGD	$25,000,000[1]
OC SAN Plant No. 2 Liquids and Solids	MGD	$20,000,000[2]
SOCWA JBL Liquids and Solids	MGD	$25,000,000[1]
AWT Construction/Expansion	MGD	$7,500,000

Notes:
1. *OC San Plant No. 2 unit cost escalated by 25% to account for economy-of-scale savings*
2. *Unit cost provided by OC San staff*

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1.4.2.2.3 *Infrastructure Improvement Costs*

Table 1-11 summarizes unit costs applied to conceptual infrastructure improvements required for each proposed alternative. Unit costs are planning-level, parametric estimates based on recent project experience in Southern California and reflect typical construction conditions for similar wastewater infrastructure.

Table 1-11: Infrastructure Improvement Unit Costs		
Pipeline Infrastructure Improvements		
Diameter (in)	**Unit**	**Unit Cost ($/Unit)**
8	LF	$500
12		$700
16		$900
20		$1,200
24		$1,400
27		$1,600
30		$1,800
Lift Station Infrastructure Improvements		
Description	**Unit**	**Unit Cost ($/Unit)**
1 – 4 MGD New Lift Station	MGD	$6,250,000
4 – 15 MGD New Lift Station		$3,125,000
5 – 15 HP Pump	HP	$3,000
15 – 50 HP Pump		$2,500
50 – 125 HP Pump		$1,750
125 – 250 HP Pump		$1,250
Concrete Equalization Basin	GAL	$10
Emergency Generator	EA	$750,000
Treatment Facility Infrastructure Improvements		
Description	**Unit**	**Unit Cost ($/Unit)**
Treatment Plant Abandonment	SF	$100

Note:
1. *LF = linear feet.*
2. *SF = Square feet.*

1.4.2.3 ***Other Cost Assumptions***

For use as part of the economic evaluation, additional cost assumptions were compiled and are presented in **Table 1-12**.

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Table 1-12: Economic Evaluation Assumptions			
Category	**Assumption**	**Value**	**Notes**
Analysis Period	Life-Cycle Evaluation Period	40 years	Standard for wastewater infrastructure
Discount Rate	Nominal Discount Rate	5.0%	Typical for municipal infrastructure economic analysis
O&M Inflation	Annual Escalation	3.5% per year	Includes labor, chemicals, routine maintenance
Construction Inflation	Capital Cost Escalation	3.5% per year	Reflects recent water/wastewater construction trends
Electricity Cost	Unit Cost	$0.18/kWh	Typical municipal Southern California blended rate
Capital Contingency	Planning-Level Estimate	30% contingency	Consistent with AACE Classes 4–5 estimate
Engineering/ Program Costs	Engineering + Construction Management + Admin	30% of construction cost after capital contingency	Typical planning-level factor

Notes:
1. *kWh = kilowatt-hour.*
2. *AACE = Association for the Advancement of Cost Engineering.*

1.5 Infrastructure Design Criteria

Table 1-13 defines the design criteria that will serve as the basis for sizing new infrastructure.

Table 1-13: Infrastructure Design Criteria		
Category	**Parameter**	**Value**
Gravity Main Criteria	Minimum pipe diameter	8 in.
	Minimum velocity at peak dry flow	3 ft/second (ft/s)
	Manning's Roughness Coefficient	0.013
Depth-to-Diameter (d/D) Ratio for Gravity Mains	For sewer mains ≤ 12-in. at Peak Dry Weather Flow	0.50
	For sewer mains > 12-in. at Peak Dry Weather Flow	0.75
Pump Station Criteria	Minimum number of pumps	2
	Minimum pump capacity	Peak flow
	Standby capacity	100% of the largest pump capacity
	Emergency backup power	Required
Velocity for Force Mains	Minimum allowable velocity	2 ft/s
	Maximum allowable velocity	8 ft/s
Source: Table 5.1 from CLB Sewer Master Plan		

1.6 Alternatives Evaluation Criteria

Evaluation criteria were developed in coordination with SOCWA staff and the PC-15 Member Agencies to provide a consistent and transparent framework for comparing regional wastewater flow redirection alternatives. The criteria reflect technical feasibility, regional coordination complexity, financial implications, regulatory constraints, and operational impacts associated with potential decommissioning of the CTP and redirection of flows to alternative facilities (e.g., OC San, JBL, RTP).

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Both quantitative metrics (e.g., order-of-magnitude capital costs, hydraulic capacity, estimated implementation duration) and qualitative considerations (e.g., interagency coordination, permitting complexity, operational transition risk) were incorporated into the evaluation.

Each alternative was scored on a scale of **1 to 3** for each criterion:

- 1 = Significant challenges / least favorable
- 2 = Moderate feasibility / moderate risk
- 3 = Most favorable / lowest risk

The evaluation is intended to support high-level screening and identification of viable regional strategies and does not represent detailed design-level analysis. **Table 1-14** summarizes the evaluation criteria used.

Table 1-14: Evaluation Criteria and Scoring Guidance

Criteria	Metrics (Scoring 1 to 3)	Weighting
Capital Cost	Relative order-of-magnitude capital cost compared to other alternatives (±30–50%). A high score (3) reflects the lowest comparative capital investment.	High
O&M Cost Impact	Relative long-term operational and maintenance cost impacts, including staffing, energy, and treatment costs. A high score (3) reflects lower lifecycle operational burden.	High
Technical Feasibility	Ability to convey and treat projected flows within available hydraulic and treatment capacities, and transition seamlessly. A high score (3) reflects minimal infrastructure constraints and no major fatal flaws.	Medium
Regulatory & Permitting Risk	Level of permitting complexity (e.g., NPDES, CEQA, LAFCO, annexation, out-of-area service agreements). A high score (3) reflects limited new regulatory hurdles and low approval risk.	Medium
Schedule & Implementation Complexity	Estimated time and complexity to implement, including property acquisition, design, construction, and transition planning. A high score (3) reflects a shorter and less complex implementation timeline.	Low
Regional / Interagency Coordination	Degree to which implementation can rely on existing agreements and minimize the need for new interagency agreements among SOCWA, CLB, SCWD, EBSD, OC San, MNWD, and OCWD. A high score (3) reflects fewer new agreements and the simplest agreement structures.	Low
Recycled Water Impacts	Effect on existing and future recycled water production and reliability in South Orange County. A high score (3) reflects preservation or enhancement of recycled water supply.	Low

Note:
1. *CEQA = California Environmental Quality Act.*

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2.0 TECHNICAL FEASIBILITY ASSESSMENT

This section provides a high-level technical feasibility evaluation of the identified regional flow redirection alternatives associated with potential decommissioning of the CTP. Each alternative is assessed at a conceptual level to identify major infrastructure requirements, system modifications, operational impacts, and potential constraints. The following describes the alternatives evaluated in this section:

- **Alternative 1 – Split Redirection to OC San Plant No. 2 and MNWD RTP.** Wastewater flow generated by EBSD and CLB is conveyed to OC San's Plant No. 2 and wastewater flow generated by SCWD's northern service area is conveyed to MNWD's RTP.
- **Alternative 2 – Complete Redirection to SOCWA JBL.** Wastewater flow generated by EBSD, CLB, and SCWD is conveyed to SOCWA's JBL.
- **Alternative 3 – Complete Redirection to MNWD RTP.** Wastewater flow generated by EBSD, CLB, and SCWD is conveyed to MNWD's RTP.

Each subsection that follows describes a specific alternative, including an overview of the general concept, identification of infrastructure improvements, infrastructure sizing, and additional infrastructure considerations. Each alternative assessment also includes commentary on the following additional categories:

- Regulatory and Permitting Risk
- Schedule and Implementation Complexity
- Regional/Interagency Coordination
- Recycled Water Impacts
- New Water Opportunities

2.1 Alternative 1 – Redirection to OC San Plant No. 2 and MNWD RTP

2.1.1 Overview

In 1947, a regional wastewater approach was documented in the "Report Upon the Collection, Treatment and Disposal of Sewage and Industrial Wastes of Orange County California." In this document, the area generally served by CTP was included in Orange County Sanitation District No. 8 and wastewater was intended to be conveyed to OC San's Plant No. 2. While District No. 8 was later dissolved and infrastructure development did not occur to support conveyance to Plant No. 2, the overall approach of this alternative is to meet the original intent of the 1947 document.

The original scope of Alternative 1 was to evaluate sending all PC-15 flows to OC San's collection system. However, during peak flow events, wastewater flow from the PC-15 service area substantially exceeds OC San's current available collection system capacity of 4 MGD[1]. Conveying flows above 4 MGD would require major capacity improvements to OC San's LSs and force mains extending from southern Newport Beach to Plant No. 2 in Huntington Beach. Preliminary estimates indicate these improvements alone could cost between $100 to $200 million, effectively doubling the total project costs to $200 to $400

[1] Based off pump station capacity and approximate pipeline capacity mapping provided by OC San. A more detailed hydraulic modeling effort would be required to confirm that no pipeline improvements are required to convey 4 MGD.

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million, and rendering the alternative infeasible. In addition, based on OC San's past projects along Pacific Coast Highway, it remains uncertain whether feasible pipeline alignments exist within the highly congested Pacific Coast Highway utility corridor.

During Workshop No. 1, a hybrid variation of Alternative 1 was introduced to evaluate the feasibility of diverting up to 4 MGD from the PC-15 service area to OC San. Wastewater generated from CLB and EBSD would be conveyed to OC San's Plant No. 2, with remaining PC-15 flows from SCWD transmitted to MNWD's RTP. This approach was proposed since the combined flows from CLB and EBSD are near the 4 MGD capacity currently available within OC San's system. Additionally, this approach provides a more cost-effective solution for returning recycled water to SCWD, which was identified as a key priority by SCWD. Following Workshop No. 1, direction was provided to proceed with the development of this hybrid Alternative 1 option instead of the original Alternative 1 concept.

Under this hybrid Alternative 1, wastewater flow generated from CLB and EBSD is conveyed to OC San's Plant No. 2 through a combination of new pipeline and LS construction and existing LS modifications. Redirecting flow to OC San's Plant No. 2 will require the existing flow path direction through CLB to reverse, with an altered flow path extending from Nye's Place to Bluebird SOCWA LS to Laguna SOCWA LS to a new Transfer LS located near EBSD's LS No. 4. From there, flow is conveyed to OC San's 21-in. gravity trunk main located at the intersection of MacArthur Boulevard and Pacific Coast Highway, which is conveyed to OC San's Bay Bridge LS, then Bitter Point LS, and finally Plant No. 2.

Wastewater flow generated from SCWD's northern collection system, generally bounded by Cardinal Drive and Crown Valley Parkway, will be redirected to MNWD's RTP via a new CTP LS located at the site of the decommissioned CTP and a new force main to convey flow to MNWD's existing Regional LS. Wastewater flow generated from SCWD's southern collection system will continue to flow to SOCWA's JBL and no infrastructure modifications are anticipated to that portion of SCWD's system.

Table 2-1 summarizes the infrastructure improvements associated with Alternative 1 and **Figure 2-1** through **Figure 2-4** provides an overview and locations of the improvements. **Figure 2-5** provides a revised flow schematic of CLB's, EBSD's, and SCWD's collection systems accounting for the flow redirections to Plant No. 2 and the RTP.

Table 2-1: Alternative 1 Infrastructure Improvements Summary

No.	Infrastructure Improvement Description
1	**Transfer LS Force Main.** New sewer pipeline consisting of 28,080-ft 16-in. HDPE force main from the new Transfer LS to the 21-in. VCP OC San gravity pipeline connection located near the intersection of MacArthur Blvd and Pacific Coast Hwy. Uses the alignment of LBCWD's abandoned Coast Supply Pipeline.
2	**Laguna SOCWA LS Gravity Main.** New sewer pipeline consisting of 1,390-ft 27-in. polyvinyl chloride (PVC) gravity main from the intersection of Ledroit St and Pacific Coast Hwy to the new Transfer LS.
3	**Laguna SOCWA LS Force Main.** New sewer pipeline consisting of 7,410-ft 20-in. HDPE force main from CLB's Laguna SOCWA LS to the new Transfer LS. Includes tie-ins from the following CLB LSs: Crescent Bay LS, Fairview LS, and Main Beach LS.
4	**Bluebird SOCWA LS Gravity Main.** New sewer pipeline consisting of 2,005-ft 16-in. PVC gravity main from the end of Bent St to CLB's Laguna SOCWA LS. Assumed to use alignment of CLB's existing NCI pipeline and an abandoned CLB sewer main on Loma Terrace via pipe bursting.

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Table 2-1: Alternative 1 Infrastructure Improvements Summary	
No.	**Infrastructure Improvement Description**
5	**Bluebird SOCWA LS Force Main.** New sewer pipeline consisting of 5,705-ft 12-in. HDPE force main from CLB's Bluebird LS to the end of Bent St. Includes a tie-in from CLB's Anita LS and uses the alignment of CLB's existing NCI pipeline via pipe bursting.
6	**Nye's Place LS Force Main.** New sewer pipeline consisting of 720-ft 8-in. HDPE force main from CLB's Nye's Place LS to an existing CLB 8-in. VCP gravity pipeline on Solana Way. Assumed that the local collection system has the hydraulic capacity to convey Nye's Place LS flows to CLB's Bluebird SOCWA LS.
7	**CTP LS Force Main.** New sewer pipeline consisting of 16,760-ft 12-in. HDPE force main from the new CTP LS located at the CTP's west primary sedimentation basin to MNWD's Transfer LS located near the intersection of Sulphur Creek and Alicia Pkwy. Assumed to use the alignment of MNWD's inactive 18-in. VCP gravity pipeline via pipe bursting.
8	**MNWD Recycled Water Pipeline Improvement.** New recycled water pipeline consisting of approximately 100 ft of 12-in. PVC distribution pipeline.
9	**New Transfer LS.** New LS consisting of approximately 650,000 gallons of equalization storage and three (two duty and one standby) 125 HP pumps sized at approximately 1,380 gpm at 219 ft total dynamic head (TDH) each. Includes an emergency generator.
10	**New CTP LS.** New LS consisting of conversion of the existing CTP West Primary Sedimentation Basin to approximately 300,000 gallons of equalization storage and three (two duty and one standby) 50 HP pumps sized at approximately 800 gpm at 111 ft TDH each. Includes an emergency generator.
11	**Crescent Bay LS Improvements.** Replace existing pumps with two (one duty and one standby) 20 HP pumps sized at approximately 325 gpm at 131 ft TDH each.
12	**Fairview LS Improvements.** Replace existing pumps with two (one duty and one standby) 15 HP pumps sized at approximately 325 gpm at 88 ft TDH each.
13	**Main Beach LS Improvements.** Replace existing pumps with three (two duty and one standby) 30 HP pumps sized at approximately 800 gpm at 88 ft TDH each.
14	**Laguna SOCWA LS Improvements.** Replace existing pumps with four (three duty and one standby) 200 HP pumps sized at approximately 1,900 gpm at 140 ft TDH each.
15	**Anita LS Improvements.** Replace existing pumps with two (one duty and one standby) 15 HP pumps sized at approximately 375 gpm at 98 ft TDH each.
16	**Bluebird SOCWA LS Improvements.** Replace existing pumps with three (two duty and one standby) 50 HP pumps sized at approximately 1,050 gpm at 103 ft TDH each.
17	**Nye's Place LS Improvements.** Replace existing pumps with two (one duty and one standby) 20 HP pumps sized at approximately 650 gpm at 63 ft TDH each.
18	**RTP and LS Buy-In.** Improvements per Section 2.1.5.
19	**CTP Abandonment.** Abandonment per Section 2.1.4.

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Legend

- Sewer Service Area
- Treatment Plant

Force Main
- Proposed New
- Existing CLB
- EBSD
- Existing MNWD
- Existing OCSAN
- Existing SCWD
- Not Impacted

Gravity Pipeline
- Proposed New
- Existing CLB
- Existing EBSD
- Existing MNWD
- Existing OCSAN
- Existing SCWD
- Not Impacted

Lift Station
- Proposed New
- Existing CLB
- Existing EBSD
- Existing MNWD
- Existing OCSAN
- Existing SCWD
- Not Impacted

El Toro Water District

Moulton Niguel Water District

Irvine Ranch Water District

Costa Mesa Sanitation District

City of Newport Beach

City of Laguna Beach

South Coast Water District

Regional LS

Regional Treatment Plant

Proposed CTP LS

Laguna SOCWA LS

Bluebird SOCWA LS

Nyes Place LS

Fairview LS

Transfer LS

Crescent LS

Main Beach LS

Anita LS

Bay Bridge LS

Plant No. 2

Bitter Point LS

Uses Alignment of LBCWD's Abandoned Coastal Supply Pipeline

Uses Alignment of CLB NCI

Uses Alignment of CLB NCI

South Orange County Wastewater Authority

CTP Regional Flow Study

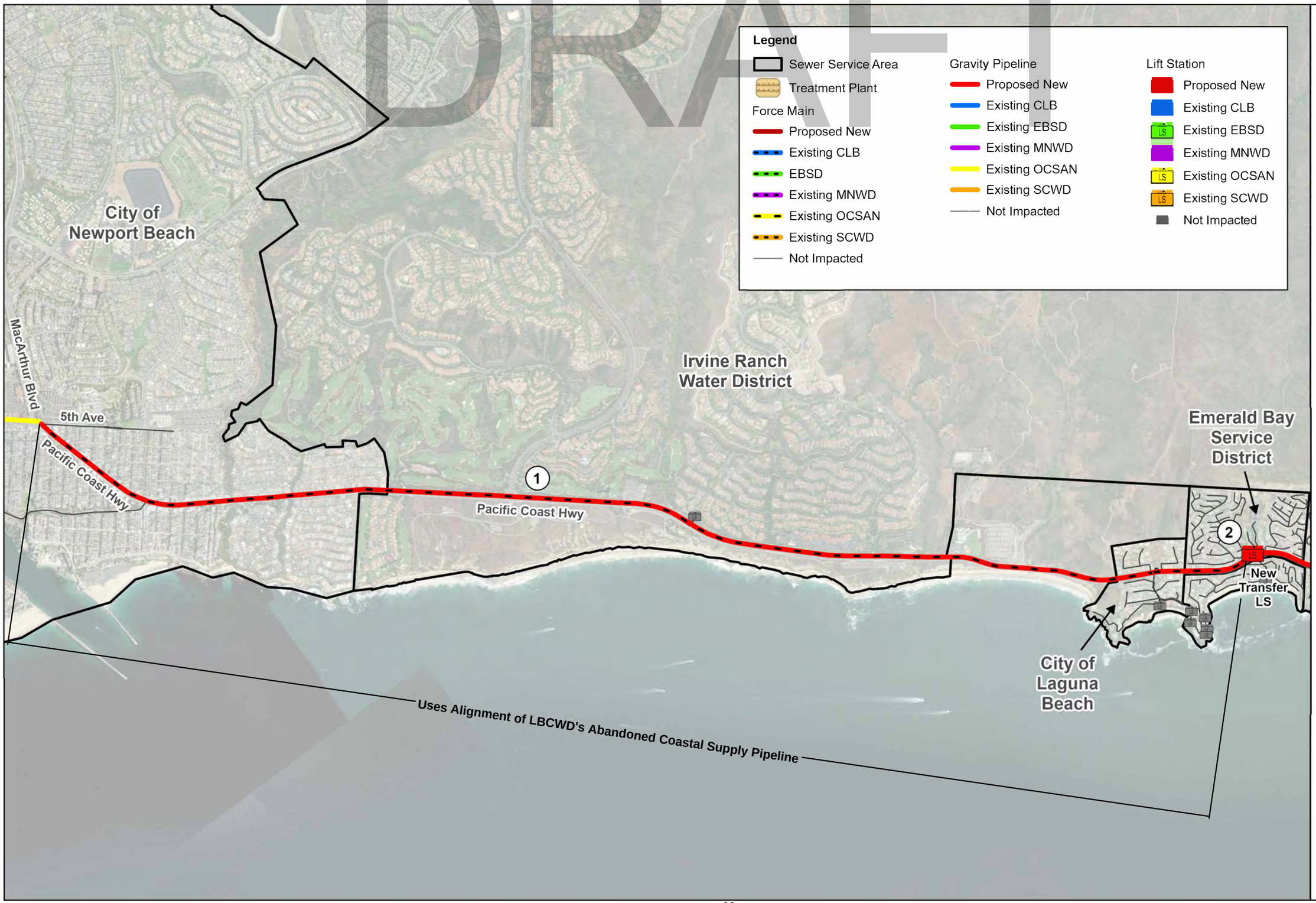
Figure 2-1

Alternative 1 Overview

1 inch = 6,000 feet

0 3,000 6,000

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South Orange County Wastewater Authority

CTP Regional Flow Study

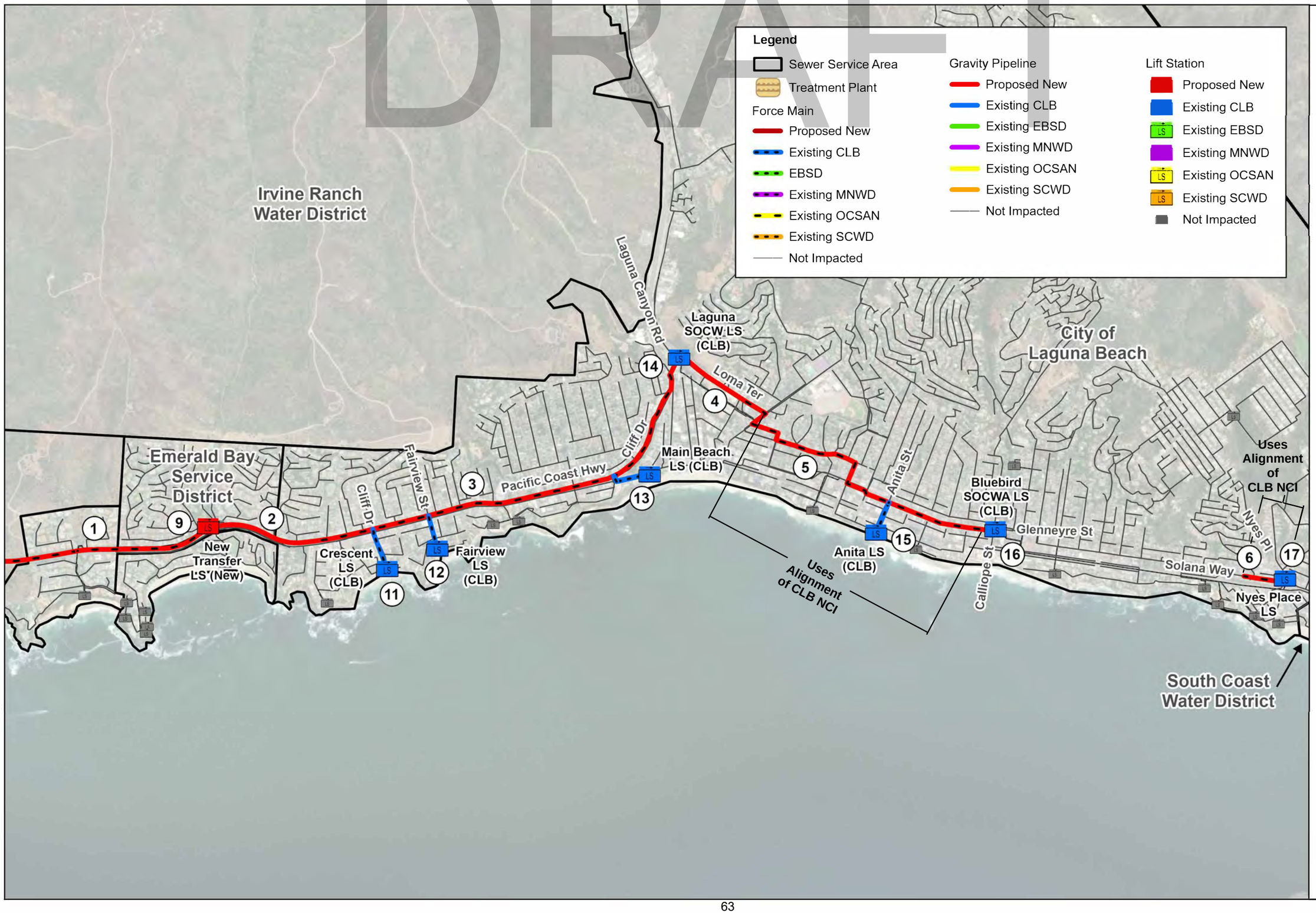
Figure 2-2

Alternative 1 Infrastructure Improvements Part 1

1 inch = 1,800 feet

0 900 1,800

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South Orange County Wastewater Authority

CTP Regional Flow Study

Figure 2-3

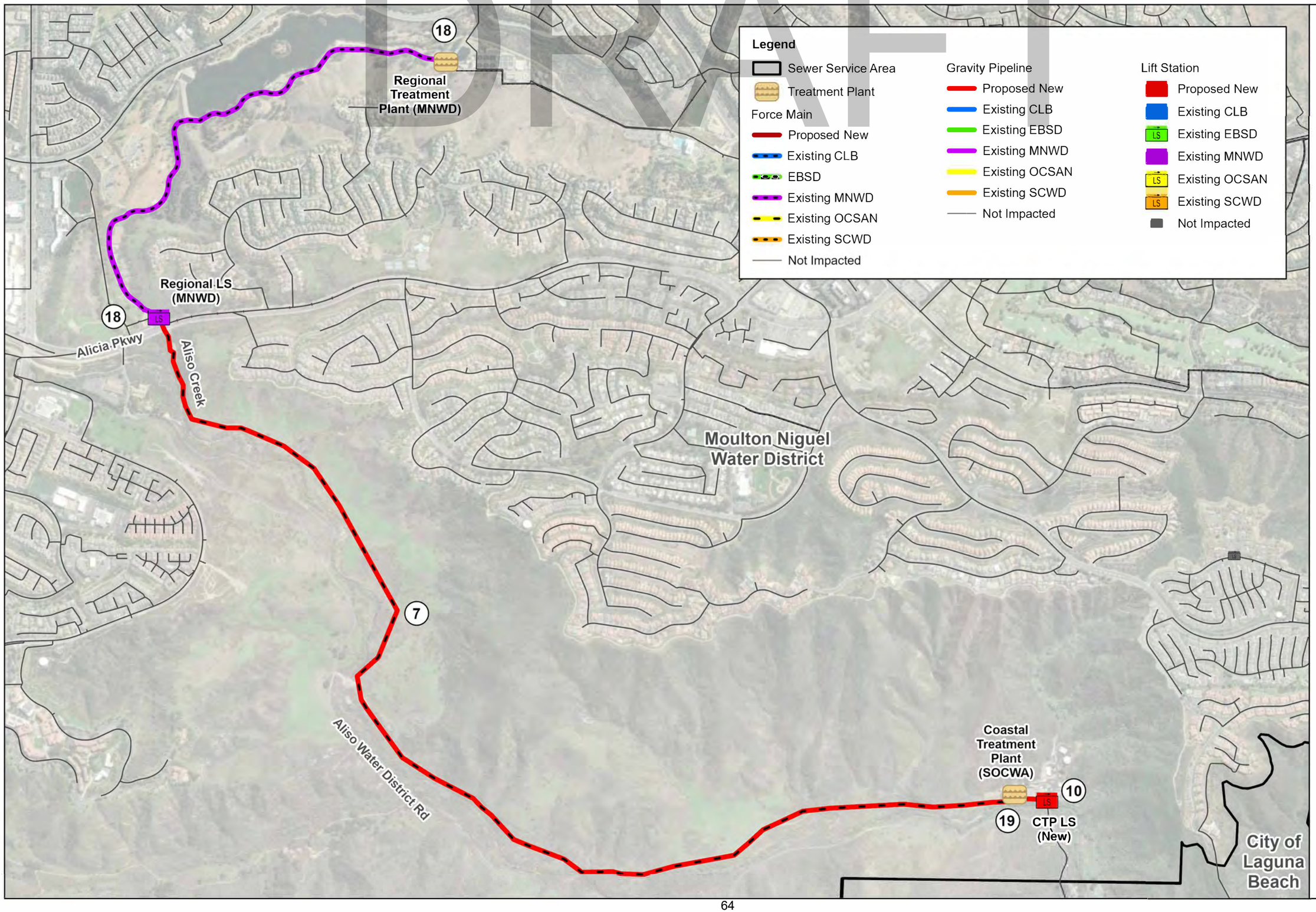
Alternative 1 Infrastructure Improvements Part 2

1 inch = 1,500 feet

0 750 1,500

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CTP Regional Flow Study

Figure 2-4

Alternative 1 Infrastructure Improvements Part 3

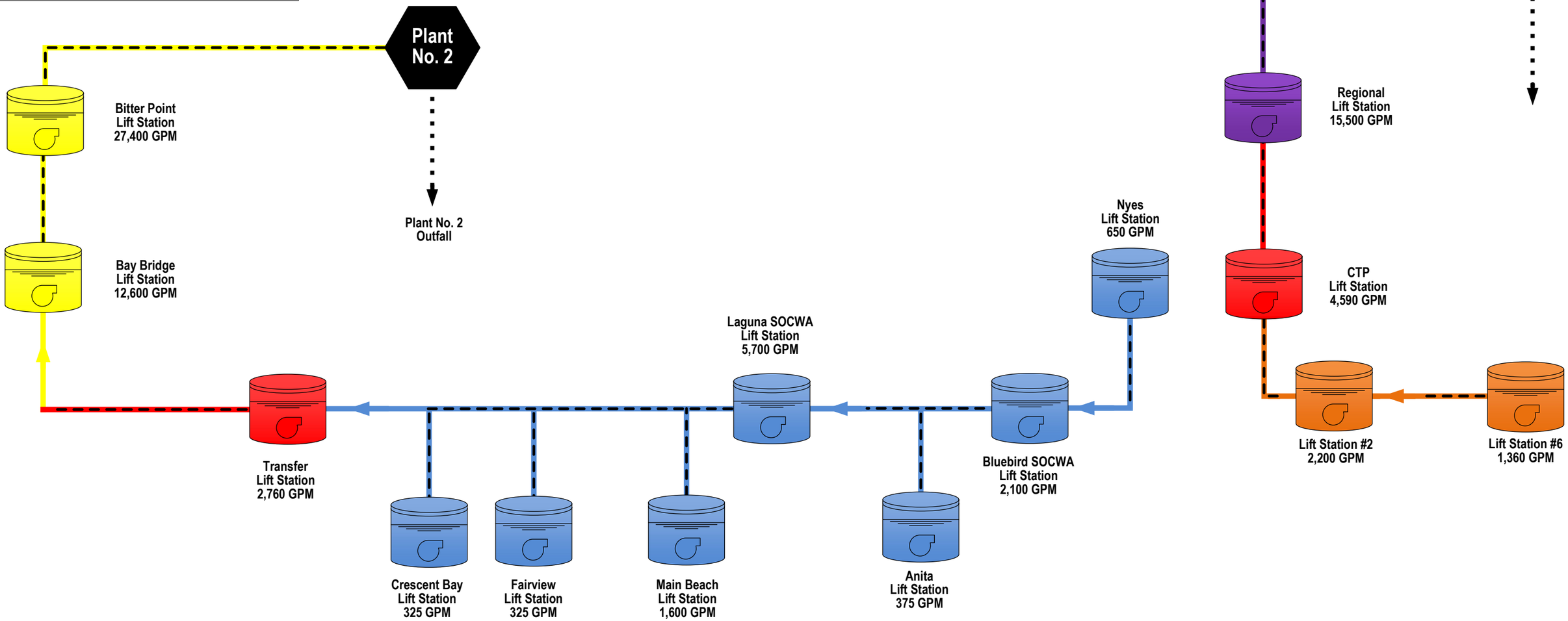
1 inch = 1,200 feet

0 600 1,200

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Legend

- Lift Station
- Treatment Plant
- Treatment Plant Output
- Gravity Main
- Force Main
- New
- CLB
- EBSD
- SCWD
- MNWD
- OCSAN



South Orange County Wastewater Authority (SOCWA) – Coastal Treatment Plant (CTP) Regional Flow Study

Figure 2-5: Alternative 6 Flow Path Schematic

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2.1.2 Infrastructure Design

This section presents planning-level sizing of the new pipelines, new LSs, and modifications to existing LSs identified for Alternative 1 in **Table 2-1**. The sizing is intended to establish the general scope of required infrastructure to support evaluation of order-of-magnitude costs. These preliminary assumptions are appropriate for alternatives screening; final sizing and design will require refinement through detailed hydraulic analysis and engineering during subsequent project phases.

2.1.2.1 ***Lift Station Design Flows***

Existing LS capacities were applied to the revised flow paths identified in **Figure 2-5** to determine new required LS capacities under Alternative 1. It was assumed that all existing LSs are already sized adequately for existing flow conditions. **Table 2-2** provides a summary of the recommended Alternative 1 LS capacities and a comparison to existing LS capacities.

Table 2-2: Alternative 1 LS Design Capacity

LS	Design Capacity (gpm)		Alt 1 - # Pumps at Design Flow (gpm)
	Baseline	Alternative 1	
Transfer LS (New)	-	2,760[1]	3 @ 1,380
CTP LS (New)	-	1,600[2]	3 @ 800
Crescent Bay LS (CLB)	325	325	2 @ 325
Fairview LS (CLB)	325	325	2 @ 325
Main Beach LS (CLB)	1,600	1,600	3 @ 800
Laguna SOCWA LS (CLB)	5,260	5,700[3]	4 @ 1,900
Anita LS (CLB)	375	375	2 @ 375
Bluebird SOCWA LS (CLB)	7,080	2,100[4]	3 @ 1,050
Nye's Place LS (CLB)	650	650	2 @ 650

Notes:

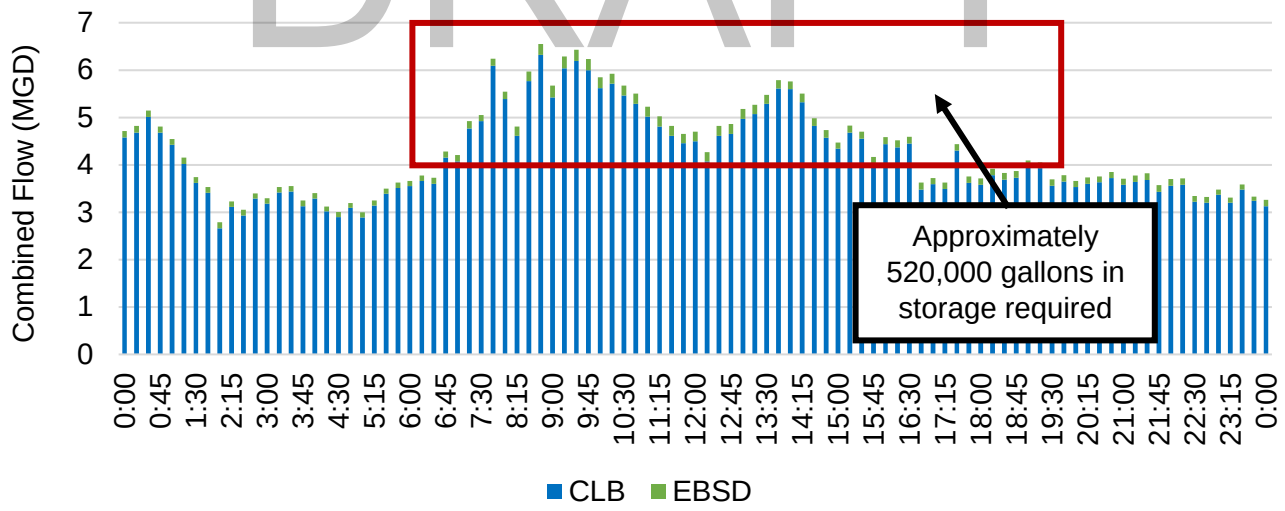
1. *Design capacity limited to ensure the wastewater flow from the Transfer LS does not exceed the maximum acceptable flow of 4 MGD to OC San's collection system.*
2. *Sized to meet SCWD maximum average daily wet weather flow of 2.3 MGD.*
3. *Equal to the design capacity of Bluebird SOCWA LS + Nye's Place LS + Irvine Cove LS – Main Beach LS – Fairview LS – Crescent Bay LS.*
4. *Equal to the design capacity of Bluebird SOCWA LS + Nye's Place LS – Laguna SOCWA LS – Anita LS.*

2.1.2.2 ***Transfer Lift Station Equalization Basin***

The new Transfer LS will include an equalization basin sized to provide operational storage and peaking attenuation of influent flows. The equalization basin would also include an odor scrubbing unit process to reduce odor nuisances. Preliminary sizing of the equalization basin was established based on the maximum daily wet weather observed over the past five years on February 6, 2024 for combined CLB and EBSD flows. All flows exceeding the LS's design capacity of 4 MGD were totaled during the peaking event and converted to a storage volume requirement. **Figure 2-6** shows the 15-minute interval peak wet weather flows observed during the February 6, 2024 event and identifies the total LS storage requirement for equalization.

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Figure 2-6: Storage Requirement for New Transfer LS

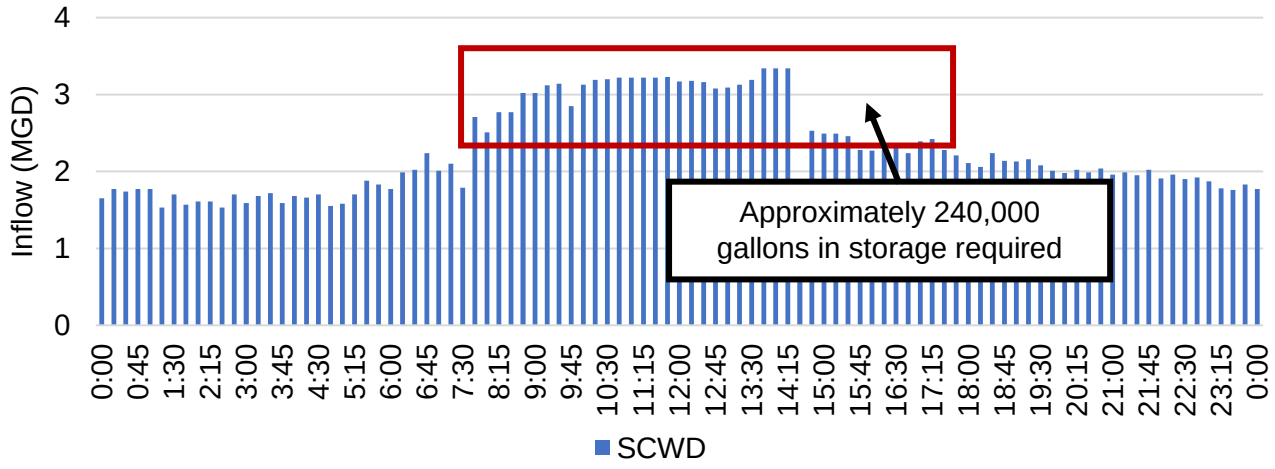


Per **Figure 2-6**, approximately 520,000 gallons in storage are required to equalize flows. Since the required volume is based on the past five years of flow data, a safety factor of 1.25 was applied to the required volume. Based on the safety factor, approximately 650,000 gallons of storage is required, and a 25-ft x 35-ft x 100-ft multi-chamber concrete basin is recommended.

2.1.2.3 ***CTP Lift Station Equalization Basin***

The new CTP LS will include an equalization within the existing CTP West Primary Sedimentation Basin to provide operational storage and peaking attenuation of wet weather flows greater than the LS's capacity. The equalization basin would also include an odor scrubbing unit process to reduce odor nuisances. Preliminary sizing of the equalization basin was established based on the maximum average daily wet weather flow observed over the past five years on February 6, 2024 for SCWD flows. All flows exceeding the LS's design capacity of 2.3 MGD were totaled during the peaking event and converted to a storage volume requirement. **Figure 2-7** shows the 15-minute interval peak wet weather flows observed during the February 6, 2024 event and identifies the total LS storage requirement for equalization.

Figure 2-7: Alternative 1 Storage Requirement for New CTP LS



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Per **Figure 2-7**, approximately 240,000 gallons in storage are required to equalize flows. Since the required volume is based on the past five years of flow data, a safety factor of 1.25 was applied to the required volume. Based on the safety factor, approximately 300,000 gallons of storage is required, and a 25-ft x 20-ft x 80-ft multi-chamber concrete basin is recommended.

2.1.2.4 *Force Main Pipeline Diameter*

Using the LS design capacities sized for Alternative 1 in **Table 2-2**, a pipeline diameter was selected for each pipeline infrastructure improvement. **Table 2-3** summarizes the recommended force main pipeline diameters and hydraulic results.

Table 2-3: Alternative 1 Force Main Pipeline Diameter

Pipeline	Contributing LS(s)	Flow (gpm)		Diameter (in.)	Pipeline Velocity (ft/s)	
		Min[1]	Max[2]		Min	Max
Transfer LS Force Main	Transfer LS	1,380	2,760	16	2.2	4.4
Laguna SOCWA LS Force Main	Laguna SOCWA LS, Crescent Bay LS, Fairview LS, and Main Beach LS	1,900	7,950	20	1.9	8.1
Bluebird SOCWA LS Force Main	Bluebird SOCWA LS and Anita LS	1,050	2,100	12	3.0	6.0
Nye's Place LS Force Main	Nye's Place LS	650	650	8	4.1	4.1
CTP LS Force Main	CTP LS	800	1,600	12	2.3	4.5

Notes:
1. *One duty pump active at primary LS.*
2. *All duty pumps active LSs contributing flow to force main.*
3. *Force mains should be designed to produce velocities between 2 ft/s and 8 ft/s.*

2.1.2.5 *Gravity Pipeline Diameter*

Alternative 1 contains two gravity pipelines that convey wastewater flow from the Laguna SOCWA LS and Bluebird SOCWA LS force mains. To conservatively size the pipeline, the recommended diameter was selected based off the d/D ratio and velocity for an assumed minimum slope of 0.5% and maximum flow anticipated in the pipeline. **Table 2-4** summarizes the recommended gravity pipeline diameters and resulting velocities.

Table 2-4: Alternative 1 Gravity Pipeline Diameter

Pipeline	Contributing LS(s)	Max Flow (gpm)[1]	Diameter (in.)	d/D	Velocity (ft/s)
Laguna SOCWA LS Gravity Main	Laguna SOCWA LS (CLB), Crescent Bay LS (CLB), Fairview LS (CLB), and Main Beach LS (CLB)	7,950	27	0.67	6.1
Bluebird SOCWA LS Gravity Main	Bluebird SOCWA LS (CLB)	2,100	16	0.68	4.4

Notes:
1. *All duty pumps active for LSs contributing flow to gravity main.*
2. *Gravity mains should be designed with a d/D ratio of below 0.75 for pipelines greater than 12-in. and a minimum velocity at maximum flow greater than 3 ft/s.*

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2.1.2.6 *Lift Station Total Dynamic Head*

A preliminary design TDH was determined for each LS using the design capacities from **Table 2-2** and the pipeline diameters from Sections 2.1.2.4 and 2.1.2.5. **Table 2-5** provides a summary of each LS's design TDH at its design capacity.

Table 2-5: Alternative 1 LS Design TDH

LS	Baseline		Alternative 1	
	Design Capacity (gpm)	TDH (ft)	Design Capacity (gpm)	TDH (ft)[1]
Transfer (New)	-	-	2,760	219
CTP (New)	-	-	1,600	111
Crescent Bay (CLB)	325	105	325	131[2]
Fairview (CLB)	325	70	325	88[2]
Main Beach (CLB)	1,600	70	1,600	88[2]
Laguna SOCWA (CLB)	5,260	90	5,700	140
Anita Street (CLB)	375	78	375	98[2]
Bluebird SOCWA (CLB)	7,080	108	2,100	103
Nye's Place (CLB)	650	22	650	63

Notes:

1. *TDH = Static Lift + Friction Losses. Friction losses approximated using the Hazen Williams formula with an assumed "C Factor" of 140.*
2. *LS currently ties into gravity main and will be converted to discharge to a shared force main. Baseline TDH is assumed to increase by 25% under Alternative 1. Subsequent hydraulic analysis is recommended.*

2.1.2.7 *Lift Station Horsepower*

With the design capacity and TDH determined for each LS, the minimum and recommended design HP for each LS pump was determined. **Table 2-6** provides a summary of the recommended design LS HP.

