GRANADA COMMUNITY SERVICES DISTRICT

AGENDA

BOARD OF DIRECTORS
SPECIAL MEETING at 6:30 p.m.

Tuesday, August 3, 2021

DUE TO COVID-19 AND COUNTY REGULATIONS, THIS MEETING WILL BE HELD VIA TELECONFERENCE AS PERMITTED BY THE GOVERNOR'S EXECUTIVE ORDER N-08-21.

Members of the Public may participate via ZOOM online or by telephone:

Join Zoom Meeting

Phone one-tap: US: +16699006833,,99883485083# or +19292056099,,99883485083#

Meeting URL: https://dudek.zoom.us/j/99883485083

Join by Telephone

Dial:

US: +1 669 900 6833 or +1 929 205 6099

Meeting ID: 998 8348 5083

CALL SPECIAL MEETING TO ORDER AT 6:30 p.m.

ROLL CALL

Directors:	President:	Matthew Clark
	Vice-President:	Eric Suchomel
	Director:	Barbara Dye
	Director:	Nancy Marsh
	Director:	David Seaton
Staff:	General Manager:	Chuck Duffy
	Assistant Manager:	Delia Comito
	District Counsel:	Bill Parkin

The Board has the right to take action on any of the items listed on the Agenda. The Board reserves the right to change the order of the agenda items, to postpone agenda items to a later date, or to table items indefinitely.

GENERAL PUBLIC PARTICIPATION

Public members may comment on matters under the jurisdiction of the District that are not on the agenda. Comments are limited to 3 minutes. See the instructions above to comment via ZOOM (online) or by telephone.

ACTION AGENDA

1. **Consideration of Operations Issues, BOD Loading, and Process Study at the Sewer Authority Mid-Coastside Wastewater Treatment Plant.**
   Recommendation: To be made by the Board.

ADJOURN TO CLOSED SESSION

2. **Conference with Real Property Negotiator (Government Code Section 54956.8).** Property: 480 Avenue Alhambra, El Granada, California.
   District's Negotiator: Chuck Duffy
   Negotiating parties: Candise D'Acquisto (Owner) Picasso Preschool and Granada Community Services District.
   Under negotiation: Instruction to negotiator regarding price and terms of lease.

RECONVENE TO OPEN SESSION

Report any reportable action taken in Closed Session.

ADJOURN SPECIAL MEETING

At the conclusion of the July 22, 2021 Meeting:
Last Ordinance adopted: No. 174
Last Resolution adopted: No. 2021-005

This meeting is accessible to people with disabilities. If you have a disability and require special assistance related to participating in this teleconference meeting, please contact the District at least two working days in advance of the meeting at (650) 726-7093 or via email at dcomito@granada.ca.gov.

Except for records exempt from disclosure under section 6254 of the Public Records Act, all materials distributed for the discussion or consideration of items on the Agenda are disclosable to the public upon request, and shall be made available without delay or at the time of distribution to the Board. Please contact Delia Comito at (650) 726-7093 to request copies of Agenda materials.

Sewer Authority Mid-Coastside
1000 Cabrillo Hwy N.
Half Moon Bay, CA 94019
(650) 726-0124
www.samcleanswater.org

A Joint Powers Authority
Serving:
City of Half Moon Bay
Granada Community Services District
Montara Water and Sanitary District

MEMORANDUM

CONFIDENTIAL COMMON INTEREST PRIVILEGED COMMUNICATION

TO: Sewer Authority Mid-Coastside (SAM) Member Agency General Managers

FROM: Jeremy N. Jungreis, General Counsel and Kishen Prathivadi, General Manager

DATE: August 1, 2021

RE: Actions to Be Taken With Regard to Certain Dischargers Believed to Be Responsible for Slugs of High Levels of Biochemical Oxygen Demand Materials Currently Causing Interference at SAM Publicly Owned Treatment Works

For the past ten months SAM's wastewater treatment plant ("WWTP" or "POTW") has had periodic upsets and interference with secondary treatment processes because of influent entering the WWTP containing excessive biochemical oxygen demand ("BOD"). The sources of these high BOD slugs are not known with certainty, but certain categories of dischargers—breweries, distilleries, and wineries —are suspected of being primarily responsible for the recent upsets, for the reasons discussed below. Upset at the WWTP attributable to excessive BOD has resulted in interference with the effectiveness of secondary treatment processes and resulted in over thirty exceedances of SAM's National Pollutant Discharge Elimination System permit ("NPDES" or "Permit") since November of 2020, primarily for BOD, but also for excessive total suspended solids ("TSS").

SAM, as authorized by the Board, has retained Brown and Caldwell ("B&C") to identify infrastructure modifications at the WWTP that could potentially eliminate or reduce the number of future BOD and TSS violations through the addition of certain treatment redundancy. However, we have confirmed—by review of pertinent literature,[1] and by consulting experts in

[1] *See, e.g.,* Rhode Island Department of Environmental Management, *Industrial Pretreatment Program Fact Sheet – Breweries, Distilleries and Wineries* (June 11, 2019) (describing how even small breweries can be major source of BOD loading to a POTW and suggesting regulatory pretreatment requirements for all breweries["["Average municipal BOD values range from 100 to 400 mg/L, while high strength BOD values from breweries, distilleries or wineries can range from 5,000 to over 20,000 mg/L."]), available online at http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/pdfs/brewery-ipp-fs.pdf. *See also Brewers Association Water and Wastewater: Treatment/Volume Reduction Manual*, at p. 17 (charts showing BOD in brewery waste ranging from 500 mg per liter to 100,000 mg per liter—depending on type of waste discharged, and recommending discharge limits of less than 400 for BOD and 350 for TSS), available online at

BOD source control,[2] that slugs of BOD rich materials from breweries/distilleries/wineries entering a WWTP—even if discharged on an episodic basis in relatively small quantities, such as during brewery tank cleaning or when high strength waste, such as brewing yeast, is released into member agency collections systems—do have significant potential to cause upset and WTTP interference, particularly for a small WWTP like the one operated by SAM, which has an average daily flow during dry weather of only 1.4 MGD. The risk of upset/interference from high BOD slugs or spikes in BOD's entering the WWTP will remain, absent better coordinated source control, even with the additional plant modifications proposed by B&C. Thus, coordinated actions by SAM and the Member Agencies to tighten up their existing source control (also known as non-domestic wastewater) program, and enforce existing member agency and SAM standards for preventing harmful discharges of non-domestic wastewater into the member agency collection systems,[3] is essential to preventing future NPDES violations for both BOD and TSS while heading off a cease and desist order, and perhaps a formal mandate for implementation of the EPA's pretreatment program throughout SAM's service area.

