I hereby certify that the following Agenda was posted at least 72 hours prior to the time of the Board Meeting so noticed below, at the usual agenda posting location of the South Orange County Wastewater Authority [SOCWA] and at www.socwa.com.

Betty Burnett, General Manager
SOCWA and the Board of Directors thereof

AGENDA

MEETING OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
BOARD OF DIRECTORS

Thursday, November 2, 2017
8:30 a.m.

THE BOARD OF DIRECTORS MEETING ROOM IS LOCATED AT 34156 DEL OBISPO STREET, DANA POINT, CA. THE ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS (I.E. ACCESS TO AN AMPLIFIED SOUND SYSTEM, ETC.), PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY'S OFFICE AT 949-234-5421 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON WRITTEN REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING.

AGENDA ATTACHMENTS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY BOARD OF DIRECTORS IN CONNECTION WITH A MATTER SUBJECT TO DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE BOARD OF DIRECTORS ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY OFFICE, 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE"). IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE BOARD OF DIRECTORS LESS THAN SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE BOARD OF DIRECTORS, EXCEPT THAT, IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE BOARD OF DIRECTORS MEETING ROOM.

1. CALL MEETING TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ORAL COMMUNICATIONS

   A. Members of the public may address the Board regarding an item on the agenda or may reserve this opportunity during the meeting at the time item is discussed by the Board. There will be a three-minute limit for public comments.

4. CONSENT CALENDAR

   A. Minutes of Board of Directors Meeting October 5, 2017 1

      ACTION: The Board will be requested to approve subject Minutes.

   B. Minutes of Board of Directors Meeting September 7, 2017 48

      ACTION: The Board will be requested to approve subject Minutes.

   C. Minutes – Executive Committee March 20, 2017 61

ACTION: The Board will be requested to approve subject Minutes.

D. Minutes – Engineering Committee June 8, 2017 63

ACTION: The Board will be requested to receive and file minutes.

E. Minutes – Engineering Committee May 11, 2017 69

ACTION: The Board will be requested to receive and file minutes.

F. Operations Reports

ACTION: The Board will be requested to receive and file subject reports.

a) September 2017 Operational Report 74
b) Ocean Outfall Discharges by Agency.....83
c) Beach/Ocean Monitoring Report.....93
d) Recycled Water Report.....114
e) Pretreatment Report 118

G. Capital Improvement Program

ACTION: The Board will be requested to receive and file subject reports.

Status Report 122

H. Project Committee No. 15

ACTION: The Board will be requested to receive and file subject minutes.

a) May 12, 2017.....139
b) June 1, 2017.....144
c) June 15, 2017 146
d) June 29, 2017.....148
e) July 13, 2017 150
f) August 10, 2017.....152
g) August 31, 2017.....154
h) September 14, 2017 156
i) September 27, 2017 159

I. Project Committee No. 17

Change Order – Olsson Construction.....161

ACTION: The Project Committee No. 17 Board will be requested to approve Change Orders 1, 2, and 3 to the construction contract with Olsson Construction for the Coastal Treatment Plant Miscellaneous Improvements 2017 Project.

J. Change Order – Pacific Hydrotech Construction 165

ACTION: The Project Committee No. 17 Board will be requested to approve Change Order 14 to the construction contract with Pacific Hydrotech for the Regional Treatment Plant Cogeneration and Switchgear Upgrade Project.

5. ENGINEERING MATTERS

A. Award of Engineering Services [PC15] 168

ACTION: The Board will be requested to approve the award of engineering services contract to Hazen and Sawyer at a fee of $1,195,286.

6. GENERAL MANAGER'S REPORT

A. Determining Future C&P Process - Staff presentation

ACTION: Board questions and comments.

B. General Manager's Status Report……179

ACTION: The Board will review the General Manager's Status Report:

- Board Questions
- Receive and file

7. OTHER MATTERS

A. Open discussion or items received too late to be agendized.

NOTE: Determine the need to take action on the following item(s) introduced by the General Manager which arose subsequent to the agenda being posted. [Adoption of this action requires a two-thirds vote of the Board, or if less than two thirds are present a unanimous vote.]

8. ADJOURNMENT

NOTE - THE NEXT REGULAR SOCWA BOARD MEETING WILL BE HELD AT 8:30 A.M. ON DECEMBER 14, 2017

MINUTES OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Board of Directors

October 5, 2017

The Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Board of Directors was held on Thursday, October 5, 2017, at 8:30 a.m. at the Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of the Board of Directors were present:

MIKE DUNBAR, Emerald Bay Service District	Director
SCOTT GOLDMAN, El Toro Water District	Director
RAY MILLER, City of San Juan Capistrano	Director
MATT COLLINGS, Moulton Niguel Water District	Alternate Director
PAUL COOK, Irvine Ranch Water District	Alternate Director [arrival 8:35 p.m.]
TONI ISEMAN, City of Laguna Beach	Vice Chairman
DAN FERONS, Santa Margarita Water District	Chairman
ANDY BRUNHART, South Coast Water District	Director
STEPHAN DOPUDJA, Trabuco Canyon Water District	Director
DAVE REBENSDORF, City of San Clemente	Director

Staff present:

BETTY BURNETT	General Manager/Secretary
TERI NOSON	Executive Assistant/Clerk of the Board
BRAD NEUFELD	Varner & Brandt [arrival 8:33 a.m.]
BRIAN PECK	Director of Engineering
AMBER BAYLOR	Environmental Compliance Administrator
JIM BURROR	Director of Operations
MARY CAREY	Finance Controller [exit 9:55 a.m.]
DINA ASH	Human Resource Analyst
JEANETTE CONTINOLA	Procurements/Contracts Administrator
DANITA HIRSH	Executive Assistant
NADIYA SZE	Senior Accountant
NAYDN KIM	Accountant

Also present:

DONALD FROELICH	Moulton Niguel Water District
DENNIS CAFFERTY	El Toro Water District
RICHARD GARDNER	Public
DENNIS ERDMAN	South Coast Water District
DAVID SHISSLER	City of Laguna Beach

Chairman Ferons called the meeting to order at 8:30 a.m. and welcomed everyone present. Director Goldman led the Pledge of Allegiance to the Flag of the United States of America.

Oral Comments

Chairman Ferons asked if members of the public desired to address the Board, or desired to reserve addressing the Board during the meeting regarding any item on the Agenda.

Mr. Erdman provided comments regarding the September 2017 WEFTEC seminar in Chicago and the benefits WEFTEC provides to member agencies.

ACTION TAKEN

No action required.

Consent Calendar

Chairman Ferons referenced the items under the Consent Calendar and asked if there were any questions or comments.

Director Goldman requested that Item 4E, Project Committee No. 5, Dilution Study Extension Request be pulled from the Consent Calendar.

Director Collings requested that Item 4F, Project Committee No. 15, Change Order – Dudek Design and Environmental Services Contract be pulled from the Consent Calendar.

ACTION TAKEN

Motion was made by Director Brunhart and seconded by Director Miller to approve the remaining items under the consent calendar.

Motion carried:	Aye 10; Nay 0; Abstain 0; Absent 0	
	Director Dunbar	Aye
	Director Goldman	Aye
	Director Miller	Aye
	Director Collings	Aye
	Director Cook	Aye
	Vice Chairman Iseman	Aye
	Chairman Ferons	Aye
	Director Brunhart	Aye
	Director Dopudja	Aye
	Director Rebensdorf	Aye

Item 4E - Project Committee No. 5

Dilution Study Extension Request

Director Goldman requested clarification regarding the Dilution Study Extension Request as an Agenda Item for Project Committee No. 5. Ms. Baylor confirmed the Dilution Study Extension Request was a Project Committee No. 5 Agenda Item.

ACTION TAKEN

Motion was made by Director Collings and seconded by Director Brunhart to approve 4E, Project Committee No. 5, Dilution Study Extension Request.

Motion carried:	Aye 5; Nay 0; Abstain 0; Absent 0	
	Director Miller	Aye
	Director Collings	Aye
	Chairman Ferons	Aye
	Director Brunhart	Aye
	Director Rebensdorf	Aye

Item 4F- Project Committee No. 15

Change Order – Dudek Design and Environmental Services Contract

Director Collings reported that MNWD did not approve the Capital Budget for the Coastal Treatment Plant and will be registering a no vote for this project.

Director Brunhart noted that most of the items were permit related.

ACTION TAKEN

Motion was made by Director Dunbar and seconded by Director Brunhart to approve 4F, Project Committee No. 15, Change Order – Dudek Design and Environmental Services Contract

Motion carried:	Aye 3; Nay 1; Abstain 0; Absent 0	
	Director Dunbar	Aye
	Director Collings	Nay
	Vice Chairman Iseman	Aye
	Director Brunhart	Aye

Financial Matters

FY 2015-16 Audited Financial Statements Supplemental Schedules

ACTION TAKEN

There being no objection, Chairman Ferons directed the FY 2015-16 Audited Financial Statements Supplemental Schedules to return to Finance Committee for Board recommendation and resubmitted to the Board of Directors for consideration.

General Budget: Policy on Allocation of Costs

Director Dopudja presented the PowerPoint presentation *TCWD's 2017-18 SOCWA Budget Participation Approach, 1st Quarter Check-in*, which is herewith attached to these minutes. An open discussion ensued.

Chairman Ferons reported that the Finance Committee was in support of TCWD's request to continue discussions for another three (3) months and asked if there were any comments from the public regarding this item.

Mr. Gardner provided comments regarding equitable distribution of costs between the member agencies and sharing of benefits.

Mr. Adjarian inquired as to the process of working with member agencies and suggested a subcommittee working within the confines of the Finance Committee with staff and/or Board members. Director Dopudja concurred with Mr. Adjarian's suggestion stating both staff and Board members would be appropriate.

Director Goldman stated that continued discussion was important. Director Rebensdorf supported a clear and equitable analysis of the General Fund and concurred with Director Dopudja regarding the changes in the General Fund allocations were hastily presented. An open discussion ensued.

Director Dopudja clarified the importance that TCWD lead this effort in working with SOCWA Board members and SOCWA staff; and, requested support of member agency staff to be available to meet and discuss how this effects their agency and provide cohesion over the next three (3) month process.

ACTION TAKEN

Motion was made by Chairman Ferons and seconded by Director Dopudja to direct the Finance Committee to review the item over the next 3 months and report regularly back to the Board.

Motion carried:	Aye 10; Nay 0; Abstain 0; Absent 0	
	Director Dunbar	Aye
	Director Goldman	Aye
	Director Miller	Aye
	Director Collings	Aye
	Director Cook	Aye
	Vice Chairman Iseman	Aye
	Chairman Ferons	Aye
	Director Brunhart	Aye
	Director Dopudja	Aye
	Director Rebensdorf	Aye

2005 Capitalization Policy Update

Director Collings noted for clarity that staff will return to the Board of Directors with any future changes to the 2005 Capitalization Policy. Ms. Burnett duly noted and concurred with Director Collings clarification.

ACTION TAKEN

Motion was made by Director Cook and seconded by Director Brunhart to approve two (2) corrections to Exhibit A of the 2005 Capitalization Policy, as follows: Section 6. Office Equipment: revise "$3000" to "*$5000"*, and change "Director of Finance" to "*General Manager or Designee"*.

Motion carried:	Aye 10; Nay 0; Abstain 0; Absent 0	
	Director Dunbar	Aye
	Director Goldman	Aye
	Director Miller	Aye
	Director Collings	Aye
	Director Cook	Aye
	Vice Chairman Iseman	Aye
	Chairman Ferons	Aye
	Director Brunhart	Aye
	Director Dopudja	Aye
	Director Rebensdorf	Aye

Implementation of Additional Retiree Health Benefits Tier

ACTION TAKEN

Motion was made by Director Brunhart and seconded by Director Cook to approve authorization to be given to the General Manager to execute the following: Administrative Agreement, Resolution for Adoption and Statement of Adoption, VantageCare Retirement Health Savings (RHS) Adoption Agreement, Declaration of Trust, Retiree Welfare Benefits Plan; and, approve a budget adjustment to the FY 2017-18 SOCWA Administration Budget to add $2500 for the funding of the ADP Services Attendant to the Tier I reimbursements.

Motion carried:	Aye 10; Nay 0; Abstain 0; Absent 0

Director Dunbar	Aye
Director Goldman	Aye
Director Miller	Aye
Director Collings	Aye
Director Cook	Aye
Vice Chairman Iseman	Aye
Chairman Ferons	Aye
Director Brunhart	Aye
Director Dopudja	Aye
Director Rebensdorf	Aye

Engineering Matters

Award of Contract – JBL Treatment Plant Improvements Package "B" [PC2]

ACTION TAKEN

Motion was made by Director Brunhart and seconded by Director Collings to approve the award of the engineering services contract to Carollo at a fee of $1,597,876.

Motion carried:	Aye 3; Nay 1; Abstain 0; Absent 0	
	Director Miller	Aye
	Director Collings	Aye
	Chairman Ferons	Nay
	Director Brunhart	Aye

General Manager's Report

Mr. Burror provided the PowerPoint presentation *SOCWA Maintenance Program Overview*, which is herewith attached to these minutes.

ACTION TAKEN

There being no objection, the Chairman directed the General Manager's report received and filed.

Other Matters

Chairman Ferons asked if there were any more questions or comments from the Board. There were none.

Adjournment

There being no further business, Chairman Ferons adjourned the meeting at 10:25 a.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Regular Meeting of the South Orange County Wastewater Authority Board of Directors of October 5, 2017, and approved by the Board of Directors of the South Orange County Wastewater Authority.

_____

Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

SUMMARY OF BOARD ACTIONS
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

October 5, 2017

DESCRIPTION	MOTION MADE BY	ACTION
Consent Calendar	Brunhart	Approved
General Budget: Policy on Allocation of Costs	Ferons	Approved
2005 Capitalization Policy Update	Cook	Approved
Implementation of Additional Retiree Health Benefits Tier	Brunhart	Approved
Award of Contract JBL Treatment Plant Improvements Package “B” [PC2]	Brunhart	Approved

TCWD's 2017/18 SOCWA Budget Participation Approach

1st Quarter Check-In

Summary

- At the June 14th Board Meeting SOCWA adopted a budget that increased TCWD's participation by 138%
- TCWD opposed the budget on the grounds it was hastily established without sufficient cost allocation/justification
- TCWD is committed to our participation in SOCWA, but the General Fund budget must be equitable. Equal Cost/Equal Benefit
- SOCWA committed to revisit in Q1

Concept

- SOCWA should provide the efficiency of a JPA
- Any agency's participation in SOCWA should provide cost benefits
- There are three main areas of SOCWA Services/Infrastructure
  - Permitting, Treatment and Outfalls
- A fair approach could create "bookends" for participation

SOCWA Services/Infrastructure

Permitting
Treatment
Outfalls

- Permitting is the smallest and most discrete service performed
- The cost for permitting support is undefined in the General Fund allocations
- The total cost should be comparable to any agency performing the same permitting task
- TCWD is unique in our level of participation.

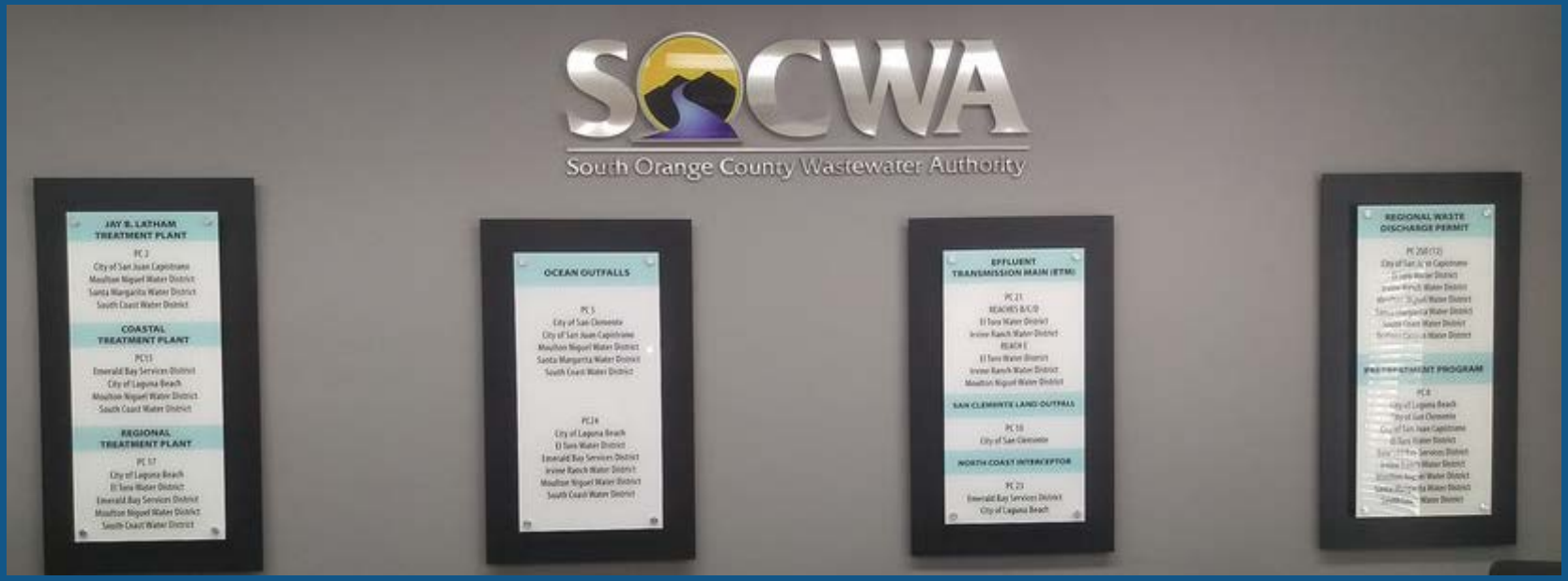
Bookends

- The cost for each agency to obtain its own permit is easily quantifiable
  - Numerous outside consultants perform this work
- Compare with each agencies level of participation within SOCWA

Book End #1

- Consultant Proposal
  - TCWD has soliciting a separate proposal to determine the cost if we were to obtain our own permit.
    - The additional cost for TCWD to obtain its own permit is estimated between $27,000 and $38,000.

Book End #2



- Using the number of distinct agency participations within SOCWA
- 42 Total

Potential Alternatives for the GF

	Proposed by TCWD Based on Quantifiable Participation & Benefit			
	Pre-Allocated Cost	General Fund Allocation %	General Fund Allocation Note	
Public Notices	$ 1,400.00	8.3333%	1 required meeting per year	$ 116.67
Office Equipment	$ 8,000.00	2.3810%	1/42nd participation for Permitting	$ 190.48
Audit	$ 35,000.00	2.3810%	1/42nd participation for Permitting	$ 833.33
Legal (Admin)	$ 90,000.00	2.3810%	1/42nd participation for Permitting	$ 2,142.86
Outside Services (Records Mgt.)	$ 2,016.00	2.3810%	1/42nd participation for Permitting	$ 48.00
Postage	$ 710.00	2.3810%	1/42nd participation for Permitting	$ 16.90
Office Supplies	$ 7,500.00	2.3810%	1/42nd participation for Permitting	$ 178.57
Miscellaneous	$ 14,000.00	2.3810%	1/42nd participation for Permitting	$ 333.33
IT Allocation	$ 111,360.00	2.3810%	1/42nd participation for Permitting	$ 2,651.43
GM Payroll	$ 266,897.00	2.3810%	1/42nd participation for Permitting	$ 6,354.69
Executive Asst.			1/42nd participation for Permitting	
Finance Controller			1/42nd participation for Permitting	
Total General Fund				$ 12,866.26

Proposed General Fund Equal Allocation per Agency = **$ 1,286.63**

	Proposed by TCWD Based on Quantifiable Participation & Benefit			
	Pre-Allocated Cost	General Fund Allocation %	General Fund Allocation Note	
	$ 1,400.00	8.3333%	1 required meeting per year	$ 116.67
	$ 8,000.00	2.3810%	1/42nd participation for Permitting	$ 190.48
	$ 35,000.00	2.3810%	1/42nd participation for Permitting	$ 833.33
	$ 90,000.00	2.3810%	1/42nd participation for Permitting	$ 2,142.86
	$ 2,016.00	2.3810%	1/42nd participation for Permitting	$ 48.00
	$ 710.00	2.3810%	1/42nd participation for Permitting	$ 16.90
	$ 7,500.00	2.3810%	1/42nd participation for Permitting	$ 178.57
	$ 14,000.00	2.3810%	1/42nd participation for Permitting	$ 333.33
	$ 111,360.00	2.3810%	1/42nd participation for Permitting	$ 2,651.43
	$ 266,897.00	8.3333%	1 required meeting per year	$ 22,241.42
			1 required meeting per year	
			1 required meeting per year	
				$ 28,752.99

Proposed General Fund Equal Allocation per Agency = **$ 2,875.30**

- Permitting needs can likely be met with a single meeting annually
- The General Fund participation should range from $1,287 to $2,875

Current GF vs TCWD Potential

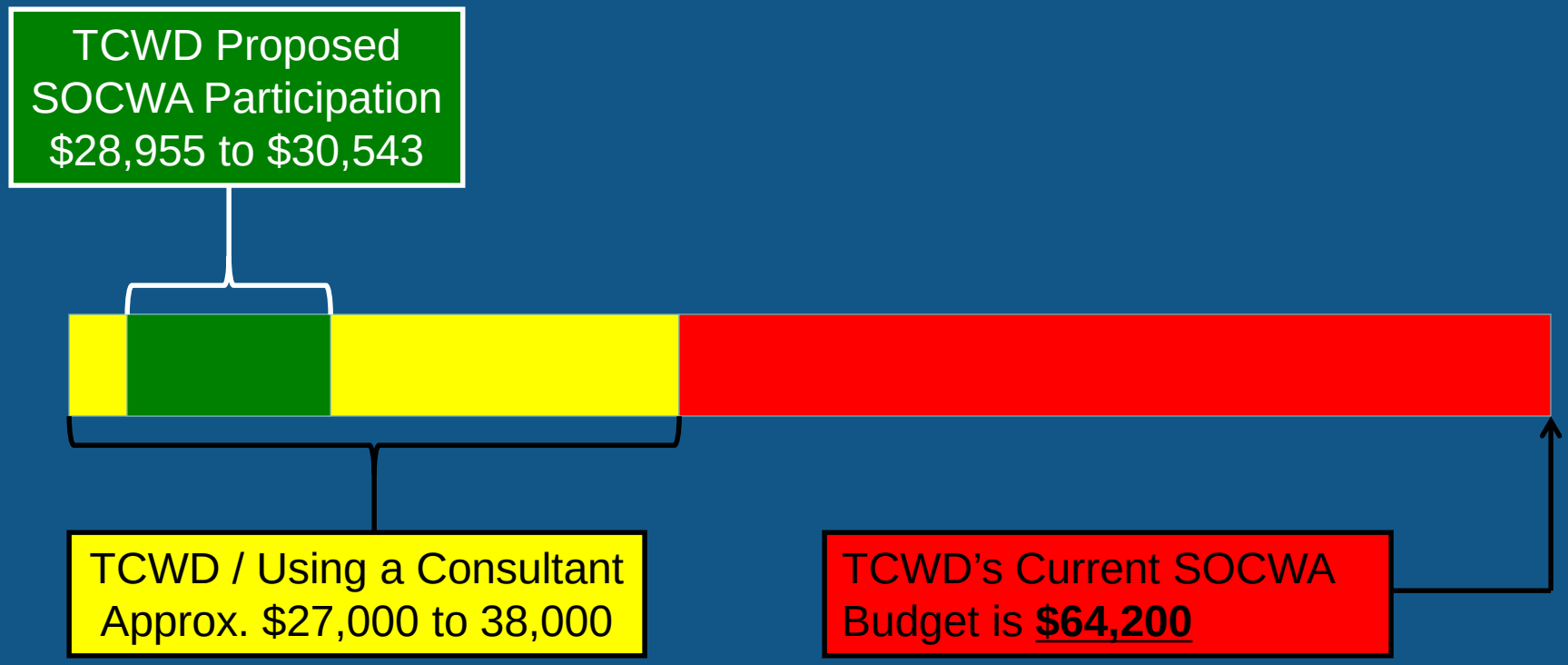
Expense	Staff Proposed % (on 6/14/17)	Staff Proposed Amount	Board Approved % on 6/14/17	Board Approved Amount 6/14/17
Public Notices	100%	$1,400	100%	$1,400
Office Equipment	20%	$1,800	100%	$8,000
Audit	50%	$17,500	100%	$35,000
Legal (Admin)	20%	$18,000	40%	$36,000
Outside Services (Records Mgt.)	100%	$2,016	100%	$2,016
Postage			20%	$142
Office Supplies	20%	$1,500	100%	$7,500
Miscellaneous	20%	$2,800	20%	$2,800
IT Allocation	5.5%	$6,109	5%	$5,568
GM Payroll	32 hours per month	$149,496	50%	$266,897
Executive Asst.	48 hours per month		50%	
Finance Controller	5% of salary		5% of salary	
Total		$184,392		$365,323

÷ 10 =

	Current FY 2017-18	Potential FY 2017-18	
O&M Environmental, Safety Expenses	$ 24,824	$ 24,824	
Member Agency Administration & Residual Engineering Expenses	$ 2,844	$ 2,844	
Member Agency General Fund Expenses	$ ~~36,532~~	$ 1,287	$ 2,875.30
TOTAL - O&M Environmental, Safety Expenses PLUS Member Agency Administration, Residual Engineering Expenses & General Fund Expenses	**$**	**28,955**	**$ 30,543.30**

TCWD Proposed SOCWA Participation

Is This Approach Reasonable?



Key Considerations & Request

- There is a intangible value to TCWD to participate in regional matters
- If the General Fund is reduced, where do these reallocated cost from the General Fund get re-distributed?
  - Admin vs PC Budgets
  - A similar policy approach should be established
- TCWD is requesting we continue discussions through Q2 of FY 2017-18 to formulate an overall policy

Discussion

SOCWA
Maintenance Program
Overview
October 5, 2017

Asset Management for Maintenance Strategic Initiative

- April 26, 2017 Strategic Planning Meeting

- Update Board on SOCWA's Maintenance program and provide summary of forward steps.
- Clarify what we are doing now and give a baseline for comparison.

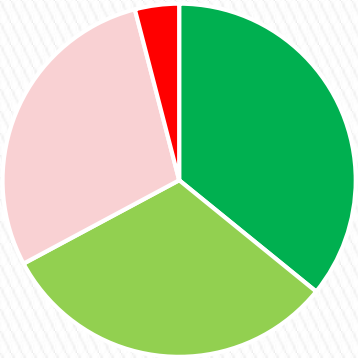
Maintenance Program Overview

- Program effective in avoiding spills, violations, etc. and within industry standards for PM ratios (PM to CM and CM to Call back).
- Cost effectiveness difficult to determine with existing accounting systems in place.
- Infrastructure is aging and getting more difficult to maintain increasing relative risk levels (expertise, parts, vendor resources, obsolescence, etc.)
- Continuous coordination with Capital Program needed.
- New equipment much more complex than old systems and requires more maintenance effort.
- Opportunities for improvements.

Maintenance Program Overview (cont'd)

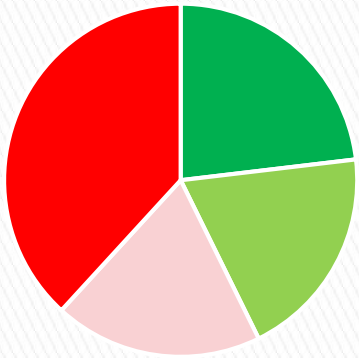
- 1700 equipment items in Tabware
- Managed mechanical equipment items
  - 580 gates and valves ($17M)
  - 552 mechanically rotating/moving equipment items ($56M)
  - 568 instruments, electrical gear, and area/building tags
- Values and information based on the 2004 Tetra Tech Asset Management Plan updated for 2017. Tetra Tech costs only include the actual cost of the equipment and not additional engineering and construction support to replacement equipment.
- What are we up against…

JBL Plant (PC-2) Rotating/Driven Equipment Summary



- Assets with Remaining Life with more than 5 years life remaining
- Assets with Remaining Life 0 to 5 years
- Assets beyond useful life 1 to 5 years
- Assets beyond useful life more than 5 years

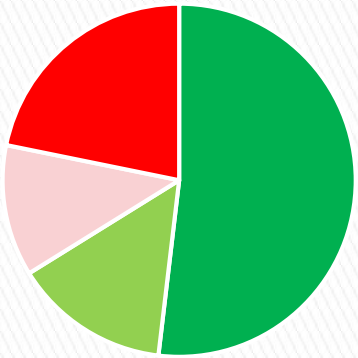
2004



- Assets with Remaining Life with more than 5 years life remaining
- Assets with Remaining Life 0 to 5 years
- Assets beyond useful life 1 to 5 years
- Assets beyond useful life more than 5 years

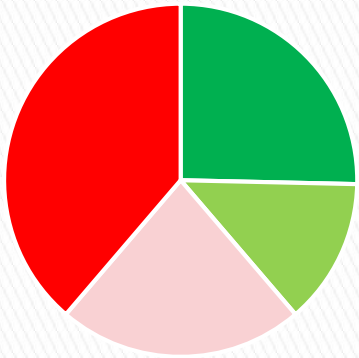
2017

CTP Plant (PC-15) Rotating/Driven Equipment Summary



- Assets with Remaining Life with more than 5 years life remaining
- Assets with Remaining Life 0 to 5 years
- Assets beyond useful life 1 to 5 years
- Assets beyond useful life more than 5 years

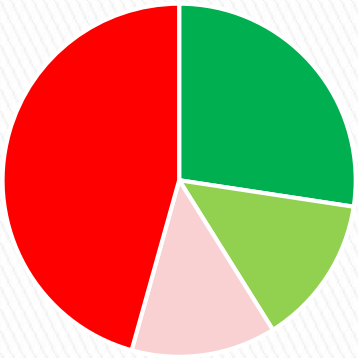
2004



- Assets with Remaining Life with more than 5 years life remaining
- Assets with Remaining Life 0 to 5 years
- Assets beyond useful life 1 to 5 years
- Assets beyond useful life more than 5 years

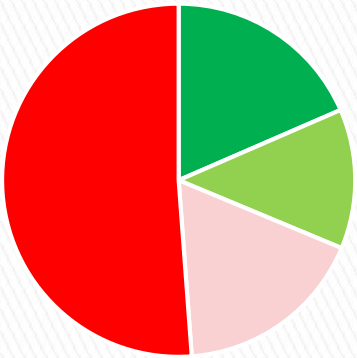
2017

RTP Plant (PC-17) Rotating/Driven Equipment Summary



- Assets with Remaining Life with more than 5 years life remaining
- Assets with Remaining Life 0 to 5 years
- Assets beyond useful life 1 to 5 years
- Assets beyond useful life more than 5 years

2004

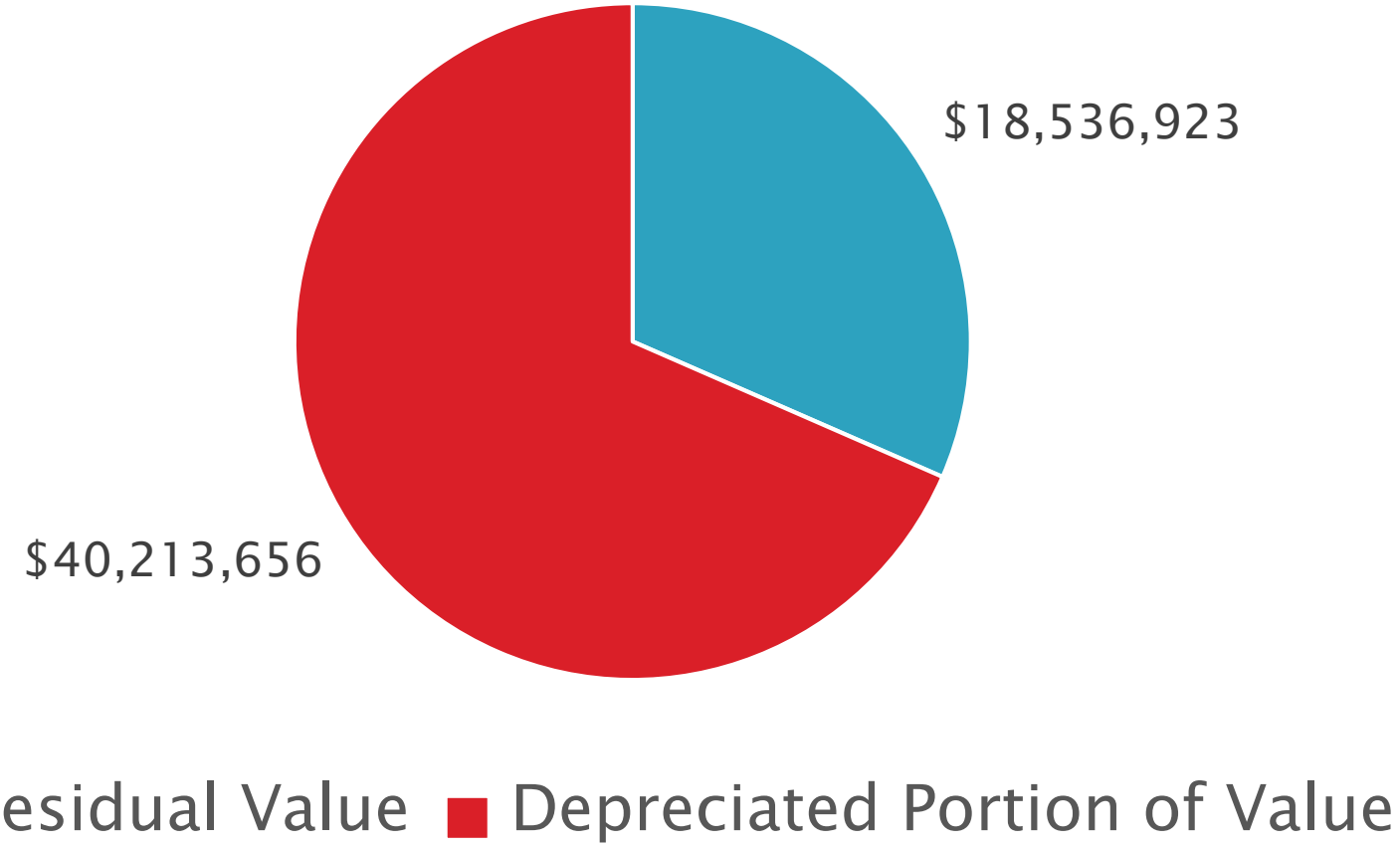


- Assets with Remaining Life with more than 5 years life remaining
- Assets with Remaining Life 0 to 5 years
- Assets beyond useful life 1 to 5 years
- Assets beyond useful life more than 5 years

