

**NOTICE OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE 2**

**October 26, 2026
2:00 pm**

NOTICE IS HEREBY GIVEN that a Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee 2 was called to be held on **October 26, 2026, at 2:00 pm**. 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 TWENTY-FOUR (24) 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 TWENTY-FOUR (24) 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 LYNDIA 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 PROJECT COMMITTEE 2 IN CONNECTION WITH A MATTER SUBJECT FOR DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE PROJECT COMMITTEE 2 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 PROJECT COMMITTEE 2 LESS THAN TWENTY-FOUR (24) 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 PROJECT COMMITTEE 2 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: 835 3545 3121
Passcode: 892819

One Tap Mobile
+16694449171,, 83535453121#,,, *892819# US
+16699006833,, 83535453121#,,, *892819# US (San Jose)

AGENDA

1. Call Meeting to Order
2. Public Comments

THOSE WISHING TO ADDRESS THE PROJECT 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.

3. JB Latham Facility Plan Assessment Update – Wastewater Alternatives Analysis

ACTION: Staff recommends the PC2 Board 1) Remove the Option B “without OCWRP” alternatives from further consideration based on the recent SMWD Board approval to reconstruct the OCWRP; and 2) Receive and File HDR's presentation.

4. JB Latham Facility Plan Assessment Update – Draft Evaluation Criteria, Weighting, and Scoring Methodology

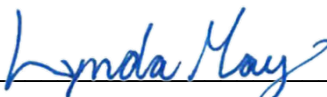
ACTION: Staff recommends that the PC 2 Board adopt the weighting criteria proposed by SOCWA staff as shown in Table 1 of this report.

Adjournment

I hereby certify that the foregoing Notice was personally emailed or mailed to each member of the SOCWA Project Committee 2 at least 24 hours prior to the scheduled time of the Special Meeting referred to above.

I hereby certify that the foregoing Notice was posted at least 24 hours prior to the time of the above-referenced Project Committee meeting at the usual agenda posting location of the South Orange County Wastewater Authority and at www.socwa.com.

Dated this 22nd day of October 2026.



Lynda May, Assistant Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Agenda Item

3

Project Committee 2 Special Meeting

Meeting Date: October 26, 2026

TO: Project Committee 2 Board of Directors

FROM: Amber Boone, General Manager

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

SUBJECT: J.B. Latham Facility Plan Assessment Update – Wastewater Alternatives Analysis [Project Committee 2]

Executive Summary

HDR will present an update on the J.B. Latham (JBL) Treatment Plant Facility Planning Assessment (FPA), including a review of the preliminary wastewater treatment and solids management alternatives. The scope of work for this JBL FPA considers PC2 reviewing a range of feasible alternatives suitable for JBL. This presentation provides information on the fifteen feasible alternatives currently being considered. The Project scope is to narrow the treatment alternatives down to four alternatives.

Background

The J.B. Latham Treatment Plant (JBL) provides wastewater treatment services to SOCWA member agencies and stakeholders representing a significant long-term infrastructure investment. SOCWA retained HDR to prepare a Facility Planning Assessment (FPA) to evaluate the condition and capacity of existing facilities, identify future treatment requirements, and develop alternatives for the long-term operation and improvement of JBL. The FPA will establish the technical and economic basis for recommending improvements to be further developed during Phase 2, the Facility Master Plan.

The FPA includes evaluation of existing facilities, projected wastewater flows and loads, liquid treatment processes, solids management, effluent utilization, facility reliability and resiliency, and associated capital and operating costs. The planning effort considers a 30-year horizon.

Discussion

HDR began the wastewater treatment alternatives planning by conducting an initial condition assessment. HDR's condition assessment identified rehabilitation and replacement needs involving major liquid treatment, solids handling, structural, and electrical facilities.

SOCWA's existing capital improvement program includes approximately \$50 million in planned JBL improvements, as referenced in HDR's presentation. The FPA will consider how these improvements relate to the proposed treatment alternatives, including opportunities to coordinate projects, avoid duplicative investments, and identify improvements that may no longer be necessary under certain alternatives.

HDR then began liquids and solids treatment alternatives that would be implementable within the JBL facility footprint. HDR developed preliminary wastewater treatment alternatives addressing the continued use, rehabilitation, and modification of existing JBL facilities. The alternatives evaluate different treatment technologies and configurations within Plant 1 and Plant 2, including membrane bioreactors (MBR), modified Ludzack-Ettinger (MLE) treatment, moving-bed and integrated fixed-film activated sludge (IFAS) processes, and conventional treatment with nitrification and partial denitrification.

The treatment alternatives also considered potential recycled water production and associated tertiary and advanced treatment improvements.

Two principal regional wastewater flow scenarios are being evaluated:

- OCWRP is reconstructed or “With OCWRP”: This scenario includes the reconstruction of SMWD’s OCWRP, with JBL continuing to receive solids for treatment and not serving as a backup for liquids processing. This scenario also includes receiving 1.5mgd from MNWD starting 2029.
- OCWRP is not reconstructed or “Without OCWRP”: Wastewater flows (liquids and solids) from the OCWRP would continue to be directed to JBL. This scenario also includes receiving 1.5mgd from MNWD starting 2029.

The alternatives include combinations of treatment technologies, facility configurations, and recycled water production. The evaluation considers the ability to reuse existing infrastructure, accommodate future flows, maintain treatment reliability, and meet potential future regulatory and beneficial reuse requirements. Preliminary capital cost estimates for the liquid treatment alternatives range from approximately \$40 million to \$107 million (Liquids Cost Summary slide), depending on treatment technology, plant configuration, and effluent utilization requirements.

HDR has also developed alternatives addressing the long-term management of primary sludge, waste activated sludge, anaerobic digestion, and Biosolids processing. The alternatives range from continued operation with limited improvements to additional thickening, digestion, and dewatering improvements intended to achieve Class B Biosolids treatment requirements, increase treatment capacity, and improve long-term Biosolids management flexibility. Preliminary capital cost estimates for the solids management alternatives range from approximately \$0.6 million to \$22.9 million (Solids Cost Summary slide). The alternatives also consider opportunities to improve Biosolids management flexibility, reduce long-term disposal risks, and evaluate emerging treatment technologies.

The SMWD Board of Directors awarded the construction of the OCWRP at its October 19, 2026, meeting. Staff concludes from this decision that the “Without OCWRP” alternatives would be removed from further consideration to narrow the wastewater treatment scenarios being evaluated.

Financial Impact

There is no immediate financial impact associated with receiving the presentation and providing direction regarding the alternatives and evaluation methodology.

Recommendation

Staff recommends the PC2 Board 1) Remove the Option B “without OCWRP” alternatives from further consideration based on the recent SMWD Board approval to reconstruct the OCWRP; and 2) Receive and File HDR's presentation.

Attachment:

HDR – J.B. Latham Treatment Plant Facility Planning Assessment, PC 2 Board Meeting Presentation, October 26, 2026.



PC2 Board Meeting

JBL FPA Project Update

SOCWA
*J.B. Latham Treatment Plant
Facility Planning Assessment*



October 26, 2026

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AGENDA

01 Purpose, Goals, & Objective

02 Review Project To-Date

03 Liquids Alternatives

04 Solids Alternatives

05 Draft Evaluation Criteria

01



Purpose, Goals, and Objective

JBL FPA Project Purpose

- Phase 1: Facility Planning Assessment
 - To identify a range of treatment options, shortlist alternatives, and evaluate the alternatives to identify recommendation to advance to Phase 2 (Facility Master Plan).
- Existing Facilities Evaluation and Condition Assessment
- Wastewater Treatment Alternatives Development and Evaluation
 - Liquids Alternatives
 - Solids Alternatives

JBL FPA Project Goals

1. Strengthen system resiliency to maintain reliable wastewater treatment over the long-term to reduce vulnerabilities and mitigate climate, regulatory, and operational risks.
2. Maximize reuse, both liquids and solids, for regional benefit while reducing effluent disposal risk.
3. Right-size treatment facilities for average and peak flow to develop an equitable Capital and O&M cost-sharing model for regional reliability.

Objective

Obtain PC2 Board input and feedback on the SOCWA JBL FPA project to-date, liquids and solids treatment alternatives, and draft evaluation criteria and weighting.



Review Project To-Date



Treatment Alternatives



Evaluation Criteria & Weighting

02



Review Project To-Date

Scope of Work

Task 1 Project Management

- Project initiation & closeout
- Scope, schedule, budget management

Task 2 Existing Facility Evaluation

- Flows and loading
- **Condition Assessment Report**
- Process modeling
- Existing facility analysis
- **Prepare Technical Memo**

Task 3 Wastewater Treatment Alternatives

- Risk and resilience planning
- Regulatory assessment
- Treatment technology screening
- Site planning evaluation
- Development of treatment alternatives
- **Prepare Technical Memo**

Task 4 Effluent Utilization Evaluation

- Reuse infrastructure assessment
- Development of effluent alternatives
- Cost-Benefit analysis
- Draft and final screening and evaluation criteria
- **Prepare Technical Memo**

Task 5 Project Alternatives

- Define evaluation criteria
- Development of recommended alternatives
- **Prepare Technical Memo**

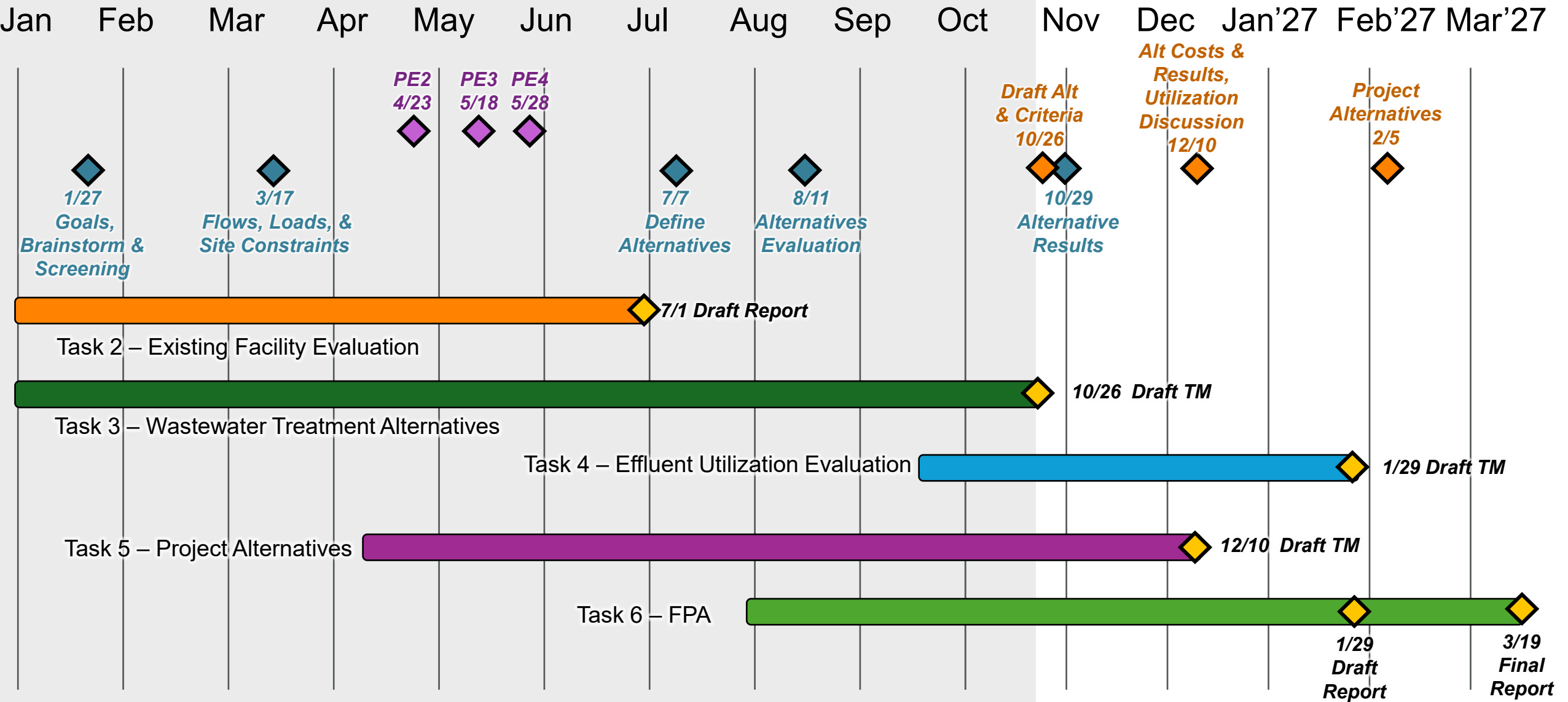
Task 6 Facility Planning Assessment

- **Prepare Draft Report**
- **Prepare Final Report**

JBL FPA Schedule

CTP Workshop
Board Discussion

Technical Memo / Report
Stakeholder Workshop



Condition Assessment of Existing

- Performed a high-level assessment of major structural, process-mechanical, and electrical facilities at JBL.
 - Visual site inspection
 - Input from plant operations staff
 - Reviewed available asset records and previous condition assessments.
- Evaluated condition, obsolescence, and remaining useful life to identify rehabilitation and replacement needs.
- Used the findings to determine which existing facilities could be retained, rehabilitated, repurposed, or replaced.
- Carried the results into the facility planning alternatives to support practical, cost-effective improvements and lifecycle cost development.

Headworks



Secondary Clarifier

Overall Site Liquids & Solids Condition Assessment

SOLIDS ASSETS

5 Years to Replace

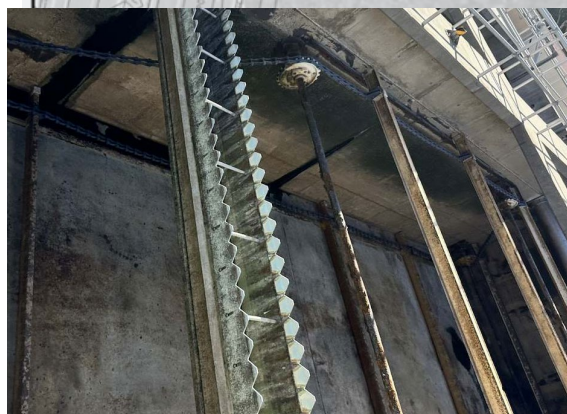
- Digester Heat Loops 1-4: Age and Corrosion
- Dewatering Centrifuges: Obsolete
- Flare: Corrosion
- WAS Pumps: Age
- Primary Sludge Pumps: Age

10 Years to Replace

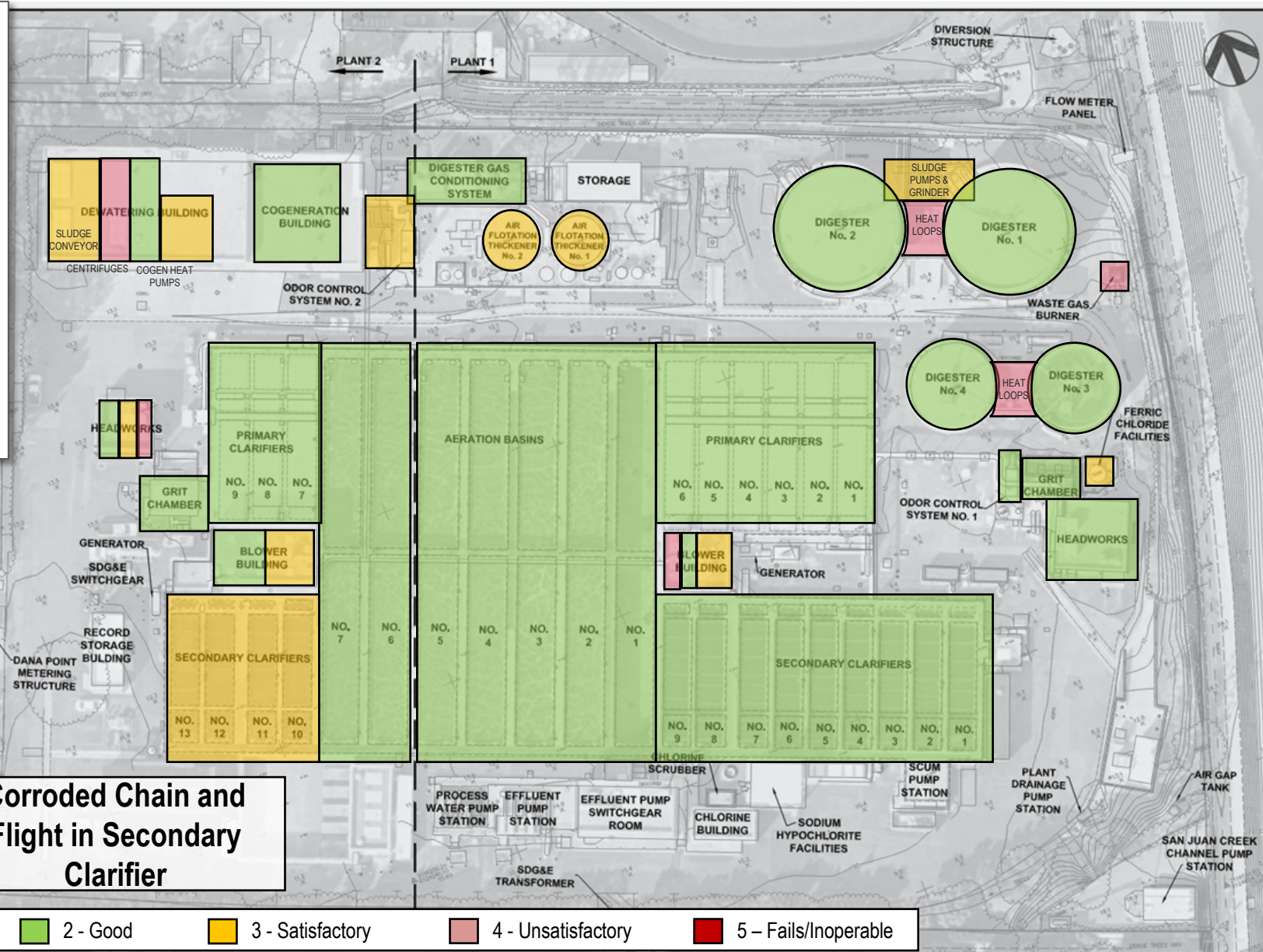
- Digested Sludge Pumps and Sludge Grinder: Age
- Solids Handling Conveyor 1-4: Age
- Ferric Chloride System: Age
- Odor Control Scrubber: Age

15 Years to Replace

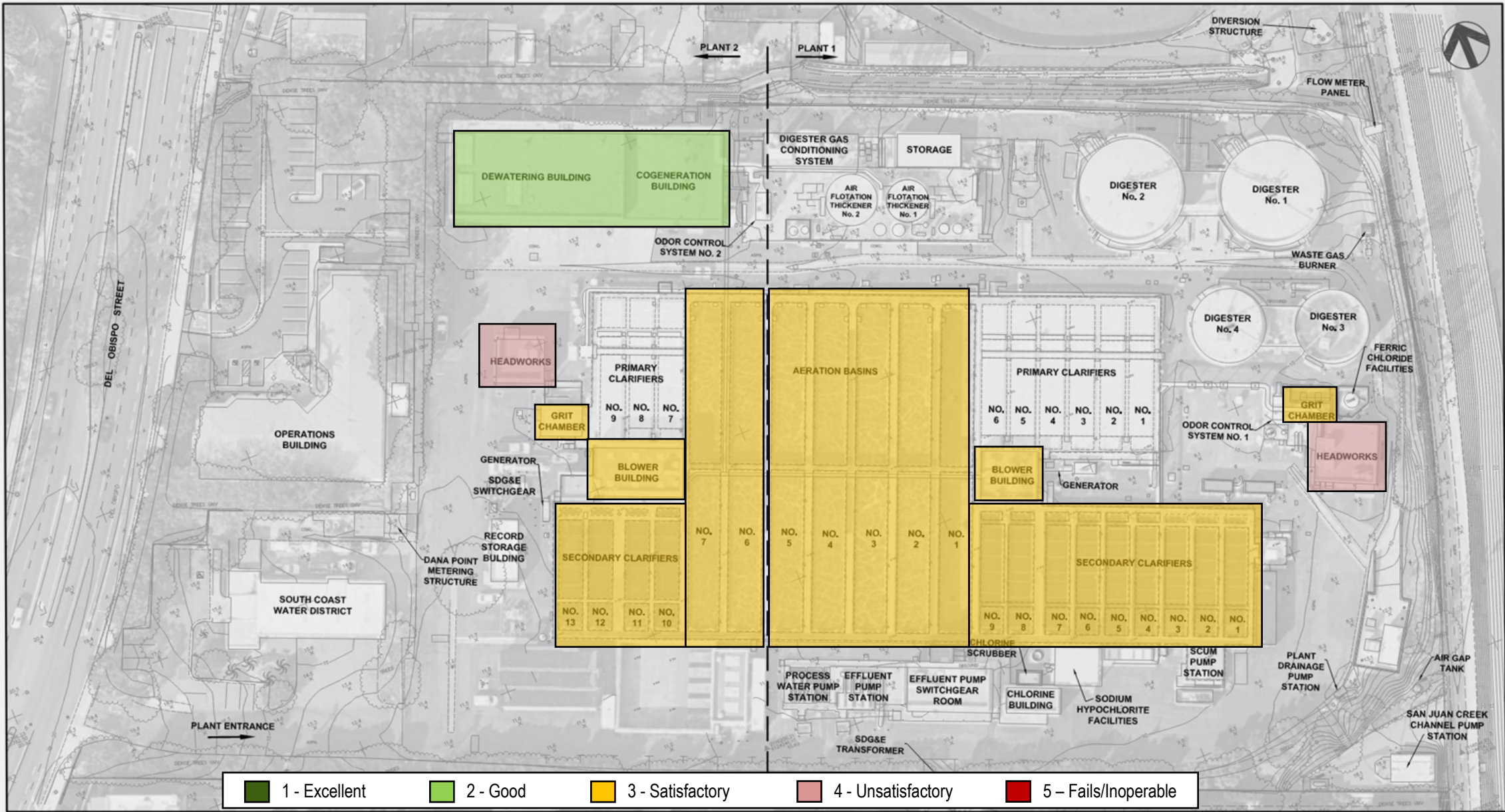
- Digesters 1-4: Age
- Cogen Heat Pumps: Age
- Cogen Gas Treatment System: Age
- Centrifuge Polymer System: Age



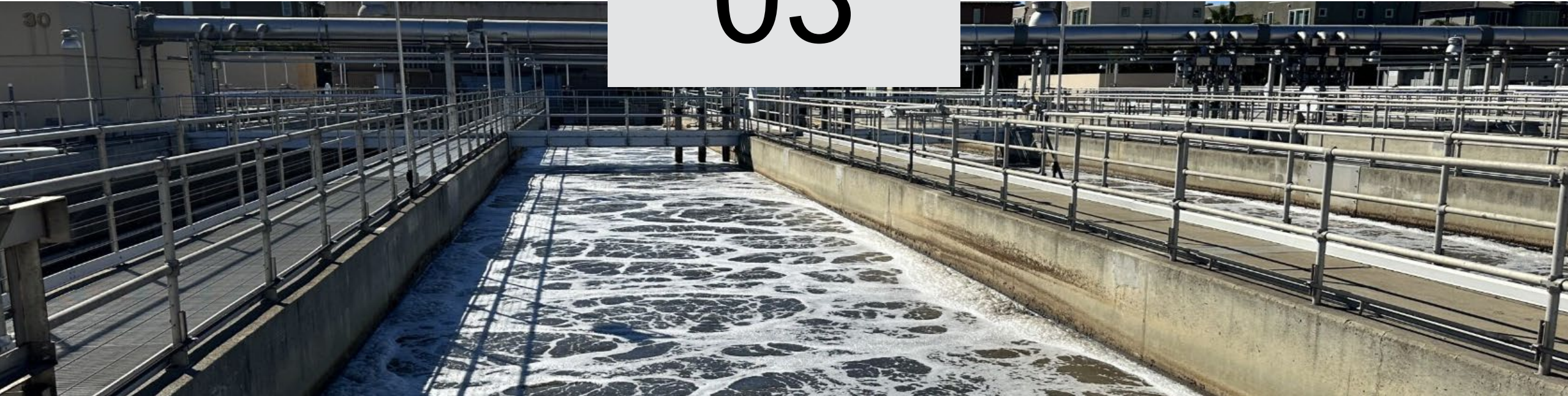
Corroded Chain and Flight in Secondary Clarifier



Overall Site Structural Condition Assessment



03



Liquids Alternatives Evaluation

JBL Liquids Treatment Drivers

Key needs guiding liquids treatment improvements.



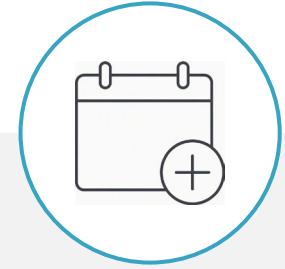
Condition & Operations

Address facility condition and operational challenges.



End-Use Requirements

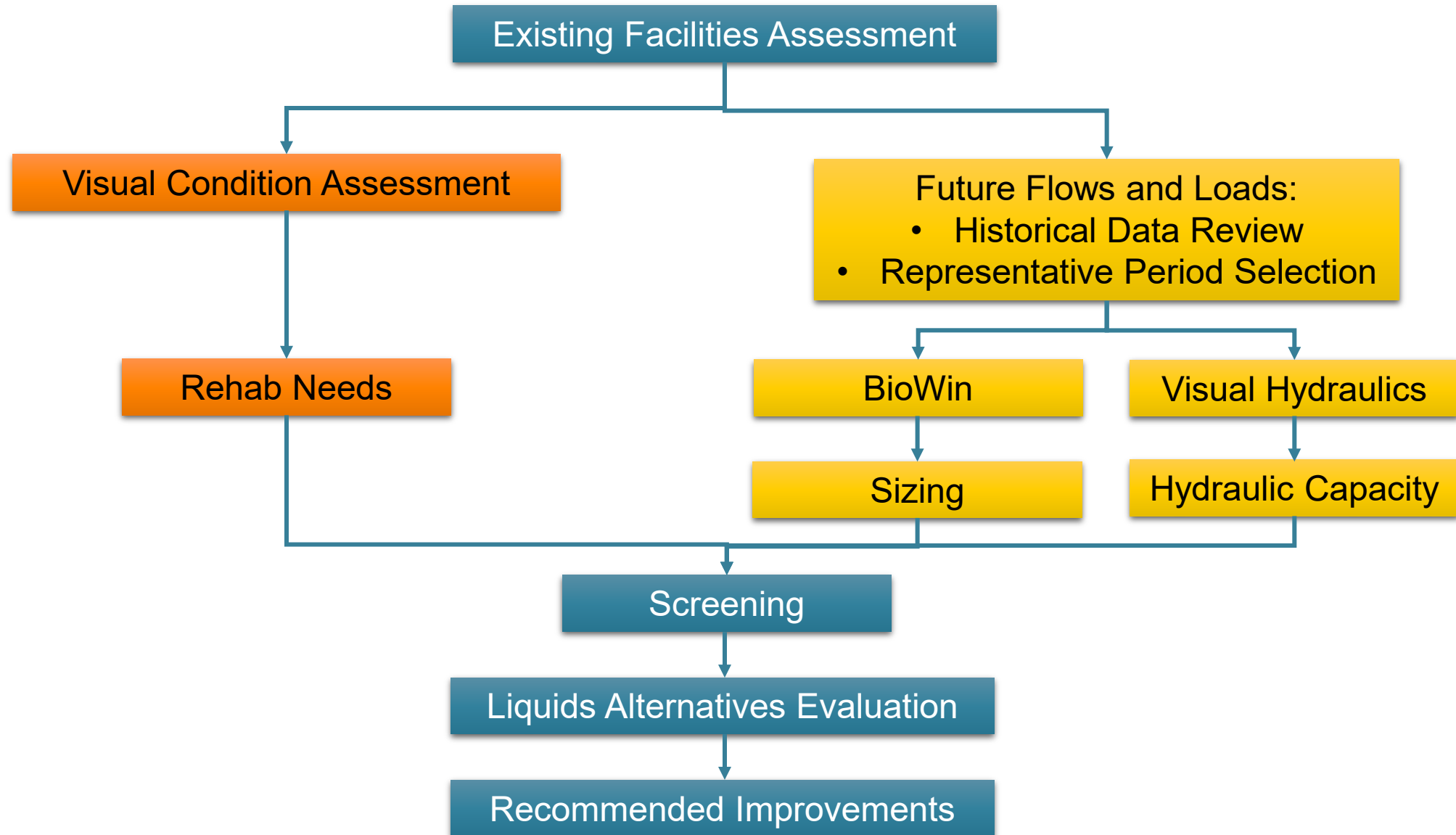
Provide treatment that meets waters end-use requirements.



