

AGENDA
ENGINEERING & OPERATIONS COMMITTEE
Thursday, May 7, 2020, at 9:00 am
Boardroom, 1701 North Lombard Street, Oxnard CA 93030

Meeting attendees should be aware that the meetings of the Committee are, as required by law, open to the public and the District has very limited powers to regulate who attends Committee meetings. Therefore, attendees must exercise their own judgement with respect to protecting themselves from exposure to COVID-19, as the District cannot ensure that all attendees at public meetings will be free from COVID-19.

**In addition to its public Engineering and Operations Committee Meeting,
people may choose to participate virtually
using the Webex video conferencing application.**

**If you are new to Webex video conferencing,
please visit this test page in advance of the meeting date and time:**

<https://www.webex.com/test-meeting.html>

To access the meeting, click on this link:

<https://meetingsamer9.webex.com/meetingsamer9/j.php?MTID=m11b55f43f40051fc36698404e68bf135>

Meeting number: 623 143 688

Password: EngOps (364677 from phones)

Join by phone call in to +1-408-418-9388 (toll rates apply)

Access code: 623 143 688

Call to Order – Open Session

1. Public Comment (Proposed Time: 5 minutes)

The public may comment on any matter not on the agenda within the jurisdiction of the Committee. All comments are subject to a five-minute time limit.

2. Approval of Minutes (Proposed Time: 5 minutes)

The Committee will review the minutes from the March 5, 2020 Committee meeting.

3. May 13, 2020 Board Meeting Motion Agenda Items

A. Amendment to Stillwaters Professional Services Agreement (Environmental Department) (Proposed Time: 10 minutes)

The committee will review the Amendment to Stillwaters Professional Services Agreement.

4. Project Highlights

A. Santa Paula Tower (Proposed Time: 10 minutes)

B. Brackish Groundwater Treatment Plant (Proposed Time: 10 minutes)

C. Recycled Water (Proposed Time: 10 minutes)



5. Departments Monthly Updates

A. Engineering Department
Staff Report

B. Operations and Maintenance Department
Staff Report

C. Recreation Department
Staff Report

D. Environmental Department
Staff Report

Staff is available to answer questions regarding the Monthly Reports

6. Future Agenda Topics (Proposed Time: 5 minutes)

ADJOURNMENT

Directors:



Lynn Maulhardt, Chair
Edwin T. McFadden III
Daniel C. Naumann

Staff:

Mauricio E. Guardado Jr.	Bob Siemak
Anthony Emmert	Dr. Maryam Bral
Brian Collins	Craig Morgan
Robert Richardson	Michel Kadah
Adrian Quiroz	Linda Purpus
Erin Gorospe	Clayton Strahan

The Americans with Disabilities Act provides that no qualified individual with a disability shall be excluded from participation in, or denied the benefits of, the District's services, programs or activities because of any disability. If you need special assistance to participate in this meeting, please contact the District Office at (805) 525-4431. Notification of at least 48 hours prior to the meeting will enable the District to make appropriate arrangements.

Approved:

 
Robert C. Siemak, Assistant General Manager. Dr. Maryam Bral, Chief Engineer

Posted: (date) , , 2020 -May 1 (time) 9am (attest) Kris Sofley
At: United Water Conservation District Headquarters, 1701 Lombard Street, Oxnard CA 93030

Posted: (date) , , 2020 -May 1 (time) 9:15am (attest) Kris Sofley
At: www.unitedwater.org



Board of Directors
Michael W. Mobley, President
Bruce E. Dandy, Vice President
Sheldon G. Berger, Secretary/Treasurer
Patrick J. Kelley
Lynn E. Maulhardt
Edwin T. McFadden III
Daniel C. Naumann

General Manager
Mauricio E. Guardado, Jr.

Legal Counsel
David D. Boyer

MINUTES
ENGINEERING & OPERATIONS
COMMITTEE MEETING

Thursday, March 5, 2020, 9:00 A.M.

Board Room

UWCD, 1701 Lombard Street, Oxnard CA 93030

COMMITTEE MEMBERS

Lynn E. Maulhardt, Chair
Edwin T. McFadden III
Daniel C. Naumann

STAFF ATTENDING

Mauricio E. Guardado Jr, General Manager
Anthony Emmert, Assistant General Manager
Robert C. Siemak, Assistant General Manager
Dr. Maryam Bral, Chief Engineer
Brian Collins, Operations and Maintenance Manager
Josh Perez, Human Resource Manager
Adrian Quiroz, Assistant Engineer
Michel Kadah, Associate Engineer
Craig Morgan, Senior Engineer
Robert Richardson, Senior Engineer
Evan Lashly, Associate Ecologist
Tessa Lenz, Assistant Ecologist
Randall McInvale, Assistant Ecologist
Linda Purpus, Senior Environmental Scientist
Zachary Plummer, IT Administrator
Destiny Rubio, Administrative Assistant

Public Present

none

OPEN SESSION:

Chair Maulhardt called the Engineering & Operations Committee Meeting to order at 9:05 am.

1. Public Comment

Chair Maulhardt asked if there were any public comments for the Committee. None were offered.

2. Approval of Minutes

Motion to approve the minutes from the July 2, 2019 Operations Committee meeting, Voice vote, three ayes (Maulhardt, McFadden, Naumann). None opposed. Minutes approved unanimously.

3. Amendment to Pleasant Valley County Water District's Water Delivery Agreement

Operations and Maintenance Manager Brian Collins provided updates and slides on UWCD's water delivery agreement with Pleasant Valley County Water District. He asked for the Committee's recommendation to the Board to authorize the General Manager to amend the current agreement with proposed language approved by the District's legal counsel. Discussion ensued among the committee members and staff.

The committee agreed to recommend the Board amend the current water delivery agreement with Pleasant Valley County Water District.

4. Santa Felicia Dam Safety Improvement Project Update

Chief Engineer Maryam Bral and Associate Engineer Michel Kadah provided updates and slides regarding the Santa Felicia Dam Safety Improvement Project. They asked for the Committee's recommendation to the Board to authorize the General Manager to approve the costs and enter into agreement with GEI Consultants for delivery of 30% Design. Discussion ensued among the committee members and staff.

The committee agreed to recommend the Board approve costs and authorize the General Manager to execute an agreement with GEI Consultants for 30% Design of the SFD Safety Improvement Project.

5. Operations and Maintenance Update

Mr. Collins provided updates and slides on the department's recent activities and projects.

6. Recreation Department Update

Assistant General Manager Robert C. Siemak provided updates and slides on the department's recent activities and projects.

7. Environmental Planning and Conservation Department Update

Senior Environmental Scientist Linda Purpus provided updates on the department's recent activities and projects.

8. Future Agenda Topics

None were offered.

ADJOURNMENT 10:58 a.m.

Chair Maulhardt adjourned the Engineering & Operations Committee meeting at 10:58 am.

UWCD Engineering and Operations Committee Meeting MINUTES

March 5, 2020

Page 3

I certify that the above is a true and correct copy of the minutes of the Engineering and Operations Committee Meeting of March 5, 2020.

ATTEST: _____
Lynn Maulhardt, Chair

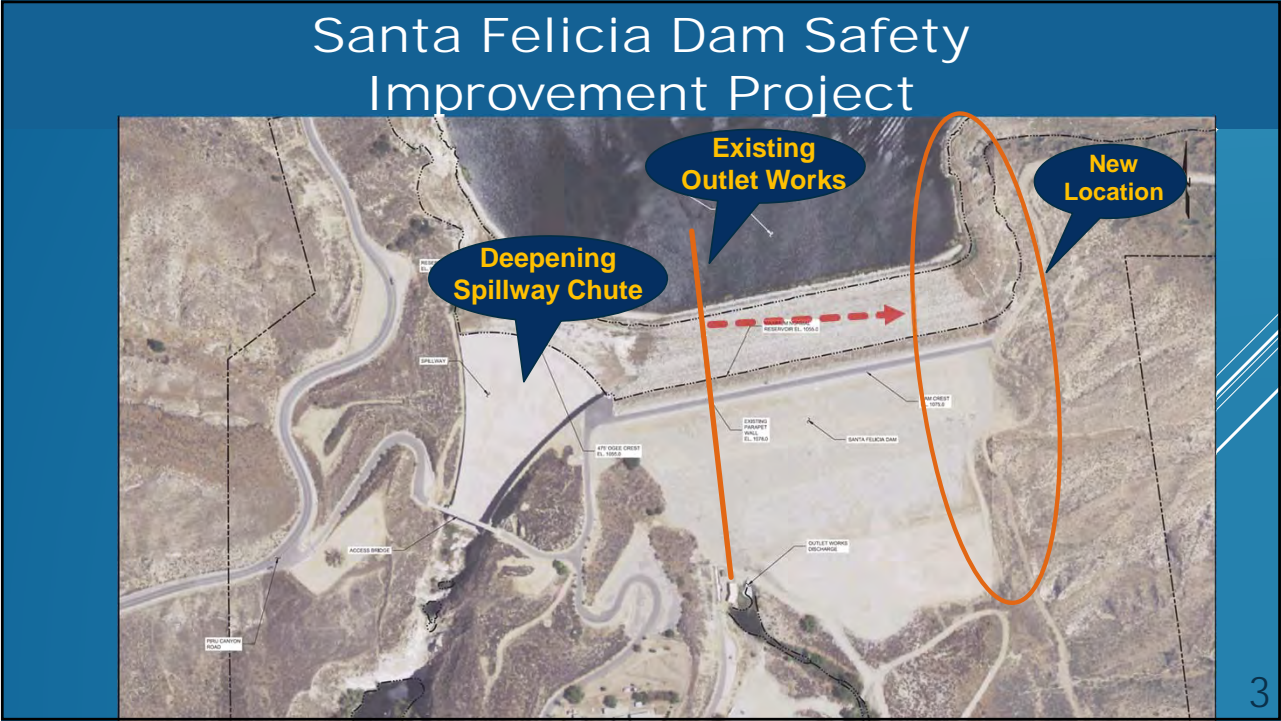
ATTEST: _____
Destiny Rubio, Administrative Assistant



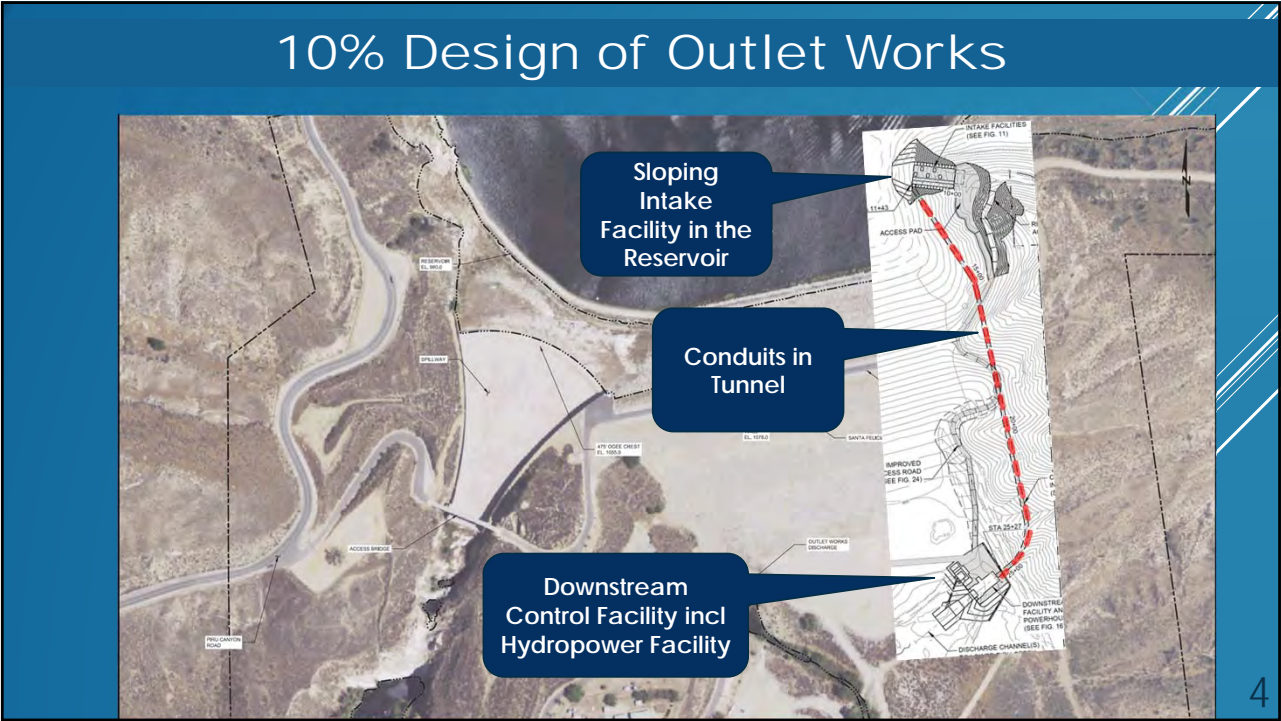
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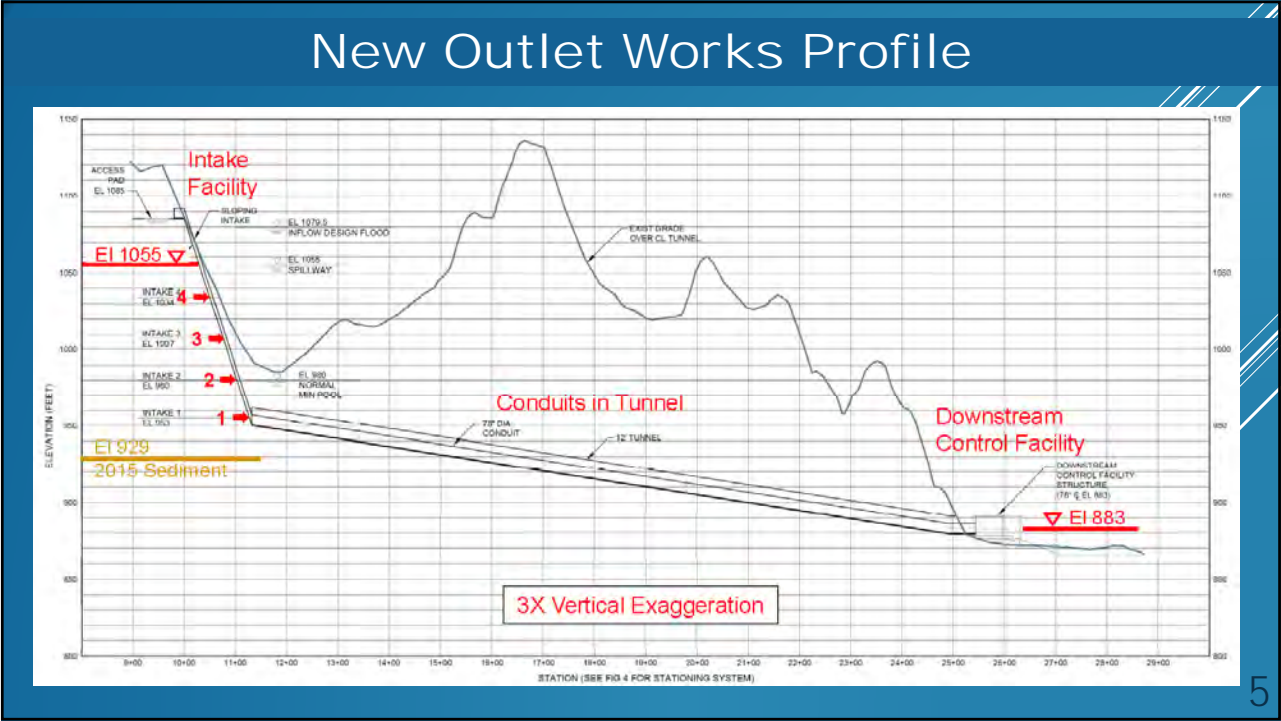
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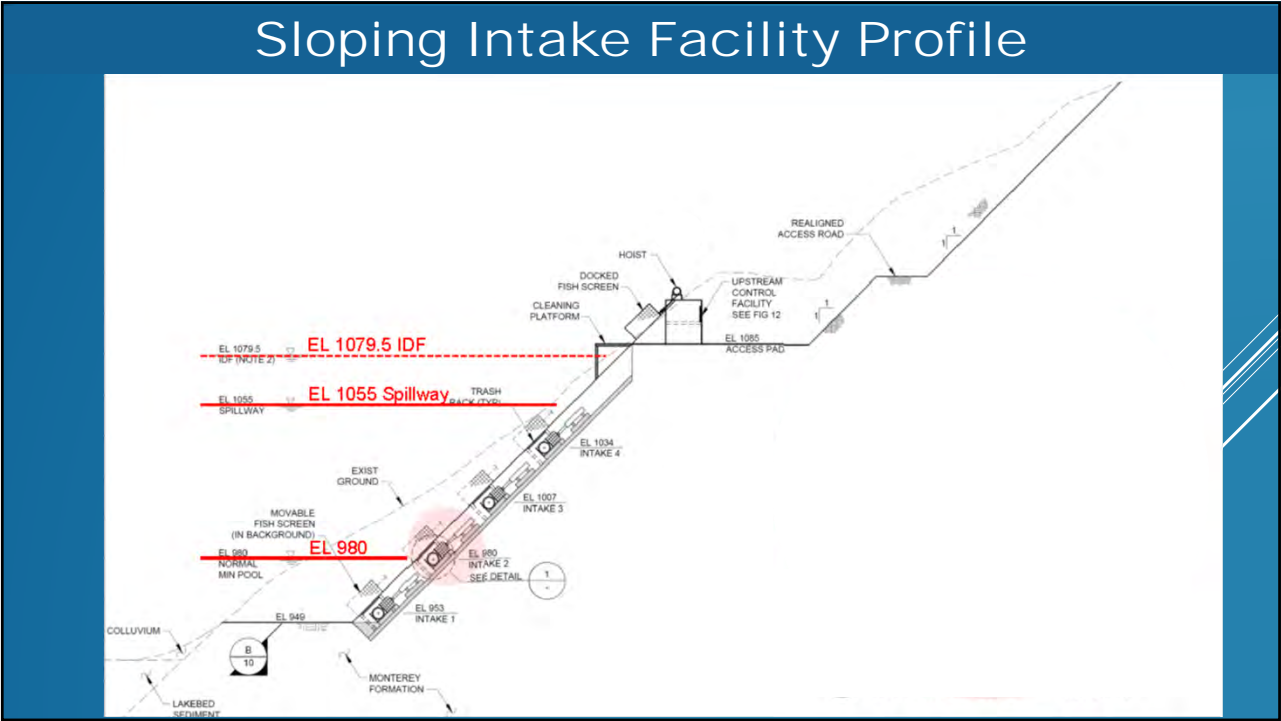
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New Outlet Works Profile

Upstream Control Facility Components

☐ Sloped Intake Facility

☐ 78-inch Primary Flow Conduit with 4 Intakes

☐ 30-inch Low Flow Conduit with 1 Intake

☐ Moveable Fish Screens

☐ Trash Racks

☐ Upstream Control Building

7

7

Intake Facility Top View

The diagram illustrates the top view of the Intake Facility. It features a horizontal arrangement of components. On the left, a 78" PRIMARY CONDUIT and a 30" LOW FLOW CONDUIT are shown, with a TUNNEL-ANNULAR SPACE FILLED WITH CELLULAR CONCRETE between them. A MOVABLE FISH SCREEN (TYP) is positioned at the far left. Moving right, there are four 60" KNIFE GATE VALVES labeled 1 through 4. Below these valves are two future intake points: INTAKE FOR FUTURE USE EL 990 and INTAKE FOR FUTURE USE EL 1015. A 30" KNIFE GATE VALVE AND MOVABLE FISH SCREEN INTAKE EL 985 is located near the bottom left. A 60" KNIFE GATE VALVE 4 is at the bottom right. A 60" CONNECTOR PIPE (TYP) and a FISH SCREEN RAIL (TYP) run horizontally across the middle. On the right side, there is an ACCESS PAD AREA, a WIRE ROPE (TYP) HOIST, and 78" AND 30" CONDUITS FOR VENTING AND MAINTENANCE ACCESS. Dimensions include 40' for the main section, 17' for a side section, and 12' and 9.5' for vertical offsets. Elevation markers EL 1080 and EL 1085 are also present.