2017

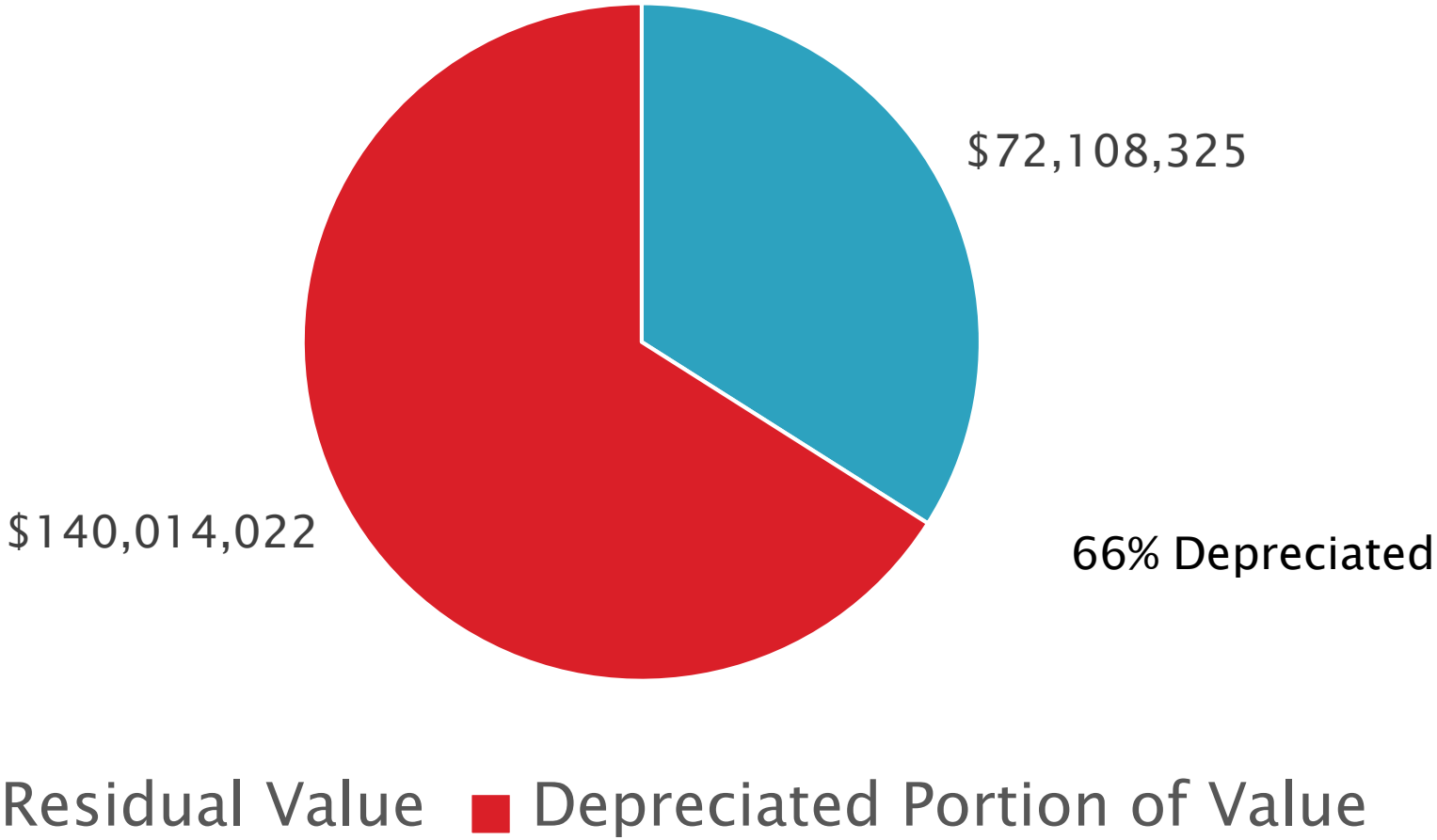
Machinery and Equipment $58.75M

(Source: FY15-16 Audit)



Total Assets $212M

(Source: FY15-16 Audit)

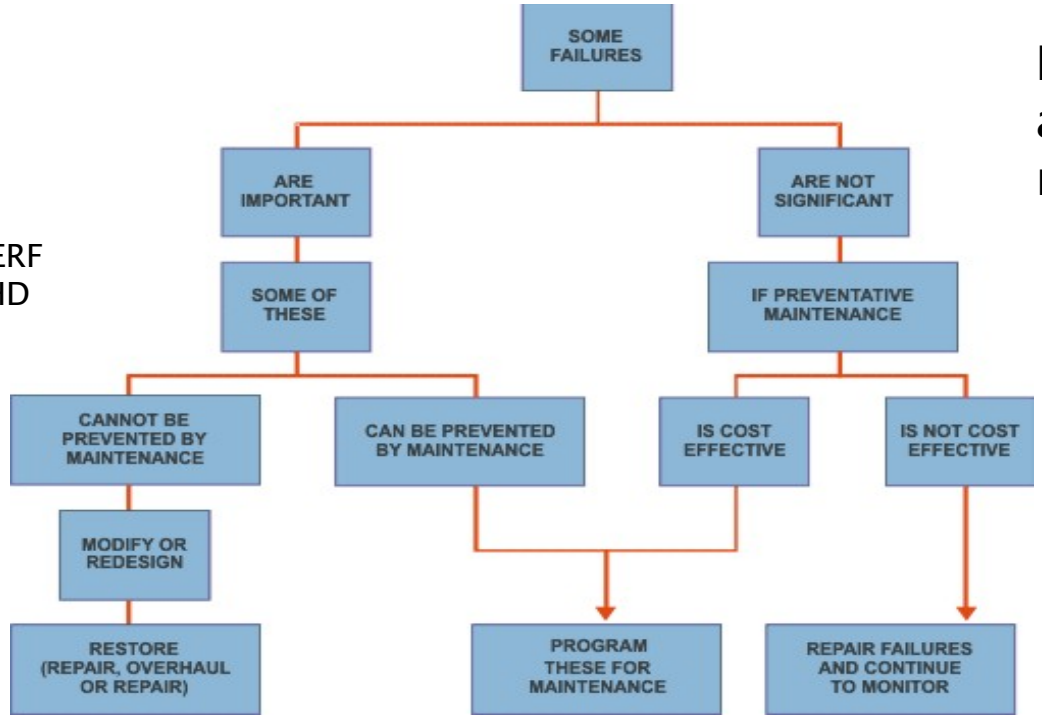


SOCWA's Maintenance Program Overview

- SOCWA has a Preventative Maintenance program.

Tabware only contains Equipment with PM's and plant areas for reporting problems.

Source: WERF SIMPLE/GHD



"Replace"

"Run to fail"

"Preventative Maintenance"

Industry Standard Preventative Maintenance Definitions

- The objective of establishing an equipment maintenance program to preserve the inherent levels of reliability and safety of equipment at the lowest overall cost.
  - There usually is no precise method of establishing the "correct" maintenance interval due to:
    - Lack of detailed performance data
    - Differences in the use of similar items
    - Lack of complete understanding about the behavior of the item.

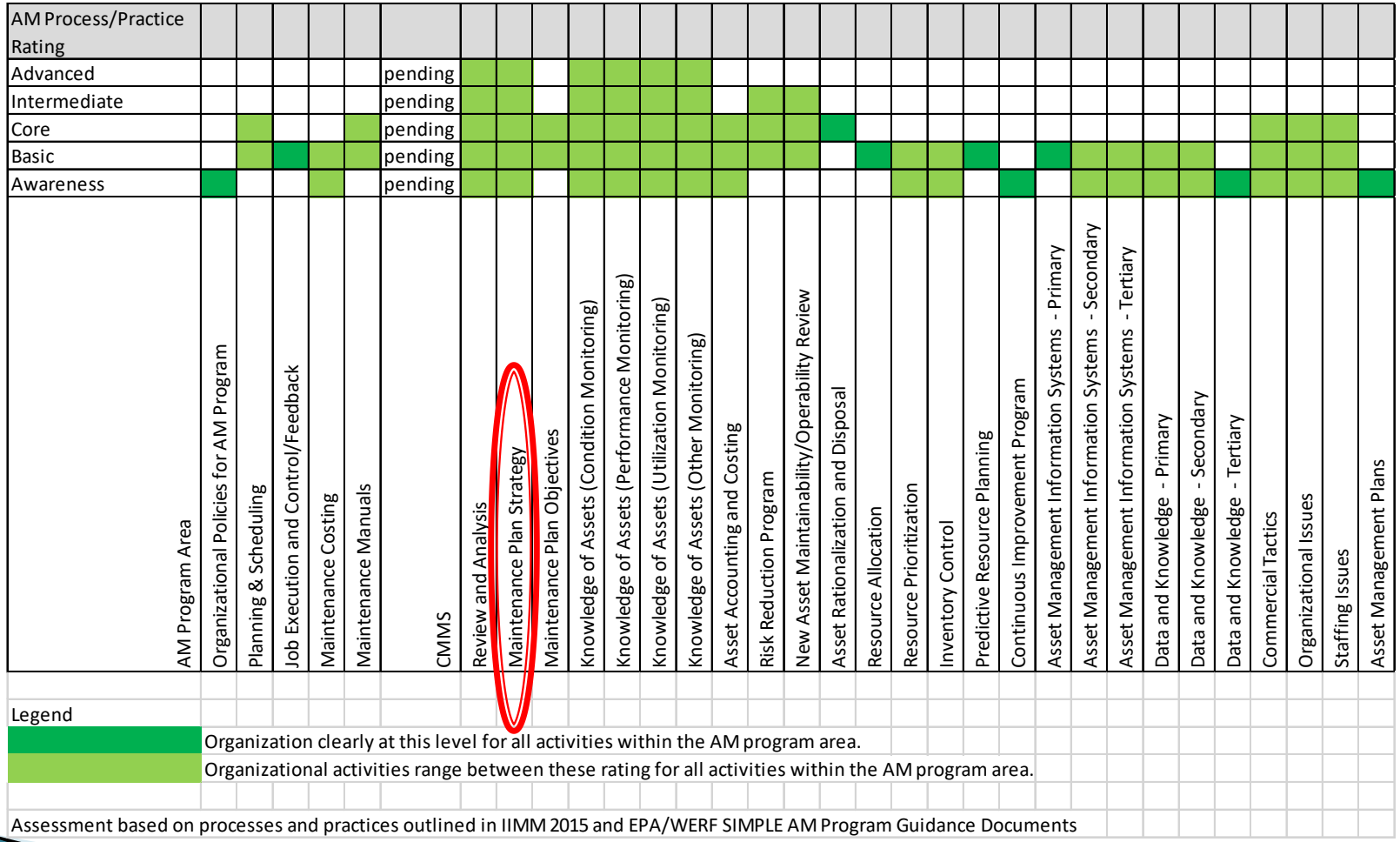
Source: (WERF/GHD)

- It's Art and Science…

Preventative Maintenance (cont'd)

- The process involves setting an initial interval following a failure, initial analysis, and progressively refining the interval based on maintenance and performance data collected for the item. Source: WERF/GHD
- SOCWA generally uses the manufacture's recommendations to set up initial PM's and modifies practices over time based on equipment failures and observations.

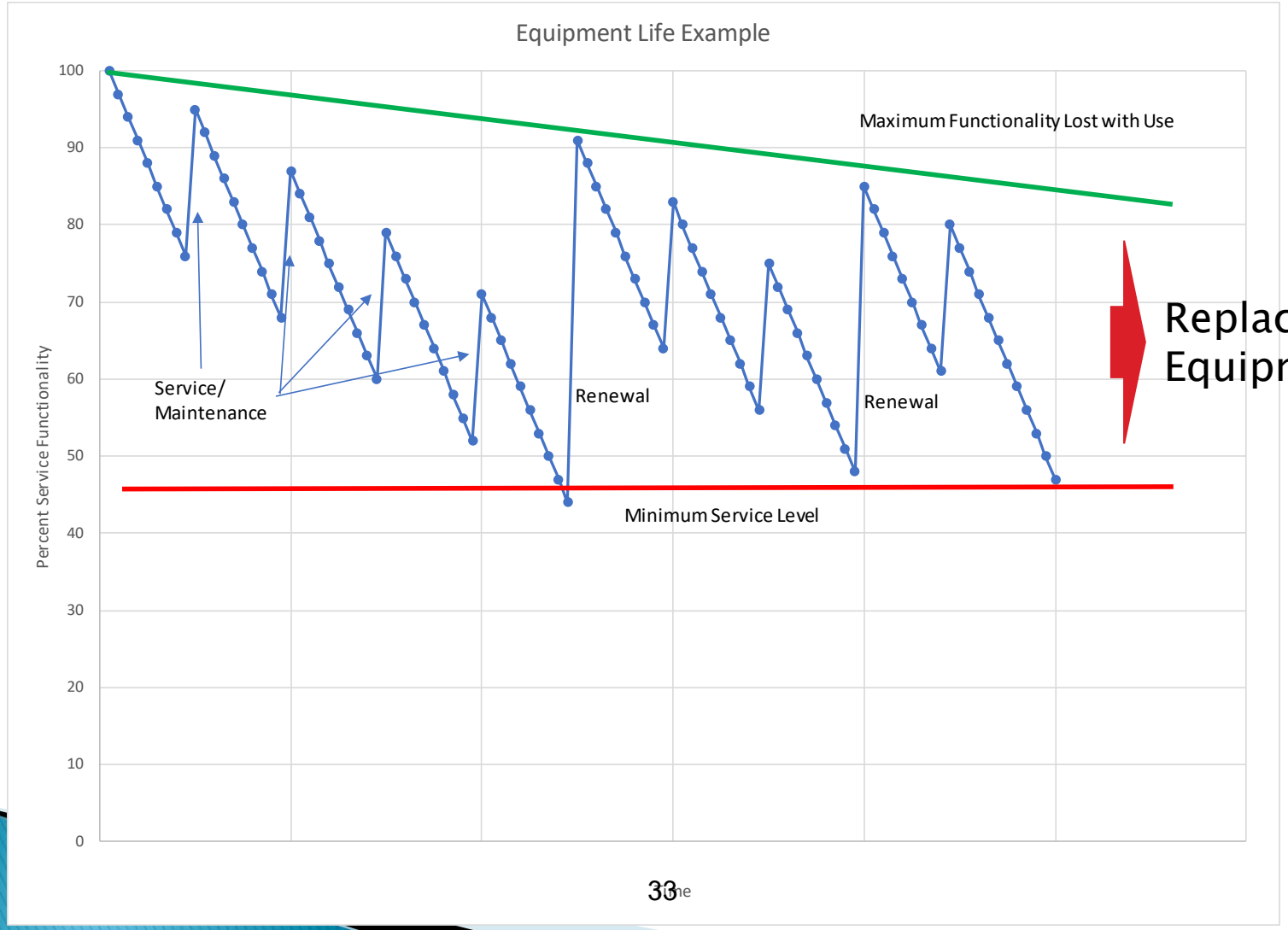
SOCWA Maintenance Practices Evaluation



SOCWA's Equipment Management Program Overview

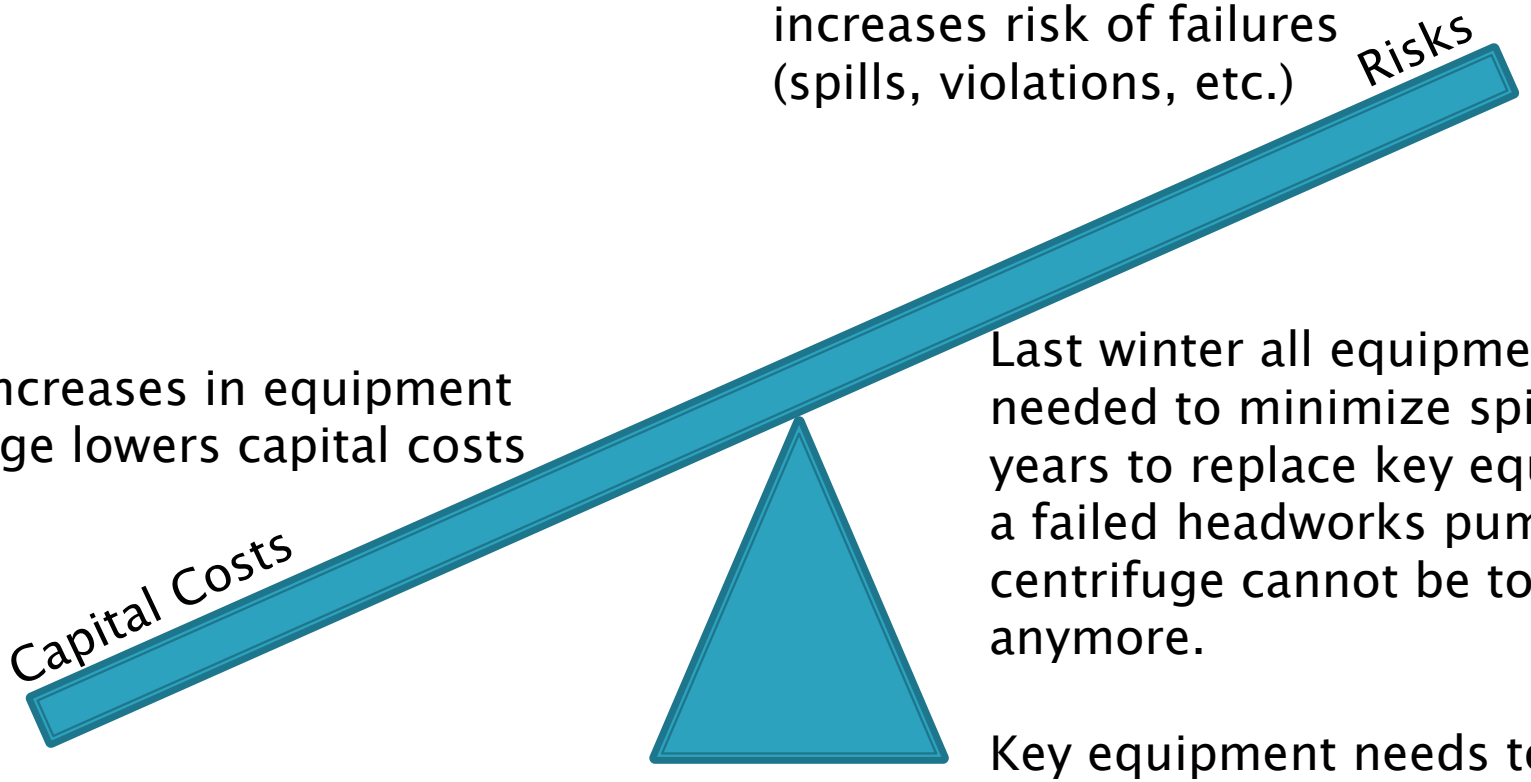
- The program is clearly effective in extending the life of the equipment beyond its expected life.
- The financial and Tabware systems are not integrated to allow for operational cost efficiency calculations.
- Efficiency is determined on a case-by-case analysis.

Equipment Maintenance Lifecycle



Elevated Equipment Age Increases Risk

Increases in equipment age increases risk of failures (spills, violations, etc.)



Increases in equipment age lowers capital costs

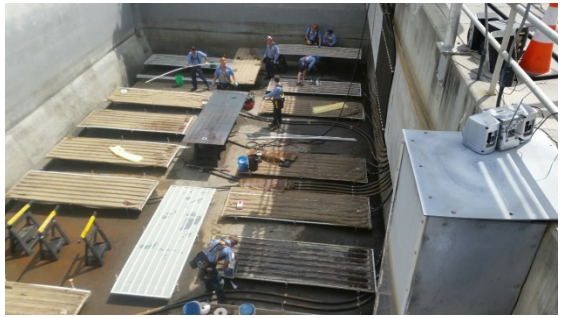
Last winter all equipment was needed to minimize spills. Up to 2 years to replace key equipment like a failed headworks pumps or centrifuge cannot be tolerated anymore.

Key equipment needs to be replaced at the end of its useful life or a long term contingency plan put in place for specific equipment to remain beyond their useful lives.

Managed Maintenance Program Highlights (last year)

- Pumps and other driven equipment with Preventative Maintenance (PM) programs:
  - 2539 PM tasks
  - 210 Equipment failures (Corrective) – Ratio 10:1
  - 13 Callbacks failures reoccurred – 6%

- Lifecycle Engineering indicates that an effective program is at least 6:1
- Callbacks should range between 3% and 10%



Systems more complicated…

Once through waste cooling system

Engine and Blower with control panel

PC2 Old Engine System

Electrical Gear

Gas Compressor

PC2 New Engine System

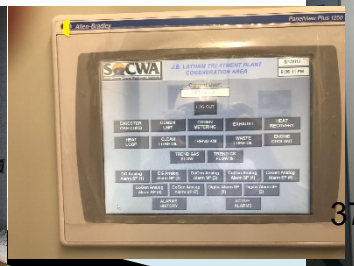
Cooling systems (closed loop waste system)

Electrical systems

2 emission control systems

Engine

Engine control system



2 gas cleaning systems and gas compression

Preventative Maintenance Program Improvements

Preventative Maintenance Program Ideas for Improvement

- SOCWA Maintenance would benefit from a maintenance scheduler position (senior level mechanic
  - Improving functions
  - Coordinate and obtain resources required for work
  - Assess needs for new equipment and systems
  - Identifying the right resources
  - Coordinate work to minimize plant shut downs

Managing Assets Beyond Expected Useful Lives

- Requires additional staff training to perform work not typically anticipated for equipment (For example, beyond life pump overhauls include reconditioning volutes.)
- Requires additional fabricating equipment expenses and expertise for obsolete items.
- Corrosion of older equipment complicates repairs.
- Repairs can escalate to emergencies more quickly.

RTP Hot Water Return Pipeline Replacement Example

About $150,000 on 8 separate repair/replacement projects over the past 3 years due to delays in implementing a larger project to remove utilities from “Hot Soil” trenches at RTP.

O&M and Engineering Capital Project Coordination

About $30M in this type of equipment at SOCWA

42

Large Versus Small Capital

- Major Systems Repairs
- Design requirements (ex. structural engineering)
- New regulations
- Complex shutdowns and tie-ins
- Large (multiyear) efforts
- New Services/ Processes

- Point/Temporary Repairs
- Emergency Repairs
- Standalone items
- IT and Security
- Obsolescence issues
- Limit scope items
- Limited staffing in Engineering to support
- Near term or critical need (Planned or unplanned in CIP project)

Large Cap

Small Cap

Highlighted items may overlap with large capital program

Phase II – SOCWA Future Capital & Operations Planning *What's Essential*

- What kind of facilities do the SOCWA agencies want and need? When do they want/need them?
- What is the next generation of wastewater treatment?
- What does the community need & want?

Community Needs & Wants?

- Food waste digestion
- Greater reuse of water
- Better odor controls
- Improved resource recovery
- Nutrient removal
- Climate change responses
- Sustainability improvements

SOCWA Decisions – Next Steps

A convergence of

- The Risks of Aging Infrastructure
- Diminishing Returns
  - $$$ ongoing repair vs. replace vs. nextgen
- Technical Opportunities
  - Improve level of treatment
  - Improve operational cost profile
- Other policy or regulatory objectives
  (Increased reuse, sustainability policies…)

QUESTIONS?

Board Discussion/Direction

MINUTES OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Board of Directors

September 7, 2017

The Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Board of Directors was held on Thursday, September 7, 2017, at 8:30 a.m. at the Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of the Board of Directors were present:

DAN FERONS, Santa Margarita Water District	Chairperson
SCOTT GOLDMAN, El Toro Water District	Director
RAY MILLER, City of San Juan Capistrano	Director
MATT COLLINGS, Moulton Niguel Water District	Alternate Director
DOUG REINHART, Irvine Ranch Water District	Director
TONI ISEMAN, City of Laguna Beach	Vice Chairperson [arrival 8:40 a.m.]
MIKE DUNBAR, Emerald Bay Water District	Director
ANDY BRUNHART, South Coast Water District	Director
STEPHAN DOPUDJA, Trabuco Canyon Water District	Director

Absent:

DAVE REBENSDORF, City of San Clemente	Director

Staff present:

BETTY BURNETT	General Manager/Secretary
PAT GIANNONE	Bowie, Arneson, Wiles & Giannone
BRIAN PECK	Director of Engineering
AMBER BAYLOR	Director of Environmental Compliance
JIM BURROR	Director of Operations
MARY CAREY	Finance Controller
DINA ASH	Human Resource Administrator
JEANETTE CONTINOLA	Procurements/Contracts Administrator [exit 9:20 a.m.]
NADIYA SZE	Senior Accountant
NAYDIN KIM	Accountant
TERI NOSON	Executive Assistant/Clerk of the Board

Also present:

DONALD FROELICH	Moulton Niguel Water District
DENNIS CAFFERTY	El Toro Water District
FRED ADJARIAN	El Toro Water District
HECTOR RUIZ	Trabuco Canyon Water District

Chairperson Ferons called the meeting to order at 8:30 a.m. and welcomed everyone present. Director Reinhart led the Pledge of Allegiance to the Flag of the United States of America.

Oral Comments

Chairperson Ferons asked if members of the public desired to address the Board, or desired to reserve addressing the Board during the meeting regarding any item on the Agenda. No comments were received.

Director Collings reported that MNWD reviewed the SOCWA website this morning and noted that the Budget document on the webpage still included the definitions that the Board had voted to remove from the Budget at the August Board meeting. Director Collings inquired when staff intends to remove the definitions based on the direction from the Board. Ms. Burnett duly noted the request and indicated that the issue would be addressed.

ACTION TAKEN

No action required.

Consent Calendar

Chairperson Ferons referenced the items under the Consent Calendar and asked if there were any questions or comments.

Director Collings requested that Item 4A - Financial Matters be pulled from the consent calendar.

ACTION TAKEN

Motion was made by Director Reinhart and seconded by Director Brunhart to approve the items under the consent calendar sans Item 4A - Financial Matters.

Motion carried:	Aye 9; Nay 0; Abstain 0; Absent 1	
	Director Dunbar	Aye
	Director Goldman	Aye
	Director Miller	Aye
	Director Collings	Aye
	Director Reinhart	Aye
	Vice Chairperson Iseman	Aye
	Chairperson Ferons	Aye
	Director Brunhart	Aye
	Director Dopudja	Aye
	Director Rebensdorf	Absent

Item 4A – Financial Matters

Director Collings referenced the Finance reports on page 8 note (4) and stated there was a discussion at the Finance Committee meeting that during the Use Audit process staff was to provide a break-down of the fringe benefit expenses to allow MNWD to review/understand changes to the Budget. Ms. Burnett duly noted the request and the requested data would be forthcoming.

Director Collings referenced page 17, and requested a detailed breakdown of the legal expenses and where and how they are allocated. Ms. Burnett reported that the report was in preparation.

ACTION TAKEN

Motion was made by Director Collings and seconded by Director Burnhart to approve Item 4A - Financial Matters of the consent calendar.

Motion carried:	Aye 9; Nay 0; Abstain 0; Absent 1	
	Director Dunbar	Aye

Director Goldman	Aye
Director Miller	Aye
Director Collings	Aye
Director Reinhart	Aye
Vice Chairperson Iseman	Aye
Chairperson Ferons	Aye
Director Brunhart	Aye
Director Dopudja	Aye
Director Rebensdorf	Absent

Engineering Matters

Construction Contract Award – J.B. Latham Treatment Plant [PC2]

Mr. Peck provided a brief overview of the contract award as submitted and noted that during the Engineering Committee meeting there was a question of whether or not this was a capital expense or repair expense covered by O&M. Mr. Peck referenced the provided agenda report regarding the discussion on why the project was identified as a capital project.

An open discussion ensued.

Director Reinhart suggested that the Engineering Committee revisit the capitalization definitions to resolve and/or avoid the issue going forward. Ms. Burnett noted that staff prepared a draft Capitalization Policy that addressed the question and included the language of the JPA Agreement.

The Chairman directed staff to bring back to the Board the current capitalization definitions/policy for Board discussion, direction and Committee assignment.

ACTION TAKEN

Motion was made by Chairperson Ferons and seconded by Director Brunhart to approve the award of the construction contract to the S.S. Mechanical Construction Corporation at a price of $53,775.

Motion carried:	Aye 3; Nay 0; Abstain 1; Absent 0	
	Director Miller	Aye
	Director Collings	Abstain
	Chairperson Ferons	Aye
	Director Brunhart	Aye

General Manager's Report

Ms. Baylor provided a brief PowerPoint presentation on the results of the 2016 Kelp Consortium Study, which are herewith attached to these minutes. Ms. Baylor noted that the study required a very low funding input from SOCWA and yielded positive results in that outfall discharge was not demonstrated to be impacting kelp as indicator species.

An open discussion ensued.

ACTION TAKEN

There being no objection Chairperson Ferons directed that the General Manager's Status Report be received and filed as submitted.

Fiscal Year End June 30, 2017 Financial Audit Services – Selection of Auditor

Director Reinhart requested a brief report from the Finance Committee. Director Collings reported that the SMWD and SCWD were both independently involved with SOCWA staff in the evaluation of the proposal and MNWD relied on the recommendation the other agencies who participated in the process to support the recommendation. The Finance Committee members respectively were supportive to use the Pun Group.

An open discussion ensued.

ACTION TAKEN

Motion was made by Director Reinhart and seconded by Director Brunhart to approve and authorize the General Manager to enter into a contract on behalf of SOCWA with the Pun Group for the FY 2016/17 Audit with the option of a two (2) years renewal; and, approve a Budget increase to the General Fund/Administration Budget of $5,000 for additional Audit services costs.

Motion carried:	Aye 9; Nay 0; Abstain 0; Absent 1	
	Director Dunbar	Aye
	Director Goldman	Aye
	Director Miller	Aye
	Director Collings	Aye
	Director Reinhart	Aye
	Vice Chairperson Iseman	Aye
	Chairperson Ferons	Aye
	Director Brunhart	Aye
	Director Dopudja	Aye
	Director Rebensdorf	Absent

Infrastructure Valuation Services

Ms. Burnett provided a brief summary of the staff report as submitted and invited Board questions.

An open discussion ensued.

ACTION TAKEN

Motion was made by Director Brunhart and seconded by Miller to approve and authorize the General Manager, on Behalf of SOCWA to enter into a contract with Carollo Engineers to perform the Infrastructure Valuation Services in the amount of $105,358 with 10 percent of the award amount authorized in change orders, and at the Finance Committee Workshop the Finance Committee is authorized to adjust scope as needed, but staying within the award amount of $105,358; and, additionally move recommendation as written.

Director Collings reported that his no vote was due to disagreement with the process, stating the process was unfair by which the firms were given the opportunity to propose on the item, where it was unclear as to what method would be used and whether it was necessary to evaluate all SOCWA infrastructure.

Motion carried:	Aye 8; Nay 1; Abstain 0; Absent 1	
	Director Dunbar	Aye
	Director Goldman	Aye
	Director Miller	Aye
	Director Collings	Nay
	Director Reinhart	Aye

Vice Chairperson Iseman	Aye
Chairperson Ferons	Aye
Director Brunhart	Aye
Director Dopudja	Aye
Director Rebensdorf	Absent

Chairperson Ferons adjourned the Board of Directors Meeting for a five (5) minute recess at 9:39 a.m.

The Board meeting reconvened at 9:44 a.m. and went into Closed Session at 9:45 a.m.

Closed Session

A. Conference with SOCWA Labor Negotiator – Closed Session.

Employee MOU (July 1, 2017 – June 30, 2017), Side Letters 1 and 2, a Closed Session will be conducted in accordance with Government Code Section 54957.6.

Conference with SOCWA Negotiator - Betty Burnett, GM Employee Organization – SOCWA Employee Association.

The Board meeting reconvened to open session at 9:58 p.m.

Report Out of Closed Session

Chairperson Ferons reported that there were no reportable actions from Closed Session.

Employee Manual (July 1, 2017 – June 30, 2017) Side Letters 1 and 2

ACTION TAKEN

Motion was made by Director Brunhart and seconded by Director Dunbar to approve Resolution No. 2017-08, *A Resolution Approving Side Letters of Agreement No. 1 and No. 2 to the July 1, 2017, to June 30, 2020, Memorandum of Understanding between the South Orange County Wastewater Authority and the SOCWA Employee Association*.

Motion carried:	Aye 9; Nay 0; Abstain 0; Absent 1	
	Director Dunbar	Aye
	Director Goldman	Aye
	Director Miller	Aye
	Director Lopez	Aye
	Director Reinhart	Aye
	Vice Chairperson Iseman	Aye
	Chairperson Ferons	Aye
	Director Brunhart	Aye
	Director Dopudja	Aye
	Director Rebensdorf	Absent

Other Matters

Chairperson Ferons asked if there were any more questions or comments from the Board. There were none.

Adjournment

There being no further business, Chairperson Ferons adjourned the meeting at 9:59 a.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Regular Meeting of the South Orange County Wastewater Authority Board of Directors of September 7, 2017, and approved by the Board of Directors of the South Orange County Wastewater Authority.

_____

Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

SUMMARY OF BOARD ACTIONS
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

September 7, 2017

DESCRIPTION	MOTION MADE BY	ACTION
Consent Calendar	Reinhart	Approved
Construction Contract [PC2] SS Mechanical Construction Corporation	Ferons	Approved
Financial Audit Services	Reinhart	Approved
Infrastructure Valuation Services	Brunhart	Approved
Resolution No. 2017-08 MOU Side Letters 1 and 2	Brunhart	Approved

2016 KELP Consortium Results

Amber Baylor, SOCWA

Kelp Monitoring Highlights

- Indicator species for outfall toxicity testing
- Required for both NPDES permits
- Historical baseline
- Low cost
- Collaborative power

Giant kelp (Macrocystis pyrifera)
California, Channel Islands NMS.Claire Fackler, CINMS, NOAA.