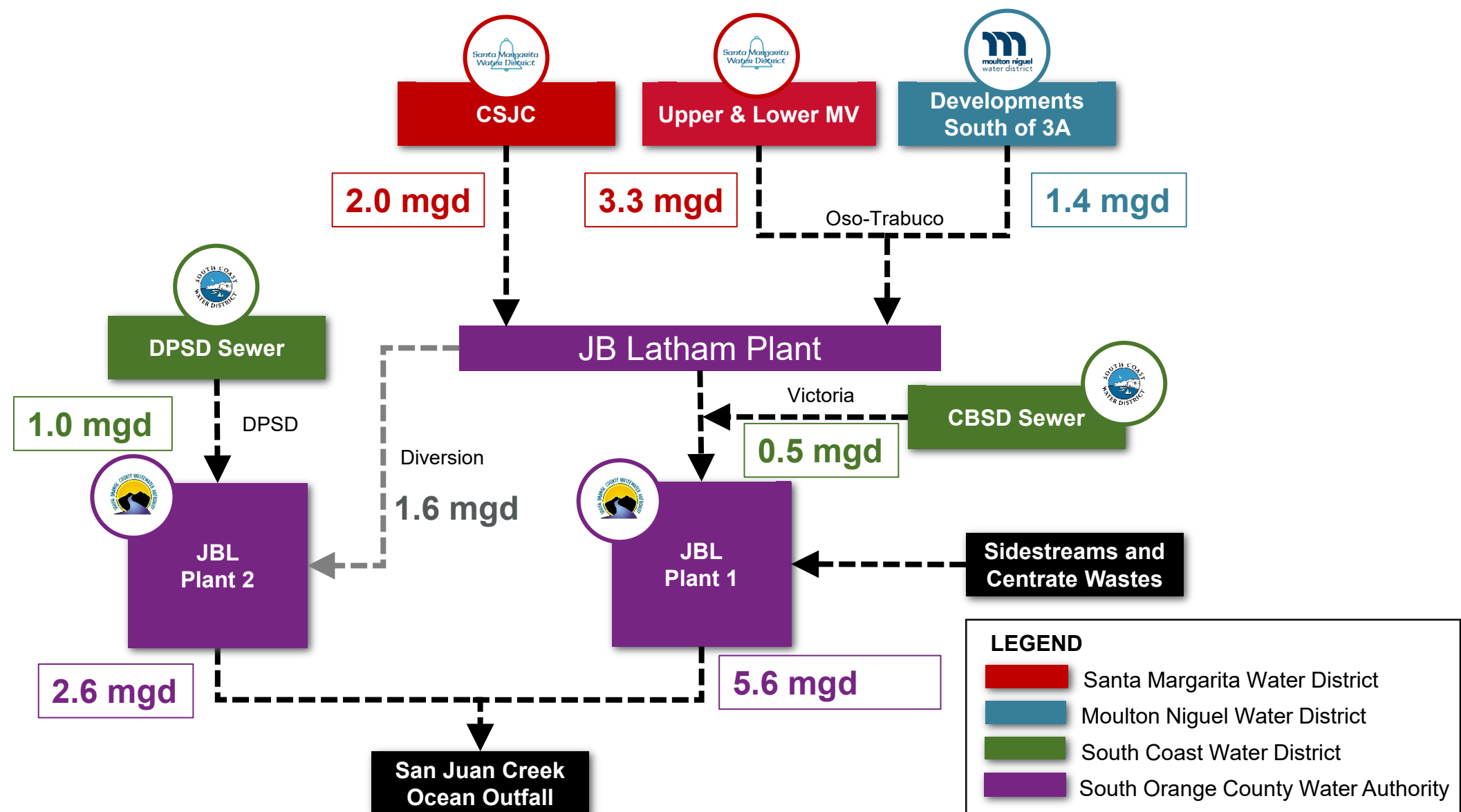
Right-Size Facility

Plan facility size and layout to add treatment for anticipated future needs.

Liquids Alternatives Planning Methodology

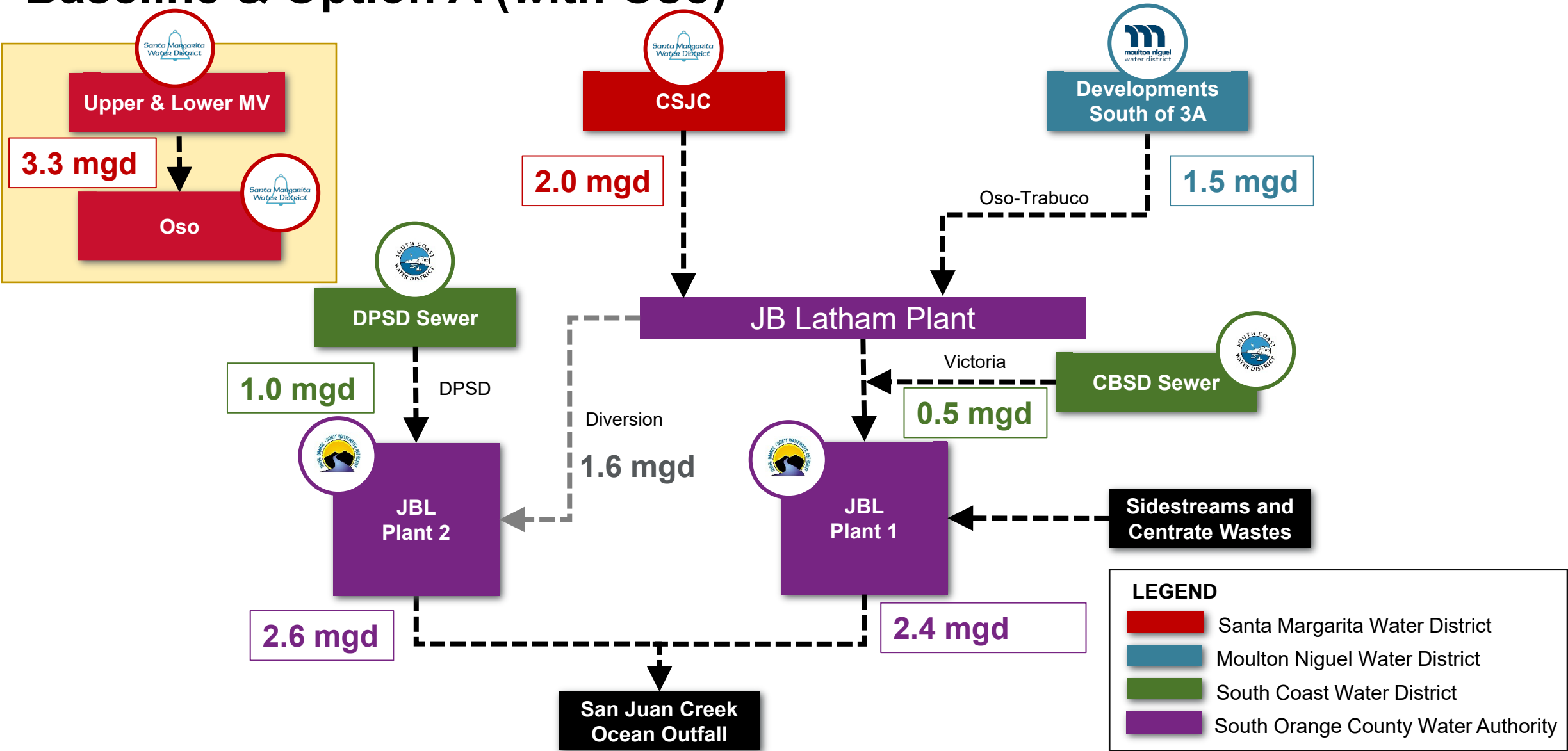


Current Member Agency Contributions to JBL



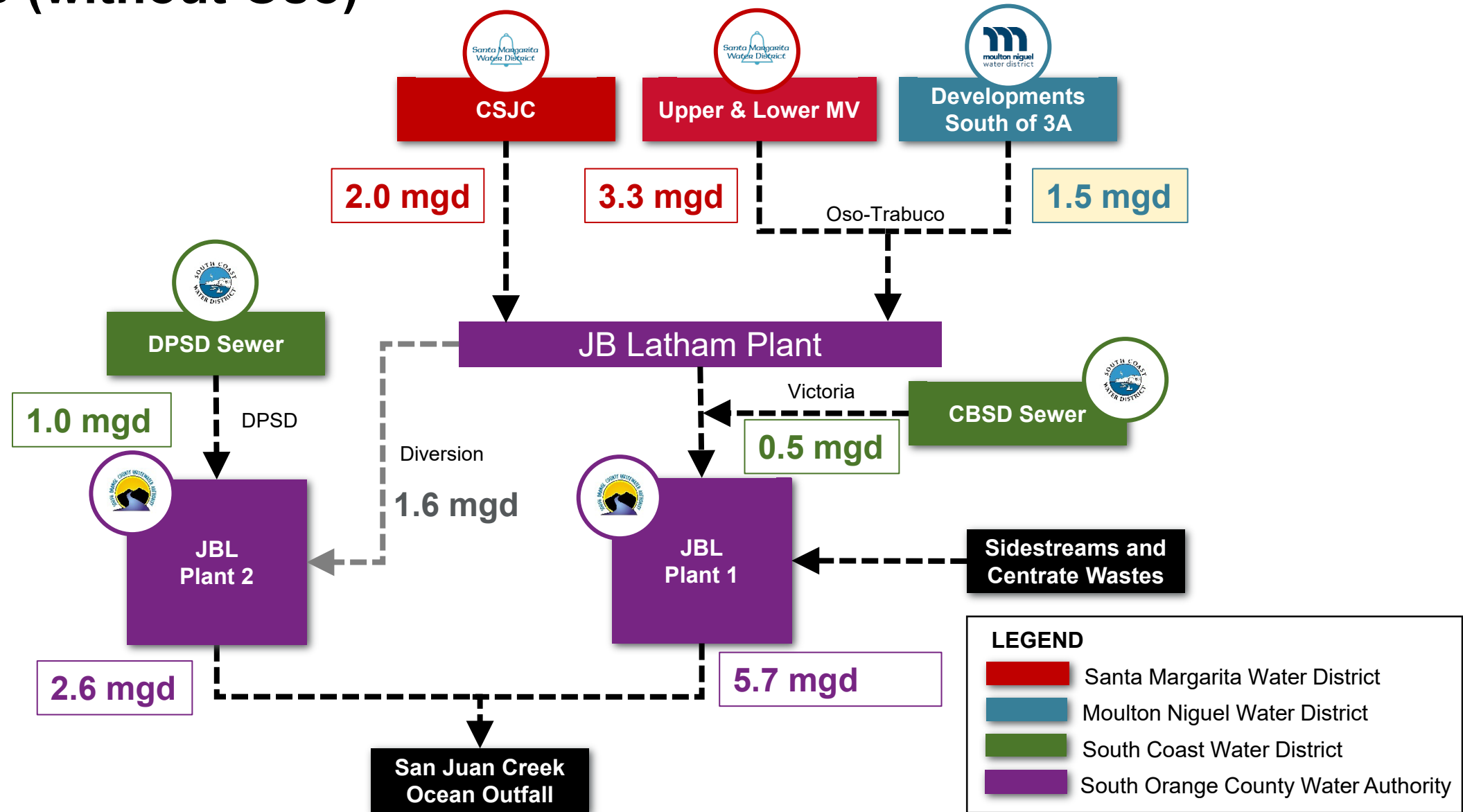
2024-2025 Agency Flows Dataset.
SMWD Upper and Lower MV Flows: Assume 3.25 mgd, rounded to 3.3 mgd, based on SMWD Master Plan.

Future Member Agency Contributions to JBL: Baseline & Option A (with Oso)



2024-2025 Agency Flows Dataset.
SMWD Upper and Lower MV Flows: Assume 3.25 mgd, rounded to 3.3 mgd, based on SMWD Master Plan.

Future Member Agency Contributions to JBL: Option B (without Oso)



2024-2025 Agency Flows Dataset.
SMWD Upper and Lower MV Flows: Assume 3.25 mgd, rounded to 3.3 mgd, based on SMWD Master Plan.

Baseline and JBL Treatment Alternative Flows

Option	Agency Sewage Flow to JBL (mgd)							OCWRP (mgd)	JBL Treatment (mgd)		
	SCWD (DPSD Sewer)	SCWD (CBSD Sewer)	MNWD	SMWD (Upper & Lower MV)	SMWD (CSJC)	Total Influent	OCWRP WAS	NPR (MBR)	Ocean Discharge (cBOD-Only)	NPR (Tertiary + Disinfection)	IPR / DPR (AWP)
Baseline (A.1)	1.0	0.5	1.5	0.0	2.0	5.0	✓	3.3	5.0	0.0	0.0
A - Option with OCWRP											
A.2	1.0	0.5	1.5	0.0	2.0	5.0	✓	3.3	3.0	2.0	0.0
B - Options without OCWRP											
B.2	1.0	0.5	1.5	3.3	2.0	8.3		0.0	6.3	2.0	0.0

Highlighted = Changes from Top Down

JBL Treatment Distinctions

- 1. Baseline and A.2: With Oso, JBL plant will receive WAS from Oso
- 2. A.2: 2.0 mgd Title 22 non-potable reuse at JBL (add tertiary and disinfection train)
- 3. B.2: Includes sewage from SMWD’s Upper and Lower MV (without Oso); therefore, higher ocean discharge to JBL

Technology Screening Considerations – Fatal Flaw Analysis

Criterion	Description
Technology Maturity	Is the technology established?
Land Requirements/Site Constraints	Can the technology fit onsite?
Permitting	Can the technology be permitted? Does the technology have potential to push District to Title V Air Permit?
Financial	Does the technology increase annual operating costs or increase capital projects (e.g., biosolids management, biogas production, struvite formation potential, etc)
Vendor Competition	Does the technology have multiple vendors or is it a sole-source technology?
End Use Diversification	Does the technology limit end use options and/or limit options to status quo?
Regulatory	Will the technology provide ability to meet potential future regulatory requirements

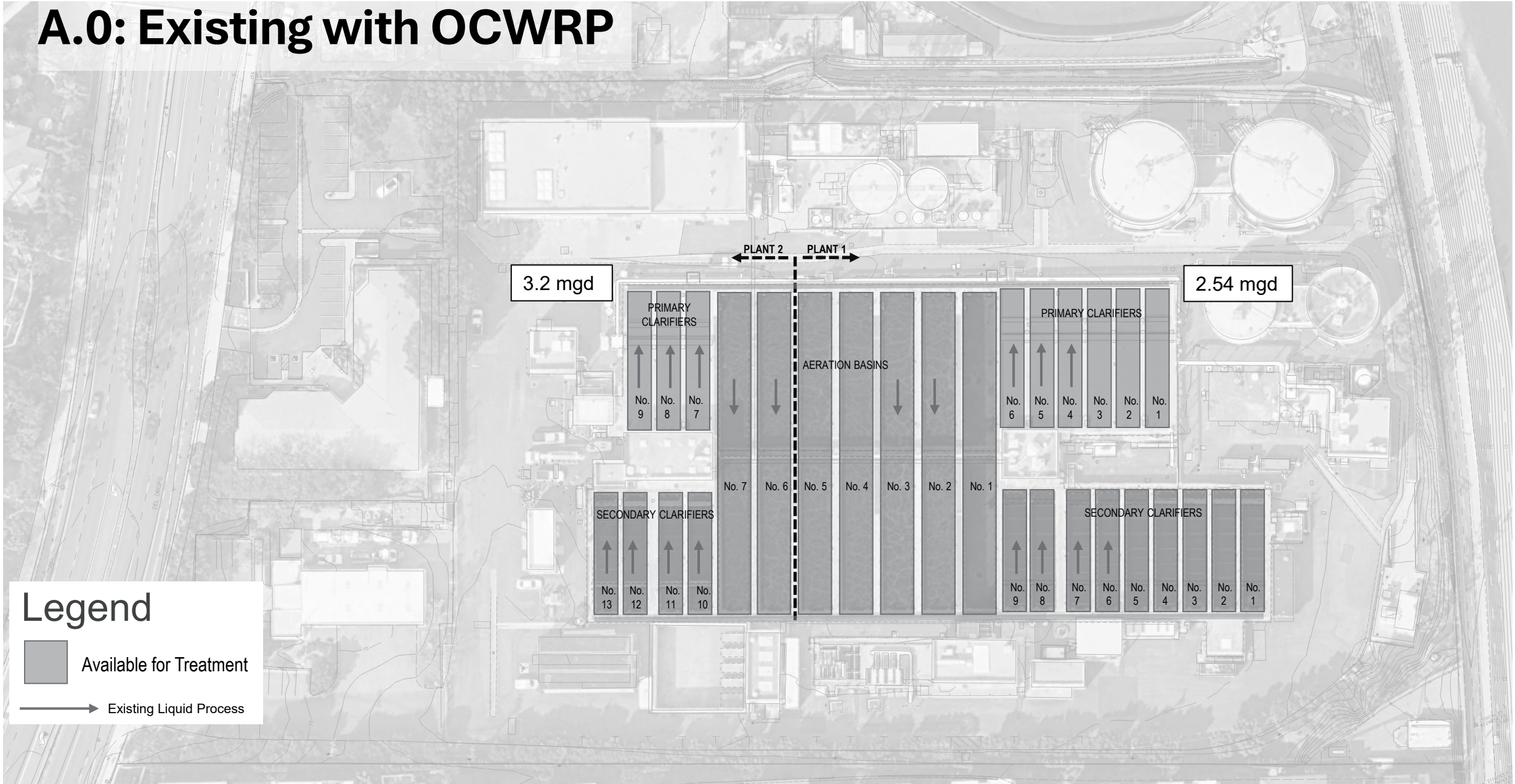
Model Alternatives Summary

Option	Ocean Discharge	Non-Potable Reuse	Total
E - Existing (Baseline)			
A.0 (A, with OCWRP)	5.3 mgd (cBOD)	-	5.3 mgd
B.0 (B, without OCWRP)	8.3 mgd (cBOD)	-	8.3 mgd
A - Options with OCWRP			
1A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
1A.2	3.3 mgd (cBOD)	2.0 mgd (MLE)	5.3 mgd
1A.3	3.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	5.3 mgd
1A.4	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
2A.4a	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.4b	3.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	5.3 mgd
B - Options without OCWRP			
1B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
1B.3	6.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	8.3 mgd
1B.4	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
2B.4a	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.4b	6.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	8.3 mgd

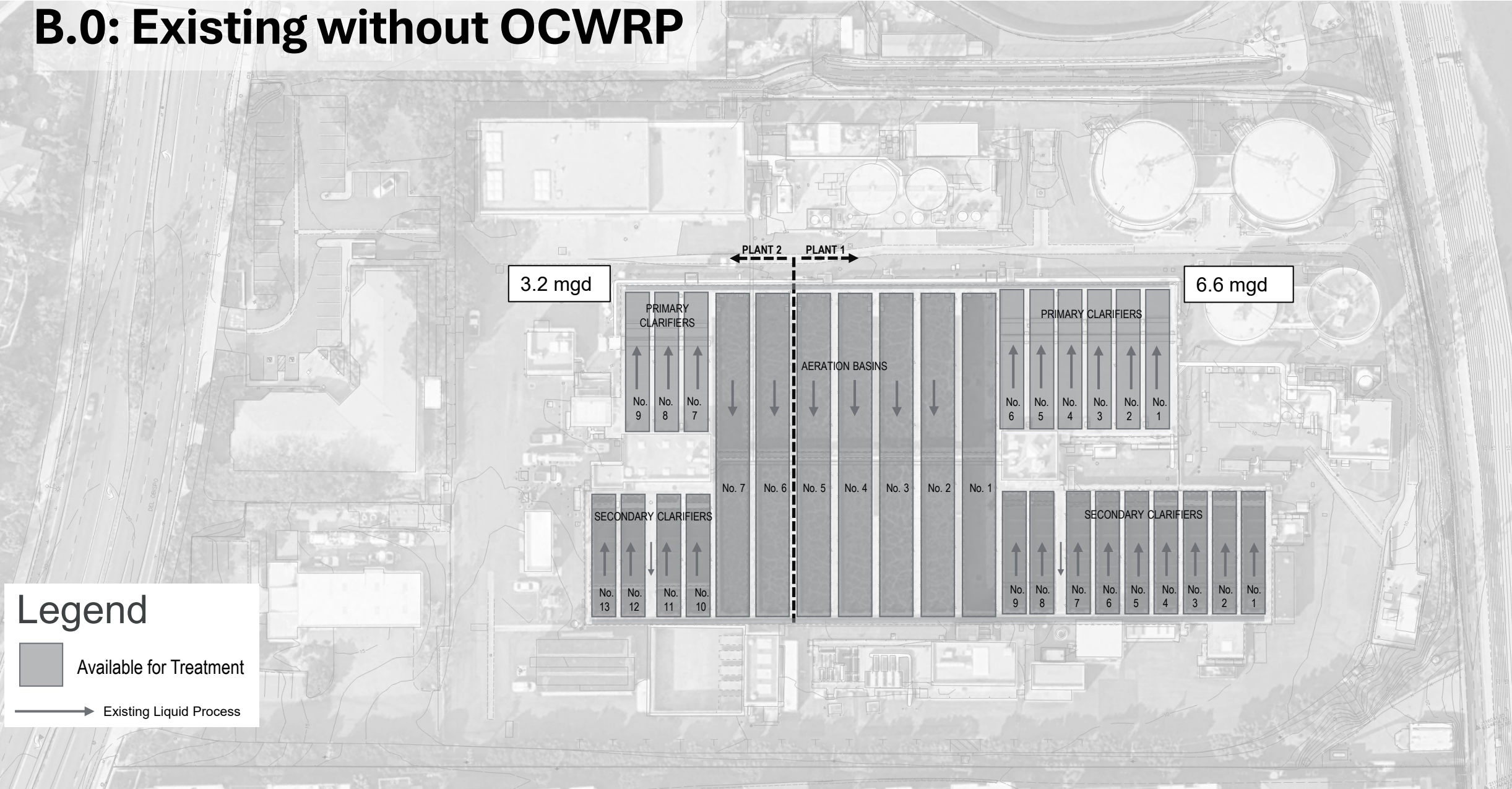
Model Alternatives Summary

Option	Ocean Discharge	Non-Potable Reuse	Total
E - Existing (Baseline)			
A.0 (A, with OCWRP)	5.3 mgd (cBOD)	-	5.3 mgd
B.0 (B, without OCWRP)	8.3 mgd (cBOD)	-	8.3 mgd
A - Options with OCWRP			
1A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
1A.2	3.3 mgd (cBOD)	2.0 mgd (MLE)	5.3 mgd
1A.3	3.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	5.3 mgd
1A.4	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
2A.4a	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.4b	3.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	5.3 mgd
B - Options without OCWRP			
1B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
1B.3	6.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	8.3 mgd
1B.4	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
2B.4a	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.4b	6.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	8.3 mgd

A.0: Existing with OCWRP



B.0: Existing without OCWRP



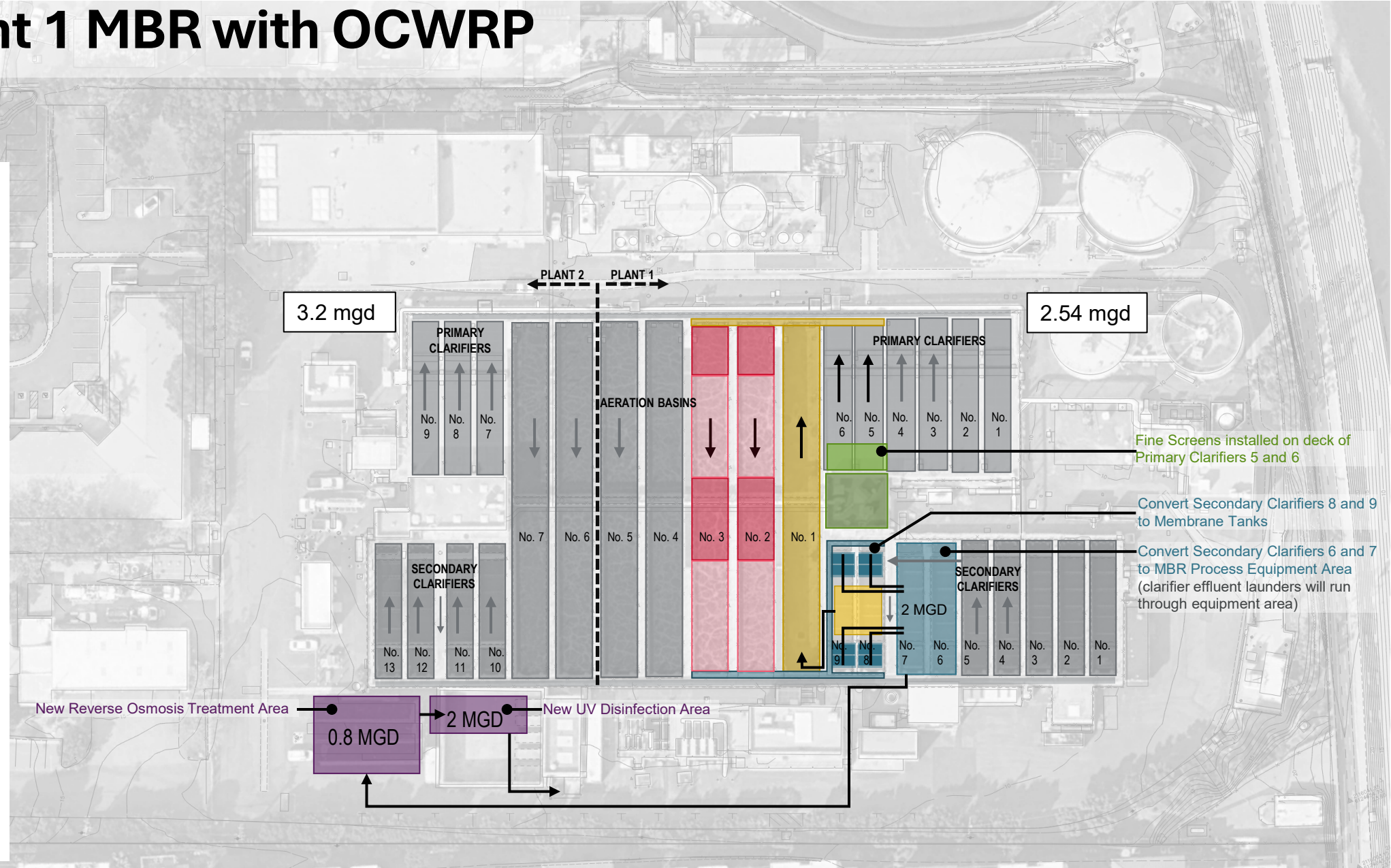
Model Alternatives Summary

Option	Ocean Discharge	Non-Potable Reuse	Total
E - Existing (Baseline)			
A.0 (A, with OCWRP)	5.3 mgd (cBOD)	-	5.3 mgd
B.0 (B, without OCWRP)	8.3 mgd (cBOD)	-	8.3 mgd
A - Options with OCWRP			
1A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
1A.2	3.3 mgd (cBOD)	2.0 mgd (MLE)	5.3 mgd
1A.3	3.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	5.3 mgd
1A.4	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
2A.4a	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.4b	3.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	5.3 mgd
B - Options without OCWRP			
1B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
1B.3	6.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	8.3 mgd
1B.4	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
2B.4a	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.4b	6.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	8.3 mgd