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8

Diagram illustrating the influent system layout, showing various components and flow paths:

- Flow Paths:** Indicated by blue arrows, showing the flow from the 78" Primary Flow Conduit and 8" Water Line through the system to the 42" Discharge.
- Components:**
 - 78" Flow Meter
 - 78" Primary Flow Conduit
 - 8" Water Line
 - 8" Magnetic Flow Meter
 - 8" Ball Valve (TYP)
 - 8" Flange Coupling Adapter (TYP)
 - 42" Blind Flange
 - 8" Access Manway (TYP OF 2)
 - 78" Butterfly Valve
 - Conduit Drains
 - Crotch Plate
 - 60" Collar Plates
 - Access Ladder
 - 54" Hooded Fixed Cone Valve
 - 24" Hooded Fixed Cone Valve
 - 30" Low Flow Conduit
 - 20" Ball Valve
 - 30" Ball Valve
 - 14" Butterfly Valve
 - 2 x Pump/Turbines (Cornell 6TR3-F18D)
 - 2 x 14" Magnetic Flow Meters
 - 30" Magnetic Flow Meter
 - 30" Floor Drain
 - 30" x 24" Reducer
 - Tailrace/Stilling Basin
 - Outlet Sill w/ Orifice Diffusers, Detail 1
 - 42" Discharge
 - Retaining Wall
 - Access Stairs (TYP OF 2)
 - Cross-over (TYP)
 - Future 42" 60" Breakout Sleeve
 - Access Ladder
 - Reinforced Concrete (TYP)
- Dimensions:**
 - 4'-0" (Diameter)
 - 5'-0" (Diameter)
 - 53'-0" (Length)
 - 88'-3" (Length)
 - 60" (Radius)
 - 30" (Diameter)
 - 24" (Diameter)
 - 42" (Diameter)

9

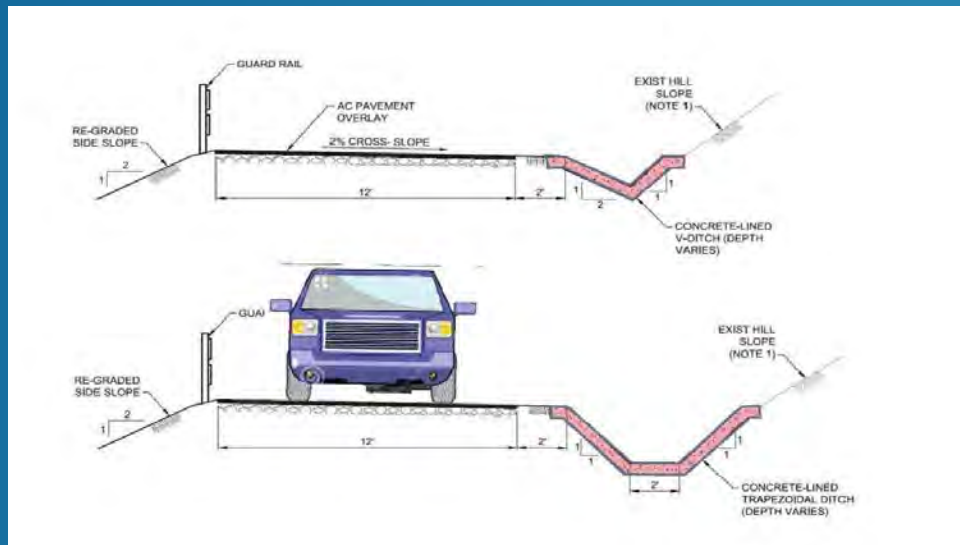
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- Improvement to an Existing Access Road
- Installation of a new Electric Power Supply System
- Abandonment of the Existing Outlet Works

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Access Road Improvement



11

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Next Step

Proceed with 30% Design

- Subsurface Exploration Program
- Intake Facility Design
- Tunnel Design – Refine Tunnel Alignment and Elevation
- Pipeline and Valve Design and Transient Surge Analysis
- DCF Design
- Hydropower design – Turbine and Generator Selections
- Electrical and Control System Design

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10% Design of Spillway

The diagram shows an aerial view of a spillway project with several key features highlighted by callouts:

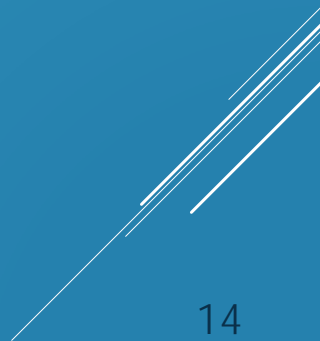
- Preserve Ogee Crest**: Callout pointing to the top of the spillway structure.
- Raise Dam Crest using MSE Wall to El 1081.5**: Callout pointing to the right side of the dam structure.
- New Slab & Subdrain System**: Callout pointing to the left side of the spillway structure.
- Preserve Bridge**: Callout pointing to the bridge structure on the left side.
- Preserve Spillway Walls**: Callout pointing to the walls of the spillway structure.
- Preserve Heel Drains**: Callout pointing to the heel of the spillway structure.

Other labels visible in the diagram include: "EXISTING OGE CREST ELEV 1080.1", "NEW RETEENED CONCRETE SLAB", "NEW BLINDED ROCK WALL", "PROTECT EXISTING ACCESS BRIDGE", "NEW STRUCTURES EXISTING WALL BEH. PEB 17", "MOUNTAIN NORMAL OBSERVATION EL 1080.0", "PROTECT WALL EL 1081.5", "DAM CREST RAISE TO EL 1081.5 (SEE PLAN)", "DAM CREST", "MANTA PELICA DAM", and "PROPOSED SPILL STRUCTURE".

13

10% Design of Spillway

- Hydraulic Analysis – 2D and CFD
- Spillway Condition Assessment
- Downstream Channel Analysis
- Seismic Analysis of Existing Spillway Walls
 - Counterfort Wall Sections
- Structural Evaluation of Wall Retrofit Options



14

14

10% Design of Spillway

An aerial photograph of a spillway structure with various engineering annotations. The annotations include:

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- EL. 1005.0
- EL. 1004.7
- EL. 1004.5
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15

10% Design of Spillway

East Counterfort Wall Retrofit Options

ALT 1 – BURIED POST-TENSIONED ANCHORS

ALT 2 – POST-TENSIONED ANCHORS AT TOP OF WALL

ALT 3 – NEW COUNTERFORTS

ALT 3 – NEW COUNTERFORTS

16

Next Step

Supplemental Spillway Design

- Subsurface Exploration Program
- New Slab and Subdrain Design
- Finalize Preferred Wall Retrofit Option
- Hydraulic Analyses – Comparison between CFD and Physical Model

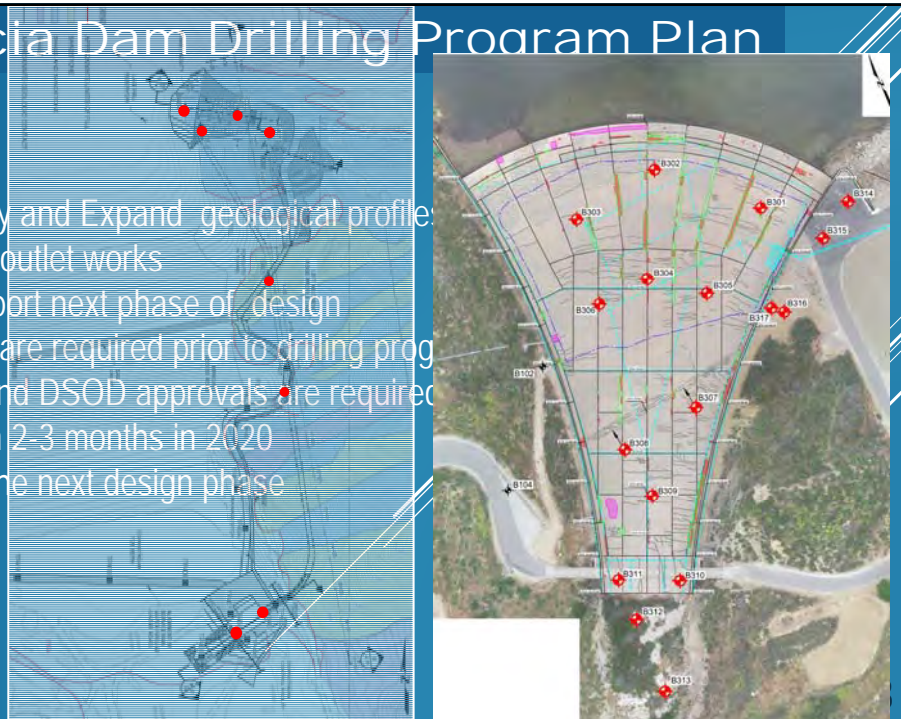
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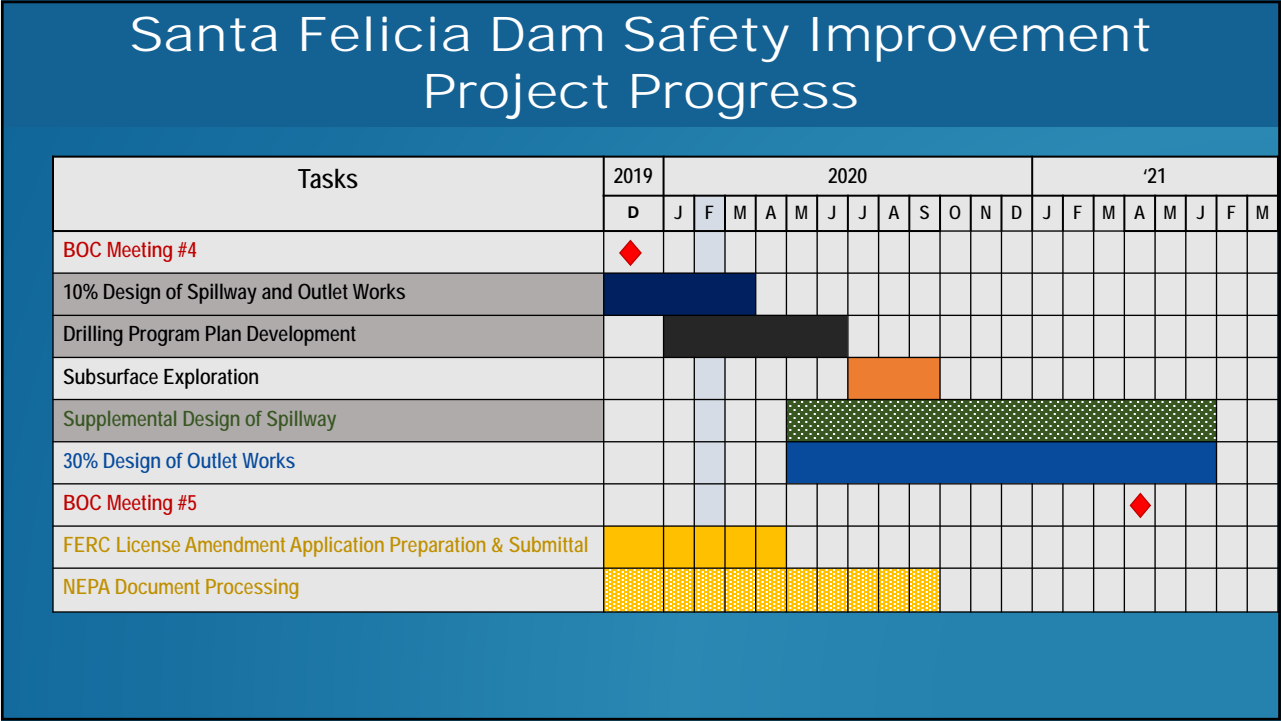
Santa Felicia Dam Drilling Program Plan

Purpose:

- Verify and Expand geological profile for new outlet works
- Support next phase of design
- Permits are required prior to drilling program
- FERC and DSOD approvals are required
- Duration 2-3 months in 2020
- Part of the next design phase



18



19

POTHOLE TRAILHEAD PARKING AREA PROJECT

Piru Canyon Road

- Issues of ownership and maintenance resolved by 1974 Easement granted to Forest Service

Path Forward - Interim

Interim Improvements to be completed by March 31, 2020:

- New Pothole Gate with Secure Lockbox
- Portable Restroom and Hand Wash Station
- Six Road Hazard Signs on Piru Canyon Road
- Parking Area Boundary

Full Implementation

- Vaulted Restroom and Wildlife Trash Receptacle
- Gravel paved parking area
- Interpretative signage in collaboration with FS
- ADA Parking Space
- Horse hitch Rail
- Trail Realignment (1.8 miles) if prop 68 funding granted

Piru Canyon Road
From Juan Fernandez Gate to future Pothole Trailhead Parking Area Gate
Total Length: 2.81 miles

Legend
Rancho Temescal
UNITED STATES OF AMERICA
UNITED WATER CONS DISTRICT

Pothole Trailhead Parking Area

Future Pothole Trailhead Parking Area Gate

POTHOLE TRAILHEAD PARKING AREA PROJECT

"Grantor [United] has no right to maintain or reconstruct said road, but this will not prevent Grantor and Grantee from later agreeing to any maintenance or construction."

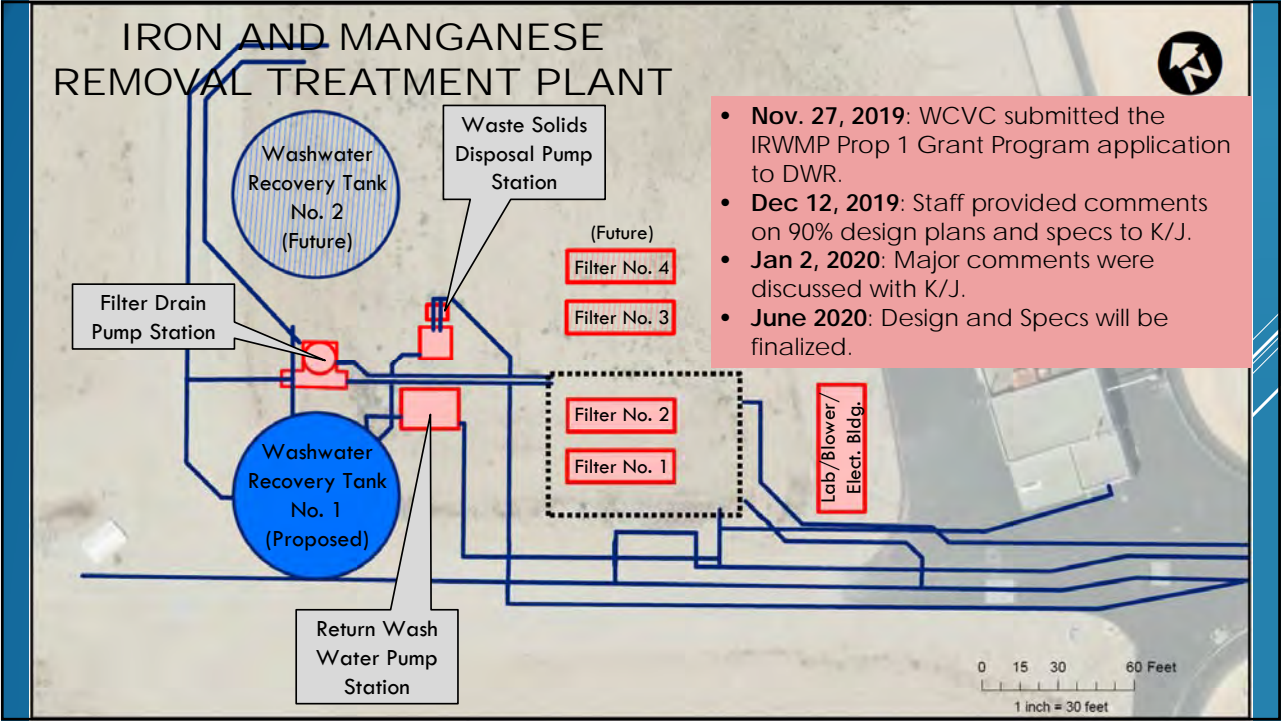
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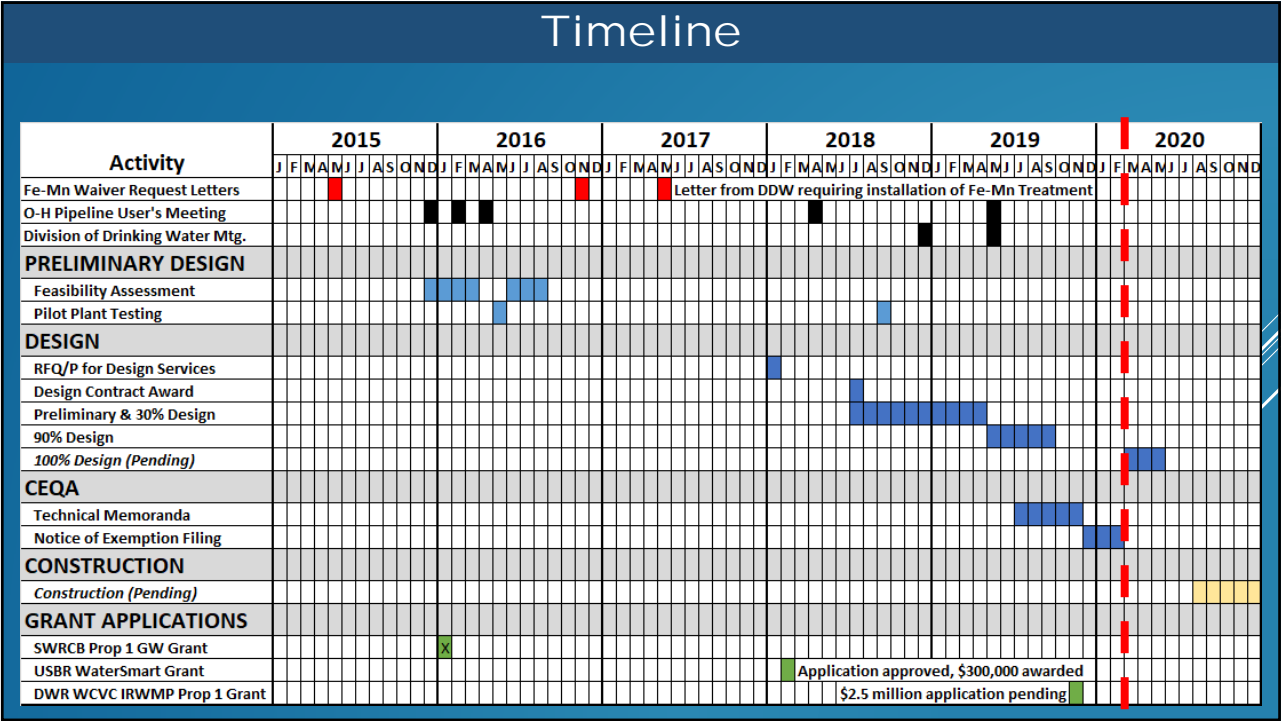
Juan Fernandez Gate