Table 2-6: Alternative 1 LS Design HP

LS	Design Capacity per Pump (gpm)	Design TDH per Pump (ft)	Min Required HP per Pump[1]	Design HP per Pump
Transfer (New)	1,380	219	118	125
CTP (New)	800	111	47	50
Crescent Bay (CLB)	325	131	17	20
Fairview (CLB)	325	88	11	15
Main Beach (CLB)	800	88	27	30
Laguna SOCWA (CLB)	1,900	140	155	200
Anita Street (CLB)	375	98	14	15
Bluebird SOCWA (CLB)	1,050	103	42	50
Nye's Place (CLB)	650	63	16	20

Notes:

1. *Minimum required HP calculated using an assumed combined pump and motor efficiency of 65%.*
2. *Design HP selected by rounding minimum required HP to next largest standard size.*

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2.1.3 New Transfer LS

The new Transfer LS would be located in the vicinity of EBSD LS No. 4. A key advantage of this location is the availability of existing EBSD-owned property, which could minimize right-of-way (ROW) acquisition and streamline implementation. The new Transfer LS would include a 650,000-gallon equalization basin (per Section 2.1.2.2), submersible or dry-pit pumps, and a dedicated valve and piping gallery. Additional facilities would include odor control systems, emergency backup power (generator with on-site fuel storage), electrical and control systems (including SCADA integration), and provisions for maintenance access and equipment removal. The site would also require associated appurtenances such as flow metering, surge protection, bypass pumping connections, and site drainage.

The site footprint is assumed to be 25 ft x 35 ft x 100 ft, though additional space may be required for access, maintenance clearances, and ancillary equipment. **Figure 2-8** provides an illustration of potential areas that could be utilized. Construction at this location would likely require a retaining wall due to topographic constraints, as well as careful staging and coordination to maintain uninterrupted access to the vehicle tunnel beneath Pacific Coast Highway. Traffic control, limited staging areas, and potential restrictions on construction methods may further influence design, cost, and schedule.

2.1.4 CTP Abandonment and New CTP LS

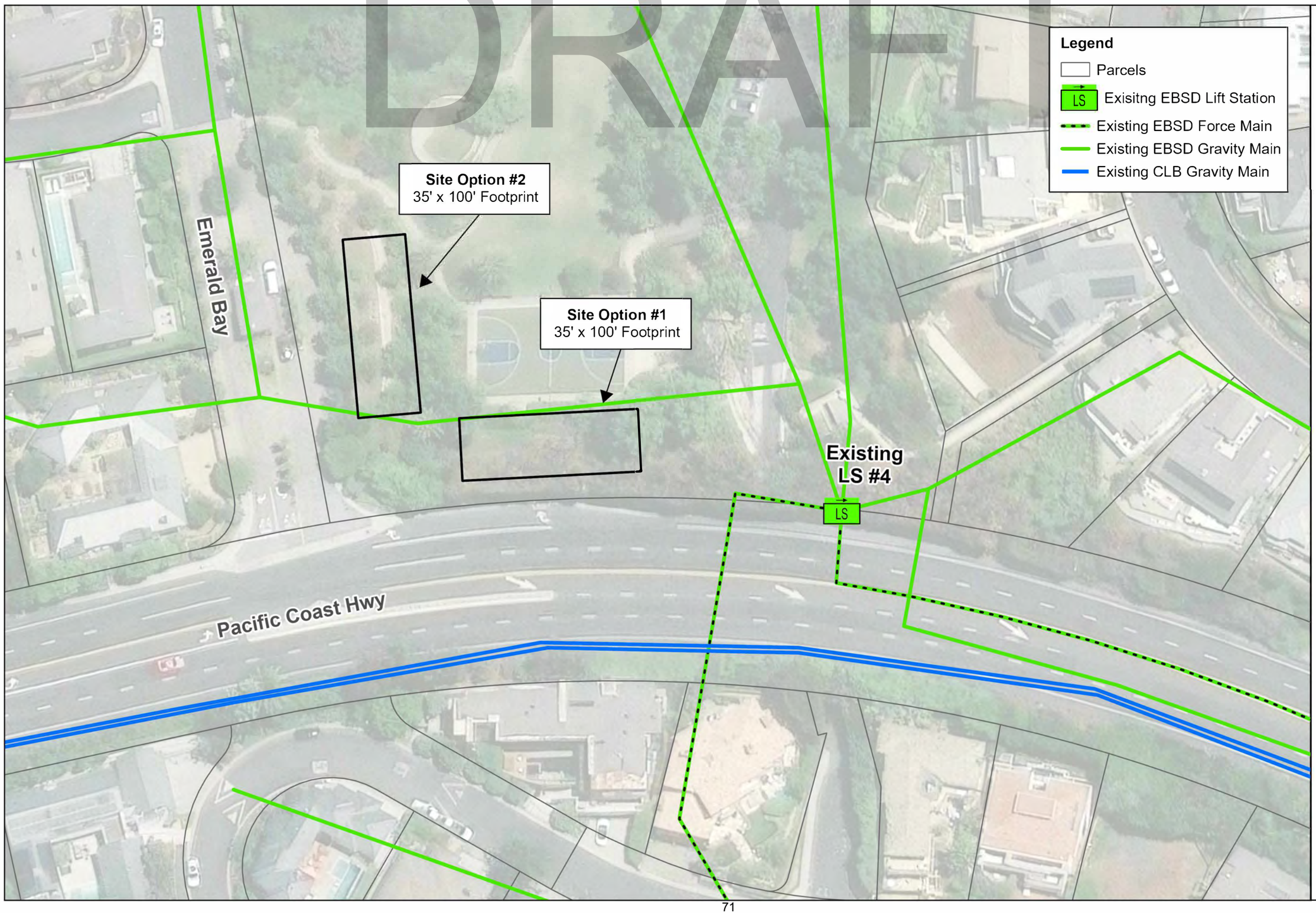
For this alternative, the CTP could be decommissioned and largely abandoned, apart from select facilities that would remain in service to support ongoing operations and site functions. These include:

- Reservoir No. 1 and associated pumping systems
- Vehicle Storage Building
- Aliso Creek Water Reclamation Facility (ACWRF)
- Water Testing Lab
- Bathroom and Breakroom
- Emergency Generator
- Electrical Supply Equipment/Power Building
- Stormwater pumping system
- Site fencing and select surface improvements (as needed for access and security)

In addition, the new CTP LS would be constructed as described in **Table 2-1**. Implementation of this alternative would require the following key modifications and new facilities:

- Construction of a new LS with wet well, pumps, electrical/control systems, odor control, and backup power
- Conversion of an existing concrete basin to provide influent equalization storage to attenuate peak wet weather flows, including an odor scrubbing unit process
- Modifications to existing emergency power systems to support the new LS
- Reconfiguration of influent piping and site hydraulics to route all flows to the new LS

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South Orange County Wastewater Authority

CTP Regional Flow Study

Figure 2-8

Alternative 1
Transfer LS
Site Options

1 inch = 50 feet

0 25 50

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Figure 2-9 illustrates the conceptual location of the proposed LS and identifies the areas of the CTP site that could be decommissioned. While reuse of the site is not the primary focus of this study, the cleared area—totaling approximately 2.3 acres—represents a potentially valuable asset. Conceptual reuse opportunities could include solar power generation, expanded operational or maintenance facilities, recycled water storage, or other utility-support functions.

However, redevelopment of the site would be subject to several important constraints and considerations. These include existing land use and zoning restrictions (e.g., open space or coastal zone designations), permitting requirements under the California Coastal Act, and potential environmental constraints such as habitat sensitivity, visual resource impacts, and public access requirements. In addition, conversion to beneficial reuse (e.g., recycled water storage or treatment) would require demonstration of consistent demand, operational reliability, and integration with the broader recycled water system. These factors may limit feasible reuse options and should be evaluated in more detail in subsequent phases.

2.1.5 Regional Treatment Plant Buy-In

RTP appears to have sufficient available capacity to accommodate SCWD flows under average dry-weather conditions. As shown in **Table 1-6**, the current average flow is approximately 7.18 MGD compared to a design capacity of 12 MGD. The proposed addition of SCWD flows would increase influent by approximately 0.85 MGD, resulting in a total average flow of roughly 8.0 MGD, which remains within the design capacity available. While average capacity is available, wet weather hydraulic and tertiary treatment constraints may limit operational flexibility and require further evaluation.

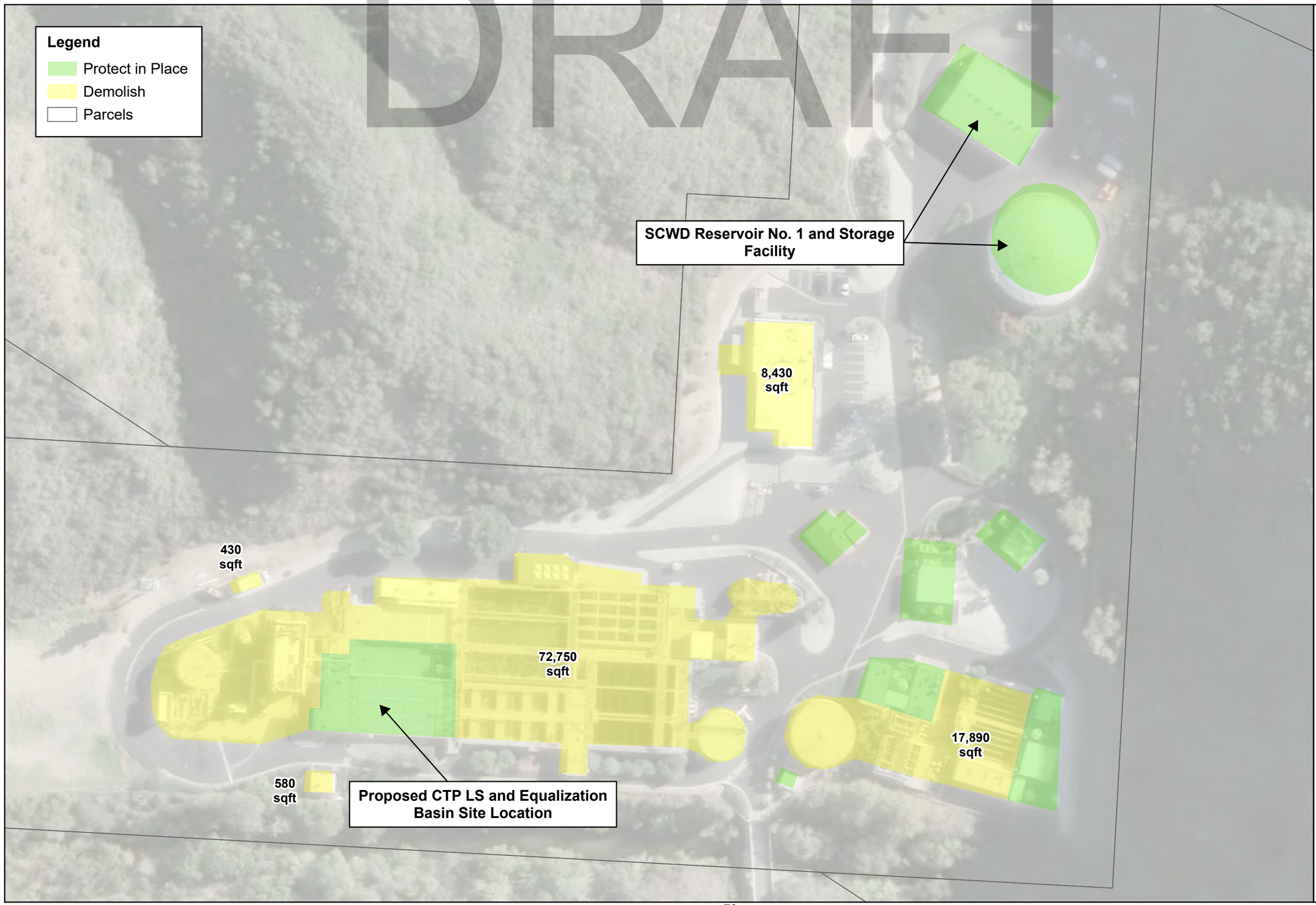
While detailed data are not available to fully assess peak wet weather conditions, it is assumed that influent equalization at the CTP could be implemented to attenuate peak flows. This approach would reduce hydraulic surcharge risks and minimize impacts to both the Regional LS and RTP during wet weather events. Confirmation of available peak capacity and conveyance limitations would require further hydraulic modeling and coordination with MNWD.

- **RTP Capacity Buy-In.** Use of existing treatment capacity would require a proportional capital buy-in, to be established through project-specific negotiations with MNWD.
- **AWT Expansion/Buy-In.** SCWD requires a reliable recycled water supply. To ensure availability during peak demand periods, expansion of the existing AWT facilities—or a proportional buy-in to existing capacity—is assumed to provide approximately 0.85 MGD of firm recycled water production during peak demand months.
- **Regional LS/Force-Main Buy-In.** Use of existing pumping and conveyance capacity would require a proportional capital buy-in, to be established through project-specific negotiations with MNWD.

2.1.6 Regulatory and Permitting Risk

Table 2-7 summarizes the OC San regulatory and permitting requirements for this scenario.

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South Orange County Wastewater Authority

CTP Regional Flow Study

Figure 2-9

Alternative 1 Coastal Treatment Plant Abandonment and New Lift Station

1 inch = 90 feet

0 45 90

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Table 2-7: OC San Regulatory and Permitting Requirements	
Category	**Description**
Caltrans Encroachment Permits (Pacific Coast Hwy/State Route 1)	Construction within Pacific Coast Hwy ROW will require Caltrans encroachment permits, which impose strict requirements on traffic control, allowable construction methods, and work hours. Limitations on open trenching and potential requirements for trenchless construction may significantly influence design, cost, and schedule.
Coastal Development Permits (CDPs)	The alignment lies within the California Coastal Zone and will require coastal development permits from CLB and Newport Beach, with potential involvement or appeal authority from the California Coastal Commission. Coastal Act policies related to visual resources, public access, and environmentally sensitive habitat areas may constrain alignment and facility siting.
CEQA Compliance	Due to the scale and visibility of the project, preparation of an Environmental Impact Report (EIR) is likely required. Key issues include traffic, construction-related impacts, biological and cultural resources, and coastal aesthetics. The CEQA process may be prolonged due to stakeholder interest and potential for legal challenge.
RWQCB Permitting	Construction activities will require compliance with the Construction General Permit for stormwater discharges, as well as potential permits for dewatering or non-stormwater discharges. Coordination with the Regional Water Quality Control Board (RWQCB) will be necessary for activities affecting surface or groundwater.
Resource Agency Permits	If the project affects jurisdictional waters or drainage features, permits may be required from the California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement) and the U.S. Army Corps of Engineers (Section 404), along with Section 401 water quality certification. A federal nexus could also trigger Section 106 cultural resource review.
Local Agency Permits and Coordination	Work outside of Caltrans ROW will require encroachment permits and approvals from the CLB and City of Newport Beach. Additional coordination will be required for utility conflicts, relocations, and public outreach due to construction impacts in developed areas.
ROW and Easements	While much of the alignment may follow public corridors, additional easements may be required in constrained segments and for construction of the new Transfer LS. Acquisition within coastal areas may be complex due to limited space and property constraints.
Construction and Traffic Constraints	Construction along Pacific Coast Hwy will require careful traffic management to maintain access and minimize disruption. Work hour restrictions, seasonal limitations, and high traffic volumes will likely constrain construction windows and extend the schedule.

Overall, this alternative presents a high level of permitting complexity due to multi-agency coordination, coastal zone requirements, and CEQA compliance. The constrained and highly visible nature of the corridor introduces elevated schedule risk and a potentially lengthy and resource-intensive approval process.

Additional activities would be required for the ultimate shutdown of CTP as shown in **Table 2-8**. These activities would be considered constant among all alternatives.

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Table 2-8: CTP Decommissioning Requirements	
Category	**Description**
Treatment Plant Permit Modifications (OC San and RTP)	CTP operates under an NPDES permit for ocean discharge. If flows are diverted and discharge ceases, the permit would need to be formally modified or terminated through the RWQCB. This process requires demonstration that discharges have permanently ceased and may involve a formal application and agency review period. OC San would likely need to amend its NPDES permit and/or Waste Discharge Requirements (WDRs) to reflect increased influent flow and loading, though changes are expected to be administrative if within existing capacity. In contrast, MNWD's RTP would likely require more substantive updates to its WDRs and recycled water permits, including revisions to the Title 22 Engineering Report to address changes in influent source, treatment capacity, and recycled water production.
WDRs	Any existing WDRs associated with treatment, solids handling, or residuals management would need to be modified or rescinded. If any portion of the facility remains in operation (e.g., equalization, pumping, or partial treatment), revised permits may be required to reflect the new function.
Air Quality Permits	South Coast Air Quality Management District permits for treatment processes (e.g., odor control systems, engines, or digesters if present) would need to be modified or surrendered. Equipment decommissioning may require notifications and potentially emissions reporting during shutdown activities.
CEQA for Facility Decommissioning	Decommissioning activities themselves may be subject to CEQA, particularly if demolition, site restoration, or repurposing is involved. If included as part of a broader project (e.g., diversion alternative), it can be covered within the overall CEQA document.
Hazardous Materials and Site Closure	A site assessment may be required to address any hazardous materials, chemical storage, or legacy contamination. Regulatory closure requirements could include soil and groundwater evaluation depending on historical operations.

2.1.7 Schedule and Implementation Complexity

From a technical standpoint, this alternative presents limited complexity, as the required improvements primarily consist of conveyance infrastructure and new pumping facilities. In addition, the contractual framework for discharge to OC San is already well established, providing a basis for advancing negotiations using existing agreement structures.

The primary implementation challenges for this alternative are expected to be related to environmental review, permitting, and multi-agency coordination, particularly for work within the Pacific Coast Highway corridor and the coastal zone. These elements are anticipated to be the critical drivers of the overall project schedule.

Figure 2-10 presents a preliminary implementation schedule for this alternative.

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Figure 2-10: Alternative 1 Implementation Schedule

Activity	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Conceptual Planning	●	●									
CEQA/Permitting (EIR, CDP, NPDES)		●	●	●	●	●					
Preliminary Design			●	●							
Final Design				●	●						
ROW / Easements			●	●	●						
Construction (Overall)						●	●	●	●	●	●
Transfer LS						●	●				
Transfer LS Force Main						●	●	●			
Laguna SOCWA Force Main and LS							●	●	●		
Bluebird SOCWA Force Main and LS							●	●			
Nye's LS Force Main								●	●		
CTP LS Conversion									●	●	
CTP to Regional LS Pipeline									●	●	
Decommission CTP										●	●

2.1.8 Regional/Interagency Coordination

The following regional/interagency coordination is anticipated:

- **Closeout of CTP (PC-15).** Coordinate the ultimate shutdown of CTP. SCWD would be sole owner of all remaining assets at CTP.
- **Aliso Creek Ocean Outfall (PC-24) Ownership Change**. ETWD would be the sole owner of all capacity in PC-24.
- **OC San Discharge Agreement.** Agreement between CLB/EBSD/OC San for wastewater discharge as discussed in Section 1.4.2.3.
- **MNWD Discharge Agreement.** Agreement between MNWD/SCWD for wastewater discharge as discussed in Section 2.1.5. Agreement will also need to cover return of recycled water as discussed in Section 2.1.9.
- **Closeout or Modify PC-23.** This alternative fundamentally repurposes the NCI from southbound conveyance to northbound conveyance.
- **OCWD Water Supply.** This agreement would include LBCWD and is contingent on the receipt of additional groundwater allocation. This approach is described in Section 2.1.10.

2.1.9 Recycled Water Impacts

This option will eliminate the source of tertiary water currently supplying the SCWD recycled water system. To continue receiving recycled water, SCWD would develop an agreement with MNWD to return recycled water treated at RTP, delivered by SCWD as part of this alternative. In addition to improvements identified in Section 2.1.5, this would require modification to MNWD recycled piping at Reservoir No. 3. Based on discussions with MNWD staff, the improvements are assumed for planning purposes to include approximately 100 ft of 12-in. pipe, associated valving and metering.

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For a one-to-one return, SCWD would be limited to 0.85 MGD supply. This would leave a deficit when compared against planned recycled water buildout which is noted as 1.07 MGD.

2.2 Alternative 2 – Redirection to SOCWA JBL

2.2.1 Overview

Under Alternative 2, wastewater flow generated from CLB, EBSD, and northern SCWD is conveyed to JBL through a combination of new pipeline and existing LS modifications. Redirecting flow to the JBL will require the existing flow path direction for SCWD's northern collection system to reverse, with an altered flow path extending from LS No. 2 to LS No. 6. From there, flow is conveyed directly to the JBL via a new force main along the Pacific Coast Highway and Dana Point Harbor Drive.

Table 2-9 summarizes the infrastructure improvements associated with Alternative 2 and **Figure 2-11** and **Figure 2-12** identify the locations of the improvements. **Figure 2-13** provides a revised flow schematic of CLB's, EBSD's, and SCWD's collection systems accounting for flow redirections to the JBL.

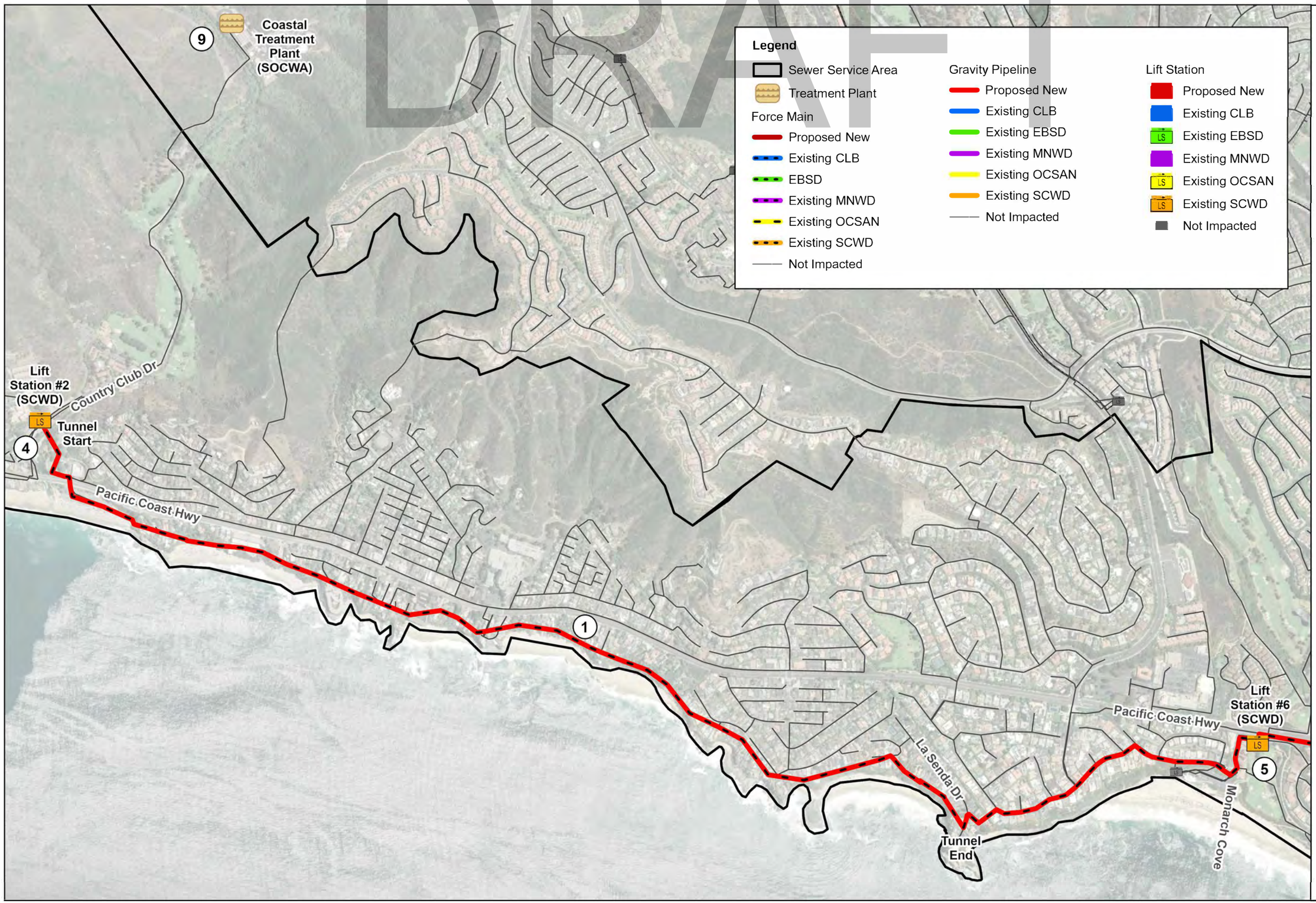
Table 2-9: Alternative 2 Infrastructure Improvements Summary

No.	Infrastructure Improvement Description
1	**LS No. 2 Force Main.** New sewer pipeline consisting of 16,655-ft 24-in. HDPE force main from SCWD's LS No. 2 to SCWD's LS No. 6. Use the alignment of SCWD's tunnel pipeline to avoid a high-lift alignment.
2	**LS No. 6 Force Main.** New sewer pipeline consisting of 7,610-ft 24-in. HDPE force main from SCWD's LS No. 6 to the intersection of Shoreline Dr and Pacific Coast Hwy.
3	**LS No. 6 Gravity Main.** New sewer pipeline consisting of 6,810-ft 30-in. PVC gravity main from the intersection of Shoreline Dr and Pacific Coast Hwy to the JBL.
4	**LS No. 2 Improvements.** Replace existing lift station with a new lift station equipped with four (three duty and one standby) 250 HP pumps sized at approximately 2,860 gpm at 188 ft TDH each.
5	**LS No. 6 Improvements.** Replace existing lift station with a new lift station equipped with four (three duty and one standby) 250 HP pumps sized at approximately 3,310 gpm at 185 ft TDH each.
6	**JBL Recycled Water Pipeline**. New recycled water distribution pipeline consisting of 5,015-ft 12-in. PVC gravity main from the JBL to a connection near Stonehill Drive and Selva Road
7	**JBL Recycled Water Pump Station.** New recycled water booster pump station sized for a design capacity of 1.07 MGD.
8	**JBL Expansion and Capital Buy-In.** Improvements per Section 2.2.4
9	**CTP Abandonment.** Abandonment per Section 2.2.5

2.2.2 Infrastructure Sizing

This section presents planning-level sizing of the new pipelines and modifications to existing LSs identified for Alternative 2 in **Table 2-9**. The sizing is intended to establish the general scope of required infrastructure to support evaluation of order-of-magnitude costs. These preliminary assumptions are appropriate for alternatives screening; final sizing and design will require refinement through detailed hydraulic analysis and engineering during subsequent project phases.

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South Orange County Wastewater Authority

CTP Regional Flow Study

Figure 2-11

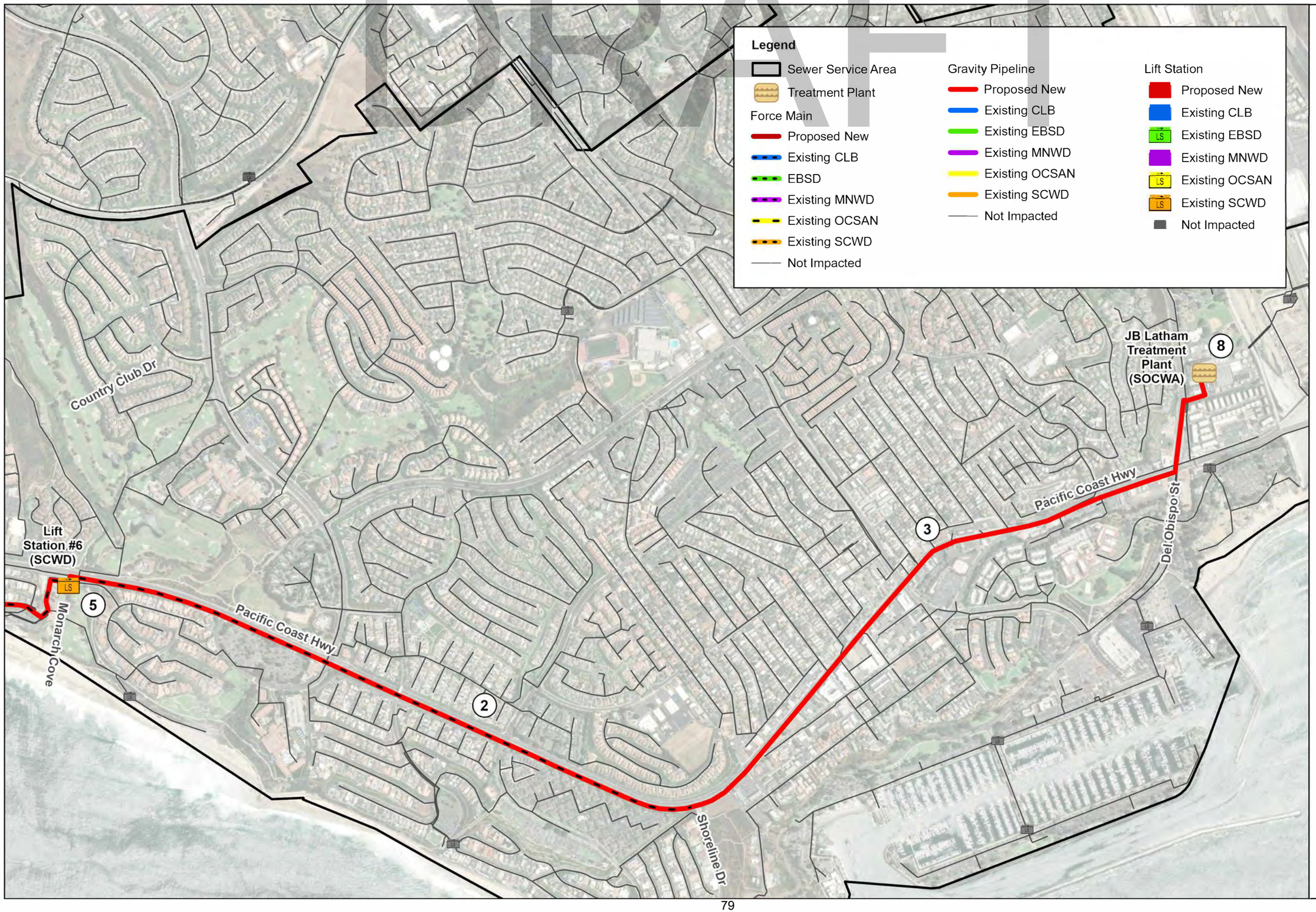
Alternative 2 Infrastructure Improvements Part 1

1 inch = 1,000 feet

0 500 1,000

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South Orange County Wastewater Authority

CTP Regional Flow Study

Figure 2-12

Alternative 2
Infrastructure
Improvements
Part 2

1 inch = 1,000 feet

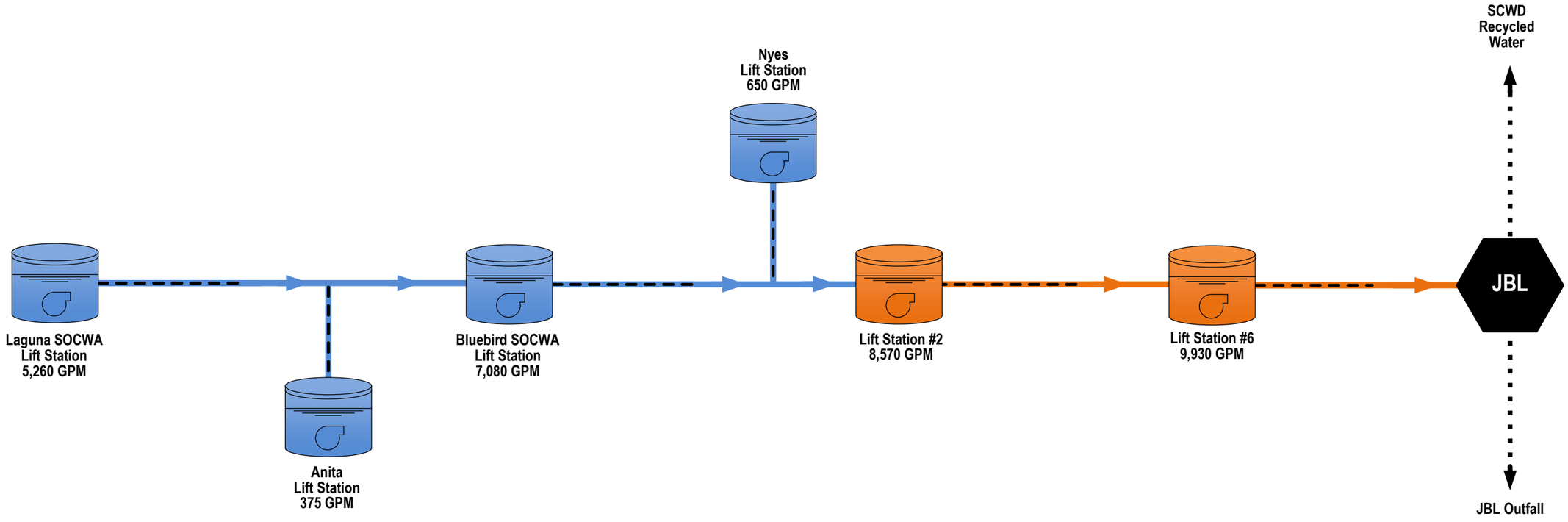
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Legend

- Lift Station
- Treatment Plant
- Treatment Plant Output
- Gravity Main
- Force Main
- New
- CLB
- EBSD
- SCWD
- MNWD
- OCSAN



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2.2.2.1 *Lift Station Design Flows*

Existing LS capacities were applied to the revised flow paths identified in **Figure 2-13** to determine new required LS capacities under Alternative 2. It was assumed that all existing LSs are already sized adequately for existing flow conditions. **Table 2-10** provides a summary of the recommended Alternative 2 LS capacities and a comparison to existing LS capacities

Table 2-10: Alternative 2 LS Design Capacity

LS	Design Capacity (gpm)		Alt 2 - # Pumps at Design Flow (gpm)
	Baseline	Alternative 2	
LS No. 2 (SCWD)	2,200	8,570[1]	4 @ 2,860
LS No. 6 (SCWD)	1,360	9,930[2]	4 @ 3,310

Notes:
1. *Equal to the design capacity of CLB's Bluebird SOCWA LS and Nye's Place LS + SCWD's LS No. 2 – SCWD's LS No. 6.*
2. *Equal to the design capacity of CLB's Bluebird SOCWA LS and Nye's Place LS + SCWD's LS No. 2.*

2.2.2.2 *Force Main Pipeline Diameter*

Using the LS design capacities sized for Alternative 2 in **Table 2-9**, a pipeline diameter was selected for each pipeline infrastructure improvement. **Table 2-11** summarizes the recommended force main pipeline diameters and hydraulic results.

Table 2-11: Alternative 2 Force Main Pipeline Diameter

Pipeline	Contributing LS(s)	Flow (gpm)		Diameter (in.)	Pipeline Velocity (ft/s)	
		Min[1]	Max[2]		Min	Max
LS No. 2 Force Main	LS No. 2 (SCWD)	2,860	8,570	24	2.0	6.1
LS No. 6 Force Main	LS No. 6 (SCWD)	3,310	9,930	24	2.3	7.0

Notes:
1. *One duty pump active.*
2. *All duty pumps active.*
3. *Force mains should be designed to produce velocities between 2 ft/s and 8 ft/s.*

2.2.2.3 *Gravity Pipeline Diameter*

Alternative 2 contains one gravity pipeline that conveys wastewater flow from SCWD's LS No. 2 force main to the JBL. To conservatively size the pipeline, the recommended diameter was selected based off the d/D ratio and velocity for an assumed minimum slope of 0.5% and maximum flow anticipated in the pipeline. **Table 2-12** summarizes the recommended gravity pipeline diameter and hydraulic results.

Table 2-12: Alternative 2 Gravity Pipeline Diameter

Pipeline	Contributing LS(s)	Max Flow (gpm)	Diameter (in.)	d/D	Velocity (ft/s)
LS No. 6 Gravity Main	LS No. 6 (SCWD)	9,930	30	0.65	6.5

Notes:
1. *All duty pumps active for all LSs contributing flow to gravity main.*
2. *Gravity mains should be designed with a d/D ratio of below 0.75 for pipelines greater than 12-in. and a minimum velocity at maximum flow greater than 3 ft/s.*

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2.2.2.4 *Lift Station Total Dynamic Head*

A preliminary design TDH was determined for each LS identified in **Table 2-9** using the design capacities from **Table 2-10** and the pipeline diameters from Sections 2.2.2.2 and 2.2.2.3. **Table 2-13** provides a summary of each LS's design TDH at its design capacity.

Table 2-13: Alternative 2 LS Design TDH

LS	Baseline		Alternative 2	
	Design Capacity (gpm)	TDH (ft)	Design Capacity (gpm)	TDH (ft)[1]
LS No. 2 (SCWD)	2,200	67	8,570	188
LS No. 6 (SCWD)	1,360	95	9,930	185

Note:
1. *TDH = Static Lift + Friction Losses. Friction losses approximated using the Hazen Williams formula with an assumed "C Factor" of 140.*

2.2.2.5 *Lift Station Horsepower*

With the design capacity and TDH determined for each LS, the minimum and recommended design HP for each LS pump was determined. **Table 2-14** provides a summary of the recommended design LS HP.

Table 2-14: Alternative 2 LS Design HP

LS	Design Capacity per Pump (gpm)	Design TDH per Pump (ft)	Min Required HP per Pump[1]	Design HP per Pump[2]
LS No. 2 (SCWD)	2,860	188	209	250
LS No. 6 (SCWD)	3,310	185	238	250

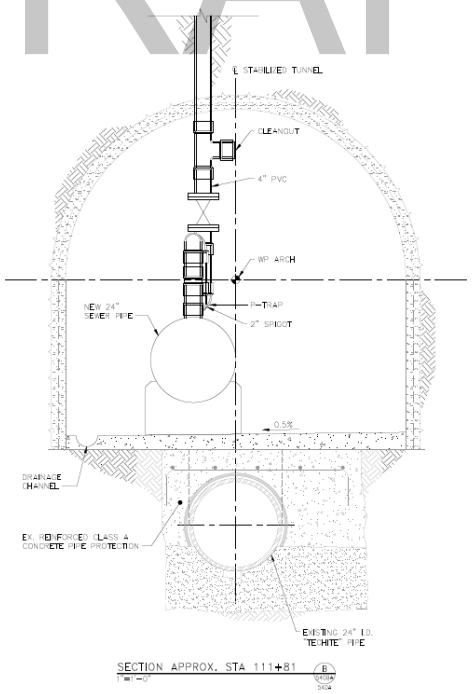
Notes:
1. *Minimum required HP calculated using an assumed combined pump and motor efficiency of 65%.*
2. *Design HP selected by rounding minimum required HP to next largest standard size.*

2.2.3 Tunnel Use

The SCWD Tunnel Project was a major infrastructure improvement constructed to replace aging coastal pipelines and provide a more resilient, seismically stable conveyance system for treated wastewater. The tunnel generally extends from LS No. 2 to a drop manhole in Three Arch Bay, a total distance of approximately 3 mi. The project included encasing the existing gravity sewer pipeline, expanding the existing tunnel and construction of a new 24-in. gravity sewer pipeline. **Figure 2-14** presents an example of a typical cross section of the tunnel.

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Figure 2-14: Sample Cross Section of Sewer Tunnel



Source: Phase III, Sheet No. 37BA

Currently, flows from LS No. 6 are pumped to Monarch Bay and then gravity flow to the drop manhole in Three Arch Bay. The drop manhole consists of multiple manholes connected to a vertical pipeline with a size of 18-in. at the base and 12-in. near the top. The pipe extends from the surface elevation of 92.5 ft to an inverted elevation of 26.3 ft for a total drop of approximately 66 ft.

For this scenario, the interconnection between the NCI and LS No. 2 influent would be made permanent. LS No. 2 would need to be expanded to accommodate the additional capacity. A new force main constructed from LS No. 2 to the tunnel and then a new pipeline constructed in the tunnel adjacent to the existing 24-in. gravity pipeline. The force main would exit vertically out of the tunnel adjacent to the existing drop manhole in Three Arch Bay and then follow the existing alignment to LS No. 6.

2.2.4 JBL Expansion and Capital Buy-In

JBL appears to have limited excess treatment capacity under average dry-weather conditions; however, its ability to reliably accommodate additional flow is constrained by hydraulic limitations and peak wet weather conditions. Based on **Table 1-6**, the current average flow to the plant is approximately 7.34 MGD, which is lower than the approximately 8.4 MGD condition evaluated in the 2017 Carollo Technical Memorandum.

The proposed addition of all CTP flows would increase influent by approximately 2.6 MGD, resulting in a combined average flow of approximately 10 MGD. While prior process modeling evaluated increased flow scenarios up to 12.2 MGD and a nominal capacity of 13 MGD, the facility is primarily constrained by hydraulic capacity during peak wet weather conditions, when major treatment processes are fully utilized with minimal redundancy.

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For planning purposes, the following assumptions are applied:

- **JBL Buy-In.** Use of existing facilities would require a proportional capacity buy-in, to be determined as part of project-specific negotiations.
- **JBL Capacity Improvements.** To accommodate peak wet weather conditions, capacity relief measures are anticipated, including enhanced primary treatment and targeted hydraulic bottleneck improvements.

2.2.5 CTP Abandonment

CTP abandonment would be similar to Alternative 1, as described in Section 2.1.4, with the exception that the new LS and basin conversion to equalization would not be required. Instead, those basins would be demolished.

2.2.6 Regulatory and Permitting Risk

Table 2-15 summarizes the regulatory and permitting requirements for this scenario.

Table 2-15: JBL Regulatory and Permitting Requirements

Category	Description
Caltrans Encroachment Permits (Pacific Coast Hwy/State Route 1)	Construction within Pacific Coast Hwy ROW will require Caltrans encroachment permits, which impose strict requirements on traffic control, allowable construction methods, and work hours. Limitations on open trenching and potential requirements for trenchless construction may significantly influence design, cost, and schedule.
CDPs	JBL is located within the Coastal Zone. Any expansion of treatment facilities or modifications to the outfall system will require CDPs from the City of Dana Point and may be subject to California Coastal Commission review or appeal.
CEQA Compliance	Due to the scale and visibility of the project, preparation of an EIR is likely required. Key issues include traffic, construction-related impacts, biological and cultural resources, and coastal aesthetics. The CEQA process may be prolonged due to stakeholder interest and potential for legal challenge.
RWQCB Permitting	Construction activities will require compliance with the Construction General Permit for stormwater discharges, as well as potential permits for dewatering or non-stormwater discharges. Coordination with the RWQCB will be necessary for activities affecting surface or groundwater.
Resource Agency Permits	If the project affects jurisdictional waters or drainage features, permits may be required from the California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement) and the U.S. Army Corps of Engineers (Section 404), along with Section 401 water quality certification. A federal nexus could also trigger Section 106 cultural resource review.
Local Agency Permits and Coordination	Work outside of Caltrans ROW will require encroachment permits and approvals from the City of Dana Point. Additional coordination will be required for utility conflicts, relocations, and public outreach due to construction impacts in developed areas.
ROW and Easements	While much of the alignment may follow public corridors, additional easements may be required in constrained segments and for expansion of LS No. 6. Acquisition within coastal areas may be complex due to limited space and property constraints.

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Table 2-15: JBL Regulatory and Permitting Requirements	
Category	**Description**
Construction and Traffic Constraints	Construction along Pacific Coast Hwy will require careful traffic management to maintain access and minimize disruption. Work hour restrictions, seasonal limitations, and high traffic volumes will likely constrain construction windows and extend the schedule.

Similar to Alternative 1, this alternative presents a high level of permitting complexity due to multi-agency coordination, Coastal Zone requirements, and CEQA compliance, in addition to modifications to existing discharge permits and treatment capacity certifications at the JBL.

Additional regulatory and permitting activities would be required for the ultimate decommissioning of the CTP. These activities are assumed to be consistent across all alternatives and are summarized in **Table 2-8**.

2.2.7 Schedule and Implementation Complexity

Implementation of Alternative 2 is expected to involve a moderate to high level of schedule and implementation complexity, driven primarily by the need to expand and integrate flows at the JBL, construct new conveyance infrastructure, and complete associated regulatory approvals. While this alternative avoids coordination with external agencies such as OC San or MNWD for treatment capacity, it requires significant modifications within SOCWA facilities and systems, including potential plant expansion and outfall capacity considerations.

The overall schedule will be influenced by permitting timelines, particularly CEQA and CDP approvals, as well as the design and construction of new pipelines and LS improvements. **Figure 2-15** presents a preliminary implementation schedule for this alternative.

