



TOWN OF DISCOVERY BAY

A COMMUNITY SERVICES DISTRICT

SDLF Platinum-Level of Governance



President – Kevin Graves • Vice-President – Ashley Porter • Director – Bryon Gutow • Director – Michael Callahan • Director – Carolyn Graham

**NOTICE OF THE REGULAR MEETING
OF THE WATER AND WASTEWATER COMMITTEE
OF THE TOWN OF DISCOVERY BAY
Wednesday June 1, 2022, 5:30 P.M.**

NOTICE
Coronavirus COVID-19

In response to the current proclaimed State of Emergency, indoor masking requirements, and recommended measures to promote social distancing imposed by State and local officials, the Town of Discovery Bay Community Services District Board of Directors will take all actions necessary to carry out the intent and purpose of AB 361, including, ensuring that the Directors and meeting attendees may continue to have the option to access and participate in this public meeting by teleconference to avoid imminent risks to the health or safety of the Directors and meeting attendees.

To accommodate the public during this period of time, the Town of Discovery Bay Community Services District Board of Directors has arranged for members of the public to observe and address the meeting telephonically or in person.

TO ATTEND IN PERSON: The meeting will be held at the Community Center located at 1601 Discovery Bay Boulevard.

TO ATTEND BY WEBINAR:

Please register for the Water and Wastewater Committee Meeting by: (Copy and paste into your browser the registration URL. You will then be directed to download the webinar to your device and register with LogMeIn, Inc.)

Registration URL: <https://attendee.gotowebinar.com/register/2561594234827573262>
Webinar ID# 204-335-987

After registering, you will receive a confirmation email containing information about joining the webinar by computer or by phone.

For listen only mode dial: 415-655-0052 ID# 420-774-134

Download Agenda Packet and Materials at <http://www.todb.ca.gov/>

Water and Wastewater Committee Board Members

*Chair Kevin Graves
Vice-Chair Ashley Porter*

A. ROLL CALL

1. Call business meeting to order 5:30 p.m.
2. Roll Call.

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

During Public Comments, the public may address the Committee on any issue within the District's jurisdiction which is not on the Agenda. The public may comment on any item on the Agenda at the time the item is before the Committee for consideration. Any person wishing to speak will have 3 minutes to make their comment. There will be no dialog between the Committee and the commenter as the law strictly limits the ability of Committee members to discuss matters not on the agenda. We ask that you refrain from personal attacks during comment, and that you address all comments to the Committee only. Any clarifying questions

from the Committee must go through the Chair. Comments from the public do not necessarily reflect the viewpoint of the Committee Members.

C. DRAFT MINUTES TO BE APPROVED

1. Approve Water and Wastewater DRAFT Meeting minutes from November 3, 2021.
2. Approve Water and Wastewater DRAFT Meeting minutes from December 15, 2021.
3. Approve Water and Wastewater DRAFT Meeting minutes from May 4, 2022.

D. PRESENTATIONS

1. None.

E. UPDATES

1. None.

F. DISCUSSION ITEMS

1. Discussion Regarding Willow and Newport Water Plant Filter Modification Options.
2. Discussion Regarding Water Quality Levels by Well.

G. FUTURE AGENDA ITEMS

H. ADJOURNMENT

1. Adjourn to the next Standing Water and Wastewater Committee meeting on July 6, 2022, at the Community Center located at 1601 Discovery Bay Boulevard.

"This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925) 634-1131, during regular business hours, at least forty-eight hours prior to the time of the meeting."

"Materials related to an item on the Agenda submitted to the Town of Discovery Bay after distribution of the agenda packet are available for public inspection in the District Office located at 1800 Willow Lake Road during normal business hours."



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PLATINUM LEVEL

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**MINUTES OF THE REGULAR MEETING
OF THE WATER AND WASTEWATER COMMITTEE
OF THE TOWN OF DISCOVERY BAY
Wednesday November 3, 2021, 5:30 P.M**

**NOTICE
Coronavirus COVID-19**

The Town of Discovery Bay Community Services District Board Chambers will be open to the public as well as attendance by video conference and telephone for this meeting. Masks are required for in person attendance. On September 16, 2021, Governor Newsom signed into law AB 361, enabling public agencies to continue using teleconferencing with modified notice and physical access requirements for public meetings during a proclaimed State of Emergency.

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TO ATTEND IN PERSON: Masks are required to be worn inside the building.

TO ATTEND BY TELECONFERENCE:
Toll-Free Dial-In Number: (866) 848-2216
CONFERENCE ID **5193676302#**

Download Agenda Packet and Materials at www.todb.ca.gov/

Water and Wastewater Committee Board Members

*Chair Kevin Graves
Vice-Chair Ashley Porter*

A. ROLL CALL

1. Call business meeting to order 5:30 p.m. – By Chair Graves.
2. Roll Call – all present.

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

None.

C. DRAFT MINUTES TO BE APPROVED

1. Approve October 6, 2021, Regular Water and Wastewater Committee DRAFT meeting minutes. Motion made by Vice-Chair Porter to approve the minutes. Seconded by Chair Graves.

D. PRESENTATIONS

1. Water & Wastewater Updates.

General Manager Breitstein reported that the Town will have a 6,000lb. dredge delivered tomorrow (ordered months ago).

Water and Wastewater Manager Goldsworthy clarified the value and purpose of the dredge. The dredge is a pump that will float on top of the (middle) lagoon and suck the salt from the bottom and redirect it to the smaller lagoon on the West. The water and wastewater department will then collect and store the salt.

Water and Wastewater Manager Goldsworthy advised the committee that the Town had its State Inspection

from the Central Valley Water Control Board last Tuesday of Plant 1 and 2; everything is in working order. The only minor issue is the growth around Lagoon 2; the water and wastewater department staff are working on it. Due to the fact this is an ongoing area of concern the water and wastewater department is looking into the use of pesticides to halt the growth.

Water and Wastewater Manager Goldsworthy provided an update regarding the rotor for the Ox Ditch; it has been turned on. The shaft has been installed and the covers are back on and it is operating, but unfortunately the mount that holds the motor is broken. This was not previously noticed when repairs for the shaft were done. The plan is to fix the issue by welding the mount. It will not be operating until repaired.

Water and Wastewater Manager Goldsworthy provided an update regarding Ox Ditch 2 (the oldest) had a starter fail in the rotor yesterday. However, we have it on shelf and will be fixed as soon as possible.

E. DISCUSSION ITEMS

1. Discussion Regarding Water Projects.

Water Engineer Coleman presented on several CIP projects and other related water projects. Starting with the Marlin Marina Pipeline Project which is in the design phase. Water Engineer Coleman, in collaboration with Project Manager Mike Yeraka and Water and Wastewater Manager Goldsworthy, is working to complete final engineering plans. Project Manager Mike Yeraka is working with the Marina owner to negotiate a power supply agreement. The hope is to replace several of the streetlights with LED lighting which would be mutually beneficial and result in lower energy costs for the marina.

President Graves question: When is the project starting?

Water Engineer Coleman response: Project Manager Mike Yeraka is working with the marina owner to finalize the power supply agreement – that is one of the holdups. Engineer plans are nearly complete but there's final details being worked on. There are several parties involved in determining an appropriate timeline.

Water and Wastewater Manager Goldsworthy commented that he's spoken with JGH (erosion consultant) within the last month and the projected timeline to begin is early 2022.

Water Engineer Coleman presented updates regarding the Edgeview Pipeline Project. There are watermains in that area with multiple leaks and a portion of the Edgeview Drive watermain is under residential driveways so we want to replace that to avoid potential liability. This also connects to the Discovery Bay Boulevard pipeline. A walkthrough is scheduled later in the month to confirm final design details.

President Graves question: When is the project starting?