For better or worse, this is not the first time that the SAM WWTP has experienced difficulties meeting all of its NPDES permit requirements. During the 1990s SAM's WWTP had difficulties achieving permit standards. The result was a a determination by the SAM Member Agencies to grant additional powers to SAM via amendment to the JPA Agreement[4] so as to allow SAM a greater role in controlling non-domestic and industrial wastes with potential to enter the WWTP and cause upset. SAM adopted a Non-Domestic Waste Source Control Program ("NDWSCP") with Resolution 1-91, and comprehensive regulations to implement the NDWSCP, in cooperation with the Member Agencies, in 1994 with the SAM Board's approval of SAM Resolution 2-94 (attached hereto, with member agency ratifications, at Attachment 1).

SAM's NDWSCP was amended by the Board in 2014 to update the fee schedule for SAM's implementation of the NDWSCP, but the program has largely remained unchanged since initial passage and ratification by the Member Agencies. Thus, SAM's NDWSCP Regulations are currently enforceable against non-domestic dischargers,[5] either by SAM, the Member Agencies, or a combination thereof, within the Member Agency service areas. However, it

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https://www.brewersassociation.org/attachments/0001/1517/Sustainability_-_Water_Wastewater.pdf

[2] Among others, we consulted Tim Suydam, the former environmental director for Stone Brewery (who developed Stone's pretreatment system and assisted numerous small breweries in San Diego County to develop pretreatment programs), and Jack Bebee, General Manager of the Fallbrook Public Utilities District, who has extensive experience in wastewater process design.

[3] Though in recent years SAM has not issued permits for non-domestic wastewater, it has authority to do so per prior agreement of the member agencies in amending the JPA Agreement to add Article IV, Section B (9), which authorizes SAM to adopt such uniform regulations related to industrial and non-domestic pollutants of concern, and to assume permitting and enforcement authority as to regulations adopted by SAM.

[4] See SAM JPA Agreement § IV.B (9).

[5] Non-Domestic Dischargers, as defined in Section 1.2 of SAM's NDWSCP Regulations, are those dischargers to Member Agency wastewater collection systems who exceed the allowable wastewater limits in Section 1.0 (b)(11) or who have the potential to discharge prohibited substances in violation of Section 2.0 of the NDWSCP Regulations.

appears that all of the permits previously issued to non-domestic discharges have lapsed while new breweries/distilleries have been issued permits to operate without obtaining NDWSCP permits from SAM. This circumstance needs to be remedied as recommended below.

Steps Moving Forward to Address the Current Exceedances:

1. Member Agencies to Promptly Provide Records to SAM Related to Existing Discharges By Breweries, Distilleries and Wineries: Each Member Agency, on or before Friday August 6, 2021, is asked to provide SAM with all permits or authorizations issued for breweries, distilleries, and wineries within each Member Agency's service area. SAM has some of these records, but a partial picture is not good enough to address the current situation. Given the repeated BOD violations that have occurred, and the likelihood of San Francisco Regional Water Quality Control Board ("Regional Board") enforcement in the near future, there is an urgent need for a carefully coordinated source control response between SAM and each Member Agency, a response that will allow SAM to determine which previously issued non-domestic permits should be revised and reissued, and which newly issued authorizations to discharge require the discharger to apply for and obtain a permit in order to ensure SAM's NDWSCP Regulations are enforced while providing consequences to dischargers of high BOD and TSS discharges into Member Agency collection systems.

2. Member Agencies to Immediately Notify All Breweries, Distilleries, and Wineries Within Their Service Areas That These Non-Domestic Dischargers Are Required to Obtain a NDWSCP Permit from SAM, And that They Must Not Discharge BOD in Excess of 400 mg/L, COD in excess of 1000mg/L, or TSS in excess of 350 mg/L Until Such Permit is Obtained[6]

SAM Resolution 2-94, Exhibit A, attached hereto as Attachment 2, establishes the maximum allowable limits ("MALs") for wastewater entering SAM Member Agency collection systems without a permit. If the wastewater exceeds, *or has the potential to exceed*, 400 mg/L of BOD, 350 mg/L of TSS, or 1000 mg/L of COD, then discharge is not authorized without first obtaining a NDWSCP permit from SAM. (NDWSCP Regulations §§ 1.0 (b)(11); 1.2 (b).) Each of the member agencies adopted SAM Resolution 2-94 and stated that they had incorporated the requirements of the NDWSCP Regulations into their own sewer use ordinances.[7] Consequently, the numeric effluent limits ("NELs") and MALs in Exhibit A to Resolution 2-94 are legally binding throughout SAM on those persons that discharge into the Member Agency collection systems. Each non-domestic discharger within the service area of each Member Agency—which

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[6] SAM NDWSCP Regulations § 2.10 (b) gives SAM the discretion, though not the obligation, in an issued permit, to allow BOD, COD, or TSS limits above listed MALs upon making certain findings. Historically, however, SAM permits contained effluent limits for BOD at 400 mg/L and 350 mg/L for TSS, consistent with, or more permissive than, BOD limits in other non-domestic and industrial permits for breweries/distilleries/wineries.

[7] Evidence of incorporation of SAM's NDWSCP program and permitting system is readily confirmed in the sewer use ordinances of both GCSD and the City. However, the sewer use ordinance of MWSD does not appear to reference the NDWSCP or provide any permitting or enforcement role for SAM with regard to non-domestic or industrial wastewater, so it is not clear what the mechanism for enforcement of SAM's NDWSCP would be within Montara. Further consultation between Montara and SAM regarding this issue would be helpful.

at minimum should include all breweries, distilleries, and wineries, should be notified within the next week that: (1) they are either exceeding, or have the potential to exceed, the MALs for BOD and TSS at their respective point(s) of discharge, thereby rendering them a non-domestic discharger; (2) they are believed to be potentially discharging a prohibited waste forbidden by Section 2.0 (f) of the NDWSCP Regulations because their waste, individually, or cumulatively with other non-domestic dischargers, is causing interference with treatment at the WWTP; (3) they are not to discharge any wastewater or substance to the sanitary sewer prior to obtaining a permit that exceeds the MALs established in the NDWSCP Regulations (and they should be provided with a copy of the MALs with the letter).