3000 ft

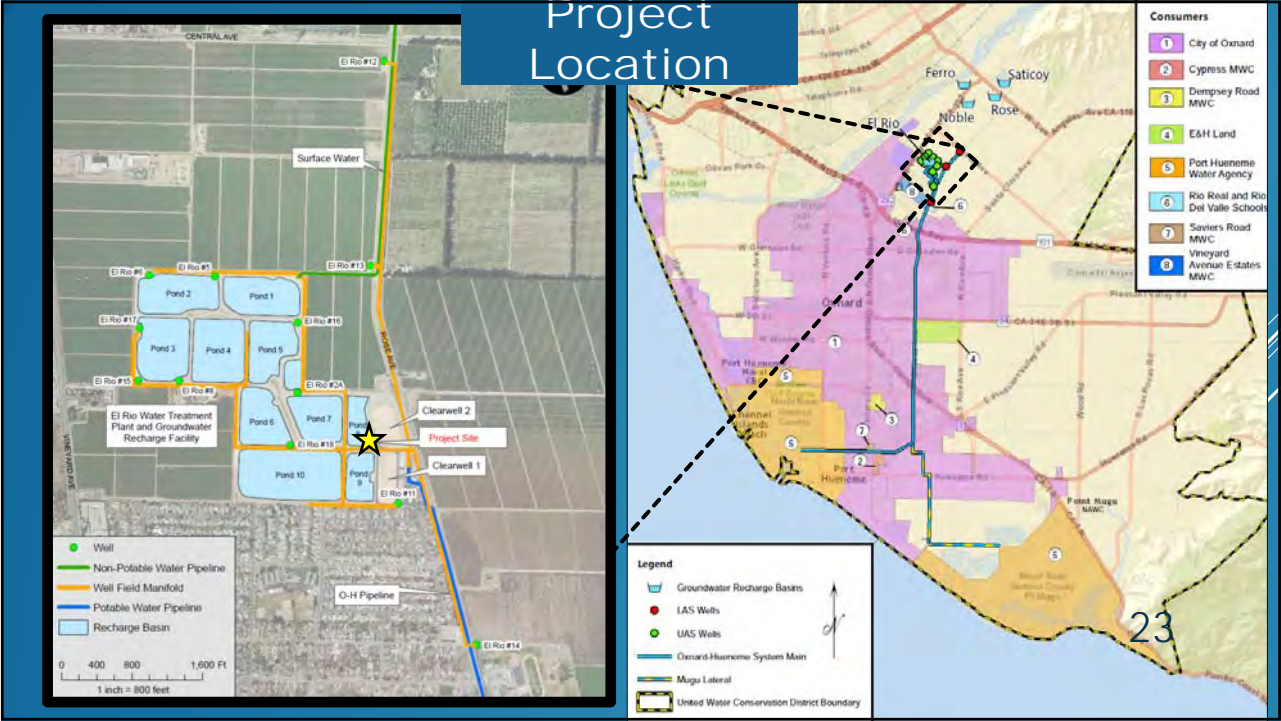
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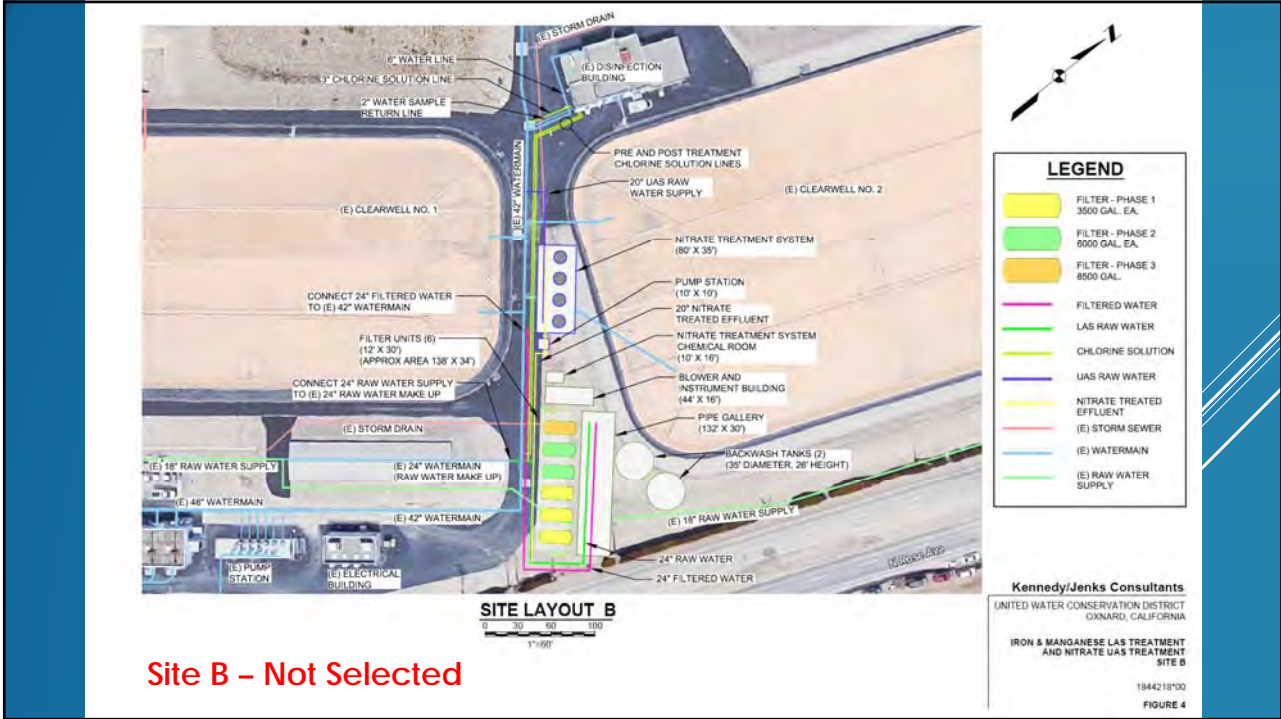
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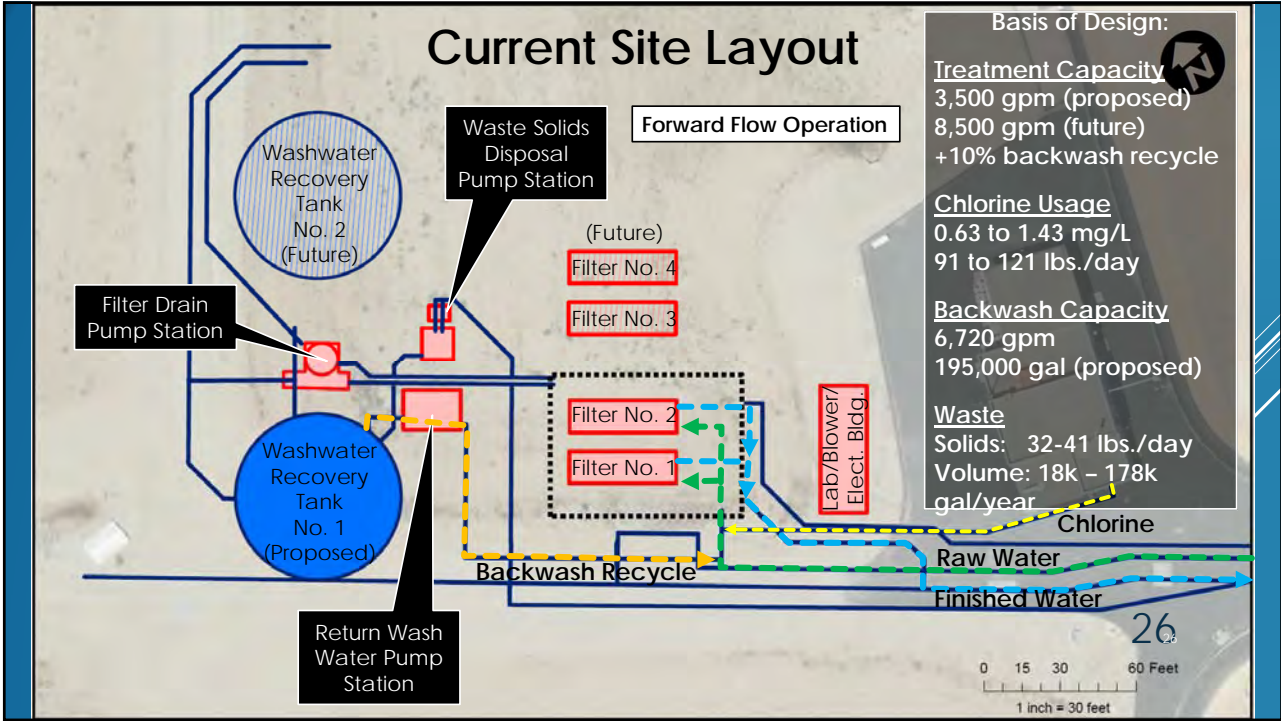
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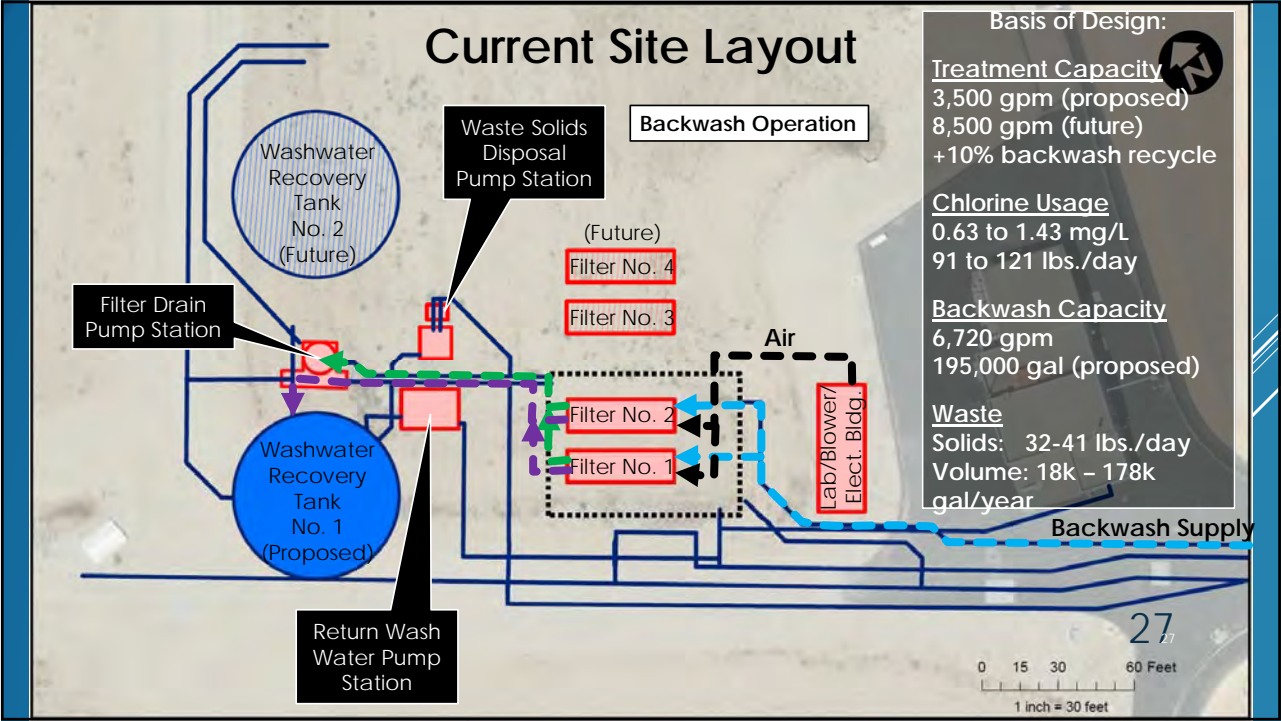
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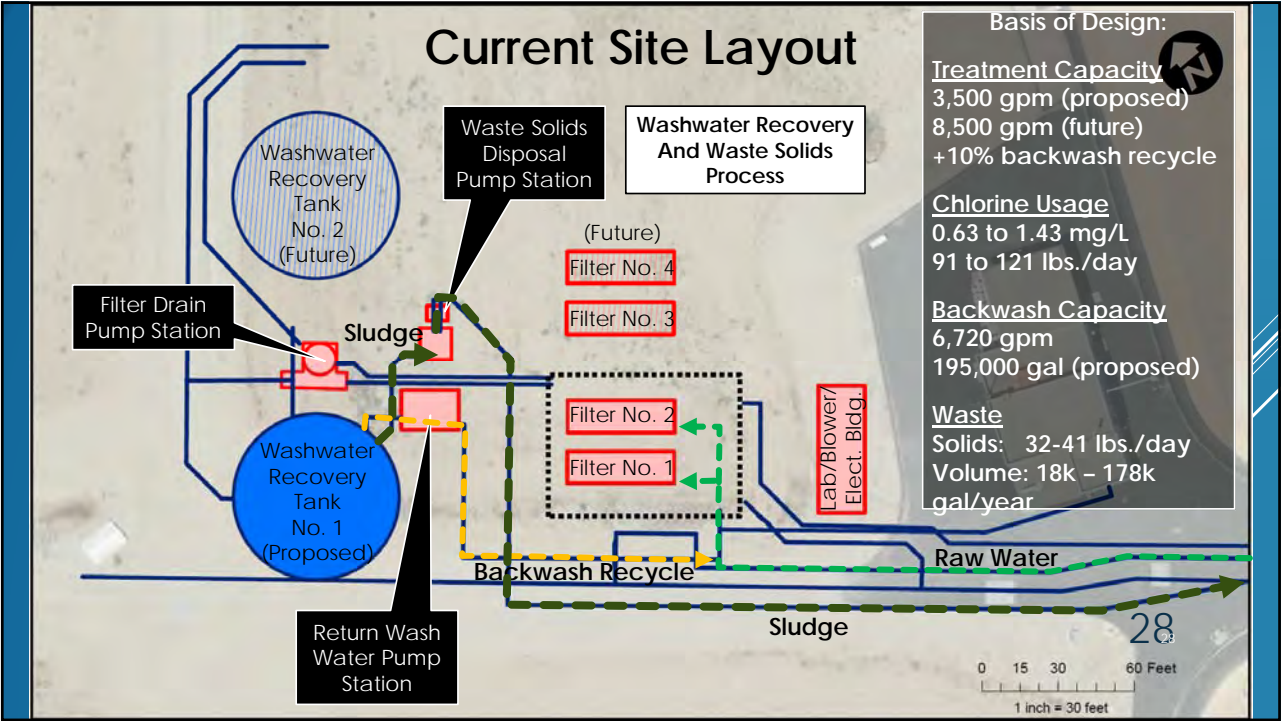
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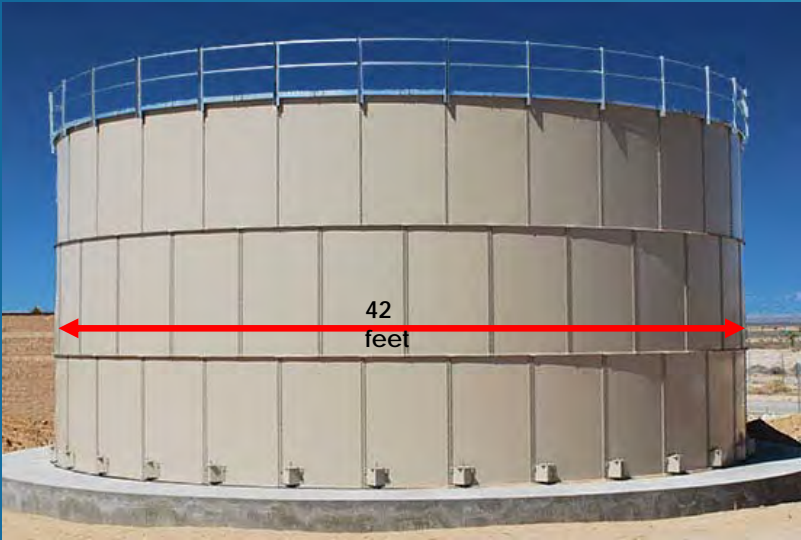
Filter Vessels



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Washwater Recovery Tank

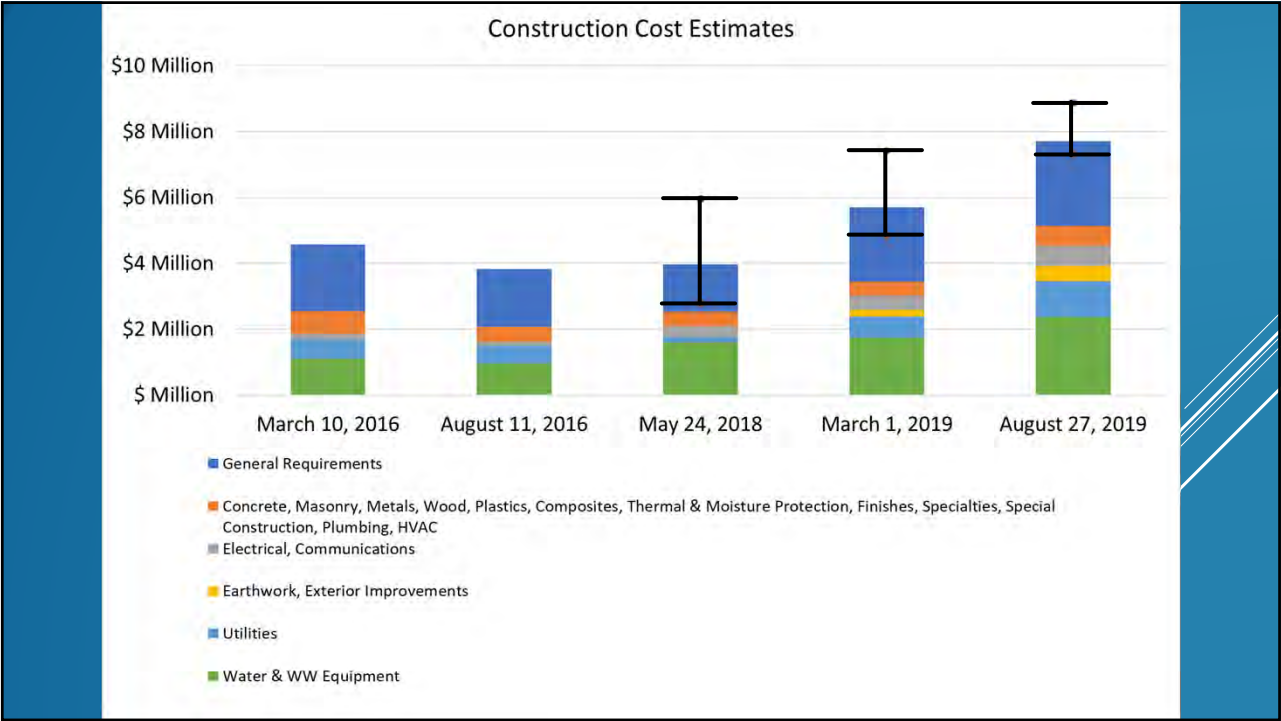


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Design Considerations					
Feasibility Study (Draft)	Feasibility Study (Final)	GW Treatment System Evaluation (Kennedy/Jenks)		30% Design (Kennedy/Jenks)	90% Design (Kennedy/Jenks)
Mar 10, 2016	Aug 11, 2016	May 24, 2018	June 29, 2018	Mar 1, 2019	Aug 27, 2019
	<ul style="list-style-type: none">Improved Filter Loading Rate (3 to 6 gpm/sf)Decreased Filter Vessel Size	<ul style="list-style-type: none">Reduced from 4 to 3 active horizontal filtersAdded Backwash Tank and Recycled Pump StationAdded Waste Solids Manhole and Lift Station	<ul style="list-style-type: none">Considered change in treatment plant location	<p>Changes:</p> <ul style="list-style-type: none">Reduced from 3 to 2 active horizontal filtersMoved treatment plant locationIncreased EarthworkIncreased Yard PipingBolted steel tank in lieu of lined earth basinsConcrete Encasement of Piping at FiltersElectrical Supply SourceLab/Air Scour Building Size Increase <p>Additions:</p> <ul style="list-style-type: none">Filter Drain Pump Station	<p>Additions:</p> <ul style="list-style-type: none">PavingRaw BypassFuture Nitrate Treatment Connections <p>Cost Increases:</p> <ul style="list-style-type: none">EarthworkCMU BuildingElectrical, I&CTank & PipingYard PipingFilter Drain Pump Station