Water Engineer Coleman response: Once we have a final design plan, we can issue it out for bid and move forward with the project.

Water and Wastewater Manager Goldsworthy commented that it might be best to wait to start until after the holidays.

Water Engineer Coleman also reported on the Willow Lake and Newport Filter Repairs Project. This project consists of completing a condition assessment and preparing a work plan to repair the vessels, as well as replacing the media for Willow Lake Filter B. The work will start during the low water-demand period, probably in about another month.

Water and Wastewater Manager Goldsworthy clarified that the Newport filter has already been done.

Water Engineer Coleman concurred.

Water Engineer Coleman provided an update for the Well 8 Pump Station and Treatment Plan Project.

Currently, this project is in the planning phase. Luhdorff & Scalmanini Consulting Engineers are working on providing a proposal for the design and construction of this project. This will be a new ground water pump station located on one corner of the Pantages subdivision with an 1,800 gallons per minute flow rate. The well siting and conceptual design layout has been completed and regulatory approval from the Division of Drinking Water to proceed forward has been received.

President Graves asked for clarification regarding the status of the Town working with the developer because we are putting this in before the development gets started.

General Manager Breitstein confirmed that is correct. The developer has asked the Town to purchase the land and provided an asking price. However, the Town is independently seeking an appraisal value of the lot.

President Graves question: Will that water go over to Newport for processing?

Water and Wastewater Manager Goldsworthy clarified Well 8 will be self-sufficient so the water will not need to travel elsewhere for processing.

Public Comment: none.

F. FUTURE DISCUSSION/AGENDA ITEMS

None.

G. ADJOURNMENT

1. Adjourned at 5:57 p.m. to the next Standing Water and Wastewater Committee meeting at the Community Center located at 1601 Discovery Bay Boulevard.

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with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925) 634-1131, during regular business hours, at least forty-eight hours prior to the time of the meeting.”

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PLATINUM LEVEL

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**MINUTES OF THE SPECIAL MEETING
OF THE WATER AND WASTEWATER COMMITTEE
OF THE TOWN OF DISCOVERY BAY
Wednesday, December 15, 2021, 5:00 P.M.**

**NOTICE
Coronavirus COVID-19**

The Town of Discovery Bay Community Services District Board Chambers will be open to the public as well as attendance by video conference and telephone for this meeting. Masks are required for in person attendance. On September 16, 2021, Governor Newsom signed into law AB 361, enabling public agencies to continue using teleconferencing with modified notice and physical access requirements for public meetings during a proclaimed State of Emergency.

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TO ATTEND IN PERSON: Masks are required to be worn inside the building.

TO ATTEND BY WEBINAR:

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Download Agenda Packet and Materials at www.todb.ca.gov/

Water and Wastewater Committee Board Members

Chair Kevin Graves

Vice-Chair Ashley Porter

A. ROLL CALL

1. Call business meeting to order 5:00 p.m. – By Chair Graves.
2. Roll Call – all present.

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

None.

C. DRAFT MINUTES TO BE APPROVED

None.

D. PRESENTATIONS

None.

E. DISCUSSION ITEMS

1. Discussion Regarding the Town of Discovery Bay Water System Emergency Response Plan (ERP).

Veolia Project Manager Harper presented the Emergency Response Plan (ERP) to the committee. The America's Water Infrastructure Act of 2018 has two requirements that must be met: (1) complete a risk assessment and (2) submit a statement (proving that an ERP specific to drinking water has been developed) to the US EPA. For the Town, the deadline to do so is by December 31, 2021. The Town has already completed the risk assessment, as required. For the Town of Discovery Bay's Drinking Water ERP, Veolia chose not to simply revise the old or current plan but to start from scratch using the template and language from the California Drinking Water ERP. This is a living document that can be updated as needed and simultaneously used as a training guide. Because the ERP is 132 pages long, Veolia also created a companion quick guide with critical data to be used during emergencies (in addition to regular training and review of the ERP). The ERP is in both English and Spanish. Veolia Project Manager Harper asked the Water and Wastewater Committee to approve the submission of the ERP to the State.

Chair Graves question: Will this plan be incorporated into staff training?

Veolia Project Manager Harper response: Yes, it will. We are also planning a mock drill to identify our weaknesses before an emergency even happens.

Chair Graves commented that it is the Water and Wastewater Committee's recommendation that this item be brought before the Board for approval.

General Manager Breitstein commented that this item will be brought before the Board tonight as the statement needs to be submitted to the State by December 31, 2021.

2. Discussion Regarding the Central Valley Regional Water Quality Control Board; Compliance Evaluation Inspection Report.

Veolia Project Manager Harper presented the Compliance Evaluation Inspection Report. On October 26, 2021, Central Valley Regional Water Quality Control Board staff (our State representative) conducted the annual inspection of Treatment Plants #1 and #2. The standard Compliance Evaluation Inspection Report from the State was received on November 30, 2021. Ten areas were evaluated with nine areas found to be satisfactory and one area identified as an area of concern (not a violation). The finding was excessive vegetation growth around the storage pond. The lagoon in Plant 2 has had an ongoing battle with palm trees and cattails growth, therefore, this finding was not a surprise. Veolia is working with the Town to address the problem. In mid-November, Veolia signed a year contract with Green Valley Pest Control for routine pesticide control around the lagoon. The pesticide is working and minimizing the vegetation growth. (The pesticide chemicals are confirmed environmentally friendly.)

Chair Graves question: How long have we been dealing with this issue of cattails and palm trees growth around the lagoon?

Water & Wastewater Manager Goldsworthy response: We've been dealing with this since I started working with the Town, about 10 years ago. We cut them down and they come right back up.

Chair Graves question: It's just too fertile?

Veolia Project Manager Harper response: Yes, and (in addition to high winds) animals also bring seeds to this area.

Chair Graves question: So, it's expected to be an ongoing problem?

Veolia Project Manager Harper response: Yes.

Chair Graves expressed satisfaction with the overall report and congratulated the team.

3. Discussion Regarding Luhdorff & Scalmanini Scope of Work to Provide Design and Construction Engineering Services for Well 8 Pump Station and Well, in the amount of \$357,998 Plus 10% for Contingencies.

Project Manager Yeraka presented the Scope of Work for Well 8 Pump Station and Well. Luhdorff & Scalmanini Consulting Engineers have prepared the attached Scope of Work, which is included in the overall \$4.8M budget for this project. The Scope of Work contains four (4) tasks: (1) Project Coordination and Administration, (2) Regulatory and Permitting Activities, (3) Production Well Design and Construction, and (4) Well Pump Station Design and Construction. This is being presented to the committee today before being brought to the full Board at the January 19, 2022, meeting. The total estimated cost, with 10% contingency, is \$4.6M which is below the budgeted \$4.8M.

Chair Graves question: The funding for this is part of the bond financing?

General Manager Breitstein confirmed, yes.

Vice-Chair Porter question: Is the total estimated cost a solid number, or could it change with inflation?

Project Manager Yeraka response: Luhdorff & Scalmanini Consulting Engineers feel pretty confident in the number, even with everything that's going on in the economy.

Chair Graves directed a question to Veolia Project Manager Harper: Have we been hit with any unexpected large overages with the existing denitrification project because of Covid?

Veolia Project Manager Harper response: So far, we haven't been hit as much as anticipated. We saw an increase in small minor things but nothing excessive.

The committee recommended that this item go before the Board at the January 19, 2022, meeting for approval.

4. Discussion Regarding Authorization to Waive Annual \$224 Vacant Lot Fee for Contra Costa Water District Los Vaqueros Pipeline Parcel Crossing Wastewater Plant #2 Property in Order to Complete Annexation of Plant #2 Property and Removal of Two Previously Detached Parcels from the Town Sphere of Influence.