3. Member Agencies Need to Work With SAM to Obtain the Data and Sampling and Monitoring Information Needed for SAM to Promptly Issue NDWSCP Permits to All Breweries, Wineries and Distilleries within SAM that Contain Robust Sampling and Monitoring Plans

SAM will need assistance from the Member Agencies, and potentially consultant support from experienced pretreatment program managers and developers to rapidly reissue NDWSCP Permits to all of the breweries, distilleries, and wineries within SAM and to quickly develop sampling and monitoring plans with real teeth, including the taking of grab samples and composite samples needed to ensure that there are no more slugs/spikes of high BOD water covertly released from these facilities to Member Agency collection systems. It may be necessary to require NDWSCP permits from nurseries and fertilizer mixing operations operating within the SAM service area as well, and we'll need further input from the member agencies on whether these types of operations are a likely source of high BOD/TSS entering SAM's WWTP. Undertaking this evaluation quickly will not only increase the likelihood that slugs of high BOD wastewater will stop causing upset at the WWTP, but also potentially head off some of the most draconian enforcement options currently under consideration by the Regional Board.

***

We are happy to discuss this matter at your convenience, to include participation in Member Agency Closed sessions regarding this matter as may be appropriate or desired per Government Code section 54956.96.

cc: SAM Board of Directors

Sewer Authority Mid-Coastside

SAM Board Workshop:
Optimization Alternatives

July 26, 2021

Agenda

- Workshop Objectives
- Optimization Alternatives Results
- Recommendations and Direction
- Next Steps / Schedule

Workshop Objectives

Brown AND Caldwell

Workshop Objectives

- Review Optimization Alternatives
- Review Alternative Costs
- Discuss Recommendations

Plant Optimization Options

Alternatives Capacity Discussion

- The presented alternatives are not intended to upgrade all of the aeration tanks as part of the initial Project; additional upgrades would be required to reach the original design loading

Cost Estimating Assumptions

- Costs shown are marked up to represent construction costs, or the cost we expect a contractor to bid at
- Actual project costs (i.e. capital costs) may be 30-35% higher (see next slide)
- Class 5 estimate, with an error band of -50% to +100%
- All costs are in 2021 dollars and need to be escalated to the planned year of construction

Example Capital Cost Markups (in addition to construction costs)

Project Element	Percentage
Project Administration	5%
Planning/Environmental	10%
Design	10%
Construction Management	10%
Total	**35%**

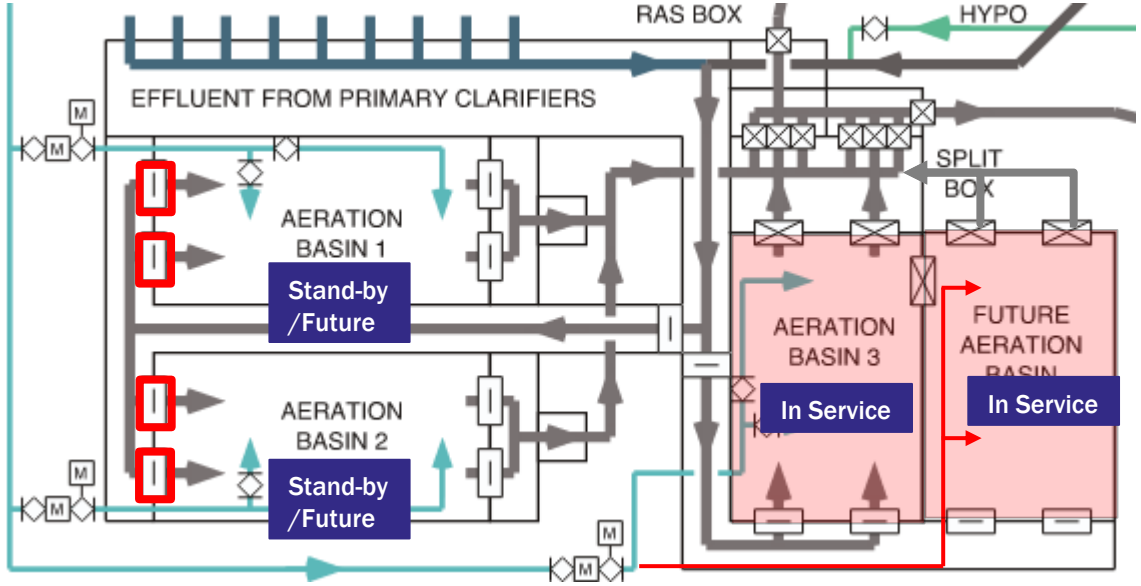
Alternative 1: Use Aeration Basins 3 and 4

Typical Operation: Use AT 3 and 4 in parallel the short term, and use tanks 1 and/or 2 for redundancy

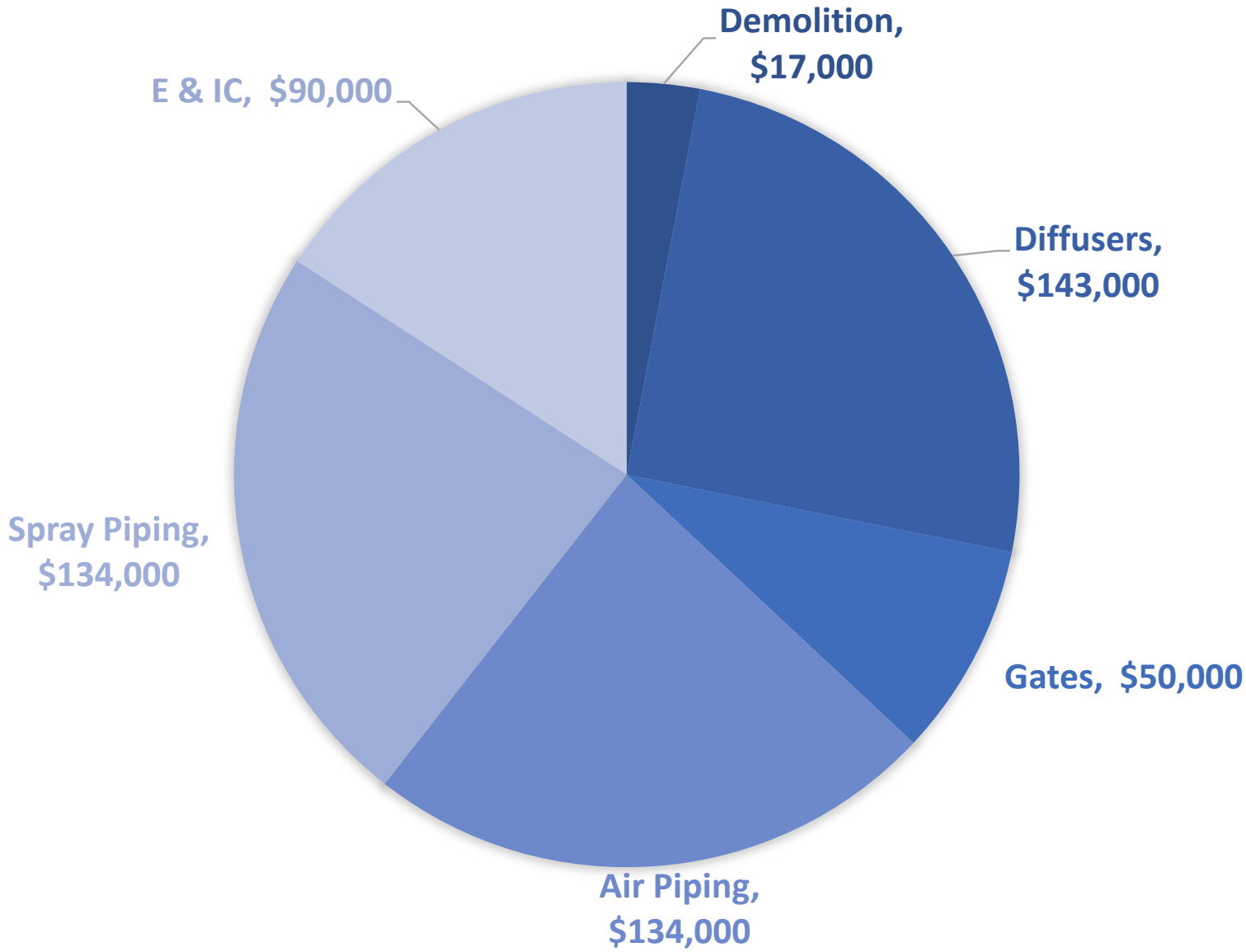
Scope:

- Install fine bubble diffusers in Basin 4
- Install aeration piping/valving in Basin 4
- Install spray water piping in Basin 4
- Replace weir gates in Basins 1 and 2
- Install DO probe in Basin 4

Class 5 OPCC: $565,000 *(- 50 %, + 100 %)*



Alternative 1 Cost Breakdown



Alternative 1 Pros/Cons

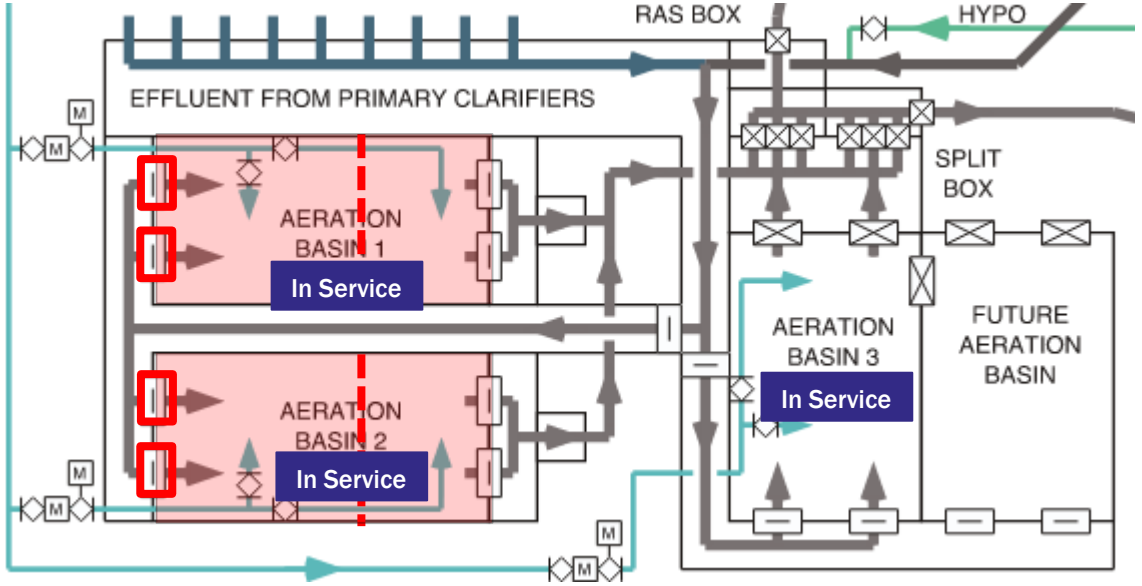
Pros	Cons
Provides the most redundancy	Need additional utility piping, air header piping and weir gates in addition to the fine bubble diffusers for outfitting Aeration Basin 4
Can use Aeration Basins 1 and 2 when performing maintenance on Aeration Basin 3 or 4	
More efficient oxygen transfer in Aeration Basin 3 and 4 with new fine bubble diffusers (lower energy)	
Can utilize Basins 1 and 2 in the future if needed to accommodate additional growth	