31



32

Next Steps

▶ Complete 100% Design

- General Manager to approve Amendment No. 1 in the amount of \$158,000 with Kennedy/Jenks Consultants
- Complete potholing work at El Rio WTP to avoid utility conflicts during construction
- Staff will consider constructability review by independent consultant

➤ WCVC IRWMP Prop 1 Funding

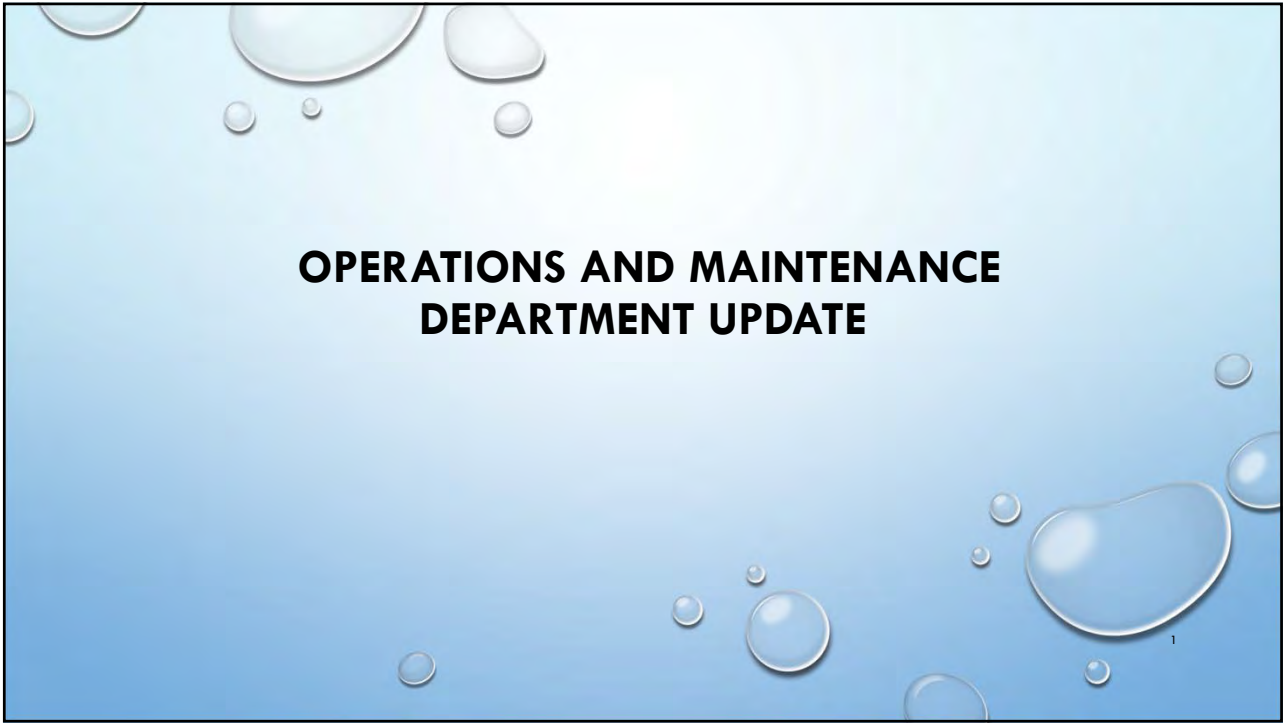
- DWR is anticipated to announce awards in late spring or early fall 2020

➤ NEPA

- U.S. Bureau of Reclamation to complete NEPA process

➤ Bid Process and Construction

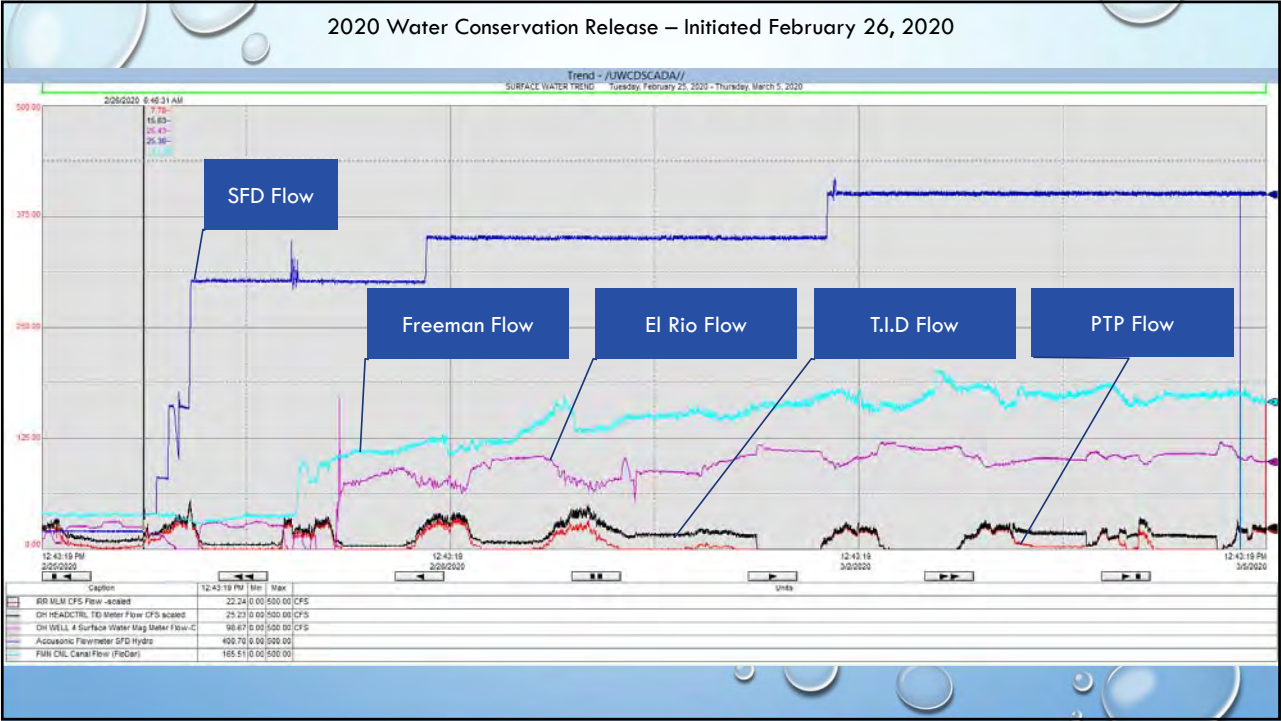
- Advertise for bids as early as fall 2020 following DWR funding announcement



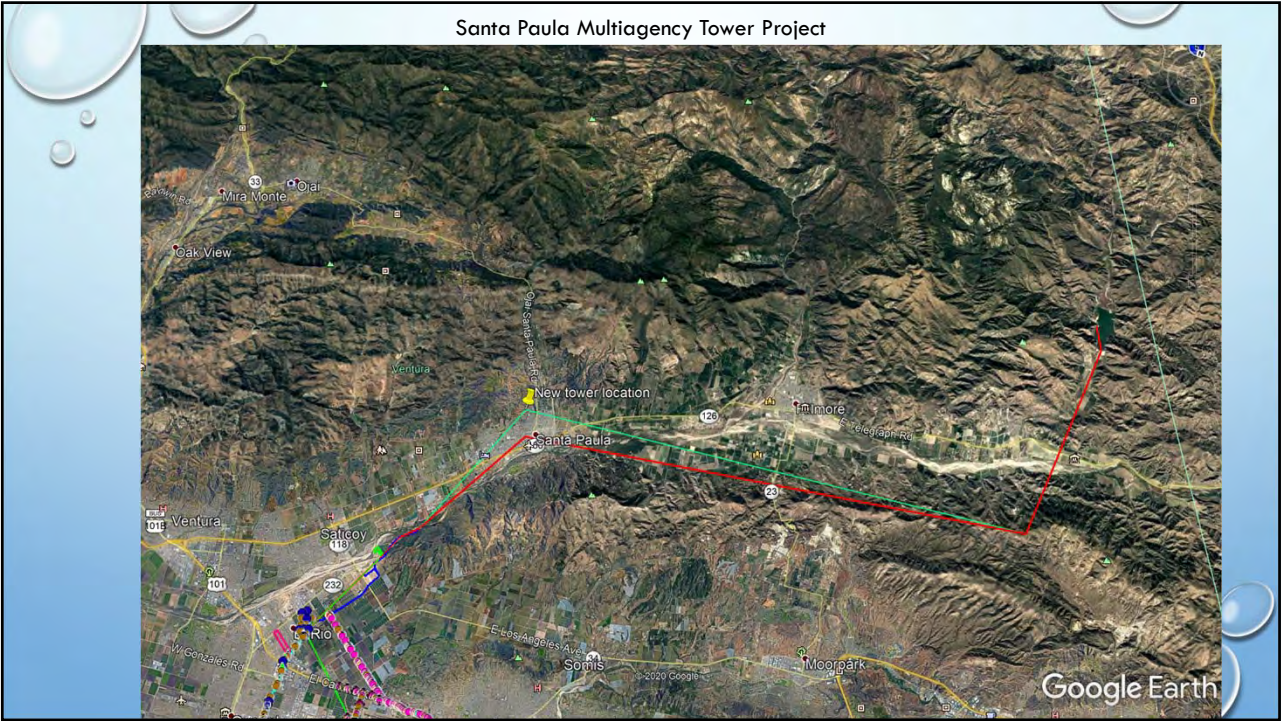
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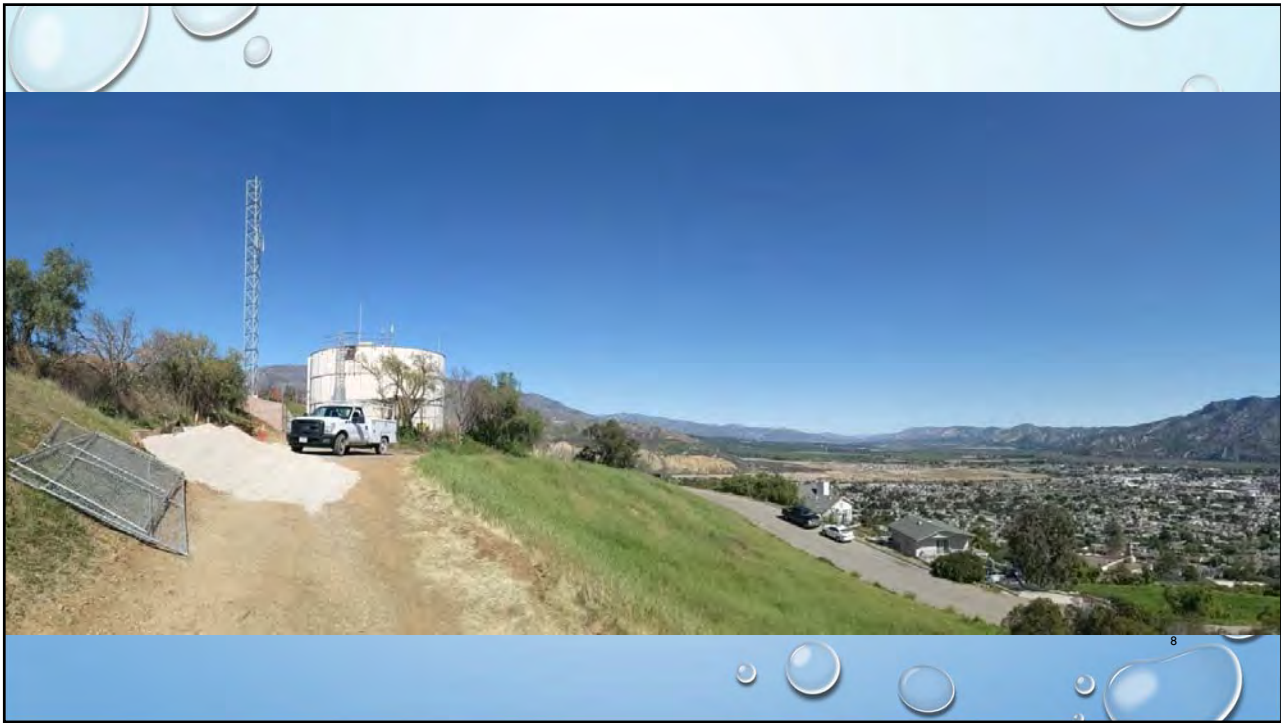
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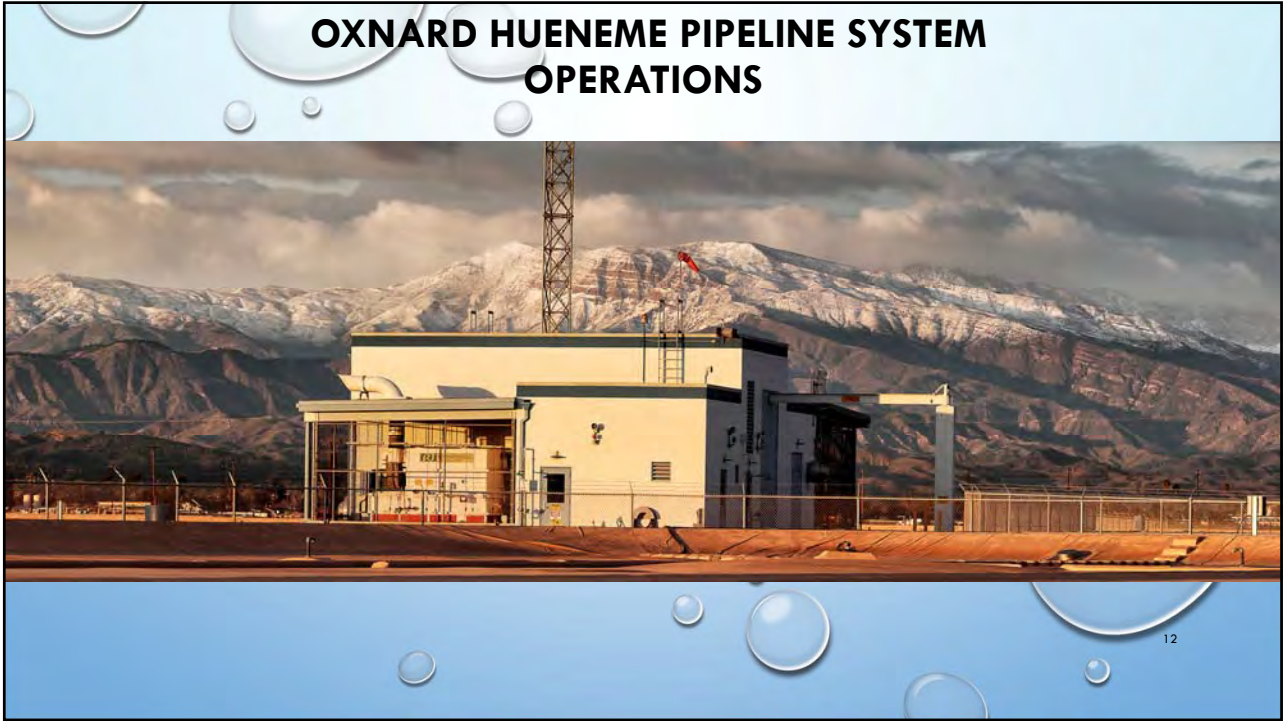
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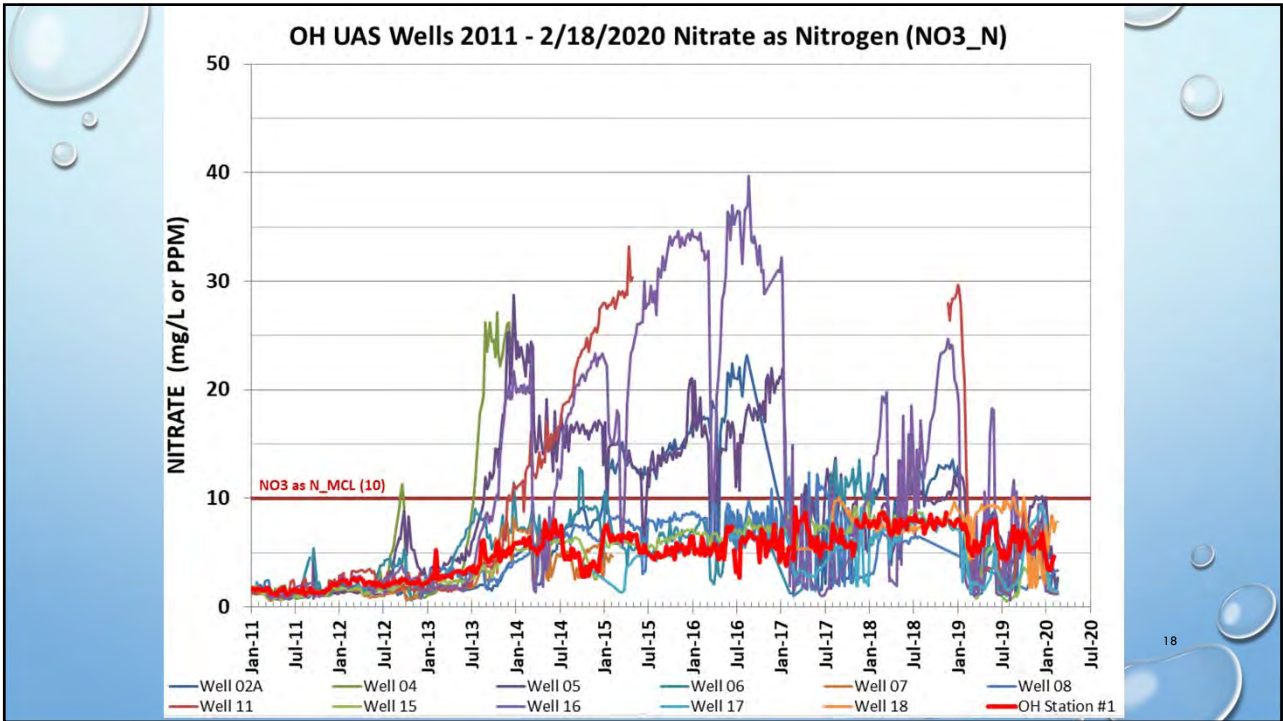
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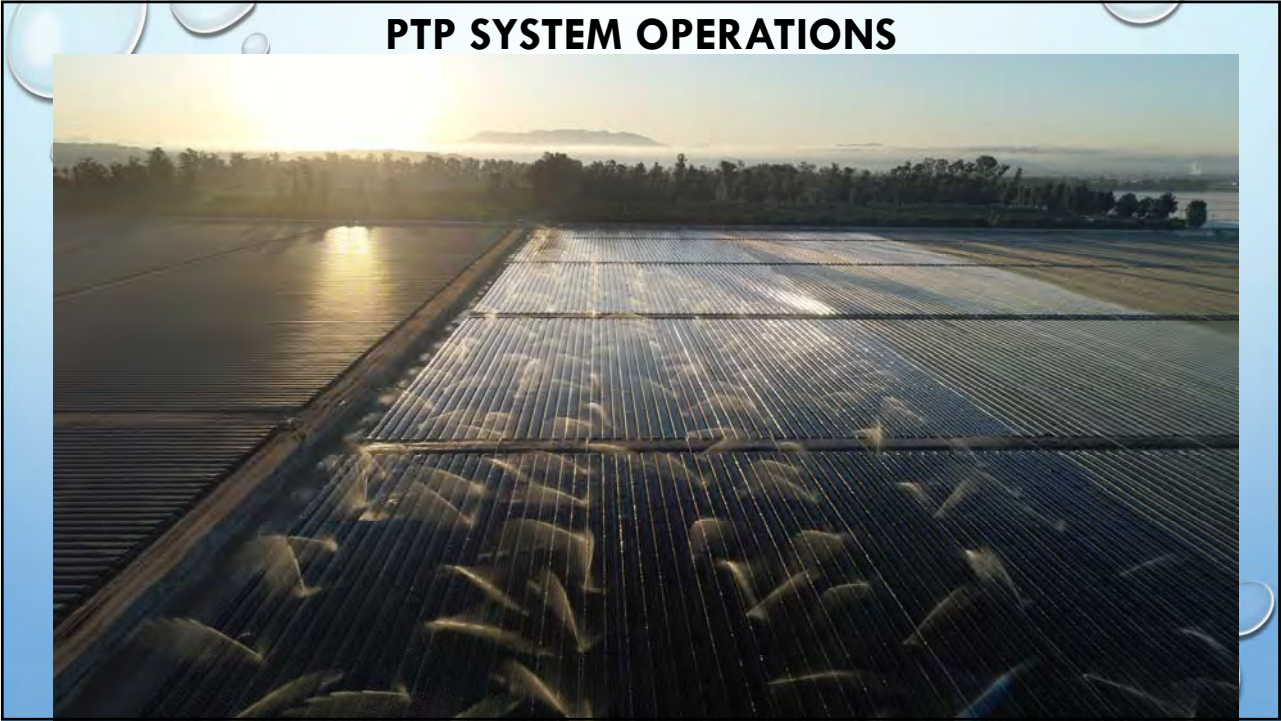
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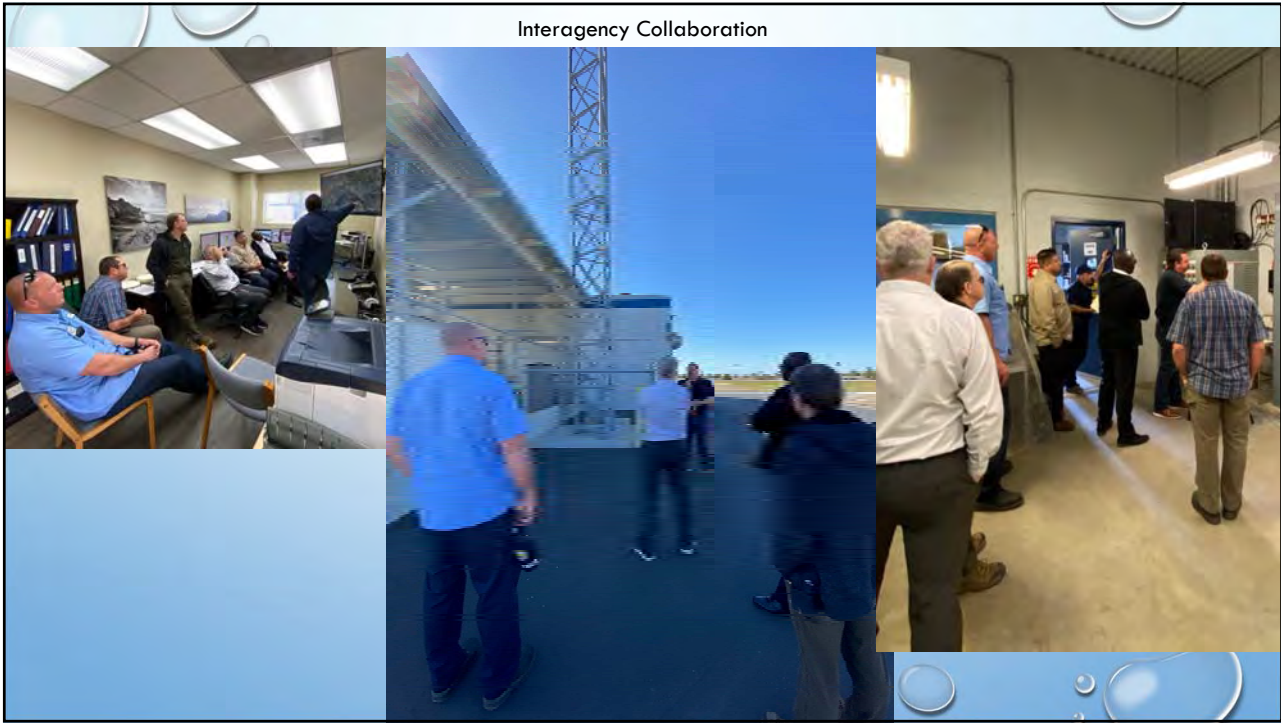
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1