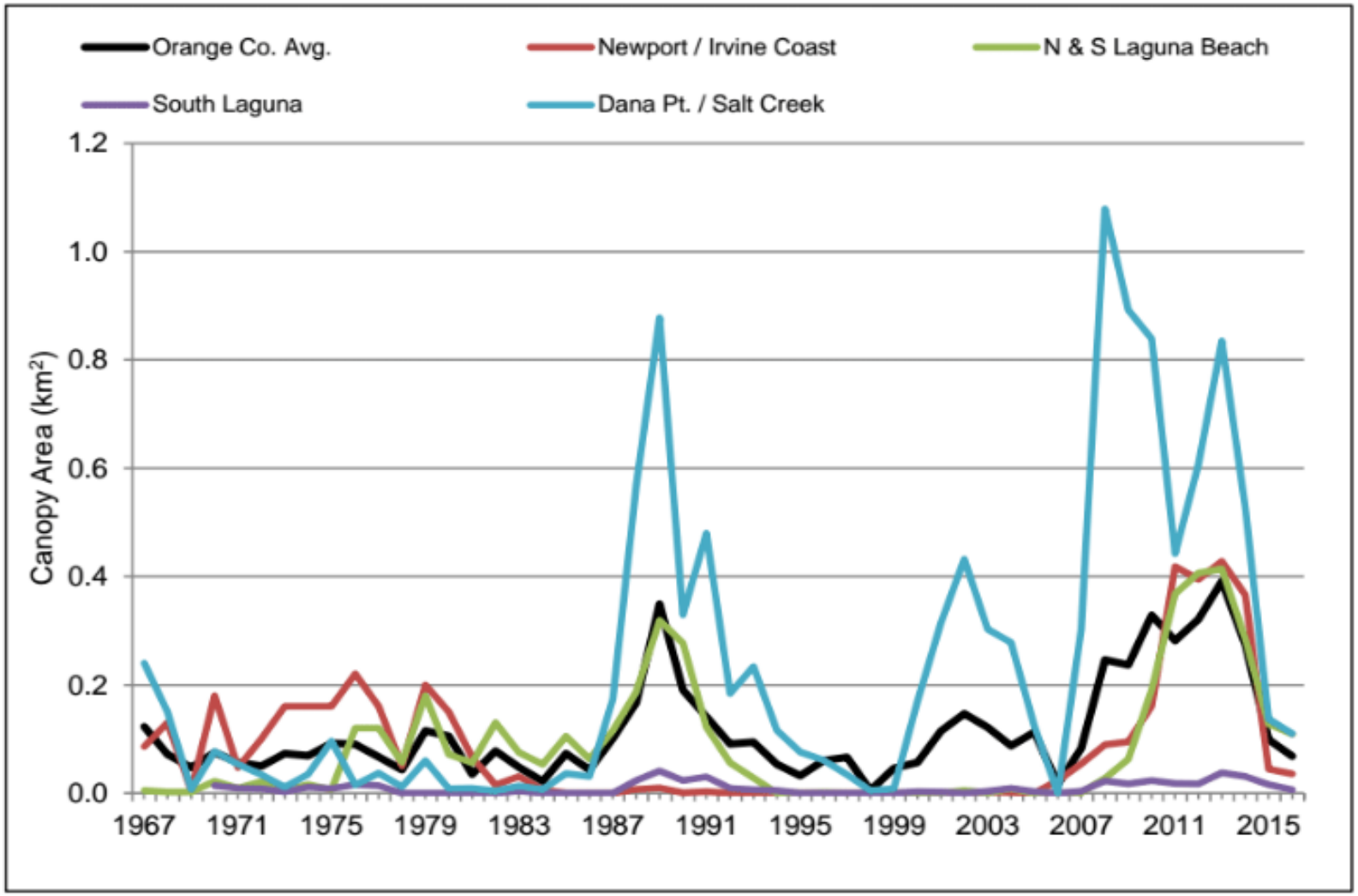
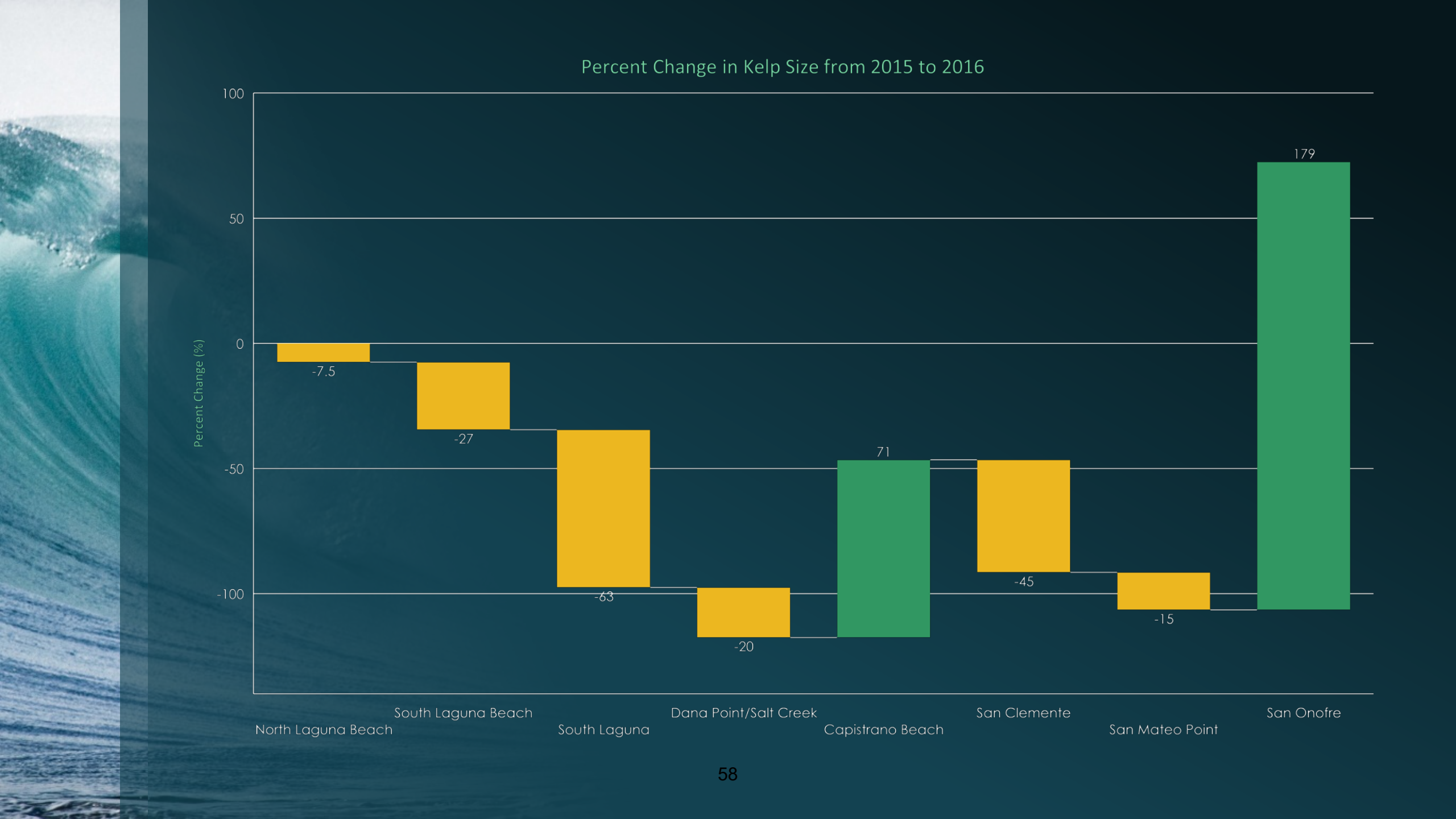


Figure 26. Comparisons between the average Orange County ABAPY and the canopy coverage of the kelp beds from Newport/Irvine Coast to Dana Point/Salt Creek from 1967 through 2016.

ABAPY = Average Bed Area Per Year


Percent Change in Kelp Size from 2015 to 2016
Percent Change (%)
100
50
0
-50
-100
-7.5
-27
-63
-20
71
-45
-15
179
North Laguna Beach
South Laguna Beach
South Laguna
Dana Point/Salt Creek
Capistrano Beach
San Clemente
San Mateo Point
San Onofre

Factors Analyzed Contributing to Decline

- Sea surfaces warmer
- Upwelling average
- Nutrient quotient low

Key Take Away: Macro-level Effects Dominate Kelp Canopy Size

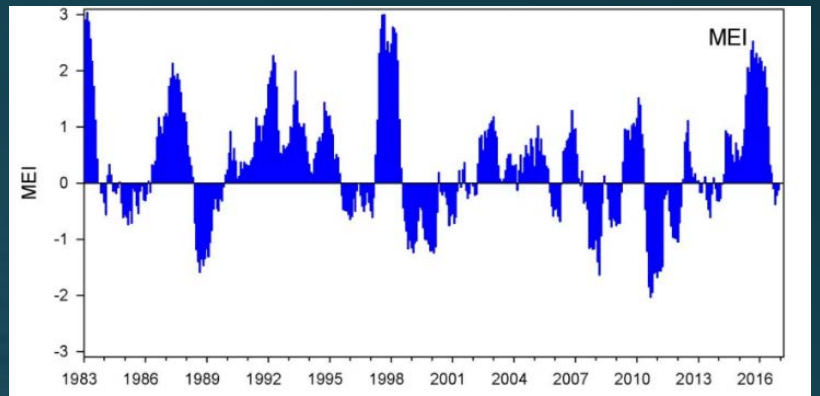


Figure 12. The PDO, NPGO, and MEI from Jan. 1983–Dec. 2016. Data from Di Lorenzo (2017), Mantua (2017) and NOAA-ESRL (2017).

Factors Analyzed but NOT Contributing to Decline

- Sea & swell height
- Rainfall /runoff
- Harmful Algae Blooms
- Predation
- Toxicity

2016 KELP Consortium Report:

http://bit.ly/2wHu2QR

Amber Baylor, SOCWA

Agenda Item

Meeting Date: November 2, 2017

TO: Board of Directors

FROM: Betty Burnett, General Manager

STAFF CONTACT: Teri Noson, Executive Assistant/Clerk of the Board

SUBJECT: Executive Committee Minutes

The submitted Executive Committee minutes have not been approved by the Executive Committee. Staff is recommending that the Executive Committee approve subject minutes and the Board of Directors receive and file the approved minutes.

Recommended Action

1) Approve subject minutes
2) Receive and file subject minutes.

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Executive Committee

March 20, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Executive Committee Meeting was held on March 20, 2017, at 11:30 a.m. at SOCWA Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of the Executive Committee were present:

MICHAEL DUNBAR	Emerald Bay Service District
MATT COLLINGS	Moulton Niguel Water District
DAN FERONS	Santa Margarita Water District
TONI ISEMAN	City of Laguna Beach

Staff Present:

BETTY BURNETT	General Manager/Secretary
MARY CAREY	Finance Controller
BRAD NEUFELD	Varner & Brandt

Chairman Ferons called the meeting to order at 11:30 a.m. and welcomed everyone present. The Executive Committee entered into Closed Session at 11:45 a.m.

Public Comments

There were no public comments.

Closed Session

Conference with SOCWA Labor Negotiator – Closed Session

a. In Preparation for 2017 Employee MOU Renewal a Closed Session will be conducted in accordance with Government Code Section 54957.6.

Conference with SOCWA Negotiator - Betty Burnett, GM
Employee Organization – SOCWA Employee Association

The Board ended closed session at 1:55 p.m.

ACTION TAKEN

No action was taken in closed session.

Adjournment

There being no further business, Chairman Ferons adjourned the meeting at 1:56 a.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of Special Meeting of the South Orange County Wastewater Authority Executive Committee of March 20, 2017, and approved and ratified by the Executive Committee of the South Orange County Wastewater Authority.

_____
Betty C. Burnett, General Manger / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Agenda Item

Meeting Date: November 2, 2017

TO: Board of Directors

FROM: Betty Burnett, General Manager

STAFF CONTACT: Teri Noson, Executive Assistant/Clerk of the Board

SUBJECT: Engineering Committee Minutes

The Engineering Committee has approved the submitted set of minutes. These items are presented to the Board for information and review.

Recommended Action

Receive and file subject minutes.

MINUTES OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Engineering Committee

June 8, 2017

The Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Engineering Committee was held on Thursday, June 8, 2017, at 8:30 a.m. at their Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members were present:

ROD WOODS	Moulton Niguel Water District
RICK SHINTAKU	South Coast Water District [exit 9:04 a.m.]
MICHAEL DUNBAR	Emerald Bay Service District
MIKE MARQUIS	City of San Juan Capistrano [exit 9:15 a.m.]
DENNIS CAFFERTY	El Toro Water District [exit 9:55 a.m.]
DAVID SHISSLER	City of Laguna Beach

Absent:

DON BUNTS	Santa Margarita Water District
HECTOR RUIZ	Trabuco Canyon Water District
DAVE REBENSDORF	City of San Clemente
KEVIN BURTON	Irvine Ranch Water District

Also present:

ANDY BRUNHART	South Coast Water District
MATT COLLINGS	Moulton Niguel Water District
KEN HUME	KEH Engineering

Staff present:

BETTY BURNETT	General Manager
BRIAN PECK	Director of Engineering
JASON MANNING	Senior Engineer
RONI YOUNG-GRANT	Associate Engineer
JIM BURROR	Director of Operations
JEANETTE COTINOLA	Procurement/Contracts Administrator

Mr. Peck called the meeting to order at 8:32 a.m. and welcomed everyone present.

Public Comments

Mr. Peck asked if members of the public desired to address the Engineering Committee or desired to reserve addressing the Engineering Committee during the meeting regarding any item on the Agenda.

No comments were received.

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Review/Approval of Meeting Minutes

ACTION TAKEN

Motion was made my Mr. Dunbar and seconded by Mr. Shintaku to approve the May 11, 2017, Engineering Committee Meeting minutes with changes as noted.

Motion carried: Aye 5; Nay 0; Abstain 1; Absent 4

Michael Dunbar	Aye
Kevin Burton	Absent
Rick Shintaku	Aye
Mike Marquis	Aye
Dave Rebensdorf	Absent
Don Bunts	Absent
Hector Ruiz	Absent
Dennis Cafferty	Aye
David Shissler	Abstain
Rod Woods	Aye

J. B. Latham Treatment Plant Facility Upgrade Package B Update
(Project Committee No. 2)

DISCUSSION

Mr. Peck gave a recap of the previous discussions regarding the Package 'B' components, costs, and schedule. Mr. Peck noted that the Package 'B' design cost was included in the Fiscal Year '17/'18 budget. This budget is to be reviewed by the Finance Committee on June 12 and the Board of Directors on June 14, 2017. The current plan is to defer the majority of the work on the Plant 2 liquids facilities until Package 'D'; this will allow the Project Committee No. 2 member agencies more time to make final decisions regarding capacity utilization.

ACTION TAKEN

No action necessary. This item was presented for information only.

J. B. Latham Treatment Plant Facility Improvements Packages A/C Construction

DISCUSSION

Mr. Peck provided an update to the cogeneration project. Mr. Peck noted that there had been much discussion regarding the actual digester gas available given the reduced loading to the Latham Plant. The actual engine performance is dictated by available digester gas, AQMD permit levels, the requirements of the SGIP program. Engine testing is expected to be completed and the project closed by the end of June.

Mr. Peck also stated that there will be two final change orders resulting in a net credit. These change orders will be presented at the July Engineering Committee meeting.

ACTION TAKEN

No action necessary. This item was presented for information only.

Coastal Treatment Plant Access Road Repair Status Report
(Project Committees No. 15 and 21)

DISCUSSION

Mr. Peck provided an update to the site visit with representatives of the Coastal Commission and U.S. Fish and Wildlife Service (USFWS) on June 1. Coastal Commission staff members did agree that the West 1 (W1) site along the paved access road was a safety issue. However, they stated that the work requested was permanent repair work and only temporary patch work would be approved for consideration as emergency repair work. A minimum approach was agreed to and a larger project, if submitted, would be reviewed at the Coastal Commission's August meeting.

During the June 1 meeting the Export Sludge pipeline project was also discussed. USFW has requested to move the alignment in five locations and to provide creek embankment protection at four locations. SOCWA is preparing a response letter to USFWS. SOCWA will then meet again with USFW representatives in Carlsbad. It is believed that it will be necessary to elevate the discussion to the regional office in Sacramento. Mr. Shissler and Mr. Dunbar expressed a desire to attend the Carlsbad meeting if it fit into their schedules. Mr. Shissler expressed concern that the delays in the project are increasing the likelihood of a pipe failure and putting the local communities at risk.

ACTION TAKEN

No action necessary. This item was presented for information only.

Regional Treatment Plant Switchgear and Cogeneration Upgrade Construction Project
(Project Committee No. 17)

DISCUSSION

Mr. Manning reported on the status of the Regional Treatment Plant Switchgear and Co-Generation Upgrade Project. The new transformer has been installed by Southern California Edison (SCE) and the existing transformer has been removed. The original switchgear is now being removed and the installation of the new distribution panel for the cogeneration system is underway.

Mr. Manning presented three change orders to the Pacific Hydrotech contract. Change Order No. 11 involved providing increased structural support with upgraded beams in the equipment bay; the facility as-built drawings had incorrectly identified the size of the support beams. The cost of Change Order No.11 is $24,698.65. Change Order No. 12 is the upsizing of the boiler instrumentation panel to include three hourly meters required by the AQMD. The cost for Change Order No.12 is $4,249.73. Change Order No. 13 is the demolition of the piping and equipment originally kept to support the remaining two cogeneration engines. Pacific Hydrotech and SOCWA staff agreed that the removal of the piping would be easier to do as part of the current construction project. The cost for Change Order No.13 is $32,258.49.

ACTION TAKEN

The present Project Committee No. 17 members recommended Change Orders Nos. 11, 12, and 13 to the construction contract with Pacific Hydrotech for the Regional Treatment Plant Cogeneration and Switchgear Upgrade Project for action by the Board of Directors.

Coastal Treatment Plant Ten Year Plan Review (Project Committee No. 15)

DISCUSSION

Mr. Peck reviewed the draft Ten Year Plan (TYP) for the Coastal Treatment Plant and explained the Listing of Expected Asset Life (Table 5.1) and Coastal Treatment Plant Asset Listing (Table 5.2). He stated that the TYP uses an annual inflation rate of 3.2% (as set forth in the attached memorandum from Carollo Engineers). The TYP is a living document to be updated approximately every 1 one to 2 years.

Ms. Burnett requested that the item numbers in Table 5.2 be added to the information in Appendix F so the projects can be more easily cross referenced with the asset expected life. Mr. Peck agreed to have the information added.

Mr. Brunhart asked if the 2010 TYP was the last plan adopted. Mr. Peck stated that the 2010 TYP was the last plan adopted by the Board of Directors. Mr. Brunhart asked if the underlying philosophy of the document was the same as the 2010 TYP. Mr. Peck noted that that the current draft took a more rigorous approach to the end of useful life. If the asset exceeded its useful life during the 15-year span of the planning document it was included somewhere in the document. Mr. Peck noted that the exception to that were the structures – many of which will have exceeded their useful life during the span of the current TYP.

Mr. Collings expressed concern that that the capital investment projected for Project Committee (PC) 15 over a fifteen-year period was more than $10 million higher than presented with the 2017-2018 draft capital improvement program budget. Mr. Peck agreed that the investment was substantially higher; the draft TYP included cost information so that the member agencies could see the basis for the proposed cost. A detailed discussion of these costs will take place at a subsequent PC 15 meeting. Additionally, Mr. Collings noted concern that the existing governing agreement for the Coastal Treatment Plant expires during the planning window of the TYP and the member agencies need to prioritize addressing the expiring agreement.

Mr. Brunhart emphasized that the TYP needed to be based on the current 6.7 mgd capacity of the treatment. Any reductions in capital expenditure based on a resetting of the plant capacity to 4.0 mgd (or other capacity) need to be documented separately. Mr. Peck noted that the majority of the draft TYP was based on the current 6.7 mgd capacity; however, there are elements of the proposed Facility Improvements Project that are based on the reduced 4.0 mgd capacity of the facility. Mr. Peck noted that the numbers would be revised to reflect the 6.7 mgd existing capacity.

It was also stressed that the TYP is a planning document, not a budgetary document. Mr. Peck will schedule a meeting for PC 15 to meet to discuss any questions related to the TYP.

ACTION TAKEN

No action necessary. This item was presented for information only.

Adjournment

There being no further business, Mr. Peck adjourned the meeting at 10:17 a.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Regular Meeting of the South Orange County Wastewater Authority Engineering Committee

of June 8, 2017, and approved by the Engineering Committee of the South Orange County Wastewater Authority.

_____

Betty Burnett, General Manager/Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Engineering Committee

May 11, 2017

The Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Board of Directors was held on Thursday, May 11, 2017, at 8:30 a.m. at their Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members were present:

ROD WOODS	Moulton Niguel Water District
DON BUNTS	Santa Margarita Water District [arrive 8:36 a.m.]
RICK SHINTAKU	South Coast Water District
MICHAEL DUNBAR	Emerald Bay Service District [exit 8:55 a.m.]
MIKE MARQUIS	City of San Juan Capistrano
DENNIS CAFFERTY	El Toro Water District

Absent:

HECTOR RUIZ	Trabuco Canyon Water District
DAVE REBENSDORF	City of San Clemente
DAVID SHISSLER	City of Laguna Beach
KEVIN BURTON	Irvine Ranch Water District

Staff present:

BRIAN PECK	Director of Engineering
JASON MANNING	Senior Engineer
RONI YOUNG-GRANT	Associate Engineer
JIM BURROR	Director of Operations
AMBER BAYLOR	Environmental Specialist [exit 9:15 a.m.]
JEANETTE COTINOLA	Procurement/Contracts Administrator

Mr. Peck called the meeting to order at 8:34 a.m. and welcomed everyone present.

Public Comments

Mr. Peck asked if members of the public desired to address the Engineering Committee or desired to reserve addressing the Engineering Committee during the meeting regarding any item on the Agenda.

No comments were received.

Review/Approval of Meeting Minutes

ACTION TAKEN

Motion was made by Mr. Dunbar and seconded by Mr. Shintaku to approve the March 9, 2017, Engineering Committee Meeting minutes with changes as noted.

Motion carried: Aye 5; Nay 0; Abstain 1; Absent 4
Michael Dunbar Aye

Kevin Burton	Absent
Rick Shintaku	Aye
Mike Marquis	Aye
Dave Rebensdorf	Absent
Don Bunts	Aye
Hector Ruiz	Absent
Dennis Cafferty	Aye
David Shissler	Absent
Rod Woods	Abstain

Motion was made my Mr. Dunbar and seconded by Mr. Shintaku to approve the April 9, 2017, Engineering Committee Meeting minutes with changes as noted.

Motion carried:	Aye 5; Nay 0; Abstain 1; Absent 4	
	Michael Dunbar	Aye
	Kevin Burton	Absent
	Rick Shintaku	Aye
	Mike Marquis	Aye
	Dave Rebensdorf	Absent
	Don Bunts	Aye
	Hector Ruiz	Absent
	Dennis Cafferty	Abstain
	David Shissler	Absent
	Rod Woods	Aye

Operations Report

DISCUSSION

Mr. Burror stated that the engine startup for the cogeneration system has been performed at the J. B. Latham Treatment Plant (JBLTP) and staff is getting trained on the new system. A turbidity issue has been reported at the advanced wastewater treatment (AWT) system at the Coastal Treatment Plant (CTP); SOCWA staff is looking at different technologies on measuring turbidity to determine the true turbidity.

ACTION TAKEN:

No action taken at this time.

Discussion of Influent Flow Metering at the J. B. Latham Treatment Plant
(Project Committee 2)

DISCUSSION

Ms. Baylor gave a recap of the discussion from the March 2017 Engineering Committee Meeting, which included: Description of splitting the flow and solids allocations related to the Oso Trabuco Trunk Line; description of the three-year waste strength characterization for PC 2 solids allocation for all member agencies, and moving the PC 2 effluent pump station operation and maintenance from the PC 5 budget to the PC 2 budget. Since the prior discussion, ADS installed a flow meter in the Oso Trabuco trunk line with a SOCWA flow meter installed for side

by side comparison. Sediment is still being found in the sewer; the next step is to determine the source of the sediment.

ACTION TAKEN

This item was presented for information only.

Review of Consulting Rates

DISCUSSION

Mr. Peck presented several consultants' engineering rates. Tetra Tech, HDR and Carollo represent the high range of fees. AECOM and CH2M rates are somewhat lower. SOCWA staff will note to proposing firms that it is important to show the reasoning to support utilization of staff members with higher billing rates.

ACTION TAKEN

This item was presented for information only.

Coastal Treatment Plant Access Road Repair Status Report
(Project Committees 15 and 21)

DISCUSSION

Mr. Peck indicated that the Coastal Commission staff had indicated that the proposed work did not meet emergency permit conditions. SOCWA staff has submitted additional supporting documentation to the Coastal Commission. A site visit is scheduled for June 1st with the Coastal Commission and other resource agencies.

ACTION TAKEN

No action necessary at this time.

J. B. Latham Treatment Plant Facility Upgrade Package B Update
(Project Committee 2)

DISCUSSION

Mr. Peck stated that SOCWA staff has met with three out of the four PC 2 member agencies. Each of these agencies indicated that their own water resource planning relative to the Latham Plant would take approximately one year to complete. These agencies asked that SOCWA delay items from Package 'B' that were not either immediately needed or that were in an area (e.g. Plant 2) that would be impacted by the outcome of the agencies own planning. Mr. Peck indicated that a review meeting had been held with the SOCWA Operations department to identify items that could be postponed 1 to 3 years. This effort resulted in a $3 to $4 million reduction in construction estimate. SOCWA staff will determine the scope of work for this project and present it at the June Engineering Committee Meeting.

ACTION TAKEN

SOCWA staff to present the scope of work for Package 'B' at the June Engineering Committee Meeting.

J. B. Latham Treatment Plant Facility Improvements Packages A/C Construction Project B Update (Project Committee 2)

DISCUSSION

Mr. Peck stated that the Gateway Pacific had performed the preliminary start-up on the new engine. The project is expected to be complete by the end of June.

ACTION TAKEN

No action necessary at this time.

Regional Treatment Plant Switchgear and Cogeneration Upgrade Construction Project Update (Project Committee 17)

DISCUSSION

Mr. Manning reported on the status of the Regional Treatment Plant Switchgear and Co-Generation Upgrade Project. The new transformer has been installed by Southern California Edison (SCE). SCE is planning a day long area wide shut down for maintenance in late May. The shut-down will allow SCE to remove the existing transformer. This will the allow Pacific Hydrotech to remove the original switchgear and install the new distribution panel for the cogeneration system.

Mr. Manning presented two change orders to the Pacific Hydrotech contract. Change Order No. 9 involved the contractor installation of trench plates over excavated duct banks while waiting for SCE approval of the modified power supply design. Mr. Manning reviewed a graphic showing the location and the duration of the trench plate installations. The cost of Change Order No.9 is $50,284.35. Change Order No. 10 is a deductive change order reflecting a reduction in site work as the new SCE transformer ended up closer to the Energy Building than originally anticipated. The credit for Change Order No.10 is $4,885.33.

ACTION TAKEN

The present Project Committee No. 17 members recommended Change Orders Nos. 9 and 10 to the construction contract with Pacific Hydrotech for the Regional Treatment Plant Cogeneration and Switchgear Upgrade Project for action by the Board of Directors.

Regional Treatment Plant Miscellaneous Improvements 2017 Final Design Request for Proposal Review (Project Committee 17)

DISCUSSION

Mr. Manning reviewed the scope for the Miscellaneous Improvements 2017 project. The lighting improvements in this project is a PC 17 common item; the other project components are PC 17 Liquids items. The intent is to finish design at the beginning of 2018 and bid this project along with the improvements to the power supply system for the Secondary Sedimentation Basin system (currently under design by Lee & Ro). The PC 17 members have been asked to review and comment on the draft Request for Proposal (RFP) by May 25, 2017.

ACTION TAKEN

PC 17 members to review and comment on the draft RFP by May 25, 2017.

Adjournment

There being no further business, Mr. Peck adjourned the meeting at 9:23 a.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Regular Meeting of the South Orange County Wastewater Authority Engineering Committee of May 11, 2017, and approved by the Engineering Committee of the South Orange County Wastewater Authority.

_____

Betty Burnett, General Manager/Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Agenda Item

Meeting Date: November 2, 2017

TO: Board of Directors

FROM: Betty Burnett, General Manager

STAFF CONTACT: Jim Burror, Director of Operations

SUBJECT: September 2017 Operations Report

Summary/Discussion

The following selected operational reports are provided monthly to the Board of Directors. The operational reports included are as follows:

1) Monthly Operational Report

   A six (6) page overview and comparison of owner use of facilities, including influent and recycled water production. The pages include ongoing calculation used by SOCWA for billing the agencies. Other items include important statistics for regulatory compliance, visitations by the public to the treatment works, and other vendor interactions. The information is broken down by facility and by member agency.

2) SOCWA Ocean Outfall Discharges by Agency

   This data shows how much water is being discharged to the ocean each month and for the last 12 months. This data is presented for the agencies planning reuse projects to better understand the potential to expand water reuse in their service area.

3) Quarterly Report on Key Operational Expenses

   These charts include tracking of monthly expenses for key operational expenses with estimated projections for the Fiscal Year. The key parameters that are being tracked are Electricity, Odor Control, Polymer, Biosolids, Maintenance expenses (not including SOCWA staff labor), small capital purchases and safety.

4) Beach Ocean Monitoring Report

5) Recycled Water Report

6) Pretreatment Report

Fiscal impact

No change

Recommendation

Receive and file the operational reports.

Monthly Operational Report

SOCWA Operational Report September, 2017

Excursion, Complaint, and Violation Events

Events	CTP	RTP	JBL	Totals
Odor	0	4(1)	0	4
Noise	0	0	0	0
Spills	0	0	0	0
Violations	1(2)	0	0	1
Others	0	0	0	0

(1) Odors were reported several miles from RTP and not tracked back to the plant.

(2) Title 22 - 7-day median coliform bacteria exceedance.

Plant Wastewater Billing Characteristics

Key Parameters	CTP	RTP	JBL TP1	JBL TP2	Totals
Influent (mgd)	2.81	7.64	6.57	0.93	17.96
Effluent (mgd)	2.49	1.25	6.57	0.98	11.29
Peak Flow (mgd)	3.21	16.02	13.53	5.96	38.72
Influent BOD (mg/l)	231	251	245	259	
Influent TSS (mg/l)	342	325	423	296	
Effluent BOD (mg/l)	6.5	4.5	6.0	9.8	
Effluent TSS (mg/l)	5.6	5.1	5.1	11.6	
Effluent Turbidity (NTU)	2.9	3.4	3.1	5.9	

Recycled Water (AWT) Operations

Key Parameters	CTP	RTP	JBL	Totals
Average Flow (mgd)	1.18	6.40		7.58
Days of Operation (days)	29	30		
Total Flow (million gallons)	35.4	191.9		227.3
Plant Irrigation (million gallons)	0.10	0.10	0.29	
AWT Time Online (%)	100.0	100.0		

Wastewater Unit Definitions

mgd = million gallons per day

mg/l = milligram per liter also known as parts per million

NTU = Nephelometric Turbidity Units

SOCWA Operational Report September, 2017 (cont'd)

Biosolids Management

Biosolids Management Site	CTP	RTP	JBL	Totals
Synagro Compost (tons)		735.1	178.7	913.9
Nursery Products (tons)		373.5	454.3	827.8
Prima Deshecha (tons)		429.6	200.4	630.0
Other: _____ (tons)		0.0	0.0	0.0
Total Processed (tons)		1,538.3	833.4	2,371.7

Summary of Maintenance Activities

Task Type	CTP	RTP	JBL	Totals
Preventative Maintenance	56	707	561	1,324
Corrective Maintenance	177	136	114	427

Site Visitors

Visitor Types	CTP	RTP	JBL	Totals
Regulatory	0	2	0	2
Member Agency	0	3	0	3
Residents	0	0	0	0
Others	9	38	33	71
Tours #/Visitors	0	1	0	1

Grit Disposal Management

Grit & Screenings	CTP	RTP	JBL	Totals
Simi Valley Landfill (tons)	NA	59.4	24.9	84.3

Chemical and Energy Utilization

Chemical/Utility	CTP	RTP	JBL	Totals
Ferric Chloride (tons)	0.1	NA	NA	0.1
Power (kWh)	220,666	589,602	503,009	1,313,277
Natural Gas (Dth)	23	NA	3,185	3,208
Digester Gas to Engines (scfm)		0(1)	1,132,307	1,132,307
Digester Gas to Flares (scfm)		15,999,565	2,876,799	18,876,364
Digester Gas Power Savings		(1)		

(1) Engines were off at RTP and being started up at JBL under ongoing construction projects.
NA = Not Available at the time this report was generated.

Wastewater Unit Definitions

kWh = kilowatt hours

Dth = Dekatherms

scfm = standard cubic feet per minute

SOCWA Operational Report September, 2017 (cont'd)

Agency Wastewater Flows to SOCWA by Facility
(Including Internal Waste Streams Used for Billing)

Agency	CTP (mgd)	CTP (%)	RTP (mgd)	JBL (mgd)	JBL (%)	Total (mgd)
CLB	1.638	56.09%				1.64
EBSD	0.048	1.64%				0.05
SCWD	1.235	42.27%		1.651	25.13%	2.89
MNWD	0.000	0.00%	7.64	1.400	21.31%	9.04
CSJC				2.186	33.27%	2.19
SMWD				1.334	20.30%	1.33
Total	2.921	100.00%	7.64	6.571	100.00%	17.13

Total Agency Outfall Flows by Outfall System-Billing Flows

Agency	SJCOO (mgd)	SJCOO (%)	SJCOO Meter (mgd)	ACOO (mgd)	ACOO (%)	Total (mgd)	Notes
CLB				1.64	23.63%	1.64	
EBSD				0.05	0.69%	0.05	
SCWD	1.71	17.25%		0.71	10.26%	2.42	Includes Desalters
MNWD	1.40	14.11%		1.25	17.96%	2.65	
ETWD				1.96	28.26%	1.96	Direct Outfall Only
CSJC	2.63	26.49%				2.63	Incudes Desalter
SMWD	2.52	25.43%				2.52	Includes Chiquita
CSC	1.66	16.73%				1.66	Direct Outfall Only
IRWD				1.33	19.20%	1.33	Direct Outfall Only
Total	9.92	100.00%	10.33	6.93	100.00%	16.86	

FY Flow/Solids Summary-Billing

Project Committee No. 2 Liquids (JBL)

Agency	Own (mgd)	Own (%)	Budget (mgd)	Budget (%)	Month (mgd)(1)	Month (%)	FY Avg to Date (mgd)	FY Avg to Date (%)
CSJC	4.00	30.77%	3.19	38.02%	2.186	33.27%	2.20	34.81%
MNWD	3.00	23.08%	1.40	16.69%	1.400	21.31%	1.40	22.16%
SCWD	3.75	28.85%	2.00	23.84%	1.651	25.13%	1.71	27.12%
SMWD	2.25	17.31%	1.80	21.45%	1.334	20.30%	1.01	15.91%
Total	13.00	100.00%	8.39	100.00%	6.571	100.00%	6.32	100.00%

Project Committee No. 2 Solids (JBL)

Agency	Own (lbs/d)	Own (%)	Budget (lbs/d)	Budget (%)	Month (lbs/d)	Month (%)	36 Month Rol. Avg. (lbs/d)	36 Month Rol. Avg. (%)
CSJC	11,572	30.00%	8,620	33.30%	5,041	24.81%	6,357	26.35%
MNWD	8,340	21.62%	5,270	20.36%	5,149	25.35%	6,035	25.01%
SCWD	7,715	20.00%	5,304	20.49%	5,219	25.69%	5,021	20.81%
SMWD	10,946	28.38%	6,695	25.86%	4,906	24.15%	6,716	27.83%
Total	38,573	100.00%	25,889	100.00%	20,315	100.00%	24,128	100.00%

Project Committee No. 5 - Effluent Pumping Station (SJCOO EPS)

Agency	Own (%)	Variable Budget (mgd)	Variable Budget (%)	Month Outfall Flow (mgd)	Month Outfall Flow (%)	Month EPS Outfall Flow (mgd)	Month EPS Outfall Flow (%)
CSC	16.62%	3.00	17.13%	1.66	16.73%		
CSJC	11.08%	3.83	21.87%	2.63	26.49%	2.19	33.27%
MNWD	15.51%	2.42	13.82%	1.40	14.11%	1.40	21.31%
SCWD	12.47%	2.67	15.25%	1.71	17.25%	1.65	25.13%
SMWD	44.32%	5.59	31.92%	2.52	25.43%	1.33	20.30%
Total	100.00%	17.51	100.00%	9.92	100.00%	6.57	100.00%

(1) Influent billing meter summary:

a. CSJC is metered for two weeks of each month to determine the monthly flow. The area velocity metering system in the collection system has an accuracy of +/- 20%.

b. MNWD is assumed to be 1.4 mgd unless Treatment Plant 3A is discharging to the sewer. If other discharges occur they are estimated.

c. SCWD is the summation of the DPSD and Victoria PS meters. The two metering systems have an accuracy of +/- 10%.

d. The Oso Trabuco sewer is metered for two weeks of each month to determine the monthly flow. The flows from MNWD are subtracted from the metering data collected to determine SMWD's flows. The area velocity metering system in the collection system has an accuracy of +/- 20%.