Alternative 2: Use Aeration Basins 1, 2, and 3

Typical Operation: Use AT 1, 2, and 3 in parallel

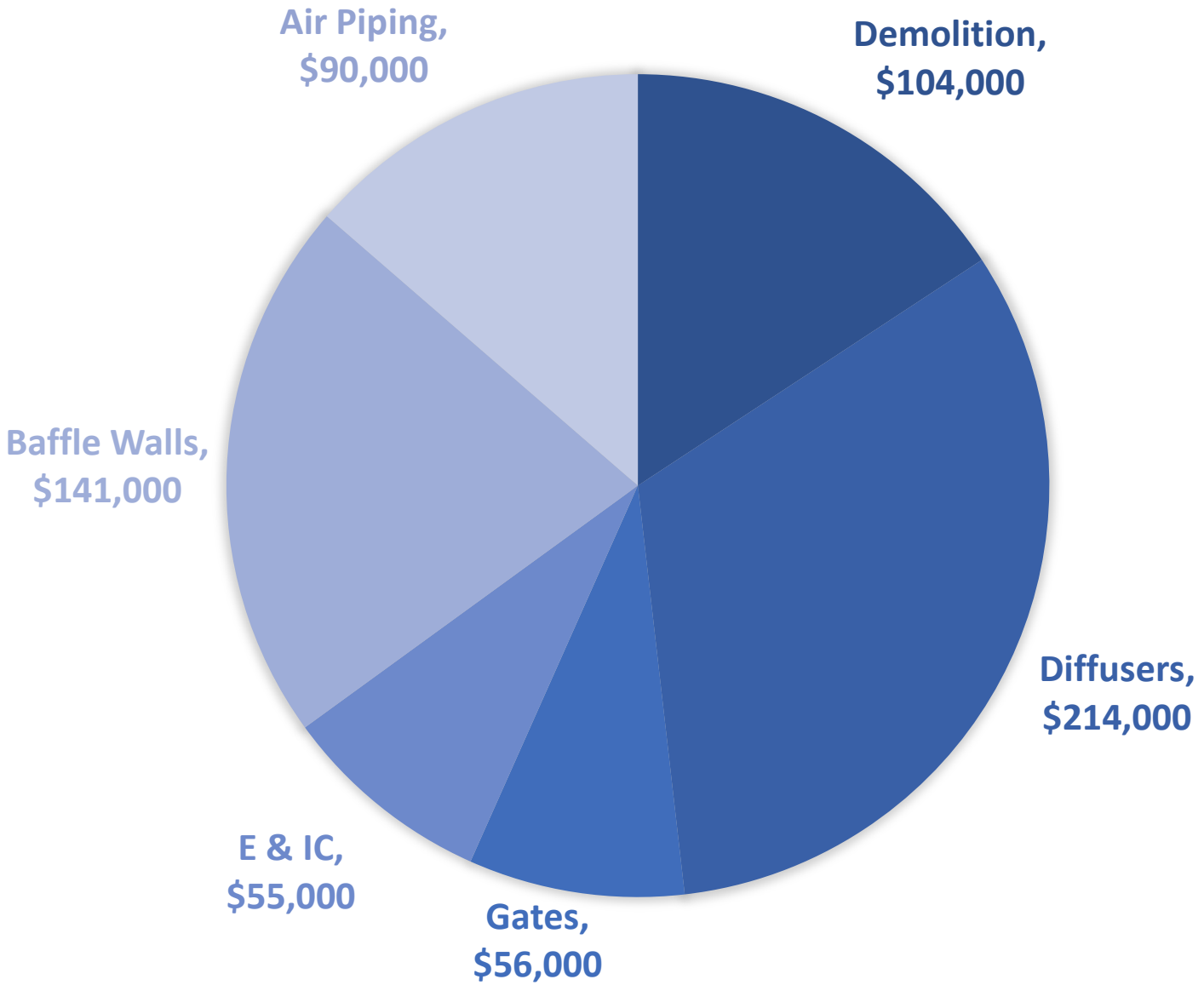
Scope:

- Remove the existing coarse bubble diffusers in Basin 1 and 2
- Install new fine bubble diffusers in Basins 1 and 2
- Replace weir gates in Basins 1 and 2
- Construct new baffle walls in Basins 1 and 2 (for better hydraulics)



Class 5 OPCC: $683,000 *(- 50 %, + 100 %)*

Alternative 2 Cost Breakdown



Alternative 2 Pros/Cons

Pros	Cons
Does not require installing new process piping to connect to Basin 4	Completely strand assets in basin 4
Significant increase in capacity, from only one Basin available to 3 basins available	Lower Redundancy than Alternative 1
Repurposes existing tanks for better performance	Older basins have more uncertainties associated with condition

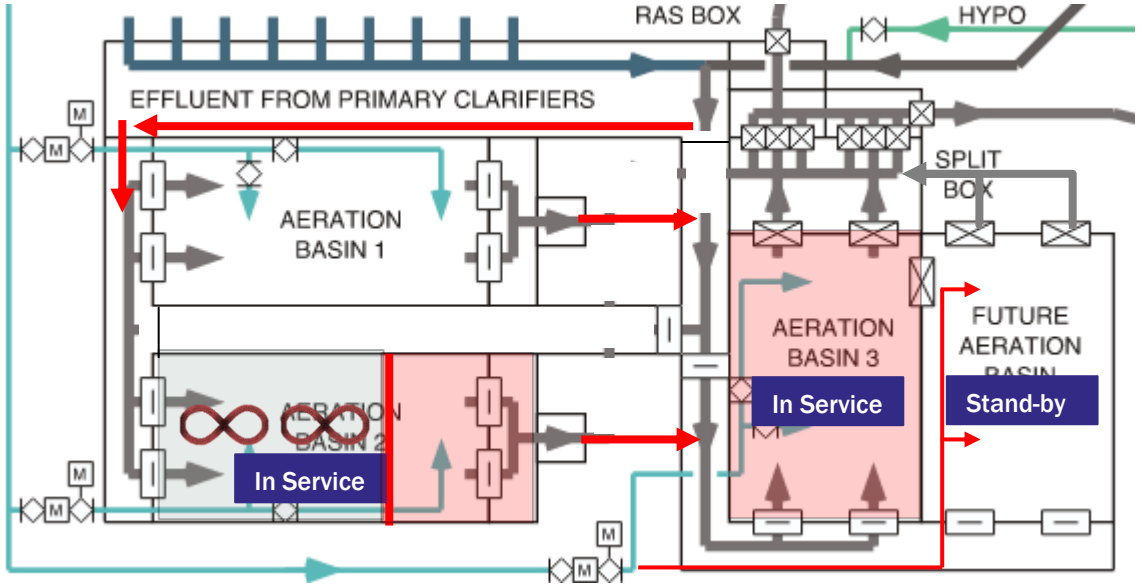
Alternative 3: Operate in series with biological selector

Typical Operation: Operate Tank 2 and 3 in series. Need Tank 4 when maintaining Tank 3.