JOINT MAINTENACE TASKS & ACTIVITIES		
• Roadway Drain Project:		February
• Replace Marina Anchor Pick Lines & Hardware:		February
• Replace Reasoner Canyon and Marina Dock Line Cables:		February
• Replace & Re-set Barge Anchors:		March
• Replace Pump Barge Pick Lines:		March
• Replace Anchor Floats Lake Wide:		March
• Grade Road Shoulders & Fire Abatement:		March
• Grading of Swim Beach & Upper Overflow:		March
• Weed Spraying:		March & April
• Painting of Fernandez Restrooms:		April

2



3



ANNUAL DRAIN & ROAD MAINTENANCE

4



5



6



7



8



9



10



11



12

PMC Operating Agreement Update

- The PMC operating agreement was executed & initiated January 1, 2014
- 3 Amendments occurred to the agreement: February 2015, November 2015 & May 2017
- PMC has increased revenue in each of its 7 years of the agreement:
 - \$525,000.00 in 2014
 - \$1,074,120.00 in 2019.
- The current operating agreement is set to expire December 31, 2020
- PMC and the District have the option to negotiate up to as many as two (2) five (5) year extensions under the current operating agreement
- Staff, including AGM Bob Siemak and CFO Joseph Jereb, have engaged PMC and initiated discussions moving toward contractual discussions.

Multiple Species Habitat Conservation Plan



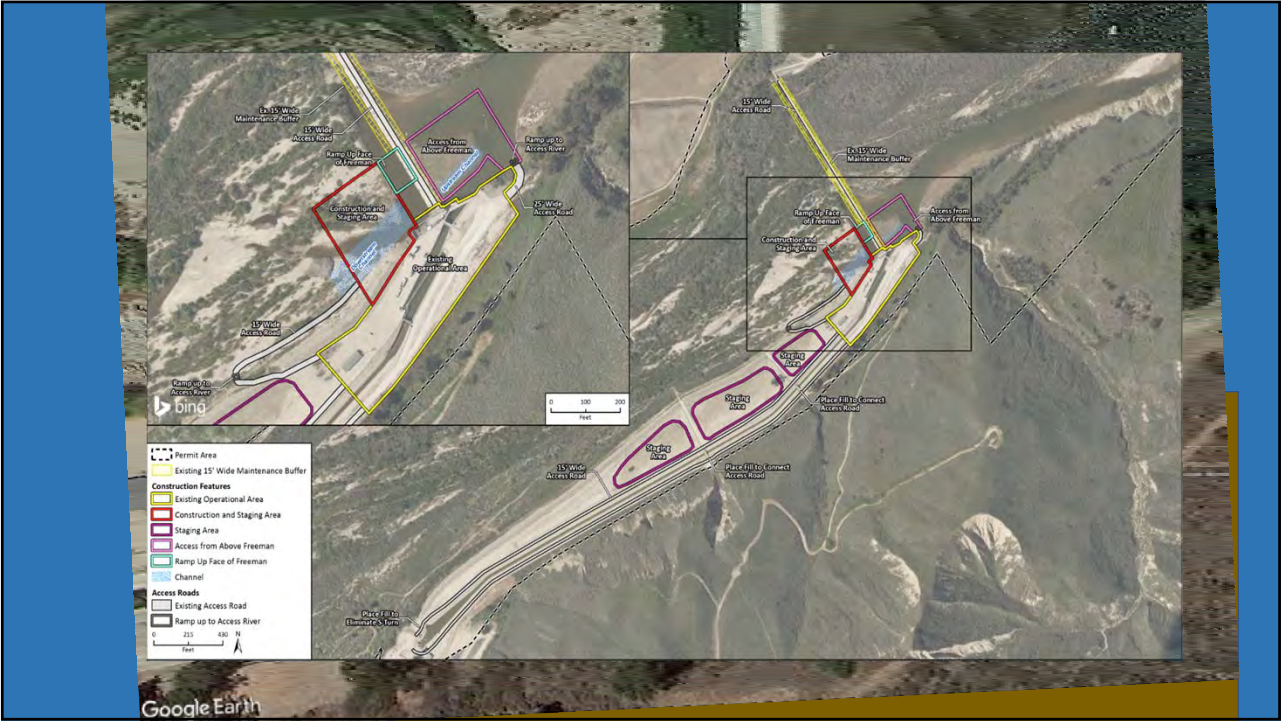
Photo Credit: John Carman

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Outline

- Previous updates
 - August 2018 Special Board Meeting
- Live-edit process
- Changes made to the HCP
- Next Steps
 - Live-edit of Chapters 1, 6, 7, 8, 9, and 10
 - Permit application package submittal by 6/30

2



3

Covered Activities

• Construction, operation, and maintenance of a new fish passage facility.

→ Construction operation and maintenance of the Freeman Expansion Project

• Modifications to the facility to allow diversion of more turbid water at higher flows.

• Water diversion/instream flow operations
(striking a balance to the maximum extent practicable)

• Restoration and enhancement of habitat

• Monitoring

• Potential adaptive management measures

4

Covered Species

- Fish
 - Southern California steelhead
 - Pacific lamprey
 - ~~Santa Ana sucker~~
 - Tidewater goby
- Birds
 - Least Bell's vireo
 - Southwestern willow flycatcher
 - Yellow-billed cuckoo
 - ~~Yellow warbler~~
 - ~~Yellow-breasted chat~~
- Reptiles
 - Western pond turtle
 - Two-striped garter snake



5

Instream Flow Commitments

- Mimic the shape of the No Diversion hydrograph to the maximum extent practicable
- Provide instream flows according to several protocols to maximize biologically meaningful passage days to the maximum extent practicable
 - For both interim (375 cfs) and future (750 cfs) diversions
 - Turn-in Rate Protocol
 - Adult Migration Variable Flow Protocol
 - Adult Migration Base Flow Protocol
 - Smolt Migration Protocol

6

Next Steps

- Live-edit of Chapters 1, 6, 7, 8, 9, and 10
 - Currently being scheduled
- Permit application package submittal by 6/30
 - Including the Draft HCP/ ITP, USACE and RWQCB Clean Water Act, and CDFW 1600 Streambed Alteration Agreement
- California Endangered Species Act Permitting

7

Proactive Monitoring



8



9



10



Staff Report

To: Engineering and Operations Committee

Through: Mauricio E. Guardado, Jr., General Manager
Anthony A. Emmert, Assistant General Manager

From: Staff, Environmental Planning and Conservation Department

Date: April 21, 2020 (May 13, 2020 Meeting)

Agenda Item: **3A Multiple Species Habitat Conservation Plan and Incidental Take Permitting Support – Amendment to Agreement with Stillwater Sciences**
Motion

Staff Recommendation:

The Committee will consider recommending to the Board that it authorize the General Manager to execute an amendment to the agreement with Stillwater Sciences for technical support in finalizing the fourth administrative draft of the Multiple Species Habitat Conservation Plan (MSHCP) and associated activities.

Discussion:

United executed a professional services agreement with Stillwater Sciences on April 16, 2014. Since that time, the habitat conservation planning process has increased in complexity and regulatory scrutiny. In response, United requested that Stillwater Sciences expand the scope of work significantly, and the agreement has been amended on five occasions. Stillwater Sciences has provided services in support of the District's efforts in the foundational studies for the effects analyses, assisted with revising technical aspects of the MSHCP, participated in live-edit meetings with regulatory agencies, and more recently assumed a project management role, promoting progress in resolving outstanding issues in the MSHCP planning process.

This motion will provide for continuity of services to finalize the MSHCP by June 30, 2020, and coordinate follow-up permitting activities through December 31, 2020. The additional scope includes technical review and analysis of hydrologic data and assessments that inform decisions as United finalizes the MSHCP, support and facilitation of the mitigation working group and completion of the mitigation assessment appendix, project management to complete revisions of the MSHCP and finalize consultation with resource agencies, and coordination of follow-up permitting (state incidental take permit, Lake and Streambed Alteration Agreement, etc.). The additional scope of work cost is estimated at \$142,000, and would bring the total not-to-exceed expenditure under the Agreement to \$678,628.

**3A Multiple Species Habitat Conservation Plan and Incidental Take
Permitting Support – Amendment to Agreement with Stillwater
Sciences
Motion**

Fiscal Impact:

The recommended \$142,000 would be funded from the Freeman Capital Improvement Fund (Fund 421-400-81020, Project 8001-815) and is included in the FY 2019-2020 Budget.

Attachments: Amendment to Agreement with Stillwater Sciences for Technical Support on the Multiple Species Habitat Conservation Plan and Associated Permitting

**SIXTH AMENDMENT TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES**

This Amendment to the Agreement for Professional Consulting Services is entered into as of _____, 2020, by and between **United Water Conservation District** (UNITED), a public entity, and **Stillwater Sciences** (CONSULTANT) with reference to the following terms and conditions:

WITNESSETH

WHEREAS, on April 16, 2014, UNITED and CONSULTANT entered into a Professional Consulting Services AGREEMENT for the purpose of providing technical assistance to support development of the Multiple Species Habitat Conservation Plan, and entered into a FIRST AMENDMENT to said AGREEMENT on June 22, 2016, a SECOND AMENDMENT on May 24, 2018, a THIRD AMENDMENT on June 24, 2019, a FOURTH AMENDMENT on July 25, 2019, and entered into a FIFTH AMENDMENT on October 24, 2019, and;

WHEREAS, UNITED and CONSULTANT have discussed and agreed to amend certain terms and conditions of the AGREEMENT, FIRST AMENDMENT, SECOND AMENDMENT, THIRD AMENDMENT, FOURTH AMENDMENT, and FIFTH AMENDMENT involving scope of work, and compensation as specified in this SIXTH AMENDMENT.

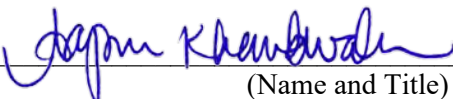
NOW, THEREFORE, based on the covenants and considerations set forth, UNITED and CONSULTANT mutually agree as follows:

1. The not-to-exceed total charge described in the AGREEMENT and all prior AMENDMENTS is hereby increased by \$142,000 (one hundred forty-two thousand dollars). This amendment results in a total revised not-to-exceed amount of: \$678,628 (six hundred seventy-eight thousand, six hundred and twenty-eight dollars) as total payment inclusive of all services.
2. The Scope of Work included as Exhibit A of the AGREEMENT, Attachment A of the FIRST AMENDMENT, Attachment A of the SECOND AMENDMENT, Attachment A of the THIRD AMENDMENT, Attachment A of the FOURTH AMENDMENT, and Attachment A of the FIFTH AMENDMENT is hereby amended to include the revised Scope of Work and schedule included in Attachment A of this SIXTH AMENDMENT.
3. The term of the AGREEMENT and all prior AMENDMENTS will expire on December 31, 2020.
4. Each and all other provisions of said AGREEMENT, FIRST, SECOND, THIRD, FOURTH, and FIFTH AMENDMENT remain in full force and effect and apply to all services and payments made under this SIXTH AMENDMENT.

UNITED WATER CONSERVATION DISTRICT

By _____
Mauricio E. Guardado, General Manager

STILLWATER SCIENCES

By  _____, CEO/President
(Name and Title)

**ATTACHMENT “A”
SIXTH AMENDMENT TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES**

Revised Scope of Work and Schedule



April 16, 2019
Linda Purpus
United Water Conservation District
1701 Lombard Street, Suite 200
Oxnard, CA 93030
lindap@unitedwater.org

Re: Amended scope and cost proposal for management and coordination of Freeman Rehabilitation Project permitting, technical analysis, technical meetings, and document revisions in support of the United Water Conservation District Multiple Species Habitat Conservation Plan (MSHCP)

Dear Ms Purpus,

For your review, Stillwater Sciences (Stillwater) is pleased to submit an amended scope and budget proposal below to assist United Water Conservation District (United) with management and coordination of Freeman Rehabilitation Project permitting, focused technical analysis, technical meetings, and document revisions in support of the MSHCP. For the task below, Stillwater key staff include Ethan Bell (Project Director), Katherine Ayres (Project Manager), Matt Drenner (technical lead), Glen Leverich (technical lead), Nate Butler (technical support), Noah Hume (technical review), and Bruce Orr (Sr. technical review). Other Stillwater staff will be included for support as appropriate.

Scope of Work

Task 2: Riverine Effects Analysis

Increase scope to provide technical analysis and summary of backlogged data, including, but not limited to, data from critical riffle surveys, water quality in pools downstream of Freeman Diversion, and watershed water quality data. This task assumes that United will provide the data for analysis and Stillwater will analyze the data with basic summary statistics, provide data visualization, and write up the data either in memorandum format and/or incorporate the write-up into the MSHCP.

Increase scope to provide technical review of analyses performed by United staff including, but not limited to, turn-in rates, stranding risk, flow analysis, fish passage criteria, etc. This task assumes that United has conducted data analysis with a write-up and desires Stillwater provide technical review and feedback prior to incorporation into the MSHCP. This task assumes that United would provide the raw data and written documents/sections to Stillwater and Stillwater would return the document(s) with technical feedback and suggested track changes.

Increased budget by \$15,000 to cover increased scope.