1A.1: Plant 1 MBR with OCWRP

Legend

- Fine Screens
- Upgrade Plant 1 Raw Sewage Pump Station
- Anoxic Zones
- Aerobic Zones
- RAS DeOx and Selector Zone
- MBR Tanks and MBR Support Structure
- RO + UV Disinfection
- Available for Treatment
- Unavailable for Treatment
- Modified Liquid Process
- Existing Liquid Process



1A.2: Plant 1 MLE with OCWRP

Legend

Anoxic Zones

Aerobic Zones

Upgrade WAS Pumps

Secondary Clarifier Upgrades

Tertiary Treatment

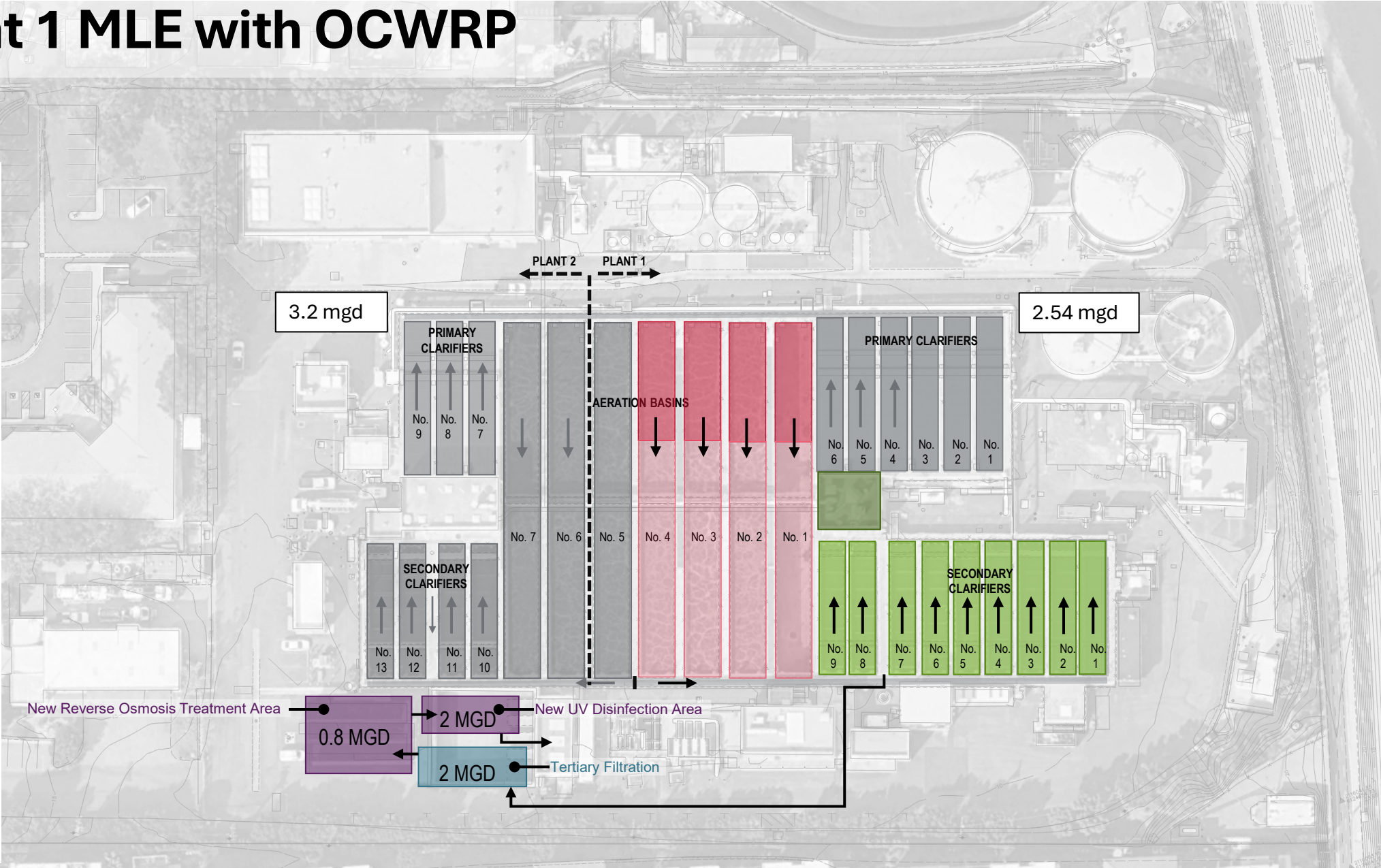
RO + UV Disinfection

Available for Treatment

Unavailable for Treatment

Modified Liquid Process

Existing Liquid Process



1A.3: Plant 1 MOB/IFAS with OCWRP

Legend

Anoxic with Media

Aerobic with Media

Upgrade WAS Pumps

Tertiary Microfiltration Area

RO + UV Disinfection

Available for Treatment

Unavailable for Treatment

Modified Liquid Process

Existing Liquid Process

The diagram illustrates the layout of Plant 1 MOB/IFAS with OCWRP, showing the flow of wastewater through various treatment stages. The plant is divided into two main sections, PLANT 2 and PLANT 1, separated by a dashed line.

PLANT 2 (Left Side):

- Primary Clarifiers:** Three units (No. 9, No. 8, No. 7) with a combined flow rate of 3.2 mgd.
- Secondary Clarifiers:** Four units (No. 13, No. 12, No. 11, No. 10).
- Aeration Basins:** Six units (No. 7, No. 6, No. 5, No. 4, No. 3, No. 2, No. 1).

PLANT 1 (Right Side):

- Primary Clarifiers:** Six units (No. 6, No. 5, No. 4, No. 3, No. 2, No. 1) with a combined flow rate of 2.54 mgd.
- Secondary Clarifiers:** Five units (No. 9, No. 8, No. 7, No. 6, No. 5).
- Upgrade WAS Pumps:** A green box indicating the location of upgraded pumps.

Flow and Treatment Areas:

- New Reverse Osmosis Treatment Area:** A purple box with a flow rate of 0.8 MGD.
- New UV Disinfection Area:** A purple box with a flow rate of 2 MGD.
- Tertiary Filtration:** A blue box with a flow rate of 2 MGD.
- Modified Liquid Process:** Indicated by solid black arrows.
- Existing Liquid Process:** Indicated by dashed black arrows.

Legend:

- Anoxic with Media:** Red box with white dots.
- Aerobic with Media:** Red box with black dots.
- Upgrade WAS Pumps:** Green box.
- Tertiary Microfiltration Area:** Blue box.
- RO + UV Disinfection:** Purple box.
- Available for Treatment:** Grey box.
- Unavailable for Treatment:** Light grey box.
- Modified Liquid Process:** Solid black arrow.
- Existing Liquid Process:** Dashed black arrow.

WAS upgrades include static screens to retain media (MOB)

1A.4a: Plant 1 Nitrification and Partial Denitrification with OCWRP

Legend

Anoxic Zones

Aerobic Zones

Secondary Clarifier Upgrades

Tertiary Treatment

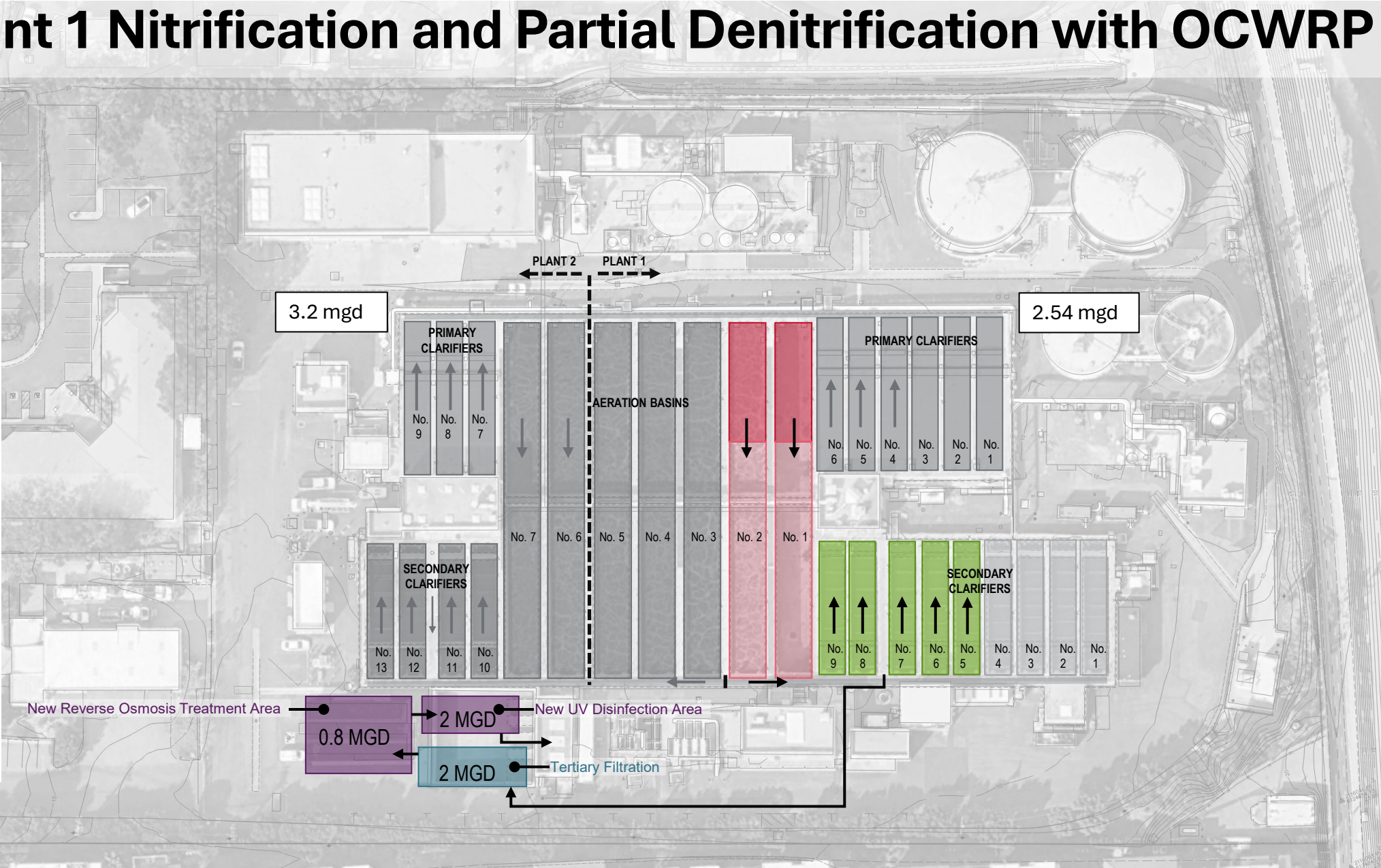
RO + UV Disinfection

Available for Treatment

Unavailable for Treatment

Modified Liquid Process

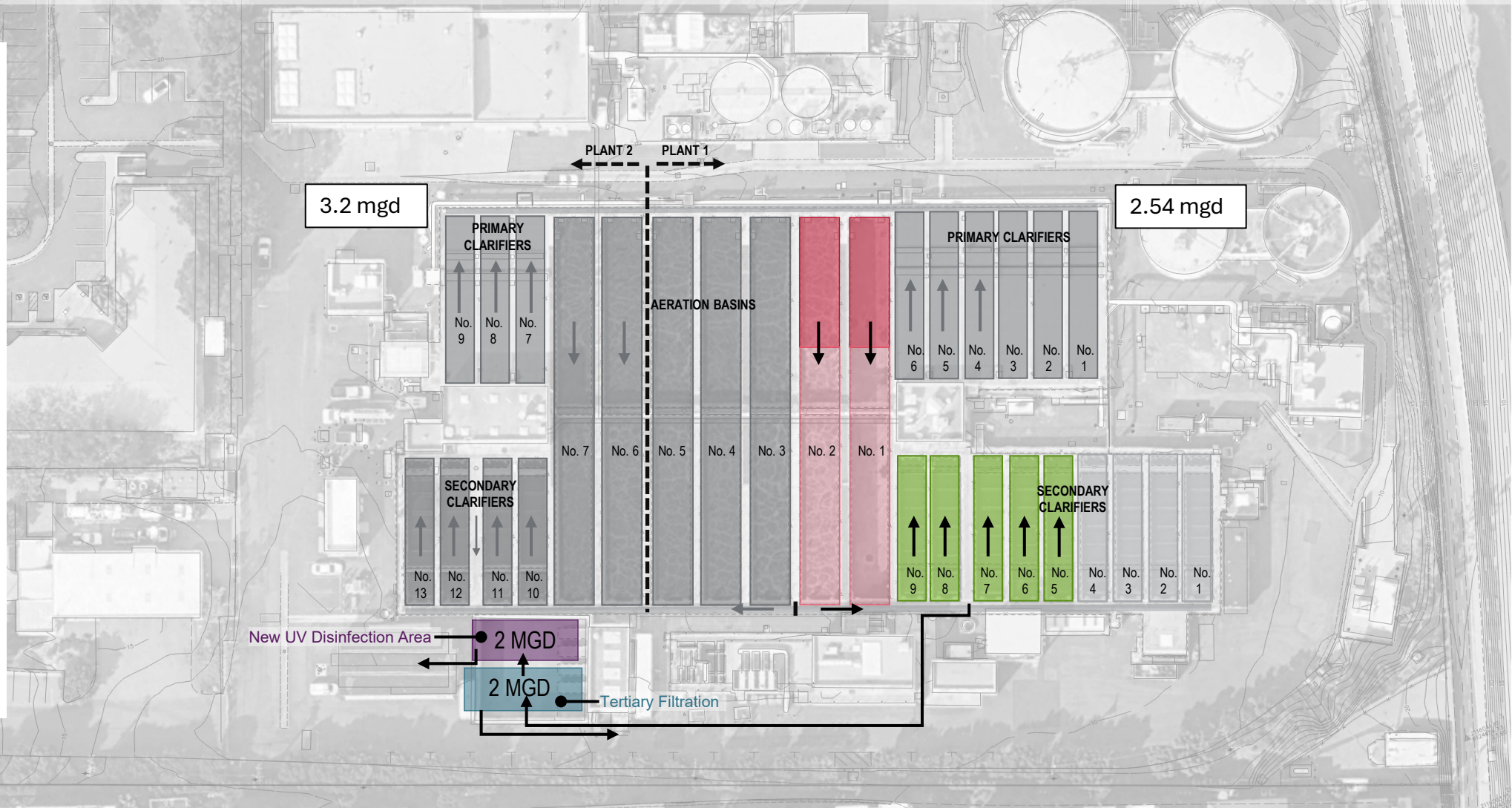
Existing Liquid Process



1A.4b: Plant 1 Nitrification and Partial Denitrification with OCWRP for Designated Use

Legend

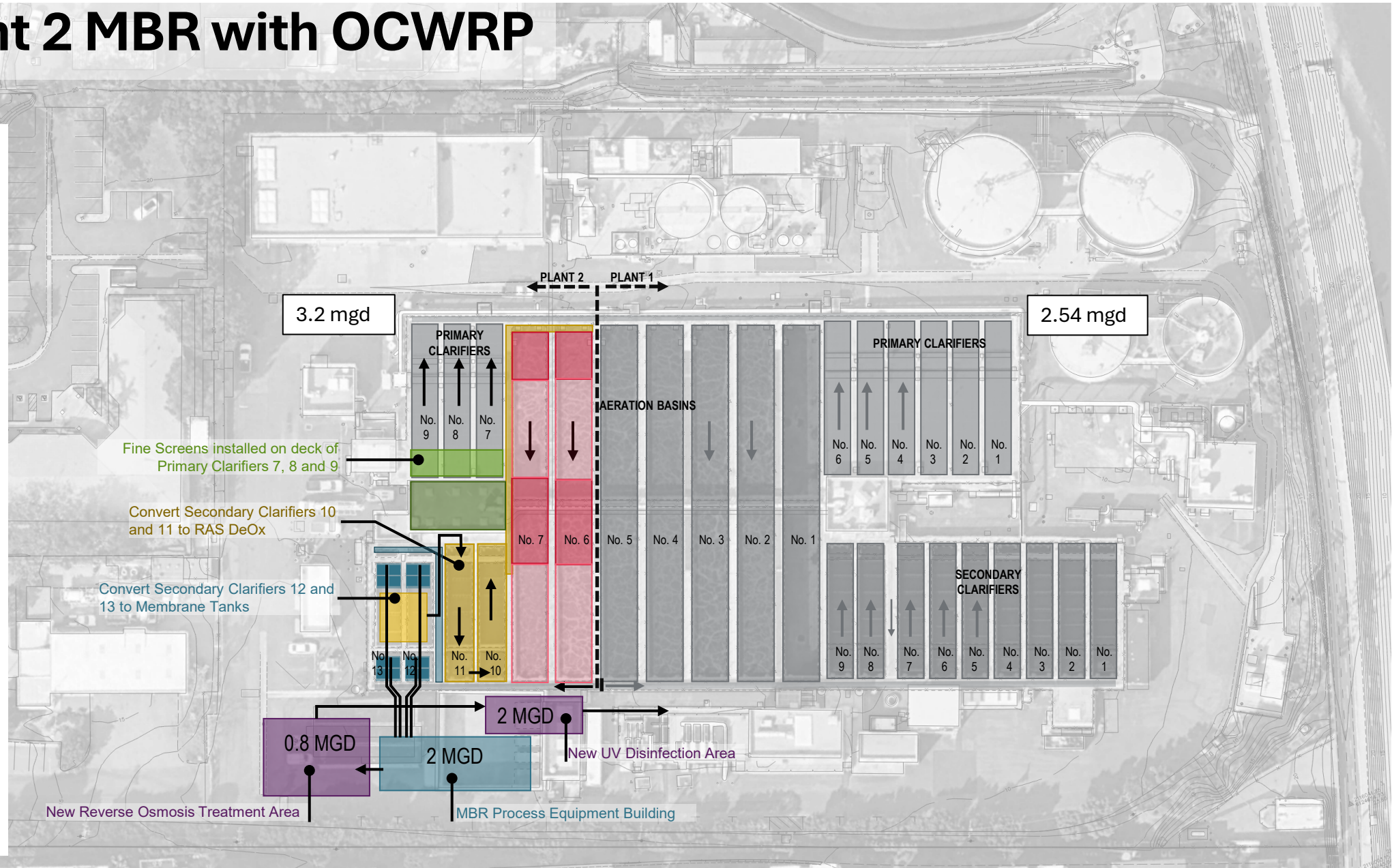
-  Anoxic Zones
-  Aerobic Zones
-  Secondary Clarifier Upgrades
-  Tertiary Treatment
-  RO + UV Disinfection
-  Available for Treatment
-  Unavailable for Treatment
-  Modified Liquid Process
-  Existing Liquid Process



2A.1: Plant 2 MBR with OCWRP

Legend

-  Fine Screens
-  Upgrade Plant 1 Raw Sewage Pump Station
-  Anoxic Zones
-  Aerobic Zones
-  RAS DeOx and Selector Zone
-  MBR Tanks and MBR Support Structure
-  RO + UV Disinfection
-  Available for Treatment
-  Unavailable for Treatment
-  Modified Liquid Process
-  Existing Liquid Process



2A.4a: Plant 2 Nitrification and Partial Denitrification with OCWRP

Legend

Anoxic Zones

Aerobic Zones

Secondary Clarifier Upgrades

Tertiary Treatment

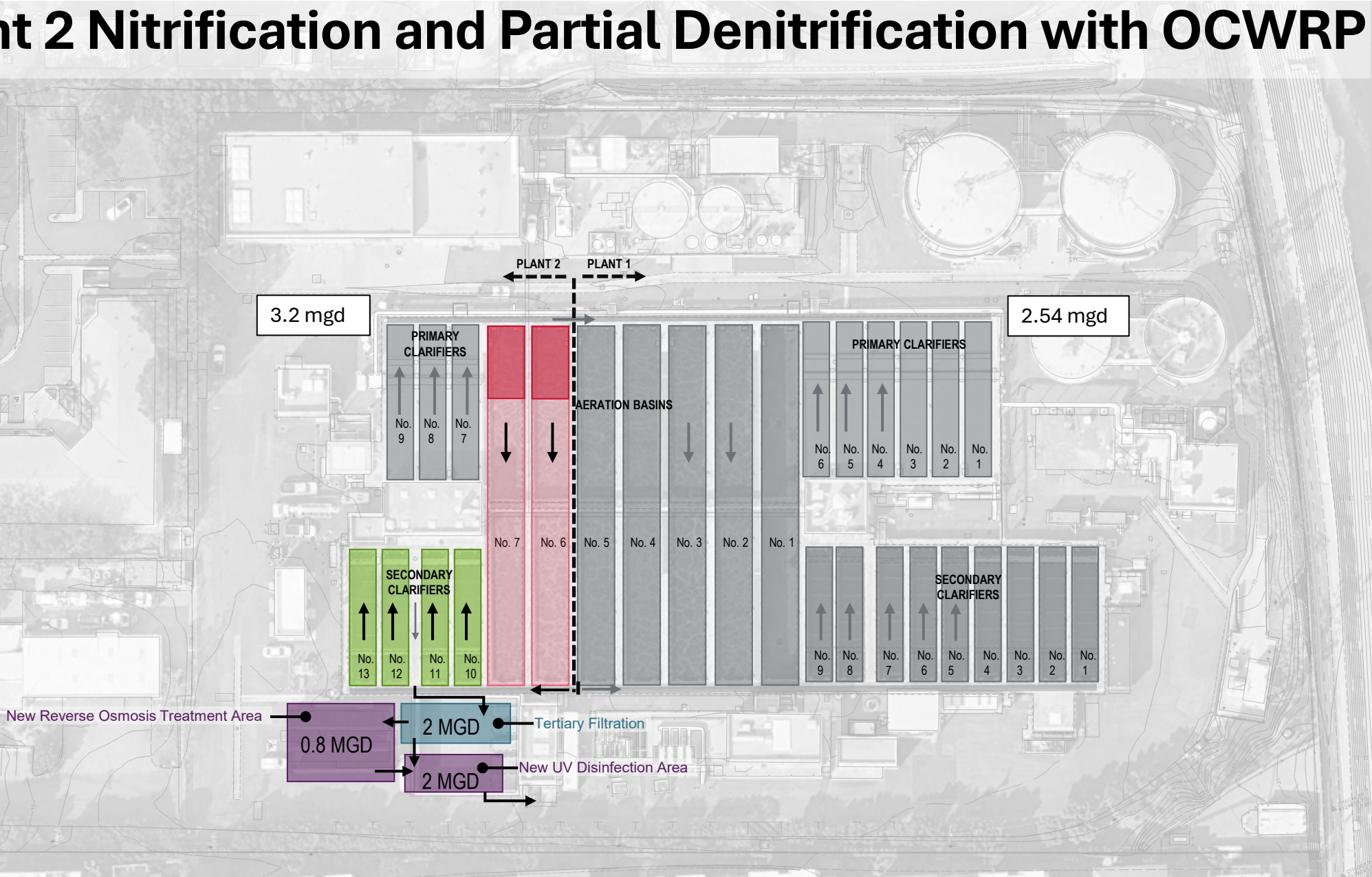
RO + UV Disinfection

Available for Treatment

Unavailable for Treatment

Modified Liquid Process

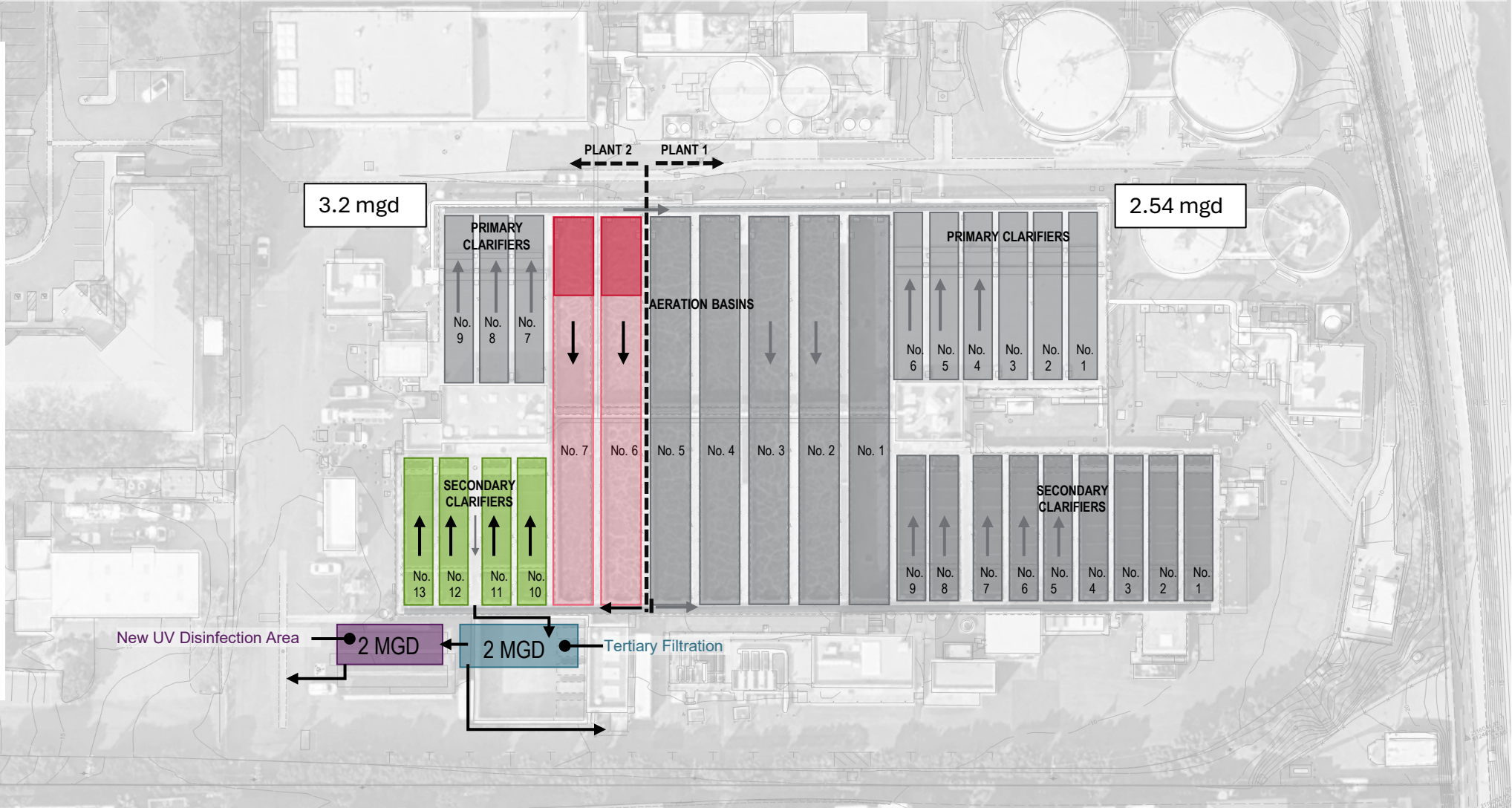
Existing Liquid Process



2A.4b: Plant 2 Nitrification and Partial Denitrification with OCWRP for Designated Use