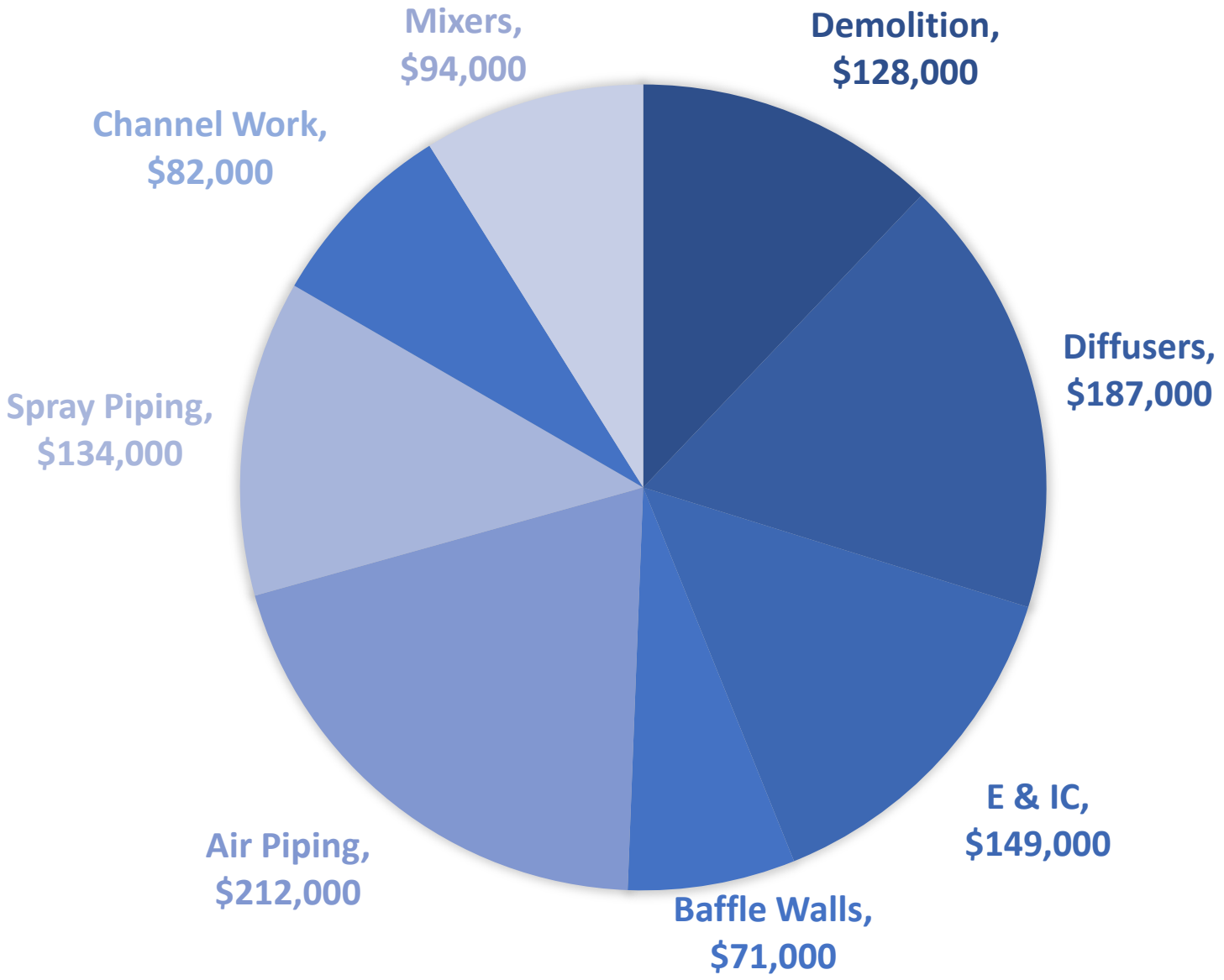
Scope:

- Fully upgrade Basin 4 (see Alt. 1 for details)
- Install new fine bubble diffusers in Basins 1/2
- Construct a new baffle walls in Basins 1/2
- Install submersible mixers in Basins 1/2
- Install coarse bubble diffusers in the Basin 1 Channel
- Infill openings in the concrete divider wall in the Basin 1 Channel
- Install stainless steel stop plates in the basin channels

Class 5 OPCC: $1,050,000 *(- 50 %, + 100 %)*



Alternative 3 Cost Breakdown



Alternative 3 Pros/Cons

Pros	Cons
Highest overall capacity, if all tanks are built out	Highest cost project
Better settleability, strong process resiliency	High probability of struvite precipitation issues, which would add additional O&M costs
	Complex construction to change flow routing through aeration tank system
	New process to SAM operations team