Berkeley, CA
510.848.8098

Arcata, CA
707.822.9607

Davis, CA
530.756.7550

Portland, OR
503.267.9006

Morro Bay, CA
805.570.7499

Boulder, CO
720-656-2330

Los Angeles, CA
424.302.3910

Task 4: Mitigation, Monitoring, and Adaptive Management

Increase scope for Stillwater Sciences to support and facilitate the mitigation working group for the MSHCP. This task includes technical staff to attend up to two teleconference meetings of three-hour duration with the mitigation working group. Stillwater will then complete the mitigation assessment appendix for the MSHCP and incorporate United's relevant mitigation decisions into the Chapters 1, 3, 5, 6, and 7 of the MSHCP as appropriate. This scope assumes that United will provide to Stillwater any mitigation decisions with relevant details and any planning documents at least 15 working days prior to the deadline for the MSHCP. This scope also assumes that United or ICF will incorporate any mitigation decisions into Chapters 9 and 10 of the MSHCP.

Increased budget by \$15,000 to cover increased scope

Task 4: Project Management and Meetings

Increase scope to include technical support at two live-edit meetings (two days each) covering Chapter 5 (with revisions), Chapter 6, Chapter 7, and full document, including preparation time for meetings. Increased scope also includes up to five technical meetings (two hours each) with the agencies or equivalent time communicating with the agencies on technical questions. All meetings are assumed to be teleconference meetings.

Increased budget by \$12,000 to cover increased scope.

Task 5: MSCHP Revisions

Increase scope to include editorial review and assurance of consistent style of sections written by United staff, including updating and production of relevant figures and tables. Scope also includes Stillwater support for revisions of Chapters 1, 2, 3, 4, 5, 6, and 7 following live edit meetings based on agency comments and edits agreed on during the meetings. Scope assumes that ICF or United will cover edits for Chapters 8, 9, and 10.

Increased budget by \$35,000 to cover increased scope.

Task 8: Management and Coordination of Freeman Rehabilitation Project Permitting

Subtask 8.01 Management

New scope for Stillwater to support United's management, coordination, review and completion of the 4th Administrative Draft Habitat Conservation Plan and Public Draft Habitat Conservation Plan and other associated permits (state ITPs, LSAA, etc.). This task will include coordinating and attending meetings with United staff, agencies, and the MSHCP consultant team; identifying action items; and coordination to ensure action items are completed. The scope assumes project management support consisting of regular updates to United staff (weekly email or preferred communication method), recommendations on next steps, weekly coordination calls, recommended delegation of action items, milestone checklist updates, and project schedule updates. The scope also assumes PM support at three live edit meetings with the agencies (two days each); two

mitigation working group meetings (3 hours each); and up to twenty meetings (one hour each) at United's discretion. These meetings could be, but are not limited to, internal strategy meetings, internal technical meetings, pre-meeting preparation, engineering meetings, and meetings with the agencies. The scope assumes that all meetings will be teleconference meetings. The scope also includes a full document review for clarity, consistency, style, typos, and technical accuracy prior to submission to the agencies. The scope assumes more need for PM support in May and June with continued, but less frequent, PM support through December 2020.

Increased budget by \$65,000 to cover additional scope.

Budget

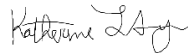
The tasks above will be conducted using Stillwater's standard billing rates on a time and materials basis with a total not-to-exceed cost of \$142,000.

Deliverables Schedule

The term of this scope remains through December 31, 2020 unless extended by United in writing. Schedule and deliverables for all tasks will be as directed by United during 2020.

Please let us know if you have any questions or would like to discuss further.

Sincerely,



Katherine Ayres, Ph.D.
Senior Scientist
Stillwater Sciences
KAyres@Stillwatersci.com



Staff Report

To: Engineering and Operations Committee

Through: Mauricio E. Guardado, Jr., General Manager
Robert C. Siemak, Assistant General Manager

From: Maryam A. Bral, Chief Engineer
Craig A. Morgan, Senior Engineer
Robert J. Richardson, Senior Engineer
Michel Kadah, Associate Engineer
Adrian Quiroz, Assistant Engineer

Date: April 28, 2020 (May 05, 2020 Committee meeting)

Agenda Item: 5A **Monthly Engineering Department Report**
Information Item

Staff Recommendation:

Committee will receive the information presented herein.

Discussion:

(Due to the COVID19 stay-at-home order, a majority of staff worked from home, To facilitate communications and coordination, daily conference calls were held in the morning and afternoon on Teams; this has proven to be an effective way of moving all projects and programs forward. In instances where field work was required, all social distancing and safety procedures were followed)

1. Santa Felicia Dam Safety Improvement Projects

- **Spillway Improvement Project**
 - Staff submitted the electronic copy of the 10% design documents to FERC and DSOD on April 9, 2020.
 - Staff submitted the electronic copy of the Spillway Condition Assessment final report to FERC and DSOD on April 16, 2020. The fully executed Professional Services Agreement for the next design phase was sent to GEI along with the Notice-to-Proceed.
 - Staff prepared a permit application for the 2020 Drilling Program Plan and the new survey monument installation.
- **Outlet Works Improvement Project**
 - The updates reported for the Spillway Improvement Project also apply to the Outlet Works Improvement Project.
- **FERC License Amendment Application and NEPA Documentation**

Agenda Item: 5A Monthly Engineering Department Report
Information Item

- Catalyst is implementing the final comments provided by Staff and Rincon on the draft final EA report and planning to finalize it in May.
 - Staff finalized and submitted Exhibit F (Santa Felicia Dam Proposed Safety Improvement Detailed Drawings) and Exhibit G (Santa Felicia Dam, Project Boundary Map).
 - The complete FERC license amendment application, including EA and Exhibits F and G will be submitted to FERC in May 2020.
 - Rincon completed their review of the draft Biological Assessment (BA) report on April 13. Staff and EPCD are currently reviewing the draft BA and Rincon's review comments.
2. Freeman Diversion Rehabilitation/Fish Passage Facility
- Staff met with NMFS and CDFW to discuss the Hardened Ramp Design.
 - Attended a two-day Multiple Species Habitat Conservation Plan (MSHCP) live edit meeting on April 8 and 9, 2020.
3. Grand Canal Hydraulic Optimization
- Purchase order issued to Waterman Valve for the new Grand Canal headwork gates, 20-week lead time required them to be owner furnished.
4. Ferro-Rose Recharge Basins
- An agreement is in place with Northwest Hydraulic Consultants (NHC) for the design of the replacement of the 3-barrel culvert and inverted siphon within the Freeman conveyance system.
5. Santa Felicia Dam Safety
- Pavement Coatings Co. completed the slurry seal of the Santa Felicia Dam (SFD) Crest Asphalt on Tuesday, March 31, 2020.
 - The District has prepared and sent a Professional Services Agreement (PSA) to Fugro for the 2020 Lake Piru Bathymetric Survey for partial execution. The District expects Fugro to begin work by June 2020.
 - The District is working with ECG to install four new survey monuments at the spillway ogee crest. A request for authorization to install the new monuments was submitted to FERC and DSOD on April 14, 2020.
 - The District is in the process of its annual SFD Emergency Action Plan Update. Chief Engineer, Maryam Bral and Assistant Engineer, Adrian Quiroz met on April 03 and April 17, 2020 for EAP review sessions. Final updates are expected to be completed in June 2020. The finalized EAP will be submitted to the California Governor's Office of Emergency Services for review and approval.
6. Recycled Water Update
- Staff continues to work on the preliminary design plans for the Riverpark Saticoy/Central Recycled Water Backbone System (RWBS) Pipeline Extension project to convey advanced treated water to the Saticoy groundwater recharge basins.

Agenda Item: 5A Monthly Engineering Department Report
Information Item

- Staff is preparing preliminary easement exhibits for future discussions with the California Department of Transportation for the Riverpark RWBS Pipeline Extension project (See Figures 1 and 2).
- Staff developed a detailed work plan and schedule for Fiscal Years 2019/20 and 2020/21.

7. PTP Turnout Metering System Improvement

- Total number of meters installed: 20
 - Figures 3 and 4 show the latest meter installation at PTP Turnout No. 133.
- Actual project completion: 32.3%
- On March 27, 2020, Stantec submitted easement map exhibits for PTP Turnout Nos. 114, 125, 126, 127, 154 and 162. Staff is currently providing comments on these exhibits.
- On March 31, 2020, Stantec submitted easement map exhibits for PTP Turnout Nos. 109, 113 and 149. Staff is currently working on clarifying property line conflicts.

8. Iron and Manganese Removal at the El Rio Water Treatment Plant

- The General Manager authorized Amendment No. 1 for Kennedy/Jenks Consultants (K/J) to complete final design in the amount of \$173,227 (includes a 10% contingency to be authorized by the District on an “as needed” basis).
- Staff issued the Notice to Proceed to K/J on April 14, 2020.
- Staff reviewed a potholing plan prepared by K/J to explore potential utility conflicts with the Iron and Manganese Treatment Plant design at the El Rio WTP. Staff decided not to pursue potholing (destructive process) until a contractor is mobilized and ready to start construction.
- Staff has recommended that the fire suppression system in the laboratory /electrical/blower room be wet sprinklers except for the electrical room per National Fire Protection Association (NFPA) code exemptions (See Figure 5). K/J is in agreement with this approach.
- Staff is coordinating with the U.S. Bureau of Reclamation regarding NEPA compliance which awarded a \$300,000 WaterSmart grant under the Drought Resiliency Program.

9. State Water Project (SWP) Interconnection Project

- The City of Ventura is planning to tentatively recommend a contract agreement with Stantec/ HDR team to the City Council in May.

10. Rice Avenue Grade Separation – PTP Relocation

- Staff is meeting with the Ventura County and the City of Oxnard’s design team via Teams to discuss relocation options for the 700-ft segment of United’s 30” transmission pipeline located southerly of Eastman Ave on April 29.

11. Pothole Trailhead Parking Area

- Engineering Staff were notified that the Project was not selected to continue in the competitive process for Proposition 68 – Recreational Trails and Greenways Grant Funding.
- Staff will finalize design and permit acquisition and put the project out to bid in July 2020 to construct the final improvements to the parking area. Construction is scheduled to begin

Agenda Item: 5A Monthly Engineering Department Report
Information Item

on September 15, 2020 following the conclusion of nesting season and be completed by December 31, 2020.

12. Santa Clara River (SCR-1) Levee Improvement Project (VCWPD)

- VCWPD is currently evaluating two different levee construction options (soil cement and rock-rip rap) for the portion of levee alignment on the south side of the Ferro Basin along Central Avenue Drain.
- VCWPD has agreed to approach the District with right-of-way needs in the Ferro Basin property.

13. Alternative Supply and Assurance Pipeline Project (ASAPP)

- Staff mapped the proposed alignment, identified the crossings through private properties and easement requirements upstream of the Freeman Diversion and updated the opinion of cost for the proposed alignment.

14. Freeman Diversion and Lower River System Quagga Mussel Control Project

- On March 27, 2020, Staff along with the District's consultant Catalyst completed their review of the Chemical Treatment Pilot Study performed by KASF Consulting.
- On April 10, 2020, KASF Consulting submitted the final draft of the Chemical Treatment Pilot Study which is currently under review by Staff.
- Staff has been coordinating with EPCD staff on the next phase of chemical treatment pilot testing.

15. Coastal Brackish Water Treatment Plant

- Staff submitted draft meeting minutes with action items for the District's meeting with the U.S. Navy on February 10, 2020. Staff also provided an updated data request log. U.S. Navy staff has agreed to respond back with an updated schedule for future meetings and action items.
- Staff developed a detailed work plan and schedule for Fiscal Years 2019/20 and 2020/21.
- Staff is considering various energy recovery technologies such as installation of energy recovery devices on the brine concentrate (See Figure 6).
- On April 6, 2020, Staff attended a teleconference with Steve Wait (IDE) demonstrating two types of high recovery reverse-osmosis systems (pulsed flow and pellet reactor (See Figure 7) that are currently in the demonstration phases.

16. CalOES HMGP Sub application)

- Per the email correspondence with CalOES on April 14, Staff was informed that if United proceeds with electric design of the OH backup emergency generators prior to FEMA's approval of the grant application, there would be a risk of making the project ineligible for grant funding.

17. Comprehensive Water Supply and Optimization Plan Support)

- Staff is finalizing project status updates and implementation plans for four of the five projects presented at the Water Sustainability Summit. KJ will be supporting Staff with various tasks to advance the projects.

Agenda Item: 5A Monthly Engineering Department Report
Information Item

18. Piru Stormwater Capture for Groundwater Recharge)

- No new updates to report.

19. Asset Management

- Staff attended AWIA Webinar Series to aid in the preparation of a detailed scope of work for the asset management project.
- On March 31, 2020, Staff prepared a draft detailed scope of work for the asset management project focusing on district needs that were discussed on October 2, 2019 at the ESRI Discovery Meeting.
- On April 24 and 29, 2020, Staff met and continued the preparation of the detailed scope of work for the asset management project.

20. Other Topics, Meetings and Training

- April 06, 2020 – Engineering and Water Resources team attended a teleconference with IDE to discuss RO brine concentrate treatment alternatives.
- April 14, 2020 – Engineering and Water Resources Monthly Staff Meeting
- April 16, 2020 – Engineering Staff participated in webinar for RS Means software.
- April 16, 2020 – Maryam Bral, Robert Richardson, and Erik Zvirbulis participated in an AWIA webinar: Part 2 – Building a GIS-centric water asset registry.
- April 23, 2020 - Maryam Bral, Robert Richardson, and Erik Zvirbulis participated in an AWIA webinar: Part 3 - Using a GIS-centric Enterprise Asset Management System
- April 27, 2020 - Maryam Bral, Robert Richardson, and Erik Zvirbulis participated in an AWIA webinar: Part 4 - Asset Performance and Risk Modeling
- April 28, 2020 – Engineering Staff participated in a FERC Security Program webinar for Hydropower Projects and preparation for the 2020 inspection season.
- April 30, 2020 – Engineering Staff participated in an ASDSO Webinar for Putting Public Safety First – The Oroville Dam Spillways Emergency Recovery: On-Demand

Agenda Item: 5A Monthly Engineering Department Report
Information Item



Figures 1 and 2– Staff continues to work on the preliminary design plans for the Riverpark-Saticoy Recycled Water Pipeline project (Vineyard Ave. crossing shown)

Agenda Item: 5A Monthly Engineering Department Report
Information Item



Figure 3 – O&M Staff completed the installation of a new meter at PTP Turnout No. 133



Figure 4 – O&M Staff installing solar power wood utility pole at PTP Turnout No. 133

Agenda Item: 5A Monthly Engineering Department Report
Information Item

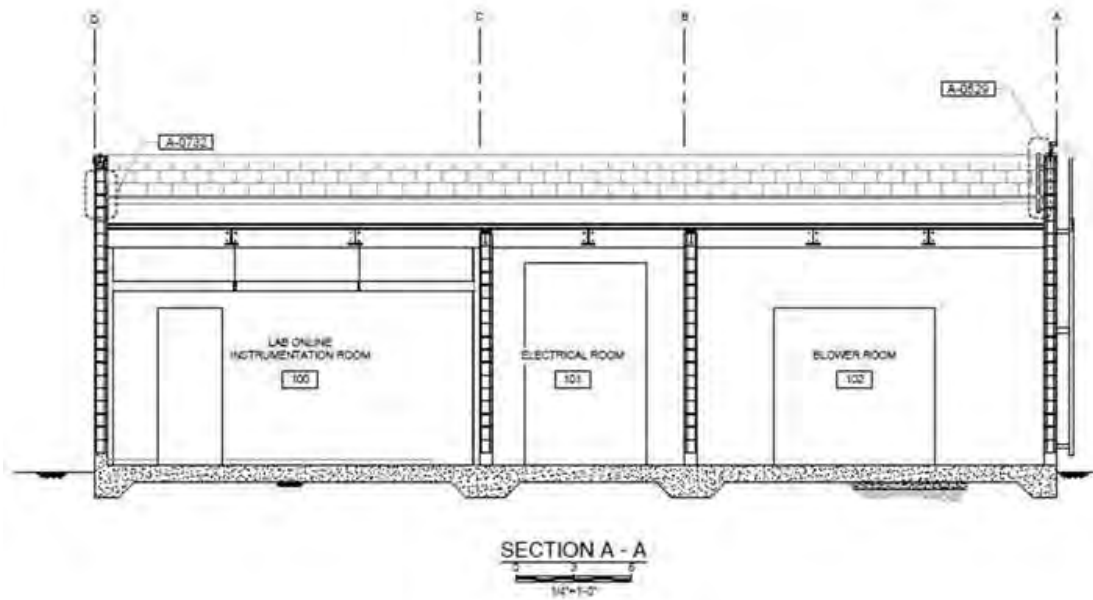


Figure 5 – Staff considers fire suppression requirements for Iron and Manganese Treatment System Building



Figure 6– Energy Recovery Devices at the Carlsbad Desalination Plant

Agenda Item: 5A Monthly Engineering Department Report
Information Item



Figure 7 – Staff meets with IDE Technologies to discuss high recovery/brine management technologies (pellet reactor shown above)



Staff Report

To: Engineering and Operations Committee

Through: Mauricio E. Guardado, Jr., General Manager
Robert C. Siemak, Assistant General Manager

From: Brian Collins, Operations and Maintenance Manager

Date: April 28, 2020 (May 05, 2020 Committee Meeting)

Agenda Item: **5B Monthly Operations and Maintenance Department Report**
Information Item

Staff Recommendation:

Committee will receive the monthly Operations and Maintenance Department report for April.

Summary:

- Lake Piru rose 10.95 feet in April resulting in 9,735 acre-feet (AF) of water collected.
- 4114 AF of water was diverted by the Freeman Diversion facility in April.
- 1941 AF of water was diverted to the Saticoy recharge basins in April.
- 1796 AF of surface water was delivered to the El Rio recharge basins in April.
- 172 AF of surface water was delivered to the PTP system in April.
- 8 AF of surface water was delivered to Pleasant Valley County Water District in April.

Discussion:

I. Major Facilities Update

On March 23, 2020, in response to the recent COVID-19 global crisis, operations and maintenance (O&M) staff initiated an aggressive social distancing program that includes alternative work schedules in addition to relocation of staff to typically unmanned facilities. Staff have implemented daily cleaning of high contact surfaces as well as daily utilization of the Microsoft Teams application for socially distant meetings. Staff have procured N-95 masks, latex gloves and hand sanitizer to support staff while providing essential services throughout the Covid-19 crisis.

Santa Felicia Dam

Lake Piru rose 10.95 feet April 1, 2020 through May 1, 2020, to 48,190 AF of storage. On May 1, 2020 the lake level was 31.3 feet below the spillway lip.

On April 1, 2020 the cumulative rainfall measured at rain station 160 was 15.19 inches which exceeds the 14.9 inch trigger; habitat water releases from Santa Felicia Dam (SFD) were increased

**Agenda Item: 5B Monthly Operations and Maintenance Department Report –
Information Item**

to 20 cubic feet per second (cfs), for the month of April, as per the Water Release and Ramping Rate Implementation Plan for lower Piru Creek.

During the month of April, recreation and operations staff relocated the marina due to dynamic lake levels associated with local rain/storm events.

District staff have been aggressively working to complete fire season hazard abatement and weed removal within the recreation and Santa Felicia Dam areas.