Source: Cost Allocation Methodology for Project Committees, Dudek Engineering 2012.

FY Flow/Solids Summary-Billing (cont'd)

Project Committee No. 5 - Outfall (SJCOO)

Agency	FY Avg Outfall Flow (mgd)	FY Avg Outfall Flow (%)	FY Avg EPS Outfall Flow (mgd)	FY Avg EPS Outfall Flow (%)
CSC	1.521	14.29%		
CSJC	2.603	24.46%	2.20	34.81%
MNWD	1.420	13.34%	1.40	22.16%
SCWD	1.832	17.21%	1.71	27.12%
SMWD	3.268	30.70%	1.01	15.91%
Total	10.643	100.00%	6.32	100.00%

Project Committee No. 15 (CTP)

Agency	Own (mgd)	Own (%)	Budget (mgd)	Budget (%)	Month (mgd)	Month (%)	FY Avg to Date (mgd)	FY Avg to Date (%)
CLB	2.54	37.91%	1.960	60.61%	1.638	56.09%	1.735	55.83%
EBSD	0.20	2.99%	0.061	1.89%	0.048	1.64%	0.054	1.75%
SCWD	2.00	29.85%	1.213	37.51%	1.235	42.27%	1.318	42.42%
MNWD	1.96	29.25%	0.000	0.00%	0.000	0.00%	0.000	0.00%
Total	6.70	100.00%	3.234	100.00%	2.921	100.00%	3.108	100.00%

Project Committee No. 17 Liquids (RTP)

Agency	Budget Liquids (mgd)	Budget Liquids (%)	Month Plant Influent (mgd)	Month Centrate (mgd)	Month Total (mgd)(1)	Month Total (%)	FY Avg to Date (mgd)	FY Avg to Date (%)
CLB	0.01408	0.167%	0.0000	0.0121	0.0121	0.16%	0.0141	0.18%
EBSD	0.00044	0.005%	0.0000	0.0004	0.0004	0.00%	0.0004	0.01%
SCWD	0.00871	0.103%	0.0000	0.0091	0.0091	0.12%	0.0107	0.14%
ETWD	0.01719	0.204%	0.0000	0.0141	0.0141	0.18%	0.0133	0.17%
MNWD	8.40541	99.521%	7.6407	0.0542	7.6948	99.54%	7.7187	99.50%
Total	8.44583	100.000%	7.6407	0.0899	7.7306	100.00%	7.7573	100.00%

(1) Month total does not double count MNWD centrate. It is included in the Monthly Plant Influent too.

FY Flow/Solids Summary (cont'd)

Project Committee No. 17 Solids (RTP)

Agency	Own (lbs/d)	Own (%)	Budget (lbs/d)	Budget (%)	Total Month (lbs)	Total Month (%)	FY Avg Total to Date (lbs)	FY Avg Total to Date (%)
CLB	5,605	11.22%	4,728	12.95%	141,101	13.49%	183,542	15.90%
EBSD	295	0.59%	147	0.40%	4,117	0.39%	5,775	0.50%
SCWD	4,480	8.96%	2,926	8.02%	106,336	10.17%	139,588	12.09%
ETWD	10,200	20.41%	5,903	16.17%	164,099	15.69%	171,150	14.83%
MNWD	29,395	58.82%	22,801	62.46%	630,152	60.26%	654,121	56.67%
Total	49,975	100.00%	36,505	100.00%	1,045,805	100.00%	1,154,176	100.00%

Project Committee No. 24 (ACOO)

Agency	Own (%)	Budget (mgd)	Budget (%)	Month Outfall Flow (mgd)	Month Outfall Flow (%)	FY Avg Outfall Flow (mgd)	FY Avg Outfall Flow (%)
CLB	11.000%	1.49	13.32%	1.638	23.63%	1.735	26.94%
EBSD	0.780%	0.06	0.54%	0.048	0.69%	0.054	0.84%
ETWD	16.302%	2.89	25.83%	1.960	28.26%	1.690	26.25%
IRWD	15.760%	2.62	23.41%	1.332	19.20%	1.260	19.57%
MNWD	43.848%	2.96	26.45%	1.245	17.96%	0.963	14.96%
SCWD	12.310%	1.17	10.46%	0.711	10.26%	0.736	11.43%
Total	100.000%	11.19	100.00%	6.934	0.00%	6.439	100.00%

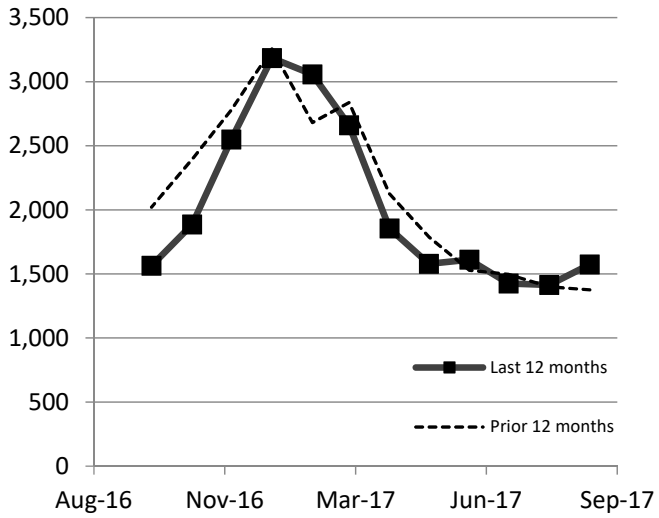
SOCWA Ocean Outfall Discharges by Agency

SOCWA Outfall Discharge Report September, 2017

Agency	SJCOO (mgd)	SJCOO (%)	ACOO (mgd)	ACOO (%)	Total (mgd)
CLB			1.64	23.63%	1.64
EBSD			0.05	0.69%	0.05
SCWD	1.71	17.25%	0.71	10.26%	2.42
MNWD	1.40	14.11%	1.25	17.96%	2.65
ETWD			1.96	28.26%	1.96
CSJC	2.63	26.49%			2.63
SMWD	2.52	25.43%			2.52
CSC	1.66	16.73%			1.66
IRWD			1.33	19.20%	1.33
Total	9.92	100.00%	6.93	100.00%	16.86
	or Acre-Feet per year equivalent				18,880

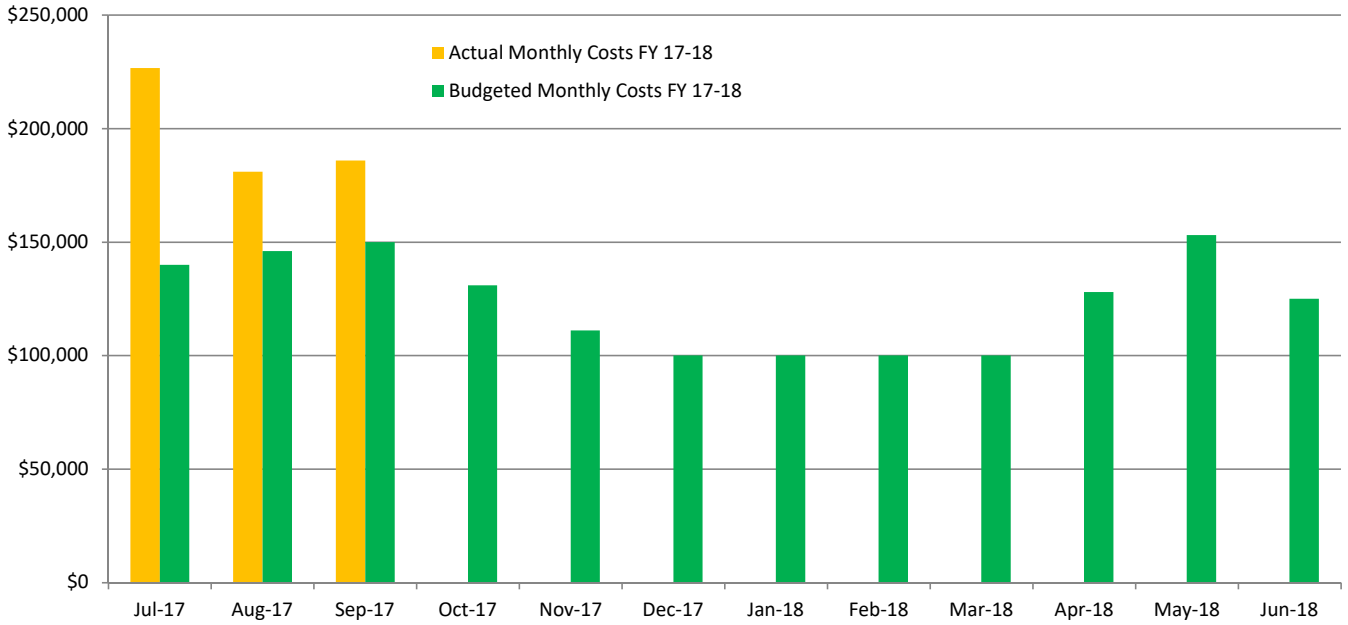
12-Month Running Total Discharge to Ocean Outfalls (AF)

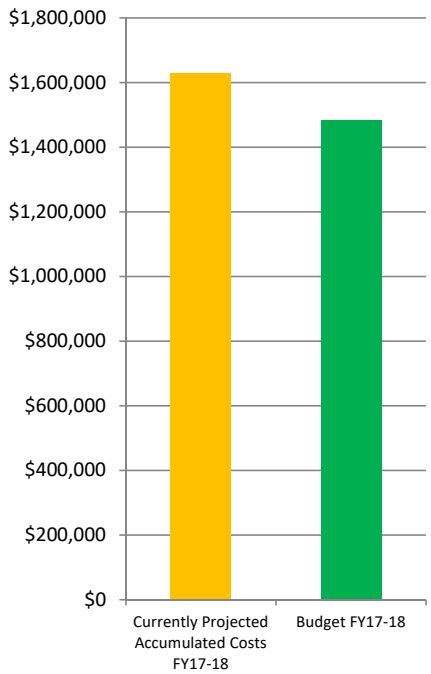
Sep-17	1,573
Aug-17	1,414
Jul-17	1,425
Jun-17	1,611
May-17	1,578
Apr-17	1,854
Mar-17	2,659
Feb-17	3,057
Jan-17	3,184
Dec-16	2,549
Nov-16	1,886
Oct-16	1,564
Total	24,354



Quarterly Report on Key Operational Expenses

Electricity (5010) Costs

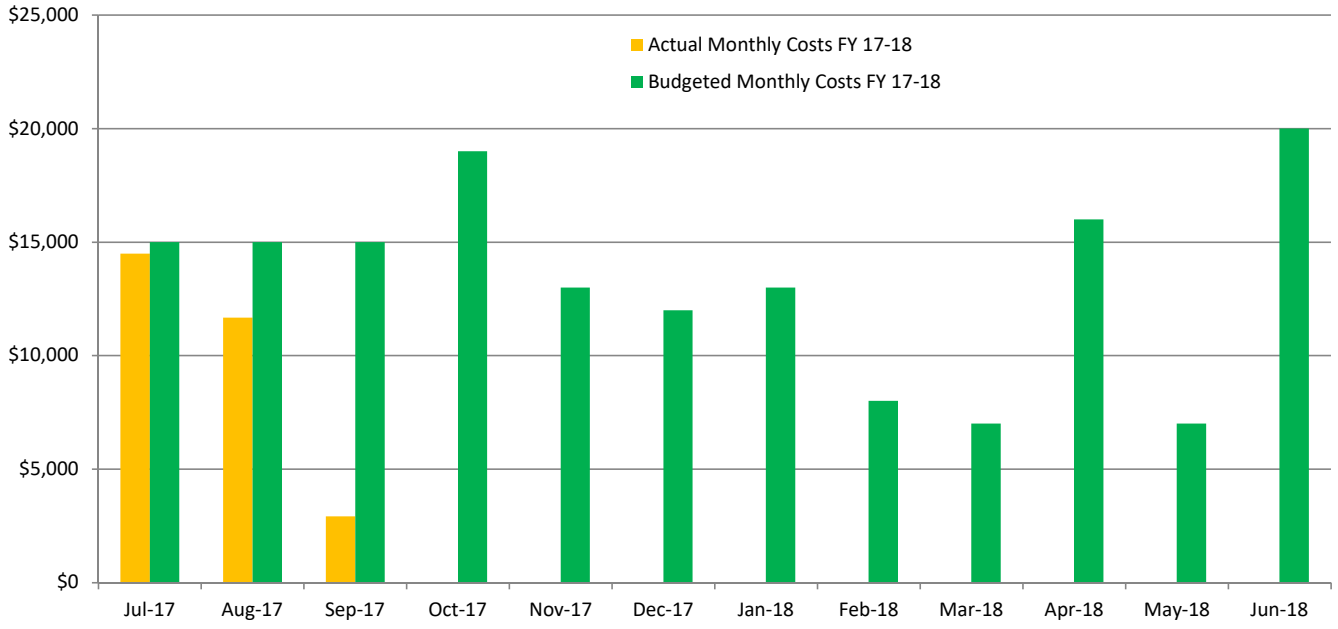


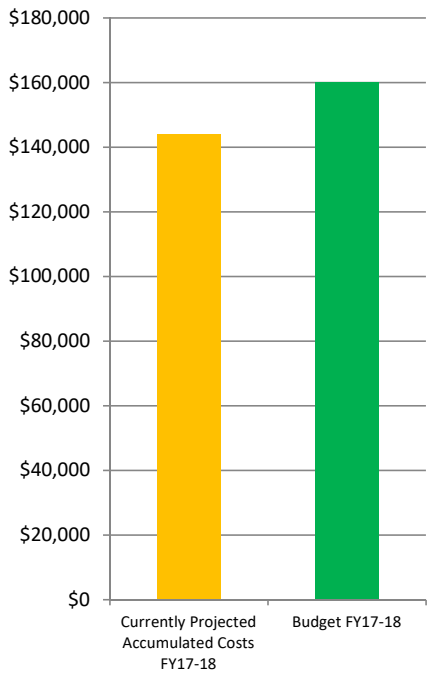


	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Actual Monthly Costs FY 17-18	$226,662	$180,959	$185,978									
Budgeted Monthly Costs FY 17-18	$140,000	$146,000	$150,000	$131,000	$111,000	$100,000	$100,000	$100,000	$100,000	$128,000	$153,000	$125,000

Currently Projected Accumulated Costs FY17-18	$1,627,599
Budget FY17-18	$1,484,000
Currently Projected Under(+)/Over (-) Budget	-$143,599

Odor Control (5018) Costs

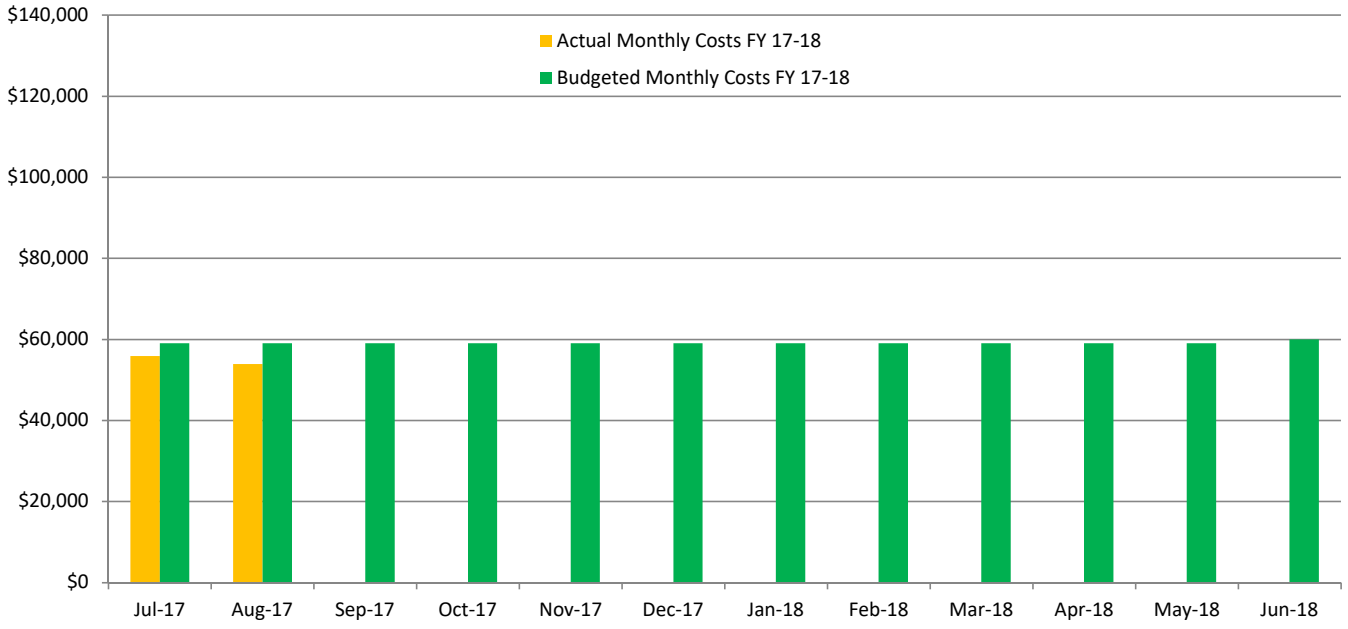


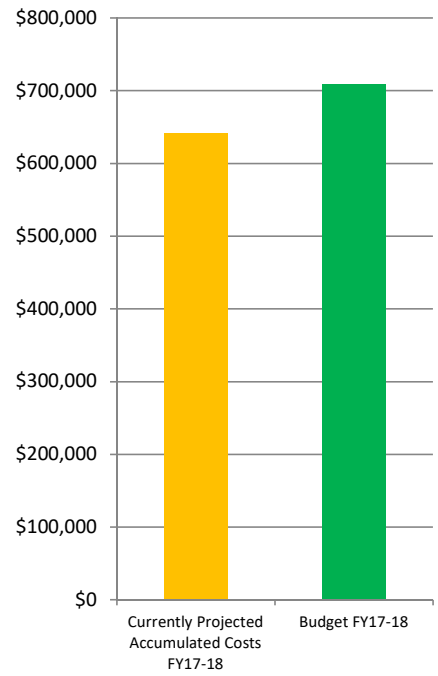


	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Actual Monthly Costs FY 17-18	$14,494	$11,669	$2,918									
Budgeted Monthly Costs FY 17-18	$15,000	$15,000	$15,000	$19,000	$13,000	$12,000	$13,000	$8,000	$7,000	$16,000	$7,000	$20,000

Currently Projected Accumulated Costs FY17-18	$144,082
Budget FY17-18	$160,000
Currently Projected Under(+)/Over (-) Budget	$15,918

Polymer (5016) Costs

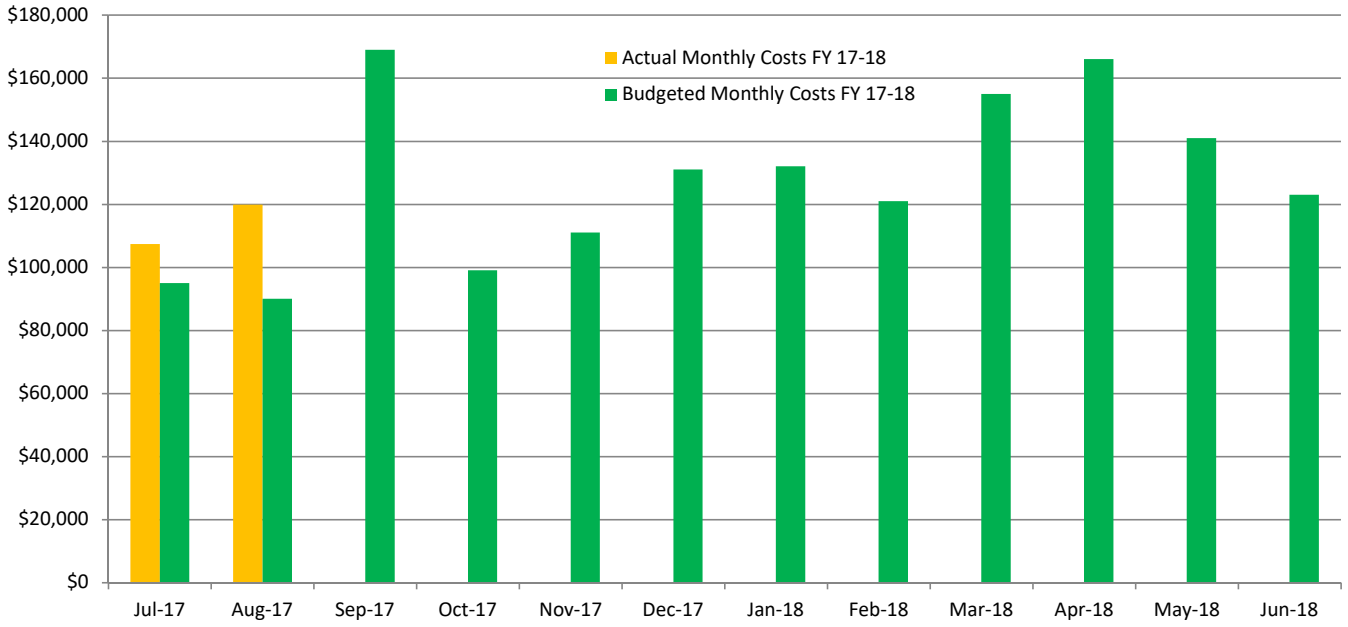


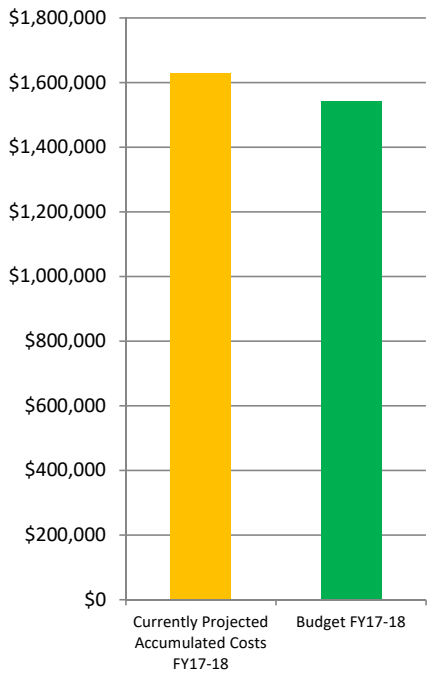


	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Actual Monthly Costs FY 17-18	$55,911	$53,886	$0									
Budgeted Monthly Costs FY 17-18	$59,000	$59,000	$59,000	$59,000	$59,000	$59,000	$59,000	$59,000	$59,000	$59,000	$59,000	$60,000

Currently Projected Accumulated Costs FY17-18	$641,797
Budget FY17-18	$709,000
Currently Projected Under(+)/Over (-) Budget	$67,203

Biosolids (5078/21-B) Costs

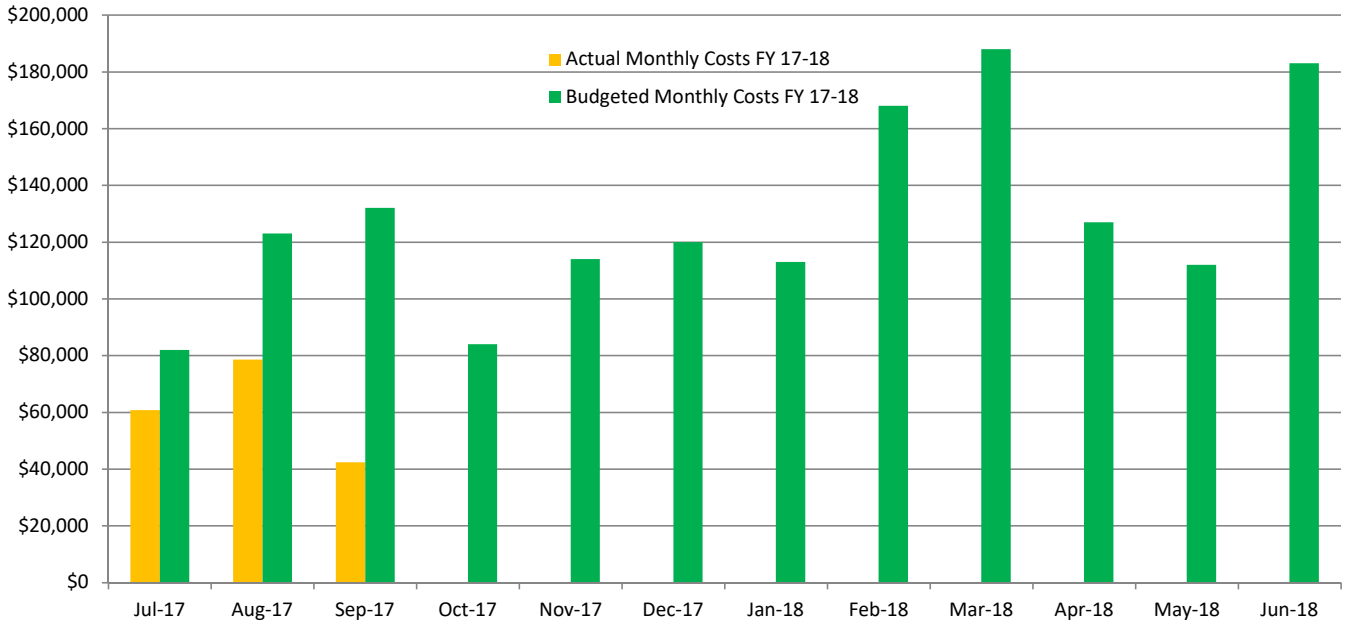


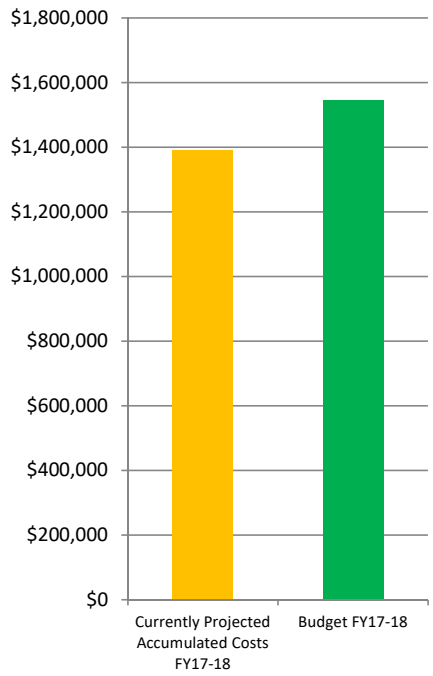


	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18		
Actual Monthly Costs FY 17-18	$107,410	$119,836											Currently Projected Accumulated Costs FY17-18	$1,626,856
Budgeted Monthly Costs FY 17-18	$95,000	$90,000	$169,000	$99,000	$111,000	$131,000	$132,000	$121,000	$155,000	$166,000	$141,000	$123,000	Budget FY17-18	$1,541,000
													Currently Projected Under(+)/Over (-) Budget	-$85,856

(1) September not posted.

Maintenance Repair (5086 to 5089) Costs

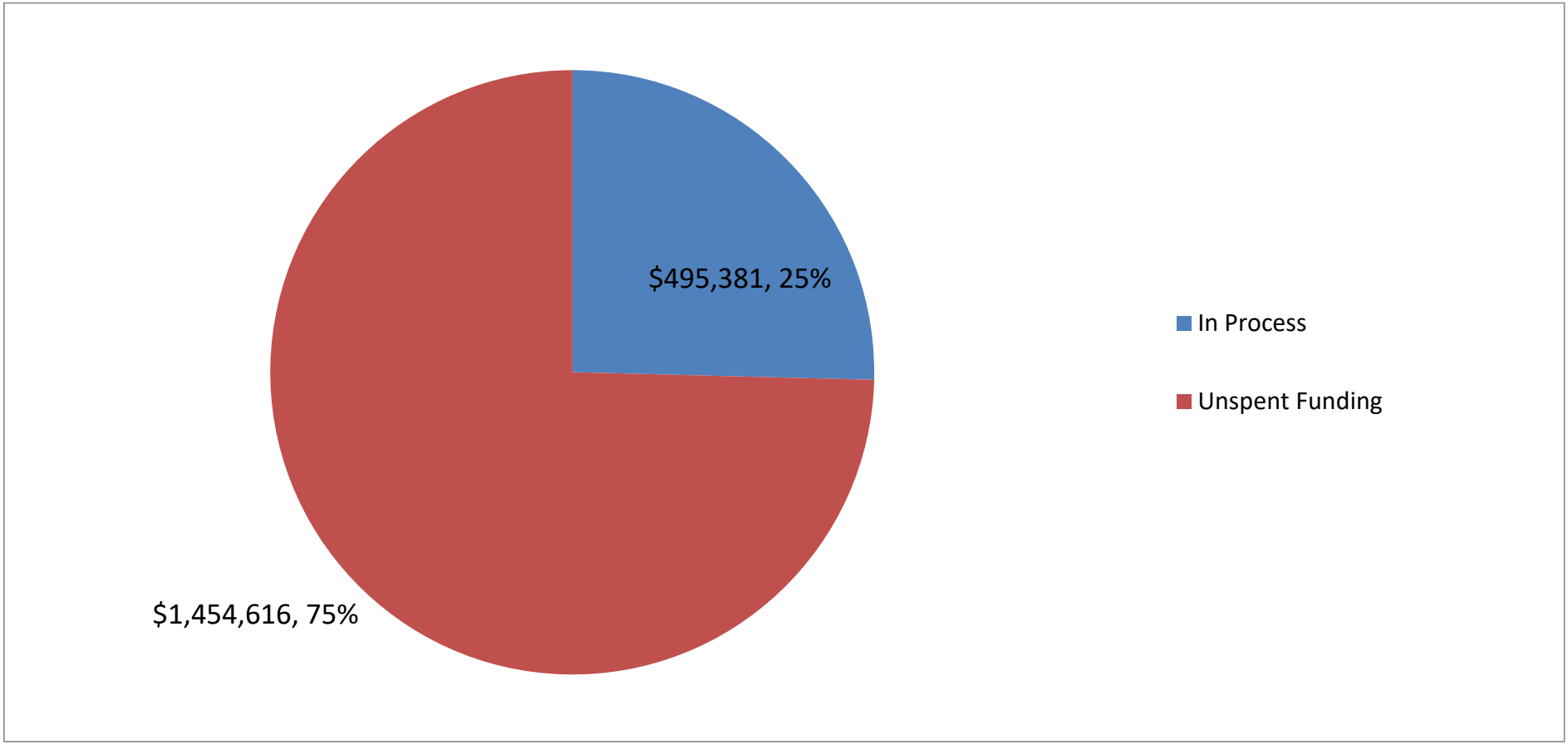




	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Actual Monthly Costs FY 17-18	$60,740	$78,613	$42,409									
Budgeted Monthly Costs FY 17-18	$82,000	$123,000	$132,000	$84,000	$114,000	$120,000	$113,000	$168,000	$188,000	$127,000	$112,000	$183,000

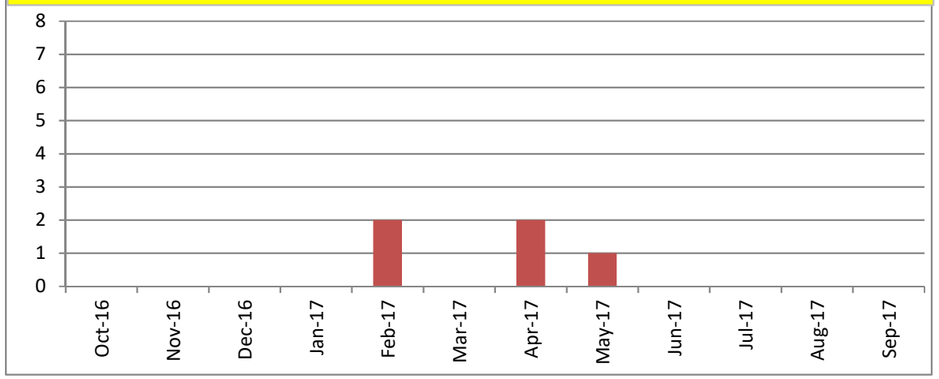
Currently Projected Accumulated Costs FY17-18	$1,390,763
Budget FY17-18	$1,546,000
Currently Projected Under(+)/Over (-) Budget	$155,237

Small Internal Capital Costs



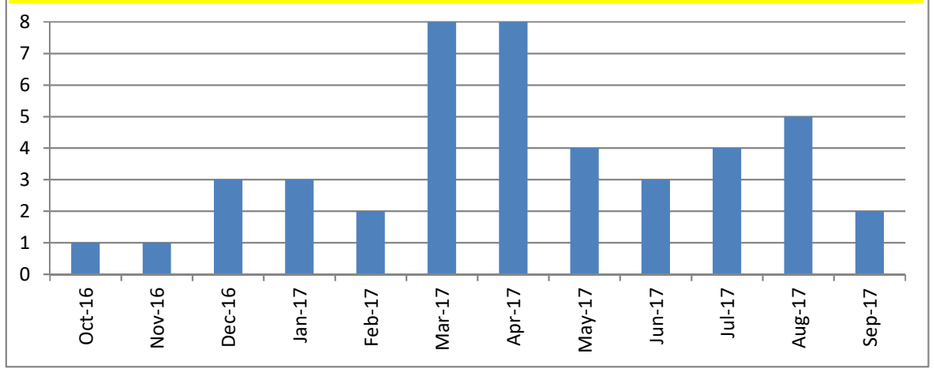
SAFETY UPDATE - OCTOBER 11, 2017

OSHA RECORDABLE INJURIES



	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
OSHA RECORDABLE INJURIES	0	0	0	0	2	0	2	1	0	0	0	0