Project Manager Yeraka presented the proposal to waive the annual \$224 vacant lot fee for the Contra Costa Water District parcel crossing the Plant #2 property. LAFCO has notified the Town that they do not like to see breaks in District boundaries. Therefore, it is LAFCO's recommendation that the Town include the parcel so the Town boundary can be contiguous and not have any breaks in it.

Vice-Chair Porter clarified that boundaries differ from parcels. (i.e., The parcel may have a break in it but LAFCO wants a contiguous Town boundary with no breaks in it.)

Project Manager Yeraka continued with the presentation stating that the Contra Costa Water District is fine with being included in the Town boundary but wants to ensure there will be no fees associated with the decision.

Chair Graves question: Where does the \$224 vacant lot fee come from?

General Manager Breitstein response: It is from our rate study. It is a vacant lot fee that is paid for a vacant lot within Town boundaries.

Project Manager Yeraka justified waiving the annual \$224 vacant lot fee because if the Contra Costa Water District parcel is not included in the annexation, the Town would still not receive that money. By including them, and having the commission approve the annexation, the Town can avoid paying \$11,000 in annual property taxes.

Project Manager Yeraka presented the second item LAFCO brought attention to: (Review Exhibit B) In 2016, there were two parcels removed from the Discovery Bay Community Service District (DBCSD) service boundary, but they were not removed from the DBCSD sphere of influence (SOI). LAFCO Executive Officer, Lou Ann Texeira, is suggesting the Town allow her to present this to the LAFCO commission in her staff report to remove these two parcels from DBCSD's SOI.

The committee recommended that this item go before the Board for approval.

General Manager Breitstein confirmed this item would be brought before the Board at tonight's meeting.

F. FUTURE DISCUSSION/AGENDA ITEMS

G. CLOSED SESSION

1. CONFERENCE WITH REAL PROPERTY NEGOTIATORS FOR WELL 8 AS ALLOWED UNDER GOVERNMENT CODE SECTION 54956.8
 Property: A portion of APN 011-220-010, Discovery Bay
 Agency Negotiator: Dina Breitstein, General Manager
 Negotiating Parties: C&D Discovery Bay LLC/Waterfront Lots LLC
 Under Negotiation: Price and Terms of Payment

H. RETURN TO OPEN SESSION; REPORT ON CLOSED SESSION

(Government Code Section 54957.1)
 No reportable action.

I. ADJOURNMENT

1. Adjourned to the next Standing Water and Wastewater Committee meeting at the Community Center located at 1601 Discovery Bay Boulevard on February 2, 2022.

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**NOTICE OF THE REGULAR MEETING
MINUTES OF THE WATER AND WASTEWATER COMMITTEE
OF THE TOWN OF DISCOVERY BAY
Wednesday May 4, 2022**

Water and Wastewater Committee Board Members

*Chair Kevin Graves
Vice-Chair Ashley Porter*

A. ROLL CALL

1. Call business meeting to order 5:30 p.m.
2. Roll Call – all members were present.

B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)

No public comment.

C. DRAFT MINUTES TO BE APPROVED

1. Approve Water and Wastewater DRAFT Meeting minutes from April 6, 2022.

Vice-Chair Porter made a Motion to Approve the April DRAFT minutes.

Chair Graves second.

Vote: Motion Carried – AYES:2, NOES: 0, ABSTAINED: 0, ABSENT: 0

D. PRESENTATIONS

1. None.

E. UPDATES

1. None.

F. DISCUSSION ITEMS

1. Rotor Update Presented by Water and Wastewater Manager, Aaron Goldsworthy.
 - Rotor – ox stitch 3 rotor broke more severely, too much damage has taken place. Possible problems with motor and alignment. The current plan is to rent additional temporary floating rotors to pump more oxygen, as the temperature increases through the summer. Additional materials were presented of photos of missing rotor as of May 4, 2022.
2. Denite Update Presented by Veolia Manager, Anthony Harper.
 - Denite – additional materials of pictures shown as of May 4, 2022. Veolia Manager, Anthony Harper provided explanation of photos of where the piping will be placed of what is coming into the wastewater plant and the direction of the flow.

Chair Graves, Vice-Chair Porter, and General Manager, Dina Breitstein agreed to schedule a walk of the location soon.

3. Pipeline Project at Edgeview and Lakeview Business Plaza Presented by Water and Wastewater Manager, Aaron Goldsworthy.
 - Explanation of additional materials of photos as of May 4, 2022, of pipe that has been laid, next steps are fittings must be pressure tested, super chlorinated once passes can make connections. Tracer wires are being placed on all new piping.

Jason Coleman, LSC Engineers commented that he plans to attend the next Water and Wastewater committee meeting to present filter options and longer term options to consider.

No public comment.

G. FUTURE AGENDA ITEMS

None.

H. ADJOURNMENT

1. Meeting adjourned at 5:58 p.m. to the next Standing Water and Wastewater Committee meeting at the Community Center located at 1601 Discovery Bay Boulevard.

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**Luhdorff &
Scalmanini**
Consulting Engineers

Town of Discovery Bay

June 1st Board Meeting

Willow and Newport Filter Modification Options

Jun 1st, 2022

Overview

- Newport and Willow WTP Overview
- Current and Build-Out Water System EDUs
- Current and Build-Out Water System Source Capacity
- Willow WTP Project Alternatives
- Recommendations

Willow Lake and Newport Drive WTP Overview

Newport Drive WTP

- Originally Constructed in 2003
 - Phase 1 (2001), Phase 2 (2003)
- Recent Plant Improvements
 - Filter B Repair and Media Replacement (completed 2022)
- Current Filtration Capacity
 - 4,000 gpm (Filters A and B rated to 2,000 gpm each)
- Current Well Field Capacity
 - 3,900 gpm (Wells 4, 5*, 7)

Willow Lake WTP

- Originally Constructed in 2006
 - Phase 1 (2003), Phase 2 (2006)
- Recent Plant Improvements
 - Filter B Repair and Media Replacement (completed 2022)
- Current Filtration Capacity
 - 2,550 gpm (Filters A, B, and C rated to 850 gpm each)
- Current Well Field Capacity
 - 4,550 gpm (Wells 1, 2, 6)

Note Well 5 currently on standby due to elevated EC levels

Water System EDUs*

- LSCE recently revisited analysis of the current and future water system demands
 - This was primarily due to updated information from developer activities (Pantages and Newport Point developments)
- Last analysis water supply vs EDU analysis was performed July 2021
 - Water system EDU total of 7,390. Build out EDU total of 8,668.
- Updated analysis performed January 2022
 - Current water system EDU total of 7,480 (increase of 90 EDU).
 - Build out water system EDU total of 9,394 (increase of 726 EDU).
 - Small increase in current water system EDU due to updated service connection totals reported by Town.
 - Large increase in Buildout EDU total attributed to changes in anticipated development water demands including lake fill needs and revised development service connection totals

* One EDU equal to 0.28 gpm per service connection under Maximum Day Demands (MDD)