Legend

- Anoxic Zones
- Aerobic Zones
- Secondary Clarifier Upgrades
- Tertiary Treatment
- RO + UV Disinfection
- Available for Treatment
- Unavailable for Treatment
- Modified Liquid Process
- Existing Liquid Process



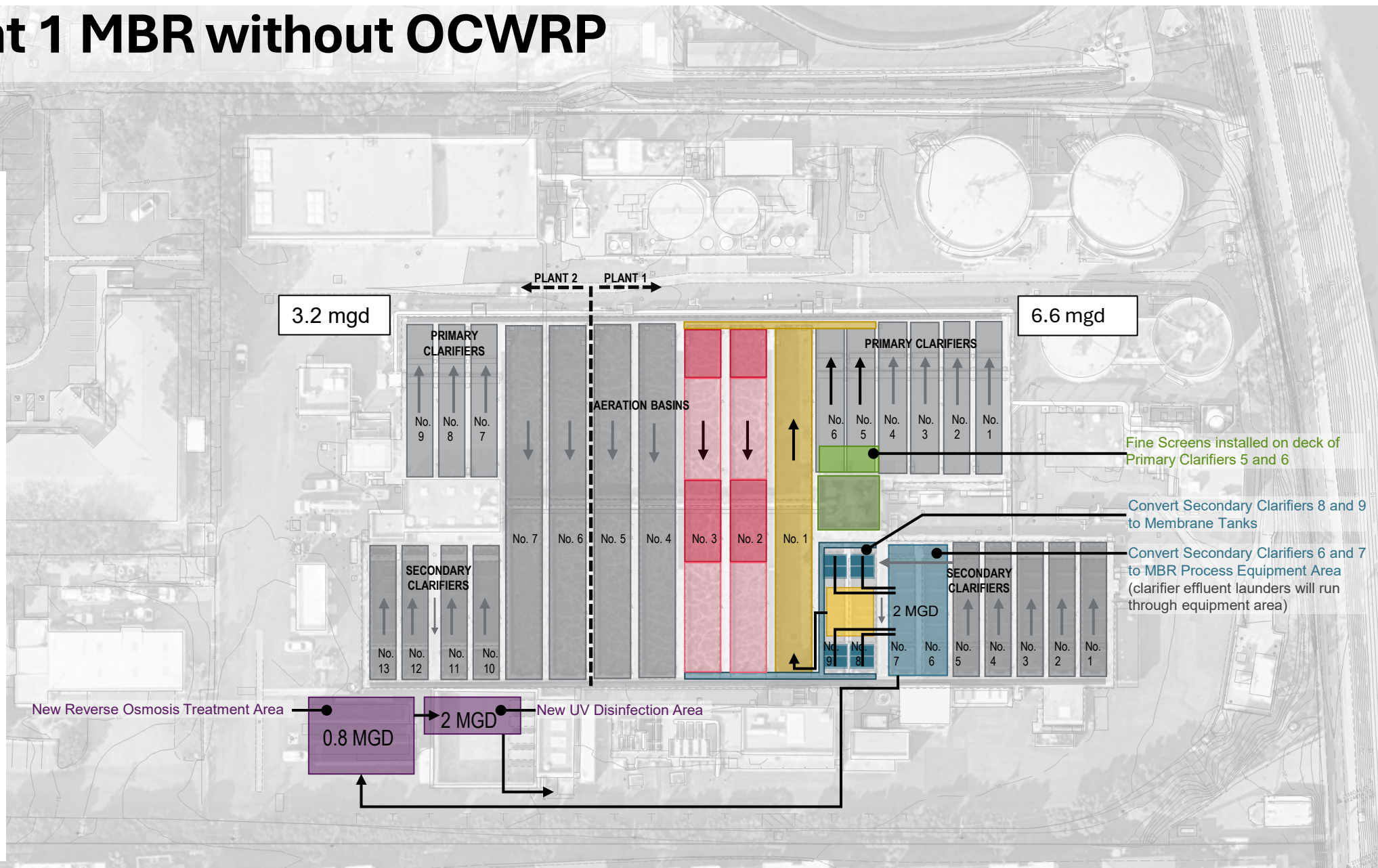
Model Alternatives Summary

Option	Ocean Discharge	Non-Potable Reuse	Total
E - Existing (Baseline)			
A.0 (A, with OCWRP)	5.3 mgd (cBOD)	-	5.3 mgd
B.0 (B, without OCWRP)	8.3 mgd (cBOD)	-	8.3 mgd
A - Options with OCWRP			
1A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
1A.2	3.3 mgd (cBOD)	2.0 mgd (MLE)	5.3 mgd
1A.3	3.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	5.3 mgd
1A.4	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
2A.4a	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.4b	3.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	5.3 mgd
B - Options without OCWRP			
1B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
1B.3	6.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	8.3 mgd
1B.4	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
2B.4a	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.4b	6.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	8.3 mgd

1B.1: Plant 1 MBR without OCWRP

Legend

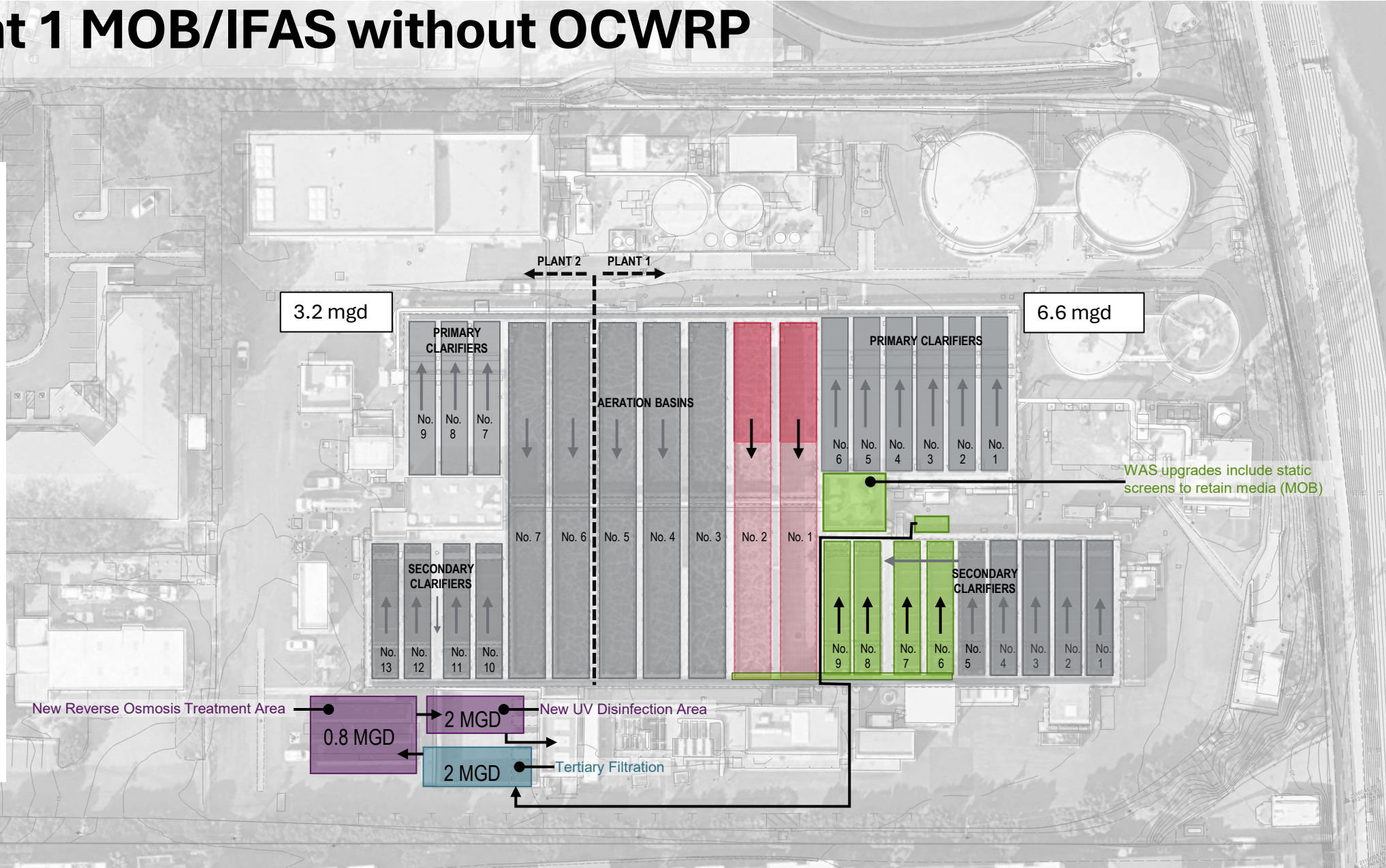
- Fine Screens
- Upgrade Plant 1 Raw Sewage Pump Station
- Anoxic Zones
- Aerobic Zones
- RAS DeOx and Selector Zone
- MBR Tanks and MBR Support Structure
- RO + UV Disinfection
- Available for Treatment
- Unavailable for Treatment
- Modified Liquid Process
- Existing Liquid Process



1B.3: Plant 1 MOB/IFAS without OCWRP

Legend

-  Anoxic with Media
-  Aerobic with Media
-  Upgrade WAS Pumps
-  Tertiary Microfiltration Area
-  RO + UV Disinfection
-  Available for Treatment
-  Unavailable for Treatment
-  Modified Liquid Process
-  Existing Liquid Process



1B.4a: Plant 1 Nitrification and Partial Denitrification without OCWRP

Legend

Anoxic Zones

Aerobic Zones

Secondary Clarifier Upgrades

Tertiary Treatment

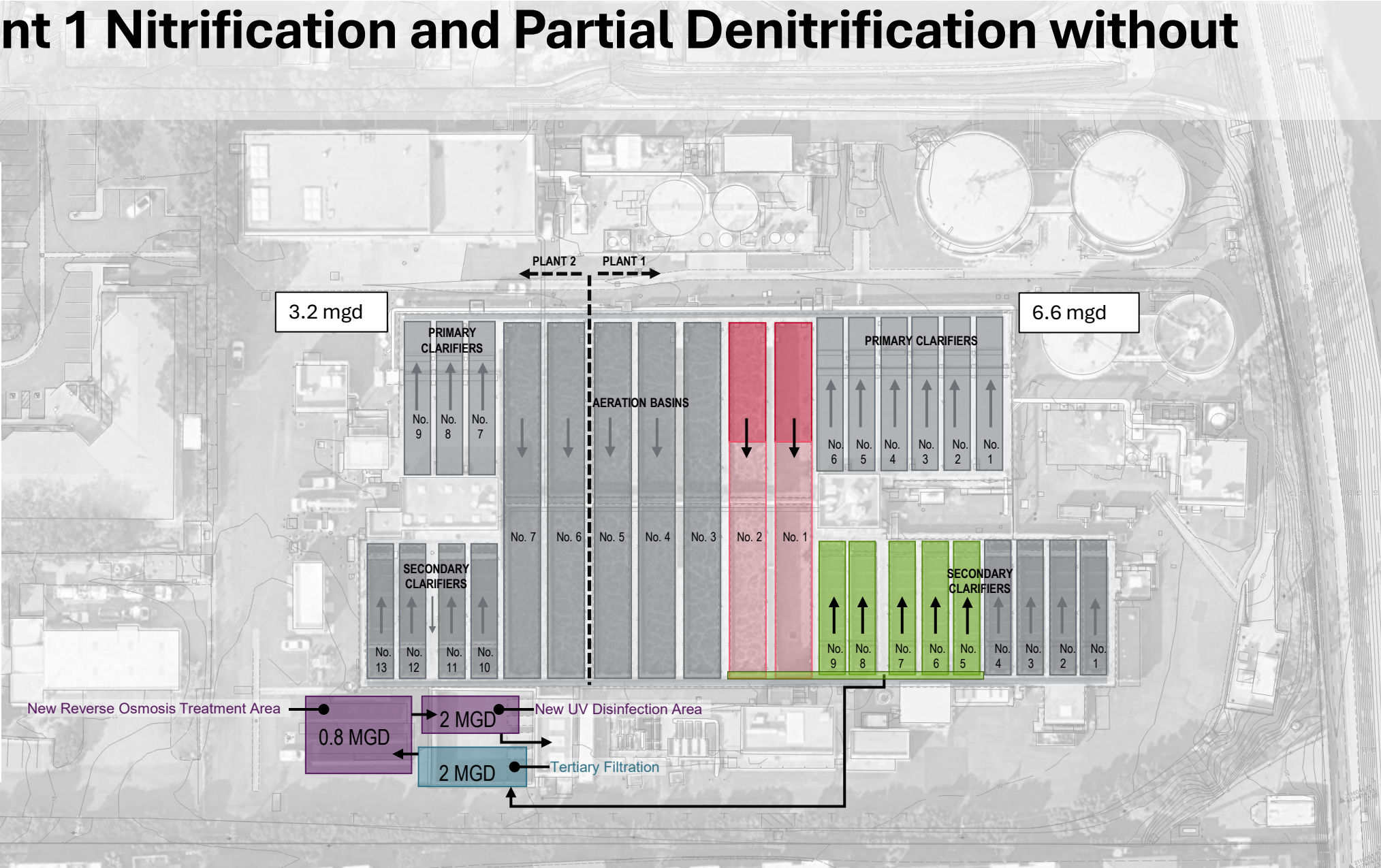
RO + UV Disinfection

Available for Treatment

Unavailable for Treatment

Modified Liquid Process

Existing Liquid Process



1B.4b: Plant 1 Nitrification and Partial Denitrification without OCWRP for Designated Use

Legend

Anoxic Zones

Aerobic Zones

Secondary Clarifier Upgrades

Tertiary Treatment

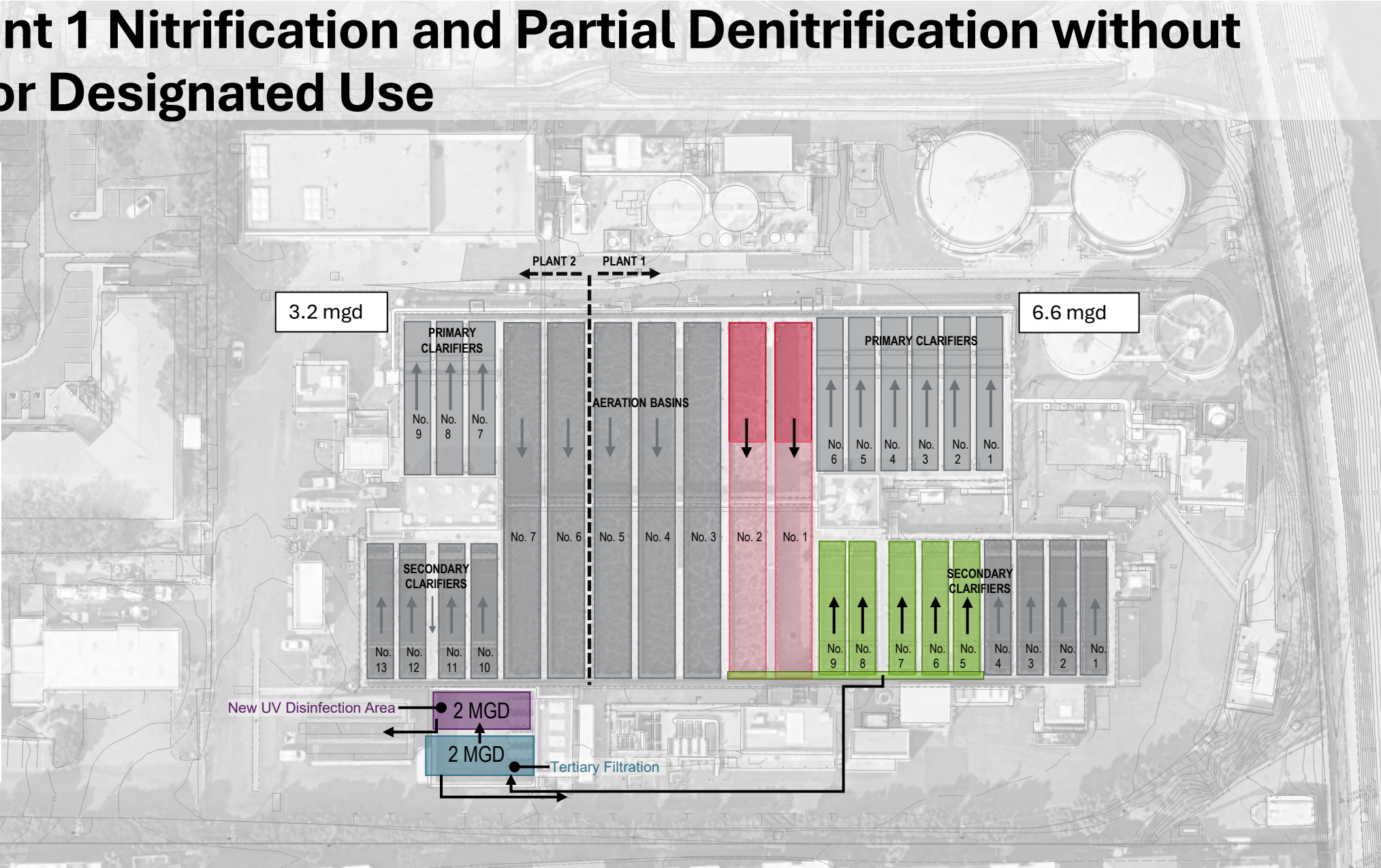
RO + UV Disinfection

Available for Treatment

Unavailable for Treatment

Modified Liquid Process

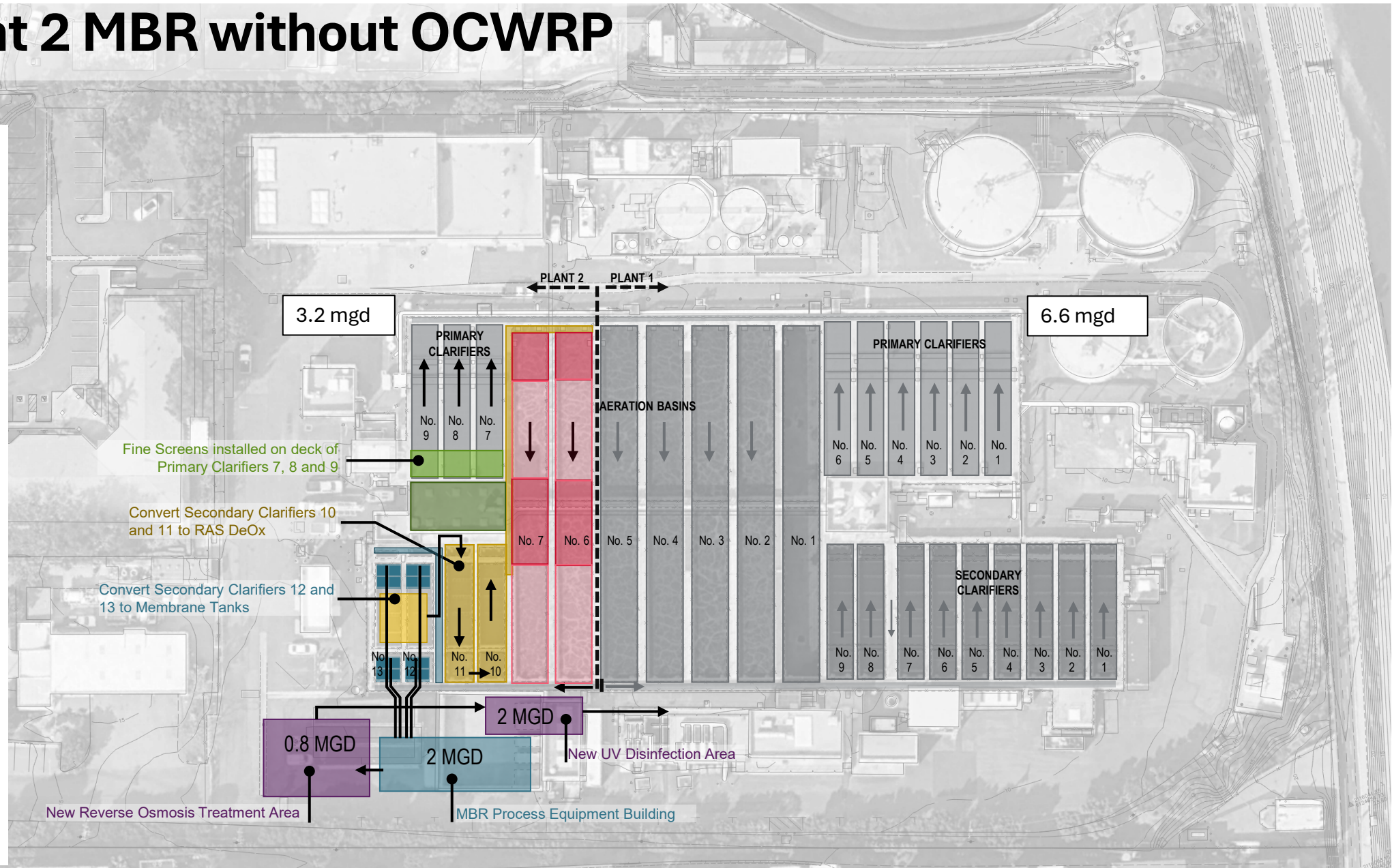
Existing Liquid Process



2B.1: Plant 2 MBR without OCWRP

Legend

-  Fine Screens
-  Upgrade Plant 1 Raw Sewage Pump Station
-  Anoxic Zones
-  Aerobic Zones
-  RAS DeOx and Selector Zone
-  MBR Tanks and MBR Support Structure
-  RO + UV Disinfection
-  Available for Treatment
-  Unavailable for Treatment
-  Modified Liquid Process
-  Existing Liquid Process



Model Alternatives Summary

Option	Ocean Discharge	Non-Potable Reuse	Total
E - Existing (Baseline)			
A.0 (A, with OCWRP)	5.3 mgd (cBOD)	-	5.3 mgd
B.0 (B, without OCWRP)	8.3 mgd (cBOD)	-	8.3 mgd
A - Options with OCWRP			
1A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
1A.2	3.3 mgd (cBOD)	2.0 mgd (MLE)	5.3 mgd
1A.3	3.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	5.3 mgd
1A.4	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.1	3.3 mgd (cBOD)	2.0 mgd (MBR)	5.3 mgd
2A.4a	3.3 mgd (cBOD)	2.0 mgd (Nitrif)	5.3 mgd
2A.4b	3.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	5.3 mgd
B - Options without OCWRP			
1B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
1B.3	6.3 mgd (cBOD)	2.0 mgd (MOB/IFAS)	8.3 mgd
1B.4	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.1	6.3 mgd (cBOD)	2.0 mgd (MBR)	8.3 mgd
2B.4a	6.3 mgd (cBOD)	2.0 mgd (Nitrif)	8.3 mgd
2B.4b	6.3 mgd (cBOD)	2.0 mgd (Nitrif, Designated Use)	8.3 mgd

Add'l Consideration: Maximize RW Production w/ Conventional Treatment

Treatment Process:

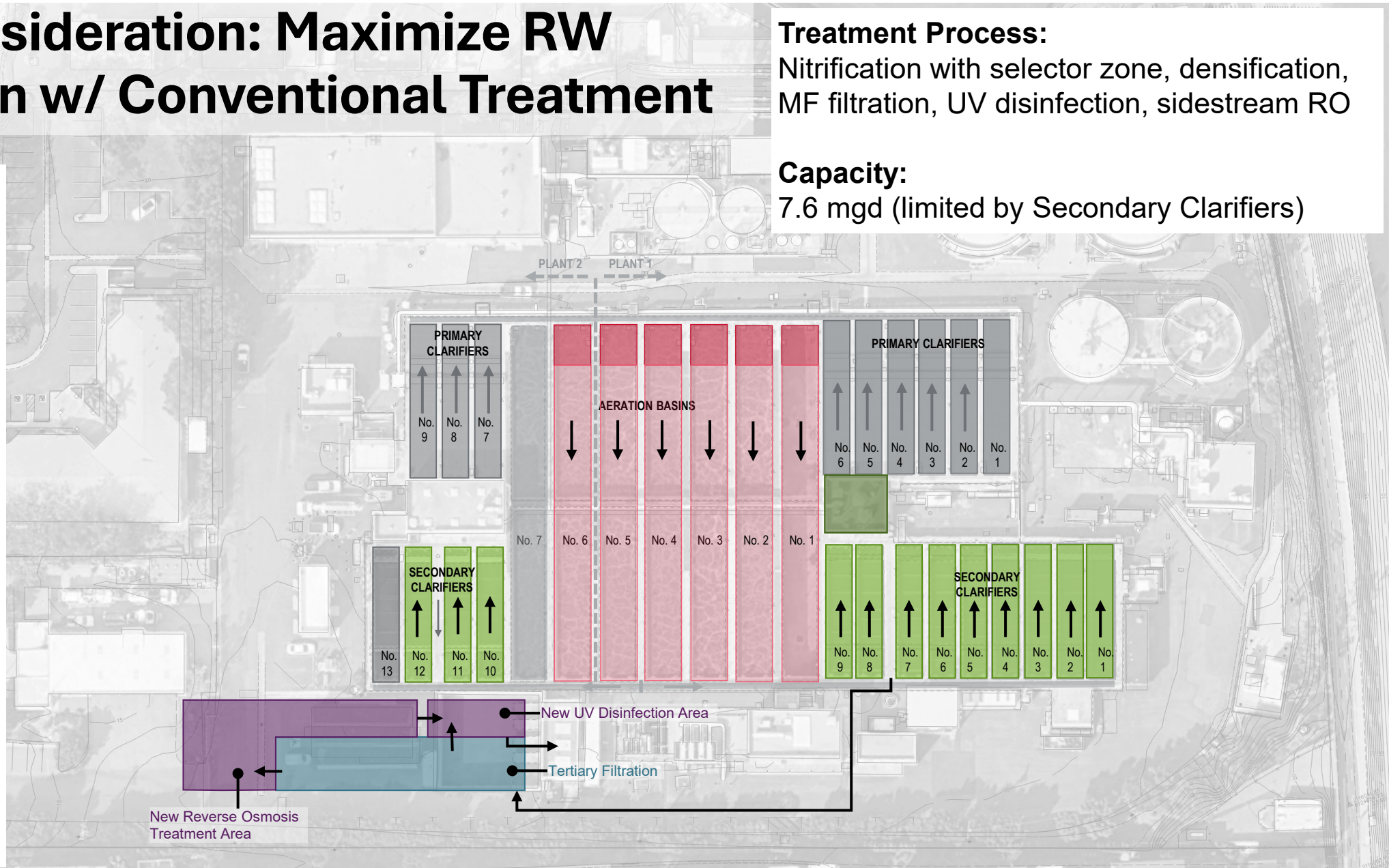
Nitrification with selector zone, densification, MF filtration, UV disinfection, sidestream RO