NEAR MISS REPORTS



	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17
NEAR MISS REPORTS	1	1	3	3	2	8	8	4	3	4	5	2

SAFETY TRAINING

TRAINING TOPIC	ATTENDANCE
September 2017 - Active Shooter and Wokplace Violence Training	90%
July/August 2017 - Spill Response Training (hands on training with use of ICS System)	100%
June 2016 and 2017 - Annual Confined Space Entry Rescue Refresher Training	100%
May 2017 - Annual Fire Extinguisher Training and Safety Culture Training	100%
April 2017 - Annual 8-Hour HAZWOPER Refresher	100%
March 2017 - Authorized User Fall Protection Training and Bi-Annual CPR/First Aid/AED Training	100%
January 2017 - Confined Space Rescue Practice/Training and Lockout/Tagout Training	100%
December 2016 - Annual Defensive Driving and DUIs/Distracted Driver Training (with CHP)	100%
November 2016 - Annual Hearing Testing	100%
October 2016 - Confined Space Awareness/Entry Rescue Training and Forklift Training (for newer employees)	100%
May 2016 - Fire Extinguisher Training, Entry Level NIMS/ICS Training, and Heat Illness Training	100%
February 2016 - Biomechanics and Ergonomics (with CSRMA) and Bloodborne Pathogen Training	100%
Oct 2015 and Jan 2016 - Initial Confined Space Entry Rescue (Two 3-day training sessions)	100%
November 2015 - Laboratory Safety (for Laboratory Employees)	100%
September 2015 - Pre-Storm Workshop/Training, Arc Flash Training, and Forklift Training (Biennial)	100%
August 2015 - Fire Prevention for Water Utility Field Staff and Disaster Cost Recovery Training	100%
July 2015 - Initiate additional NIMS/ICS Training and Water and Power Resiliency Workshop	Ongoing
June 2015 - Initial Confined Space Awarness and Non-Entry Rescue Training	100%
March 2015 - Initiate Target Solutions Online Safety Training	Ongoing training includes topics not covered during classroom-based safety training

Beach / Ocean Monitoring Report

ALISO CREEK OCEAN OUTFALL MONITORING REPORT

September 2017

	IRWD LOS ALISOS WRP				EL TORO WRP				SOCWA REGIONAL PLANT				SOCWA COASTAL PLANT				IRWD IDP	IRWD SGU	SCWD ACWRF	ACOO	Rain
	FLOW	TSS	cBOD	SS	FLOW	TSS	cBOD	SS	FLOW	TSS	cBOD	SS	FLOW	TSS	cBOD	SS	FLOW	FLOW	FLOW	FLOW	Fall
DATE	MGD	mg/L	mg/L	ml/L	MGD	mg/L	mg/L	ml/L	MGD	mg/L	mg/L	ml/L	MGD	mg/L	mg/L	ml/L	MGD	MGD	MGD	MGD	inches
09/01/17	No Flow				1.299	11.4	2.5	0.5	1.140	6.9	8.0	0.1	2.654	4.8	5.0	0.1	0.729	0.563	0.107	6.492	0.00
09/02/17	No Flow				1.211	9.8	1.9	0.9	0.490				1.970				0.853	0.599	0.103	5.226	0.00
09/03/17	No Flow				0.874	15.2	1.7	<0.1	0.530	5.5	7.0	<0.1	2.278	2.1	7.0		0.574	0.473	0.097	4.826	0.00
09/04/17	No Flow				1.674	7.8	3.5	<0.1	1.800	5.9	7.0	<0.1	3.016	9.1	7.0	<0.1	0.419	0.426	0.104	7.439	0.00
09/05/17	No Flow				2.362	10.6	3.6	<0.1	1.290	8.5	6.0	<0.1	2.496	12.4	9.0	0.1	0.418	0.425	0.094	7.085	0.00
09/06/17	No Flow				2.864	10.6	2.7	<0.1	0.680	5.7	5.0	0.2	1.733	10.2	6.0	0.1	0.691	0.425	0.092	6.485	0.00
09/07/17	No Flow				2.261	9.4	2.9	<0.1	0.790	4.1	5.0	0.1	1.807	8.5	7.0	0.1	0.851	0.424	0.111	6.244	0.00
09/08/17	No Flow				1.845	10.0	4.2	0.1	0.740	5.4	4.0	0.1	2.531	5.5	6.0	0.1	0.849	0.578	0.083	6.626	0.00
09/09/17	No Flow				2.481	11.4	6.0	<0.1	0.120				2.434				0.849	0.612	0.109	6.605	0.00
09/10/17	No Flow				2.616	8.8	6.6	<0.1	1.490	3.9	6.0	<0.1	2.248	3.0	7.0		0.849	0.609	0.085	7.897	0.00
09/11/17	No Flow				2.539	19.6	8.5	<0.1	2.720	6.9	6.0	0.1	2.574	4.8	6.0	0.1	0.850	0.608	0.098	9.389	0.00
09/12/17	No Flow				1.125	29.2	11.4	<0.1	0.730	4.1	5.0	0.1	2.296	4.2	4.0	0.1	0.849	0.607	0.101	5.708	0.00
09/13/17	No Flow				1.959	23.4	7.8	<0.1	0.220	5.2	3.0	0.1	2.161	3.4	4.0	0.1	0.711	0.601	0.108	5.760	0.00
09/14/17	No Flow				1.986	37.0	13.4	<0.1	0.290	3.7	<2.0	0.4	1.667	1.8	4.0	0.1	0.849	0.574	0.101	5.467	0.00
09/15/17	No Flow				1.578	14.2	4.8	1.0	0.450	2.6	3.0	<0.1	2.127	7.0	9.0	<0.1	0.849	0.595	0.105	5.704	0.00
09/16/17	No Flow				1.894	15.6	6.4	0.3	0.100				2.312				0.848	0.588	0.104	5.846	0.00
09/17/17	No Flow				2.928	25.0	8.7	0.2	2.050	6.1	5.0	0.1	2.370	6.8	7.0		0.848	0.575	0.096	8.867	0.00
09/18/17	No Flow				2.155	15.4	6.8	1.0	3.670	8.2	7.0	<0.1	2.243	13.3		<0.1	0.849	0.573	0.099	9.589	0.00
09/19/17	No Flow				2.279	19.6	7.3	0.1	1.300	6.8	4.0	0.1	2.350	5.1	6.0	<0.1	0.848	0.608	0.121	7.506	0.00
09/20/17	No Flow				1.787	31.6	10.6	0.7	0.590	5.6	3.0	0.1	2.175	2.9	6.0	<0.1	0.847	0.607	0.030	6.036	0.00
09/21/17	No Flow				2.023	13.8	6.0	0.9	1.010	4.0	3.0	0.1	1.843	3.5	6.0	<0.1	0.848	0.603	0.114	6.441	0.01
09/22/17	No Flow				1.865	13.2	9.6	0.5	2.240	3.6	3.0	0.1	2.613	4.3	6.0	0.1	0.848	0.601	0.061	8.228	0.00
09/23/17	No Flow				2.642	22.0	8.3	0.4	3.270				2.616				0.848	0.597	0.102	10.075	0.00
09/24/17	No Flow				2.649	13.2	5.5	1.0	3.970	6.9	5.0	<0.1	2.627	4.7	7.0		0.848	0.529	0.085	10.708	0.00
09/25/17	No Flow				1.681	10.8	5.6	0.2	2.860	4.4	3.0	<0.1	3.608	4.8	12.0	0.1	0.848	0.602	0.008	9.607	0.00
09/26/17	No Flow				1.412	30.4	12.1	<0.1	1.230	3.7	3.0	<0.1	2.540	2.8	4.0	<0.1	0.821	0.600	0.092	6.695	0.00
09/27/17	No Flow				1.530	13.0	6.1	2.5	0.660	4.6	3.0	0.1	2.446	4.2	7.0	0.1	0.418	0.599	0.102	5.755	0.00
09/28/17	No Flow				2.051	12.0	4.7	0.4	0.110	3.5	4.0	0.1	2.642	4.3	6.0	<0.1	0.741	0.597	0.107	6.248	0.00
09/29/17	No Flow				1.588	22.0	6.1	0.2	0.250	2.5	2.0	0.1	2.773	5.9	7.0	0.1	0.848	0.595	0.092	6.146	0.00
09/30/17	No Flow				1.628	15.8	9.5	0.2	0.570				2.775				0.849	0.206	0.103	6.131	0.00
AVG	No Flow				1.960	16.7	6.5	<0.4	1.245	5.1	4.5	<0.1	2.398	5.6	6.5	<0.1	0.778	0.553	0.094	7.028	
TOTAL	No Flow				58.79				37.36				71.93				23.35	16.60	2.814	210.83	0.01

Unified Beach Monitoring #1

South Orange County Wastewater Authority-Aliso Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1 2017
SAMPLE SOURCE: Surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: High Tide 0946
Weather: Clear
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F	Water Condition	Water Outlet	Birds
S3	09/06/17	740	9	<20	<3	None	None	None	None	Green	73	Clear		
S4	09/06/17	1010	9	<20	3	None	None	None	None	Green		Clear		
S5	09/06/17	945	<20	9	2	None	None	None	None	Green		Clear		
S6	09/06/17	935	9	<20	<3	None	None	None	None	Green		Clear		
WEST	09/06/17	930	9	<20	<3	None	None	None	None	Green		Clear		
S7	09/06/17	925	<20	<20	<3	None	None	None	None	Green		Clear		
S8	09/06/17	920	<20	<20	<3	None	None	None	None	Blue		Clear		
S9	09/06/17	905	9	<20	<3	None	None	None	None	Green		Clear		
ACM1	09/06/17	900	20	<20	2	None	None	None	None	Green		Clear		
S10	09/06/17	830	<20	<20	<3	None	None	None	None	Green		Clear		
S11	09/06/17	825	9	<20	2	None	None	None	None	Green		Clear		
S12	09/06/17	820	30	20	<4	None	None	None	None	Green		Clear		

RECREATIONAL WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exce 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

Unified Beach Monitoring #2

South Orange County Wastewater Authority-Aliso Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: Low Tide 0906
Weather: Clear
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F	Water Condition	Water Outlet	Birds
S3	09/13/17	925	<20	<20	<3	None	None	None	None	Green	71	Clear		
S4	09/13/17	1135	20	9	<3	None	None	None	None	Green		Clear		
S5	09/13/17	1115	<20	<20	2	None	None	None	None	Green		Clear		
S6	09/13/17	1050	<20	<20	<3	None	None	None	None	Green		Clear		
WEST	09/13/17	1045	9	<20	<3	None	None	None	None	Green		Clear		
S7	09/13/17	1040	<20	<20	<3	None	None	None	None	Green		Clear		
S8	09/13/17	1035	<20	<20	<3	None	None	None	None	Blue		Clear		
S9	09/13/17	1020	<20	<20	<3	None	None	None	None	Green		Clear		
ACM1	09/13/17	1015	<20	<20	<3	None	None	None	None	Green		Clear		
S10	09/13/17	955	<20	<20	<3	None	None	None	None	Green		Clear		
S11	09/13/17	950	9	<20	<3	None	None	None	None	Green		Clear		
S12	09/13/17	940	<10	<10	<4	None	None	None	None	Green		Clear		

RECEIVING WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exceed 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

Unified Beach Monitoring #3

South Orange County Wastewater Authority-Aliso Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: HIgh Tide 0947
Weather: Overcast
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F)	Water Condition	Water Outlet	Birds
S3	09/20/17	0935	<20	<20	<3	None	None	None	None	Green	69	Clear		
S4	09/20/17	0920	<20	<20	5	None	None	None	None	Green		Clear		
S5	09/20/17	0910	<20	40	<3	None	None	None	None	Green		Clear		
S6	09/20/17	0855	10	<20	<3	None	None	None	None	Green		Clear		
WEST	09/20/17	0850	10	10	2	None	None	None	None	Green		Slightly Turbid		
S7	09/20/17	0845	<20	<20	<3	None	None	None	None	Green		Slightly Turbid		
S8	09/20/17	0840	<20	<20	7	None	None	None	None	Green		Slightly Turbid		
S9	09/20/17	0825	<20	<20	5	None	None	None	None	Green	67	Slightly Turbid		30
ACM1	09/20/17	0830	5	5	4	None	None	None	None	Green		Slightly Turbid		
S10	09/20/17	0820	<20	10	7	None	None	None	None	Green		Slightly Turbid		
S11	09/20/17	0815	<20	30	<3	None	None	None	None	Green		Slightly Turbid		
S12	09/20/17	0810	20	30	<3	None	None	None	None	Green		Slightly Turbid		

RECEIVING WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exce 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

Unified Beach Monitoring #4

South Orange County Wastewater Authority-Aliso Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: Low Tide 0759
Weather: Clear
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F)	Water Condition	Water Outlet	Birds
S3	09/27/17	813	<20	<20	<3	None	None	None	None	Green	67	Slightly Turbid		
S4	09/27/17	833	<20	9	<3	None	None	None	None	Green		Slightly Turbid		2
S5	09/27/17	1119	60	<20	<3	None	None	None	None	Green		Clear		
S6	09/27/17	901	9	<20	<3	None	None	None	None	Green		Slightly Turbid		
WEST	09/27/17	904	<20	<20	<3	None	None	None	None	Green	67	Slightly Turbid		
S7	09/27/17	905	<20	<20	<3	None	None	None	None	Green		Slightly Turbid		
S8	09/27/17	1040	<20	<20	<3	None	None	None	None	Green		Clear		
S9	09/27/17	1037	<20	<20	<3	None	None	None	None	Green	67	Slightly Turbid		
ACM1	09/27/17	1026	20	<10	<4	None	None	None	None	Green		Slightly Turbid		
S10	09/27/17	947	<20	<20	<3	None	None	None	None	Green	67	Slightly Turbid	Flowing	
S11	09/27/17	943	<20	<20	<3	None	None	None	None	Green		Slightly Turbid		1
S12	09/27/17	1008	9	<20	<3	None	None	None	None	Green		Clear		

RECEIVING WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exceed 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

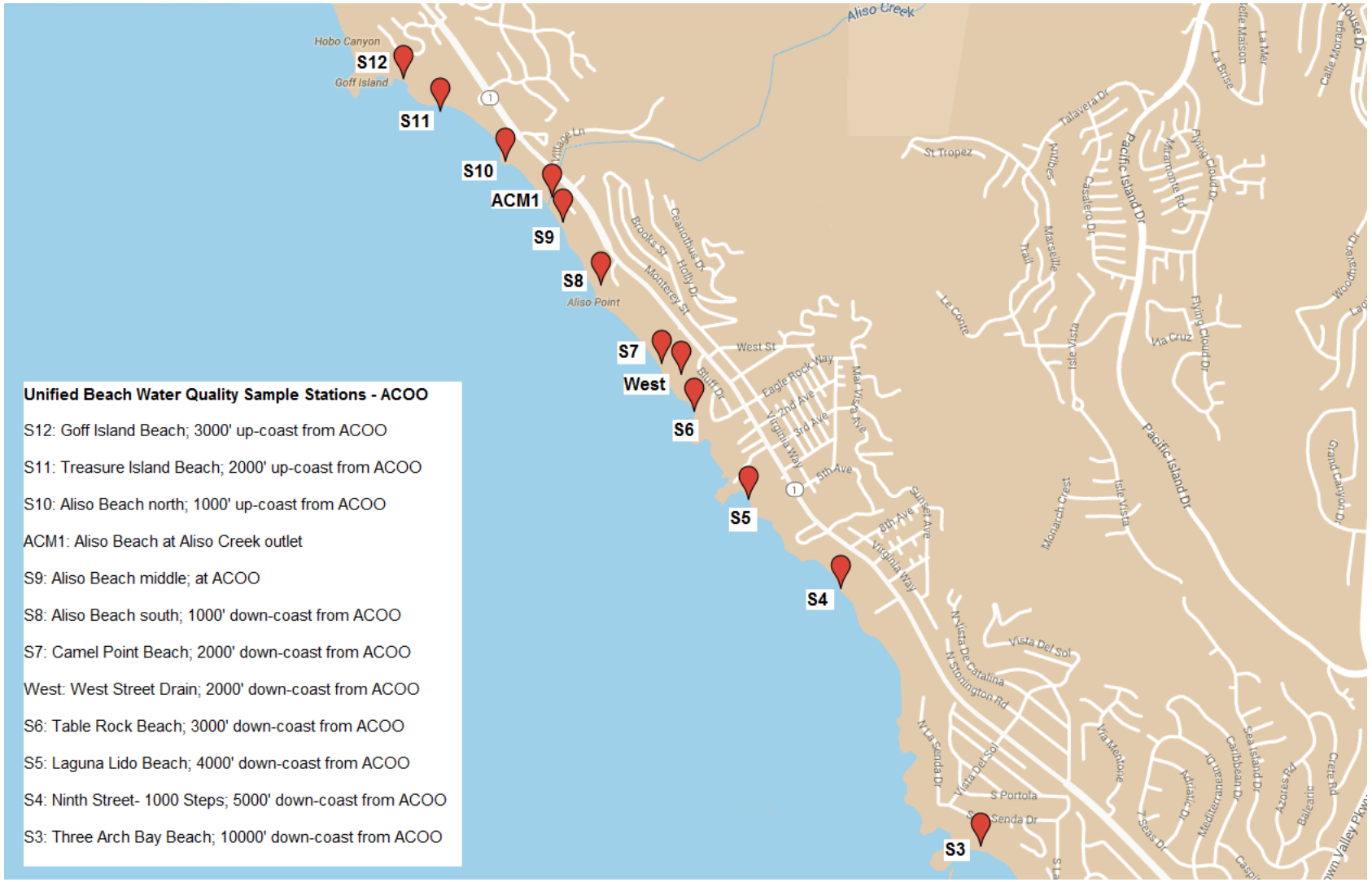
Aliso Creek Ocean Outfall

Unified Beach Water Quality Monitoring Stations

SOCWA's NPDES discharge permit requires participation in the South Orange County Unified Beach Water Quality Monitoring Program. The monitoring stations below are tested by SOCWA at least once per week for Total and Fecal Coliform and Enterococcus Bacteria.

Station	Location
S3	Three Arch Bay Beach; 10,000' down-coast from ACOO
S4	Ninth Street-1000 Steps; 5,000' down-coast from ACOO
S5	Laguna Lido Beach; 4,000 down-coast from ACOO
West	West Street Drain; 2,000' down-coast from ACOO
S6	Table Rock Beach; 3,000' down-coast from ACOO
S7	Camel Point Beach; 2,000' down-coast from ACOO
S8	Aliso Beach south; 1,000' down-coast from ACOO
S9	Aliso Beach middle; at ACOO
ACM1	Aliso Beach at Aliso Creek Outlet
S10	Aliso Beach north; 1,000' up-coast of ACOO
S11	Treasure Island Beach; 2,000' up-coast of ACOO
S12	Goff Island Beach; 3,000' up-coast of ACOO

Unified Beach Water Quality Sample Station Map – Aliso Creek Ocean Outfall



MONITORING REPORT

Off Shore Stations

South Orange County Wastewater Authority

DISCHARGE: Aliso Creek Ocean Outfall
REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water, nearshore and offshore
EXACT SAMPLE POINTS: As specified in permit
SAMPLES COLLECTED BY: Seaventures/SOCWA staff
SAMPLES ANALYZED BY: SOCWA Lab

REPORT FREQUENCY: Monthly

SAMPLING FREQUENCY: Monthly
TYPE OF SAMPLE: Grab

Comments: High Tide 0947

Sta No.	Sample Depth	Sample Date	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Sample Time	Oil & Grease	Sewage Debris
A-1	Surface	09/20/17	<2	<2	<2	810	0	0
A-1	Mid depth	09/20/17	<10	<10	<10			
A-2	Surface	09/20/17	<2	<2	<2	758	0	0
A-2	Mid depth	09/20/17	<10	<10	<10			
A-3	Surface	09/20/17	2	<2	<2	802	0	0
A-3	Mid depth	09/20/17	<10	<10	<10			
A-4	Surface	09/20/17	2	<2	<2	819	0	0
A-4	Mid depth	09/20/17	<10	<10	<10			
A-5	Surface	09/20/17	<2	<2	<2	807	0	0
A-5	Mid depth	09/20/17	<10	<10	<10			
B-1	Surface	09/20/17	<2	<2	<2	747	0	0
B-1	Mid depth	09/20/17	<10	<10	<10			
B-2	Surface	09/20/17	<2	<2	<2	822	0	0
B-2	Mid depth	09/20/17	<10	<10	<10			
N1	Surface	09/20/17	<2	<2	<2	839	0	0
N2	Surface	09/20/17	2	<2	<2	838	0	0
N3	Surface	09/20/17	<2	<2	<2	837	0	0
N4	Surface	09/20/17	<2	<2	<2	835	0	0
N5	Surface	09/20/17	<2	<2	<2	833	0	0
N6	Surface	09/20/17	2	<2	<2	832	0	0
N7	Surface	09/20/17	<2	<2	<2	829	0	0

0 - None
1 - Mild
2 - Moderate
3 - Severe

REQUIREMENT: (1) Floating particulates and grease and oil shall not be visible. (2) The discharge of wasteshall not cause aesthetically undesireable discoloration of the ocean surface.

Compliance Summary Report
Aliso Creek Ocean Outfall 2017

ACOO Permit Order No. R9-2012-0013							
Agency - Facility	**Violation Date**	**Constituent**	**Effluent Limit Violation**	**Units**	**Permit Limit**	**Reported Value**	**Potential Fine**
There were no water quality violations during this reporting period.							

SOCWA and MEMBER AGENCY FACILITIES
ACOO Spill / Overflow Report Log - 2017
Order No. R9-2012-0013 ~ NPDES Permit No. CA0107611

Reporting Agency	Responsible Agency	Estimated Volume (Gallons)	Type of Discharge	Location/Comments	Receiving Waters	Date Reported To State	Date Resolved
SOCWA	Regional Treatment Plant	60	Tertiary Effluent	Broken 3WHP 1" reclaimed water line due to a broken elbow. Spill was contained and pumped back to the plant.	None	N/A	1/11/2017
SOCWA	Regional Treatment Plant	124,320	Secondary Effluent	One of two applied reclaimed water effluent pumps failed. These pumps push water from the reclaimed water effluent pond to the reclaimed water reservoirs. The single pump could not keep up with the demand thus leading to a spill from the pond. All flows were diverted to the outfall while the applied pump was repaired. Sandbags were placed around the overflow in an effort to contain secondary water in the pond.	Sulphur Creek Aliso Creek Pacific Ocean	1/23/2017	1/22/2017
SOCWA	Pacific Hydrotech	100	Untreated Sewage	Pacific Hydrotech and Herc Rental has a sewer bypass in operation at RTP. One of the bypass pumps did not start. One of their employees noticed the spill and started the pump. The spill was contained in the area and internal drains routed the flow to the influent Junction Structure.	None	7/11/2017	7/11/2017
SOCWA	Pacific Hydrotech	225	Untreated Sewage	Pacific Hydrotech and Herc Rental has a sewer bypass in operation at RTP. One of the bypass pumps got a rag ball stuck in the pump One of their employees noticed the spill and remove rags form suction of the pump. The spill was contained in the area and internal drains routed the flow to the influent Junction Structure.	None	7/14/2017	7/14/2017
SOCWA	Pacific Hydrotech	300	Untreated Sewage	Pacific Hydrotech and Herc Rental has a sewer bypass in operation at RTP. One of the bypass pumps got a rag ball stuck in the pump One of their employees noticed the spill and remove rags form suction of the pump. The spill was contained in the area and internal drains routed the flow to the influent Junction Structure.	None	07-17-17	07-17-17
SOCWA	Regional Treatment Plant	7,575	Untreated Sewage	The control power on Barscreen 1 blew a 30 amp fuse making the barscreen inoperable. Spill was contained treated in the plant.	None	7/18/2017	7/18/2017
SOCWA	Regional Treatment Plant	200	Untreated Sewage	The control power fuse blew, preventing operation of Bar Screen 1. A pacific hydrotech employee on site for the bypass found the spill and called the standby operator. The standby operator called the CPO.	None	7/18/2017	7/19/2017

SAN JUAN CREEK OCEAN OUTFALL MONITORING REPORT

September 2017

	J.B. LATHAM FACILITY				SAN CLEMENTE WRP				SMWD CHIQUITA WRP				3-A PLANT				CSJC Desalter	SCWD Desalter	SJCOO	Rain
	FLOW	TSS	cBOD	SS	FLOW	TSS	cBOD	SS	FLOW	TSS	cBOD	SS	FLOW	TSS	cBOD	SS	FLOW	FLOW	FLOW	Fall
DATE	MGD	mg/L	mg/L	ml/L	MGD	mg/L	mg/L	ml/L	MGD	mg/L	mg/L	ml/L	MGD	mg/L	mg/L	ml/L	MGD	MGD	MGD	inches
09/01/17	6.570	6.0	4.1	0.1	1.366	8.6	5.0	<0.1	0.280	18.0	9.8	0.1	0.196	3.6	4.0	0.1	0.487	0.159	9.050	0.00
09/02/17	6.590				1.609				0.170				0.092				0.505	0.164	9.210	0.00
09/03/17	6.750				3.200				1.430				0.217				0.522	0.159	11.120	0.00
09/04/17	6.620	3.9	4.7	<0.1	1.803	7.6	5.0	<0.1	2.360	11.0	15.8	<0.1	0.180	3.0	14.0	<0.1	0.551	0.160	11.960	0.00
09/05/17	7.040	5.9	5.9	0.1	2.736	9.2	5.0	<0.1	1.650	8.6	16.0	0.1	0.412	2.7	14.0	<0.1	0.570	0.164	13.320	0.00
09/06/17	6.610	8.2	5.6	0.5	1.692	8.3	5.0	<0.1	1.160	11.4	9.0	0.1	0.132	3.1	3.0	<0.1	0.514	0.159	11.090	0.00
09/07/17	6.630	5.4	5.8	0.1	1.351	8.5	5.0	<0.1	0.120	8.0	5.9	<0.1	0.156	4.9	4.0	<0.1	0.532	0.165	10.060	0.00
09/08/17	6.800	5.4	6.4	0.2	1.052	7.7	4.0	<0.1	0.590	8.4	7.0	0.1	0.098	3.6	5.0	<0.1	0.531	0.160	9.120	0.00
09/09/17	6.540				1.342				0.500				0.020				0.492	0.159	9.250	0.00
09/10/17	6.740	7.9	8.2		1.624				2.060				0.138				0.499	0.164	9.820	0.00
09/11/17	6.560	5.0	5.3	0.1	3.353	8.4	5.0	<0.1	1.980	17.3	14.5	0.6	0.798	4.1	13.0	<0.1	0.497	0.160	12.740	0.00
09/12/17	6.960	6.4	5.5	0.1	1.523	7.3	5.0	<0.1	0.810	12.8	13.0	<0.1	0.074	2.4	11.0	<0.1	0.508	0.040	11.810	0.00
09/13/17	6.680	3.9	3.3	0.2	1.358	9.6	5.0	<0.1	0.360	9.2	10.5	<0.1	0.083	4.1	6.0	<0.1	0.515	No Flow	10.060	0.00
09/14/17	6.440	5.0	3.3	<0.1	1.007	8.8	5.0	<0.1	0.330	6.0	6.3	<0.1	0.035	3.2	7.0	<0.1	0.522	No Flow	8.910	0.00
09/15/17	6.610	5.5	3.3	0.1	1.378				0.260	12.0	8.6	<0.1	0.055	3.2	7.0	<0.1	0.541	No Flow	9.090	0.00
09/16/17	6.440				1.351	7.6	4.0	<0.1	1.110				0.024				0.555	No Flow	8.790	0.00
09/17/17	6.680	4.4	4.6		1.593				2.370				0.121				0.575	No Flow	10.180	0.00
09/18/17	6.820	6.6	6.8	<0.1	2.570	7.2	6.0	<0.1	1.180	7.0	13.4	<0.1	0.169	3.7	12.0	<0.1	0.571	No Flow	12.730	0.00
09/19/17	6.490	5.7	6.1	<0.1	1.560	11.4	6.0	<0.1	0.490	7.2	12.8	0.1	0.086	3.7	11.0	<0.1	0.565	No Flow	10.340	0.00
09/20/17	6.150	5.6	11.1	0.1	2.095	8.8	5.0	<0.1	0.930	5.2	5.6	<0.1	0.238	4.3	5.0	<0.1	0.568	No Flow	9.300	0.00
09/21/17	6.220	5.8	10.3	<0.1	1.341	10.8	6.0	<0.1	2.210	6.0	6.0	<0.1	0.189	3.8	5.0	<0.1	0.571	No Flow	9.860	0.01
09/22/17	6.310	7.0	10.0	0.2	1.025	12.6	6.0	<0.1	2.910	5.3	4.4	0.1	0.177	3.7	5.0	<0.1	0.398	No Flow	11.580	0.00
09/23/17	6.250				1.193				3.190				0.129				No Flow	No Flow	11.190	0.00
09/24/17	6.100	6.8	9.8		1.560				3.870				0.359				No Flow	No Flow	11.880	0.00
09/25/17	6.180	8.7	8.5	0.1	2.200	7.5	5.0	<0.1	1.870	8.8	13.5	<0.1	0.403	5.5	12.0	0.8	No Flow	No Flow	12.910	0.00
09/26/17	5.830	9.8	8.2	<0.1	1.361	8.7	5.0	<0.1	0.610	5.8	14.2	<0.1	0.211	4.1	13.0	0.1	No Flow	No Flow	9.740	0.00
09/27/17	6.350	7.0	8.1	0.2	1.361	8.1	5.0	<0.1	0.370	17.3	12.8	0.1	0.323	3.8	5.0	<0.1	0.171	No Flow	9.070	0.00
09/28/17	6.070	5.7	7.3	<0.1	1.514	7.9	5.0	<0.1	0.330	10.4	14.9	<0.1	0.201	3.8	5.0	<0.1	0.497	No Flow	8.470	0.00
09/29/17	6.660	6.8	6.8	0.1	1.256	7.1	4.0	<0.1	0.090	7.2	7.7	<0.1	0.172	4.0	6.0	<0.1	0.515	No Flow	8.880	0.00
09/30/17	6.510				1.423				0.080				0.215				0.503	No Flow	8.470	0.00
AVG	6.507	6.2	6.6	<0.1	1.660	8.7	5.0	<0.1	1.189	9.7	10.6	<0.1	0.190	3.7	8.0	<0.1	0.443	0.060	10.333	
TOTAL	195.200				49.797				35.670				5.703				13.275	1.813	310.000	0.01

Unified Beach Monitoring #1

South Orange County Wastewater Authority-San Juan Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: High Tide 0925
Weather: Clear
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F	Water Condition	Water Outlet	Birds
S0	09/05/17	900	20	20	5	None	None	None	None	Green	74	Slightly Turbid		
S1	09/05/17	910	40	<40	4	None	None	None	None	Green		Slightly Turbid		
S2	09/05/17	805	20	<40	10	None	None	None	None	Green		Slightly Turbid		
DSB5	09/05/17	750	>=40	40	30	None	None	None	None	Green		Slightly Turbid		
S3	09/05/17	915	<40	<40	9	None	None	None	None	Green		Slightly Turbid		
DSB4	09/05/17	920	20	20	30	None	None	None	None	Green		Slightly Turbid		
S5	09/05/17	930	30	<30	3	None	None	None	None	Green		Slightly Turbid		
DSB1	09/05/17	940	<40	<40	2	None	None	None	None	Green		Slightly Turbid		
SJC1	09/05/17	850	<200	<200	9	None	None	None	None	Green		Slightly Turbid		

RECEIVING WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exceed 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

Unified Beach Monitoring #2

South Orange County Wastewater Authority-San Juan Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: High Tide 0600
Weather: Partly Cloudy
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F	Water Condition	Water Outlet	Birds
S0	09/14/17	0915	40	40	10	None	None	None	None	Green	68	Turbid		
S1	09/14/17	0925	20	40	20	None	None	None	None	Green		Turbid		
S2	09/14/17	0900	40	<40	2	None	None	None	None	Green		Turbid		
DSB5	09/14/17	0850	<40	20	7	None	None	None	None	Green		Turbid		
S3	09/14/17	0930	<40	50	50	None	None	None	None	Green		Turbid		
DSB4	09/14/17	0930	20	20	20	None	None	None	None	Green		Turbid		
S5	09/14/17	0935	90	20	2	None	None	None	None	Green		Turbid		
DSB1	09/14/17	0940	100	50	2	None	None	None	None	Green	66	Turbid		
C1	09/14/17	0915	<100	<100	10	None	None	None	None	Green		Turbid		

RECEIVING WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exceed 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

Unified Beach Monitoring #3

South Orange County Wastewater Authority-San Juan Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: High Tide 1017
Weather: Overcast
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F	Water Condition	Water Outlet	Birds
S0	09/21/17	825	<40	<40	2	None	None	None	None	Green	65	Turbid		
S1	09/21/17	831	<40	40	7	None	None	None	None	Green		Turbid		
S2	09/21/17	815	<40	<40	10	None	None	None	None	Green		Turbid		
DSB5	09/21/17	800	100	50	30	None	None	None	None	Green		Turbid		20
S3	09/21/17	835	<40	20	20	None	None	None	None	Green		Turbid		
DSB4	09/21/17	845	20	<40	120	None	None	None	None	Green	65	Turbid		
S5	09/21/17	855	<40	<40	10	None	None	None	None	Green		Turbid		
DSB1	09/21/17	907	<40	<40	10	None	None	None	None	Green		Turbid		
C1	09/21/17	830	<100	<100	<20	None	None	None	None	Green	65	Turbid		

RECEIVING WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exceed 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

Unified Beach Monitoring #4

South Orange County Wastewater Authority-San Juan Creek Ocean Outfall

REPORT FOR: September 2017
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water surf zone
TYPE OF SAMPLE: Grab

REPORT FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in Unified Monitoring Plan
SAMPLES COLLECTED BY: SOCWA Lab
SAMPLES ANALYZED BY: SOCWA Lab

Tidal Condition: Low Tide 0638
Weather: Clear
COMMENTS:

STA#	DATE	TIME	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Material of Sewage Origin Onshore	Material of Sewage Origin Offshore	Oil & Grease	Odor	Water Color	H20 Temp(F	Water Condition	Water Outlet	Birds
S0	09/26/17	950	<40	<40	<4	None	None	None	None	Green	67	Turbid		
S1	09/26/17	955	<40	<40	<4	None	None	None	None	Green		Turbid		
S2	09/26/17	938	<40	<40	<4	None	None	None	None	Green		Turbid		
DSB5	09/26/17	928	<40	20	<4	None	None	None	None	Green		Clear		
S3	09/26/17	1000	<40	<40	<4	None	None	None	None	Green		Turbid		
DSB4	09/26/17	1005	<40	<40	<4	None	None	None	None	Green	67	Turbid		
S5	09/26/17	1010	<40	<40	<4	None	None	None	None	Green		Turbid		
DSB1	09/26/17	1015	<40	<40	7	None	None	None	None	Green	67	Turbid		
C1	09/26/17	948	<100	<100	<20	None	None	None	None	Green		Turbid		

RECEIVING WATER LIMITATIONS:Single Sample Maximum - Total coliform density shall not exceed 10,000 per 100ml; Fecal coliform density shall not exceed 400 per 100ml; Enterococcus density shall not exceed 104 per 100ml.