Water System Source Capacity

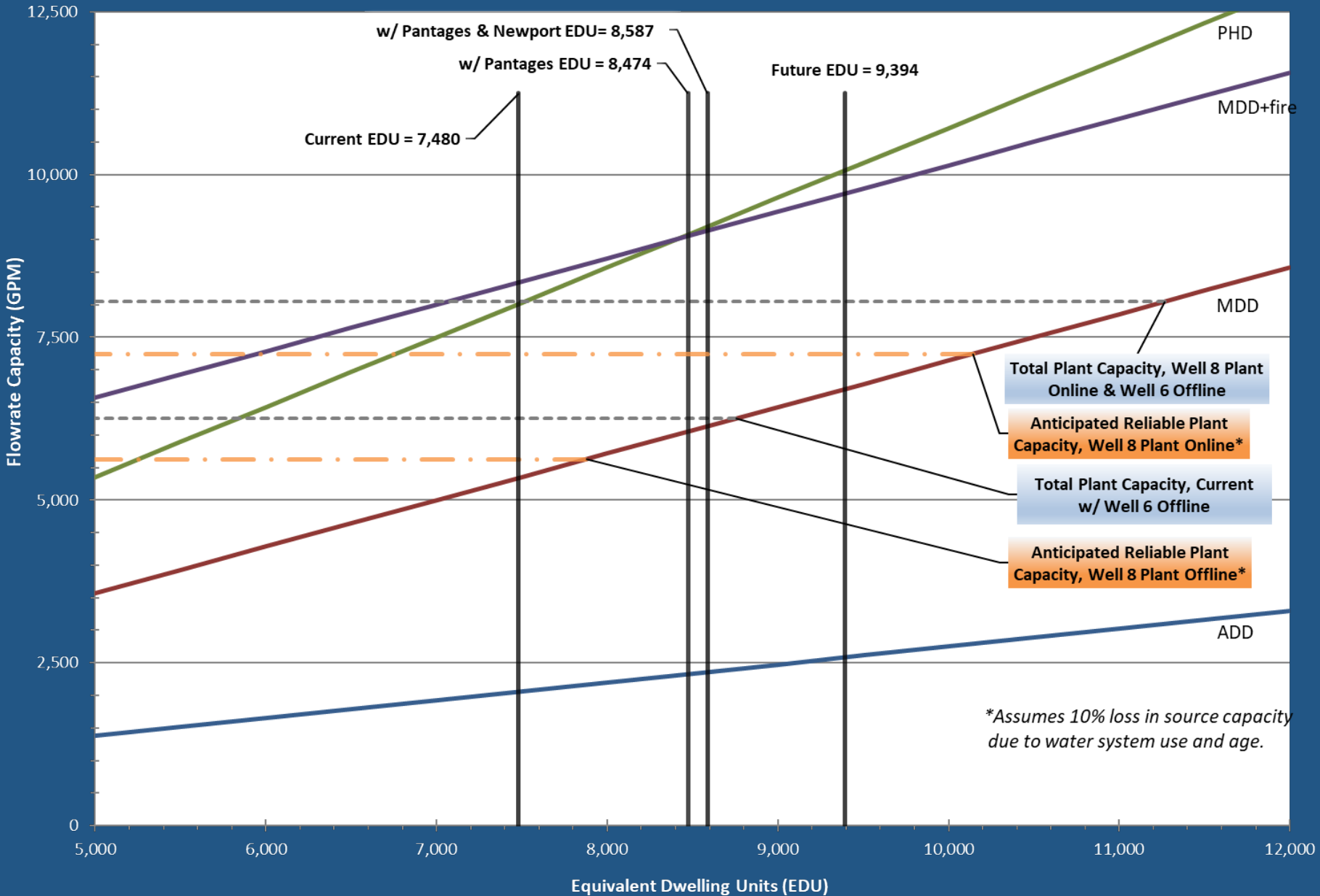
- Total plant water supply (Newport and Willow WTP) capacity of 6,250 gpm assuming the following:
 - Well 6 offline* and Well 1 and Well 2 in operation at Willow Lake WTP
 - Wells 4 and 7 in operation at Newport Drive WTP**
 - Filter capacity limiting factor at Willow WTP
 - Excess well field capacity readily available at Willow WTP
 - Newport WTP filter capacity largely utilized
- New Well 8 WTP (currently in planning phase)
 - With Well 8 added to the water system (1,800 gpm) the total water supply will be increased to 8,050 gpm
- Reliable Source Capacity
 - Assumes 10% reduction in wellfield capacity, 5,600 gpm without Well 8 and 7,250 gpm with Well 8

*Per Title 22 regulations, water supply capacity is determined with the largest well source offline (Well #6).

**Well 5 is on standby due to elevated EC levels

Town of Discovery Bay Current EDU vs. Source Capacity

5/16/2022



Total Water System Source Capacity Summary

Treatment Plant	Well Capacity		Filter Capacity		Actual Total Water System Source Capacity
	Well Name	gpm	Filter Name	gpm	gpm
Willow Lake WTP	WELL 1	1,500	A	850	2,350
	WELL 2	850	B	850	
	WELL 6	2,200	C	850	
Newport Dr. WTP	WELL 4	1,800	A	2,000	3,900
	WELL 5*	1,800	B	2,000	
	WELL 7	2,100			
SubTotal		10,250		6,550	6,250
Well 8 WTP	WELL 8	1,800	A	1,800	1,800
Total		12,050		8,350	8,050

Note Well 5 currently on standby due to elevated EC levels

Capital Improvement Plan – WTP Projects

- LSCE Issued 20 year CIP Technical Memorandum August 2021
 - CIP Tables identified water system projects in the 1-5, 5-10, and 10-20 year timeframe. Specific CIP projects associated with both WTPs include the following:

NEWPORT WTP

- Key 1-5 year CIP Projects
 - Repair Filter B and Replace Media (completed this year)
 - Replace Media in Filter A
 - Replace existing pneumatic style filter control valves with electric actuated valves
 - Booster, Jockey, Reclaim pump replacements*
 - VFD drives for 4x Booster Pumps*
- Key 5-10 year CIP Projects
 - Booster, Jockey, Reclaim pump replacements*
 - Station Pipe, Valving repairs/replacement*
 - SCADA Upgrades*
- Key 10-20 year CIP Projects
 - Booster, Jockey, Reclaim pump replacements*
 - Station Pipe, Valving repairs/replacement*
 - Site Pavement replacement*

*May be deferred to subsequent years

Capital Improvement Plan – WTP Projects

WILLOW WTP

- Key 1-5 year CIP Projects
 - Repair Filter B and Replace Media (completed this year)
 - Replace Media and Repair Filters A & C
 - Replace existing pneumatic style filter control valves with electric actuated valves
 - Booster, Jockey, Reclaim pump replacements*
 - VFD drives for 4x Booster Pumps*
- Key 5-10 year CIP Projects
 - Booster, Jockey, Reclaim pump replacements*
 - Station Pipe, Valving repairs/replacement*
- Key 10-20 year CIP Projects
 - Station Pipe, Valving repairs/replacement*
 - Site Pavement replacement*
 - Replace Filter Vessels A and B*