Figure 2-15: Alternative 2 Implementation Schedule

Activity	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Conceptual Planning	●	●									
CEQA/Permitting (EIR, CDP, NPDES)		●	●	●	●	●					
Preliminary Design			●	●							
Final Design				●	●						
ROW / Easements			●	●	●						
Construction (Overall)						●	●	●	●	●	
JBL Expansion/Improvements						●	●	●			
Advanced Treatment								●	●		
Recycled Water Connection									●		
LS No. 6 and Force Main							●	●			
LS No. 2 and Force Main								●	●	●	
Decommission CTP										●	●

2.2.8 Regional/Interagency Coordination

The following regional/interagency coordination is anticipated:

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- **Closeout of CTP (PC-15).** Coordinate the ultimate shutdown of CTP. SCWD would be the sole owner of all remaining assets at CTP, including the following:
    - Reservoir No. 1 and associated pumping systems
    - Vehicle Storage Building
    - ACWRF
    - Water Testing Lab
    - Bathroom and Breakroom
    - Emergency Generator
    - Electrical Supply Equipment/Power Building
    - Stormwater pumping system
    - Site fencing and select surface improvements (as needed for access and security)
- **Aliso Creek Ocean Outfall (PC-24) Ownership Change**. ETWD would be the sole owner of all capacity in PC-24.
- **Modify JBL (PC-2) Agreements.** Updates to PC-2 agreements to address capacity ownership, cost-sharing, and operational responsibilities associated with increased flows and potential expansion at JBL.
- **SOCWA Member Agency Agreements.** Coordination among the CLB, City of San Juan Capistrano, SCWD, SMWD, and EBSD to revise flow allocations and funding responsibilities.
- **JBL Capacity Buy-In.** Agreements required among contributing agencies to define proportional capital buy-in, allocation of existing and expanded treatment capacity, and long-term cost participation.
- **Modify NCI (PC-23).** This alternative reduces or eliminates reliance on the NCI for conveyance to CTP and may require modifications to existing agreements governing ownership, operation, and maintenance responsibilities.

2.2.9 Recycled Water Impacts

With the decommissioning of the CTP, SCWD will require a new source of supply to meet demands within its existing recycled water system. Alternative 2 provides an opportunity to replace this supply through development of recycled water production at JBL. This has been contemplated and study as part of two previous studies, an initial effort in 2006 and subsequent study in 2017. The former identified an ultimate recycled water production capacity of approximately 9 MGD, with the latter indicating a practical implementation range of approximately 6 to 8 MGD.

The planned approach consisted of upgrading secondary effluent to Title 22 standards using advanced treatment processes. Tertiary membrane filtration (MF/UF) followed by ultraviolet (UV) disinfection was identified as the preferred AWT configuration. To deliver the recycled water, a new pump station and pipeline will be required. The pump station would be sized for a future peak demand of 1.07 MGD and the 12-in. pipeline would extend approximately 5,015 ft from JBL to a connection near Stonehill Drive and Selva Road.

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2.3 Alternative 2 – Redirection to RTP

2.3.1 Overview

Under Alternative 3, wastewater flow generated from CLB, EBSD, and northern SCWD is conveyed to the CTP site using the existing collection infrastructure and then is conveyed via the CTP LS and force main to MNWD's Regional LS. **Table 2-16** summarizes the infrastructure improvements associated with Alternative 3 and **Figure 2-16** identifies the locations of the improvements. **Figure 2-17** provides a revised flow schematic of CLB's, EBSD's, and SCWD's collection systems accounting for the flow redirections to the JBL.

Table 2-16: Alternative 3 Infrastructure Improvements Summary	
No.	**Infrastructure Improvement Description**
1	**CTP LS Force Main.** New sewer pipeline consisting of 16,760-ft 16-in. HDPE force main from the new CTP LS located at the CTP's west primary sedimentation basin to MNWD's Transfer LS located near the intersection of Sulphur Creek and Alicia Pkwy. Assumed to use the alignment of MNWD's inactive 18-in. VCP gravity pipeline via pipe bursting.
2	**New CTP LS.** New LS consisting of conversion of the existing CTP West Primary Sedimentation Basin to approximately 750,000 gallons of equalization storage and four (three duty and one standby) 125 HP pumps sized at approximately 1,530 gpm at 245 ft TDH each. Includes an emergency generator.
3	**MNWD Recycled Water Pipeline Improvement.** New recycled water pipeline consisting of approximately 100 ft of 12-in. PVC distribution pipeline.
4	**RTP Expansion and Capital Buy-In.** Improvements per Section 2.3.4
5	**CTP Abandonment.** Abandonment per Section 2.3.5.

2.3.2 Infrastructure Sizing

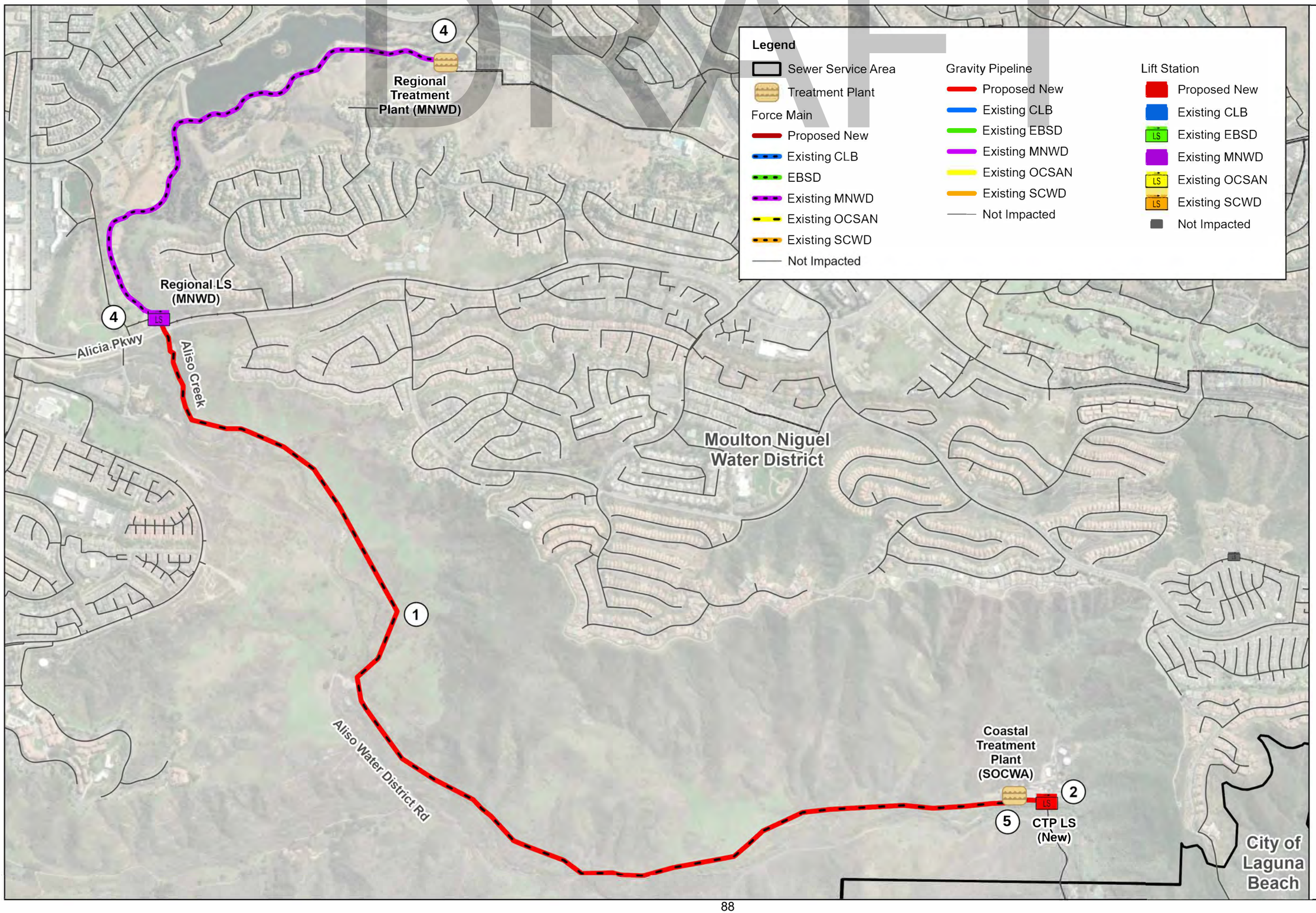
This section presents planning-level sizing of the CTP LS and force main identified for Alternative 3 in **Table 2-16**. The sizing is intended to establish the general scope of required infrastructure to support evaluation of order-of-magnitude costs. These preliminary assumptions are appropriate for alternatives screening; final sizing and design will require refinement through detailed hydraulic analysis and engineering during subsequent project phases.

2.3.2.1 *CTP Lift Station Design Flow*

Table 2-17 provides a summary of the new CTP LS design capacity for Alternative 3.

Table 2-17: Alternative 3 CTP LS Design Capacity	
Design Capacity (gpm)	**Alt 3 - # Pumps at Design Flow (gpm)**
4,590[1]	4 @ 1,530
Note: *1. Sized to meet CLB, EBSD, and SCWD combined maximum average daily wet weather flow of 6.6 MGD.*	

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CTP Regional Flow Study

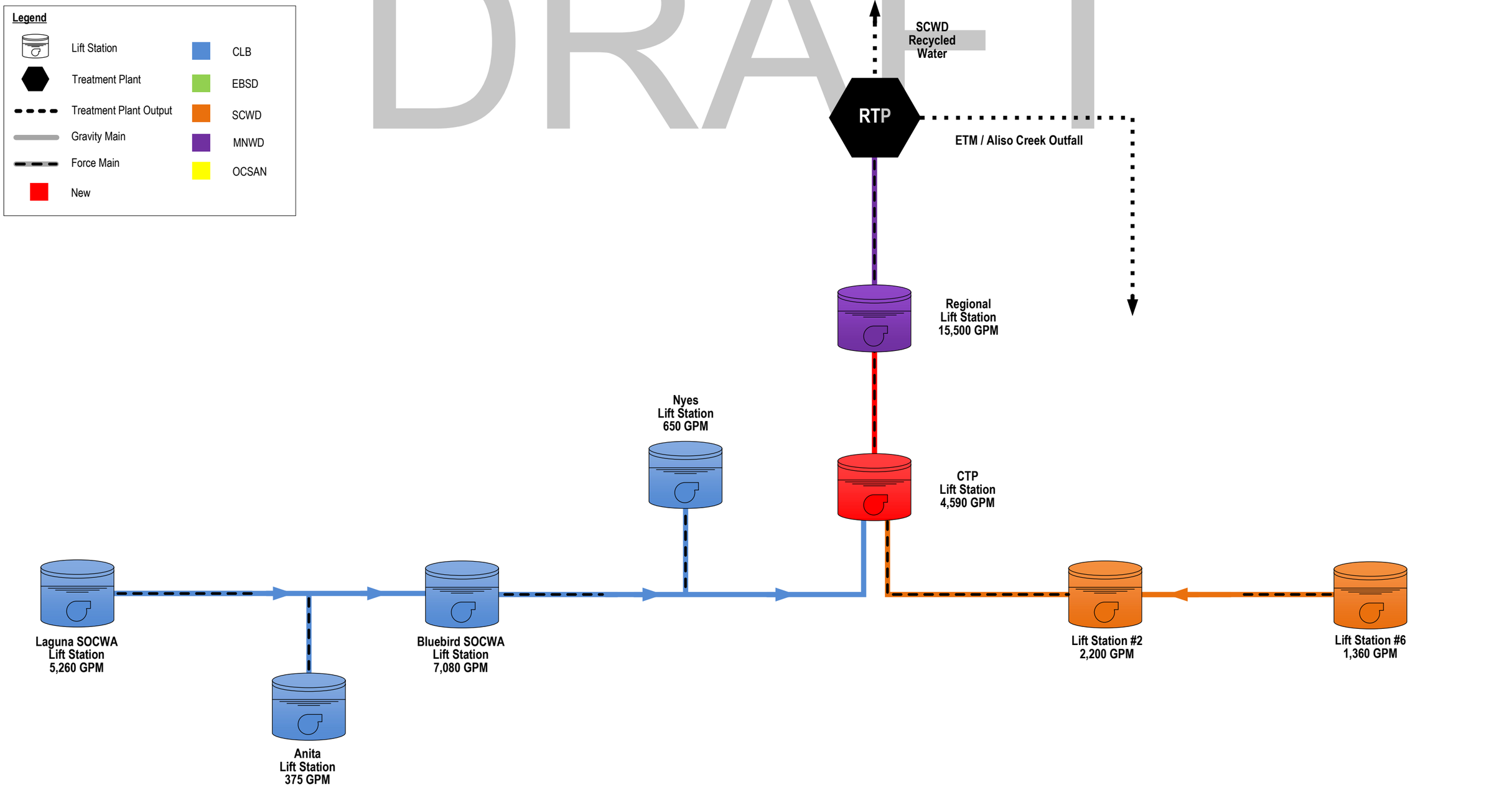
Figure 2-16

Alternative 3 Infrastructure Improvements

1 inch = 1,200 feet

0 600 1,200

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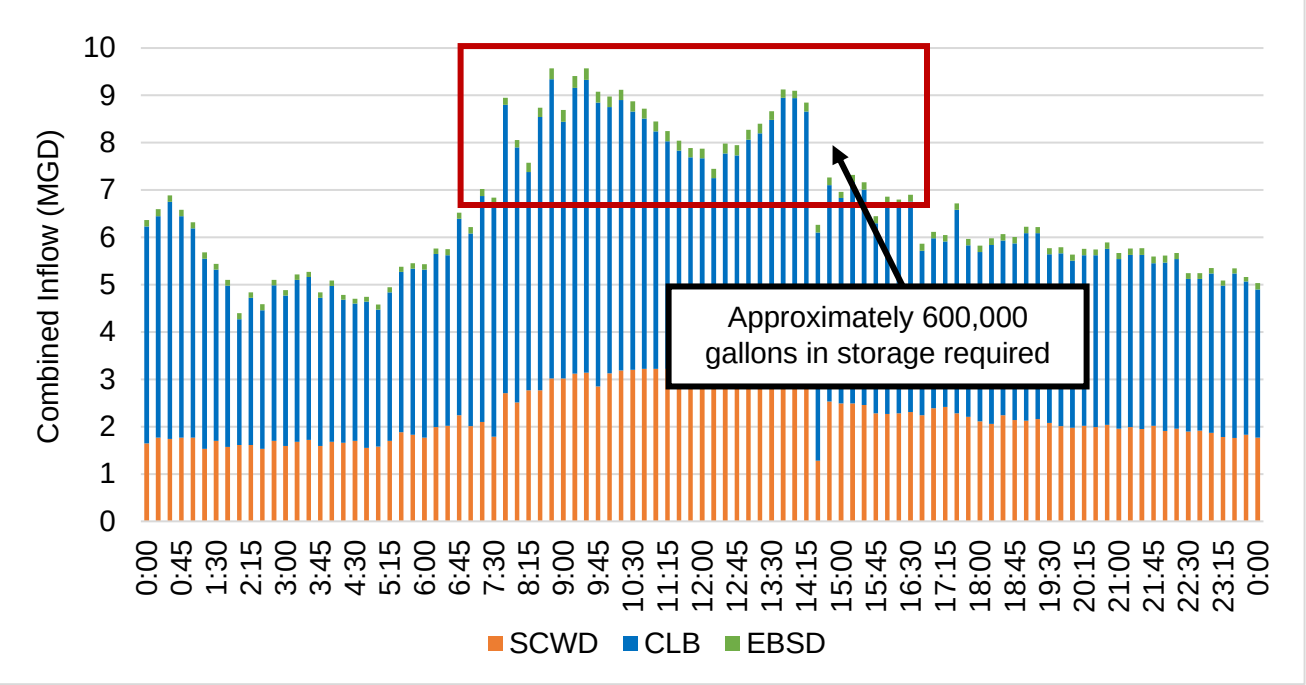

Legend
Lift Station
Treatment Plant
Treatment Plant Output
Gravity Main
Force Main
New
CLB
EBSD
SCWD
MNWD
OCSAN
SCWD
Recycled
Water
RTP
ETM / Aliso Creek Outfall
Regional
Lift Station
15,500 GPM
Nyes
Lift Station
650 GPM
CTP
Lift Station
4,590 GPM
Laguna SOCWA
Lift Station
5,260 GPM
Anita
Lift Station
375 GPM
Bluebird SOCWA
Lift Station
7,080 GPM
Lift Station #2
2,200 GPM
Lift Station #6
1,360 GPM

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2.3.2.2 *CTP Lift Station Equalization Basin*

The new CTP LS will include equalization within the existing CTP West Primary Sedimentation Basin to provide operational storage and peaking attenuation of wet weather flows greater than the LS's capacity. The equalization basin would also include an odor scrubbing unit process to reduce odor nuisances. Preliminary sizing of the equalization basin was established based on the maximum average daily wet weather flow observed over the past five years on February 6th, 2024 for combined CLB, EBSD, and SCWD flows. All flows exceeding the LS's design capacity of 6.6 MGD (4,590 gpm) were totaled during the peaking event and converted to a storage volume requirement. **Figure 2-18** shows the 15-minute interval peak wet weather flows observed during the February 6th, 2024 event and identifies the total LS storage requirement for equalization.

Figure 2-18: Alternative 3 Storage Requirement for New CTP LS



Per **Figure 2-18**, approximately 600,000 gallons in storage are required to equalize flows. Since the required volume is based on the past five years of flow data, a safety factor of 1.25 was applied to the required volume. Based on the safety factor, approximately 750,000 gallons of storage is required, and a 25-ft x 40-ft x 100-ft multi-chamber concrete basin is recommended.

2.3.2.3 *CTP Lift Station Force Main Pipeline Diameter*

Using the CTP LS design capacity sized for Alternative 3 in **Table 2-16**, a pipeline diameter was selected for the CTP LS force main. **Table 2-18** summarizes the recommended force main pipeline diameter and hydraulic results.

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Table 2-18: Alternative 3 CTP LS Force Main Pipeline Diameter				
Flow (gpm)		Diameter (in)	Pipeline Velocity (ft/s)	
Min[1]	Max[2]		Min	Max
1,530	4,590	16	2.4	7.3

Notes:
1. *One duty pump active.*
2. *All duty pumps active.*
3. *Force mains should be designed to produce velocities between 2 ft/s and 8 ft/s.*

2.3.2.4 *CTP Lift Station Total Dynamic Head*

A preliminary design TDH was determined for the new CTP LS using the design capacity from **Table 2-17** and the pipeline diameter from **Table 2-18**. **Table 2-19** provides a summary of the new CTP LS' design TDH.

Table 2-19: Alternative 3 CTP LS Design TDH	
Design Capacity (gpm)	TDH (ft)[1]
4,590	245

Note:
1. *TDH = Static Lift + Friction Losses. Friction losses approximated using the Hazen Williams formula with an assumed "C Factor" of 140.*

2.3.2.5 *CTP Lift Station Horsepower*

With the design capacity and TDH determined for the new CTP LS, the minimum and recommended design HP for was determined. **Table 2-20** provides a summary of the recommended HP.

Table 2-20: Alternative 3 CTP LS Design HP			
Design Capacity per Pump (gpm)	Design TDH per Pump (ft)	Min Required HP per Pump[1]	Design HP per Pump
1,530	245	118	125

Notes:
1. *Minimum required HP calculated using an assumed combined pump and motor efficiency of 65%.*
2. *Design HP selected by rounding minimum required HP to next largest standard size.*

2.3.3 RTP Expansion and Capital Buy-In

RTP appears to have sufficient available capacity to accommodate existing CTP flows under average dry-weather conditions. As shown in **Table 1-6**, the current average flow is approximately 7.18 MGD compared to a design capacity of 12 MGD. The proposed addition of all CTP flows would increase influent by approximately 2.6 MGD, resulting in a total average flow of roughly 9.8 MGD, which remains within the available design capacity. While average capacity is available, wet weather hydraulic and tertiary treatment constraints may limit operational flexibility and require further evaluation.

While detailed data are not available to fully assess peak wet weather conditions, it is assumed that influent equalization at the CTP could be implemented to attenuate peak flows. This approach would reduce hydraulic surcharge risks and minimize impacts to both the Regional LS and RTP during wet weather events. Confirmation of available peak capacity and conveyance limitations would require further hydraulic modeling and coordination with MNWD.

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The following major capital improvements/expenditures are anticipated:

- **RTP Capacity Buy-In and Expansion.** Use of existing treatment capacity would require a proportional capital buy-in, to be established through project-specific negotiations with MNWD. In addition, at this flow rate it is anticipated that expansion to the liquid stream treatment process would be required. RTP already processes all solids from CTP, so no expansion is anticipated related to solids.
- **Advanced Water Treatment (AWT) Expansion/Buy-In.** SCWD requires a reliable recycled water supply. To ensure availability during peak demand periods, expansion of the existing AWT facilities—or a proportional buy-in to existing capacity—is assumed to provide approximately 1.07 MGD of firm recycled water production during peak demand months.
- **Regional LS/Force-Main Buy-In.** Use of existing pumping and conveyance capacity would require a proportional capital buy-in, to be established through project-specific negotiations with MNWD.

2.3.4 CTP Abandonment and New LS

CTP abandonment would be similar to Alternative 1, with the exception that the new LS and basin conversion to equalization would be constructed larger to accommodate the full flow of all CTP flow.

2.3.5 Regulatory and Permitting Risk

Table 2-21 summarizes the regulatory and permitting requirements for this scenario.

Table 2-21: JBL Regulatory and Permitting Requirements	
Category	**Description**
CEQA Compliance	Due to the scale of proposed conveyance improvements and expansion of facilities at the RTP, preparation of an EIR is anticipated. A key consideration will be construction of the new pipeline between the CTP LS and the MNWD Regional LS, which may result in impacts to Aliso Creek, biological resources, and environmentally sensitive habitats. Additional considerations include construction-related impacts, cultural resources, and potential impacts associated with expansion of treatment facilities at RTP.
RWQCB Permitting	Modifications to RTP treatment processes and increased discharge flows will likely require updates to existing WDRs and/or NPDES permits. Construction activities will require compliance with the Construction General Permit and potential dewatering permits. Coordination with the RWQCB will be required.
Resource Agency Permits	If the project affects jurisdictional waters or drainage features, permits may be required from the California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement) and the U.S. Army Corps of Engineers (Section 404), along with Section 401 water quality certification. A federal nexus could also trigger Section 106 cultural resource review.
ROW and Easements	While much of the alignment may follow within existing pipeline easements, there may be a need for temporary construction easements to allow for staging and access within OC Parks and the Ranch Golf Course.

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Compared to the other alternatives, this alternative presents a relatively lower level of regulatory and permitting complexity. While CEQA compliance and resource agency permitting will still be required, particularly for construction of the new pipeline between the CTP LS and MNWD Regional LS within the Aliso Creek corridor, the overall permitting pathway is more streamlined. This is primarily due to the use of a single receiving treatment facility and the absence of Coastal Zone permitting or out-of-area service agreements with external agencies such as OC San.

Additional regulatory and permitting activities would be required for the ultimate decommissioning of the CTP. These activities are assumed to be consistent across all alternatives and are summarized in **Table 2-8**.

2.3.6 Schedule and Implementation Complexity

Implementation of Alternative 3 is expected to involve a moderate level of schedule and implementation complexity, driven primarily by the need to construct new conveyance infrastructure and expand facilities at the RTP to accommodate full CTP flows. While RTP appears to have sufficient capacity under average dry weather conditions, additional improvements will be required to address peak wet weather hydraulics, tertiary treatment capacity, and outfall constraints.

The overall schedule will be influenced by CEQA compliance and resource agency permitting, particularly for construction of the new pipeline between the CTP LS and MNWD Regional LS within the Aliso Creek corridor, as well as the design and phased expansion of RTP facilities. Compared to the other alternatives, this alternative benefits from a more streamlined implementation approach due to reliance on a single receiving facility and the absence of Coastal Zone permitting requirements.

Figure 2-19 presents a preliminary implementation schedule for this alternative.

Figure 2-19: Alternative 3 Implementation Schedule

Activity	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Conceptual Planning	●	●									
CEQA/Permitting (EIR, CDP, NPDES)		●	●	●	●	●					
Preliminary Design			●	●							
Final Design				●	●						
ROW / Easements			●	●	●						
Construction (Overall)						●	●	●	●	●	
RTP Treatment Expansion						●	●				
RTP Title 22 Treatment Expansion							●	●			
Regional LS Modifications								●	●		
MNWD Title 22 Piping										●	
CTP LS Conversion								●	●		
CTP to Regional LS Pipeline								●	●		
Decommission CTP									●	●	

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2.3.7 Regional/Interagency Coordination

The following regional/interagency coordination is anticipated:

- **Modify CTP (PC-15).** PC-15 would be converted solely to a conveyance agreement with no treatment occurring.
- **Aliso Creek Ocean Outfall (PC-24) Ownership Change**. ETWD would be the sole owner of all capacity in PC-24.
- **MNWD Discharge Agreement.** Agreement between MNWD/CLB/EBSD/SCWD for wastewater discharge as discussed in Section 2.3.3. Agreement will also need to cover return of recycled water as discussed in Section 2.3.8.

2.3.8 Recycled Water Impacts

Similar to Alternative 1, SCWD could receive recycled water from MNWD via Reservoir No. 3. With additional flow being provided by CLB and EBSD, additional capacity could be returned sufficient for buildout which is noted as 1.07 MGD.

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3.0 COST EVALUATION

This section presents a planning-level cost evaluation of the following four scenarios:

- Baseline – No Flow Redirection
- Alternative 1 – Redirection to OC SAN Plant No. 2 and MNWD RTP
- Alternative 2 – Redirection to SOCWA JBL
- Alternative 3 – Redirection to MNWD RTP

The purpose of this evaluation is to provide a consistent and comparative assessment of the anticipated capital and O&M costs associated with each scenario over a 40-year planning period to support screening and decision-making. Capital costs were developed to reflect the infrastructure and facility improvements required to implement each scenario and support the continued operation of conceptual infrastructure improvements and treatment facilities receiving PC-15 flow.

Capital costs include conceptual infrastructure improvements, construction contingency, engineering design, project management allowances, existing CIP projects, and future CIP projections. O&M costs were developed to reflect the long-term operational requirements of each alternative, including labor, power, chemicals, maintenance, residuals handling, and any contractual or treatment-related costs associated with conveyance to or treatment at regional facilities.

All cost estimates presented herein are informed by the infrastructure configurations and operational considerations described in Section 2 and calculated based on assumed flows, existing CIP projects, unit costs, and economic evaluation criteria established in Section 1, as well as any additional cost assumptions identified in each scenario's cost evaluation section below. The results of this evaluation provide the basis for the comparative cost analysis presented in Section 3.3 and support the overall alternatives assessment in Section 4.

3.1 Baseline

A baseline scenario was established to provide a consistent point of financial comparison for the evaluated alternatives. This baseline represents the "no flow redirection" condition, in which none of the alternatives from Section 2 are implemented and the CTP continues to operate under existing conditions. In addition to the flow assumptions, unit costs, and economic evaluation criteria set forth in Section 1, the following additional cost assumptions are made for the baseline scenario:

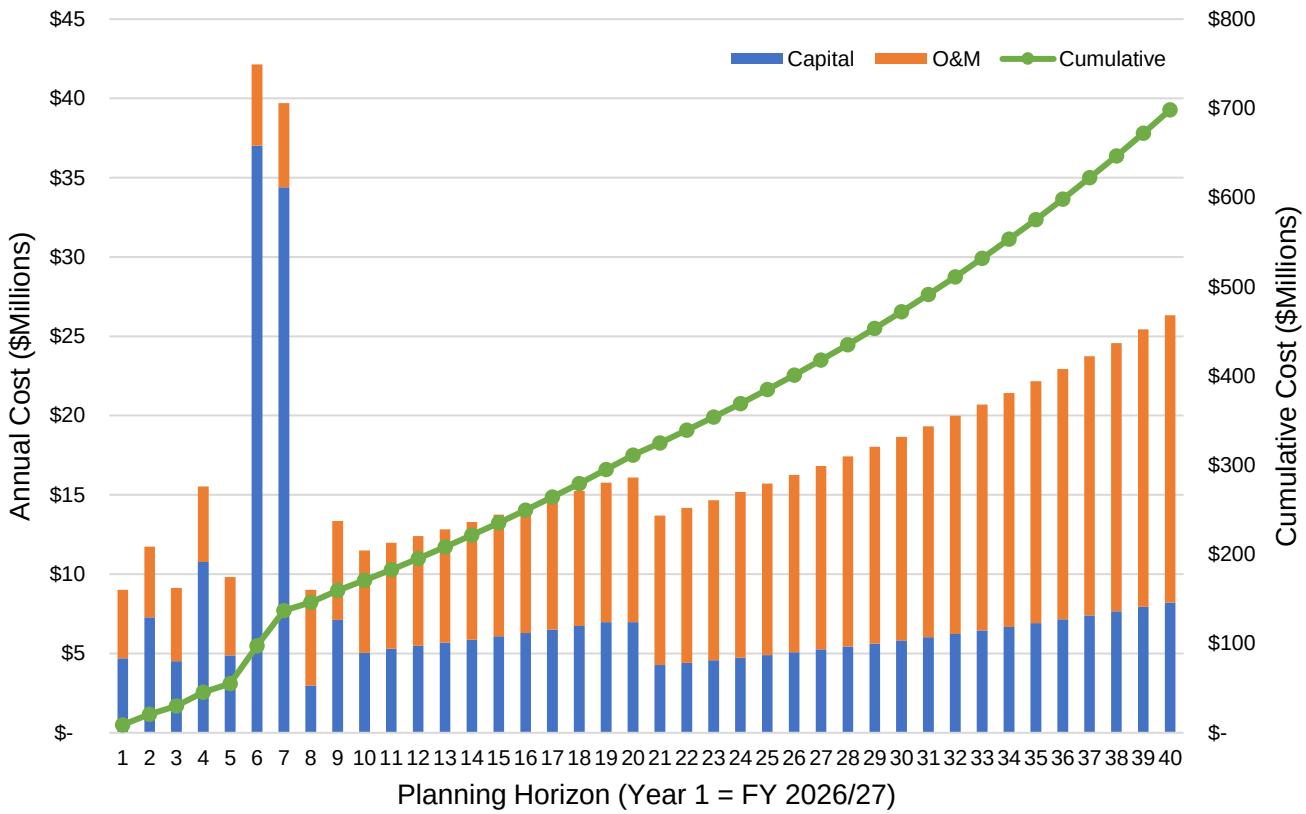
- **Live Stream Initial Capital and Annual O&M.** Under the baseline scenario, CLB is assumed to pursue beneficial reuse of its proportionate share of influent currently treated at CTP, requiring implementation of advanced treatment processes. For planning-level cost estimating, this analysis references the "CTP Future Alternatives Feasibility Study Technical Memorandum" (Hazen, May 2021). The live stream discharge approach is assumed to be consistent with the report's Alternative 2 – Membrane Bioreactor (MBR), which was estimated at approximately $28,800,000 capital and $465,000 annual O&M in October 2021 dollars. Escalated to 2026 dollars, total cost is estimated at $31,806,000 initial required capital and $528,000 annual O&M adjusted for inflation. Following discussion with stakeholders and comparison to recent construction bids, the total capital cost for the MBR facility was increased to $50,000,000 in current dollars, with O&M remaining the same at $528,000 per year.

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- **Live Stream Future CIP.** For years following completion of live stream construction, a one percent annual capital replacement allowance adjusted for inflation is applied to the initial total capital cost to account for required future capital improvements associated with the new facility.
- **SOCWA CTP Existing CIP.** The current SOCWA CIP for CTP is largely based on the 2014 Facility Master Plan and includes approximately $49 million in planned expenditures over the next ten years. While SOCWA is currently initiating an updated Facility Master Plan, this analysis assumes an additional $51 million in capital investment over the subsequent 20-year planning horizon.
- **SOCWA CTP Future CIP.** For years following the 20-year planning horizon of the CTP's existing CIP, a three percent annual capital replacement allowance adjusted for inflation is applied to the total existing CIP cost to account for required future capital improvements associated with the existing facility.
- **MNWD RTP Biosolids Future CIP.** For years following the 10-year planning horizon of the RTP's existing biosolids CIP, a three percent annual capital replacement allowance adjusted for inflation is applied to the total existing CIP cost and adjusted for inflation to account for required future capital improvements associated with the existing facility.

Figure 3-1 identifies the estimated baseline annual cost anticipated over the planning period. A detailed breakdown of baseline annual capital and O&M costs over the planning period are provided in **Appendix A**.

Figure 3-1: Baseline Annual Costs



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3.2 Alternative 1 – Redirection to OC San Plant No. 2 and MNWD RTP

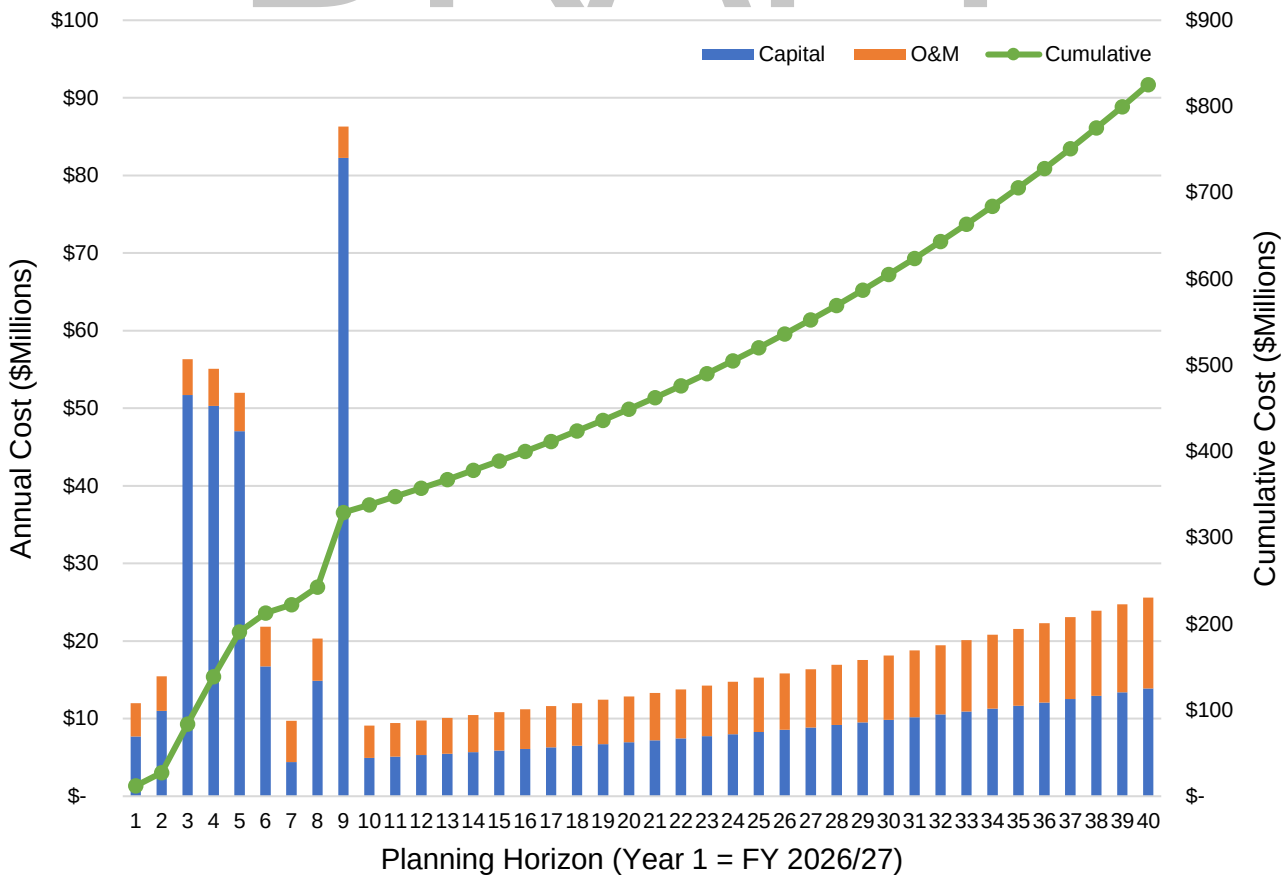
Alternative 1 represents the scenario in which CLB and EBSD flows are redirected to OC San's Treatment Plant No. 2 and SCWD flows are redirected to MNWD's RTP. In addition to the flow assumptions, unit costs, and economic evaluation criteria set forth in Section 1, the following additional cost assumptions are made for the Alternative 1 scenario:

- **SOCWA CTP Existing CIP Reduced Expenditure.** Since Alternative 1 eliminates reliance on the CTP, it is assumed that long-term capital reinvestment at the facility would be correspondingly reduced. However, a portion of the CIP is assumed to represent near-term, unavoidable improvements. For planning purposes, a reduced annual capital expenditure of approximately 75% budgeted CIP costs for years 1–3 and $250,000 for years 4 - 8 is assumed during the transition period prior to abandonment of the CTP per input from SOCWA staff.
- **CLB and EBSD Existing CIP Capital Offset.** All reaches of CLB's NCI are anticipated to be abandoned or used for their alignment under Alternative 1 and project costs per **Table 1-10** are subtracted against the total annual capital cost for applicable FYs to reflect the benefit of not having to execute the projects. Cost offsets were applied to CLB and EBSD total capital costs based on each agency's proportion of flow conveyed through the NCI.
- **Conceptual Infrastructure Improvements Future CIP.** For years following completion of all conceptual infrastructure improvements, a one percent annual capital replacement allowance adjusted for inflation is applied to the initial total capital cost to account for required future capital improvements associated with the new facility.
- **MNWD Regional LS and Force Main Capacity Buy-In.** Use of the Regional Lift Station and Force Main to convey wastewater from the CTP to the RTP is assumed to require a facility buy-in component. For planning purposes, a buy-in allowance of $3,000,000 per MGD is applied.
- **MNWD RTP Future CIP.** For years following capital buy-in, a three percent annual capital replacement allowance adjusted for inflation is applied to the total capital-buy in cost to account for required capital improvements associated with existing and planned facilities.
- **OC San Plant No. 2 Future CIP.** For years following capital buy-in, a three percent annual capital replacement allowance adjusted for inflation is applied to the total capital-buy in cost to account for required capital improvements associated with the existing facility.

Figure 3-2 identifies the estimated Alternative 1 annual cost anticipated over the planning period. A detailed breakdown of Alternative 1 annual capital and O&M costs over the planning period are provided in **Appendix A**.

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Figure 3-2: Alternative 1 Annual Costs



3.3 Alternative 2 – Redirection to SOCWA JB Latham Treatment Plant

Alternative 2 represents the scenario in which all PC-15 flows are redirected to SOCWA's JBL. In addition to the flow assumptions, unit costs, and economic evaluation criteria set forth in Section 1, the following additional cost assumptions are made for the Alternative 2 scenario:

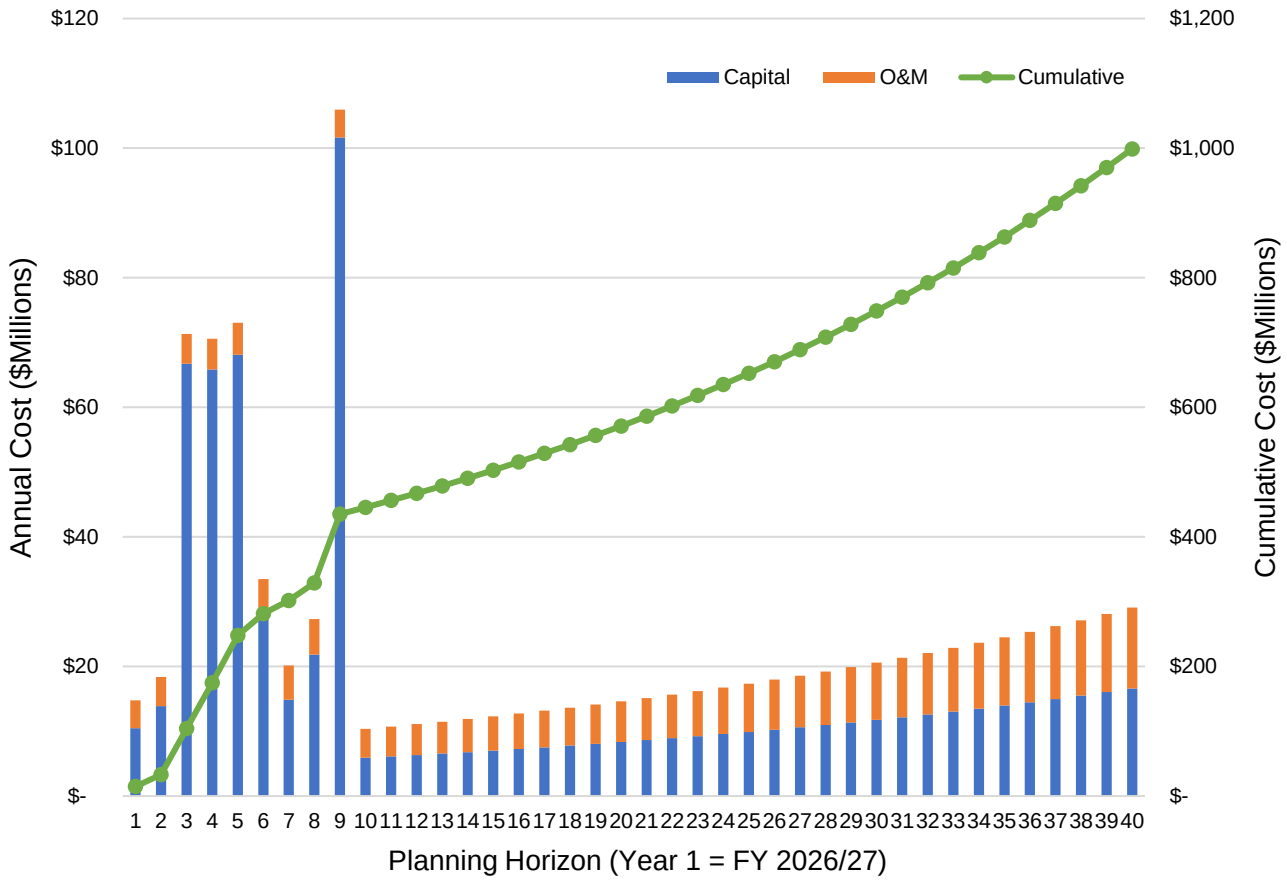
- **SOCWA CTP Existing CIP Reduced Expenditure.** Since Alternative 2 eliminates reliance on the CTP, it is assumed that long-term capital reinvestment at the facility would be correspondingly reduced. However, a portion of the CIP is assumed to represent near-term, unavoidable improvements. For planning purposes, a reduced annual capital expenditure of approximately 75% budgeted CIP costs for years 1–3 and $250,000 for years 4 - 8 is assumed during the transition period prior to abandonment of the CTP per input from SOCWA staff.
- **CLB and EBSD Existing CIP Capital Offset.** Reach 5 is anticipated to be abandoned under Alternative 2 and the capital cost associated with the existing Reach 5 replacement CIP per **Table 1-10** is subtracted against the total annual capital cost for FY 2026/27 and FY 2027/28 to reflect the benefit of not having to execute the Reach 5 project. Cost offsets were applied to CLB and EBSD total capital costs based on each agency's proportion of flow conveyed through the NCI.

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- **Conceptual Infrastructure Improvements Future CIP.** For years following completion of all conceptual infrastructure improvements, a one percent annual capital replacement allowance adjusted for inflation is applied to the initial total capital cost to account for required future capital improvements associated with the new facility.
- **MNWD RTP Future CIP.** For years following capital buy-in, a three percent annual capital replacement allowance adjusted for inflation is applied to the total capital-buy in cost to account for required capital improvements associated with existing and planned facilities.

Figure 3-3 identifies the estimated Alternative 2 annual cost anticipated over the planning period. A detailed breakdown of Alternative 2 annual capital and O&M costs over the planning period are provided in **Appendix A**.