San Juan Creek Ocean Outfall

Unified Beach Water Quality Monitoring Stations

SOCWA's NPDES discharge permit requires participation in the South Orange County Unified Beach Water Quality Monitoring Program. The monitoring stations below are tested by SOCWA SOCWA at least once per week for Total and Fecal Coliform and Enterococcus Bacteria.

Station	Location
DSB 5	Doheny Beach – North Creek Outlet 1500’ up-coast from SJCOO
S2	Doheny Beach- Midway between Jetty and San Juan Creek
SJC1	San Juan Creek Mouth – up-coast from SJCOO
S0	Doheny Beach at Outfall; surf line over SJCOO
S1	Doheny Beach Campground; 1,000’ down-coast from SJCOO
DSB 4	Doheny State Beach; 1,900’ down-coast from SJCOO
S3	South Day Use; 2000’ down-coast from SJCOO
S5	Doheny Beach near overpass; 3000’ down-coast from SJCOO
DSB 1	End of Doheny State Beach; 3500’ down-coast from SJCOO

Unified Beach Water Quality Sample Stations - SJCOO

DSB 5	Doheny Beach – North Creek Outlet 1500' up-coast from SJCOO
S2	Doheny Beach- Midway between Jetty and San Juan Creek
SJC1	San Juan Creek Mouth – up-coast from SJCOO
S0	Doheny Beach at Outfall; surf line over SJCOO
S1	Doheny Beach Campground; 1,000' down-coast from SJCOO
DSB 4	Doheny State Beach; 1,900' down-coast from SJCOO
S3	South Day Use; 2000' down-coast from SJCOO
S5	Doheny Beach near overpass; 3000' down-coast from SJCOO
DSB 1	End of Doheny State Beach; 3500' down-coast from SJCOO

MONITORING REPORT Offshore

South Orange County Wastewater Authority

DISCHARGE: San Juan Creek Ocean Outfall
REPORT FOR: September 2017 REPORT FREQUENCY: Monthly
REPORT DUE: November 1, 2017
SAMPLE SOURCE: Receiving water, nearshore and offshore SAMPLING FREQUENCY: Monthly
EXACT SAMPLE POINTS: As specified in permit TYPE OF SAMPLE: Grab
SAMPLES COLLECTED BY: Seaventures/SOCWA staff
SAMPLES ANALYZED BY: SOCWA Lab

Comments: High Tide 0947

Sta No.	Sample Depth	Sample Date	Total Coliform CFU/100ml SM9222B	Fecal Coliform CFU/100ml SM9222D	Entero-coccus CFU/100ml EPA 1600	Sample Time	Oil & Grease	Sewage Debris
A-1	Surface	09/20/17	<2	<2	<2	932	0	0
A-1	Mid depth	09/20/17	10	<10	<10			
A-2	Surface	09/20/17	<2	<2	<2	936	0	0
A-2	Mid depth	09/20/17	<10	<10	<10			
A-3	Surface	09/20/17	2	2	<2	939	0	0
A-3	Mid depth	09/20/17	<10	<10	<10			
A-4	Surface	09/20/17	<2	<2	<2	948	0	0
A-4	Mid depth	09/20/17	<10	<10	<10			
A-5	Surface	09/20/17	<2	<2	<2	944	0	0
A-5	Mid depth	09/20/17	<10	<10	<10			
B-1	Surface	09/20/17	<2	<2	<2	924	0	0
B-1	Mid depth	09/20/17	30	<10	<10			
B-2	Surface	09/20/17	<2	<2	<2	957	0	0
B-2	Mid depth	09/20/17	<10	<10	<10			
N1	Surface	09/20/17	<2	<2	<2	909	0	0
N2	Surface	09/20/17	<2	<2	<2	907	0	0
N3	Surface	09/20/17	<2	<2	<2	903	0	0
N4	Surface	09/20/17	6	<2	<2	858	0	0
N5	Surface	09/20/17	2	<2	<2	854	0	0
N6	Surface	09/20/17	16	6	<2	851	0	0

0 - None
1 - Mild
2 - Moderate
3 - Severe

REQUIREMENT: (1) Floating particulates and grease and oil shall not be visible. (2) The discharge of waste shall not cause aesthetically undesireable discoloration of the ocean surface.

Compliance Summary Report
San Juan Creek Ocean Outfall 2017

SJCOO Permit Order No. R9-2012-0012							
Agency	**Violation Date**	**Constituent**	**Effluent Limit Violation**	**Units**	**Permit Limit**	**Reported Value**	**Potential Fine**
SMWD - 3A	4/8/2017	Turbidty	Deficient Monitoring	ntu	weekly	not monitored	$3,000
SMWD - CWRP	4/17/2017	TSS	TSS Monthly Average Limit	mg/L	30	87.8	$3,000
SMWD - CWRP	4/18/2017	TSS	TSS Weekly Average Limit	mg/L	45	292	$3,000
SMWD - CWRP	4/17/2017	TSS	TSS % Removal	%	85	0	$3,000
SMWD - CWRP	4/30/2017	TSS	TSS % Removal	%	85	0	$3,000
SOCWA - Outfall	7/12/2017	Fecal Coliform	30 Day Geometric Mean	cfu/100mL	200	315	N/A

SOCWA and MEMBER AGENCY FACILITIES
SJCOO Spill / Overflow Report Log - 2017
Order No. R9-2012-0012 ~ NPDES Permit No. CA0107417

Reporting Agency	Responsible Agency	Estimated Volume (Gallons)	Type of Discharge	Location/Comments	Receiving Waters	Date Reported To State	Date Resolved
SOCWA	JB Latham Plant	100	Primary	High flows experienced at the plant.	N/A	N/A	01-22-17

Recycled Water Report

Compliance Summary Report
Recycled Water Permit
2017

Waste Discharge Requirement Order 97 - 52							
Agency - Facility	**Violation Date**	**Constituent**	**Effluent Limit Violation**	**Units**	**Permit Limit**	**Reported Value**	**Remarks**
SCWD-CTP	1/4/2017	Manganese	12-Month	mg/L	0.05	0.06	
SOCWA - RTP	1/4/2017	TDS	12-month	mg/L	1,000	1026	
SOCWA - RTP	1/4/2007	Manganese	12-Month	mg/L	0.05	0.06	
SMWD-3A	1/31/2017	Manganese	12-Month	mg/L	0.05	0.06	Plant offline in January
SOCWA - RTP	2/14/2017	TDS	12-month	mg/L	1,000	1101	
SOCWA - RTP	2/14/2017	TDS	Daily	mg/L	1,100	1101	
SOCWA - RTP	2/14/2017	Manganese	12-Month	mg/L	0.05	0.06	
SMWD-3A	2/28/2017	Manganese	12-Month	mg/L	0.05	0.06	Plant offline in February
SOCWA - RTP	3/7/2017	TDS	12-month	mg/L	1,000	1047	
SOCWA - RTP	3/7/2017	Manganese	12-Month	mg/L	0.05	0.08	
SCWD-RTP	3/7/2017	Manganese	Daily	mg/L	0.06	0.11	
SMWD-3A	3/16/2017	Manganese	Daily	mg/L	0.06	0.07	
SMWD-3A	3/16/2017	Manganese	12-Month	mg/L	0.05	0.06	
SOCWA - RTP	4/11/2017	TDS	12-month	mg/L	1000	1083	
SOCWA - RTP	4/11/2017	Manganese	12-Month	mg/L	0.05	0.08	
SMWD-3A	4/13/2017	Manganese	12-Month	mg/L	0.05	0.06	
SMWD-3A	4/13/2017	Manganese	Daily	mg/L	0.06	0.07	
SMWD-3A	5/10/2017	Manganese	12-Month	mg/L	0.05	0.06	
SCWD-CTP	5/6/2017	Coliform	Daily	cfu/100mL	23	NR*	Monitoring violation
SOCWA - RTP	5/16/2017	Manganese	12-Month	mg/L	0.05	0.07	
SMWD-OCWRP	5/21/2017	Coliform	Daily	cfu/100mL	23	1600	Possible sample contamination reported by the Chief Plant Operator
SOCWA - RTP	6/6/2017	Manganese	12-Month	mg/L	0.05	0.08	
SMWD-3A	6/8/2017	Manganese	12-Month	mg/L	0.05	0.06	
SMWD-3A	7/1/2017	Manganese	12-Month	mg/L	0.05	0.06	
SOCWA - RTP	7/4/2017	Manganese	12-Month	mg/L	0.05	0.07	
SOCWA - RTP	8/8/2017	Manganese	12-Month	mg/L	0.05	0.08	
SMWD-3A	8/21/2017	Manganese	12-Month	mg/L	0.05	0.06	
SOCWA - RTP	9/12/2017	Manganese	12-Month	mg/L	0.05	0.08	
SOCWA - RTP	9/8/2017-9/10/17	Coliform	7 day median	cfu/100mL	<2.2	5,5,&4	The 7 day median was exceeded from 9/8/17 through 9/10/17
SMWD-3A	9/21/2017	Manganese	12-Month	mg/L	0.05	0.06	

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

QUARTERLY RECYCLED WATER MONITORING

Monitoring Period Ending: Sep 30, 2017

Constituent	Units	12-month Avg Maximum Permit Limit	IRWD-LAWRP 12-month Average *	ETWD-WRP 12-month Average **	TCWD 12-month Average	SMWD Oso 12-month Average	SMWD Chiquita 12-month Average	SMWD Nichols 12-month Average	MNWD-3A 12-month Average	MNWD-RTP 12-month Average	SCWD-CTP 12-month Average ***
TDS	mg/L	1000	752	908	929	779	844	949	820	962	709
Chloride	mg/L	375	144	182	218	161	185	239	186	238	207
Sulfate	mg/L	400	194	217	229	226	220	208	208	321	254
Sodium	mg/L	None	149	158	170	133	143	188	143	180	150
Alkalinity	mg/L	None	-	-	-	-	-	-		257	185
Adjusted SAR	Ratio	None	5.10	-	4.29	4.30	4.37	5.21	4.74	4.39	4.52
Iron	mg/L	0.3	0.023	0.040	0.027	0.224	0.084	0.056	0.13	0.187	0.123
Manganese	mg/L	0.05	0.024	0.013	0.020	0.024	0.031	0.018	0.060	0.082	0.044
MBAS	mg/L	0.5	0.11	0.00	0.05	0.60	0.45	0.48	0.60	0.10	0.10
Boron	mg/L	0.75	0.36	0.280	0.307	0.290	0.318	0.305	0.29	0.347	0.27
Fluoride	mg/L	None	0.49	1.540	0.43	0.840	0.76	0.99	0.99	0.93	0.79
Total Organic Carbon	mg/L	None	8.5	-	8.8	9.1	10.8	9.8	10.2	13.0	11.0

* The LAWRP 12-month permit limits are listed below:

TDS 1000 mg/L
Chloride 180 mg/L
Sulfate 340 mg/L

**The ETWD 12-month permit limits are listed below:

TDS 910 mg/L

*** The CTP 12-month permit limits are listed below:

TDS 1200 mg/L
Chloride 400 mg/L
Sulfate 500 mg/L

SOCWA Service Area
Recycled Water Production (Ac-Ft) - 2017

Agency	Facility or Region	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Annual Totals
CSJC[1]	3-A Plant/MNWD	0.00	0.91	5.54	1.51	0.48	0.00	0.00	0.48	0.00				8.92
CSJC[2]	Chiquita/SMWD	0.30	0.02	9.60	22.50	21.70	21.00	21.90	25.10	23.20				145.32
CSJC[3]	Non-Domestic Well	3.18	4.44	NR	46.32	56.30	61.32	79.19	53.34	61.04				365.13
ETWD	Region 8	27.67	21.00	88.91	146.89	169.07	168.67	206.55	201.82	157.58				1188.15
IRWD														
[4]	IRWD - 8	2.71	3.65	39.50	74.46	94.27	100.26	106.56	139.76	155.09				716.25
[4]	IRWD - 9	1.11	4.97	28.05	63.80	85.49	88.45	102.61	157.79	124.95				657.22
SCWD	SOCWA CTP	3.32	10.16	49.66	116.27	116.12	76.77	123.91	129.51	108.75				734.47
MNWD	JRP	153.48	158.57	268.68	479.15	505.02	559.34	643.09	661.04	588.80				4017.17
	3-A Plant	0.00	0.00	70.24	123.24	174.31	175.83	178.74	179.59	180.67				1082.62
[5]	CTP	-1.25	4.36	2.16	18.65	12.63	-34.25	0.40	-34.25	-5.28				-36.84
SMWD	Oso Creek	151.60	141.02	149.58	136.93	142.67	143.50	153.23	142.06	143.99				1304.58
	Chiquita	197.02	95.04	205.46	421.26	351.57	404.51	377.81	375.97	266.99				2695.63
	Nichols	1.73	1.53	1.82	1.72	1.98	2.21	2.84	2.83	2.45				19.11
TCWD	RRWRP	52.88	36.21	43.81	49.50	53.28	51.90	48.67	48.06	44.66				428.97
TOTALS		594.70	476.59	945.71	1659.54	1750.08	1832.75	2023.20	2091.77	1834.97	0.00	0.00	0.00	13209.30

[1] Denotes transfer of recycled water from MNWD (3A Plant) for use in the CSJC service area. Not counted as additional production.

[2] Denotes recycled water purchased from SMWD Chiquita-WRP used in the CSJC service area. Not counted as additional production.

[3] Denotes nondomestic groundwater produced from wells used for landscape irrigation.

[4] IRWD production is from recycled water production, nonpotable water wells, and surface water impoundments

[5] Denotes transfer of recycled water from SCWD (SOCWA CTP) for use in the MNWD service area. Not counted as additional production.

Note: All of ETWD reclaimed water produced and used in Region 8.

NR = No Report

Pretreatment Report

Agenda Item

Legal Counsel Review: N/A

Meeting Date: November 2, 2017

TO: SOCWA Board of Directors

FROM: Betty Burnett, General Manager

STAFF CONTACT: Katie Greenwood, Source Control Manager

SUBJECT: Monthly Pretreatment Report, September and October 2017
San Juan Creek Ocean Outfall
NPDES Permit #CA0107417 Order #R9-2012-0012
Aliso Creek Ocean Outfall
NPDES Permit #CA0107611 Order #R9-2012-0013

Summary of Program Activities

State contractors conducted a Pretreatment Compliance Inspection (PCI) of SOCWA's Pretreatment Program on March 23, 2017. The following two categorical industrial user (CIU) files and facilities were inspected: IRWD-Dynacast, SMWD-Applied Medical (003). Preliminary findings were presented verbally and include the requirement to modify permit language to state that all self-monitoring performed (at the sampling location described in the permit) must be reported to SOCWA, even if the IU is monitoring more frequently than required. Several recommendations for program improvement were also given verbally and include: 1.) SOCWA should evaluate IU facilities for the need to have a Slug Discharge Control Plan (SDCP) more frequently than federal law requires, and 2.) SOCWA Staff should be less specific as to when compliance sampling will occur over a timeframe when communicating with IUs.

- Staff has not yet received the PCI report and recently learned that other programs have experienced a similar delay in issuance of State inspection and audit reports.

The Dental Amalgam Rule became effective on July 14, 2017. The compliance date, meaning the date that Existing Sources subject to the rule must comply with the standards in this rule is July 14, 2020. New Sources subject to this rule must comply immediately with the standards in this rule. Staff has finished updating SOCWA's list of all existing dental offices. Staff created a Dental Discharger One-Time Compliance Report in advance of EPA publishing theirs. Staff plans to post information about the Rule along with a link to SOCWA's One-Time Compliance Report on its website. Staff will conduct a mass mail-out to all Dental Users to provide the Discharger One-Time Compliance Report.

SOCWA Staff provided required MAs (CSC, SMWD, ETWD, and IRWD) with the appropriate reporting sheets for their data submittals necessary to assist in the production of the annual pretreatment report, which is due to the RWQCB-SD by March 1, 2018. Once received, Staff will review and enter the data into the Water Information Management Solution (WIMS) database so it can be uploaded electronically to the State CA Integrated Water Quality System (CIWQS) database. Influent and effluent data from each of the treatment plants and the narrative portion of the report will only be submitted electronically to the State. SOCWA Staff has not yet received influent/effluent sampling results from SMWD, CSC, and ETWD. As of October 19, 2017:

- SOCWA Staff completed the annual influent/effluent sampling at JBL, CTP, and RTP treatment plants on September 19, 2017 and analytical results have been received.

- IRWD completed its annual influent/effluent sampling of the Los Alisos WRP on January 24-25, 2017 and submitted results to SOCWA for review on October 12, 2017.

Trainings and Committee Meetings Attended

SOCWA Staff attended the annual Strike Force training and lunch at Rattlesnake Reservoir on October 18, 2017.

Permit Related Activities

The following Wastewater Discharge (WD) Permits, Special Wastewater Discharge (SWD) Permits, Nuisance Water-Special Wastewater Discharge (NSWD) Permits, Non-Industrial Wastewater Discharge (NIWD) forms, and BMP letters were issued or are in the process of being drafted for issuance:

CLB – SWD Permit No. 4-001 (Chevron Co.) – Renewal, Non-SIU Class IV SWD Permit – issued October 16, 2017.

SMWD – WD Permit No. 2-001 (Control Components, Inc.) – Renewal, Non-SIU Class II WD Permit – issued October 5, 2017

CSC – SWD Permit No. 4-001 (FREY Environmental) – New, Non-SIU, Class IV SWD Permit to allow treated groundwater contaminated from a petroleum underground storage tank to be discharged to the sewer. A SWD Permit has been drafted. Staff is awaiting test results which show pollutant levels in the groundwater before and after treatment to prove the treatment system effectively treats the groundwater to non-detect pollutant levels.

SCWD – NSWD Permit No. N4-007 (Montage Resorts) –Montage Council submitted Agreement legal revisions to SCWD on July 27, 2017. SCWD Staff are working with legal to incorporate changes into the Agreement. The Permit may not be finalized until the Agreement is approved and signed by all parties.

Enforcement Events

Alliance Residential Broadstone, 27742 Forbes Rd, Laguna Niguel, CA 92677
Issued a Notice of non-Compliance (NON) on September 26, 2017.
Site exceeded the permit effluent limit for zinc and failed to notify SOCWA within 24 hours of becoming aware of the violation. Re-testing has been performed and the zinc result was within compliance. SOCWA Staff considers this enforcement matter resolved.

Inspection and Monitoring Activities

SOCWA Staff finished conducting the federally required annual site inspections and monitoring/sampling of all SIU/CIU's in the SOCWA service area. This is a required activity of the SOCWA approved pretreatment program and has to be completed by December 31, 2017. The information and data obtained from these required activities will be incorporated into the SOCWA Pretreatment Annual Report.

On October 6, 2017 SOCWA Staff inspected Dynacast, WD Permit No. IRWD-1-001. Staff collected 24-hour composite samples of the facility wastewater to verify annual compliance with local limit values as required by federal pretreatment rules. Analytical results were received and all parameters were found in compliance.

Summary of Activities and Types of IUs in the SOCWA Service Area.
YTD through October 19, 2017.

MA		Events	Permit	NIWD	BMP	FSE	OSE	Closed	Enforcement	# of IUs
CLB	(S)	1	3	2	5	8	111	0	0	129
CSC	(M)	0	6	35	18	181	1283	0	2	1522
CSJC	(S)	0	2	27	59	137	1669	0	1	1894
ETWD	(M)	0	3	98	0	262	134	0	0	497
EBSD	(U)	0	1	0	0	0	0	0	0	1
IRWD	(S)	1	3	51	21	63	920	0	0	1058
MNWD	(S)	89	5	125	40	609	2053	17	2	2832
SMWD	(S)	56	5	20	20	183	736	5	1	964
SCWD	(S)	0	6	33	7	148	184	0	4	386
TCWD	(S)	0	11	0	0	7	33	0	0	51
SOCWA	(S)	2	3	1	0	0	0	0	3	4
Totals		88	55	392	170	1596	7097	7	8	9338
Dentist (All)										444
									Total Known IUs	**9782**

(S) = SOCWA conducts PT program.
(M) = MA conducts PT program /w SOCWA oversight.
(U) = Urban Diversion Only.

NIWD = Non-industrial Waste Discharger.
BMP = Best Management Practices.
FSE = Food Service Establishment.
OSE = Other Surveyed Establishment.
YTD = Year to Date.

Agenda Item

Legal Counsel Review: N/A

Meeting Date: November 2, 2017

TO: Board of Directors

FROM: Betty Burnett, General Manager

STAFF CONTACT: Brian Peck, Director of Engineering

SUBJECT: Capital Improvement Program Status Report

The status of the SOCWA Capital Improvement Program is presented in the tables on the following pages.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 2(R) - JB LATHAM TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	*Description*	*Phase*	*Status*
CAPITAL IMPROVEMENT PROJECT LIQUIDS			
3213-000	Water System Piping Improvements (2014)	Design	Study completed. Remaining work is part of the Package 'B' Improvements.
3201-000	Aeration/Secondary Upgrade (2009)	Constuction	Project completed. Follow-up project underway to repair structural cracking in the Plant No.1 Blower Building.
3214-000	4MGD Diversion Flow Meter & Control Structure (2012)	Design	Part of the Package 'B' Improvements.
3212-000	East Primary Influent Channel Repair (2015)	Design	Part of the Package 'B' Improvements.
3202-000	Preliminary and Primary Treatment Improvements (Package "B") (2016)	Design	Preliminary design completed.
3280-000	Facility Improvements B - Basin Upgrades (2018)	Design	Design contract awarded to Carollo Engineers.
3252-000	Plant 1 Standby Power Generator Replacement (2017)	Design	Operations staff has requested a standby power generator large enough to supply power to all of Plant No.1. Design on hold to allow consideration.
3251-000	Effluent Flow Meter Replacement (2017)	Design	Hazen and Sawyer has indicated that there is no cost effective metering option that will allow improvement to existing meter accuracy; project is on hold
3250-000	Plant 1 Grit Basin Improvements (2017)	Design	Project to be advertised for construction bid in October, 2017.
3253-000	Effluent System Valve Replacement (2017)	Design	Hazen and Sawyer design completed; project to be included as part of Package B construction.
3285-000	Main Plant Drain Line Reconstruction (2018)	Design	Part of the Package 'B' Improvements.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 2(R) - JB LATHAM TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	*Description*	*Phase*	*Status*
CAPITAL IMPROVEMENT PROJECT COMMON			
3218-000	Energy Building Roof Reconstruction (2015)	Design	Part of the Package 'B' Improvements.
4014-000	Foul Air System Evaluation (2016) (NCP)	Study	Workshop conducted with DHK Engineers on September 11, 2017. Process type and location was agreed upon by the project participants.
3216-000	Hoist System for Maintenance Shop (2013)	Design	Part of the Package 'B' Improvements.
3286-000	PLC Upgrades (2018)	Construction	Project underway by SOCWA Operations department.
4001-000	Plant Drain System Study (2017) (NCP)	Study	RFP to be issued in November, 2017.
CAPITAL IMPROVEMENT PROJECT SOLIDS			
3209-000	Facility Improvements - Co-Generation Reconstruction (2015)	Construction	Project completed.
3287-000	Facility Improvements B - DAFT and Ancillary Solids Improvements (2018)	Design	Design contract awarded to Carollo Engineers.
4002-000	Dewatering System Condition Assessment (2017) (NCP)	Condition Assessment	Carollo Engineers finalizing condition assessment report.
4003-000	Heating System Condition Assessment (2017) (NCP)	Condition Assessment	Carollo Engineers evaluating options for location of replacement boilers as part of condition assessment.
3210-000	Facility Improvements - Solids Area (2015)	Design	Projects being performed to provide temporary structural repair at DAF No.2 and automation of flare pilot will be done as soon as possible. Remainder of work to be completed as part of Package B.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 5 - SAN JUAN CREEK OCEAN OUTFALL CAPITAL PROJECTS
('17/'18)

Task Code	*Description*	*Phase*	*Status*
CAPITAL IMPROVEMENT PROJECTS			
3601-000	Junction Structure Rehabilitation Design	Design	Black & Veatch and Dudek are currently working on resource agency and Coastal Commission permit applications.
4004-000	Emergency Plan Development (2016) (NCP)	Study	Black & Veatch has submitted draft plan for review by SOCWA staff.
4005-000	Dilution Study (2017) (NCP)	Study	Baker is proceeding with the work in the contract amendment.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 15(R) - COASTAL TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	Description	Phase	Status
CAPITAL IMPROVEMENT PROJECTS LIQUIDS			
1367	Export Sludge Line Repair & Rip Rap (R - 2) (2012)	Design	Protection in this area has been largely addressed through the routing of the new Export Sludge pipeline as well as through minor embankment protection features that will be integrated with Export Sludge System replacement.
3504-000	Aeration System Modification Design (2015)	Design	Part of the Facility Improvements Project; recommendation for award of design contract to Hazen & Sawyer will be presented at the November 2 Board of Directors meeting.
3507-000	East Primary Influent Gates (2015)	Construction	Olsson Construction proceeding with field work.
3508-000	Grit System Knife Gate Valve Replacement (2015)	Construction	This item is part of the Miscellaneous Improvements 2017 project; Olsson Contruction attempted the first valve replacement during the night of September 13/14. Upstream valves would not seal. A bypass is being constructed; work expected to continue during the first week of November, 2017.
3509-000	Switchgear Replacement Design (2016)	Design	Part of the Facility Improvements Project; recommendation for award of design contract to Hazen & Sawyer will be presented at the November 2 Board of Directors meeting.
3593-000	Primary Sludge Valve Replacement (2018)	Design	Project underway by SOCWA Operations department.
3595-000	Primary Device Electrical Conduit and Conductor Replacement (2018)	Design	Project underway by SOCWA Operations department.
3514-000	CTP Facility Upgrade Design (2016)	Design	Part of the Facility Improvements Project; recommendation for award of design contract to Hazen & Sawyer will be presented at the November 2 Board of Directors meeting.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 15(R) - COASTAL TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	Description	Phase	Status
CAPITAL IMPROVEMENT PROJECTS LIQUIDS			
3534-000	Export Sludge System (1997)	Design	Staff conducted a fourth review meeting with the USFWS in August, 2017; a pathway to completing the permitting was identified.
3510-000	Grating Rebate and Concrete Repair Between Aeration Basins and Primary Basins (2016)	Construction	Olsson Construction proceeding with field work.
3512-000	Grating Rebate and Concrete Repair Between HW Building and Primary Basins (2016)	Construction	Olsson Construction proceeding with field work.
3550-000	Export Sludge Pump Addition (2017)	Construction	This item is part of the Miscellaneous Improvements 2017 project; Olsson Contruction expected to begin work in December, 2017.
3594-000	PLC Replacement (2018)	Construction	Project underway by SOCWA Operations department.
3592-000	Facility Improvements Project Design (2018)	Design	Part of the Facility Improvements Project; recommendation for award of design contract to Hazen & Sawyer will be presented at the November 2 Board of Directors meeting.
3553-000	Plant Drainage Improvements (2017)	Design	TetraTech has completed design. SOCWA intends to advertise for bids in December, 2017.
3554-000	Odor Scrubber Bleach Tank Replacement (2017)	Construction	Olsson Construction proceeding with field work; project completion anticipated in Feburary, 2018.
3503-000	Scrubber Upgrade (2013)	Construction	Olsson Construction proceeding with field work; project completion anticipated in Feburary, 2018.
4015-000	Conceptual Building Design (2017) (NCP)	Study	Work completed.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 15(R) - COASTAL TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	*Description*	*Phase*	*Status*
CAPITAL IMPROVEMENT PROJECT AWT			
3562-000	AWT Applied Water Pump Replacement (2017)	Construction	Olsson Construction proceeding with field work; project completion anticipated in Feburary, 2018.
3596-000	Applied Water VFD Pump Panel and Electrical (2018)	Design	An RFP for design services has been issued; proposals are due on November 8, 2017.
3597-000	MCC A Replacement Design (2018)	Design	An RFP for design services has been issued; proposals are due on November 8, 2017.
3517-000	AWT Backwash Water Pump Replacement (2016)	Construction	Olsson Construction proceeding with field work; project completion anticipated in Feburary, 2018.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 17(R) - REGIONAL TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	Description	Phase	Status
CAPITAL IMPROVEMENT PROJECT LIQUIDS			
3701-000	Secondary Electrical System Rerouting (2014)	Design	Lee & Ro has submitted 50% complete design drawings for SOCWA review.
3730-000	Primary Gallery Upgrade (2014)	Design	Part of the RTP Miscellaneous Improvements 2017 Project; kick-off meeting with Lee & Ro held on October 26, 2017.
3702-000	Waste Activated Sludge VFD Control Panel (2013)	Design	Lee & Ro has submitted 50% complete design drawings for SOCWA review.
3704-000	Odor Control Scrubber Control Panel No. 1 (2013)	Design	This project pending completion of odor technology evaluation.
3707-000	Influent Manholes 1 and 2 and Sewer Repair (2016)	Construction	Part of the RTP Miscellaneous Improvements 2016 Project; this work is substantially completed.
3708-000	Influent Junction Structure Gate Replacement (2016)	Construction	Part of the RTP Miscellaneous Improvements 2016 Project; this work is substantially completed.
201617RL3	Influent Junction Structure and Pipe Condition Assessment (2016) (NCP)	Condition Assessment	Completed.
3710-000	AWT Water Quality Instrumentation (2016)	Construction	Part of the RTP Miscellaneous Improvements 2016 Project; this work is substantially completed.
3712-000	Grit Basin Drop Gate and Weir Replacement (2016)	Construction	Part of the RTP Miscellaneous Improvements 2016 Project; this work is substantially completed.
3752-000	AWT No.2 Upgrade Design (2017)	Design	Carollo Engineers is proceeding with the design.
3781-000	Primary Scum Skimmer Replacement (2018)	Design	Part of the RTP Miscellaneous Improvements 2017 Project; kick-off meeting with Lee & Ro held on October 26, 2017.
3784-000	DAF (Mannich) Polymer System Replacement (2018)	Design	Part of the RTP Miscellaneous Improvements 2017 Project; kick-off meeting with Lee & Ro scheduled for October 18, 2017.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 17(R) - REGIONAL TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	Description	Phase	Status
CAPITAL IMPROVEMENT PROJECT LIQUIDS			
3785-000	DAF Dissolution Tank System Replacement (2018)	Design	Part of the RTP Miscellaneous Improvements 2017 Project; kick-off meeting with Lee & Ro held on October 26, 2017.
3786-000	Primary Gallery Mechanical and Electrical Upgrade (2018)	Design	Part of the RTP Miscellaneous Improvements 2017 Project; kick-off meeting with Lee & Ro held on October 26, 2017.
4023-000	Foul Air System Evaluation (2016) (NCP)	Study	Workshop conducted with DHK Engineers on September 11, 2017. Process type and location was agreed upon by the project participants.
3787-000	Aeration Area Upgrade Design (2018)	Design	The RFP for the design was issued on September 21; proposals are due on October 31, 2017.
201717RL1	Effluent Equalization Pond and Gate Condition Assessment (2017) (NCP)	Condition Assessment	Project has been awarded to V&A consultants; assessments to be performed in December, 2017.
201617RL5	Primary Influent Channel Condition Assessment (2016) (NCP)	Condition Assessment	Project has been awarded to V&A consultants; assessments to be performed in October, 2017.
CAPITAL IMPROVEMENT PROJECT COMMON			
3715-000	Switchgear Upgrade (2006)	Construction	Pacific Hydrotech is currently working on the installation of the CEMS.
3760-000	Develop Buried Piping Reconstruction Master Plan (2017)	Study	SOCWA staff is integrating the Lee & Ro data with the Regional Treatment Plant Ten Year Plan.
3761-000	External Lighting Upgrade (2017)	Design	Part of the RTP Miscellaneous Improvements 2017 Project; kick-off meeting with Lee & Ro held on October 26, 2017.
3762-000	Secondary Access Road CEQA (2017)	Permitting	Work is currently on hold.
3788-000	PLC Upgrade (2018)	Construction	Project underway by SOCWA Operations Dept.
3717-000	Security Fencing (2015)	Construction	Part of the RTP Miscellaneous Improvements 2016 Project; this work is substantilly completed.
3718-000	Access Bridge Upgrades (2015)	Construction	Part of the RTP Miscellaneous Improvements 2016 Project; this work is substantilly completed.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 17(R) - REGIONAL TREATMENT PLANT CAPITAL PROJECTS
('17/'18)

Task Code	Description	Phase	Status
CAPITAL IMPROVEMENT PROJECT SOLIDS			
3720-000	Digester Dome Recoating (2014)	Construction	Pacific Hydrotech has sustantially completed this work.
1478	Underground Piping Upgrade (2006)	Construction	Pacific Hydrotech has sustantially completed this work.
3722-000	Co-Generation System Retrofit (2008)	Construction	Pacific Hydrotech is currently working on the waste heat system; co-generation system start-up scheduled for late November, 2017.
3790-000	Solids Area Upgrade Design (2018)	Design	The RFP for the design was issued on September 21; proposals are due on November 1, 2017.
3723-000	Recoat Top of Digesters (2016)	Construction	Pacific Hydrotech has substantially completed the recoating work.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 21 - EFFLUENT TRANSMISSION MAIN CAPITAL PROJECTS
('17/'18)

Task Code	*Description*	*Phase*	*Status*
CAPITAL IMPROVEMENT PROJECTS			
3601-000	Reach B/C Techite Pipeline Replacement Concept Update (Reach B/C)	Study	TetraTech retained to update study; draft technical memorandum expected in late October, 2017.
3181-000	Air Vacuum Release Valve Replacement Reach D (2018)	Construction	Evaluating valve size prior to procurement.
3182-000	Air Vacuum Release Valve Replacement Reach E (2018)	Construction	Evaluating valve size prior to procurement.
4004-000	Trail Bridge Creek Crossing Protection (Reach D)	Design	TetraTech; this proposal is currently being reviewed with Engineering Committee.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 24 - ALISO CREEK OCEAN OUTFALL CAPITAL PROJECTS
('17/'18)

Task Code	*Description*	*Phase*	*Status*
CAPITAL IMPROVEMENT PROJECTS			
3480-000	Internal Seal Replacement (2018)	Design	Issue RFP in December, 2017.
4004-000	Emergency Plan Development (2016) (NCP)	Study	Black & Veatch has submitted draft plan for review by SOCWA staff.