*May be deferred to subsequent years

Newport WTP

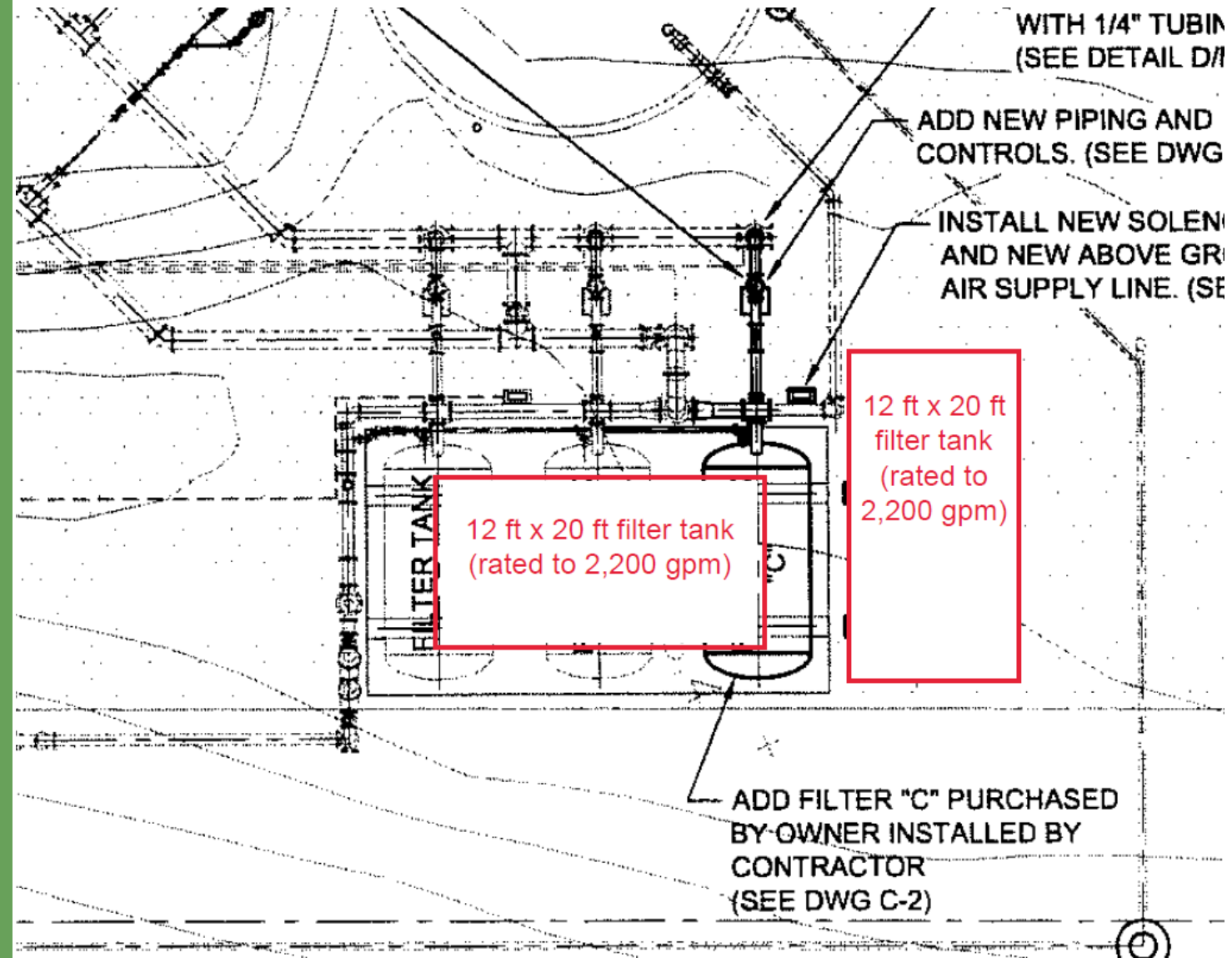
- No proposed changes in approach to repair/replace filters and replace media
 - Existing filter vessels are approximately 20 years old
 - Based on current filter tank conditions, replace in next 20-30 years
 - Filter A media to be replaced in next 1-2 years
 - Well 5 has high EC and is a standby source, adequate filtration capacity available
 - Currently only one pair of wells (Wells 4 and 7) are operated at Newport WTP
 - Capacity of Wells 4 and 7 are 3,900 gpm vs. 4,000 gpm filter capacity
 - Well 8 will be online (2023/2024) to augment water supplies on west side of distribution system
- In conclusion, no changes to CIP projects associated with Newport WTP are proposed

Willow WTP

- Plant Issues and operational difficulties associated with the Willow WTP include:
 - Absent all other considerations based on current filter conditions, all filter tanks at Willow WTP may need to be replaced in next 20-30 years
 - Veolia reports signs of filter breakthrough at Filters A and C given age of media, media near end of life
 - Veolia is unable to operate all three wells (Wells 1, 2, and 6) given limited filter capacity
 - Existing pneumatic control valves and actuators are failing resulting in significant filter downtime if one valve fails out of each set of filter valves
 - If water demands increase, plant is unable to utilize additional water from wellfield as filter capacity is limited to approximately 2,500 gpm.
- Given the issues identified above, two WTP modification project options have been identified which consider:
 - Available site space
 - Anticipated project capital costs
 - Potential increases to water demand at build-out
 - Operational complexity and flexibility
 - Changes to future CIP costs and timing

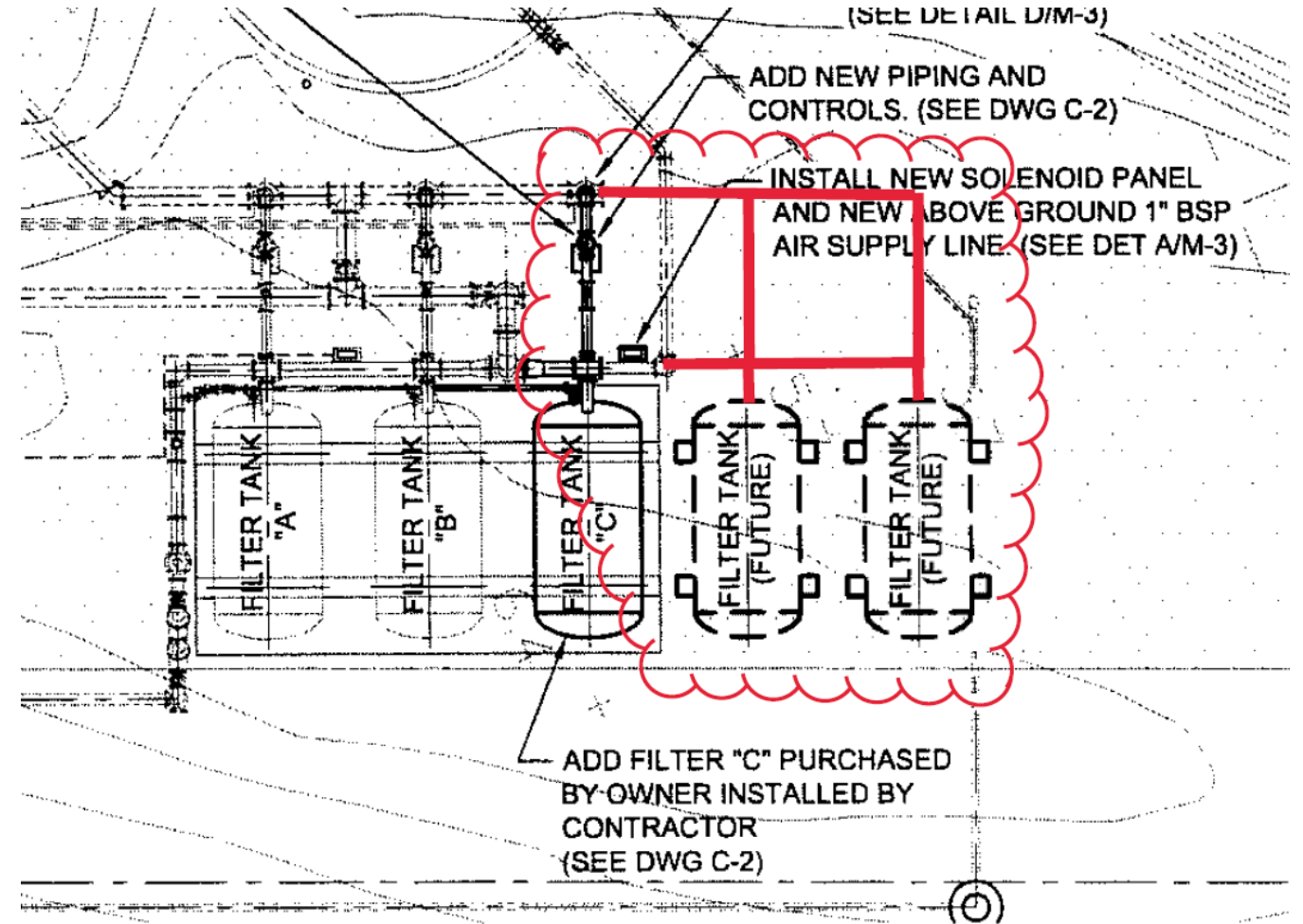
PROJECT ALTERNATIVE #1

- Phase 1: Construct new 12' x 20' filter tank (rated to 2,200 gpm) adjacent to existing Filters A, B, and C.
 - Operate new filter and existing Filter B primarily, with Filters A and C as standby/backup capacity
- Phase 2: Replace Filters A, B, and C with identically sized 12' x 20' filter tank (rated to 2,200 gpm)
 - Phase 2 would commence once Filters A, B, and C have reached the end of their useful service life and/or additional plant capacity needed due to additional demands
 - Install new 50k gallon Backwash Tank and 340 gpm reclaim pumps, piping, etc. to accommodate larger plant flow
- Phase 1 Estimated Capital Cost \$1.1M
- Phase 2 Estimated Capital Cost \$1.2M