Figure 3-3: Alternative 2 Annual Costs



3.4 Alternative 3 – Redirection to MNWD Regional Treatment Plant

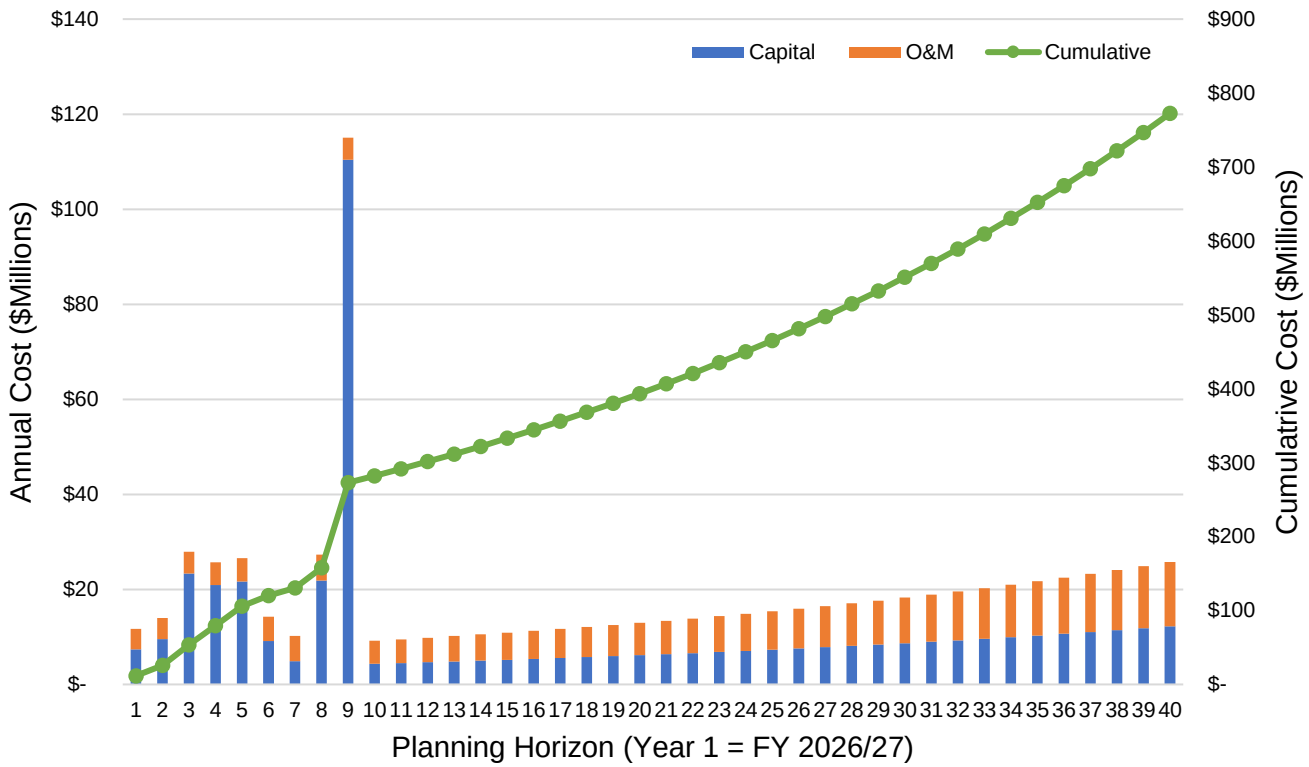
Alternative 3 represents the scenario in which all PC-15 flows are redirected to MNWD's RTP. In addition to the flow assumptions, unit costs, and economic evaluation criteria set forth in Section 2, the following additional cost assumptions are made for the Alternative 3 scenario:

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- **SOCWA CTP Existing CIP Reduced Expenditure.** Since Alternative 3 eliminates reliance on the CTP, it is assumed that long-term capital reinvestment at the facility would be correspondingly reduced. However, a portion of the CIP is assumed to represent near-term, unavoidable improvements. For planning purposes, a reduced annual capital expenditure of approximately 75% budgeted CIP costs for years 1–3 and $250,000 for years 4 - 8 is assumed during the transition period prior to abandonment of the CTP per input from SOCWA staff.
- **Conceptual Infrastructure Improvements Future CIP.** For years following completion of all conceptual infrastructure improvements, a one percent annual capital replacement allowance adjusted for inflation is applied to the initial total capital cost to account for required future capital improvements associated with the new facility.
- **MNWD Regional LS and Force Main Capacity Buy-In.** Use of the Regional Lift Station and Force Main to convey wastewater from the CTP to the RTP is assumed to require a facility buy-in component. For planning purposes, a buy-in allowance of $3,000,000 per MGD is applied.
- **MNWD RTP Future CIP.** For years following capital buy-in, a three percent annual capital replacement allowance adjusted for inflation is applied to the total capital-buy in cost to account for required capital improvements associated with the existing facility.

Figure 3-4 identifies the estimated Alternative 3 annual cost anticipated over the planning period. A detailed breakdown of Alternative 3 annual capital and O&M costs over the planning period are provided in **Appendix A**.

Figure 3-4: Alternative 3 Annual Costs



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3.5 Cost Comparison

This section provides a comparative cost analysis of the four scenarios evaluated in Sections 3.1 through 3.4.

3.5.1 40-Year Cumulative Cost Summary

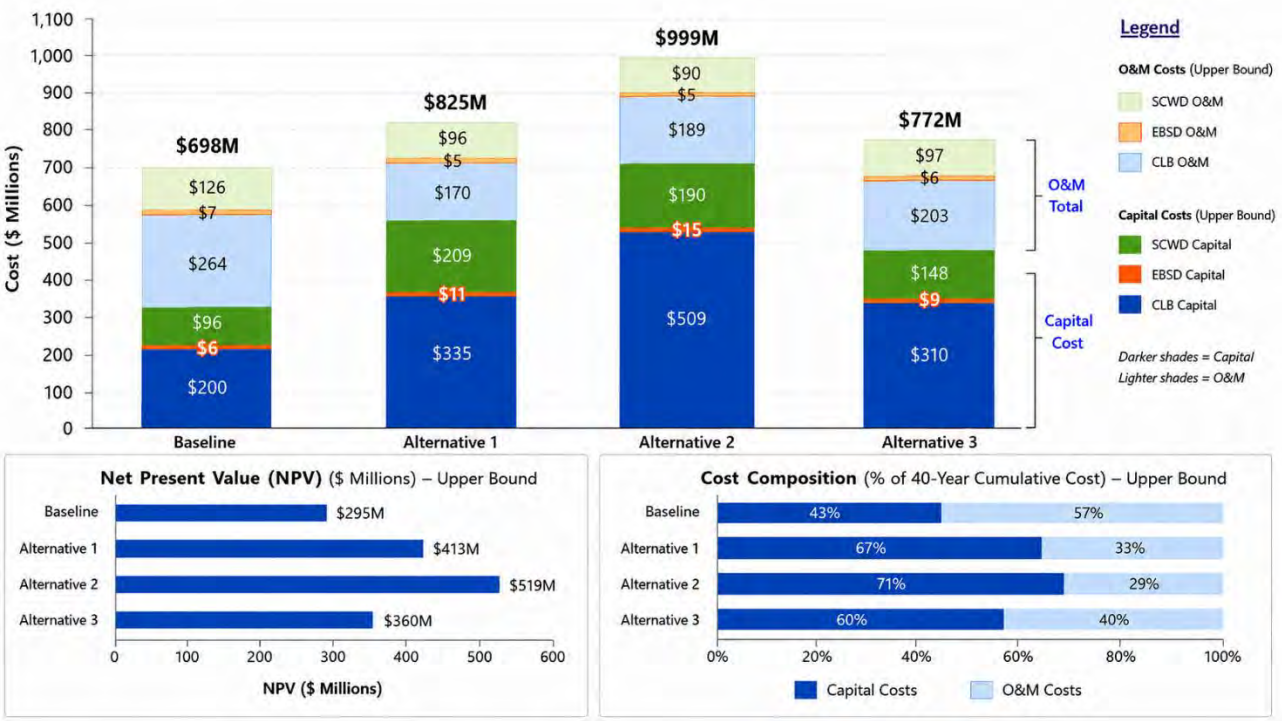
Table 3-1 presents the estimated cumulative costs over the planning period. Costs within each category are allocated by PC-15 member agency to provide a comparative summary of the estimated financial impact to each participating agency. Lifecycle costs represent net present value (NPV) using the discount rate assumptions identified in **Table 1-11**.

Table 3-1: Summary of 40-Year Cumulative Cost Comparison

Metric	Baseline	Alternative 1	Alternative 2	Alternative 3
Capital Cost ($M)	**$301**	**$555**	**$714**	**$467**
CLB	$200	$335	$509	$310
EBSD	$6	$11	$15	$9
SCWD	$96	$209	$190	$148
O&M Total ($M)	**$397**	**$271**	**$285**	**$306**
CLB	$264	$170	$189	$203
EBSD	$7	$5	$5	$6
SCWD	$126	$96	$90	$97
40-Year Undiscounted Cost ($M)	**$698**	**$825**	**$999**	**$772**
NPV ($M)	**$295**	**$413**	**$519**	**$360**

Figure 3-5 provides an illustration of the information provided in **Table 3-1**.

Figure 3-5: Summary of 40-Year Cumulative Cost Comparison



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3.5.2 Key Cost Drivers

The cumulative cost of each scenario is influenced by several key cost drivers, including required future improvements (e.g. live stream), uncertain future CIP costs, and the magnitude of treatment facility buy-in and capacity expansion costs. Given the planning-level nature of this evaluation, several key cost drivers were evaluated using both upper bound and lower bound assumptions to understand potential cost sensitivity. **Table 3-2** identifies lower bound cost assumptions for key cost drivers that would bring the overall cumulative cost of each scenario down.

Table 3-2: Key Cost Drivers Upper and Lower Bound Values

Key Cost Driver	Scenario	Unit	Upper Value	Lower Value
CTP Live Stream Capital Cost	Baseline	$/EA	$50,000,000	$ -[1]
CTP Live Stream O&M, NPV	Baseline	$/Year	$528,000	$ -[1]
MNWD RTP Liquids & Solids Buy-In	Alt 1 & 3	$/MGD	$25,000,000	$18,750,000
MNWD RTP Recycled Water Buy-In	Alt 1 & 3	$/MGD	$7,500,000	$5,000,000
MNWD Regional LS and Force Main Buy-In	Alt 1 & 3	$/MGD	$3,000,000	$2,000,000
OC San Plant No. 2 Buy-In	Alt 1	$/MGD	$20,000,000	$15,000,000
SOCWA JBL Liquids and Solids Buy-In	Alt 2	$/MGD	$25,000,000	$18,750,000
SOCWA JBL Recycled Water Buy-In	Alt 2	$/MGD	$7,500,000	$5,000,000

Notes:
1. *Assumes that construction of the live stream is not required.*

3.5.3 Lower Bound 40-Year Cumulative Cost Summary

Table 3-3 presents the estimated cumulative costs over the planning period using lower bound values from **Table 3-2**. Costs within each category are allocated by PC-15 member agency to provide a comparative summary of the estimated financial impact to each participating agency.

Table 3-3: Summary of Lower Bound 40-Year Cumulative Cost Comparison

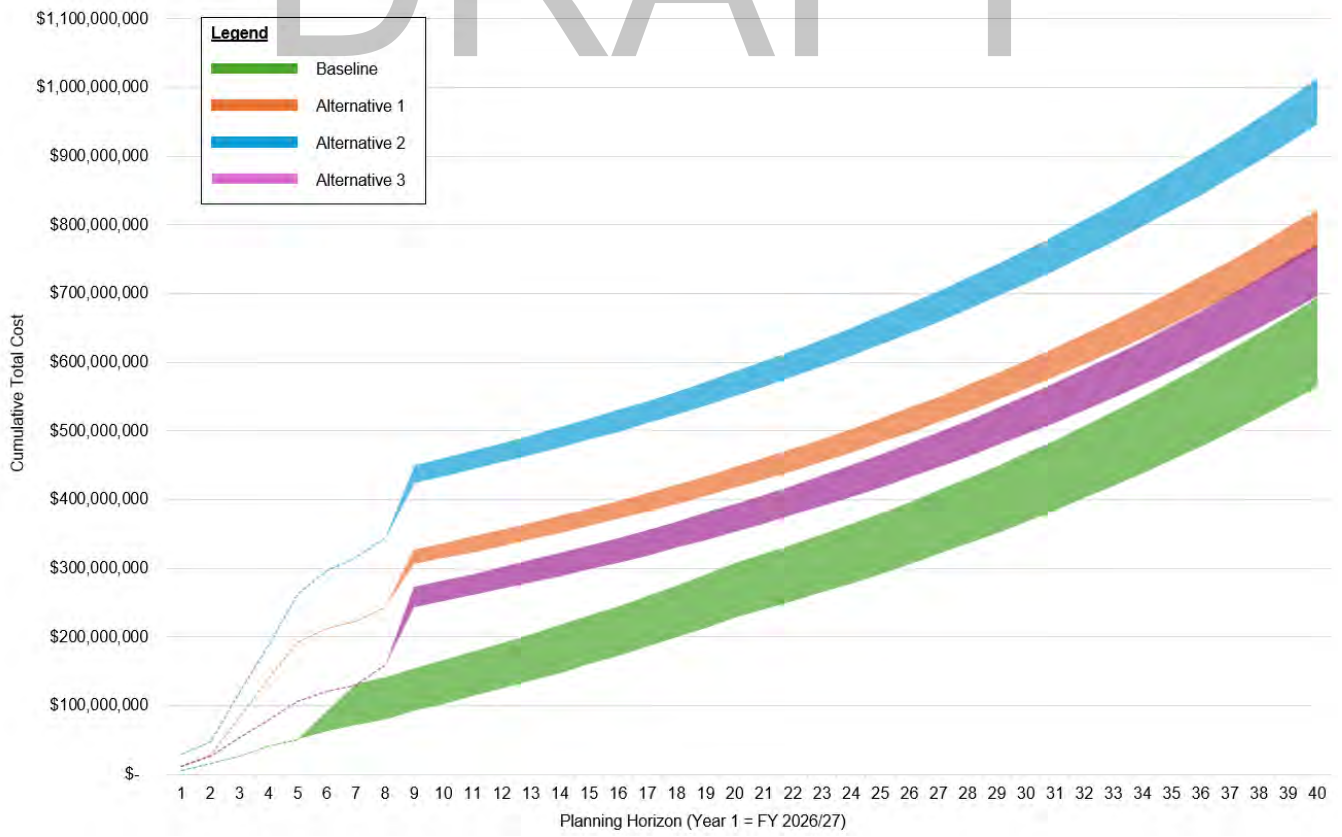
Metric	Baseline	Alternative 1	Alternative 2	Alternative 3
Capital Cost ($M)	**$205**	**$494**	**$646**	**$390**
CLB	$136	$305	$464	$259
EBSD	$4	$10	$13	$7
SCWD	$65	$180	$169	$124
O&M Total ($M)	**$364**	**$271**	**$285**	**$306**
CLB	$242	$170	$189	$203
EBSD	$7	$5	$5	$6
SCWD	$116	$96	$90	$97
40-Year Undiscounted Cost ($M)	**$569**	**$765**	**$931**	**$696**
NPV ($M)	**$227**	**$387**	**$489**	**$326**

3.5.4 40-Year Cumulative Cost (Undiscounted) Comparison and Summary

Figure 3-6 provides a summary of cumulative cost (undiscounted) per year over the planning period for the upper- and lower-bound scenarios. Overlap between two scenarios indicates that cumulative costs between the two scenarios have the potential to be the same for the year(s) in which they overlap.

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Figure 3-6: Cumulative Cost (Undiscounted) per Year



The following are key observations from the cost evaluation analysis:

- **Lowest-Cost Scenario.** The Base scenario presents the opportunity for the lowest-total cost solution.
- **Highest-Cost Scenario.** Alternative 2 resulted in the highest overall cost, driven primary by extensive conveyance infrastructure and LS expansion requirements.
- **Higher Capital and Lower O&M.** All three alternatives require more capital in the next 10 years when compared to the baseline scenario. However, all three scenarios have a lower O&M requirement, with O&M costs in the baseline scenario driven by higher present-day O&M costs at the CTP.
- **Buy-In and Capacity Expansion Sensitivity.** Unknown costs associated with capital buy-in and capacity expansion at non-CTP treatment plants create a range of cost scenarios for all three alternatives.

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4.0 ANALYSIS AND RECOMMENDATIONS

This section presents a comparative evaluation of the baseline scenario and the three alternatives, building on the technical assessment in Section 2 and the cost evaluation in Section 3. The analysis applies the evaluation criteria established in Section 1, providing a consistent framework for comparing each scenario.

For each alternative, technical considerations such as infrastructure requirements, permitting complexity, and implementation risk are evaluated alongside financial metrics including capital, O&M, and lifecycle costs. These inputs are used to assign relative scores and identify key tradeoffs between alternatives.

The results of this evaluation are summarized in Section 4.1, followed by a recommended approach in Section 4.2 and implementation considerations in Section 4.3.

4.1 Alternatives Analysis

This section presents a comparative evaluation of the baseline scenario and the three alternatives using the criteria, scoring scale (1 to 3), and weighting established in **Table 1-15**. The evaluation framework incorporates both quantitative results (e.g., capital and O&M costs from Section 3) and qualitative considerations (e.g., technical feasibility, permitting complexity, and operational impacts from Section 2).

For each alternative, the results from Sections 2 and 3 are applied to the metrics defined in **Table 1-15** to assign relative scores and identify key tradeoffs. **Table 4-1** summarizes the scoring results and provides the basis for the recommendations presented in this section. Scoring was performed by MKN and additional scoring input from PC-15 member agencies is attached as **Appendix B**.

Table 4-1: Alternatives Evaluation

Criteria	Weighting	Baseline	Alt 1 - OC San and RTP	Alt 2 - JBL	Alt 3 - RTP
Capital Cost	20	**3** ($205M–$301M)	**2** ($494M–$555M)	**1** ($646M–$714M)	**2** ($390M–$467M)
O&M Cost Impact	20	**1** ($364M–$397M)	**3** ($271M)	**3** ($285M)	**2** ($306M)
Technical Feasibility	15	**3**	**2**	**1**	**2**
Regulatory & Permitting Risk	15	**3**	**2**	**1**	**2**
Schedule & Implementation Complexity	10	**3**	**2**	**1**	**2**
Regional / Interagency Coordination	10	**3**	**2**	**3**	**2**
Recycled Water Impacts	10	**3**	**1**	**2**	**2**
Total (unweighted)		**19**	**14**	**12**	**14**
Total (weighted)		**260**	**210**	**170**	**200**

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Justification for the scoring, by category, is provided as follows:

- **Capital Cost.** The Baseline has the lowest capital cost range at $205M to $301M and therefore receives the highest score. Alternative 2 has the highest capital cost range at $646M to $714M, while Alternatives 1 and 3 fall between the Baseline and Alternative 2.
- **O&M Cost Impact.** The Baseline has the highest 40-year O&M cost range at $364M to $397M. Alternatives 1 and 2 have the lowest long-term O&M costs at $271M and $285M, respectively, while Alternative 3 is slightly higher at $306M.
- **Technical Feasibility.** The Baseline receives the highest score because it maintains existing operations and does not require major new conveyance or treatment modifications. Alternative 1 and Alternative 3 appear feasible but require significant conveyance and integration with other regional systems. Alternative 2 scores lowest due to inability to utilize the SCWD tunnel and greater hydraulic and treatment capacity constraints at JBL.
- **Regulatory & Permitting Risk.** The Baseline receives the highest score because it maintains existing permitted operations and avoids the near-term complexity associated with new regional conveyance and discharge arrangements. Alternative 1 receives a moderate score because construction along Pacific Coast Highway would involve significant environmental review and permitting; however, connection to OC San's large regional treatment system would reduce long-term regulatory risk through greater capacity and shared compliance resources. Alternative 3 also receives a moderate score because it requires regional flow redirection but avoids many of the coastal and Pacific Coast Highway permitting constraints associated with Alternative 1. Alternative 2 receives the lowest score because it presents permitting and implementation challenges similar to Alternative 1 without the same long-term regulatory risk-sharing benefits provided by OC San.
- **Schedule & Implementation Complexity.** The Baseline is the least complex to implement because it does not require a major transition. Alternatives 1 and 3 require major new infrastructure and transition planning but appear more manageable than Alternative 2. Alternative 2 scores lowest due to the likely complexity of JBL expansion and related construction sequencing.
- **Regional/Interagency Coordination.** The Baseline and Alternative 2 receive the highest scores. The Baseline relies primarily on established SOCWA agreements and existing institutional relationships, avoiding the need to negotiate new regional arrangements. Alternative 2 consolidates treatment at JBL and would require fewer new external agency agreements than the other regional alternatives. Alternatives 1 and 3 receive moderate scores because both would require new agreements governing capacity, conveyance, operations, cost allocation, and long-term responsibilities. Alternative 1 would require several multi-agency agreements (e.g., SCWD/MNWD, CLB/EBSD, and CLB/EBSD/OC San). The OC San component could potentially be structured as a service agreement, which would be less complex than a Joint Powers Authority and may provide greater cost stability.
- **Recycled Water Impacts.** The Baseline receives the highest score because it preserves existing recycled water production at CTP. Alternatives 2 and 3 receive moderate scores because both could maintain or support regional recycled water production but would require expansion of treatment facilities and modifications or additions to the existing conveyance systems. Alternative 1 receives the lowest score because diversion to OC San would reduce local recycled water availability without providing a direct replacement supply.

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4.2 Potential Scoring Optimizations

The following optimizations are noted but not captured in the scoring:

- **Ocean Outfall Rehabilitation.** All scenarios rely on continued use of either the Aliso Creek Ocean Outfall (Baseline, Alternative 1, and Alternative 3), San Juan Creek Ocean Outfall (Alternative 2), or OC San Outfall (Alternative 1), which are aging infrastructure and will likely require rehabilitation or replacement within the planning horizon. These future capital costs are not included and could materially increase all scenarios.
- **CTP Future O&M**. O&M costs included in the cost analysis for the CTP reflect oversized operations and future capital improvements may result in a more efficient facility. Future O&M costs may improve as a result of "right sizing" the CTP, which is not captured in the cost analysis and could materially reduce total O&M costs for the Baseline scenario.
- **CTP Future Capital**. Capital costs included in the cost analysis for the CTP include an assumed $100M 20-year CIP for existing liquid treatment facilities, with capital costs associated with the live-stream MBR facility considered an additional cost on top of the 20-year CIP for the high-cost scenario. Completion of the CTP Master Plan could optimize capital costs and materially reduce total capital required for future CIPs.
- **Capacity Buy-In / System Access Fees.** The cost to access capacity at OC San, RTP, or JBL will depend on negotiated agreements and could vary widely based on methodology (e.g., replacement value, incremental cost). Additionally, the capacity cost may include share costs associated with significant treatment plant upgrades planned or underway, such as planned polishing unit processes for salinity management at the RTP. This represents one of the largest uncertainties in the analysis and could significantly shift the relative cost of alternatives.
- **Use of Existing Infrastructure Corridors.** Opportunities may exist to reduce costs by leveraging existing infrastructure, such as the original Coast Supply Pipeline alignment for Alternative 1 or existing overflow pipelines and easements for Alternative 3. These opportunities were not fully evaluated but could meaningfully reduce conveyance costs and permit complexity.
- **ROW and Construction Constraints (Pacific Coast Highway/Coastal Zone).** New conveyance infrastructure, particularly along Pacific Coast Highway or in coastal areas, may require additional easements, traffic control, and trenchless construction methods. These constraints introduce significant cost and schedule risk that may not be fully captured in planning-level estimates.
- **Schedule Adjustments.** The schedules presented for construction of conceptual infrastructure improvements for each alternative are noted by stakeholders as optimistic and may be subject to later construction start dates and finish dates. This would increase the undiscounted total cost of the alternatives due to inflationary cost escalation.
- **Pipeline Alignments**. Pipeline alignments provided for alternatives are high-level and based on the best available information at the time of the study. Further assessment of pipeline alignments may identify corridors that need to be rerouted. For example, it is likely that the force main for Lift Station No. 2 in Alternative 2 would need to be realigned within PCH due to SCWD's need for direct access to the tunnel. Revisions to pipeline alignments were not evaluated but could meaningfully impact near-term capital costs.

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- **Additional Alternatives and Configurations.** Variations of the evaluated baseline and alternatives may exist that could materially change cost and operational outcomes. For example, under a modified version of Alternative 1, SCWD flows could remain at CTP and recycled water production could continue to meet SCWD recycled water needs. These hybrid configurations were not evaluated but could offer a more balanced solution.
- **Benefit of CTP Conversion / Repurposing.** The potential repurposing of the CTP site is not captured in the scoring but may represent a meaningful benefit depending on community priorities. Opportunities such as conversion to open space, coastal access, or other community-serving uses could provide qualitative value, particularly for the CLB, and may influence decision-making beyond purely financial considerations.

The potential impact of each potential scoring optimization is not consistent across alternatives. **Table 4-2** provides an estimate of the potential impact for each alternative.

Table 4-2: Potential Scoring Optimization Impacts on Alternatives

Consideration	Baseline	Alt 1 – OC San and RTP	Alt 2 – JBL	Alt 3 – RTP
Ocean Outfall Rehabilitation	▲	▲	▲	▲
CTP Long-Term O&M	▼	-	-	-
CTP Future Capital	▼	-	-	-
Capacity Buy-In / Access Fees	–	▲/▼	▲/▼	▲/▼
Use of Existing Infrastructure Corridors	–	▼	–	▼
ROW / Coastal Construction Constraints	–	▲	▲	▲
Schedule Adjustments	-	▲	▲	▲
Pipeline Alignments	-	–	▲	–
Additional Alternative Configurations	-	▼	▼	▼
CTP Conversion / Community Benefit	–	▼	▼	▼

Legend:
▲ = Potential Increase in Cost / Risk
▼ = Potential Cost Reduction / Opportunity
– = No Material Impact / Not Applicable

4.3 Next Steps/Recommendations

As stated in Section 1.2, the analysis presented in this report is intended to inform future decision-making and potential follow-up studies. Based on the findings of this report, the following actions are recommended:

1. **Eliminate Alternative 2 from further consideration.** This option presents potential fatal flaws related to use of the tunnel, and has the highest capital and overall lifecycle cost.
2. **Complete the CTP Master Plan.** Updating the Master Plan will allow baseline costs to be more accurately defined and will assist in identifying critical projects that should still be included for the "reduced expenditure" existing CIP scenario in the event the CTP is abandoned. Include any outfall rehabilitation costs and make determination regarding future Live Stream or other Aliso Creek-related modifications (i.e., pipe relocations, additional creek treatment, etc.).
3. **Conduct additional refinement.** Using the considerations identified in Section 4.2, perform further evaluation of Alternative 1 and/or Alternative 3.

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4. **Update the economic model and scoring.** Following completion of the CTP Master Plan and additional alternative refinement, update the economic model and scoring.

Following completion of the evaluation updates, the SOCWA Board of Directors can review the results and provide direction. Should Alternative 1 or Alternative 3 be selected for additional consideration, the next general steps would consist of the following:

- **Confirm Receiving Agency Capacity and Partnership Framework.** Initial coordination with OC San and/or MNWD will be required to confirm available capacity (including peak wet weather flow), identify any required system improvements, and establish a shared understanding of potential participation. This step represents a critical path item, as feasibility is dependent on receiving agency acceptance.
- **Interagency Agreements and Governance Structure.** Implementation will require development of formal agreements between participating agencies. Initial agreements would establish program delivery structure, cost-sharing approaches, roles and responsibilities, and key milestones for defining transition conditions and long-term operational terms.
- **Program Development.** A transition of this scale will require coordination across multiple agencies, facilities, and infrastructure systems. Following establishment of governance and interagency coordination, a comprehensive program can be developed to guide implementation. Preliminary program elements would include:
    - **Advancing Conceptual Design (Basis of Design).** Refine key infrastructure components, including pipeline alignments, LS sizing, hydraulic capacity, and constructability constraints.
    - **Refinement of Capital Buy-In and Cost Assumptions.** Coordinate with partner agencies to better define treatment capacity costs, conveyance improvements, and long-term obligations, which represent primary cost drivers in the analysis.
    - **Environmental Review and Permitting Strategy.** Define the CEQA approach and permitting pathway, including key considerations related to coastal development, biological resources, and construction impacts.
    - **Funding and Financial Strategy.** Develop an approach for funding near-term capital improvements, including evaluation of financing mechanisms, phasing, and potential external funding opportunities.

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Appendix A

Financial Detail

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SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
BASELINE - FINANCIAL EVALUATION

Baseline Costs (High-End)

Fiscal Year	WW Flow (MGD)	RW Produced (MGD)	SOCWA Coastal Treatment Plant – Capital Cost – Live Stream (MBR)	Capital Cost – Liquids	Capital Cost – Solids (To MNWD)	Capital Cost – Total	O&M Cost – Live Stream (MBR)	O&M Cost – Liquids	O&M Cost – Solids (To MNWD)	O&M Cost – Total	Overall Cost Summary – Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Agency Cost Summary – Total Capital Cost – CLB	Total Capital Cost – EBSD	Total Capital Cost – SCWD	Total O&M Cost – CLB	Total O&M Cost – EBSD	Total O&M Cost – SCWD
2026/27	2.68	1.07	$ 50,000,000	$ 4,113,000	$ 582,000	$ 4,695,000	$ 528,000	$ 2,842,000	$ 1,468,000	$ 4,310,000	$ 4,695,000	$ 4,310,000	$ 9,005,000	$ 9,005,000	$ 3,118,321	$ 87,593	$ 1,489,086	$ 2,862,612	$ 80,410	$ 1,366,978
2027/28	[illegible]	[illegible]	$ 51,750,000	$ 6,488,000	$ 795,000	$ 7,283,000	$ 441,000	$ 2,941,000	$ 1,519,000	$ 4,460,000	$ 7,283,000	$ 4,460,000	$ 11,743,000	$ 20,748,000	$ 4,837,216	$ 135,877	$ 2,309,907	$ 2,962,239	$ 83,209	$ 1,414,552
2028/29	[illegible]	[illegible]	$ 53,561,000	$ 4,467,000	$ 52,000	$ 4,519,000	$ 457,000	$ 3,044,000	$ 1,572,000	$ 4,616,000	$ 4,519,000	$ 4,616,000	$ 9,135,000	$ 29,883,000	$ 3,001,425	$ 84,310	$ 1,433,265	$ 3,065,851	$ 86,119	$ 1,464,030
2029/30	[illegible]	[illegible]	$ 55,436,000	$ 10,708,000	$ 52,000	$ 10,760,000	$ 473,000	$ 3,151,000	$ 1,627,000	$ 4,778,000	$ 10,760,000	$ 4,778,000	$ 15,538,000	$ 45,421,000	$ 7,146,567	$ 200,746	$ 3,412,687	$ 3,173,448	$ 89,142	$ 1,515,410
2030/31	[illegible]	[illegible]	$ 57,376,000	$ 4,816,000	$ 52,000	$ 4,868,000	$ 489,000	$ 3,261,000	$ 1,684,000	$ 4,945,000	$ 4,868,000	$ 4,945,000	$ 9,813,000	$ 55,234,000	$ 3,233,224	$ 90,821	$ 1,543,955	$ 3,284,366	$ 92,257	$ 1,568,377
2031/32	[illegible]	[illegible]	$ 29,692,000	$ 7,282,000	$ 52,000	$ 37,026,000	$ 506,000	$ 3,375,000	$ 1,743,000	$ 5,118,000	$ 37,026,000	$ 5,118,000	$ 42,144,000	$ 97,378,000	$ 24,591,896	$ 690,784	$ 11,743,321	$ 3,399,269	$ 95,485	$ 1,623,246
2032/33	[illegible]	[illegible]	$ 30,731,000	$ 3,618,000	$ 52,000	$ 34,401,000	$ 524,000	$ 3,493,000	$ 1,804,000	$ 5,297,000	$ 34,401,000	$ 5,297,000	$ 39,698,000	$ 137,076,000	$ 22,848,425	$ 641,810	$ 10,910,765	$ 3,518,157	$ 98,825	$ 1,680,019
2033/34	[illegible]	[illegible]	$ 604,000	$ 2,331,000	$ 52,000	$ 2,987,000	$ 542,000	$ 3,615,000	$ 1,867,000	$ 6,024,000	$ 2,987,000	$ 6,024,000	$ 9,011,000	$ 146,087,000	$ 1,983,903	$ 55,728	$ 947,369	$ 4,001,015	$ 112,388	$ 1,910,597
2034/35	2.68	1.07	$ 625,000	$ 4,091,000	$ 2,408,000	$ 7,124,000	[illegible]	[illegible]	$ 1,932,000	$ 6,235,000	$ 7,124,000	$ 6,235,000	$ 13,359,000	$ 159,446,000	$ 4,731,612	$ 132,910	$ 2,259,478	$ 4,141,157	$ 116,325	$ 1,977,519
2035/36	[illegible]	[illegible]	[illegible]	$ 740,000	$ 3,646,000	$ 5,033,000	[illegible]	[illegible]	$ 2,000,000	$ 6,454,000	$ 5,033,000	$ 6,454,000	$ 11,487,000	$ 170,933,000	$ 3,342,813	$ 93,899	$ 1,596,287	$ 4,286,612	$ 120,410	$ 2,046,978
2036/37	[illegible]	[illegible]	[illegible]	$ 4,397,000	$ 232,290	$ 5,299,290	[illegible]	[illegible]	$ 2,070,000	$ 6,680,000	$ 5,299,290	$ 6,680,000	$ 11,979,290	$ 182,912,290	$ 3,519,678	$ 98,867	$ 1,680,745	$ 4,436,716	$ 124,627	$ 2,118,657
2037/38	[illegible]	[illegible]	[illegible]	$ 4,551,000	$ 240,000	$ 5,484,000	[illegible]	[illegible]	$ 2,142,000	$ 6,913,000	$ 5,484,000	$ 6,913,000	$ 12,397,000	$ 195,309,290	$ 3,642,358	$ 102,313	$ 1,739,328	$ 4,591,470	$ 128,974	$ 2,192,556
2038/39	[illegible]	[illegible]	[illegible]	$ 4,710,000	$ 248,000	$ 5,675,000	[illegible]	[illegible]	$ 2,217,000	$ 7,155,000	$ 5,675,000	$ 7,155,000	$ 12,830,000	$ 208,139,290	$ 3,769,216	$ 105,877	$ 1,799,907	$ 4,752,201	$ 133,489	$ 2,269,310
2039/40	[illegible]	[illegible]	[illegible]	$ 4,875,000	[illegible]	$ 5,874,000	[illegible]	[illegible]	$ 2,295,000	$ 7,406,000	$ 5,874,000	$ 7,406,000	$ 13,280,000	$ 221,419,290	$ 3,901,388	$ 109,590	$ 1,863,022	$ 4,918,910	$ 138,172	$ 2,348,918
2040/41	2.68	1.07	[illegible]	$ 5,046,000	[illegible]	$ 6,080,000	$ 690,000	$ 4,600,000	$ 2,375,000	$ 7,665,000	$ 6,080,000	$ 7,665,000	$ 13,745,000	$ 235,164,290	$ 4,038,209	$ 113,433	$ 1,928,358	$ 5,090,933	$ 143,004	$ 2,431,063
2041/42	2.68	1.07	$ 795,000	$ 5,223,000	[illegible]	$ 6,293,000	$ 714,000	$ 4,761,000	$ 2,458,000	$ 7,933,000	$ 6,293,000	$ 7,933,000	$ 14,226,000	$ 249,390,290	$ 4,179,679	$ 117,407	$ 1,995,914	$ 5,268,933	$ 148,004	$ 2,516,063
2042/43	2.68	[illegible]	[illegible]	$ 5,406,000	[illegible]	$ 6,514,000	$ 739,000	$ 4,928,000	$ 2,544,000	$ 8,211,000	$ 6,514,000	$ 8,211,000	$ 14,725,000	$ 264,115,290	$ 4,326,463	$ 121,530	$ 2,066,007	$ 5,453,575	$ 153,190	$ 2,604,235
2043/44	2.68	[illegible]	[illegible]	$ 5,595,000	[illegible]	$ 6,742,000	$ 765,000	$ 5,100,000	$ 2,633,000	$ 8,498,000	$ 6,742,000	$ 8,498,000	$ 15,240,000	$ 279,355,290	$ 4,477,896	$ 125,784	$ 2,138,321	$ 5,644,194	$ 158,545	$ 2,695,261
2044/45	2.68	[illegible]	[illegible]	$ 5,791,000	$ 305,000	$ 6,978,000	$ 792,000	$ 5,279,000	$ 2,725,000	$ 8,796,000	$ 6,978,000	$ 8,796,000	$ 15,774,000	$ 295,129,290	$ 4,634,642	$ 130,187	$ 2,213,172	$ 5,842,119	$ 164,104	$ 2,789,776
2045/46	2.68	[illegible]	[illegible]	$ 5,752,000	$ 316,000	$ 6,981,000	$ 820,000	$ 5,464,000	$ 2,820,000	$ 9,104,000	$ 6,981,000	$ 9,104,000	$ 16,085,000	$ 311,214,290	$ 4,636,634	$ 130,243	$ 2,214,123	$ 6,046,687	$ 169,851	$ 2,887,463
2046/47	2.68	1.07	$ 945,000	$ 3,000,000	$ 327,000	$ 4,272,000	$ 848,000	$ 5,655,000	$ 2,919,000	$ 9,422,000	$ 4,272,000	$ 9,422,000	$ 13,694,000	$ 324,908,290	$ 2,837,373	$ 79,701	$ 1,354,925	$ 6,257,896	$ 175,784	$ 2,988,321
2047/48	2.68	1.07	$ 978,000	$ 3,105,000	$ 338,000	$ 4,421,000	$ 878,000	$ 5,853,000	$ 3,021,000	$ 9,752,000	$ 4,421,000	$ 9,752,000	$ 14,173,000	$ 339,081,290	$ 2,936,336	$ 82,481	$ 1,402,183	$ 6,477,075	$ 181,940	$ 3,092,985
2048/49	2.68	1.07	$ 1,012,000	[illegible]	$ 350,000	$ 4,576,000	$ 909,000	$ 6,058,000	$ 3,127,000	$ 10,094,000	$ 4,576,000	$ 10,094,000	$ 14,670,000	$ 353,751,290	$ 3,039,284	$ 85,373	$ 1,451,343	$ 6,704,224	$ 188,321	$ 3,201,455
2049/50	2.68	1.07	$ 1,047,000	[illegible]	$ 362,000	$ 4,735,000	$ 941,000	$ 6,270,000	$ 3,236,000	$ 10,447,000	$ 4,735,000	$ 10,447,000	$ 15,182,000	$ 368,933,290	$ 3,144,888	$ 88,340	$ 1,501,772	$ 6,938,679	$ 194,907	$ 3,313,414
2050/51	2.68	1.07	$ 1,084,000	[illegible]	$ 375,000	$ 4,901,000	$ 973,000	$ 6,489,000	$ 3,349,000	$ 10,811,000	$ 4,901,000	$ 10,811,000	$ 15,712,000	$ 384,645,290	$ 3,255,142	$ 91,437	$ 1,554,422	$ 7,180,440	$ 201,698	$ 3,428,862
2051/52	2.68	1.07	$ 1,122,000	[illegible]	$ 388,000	$ 5,072,000	$ 1,007,000	$ 6,716,000	$ 3,466,000	$ 11,189,000	$ 5,072,000	$ 11,189,000	$ 16,261,000	$ 400,906,290	$ 3,368,716	$ 94,627	$ 1,608,657	$ 7,431,500	$ 208,750	$ 3,548,750
2052/53	2.68	1.07	$ 1,161,000	[illegible]	$ 402,000	$ 5,250,000	$ 1,043,000	$ 6,951,000	$ 3,587,000	$ 11,581,000	$ 5,250,000	$ 11,581,000	$ 16,831,000	$ 417,737,290	$ 3,486,940	$ 97,948	$ 1,665,112	$ 7,691,858	$ 216,063	$ 3,673,078
2053/54	2.68	1.07	$ 1,202,000	[illegible]	$ 416,000	$ 5,434,000	$ 1,079,000	$ 7,194,000	$ 3,713,000	$ 11,986,000	$ 5,434,000	$ 11,986,000	$ 17,420,000	$ 435,157,290	$ 3,609,149	$ 101,381	$ 1,723,470	$ 7,960,851	$ 223,619	$ 3,801,530
2054/55	2.68	1.07	$ 1,244,000	$ 3,950,000	$ 431,000	$ 5,625,000	$ 1,117,000	$ 7,446,000	$ 3,843,000	$ 12,406,000	$ 5,625,000	$ 12,406,000	$ 18,031,000	$ 453,188,290	$ 3,736,007	$ 104,944	$ 1,784,049	$ 8,239,806	$ 231,455	$ 3,934,739
2055/56	2.68	1.07	$ 1,288,000	$ 4,088,000	$ 446,000	$ 5,822,000	$ 1,156,000	$ 7,707,000	$ 3,978,000	$ 12,841,000	$ 5,822,000	$ 12,841,000	$ 18,663,000	$ 471,851,290	$ 3,866,851	$ 108,619	$ 1,846,530	$ 8,528,724	$ 239,571	$ 4,072,705
2056/57	2.68	1.07	$ 1,333,000	$ 4,231,000	$ 462,000	$ 6,026,000	$ 1,197,000	$ 7,977,000	$ 4,117,000	$ 13,291,000	$ 6,026,000	$ 13,291,000	$ 19,317,000	$ 491,168,290	$ 4,002,343	$ 112,425	$ 1,911,231	$ 8,827,604	$ 247,966	$ 4,215,429
2057/58	2.68	1.07	$ 1,380,000	$ 4,379,000	$ 478,000	$ 6,237,000	$ 1,238,000	$ 8,256,000	$ 4,261,000	$ 13,755,000	$ 6,237,000	$ 13,755,000	$ 19,992,000	$ 511,160,290	$ 4,142,485	$ 116,362	$ 1,978,153	$ 9,135,784	$ 256,623	$ 4,362,593
2058/59	2.68	1.07	$ 1,428,000	$ 4,532,000	$ 495,000	$ 6,455,000	$ 1,282,000	$ 8,545,000	$ 4,410,000	$ 14,237,000	$ 6,455,000	$ 14,237,000	$ 20,692,000	$ 531,852,290	$ 4,287,276	$ 120,429	$ 2,047,295	$ 9,455,918	$ 265,616	$ 4,515,466
2059/60	2.68	1.07	$ 1,478,000	$ 4,691,000	$ 512,000	$ 6,681,000	$ 1,327,000	$ 8,844,000	$ 4,564,000	$ 14,735,000	$ 6,681,000	$ 14,735,000	$ 21,416,000	$ 553,268,290	$ 4,437,381	$ 124,646	$ 2,118,974	$ 9,786,679	$ 274,907	$ 4,673,414
2060/61	2.68	1.07	$ 1,530,000	$ 4,855,000	$ 530,000	$ 6,915,000	$ 1,373,000	$ 9,154,000	$ 4,724,000	$ 15,251,000	$ 6,915,000	$ 15,251,000	$ 22,166,000	$ 575,434,290	$ 4,592,799	$ 129,011	$ 2,193,190	$ 10,129,396	$ 284,534	$ 4,837,071
2061/62	2.68	1.07	$ 1,584,000	$ 5,025,000	$ 549,000	$ 7,158,000	$ 1,421,000	$ 9,474,000	$ 4,889,000	$ 15,784,000	$ 7,158,000	$ 15,784,000	$ 22,942,000	$ 598,376,290	$ 4,754,194	$ 133,545	$ 2,270,261	$ 10,483,403	$ 294,478	$ 5,006,119
2062/63	2.68	1.07	$ 1,639,000	$ 5,201,000	$ 568,000	$ 7,408,000	$ 1,471,000	$ 9,806,000	$ 5,060,000	$ 16,337,000	$ 7,408,000	$ 16,337,000	$ 23,745,000	$ 622,121,290	$ 4,920,239	$ 138,209	$ 2,349,552	$ 10,850,694	$ 304,795	$ 5,181,511
2063/64	2.68	1.07	$ 1,696,000	$ 5,383,000	$ 588,000	$ 7,667,000	$ 1,522,000	$10,149,000	$ 5,237,000	$ 16,908,000	$ 7,667,000	$ 16,908,000	$ 24,575,000	$ 646,696,290	$ 5,092,261	$ 143,041	$ 2,431,698	$ 11,229,940	$ 315,448	$ 5,362,612
2064/65	2.68	1.07	$ 1,755,000	$ 5,571,000	$ 609,000	$ 7,935,000	$ 1,576,000	$10,504,000	$ 5,420,000	$ 17,500,000	$ 7,935,000	$ 17,500,000	$ 25,435,000	$ 672,131,290	$ 5,270,261	$ 148,041	$ 2,516,698	$ 11,623,134	$ 326,493	$ 5,550,373
2065/66	2.68	1.07	$ 1,816,000	$ 5,766,000	$ 630,000	$ 8,212,000	$ 1,631,000	$10,872,000	$ 5,610,000	$ 18,113,000	$ 8,212,000	$ 18,113,000	$ 26,325,000	$ 698,456,290	$ 5,454,239	$ 153,209	$ 2,604,552	$ 12,030,276	$ 337,929	$ 5,744,795

Costs for FY 2026/27 to 2030/31 shown in grey to track inflation. Cost not included in total until start of construction in FY 2031/32

Total construction cost split over FY 2031/32 and FY 2032/33

Live stream CIP allowance of 1% for total construction escalated for inflation begins

Solids CIP allowance of 3% existing 10-year CIP escalated for inflation begins

Years 10 - 20 of the existing CIP assumed to total to $100M when combined with the total cost of years 1 - 10 of the existing CIP

Liquids CIP allowance of 3% existing 20-year CIP escalated for inflation begins

Costs for FY 2026/27 to 2030/31 shown in grey to track inflation. Cost not included in total until completion of construction in FY 2033/34.