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 2(R) - JB LATHAM TREATMENT PLANT CAPITAL PROJECTS

Task Code	Description	Fiscal Year 17/18				Fiscal Year 18/19	
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr
FACILITY IMPROVEMENTS PACKAGES A/C		C					
3203-000	Effluent Standby Generator ATS Replacement (2016)	C					
3204-000	Facility Improvements - Structural Repair (2015)	C					
3205-000	West Side Power System Upgrade (2013)	C					
3209-000	Facility Improvements - Co-Generation Reconstruction (2015)	C					
FACILITY IMPROVEMENTS PACKAGE B			D	D	D	B&A	C
3213-000	Water System Piping Improvements (2014)		D	D	D	B&A	C
3214-000	4MGD Diversion Flow Meter & Control Structure (2012)		D	D	D	B&A	C
3202-000	Preliminary and Primary Treatment Improvements (Package "B") (2016)		D	D	D	B&A	C
3285-000	Main Plant Drain Line Reconstruction (2018)		D	D	D	B&A	C
3280-000	Facility Improvements B - Basin Upgrades (2018)		D	D	D	B&A	C
3287-000	Facility Improvements B - DAFT (2018)		D	D	D	B&A	C
3212-000	East Primary Influent Channel Repair (2015)		D	D	D	B&A	C
3218-000	Energy Building Roof Reconstruction (2015)		D	D	D	B&A	C
3216-000	Hoist System for Maintenance Shop (2013)		D	D	D	B&A	C
3210-000	Facility Improvements - Solids Area (2015)		D	D	D	B&A	C

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 2(R) - JB LATHAM TREATMENT PLANT CAPITAL PROJECTS

Task Code	Description	Fiscal Year 17/18				Fiscal Year 18/19	
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr
MISCELLANEOUS IMPROVEMENTS 2017		D	B&A	C	C	C	C
3252-000	Plant 1 Standby Power Generator Replacement (2017)	D	B&A				
3251-000	Effluent Flow Meter Replacement (2017)	D	B&A				
3250-000	Plant 1 Grit Basin Improvements (2017)	D	B&A	C	C	C	C
3253-000	Effluent System Valve Replacement (2017)	D				B&A	C
INDEPENDENT PROJECTS							
4014-000	Foul Air System Evaluation (2016) (NCP)	P	P				
3286-000	PLC Upgrades (2018)	C	C	C	C		
4001-000	Plant Drain System Study (2017) (NCP)		P	P			
4002-000	Dewatering System Condition Assessment (2017) (NCP)	CA					
4003-000	Heating System Condition Assessment (2017) (NCP)	CA					

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 15(R) - COASTAL TREATMENT PLANT CAPITAL PROJECTS

Task Code	Description	Fiscal Year 17/18				Fiscal Year 18/19	
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr
MISCELLANEOUS IMPROVEMENTS 2017		C	C	C			
3507-000	East Primary Influent Gates (2015)	C	C	C			
3508-000	Grit System Knife Gate Valve Replacement (2015)	C	C	C			
3510-000	Grating Rebate and Concrete Repair Between Aeration Basins and Primary Basins (2016)	C	C	C			
3512-000	Grating Rebate and Concrete Repair Between HW Building and Primary Basins (2016)	C	C	C			
3550-000	Export Sludge Pump Addition (2017)	C	C	C			
3554-000	Odor Scrubber Bleach Tank Replacement (2017)	C	C	C			
3503-000	Scrubber Upgrade (2013)	C	C	C			
3562-000	AWT Applied Water Pump Replacement (2017)	C	C	C			
3517-000	AWT Backwash Water Pump Replacement (2016)	C	C	C			
FACILITY IMPROVEMENTS PACKAGE			D	D	D	B&A	C
3504-000	Aeration System Modification Design (2015)		D	D	D	B&A	C
3592-000	Facility Improvements Project Design (2018)		D	D	D	B&A	C
3509-000	Switchgear Replacement Design (2016)		D	D	D	B&A	C
3514-000	CTP Facility Upgrade Design (2016)		D	D	D	B&A	C

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 15(R) - COASTAL TREATMENT PLANT CAPITAL PROJECTS

Task Code	Description	Fiscal Year 17/18				Fiscal Year 18/19	
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr
MISCELLANEOUS IMPROVEMENTS 2018			D	D	B&A	C	C
3593-000	Primary Sludge Valve Replacement (2018)		D	D	B&A	C	C
3595-000	Primary Device Electrical Conduit and Conductor Replacement (2018)		D	D	B&A	C	C
3597-000	MCC-A Replacement (2018)		D	D	B&A	C	C
3596-000	Applied Water VFD Pump Panel and Electrical (2018)		D	D	B&A	C	C
EXPORT SLUDGE SYSTEM REPLACEMENT		ENV	ENV	B&A	C	C	C
1367	Export Sludge Line Repair & Rip Rap (R - 2) (2012)	ENV	ENV	B&A	C	C	C
3534-000	Export Sludge System (1997)	ENV	ENV	B&A	C	C	C

INDEPENDENT PROJECTS							
3594-000	PLC Replacement (2018)	C	C	C	C		
3553-000	Plant Drainage Improvements (2017)	D	B&A	C			
4015-000	Conceptual Building Design (2017) (NCP)	P					

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 17(R) - REGIONAL TREATMENT PLANT CAPITAL PROJECTS

Task Code	Description	Fiscal Year 17/18				Fiscal Year 18/19	
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr
MISCELLANEOUS IMPROVEMENTS 2016		C					
3707-000	Influent Manholes 1 and 2 and Sewer Repair (2016)	C					
3708-000	Influent Junction Structure Gate Replacement (2016)	C					
3710-000	AWT Water Quality Instrumentation (2016)	C					
3712-000	Grit Basin Drop Gate and Weir Replacement (2016)	C					
3717-000	Security Fencing (2015)	C					
3718-000	Access Bridge Upgrades (2015)	C					
3723-000	Recoat Top of Digesters (2016)	C					

MISCELLANEOUS IMPROVEMENTS 2017		D	D	B&A	C	C	C
3701-000	Secondary Electrical System Rerouting (2014)	D	D	B&A	C	C	C
3702-000	Waste Activated Sludge VFD Control Panel (2013)	D	D	B&A	C	C	C
3730-000	Primary Gallery Upgrade (2014)	D	D	B&A	C	C	C
3781-000	Primary Scum Skimmer Replacement (2018)	D	D	B&A	C	C	C
3784-000	DAF (Mannich) Polymer System Replacement (2018)	D	D	B&A	C	C	C
3785-000	DAF Dissolution Tank System Replacement (2018)	D	D	B&A	C	C	C
3786-000	Primary Gallery Mechanical and Electrical Upgrade (2018)	D	D	B&A	C	C	C
3761-000	External Lighting Upgrade (2017)	D	D	B&A	C	C	C

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
PROJECT COMMITTEE NO. 17(R) - REGIONAL TREATMENT PLANT CAPITAL PROJECTS

Task Code	Description	Fiscal Year 17/18				Fiscal Year 18/19	
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr
COGENERATION AND SWITCHGEAR UPGRADE		C	C				
3715-000	Switchgear Upgrade (2006)	C	C				
3720-000	Digester Dome Recoating (2014)	C	C				
1478	Underground Piping Upgrade (2006)	C	C				
3722-000	Co-Generation System Retrofit (2008)	C	C				
MISCELLANEOUS IMPROVEMENTS 2017			D	D	B&A	C	C
3787-000	Aeration Area Upgrade Design (2018)		D	D	B&A	C	C
3752-000	AWT No.2 Upgrade Design (2017)	D	D		B&A	C	C
3790-000	Solids Area Upgrade Design (2018)		D	D	B&A	C	C
INDEPENDENT PROJECTS							
3704-000	Odor Control Scrubber Control Panel No. 1 (2013)						
201617RL3	Influent Junction Structure and Pipe Condition Assessment (2016) (NCP)	CA					
201717RL1	Effluent Equalization Pond and Gate Condition Assessment (2017) (NCP)		CA	CA			
201617RL5	Primary Influent Channel Condition Assessment (2016) (NCP)	CA					
3760-000	Develop Buried Piping Reconstruction Master Plan (2017)	P					
3762-000	Secondary Access Road CEQA (2017)			ENV			
3788-000	PLC Upgrade (2018)	C	C	C	C		

Agenda Item

Meeting Date: November 2, 2017

TO: Board of Directors

FROM: Betty Burnett, General Manager

STAFF CONTACT: Teri Noson, Executive Assistant/Clerk of the Board

SUBJECT: Project Committee No. 15 Minutes

The Project Committee No. 15 has approved the submitted set of minutes. These items are presented to the Board for information and review.

Recommended Action

Receive and file subject minutes.

REVISED MINUTES OF SPECIAL
MEETING OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

May 12, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on Friday, May 12, 2017, at 3:00 p.m. at SOCWA's Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of Project Committee No. 15 were present:

JOHN PIETIG	City of Laguna Beach
JOONE LOPEZ	Moulton Niguel Water District
ANDY BRUNHART	South Coast Water District
MIKE DUNBAR	Emerald Bay Service District

Staff present:

BETTY BURNETT	General Manager
TERI NOSON	Executive Assistant/Clerk of the Board

Also present:

JEREMY JUNGREIS	Rutan & Tucker
ART KIDMAN	Kidman Law
ALLISON BURNS	Stradling, Yocca, Carlson & Rauth
PETER WHITTINGHAM	Curt Pringle & Associates
ERIC WEIGAND	Senator Patricia Bates
DON FROELICH	Moulton Niguel Water District
ROGER FAUBEL	Faubel Public Affairs
JAKE VOLLEBREGT	Moulton Niguel Water District
RUBEN DURAN	Moulton Niguel Water District
SHAUN PELLETER	Aliso Viejo
JOHN UHRICH	Moulton Niguel Water District
JEFF DUNN	Moulton Niguel Water District
DON SEDGWICK	Mayor- City Laguna Hills
ANTHONY KOO	County of Orange - Auditor Controller
ERIC WOOLERY	County of Orange - Auditor Controller
ROBERT L. BROWN	Citizen - Moulton Niguel Water District
SHARON CAMPBELL	Assemblyman Brough
DENNIS WILBERG	City of Mission Viejo
KATHYN FRESHLEY	Laguna Woods Village
ELAIN GENNAWEY	City of Laguna Niguel

Chairperson Dunbar called the meeting to order at 3:03 p.m. and welcomed everyone present.

Open Session

Public Comments

Public comments were received by Eric Woolery, Don Sedgwick and Robert L. Brown.

ACTION TAKEN

No action taken.

Approval of Minutes

Director Lopez noted for the record that the submitted minutes for approval indicate Moulton Niguel Water District (MNWD) as absent from the meeting and further stated that there was a discussion verbally and in writing about not consulting MNWD prior to scheduling all of the meetings that is outlined in the agenda. Director Lopez requested that there be a footnote added to all of the current submitted meeting minutes stating that MNWD was not notified and was not able to be present at the meetings, and that such a footnote should be added for the minutes of the May 12, 2017, Project Committee No. 15 meeting. Director Lopez further noted that if there is a Project Committee No. 15 meeting, MNWD would want to attend to understand "what is going on" and requested that all the minutes reflect Director Lopez's request. An open discussion ensued.

Chairperson Dunbar noted that Mr. Collings did attend the April 14, 2017, Project Committee No. 15 meeting. Director Lopez requested that her comments be added to the April 14, 2017, minutes noting that MNWD had to move their schedules to accommodate attendance of the meeting. An open discussion ensued.

Mr. Jungreis inquired if Director Lopez was making a motion to amend the submitted minutes. Director Lopez confirmed that her comments for the record were submitted for a motion to amend the submitted minutes for Project Committee No. 15 approval. An open discussion ensued.

Director Pietig reported that some of the meetings were scheduled on short notice due to actions by MNWD, and stated that MNWD had some responsibility for the short meeting notice situation. Director Pietig suggested that the notation to the minutes state MNWD had concerns regarding timeliness of meetings and requested notification in advance as much as possible in the future. An open discussion ensued.

Director Pietig reported that there were instances where Project Committee No. 15 members, Emerald Bay Service District, City of Laguna Beach, and South Coast Water District, have had to meet with legal counsel as a result of MNWD's actions. All of the meetings have had an open session as required by the Brown Act and adjourned to closed session. MNWD is welcome to attend open sessions, and they were notified of those meetings. MNWD's actions were the cause of the need to schedule meetings. Director Pietig stated that the other members of PC 15 look forward to coordinating Project Committee No. 15 meetings in a collaborative manner going forward. There were very specific reasons for the Project Committee No. 15 meetings to be scheduled in the manner that they were. An open discussion ensued.

Mr. Jungreis reported that there was not a second motion to Director Lopez's motion to amend the minutes, and it failed for lack of a second.

ACTION TAKEN

Motion was made by Director Pietig and seconded by Director Brunhart to approve the Project Committee No. 15 minutes for April 5, 2017, April14, 2017, April 28, 2017, April 26, 2017 and May 4, 2017 as submitted.

Motion carried: Aye 3; Nay 1; Abstain 0; Absent 0

Director Pietig	Aye
Director Dunbar	Aye
Director Brunhart	Aye
Director Lopez	Nay

Moulton Niguel Water District Payment of Due and Owing Invoices

Chairperson Dunbar provided brief comments regarding Project Committee No. 15 meeting comments/discussion protocol and welcomed opening comments from Project Committee No. 15 members.

Director Pietig, Director Lopez, Director Brunhart, and Chairperson Dunbar provided opening comments regarding the MNWD payments due and owing invoices.

Chairperson Dunbar requested that Director Lopez provide the full check of $755,871 without any conditions, to Project Committee No. 15 at which time the Project Committee No. 15 members would proceed to the next steps of negotiations.

Director Lopez provided the check in the amount of $755,871 accompanied by a letter from MNWD. And open discussion ensued.

Chairperson Dunbar adjourned the Project Committee No. 15 meeting for recess at 3:43 p.m.

The Board meeting reconvened at 3:51 p.m.

Chairperson Dunbar directed the SOCWA General Manager to provide the requested accounting that is available to MNWD, and referenced the MNWD provided letter and reported that conditions were not acceptable and did not accept the MNWD provided check stating that preconditions were unacceptable.

Chairperson Dunbar noted for the record that Project Committee No. 15 is not accepting any conditions on the payment and should MNWD insist that payment be conditional Chairperson Dunbar requested that MNWD come and retrieve the check. Chairperson Dunbar directed that the minutes reflect that Project Committee No. 15 took custody of the check after declining to withdraw its conditions on payment.

Chairperson Dunbar further noted for the record that acceptance of the check is not acceptance of any condition that MNWD has attempted to impose. Project Committee No. 15 partners will discuss the next steps of negotiating potential divestment only after MNWD makes unconditional payment of past due amounts owed to South Orange County Wastewater Authority.

Director Lopez requested clarity regarding 'unconditional' and 'accounting that is available'. Chairperson Dunbar stated that the accounting that is available will be provided to MNWD and restated that the General Manager has been directed to provide the available requested accounting information.

Mr. Jungreis reported that the response to the MNWD letter was not agendized and a detailed discussion about data would have to be on the agenda. Mr. Jungreis stated that the Chairperson has made a commitment to MNWD to provide available SOCWA requested accounting data to address the concerns in the letter provided today. Any further discussion of data sought by MNWD would need to be agendized for a later meeting.

Director Lopez expressed concerns of receiving accounting information from SOCWA, and Chairperson Dunbar stated that the information would be provided to MNWD.

Chairperson Dunbar provided clarification on the need for unconditional payment to SOCWA referencing the letter submitted by MNWD. Chairperson Dunbar stated that the last sentence of the first paragraph of MNWD's letter was a condition and could not be accepted as condition of payment. The second paragraph of MNWD's letter also imposed a condition on payment. Chair Dunbar stated that should MNWD want to remove those two (2) conditions on payment, SOCWA would accept the check. Should MNWD not want to remove the two (2) conditions, then they were to retrieve the check. An open discussion ensued after which MNWD voluntarily retrieved the check.

ACTION TAKEN

Motion was made by Director Pietig and seconded by Director Dunbar that Project Committee No. 15 was unable to accept the check as currently provided because it was not in compliance with the existing legal agreements between the agencies. Chair Dunbar expressed willingness to begin negotiations with Moulton Niguel Water District regarding potential divestiture of MNWD's obligations under the agreements regarding the Coastal Treatment Plant once MNWD's obligations to PC 15 were unconditionally paid in full.

Motion carried: Aye 3; Nay 1; Abstain 0; Absent 0

Director Pietig	Aye
Director Dunbar	Aye
Director Brunhart	Aye
Director Lopez	Nay

Director Lopez inquired if the check was accepted by Project Committee No. 15.

Mr. Jungreis reported that the approved motion was not to accept the check with the conditions on payment imposed by MNWD, and should MNWD want to withdraw the conditions a different motion could be submitted.

Public Comments

Upon the request of MNWD, additional public comments were received from Dennis Wilberg and Rod Foster.

Project Committee No. 15 went into Closed Session at 4:14p.m.

Closed Session

Closed Session was conducted under Government Code Section 54956.9 for the following purpose:

POTENTIAL LITIGATION IN 1 MATTER
Pursuant to Government Code Section 54956.9 a Closed Session was held to confer with legal counsel regarding potential litigation in 1 matter.

Project Committee No. 15 reconvened to open session at 5:39p.m.

Report Out of Closed Session

Director Dunbar reported that Project Committee No. 15 authorized the initiation of litigation.

Adjournment

There being no further business, Director Dunbar adjourned the meeting at 5:40p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of May 12, 2017, and approved by the Project Committee No. 15 of the South Orange County Wastewater Authority.

Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

June 1, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on June 1, 2017, at 2:30 p.m. at SOCWA's Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of Project Committee No. 15 were present:

JOHN PIETIG	City of Laguna Beach
ANDY BRUNHART	South Coast Water District
MIKE DUNBAR	Emerald Bay Service District

Absent:

Joone Lopez	Moulton Niguel Water District

Staff present:

BETTY BURNETT	General Manager
TERI NOSON	Clerk of the Board

Also present:

JEREMY JUNGREIS	Runtan & Tucker
PETER WHITTINGHAM	CP&A

Director Dunbar called the meeting to order at 2:30 p.m. and welcomed everyone present.

Public Comments

There were no public comments received.

ACTION TAKEN:

No action taken.

The Board went into Closed Session at 2:33 p.m.

Closed Session

A Closed Session was conducted for the following matter:

> Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District* Case number 30-2017-00923143-CU-BC-CJC.

The Board meeting reconvened in Open Session at 4:15 p.m.

Report Out of Closed Session

Chairman Dunbar reported that there were no reportable actions from Closed Session.

Adjournment

There being no further business, Chairperson Dunbar adjourned the meeting at 4:16 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of June 1, 2017, and approved by the Project Committee No. 15 of the South Orange County Wastewater Authority.

_____

Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

June 15, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on June 15, 2107, at 3:00 p.m. at SOCWA's Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of Project Committee No. 15 were present:

JOHN PIETIG	City of Laguna Beach
MIKE DUNBAR	Emerald Bay Service District
ANDY BRUNHART	South Coast Water District

Absent:

JOONE LOPEZ	Moulton Niguel Water District

Staff present:

BETTY BURNETT	General Manager
TERI NOSON	Clerk of the Board

Also Present:

JEREMY JUNGREIS	Runtan & Tucker
STEVE GREYSHOCK	Greycomm

Chairperson Dunbar called the meeting to order at 3:00 p.m. and welcomed everyone present.

Public Comments

There were no public comments received.

ACTION TAKEN

No action taken.

The Board went into closed session at 3:01 p.m.

Closed Session

A Closed Session was conducted for the following matter:

> Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District* Case number 30-2017-00923143-CU-BC-CJC.

The Board meeting reconvened in Open Session at 5:37 p.m.

Report Out of Closed Session

Chairperson Dunbar reported that there were no reportable actions from Closed Session.

Adjournment

There being no further business, Chairperson Dunbar adjourned the meeting at 5:38 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of June 15, 2017, and approved by the Project Committee No. 15 of the South Orange County Wastewater Authority.

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Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

June 29, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on June 29, 2107, at 3:00 p.m. at their Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of Project Committee No. 15 were present:

JOHN PIETIG	City of Laguna Beach
MIKE DUNBAR	Emerald Bay Service District
ANDY BRUNHART	South Coast Water District
MATT COLLINGS	Moulton Niguel Water District [exit @ 3:13 p.m.]

Staff present:

BETTY BURNETT	General Manager
TERI NOSON	Clerk of the Board

Also Present:

JEREMY JUNGREIS	Runtan & Tucker
STEVE GREYSHOCK	Greycomm
ART KIDMAN	Kidman Law
ALLISON BURNES	Stradlig, Yocca, Carlson & Rauth
RAY MILLER	SOCWA/City of San Juan Capistrano [exit @ 3:13 p.m.]

Chairperson Dunbar called the meeting to order at 3:10 p.m. and welcomed everyone present.

Public Comments

There were no public comments received.

ACTION TAKEN

No action taken.

The Chairman adjourned the Project Committee No. 15 meeting for recess at 3:12 p.m.

The Board meeting reconvened at 3:15 p.m. and went into Closed Session at 3:16 p.m.

Closed Session

A Closed Session of Project Committee 15 was conducted for the following matter:

> Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District* Case number 30-2017-00923143-CU-BC-CJC.

The Board meeting reconvened in Open Session at 5:56 p.m.

Report Out of Closed Session

Chairperson Dunbar reported that there were no reportable items from Closed Session.

Adjournment

There being no further business, Chairman Dunbar adjourned the meeting at 5:58 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of June 29, 2017, and approved by the Project Committee No. 15 of the South Orange County Wastewater Authority.

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Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

July 13, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on July 13, 2017, at 1:00 p.m. at their Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of the Directors were present:

MIKE DUNBAR	Emerald Bay Service District
ANDY BRUNHART	South Coast Water District
JOHN PIETIG	City of Laguna Beach

Absent:

JOONE LOPEZ	Moulton Niguel Water District

Staff present:

BETTY BURNETT	General Manager
TERI NOSON	Clerk of the Board
JEREMY JUNGREIS	Rutan & Tucker

Also present:

Ken Hume	KEH & Associates
Allison Burns	Stradling, Yocca, Carlson & Rauth
Steve Greyshock	Greycomm
Peter Wittingham	Curt Pringle & Associates
Curt Pringle	Curt Pringle & Associates

Chairperson Dunbar called the meeting to order at 1:06 p.m. and welcomed everyone present.

Public Comments

No comments were received.

Approval of Minutes

ACTION TAKEN:

Motion was made by Director Brunhart and seconded by Director Pietig to approve Project Committee No. 15 minutes for June 1, 2017, June 15, 2017, June 29, 2017 as submitted and defer approval of the May 12, 2017 minutes.

Motion carried: Aye 3; Nay 0; Abstain 0; Absent 1

Director Pietig	Aye
Director Dunbar	Aye
Director Brunhart	Aye
Director Lopez	Absent

The Project Committee No. 15 meeting entered Closed Session at 1:10 p.m.

Closed Session

A Closed Session was conducted for the following matter:

Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District*
Case number 30-2017-00923143-CU-BC-CJC.

The Project Committee No. 15 meeting reconvened to Open Session at 4:10 p.m.

Report Out of Closed Session

ACTION TAKEN

Chairperson Dunbar stated that there were no reportable items from Closed Session.

Adjournment

There being no further business, Chairperson Dunbar adjourned the meeting at 4:11 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of July 13, 2017, and approved and ratified by the Project Committee No. 15 of the South Orange County Wastewater Authority.

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Betty Burnett, General Manager
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

August 10, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on August 10, 2017, at 3:00 p.m. at their Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following Directors were present:

MATT COLLINGS	Moulton Niguel Water District
MIKE DUNBAR	Emerald Bay Service District
ANDY BRUNHART	South Coast Water District
JOHN PIETIG	City of Laguna Beach

Staff present:

BETTY BURNETT	General Manager
TERI NOSON	Executive Assistant
MORGAN GALLAGHER	Rutan & Tucker

Also present:

ALLISON BURNS	Stradling, Yocca, Carlson & Rauth
ART KIDMAN	Kidman Law

Chairperson Dunbar called the meeting to order at 3:09 p.m. and welcomed everyone present.

Public Comments

No public comments were received.

Director Comments

Chairperson Dunbar made opening comments regarding Moulton Niguel Water District's (MNWD) failure to pay its Project Committee No. 15 bills.

Director Collings reported that MNWD has paid and continues to pay MNWD's Operation and Maintenance invoices, which fund critical repairs and stated that MNWD has offered to pay under protest but the check was rejected by Project Committee No. 15 members.

Chairperson Dunbar reported that the check referenced by Director Collings came with conditions that were not acceptable to Project Committee No. 15 members.

Director Pietig stated that he supported Chairman Dunbar's comments and expressed disappointment of the current situation with MNWD.

Director Brunhart stated that no one was winning in this matter and the Orange County water community was losing.

The Project Committee No. 15 meeting entered Closed Session at 3:15 p.m.

Closed Session

Closed Session was conducted for the following matter:

Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District*
Case number 30-2017-00923143-CU-BC-CJC.

The Project Committee No. 15 meeting reconvened to Open Session at 5:24 p.m.

Report out of Closed Session

Chairperson Dunbar stated that there were no reportable items from Closed Session.

Adjournment

There being no further business, Chairperson Dunbar adjourned the meeting at 5:26 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of August 10, 2017, and approved and ratified by the Project Committee No. 15 of the South Orange County Wastewater Authority.

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Betty Burnett, General Manager
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

August 31, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on August 31, 2017, at 3:00 p.m. at their Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following Directors were present:

MATT COLLINGS	Moulton Niguel Water District [exit 3:05 p.m.]
MIKE DUNBAR	Emerald Bay Service District
ANDY BRUNHART	South Coast Water District
JOHN PIETIG	City of Laguna Beach

Staff present:

BETTY BURNETT	General Manager
TERI NOSON	Executive Assistant
JEREMY JUNGREIS	Rutan & Tucker

Also present:

ALLISON BURNS	Stradling, Yocca, Carlson & Rauth
ART KIDMAN	Kidman Law
STEVE GREYSHOCK	Greycomm [exit 3:05 p.m.]

Chairperson Dunbar called the meeting to order at 3:02 p.m. and welcomed everyone present.

Public Comments

No public comments were received.

Open Session

Approval of Prior Project Committee No.15 Meeting Minutes

Director Collings requested that a copy of the previous version of edits of the May 12, 2017, Project Committee No. 15 minutes be provided to MNWD. Mr. Jungreis requested that MNWD provide a written request to SOCWA so that the committee could better understand exactly what records MNWD was seeking.

ACTION TAKEN

Motion was made by Director Collings and seconded by Director Pietig to defer any action on the minutes until MNWD had further opportunity to review the minutes.

Motion carried:	Aye 4; Nay 0; Abstain 0; Absent 0	
	Director Pietig	Aye
	Director Dunbar	Aye
	Director Brunhart	Aye
	Director Collings	Aye

Committee Member Comments

There were no Director comments.

The Project Committee No. 15 meeting entered Closed Session at 3:10 p.m.

Closed Session

Closed Session was conducted for the following matter:
Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District*
Case number 30-2017-00923143-CU-BC-CJC.

The Project Committee No. 15 meeting reconvened to Open Session at 5:37 p.m.

Report out of Closed Session

Chairperson Dunbar stated that there were no reportable items from Closed Session.

Adjournment

There being no further business, Chairperson Dunbar adjourned the meeting at 5:37 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of August 31, 2017, and approved and ratified by the Project Committee No. 15 of the South Orange County Wastewater Authority.

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Betty Burnett, General Manager
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

September 14, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on September 14, 2017, at 2:30 p.m. at SOCWA Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of Project Committee No. 15 were present:

MIKE DUNBAR	Emerald Bay Service District
ANDY BRUNHART	South Coast Water District
JOHN PIETIG	City of Laguna Beach

Absent:

JOONE LOPEZ	Moulton Niguel Water District

Staff present:

BETTY BURNETT	General Manager
DANITA HIRSH	Executive Assistant

Also Present:

JEREMY JUNGREIS	Runtan & Tucker
ART KIDMAN	Kidman Law
STEVE GREYSHOCK	Greycomm, LLC
JAKE VOLLEBREGT	Moulton Niguel Water District

1. **Call Meeting to Order**

Chairperson Dunbar called the meeting to order at 2:34 p.m.

2. **Public Comments**

None.

3. **Open Session**

- Chair Comments –

Chairperson Dunbar commented that in the Open Session the Committee was tasked to approve several Minutes from previous meetings. He stated at the last meeting, Moulton Niguel requested that the Committee hold off on approvals to allow Moulton Niguel time to review the Minutes. Moulton Niguel was asked to provide the Committee with written comments and was given an opportunity to do so. None were received.

Chairperson Dunbar stated an email was received indicating that Matt Collings, Moulton Niguel's Alternate Representative for the Committee was not able to be present. Chairperson Dunbar noted Jake Vollebregt from Moulton Niguel was currently present in the audience.

Chairperson Dunbar went on to state that Moulton Niguel was provided 3 days notice for today's meeting, and in his opinion, this was sufficient time for Moulton Niguel to submit comments, and that he was prepared to approve the May 12 Minutes.

- Committee Member Comments
    - None.
- Approval of Prior Project Committee No. 15 Meeting Minutes

Chairperson Dunbar recommended the Committee vote on each set of Minutes separately.

ACTION TAKEN

Motion was made by Director Brunhart and seconded by Director Pietig to approve the Minutes of August 31, 2017.

Motion carried:	Aye 3, Nay 0, Abstain 0, Absent 1	
	Director Dunbar	Aye
	Director Pietig	Aye
	Director Brunhart	Aye
	Director Lopez	Absent

Motion was made by Director Brunhart and seconded by Director Pietig to approve the Minutes of August 10, 2017.

Motion carried:	Aye 3, Nay 0, Abstain 0, Absent 1	
	Director Dunbar	Aye
	Director Pietig	Aye
	Director Brunhart	Aye
	Director Lopez	Absent

Motion was made by Director Pietig and seconded by Director Brunhart to approve the Minutes of July 13, 2017.

Motion carried:	Aye 3, Nay 0, Abstain 0, Absent 1	
	Director Dunbar	Aye
	Director Pietig	Aye
	Director Brunhart	Aye
	Director Lopez	Absent

Mr. Vollebregt of Moulton Niguel Water District addressed the Committee and stated Director Pietig's reference to Moulton Niguel's request at the last meeting on August 31st, was for Moulton Niguel to receive a copy of the prior meeting minute drafts so that Moulton Niguel could review them. He stated the drafts were requested, and Moulton Niguel was instructed to file a written request which request was filed with Chair Dunbar on Tuesday, September 12. Mr. Vollebregt stated that Moulton Niguel would appreciate the opportunity to look at the prior drafts before commenting on the minutes. He also requested that Moulton Niguel be given the professional courtesy of checking with their staff for availability on the days that future PC-15 Meetings are scheduled. He then requested the Committee to defer approval of May 12 Minutes to the next PC 15 meeting.

ACTION TAKEN

Motion was made by Director Pietig and seconded by Director Brunhart to defer the May12 Minutes to the next meeting on September 28, with the understanding that Moulton Niguel commits to either attending the meeting to provide comments, or provides any comments in writing should they not attend in order to support the orderly conduct of business for Project Committee No. 15.

Motion carried:	Aye 3, Nay 0, Abstain 0, Absent 1	
	Director Dunbar	Aye
	Director Pietig	Aye
	Director Brunhart	Aye
	Director Lopez	Absent

General Manager, Betty Burnett, asked the Committee Chair whether a schedule had been determined for PC-15 Committee Meetings.

Chairman Dunbar responded that there had not been a formal routine schedule in the past and that it is an item to be discussed amongst the PC-15 Members. He stated, the next meeting would be on Thursday, September 28 pending Members schedules. He recommended holding the meetings every 2 weeks on Thursday at 3:00 p.m. The Committee Members concurred.

The Committee entered Closed Session at 2:50 p.m.

Closed Session

A Closed Session was conducted for the following matter:

> Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District* Case number 30-2017-00923143-CU-BC-CJC.

The Board meeting reconvened in Open Session at 4:44 p.m.

Report Out of Closed Session

There were no reportable actions from Closed Session.

Adjournment

There being no further business, Chairperson Dunbar adjourned the meeting at 4:45 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of September 14, 2017 approved by the Project Committee No. 15 of the South Orange County Wastewater Authority.

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Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

MINUTES OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Project Committee No. 15

September 27, 2017

The Special Meeting of the South Orange County Wastewater Authority (SOCWA) Project Committee No. 15 was held on September 27, 2017, at 5:00 p.m. at SOCWA's Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of Project Committee No. 15 were present:

MATT COLLINGS	Moulton Niguel Water District
MIKE DUNBAR	Emerald Bay Service District
ANDY BRUNHART	South Coast Water District
JOHN PIETIG	City of Laguna Beach

Staff present:

BETTY BURNETT	General Manager
DANITA HIRSH	Executive Assistant

Also Present:

JEREMY JUNGREIS	Rutan & Tucker, LLP
ALLISON BURNS	Stradling Yocca Carlson & Rauth
TIFFANY ACKLEY	Kidman Law, LLP
DANIEL SHIMELL	Best Best & Krieger, LLP
JAKE VOLLEBREGT	Moulton Niguel Water District

1. **Call Meeting to Order**

Chairperson Dunbar called the meeting to order at 5:01 p.m.

2. **Public Comments**

None.

3. **Open Session**

- Chair Comments –

Chairperson Dunbar opened with brief comments regarding revisions that were requested by Moulton Niguel. He indicated that some of Moulton Niguel's previously suggested revisions had been incorporated into the May 12 Minutes, and the minutes were ready for approval. He welcomed other Committee Members comments prior to approving the May 12 Minutes.

- Committee Member Comments

Director Collings commented that he was not aware that all of the comments had been incorporated into the Minutes. He also stated that one of the comments was to include a copy of the check and Moulton Niguel's letter of May 12 as part of the Minutes. Discussion ensued.

ACTION TAKEN

Motion was made by Director Collings to approve the Minutes removing the word "voluntarily" from page 6, and adding the attachments to MNWD's May 12 letter..

Mr. Jungreis stated there was a motion and asked if there was a second.

Mr. Jungreis stated to Chairperson Dunbar that since there was not a second, would there be a substitute motion to approve the Minutes as written subject to the revisions already made.

Substitute motion was made by Director Pietig and seconded by Chairperson Dunbar to approve the May12, 2017 Minutes as written with the following amendments:(1) to revise page 5, fifth full paragraph of the Minutes, to add a period after MNWD, and to strike the language reading "which is herewith attached to these minutes;" and (2) to remove the attachment of MNWD's letter from the Minutes.