PROJECT ALTERNATIVE #2

- Construct new additional identically sized filter tanks as needed adjacent to existing Filters A, B, and C.
 - Each additional filter increases plant capacity by 850 gpm. Five filters provide approximately 4,250 gpm filtration capacity
 - Similar to Project Alternative #1, a new 50k gallon Backwash Tank and 340 gpm reclaim pumps, piping, etc. to accommodate larger total plant flow
- Estimated Capital Costs
 - One additional filter \$1.3M
(includes costs for electric valves and Filter A&C rehab)
 - Five filters total with backwash/reclaim system improvements \$800k



Project Alternative #1 - Pros & Cons

Pros:

1. Cost savings of approximately \$200k by avoiding replacement of pneumatic filter valves with electrical valves and actuators. Filter B would be operated manually as needed.
2. Filter A & C tank and media rehab can be deferred indefinitely with operation of new large filter and existing Filter B resulting in cost savings of approximately \$600k
3. Increases plant capacity (from 2,550 gpm to 4,750 gpm) which can accommodate future growth
4. Provides operational flexibility and filter capacity redundancy in the event of Filter A, B and/or C downtime
5. Simplified operational complexity given reduced number of filter valves, equipment, instruments, and other filter assets once Phase 2 is completed
6. Lower overall capital costs for 2 filter system vs 5 filter system

Cons:

1. Minor added operational complexity due to different sized filters prior to Phase 2 completed
2. Site ingress/egress will be reduced but still considered acceptable by operations
3. Higher project capital costs vs. existing CIP project approach

Project Alternative #2 - Pros & Cons

Pros:

1. Less downtime/impact to existing Filters A, B, and C to add new and additional identically sized filters
2. Existing site configured to accommodate install of identically sized filter additions
3. Less impact to site ingress/egress given small filter footprint

Cons:

1. With additional two filters, total plant capacity remains approximately 300 gpm short of wellfield capacity
2. Additional operational complexity with five total filters
3. Additional asset management capital/maintenance costs for five sets of filter valves, instruments, etc.
4. Split service life between filters A, B, and C and new filters, eventual replacement of filters A, B, and C needed

Recommendations

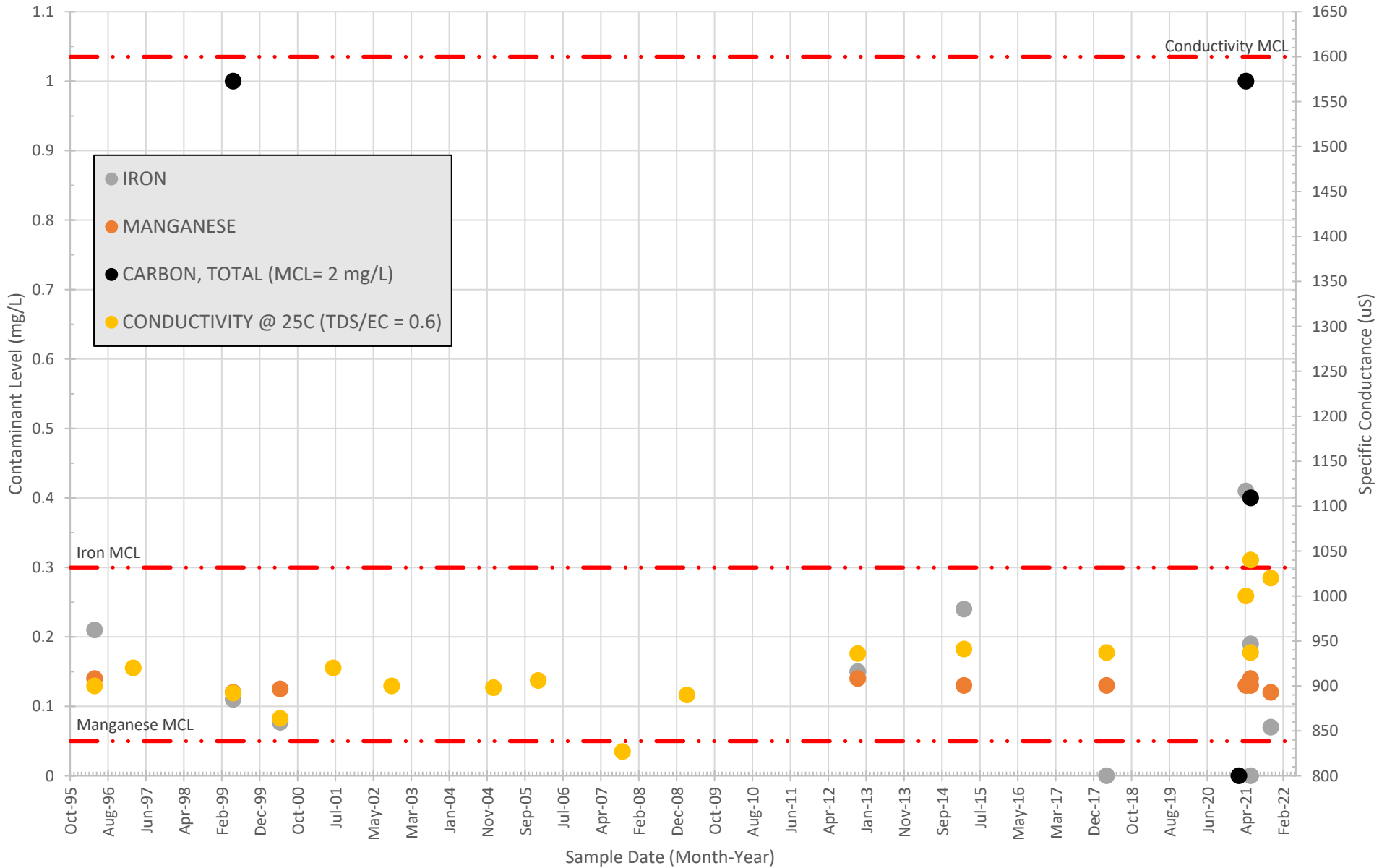
- In conclusion, Project Alternative #1 is preferred for the following reasons:
 - Site ingress/egress remains acceptable
 - Lower long term projected project capital and operational costs
 - Approximately \$800k savings allocated towards infrastructure for future growth
 - Provides near term and long-term added filtration capacity
 - Two filter system provides simple operational complexity
 - Two filter system provides sufficient filtration capacity to fully utilize wellfield