Baseline Costs (Low-End)

Fiscal Year	WW Flow (MGD)	RW Produced (MGD)	SOCWA Coastal Treatment Plant – Capital Cost – Live Stream (MBR)	Capital Cost – Liquids	Capital Cost – Solids (To MNWD)	Capital Cost – Total	O&M Cost – Live Stream (MBR)	O&M Cost – Liquids	O&M Cost – Solids (To MNWD)	O&M Cost – Total	Overall Cost Summary – Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Agency Cost Summary – Total Capital Cost – CLB	Total Capital Cost – EBSD	Total Capital Cost – SCWD	Total O&M Cost – CLB	Total O&M Cost – EBSD	Total O&M Cost – SCWD
2026/27	2.68	1.07	$ -	$ 4,113,000	$ 582,000	$ 4,695,000	$ -	$ 2,842,000	$ 1,468,000	$ 4,310,000	$ 4,695,000	$ 4,310,000	$ 9,005,000	$ 9,005,000	$ 3,118,321	$ 87,593	$ 1,489,086	$ 2,862,612	$ 80,410	$ 1,366,978
2027/28	[illegible]	[illegible]	$ -	$ 6,488,000	$ 795,000	$ 7,283,000	$ -	$ 2,941,000	$ 1,519,000	$ 4,460,000	$ 7,283,000	$ 4,460,000	$ 11,743,000	$ 20,748,000	$ 4,837,216	$ 135,877	$ 2,309,907	$ 2,962,239	$ 83,209	$ 1,414,552
2028/29	[illegible]	[illegible]	$ -	$ 4,467,000	$ 52,000	$ 4,519,000	$ -	$ 3,044,000	$ 1,572,000	$ 4,616,000	$ 4,519,000	$ 4,616,000	$ 9,135,000	$ 29,883,000	$ 3,001,425	$ 84,310	$ 1,433,265	$ 3,065,851	$ 86,119	$ 1,464,030
2029/30	[illegible]	[illegible]	$ -	$ 10,708,000	$ 52,000	$ 10,760,000	$ -	$ 3,151,000	$ 1,627,000	$ 4,778,000	$ 10,760,000	$ 4,778,000	$ 15,538,000	$ 45,421,000	$ 7,146,567	$ 200,746	$ 3,412,687	$ 3,173,448	$ 89,142	$ 1,515,410
2030/31	2.68	1.07	$ -	$ 4,816,000	$ 52,000	$ 4,868,000	$ -	$ 3,261,000	$ 1,684,000	$ 4,945,000	$ 4,868,000	$ 4,945,000	$ 9,813,000	$ 55,234,000	$ 3,233,224	$ 90,821	$ 1,543,955	$ 3,284,366	$ 92,257	$ 1,568,377
2031/32	2.68	1.07	$ -	$ 7,282,000	$ 52,000	$ 7,334,000	$ -	$ 3,375,000	$ 1,743,000	$ 5,118,000	$ 7,334,000	$ 5,118,000	$ 12,452,000	$ 67,686,000	$ 4,871,090	$ 136,828	$ 2,326,082	$ 3,399,269	$ 95,485	$ 1,623,246
2032/33	2.68	1.07	$ -	$ 3,618,000	$ 52,000	$ 3,670,000	$ -	$ 3,493,000	$ 1,804,000	$ 5,297,000	$ 3,670,000	$ 5,297,000	$ 8,967,000	$ 76,653,000	$ 2,437,537	$ 68,470	$ 1,163,993	$ 3,518,157	$ 98,825	$ 1,680,019
2033/34	2.68	1.07	$ -	$ 2,331,000	$ 52,000	$ 2,383,000	$ -	$ 3,615,000	$ 1,867,000	$ 5,482,000	$ 2,383,000	$ 5,482,000	$ 7,865,000	$ 84,518,000	$ 1,582,739	$ 44,459	$ 755,802	$ 3,641,030	$ 102,276	$ 1,738,694
2034/35	2.68	1.07	$ -	$ 4,091,000	$ 2,408,000	$ 6,499,000	$ -	$ 3,742,000	$ 1,932,000	$ 5,674,000	$ 6,499,000	$ 5,674,000	$ 12,173,000	$ 96,691,000	$ 4,316,500	$ 121,250	$ 2,061,250	$ 3,768,552	$ 105,858	$ 1,799,590
2035/36	2.68	1.07	$ -	$ 740,000	$ 3,646,000	$ 4,386,000	$ -	$ 3,873,000	$ 2,000,000	$ 5,873,000	$ 4,386,000	$ 5,873,000	$ 10,259,000	$ 106,950,000	$ 2,913,090	$ 81,828	$ 1,391,082	$ 3,900,724	$ 109,571	$ 1,862,705
2036/37	[illegible]	[illegible]	-	$ 4,397,000	$ 232,000	$ 4,629,000	$ -	$ 4,009,000	$ 2,070,000	$ 6,079,000	$ 4,629,000	$ 6,079,000	$ 10,708,000	$ 117,658,000	$ 3,074,485	$ 86,362	$ 1,468,153	$ 4,037,545	$ 113,414	$ 1,928,041
2037/38	[illegible]	[illegible]	-	$ 4,551,000	$ 240,000	$ 4,791,000	$ -	$ 4,149,000	$ 2,142,000	$ 6,291,000	$ 4,791,000	$ 6,291,000	$ 11,082,000	$ 128,740,000	$ 3,182,082	$ 89,384	$ 1,519,534	$ 4,178,351	$ 117,369	$ 1,995,280
2038/39	[illegible]	[illegible]	-	$ 4,710,000	[illegible]	$ 4,958,000	$ -	$ 4,294,000	$ 2,217,000	$ 6,511,000	$ 4,958,000	$ 6,511,000	$ 11,469,000	$ 140,209,000	$ 3,293,000	$ 92,500	$ 1,572,500	$ 4,324,470	$ 121,474	$ 2,065,056
2039/40	[illegible]	[illegible]	-	$ 4,875,000	[illegible]	$ 5,132,000	$ -	$ 4,444,000	$ 2,295,000	$ 6,739,000	$ 5,132,000	$ 6,739,000	$ 11,871,000	$ 152,080,000	$ 3,408,567	$ 95,746	$ 1,627,687	$ 4,475,903	$ 125,728	$ 2,137,369
2040/41	2.68	1.07	$ -	$ 5,046,000	[illegible]	$ 5,312,000	$ -	$ 4,600,000	$ 2,375,000	$ 6,975,000	$ 5,312,000	$ 6,975,000	$ 12,287,000	$ 164,367,000	$ 3,528,119	$ 99,104	$ 1,684,776	$ 4,632,649	$ 130,131	$ 2,212,220
2041/42	2.68	1.07	$ -	$ 5,223,000	[illegible]	$ 5,498,000	$ -	$ 4,761,000	$ 2,458,000	$ 7,219,000	$ 5,498,000	$ 7,219,000	$ 12,717,000	$ 177,084,000	$ 3,651,657	$ 102,575	$ 1,743,769	$ 4,794,709	$ 134,683	$ 2,289,608
2042/43	2.68	1.07	$ -	$ 5,406,000	[illegible]	$ 5,691,000	$ -	$ 4,928,000	$ 2,544,000	$ 7,472,000	$ 5,691,000	$ 7,472,000	$ 13,163,000	$ 190,247,000	$ 3,779,843	$ 106,175	$ 1,804,981	$ 4,962,746	$ 139,403	$ 2,369,851
2043/44	2.68	1.07	$ -	$ 5,595,000	[illegible]	$ 5,890,000	$ -	$ 5,100,000	$ 2,633,000	$ 7,733,000	$ 5,890,000	$ 7,733,000	$ 13,623,000	$ 203,870,000	$ 3,912,015	$ 109,888	$ 1,868,097	$ 5,136,097	$ 144,272	$ 2,452,631
2044/45	2.68	1.07	$ -	$ 5,791,000	$ 305,000	$ 6,096,000	$ -	$ 5,279,000	$ 2,725,000	$ 8,004,000	$ 6,096,000	$ 8,004,000	$ 14,100,000	$ 217,970,000	$ 4,048,836	$ 113,731	$ 1,933,433	$ 5,316,090	$ 149,328	$ 2,538,582
2045/46	2.68	1.07	$ -	$ 5,752,000	$ 316,000	$ 6,068,000	$ -	$ 5,464,000	$ 2,820,000	$ 8,284,000	$ 6,068,000	$ 8,284,000	$ 14,352,000	$ 232,322,000	$ 4,030,239	$ 113,209	$ 1,924,552	$ 5,502,060	$ 154,552	$ 2,627,388
2046/47	2.68	1.07	$ -	$ 3,000,000	$ 327,000	$ 3,327,000	$ -	$ 5,655,000	$ 2,919,000	$ 8,574,000	$ 3,327,000	$ 8,574,000	$ 11,901,000	$ 244,223,000	$ 2,209,724	$ 62,071	$ 1,055,205	$ 5,694,672	$ 159,963	$ 2,719,366
2047/48	2.68	1.07	$ -	$ 3,105,000	$ 338,000	$ 3,443,000	$ -	$ 5,853,000	$ 3,021,000	$ 8,874,000	$ 3,443,000	$ 8,874,000	$ 12,317,000	$ 256,540,000	$ 2,286,769	$ 64,235	$ 1,091,996	$ 5,893,925	$ 165,560	$ 2,814,515
2048/49	2.68	1.07	$ -	[illegible]	$ 350,000	$ 3,564,000	$ -	$ 6,058,000	$ 3,127,000	$ 9,185,000	$ 3,564,000	$ 9,185,000	$ 12,749,000	$ 269,289,000	$ 2,367,134	$ 66,493	$ 1,130,373	$ 6,100,485	$ 171,362	$ 2,913,153
2049/50	2.68	1.07	$ -	[illegible]	$ 362,000	$ 3,688,000	$ -	$ 6,270,000	$ 3,236,000	$ 9,506,000	$ 3,688,000	$ 9,506,000	$ 13,194,000	$ 282,483,000	$ 2,449,493	$ 68,806	$ 1,169,701	$ 6,313,687	$ 177,351	$ 3,014,963
2050/51	2.68	1.07	$ -	[illegible]	$ 375,000	$ 3,817,000	$ -	$ 6,489,000	$ 3,349,000	$ 9,838,000	$ 3,817,000	$ 9,838,000	$ 13,655,000	$ 296,138,000	$ 2,535,172	$ 71,213	$ 1,210,616	$ 6,534,194	$ 183,545	$ 3,120,261
2051/52	2.68	1.07	$ -	[illegible]	$ 388,000	$ 3,950,000	$ -	$ 6,716,000	$ 3,466,000	$ 10,182,000	$ 3,950,000	$ 10,182,000	$ 14,132,000	$ 310,270,000	$ 2,623,507	$ 73,694	$ 1,252,799	$ 6,762,672	$ 189,963	$ 3,229,366
2052/53	2.68	1.07	$ -	[illegible]	$ 402,000	$ 4,089,000	$ -	$ 6,951,000	$ 3,587,000	$ 10,538,000	$ 4,089,000	$ 10,538,000	$ 14,627,000	$ 324,897,000	$ 2,715,828	$ 76,287	$ 1,296,884	$ 6,999,119	$ 196,604	$ 3,342,276
2053/54	2.68	1.07	$ -	[illegible]	$ 416,000	$ 4,232,000	$ -	$ 7,194,000	$ 3,713,000	$ 10,907,000	$ 4,232,000	$ 10,907,000	$ 15,139,000	$ 340,036,000	$ 2,810,806	$ 78,955	$ 1,342,239	$ 7,244,201	$ 203,489	$ 3,459,310
2054/55	2.68	1.07	$ -	$ 3,950,000	$ 431,000	$ 4,381,000	$ -	$ 7,446,000	$ 3,843,000	$ 11,289,000	$ 4,381,000	$ 11,289,000	$ 15,670,000	$ 355,706,000	$ 2,909,769	$ 81,735	$ 1,389,496	$ 7,497,918	$ 210,616	$ 3,580,466
2055/56	2.68	1.07	$ -	$ 4,088,000	$ 446,000	$ 4,534,000	$ -	$ 7,707,000	$ 3,978,000	$ 11,685,000	$ 4,534,000	$ 11,685,000	$ 16,219,000	$ 371,925,000	$ 3,011,388	$ 84,590	$ 1,438,022	$ 7,760,933	$ 218,004	$ 3,706,063
2056/57	2.68	1.07	$ -	$ 4,231,000	$ 462,000	$ 4,693,000	$ -	$ 7,977,000	$ 4,117,000	$ 12,094,000	$ 4,693,000	$ 12,094,000	$ 16,787,000	$ 388,712,000	$ 3,116,993	$ 87,556	$ 1,488,451	$ 8,032,582	$ 225,634	$ 3,835,784
2057/58	2.68	1.07	$ -	$ 4,379,000	$ 478,000	$ 4,857,000	$ -	$ 8,256,000	$ 4,261,000	$ 12,517,000	$ 4,857,000	$ 12,517,000	$ 17,374,000	$ 406,086,000	$ 3,225,918	$ 90,616	$ 1,540,466	$ 8,313,530	$ 233,526	$ 3,969,944
2058/59	2.68	1.07	$ -	$ 4,532,000	$ 495,000	$ 5,027,000	$ -	$ 8,545,000	$ 4,410,000	$ 12,955,000	$ 5,027,000	$ 12,955,000	$ 17,982,000	$ 424,068,000	$ 3,338,828	$ 93,787	$ 1,594,384	$ 8,604,440	$ 241,698	$ 4,108,862
2059/60	2.68	1.07	$ -	$ 4,691,000	$ 512,000	$ 5,203,000	$ -	$ 8,844,000	$ 4,564,000	$ 13,408,000	$ 5,203,000	$ 13,408,000	$ 18,611,000	$ 442,679,000	$ 3,455,724	$ 97,071	$ 1,650,205	$ 8,905,313	$ 250,149	$ 4,252,537
2060/61	2.68	1.07	$ -	$ 4,855,000	$ 530,000	$ 5,385,000	$ -	$ 9,154,000	$ 4,724,000	$ 13,878,000	$ 5,385,000	$ 13,878,000	$ 19,263,000	$ 461,942,000	$ 3,576,604	$ 100,466	$ 1,707,929	$ 9,217,478	$ 258,918	$ 4,401,604
2061/62	2.68	1.07	$ -	$ 5,025,000	$ 549,000	$ 5,574,000	$ -	$ 9,474,000	$ 4,889,000	$ 14,363,000	$ 5,574,000	$ 14,363,000	$ 19,937,000	$ 481,879,000	$ 3,702,134	$ 103,993	$ 1,767,873	$ 9,539,604	$ 267,966	$ 4,555,429
2062/63	2.68	1.07	$ -	$ 5,201,000	$ 568,000	$ 5,769,000	$ -	$ 9,806,000	$ 5,060,000	$ 14,866,000	$ 5,769,000	$ 14,866,000	$ 20,635,000	$ 502,514,000	$ 3,831,649	$ 107,631	$ 1,829,720	$ 9,873,687	$ 277,351	$ 4,714,963
2063/64	2.68	1.07	$ -	$ 5,383,000	$ 588,000	$ 5,971,000	$ -	$10,149,000	$ 5,237,000	$ 15,386,000	$ 5,971,000	$ 15,386,000	$ 21,357,000	$ 523,871,000	$ 3,965,813	$ 111,399	$ 1,893,787	$ 10,219,060	$ 287,052	$ 4,879,888
2064/65	2.68	1.07	$ -	$ 5,571,000	$ 609,000	$ 6,180,000	$ -	$10,504,000	$ 5,420,000	$ 15,924,000	$ 6,180,000	$ 15,924,000	$ 22,104,000	$ 545,975,000	$ 4,104,627	$ 115,299	$ 1,960,075	$ 10,576,388	$ 297,090	$ 5,050,522
2065/66	2.68	1.07	$ -	$ 5,766,000	$ 630,000	$ 6,396,000	$ -	$10,872,000	$ 5,610,000	$ 16,482,000	$ 6,396,000	$ 16,482,000	$ 22,878,000	$ 568,853,000	$ 4,248,090	$ 119,328	$ 2,028,582	$ 10,947,000	$ 307,500	$ 5,227,500

No live stream construction under low-end

Years 10 - 20 of the existing CIP assumed to total to $100M when combined with the total cost of years 1 - 10 of the existing CIP

Solids CIP allowance of 3% existing 10-year CIP escalated for inflation begins

Liquids CIP allowance of 3% existing 20-year CIP escalated for inflation begins

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

ALTERNATIVE 1 - FINANCIAL EVALUATION

DRAFT

Alternative 1 Costs (High-End)

Fiscal Year	SOCWA Coastal Treatment Plant										MNWD Regional Treatment Plant				OCSAN Treatment Plant No. 2				City of Laguna Beach NCI Offset		Overall Cost Summary				Agency Cost Summary					
	Alternative Infrastructure Improvements		WW Flow (MGD)	RW Produced (MGD)	Capital Cost			O&M Cost			WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	Reach 5 Capital	Reach 1-4 Capital	Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Total Capital Cost			Total O&M Cost		
	Capital Cost	O&M Cost			Liquids	Solids (To MNWD)	Total	Liquids	Solids (To MNWD)	Total															CLB	EBSD	SCWD	CLB	EBSD	SCWD
2026/27	$ 9,018,000	$ 81,000	2.68	1.07	$ 3,085,000	$ 582,000	$ 3,667,000	$ 2,842,000	$ 1,468,000	$ 4,310,000	0.85	0.85	$ 30,175,000	$ 1,084,000	1.83	-	$ 36,600,000	$ 1,902,000	$ (5,000,000)	$ -	$ 7,685,000	$ 4,310,000	$ 11,995,000	$ 11,995,000	$ 3,711,326	$ 249,325	$ 3,724,350	$ 2,862,612	$ 80,410	$ 1,366,978
2027/28	$ 9,332,000	[illegible]	[illegible]	[illegible]	$ 4,866,000	$ 795,000	$ 5,661,000	$ 2,941,000	$ 1,519,000	$ 4,460,000	0.85	0.85	$ 31,231,000	$ 1,122,000	1.83	-	$ 37,881,000	$ 1,969,000	$ (4,000,000)	$ -	$ 10,993,000	$ 4,460,000	$ 15,453,000	$ 27,448,000	$ 6,254,217	$ 292,825	$ 4,445,958	$ 2,962,239	$ 83,209	$ 1,414,552
2028/29	$ 48,295,000	[illegible]	[illegible]	[illegible]	$ 3,350,000	$ 52,000	$ 3,402,000	$ 3,044,000	$ 1,572,000	$ 4,616,000	0.85	0.85	$ 32,324,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,038,000	$ -	$ -	$ 51,697,000	$ 4,616,000	$ 56,313,000	$ 83,761,000	$ 35,868,856	$ 1,032,318	$ 14,795,826	$ 3,065,851	$ 86,119	$ 1,464,030
2029/30	$ 49,984,000	[illegible]	[illegible]	[illegible]	$ 250,000	$ 52,000	$ 302,000	$ 3,151,000	$ 1,627,000	$ 4,778,000	0.85	0.85	$ 33,455,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,109,000	$ -	$ -	$ 50,286,000	$ 4,778,000	$ 55,064,000	$ 138,825,000	$ 34,985,305	$ 1,008,365	$ 14,292,330	$ 3,173,448	$ 89,142	$ 1,515,410
2030/31	$ 51,733,000	[illegible]	[illegible]	[illegible]	$ 259,000	$ 52,000	$ 311,000	$ 3,261,000	$ 1,684,000	$ 4,945,000	0.85	0.85	$ 34,626,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,183,000	$ -	$ (5,000,000)	$ 47,044,000	$ 4,945,000	$ 51,989,000	$ 190,814,000	$ 31,208,441	$ 1,043,620	$ 14,791,939	$ 3,284,366	$ 92,257	$ 1,568,377
2031/32	$ 21,417,000	[illegible]	2.68	1.07	$ 268,000	$ 52,000	$ 320,000	$ 3,375,000	$ 1,743,000	$ 5,118,000	0.85	0.85	$ 35,838,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,259,000	$ -	$ (5,000,000)	$ 16,737,000	$ 5,118,000	$ 21,855,000	$ 212,669,000	$ 10,116,995	$ 435,617	$ 6,184,388	$ 3,399,269	$ 95,485	$ 1,623,246
2032/33	$ 11,083,000	[illegible]	2.68	1.07	$ 277,000	$ 52,000	$ 329,000	$ 3,493,000	$ 1,804,000	$ 5,297,000	0.85	0.85	$ 37,092,000	$ 1,333,000	1.83	-	$ 44,990,000	$ 2,338,000	$ -	$ (7,000,000)	$ 4,412,000	$ 5,297,000	$ 9,709,000	$ 222,378,000	$ 931,365	$ 228,475	$ 3,252,161	$ 3,518,157	$ 98,825	$ 1,680,019
2033/34	$ 21,519,000	$ 102,000	2.68	1.07	$ 287,000	$ 52,000	$ 339,000	$ 3,615,000	$ 1,867,000	$ 5,482,000	0.85	0.85	$ 38,390,000	$ 1,380,000	1.83	-	$ 46,565,000	$ 2,420,000	$ -	$ (7,000,000)	$ 14,858,000	$ 5,482,000	$ 20,340,000	$ 242,718,000	$ 8,200,598	$ 438,018	$ 6,219,384	$ 3,641,030	$ 102,276	$ 1,738,694
2034/35	$ 2,224,000	$ 106,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 39,734,000	$ 1,428,000	1.83	-	$ 48,195,000	$ 2,505,000	$ -	$ (7,900,000)	$ 82,253,000	$ 4,039,000	$ 86,292,000	$ 329,010,000	$ 40,488,928	$ 1,398,408	$ 40,365,665	$ 2,508,404	$ 72,497	$ 1,458,099
2035/36	$ 2,302,000	$ 110,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,192,000	$ 1,478,000	1.83	-	$ 1,446,000	$ 2,593,000	$ -	$ -	$ 4,940,000	$ 4,181,000	$ 9,121,000	$ 338,131,000	$ 3,007,383	$ 86,798	$ 1,845,818	$ 2,596,716	$ 75,050	$ 1,509,235
2036/37	[illegible]	$ 114,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,234,000	$ 1,530,000	1.83	-	$ 1,497,000	$ 2,684,000	$ -	$ -	$ 5,114,000	$ 4,328,000	$ 9,442,000	$ 347,573,000	$ 3,113,320	$ 89,856	$ 1,910,824	$ 2,687,943	$ 77,686	$ 1,562,370
2037/38	[illegible]	$ 118,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,584,000	1.83	-	$ 1,549,000	$ 2,778,000	$ -	$ -	$ 5,292,000	$ 4,480,000	$ 9,772,000	$ 357,345,000	$ 3,221,620	$ 92,982	$ 1,977,398	$ 2,782,087	$ 80,407	$ 1,617,506
2038/39	[illegible]	$ 122,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,639,000	1.83	-	[illegible]	$ 2,875,000	$ -	$ -	$ 5,477,000	$ 4,636,000	$ 10,113,000	$ 367,458,000	$ 3,333,952	$ 96,224	$ 2,046,824	$ 2,879,146	$ 83,212	$ 1,673,642
2039/40	[illegible]	$ 126,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,696,000	1.83	-	[illegible]	$ 2,976,000	$ -	$ -	$ 5,668,000	$ 4,798,000	$ 10,466,000	$ 377,924,000	$ 3,450,316	$ 99,582	$ 2,118,102	$ 2,980,092	$ 86,130	$ 1,731,778
2040/41	[illegible]	$ 130,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,755,000	1.83	-	[illegible]	$ 3,080,000	$ -	$ -	$ 5,866,000	$ 4,965,000	$ 10,831,000	$ 388,755,000	$ 3,570,711	$ 103,057	$ 2,192,232	$ 3,083,955	$ 89,132	$ 1,791,914
2041/42	[illegible]	$ 135,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,816,000	1.83	-	[illegible]	$ 3,188,000	$ -	$ -	$ 6,072,000	$ 5,139,000	$ 11,211,000	$ 399,966,000	$ 3,695,834	$ 106,668	$ 2,269,498	$ 3,192,401	$ 92,266	$ 1,854,333
2042/43	[illegible]	$ 140,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,880,000	1.83	-	[illegible]	$ 3,300,000	$ -	$ -	$ 6,284,000	$ 5,320,000	$ 11,604,000	$ 411,570,000	$ 3,824,988	$ 110,396	$ 2,348,616	$ 3,304,734	$ 95,513	$ 1,919,753
2043/44	[illegible]	$ 145,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,946,000	1.83	-	[illegible]	$ 3,415,000	$ -	$ -	$ 6,503,000	$ 5,506,000	$ 12,009,000	$ 423,579,000	$ 3,958,174	$ 114,240	$ 2,430,586	$ 3,419,984	$ 98,843	$ 1,987,173
2044/45	$ 3,136,000	$ 150,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 2,014,000	1.83	-	[illegible]	$ 3,535,000	$ -	$ -	$ 6,731,000	$ 5,699,000	$ 12,430,000	$ 436,009,000	$ 4,097,059	$ 118,248	$ 2,515,692	$ 3,540,093	$ 102,315	$ 2,056,593
2045/46	$ 3,246,000	$ 155,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,682,000	$ 2,084,000	1.83	-	$ 2,039,000	$ 3,659,000	$ -	$ -	$ 6,967,000	$ 5,898,000	$ 12,865,000	$ 448,874,000	$ 4,240,672	$ 122,393	$ 2,603,935	$ 3,664,089	$ 105,899	$ 2,128,012
2046/47	$ 3,360,000	$ 160,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,741,000	$ 2,157,000	1.83	-	$ 2,110,000	$ 3,787,000	$ -	$ -	$ 7,211,000	$ 6,104,000	$ 13,315,000	$ 462,189,000	$ 4,389,012	$ 126,675	$ 2,695,313	$ 3,791,973	$ 109,595	$ 2,202,432
2047/48	$ 3,478,000	$ 166,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,802,000	$ 2,232,000	1.83	-	$ 2,184,000	$ 3,920,000	$ -	$ -	$ 7,464,000	$ 6,318,000	$ 13,782,000	$ 475,971,000	$ 4,543,052	$ 131,121	$ 2,789,828	$ 3,925,413	$ 113,451	$ 2,279,136
2048/49	$ 3,600,000	$ 172,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,865,000	$ 2,310,000	1.83	-	$ 2,260,000	$ 4,057,000	$ -	$ -	$ 7,725,000	$ 6,539,000	$ 14,264,000	$ 490,235,000	$ 4,701,819	$ 135,703	$ 2,887,479	$ 4,062,740	$ 117,420	$ 2,358,840
2049/50	$ 3,726,000	$ 178,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,930,000	$ 2,391,000	1.83	-	$ 2,339,000	$ 4,199,000	$ -	$ -	$ 7,995,000	$ 6,768,000	$ 14,763,000	$ 504,998,000	$ 4,866,285	$ 140,450	$ 2,988,265	$ 4,204,927	$ 121,530	$ 2,441,543
2050/51	$ 3,856,000	$ 184,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,998,000	$ 2,475,000	1.83	-	$ 2,421,000	$ 4,346,000	$ -	$ -	$ 8,275,000	$ 7,005,000	$ 15,280,000	$ 520,278,000	$ 5,036,451	$ 145,361	$ 3,093,188	$ 4,351,974	$ 125,780	$ 2,527,247
2051/52	$ 3,991,000	$ 190,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,068,000	$ 2,562,000	1.83	-	$ 2,506,000	$ 4,498,000	$ -	$ -	$ 8,565,000	$ 7,250,000	$ 15,815,000	$ 536,093,000	$ 5,213,012	$ 150,457	$ 3,201,531	$ 4,503,879	$ 130,170	$ 2,615,951
2052/53	$ 4,131,000	$ 197,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,140,000	$ 2,652,000	1.83	-	$ 2,594,000	$ 4,655,000	$ -	$ -	$ 8,865,000	$ 7,504,000	$ 16,369,000	$ 552,462,000	$ 5,395,969	$ 155,737	$ 3,313,294	$ 4,661,341	$ 134,721	$ 2,707,938
2053/54	$ 4,276,000	$ 204,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,215,000	$ 2,745,000	1.83	-	$ 2,685,000	$ 4,818,000	$ -	$ -	$ 9,176,000	$ 7,767,000	$ 16,943,000	$ 569,405,000	$ 5,585,320	$ 161,202	$ 3,429,477	$ 4,824,634	$ 139,440	$ 2,802,926
2054/55	$ 4,426,000	$ 211,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,293,000	$ 2,841,000	1.83	-	$ 2,779,000	$ 4,987,000	$ -	$ -	$ 9,498,000	$ 8,039,000	$ 17,537,000	$ 586,942,000	$ 5,781,067	$ 166,852	$ 3,550,081	$ 4,993,758	$ 144,328	$ 2,900,914
2055/56	$ 4,581,000	$ 218,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,373,000	$ 2,940,000	1.83	-	$ 2,876,000	$ 5,162,000	$ -	$ -	$ 9,830,000	$ 8,320,000	$ 18,150,000	$ 605,092,000	$ 5,983,210	$ 172,686	$ 3,674,104	$ 5,168,714	$ 149,385	$ 3,001,901
2056/57	$ 4,741,000	$ 226,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,456,000	$ 3,043,000	1.83	-	$ 2,977,000	$ 5,343,000	$ -	$ -	$ 10,174,000	$ 8,612,000	$ 18,786,000	$ 623,878,000	$ 6,192,720	$ 178,733	$ 3,802,547	$ 5,350,197	$ 154,630	$ 3,107,173
2057/58	$ 4,907,000	$ 234,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,542,000	$ 3,150,000	1.83	-	$ 3,081,000	$ 5,530,000	$ -	$ -	$ 10,530,000	$ 8,914,000	$ 19,444,000	$ 643,322,000	$ 6,409,320	$ 184,984	$ 3,935,695	$ 5,537,512	$ 160,044	$ 3,216,444
2058/59	$ 5,079,000	$ 242,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,631,000	$ 3,260,000	1.83	-	$ 3,189,000	$ 5,724,000	$ -	$ -	$ 10,899,000	$ 9,226,000	$ 20,125,000	$ 663,447,000	$ 6,633,985	$ 191,469	$ 4,073,547	$ 5,731,630	$ 165,654	$ 3,328,716
2059/60	$ 5,257,000	$ 250,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,723,000	$ 3,374,000	1.83	-	$ 3,301,000	$ 5,924,000	$ -	$ -	$ 11,281,000	$ 9,548,000	$ 20,829,000	$ 684,276,000	$ 6,866,712	$ 198,186	$ 4,216,103	$ 5,931,579	$ 171,433	$ 3,444,988
2060/61	$ 5,441,000	$ 259,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,818,000	$ 3,492,000	1.83	-	$ 3,417,000	$ 6,131,000	$ -	$ -	$ 11,676,000	$ 9,882,000	$ 21,558,000	$ 705,834,000	$ 7,107,502	$ 205,135	$ 4,363,363	$ 6,139,028	$ 177,429	$ 3,565,543
2061/62	$ 5,631,000	$ 268,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,917,000	$ 3,614,000	1.83	-	$ 3,537,000	$ 6,346,000	$ -	$ -	$ 12,085,000	$ 10,228,000	$ 22,313,000	$ 728,147,000	$ 7,356,356	$ 212,318	$ 4,516,327	$ 6,354,252	$ 183,649	$ 3,690,099
2062/63	$ 5,828,000	$ 277,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 3,019,000	$ 3,740,000	1.83	-	$ 3,661,000	$ 6,568,000	$ -	$ -	$ 12,508,000	$ 10,585,000	$ 23,093,000	$ 751,240,000	$ 7,613,968	$ 219,753	$ 4,674,279	$ 6,576,280	$ 190,066	$ 3,818,654
2063/64	$ 6,032,000	$ 287,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 3,125,000	$ 3,871,000	1.83	-	$ 3,789,000	$ 6,798,000	$ -	$ -	$ 12,946,000	$ 10,956,000	$ 23,902,000	$ 775,142,000	$ 7,880,340	$ 227,441	$ 4,838,220	$ 6,806,778	$ 196,728	$ 3,952,494
2064/65	$ 6,243,000	$ 297,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 3,234,000	$ 4,006,000	1.83	-	$ 3,922,000	$ 7,036,000	$ -	$ -	$ 13,399,000	$ 11,339,000	$ 24,738,000	$ 799,880,000	$ 8,156,442	$ 235,410	$ 5,007,148	$ 7,045,052	$ 203,614	$ 4,090,333
2065/66	$ 6,462,000	$ 307,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 3,347,000	$ 4,146,000	1.83	-	$ 4,059,000	$ 7,282,000	$ -	$ -	$ 13,868,000	$ 11,735,000	$ 25,603,000	$ 825,483,000	$ 8,442,000	$ 243,651	$ 5,182,349	$ 7,291,102	$ 210,725	$ 4,233,173

O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

75% of existing annual CIP for FY 2026/27 to FY 2028/29

Assumed $250k annual CIP cost until CTP abandonment.

CIP allowance of 1% of total infrastructure improvements construction cost escalated for inflation begins

Capital / O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

Alternative 1 Costs (Low-End)

Fiscal Year	SOCWA Coastal Treatment Plant										MNWD Regional Treatment Plant				OCSAN Treatment Plant No. 2				City of Laguna Beach NCI Offset		Overall Cost Summary				Agency Cost Summary					
	Alternative Infrastructure Improvements		WW Flow (MGD)	RW Produced (MGD)	Capital Cost			O&M Cost			WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	Reach 5 Capital	Reach 4 Capital	Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Total Capital Cost			Total O&M Cost		
	Capital Cost	O&M Cost			Liquids	Solids (To MNWD)	Total	Liquids	Solids (To MNWD)	Total															CLB	EBSD	SCWD	CLB	EBSD	SCWD
2026/27	$ 9,018,000	$ 81,000	2.68	1.07	$ 3,085,000	$ 582,000	$ 3,667,000	$ 2,842,000	$ 1,468,000	$ 4,310,000	0.85	0.85	$ 21,888,000	$ 1,084,000	1.83	-	$ 27,450,000	$ 1,902,000	$ (5,000,000)	$ -	$ 7,685,000	$ 4,310,000	$ 11,995,000	$ 11,995,000	$ 3,711,326	$ 249,325	$ 3,724,350	$ 2,862,612	$ 80,410	$ 1,366,978
2027/28	$ 9,332,000	[illegible]	[illegible]	[illegible]	$ 4,866,000	$ 795,000	$ 5,661,000	$ 2,941,000	$ 1,519,000	$ 4,460,000	0.85	0.85	$ 22,654,000	$ 1,122,000	1.83	-	$ 28,411,000	$ 1,969,000	$ (4,000,000)	$ -	$ 10,993,000	$ 4,460,000	$ 15,453,000	$ 27,448,000	$ 6,254,217	$ 292,825	$ 4,445,958	$ 2,962,239	$ 83,209	$ 1,414,552
2028/29	$ 48,295,000	[illegible]	[illegible]	[illegible]	$ 3,350,000	$ 52,000	$ 3,402,000	$ 3,044,000	$ 1,572,000	$ 4,616,000	0.85	0.85	$ 23,447,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,038,000	$ -	$ -	$ 51,697,000	$ 4,616,000	$ 56,313,000	$ 83,761,000	$ 35,868,856	$ 1,032,318	$ 14,795,826	$ 3,065,851	$ 86,119	$ 1,464,030
2029/30	$ 49,984,000	[illegible]	[illegible]	[illegible]	$ 250,000	$ 52,000	$ 302,000	$ 3,151,000	$ 1,627,000	$ 4,778,000	0.85	0.85	$ 24,268,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,109,000	$ -	$ -	$ 50,286,000	$ 4,778,000	$ 55,064,000	$ 138,825,000	$ 34,985,305	$ 1,008,365	$ 14,292,330	$ 3,173,448	$ 89,142	$ 1,515,410
2030/31	$ 51,733,000	[illegible]	[illegible]	[illegible]	$ 259,000	$ 52,000	$ 311,000	$ 3,261,000	$ 1,684,000	$ 4,945,000	0.85	0.85	$ 25,117,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,183,000	$ -	$ (5,000,000)	$ 47,044,000	$ 4,945,000	$ 51,989,000	$ 190,814,000	$ 31,208,441	$ 1,043,620	$ 14,791,939	$ 3,284,366	$ 92,257	$ 1,568,377
2031/32	$ 21,417,000	[illegible]	2.68	1.07	$ 268,000	$ 52,000	$ 320,000	$ 3,375,000	$ 1,743,000	$ 5,118,000	0.85	0.85	$ 25,996,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,259,000	$ -	$ (5,000,000)	$ 16,737,000	$ 5,118,000	$ 21,855,000	$ 212,669,000	$ 10,116,995	$ 435,617	$ 6,184,388	$ 3,399,269	$ 95,485	$ 1,623,246
2032/33	$ 11,083,000	[illegible]	2.68	1.07	$ 277,000	$ 52,000	$ 329,000	$ 3,493,000	$ 1,804,000	$ 5,297,000	0.85	0.85	$ 26,906,000	[illegible]	[illegible]	[illegible]	[illegible]	$ 2,338,000	$ -	$ (7,000,000)	$ 4,412,000	$ 5,297,000	$ 9,709,000	$ 222,378,000	$ 931,365	$ 228,475	$ 3,252,161	$ 3,518,157	$ 98,825	$ 1,680,019
2033/34	$ 21,519,000	$ 102,000	2.68	1.07	$ 287,000	$ 52,000	$ 339,000	$ 3,615,000	$ 1,867,000	$ 5,482,000	0.85	0.85	$ 27,848,000	$ 1,380,000	1.83	-	$ 34,923,000	$ 2,420,000	$ -	$ (7,000,000)	$ 14,858,000	$ 5,482,000	$ 20,340,000	$ 242,718,000	$ 8,200,598	$ 438,018	$ 6,219,384	$ 3,641,030	$ 102,276	$ 1,738,694
2034/35	$ 2,224,000	$ 106,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 28,823,000	$ 1,428,000	1.83	-	$ 36,145,000	$ 2,505,000	$ -	$ (7,900,000)	$ 59,292,000	$ 4,039,000	$ 63,331,000	$ 306,049,000	$ 28,777,411	$ 1,059,925	$ 29,454,665	$ 2,508,404	$ 72,497	$ 1,458,099
2035/36	$ 2,302,000	$ 110,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 865,000	$ 1,478,000	1.83	-	$ 1,084,000	$ 2,593,000	$ -	$ -	$ 4,251,000	$ 4,181,000	$ 8,432,000	$ 314,481,000	$ 2,655,552	$ 76,630	$ 1,518,818	$ 2,596,716	$ 75,050	$ 1,509,235
2036/37	[illegible]	$ 114,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 895,000	$ 1,530,000	1.83	-	$ 1,122,000	$ 2,684,000	$ -	$ -	$ 4,400,000	$ 4,328,000	$ 8,728,000	$ 323,209,000	$ 2,748,854	$ 79,322	$ 1,571,824	$ 2,687,943	$ 77,686	$ 1,562,370
2037/38	[illegible]	$ 118,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,584,000	1.83	-	[illegible]	$ 2,778,000	$ -	$ -	$ 4,553,000	$ 4,480,000	$ 9,033,000	$ 332,242,000	$ 2,844,519	$ 82,083	$ 1,626,398	$ 2,782,087	$ 80,407	$ 1,617,506
2038/39	[illegible]	$ 122,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,639,000	1.83	-	[illegible]	$ 2,875,000	$ -	$ -	$ 4,712,000	$ 4,636,000	$ 9,348,000	$ 341,590,000	$ 2,944,217	$ 84,960	$ 1,682,824	$ 2,879,146	$ 83,212	$ 1,673,642
2039/40	[illegible]	$ 126,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,696,000	1.83	-	[illegible]	$ 2,976,000	$ -	$ -	$ 4,877,000	$ 4,798,000	$ 9,675,000	$ 351,265,000	$ 3,046,973	$ 87,925	$ 1,742,102	$ 2,980,092	$ 86,130	$ 1,731,778
2040/41	[illegible]	$ 130,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,755,000	1.83	-	[illegible]	$ 3,080,000	$ -	$ -	$ 5,048,000	$ 4,965,000	$ 10,013,000	$ 361,278,000	$ 3,153,762	$ 91,007	$ 1,803,232	$ 3,083,955	$ 89,132	$ 1,791,914
2041/42	[illegible]	$ 135,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,816,000	1.83	-	[illegible]	$ 3,188,000	$ -	$ -	$ 5,225,000	$ 5,139,000	$ 10,364,000	$ 371,642,000	$ 3,264,306	$ 94,196	$ 1,866,498	$ 3,192,401	$ 92,266	$ 1,854,333
2042/43	[illegible]	$ 140,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,880,000	1.83	-	[illegible]	$ 3,300,000	$ -	$ -	$ 5,408,000	$ 5,320,000	$ 10,728,000	$ 382,370,000	$ 3,378,881	$ 97,503	$ 1,931,616	$ 3,304,734	$ 95,513	$ 1,919,753
2043/44	[illegible]	$ 145,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 1,946,000	1.83	-	[illegible]	$ 3,415,000	$ -	$ -	$ 5,597,000	$ 5,506,000	$ 11,103,000	$ 393,473,000	$ 3,496,517	$ 100,897	$ 1,999,586	$ 3,419,984	$ 98,843	$ 1,987,173
2044/45	$ 3,136,000	$ 150,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	[illegible]	$ 2,014,000	1.83	-	[illegible]	$ 3,535,000	$ -	$ -	$ 5,793,000	$ 5,699,000	$ 11,492,000	$ 404,965,000	$ 3,618,879	$ 104,428	$ 2,069,692	$ 3,540,093	$ 102,315	$ 2,056,593
2045/46	$ 3,246,000	$ 155,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,220,000	$ 2,084,000	1.83	-	$ 1,530,000	$ 3,659,000	$ -	$ -	$ 5,996,000	$ 5,898,000	$ 11,894,000	$ 416,859,000	$ 3,745,970	$ 108,096	$ 2,141,935	$ 3,664,089	$ 105,899	$ 2,128,012
2046/47	$ 3,360,000	$ 160,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,263,000	$ 2,157,000	1.83	-	$ 1,584,000	$ 3,787,000	$ -	$ -	$ 6,207,000	$ 6,104,000	$ 12,311,000	$ 429,170,000	$ 3,877,787	$ 111,899	$ 2,217,313	$ 3,791,973	$ 109,595	$ 2,202,432
2047/48	$ 3,478,000	$ 166,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,307,000	$ 2,232,000	1.83	-	$ 1,639,000	$ 3,920,000	$ -	$ -	$ 6,424,000	$ 6,318,000	$ 12,742,000	$ 441,912,000	$ 4,013,361	$ 115,812	$ 2,294,828	$ 3,925,413	$ 113,451	$ 2,279,136
2048/49	$ 3,600,000	$ 172,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,353,000	$ 2,310,000	1.83	-	$ 1,696,000	$ 4,057,000	$ -	$ -	$ 6,649,000	$ 6,539,000	$ 13,188,000	$ 455,100,000	$ 4,153,661	$ 119,860	$ 2,375,479	$ 4,062,740	$ 117,420	$ 2,358,840
2049/50	$ 3,726,000	$ 178,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,400,000	$ 2,391,000	1.83	-	$ 1,755,000	$ 4,199,000	$ -	$ -	$ 6,881,000	$ 6,768,000	$ 13,649,000	$ 468,749,000	$ 4,298,690	$ 124,045	$ 2,458,265	$ 4,204,927	$ 121,530	$ 2,441,543
2050/51	$ 3,856,000	$ 184,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,449,000	$ 2,475,000	1.83	-	$ 1,816,000	$ 4,346,000	$ -	$ -	$ 7,121,000	$ 7,005,000	$ 14,126,000	$ 482,875,000	$ 4,448,445	$ 128,367	$ 2,544,188	$ 4,351,974	$ 125,780	$ 2,527,247
2051/52	$ 3,991,000	$ 190,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,500,000	$ 2,562,000	1.83	-	$ 1,880,000	$ 4,498,000	$ -	$ -	$ 7,371,000	$ 7,250,000	$ 14,621,000	$ 497,496,000	$ 4,604,596	$ 132,873	$ 2,633,531	$ 4,503,879	$ 130,170	$ 2,615,951
2052/53	$ 4,131,000	$ 197,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,552,000	$ 2,652,000	1.83	-	$ 1,946,000	$ 4,655,000	$ -	$ -	$ 7,629,000	$ 7,504,000	$ 15,133,000	$ 512,629,000	$ 4,766,171	$ 137,535	$ 2,725,294	$ 4,661,341	$ 134,721	$ 2,707,938
2053/54	$ 4,276,000	$ 204,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,606,000	$ 2,745,000	1.83	-	$ 2,014,000	$ 4,818,000	$ -	$ -	$ 7,896,000	$ 7,767,000	$ 15,663,000	$ 528,292,000	$ 4,933,169	$ 142,354	$ 2,820,477	$ 4,824,634	$ 139,440	$ 2,802,926
2054/55	$ 4,426,000	$ 211,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,662,000	$ 2,841,000	1.83	-	$ 2,084,000	$ 4,987,000	$ -	$ -	$ 8,172,000	$ 8,039,000	$ 16,211,000	$ 544,503,000	$ 5,105,590	$ 147,329	$ 2,919,081	$ 4,993,758	$ 144,328	$ 2,900,914
2055/56	$ 4,581,000	$ 218,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,720,000	$ 2,940,000	1.83	-	$ 2,157,000	$ 5,162,000	$ -	$ -	$ 8,458,000	$ 8,320,000	$ 16,778,000	$ 561,281,000	$ 5,284,407	$ 152,489	$ 3,021,104	$ 5,168,714	$ 149,385	$ 3,001,901
2056/57	$ 4,741,000	$ 226,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,780,000	$ 3,043,000	1.83	-	$ 2,232,000	$ 5,343,000	$ -	$ -	$ 8,753,000	$ 8,612,000	$ 17,365,000	$ 578,646,000	$ 5,468,647	$ 157,806	$ 3,126,547	$ 5,350,197	$ 154,630	$ 3,107,173
2057/58	$ 4,907,000	$ 234,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,842,000	$ 3,150,000	1.83	-	$ 2,310,000	$ 5,530,000	$ -	$ -	$ 9,059,000	$ 8,914,000	$ 17,973,000	$ 596,619,000	$ 5,659,978	$ 163,327	$ 3,235,695	$ 5,537,512	$ 160,044	$ 3,216,444
2058/59	$ 5,079,000	$ 242,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,906,000	$ 3,260,000	1.83	-	$ 2,391,000	$ 5,724,000	$ -	$ -	$ 9,376,000	$ 9,226,000	$ 18,602,000	$ 615,221,000	$ 5,858,400	$ 169,053	$ 3,348,547	$ 5,731,630	$ 165,654	$ 3,328,716
2059/60	$ 5,257,000	$ 250,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 1,973,000	$ 3,374,000	1.83	-	$ 2,475,000	$ 5,924,000	$ -	$ -	$ 9,705,000	$ 9,548,000	$ 19,253,000	$ 634,474,000	$ 6,063,914	$ 174,983	$ 3,466,103	$ 5,931,579	$ 171,433	$ 3,444,988
2060/61	$ 5,441,000	$ 259,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,042,000	$ 3,492,000	1.83	-	$ 2,562,000	$ 6,131,000	$ -	$ -	$ 10,045,000	$ 9,882,000	$ 19,927,000	$ 654,401,000	$ 6,276,519	$ 181,118	$ 3,587,363	$ 6,139,028	$ 177,429	$ 3,565,543
2061/62	$ 5,631,000	$ 268,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,113,000	$ 3,614,000	1.83	-	$ 2,652,000	$ 6,346,000	$ -	$ -	$ 10,396,000	$ 10,228,000	$ 20,624,000	$ 675,025,000	$ 6,496,215	$ 187,458	$ 3,712,327	$ 6,354,252	$ 183,649	$ 3,690,099
2062/63	$ 5,828,000	$ 277,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,187,000	$ 3,740,000	1.83	-	$ 2,745,000	$ 6,568,000	$ -	$ -	$ 10,760,000	$ 10,585,000	$ 21,345,000	$ 696,370,000	$ 6,723,698	$ 194,022	$ 3,842,279	$ 6,576,280	$ 190,066	$ 3,818,654
2063/64	$ 6,032,000	$ 287,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,264,000	$ 3,871,000	1.83	-	$ 2,841,000	$ 6,798,000	$ -	$ -	$ 11,137,000	$ 10,956,000	$ 22,093,000	$ 718,463,000	$ 6,958,969	$ 200,812	$ 3,977,220	$ 6,806,778	$ 196,728	$ 3,952,494
2064/65	$ 6,243,000	$ 297,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,343,000	$ 4,006,000	1.83	-	$ 2,940,000	$ 7,036,000	$ -	$ -	$ 11,526,000	$ 11,339,000	$ 22,865,000	$ 741,328,000	$ 7,202,026	$ 207,825	$ 4,116,148	$ 7,045,052	$ 203,614	$ 4,090,333
2065/66	$ 6,462,000	$ 307,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	0.85	0.85	$ 2,425,000	$ 4,146,000	1.83	-	$ 3,043,000	$ 7,282,000	$ -	$ -	$ 11,930,000	$ 11,735,000	$ 23,665,000	$ 764,993,000	$ 7,454,539	$ 215,112	$ 4,260,349	$ 7,291,102	$ 210,725	$ 4,233,173

O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

75% of existing annual CIP for FY 2026/27 to FY 2028/29

Assumed $250k annual CIP cost until CTP abandonment.