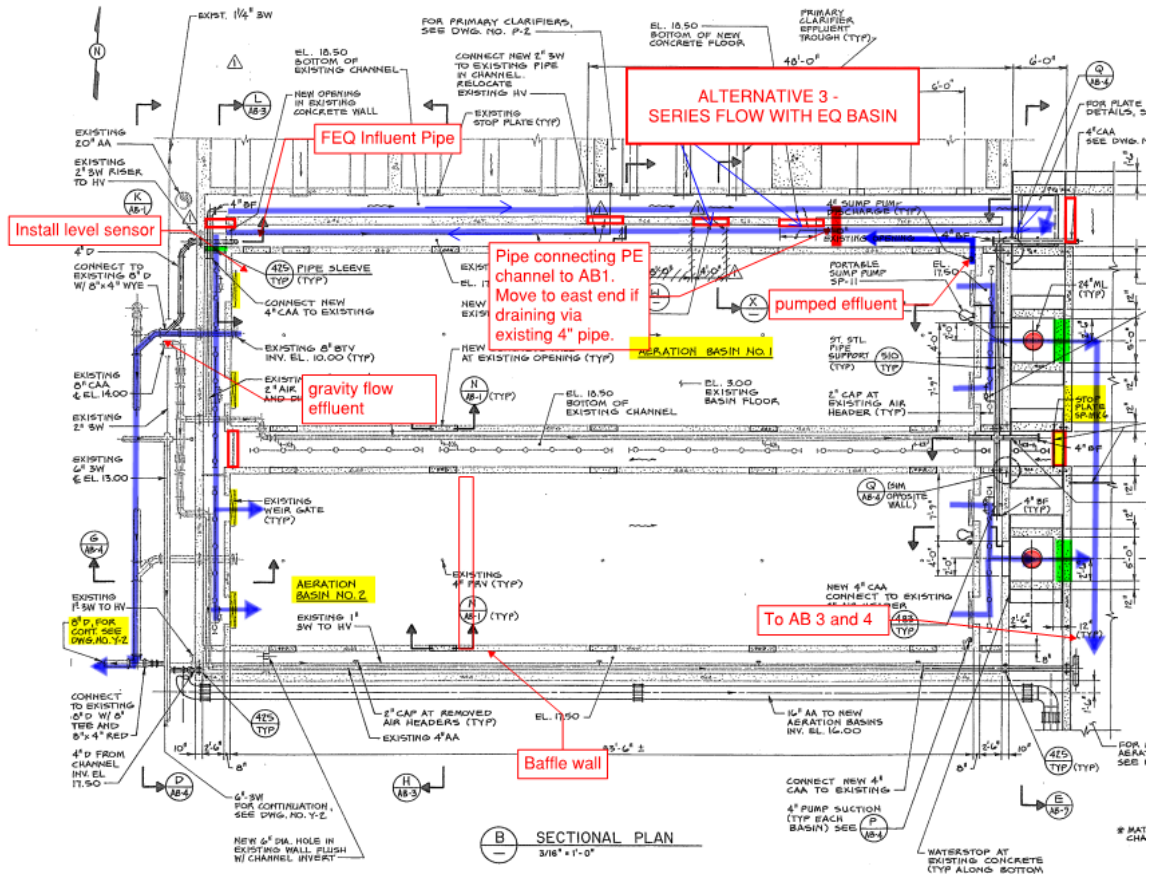
Equalization in Basin 1

Typical Operation: Aeration Basin 1 cannot be used for treatment, only PE EQ

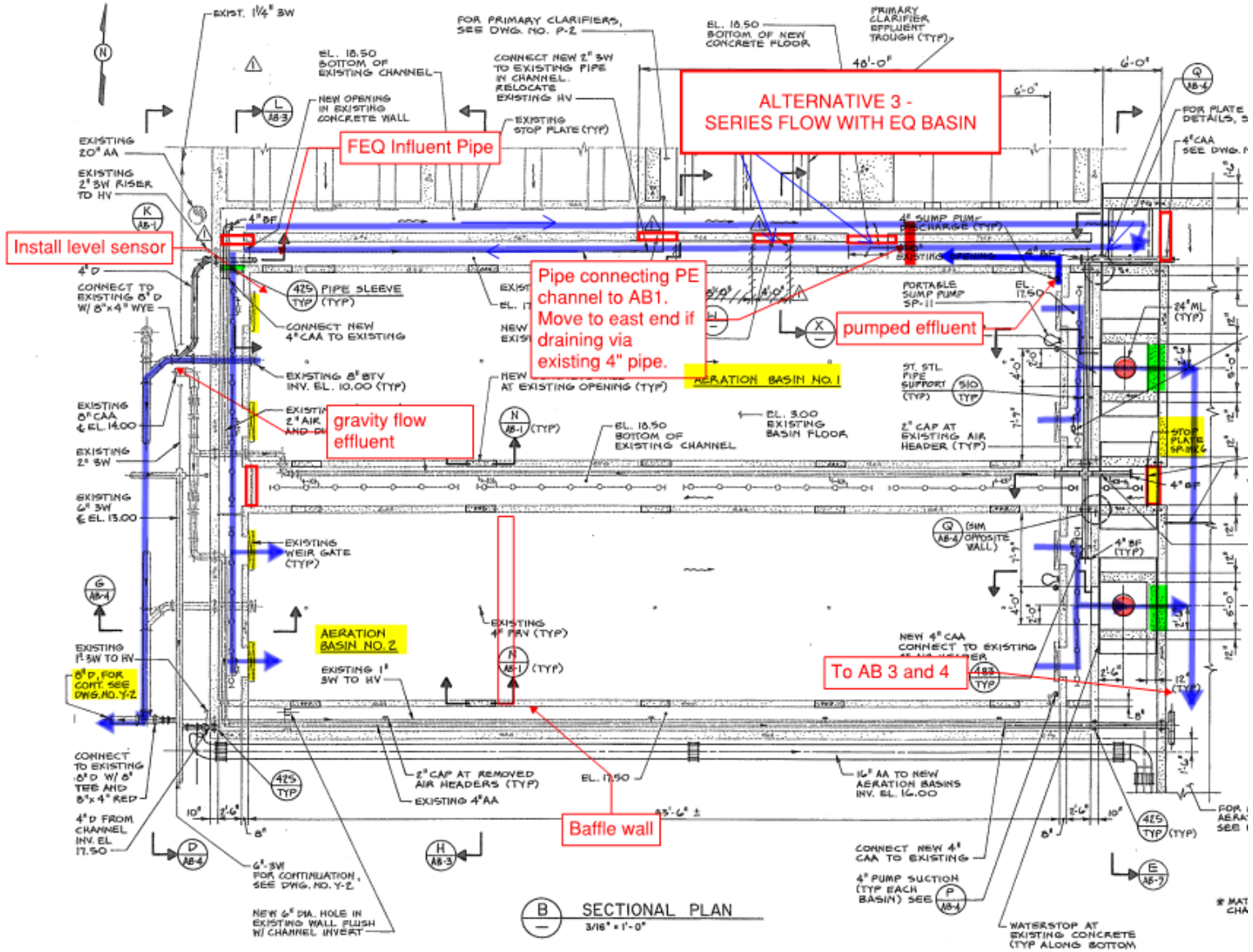
Scope:

- Install submersible pump
- Install 8” pipe with magnetic flow meter

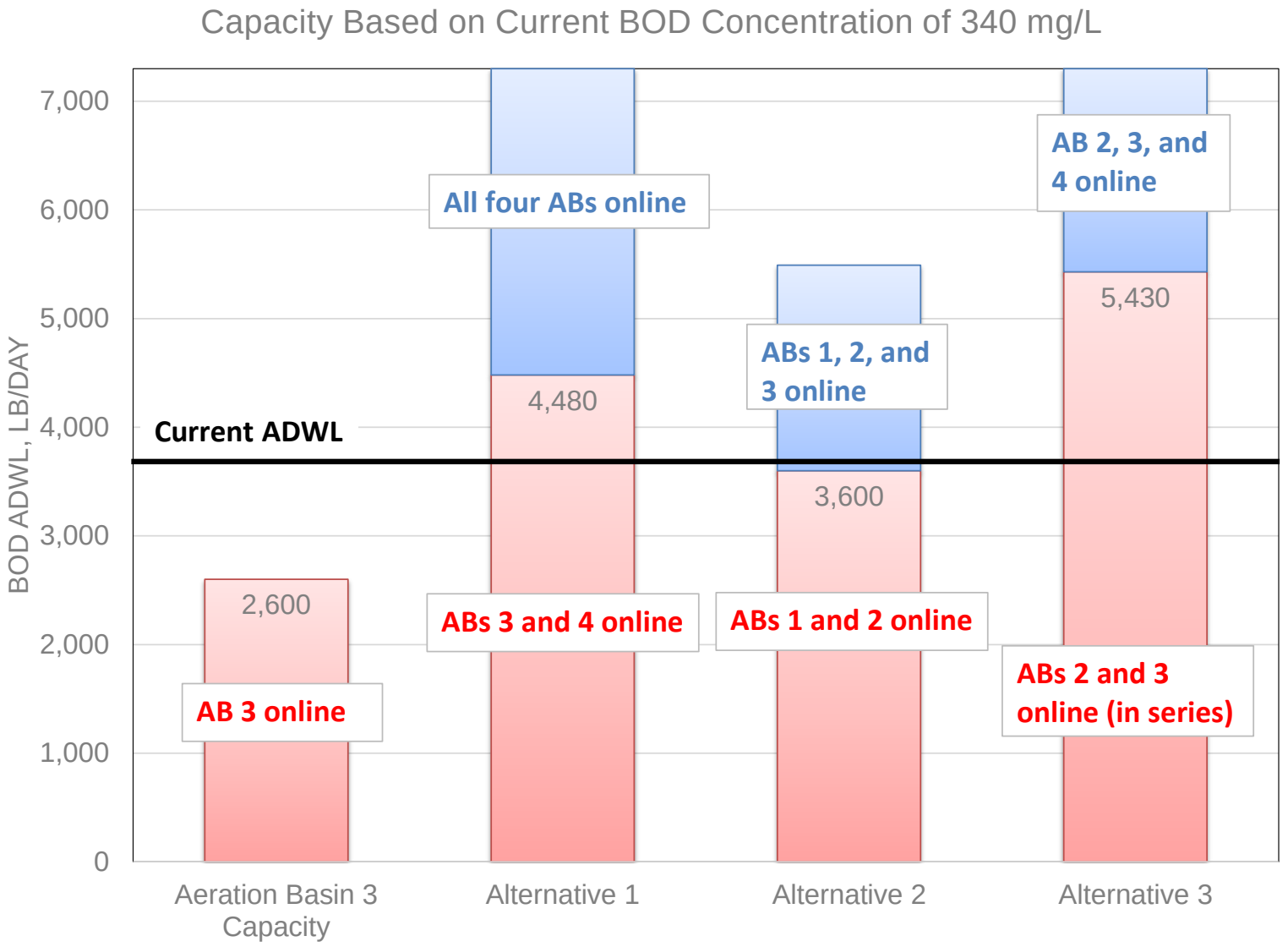
Class 5 OPCC: $243,000 *(- 50 %, + 100 %)*