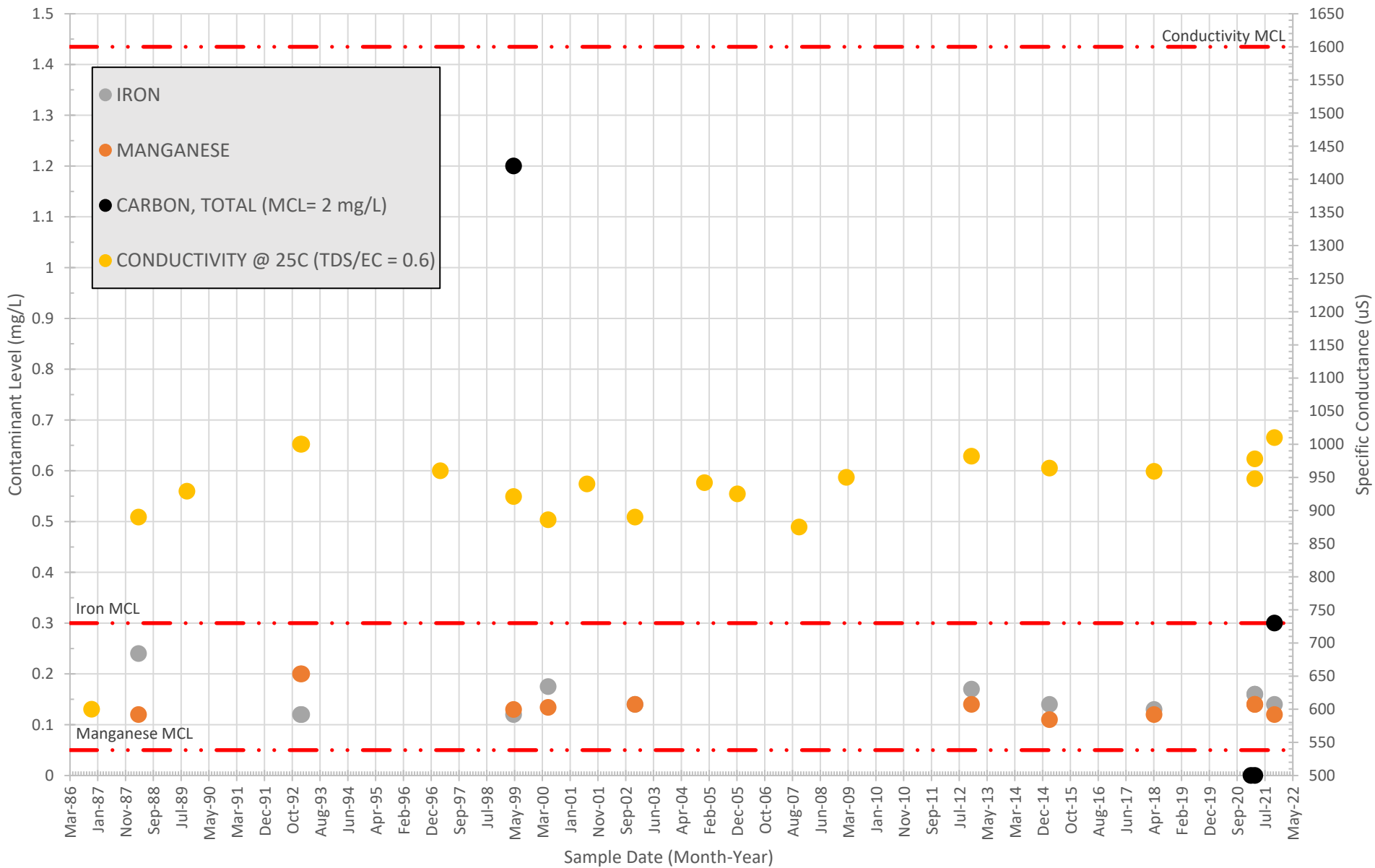
**Luhdorff &
Scalmanini**
Consulting Engineers

QUESTIONS?

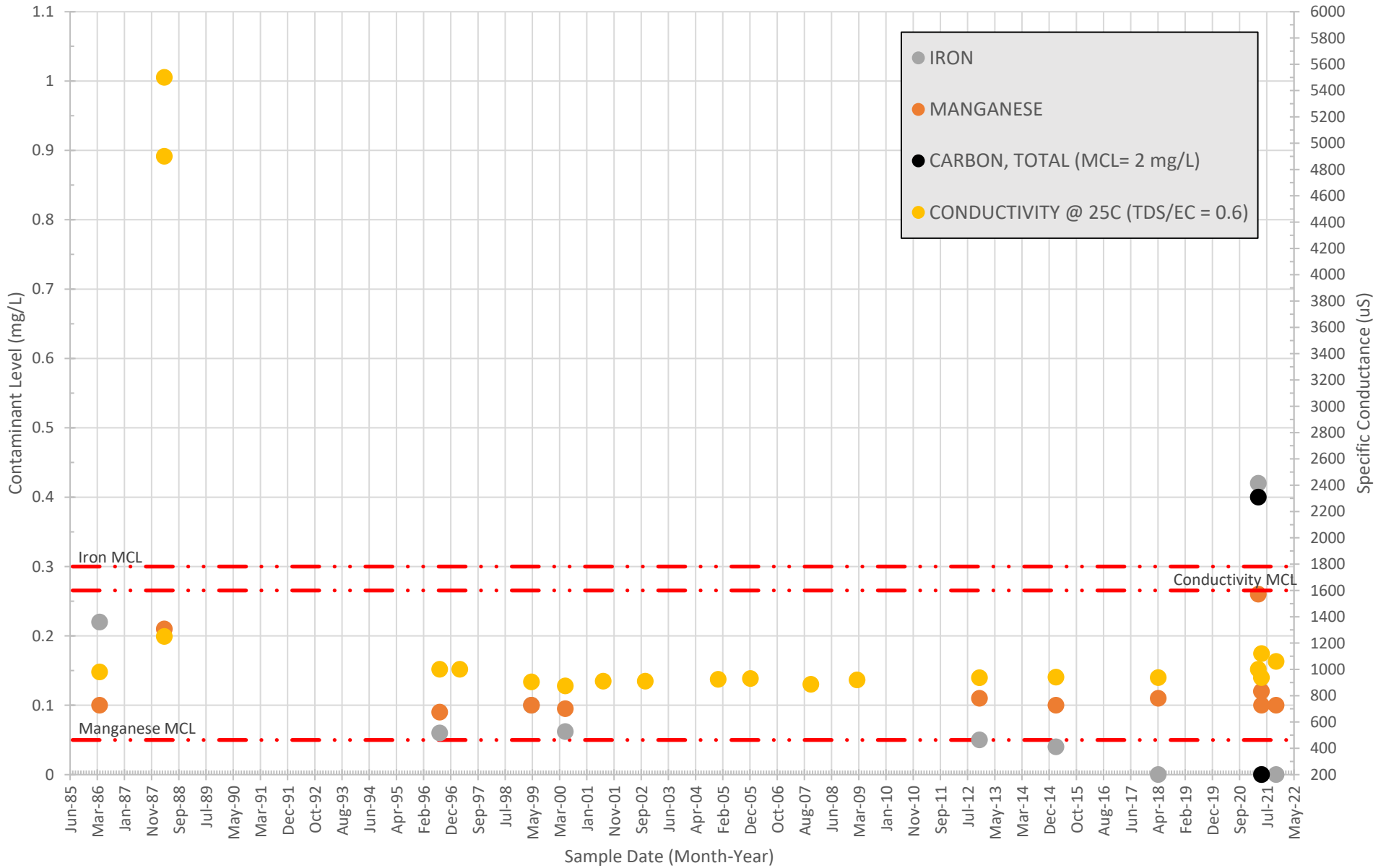
Town of Discovery Bay - Well 01B Constituent Data 1996-2021