CIP allowance of 1% of total infrastructure improvements construction cost escalated for inflation begins

Capital / O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment. Initial Capital costs shown are reduced compared to the high-end table

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

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SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
ALTERNATIVE 1 - CAPITAL PROJECTS

Alternative 1 Infrastructure Improvement Capital

No.	Infrastructure Improvement Description (Per Table 2-1)	Attribute	Value	Unit	Unit Value	Unit Cost	Construction Cost	Construction Contingency	Design and PM Contingency	Total Project Cost	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	FY 2032/33	FY 2033/34	FY 2034/35	FY 2035/36	Total Project Cost with Inflation
1	Transfer LS Force Main	Diameter (in)	16	LF	28,080	$ 900	$ 25,272,000	$ 7,582,000	$ 9,856,000	$ 42,710,000	$ 2,136,000	$ 2,210,000	$ 11,438,000	$ 11,838,000	$ 12,253,000	$ 5,073,000	$ 2,625,000	$ -	$ -	$ -	$ 47,573,000
2	Laguna SOCWA LS Gravity Main	Diameter (in)	27	LF	1,390	$ 1,600	$ 2,224,000	$ 667,000	$ 867,000	$ 3,758,000	$ 188,000	$ 194,000	$ 1,006,000	$ 1,042,000	$ 1,078,000	$ 446,000	$ 231,000	$ -	$ -	$ -	$ 4,185,000
3	Laguna SOCWA LS Force Main	Diameter (in)	20	LF	7,410	$ 1,200	$ 8,892,000	$ 2,668,000	$ 3,468,000	$ 15,028,000	$ 751,000	$ 778,000	$ 4,025,000	$ 4,165,000	$ 4,311,000	$ 1,785,000	$ 924,000	$ -	$ -	$ -	$ 16,739,000
4	Bluebird SOCWA LS Gravity Main	Diameter (in)	16	LF	2,005	$ 900	$ 1,805,000	$ 542,000	$ 704,000	$ 3,051,000	$ 153,000	$ 158,000	$ 817,000	$ 846,000	$ 875,000	$ 362,000	$ 188,000	$ -	$ -	$ -	$ 3,399,000
5	Bluebird SOCWA LS Force Main	Diameter (in)	12	LF	5,705	$ 700	$ 3,994,000	$ 1,198,000	$ 1,558,000	$ 6,750,000	$ 338,000	$ 349,000	$ 1,808,000	$ 1,871,000	$ 1,936,000	$ 802,000	$ 415,000	$ -	$ -	$ -	$ 7,519,000
6	Nyes Place LS Force Main	Diameter (in)	8	LF	720	$ 500	$ 360,000	$ 108,000	$ 140,000	$ 608,000	$ 30,000	$ 31,000	$ 163,000	$ 169,000	$ 174,000	$ 72,000	$ 37,000	$ -	$ -	$ -	$ 676,000
7	CTP LS Force Main	Diameter (in)	12	LF	16,760	$ 700	$ 11,732,000	$ 3,520,000	$ 4,576,000	$ 19,828,000	$ 991,000	$ 1,026,000	$ 5,310,000	$ 5,496,000	$ 5,688,000	$ 2,355,000	$ 1,219,000	$ -	$ -	$ -	$ 22,085,000
8	MNWD RW Pipeline Improvement	Diameter (in)	12	LF	100	$ 700	$ 70,000	$ 21,000	$ 27,000	$ 118,000	$ 6,000	$ 6,000	$ 32,000	$ 33,000	$ 34,000	$ 14,000	$ 7,000	$ -	$ -	$ -	$ 132,000
9	New Transfer LS	1 - 4 MGD New Lift Station	-	MGD	4	$ 6,250,000	$ 25,000,000	$ 9,675,000	$ 12,578,000	$ 54,503,000	$ 2,725,000	$ 2,821,000	$ 14,596,000	$ 15,107,000	$ 15,636,000	$ 6,473,000	$ 3,350,000	$ -	$ -	$ -	$ 60,708,000
		Concrete Equalization Basin	-	GAL	650,000	$ 10	$ 6,500,000														$ -
		Emergency Generator	-	EA	1	$ 750,000	$ 750,000														$ -
10	New CTP LS	1 - 4 MGD New Lift Station	-	MGD	2.3	$ 6,250,000	$ 14,375,000	$ 5,437,500	$ 7,069,000	$ 30,631,500	$ 1,532,000	$ 1,585,000	$ 8,203,000	$ 8,490,000	$ 8,788,000	$ 3,638,000	$ 1,883,000	$ -	$ -	$ -	$ 34,119,000
		Concrete Equalization Basin	-	GAL	300,000	$ 10	$ 3,000,000														$ -
		Emergency Generator	-	EA	1	$ 750,000	$ 750,000														$ -
11	Crescent Bay LS Improvements	20 - 50 HP Pumps	2	HP	20	$ 2,500	$ 100,000	$ 30,000	$ 39,000	$ 169,000	$ 8,000	$ 9,000	$ 45,000	$ 47,000	$ 48,000	$ 20,000	$ 10,000	$ -	$ -	$ -	$ 187,000
12	Fairview LS Improvements	5 - 15 HP Pumps	2	HP	15	$ 3,000	$ 90,000	$ 27,000	$ 35,000	$ 152,000	$ 8,000	$ 8,000	$ 41,000	$ 42,000	$ 44,000	$ 18,000	$ 9,000	$ -	$ -	$ -	$ 170,000
13	Main Beach LS Improvements	20 - 50 HP Pumps	3	HP	30	$ 2,500	$ 225,000	$ 67,500	$ 88,000	$ 380,500	$ 19,000	$ 20,000	$ 102,000	$ 105,000	$ 109,000	$ 45,000	$ 23,000	$ -	$ -	$ -	$ 423,000
14	Laguna SOCWA LS Improvements	150 - 250 HP Pumps	4	HP	200	$ 1,250	$ 1,000,000	$ 300,000	$ 390,000	$ 1,690,000	$ 85,000	$ 87,000	$ 453,000	$ 468,000	$ 485,000	$ 201,000	$ 104,000	$ -	$ -	$ -	$ 1,883,000
15	Anita LS Improvements	5 - 15 HP Pumps	2	HP	15	$ 3,000	$ 90,000	$ 27,000	$ 35,000	$ 152,000	$ 8,000	$ 8,000	$ 41,000	$ 42,000	$ 44,000	$ 18,000	$ 9,000	$ -	$ -	$ -	$ 170,000
16	Bluebird SOCWA LS Improvements	20 - 50 HP Pumps	3	HP	50	$ 2,500	$ 375,000	$ 112,500	$ 146,000	$ 633,500	$ 32,000	$ 33,000	$ 170,000	$ 176,000	$ 182,000	$ 75,000	$ 39,000	$ -	$ -	$ -	$ 707,000
17	Nyes Place LS Improvements	20 - 50 HP Pumps	2	HP	20	$ 2,500	$ 100,000	$ 30,000	$ 39,000	$ 169,000	$ 8,000	$ 9,000	$ 45,000	$ 47,000	$ 48,000	$ 20,000	$ 10,000	$ -	$ -	$ -	$ 187,000
19	CTP Abandonment	Area	-	SF	100,080	$ 100	$ 10,008,000	$ 3,002,400	$ 3,903,000	$ 16,913,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 21,519,000	$ -	$ -	$ 21,519,000
										$ 197,244,900	**$ 9,018,000**	**$ 9,332,000**	**$ 48,295,000**	**$ 49,984,000**	**$ 51,733,000**	**$ 21,417,000**	**$ 11,083,000**	**$ 21,519,000**	**$ -**	**$ -**	**$ 222,381,000**

Alternative 1 New Lift Station O&M

No	Infrastructure Improvement Description (Per Table 2-1)	Number of Pumps Active for ADWF	Unit	Unit Value	Unit Cost	O&M Cost ($/Yr)	Percent of Total
9	New Transfer LS	1	HP	125	$ 58,000	$ 58,000	72%
10	New CTP LS	1	HP	50	$ 23,000	$ 23,000	28%

Legend
CLB Only
SCWD Only
CLB & EBSD
CLB, EBSD, and SCWD

Current Flow Split	
CLB	68%
EBSD	2%
SCWD	30%

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Alternative 2 Costs (High-End)

Fiscal Year	SOCWA Coastal Treatment Plant										SOCWA JB Latham Treatment Plant				City of Laguna Beach NCI Offset	Overall Cost Summary				Agency Cost Summary					
	Alternative Infrastructure Improvements		WW Flow (MGD)	RW Produced (MGD)	Capital Cost			O&M Cost			WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	Reach 5 Capital	Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Total Capital Cost			Total O&M Cost		
	Capital Cost	O&M Cost			Liquids	Solids (To MNWD)	Total	Liquids	Solids (To MNWD)	Total										CLB	EBSD	SCWD	CLB	EBSD	SCWD
2026/27	$ 11,818,000	$ 117,000	2.68	1.07	$ 3,085,000	$ 582,000	$ 3,667,000	$ 2,842,000	$ 1,468,000	$ 4,310,000	2.68	1.07	$ 75,025,000	$ 3,146,000	$ (5,000,000)	$ 10,485,000	$ 4,310,000	$ 14,795,000	$ 14,795,000	$ 6,283,588	$ 319,516	$ 3,881,896	$ 2,862,612	$ 80,410	$ 1,366,978
2027/28	$ 12,232,000	[illegible]	2.68	1.07	$ 4,866,000	$ 795,000	$ 5,661,000	$ 2,941,000	$ 1,519,000	$ 4,460,000	2.68	1.07	$ 77,651,000	$ 3,256,000	$ (4,000,000)	$ 13,893,000	$ 4,460,000	$ 18,353,000	$ 33,148,000	$ 8,917,920	$ 365,514	$ 4,609,567	$ 2,962,239	$ 83,209	$ 1,414,552
2028/29	$ 63,302,000	[illegible]	[illegible]	[illegible]	$ 3,350,000	$ 52,000	$ 3,402,000	$ 3,044,000	$ 1,572,000	$ 4,616,000	2.68	1.07	$ 80,369,000	$ 3,370,000	$ -	$ 66,704,000	$ 4,616,000	$ 71,320,000	$ 104,468,000	$ 49,653,245	$ 1,408,471	$ 15,642,283	$ 3,065,851	$ 86,119	$ 1,464,030
2029/30	$ 65,519,000	[illegible]	[illegible]	[illegible]	$ 250,000	$ 52,000	$ 302,000	$ 3,151,000	$ 1,627,000	$ 4,778,000	2.68	1.07	$ 83,182,000	$ 3,488,000	$ -	$ 65,821,000	$ 4,778,000	$ 70,599,000	$ 175,067,000	$ 49,254,140	$ 1,397,741	$ 15,169,119	$ 3,173,448	$ 89,142	$ 1,515,410
2030/31	$ 67,810,000	[illegible]	[illegible]	[illegible]	$ 259,000	$ 52,000	$ 311,000	$ 3,261,000	$ 1,684,000	$ 4,945,000	2.68	[illegible]	[illegible]	[illegible]	$ -	$ 68,121,000	$ 4,945,000	$ 73,066,000	$ 248,133,000	$ 50,975,372	$ 1,446,587	$ 15,699,042	$ 3,284,366	$ 92,257	$ 1,568,377
2031/32	$ 28,073,000	[illegible]	2.68	1.07	$ 268,000	$ 52,000	$ 320,000	$ 3,375,000	$ 1,743,000	$ 5,118,000	2.68	[illegible]	[illegible]	[illegible]	$ -	$ 28,393,000	$ 5,118,000	$ 33,511,000	$ 281,644,000	$ 21,230,571	$ 602,448	$ 6,559,981	$ 3,399,269	$ 95,485	$ 1,623,246
2032/33	$ 14,529,000	[illegible]	2.68	1.07	$ 277,000	$ 52,000	$ 329,000	$ 3,493,000	$ 1,804,000	$ 5,297,000	2.68	[illegible]	[illegible]	[illegible]	$ -	$ 14,858,000	$ 5,297,000	$ 20,155,000	$ 301,799,000	$ 11,096,263	$ 314,841	$ 3,446,896	$ 3,518,157	$ 98,825	$ 1,680,019
2033/34	$ 21,518,000	$ 149,000	2.68	1.07	$ 287,000	$ 52,000	$ 339,000	$ 3,615,000	$ 1,867,000	$ 5,482,000	2.68	1.07	$ 95,453,000	$ 4,002,000	$ -	$ 21,857,000	$ 5,482,000	$ 27,339,000	$ 329,138,000	$ 16,335,514	$ 463,526	$ 5,057,961	$ 3,641,030	$ 102,276	$ 1,738,694
2034/35	$ 2,848,000	$ 154,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 98,794,000	$ 4,142,000	$ -	$ 101,642,000	$ 4,296,000	$ 105,938,000	$ 435,076,000	$ 67,749,186	$ 1,903,684	$ 31,989,130	$ 2,853,313	$ 80,149	$ 1,362,537
2035/36	$ 2,948,000	$ 159,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 2,964,000	$ 4,287,000	$ -	$ 5,912,000	$ 4,446,000	$ 10,358,000	$ 445,434,000	$ 4,175,771	$ 117,936	$ 1,618,293	$ 2,952,940	$ 82,948	$ 1,410,112
2036/37	$ 3,051,000	$ 165,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,068,000	$ 4,437,000	$ -	$ 6,119,000	$ 4,602,000	$ 10,721,000	$ 456,155,000	$ 4,321,961	$ 122,065	$ 1,674,974	$ 3,056,552	$ 85,858	$ 1,459,590
2037/38	[illegible]	$ 171,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,175,000	$ 4,592,000	$ -	$ 6,333,000	$ 4,763,000	$ 11,096,000	$ 467,251,000	$ 4,473,138	$ 126,334	$ 1,733,527	$ 3,163,485	$ 88,862	$ 1,510,653
2038/39	[illegible]	$ 177,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 4,753,000	$ -	$ 6,555,000	$ 4,930,000	$ 11,485,000	$ 478,736,000	$ 4,629,967	$ 130,764	$ 1,794,269	$ 3,274,403	$ 91,978	$ 1,563,619
2039/40	[illegible]	$ 183,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 4,919,000	$ -	$ 6,784,000	$ 5,102,000	$ 11,886,000	$ 490,622,000	$ 4,791,699	$ 135,331	$ 1,856,970	$ 3,388,642	$ 95,187	$ 1,618,172
2040/41	[illegible]	$ 189,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,091,000	$ -	$ 7,021,000	$ 5,280,000	$ 12,301,000	$ 502,923,000	$ 4,959,082	$ 140,059	$ 1,921,860	$ 3,506,866	$ 98,507	$ 1,674,627
2041/42	[illegible]	$ 196,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,269,000	$ -	$ 7,267,000	$ 5,465,000	$ 12,732,000	$ 515,655,000	$ 5,132,865	$ 144,967	$ 1,989,168	$ 3,629,739	$ 101,959	$ 1,733,302
2042/43	[illegible]	$ 203,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,453,000	$ -	$ 7,522,000	$ 5,656,000	$ 13,178,000	$ 528,833,000	$ 5,312,964	$ 150,053	$ 2,058,983	$ 3,756,597	$ 105,522	$ 1,793,881
2043/44	[illegible]	$ 210,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,644,000	$ -	$ 7,785,000	$ 5,854,000	$ 13,639,000	$ 542,472,000	$ 5,498,714	$ 155,299	$ 2,130,987	$ 3,888,104	$ 109,216	$ 1,856,679
2044/45	$ 4,018,000	$ 217,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,842,000	$ -	$ 8,058,000	$ 6,059,000	$ 14,117,000	$ 556,589,000	$ 5,691,528	$ 160,745	$ 2,205,726	$ 4,024,261	$ 113,041	$ 1,921,698
2045/46	$ 4,159,000	$ 225,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,181,000	$ 6,046,000	$ -	$ 8,340,000	$ 6,271,000	$ 14,611,000	$ 571,200,000	$ 5,890,743	$ 166,372	$ 2,282,885	$ 4,165,067	$ 116,996	$ 1,988,937
2046/47	$ 4,305,000	$ 233,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,327,000	$ 6,258,000	$ -	$ 8,632,000	$ 6,491,000	$ 15,123,000	$ 586,323,000	$ 6,097,023	$ 172,198	$ 2,362,780	$ 4,311,187	$ 121,101	$ 2,058,713
2047/48	$ 4,456,000	$ 241,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,478,000	$ 6,477,000	$ -	$ 8,934,000	$ 6,718,000	$ 15,652,000	$ 601,975,000	$ 6,310,366	$ 178,223	$ 2,445,411	$ 4,461,955	$ 125,336	$ 2,130,709
2048/49	$ 4,612,000	$ 249,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,635,000	$ 6,704,000	$ -	$ 9,247,000	$ 6,953,000	$ 16,200,000	$ 618,175,000	$ 6,531,438	$ 184,467	$ 2,531,095	$ 4,618,037	$ 129,720	$ 2,205,243
2049/50	$ 4,773,000	$ 258,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,797,000	$ 6,939,000	$ -	$ 9,570,000	$ 7,197,000	$ 16,767,000	$ 634,942,000	$ 6,759,575	$ 190,910	$ 2,619,515	$ 4,780,097	$ 134,272	$ 2,282,631
2050/51	$ 4,940,000	$ 267,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,965,000	$ 7,182,000	$ -	$ 9,905,000	$ 7,449,000	$ 17,354,000	$ 652,296,000	$ 6,996,188	$ 197,593	$ 2,711,219	$ 4,947,470	$ 138,974	$ 2,362,556
2051/52	$ 5,113,000	$ 276,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,139,000	$ 7,433,000	$ -	$ 10,252,000	$ 7,709,000	$ 17,961,000	$ 670,257,000	$ 7,241,279	$ 204,515	$ 2,806,206	$ 5,120,157	$ 143,825	$ 2,445,019
2052/53	$ 5,292,000	$ 286,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,319,000	$ 7,693,000	$ -	$ 10,611,000	$ 7,979,000	$ 18,590,000	$ 688,847,000	$ 7,494,847	$ 211,676	$ 2,904,477	$ 5,299,485	$ 148,862	$ 2,530,653
2053/54	$ 5,477,000	$ 296,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,505,000	$ 7,962,000	$ -	$ 10,982,000	$ 8,258,000	$ 19,240,000	$ 708,087,000	$ 7,756,893	$ 219,077	$ 3,006,030	$ 5,484,791	$ 154,067	$ 2,619,142
2054/55	$ 5,669,000	$ 306,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,698,000	$ 8,241,000	$ -	$ 11,367,000	$ 8,547,000	$ 19,914,000	$ 728,001,000	$ 8,028,828	$ 226,757	$ 3,111,415	$ 5,676,739	$ 159,459	$ 2,710,802
2055/56	$ 5,867,000	$ 317,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,897,000	$ 8,529,000	$ -	$ 11,764,000	$ 8,846,000	$ 20,610,000	$ 748,611,000	$ 8,309,241	$ 234,677	$ 3,220,082	$ 5,875,328	$ 165,037	$ 2,805,634
2056/57	$ 6,072,000	$ 328,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 6,103,000	$ 8,828,000	$ -	$ 12,175,000	$ 9,156,000	$ 21,331,000	$ 769,942,000	$ 8,599,544	$ 242,876	$ 3,332,580	$ 6,081,224	$ 170,821	$ 2,903,955
2057/58	$ 6,285,000	$ 339,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 6,317,000	$ 9,137,000	$ -	$ 12,602,000	$ 9,476,000	$ 22,078,000	$ 792,020,000	$ 8,901,149	$ 251,394	$ 3,449,456	$ 6,293,761	$ 176,791	$ 3,005,448
2058/59	$ 6,505,000	$ 351,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 6,538,000	$ 9,457,000	$ -	$ 13,043,000	$ 9,808,000	$ 22,851,000	$ 814,871,000	$ 9,212,645	$ 260,192	$ 3,570,163	$ 6,514,269	$ 182,985	$ 3,110,746
2059/60	$ 6,733,000	$ 363,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 6,767,000	$ 9,788,000	$ -	$ 13,500,000	$ 10,151,000	$ 23,651,000	$ 838,522,000	$ 9,535,444	$ 269,309	$ 3,695,247	$ 6,742,082	$ 189,384	$ 3,219,534
2060/61	$ 6,969,000	$ 376,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 7,004,000	$ 10,131,000	$ -	$ 13,973,000	$ 10,507,000	$ 24,480,000	$ 863,002,000	$ 9,869,546	$ 278,745	$ 3,824,710	$ 6,978,530	$ 196,026	$ 3,332,444
2061/62	$ 7,213,000	$ 389,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 7,249,000	$ 10,486,000	$ -	$ 14,462,000	$ 10,875,000	$ 25,337,000	$ 888,339,000	$ 10,214,951	$ 288,500	$ 3,958,550	$ 7,222,948	$ 202,892	$ 3,449,160
2062/63	$ 7,465,000	$ 403,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 7,503,000	$ 10,853,000	$ -	$ 14,968,000	$ 11,256,000	$ 26,224,000	$ 914,563,000	$ 10,572,322	$ 298,593	$ 4,097,085	$ 7,476,000	$ 210,000	$ 3,570,000
2063/64	$ 7,726,000	$ 417,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 7,766,000	$ 11,233,000	$ -	$ 15,492,000	$ 11,650,000	$ 27,142,000	$ 941,705,000	$ 10,942,410	$ 309,045	$ 4,240,545	$ 7,737,687	$ 217,351	$ 3,694,963
2064/65	$ 7,996,000	$ 432,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 8,038,000	$ 11,626,000	$ -	$ 16,034,000	$ 12,058,000	$ 28,092,000	$ 969,797,000	$ 11,325,214	$ 319,857	$ 4,388,930	$ 8,008,672	$ 224,963	$ 3,824,366
2065/66	$ 8,276,000	$ 447,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 8,319,000	$ 12,033,000	$ -	$ 16,595,000	$ 12,480,000	$ 29,075,000	$ 998,872,000	$ 11,721,482	$ 331,048	$ 4,542,470	$ 8,288,955	$ 232,836	$ 3,958,209

O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

75% of existing annual CIP for FY 2026/27 to FY 2028/29

Assumed $250k annual CIP cost until CTP abandonment.

CIP allowance of 1% of total infrastructure improvements construction cost escalated for inflation begins

Capital / O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

Alternative 2 Costs (Low-End)

Fiscal Year	SOCWA Coastal Treatment Plant										SOCWA JB Latham Treatment Plant				City of Laguna Beach NCI Offset	Overall Cost Summary				Agency Cost Summary					
	Alternative Infrastructure Improvements		WW Flow (MGD)	RW Produced (MGD)	Capital Cost			O&M Cost			WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	Reach 5 Capital	Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Total Capital Cost			Total O&M Cost		
	Capital Cost	O&M Cost			Liquids	Solids (To MNWD)	Total	Liquids	Solids (To MNWD)	Total										CLB	EBSD	SCWD	CLB	EBSD	SCWD
2026/27	$ 11,818,000	$ 117,000	2.68	1.07	$ 3,085,000	$ 582,000	$ 3,667,000	$ 2,842,000	$ 1,468,000	$ 4,310,000	2.68	1.07	$ 55,600,000	$ 3,146,000	$ (5,000,000)	$ 10,485,000	$ 4,310,000	$ 14,795,000	$ 14,795,000	$ 6,283,588	$ 319,516	$ 3,881,896	$ 2,862,612	$ 80,410	$ 1,366,978
2027/28	$ 12,232,000	[illegible]	2.68	1.07	$ 4,866,000	$ 795,000	$ 5,661,000	$ 2,941,000	$ 1,519,000	$ 4,460,000	2.68	1.07	$ 57,546,000	$ 3,256,000	$ (4,000,000)	$ 13,893,000	$ 4,460,000	$ 18,353,000	$ 33,148,000	$ 8,917,920	$ 365,514	$ 4,609,567	$ 2,962,239	$ 83,209	$ 1,414,552
2028/29	$ 63,302,000	[illegible]	[illegible]	[illegible]	$ 3,350,000	$ 52,000	$ 3,402,000	$ 3,044,000	$ 1,572,000	$ 4,616,000	2.68	1.07	$ 59,560,000	$ 3,370,000	$ -	$ 66,704,000	$ 4,616,000	$ 71,320,000	$ 104,468,000	$ 49,653,245	$ 1,408,471	$ 15,642,283	$ 3,065,851	$ 86,119	$ 1,464,030
2029/30	$ 65,519,000	[illegible]	[illegible]	[illegible]	$ 250,000	$ 52,000	$ 302,000	$ 3,151,000	$ 1,627,000	$ 4,778,000	2.68	[illegible]	$ 61,645,000	$ 3,488,000	$ -	$ 65,821,000	$ 4,778,000	$ 70,599,000	$ 175,067,000	$ 49,254,140	$ 1,397,741	$ 15,169,119	$ 3,173,448	$ 89,142	$ 1,515,410
2030/31	$ 67,810,000	[illegible]	[illegible]	[illegible]	$ 259,000	$ 52,000	$ 311,000	$ 3,261,000	$ 1,684,000	$ 4,945,000	2.68	[illegible]	[illegible]	[illegible]	$ -	$ 68,121,000	$ 4,945,000	$ 73,066,000	$ 248,133,000	$ 50,975,372	$ 1,446,587	$ 15,699,042	$ 3,284,366	$ 92,257	$ 1,568,377
2031/32	$ 28,073,000	[illegible]	2.68	1.07	$ 268,000	$ 52,000	$ 320,000	$ 3,375,000	$ 1,743,000	$ 5,118,000	2.68	[illegible]	[illegible]	[illegible]	$ -	$ 28,393,000	$ 5,118,000	$ 33,511,000	$ 281,644,000	$ 21,230,571	$ 602,448	$ 6,559,981	$ 3,399,269	$ 95,485	$ 1,623,246
2032/33	$ 14,529,000	[illegible]	2.68	1.07	$ 277,000	$ 52,000	$ 329,000	$ 3,493,000	$ 1,804,000	$ 5,297,000	2.68	[illegible]	[illegible]	[illegible]	$ -	$ 14,858,000	$ 5,297,000	$ 20,155,000	$ 301,799,000	$ 11,096,263	$ 314,841	$ 3,446,896	$ 3,518,157	$ 98,825	$ 1,680,019
2033/34	$ 21,518,000	$ 149,000	2.68	1.07	$ 287,000	$ 52,000	$ 339,000	$ 3,615,000	$ 1,867,000	$ 5,482,000	2.68	1.07	$ 70,739,000	$ 4,002,000	$ -	$ 21,857,000	$ 5,482,000	$ 27,339,000	$ 329,138,000	$ 16,335,514	$ 463,526	$ 5,057,961	$ 3,641,030	$ 102,276	$ 1,738,694
2034/35	$ 2,848,000	$ 154,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 73,215,000	$ 4,142,000	$ -	$ 76,063,000	$ 4,296,000	$ 80,359,000	$ 409,497,000	$ 50,760,148	$ 1,426,464	$ 23,876,388	$ 2,853,313	$ 80,149	$ 1,362,537
2035/36	$ 2,948,000	$ 159,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 2,196,000	$ 4,287,000	$ -	$ 5,144,000	$ 4,446,000	$ 9,590,000	$ 419,087,000	$ 3,665,682	$ 103,607	$ 1,374,711	$ 2,952,940	$ 82,948	$ 1,410,112
2036/37	$ 3,051,000	$ 165,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 2,273,000	$ 4,437,000	$ -	$ 5,324,000	$ 4,602,000	$ 9,926,000	$ 429,013,000	$ 3,793,939	$ 107,232	$ 1,422,829	$ 3,056,552	$ 85,858	$ 1,459,590
2037/38	[illegible]	$ 171,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 2,353,000	$ 4,592,000	$ -	$ 5,511,000	$ 4,763,000	$ 10,274,000	$ 439,287,000	$ 3,927,183	$ 110,998	$ 1,472,818	$ 3,163,485	$ 88,862	$ 1,510,653
2038/39	[illegible]	$ 177,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 4,753,000	$ -	$ 5,704,000	$ 4,930,000	$ 10,634,000	$ 449,921,000	$ 4,064,751	$ 114,887	$ 1,524,363	$ 3,274,403	$ 91,978	$ 1,563,619
2039/40	[illegible]	$ 183,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 4,919,000	$ -	$ 5,903,000	$ 5,102,000	$ 11,005,000	$ 460,926,000	$ 4,206,557	$ 118,895	$ 1,577,548	$ 3,388,642	$ 95,187	$ 1,618,172
2040/41	[illegible]	$ 189,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,091,000	$ -	$ 6,109,000	$ 5,280,000	$ 11,389,000	$ 472,315,000	$ 4,353,350	$ 123,044	$ 1,632,606	$ 3,506,866	$ 98,507	$ 1,674,627
2041/42	[illegible]	$ 196,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,269,000	$ -	$ 6,323,000	$ 5,465,000	$ 11,788,000	$ 484,103,000	$ 4,505,880	$ 127,355	$ 1,689,765	$ 3,629,739	$ 101,959	$ 1,733,302
2042/43	[illegible]	$ 203,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,453,000	$ -	$ 6,544,000	$ 5,656,000	$ 12,200,000	$ 496,303,000	$ 4,663,396	$ 131,807	$ 1,748,797	$ 3,756,597	$ 105,522	$ 1,793,881
2043/44	[illegible]	$ 210,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,644,000	$ -	$ 6,773,000	$ 5,854,000	$ 12,627,000	$ 508,930,000	$ 4,826,565	$ 136,419	$ 1,810,017	$ 3,888,104	$ 109,216	$ 1,856,679
2044/45	$ 4,018,000	$ 217,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$ 5,842,000	$ -	$ 7,010,000	$ 6,059,000	$ 13,069,000	$ 521,999,000	$ 4,995,469	$ 141,193	$ 1,873,338	$ 4,024,261	$ 113,041	$ 1,921,698
2045/46	$ 4,159,000	$ 225,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,097,000	$ 6,046,000	$ -	$ 7,256,000	$ 6,271,000	$ 13,527,000	$ 535,526,000	$ 5,170,773	$ 146,148	$ 1,939,079	$ 4,165,067	$ 116,996	$ 1,988,937
2046/47	$ 4,305,000	$ 233,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,205,000	$ 6,258,000	$ -	$ 7,510,000	$ 6,491,000	$ 14,001,000	$ 549,527,000	$ 5,351,814	$ 151,265	$ 2,006,922	$ 4,311,187	$ 121,101	$ 2,058,713
2047/48	$ 4,456,000	$ 241,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,317,000	$ 6,477,000	$ -	$ 7,773,000	$ 6,718,000	$ 14,491,000	$ 564,018,000	$ 5,539,254	$ 156,563	$ 2,077,183	$ 4,461,955	$ 125,336	$ 2,130,709
2048/49	$ 4,612,000	$ 249,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,433,000	$ 6,704,000	$ -	$ 8,045,000	$ 6,953,000	$ 14,998,000	$ 579,016,000	$ 5,733,095	$ 162,041	$ 2,149,864	$ 4,618,037	$ 129,720	$ 2,205,243
2049/50	$ 4,773,000	$ 258,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,553,000	$ 6,939,000	$ -	$ 8,326,000	$ 7,197,000	$ 15,523,000	$ 594,539,000	$ 5,933,336	$ 167,701	$ 2,224,963	$ 4,780,097	$ 134,272	$ 2,282,631
2050/51	$ 4,940,000	$ 267,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,677,000	$ 7,182,000	$ -	$ 8,617,000	$ 7,449,000	$ 16,066,000	$ 610,605,000	$ 6,140,726	$ 173,563	$ 2,302,712	$ 4,947,470	$ 138,974	$ 2,362,556
2051/52	$ 5,113,000	$ 276,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,806,000	$ 7,433,000	$ -	$ 8,919,000	$ 7,709,000	$ 16,628,000	$ 627,233,000	$ 6,355,928	$ 179,645	$ 2,383,426	$ 5,120,157	$ 143,825	$ 2,445,019
2052/53	$ 5,292,000	$ 286,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 3,939,000	$ 7,693,000	$ -	$ 9,231,000	$ 7,979,000	$ 17,210,000	$ 644,443,000	$ 6,578,280	$ 185,930	$ 2,466,790	$ 5,299,485	$ 148,862	$ 2,530,653
2053/54	$ 5,477,000	$ 296,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,077,000	$ 7,962,000	$ -	$ 9,554,000	$ 8,258,000	$ 17,812,000	$ 662,255,000	$ 6,808,445	$ 192,435	$ 2,553,120	$ 5,484,791	$ 154,067	$ 2,619,142
2054/55	$ 5,669,000	$ 306,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,220,000	$ 8,241,000	$ -	$ 9,889,000	$ 8,547,000	$ 18,436,000	$ 680,691,000	$ 7,047,171	$ 199,183	$ 2,642,646	$ 5,676,739	$ 159,459	$ 2,710,802
2055/56	$ 5,867,000	$ 317,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,368,000	$ 8,529,000	$ -	$ 10,235,000	$ 8,846,000	$ 19,081,000	$ 699,772,000	$ 7,293,711	$ 206,151	$ 2,735,138	$ 5,875,328	$ 165,037	$ 2,805,634
2056/57	$ 6,072,000	$ 328,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,521,000	$ 8,828,000	$ -	$ 10,593,000	$ 9,156,000	$ 19,749,000	$ 719,521,000	$ 7,548,812	$ 213,361	$ 2,830,827	$ 6,081,224	$ 170,821	$ 2,903,955
2057/58	$ 6,285,000	$ 339,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,679,000	$ 9,137,000	$ -	$ 10,964,000	$ 9,476,000	$ 20,440,000	$ 739,961,000	$ 7,813,224	$ 220,835	$ 2,929,942	$ 6,293,761	$ 176,791	$ 3,005,448
2058/59	$ 6,505,000	$ 351,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 4,843,000	$ 9,457,000	$ -	$ 11,348,000	$ 9,808,000	$ 21,156,000	$ 761,117,000	$ 8,086,862	$ 228,569	$ 3,032,570	$ 6,514,269	$ 182,985	$ 3,110,746
2059/60	$ 6,733,000	$ 363,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,013,000	$ 9,788,000	$ -	$ 11,746,000	$ 10,151,000	$ 21,897,000	$ 783,014,000	$ 8,370,474	$ 236,585	$ 3,138,941	$ 6,742,082	$ 189,384	$ 3,219,534
2060/61	$ 6,969,000	$ 376,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,188,000	$ 10,131,000	$ -	$ 12,157,000	$ 10,507,000	$ 22,664,000	$ 805,678,000	$ 8,663,396	$ 244,864	$ 3,248,740	$ 6,978,530	$ 196,026	$ 3,332,444
2061/62	$ 7,213,000	$ 389,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,370,000	$ 10,486,000	$ -	$ 12,583,000	$ 10,875,000	$ 23,458,000	$ 829,136,000	$ 8,966,958	$ 253,444	$ 3,362,598	$ 7,222,948	$ 202,892	$ 3,449,160
2062/63	$ 7,465,000	$ 403,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,558,000	$ 10,853,000	$ -	$ 13,023,000	$ 11,256,000	$ 24,279,000	$ 853,415,000	$ 9,280,494	$ 262,306	$ 3,480,200	$ 7,476,000	$ 210,000	$ 3,570,000
2063/64	$ 7,726,000	$ 417,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,753,000	$ 11,233,000	$ -	$ 13,479,000	$ 11,650,000	$ 25,129,000	$ 878,544,000	$ 9,605,418	$ 271,489	$ 3,602,093	$ 7,737,687	$ 217,351	$ 3,694,963
2064/65	$ 7,996,000	$ 432,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 5,954,000	$ 11,626,000	$ -	$ 13,950,000	$ 12,058,000	$ 26,008,000	$ 904,552,000	$ 9,941,064	$ 280,976	$ 3,727,959	$ 8,008,672	$ 224,963	$ 3,824,366
2065/66	$ 8,276,000	$ 447,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$ 6,162,000	$ 12,033,000	$ -	$ 14,438,000	$ 12,480,000	$ 26,918,000	$ 931,470,000	$ 10,288,848	$ 290,806	$ 3,858,347	$ 8,288,955	$ 232,836	$ 3,958,209

O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

75% of existing annual CIP for FY 2026/27 to FY 2028/29

Assumed $250k annual CIP cost until CTP abandonment.