Capacity:

7.6 mgd (limited by Secondary Clarifiers)

Legend

-  Anoxic Zones
-  Aerobic Zones
-  Upgrade WAS Pumps
-  Secondary Clarifier Upgrades
-  Tertiary Treatment
-  RO + UV Disinfection
-  Available for Treatment
-  Unavailable for Treatment
-  Modified Liquid Process
-  Existing Liquid Process



Discipline	FY26/27 CIP Workplan Planned Capital Improvements	2026 FPA R&R	Past Studies R&R
Electrical	- MCC A-1 - MCC-M - Plant 1 Generator - MCC-2 - MCC-CF - Misc. Electrical Updates in Plant 2 Headworks Rehabilitation	- Confirm building classification - MCC-EA1 - MCC-A-1 - EMCC-J1 - ESBD-J - MCC-J - Replace MCC-F - Replace MCC-1	Assets incorporated under FY26/27 CIP Workplan
Structural	- Plant 2 Headworks - Energy Building Roof Upgrades	- Rehabilitate Plant 1 Headworks: - Delaminated protective coatings and exposed aggregate - Rehabilitate Plant 1 and 2 secondary clarifiers - Concrete deterioration - Rehabilitate Plant 1 and 2 RSPS/Blower Building - Localized coating failures and corrosion - Rehabilitate Aeration Tanks/Grit basin - Failed protective coatings sand corrosion - Rehabilitate Grit Chamber - Corrosion	- Plant 1 and 2 Primary Clarifier - Repair cracks, leakage, deteriorated concrete, and areas of exposed concrete - Digester 1 and 2 - Repair localized concrete and pipe corrosion and rehabilitate protective coatings
Process Mechanical	- Plant 1 Grit Upgrades - Effluent Pump Station and Energy Building Upgrades	- Replace Aerzen Turbo Blowers - Plant 2 Secondary Clarifier - Corrosion on chain and flight system, replace - Replace centrifuges	- Replace WAS Pumps - Replace RAS Pumps

R&R Project Costs

Project Name	FY26/27 CIP Workplan	Ten-Year Capital Improvement Program 2019-2028
MCC M and Plant 1 Generator Replacement	\$4,232,843	-
Plant 1 Grit, MCC A-1, and Blower Building Upgrades	\$6,256,220	-
Effluent Pump Station Upgrades	\$1,877,000	-
Plant 2 Headworks Rehabilitation	\$1,500,000	-
Energy Building Roof Upgrades	\$1,163,000	-
Gas Flare Replacement	\$1,500,000	-
Digester 3 and 4 Upgrades and Coating	\$1,000,000	-
MCC 2 and CF Replacement	-	\$761,000 (Year '21/'22)
MCC-A-1 Replacement	-	\$581,000 (Year '22/'23)
Plant 1 Headworks Upgrade	-	\$2,006,000 (Year '25/'26)
Dewatering System Replacement	-	\$5,080,000 (Year '25/'26)
Plant 1 RAS Pump Station Upgrade	-	\$1,781,000 (Year '22/'23)
Plant 2 RAS Pump Station Upgrade	-	\$1,293,000 (Year '28/'29)
Dewatering Polymer System Upgrade	-	\$341,000 (Year '26/'27)

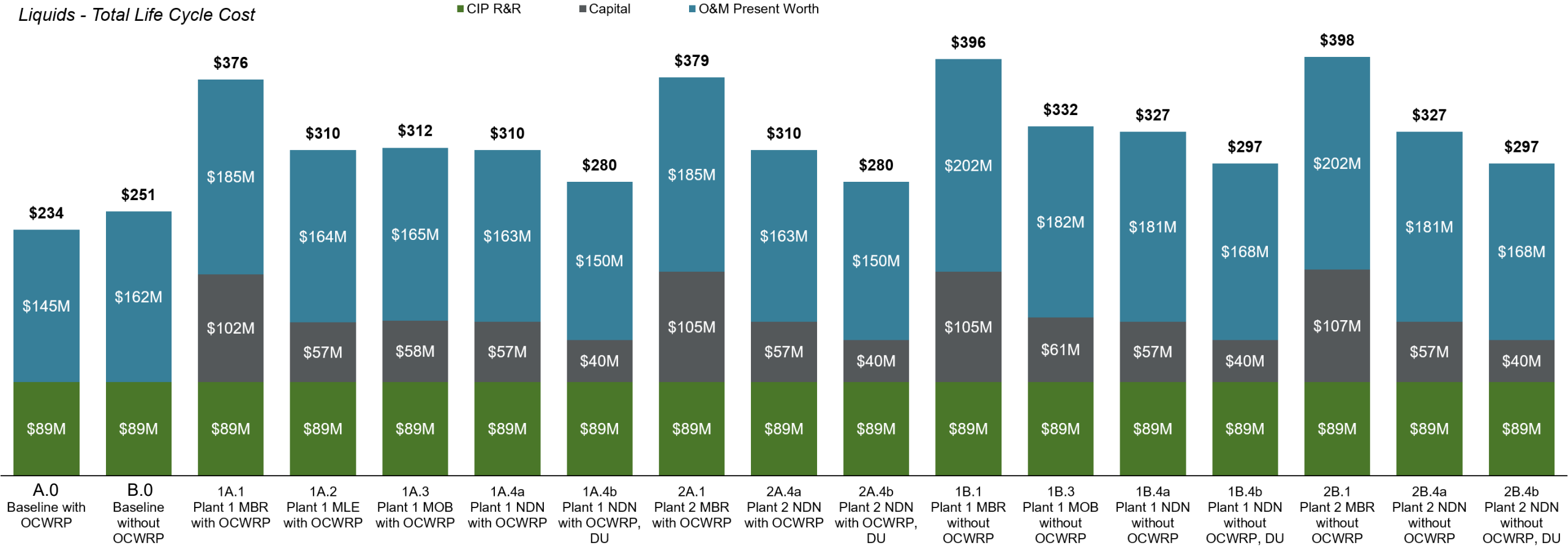
1. Costs were extracted from the source document without further escalation to 2026 dollars.
2. The 2019–2028 CIP timing reflects the schedule presented in the source document and may differ from the current implementation schedule.
3. Ten-Year Capital Improvement Program costs are derived from “Project Cost Inflation Adjusted”

Liquids Cost Summary (2026 Dollars)

No.	Name	Capital Cost at Base Year	Annual O&M at Base Year
E - Existing (Baseline)			
A.0	Baseline with OCWRP	-	\$5.98M
B.0	Baseline without OCWRP	-	\$6.70M
A – Options with OCWRP			
1A.1	Plant 1 MBR	\$102.4M	\$7.64M
1A.2	Plant 1 MLE	\$56.5M	\$6.77M
1A.3	Plant 1 MOB/IFAS	\$58.1M	\$6.80M
1A.4a	Plant 1 N/Partial DN	\$57.0M	\$6.76M
1A.4b	Plant 1 N/Partial DN Designated Use	\$40.0M	\$6.21M
2A.1	Plant 2 MBR	\$104.8M	\$7.64M
2A.4a	Plant 2 N/Partial DN	\$57.0M	\$6.76M
2A.4b	Plant 2 N/Partial DN Designated Use	\$40.0M	\$6.21M
B – Options without OCWRP			
1B.1	Plant 1 MBR	\$104.7M	\$8.36M
1B.3	Plant 1 MOB/IFAS	\$61.1M	\$7.52M
1B.4a	Plant 1 N/Partial DN	\$57.0M	\$7.47M
1B.4b	Plant 1 N/Partial DN Designated Use	\$40.0M	\$6.93M
2B.1	Plant 2 MBR	\$106.9M	\$8.36M
2B.4a	Plant 2 N/Partial DN	\$57.0M	\$7.47M
2B.4b	Plant 2 N/Partial DN Designated Use	\$40.0M	\$6.93M

Liquids 30-Year Life Cycle Costs

Liquids - Total Life Cycle Cost



* CIP R&R provided by SOCWA.

Escalation 3.5%
Discount Rate 5.0%

04

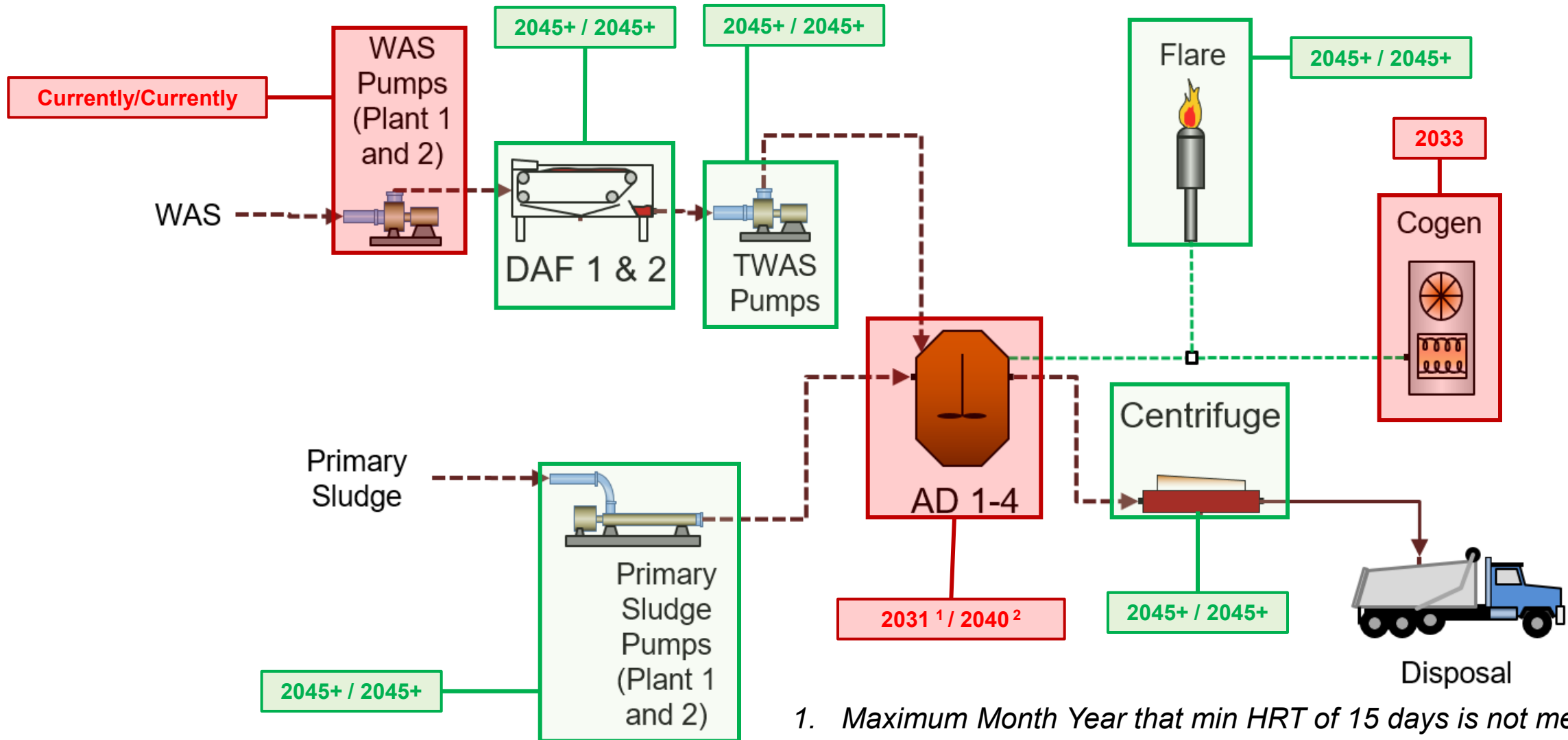


Solids Alternatives Evaluation

Summary of JBL Solids Capacity

Years shown indicate:

Firm Capacity is exceeded/ Total Capacity is exceeded



1. Maximum Month Year that min HRT of 15 days is not met
2. Annual Average Year that min HRT of 15 days is not met

Solids Goals, Objectives and Drivers



Fiscal Responsibility

- Justified value of improvements
- Holistic cost comparison
- Reduce Operating Costs



Space Constraints

- Reliable biosolids management in space available onsite



Aging Infrastructure

- Maintain reliable treatment processes



Reliable Technology

- Tried and true technology
- Limited operational upsets
- Reliable technology



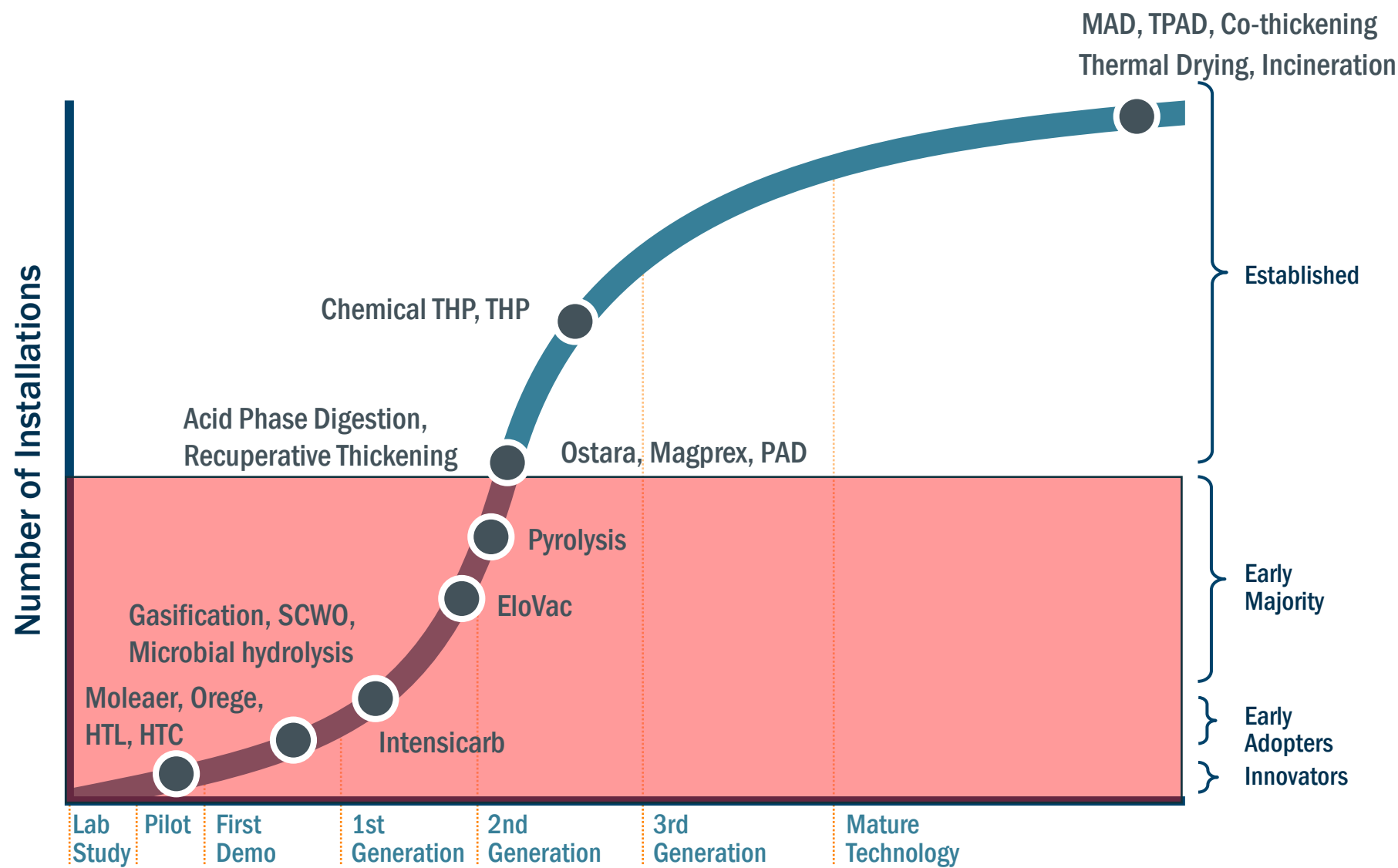
Capacity

- Meet capacity requirements for flows and loads

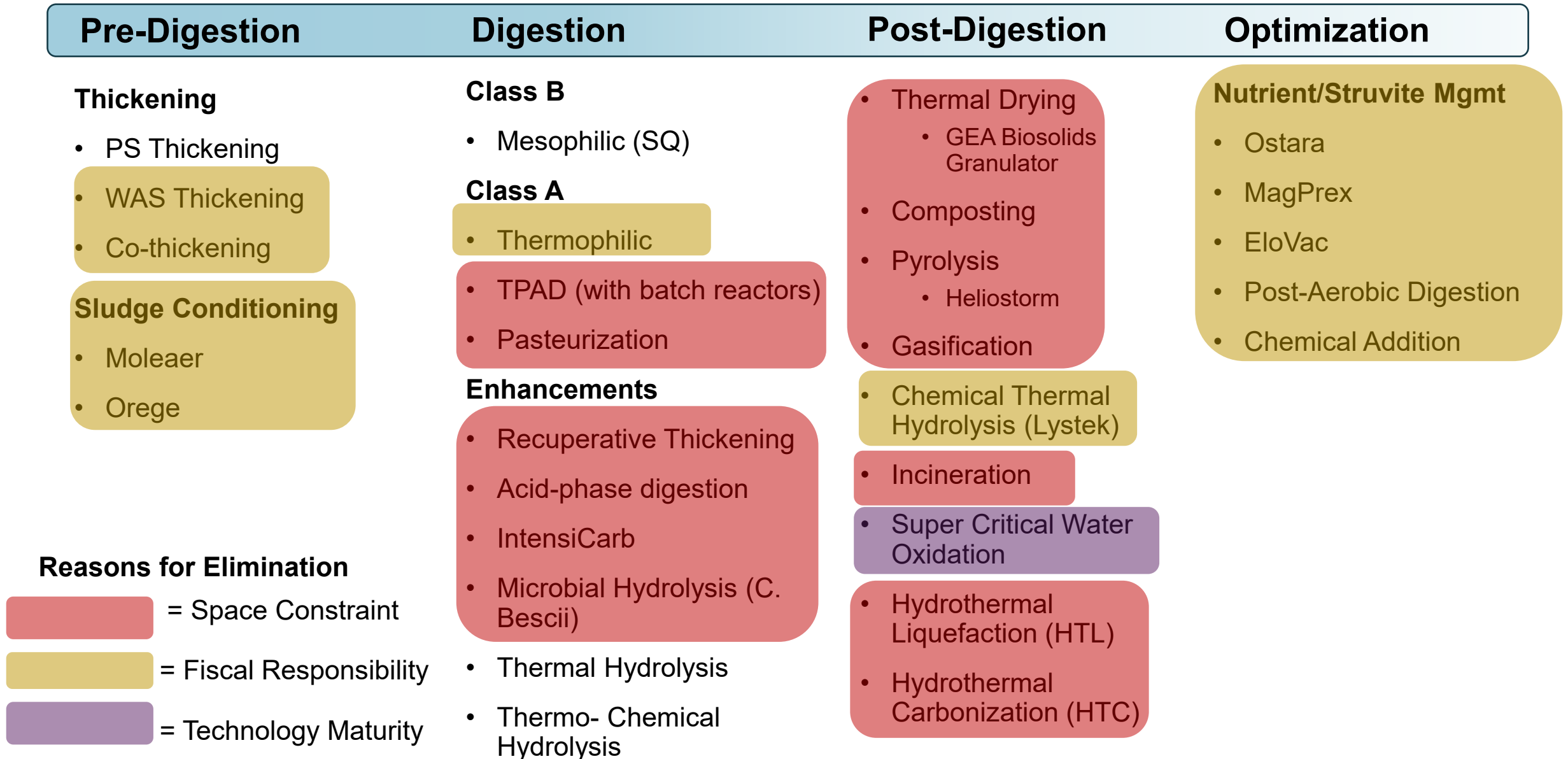
“Universe of Options” – Full list

Pre-Digestion	Digestion	Post-Digestion	Optimization
Thickening • PS Thickening • WAS Thickening • Co-thickening Sludge Conditioning • Moleaer • Orege	Class B • Mesophilic (SQ) Class A • Thermophilic • TPAD (with batch reactors) • Pasteurization Enhancements • Recuperative Thickening • Acid-phase digestion • IntensiCarb • Microbial Hydrolysis (C. Bescii) • Thermal Hydrolysis • Thermo- Chemical Hydrolysis	• Thermal Drying • GEA Biosolids Granulator • Composting • Pyrolysis • Heliostorm • Gasification • Chemical Thermal Hydrolysis (Lystek) • Incineration • Super Critical Water Oxidation • Hydrothermal Liquefaction (HTL) • Hydrothermal Carbonization (HTC)	Nutrient/Struvite Mgmt • Ostara • MagPrex • EloVac • Post-Aerobic Digestion • Chemical Addition

Technology Maturity and Risk Tolerance



“Universe of Options” – Screening



“Universe of Options” – Short Listed Alternatives

Pre-Digestion	Digestion	Post-Digestion	Optimization
Thickening • PS Thickening • ~~WAS Thickening~~ • ~~Co-thickening~~ Sludge Conditioning • ~~Moleaer~~ • ~~Orege~~	Class B • Mesophilic (SQ) Class A • ~~Thermophilic~~ • ~~TPAD (with batch reactors)~~ • ~~Pasteurization~~ Enhancements • ~~Recuperative Thickening~~ • ~~Acid-phase digestion~~ • ~~IntensiCarb~~ • ~~Microbial Hydrolysis (G. Bescii)~~ • ~~Thermal Hydrolysis~~ • Thermo- Chemical Hydrolysis	• ~~Thermal Drying~~ • ~~GEA Biosolids Granulator~~ • ~~Composting~~ • ~~Pyrolysis~~ • ~~Heliostorm~~ • ~~Gasification~~ • ~~Chemical Thermal Hydrolysis (Lystek)~~ • ~~Incineration~~ • ~~Super Critical Water Oxidation~~ • ~~Hydrothermal Liquefaction (HTL)~~ • ~~Hydrothermal Carbonization (HTC)~~	Nutrient/Struvite Mgmt • ~~Ostara~~ • ~~MagPrex~~ • ~~EloVac~~ • ~~Post-Aerobic Digestion~~ • ~~Chemical Addition~~

Small footprint,
added digester
capacity value

Reliable
technology, robust,
current practice

Added digester
capacity value,
added energy
produced

Solids Alternatives Summary

Alternative	Description	Key Improvements	MM Loading (lb/day)	Class
Scenario A: Future Loading Represented by Historical Weighed Cake (2021-2025)				
SA.1	Minimal Improvements (Status Quo) – sub-Class B cake	WAS Pumps	37,566	Sub-Class B
SA.2	Some Improvements – Can meet Class B Requirements	WAS Pumps; Rotary Drum Thickeners	37,566	Class B
SA.3	Some Improvements – Can meet Class B Requirements (with TCHP)	WAS Pumps; Rotary Drum Thickeners; TCHP	37,566	Class B
Scenario B: Future Loading Represented by the Modeled Loading to Digesters Using Historical Influent Flow and Concentrations (2021-2025)				
SB.3	By Primary Clarifier removal improvement	WAS Pumps; Rotary Drum Thickeners; TCHP	46,000	Class B
SB.4	Using influent characteristics and modeled solids numbers (E2 B, without OCWRP)	WAS Pumps; Rotary Drum Thickeners; TCHP; Upgrade Thickening & Dewatering System	48,700	Class B

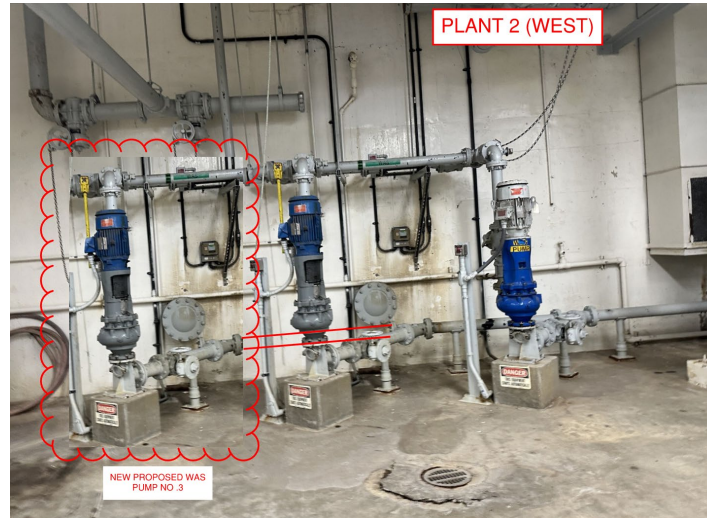
*TCHP = Thermochemical Hydrolysis Process

Scenario A

**Alternative SA.1: Minimal
improvements (Status Quo)
to continue Sub-Class B**

Alternative SA.1: Same Solids Loading, Minimal Improvements (Status Quo, sub-class B)

- Improvements:
 - Increase WAS pump capacity = upsize WAS pumps and piping
 - Roadmap for improvements is by condition only
- Reasons to Evaluate:
 - If the cost of hauling for Sub-class B solids is the same as Class B solids
 - Evaluate our alternatives to the status quo



ADVANTAGES

- + Lowest Capital cost
- + Lowest O&M cost

DISADVANTAGES

- Low Biosolids Management Options
- Potentially higher biosolids management costs
- Higher risk to biosolids management changes
- More attention to biosolids management haulers and vendors