On April 16, 2020 staff performed preventative maintenance activities on hydroelectric unit #1 and placed the unit online generating power/revenue.

Staff and contractor Aspen Helicopter completed the annual downstream face and abutment aerial spraying activities for the 15.8 acre area.

Freeman Diversion, Saticoy, and El Rio Recharge Facilities

Staff and contractor Ikes Pump and Drilling performed an emergency replacement of the electric submersible pump motor for Dos Diago well. This repair was completed the same day that the failure occurred.

District staff have initiated the annual services for the District's heavy equipment. The utilization of staff to perform fluid changes provides development opportunities to staff and supports efficient utilization of District resources.

Flows at the Freeman Diversion averaged 69 cfs for the month of April, with 0 cfs of surface water being diverted on May 1, 2020.

During the month of April, 1941 AF of surface water deliveries were made to the Saticoy Recharge Facility.

During the month of April, 1796 AF of surface water deliveries were made to the El Rio Recharge Facility.

Static water levels (distance of water from the well pad to the water table):

Saticoy	97 feet
El Rio	106 feet
PTP	92 to 130 feet

Noble/Rose/Ferro Basins

0 AF of surface water was delivered to the Nobel & Rose basins during April.

Oxnard-Hueneme (OH) Delivery System

District staff diagnosed and repaired an air supply system malfunction to the OH booster plant pressure relief valve system. This failure was repaired immediately and the OH emergency gas engines provided water delivery services while the repairs took place.

Staff performed the replacement of the clear well sample pump and motor assembly for the OH system pre-chlorination system. Services were provided by the redundant unit while repairs were performed.

El Rio staff have initiated a comprehensive housekeeping effort for the El Rio shop facility.

Pleasant Valley County Water District (PVCWD)

During April PVCWD received 8 AF of surface water from United and PVCWD continued to receive surface water from the Conejo Creek Project and also received some highly treated recycled water from the City of Oxnard's Advanced Water Purification Facility (AWPF).

On April 29, 2020, staff replaced the PV water meter located immediately adjacent to the PV reservoir. This meter replacement was performed in anticipation of the implementation of the new billing method, recently approved by United's Board of Directors.

Pumping Trough Pipeline (PTP)

In an effort to leverage District assets and provide services to the PTP system, staff initiated running of the Saticoy Wellfield for the first time in several years, to deliver water to the PTP system. The production of these wells decreased quickly and staff determined that continued use was not a cost effective solution, as compared to the PTP wells providing service.

Staff continued preparation for the installation of the PTP system emergency generators. Staff ran underground conduits, dug, formed and poured emergency generator pads for PTP wells 1, 2, 3 and the PTP reservoir. This effort is being expedited to prepare for potential Southern California Edison (SCE) Public Safety Power Shutoffs (PSPS).

District staff completed the replacement of the PTP Well #2 check valve assembly. During morning rounds backflow conditions were observed while surface water deliveries were in progress.

Instrumentation

Instrumentation staff performed repairs for the PTP reservoir cover sump pump assembly. Complete replacement of the electrical circuit was required for proper repair.

**Agenda Item: 5B Monthly Operations and Maintenance Department Report –
Information Item**

Staff performed numerous punch list tasks remaining from the headquarters relocation effort. Additionally, numerous lighting repairs were performed within and around the new headquarters location.

District staff performed the replacement of the OH Well 11 flush valve electric actuator.

The instrumentation staff led efforts to prepare the Saticoy Wellfield for delivery of water to the PTP system. This wellfield had not been utilized for several years prior.

Lake Piru Water System

All chlorine residuals and turbidity readings for the drinking water system were within proper ranges for the month of April.

Monthly pH, turbidity and coliform samples were obtained for Lake Piru, as part of the Long Term 2 Enhanced Surface Water Treatment Rule compliance monitoring.

II. O&M Projects Update

Staff have formed an emergency generator installation tiger team to expedite the installation of the 6 PTP emergency generators. District staff are handling the excavation, conduit installation, and slab installation; contractor Diener's Electric will perform the transfer switch, conductor installation and transfer switch commissioning. Quinn Company will perform the emergency generator commissioning. The anticipated completion of this project is June 1, 2020.

III. Other O&M Activities

1. The Santa Felicia Dam Emergency Action Plan sirens located in Piru were exercised on April 3, 2020.
2. On April 18, 2020 staff attended the Santa Paula Chamber of Commerce board meeting remotely.
3. The monthly inspection of Santa Felicia Dam was performed.
4. Monthly bacteria samples were obtained for the PTP system.
5. Monthly meter readings were obtained for the OH, PTP, and PV Pipelines.
6. Completed and electronically transmitted the monthly OH Pipeline report to the State Water Resources Control Board Division of Drinking Water.
7. Static water levels were obtained for all El Rio, Saticoy, and PTP wells.
8. Weed abatement continued throughout the District.
9. Action priority update biweekly meetings for operations staff were continued.
10. Staff remotely completed annual Air pollution Control District (APCD) inspections for El Rio, Saticoy Shop and the Freeman Diversion emergency generators.
11. Staff completed numerous painting activities throughout the PTP system.
12. Staff and contractor HACH completed quarterly services for all HACH equipment throughout the District.

IV. Safety and Training

During the month of April approximately 3,100 hours of work, within the O & M department, were performed with no reportable accidents. The YTD safety record is 1 recordable injury.

Two separate safety meetings were conducted on April 29 & 30, 2020, utilizing the Microsoft Teams application, to maintain social distancing practices and to accommodate the separately scheduled teams. A safety video was provided to staff entitled “*Respiratory Safety.*” Additionally, staff were provided with Coronavirus: Cleaning and Disinfecting the Workplace & Coronavirus: Managing Stress and Anxiety. An AWWA safety handout entitled “*Self-Contained Breathing Apparatus*” was also briefed to staff. Staff fulfilled Occupational Safety and Health Administration (OSHA) compliance requirements by reviewing the “*Respiratory Protection Plan*”; general review.

Tailgate safety meetings were conducted at all individual O&M field locations and the topics included refresher training on equipment used at the various O&M locations. The online Target Safety assignment for April was “*Water industry Respiratory protection.*”

Attachments: A - Operations Log for April

OPERATIONS LOG																										
DATE	SANTA FELICIA DAM								FREEMAN DIVERSION**					RECHARGE				IRRIGATION						O-H		
	SFD EI.	Stor.	Surface	Evap.	Inflow Balance	Outflow USGS	Hydro	Rain 106E	River	Diverted	Fish*** Facility	Bypass Channel	Crest	El Rio	Salicoy Facility		Noble/ Rose	Piru	T.I.D.	P.T.P.	PVCWD		L.P.	Salicoy Wells	Total	CI2
	Ft.	A/F	Acres	Inches	Av. CFS	Av. CFS	Kw	Inches	Av. CFS	Av. CFS	Av. CFS	Av. CFS	Av. CFS	Av. CFS	Misc CFS†	Weir CFS	Av. CFS	Av. CFS	A/F	A/F	A/F	%	A/F	A/F	A/F	Lbs.
A/F*		38628			22,263	11,236		15.19	38,699	19,075	3,085	5,166		12,774	4977		5	0.0	1,290	923	393		0.0	0	4,975	43,291
4/1/20	1012.76	38455	846.70	0.084	-70	15.6	0	0.00	158	0	91.2	0	66.5	0.17	0	0	0	0.0	0.0	0.0	0%	0.0	0.0	28.3	239	
4/2/20	1012.93	38599	847.90	0.106	96	21.4	0	0.00	157	0	93.7	0	63.1	0.01	0	0	0	0.0	0.0	0.0	0%	0.0	0.0	27.8	252	
4/3/20	1013.09	38734	849.00	0.127	92	21.3	168.7	0.00	148	0	95	0	52.6	0	0	0	0	0.0	0.0	0.0	0%	0.0	0.0	29.7	250	
4/4/20	1013.28	38896	850.30	0.147	106	21.1	165.4	0.00	136	0	95	0	41.4	0	0	0	0	0.0	0.0	0.1	0.0	0%	0.0	0.0	27.8	221
4/5/20	1013.39	38989	851.00	0.071	70	21.4	165.9	0.00	116	0	94.2	0	22	0	0	0	0	0.0	0.0	0.0	0%	0.0	0.0	21.3	170	
4/6/20	1013.79	39330	853.70	0.091	195	21.4	169.9	1.51	3641	0	94.5	446.2	3100	0.01	0	0	0	0.0	0.0	0.0	0%	0.0	0.0	24.5	194	
4/7/20	1014.52	39955	858.70	0.086	338	21.2	167.5	0.22	1657	238	97.3	0	1322.1	66.91	68	96.3	0	0.0	12.4	6.4	6.0	1%	0.0	0.0	23.0	195
4/8/20	1015.43	40739	865.20	0.186	498	98.3	167.5	0.80	1195	362	95.9	0	737.2	104.92	40	214.09	0	0.0	6.1	4.4	1.7	0%	0.0	0.0	24.5	202
4/9/20	1015.91	41156	868.90	0.096	415	203	887.9	0.41	1138	371	100.8	0	666.7	110.55	39	220.88	0	0.0	0.2	0.2	0.0	0%	0.0	0.0	38.3	174
4/10/20	1016.46	41635	873.70	0.037	409	166	935.9	0.96	1424	359	96.7	5.3	963.7	113.19	25	218.98	0	0.0	2.5	2.7	0.0	0%	0.0	0.0	21.5	190
4/11/20	1016.98	42090	878.40	0.045	342	111	941	0.02	890	267	102.1	0	520.1	113.32	-42	191.89	0	0.0	8.3	8.6	0.0	0%	0.0	0.0	20.3	174
4/12/20	1017.58	42619	883.00	0.098	324	55.5	0	0.00	769	141	105.8	0	522.7	117.81	-5	26.89	0	0.0	2.1	2.3	0.0	0%	0.0	0.0	22.1	173
4/13/20	1018.32	43274	889.10	0.044	360	28.3	0	0.02	707	95	98.6	0	513.5	99.95	-23	11.46	0	0.0	12.7	12.7	0.0	0%	0.0	0.0	25.8	188
4/14/20	1019.08	43952	895.90	0.094	365	20.6	0	0.00	573	63	96.6	0	413.9	61.36	-3	0	0	0.0	8.8	8.9	0.0	0%	0.0	0.0	26.9	251
4/15/20	1019.71	44519	901.40	0.172	310	20.6	0	0.00	481	46	100.3	0	334.5	42.64	-1	0	0	0.0	9.3	10.2	0.0	0%	0.0	0.0	30.0	273
4/16/20	1020.24	44998	906.20	0.144	266	21.2	0	0.00	411	33	97.2	0	281.1	22.88	3	0	0	0.0	12.6	13.9	0.0	0%	0.0	0.0	27.8	246
4/17/20	1020.66	45379	910.20	0.128	216	21.2	191.6	0.00	380	27	95.1	0	257.8	17.21	4	0	0	0.0	12.1	13.5	0.0	0%	0.0	0.0	28.0	237
4/18/20	1021.07	45753	913.90	0.124	212	21.2	192.6	0.00	339	24	93.9	0	220.4	13.6	4	0	0	0.0	12.8	14.4	0.0	0%	0.0	0.0	28.8	237
4/19/20	1021.41	46064	916.40	0.085	180	21.3	195.1	0.00	317	19	90.7	0	207.6	11.33	6	0	0	0.0	3.5	3.9	0.0	0%	0.0	0.0	26.4	236
4/20/20	1021.73	46358	918.80	0.128	172	21.2	192.6	0.00	291	16	91.5	0	183.4	5.49	5	0	0	0.0	10.7	12.2	0.0	0%	0.0	0.0	31.4	250
4/21/20	1022.23	46818	922.30	0.110	256	21.3	196.95	0.00	267	10	90.1	0	166.8	5.76	-2	0	0	0.0	13.1	14.3	0.0	0%	0.0	0.0	32.0	260
4/22/20	1022.27	46855	922.60	0.156	43	21.4	195.19	0.00	245	5	89.4	0	150.7	0.01	-3	0	0	0.0	15.4	17.5	0.0	0%	0.0	0.0	35.8	297
4/23/20	1022.51	47077	924.10	0.188	137	21.3	192.8	0.00	225	2	88.9	0	134.1	0	-3	0	0	0.0	10.9	11.5	0.0	0%	0.0	0.0	36.9	295
4/24/20	1022.71	47262	925.30	0.212	119	21.2	189.4	0.00	201	0	91.6	0	108.9	0.01	1	0	0	0.0	2.3	4.3	0.0	0%	0.0	4.8	38.9	306
4/25/20	1022.93	47465	926.70	0.192	128	21.3	188.6	0.00	189	0	96.6	0	92.7	0.01	2	0	0	0.0	0.7	2.9	0.0	0%	0.0	4.4	38.7	316
4/26/20	1023.11	47632	927.90	0.175	109	21.3	194.4	0.00	188	0	100	0	88.3	0	2	0	0	0.0	0.6	2.5	0.0	0%	0.0	4.5	32.5	262
4/27/20	1023.29	47799	929.20	0.179	110	21.7	200	0.00	182	0	99.1	0	82.6	0	2	0	0	0.0	0.4	2.3	0.0	0%	0.0	3.8	37.9	276
4/28/20	1023.45	47948	930.40	0.021	97	21.5	195.1	0.00	172	0	99.6	0	72.7	0	0	0	0	0.0	0.1	1.9	0.0	0%	0.0	0.8	35.6	273
4/29/20	1023.59	48079	931.40	0.174	91	21.3	194.3	0.00	174	0	99.8	0	74.3	0	0	0	0	0.0	0.0	0.0	0.0	0%	0.0	0.0	37.1	277
4/30/20	1023.71	48190	932.20	0.140	78	18.7	190.7	0.00	176	0	98.7	0	77.4	0.01	0	0	0	0.0	0.0	0.0	0.0	0%	0.0	0.0	35.6	270
TOTAL CFS					6062	1164		3.94	16948	2078	2880	452	11539	907	120	980	0	0.0								
AVERAGE CFS					202	39			565	69	96	15	385	30	4	33	0	0.0								
TOTAL A/F					12003	2304			33557	4114	5702	894	22847	1796	238	1941	0	0.0	158	172	8		0	18.3	895	7184
MONTHLY REVENUE TO DATE (approx.)							\$7	K																		
AVERAGE A/F					400	77			1119	137	190	30	762	60	8	65	0	0.0	5	6	0	0%	0	0.6	30	239
WATER YEAR TOTALS A/F					34,266	13,540		19.13	72,256	23,189	8,787	6,060	22,847	14,570	7,156		5	0.0	1,448	1,095	401		0	18	5,870	50,475
* Input total A/F previous month																										
** Daily averages imported from Ranch Systems																										
*** Fish facility flows include Denil fishladder, aux pipe and smolt bypass pipe																										
† Includes Ponds A, C, E, and I overflows, temporary storage in the desilting basin and Pond B, JLB diversions, losses between meters. Negatives mean prior storage from pond B or desilting basin is discharging to other metered sources.																										

Staff Report

To: Engineering and Operations Committee

Through: Mauricio E. Guardado, Jr., General Manager
Robert C. Siemak, Assistant General Manager

From: Clayton W. Strahan, Chief Park Ranger

Date: April 27, 2020 (May 05, 2020 Committee Meeting)

Agenda Item: 5C Monthly Park and Recreation Department Report
Information Item

Staff Recommendation:

Committee will receive and review the Park and Recreation Department's report for the month of April 2020.

Discussion:

The month of April 2020 has been the first full month that Lake Piru Recreation Area has been closed due to the COVID-19 pandemic. The park closure provided Park Rangers, with the assistance from O&M Santa Felicia Dam staff and Parks Management Company staff, the opportunity to focus efforts toward maintenance and preparing the park for reopening during the summer season. Most of the maintenance efforts have consisted of herbicide spraying, and brush clearing to meet the Ventura County brush clearance standards by June 1st, 2020, along with a few miscellaneous deferred maintenance tasks such as minor repairs to dock cleats and painting. Rangers have also continued to reset buoys throughout the lake and move the marina as lake levels continue to rise throughout the month of April. Lake Piru water levels raised approximately ten vertical feet throughout the month due to early April rain storms, and this increased water will help to provide better recreational opportunities to boaters as soon as the recreation area is able to be safely reopened. It should be noted that the lake is now greater than it was prior to the start of the March release.. Due to the park closure, Park Rangers have had to focus some efforts toward enforcing the park closure order. Rangers have made an abundance of contacts with individuals breaking this order, while still maintaining social distancing practices and wearing PPE..

Tasks and Activities

- April 1-30: Park Rangers have spent several hours a day throughout the month of April to patrol Lake Piru Recreation Area to ensure that the public is obeying the District's park closure order. This consists of daily patrols along the water via patrol boat to contact fishermen from the shoreline and notify them of the park closure orders. In general, the public has been very understanding of the order and were willing to comply. No citations were issued for people disobeying the park closure. All contacts made with the public were done using proper social distancing protocols and wearing the proper PPE when necessary.
 - April 1-27: Park Rangers with the assistance of Santa Felicia Dam O&M staff made ongoing movement to the Lake Piru marina due to the continuous water level changes
-

Agenda Item: 5C Monthly Parks and Recreation Department Report
Information Item

caused by releases from Pyramid Lake and influent rain runoff into the lake. The marina movements also consisted of moving the anchors that support the marina six times to help keep up with the increased water level. As previously noted, each one of these six occurrences require a crew of four to five parties, several boats and is typically a day event. Lake Piru raised approximately ten vertical feet throughout the month of April.

- April 6-22: Park Rangers continued with ongoing herbicide spraying efforts throughout the recreation area, including around Olive Grove Campground, Lake Piru Water Treatment Plant, roadways, and drainages. The herbicide spraying is vital in the effort to maintain fire clearances around roads to meet the Ventura County Fire Departments June 1st, 2020 fire clearance and to ensure that roadway drainages are free and clear of potential hazards that might cause a drain to backup.
- April 13-22: Park Rangers focused their efforts toward clearing brush along road shoulders and around critical structures throughout the recreation area. Rangers utilized chainsaws, weed eaters, and hedgers to in conjunction with herbicide spraying to maintain Ventura County Fire Department fire clearance standards, and to maintain presentable landscaping for the public upon the recreation area's reopening in the coming weeks or months.
- April 24: Park Rangers pressure washed the restrooms at the Juan Fernandez Boat Launching Facility in preparation for the Parks Management Company to paint the structures prior to the launching facilities reopening.
- April 27-May 1: Parks Management Company staff began repainting the Juan Fernandez restroom facilities. It is anticipated that this will be a rather quick project since the structures are prefabricated concrete facilities.

Training/Meetings/Events

There were no in person meetings, trainings, or events to report during the month of April. However, staff did participate in following online teams, zoom and or web-ex meetings during the month of April.

April 2,9,16, & 23: Staff held weekly briefings with PMC to discuss the District's updates associated with the COVID-19 pandemic, the protocols being instituted by the District and efforts to secure the park during the closure. These meetings allowed the District to share new development and policies with the onsite concession service and to address any questions or concerns. In addition, the District was able to resolve some long outstanding issues associated with PMC's financial reporting as a result of these meetings.