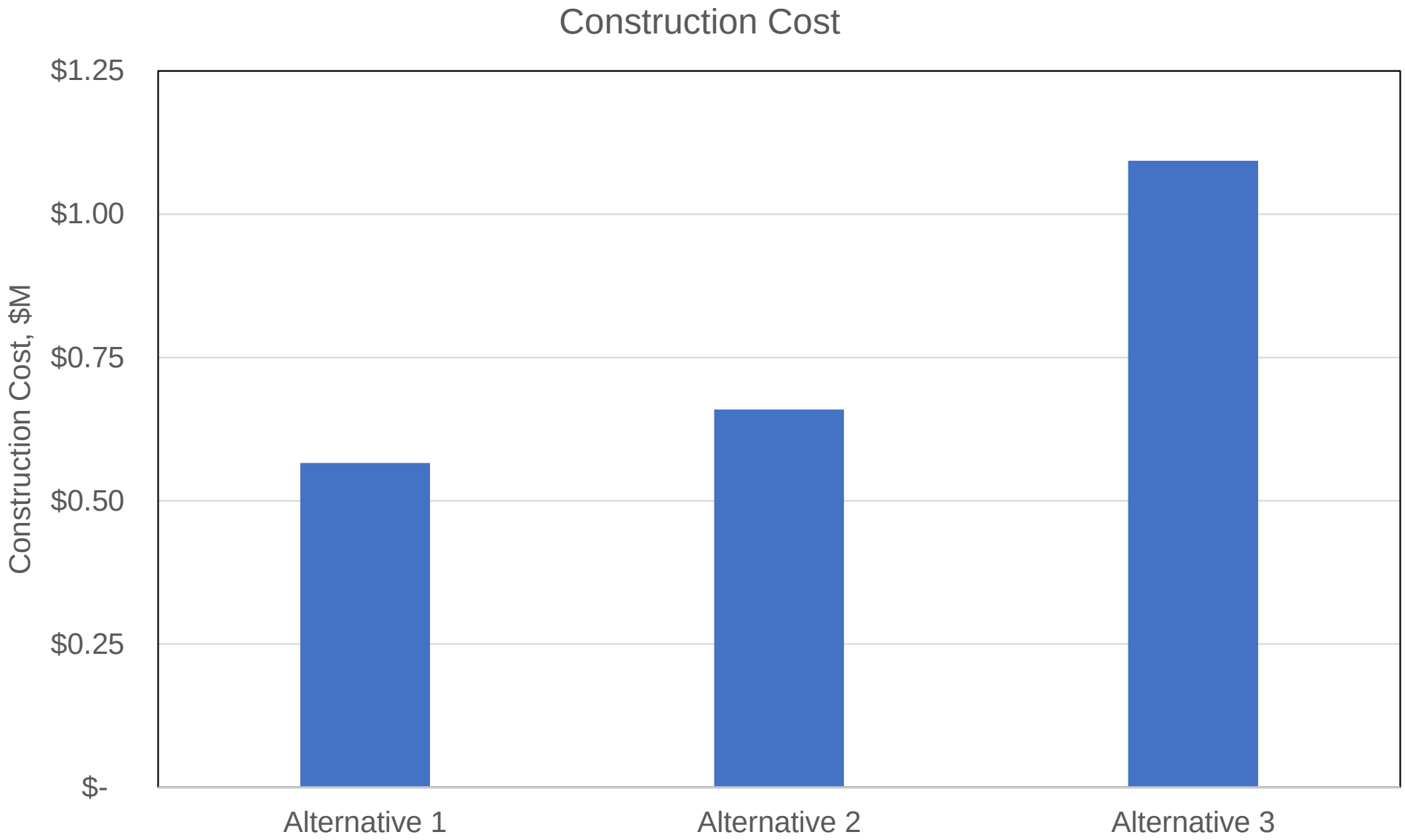
Zoom on Details of Equalization Conversion



Capacity of Alternatives Based on Design PDWWF = 9 mgd



Summary of Construction Costs



Summary of Alternatives and Associated Risks

Alternatives Analysis Summary				
	Current Configuration	Alternative 1	Alternative 2	Alternative 3
Treatment Capacity to meet current loading	No	Yes	Yes	Yes
Redundancy	No	Yes	No	No
Cost	N/A	Low	Medium	High
Risk of construction cost increase	N/A	Low	High	High
Probability risk of violation	High	Low	Medium	Low
Construction Risk	N/A	Low	High	High
Operational complexity and risk	Low	Low	Low	High
Maintenance risk	High	Low	High	High
Note: The current configuration is assumed to be either Aeration Basin 3 in service or Aeration Basins 1 and 2 in service				

Recommendations

- Alternative 3 has high costs, is complex, and will result in other O&M issues at SAM. BC does not recommend implementing Alternative 3 at this time. Re-consider if significant growth is experienced in the area and significantly higher capacity is required (population and/or industry)
- BC recommends pursuing Alternative 1. Both put SAM in a good position to address capacity limitations both in the short term and with additional expansion, to reach design capacity loading in the long term (if needed).
- Equalization costs were provided but operating an aeration tank as EQ does not improve capacity and is not recommended for implementation at this time.

Next Steps

Brown AND Caldwell

Now What?

- SAM to provide comments to draft report
- BC to finalize report
- Collections System Source Identification/Monitoring

QUESTIONS?