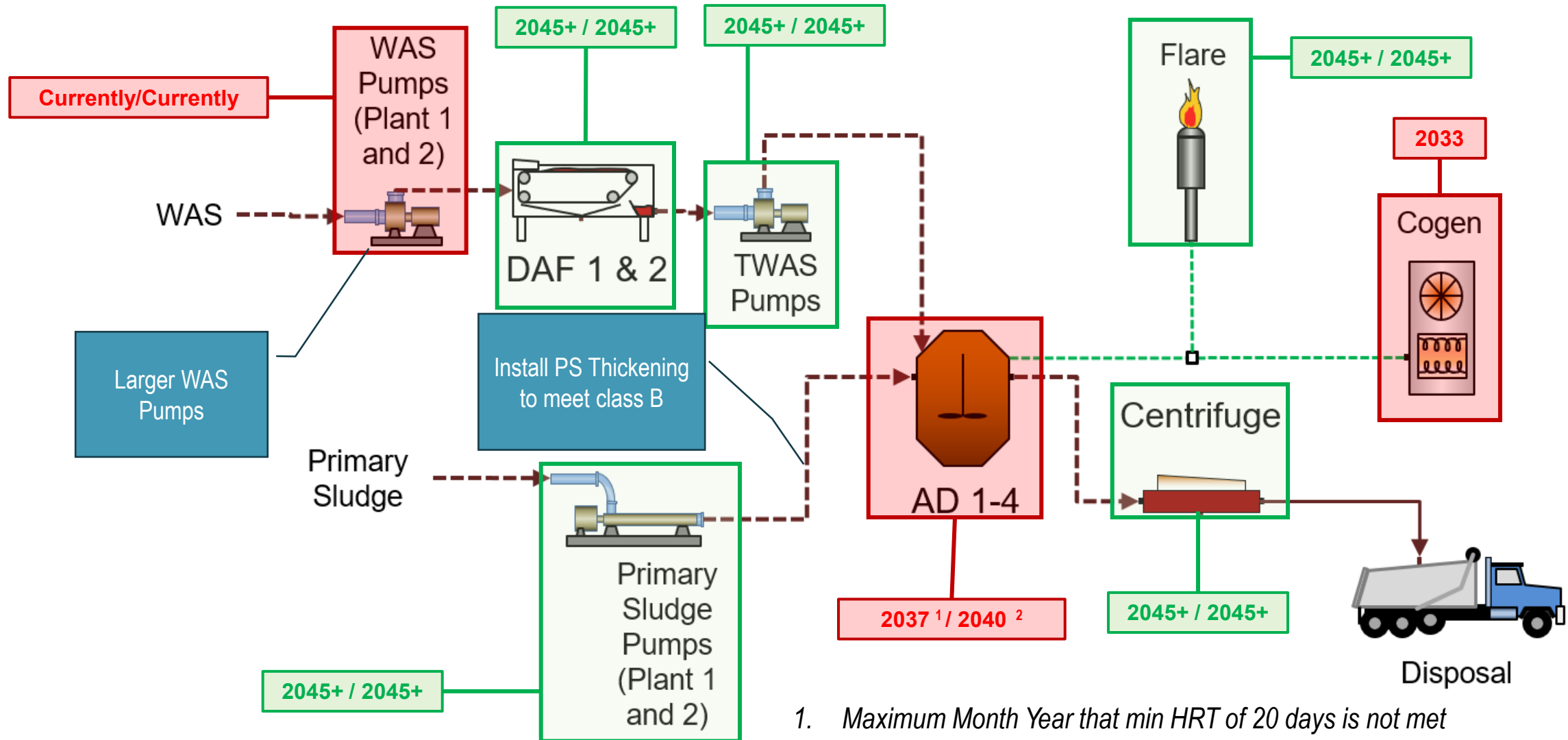
Scenario A

Alternative SA.2: Some improvements to meet Class B

Alternative SA.2: Some Improvements – Can meet Class B Requirements

Years shown indicate:

Firm Capacity is exceeded/ Total Capacity is exceeded

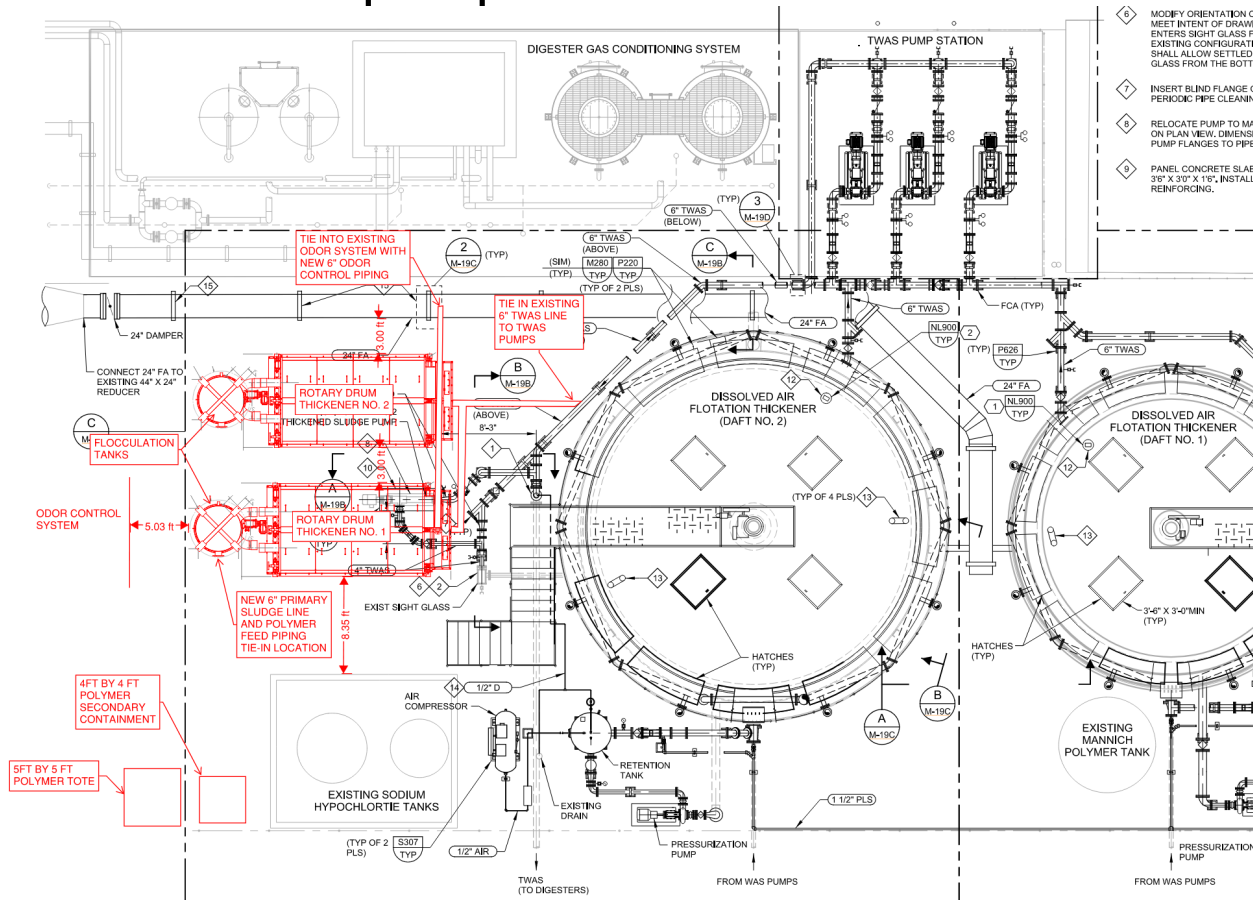


1. Maximum Month Year that min HRT of 20 days is not met
2. Annual Average Year that min HRT of 20 days is not met

Alternative SA.2: Rotary Drum Thickeners (RDT)

- (1+ 1) Rotary Drum Thickeners
- Includes Flocculation Tank
- Relocate pump

- Dimensions (each)
 - Length: ~18 ft, Width: 8ft
- Model: FKC RST-W775x3600L

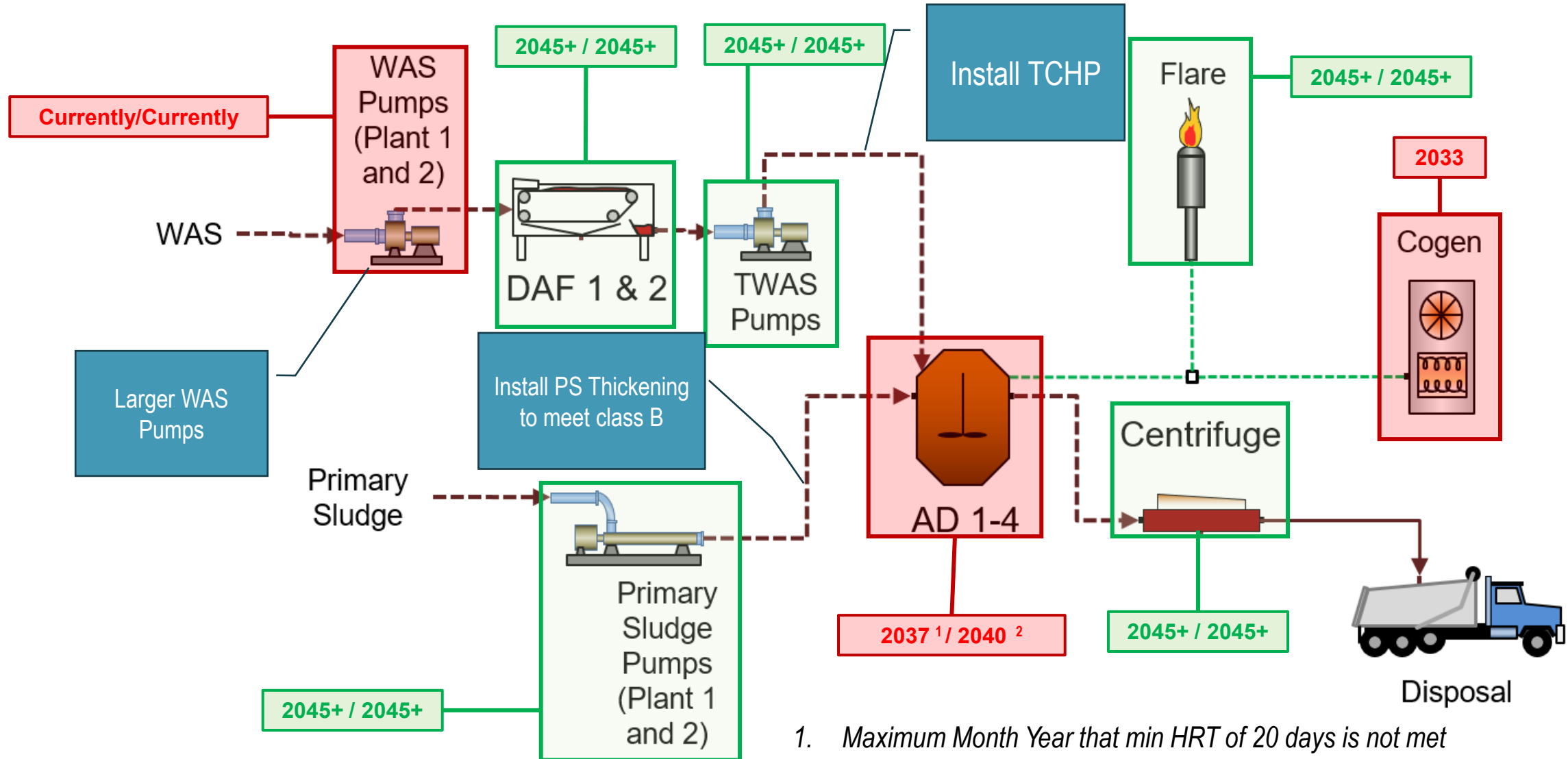


Scenario A
Alternative SA.3: Some
improvements to meet Class B
(with Thermochemical
Hydrolysis Process)

Alternative SA.3: Some Improvements – Can meet Class B Requirements (with TCHP)

Years shown indicate:

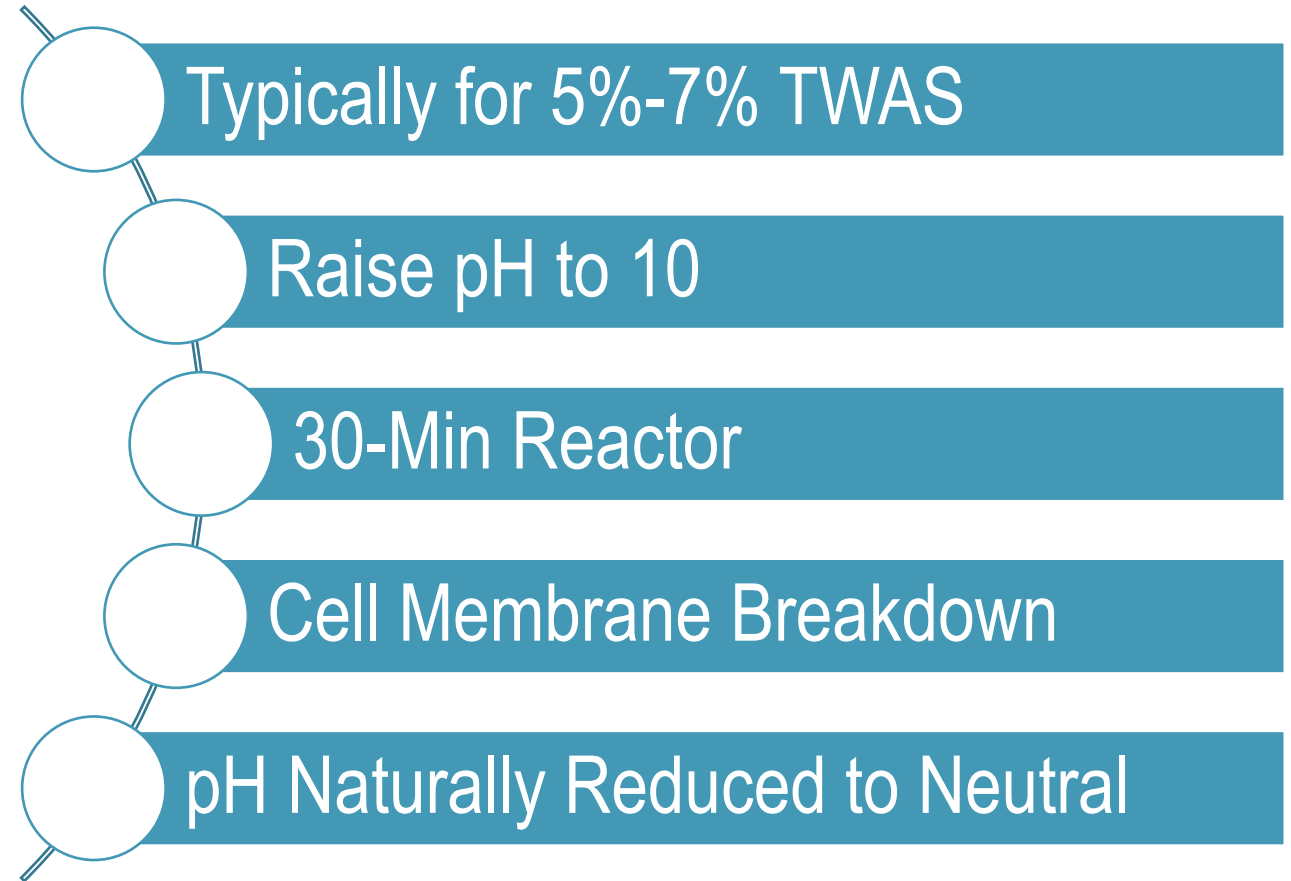
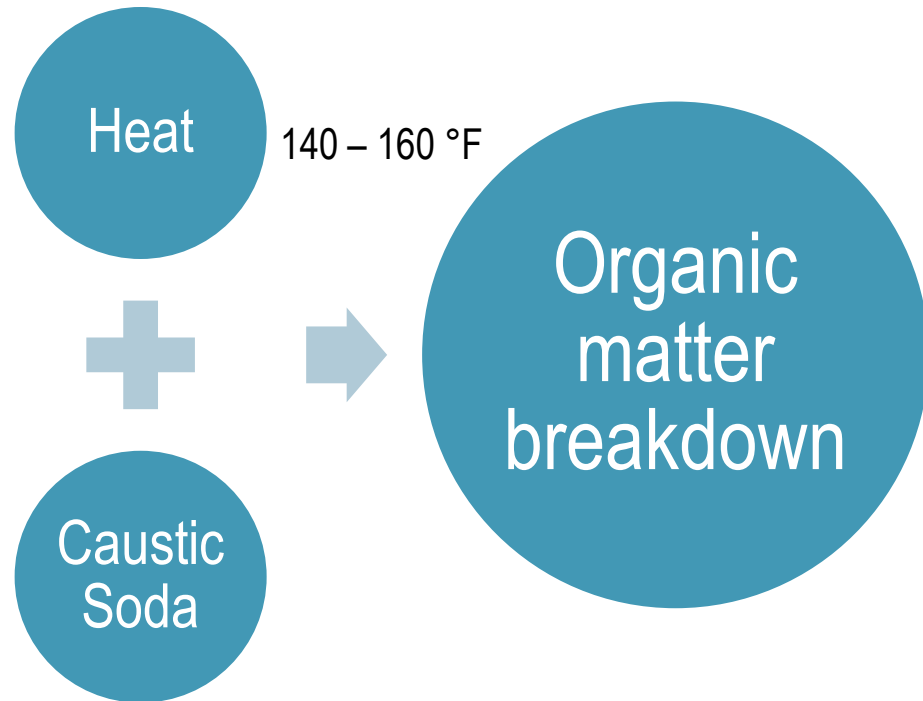
Firm Capacity is exceeded/ Total Capacity is exceeded



1. Maximum Month Year that min HRT of 20 days is not met
2. Annual Average Year that min HRT of 20 days is not met

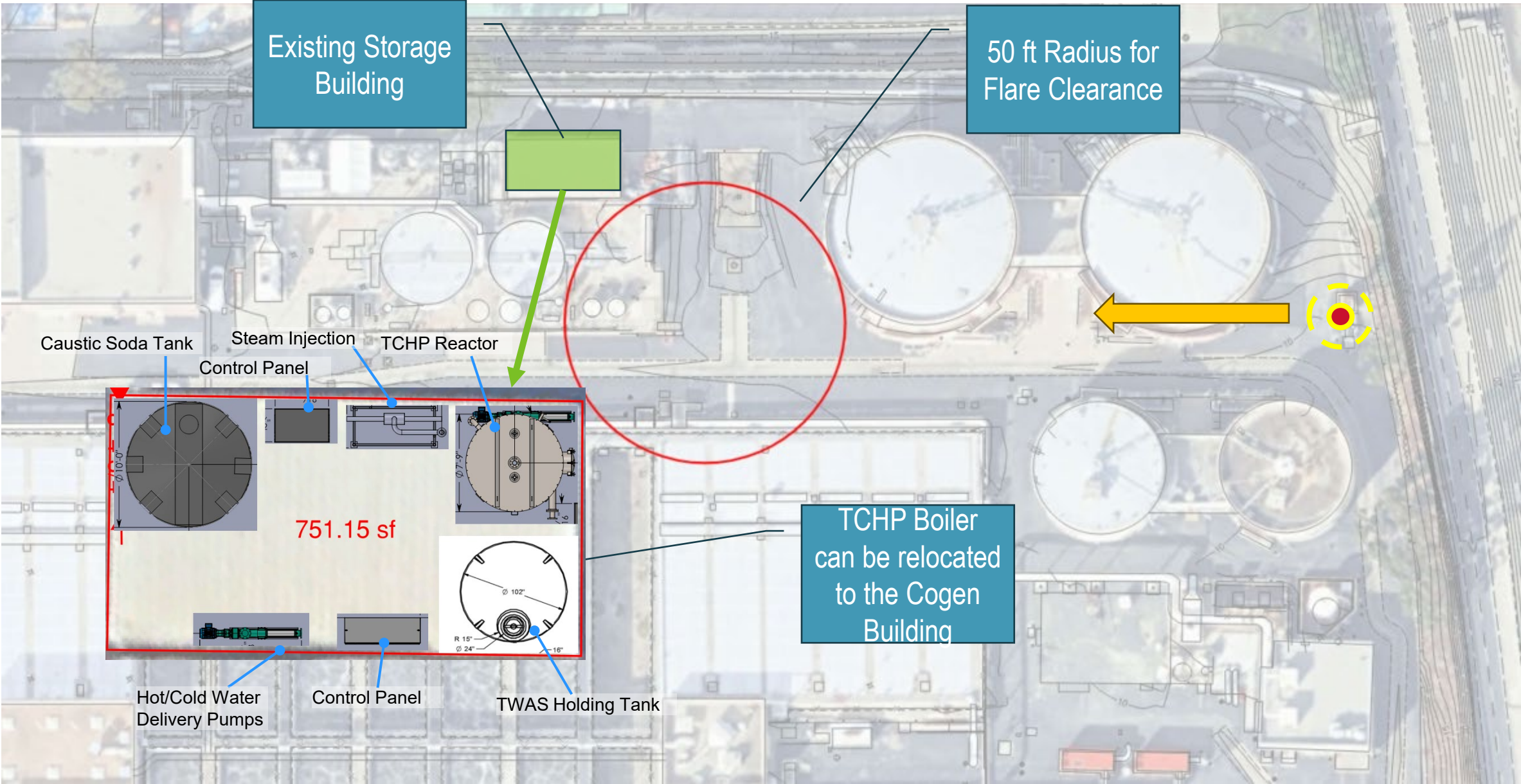
Thermochemical Hydrolysis – PONDUS™

- No Pressure Vessel



Advantage: Less complicated, low pressure and temp
Disadvantage: Max OLR of 0.25.

Alternative SA.3: TCHP Layout



Scenario B
Alternative SB.3: Solids
Loading Increases by Primary
Clarifier Removal

Alternative SB.3: Solids Loading Increases by Primary Clarifier Removal

- If improve PCL from 54% removal to 65% removal
 - Primary Sludge Loading increase from 14,000 lb/d to 17,000 lb/d
- Improvements:
 - Increase WAS pump capacity
 - Thickening Improvements to reduce digester flow
 - Roadmap for improvements is by condition + Class B standards
 - Same as SA.3, WAS Pumps, RDTs, and TCHP
- Reasons to Evaluate:
 - If the cost of hauling for Class B solids is reduced
 - Potentially more biosolids management options

ADVANTAGES

- + Less Stress on Liquid Stream process
- + Lower energy cost for aeration basin
- + More gas production (energy offset)



Thermal Chemical Hydrolysis Process (TCHP) Reactor

DISADVANTAGES

- Additional process to operate and maintain
- Capital Cost

Scenario B

Alternative SB.4: Using influent characteristics and modeled solids numbers (E2 (B, without OCWRP)

Alternative SB.4: Solids Loading Increases by Using Influent Characteristics

- If use modeled solids number based on influent characteristics
 - PS loading increases from 21,991 lb/d to 24,800 lb/d
 - WAS loading increases from 15,575 lb/d to 29,000 lb/d
- Improvements:
 - Increase WAS pump capacity
 - Thickening Improvements to reduce digester flow (RDTs, DAFTs to Centrifuges)
 - Digestion Improvements from TCHP
 - Dewatering Improvements (already planned in SOCWA 2027 CIP Plan)
- Reasons to Evaluate:
 - Solids loading increases
 - Potentially more biosolids management options

Option	Existing	
	Technologies	CAS
E2 - Existing		
*Without OCWRP	*E2	✓

ADVANTAGES

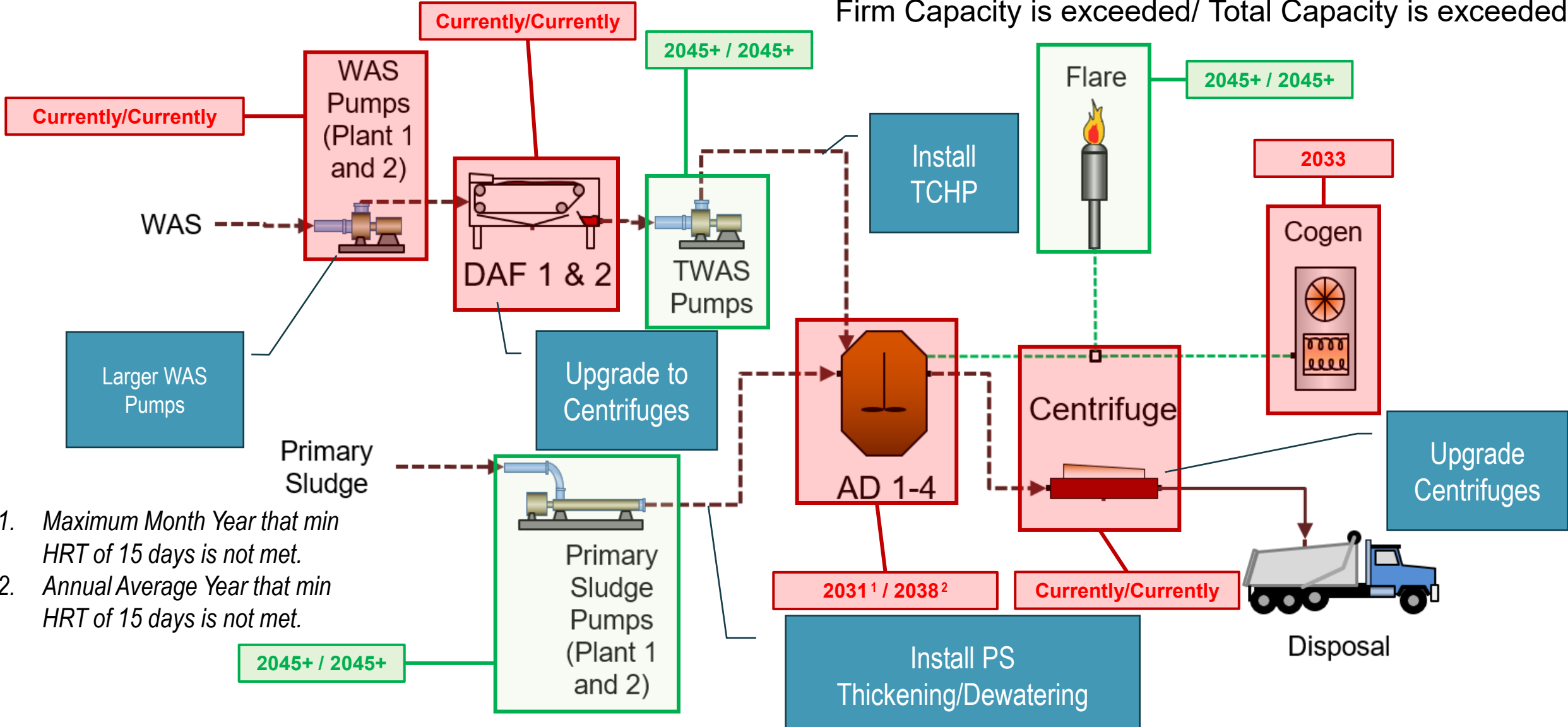
- + More gas production (energy)
- + In case more capacity is needed

DISADVANTAGES

- Additional processes to operate and maintain

Alternative SB.4: Solids Loading Increases by Using Influent Characteristics

Years shown indicate:
Firm Capacity is exceeded/ Total Capacity is exceeded



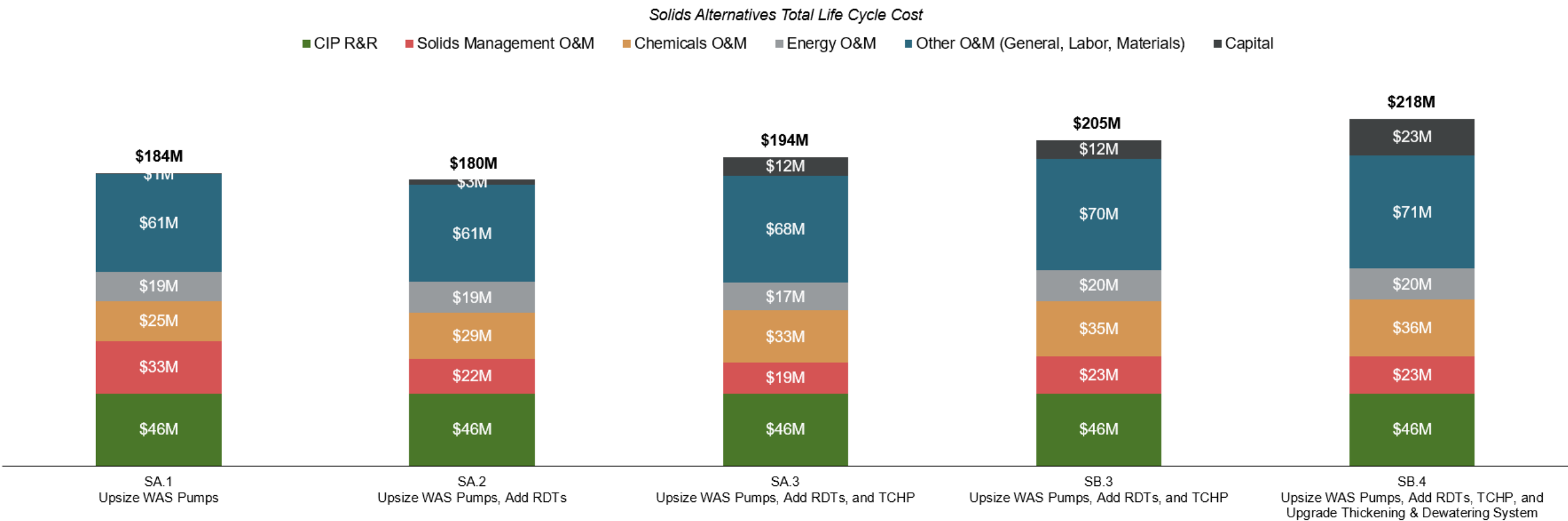
- 1. Maximum Month Year that min HRT of 15 days is not met.
- 2. Annual Average Year that min HRT of 15 days is not met.