CIP allowance of 1% of total infrastructure improvements construction cost escalated for inflation begins

Capital / O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

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SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
ALTERNATIVE 2 - CAPITAL PROJECTS

Alternative 2 Infrastructure Improvement Capital

No.	Infrastructure Improvement Description (Per Table 2-9)	Attribute	Value	Unit	Unit Value	Unit Cost	Construction Cost	Construction Contingency	Design and PM Contingency	Total Project Cost	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	FY 2032/33	FY 2033/34	FY 2034/35	FY 2035/36	Total Project Cost with Inflation
											1	1.035	1.071225	1.108717875	1.147523001	1.187686306	1.229255326	1.272279263	1.316809037	1.362897353	
1	Lift Station #2 Force Main	Diameter (in)	24	LF	16,655	$ 1,400	$ 23,317,000	$ 6,995,000	$ 9,094,000	$ 39,406,000	$ 1,970,000	$ 2,039,000	$ 10,553,000	$ 10,923,000	$ 11,305,000	$ 4,680,000	$ 2,422,000	$ -	$ -	$ -	$ 43,892,000
2	Lift Station #6 Force Main	Diameter (in)	24	LF	7,610	$ 1,400	$ 10,654,000	$ 3,196,000	$ 4,155,000	$ 18,005,000	$ 900,000	$ 932,000	$ 4,822,000	$ 4,991,000	$ 5,165,000	$ 2,138,000	$ 1,107,000	$ -	$ -	$ -	$ 20,055,000
3	Lift Station #6 Gravity Main	Diameter (in)	30	LF	6,810	$ 1,800	$ 12,258,000	$ 3,677,000	$ 4,781,000	$ 20,716,000	$ 1,036,000	$ 1,072,000	$ 5,548,000	$ 5,742,000	$ 5,943,000	$ 2,460,000	$ 1,273,000	$ -	$ -	$ -	$ 23,074,000
4	Lift Station #2 Improvements	4 - 15 MGD New Lift Station	-	MGD	12.4	$ 3,125,000	$ 38,750,000	$ 11,625,000	$ 15,113,000	$ 65,488,000	$ 3,274,000	$ 3,389,000	$ 17,538,000	$ 18,152,000	$ 18,787,000	$ 7,778,000	$ 4,025,000	$ -	$ -	$ -	$ 72,943,000
5	Lift Station #6 Improvements	4 - 15 MGD New Lift Station	-	MGD	14.3	$ 3,125,000	$ 44,688,000	$ 13,406,000	$ 17,428,000	$ 75,522,000	$ 3,776,000	$ 3,908,000	$ 20,225,000	$ 20,933,000	$ 21,666,000	$ 8,970,000	$ 4,642,000	$ -	$ -	$ -	$ 84,120,000
6	JBL Recycled Water Pipeline	Diameter (in)	12	LF	5,015	$ 700	$ 3,511,000	$ 1,053,000	$ 1,369,000	$ 5,933,000	$ 297,000	$ 307,000	$ 1,589,000	$ 1,645,000	$ 1,702,000	$ 705,000	$ 365,000	$ -	$ -	$ -	$ 6,610,000
7	JBL Recycled Water Pump Station	1 - 4 MGD New Lift Station	-	MGD	1.07	$ 6,250,000	$ 6,688,000	$ 2,006,000	$ 2,608,000	$ 11,302,000	$ 565,000	$ 585,000	$ 3,027,000	$ 3,133,000	$ 3,242,000	$ 1,342,000	$ 695,000	$ -	$ -	$ -	$ 12,589,000
9	CTP Abandonment	Area	-	SF	100,080	$ 100	$ 10,008,000	$ 3,002,000	$ 3,903,000	$ 16,913,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 21,518,000	$ -	$ -	$ 21,518,000
										$ 253,285,000	$ 11,818,000	$ 12,232,000	$ 63,302,000	$ 65,519,000	$ 67,810,000	$ 28,073,000	$ 14,529,000	$ 21,518,000	$ -	$ -	$ 284,801,000

Baseline SCWD Lift Station #2 and #6 O&M

No	Lift Station	Number of Pumps Active for ADWF	Unit	Unit Value	Unit Cost	O&M Cost ($/Yr)
-	Lift Station #2	1	HP	170	$ 78,000	$ 78,000
-	Lift Station #6	1	HP	75	$ 35,000	$ 35,000

Alternative 2 SCWD Lift Station #2 and #6 O&M

No	Infrastructure Improvement Description (Per Table 2-9)	Number of Pumps Active for ADWF	Unit	Unit Value	Unit Cost	O&M Cost ($/Yr)	O&M Cost Increase ($/Yr)	Percent of Total
4	Lift Station #2 Improvements	1	HP	250	$ 115,000	$ 115,000	$ 37,000	32%
5	Lift Station #6 Improvements	1	HP	250	$ 115,000	$ 115,000	$ 80,000	68%

Legend	
	CLB Only
	SCWD Only
	CLB & EBSD
	CLB, EBSD, and SCWD

Current Flow Split	
CLB	68%
EBSD	2%
SCWD	30%

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SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

ALTERNATIVE 3 - FINANCIAL EVALUATION

Alternative 3 Costs (High-End)

Index	Fiscal Year	SOCWA Coastal Treatment Plant										MNWD Regional Treatment Plant				Overall Cost Summary				Agency Cost Summary					
		Alternative Infrastructure Improvements		WW Flow (MGD)	RW Produced (MGD)	Capital Cost			O&M Cost			WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Total Capital Cost			Total O&M Cost		
		Capital Cost	O&M Cost			Liquids	Solids (To MNWD)	Total	Liquids	Solids (To MNWD)	Total									CLB	EBSD	SCWD	CLB	EBSD	SCWD
1	2026/27	$3,721,000	$116,000	2.68	1.07	$3,085,000	$582,000	$3,667,000	$2,842,000	$1,468,000	$4,310,000	2.68	1.07	$83,065,000	$3,419,000	$7,388,000	$4,310,000	$11,698,000	$11,698,000	$4,906,955	$137,836	$2,343,209	$2,862,612	$80,410	$1,366,978
2	2027/28	$3,850,001	[illegible]	2.68	1.07	$4,866,000	$795,000	$5,661,000	$2,941,000	$1,519,000	$4,460,000	2.68	1.07	$85,972,000	$3,539,000	$9,511,001	$4,460,000	$13,971,001	$25,669,001	$6,317,008	$177,444	$3,016,549	$2,962,239	$83,209	$1,414,552
3	2028/29	$19,928,001	[illegible]	[illegible]	[illegible]	$3,350,000	$52,000	$3,402,000	$3,044,000	$1,572,000	$4,616,000	[illegible]	[illegible]	[illegible]	[illegible]	$23,330,001	$4,616,000	$27,946,001	$53,615,002	$15,495,299	$435,261	$7,399,441	$3,065,851	$86,119	$1,464,030
4	2029/30	$20,625,001	[illegible]	[illegible]	[illegible]	$250,000	$52,000	$302,000	$3,151,000	$1,627,000	$4,778,000	[illegible]	[illegible]	[illegible]	[illegible]	$20,927,001	$4,778,000	$25,705,001	$79,320,002	$13,899,277	$390,429	$6,637,295	$3,173,448	$89,142	$1,515,410
5	2030/31	$21,346,000	[illegible]	[illegible]	[illegible]	$259,000	$52,000	$311,000	$3,261,000	$1,684,000	$4,945,000	[illegible]	[illegible]	[illegible]	[illegible]	$21,657,000	$4,945,000	$26,602,000	$105,922,003	$14,384,127	$404,049	$6,868,825	$3,284,366	$92,257	$1,568,377
6	2031/32	$8,838,000	[illegible]	2.68	1.07	$268,000	$52,000	$320,000	$3,375,000	$1,743,000	$5,118,000	2.68	1.07	$98,634,000	$4,061,000	$9,158,000	$5,118,000	$14,276,000	$120,198,003	$6,082,552	$170,858	$2,904,590	$3,399,269	$95,485	$1,623,246
7	2032/33	$4,573,001	[illegible]	2.68	1.07	$277,000	$52,000	$329,000	$3,493,000	$1,804,000	$5,297,000	2.68	1.07	$102,107,000	$4,203,000	$4,902,001	$5,297,000	$10,199,001	$130,397,004	$3,255,807	$91,455	$1,554,739	$3,518,157	$98,825	$1,680,019
8	2033/34	$21,518,000	$147,000	2.68	1.07	$287,000	$52,000	$339,000	$3,615,000	$1,867,000	$5,482,000	2.68	1.07	$105,681,000	$4,350,000	$21,857,000	$5,482,000	$27,339,000	$157,736,004	$14,516,963	$407,780	$6,932,257	$3,641,030	$102,276	$1,738,694
9	2034/35	$1,044,000	$152,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$109,380,000	$4,502,000	$110,424,000	$4,654,000	$115,078,000	$272,814,004	$73,341,313	$2,060,149	$35,022,537	$3,091,090	$86,828	$1,476,082
10	2035/36	$1,081,000	$157,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,281,000	$4,660,000	$4,362,000	$4,817,000	$9,179,000	$281,993,004	$2,897,149	$81,381	$1,383,470	$3,199,351	$89,869	$1,527,780
11	2036/37	$1,119,000	$162,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,396,000	$4,823,000	$4,515,000	$4,985,000	$9,500,000	$291,493,004	$2,998,769	$84,235	$1,431,996	$3,310,933	$93,004	$1,581,063
12	2037/38	[illegible]	$168,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$4,992,000	$4,673,000	$5,160,000	$9,833,000	$301,326,004	$3,103,709	$87,183	$1,482,108	$3,427,164	$96,269	$1,636,567
13	2038/39	[illegible]	$174,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,167,000	$4,837,000	$5,341,000	$10,178,000	$311,504,004	$3,212,634	$90,243	$1,534,123	$3,547,381	$99,646	$1,693,974
14	2039/40	[illegible]	$180,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,348,000	$5,006,000	$5,528,000	$10,534,000	$322,038,004	$3,324,881	$93,396	$1,587,724	$3,671,582	$103,134	$1,753,284
15	2040/41	[illegible]	$186,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,535,000	$5,181,000	$5,721,000	$10,902,000	$332,940,004	$3,441,112	$96,660	$1,643,228	$3,799,769	$106,735	$1,814,496
16	2041/42	[illegible]	$193,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,729,000	$5,362,000	$5,922,000	$11,284,000	$344,224,004	$3,561,328	$100,037	$1,700,634	$3,933,269	$110,485	$1,878,246
17	2042/43	[illegible]	$200,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,930,000	$5,550,000	$6,130,000	$11,680,000	$355,904,004	$3,686,194	$103,545	$1,760,261	$4,071,418	$114,366	$1,944,216
18	2043/44	[illegible]	$207,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$6,138,000	$5,744,000	$6,345,000	$12,089,000	$367,993,004	$3,815,045	$107,164	$1,821,791	$4,214,216	$118,377	$2,012,407
19	2044/45	$1,474,000	$214,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,471,000	$6,353,000	$5,945,000	$6,567,000	$12,512,000	$380,505,004	$3,948,545	$110,914	$1,885,541	$4,361,664	$122,519	$2,082,817
20	2045/46	$1,526,000	$221,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,627,000	$6,575,000	$6,153,000	$6,796,000	$12,949,000	$393,454,004	$4,086,694	$114,795	$1,951,511	$4,513,761	$126,791	$2,155,448
21	2046/47	$1,579,000	$229,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,789,000	$6,805,000	$6,368,000	$7,034,000	$13,402,000	$406,856,004	$4,229,493	$118,806	$2,019,701	$4,671,836	$131,231	$2,230,933
22	2047/48	$1,634,000	$237,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,957,000	$7,043,000	$6,591,000	$7,280,000	$13,871,000	$420,727,004	$4,377,604	$122,966	$2,090,429	$4,835,224	$135,821	$2,308,955
23	2048/49	$1,691,000	$245,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,130,000	$7,290,000	$6,821,000	$7,535,000	$14,356,000	$435,083,004	$4,530,366	$127,257	$2,163,377	$5,004,590	$140,578	$2,389,832
24	2049/50	$1,750,000	$254,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,310,000	$7,545,000	$7,060,000	$7,799,000	$14,859,000	$449,942,004	$4,689,104	$131,716	$2,239,179	$5,179,933	$145,504	$2,473,563
25	2050/51	$1,811,000	$263,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,496,000	$7,809,000	$7,307,000	$8,072,000	$15,379,000	$465,321,004	$4,853,157	$136,325	$2,317,519	$5,361,254	$150,597	$2,560,149
26	2051/52	$1,874,000	$272,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,688,000	$8,082,000	$7,562,000	$8,354,000	$15,916,000	$481,237,004	$5,022,522	$141,082	$2,398,396	$5,548,552	$155,858	$2,649,590
27	2052/53	$1,940,000	$282,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,887,000	$8,365,000	$7,827,000	$8,647,000	$16,474,000	$497,711,004	$5,198,530	$146,026	$2,482,444	$5,743,157	$161,325	$2,742,519
28	2053/54	$2,008,000	$292,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,093,000	$8,658,000	$8,101,000	$8,950,000	$17,051,000	$514,762,004	$5,380,515	$151,138	$2,569,347	$5,944,403	$166,978	$2,838,619
29	2054/55	$2,078,000	$302,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,306,000	$8,961,000	$8,384,000	$9,263,000	$17,647,000	$532,409,004	$5,568,478	$156,418	$2,659,104	$6,152,291	$172,817	$2,937,892
30	2055/56	$2,151,000	$313,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,527,000	$9,275,000	$8,678,000	$9,588,000	$18,266,000	$550,675,004	$5,763,746	$161,903	$2,752,351	$6,368,149	$178,881	$3,040,970
31	2056/57	$2,226,000	$324,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,755,000	$9,600,000	$8,981,000	$9,924,000	$18,905,000	$569,580,004	$5,964,993	$167,556	$2,848,451	$6,591,313	$185,149	$3,147,537
32	2057/58	$2,304,000	$335,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,991,000	$9,936,000	$9,295,000	$10,271,000	$19,566,000	$589,146,004	$6,173,545	$173,414	$2,948,041	$6,821,784	$191,623	$3,257,593
33	2058/59	$2,385,000	$347,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$7,236,000	$10,284,000	$9,621,000	$10,631,000	$20,252,000	$609,398,004	$6,390,067	$179,496	$3,051,437	$7,060,888	$198,340	$3,371,772
34	2059/60	$2,468,000	$359,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$7,489,000	$10,644,000	$9,957,000	$11,003,000	$20,960,000	$630,358,004	$6,613,231	$185,765	$3,158,004	$7,307,963	$205,280	$3,489,757
35	2060/61	$2,554,000	$372,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$7,751,000	$11,017,000	$10,305,000	$11,389,000	$21,694,000	$652,052,004	$6,844,366	$192,257	$3,268,377	$7,564,336	$212,481	$3,612,183
36	2061/62	$2,643,000	$385,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$8,022,000	$11,403,000	$10,665,000	$11,788,000	$22,453,000	$674,505,004	$7,083,470	$198,974	$3,382,556	$7,829,343	$219,925	$3,738,731
37	2062/63	$2,736,000	$398,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$8,303,000	$11,802,000	$11,039,000	$12,200,000	$23,239,000	$697,744,004	$7,331,873	$205,951	$3,501,175	$8,102,985	$227,612	$3,869,403
38	2063/64	$2,832,000	$412,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$8,594,000	$12,215,000	$11,426,000	$12,627,000	$24,053,000	$721,797,004	$7,588,910	$213,172	$3,623,918	$8,386,590	$235,578	$4,004,832
39	2064/65	$2,931,000	$426,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$8,895,000	$12,643,000	$11,826,000	$13,069,000	$24,895,000	$746,692,004	$7,854,582	$220,634	$3,750,784	$8,680,157	$243,825	$4,145,019
40	2065/66	$3,034,000	$441,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$9,206,000	$13,086,000	$12,240,000	$13,527,000	$25,767,000	$772,459,004	$8,129,552	$228,358	$3,882,090	$8,984,351	$252,369	$4,290,280

O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

75% of existing annual CIP for FY 2026/27 to FY 2028/29

Assumed $250k annual CIP cost until CTP abandonment.

CIP allowance of 1% of total infrastructure improvements construction cost escalated for inflation begins

Capital / O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

Alternative 3 Costs (Low-End)

Index	Fiscal Year	SOCWA Coastal Treatment Plant										MNWD Regional Treatment Plant				Overall Cost Summary				Agency Cost Summary					
		Alternative Infrastructure Improvements		WW Flow (MGD)	RW Produced (MGD)	Capital Cost			O&M Cost			WW Flow (MGD)	RW Produced (MGD)	Capital Cost	O&M Cost	Total Capital Cost	Total O&M Cost	Total Cost	Cumulative Cost	Total Capital Cost			Total O&M Cost		
		Capital Cost	O&M Cost			Liquids	Solids (To MNWD)	Total	Liquids	Solids (To MNWD)	Total									CLB	EBSD	SCWD	CLB	EBSD	SCWD
1	2026/27	$3,721,000	$116,000	2.68	1.07	$3,085,000	$582,000	$3,667,000	$2,842,000	$1,468,000	$4,310,000	2.68	1.07	$60,960,000	$3,419,000	$7,388,000	$4,310,000	$11,698,000	$11,698,000	$4,906,955	$137,836	$2,343,209	$2,862,612	$80,410	$1,366,978
2	2027/28	$3,850,001	[illegible]	2.68	1.07	$4,866,000	$795,000	$5,661,000	$2,941,000	$1,519,000	$4,460,000	2.68	1.07	$63,094,000	$3,539,000	$9,511,001	$4,460,000	$13,971,001	$25,669,001	$6,317,008	$177,444	$3,016,549	$2,962,239	$83,209	$1,414,552
3	2028/29	$19,928,001	[illegible]	[illegible]	[illegible]	$3,350,000	$52,000	$3,402,000	$3,044,000	$1,572,000	$4,616,000	[illegible]	[illegible]	[illegible]	[illegible]	$23,330,001	$4,616,000	$27,946,001	$53,615,002	$15,495,299	$435,261	$7,399,441	$3,065,851	$86,119	$1,464,030
4	2029/30	$20,625,001	[illegible]	[illegible]	[illegible]	$250,000	$52,000	$302,000	$3,151,000	$1,627,000	$4,778,000	[illegible]	[illegible]	[illegible]	[illegible]	$20,927,001	$4,778,000	$25,705,001	$79,320,002	$13,899,277	$390,429	$6,637,295	$3,173,448	$89,142	$1,515,410
5	2030/31	$21,346,000	[illegible]	[illegible]	[illegible]	$259,000	$52,000	$311,000	$3,261,000	$1,684,000	$4,945,000	[illegible]	[illegible]	[illegible]	[illegible]	$21,657,000	$4,945,000	$26,602,000	$105,922,003	$14,384,127	$404,049	$6,868,825	$3,284,366	$92,257	$1,568,377
6	2031/32	$8,838,000	[illegible]	2.68	1.07	$268,000	$52,000	$320,000	$3,375,000	$1,743,000	$5,118,000	2.68	1.07	$72,402,000	$4,061,000	$9,158,000	$5,118,000	$14,276,000	$120,198,003	$6,082,552	$170,858	$2,904,590	$3,399,269	$95,485	$1,623,246
7	2032/33	$4,573,001	[illegible]	2.68	1.07	$277,000	$52,000	$329,000	$3,493,000	$1,804,000	$5,297,000	2.68	1.07	$74,936,000	$4,203,000	$4,902,001	$5,297,000	$10,199,001	$130,397,004	$3,255,807	$91,455	$1,554,739	$3,518,157	$98,825	$1,680,019
8	2033/34	$21,518,000	$147,000	2.68	1.07	$287,000	$52,000	$339,000	$3,615,000	$1,867,000	$5,482,000	2.68	1.07	$77,559,000	$4,350,000	$21,857,000	$5,482,000	$27,339,000	$157,736,004	$14,516,963	$407,780	$6,932,257	$3,641,030	$102,276	$1,738,694
9	2034/35	$1,044,000	$152,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$80,274,000	$4,502,000	$81,318,000	$4,654,000	$85,972,000	$243,708,004	$54,009,716	$1,517,127	$25,791,157	$3,091,090	$86,828	$1,476,082
10	2035/36	$1,081,000	$157,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$2,408,000	$4,660,000	$3,489,000	$4,817,000	$8,306,000	$252,014,004	$2,317,321	$65,093	$1,106,586	$3,199,351	$89,869	$1,527,780
11	2036/37	$1,119,000	$162,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$2,492,000	$4,823,000	$3,611,000	$4,985,000	$8,596,000	$260,610,004	$2,398,351	$67,369	$1,145,280	$3,310,933	$93,004	$1,581,063
12	2037/38	[illegible]	$168,000	[illegible]	[illegible]	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$4,992,000	$3,737,000	$5,160,000	$8,897,000	$269,507,004	$2,482,037	$69,720	$1,185,243	$3,427,164	$96,269	$1,636,567
13	2038/39	[illegible]	$174,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,167,000	$3,868,000	$5,341,000	$9,209,000	$278,716,004	$2,569,045	$72,164	$1,226,791	$3,547,381	$99,646	$1,693,974
14	2039/40	[illegible]	$180,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,348,000	$4,003,000	$5,528,000	$9,531,000	$288,247,004	$2,658,709	$74,683	$1,269,608	$3,671,582	$103,134	$1,753,284
15	2040/41	[illegible]	$186,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,535,000	$4,143,000	$5,721,000	$9,864,000	$298,111,004	$2,751,694	$77,295	$1,314,011	$3,799,769	$106,735	$1,814,496
16	2041/42	[illegible]	$193,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,729,000	$4,288,000	$5,922,000	$10,210,000	$308,321,004	$2,848,000	$80,000	$1,360,000	$3,933,269	$110,485	$1,878,246
17	2042/43	[illegible]	$200,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$5,930,000	$4,439,000	$6,130,000	$10,569,000	$318,890,004	$2,948,291	$82,817	$1,407,892	$4,071,418	$114,366	$1,944,216
18	2043/44	[illegible]	$207,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	[illegible]	$6,138,000	$4,594,000	$6,345,000	$10,939,000	$329,829,004	$3,051,239	$85,709	$1,457,052	$4,214,216	$118,377	$2,012,407
19	2044/45	$1,474,000	$214,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,281,000	$6,353,000	$4,755,000	$6,567,000	$11,322,000	$341,151,004	$3,158,172	$88,713	$1,508,116	$4,361,664	$122,519	$2,082,817
20	2045/46	$1,526,000	$221,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,396,000	$6,575,000	$4,922,000	$6,796,000	$11,718,000	$352,869,004	$3,269,090	$91,828	$1,561,082	$4,513,761	$126,791	$2,155,448
21	2046/47	$1,579,000	$229,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,515,000	$6,805,000	$5,094,000	$7,034,000	$12,128,000	$364,997,004	$3,383,328	$95,037	$1,615,634	$4,671,836	$131,231	$2,230,933
22	2047/48	$1,634,000	$237,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,638,000	$7,043,000	$5,272,000	$7,280,000	$12,552,000	$377,549,004	$3,501,552	$98,358	$1,672,090	$4,835,224	$135,821	$2,308,955
23	2048/49	$1,691,000	$245,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,765,000	$7,290,000	$5,456,000	$7,535,000	$12,991,000	$390,540,004	$3,623,761	$101,791	$1,730,448	$5,004,590	$140,578	$2,389,832
24	2049/50	$1,750,000	$254,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$3,897,000	$7,545,000	$5,647,000	$7,799,000	$13,446,000	$403,986,004	$3,750,619	$105,354	$1,791,026	$5,179,933	$145,504	$2,473,563
25	2050/51	$1,811,000	$263,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,033,000	$7,809,000	$5,844,000	$8,072,000	$13,916,000	$417,902,004	$3,881,463	$109,030	$1,853,507	$5,361,254	$150,597	$2,560,149
26	2051/52	$1,874,000	$272,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,174,000	$8,082,000	$6,048,000	$8,354,000	$14,402,000	$432,304,004	$4,016,955	$112,836	$1,918,209	$5,548,552	$155,858	$2,649,590
27	2052/53	$1,940,000	$282,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,320,000	$8,365,000	$6,260,000	$8,647,000	$14,907,000	$447,211,004	$4,157,761	$116,791	$1,985,448	$5,743,157	$161,325	$2,742,519
28	2053/54	$2,008,000	$292,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,471,000	$8,658,000	$6,479,000	$8,950,000	$15,429,000	$462,640,004	$4,303,216	$120,877	$2,054,907	$5,944,403	$166,978	$2,838,619
29	2054/55	$2,078,000	$302,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,627,000	$8,961,000	$6,705,000	$9,263,000	$15,968,000	$478,608,004	$4,453,321	$125,093	$2,126,586	$6,152,291	$172,817	$2,937,892
30	2055/56	$2,151,000	$313,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,789,000	$9,275,000	$6,940,000	$9,588,000	$16,528,000	$495,136,004	$4,609,403	$129,478	$2,201,119	$6,368,149	$178,881	$3,040,970
31	2056/57	$2,226,000	$324,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$4,957,000	$9,600,000	$7,183,000	$9,924,000	$17,107,000	$512,243,004	$4,770,799	$134,011	$2,278,190	$6,591,313	$185,149	$3,147,537
32	2057/58	$2,304,000	$335,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,130,000	$9,936,000	$7,434,000	$10,271,000	$17,705,000	$529,948,004	$4,937,507	$138,694	$2,357,799	$6,821,784	$191,623	$3,257,593
33	2058/59	$2,385,000	$347,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,310,000	$10,284,000	$7,695,000	$10,631,000	$18,326,000	$548,274,004	$5,110,858	$143,563	$2,440,578	$7,060,888	$198,340	$3,371,772
34	2059/60	$2,468,000	$359,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,496,000	$10,644,000	$7,964,000	$11,003,000	$18,967,000	$567,241,004	$5,289,522	$148,582	$2,525,896	$7,307,963	$205,280	$3,489,757
35	2060/61	$2,554,000	$372,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,688,000	$11,017,000	$8,242,000	$11,389,000	$19,631,000	$586,872,004	$5,474,164	$153,769	$2,614,067	$7,564,336	$212,481	$3,612,183
36	2061/62	$2,643,000	$385,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$5,887,000	$11,403,000	$8,530,000	$11,788,000	$20,318,000	$607,190,004	$5,665,448	$159,142	$2,705,410	$7,829,343	$219,925	$3,738,731
37	2062/63	$2,736,000	$398,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,093,000	$11,802,000	$8,829,000	$12,200,000	$21,029,000	$628,219,004	$5,864,037	$164,720	$2,800,243	$8,102,985	$227,612	$3,869,403
38	2063/64	$2,832,000	$412,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,306,000	$12,215,000	$9,138,000	$12,627,000	$21,765,000	$649,984,004	$6,069,269	$170,485	$2,898,246	$8,386,590	$235,578	$4,004,832
39	2064/65	$2,931,000	$426,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,527,000	$12,643,000	$9,458,000	$13,069,000	$22,527,000	$672,511,004	$6,281,806	$176,455	$2,999,739	$8,680,157	$243,825	$4,145,019
40	2065/66	$3,034,000	$441,000	-	-	$ -	$ -	$ -	$ -	$ -	$ -	2.68	1.07	$6,755,000	$13,086,000	$9,789,000	$13,527,000	$23,316,000	$695,827,004	$6,501,649	$182,631	$3,104,720	$8,984,351	$252,369	$4,290,280

O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

75% of existing annual CIP for FY 2026/27 to FY 2028/29

Assumed $250k annual CIP cost until CTP abandonment.

CIP allowance of 1% of total infrastructure improvements construction cost escalated for inflation begins

Capital / O&M costs for FY 2026/27 to 2033/34 shown in grey to track inflation. Cost not included in total until CTP abandonment.

CIP allowance of 3% existing buy-in / capacity expansion escalated for inflation begins

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SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

ALTERNATIVE 3 - CAPITAL PROJECTS

Alternative 3 Infrastructure Improvement Capital

No.	Infrastructure Improvement Description (Per Table 2-16)	Attribute	Value	Unit	Unit Value	Unit Cost	Construction Cost	Construction Contingency	Design and PM Contingency	Total Project Cost	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	FY 2032/33	FY 2033/34	FY 2034/35	FY 2035/36	Total Project Cost with Inflation
1	CTP LS Force Main	Diameter (in)	16	LF	16,760	$ 900	$ 15,084,000	$ 4,525,000	$ 5,883,000	$ 25,492,000	$ 1,275,000	$ 1,319,000	$ 6,827,000	$ 7,066,000	$ 7,313,000	$ 3,028,000	$ 1,567,000	$ -	$ -	$ -	$ 28,395,000
2	New CTP LS	4 - 15 MGD New Lift Station	-	MGD	6.6	$ 3,125,000	$ 20,625,000														
		Concrete Equalization Basin	-	GAL	750,000	$ 10	$ 7,500,000	$ 8,662,500	$ 11,261,000	$ 48,798,500	$ 2,440,000	$ 2,525,000	$ 13,069,000	$ 13,526,000	$ 13,999,000	$ 5,796,000	$ 2,999,000	$ -	$ -	$ -	$ 54,354,000
		Emergency Generator	-	EA	1	$ 750,000	$ 750,000														
3	MNWD Recycled Water Pipeline	Diameter (in)	12	LF	100	$ 700	$ 70,000	$ 21,000	$ 27,000	$ 118,000	$ 6,000	$ 6,000	$ 32,000	$ 33,000	$ 34,000	$ 14,000	$ 7,000	$ -	$ -	$ -	$ 132,000
5	CTP Abandonment	Area	-	SF	100,080	$ 100	$ 10,008,000	$ 3,002,000	$ 3,903,000	$ 16,913,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 21,518,000	$ -	$ -	$ 21,518,000
										$ 91,321,500	**$ 3,721,000**	**$ 3,850,001**	**$ 19,928,001**	**$ 20,625,001**	**$ 21,346,000**	**$ 8,838,000**	**$ 4,573,001**	**$ 21,518,000**	**$ -**	**$ -**	**$ 104,399,000**

Alternative 3 New Lift Station O&M

No	Infrastructure Improvement Description (Per Table 2-16)	Number of Pumps Active for ADWF	Unit	Unit Value	Unit Cost	O&M Cost ($/Yr)
2	New CTP LS	2	HP	125	$ 58,000	$ 116,000

Legend	
	CLB Only
	SCWD Only
	CLB & EBSD
	CLB, EBSD, and SCWD

Current Flow Split	
CLB	68%
EBSD	2%
SCWD	30%

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Appendix B

Agency Scoring

APPENDIX B
AGENCY SCORING

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City of Laguna Beach - modifications shown in yellow highlight

Criteria	Metrics (Scoring 1 to 3)	Weighting	Weighting (HIDE)	Baseline	Alt 1 - OC San and RTP	Alt 2 - JBL	Alt 3 - RTP	Agency Comments
Capital Cost	Relative order-of-magnitude capital cost compared to other alternatives (±30–50%). A high score (3) reflects the lowest comparative capital investment.	High	30	3	2	1	2	The City's primary goal of considering any change to baseline condition would be to lower costs over the long-term, closer to the "Sensitivity – High Cost" version of the Alternatives Evaluation Table 4-1.
O&M Cost Impact	Relative long-term operational and maintenance cost impacts, including staffing, energy, and treatment costs. A high score (3) reflects lower lifecycle operational burden.	High	30	1	3	3	2	
Technical Feasibility	Ability to convey and treat projected flows within available hydraulic and treatment capacities, and transition seamlessly. A high score (3) reflects minimal infrastructure constraints and no major fatal flaws.	Medium	10	3	2	1	2	
Regulatory & Permitting Risk	Level of permitting complexity (e.g., NPDES, CEQA, LAFCO, annexation, out-of-area service agreements). A high score (3) reflects limited new regulatory hurdles and low approval risk.	Medium	15	2	1	1	2	
Schedule & Implementation Complexity	Estimated time and complexity to implement, including property acquisition, design, construction, and transition planning. A high score (3) reflects a shorter and less complex implementation timeline.	Low	5	3	2	1	2	
Regional / Interagency Coordination	Degree of coordination required between SOCWA, CLB, SCWD, EBSD, OCSAN, MNWD, and OCWD. A high score (3) reflects fewer agencies and simpler agreement structures.	Low	5	1	2	3	3	
Recycled Water Impacts	Effect on existing and future recycled water production and reliability in South Orange County. A high score (3) reflects preservation or enhancement of recycled water supply.	Low	5	3	1	2	3	
	Total (unweighted)			**16**	**13**	**12**	**16**	
	Total (weighted)			**215**	**210**	**175**	**210**	

South Coast Water District - modifications shown in yellow highlight

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Criteria	Metrics (Scoring 1 to 3)	Weighting	Weighting (HIDE)	Baseline	Alt 1 - OC San and RTP	Alt 2 - JBL	Alt 3 - RTP	Agency Comments
Capital Cost	Relative order-of-magnitude capital cost compared to other alternatives (±30–50%). A high score (3) reflects the lowest comparative capital investment.	High	20	3	2	1	2	
O&M Cost Impact	Relative long-term operational and maintenance cost impacts, including staffing, energy, and treatment costs. A high score (3) reflects lower lifecycle operational burden.	High	20	2	3	2	2	No reason CTP, JBL and Regional should be different
Technical Feasibility	Ability to convey and treat projected flows within available hydraulic and treatment capacities, and transition seamlessly. A high score (3) reflects minimal infrastructure constraints and no major fatal flaws.	Medium	15	3	2	2	2	Tech issues with all three options, pipe burst questionable for all flow
Regulatory & Permitting Risk	Level of permitting complexity (e.g., NPDES, CEQA, LAFCO, annexation, out-of-area service agreements). A high score (3) reflects limited new regulatory hurdles and low approval risk.	Medium	15	2	1	2	1	Environmental issues with pipeline to Regional
Schedule & Implementation Complexity	Estimated time and complexity to implement, including property acquisition, design, construction, and transition planning. A high score (3) reflects a shorter and less complex implementation timeline.	Low	10	3	1	1	1	Took 20 years to get permits for sludge pipeline
Regional / Interagency Coordination	Degree of coordination required between SOCWA, CLB, SCWD, EBSD, OCSAN, MNWD, and OCWD. A high score (3) reflects fewer agencies and simpler agreement structures.	Low	10	3	1	2	2	Status quo should be easiest
Recycled Water Impacts	Effect on existing and future recycled water production and reliability in South Orange County. A high score (3) reflects preservation or enhancement of recycled water supply.	Low	10	3	1	2	2	RW impacts should be the same for JBL and Regional
	Total (unweighted)			**19**	**11**	**12**	**12**	
	Total (weighted)			**265**	**175**	**170**	**175**	

Emerald Bay Service District - modifications shown in yellow highlight

Criteria	Metrics (Scoring 1 to 3)	Weighting	Weighting (HIDE)	Baseline	Alt 1 - OC San and RTP	Alt 2 - JBL	Alt 3 - RTP	Agency Comments
Capital Cost	Relative order-of-magnitude capital cost compared to other alternatives (±30–50%). A high score (3) reflects the lowest comparative capital investment.	High	20	3	2	1	2	
O&M Cost Impact	Relative long-term operational and maintenance cost impacts, including staffing, energy, and treatment costs. A high score (3) reflects lower lifecycle operational burden.	High	20	2	3	3	2	Why would the baseline (CTP) be rated so low on the O/M costs? Until a new plant is constructed, the O/M costs are relatively low. After construction of a new plant, they may be high. Would that not also apply at the RTP? That plant is in need of upgrades, especially with the proposed OASIS project. I would give the baseline a "2".
Technical Feasibility	Ability to convey and treat projected flows within available hydraulic and treatment capacities, and transition seamlessly. A high score (3) reflects minimal infrastructure constraints and no major fatal flaws.	Medium	15	3	2	1	2	
Regulatory & Permitting Risk	Level of permitting complexity (e.g., NPDES, CEQA, LAFCO, annexation, out-of-area service agreements). A high score (3) reflects limited new regulatory hurdles and low approval risk.	Medium	15	2	1	1	2	
Schedule & Implementation Complexity	Estimated time and complexity to implement, including property acquisition, design, construction, and transition planning. A high score (3) reflects a shorter and less complex implementation timeline.	Low	10	3	2	1	2	
Regional / Interagency Coordination	Degree of coordination required between SOCWA, CLB, SCWD, EBSD, OCSAN, MNWD, and OCWD. A high score (3) reflects fewer agencies and simpler agreement structures.	Low	10	3	2	3	2	why are the Regional Agency Coordination score for the baseline so low? Those agreements among CLB, SCWD and EBSD are already in place. What other agreements are contemplated that would entail a lower score? Also, any future agreement with MNWD may be problematic. I would give the baseline a "3" and MNWD a "2".
Recycled Water Impacts	Effect on existing and future recycled water production and reliability in South Orange County. A high score (3) reflects preservation or enhancement of recycled water supply.	Low	10	3	1	2	3	
	Total (unweighted)			**19**	**13**	**12**	**15**	
	Total (weighted)			**265**	**195**	**170**	**210**	

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Appendix C

Comment Log

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SOCWA
CTP Regional Flow Study
PE 1
Comment Response Log
Last Updated: 5/27/2026

Comment No.	Reviewer Comment	Reference	Response
1	CLB completed lift station assessment in 2025 (will upload to SharePoint)	Previous Studies and Reports	Included in 2025 CLB Master Plan reference
2	Finalized with Report Revision No. 1 completed in April 2022 (has been uploaded to SharePoint)	Previous Studies and Reports	Updated reference with new title and date
3	25 including recently acquired restroom pump at Thousand Steps Beach	Section 1.3.2.2	Replaced previous value with 25
4	Replacement underway and expected to be complete in 2027	Section 1.3.2.2	Note on construction timeline added to table
5	Major rehab was in 2009; rehab of wet well and odor scrubber conducted in 2019	Section 1.3.2.2	Updated value to reflect 2019 rehabilitation
6	Report Revision No. 1 completed in April 2022 (will be uploaded to SharePoint for MKN use)	Section 1.3.2.2	Updated reference with new title and date
7	Commented "?" regarding "O&M costs of approximately $500,000"	Section 1.4.2.2	Finalized as $528,000, bullet on MBR moved to Section 3 additional assumptions for Baseline Scenario
8	Commented "?" regarding "$XXX per year"	Section 1.4.2.2	75% budgeted CIP costs for years 1-3 and $250,000 for years 4-8, bullet on reduced capital expenditure moved to Section 3 additional assumptions for Alternatives 1 - 3
9	The 18" force main is in service, the 14" is the old force main left in place for redundancy	Section 1.3.2.5	Updated to only show 18"
10	Commented "This Lift Station does not exist anymore" regarding "Lift Station No. 7"	Section 1.3.2.5	Lift station removed
11	Lift Station 1 is not downstream from Lift Station 6, it is in a separate system that pumps to Lift Station 2	Section 1.3.2.5	Lift stations revised to be listed alphabetically for all tables
12	There is no 12" force main, only the slip lined 20" goes to CTP	Section 1.3.2.5	Removed 12" pipeline
13	20" diameter pipe was slip lined with 16" HDPE	Section 1.3.2.5	Updated diameter to 16"
14	Lift Station 7 does not exist	Section 1.4.1.2	Lift station removed
15	There is an Advanced Water Treatment (AWT) facility at CTP that is owned by SCWD and SOCWA is paid to operate it. This is where the recycled water is "provided" after tertiary treatment. The Aliso Creek Water Reclamation Facility (ACWRF) is a polishing facility for the recycled water due to high TDS levels. ACWRF was also designed to extract water from Aliso Creek for treatment and use as recycled water, but the minimum bypass flow requirement makes it difficult to extract water. The maximum flow of the AWT is 2300gpm, which is 3.3mgd, even though with the diurnal flow of the plant that number is not possible and the total plant flow averages about 2.4mgd.	Section 1.3.3.1	Additional write up added to Section 1.3.3.1 on AWT and ACWRF, including information on flows and capacities
16	ACWRF treats 0.5mgd by ultra filtration and reverse osmosis.	Section 1.3.3.1	Added to ACWRF discussion
17	SCWD also has RW#2, which is a recycled water reservoir in Dana Point that is 1.7mg.	Section 1.3.3.1	Recommend not adding to report since Reservoir No. 3 is the only relevant tank to any of the alternatives (could be used to transport water from MNWD to SCWD)
18	Commented "Including chemicals and electricity? Please check. Sounds low." regarding "O&M costs of approximately $500,000"	Section 1.4.2.2	O&M per 2021 report and represents the best available information we have
19	Does anybody receive any treated water as part of this?	Section 1.4.2.3	No
20	Commented "This seems very low. Is this the cost in addition to the cost of the treated water? And membership fee?" regarding "$250/AF"	Section 1.4.2.4	Groundwater discussion removed from report following feedback from OCWD
21	Please update to "OC San"	Section 1.3.2.4	Updated
22	Commented "and reclamation facilities - Reclamation Plant No. 1 and Reclamation Plant No. 2." to "facilities"	Section 1.3.2.4	Language added
23	Commented "OC San names our facilities as pump stations" on "Lift Stations"	Section 1.3.2.4	"Lift station" removed from name
24	Commented "The station is currently in construction for replacement with construction completion expected in 2030" on "Year Constructed for Bay Bridge LS"	Section 1.3.2.4	Added construction status to notes for table
25	Commented "Plant No. 2 has a Design Flow of 150 MGD, a PWW Design of 317 MGD, and averages 77 MGD (ranges between 60 & 110 depending on P1/P2 splits for various O&M/Construction activities)" on "Plant No. 2 Design Capacity	Section 1.4.1.1	Numbers in table updated
26	Commented "OC San to confirm number" regarding Note 5 in Table 1-8	Section 1.4.2.1	Number updated per feedback from OC San
27	Commented "Working with Finance to help confirm numbers for this" regarding Table 1--10	Section 1.4.2.3	Section and values updated per email from Justin on 5/15
28	Commented "Costs appear inverted (and generally low)" regarding Capital Unit Cost for 15 MGD on Table 1-12	Section 1.4.2.5	Costs escalated by 25%
29	Commented "Suggest clarifying why this is being excluded." on "Excluding CTP effluent, agency staff indicated that upstream ETM flows have elevated total dissolved solids (TDS) and are not suitable for recycled water use without additional treatment."	Section 1.3.1.1	Clarified sentence
30	- 12 MGD ADWF; 24 MGD PDWF; 27.2 MGD PWWF - 9 MGD AWT - "treats wastewater from MNWD" - "anaerobic digestion, solids dewatering, and co-generation." - add context that RTP treats solids pumped from CTP (CLB, SCWD, EBSD) as well as trucked solids from ETWD	Section 1.3.1.4	Section updated with additional information
31	Commented "9 MGD" on "6 MGD"	Section 1.3.1.4	Updated to 9 MGD
32	Commented "Aliso Creek" on "Crown Valley Parkway"	Section 1.3.2.1	Updated

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33	1,000 and 6,500 gpm are the average daily diurnal flow rates observed. Remove "peak dry weather flows (PDWFs).	Section 1.3.2.1	Discussion updated to reflect new flow rates, PDWF removed
34	"...Lift Station to CTP and has on rare occasion served as an overflow. While the pipeline is currently plugged, it could be made available for future use, subject to the execution of any necessary agreements and receipt of all appropriate approvals. "	Section 1.3.2.1	Additional write up added to section
35	Commented "10 BPSs" on "13 BPSs"	Section 1.3.3.2	Number updated
36	Commented "This explanation is incorrect and there is significant nuance here. Recommend deleting from section." on Recycled Water Supply Needs bullet point	Section 1.3.3.2	Removed
37	Commented "Under these conditions, the tertiary treatment facilities have on rare occasion been operated at or near full capacity to prevent surcharging of RTP's reach of the ocean outfall. While introducing more wastewater flow to RTP may warrant a capacity study of RTP's reach of the ocean outfall, it is appropriate to note that implementation of the OASIS project would reduce daily flow to the ocean outfall."	Section 1.3.3.2	Language added to "Outfall Capacity Constraints" bullet
38	Design: - 12 MGD ADWF - 27.2 MGD PWWF - 9 MGD AWT FY 24-25 Flow - 7.18MGD FY 25-26 Flow - 7.28 MGD	Section 1.4.1.1	Design capacities updated
39	Average daily flows range from 1,000 to 6,500 gpm The PDR for the latest improvements project noted that it was designed with weekend peak flow of 7,200 gpm, and to meet historical maximum observed flow of 15,500 gpm.	Section 1.4.1.2	Flows updated
40	RTP FY 25-26 biosolids hauling and disposal cost are $84.15/wet ton	Section 1.4.2.1	MNWD O&M cost for solids from FY 24-25 used in lieu of wet ton unit cost
41	It wasn't clear what is included in the costs for the summary table. For example: - Noticed that CTP and RTP tables both have $3,100 $/MG - appears to be an error. - Do the CTP numbers include solids costs which currently are provided by RTP? - See highlighted/posted comment on JBL costs breakdown based on our review of SOCWA's use audit. Here is a break down of RTP excluding tertiary and admin costs: FY 24-25 RTP O&M Budget was $8.45M FY 24-25 Actual ADF was 7.18 MGD FY 24-25 $/MG = $8,450,000 / (7.18 MGD * 365 days) = $3,224/MG FY 25-26 RTP O&M Budget is $8.72M FY 25-26 Actual ADF is 7.28 MGD FY 24-25 $/MG = $8,720,000 / (7.28 MGD * 365 days) = $3,282/MG Ensure we are comparing like-for-like regarding what assumptions were included in the presented values.	Section 1.4.2.1	O&M costs were re-evaluated. To compare like-to-like values, O&M costs were calculated based on FY 2025-26 budgeted O&M and FY 2025-26 estimated flow for each treatment facility (excluding OC San Plant No. 2, in which OC San staff provided the unit cost value). For MNWD, the value of $3,282/MG was used.
42	When reviewing the SOCWA use audit, the value of 7.34 MGD was budget, while the actual flow was 8.49 MGD. If FY 25-26 is going to show $8.62 which is O&M plus admin cost, then FY 24-25 should show $8.58 based on use audit. If it is going to be O&M excluding admin then FY 24-25 should be $7.54 and FY 25-26 is $8.12	Section 1.4.2.1	Budget flow value of 7.34 MGD used for JBL to remain consistent with comparison of other treatment facility O&M. O&M includes admin cost and total cost of $8.62 M used.
43	Remove San Juan Capistrano and Moulton Niguel Water District from member agencies served by SOCWA	Section 1.1	Removed
44	CTP originally first constructed in 1967 (east) and expanded (west) in 1983	Section 1.3.1.1	Dates revised
45	Sludge export pipeline constructed in 1983 as part of CTP expansion project	Section 1.3.1.1	Updated
46	JBL originally constructed in 1964 with major expansions in 1974, 1978, and 1985	1.3.1.2	Dates updated and expansion details added
47	Can treat up to a capacity of 18 MGD	1.3.1.2	Capacity updated
48	Permitted recycled water capacity of 12 MGD for RTP	1.3.1.4	Used MNWD's value of 9 MGD
49	North coast interceptor is PC-23	1.3.2.2	PC-23 added to NCI title
50	Crystal Cove LS 1995, Rocky Point LS 1954, and Bitter Point LS 1954 for construction dates	1.3.2.4	Used OC San's values for lift station construction date / last rehab date
51	ID outlier?	Figure 1-7	Outlier notes added to figure
52	Add agency names to each treatment plant	Table 1-6	Each treatment plant label specified by owner
53	Plant No. 2 average flow, permitted capacity, and design capacity specified as 68, 120, and 340,respectively	Table 1-6	Used OC San's values for treatment facility capacity