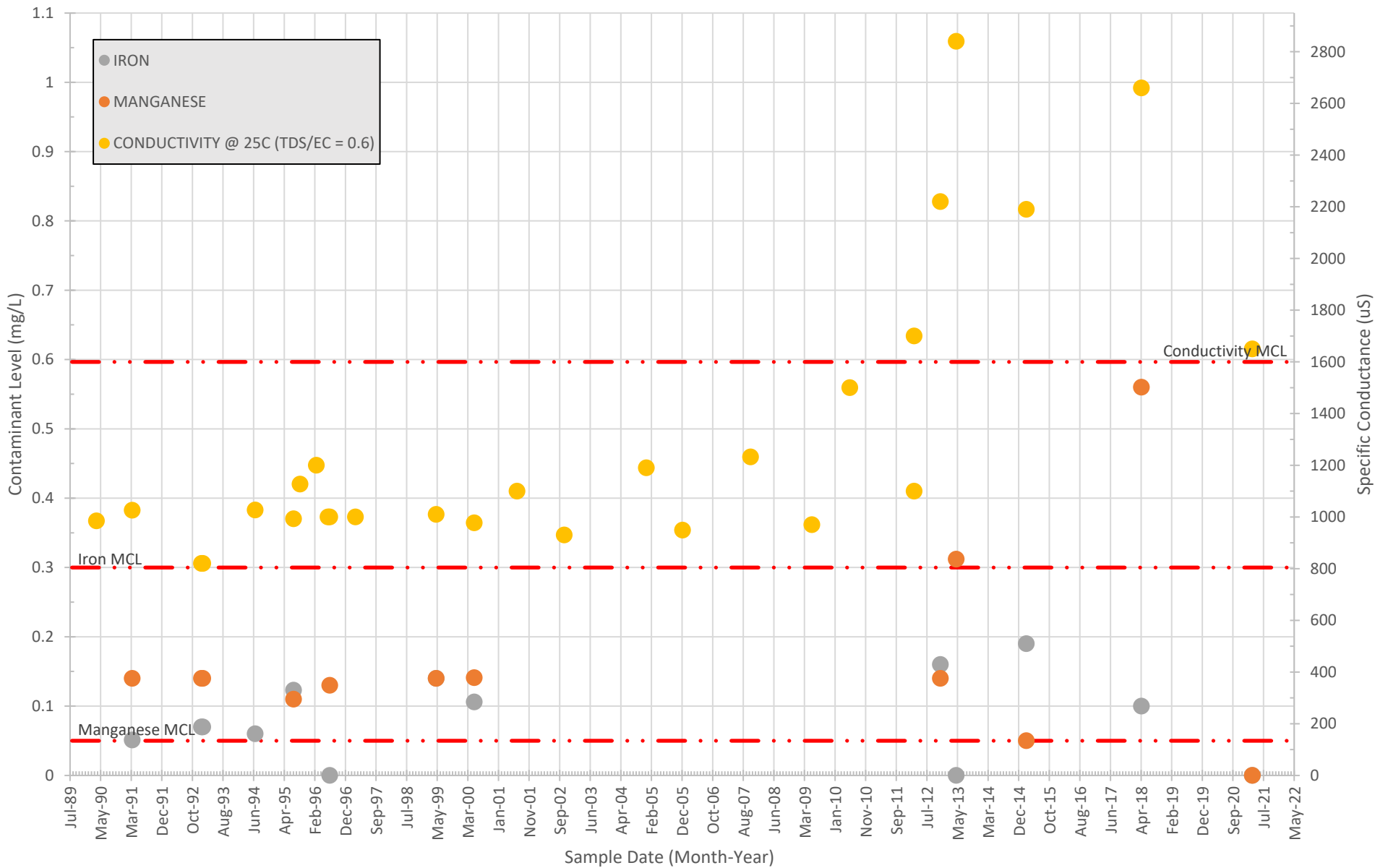
Town of Discovery Bay - Well 02 Constituent Data 1986-2021



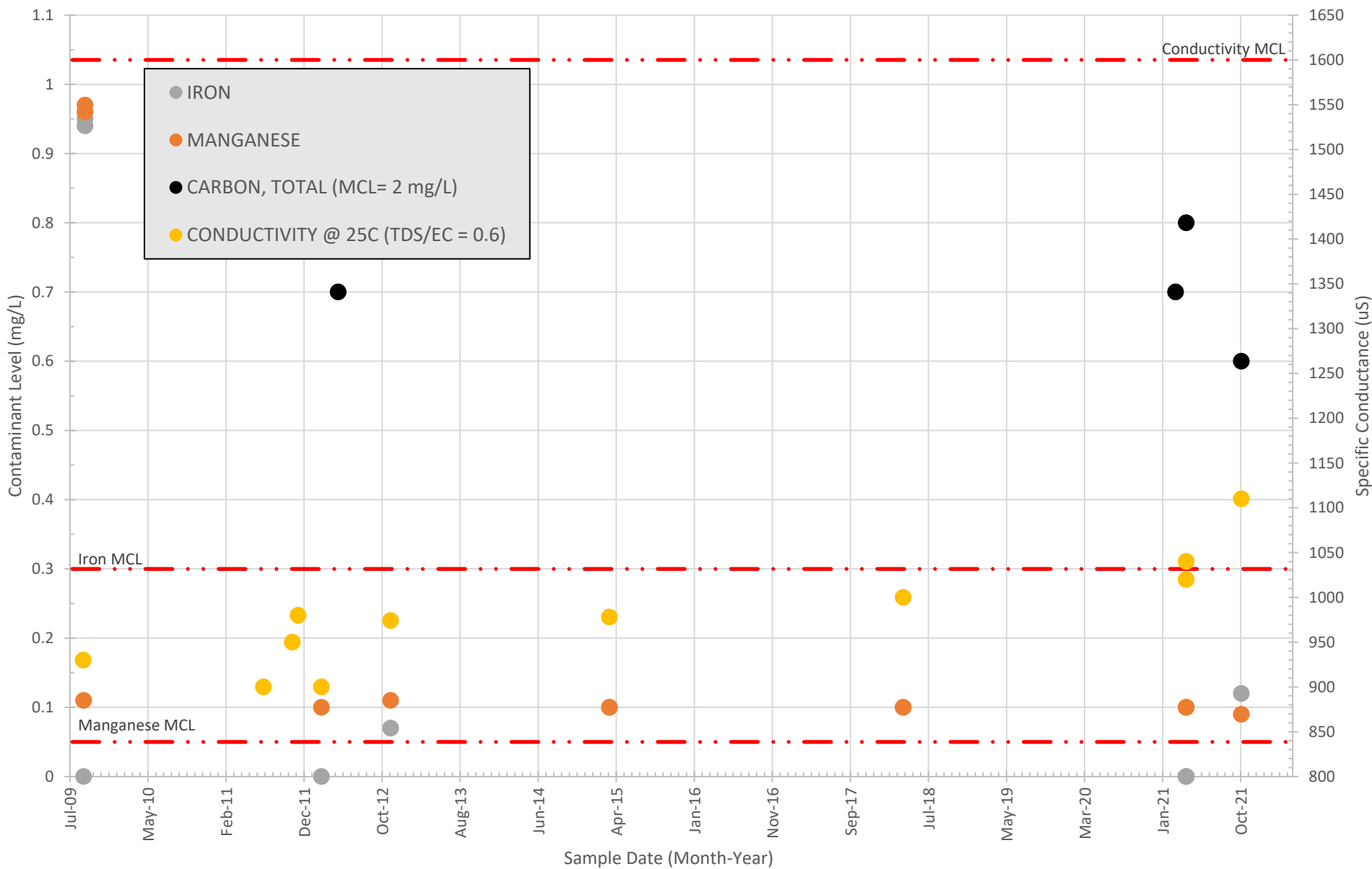
Town of Discovery Bay - Well 04A Constituent Data 1986-2021



Town of Discovery Bay - Well 05A Constituent Data 1990-2021



Town of Discovery Bay - Well 06 Constituent Data 2009-2021



Town of Discovery Bay - Well 07 Constituent Data 2012-2021