Solids Alternatives Costs

Solids Cost Summary (2026 Dollars)

No.	Name	Capital Cost at Base Year	Annual O&M Cost at Base Year
Scenario 1: Future Loading Represented by Historical Weighed Cake (2021-2025)			
SA.1	Minimal improvements (Status Quo) to continue Sub-Class B	\$0.6M	\$5.3M
SA.2	Some improvements to meet Class B	\$2.8M	\$5.3M
SA.3	Some Improvements – Can meet Class B Requirements (with TCHP)	\$11.7M	\$5.5M
Scenario 2: Future Loading Represented by the Modeled Loading to Digesters Using Historical Influent Flow and Concentrations (2021-2025)			
SB.3	By Primary Clarifier removal improvement	\$11.7M	\$6.0M
SB.4	Using influent characteristics and modeled solids numbers (E2 B, without OCWRP)	\$22.9M	\$6.1M

Solids Life Cycle Costs

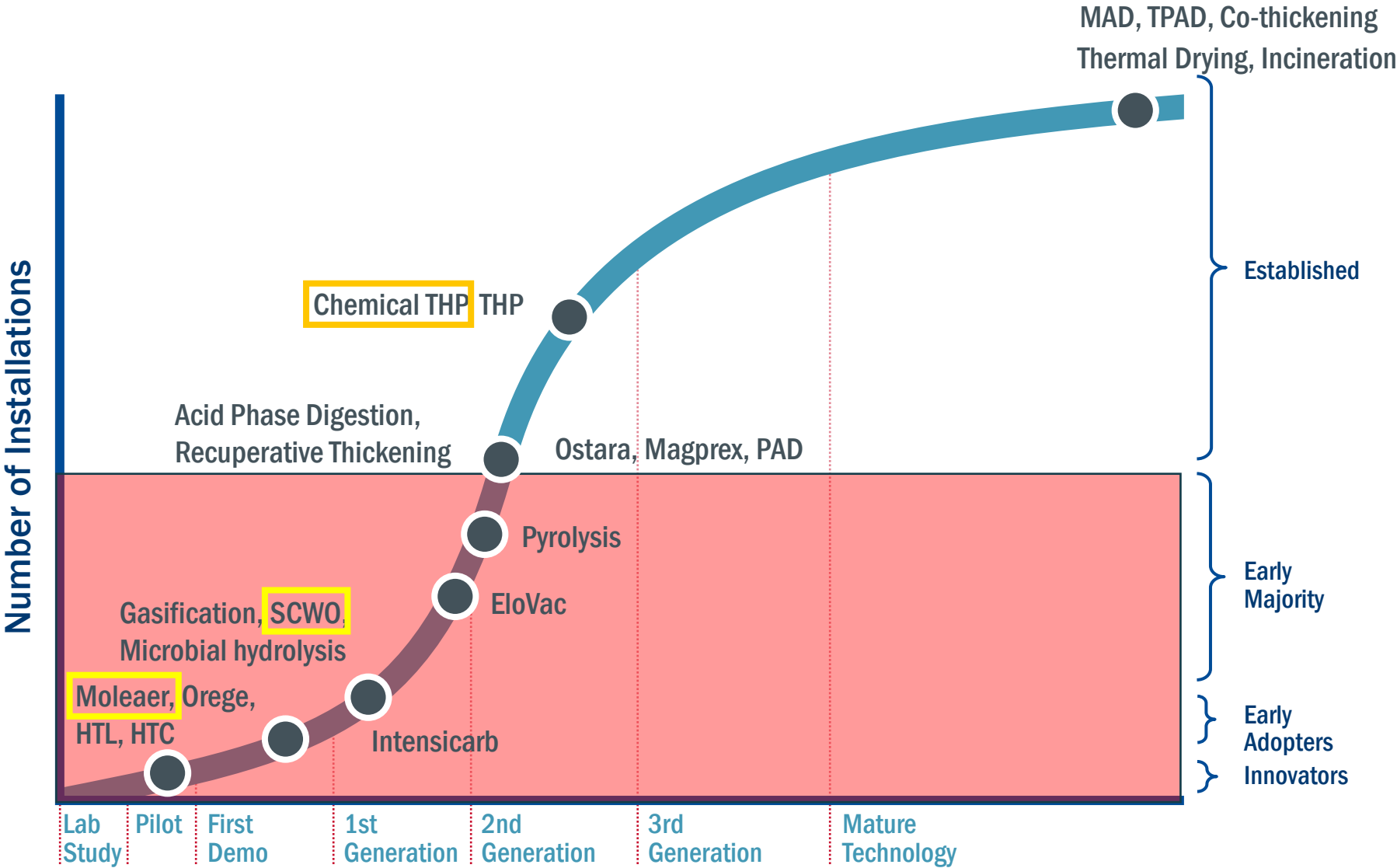


SA.1 (baseline) is more expensive due to sub-class B biosolids management (assumed 6% escalation vs 3.5% escalation for class B)

* CIP R&R provided by SOCWA.

Emerging Solids Technology

Technology Maturity and Risk Tolerance

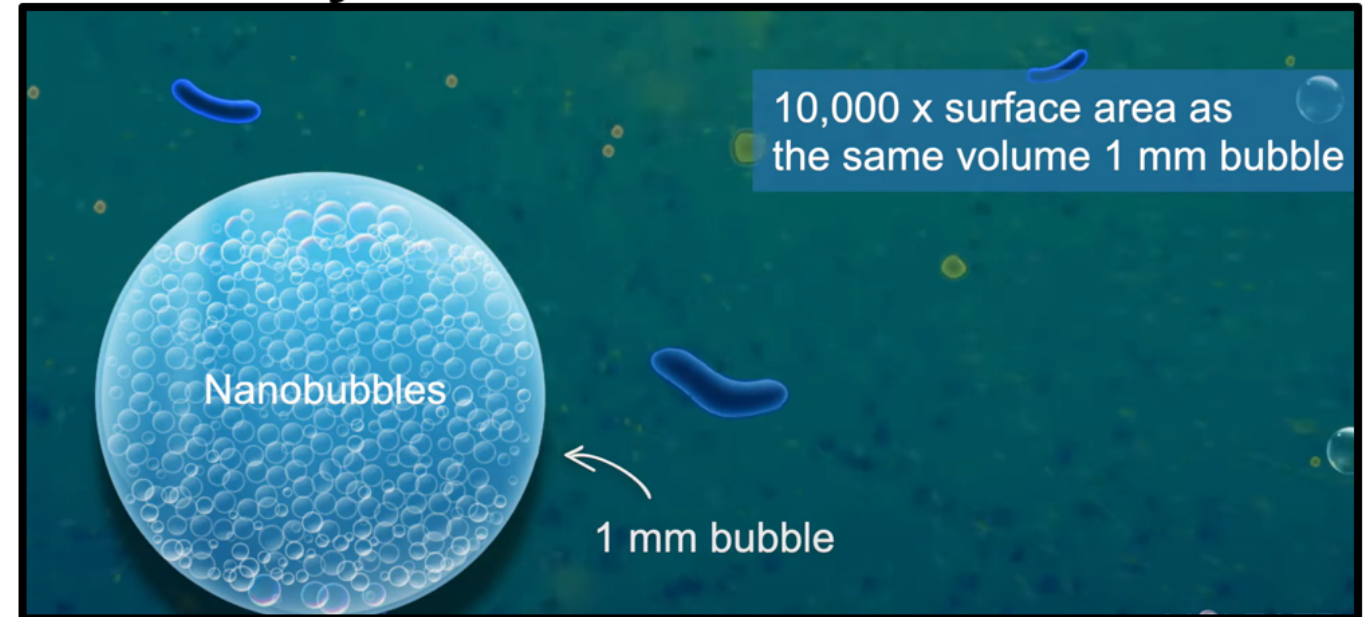


Moleaer

Nanobubble Aeration by Moleaer

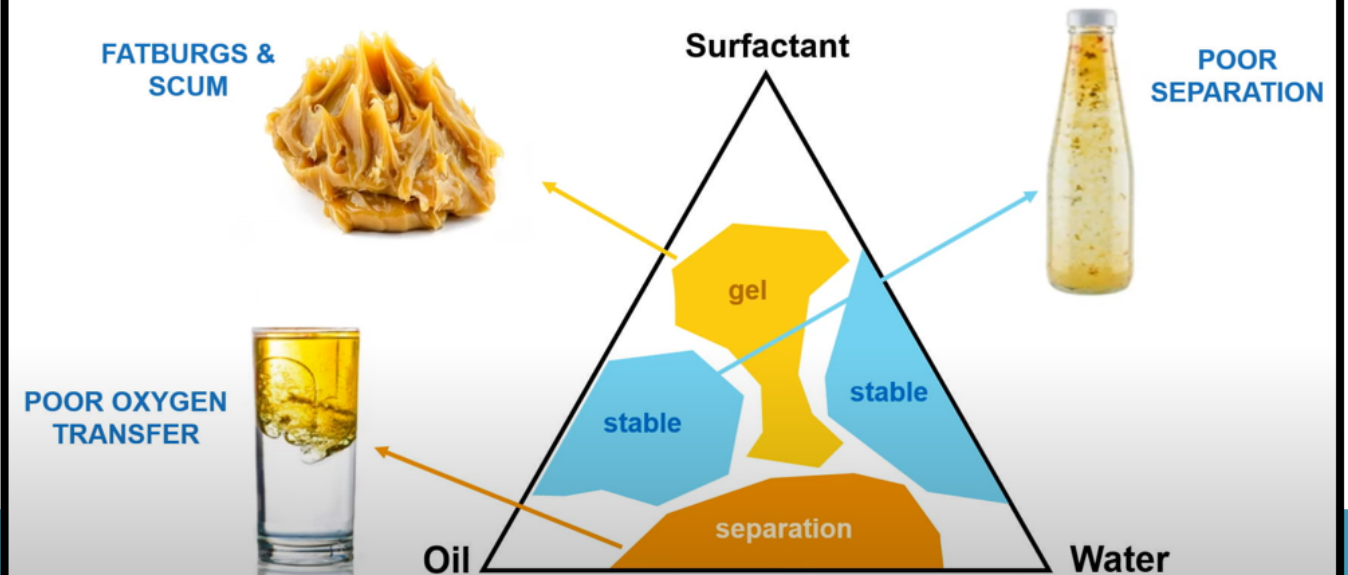
Aeration with Bubbles 1/10,000 grain of salt,
10,000x smaller than fine diffuser bubbles.

Stay suspended in liquid, do not coalesce



Improved breakdown (>50%) of amphiphilic
compounds, surfactants, emulsions, anti-
microbials, inhibitory compounds including
(Microthrix and Nocardia)

Surfactants Make Emulsions



Nanobubble Aeration by Moleaer

Better broken-down sludge going to digestion system resulting in increases hydrolysis rate, therefore better VSR.

Case studies reporting up to 20% higher biogas production.

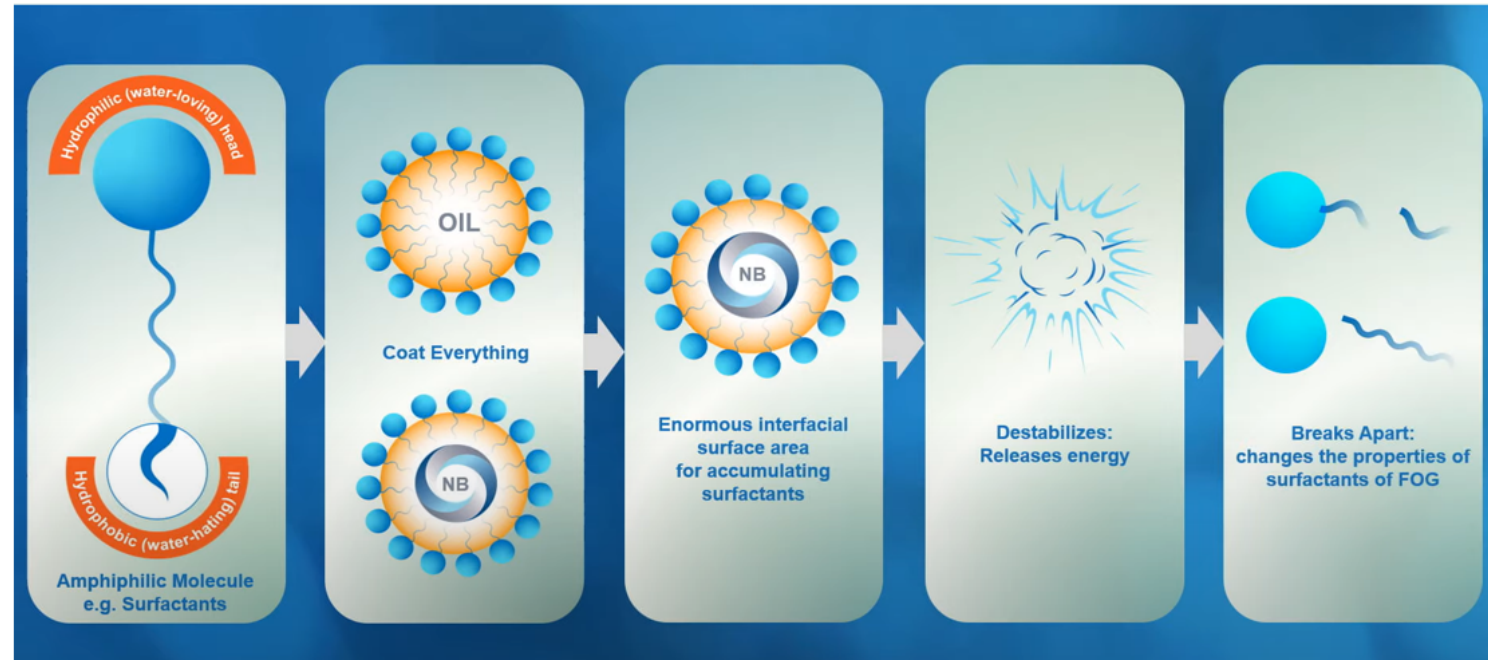
In addition to lower aeration energy, higher biological efficiency, reduced foam at secondary treatment, improved settleability

Implement at secondary treatment or in anaerobic digester recirculation loop

Considerations:

- Technology age
- Fouling of diffusers
- Effects of a failure

How Moleaer's Clean Chemistry Removes Inhibitory Compounds



Field Results: Multi-Site Field Validation Across Dewatering Applications

Evaluating polymer demand and cake solids performance



LA County Sanitation Districts
A.K. Warren, Carson, CA

Process: 36 x centrifuges on plant water

Pilot Goal: Testing for polymer reduction and cake dryness increase

Results: 15% polymer reduction
OR ~1% increase in cake solids



Clean Water Services
Rock Creek WRRF, Hillsboro, OR

Process: 2 x centrifuges on plant water

Pilot Goal: Testing for polymer reduction and cake dryness increase

Results: 23% polymer reduction
OR ~2% increase in cake solids



Greer CPW
Maple Creek WWTP Greer, SC

Process: 2 x belt filter presses on city water

Pilot Goal: Testing for polymer reduction and cake dryness increase

Results: 35% polymer reduction
OR ~4% increase in cake solids

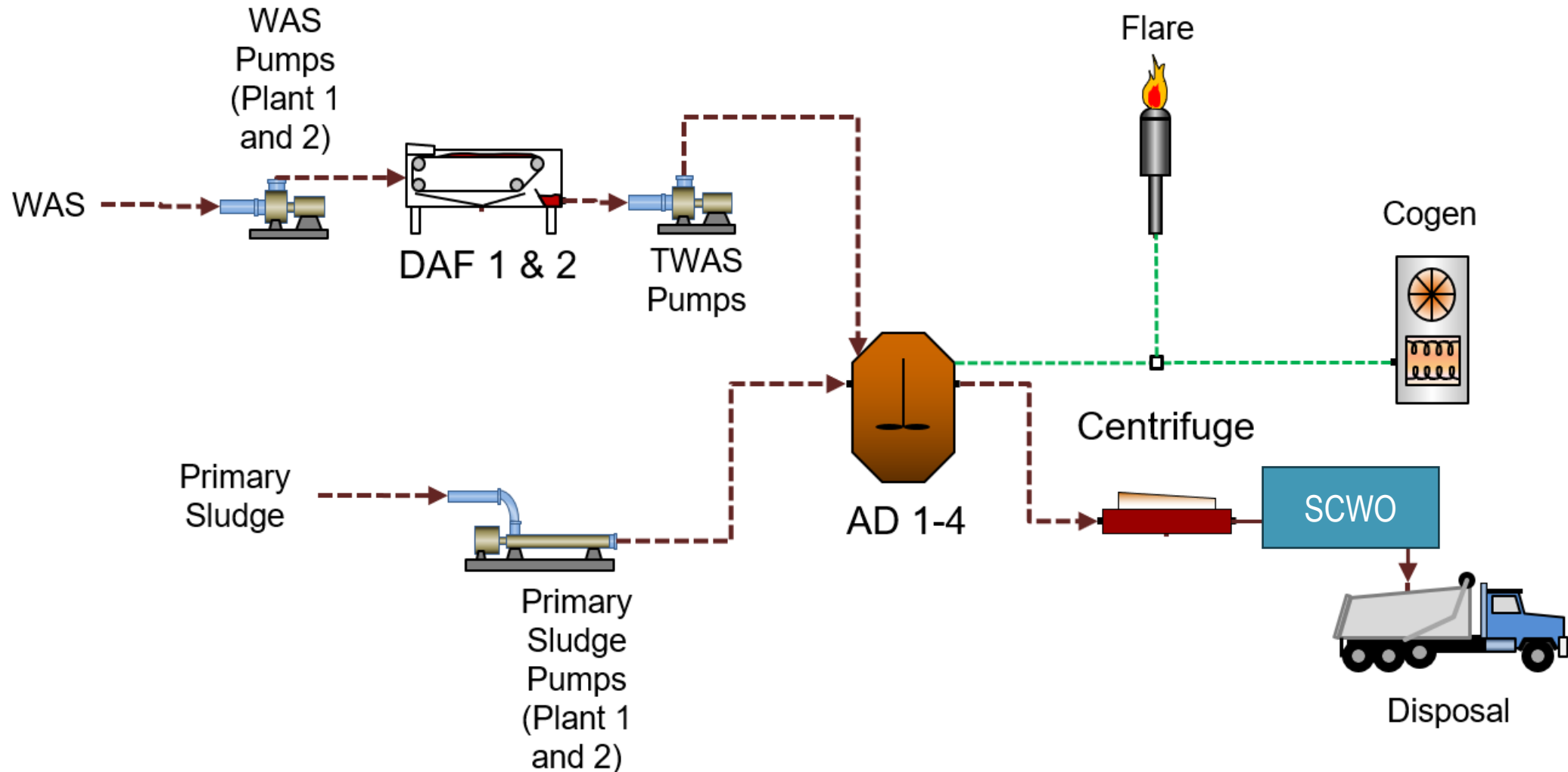
Moleaer Impact at JBL



- Assume 15% reduction in polymer
- Annual polymer cost: \$360k/yr
- Moleaer cost savings:
 - \$54k at 15% reduction in polymer consumption
 - \$72k at 20% reduction in polymer consumption
- Key equipment:
 - Nanobubble Generators in-series (Moleaer provided)
 - Footprint: 17.3" x 16.7" x 13.9" (LxWxH) each
 - Material: Stainless steel
 - Compressed Air (District provided): Up to 600 SCFM at a minimum of 60 psig
- Rental equipment cost for a minimum of 12-month piloting period: \$16,800 per month (\$201,600 per year)
- Standard lead time: 8-10 weeks

Supercritical Water Oxidation (SCWO)

Supercritical Water Oxidation



Supercritical Water Oxidation

374WATER[®]

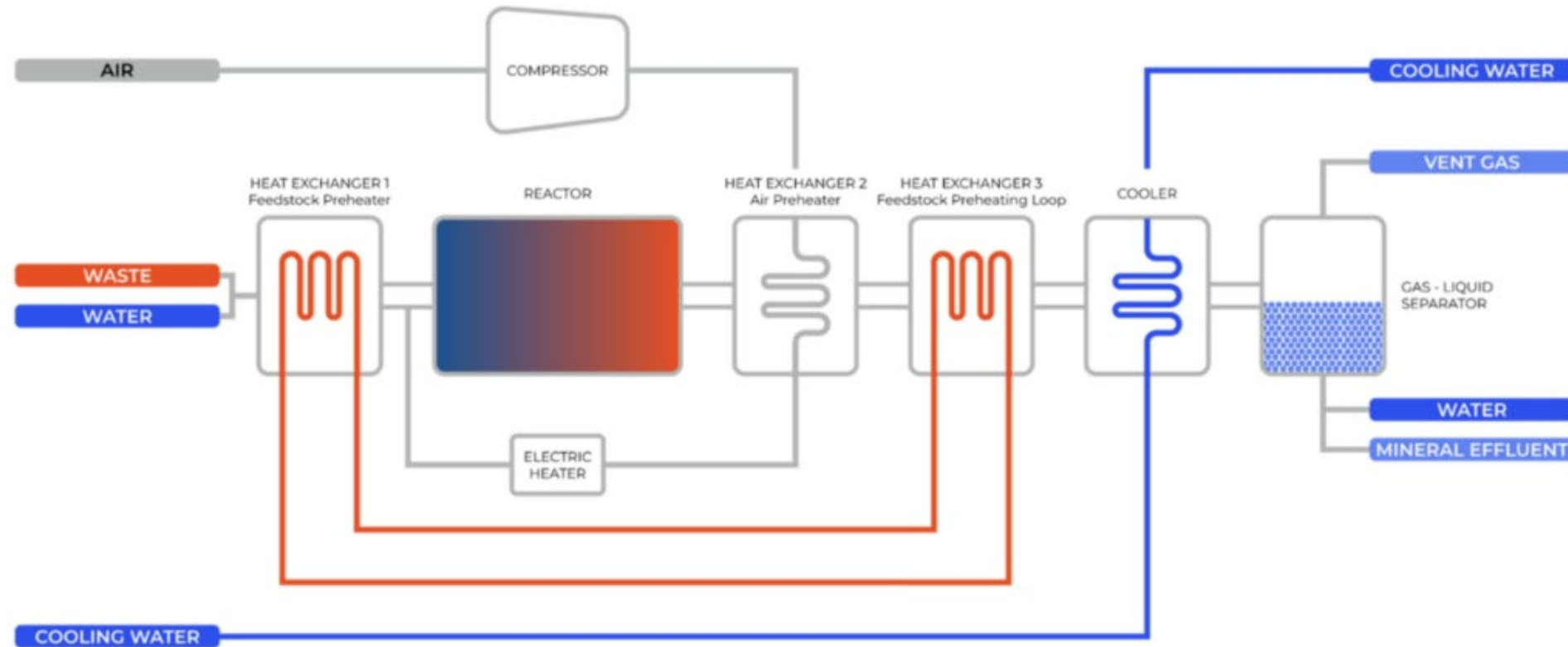


Figure 2 - 374Water AirSCWO Process Flow

Supercritical Water Oxidation

TABLE 1: CAPITAL SALE ESTIMATE		ESTIMATE
AirSCWO System	System	\$24,435,000
One-time project fees ¹	Service	\$1,275,000
Consultancy engineering and design fees	Service	Out of Scope
Permits and regulatory compliance costs	Service	Out of Scope
TABLE 2: ANNUAL ESTIMATED OPERATING COSTS		ESTIMATE
AirSCWO System Maintenance ²	Out of Scope	\$350,000
Trim fuel per year	Out of Scope	\$600,000
Electricity costs @ \$0.15/kWh (using 705 kW continuous load)	Out of Scope	\$926,700
Labor costs per FTE (annualized salary each) ³	Out of Scope	TBD
TOTAL OPERATING ESTIMATE (Labor not included)–		\$1,876,700
¹ See Appendix “One Time Fees” for included tasks/responsibilities ² Maintenance tasks may include labor and field service tech allowance for the replacement/repair/calibration of parts and instrumentation, replacement parts purchasing, and contingency for (planned and any unplanned) shutdowns and associated waste disposal costs. ³ Additional		

Break Even: \$200/WT
Hauling Cost

tion of existing plant staffing and scheduling.