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Comment No.	Reviewer Comment	Reference	Response
1	Commented "OC San" on "Alternative 1- Split Redirection to Plant No.2 and RTP"	Section 2.0	Added OC San and MNWD identifiers for treatment plants
2	Commented "Plant No. 2" on "Alternative 1- Redirection to OCSAN and RTP"	Section 2.1	Added Plant No. 2 treatment facility title
3	Commented "3.98" on "4 MGD"	Section 2.1.1	4 MGD is the capacity limit, other references to capacity updated to reflect 4 MGD
4	Commented "3.98" on "4 MGD"	Section 2.1.1	4 MGD is the capacity limit, other references to capacity updated to reflect 4 MGD
5	Commented "3.98" on "4 MGD"	Section 2.1.2.2	4 MGD is the capacity limit, other references to capacity updated to reflect 4 MGD
6	Commented "And PC-24 Aliso Creek Ocean Outfall ETWD+SCWD would be the sole owners of all the capacity" on "PC-15"	Section 2.1.8	Added an additional bullet point highlighting ownership change of PC-24
7	Commented on table formatting issue	Section 2.2.1	Corrected numbering of table
8	"PC-24 Aliso Creek Ocean Outfall ETWD would be the sole owner"	Section 2.2.8	Added an additional bullet point highlighting ownership change of PC-24
9	"CLB + EBSP buy In to SCWD sewer system"	Section 2.2.8	Under Alternative 2, new infrastructure will be built to convey flows through SCWD service area. It is our understanding that no existing SCWD infrastructure will be utilized outside of lift stations and therefore, a buy-in to the SCWD sewer system is not necessary
10	Commented "2" on "Alternative 1"	Section 2.3.4	Alternative 1 is correct
11	"SCWD will still have a reservoir + a cutoff"	Section 2.3.4	Captured in Alternative 1 section for CTP Abandonment and New LS
12	"PC-24 Aliso Creek Ocean Outfall ETWD would become the sole owner"	Section 2.3.7	Added an additional bullet point highlighting ownership change of PC-24
13	What happened to all flow going to OCSAN? That needs to be included as it was part of the original scope. We have two complete redirections and one split alternative which is not what the scope originally entailed. Please review the scope and let me know your thoughts as I am not aware that we gave Ryan specific direction to change the scope.	Section 2.1.1	More information and clarity on the new hybrid Alternative 1 added to Section 2.1.1. Decision to introduce the hybrid alternative was driven by limited capacity available in OC San's collection system, presenting a fatal flaw in the original alternative. The hybrid alternative was recommended and approved during the Chapter 1 workshop meeting.
14	There are inconsistencies in the tables: Table 2-2 and Table 2-6. Table 2-2 states design capacity 2,760 gpm (≈4 MGD limit to OC San) with 3 pumps @ 1,380 gpm each (2 duty + 1 standby). Table 2-6 lists 960 gpm per pump for the Transfer LS (New). Same for CTP LS (New). Table 2-2 states 1,600 gpm with 3 pumps @ 800 gpm each. Table 2-6 lists 1,000 gpm per pump. The horsepower values and minimum-HP calculations in Table 2-6 actually align with the higher flows from Table 2-2 (e.g., ≈118 HP minimum for Transfer LS at 1,380 gpm / 219 ft TDH / 65% efficiency). It doesn't look like the per-pump flow column in Table 2-6 was updated after the design capacities were finalized, but I may be missing something in the design; you would be best to review.	Table 2-2 and Table 2-6	Correct design capacities are 2,760 gpm (3 pumps @ 1,380 gpm ea), 1,600 gpm (3 pumps @ 800 gpm ea) for the Transfer LS and CTP LS, respectively. All tables were reviewed and updated to match the finalized design capacities.
15	Commented "General intent is true; however, this is largely based on PS capacity and a rough pipe capacity mapping. A more detailed hydraulic modeling effort would be needed to confirm that no pipeline improvements would be needed as the final concept is further refined." on "to avoid any OC San infrastructure improvements"	Section 2.1.1	Added footnote to capacity to clarify that additional hydraulic modeling would need to be conducted to confirm 4 MGD capacity
16	"Order of Lift Stations is correct, flows are mixed/incorrect. Bay Bridge should be 18.2 MGD (~12,600 GPM) Bitter Point is 39.4 MGD"	Figure 2-5	Figure updated with correct design flows
17	Commented "please identify location on Figures 2-1 through 2-4 (or add new figure)" on "Uses the alignment of LBCWD's abandoned Coastal Supply Pipeline."	Table 2-1	Alignment for Coastal Suypply Pipeline added to Figure 2-1 and Figure 2-2
18	Commented "please identify location on Figures 2-1 through 2-4 (or add new figure)" on "Uses the alignment of LBCWD's abandoned Coastal Supply Pipeline."alignment of CLB's existing NCI pipeline."	Table 2-1	Alignment for NCI added to Figure 2-1 and Figure 2-3
19	approximately 4,000' of 18" VCP (siphon) in Coast Highway, between Irvine Cove Wy and McKnight Dr, could be eliminated if the Irvine Cove lift station force main connected directly to the proposed north-flowing pipe at Irvine Cove Wy. About 500' of new gravity pipe would be needed to connect.	Figure 2-3	Not included in current Alternative 1 infrastructure improvements to maximize design capacity of Transfer LS and minimize required sizing of equalization basin. Connecting Irvine Cove LS to the Transfer LS force main can be considered if a subsequent study is performed for Alternative 1.
20	there is an abandoned sewer main along proposed alignment on Loma Terrace (may be filled with slurry)	Figure 2-3	Added to description for infrastructure improvement no. 3 for Table 2-1 (Alternative 1).
21	add purple line for existing MNWD pipe b/w CTP LS and Regional LS	Figure 2-4	MNWD line already shown for reference in Figure 1-2. Recommend not adding to figure to keep focus on flow path in Figure 2-4
22	Commented "the strictest requirement may be allowable alignment (no utilities allowed under paved portion of roadway)" on "add purple line for existing facility"	Table 2-7	Noted

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23	Commented "pipe bursting Coastal Supply Pipeline and/or NCI will be cost effective method of trenchless construction, and provide more accurate alignment than boring." on "add purple line for existing facility"	Table 2-7	Added to description for infrastructure improvement no. 4, 5, and 7 for Table 2-1 (Alternative 1) and infrastructure improvement no. 1 for Table 2-16 (Alternative 3)
24	add purple line for existing facility	Figure 2-16	MNWD line already shown for reference in Figure 1-2. Recommend not adding to figure to keep focus on flow path in Figure 2-16.
25	a more detailed explanation of OC San's constraints should be provided it explain why SCWD WW flows cannot be transported to OC San facilities. It should be noted in the report that the only viable option available is to separate agency flows and require that SCWD send flows to RTP if the intent is to eliminate CTP Wastewater Treatment facilities. It should be noted in the report that this option does not eliminate CTP facilities. It should also note that WW flows will continue to be managed at CTP, including equalization and pumping. Alternatively, it should be noted in the report that the CTP could continue to operate in a reduced capacity for SCWD RW system needs. This alternative was not addressed in the report, but it should be clarified that this is still an option to Alternative 1.	Section 2.1	Additional context added to Section 2.1.1 to describe the 4 MGD constraint, including addition of a footnote to describe where the 4 MGD capacity restriction comes from. Section 2.1.4 describes that the CTP is mostly abandoned, but lists select facilities that would remain (also shown in Figure 2-9). Concept of CTP continuing to operate in a reduced capacity for SCWD RW system needs included in "additional considerations" section of Section 4.
26	Why were max daily wet weather flows only considered over the 5 year period? It seems that a more appropriate period would be at least 10 years and would more accurately predict flow conditions and sizing requirements.	Section 2.1.2.2	Max flows for a five-year period were used instead of a ten-year period due to more granular available flow data. Reviewing over a period of 10 or more years included in "additional considerations" section of Section 4.
27	The Transfer LS calculated equalization storage of 520,000 gallons is based on total volume required on 5-yr historical data. A safety factor between and 1.25 and 1.5 should be applied to adequately size the required storage. This factor should be applied typical to all EQ storage calculations and respective cost factors in Section 3.	Section 2 (Misc.)	Safety factor of 1.25 applied to all required equalization storage volumes in Section 2 and cost information updated in Section 3
28	It was not clear if Scrubbers for the EQ basins were included in the analysis. Odor scrubbing unit processes should be added to all EQ basins that will be holding raw sewage for extended periods of time.	Section 2 (Misc.)	Scrubbers factored into cost estimate for EQ basin. Additional description added to equalization basin write-ups to include odor scrubbing unit processes.
29	Note that under Alternative 1, significant amount of CTP would not be abandoned, resulting in long-term continued use of CTP facilities for WW management.	Section 2.14	Elements of CTP not abandoned noted in Section 2.1.4
30	Disagree that this alternative presents "Limited Complexity". Please explain or provide context, along with a matrix comparison for all alternatives, that shows anticipated complexity of Baseline versus Alts 1,2, and 3.	Section 2.1.2	Additional description on complexity and matrix comparison to other alternatives provided in Section 4.
31	Schedules are optimistic. Recommend extending start of PD by 2 years and FD by 3 years. Earliest likely completion of construction would be 2038/39. Typical throughout.	Figure 2-10	Agree that schedules may be optimistic and discussion on extending schedule included in "additional considerations" section of Section 4
32	SCWD's new LS2 design will not accommodate Alt 2 flow of 8570 gpm and cannot be retrofitted without significant upgrades and cost. A new wet well would likely need to be constructed, along with all associated MEP upgrades.	Section 2.2.2.1	Lift Station No. 2 improvements identified for Alternative 2 assume complete reconstruction of the facility to accommodate the greater flows. Added assumption of new lift station construction for both Lift Station No. 2 and No. 6.
33	Option to include new 24" sewer pipeline within SCWD's tunnel is unfeasible due to SCWD's need for direct access to existing tunnel sewer and over 80 laterals. Recommend alignment within PCH rather than SCWD's tunnel alignment.	Section 2.2.3	Need to refine pipeline alignments, including realignment of the LS No. 2 force main from the SCWD tunnel to PCH, was included in the "additional considerations" section of Section 4
34	Figure 2-15 - Same comment as for Fig 2-10.	Section 2.2.7	See response to previous comment.
35	Cost for AWT will be in magnitude closer to $30-$50M due to additional secondary treatment requirements necessary either for AWT of to mitigate UF/MF fouling.	Section 2.2.9	Noted. Cost for AWT capacity expansion revised to be between $7.5 - $5M / MGD.
36	Need to consider buy in costs for significant RTP upgrades planned or underway including RO polishing unit process for salinity management. Please confirm with MNWD and their planned CIP.	Section 2.3.3	Buy-in costs for significant RTP upgrades planned included in the "additional considerations" section of Section 4
37	Need to add challenges/constraints associated with County Parks and The Ranch Golf Course/Resort.	Section 2.3.5	Added to "ROW and Easements" category of Table 2-21. Constraints associated with County Parks also mentioned when discussing CEQA compliance and resource agency permits for alignment within Aliso Creek corridor
38	Same comment as above.	Figure 2-19	Agree that schedules may be optimistic and discussion on extending schedule included in "additional considerations" section of Section 4

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PE 3
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Last Updated: 5/27/2026

Comment No.	Reviewer Comment	Reference	Response
1	Please identify and provide appendices anticipated/utilized for the RPS.	Table of Contents	Appendix A provides calculation detail for each alternative. Cost assumptions found in Section 1.4.2.1 were also updated to provide additional reference for how costs were derived.
2	probably should provide the basis of historical flows for each agency	Previous Studies and Reports	Reference for CTP flows from January 2020 to December 2026 added to references
3	It was not clear to me that the Baseline Alternative was assuming the "Live Stream" discharge requirement, which would significantly impact long-term facility improvements, upgrades, and both Capital and Operational costs. This assumption is not an "apple to apple" comparison of the other alternatives. The cost assumptions of going with an MBR based treatment may be similar to overall "right-sizing" of the CTP in the future, but this assumption and associated costs need to be documented and explained. Additionally, the long-term O&M costs should not be based on increased costs associated with Live Stream Discharge requirements, but rather, should be based on current O&M costs associated with the CTP A total capital cost of $32M may be close, but annual O&M of $528K, should be compared to current unit costs for O&M, assuming that new and upgraded capital facilities should reduce long-term O&M costs, not increase them.	Section 3.1	Live stream discharge requirement included for "high-end" cost for Baseline Scenario and no live stream discharge included for "low-end" cost for Baseline Scenario. O&M costs of $528k for live stream are based on a cost escalated from the "CTP Future Alternatives Feasibility Study Technical Memorandum" (Hazen, May 2021), which reflects additional O&M costs associated with live stream on top of current O&M costs
4	All data for this graph needs to be provided for review. Initial 7 years of capital expenses do not make sense…please explain. Extended years of O&M are excessive and unrealistic. There appears to be a significant escalation that is not representative of practical projections for costs.	Figure 3-1	Capital for first seven years includes capital for live stream construction (split over two years). More detailed information on capital costs shown in Appendix A. Extended years of O&M costs are based on assumed 3.5% annual inflation.
5	SOCWA CTP Existing CIP – the duration extending to 2028/29 is unrealistic. Recommend extending out to 2030/31 for Capital expenditures.	Section 3.2	3-year reduced expenditure based on input from SOCWA staff. Revising the existing CTP CIP for alternatives is included as part of the "Complete CTP Master Plan" next steps/recommendation in Section 4.
6	The assumption of 75% of each years capital cost should also be assumed for Baseline Alternative…it is the same assessment for all alternatives, although the Baseline should be a more expedited analysis than Alts 1-3. If you disagree, please explain.	Section 3.2	The baseline scenario represents the scenario in which no flow redirection is performed and the CTP continues to operate as currently planned. In this scenario, capital costs should not be reduced to 75% since the CTP is not planned to be abandoned.
7	CLB Existing CIP Capital Offset – It is unclear why capital costs associated with NCI projects are "subtracted" against the total capital cost. Please explain and provide narrative in the report. If this is specific to LB/EB, then provide calculations.	Section 3.2	NCI projects are subtracted because they are CLB projects that will no longer be needed due to the flow redirection alternatives. Subtraction either means the existing NCI segment will be repurposed or abandoned. Additional language was added to Section 3.1 and 3.2 to clarify the purpose of the subtraction.
8	MNWD RTP – Please confirm what the 3% amount is being applied to and specifically which facilities at RTP…does it include both existing and planned facilities, such as the AWT MF/RO polishing system to reduce T22 salinity.	Section 3.2	The 3% amount is applied to the total capital-buy in cost (liquids, solids, RW, etc.) and represents an approximate cost owed by PC-15 members for their share of future CIPs at the RTP based on their buy-in cost. It is meant to capture existing and planned facilities, although it is a very high-level value and should be further refined as part of next steps and recommendations in Section 4.
9	Why the significant spike in annual costs at year 9? Typical other graphs and please explain in report. Also, revise schedule to extend PD and FD periods.	Figure 3-2	Significant spike in annual costs due to capital buy-in to treatment facilities being applied at Year 9. Realistically, this cost would be spread over a period of years, but is shown as one year for simplicity. A note was added to explain the significant spike and Appendix A provides additional clarification on how capital costs were applied yearly. Per the response to other comments related to schedule, the schedule is being kept the same, with discussion around extending the schedule included in the "additional considerations" section of Section 4.
10	Alternative 3	Section 3.4	Updated
11	Same comment as above regarding 75% of each years capital cost…also, please explain the "$250K annual cap cost adjustment and how/where it is applied.	Section 3.4	See previous response regarding 75% of each years capital cost. $250k is an allowance for years 4-8 prior to CTP abandonment to budget for unavoidable unplanned CIPs. Based on input from SOCWA staff.
12	As I explained in my introduction, I am unable to assess the validity of the values shown in this table unless all cost assumptions and values are provided. My initial cost estimates for each of the alternatives do not align with the numbers provided. Please provide all backup data and assumption so that the referenced values can be reviewed comprehensively.	Section 3.5.2, Tables 3-2 and 3-3	Additional back up data provided in Appendix A and Section 1.4.2.1

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Last Updated: 6/10/26

Comment No.	Reviewer Comment	Reference	Response
1	Our previous comment was "1,000 gpm and 6,500 gpm are the average daily diurnal flow rates observed. 7,200 gpm is from the design report for anticipated peak weekend flows. Reword sentence as appropriate.	Section 1.3.2.3	Sentence reworded to reflect average diurnal flow rates and peak weekend flow rate
2	Update with high and low end buy in costs from spreadsheet. Appears to be old values.	Table 3-2	High and low costs updated
3	Recommend increasing 1% to 3% for the capital allowance of the live stream project.	Section 3.1	Since a capital allowance of 3% is already applied to the liquids CIP for the CTP and the 1% CIP allowance for the MBR facility is in addition to liquids CIP, we recommend retaining the 1% allowance. Adjusting the CIP allowance percentage was added to the "additional considerations" section of Chapter 4. Adjusting the capital allowance from 1% to 3% for live stream increases the total capital cost of the Baseline alternative from $301M to $374M.
4	Agree with the scoring and is in general agreement with the table.	Table 4-1	Noted
5	Why would the baseline (CTP) be rated so low on the O/M costs? Until a new plant is constructed, the O/M costs are relatively low. After construction of a new plant, they may be high. Would that not also apply at the RTP? That plant is in need of upgrades, especially with the proposed OASIS project. I would give the baseline a "2".	Executive Summary	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
6	Why are the Regional Agency Coordination score for the baseline so low? Those agreements among CLB, SCWD and EBSD are already in place. What other agreements are contemplated that would entail a lower score? I would give the baseline a "3" and MNWD a "2".	Executive Summary	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
7	Figure 1 should be corrected to show "TO MNWD – RTP".	Figure 1-1	Label updated
8	City of San Juan Capistrano should be "C/O SMWD" and MNWD should be "C/O SCWD".	Section 1.3.1.2	C/O designations added to both agencies
9	EBSD has four (4) low flow diversions	Section 1.3.2.2	Added to system description
10	Second paragraph, second sentence, "occasions".	Section 1.3.2.3	Corrected
11	Note 1 appears to be missing. Also note 2 should reference SCWD?	Table 1-4	Updated to reference SCWD for note 2, note 1 superscript added to correct table cell
12	Note 1 should refer to a MNWD study.	Table 1-10	Cost escalation based on a general 25% escalation to OCSAN cost and is not based on a study
13	The TDH appears to be not the same as in Table 2-6.	Table 2-5	Last digit intended to be a superscript for circled values, table updated
14	If the CTP is being closed out, what remaining facilities would their be for SCWD to own? Also, bullet 4, SOCWA member agreements should include ETWD and exclude CSJC.	Section 2.2.8	Remaining facilities listed in Section 2.1.4, but added to Section 2.2.8 for additional clarity. Bullet 4 updated to include ETWD and exclude CSJC.
15	Typo in first line.	Section 2.3.2.2.	Removed
16	First line should it be "CTP" instead of SCWD?	Section 2.3.3	Corrected to CTP
17	Third bullet, the agreements should include CLB and EBSD	Section 2.3.7	CLB and EBSD added
18	O/M cost impact should show the baseline as "2". Also, the Regional/Interagency coordination should show a "3" for the baseline and a "2" for MNWD.	Table 4-1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
19	I question the rational for the baseline being given the lowest score and the last sentence.	Section 4.1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
20	First bullet, would it also be case for the RTP on the ocean outfall issue? The RTP will continue to utilize the ocean outfall	Section 4.2	Agreed, also could be said about other ocean outfalls (SJCOO or OC San Outfall). Language updated to reflect that ocean outfall rehabilitation could materially impact costs for all scenarios.
21	I would show an "up arrow" for the ocean outfall rehabilitation for Alt 3. Also, typo in section 4.3, number 2.	Table 4-2	Up arrow added to all scenarios for ocean outfall rehabilitation
22	The current engineer's estimate for the NCI Reach 5 project is $14.6 million	Table 1-9	Noted. Since the impact of the NCI Reach 5 cost on the overall cost analysis is relatively minor for alternative 1 (capital cost of $555M high end / $494M low end vs. $549M high end / $489 M low end), recommended to not update all cost values for this report at this stage in the project.
23	1. The City's primary goal of considering any change to baseline condition would be to lower costs over the long-term, closer to the "Sensitivity – High Cost" version of the Alternatives Evaluation Table 4-1. The recommended weighting for City priorities is 30, 30, 10, 15, 5, 5, 5.	Table 4-1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
24	SCWD proposed scoring and rationale for Table 4.1, per Scott Goldman	Table 4-1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
25	Capital Cost for low/high end of Baseline appears highly conservative. My understanding is that the cost includes the current full 10-year CIP followed by a total upgrade/rightsizing of CTP for a 3.5 – 4.0 MGD capacity. This seems overly conservative since upgrades/rightsizing would occur prior to the 10-year CIP. Suggest that we incorporate 5-years of the current CIP and then add plant upgrade/rightsizing costs to determine Baseline Capital Costs.	Table 4-1	Capital cost for CTP for the next 20-years was based on a total capital amount of $100M per feedback from SOCWA. Once the CTP Master Plan is completed as recommended in Step #2 of Section 4.3, we will have a much clearer picture of what the actual capital costs will be, including potential cost savings as a result of right sizing the CTP. We recommend retaining the existing CIP for the CTP and revisiting overall baseline costs once the CTP Master Plan is complete.
26	For Alts 1 and 3, recommend following similar approach as for Baseline, but considering longer timeline for implementation, suggest a 7-year CIP for these Alts	Table 4-1	See above response regarding CTP CIP. Recommend waiting to adjust costs until CTP Master Plan is completed.
27	Per my comments during May 28 PE4 Chapter Review, it appears that the O&M costs for Baseline should improve upon expending significant capital to upgrade/right size the CTP. Current O&M costs reflect an oversized and older CTP operations, so an upgraded facility should be more efficient. Suggest that we reduce low-end Baseline by 10%, or note this clearly in the assumptions/considerations that this is the case.	Table 4-1	Possibility for long-term O&M costs for the baseline to be reduced as a result of "right-sizing" the CTP have been added to the additional considerations / optimizations section of Chapter 4
28	Alt 2 and Alt 3 include solids handling, so want to clarify that these values are included in the O&M costs	Table 4-1	Solids handling included in both Alternative 2 and 3 O&M unit costs
29	It is cited that the R&P Risk related to future regulatory changes is higher for CTP due to its size. Suggest that this same risk would apply to all Alternatives and impact each plant significantly. I suggest this issue related to future regulatory changes be applied equally to at least CTP, RTP, and JBL, realizing that OCSan may see a slightly lesser impact due to economy of scale.	Table 4-1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
30	Although Alt 2 is being ruled out, suggest that Alt 2 be scored at 2 due to similar challenges that are being faced by Alts 1 and 3	Table 4-1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
31	Disagree with Baseline scoring of 1 due to reliance on multiple existing SOCWA agreements involving multiple agencies and administrative complexity. Current SOCWA joint power agreements in place are well understood and efficiently managed by SOCWA and all agencies. Each Alternative does not eliminate SOCWA Agreements or lessen coordination among agencies, and Alts 1, 2, and 3 would require development of multiple new agreements. Suggest that Baseline be scored at 3 or that all Alternatives be scored equally as 2's, as each will have challenges.	Table 4-1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"
32	alternative 3 has not been confirmed that it can meet SCWD's current or future RW distribution system needs. Also, disagree with basis that Alt 3 scores highest because it "aligns with RTP recycled water and future regional water supply opportunities". Suggest this RW Impacts analysis be reconsidered and revised.	Table 4-1	Feedback incorporated into Appendix B: "Stakeholder Alternatives Scoring"

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33	Ocean Outfall - It seems that any Ocean Outfall (ACOO, SJCOO, or OCSan Outfall) rehab would impact all options and agencies. Suggest revising language to this consideration that all Alternatives will be impacted.	Section 4.2	Bullet point reworded to capture that ocean outfall rehabilitation would impact all scenarios. Table 4-2
34	Bullet on Future Reg Requirements was covered in Table 4.1 justification. Suggest incorporating into that section.	Section 4.2	Agree that it was already captured and removed from Section 4.2
35	As discussed at PE4 Chapter Review, suggest that it be noted in bullets that Alt's 1 & 3 do not include elimination of CTP, but will still require long-term operations and maintenance of WW facilities, including wastewater equalization, pump/lift station, odor control, power, etc.	Section 4.2	O&M impact of WW facilities remaining in place related to new CTP lift station operation is already captured in O&M cost for Alt 1 and 3 under infrastructure improvements O&M category
36	Note that under "Additional Alternative Configurations" that Baseline could go both up or down. Ocean Outfall consideration should be confirmed for Alt 3.	Table 4-2	Baseline scenario alternative configurations already captured in low-end and high-end costs (MBR vs. no MBR). Ocean outfall consideration added for other alternatives.
37	Total SCWD WW supply and RW Demand are shown as 0.85MGD. These numbers are average annual average RW demand only and do not represent low and high RW demand/supply required and do not represent actual WW flows to be conveyed. Need to update values and/or reference clearly in the assumptions and considerations, which will impact Alts 1, 2, and 3, and Baseline.	Financial Evaluation Spreadsheet	0.85 MGD is the maximum recycled water that can be produced from the plant based on available wastewater influent of 0.85 MGD provided by SCWD under Alternative 1 (assuming 1:1 recovery). It is noted that there would be a deficit in recycled water (0.85 MGD available vs. 1.07 MGD required) in Section 2.1.9 and Alternative 1 is scored the lowest (1) for recycled water impacts due to this deficit. Alternative 3 conveys the full CTP flows to the RTP and therefore could produce the required 1.07 MGD build-out RW vs. Alternative 1.
38	Under Baseline High – Live Stream MBR (LSMBR) implementation cost are shown as additive to 10-year CIP costs. The 10-year CIP costs should drop off in 2031/32 once LSMBR capital expenditures are initiated in 2031/32	Financial Evaluation Spreadsheet	It was assumed that the CTP would require $100M in capital improvements over a 20-year period, with construction of the MBR being a capital cost in addition to the $100M capital improvements. Reductions to the CIP capital costs has been added as an additional consideration / optimization in Section 4.2, but no changes were made to the cost analysis.
39	See comment 1 above for Section 4.1. CIP numbers should be adjusted and recommend moving years 10-20 forward by 5 years…alternatively, use same timing and capital cost assumptions with Alts 1,2,3.	Financial Evaluation Spreadsheet	Capital cost for CTP for the next 20-years was based on a total capital amount of $100M per feedback from SOCWA. Once the CTP Master Plan is completed as recommended in Step #2 of Section 4.3, we will have a much clearer picture of what the actual capital costs will be, including potential cost savings as a result of right sizing the CTP. We recommend retaining the existing CIP for the CTP and revisiting overall baseline costs once the CTP Master Plan is complete.
40	Under Baseline/Alt 1/Alt 2/Alt 3 – Proportionate share of Annual Capital Cost for solids to MNWD are shown as $52K per year. Is it assumed that MNWD will not be doing any significant solids capital projects for 6 years? Please explain or provide basis of assumptions. If common for all, either adjust or remove entirely since it is a common cost.	Financial Evaluation Spreadsheet	Proportionate annual capital cost for solids to MNWD is based on the 10-year CIP provided by MNWD and included in the cost spreadsheet "Existing CIPs" tab, which showed a total budgeted amount of $250,000 for the six-year period.
41	Under Alt 1 (low and high end) – Assumption that only $250K per year in Capital Costs and $52K for Solids would be spent for 5 years is significantly underestimated. Due to age and condition of CTP today, Capital projects will still be required until abandonment. Suggest this number be increased to $1.5M per year just to maintain for safety, compliance, and general R&R…alternatively, if this becomes common to all alternatives, then consider removing.	Financial Evaluation Spreadsheet	See above response regarding MNWD solids costs based on 10-year CIP. Recommend retaining assumption of $250k per year in bare-minimum maintenance and revising once CTP Master Plan is completed.
42	Under Alt 1 – It appears that an offset of $41M for the NCI Project being unnecessary is included in the calculations for City of Laguna Beach and the Overall Cost Summary. It is unclear how this $41M offset is accounted for in the total capital costs shown, along with relevance to the comparative values for low/high capital and each agency impacts. Please provide narrative on how this was incorporated into the analysis and net impact to each agency for each Alternative.	Financial Evaluation Spreadsheet	The NCI projects would no longer be needed should Alternative 1 proceed since the alignments would be reutilized for the flow redirection infrastructure improvements. The $41M offset is applied to Alternative 1 to account for the project no longer being needed, while being needed for other alternatives. The cost offsets were applied to CLB and EBSD based on proportion of flow transported through each reach, which has been added to the "CLB and EBSD Existing CIP Capital Offset" bullet for Section 3.2 and 3.3
43	Under Alt 3 – Seems that the significant expenditure in FY 2034/35 would be spread out over at least 2-3 years and needs to start prior to transition occurring, so recommend begin expenditures in FY 2032/33 and extend over a couple years.	Financial Evaluation Spreadsheet	Agree that buy-in costs would realistically be spread over a period of years. However, for simplicity of the cost analysis, we recommend that buy-in costs are applied to a single year for each scenario.

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Appendix D

Board Presentation

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COASTAL TREATMENT PLANT REGIONAL PLANNING STUDY

Results Overview

July 9, 2026

Presented By: Ryan Gallagher, PE

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OVERVIEW



- Project Schedule Overview
- Results
- Next Steps

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PROJECT COMPLETED – 3 MONTHS FROM NTP

South Coast Water District

City of Laguna Beach, California

Emerald Bay Service District

South Orange County Wastewater Authority

moulton niguel water district

5 WORKSHOPS

PROJECT TIMELINE

Contract PO	COMPLETED	3/5/26
Kickoff Workshop	COMPLETED	3/10/26
Project Element No. 1 – Background and Assumptions – Delivered	COMPLETED	3/29
Review Workshop	COMPLETED	4/1
Project Element No. 2 – Alternatives – Delivered	COMPLETED	4/17
Review Workshop	COMPLETED	4/23
Project Element No. 3 – Cost Evaluation – Delivered	COMPLETED	5/11
Review Workshop	COMPLETED	5/18
Full Draft Report (including PE No. 4)	COMPLETED	5/27
Review Workshop	COMPLETED	5/28
Final Report **(DRAFT)**	COMPLETED	6/11

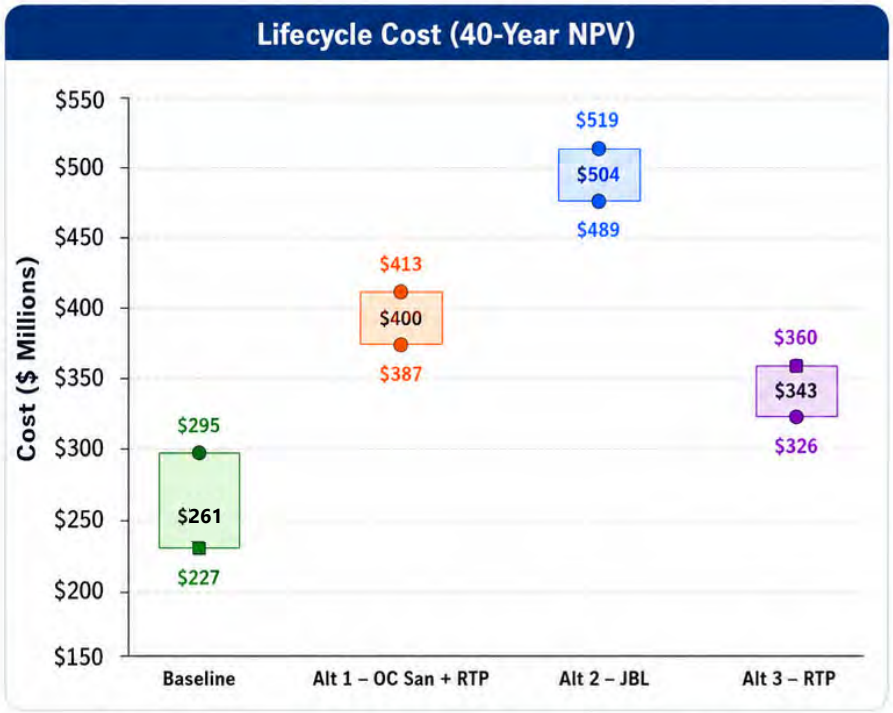
COMPLETED UPCOMING SCHEDULED DATE

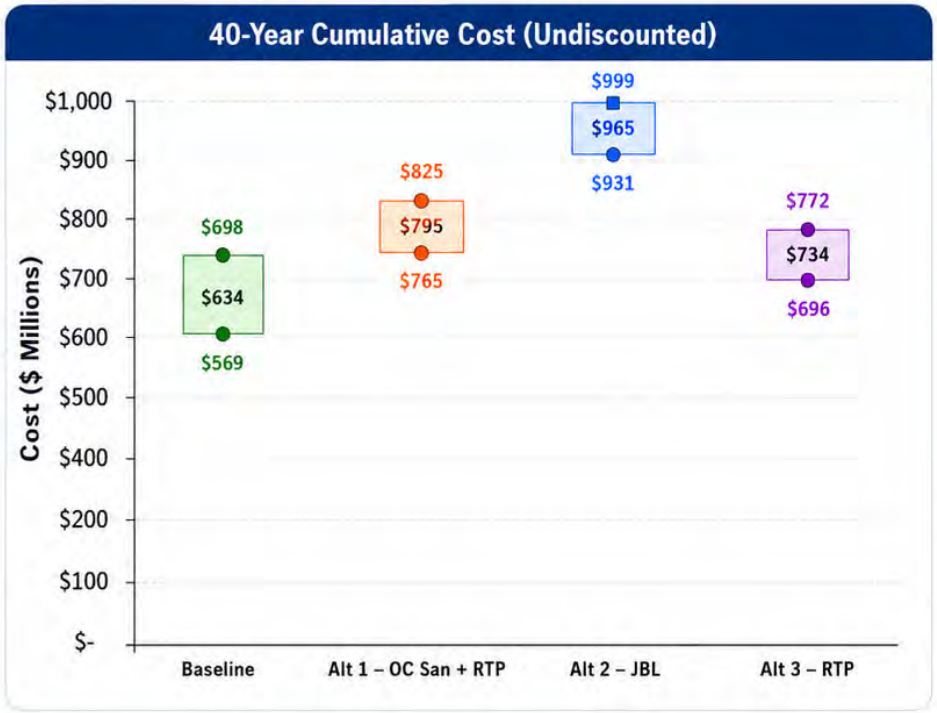
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40-YEAR COST COMPARISON (UPDATED)

Life Cycle Costs Reflect Upper and Lower Bounds (All values in $ Millions)





Upper Bound
Midpoint
Lower Bound

Left Panel: Each box represents the range between the lower bound and upper bound lifecycle cost (40-Year Net Present Value). The midpoint is shown for reference.

Upper Bound
Midpoint
Lower Bound

Right Panel: Each box represents the range between the low and high 40-year cumulative (undiscounted) cost. The midpoint is shown for reference.

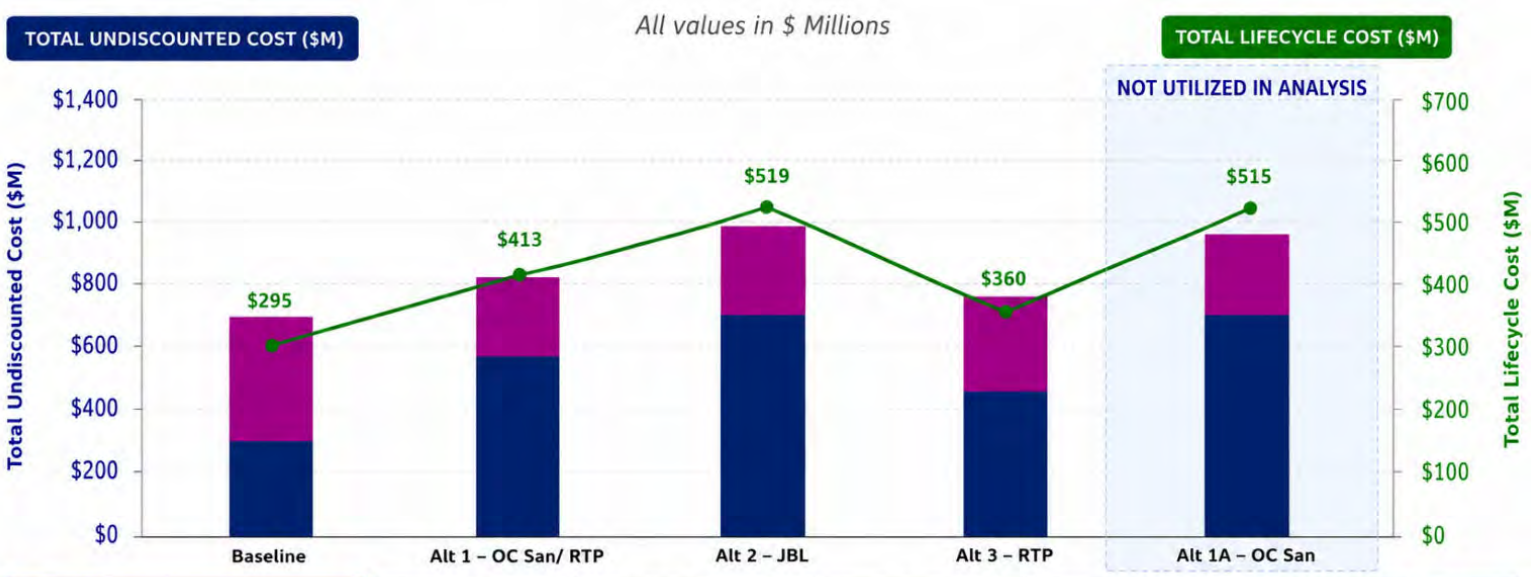
Legend
- Baseline
- Alternative 1 – OC San + RTP
- Alternative 2 – JBL
- Alternative 3 – RTP

4 *Note: Values may not add exactly due to rounding.*

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JUSTIFICATION FOR HYBRID OCSAN OPTION



Scenario	Baseline	Alt 1 – OC San/ RTP	Alt 2 – JBL	Alt 3 – RTP	Alt 1A – OC San
Capital Cost ($M)	$301	$555	$714	$467	$711
O&M Total ($M)	$397	$271	$285	$306	$255
Total Undiscounted Cost ($M)	**$698**	**$825**	**$999**	**$772**	**$967**
Total Lifecycle Cost ($M)	**$295**	**$413**	**$519**	**$360**	**$515**

Capital Cost ($M) O&M Total ($M) Total Lifecycle Cost ($M)

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ALTERNATIVE ANALYSIS RESULTS

Scoring Scale: 3 = High (Most Favorable) | 2 = Moderate | 1 = Low (Least Favorable)

EVALUATION CRITERIA (WEIGHT)	BASELINE (SOCWA CTP)	ALTERNATIVE 1 (OC SAN PLANT NO. 2 AND MNWD RTP)	ALTERNATIVE 2 (SOCWA JBL)	ALTERNATIVE 3 (MNWD RTP)	SCORING METHODOLOGY
CAPITAL COST (WEIGHT: 20)	3 $205 – $301M	2 $494 – $555M	1 $646 – $714M	2 $390 – $467M	Based on 40-year undiscounted capital cost ranges
O&M COST IMPACT (WEIGHT: 20)	1 $364 – $397M	3 $271M	3 $285M	2 $306M	Based on 40-year undiscounted O&M cost ranges
TECHNICAL FEASIBILITY (WEIGHT: 15)	3	2	1	2	Considers ability to convey and treat flows given existing capacities and infrastructure constraints. Higher score = fewer constraints and less fatal flaws
REGULATORY & PERMITTING RISK (WEIGHT: 15)	2	1	1	2	Considers permitting complexity (NPDES, CEQA, LAFCO, annexation, agreements, etc.). Higher score = lower regulatory risk and fewer new hurdles
SCHEDULE & IMPLEMENTATION COMPLEXITY (WEIGHT: 10)	3	2	1	2	Considers estimated time, property needs, design / construction complexity, and transition planning. Higher score = shorter and less complex timeline
REGIONAL / INTERAGENCY COORDINATION (WEIGHT: 10)	1	2	3	3	Considers number of agencies involved and complexity of agreements. Higher score = fewer agencies and simpler agreements
RECYCLED WATER IMPACTS (WEIGHT: 10)	3	1	2	3	Considers effect on existing and future recycled water production and reliability. Higher score = preservation or enhancement of supply
TOTAL UNWEIGHTED (MAX = 21)	16	13	12	16	Higher weighted score indicates a more favorable overall alternative
TOTAL WEIGHTED (MAX = 300)	225	195	170	220	

NOTES:

1. *Scoring Scale: 3 = High (Most Favorable) 2 = Moderate 1 = Low (Least Favorable)*
2. Cost values are undiscounted

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ALTERNATIVE EVALUATION – SUMMARY OF OUTCOMES

How Results Change Across Scenarios Compared to the Baseline

****MNWD – No Changes to Baseline**

OVERALL RANKING (Total Weighted Score)	BASELINE (Final Report)	SENSITIVITY ANALYSES (Weightings Changed – Scores Remain the Same)		AGENCY PERSPECTIVES (Scores and/or Weightings Changed)		
		HIGH COST FOCUS (Sensitivity – High Cost)	HIGH RISK FOCUS (Sensitivity – High Risk)	CITY OF LAGUNA BEACH (CLB)	SOUTH COAST WATER DISTRICT (SCWD)	EMERALD BAY SERVICE DISTRICT (EBSD)
Baseline (SOCWA CTP)	1st 225	2nd 210	1st 220	1st 215	1st 265	1st 265
Alt 1 – OC San Plant No. 2 & MNWD RTP	3rd 195	1st 220	3rd 170	2nd 210	2nd 175	3rd 195
Alt 2 – SOCWA JBL	4th 170	3rd (Last) 185	4th 145	3rd (Last) 175	3rd (Last) 170	4th 170
Alt 3 – MNWD RTP	2nd 220	2nd 210	2nd 210	2nd 210	2nd 175	2nd 210

Numbers represent Total Weighted Score
(Higher score = more favorable overall alternative)

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CTP REGIONAL PLANNING STUDY – EXECUTIVE SUMMARY

Key Findings & Conclusions

1 ALTERNATIVES EVALUATED

Four scenarios were evaluated using technical, regulatory and financial criteria.

BASELINE
Continue CTP Operations

ALT 1 – OC SAN + RTP
Redirect flow to OC San Plant No. 2 and RTP

ALT 2 – JBL
Redirect flow to SOCWA JB Latham

ALT 3 – RTP
Redirect flow to RTP

2 KEY FINDINGS

COST (UPPER BOUND)
- Lowest Capital Cost: Baseline
- Lowest Lifecycle Cost: Alt 3 – RTP
- Highest Overall Cost: Alt 2 – JBL

TECHNICAL FEASIBILITY
- Baseline: Lowest Technical Risk
- Alt 1 & Alt 3: Technically Feasible
- Alt 2: Significant Constraints

REGULATORY / PERMITTING RISK
- Baseline: Moderate
- Alt 1 – OC San + RTP: High
- Alt 2 – JBL: High
- Alt 3 – RTP: Moderate

LONG-TERM STRATEGY
Higher Capital Investment Today
→ Lower O&M Costs Tomorrow

3 CONCLUSIONS

BASELINE
REMAIN AS NEAR-TERM BENCHMARK
Lowest Capital Cost with Moderate Regulatory Risk

ALT 1 – OC SAN + RTP
CONTINUE REFINEMENT
Higher Permitting Risk and Cost; Continue to Refine

ALT 2 – JBL
ELIMINATE
Highest Cost and Fatal Constraints
PC15 eliminated Alt from further consideration

ALT 3 – RTP
HIGH RANKING OPTION
Lower Lifecycle Cost with Manageable Risk

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KEY CONSIDERATIONS & UNCERTAINTIES



CTP Future Capital

CTP capital costs assume a $100M 20-year CIP, with MBR facility costs as an additional high-cost option; completion of the CTP Master Plan could optimize capital and materially reduce future CIP needs.



Capacity Buy-In / System Access Fees

Capacity costs at OC San, RTP, or JBL depend on negotiated agreements and pricing methodology and may include costs for major plant upgrades; this is one of the largest uncertainities and could significantly shift the relative cost of alternatives. OCWD Buy-In not included based on initial feedback.



CTP Future O&M

The CTP capital costs are based on the existing CIP. An MBR upgrade was evaluated as part of a higher-cost treatment alternative to assess the sensitivity of implementing a higher level of treatment. Completion of the CTP master Plan may identify opportunities to optimize the capital program and further refine long-term facility needs/costs.



ROW and Construction Constraints (Pacific Coast Highway/Coastal Zone)

New infrastructure along PCH or in coastal areas may require additional easements, traffic control, and trenchless methods, introducing significant cost and schedule risk not fully captured in planning-level estimates.



Schedule Adjustments

Schedules for conceptual improvements are optimistic and may experience later start and finish dates, increasing undiscounted total costs due to inflationary cost escalation.



Use of Existing Infrastructure Corridors

Leveraging existing infrastructure (e.g., Coast Supply Pipeline alignment or overflow pipelines and easements) could reduce conveyance costs and permit complexity; these opportunities were not fully evaluated.



Ocean Outfall Rehabilitation

All scenarios rely on current outfall assessment, modeling and inspections which conclude that no additional costs are needed at this time.



Pipeline Alignments

Pipeline alignments are high-level and may require rerouting upon further study (e.g., LS No. 2 force main in PCH for Alternative 2); revisions could meaningfully impact near-term capital costs.

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QUESTIONS?

Thank you!