- April 3, 10, 17, 24: Chief Ranger Strahan held a weekly staff meeting via Teams to discuss priority projects, maintenance tasks and scheduling work shifts associated with the public health orders. In addition,daily briefings were held with staff to discuss issues in greater detail and to re-prioritize activities.
 - April 9 & 23: On these two dates, staff participated in teams meeting hosted by Chief Strahan to review inter-departmental activities associated with Lake Piru.
-

Agenda Item: 5C Monthly Parks and Recreation Department Report
Information Item

2020 Revenue Recap & Comparison	
2019 Calendar Year (Jan.-Mar.)	\$ 145,468.85
2020 Calendar Year (Jan.-Mar.)	\$ 68,461.30
Total Revenue Increase/Decrease from Prior Year	-\$77,007.55

Revenue has been impacted by the park closure order due to COVID-19

2020 Total Visitation Figures				
Month	# Nights/Sites	# People	# Vehicles	# Vessels
January	127	739	339	26
February	197	1253	556	130
March	117	893	387	68
April				
May				
June				
July				
August				
September				
October				
November				
December				
TOTAL	441	2885	1282	224

**** Revenue figures for the month of April will not be provided to the District until May 20. Both visitation and financial reporting are typically 30 days in arrears. Staff will report this data at the time of the next regularly scheduled board meeting in June. ****

Incidents/Arrests/Medicals

There were no incidents, arrests, or medicals during the month of April. However, as noted above there was a significant number of contacts related to the public violating the park closure order. Ultimately, no citations or arrests were made, and the violators eventually complied.

Citations/Enforcement Summary

There were zero (0) citations issued during the month of April

Grants

There is nothing new to report currently. However, staff continues to monitor potential grant opportunities and will pursue all available opportunities that may arise.



Staff Report

To: Engineering and Operations Committee

Through: Mauricio E. Guardado, Jr., General Manager
Anthony Emmert, Assistant General Manager

From: Staff, Environmental Planning and Conservation Department

Date: April 28, 2020 (May 05, 2020 Committee Meeting)

Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item

Staff Recommendation:

Committee will receive the report on activities conducted in April 2020 by the Environmental Planning and Conservation Department (EPCD).

Discussion:

COVID-19 note: Following government orders and District guidance, EPCD staff is supporting all essential activities in-person, when doing so does not present an inappropriate safety risk to staff or others in the community. Non-essential monitoring and management activities are temporarily on hold. All other activities are being conducted remotely.

Essential Activities

Activities in support of District operational and water resource management goals related to Freeman flows and fish passage operations and Santa Felicia Dam water releases (including mandated monitoring and management activities associated with protected species).

Non-essential Activities

All other monitoring and management activities (e.g., quagga mussel, middle Piru Creek resident *O. mykiss*, dissolved oxygen, aquatic exotic management, noxious weed management).

1. **Santa Felicia Project Operations and Federal Energy Regulatory Commission (FERC) License Support**
 - a. Water Release Plan

Under the Water Release Plan and FERC license for the Santa Felicia Project, United is required to make certain water releases from Santa Felicia Dam for steelhead habitat and migration, when

Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item

specific triggers are met. Triggers for enhanced habitat water releases are based on cumulative rainfall within the water year (beginning October 1 each year) as recorded at Ventura County Watershed Protection District's rainfall station No. 160, located at Piru (see table below). United evaluates whether the trigger is met on the first day of each month, between January and June. The table below presents trigger criteria for each month. The trigger for enhanced habitat water release has been met for the month of May, and the minimum required water release for the month is 10 cubic feet per second (cfs). The trigger value for enhanced habitat water release for June has also been met, and therefore, the minimum required water release will remain at 9 cfs between June 1 and October 1 of 2020.

2020 Habitat Water Release Trigger Date (1 st of every month)	Trigger Criteria (total cumulative precipitation on trigger date)	Minimum Required Water Release (if trigger is met)	2019-2020 Measured Cumulative Precipitation	Actual Minimum Required Habitat Water Release for Month
January	4.80 inches	15 cfs	8.65 inches	15 cfs
February	8.10 inches	20 cfs	9.38 inches	20 cfs
March	12.00 inches	20 cfs	9.51 inches	7 cfs
April	14.90 inches	20 cfs	15.19 inches	20 cfs
May	16.30 inches	10 cfs	19.13 inches	10 cfs
June	17.50 inches	9 cfs*	TBD	9 cfs

* If triggered, the minimum required water release will remain at 9 cfs through October 1, at which time, the minimum required water release will be 7 cfs through January 1 of next calendar year.

A migration water release of 200 cfs was triggered on April 8, 2020. The cessation trigger criteria was met at midnight on April 9, 2020, and Operations & Maintenance Department staff initiated ramp down by 12:15 am on April 10, 2020. However, another migration water release was triggered the morning of April 10, 2020. The cessation trigger criteria was met at midnight on April 10, 2020, and Operations & Maintenance Department staff initiated ramp down by 12:15 am on April 11, 2020.

b. Fish Passage

United is in the process of conducting a pre-implementation study intended to inform fish passage decisions. Spring monitoring activities were scheduled to be initiated in late March, however, this activity was identified as non-essential and is temporarily suspended due to COVID-19 challenges. On April 15, 2020, United filed an update informing FERC that non-essential monitoring efforts associated with the Fish Passage Feasibility Assessment Study Plan are temporarily suspended.

Earlier in the year, on February 23, 2020, United filed a letter with FERC in response to an information request received from FERC on December 10, 2019. In the February 23, 2020 letter, United outlined several measures for monitoring upstream migrating adult steelhead in Piru Creek and the Santa Clara River (below the Santa Felicia Dam). Those measures included snorkel

Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item

surveys. United stated that routine snorkel surveys would be conducted on United's property below Santa Felicia Dam once a month from January through May and once in the fall (September through November) of each year. Additionally, in the event an upstream migrating adult steelhead is detected transiting the fish ladder at the Freeman Diversion, United would conduct snorkel surveys twice a week for four weeks following that detection (triggered surveys). In response to COVID-19 and State and County "Stay Well at Home," orders issued in mid-March, United made modifications to the snorkel survey protocol (e.g., suspending routine surveys, incorporating social distancing), memorialized in the letter to FERC dated April 15, 2020.

In response to the steelhead detected at the Freeman Diversion, EPCD staff conducted several snorkel surveys of the previously established reach of lower Piru Creek. Elevated turbidity and the two triggered migration water releases provided impediments to conducting safe and effective snorkel surveys during April. Surveys were conducted, as possible, on April 3, 14, and 16. Water clarity was prohibitive (≤ 1.5 feet) on April 3, and less than desirable (2-3 feet) on April 14 and 16. No *O. mykiss* were observed during these snorkel surveys. Common carp and a single largemouth bass were the only fish species observed.

c. Arroyo Toad Protection Plan and Herpetological Monitoring Plan

On April 22, 2020, United filed an update informing FERC that aquatic exotic species eradication management activities described in the "Revised Lower Piru Creek Herpetological Monitoring Plan" (May 2012) are temporarily suspended due to COVID-19 issues.

d. Vegetation and Noxious Weed Management Plan

Consistent with other plans under the license, on April 22, 2020, United filed an update notifying FERC that monitoring and control activities associated with tamarisk infestations at the Santa Felicia Project described in the "Vegetation and Noxious Weed Management Plan" (September 2010) are temporarily suspended.

e. Habitat Improvement Plan

On June 17, 2019, following a ten-year long contentious consultation with the National Marine Fisheries Service (NMFS), United submitted the sixth iteration of a Habitat Improvement Plan (HIP) to FERC. An earlier version of the HIP had been submitted to the National Marine Fisheries Service (NMFS) on March 15, 2019, but had not received its agreement. The June 17, 2019 submittal was transmitted with a letter that detailed a pattern of inappropriate consultation practices exercised by NMFS Southern California Branch, and included extensive responses to NMFS's prior comments. In the letter, United asserted that the habitat improvement measures contained in the HIP were developed following the process outlined in the Reasonable and Prudent Alternatives (RPAs) of NMFS's biological opinion (BO), and are sufficient and appropriate to satisfy the requirements of the FERC license and the associated BO. In the June 17, 2019 submittal, United requested that FERC review the HIP in context of the requirements of the RPA and license, and approve the HIP.

**Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item**

On April 27, 2020, FERC issued an order approving and modifying the HIP. In the order, FERC states that “[t]ypically, the Commission does not take action on license requirements that contain a prerequisite of obtaining resource agency approval prior to implementation without a licensee having first obtained such approval. This case however, is highly unusual. As stated in the licensee’s filing, considerable effort and resources have been utilized to develop a mutually agreeable Plan, including a total of six drafts, a major change in scope, and a major investment in capital resources to develop a mutually agreeable Plan. Despite these efforts, the licensee considers its consultation efforts with NMFS to have been exhausted.”

In brief, FERC reviewed the HIP and determined that it satisfies requirements of the RPAs in NMFS’s BO, and the FERC license. The order includes directives for 1) modifying reporting measures of the HIP; and 2) reserving authority regarding modifications to license required flows after receipt and analyses of monitoring reports.

f. Lake Piru Recreation Area Maintenance

In support of the Recreation Department’s request to begin development of the Juan Fernandez swim beach area, EPCD staff conducted pre-project breeding/nesting bird surveys of the project site in accordance with the Lake and Streambed Alteration Agreement for Routine Maintenance at the Lake Piru Recreation Area, issued by the California Department of Fish and Wildlife (CDFW). Surveys were conducted on April 22 and 23, 2020. A report detailing the survey results was delivered to CDFW on April 24, 2020. Surveyors observed several species of birds exhibiting nesting behavior (nest building) near the project site. Additionally, surveyors observed a state and federally endangered least Bell’s vireo in the small canyon adjacent to the project site. This represents a new locality for least Bell’s vireo, which has never been observed at this close of proximity to the reservoir. EPCD will continue to monitor the area for least Bell’s vireo and determine if/what additional measures (i.e., pursuit of ESA and CESA incidental take permits) may be warranted.

g. Santa Felicia Dam Safety Improvement Project

EPCD is providing support to the Engineering Department on environmental elements associated with the Santa Felicia Dam Safety Improvement Project. During the last few months, these efforts have included reviewing environmental assessment documents for the National Environmental Protection Act (NEPA) evaluation, and preparing a notification package requesting a Lake and Stream Alteration Agreement for the geotechnical studies scheduled to occur in fall of 2020. On April 15, 2020, EPCD submitted the notification package for the Lake and Streambed Alteration Agreement to CDFW for geotechnical study activities.

2. Freeman Fish Ladder Operations

On March 21, 2020, the surveillance system at the Freeman Diversion documented a fish transiting the Denil fish ladder. This video footage was identified on April 2, 2020. Video footage analysis revealed that the fish was not a hatchery stray (adipose fin clearly visible), was approximately 2 feet

Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item

in length and appeared to be in good condition. The fish passed through the fish ladder system at 5:30 pm when the Santa Clara River flows downstream of the facility were approximately 200 cfs with suspended sediment concentrations of 50 mg/L, approximately four days after a hydrograph peak. These conditions support assumptions presented in the MSHCP in terms of fish movement in the Santa Clara River following storms.

Throughout the month of April, EPCD staff continued to operate the Freeman Diversion fish ladder and associated monitoring systems (video and DIDSON), including providing support for Freeman headworks operations. On April 6, 2020, Operations and Maintenance conducted a planned sediment sluicing event strategized to coincide with the peak of the hydrograph from a recent storm event. The sluicing operation was conducted successfully, without interrupting fish ladder operations and during a period when river flows and suspended sediment concentrations were elevated (>5,000 cfs and >2,500 mg/L, respectively, for the entire duration).

On the same day, prior to initiating the sluicing activity by opening the roller gate, an oil sheen was discovered in the Santa Clara River. The sheen was approximately 25 feet across and accompanied by a strong crude oil odor. Management was notified immediately upon discovery of the oil sheen and diversion operations were suspended. Subsequently, the oil sheen was reported to the County of Ventura, and the CA Department of Fish and Wildlife's Office of Oil Spill Prevention and Response (OSPR). EPCD staff was dispatched into the field to conduct reconnaissance upstream in the hopes of identifying the source of the oil sheen. Representatives from OSPR and the CA Department of Conservation Geologic Energy Management Division (CalGEM; formerly Division of Oil, Gas, and Geothermal Resources [DOGGR]), and the County of Ventura, Environmental Health Division arrived at the Freeman Diversion at approximately 10:00 am. EPCD staff recounted the mornings observations and the latest results from the field reconnaissance to agency representatives. At the time, flows in the Santa Clara River at the Freeman Diversion had risen significantly (~5,000 cfs) compared to the morning condition when the sheen was first observed (~1,500 cfs), and the sheen and odor was greatly diminished. OSPR and CalGEM representatives departed the Freeman Diversion at approximately 11:00 to conduct their own reconnaissance of the watershed. By the afternoon, OSPR and CalGEM representatives could not find a definitive source for the oil sheen and determined it was likely the result of natural seeps from Wheeler Canyon. EPCD's field reconnaissance observations do not support the agencies' conclusion; Wheeler Canyon is a tributary to the Santa Clara River, downstream of the 12th Street Bridge in Santa Paula. Our observations indicated that oil was present in the river at the 12th Street Bridge and evidence of oil was observed as far upstream as the Torrey Road Bridge. Additional reconnaissance was initiated at first light on the morning of April 7, 2020, to ensure that the oil substance was no longer present in the river prior to resuming diversions.

On April 20, 2020, woody debris (logs and Arundo) had accumulated on the trash rack at the Freeman Diversion. The chain system proved ineffective at removing this accumulation. Operations and Maintenance determined that opening the roller gate was necessary to clear the debris. EPCD and hydrology staff assisted with the operation. Prior to conducting the operation, EPCD and hydrology staff reviewed Ranch System logs to evaluate the current conditions relative to roller gate operations conducted on March 16 and 23, 2020. Staff determined it was likely that opening the roller gate for

Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item

a short duration would not interrupt fish ladder operations. The roller gate was opened incrementally to 15%, 25%, 35%, and 40%. Staff observed water level responses to each increment in the canal bay and forebay. EPCD staff were equipped and ready for fish rescue in the event of an unexpected dewatering. The debris was cleared successfully without interrupting operations of the fish ladder.

3. Multiple Species Habitat Conservation Plan (MSHCP)

United staff and United's consultants received comments from the US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) on chapters 2, 3, 4, and 5 on April 1, 2020. The comments were incorporated into the chapter text, forming the basis for the live-edit meeting #5 which took place on April 8 and 9, 2020. Comments from CDFW were received after the deadline and were not incorporated directly into the live-edit materials; however, their comments were addressed during meeting discussions. Representatives from NMFS, USFWS, CDFW, United, and consultants Stillwater Sciences, ICF, and Rincon participated in the live-edit meeting, which due to the state of emergency surrounding the COVID-19 pandemic, was conducted in a virtual setting via WebEx. The virtual format meeting proved to be successful and efficient, providing a cost savings to United while accomplishing the key functions of these meetings and maintaining close coordination with the resource agencies on MSHCP development.

Chapters 1, 6, 7, 8, 9, 10, and technical appendices continue to undergo revision and update. Subsequent live-edit meetings are currently in the scheduling phase and the next live-edit meeting is tentatively planned for May 19, 20, or 21. Materials for live-edit meeting #6 include chapter 6, which is tentatively planned for submittal to the resource agencies on April 28, 2020. The MSHCP team is continuing to prepare for subsequent live-edit meetings to complete the 4th administrative draft prior to the June 30, 2020 court ordered deadline for all permitting documents to be complete. Additionally, in accordance with the court order, United staff is currently compiling required information and correspondence for submittal in the sixth compliance report, which is due to the Court on May 5, 2020.

United staff has remained engaged with staff from CDFW regarding the jurisdictional waters permitting and incidental take permitting in compliance with California Fish and Game Code. On April 7, 2020, United engineering and hydrology staff provided a presentation and subsequent discussion with the CDFW engineering and environmental team focusing on the fish passage project design history and process. NMFS also participated in this presentation and discussion. The notification package for a Streambed Alteration Agreement (SAA) with CDFW for the construction of the Freeman Rehabilitation Project is currently being prepared by United's consultant and the incidental take permit (ITP) process is underway internally, to be completed by EPCD staff. The MSHCP team will continue to coordinate with CDFW as needed during the SAA and ITP application process, which will take place concurrently with the MSHCP live-edit meeting process.

United's consultant continues to prepare the Draft Environmental Impact Report (EIR) required under the California Environmental Quality Act (CEQA) for the Freeman Rehabilitation and Freeman Expansion Projects. EIR sections drafted to date have undergone internal review by the

Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item

MSHCP team, including United staff. The completed Draft EIR sections have been shared with the NEPA consultant for the concurrent NEPA process, which is discussed further below.

In issuing federal Incidental Take Permits (ITPs) and permitting under the Clean Water Act, NMFS, USFWS, and the US Army Corps of Engineers (ACOE) will be performing a NEPA process and developing either an Environmental Impact Statement or Environmental Assessment of their decision to issue the permits. A kickoff meeting for the process was held on October 8, 2019. Following United's January 16, 2020 letter announcing selection of a fish passage project, United delivered another letter to NMFS on January 24, 2020, copying the cooperating agencies (USFWS and ACOE), requesting that NMFS finalize a Statement of Responsibilities and formally initiate scoping through issuing the Notice of Intent. The updated master schedule for the Freeman Rehabilitation Project was distributed to the resource agencies and the NEPA consultant on February 6, 2020.

4. Quagga Mussel Management

a. Quagga Mussel Monitoring and Control Plan

On March 30, 2020, United submitted an annual report to CDFW outlining activities conducted during 2019 in accordance with the Quagga Mussel Monitoring Control Plan (Plan). On April 29, 2020, United and CDFW participated in an annual consultation meeting to discuss activities conducted throughout the reporting period.

b. Monitoring

Quagga mussel monitoring activities have been considered non-essential and are temporarily suspended due to COVID-19 challenges. Notifications have gone out to property owners (TNC and Rancho Temescal) to inform them United has halted surveys until restrictions for non-essential work have been lifted.

c. Control

On February 26, 2019, United submitted the permit application package for a special local need permit to the California Department of Pesticide Regulation (CDPR), as the first step in permitting extreme population control of quagga mussels in Lake Piru and lower Piru Creek using EarthTecQZ. Since that time, there has been open communication between CDPR and United including additional requests for information and review status updates from CDPR. On December 20, 2019, United received CDPR's EcoTox report on the permit application giving United preliminary approval of the permit with minor revisions which United has approved. United was last informed on February 20, 2020, that CDPR surface water staff is currently reviewing the permit for issuance.

**Agenda Item: 5D Monthly Environmental Planning and Conservation Department Report
Information Item**

5. Miscellaneous

On April 6, 2020, EPCD submitted a grant proposal for the National Fish and Wildlife Foundation, Southern California Forests and Watersheds - Wildfires Restoration Program. This grant funding is being made available to support the recovery of lands and watersheds degraded from the influences of past wildfire events in Southern California. For the grant proposal, United has partnered with a local biological company, Griffith Wildlife Biology (GWB). Should the grant be awarded, United would serve as the fiscal agent to accept the grant funds to support GWB's work in the watershed. GWB's monitoring work is in line with United's scientific goals and objectives.

On April 23, 2020, EPCD staff attended an interdepartmental meeting with O&M and Hydrology staff to discuss the 2020 winter seasons operations at the Freeman Diversion. The objective of the meeting was to conduct a debriefing/self-evaluation of operations this season and identify measures to adaptively manage and improve upon the operations and protocols.