- Estimated Costs: \$55M+, zero-scale installations

- Not included: SCWO Equipment Building, Sludge pre-processing, Sludge Screens, Plant Water Supply, Electrical Power Supply (**2000 Amps**), Spare Parts required

APPENDIX: One time project fees breakdown

ESTIMATES

374WATER°

Estimated Project
Fees: \$1,275,000

1. Engineering	
Site Planning	Site Assessment & Preparation Plan Design Load Values Support for Permitting & Compliance
Mechanical Engineering	Equipment Layout Materials Selection & Procurement Support Mechanical Integration Planning Piping & Connections Support Design
Electrical Engineering	Control System Customization Design Utility Connection, Wiring & Compliance Review Electrical Drawings Safety & Inspection Planning
2. System Installation	
Mechanical Installation	Equipment Delivery & Staging Support Assembly & Mechanical Fit-up Support Piping & Connections Support Pressure & Leak Testing
Electrical Installation	Power & Control Wiring System Integration & Panel Wiring Grounding & Safety Testing Final Inspection & Certification
3. System Startup	
Functional Testing & Calibration	Mechanical System Testing Electrical & Control System Verification Software & Automation Setup Performance Optimization Troubleshooting & Adjustments Initial Operator Training
4. System Commissioning	
Final Validation & Documentation	System Performance Evaluation Operator Training (2-months of included training, starting 2 weeks prior to system startup) Handover Final Reports & Documentation Post-Commissioning Support
TOTAL ESTIMATE	
\$1,275,000	

APPENDIX: Scope of Supply / Scope of Division of Work

374Water = 374, Owner = OWN, Consultant = EPC, Site Contractor = GC, Not Applicable = N/A , TBD = To Be Determined

Equipment	Specify	Design	Supply	Install
GENERAL				
Building for equipment, offices, and staff	374	EPC	GC	GC
Electrical Supply - 480 3phase, 2000 Amp	374	EPC	GC	GC
Plumbing, and Water Supply, Drain	374	EPC	OWN	GC
Anchoring, ground rod insulation, conduits	374	EPC	GC	GC
Pre-processing				
Sludge pre-processing	EPC	EPC	GC	GC
Sludge holding/buffer tank	374	EPC	OWN	GC / OWN
Sludge fill pump w/level control	OWN	EPC	OWN	GC / OWN
PROCESS EQUIPMENT TO BE INSTALLED (inside the system boundary)				
AirSCWO System	374	374	374	374/GC
Reverse Osmosis Unit	374	374	374	374/GC
Glycol unit	374	374	374	374/GC
Platform and Ladder (if needed)	374	374	374	374
SCWO Effluent Separation	374	EPC	GC	GC
Process Control System				
Software	374	374	374	374
Programming	374	374	374	374
Ethernet Interface	374	374	374	374
Existing SCADA Screen Modification	374 / OWN	OWN	OWN	OWN

374WATER^o

Equipment	Specify	Design	Supply	Install
Electrical - 374 equipment interconnects				
PDP for System Equipment	374	374	374	374
Wiring	374	374	374	374
Conduit, Cable & Raceways, etc.	374	374	374	374 / Other
UTILITIES / INFRASTRUCTURE (connections outside the system boundary)				
Valves at scope boundary for process water of non-potable quality to the RO unit	OWN	EPC	OWN	OWN
Valves at scope boundary: Plant reclaim water -	OWN	EPC	OWN	OWN
Biosolids sludge supply - see above details	OWN	OWN	OWN	OWN

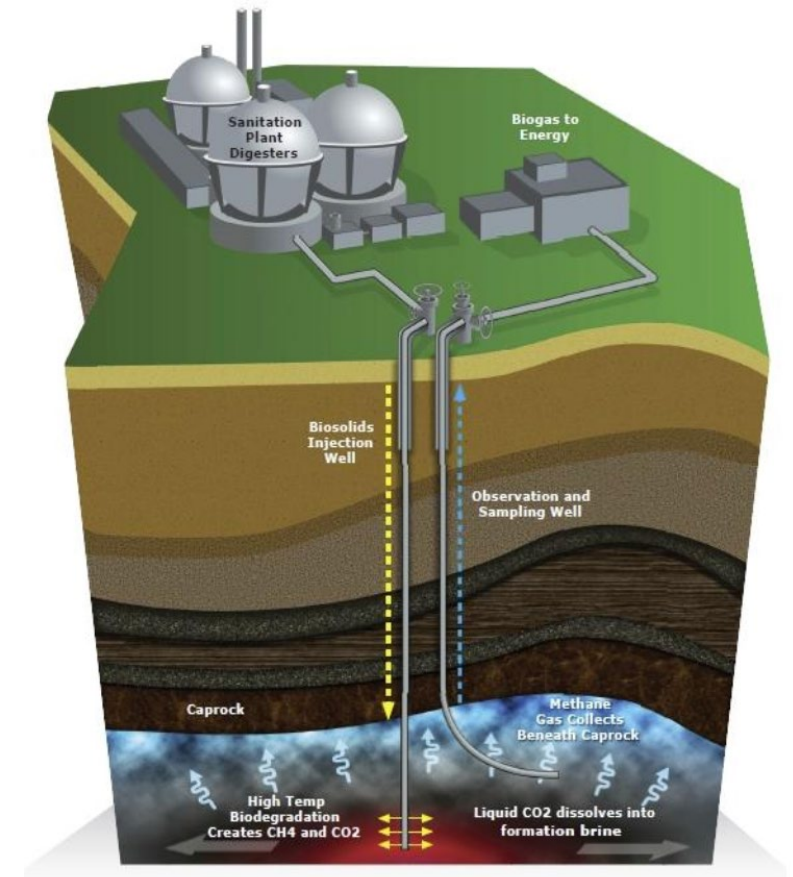
Supercritical Water Oxidation



Deep Well Injection

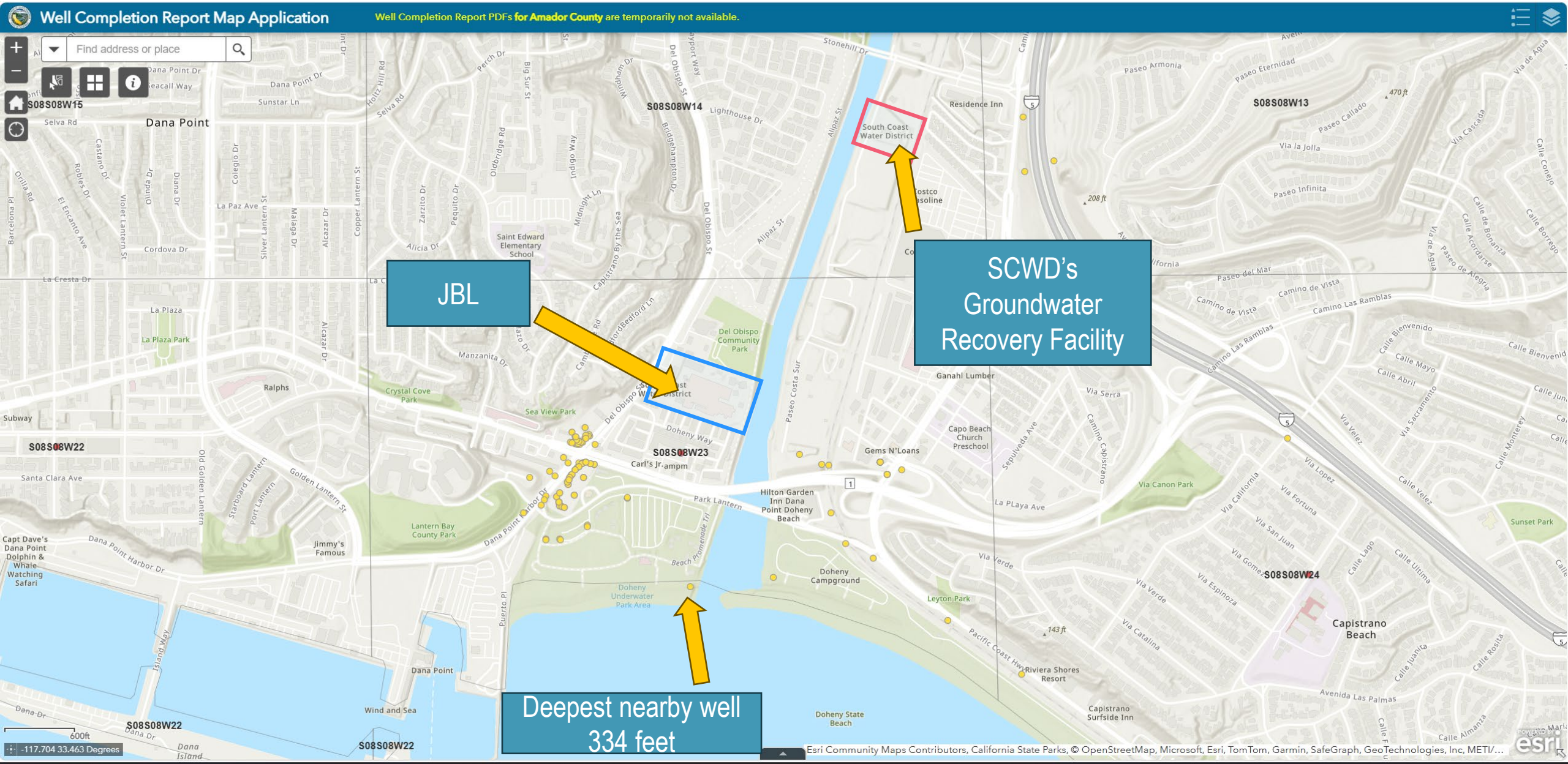
Deep Well Injection

- Known Projects
 - Terminal Island Renewable Energy (LASAN) – July 2008; 4 wells; 5,300 feet below grade.
 - OC San – Feasibility Study Phase (February 18, 2026)
 - 5,000 to 7,000 ft deep well bores
- Advance Planning Requirements:
 - Hydro-Geo investigation: Mapping of Ground Water Basin
 - Seismic Risk Assessment
 - Regulations and permitting
 - Biosolids characterization and pretreatment evaluation
- Considerations:
 - Site Constraints
 - Constructability



Existing Wells Review

DWR, Well Completion Reports, accessed August 2026
<https://dwr.maps.arcgis.com/apps/webappviewer/index.html?id=181078580a214c0986e2da28f8623b37>



Biosolids Deep Well Injection Feasibility Report: Plant No. 1 and Plant No. 2

Document No: 250613113517_6cc0c91b

Revision: Final

Orange County Sanitation District
PS24-01 Biosolids Deep Well Injection Feasibility Study
February 18, 2026



- OC San Permitting Matrix

Table 8-2. Permitting Matrix – Plant No. 1 and Plant No. 2

No.	Permit Name	Issuing Authority	Projected Lead Time	Public Review Period	Obtained by	Remarks
1	Class V UIC Permit	EPA Region 9	Up to 2 years	30 to 45 days	OC San with assistance of Design-Builder	EPA application is required. EPA administrative review is followed by technical review of the application. Public notice and CalGEM coordination is part of this permit.
2	CEQA	OC San	Up to 2 years	30 days	OC San with assistance from Owner Adviser	OC San is planning an IS/MND at minimum. An EIR May be required similar to the TPAD project.
3	EPA Well Drilling Permit	EPA Region 9	1 to 2 years	N/A	Design-Builder	Coordinate with Class V UIC Permit. CalGEM notification.
4	AQMD for Odor control – Permit to Construct & Title 5	SCAQMD	18 to 24 months	30 days	OC San / Design-Builder	Permit length and effort depend on whether source is classified as a Minor source or Major source.
5	Local Well Permit	Orange County Health Care Agency	3 months	N/A	Design-Builder	Well ordinance is enforced by City of Fountain Valley for Plant No. 1. OCWD is notified through this permit process.
6	Construction Permits	City of Fountain Valley (P1) City of Huntington Beach (P2)	3 months	N/A	Design-Builder	All other permits in hand before applying for construction permits.
7	NPDES	EPA Region 9 and California Regional Water Quality Control Board – Santa Ana Region (Region 8)	1 year	N/A	OC San	Description of project must be included in NPDES updated permit.
8	Coastal Development Permit (Plant No. 2 only)	Coastal Commission / City of Huntington Beach	6 months assumed, OC San to confirm	N/A	Design-Builder	Permit or variance may be required for Plant No. 2 biosolids receiving building if the final design height of the building exceeds 45 ft.
9	CalGEM Coordination				EPA coordinates with CalGEM during the UIC permit process	CalGEM is notified by EPA during the permitting process. CalGEM provides EPA with a list of wells/ APs and may provide comments on risks during the EPA technical review UIC permit stage.

OC San Feasibility Report OPCC (February 18, 2026)

- Injection Wells
- Monitoring Wells
- Fine Screens
- Receiving Slurry Tank and loading
- Biosolids Pumps
- Injection Pumps
- Dilution Water and Pumps
- Odor Control
- Civil Site Work
- Electrical & I&C

Table 10-2. Capital Improvement Project Budget and Estimate Accuracy Range

Site	Low Range -20%	Estimate of Capital Improvement Project Budget	High Range +75%
Plant No. 1 Site 1: Solids Area	\$104,310,000	\$130,382,000	\$228,170,000
Plant No. 1 Site 2: West Side Primary Clarifier	\$103,640,000	\$129,542,000	\$226,700,000
Plant No. 2 Site 1: North Main Facility	\$141,080,000	\$176,350,000	\$308,620,000
Plant No. 2 Site 2: South Main Facility	\$137,710,000	\$172,130,000	\$301,230,000

05



Draft Evaluation Criteria

DRAFT Evaluation Criteria Summary

Criteria	Liquids Alternatives Weighting	Solids Alternatives Weighting
Capital Cost	50%	50%
Operation and Maintenance Cost	20%	20%
Schedule & Implementation Complexity	10%	10%
Technical Feasibility	10%	10%
Resiliency & Reliability	5%	5%
Regional Beneficial Use – Liquids	5%	-
Regional Beneficial Use – Solids	-	5%

Qualitative Ranking	Extremely Low	Very Low	Low	Moderately Low	Moderate	Moderately Strong	Strong	Very Strong	Extremely Strong
Quantitative Score	1	2	3	4	5	6	7	8	9

DRAFT Evaluation Criteria Definitions

	Definition	Weight	Extremely Low (Score = 1)	Moderate (Score = 5)	Extremely Strong (Score = 9)
Capital Cost (50%)	The upfront cost to plan, design, build and start up the facilities. Lower costs mean less initial funding and a higher score.	50%	The lowest-cost option scores 9. Higher costs earn lower scores based on how much they exceed the lowest cost. The 8 in the equation represents the span from 1 to 9. $\text{Cost Score} = 9 - 8 \left(\frac{\text{Alternative Cost} - \text{Lowest Cost}}{\text{Highest Cost} - \text{Lowest Cost}} \right)$		
O&M Cost (20%)	The ongoing cost to run and maintain the facilities, including staff, energy, chemicals and hauling. Lower costs earn higher scores.	20%	The lowest-cost option scores 9. Higher costs earn lower scores based on how much they exceed the lowest cost. The 8 in the equation represents the span from 1 to 9. $\text{Cost Score} = 9 - 8 \left(\frac{\text{Alternative Cost} - \text{Lowest Cost}}{\text{Highest Cost} - \text{Lowest Cost}} \right)$		
Schedule & Implementation Complexity (10%)	How long and how difficult construction will be while keeping the plant running. Higher scores mean simpler, faster construction with less disruption to wastewater treatment.	10%	Difficult construction with many steps and a high risk of delays. Major disruptions or temporary reductions in treatment capacity.	Some construction challenges and temporary disruptions, but the plant can manage them while continuing treatment.	Simple construction with fewer steps and a lower risk of delays. Little or no disruption to treatment.

DRAFT Evaluation Criteria Definitions

Criteria	Definition	Weight	Extremely Low (Score = 1)	Moderate (Score = 5)	Extremely Strong (Score = 9)
Technical Feasibility (10%)	Workforce Fit How well the process matches the skills and equipment experience of current operators. Higher scores mean less training or new expertise to run and maintain it.	4%	Requires major training and new skills to operate and maintain unfamiliar equipment.	Builds on current staff skills, with some additional training needed.	Closely matches current staff skills and familiar equipment. Requires little additional training or outside expertise.
	Maturity How well the process has worked at similar treatment plants, especially locally. Higher scores mean a stronger track record and more confidence in long-term performance.	3%	Little or no experience at operating plants, especially locally. Long-term performance is largely unproven.	Successful use at similar plants, including local examples, provides confidence that the process can work reliably.	A long, proven record at many similar plants, especially locally. Strong confidence in successful operation over time.
	Space How much usable tank space and land remain for other needs or future expansion. Higher scores mean more room to adapt as the plant's needs change.	3%	Uses nearly all available tanks and land, leaving little or no room for other uses or future expansion.	Leaves some usable tank space or land for other needs or future expansion.	Leaves plenty of usable tank space or land, giving the plant flexibility for future needs.

DRAFT Evaluation Criteria Definitions

Criteria	Definition	Weight	Extremely Low (Score = 1)	Moderate (Score = 5)	Extremely Strong (Score = 9)
Resiliency & Reliability (5%)	Resiliency How well the process keeps plant operation when conditions change or problems occur, and how well it recovers. Higher scores mean more stable treatment and better protection of treatment quality.	3%	Problems or changing conditions can quickly reduce treatment quality. The process has limited ability to absorb disruptions or recover.	Handles everyday changes and recovers from routine problems with staff adjustments. Bigger disruptions may need extra support.	Keeps treatment stable through major changes or disruptions, with built-in protection and flexibility to maintain water quality and meet requirements.
	Redundancy How well backup equipment and extra treatment capacity keep the plant running during outages or storms. Higher scores mean more backup capacity and fewer interruptions to treatment.	2%	Few backups or spare tanks. An equipment outage can sharply reduce treatment capacity or the ability to handle storm flows.	Enough backup capacity for routine outages and expected storms. Bigger disruptions may require adjustments or temporarily reduce capacity.	Strong backups and extra capacity keep treatment running when key equipment is offline, while helping manage storm flows and meet treatment requirements.
Regional Beneficial Use – Liquids (5%)	How widely recycled water can serve local agencies and communities. Higher scores mean more SOCWA PC2 member agencies can benefit.	5%	Provides little or no reusable water benefit to local member agencies.	Provides useful recycled water for several member agencies, but not the whole region.	Provides useful recycled water for most or all member agencies, benefiting the widest part of the region.
Regional Beneficial Use – Solids (5%)	How useful treated solids (biosolids) are as a resource, based on their quality and available markets. Higher scores mean more practical reuse options.	5%	Solids quality limits reuse to a few restricted uses, with little flexibility.	Supports established uses, such as applying solids to land or composting, with some options to recover resources or energy.	Higher-quality solids support the widest range of reuse options and greater flexibility for long-term regional needs.

Questions?

October 26, 2026

Agenda Item

4

Project Committee 2 Special Meeting

Meeting Date: October 26, 2026

TO: Project Committee 2 Board of Directors

FROM: Amber Boone, General Manager

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

SUBJECT: J.B. Latham Facility Plan Assessment Update – Draft Evaluation Criteria, Weighting and Scoring Methodology [Project Committee 2]

Executive Summary

HDR will present the proposed criteria, weighting factors, and scoring methodology to evaluate the liquids and solids alternatives in the J.B. Latham (JBL) Facility Plan Assessment (FPA). Staff are seeking input from Project Committee 2 (PC 2) regarding whether the proposed criteria, weighting factors, and scoring methodology appropriately reflect the priorities of the PC2 Board Members. A draft summary of the project alternative scoring is provided to provide the Board with results based on the staff's recommendation of criteria.

Background

SOCWA retained HDR to prepare a Facility Planning Assessment (FPA) for the J.B. Latham Treatment Plant (JBL) to evaluate existing facilities, identify future treatment requirements, and develop alternatives for long-term facility improvements over a 30-year planning horizon.

As discussed under Agenda Item 3, the FPA includes wastewater treatment and solids management alternatives under different future operating conditions. The FPA scope includes developing evaluation criteria and a comparative methodology to identify alternatives for further consideration. Establishing these criteria and their relative importance is an important step because the evaluation methodology can significantly influence which alternatives are recommended.

Discussion

HDR has prepared draft evaluation criteria, weighting factors, and scoring methodologies to support a consistent comparison of the wastewater treatment and solids management alternatives. These proposed HDR criteria were provided to stakeholders for input, circulated to PC2 stakeholders on August 6, 2026, with feedback due by October 6, 2026. To assist stakeholders, SOCWA staff provided input reflecting SOCWA's historical emphasis on capital costs, long-term financial considerations, operational reliability, and regional priorities as a comparison to HDR's score is included in Table 1.

Table 1: Draft criteria and weighting factors

Evaluation Criteria	HDR Proposed Weight	Staff Proposed Weight
Capital Cost	30%	50%
Operations and Maintenance Cost	20%	20%
Schedule and Implementation Complexity	10%	10%
Technical Feasibility	15%	10%
Resiliency and Reliability	15%	5%
Regional Beneficial Use	10%	5%
Total	100%	100%

The same weighting framework is proposed for liquid treatment and solids management alternatives, with regional beneficial use evaluated separately based on recycled water or Biosolids management opportunities.

PC2 Members are requested to consider staff's recommendations:

- Capital and operating costs should represent 70% of the overall evaluation with less emphasis on technical feasibility, reliability, resiliency, and implementation considerations.
- Schedule and Implementation Complexity, Technical Feasibility, and Resiliency and Reliability should receive less consideration since all the options are similarly complex; only technically feasible options are being considered; and all options offer equivalent Resiliency and Reliability under current regulations.
- Regional beneficial uses should receive less consideration in evaluating recycled water and Biosolids management alternatives since they all produce similarly reusable recycled water and Biosolids.

Committee input will be used to refine the evaluation methodology and update the comparative rankings before identifying alternatives for further development.

Financial Impact

There is no immediate financial impact associated with reviewing the draft evaluation criteria, weighting factors, scoring methodology and draft scoring results.

The evaluation framework will influence the comparison and potential selection of alternatives involving significant future capital and operating expenditures. Any recommended capital improvements, project budgets, and funding authorizations will be considered separately through SOCWA's established approval processes.

Recommendation:

Staff recommend that the PC 2 Board adopt the weighting criteria proposed by SOCWA staff as shown in Table 1 of this report.

Attachment:

Draft Project Alternatives Scoring for Alternatives A and B

Liquid Alternatives Criteria Evaluation – Option A (with OCWRP)

JB Latham Facility Planning Assessment | Liquid Alternatives Criteria Evaluation (Updated with 2026\$ Cost Summary) | DRAFT

Criterion (Weight)	A.0 Baseline with OCWRP	1A.1 Plant 1 MBR	1A.2 Plant 1 MLE	1A.3 Plant 1 MOB/IFAS	1A.4a Plant 1 N/Partial DN	1A.4b Plant 1 N/Partial DN Designated Use	2A.1 Plant 2 MBR	2A.4a Plant 2 N/Partial DN	2A.4b Plant 2 N/Partial DN Designated Use
Capital Cost (50%)	9.0 – Extremely Strong (\$0)	1.2 – Extremely Low (\$102.4M)	4.7 – Moderate (\$56.5M)	4.6 – Moderate (\$58.1M)	4.7 – Moderate (\$57.0M)	6.0 – Moderately Strong (\$40.0M)	1.0 – Extremely Low (\$104.8M)	4.7 – Moderate (\$57.0M)	6.0 – Moderately Strong (\$40.0M)
Annual O&M Cost (20%)	9.0 – Extremely Strong (\$5.98M/yr)	1.0 – Extremely Low (\$7.64M/yr)	5.2 – Moderate (\$6.77M/yr)	5.0 – Moderate (\$6.80M/yr)	5.4 – Moderate (\$6.76M/yr)	8.0 – Very Strong (\$6.21M/yr)	1.0 – Extremely Low (\$7.64M/yr)	5.4 – Moderate (\$6.76M/yr)	8.0 – Very Strong (\$6.21M/yr)
Schedule & Implementation Complexity (10%)	9 – Extremely Strong	3 – Low	5 – Moderate	7 – Strong	6 – Moderately Strong	7 – Strong	4 – Moderately Low	7 – Strong	8 – Very Strong
Workforce Fit (4%)	9 – Extremely Strong	3 – Low	7 – Strong	6 – Moderately Strong	7 – Strong	8 – Very Strong	3 – Low	7 – Strong	8 – Very Strong
Maturity (3%)	9 – Extremely Strong	7 – Strong	9 – Extremely Strong	3 – Low	9 – Extremely Strong	9 – Extremely Strong	7 – Strong	9 – Extremely Strong	9 – Extremely Strong
Space (3%)	9 – Extremely Strong	6 – Moderately Strong	4 – Moderately Low	7 – Strong	7 – Strong	8 – Very Strong	6 – Moderately Strong	7 – Strong	8 – Very Strong
Resiliency (3%)	5 – Moderate	9 – Extremely Strong	6 – Moderately Strong	8 – Very Strong	5 – Moderate	5 – Moderate	9 – Extremely Strong	5 – Moderate	5 – Moderate
Redundancy (2%)	9 – Extremely Strong	5 – Moderate	3 – Low	6 – Moderately Strong	6 – Moderately Strong	6 – Moderately Strong	7 – Strong	7 – Strong	7 – Strong
Regional Beneficial Use – Liquids (5%)	1 – Extremely Low	3 – Low	5 – Moderate	5 – Moderate	7 – Strong	5 – Moderate	3 – Low	7 – Strong	5 – Moderate
Total Weighted Score (1-9 scale)	8.48	2.13	5.05	5.15	5.41	6.65	2.17	5.53	6.77

Notes: Scores are on a 1-9 scale (Extremely Low to Extremely Strong) from the criteria evaluation. Capital costs and Annual O&M are from the Liquids Cost Summary (2026 Dollars) slide. Total Weighted Score uses the stated criterion weights. Higher scores are better for all criteria. Green = Strong or better; Yellow = Moderate range; Red = Low or weaker. Option B (without OCWRP) is recommended for removal based on SMWD Board action to reconstruct OCWRP.

Liquid Alternatives Criteria Evaluation – Option B (without OCWRP) — Recommended for Removal

JB Latham Facility Planning Assessment | Liquid Alternatives Criteria Evaluation (Updated with 2026\$ Cost Summary) | DRAFT

Criterion (Weight)	B.0 Baseline without OCWRP	1B.1 Plant 1 MBR	1B.3 Plant 1 MOB/IFAS	1B.4a Plant 1 N/Partial DN	1B.4b Plant 1 N/Partial DN Designated Use	2B.1 Plant 2 MBR	2B.4a Plant 2 N/Partial DN	2B.4b Plant 2 N/Partial DN Designated Use
Capital Cost (50%)	9.0 – Extremely Strong (\$0)	1.1 – Extremely Low (\$104.7M)	4.4 – Moderately Low (\$61.1M)	4.7 – Moderate (\$57.0M)	6.0 – Moderately Strong (\$40.0M)	1.0 – Extremely Low (\$106.9M)	4.7 – Moderate (\$57.0M)	6.0 – Moderately Strong (\$40.0M)
Annual O&M Cost (20%)	9.0 – Extremely Strong (\$6.70M/yr)	1.0 – Extremely Low (\$8.36M/yr)	5.0 – Moderate (\$7.52M/yr)	5.2 – Moderate (\$7.47M/yr)	7.8 – Very Strong (\$6.93M/yr)	1.0 – Extremely Low (\$8.36M/yr)	5.2 – Moderate (\$7.47M/yr)	7.8 – Very Strong (\$6.93M/yr)
Schedule & Implementation Complexity (10%)	9 – Extremely Strong	2 – Very Low	6 – Moderately Strong	5 – Moderate	6 – Moderately Strong	3 – Low	6 – Moderately Strong	7 – Strong
Workforce Fit (4%)	9 – Extremely Strong	3 – Low	6 – Moderately Strong	7 – Strong	8 – Very Strong	3 – Low	7 – Strong	8 – Very Strong
Maturity (3%)	9 – Extremely Strong	7 – Strong	3 – Low	9 – Extremely Strong	9 – Extremely Strong	7 – Strong	9 – Extremely Strong	9 – Extremely Strong
Space (3%)	6 – Moderately Strong	3 – Low	2 – Very Low	2 – Very Low	3 – Low	4 – Moderately Low	2 – Very Low	3 – Low
Resiliency (3%)	5 – Moderate	9 – Extremely Strong	8 – Very Strong	5 – Moderate	5 – Moderate	9 – Extremely Strong	5 – Moderate	5 – Moderate
Redundancy (2%)	2 – Very Low	1 – Extremely Low	2 – Very Low	2 – Very Low	2 – Very Low	2 – Very Low	2 – Very Low	2 – Very Low
Regional Beneficial Use – Liquids (5%)	1 – Extremely Low	3 – Low	5 – Moderate	7 – Strong	5 – Moderate	3 – Low	7 – Strong	5 – Moderate
Total Weighted Score (1-9 scale)	8.25	1.81	4.72	5.04	6.28	1.91	5.14	6.38

Notes: Scores are on a 1-9 scale (Extremely Low to Extremely Strong) from the criteria evaluation. Capital costs and Annual O&M are from the Liquids Cost Summary (2026 Dollars) slide. Total Weighted Score uses the stated criterion weights. Higher scores are better for all criteria. Green = Strong or better; Yellow = Moderate range; Red = Low or weaker. Option B (without OCWRP) is recommended for removal based on SMWD Board action to reconstruct OCWRP.