Motion carried:	Aye 3, Nay 1, Abstain 0, Absent 0	
	Director Dunbar	Aye
	Director Pietig	Aye
	Director Brunhart	Aye
	Director Collings	Nay

The Project Committee No. 15 meeting entered Closed Session at 5:22 p.m.

Closed Session

A Closed Session was conducted for the following matter:

> Existing Litigation per paragraph (1) of subdivision (d) of Government Code Section 54956.9, *Case of SOCWA, et al. v. Moulton Niguel Water District* Case number 30-2017-00923143-CU-BC-CJC.

The Board meeting reconvened in Open Session at 7:27 p.m.

Report Out of Closed Session

There were no reportable actions from Closed Session.

Adjournment

There being no further business, Chairperson Dunbar adjourned the meeting at 7:28 p.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Special Meeting of the South Orange County Wastewater Authority Project Committee No. 15 of September 27, 2017, and approved by the Project Committee No. 15 of the South Orange County Wastewater Authority.

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Betty C. Burnett, General Manager / Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Agenda Item

Budgeted: Yes
Budget amount: $1,380,000
Line Items: PC 15 Tasks 3503-000, 3507-000, 3508-000, 3510-000, 3512-000, 3517-000, 3550-000, 3554-000 and 3562-000
Legal Counsel Review: No
Meeting Date: November 2, 2017

TO: Project Committee 17

FROM: Betty Burnett, General Manager

STAFF CONTACT: Brian Peck, Director of Engineering

SUBJECT: Change Order to Olsson Construction for the Coastal Treatment Plant Miscellaneous Improvements 2017 Project.

Recommendation

The Engineering Committee recommends that the Board of Directors approve Change Orders 1, 2, and 3 to the construction contract with Olsson Construction for the Coastal Treatment Plant Miscellaneous Improvements 2017 Project.

Change Orders

1. Approve Change Order 1 to the construction contract for the Export Sludge Pump Addition (PC 15, Task 3550-000)

CO #	CO Item	Description	Change Order Price	Total Change Order Price*	Status
1	Addition of a 2-Inch Stainless Steel Ball Valve and Union at Export Sludge Pump Relief Line	Labor, equipment and materials to install a 2-inch SS ball valve and union at the Export Sludge Pump Relief line	$685.00	$685.00	SOCWA Engineering Committee Recommended

*Cumulative for specific budget task code

2. Approve Change Orders 2 and 3 to the construction contract for the Grit Knife Gate Valve Replacement (PC 15, Tasks 3507-000, 3508-000)

CO #	CO Item	Description	Change Order Price	Total Change Order Price*	Status
2	Replacement of Two 20-Inch Victaulic Flanges at Two of the Knife Gate Valves	Labor, equipment and materials to replace two 20-inch Victaulic flanges at two of the knife gate valves	$5,484.00	$5,484.00	SOCWA Engineering Committee Recommended
3	Temporary 12-inch Screen Bypass System	Labor, equipment and materials to install temporary 12-inch screen bypass system in order to replace the grit system knife gate valves	$26,615.00	$32,099.00	SOCWA Engineering Committee Recommended

*Cumulative for specific budget task code

Advisory Status

Reviewed and recommended by the SOCWA Engineering Committee on October 12, 2017.

Financial Status

Original Contract Amount:	$	910,900.00
Net change by previous change orders:	$	0.00
Contract amount prior to this change order:	$	910,900.00
Net increase, decrease due to this change order:	$	32,784.00
New contract amount, including this change order:	$	943,684.00

The overall project remains within budget. The project ledger is shown in Exhibit 1. The allocation of these change order costs is shown below.

Member Agency	Task 3550-000	Tasks 3507-000 and 3508-000	Total PC15 Cost Allocation
Emerald Bay Service District	$20.48	$959.76	$980.24
City of Laguna Beach	$259.68	$12,168.73	$12,428.41
Moulton Niguel Water District	$200.36	$9,388.96	$9,589.32
South Coast Water District	$204.47	$9,581.55	$9,786.02
Total	$685.00	$32,099.00	$32,784.00

Exhibit 1

Project Cost Ledger: Coastal Treatment Plant

Miscellaneous Improvements 2017

(Millions)

	Export Sludge Pump and Grinder	Knife Gate Replacement	Basin Structural Repairs	Odor Control System Imps	AWT Filter Supply and Backwash Pumps	Total
Budget (2016/2017)	**0.195**	**0.135**	**0.325**	**0.500**	**0.375**	**1.530**
Budget Task Codes	**3550**	**3507/3508**	**3510/3512**	**3554/3503**	**3517/3562**	
Actual Bid Costs-Constr.	0.253	0.078	0.219	0.081	0.280	0.911
Construction Change Orders	0.001	0.032	0.000	0.000	0.000	0.033
Study & Design (Upfront Costs)	0.011	0.000	0.016	0.075	0.025	0.127
Contingency	-0.0894	0.0149	0.0651	0.3190	0.0451	0.3547
Construction Management	0.020	0.010	0.025	0.025	0.025	0.105
Total Project Costs	**0.195**	**0.135**	**0.325**	**0.500**	**0.375**	**1.530**
Spending						
Total Current Spending	(0.011)	0.000	(0.016)	(0.075)	(0.025)	(0.127)
Remaining Spending	(0.184)	(0.135)	(0.309)	(0.425)	(0.350)	(1.403)
Remaining Budget	0.000	0.000	0.000	0.000	0.000	0.000

Agenda Item

Budgeted: Yes
Budget amount: $12,720,000
Line Items: PC 17 Tasks 3720-000, 3715-000, 3721-000, and 3722-000
Legal Counsel Review: No
Meeting Date: November 2, 2017

TO: Project Committee 17

FROM: Betty Burnett, General Manager

STAFF CONTACT: Brian Peck, Director of Engineering

SUBJECT: Change Order to Pacific Hydrotech Construction Contract for the Regional Treatment Plant Cogeneration and Switchgear Upgrade Project

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Recommendation

The Engineering Committee recommends that the Board of Directors approve Change Order 14 to the construction contract with Pacific Hydrotech for the Regional Treatment Plant Cogeneration and Switchgear Upgrade Project.

Change Orders

1. Approve Change Order 14 to the construction contract for the Cogeneration Upgrade Project (PC 17, Task 3722-000).

CO #	CO Item	Description	Change Order Price	Cumulative Change Order*	Status
14	Motor Rated Disconnect Switches	Add local disconnect switches to 5 cogeneration supporting pump motors	$5,555.28	$64,582.24	SOCWA Engineering Committee Recommended

∗ Cumulative for specific budget task code.

Advisory Status

Reviewed and recommended by the SOCWA Engineering Committee on October 12, 2017.

Financial Status

Original Contract Amount:	$	8,925,217.00
Net change by previous change orders:	$	511,343.27
Contract amount prior to this change order:	$	9,436,560.27
Net increase, decrease due to this change order:	$	5,555.28
New contract amount, including this change order:	$	9,442,115.55

The overall project remains within budget. The project ledger is shown in Exhibit 1. The allocation of these change order costs is shown below.

Task	3722-000
El Toro Water District	$1,133.83
Emerald Bay Service District	$32.78
City of Laguna Beach	$623.30
Moulton Niguel Water District	$3,267.62
South Coast Water District	$497.75
Total	$5,555.28

Change Order No.14 Brief Description

Some of the cogeneration system auxiliary pumps (Clean Lube Oil Pump, Waste Lube Oil Pump, Boiler Hot Water Pump, Hot Water Pump, and Cogen Jacket Water Pump) were designed to be automatically or manually operated from the PLC HMI. The nearest disconnect switches for these pumps were located at a motor control center in an adjacent room. SOCWA standard operation requires a disconnect in sight of the device. This change order adds local disconnects for the five pump motors listed so staff can locally lock-out as needed.

Exhibit 1
Project Cost Ledger: Regional Treatment Plant
Cogeneration and Switchgear Upgrades

(Millions)

	Switchgear Upgrade	Underground Piping Relocation	Digester Recoating	Co-Generation Upgrade	Total
Budget (2016/17)	**3.475**	**0.636**	**1.024**	**7.585**	**12.720**
Budget Task Codes	**3715-000**	**3721-000**	**3720-000**	**3722-000**	
Actual Bid Costs-Constr.	1.930	0.156	0.316	6.520	8.922
Construction Change Orders	0.452	0.000	0.000	0.065	0.517
Previous Costs (Prior Construct and Design)	0.365	0.292	0.621	0.443	1.721
Contingency	-0.021	0.148	0.057	0.079	0.264
Construction Management	0.094	0.007	0.030	0.162	0.294
Construction Management Change Order No.1	0.191	0.000	0.000	0.035	0.226
Construction Management Change Order No.2	0.124	0.000	0.000	0.124	0.248
Construction Services	0.110	0.033	0.000	0.156	0.298
Construction Services Change Order	0.080	0.000	0.000	0.000	0.080
Southern California Edison (SCE)	0.150	0.000	0.000	0.000	0.150
Total Project Costs	**3.475**	**0.636**	**1.024**	**7.585**	**12.720**
Spending					
Total Current Spending	(1.900)	(0.470)	(0.960)	(6.100)	(9.430)
Remaining Spending	(1.575)	(0.166)	(0.064)	(1.485)	(3.290)
Remaining Budget	**1.575**	**0.166**	**0.064**	**1.485**	**3.290**
***Grants**				**1.700**	**1.700**
Net SOCWA Costs	**3.475**	**0.636**	**1.024**	**5.885**	**11.020**

Agenda Item

Budgeted: Yes
Budget amount: $1,725,000
Line Item: PC 15 Task 3592-000
Legal Counsel Review: No
Meeting Date: November 2, 2017

TO: Project Committee 15 Board of Directors

FROM: Betty Burnett, General Manager

STAFF CONTACT: Brian Peck, Director of Engineering

SUBJECT: Award of Engineering Services for the Coastal Treatment Plant Facility Improvements Final Design

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Summary

This agenda item provides a recommendation for the award of an engineering services contract to Hazen and Sawyer for the final design of the Facility Improvements for the Coastal Treatment Plant.

Background

The Coastal Treatment Plant is a conventional activated sludge (CAS) treatment plant with a secondary treatment design capacity of 6.7 million gallons per day (MGD). The main wastewater treatment processes are screening, aerated grit removal, primary sedimentation, activated sludge aeration and secondary sedimentation. Construction of the modern CTP began with the first phase in 1967 consisting of primary clarifiers, aeration basins and secondary clarifiers. In 1982, the main plant was expanded from 2.5 MGD to its current capacity. The advanced wastewater treatment (AWT) facility was constructed in 1983 and expanded in 1988. The current AWT has the ability to produce 2.5 MGD of recycled water, which is utilized for landscape irrigation.

Primary sludge and thickened waste activated sludge (TWAS) from the CTP are pumped through force mains to the RTP solids facility for treatment and disposal. Screenings and grit are transported from the CTP by a private contractor to a sanitary landfill.

The Facility Improvements program has been developed based on a series of evaluations prepared by the consultant CH2MHill, which identified necessary capital improvements, repairs, adjustments and replacements. The key components of the Facility Improvements program include the following:

1. Aeration System Upgrades. The activated sludge system at the CTP consists of three east aeration basins and two west aeration basins. One of the east aeration basins is not equipped with diffusers and remains out of service. The two west basins are approximately 10 feet deeper than the east basins. The aeration system was reconstructed in 2003. The four operating aeration basins were equipped with Parkson diffuser panels. Air to panels is supplied by three multistage centrifugal blowers. Two of the multistage blowers are equipped with speed increasers that require a significant amount of cooling water. The upgrade to the aeration system was proposed to improve energy and operational efficiency. The aeration upgrades would include: installation of fine bubble disc diffusers, dissolved

oxygen (DO) probes and aeration controls, new blower(s) or upgrading the existing blowers, aeration piping, valves, drop legs, pressure monitoring and building modifications to accommodate the upgrades. The upgraded aeration system should meet the plant design capacity of 6.7 MGD, but also be able to meet current flow conditions.

2. Total Dissolved Solids (TDS) Sampling and Ferric Chloride Addition. The CTP has historically experienced high concentrations of TDS in the recycled product water (prior to the installation of the Aliso Creek Water Reclamation Facility). To help identify the source of the high TDS concentrations, TDS meters and probes were installed on the influent side of two screens. The data obtained is not reliable due to the meter location downstream of the ferric chloride addition point. The proposed modifications require relocation of the ferric chloride injection point to the screen effluent pipe. This would require splitting the ferric chloride flow into three branches for injection into the discharge pipe from each of the three screens.

3. Ferric Chloride System Reconstruction. Ferric chloride is used at the CTP to reduce sulfide levels and to aid in settling the primary sedimentation basins. The existing system does not have automated control to allow pacing of the chemical feed with the rate of influent plant flow. The containment area is constructed with masonry block which is not compliant with the appropriate codes. A new ferric chloride system would be constructed adjacent to the existing system. New pumps, tankage and piping would be constructed in a concrete containment structure.

4. Switchgear Replacement. The main switchboard is to be replaced as the existing unit is suffering from corrosion. The switchgear breakers, specifically the 4000A Main Breaker, have become a reliability concern as parts are no longer available. The location of the switchgear within the existing electrical building is not compliant with the National Electric Code. The upgrades would include replacement in place with the plant loads temporarily carried by standby portable generators.

5. Operations Building Motor Control Center (MCC) E8M Replacement. MCC E8M showing significant signs of corrosion. The new MCC would be resized to reflect load change requirements that are much changed from the original conditions.

6. Dissolved Air Flotation (DAF) MCC Replacement. The DAF MCCs are showing significant signs of corrosion. As with the other 1980's era electrical distribution devices it is no longer possible to obtain replacement parts. The upgrades would include the following: replacement of MCC-E15M and MCC-15M in the DAF Utility Building, replacement of both existing doors, and air conditioning system installation for the DAF Building Electrical Room.

7. Electrical Distribution System Reconstruction. The upgrades would complete the 2014 Electrical Distribution System Upgrade. That project contemplated the replacement of all 480-volt cable between the existing main switchgear and the MCCs. The 2014 project included the installation of a new duct bank extending from the Switchgear Building to the northern Headworks Power Building. The earlier project also included the new cable from the switchgear to MCC-1 and MCC-E1. The Facility Improvements Project will include the following: installation of new 480-volt cable from the switchgear to MCC-E13M in the Auxiliary Blower Building; installation of new 480-volt cable from the switchgear to MCC-15M and MCC-E15M in the DAF Utility Building; installation of new 480-volt cable from the switchgear to MCC-E8M in the Operations Building; and rerouting of the conduit and conductors presently terminating in the original MCC-E1M and MCC-1M in the Headworks Building. The final component is to correct a potential reliability issue. The existing rotary screens are powered from MCC-E1M. The project also includes the installation of a new 75

kw standby power generator adjacent to the Headworks Building with an automatic transfer switch. This will enable reliable power supply to the critical headworks components.

8. Headworks Building Structural Improvements. The existing concrete roof of the Headworks Building has suffered from hairline fractures that result in leakage into the upper floor of the building during wet weather events. The proposed improvement would include installation of a membrane over the roof. In addition, the three skylights have deteriorated and require replacement. The existing deteriorating lower level roll-up door at the Headworks Building will also be replaced.

9. Basin Structural Improvements. The CTP has undergone significant structural modifications over the past ten years. The remaining improvements are to be identified and implemented as part of this project including the following: replacement of grating rebate, removal of deteriorated joint material that was initially installed in 1982 along the west side of the basin complex, addressing cracking concrete and exposed rebar at miscellaneous locations, removal of abandoned piping, pipe supports and fasteners, replacement of rotting baffles within the aeration basins and replacement of the pipe connecting the East and West aeration basin inlet channels.

10. Secondary Sedimentation Basins. Secondary sedimentation is the only unit process that has not been repaired over the past twenty years. The proposed upgrades include replacement of the chain and flight sludge collectors, sludge collector drives, installation of new scum skimmers, scum beaches and drives, modification of the baffles within the tanks, replacement of the launders and weirs, installation of new mud valves along the basin floor, replacement of the telescoping valves, and the installation of conduit and wire to each of the drive units. These adjustments will be made at all seven basins.

11. Return Activated Sludge (RAS) Channel along the East Secondary Sedimentation Basins. The foundation below the existing channel has eroded. In addition, the channel floor is too low to allow it to freely flow through piping to the RAS Pump Station. The proposed repair includes removing and reconstructing portions of the channel.

12. Screening Compaction System. The screenings are currently dropped directly from the screens into a movable collection dumpster that is located at the lower floor of the building. Washing and compacting will reduce the water and organics in the screenings while avoiding nuisance issues. The proposed improvement includes installation of a screenings washer/compactor and collection system. The collection system consists of a conveyor that would receive the screenings from each screen. The conveyor would discharge the screenings directly to the washer/compactor, which would be located in the lower-level hopper room. The chute at the midpoint of the conveyor would be connected to the washer/compactor, which would discharge washed and compacted screenings into the dumpster in the same lower-level hopper room.

13. Drainage Pump Station (DPS). The existing DPS is located in an enclosed building that is subject to flooding during severe wet weather events in Aliso Creek. The existing DPS includes three pumps, one submersible and two vertical centrifugal pumps. The DPS is currently capable receiving emergency overflow from Moulton Niguel Water District (MNWD) and return flows from various CTP processes. The improvements would include separating the CTP process drain flows from the MNWD emergency overflow. The new DPS would be relocated outside of the Aliso Creek flood zone.

14. Fall Protection Safety Improvements. A safety evaluation identified the need for fall protection systems at the following buildings: Operations Building, Drainage Pump Station,

Maintenance Shop, Blower Building, Personnel Building, Disinfection Facility and the AWT Building. The evaluation also identified the need for modification to 21 hatches for easier access and opening at the following locations: Operations Building, Headworks Building, Drainage Pump Station, Scum Sump Wetwell, East Aeration Gallery, and Generator Building. The Headworks Building and Scum Sump Wetwell need fixed ladder modifications to meet the minimum ladder length and clearance requirements. Handrailing also needs to be modified on all the basins and the RAS Pump Station. This work was identified in the Fall Protection and Confined Space Evaluation Report by Arcadis (April, 2017).

Requests for Proposals

Requests for Proposals (RFP's) for engineering services were submitted to the following eight engineering firms:

- AECOM
- Black & Veatch
- Carollo Engineers
- CH2MHill
- Hazen & Sawyer
- Lee & Ro
- HDR Engineering
- Stantec/MWH

Proposals were received from all of the invited firms except Carollo and Stantec/MWH. Those two firms indicated that they did not have the resources available to complete the project in the required time.

Discussion/Analysis

Comparison of Proposals

A summary of the proposals is presented in Table 1.

Table 1 - Proposal Summary

Firm	AECOM	BLACK & VEATCH	CH2M
Project Manager	Jack Gundarlahalli	Rich ten Bosch	Fred Soroushian
Project Engineer	Dale Wah	Brian Waite	Carmen Quan
Principal	Keith Campbell	Joe Lauria	Greg Eldridge
Subconsultants	None	Dudek (CEQA) DDB (Permitting)	None
Qualifications	Designed more than 300 new or upgraded plants.	Extensive wastewater experiences in Southern California and across the U.S.	Performed the planning work for SOCWA on this Project.

Firm	AECOM	Black & Veatch	CH2M
Discussion Points in Approach	• Different sizes blowers and dynamic blower operations plan • Reduced capacity gear to enable smaller footprint and lower cost	• Dynamic, integrated aeration modeling and scenario analyses • Detailed electrical equipment sequencing plan • Construction sequencing	• Optimizing aeration basin configuration and blower options • Construction planning, sequencing and scheduling • Network reliability and automation
QA/QC	• Rusty Schroedel, Gene Moe	• Randy Fiorucci	Hiram de Mel Dave Green Aaron Hall • Mark Randall
Total Labor Hours	7,307	8,948	7,707
Total Drawings	133	169	107
Project Schedule	Completion by July 2018	Completion by July 2018	Completion by July 2018
Contract Issues	None	Desire to discuss contract sections 4.1 and 4.4	None
Proposal Requirements Compliance	Complied	Complied	Complied

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Table 1 - Proposal Summary (Cont'd)

Firm	Hazen and Sawyer	HDR	Lee & Ro
Project Manager	Dave Jones	Gregorio Estrada	Lee Badertscher
Project Engineer	Chris Thunhorst	Amy Omae	Jay Jung
Principal	Dawn Guendert	Aaron Meilleur	Dhiru Patel
Subconsultants	Ninyo & Moore (Geotechnical) Kimley Horn (CEQA)	Dudek (CEQA)	EnviroSim (Modeling) Assoc. Soils Eng.(Geotechnical) Dudek (CEQA)
Qualifications	Completed thousands of major wastewater treatment plants.	Familiarity with JBLTP and SOCWA; expertise in process and electrical design.	Successfully completed numerous wastewater treatment plant process improvements .
Discussion Points in Approach	• Aeration controls and instrumentation • Verification of number, capacity and required blower building modifications	• Blower operational range dashboard • Temporary power and sequencing • System automation, power reliability and coordination • Optimization of sedimentation tanks	• Blower modifications with process modeling • Sequencing and temporary power requirements • Electrical system to accommodate future loads
QA/QC	Jerry Ratasky Allan Briggs	Dave Bachtel	Sal Calderon M. Steve Ro
Total Labor Hours	7,957	7,366	7,851
Total Drawings	170	185	150
Project Schedule	Completion by July 2018	Completion by July 2018	Completion by July 2018
Contract Issues	None	None	None
Proposal Requirements Compliance	Complied	Complied	Complied

The proposed fees for each firm are as shown in Table 2.

Table 2 – Proposal Summary

	AECOM	Black & Veatch	CH2M	Hazen and Sawyer	HDR	Lee & Ro
Total Fee	$1,209,130	$1,397,000	$1,322,364	$1,195,286	$1,396,800	$1,395,181

The Engineering Committee for Project Committee 15 reviewed each of the proposals. The Engineering Committee recommended the award of the final design contract to Hazen and Sawyer. Several of the proposals included very experienced teams. However, the Engineering Committee members felt that Hazen and Sawyer had shown the best project approach particularly for the aeration portion of the project.

The scope of work for the proposed project is presented in Exhibit 1.

Advisory Committee Review

Proposals for engineering services for the Coastal Treatment Plant Facility Improvements Project were reviewed by the Engineering Committee on October 12, 2017. The Project Committee 15 Engineering Committee recommended award of the contract to Hazen and Sawyer.

Fiscal Impact

The budget status of the task item for Project Committee 15 is presented in Table 3.

Table 3 - Budget Status

Task	Cost Center	Budget	Expended to Date	Proposed Engineering Contract	Contingency
3592-000	Liquids	$1,725,000.00	$0.00	$1,195,286	$529,714

Task 3592 was identified in the Fiscal Year 2017/2018 budget for the design of the Facility Improvements Project. A separate budget line item will be set for construction for Fiscal Years 2018/2018 and 2019/2020. The current estimate for the overall construction of the Facility Improvements Project is $21,746,000. This includes $10,283,000 for the aeration system upgrade as estimated by CH2MHill. One of the first tasks for Hazen and Sawyer under the proposed contract is verify the scope and the cost for the proposed improvements.

The allocation of the project cost to the member agencies is presented in Table 4.

Table 4 - Allocation of Cost To Member Agency

Member Agency	Task 3592-000
Emerald Bay Service District	$35,739.05
City of Laguna Beach	$453,132.92
Moulton Niguel Water District	$349,621.16
South Coast Water District	$356,792.87
Total	$1,195,286.00

Recommendation

The following action is recommended:

Approval of the award of the engineering services contract to Hazen and Sawyer at a fee of $1,195,286.00

EXHIBIT 1
SCOPE OF SERVICES

Tasks include the following:

I. Progress Meetings. FIRM shall conduct monthly progress meetings at SOCWA's Coastal Treatment Plant. FIRM shall prepare the agenda, the action item list and the decision log for each meeting. FIRM shall plan for a maximum of 9 progress meetings including one kickoff meeting.

II. Document Review. FIRM shall review all planning documentation available including but not limited to: CH2MHIll's Facility Plan and CH2MHill's Facility Improvements planning technical memoranda. FIRM shall also review facility drawings and visit the field to determine the correctness of existing as-built drawings. FIRM shall review project needs with Operations and Maintenance staff.

FIRM shall note that SOCWA does not have CAD drawings for any of the as-built drawings. SOCWA can provide CAD drawings for the following: (a) aerial topography and (b) field survey.

III. Basis of Design - Aeration. FIRM shall prepare updated treatment plant basis of design. FIRM shall evaluate recommended configuration of aeration system based on range of process flows and air requirements identified by SOCWA staff. FIRM shall verify number and size of blowers. FIRM shall note any building modifications needed to accommodate blowers. FIRM shall prepare a series of graphs showing the range of blowers' operations at different plant flow rates and basin configurations. FIRM shall prepare the findings in a technical memorandum format.

IV. Basis of Design – Other Unit Processes. FIRM shall review proposed modifications to secondary sedimentation basins. FIRM shall review potential equipment types for sludge collectors and scum collectors. Equipment options will be reviewed with SOCWA staff. FIRM shall prepare an updated basis of design for the secondary sedimentation system. FIRM shall also prepare new basis of design for ferric chloride system; DPS; and screening compaction system. FIRM shall prepare the findings in a technical memorandum format.

V. New Facility Location. FIRM shall prepare preliminary sizing of the ferric chloride system and the DPS. FIRM shall analyze and identify location of new facilities using existing aerial topographic map. FIRM shall recommend location of new facilities based on existing infrastructure and cost of new construction. FIRM shall review locations with SOCWA staff. When the siting has been agreed upon, SOCWA staff shall retain a surveyor to provide detailed field survey for use in final design. FIRM shall prepare the findings in a technical memorandum format.

VI. Electrical Facility Design Review. FIRM shall review recommendations for installation of new switchgear and MCCs. FIRM shall review equipment sizing and FIRM shall also consider impact of existing emergency power supply system on configurations of switchgear. FIRM shall review equipment selections with SOCWA staff. FIRM shall identify needed modifications to structures housing electrical devices. FIRM shall provide all new electrical gear with connections for temporary standby power generator. FIRM shall develop plan for temporary power supply during construction. FIRM shall

review impact of Southern California Edison (SCE) requirements for new switchgear. FIRM shall prepare the findings in a technical memorandum format.

VII. 35% Submittal. This submittal shall include plans, specifications and cost estimate. The plans shall include base sheets, plan views, P&ID, single line diagram, equipment list including cut sheets. FIRM shall provide specifications in electronic form (in *.doc format) and drawings in electronic form (in *.pdf format). Note: after the 35% submittal, SOCWA and FIRM shall agree to the equipment list. SOCWA will take two weeks to review the submittal and return comments. FIRM shall prepare an implementation plan showing how work can be done while maintain the facility in service.

VIII. Plan Check Sets. FIRM shall print one set of full size (22 x 34) check set each month. FIRM shall maintain one set at the local office. FIRM shall notify SOCWA when new plan set is available for review. FIRM's conference room shall be reserved for four hours each month to review the check set. Note that consultants do not have to be present during these reviews.

IX. 90% Submittal. The 90% submittal shall address all SOCWA's comments from the 35% submittal. This submittal shall also include the same elements as the 35% submittal with the completed plans, specifications and cost estimate. FIRM shall provide specifications in electronic form (in *.doc format) and drawings in electronic form (in *.pdf format). SOCWA will take two weeks to review the submittal and return comments. FIRM shall obtain guaranteed price proposal for the fine bubble disc diffusers system. FIRM shall review proposed pricing based on recent projects. FIRM shall review with SOCWA staff. Upon agreement of SOCWA staff, FIRM shall integrate guaranteed price proposal into bidding documents.

X. 100% Submittal. The 100% submittal shall address all SOCWA's comments from the 90% submittal. This submittal shall also include the same elements as the 90% submittal with the completed plans, specifications and cost estimate. FIRM shall provide specifications in electronic form (in *.doc format) and drawings in electronic form (in *.pdf format). SOCWA will take two weeks to review the submittal and return comments.

XI. Final Submittal. FIRM shall provide one set of specifications on 8-12 x 11 paper, one copy of the final drawings on full size (22 x 34) paper and one copy of the final drawings on ½ size bond paper. FIRM shall also provide specifications in electronic form (in *.doc format) and drawings in electronic form (in *.dwg and *.pdf format).

XII. Divisions 0 and 1. SOCWA will provide the FIRM with the listing of standard specifications Divisions 0 and 1 to be used for the project after the 35% submittals review. FIRM is responsible for preparing Section 01010, Summary of Work and Section 01014, Work Restrictions and Sequence. FIRM shall meet with SOCWA to discuss coordination of specifications sections referenced in the technical specifications. FIRM shall submit required information for review at the 90% submittal.

XIII. Coordination with Southern California Edison (SCE). FIRM shall provide additional 80 hours of coordination time with SCE as directed by SOCWA staff.

XIV. Orange County Environmental Health Division (OCEHD) Submittal. FIRM shall coordinate all design reviews with the OCEHD for the ferric chloride system. FIRM shall

be responsible for preparing all submittals to the OCEHD. FIRM shall be responsible for ensuring that design satisfies all OCEHD review comments.

XV. CEQA. FIRM shall provide SOCWA with the environmental documentation required to meet SOCWA's obligations as lead agency under CEQA. FIRM shall prepare an Initial Study in accordance with CEQA Guidelines. FIRM shall present sufficient information on location of staging and storage, equipment use, traffic, noise, and drainage so as to fully explain temporary impacts of project during construction. FIRM shall prepare Mitigated Negative Declaration and Mitigation Monitoring Plan. FIRM shall prepare and issue Notice for Public Hearing. FIRM shall prepare materials and presentation for Public Hearing. FIRM shall preform all filing necessary to complete the CE*QA* process.

Agenda Item

Legal Counsel Review: No

Meeting Date: November 2, 2017

TO: SOCWA Board of Directors

FROM: Betty Burnett, General Manager

SUBJECT: General Manager's Status Report

Environmental Compliance

Bight '18

Staff met with Ken Schiff, Deputy Director of the Southern California Coastal Water Research Project (SCCWRP). The microbiology research is the presence of HF183 in the watershed. The samples will be collected from urban runoff in the watershed. HF183 is a bacteriodes (another name for bacteria) which is being studied as an alternative indicator organism to replace traditional fecal indicator bacteria (FIB) such as total coliform, fecal coliform, *Escherichia coli,* and fecal streptococci (enterococcus). SOCWA analyzes for FIB on a weekly basis from reclaimed water production at RTP & CTP and at beach sites from Laguna Beach to San Clemente.

SCCWRP contends that HF183 is a better and faster predictor of human caused pollution and that by studying where HF183 resides in the watershed, managers will be better equipped to prioritize clean-up efforts. However, a study by SCCWRP at Doheny State Beach although providing evidence that HF183 is the indicator found most frequently in the study, there was not a perfect correlation to FIB which casts doubt as the efficacy of using this marker to inform management decisions. In addition, Title 22 which governs the water quality requirements for recycled water, allows for less than 2 coliform forming units per 100mL therefore it is likely that the use of this marker will point the finger at recycled water providers in the watershed. The EPA has been providing funding to laboratories to study the use of HF183 as an alternate indicator since 2000.

Laguna Niguel Reservoir

Staff met with Orange County Public Works and Orange County Watersheds to discuss the ability to take coliform samples in the Laguna Niguel Lake on a quarterly basis. This meeting was a result of follow-up work after the January 2017 storm events. The Denton Mudry biological assessment report indicated that there was no adverse impact from the storm flows but suggested that baseline monitoring down stream of RTP would be beneficial in the future. OC Public Works agreed to take samples and share results with SOCWA staff on a quarterly basis.

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ELAP

Governor Brown signed Assembly Bill 1438 into law on September 28, 2017, which makes several amendments to the California Health and Safety Code sections that govern the Environmental Laboratory Accreditation Program. The changes include:

- Outdated references to the California Department of Public Health were changed to the State Water Resources Control Board
- Existing outdated references to NELAP and NELAC were updated to TNI
- The appeals process was aligned with the process used by all other State Water Board programs
- The process for suspending or revoking accreditation was modified to provide for a hearing before the State Water Resources Control Board

The changes made by AB 1438 are considered "clean-up" actions and do not change or add any accreditation requirements. No action is required on behalf of accredited laboratories. The law goes into effect on January 1, 2018.

Safety Update - Third Quarter 2017

Notable Items since the 2nd Quarter 2017

- July 2017 – Spill Prevention and Response Training (hands on training with use of ICS System)
- July 2017 – Training – How to prepare SDS chemical labels for secondary containers
- July 2017 – WEROC Quarterly Meeting
- August 2017 – JBL Arc Flash Training with 3rd party trainer (training for arc flash rated equipment)
- August 2017 – Maintenance attended training to become Certified Forklift Trainer (to be utilized to certify newer employees for forklift use)
- August 2017 – CSRMA Risk Control Seminar (at CASA)
- August 2017 – Active Shooter and Workplace Violence Training
- September 2017 – WEROC Radio Training
- September 2017 – Quarterly Facility Safety Inspections
- September 2017 – Quarterly SOCWA Safety Committee
- September 2017 – OC Winter Weather Workshop
- September 2017 – Forklift Training
- July through September 2017 – CSRMA Monthly Webinars for upgrade of CSRMA's Online Training Capabilities
- July through September 2017 – WEROC Hazard Mitigation Plan Update
- July through September 2017 – City of Laguna Beach Hazard Mitigation Plan Update
- July through September 2017 – Credible Threat and Unknown Contaminant Training (training provided through WEROC)
- July through September 2017 – FEMA Project Reimbursement Requirements
- August through September 2017 – New Employee Safety Onboarding and Safety Orientation Meetings (6 New SOCWA Employees)
- There were No OSHA Recordable Injuries in the Third Quarter 2017

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Operations & Maintenance

Winter Storm Preparations

Staff have been diligently preparing the sites for the winter. This includes training staff on storm-water equipment operations and water quality monitoring. Staff will be using the color coding system developed last year to communicate storm event severity and protective measures to be activated. The color coding system is as follows:

Code	General Description	General Measures
No Color	Normal operations	Normal staffing
Blue	A storm expected to have 1 inch or more of rain is forecast to occur within 3 days or the upcoming weekend.	Normal staffing Site preparations to be set up Monitor storm's approach
Yellow	Flows in the plants have exceeded their normally expected flow by 10% and weather is not deteriorating. For CTP, Lower Aliso Creek flows are below 2 feet, but it is raining out.	Normal shift staffing during the day. Minimum 2 operators and 1 maintenance (mechanical or electrical) staff at each plant on the weekends. Monitor storm developments Staff starts implementing high flows procedures. Interagency communications started (Oso Creek and 3A)
Orange	Flows in the plants have exceeded their normally expected flow by 25%. Weather and/or road conditions for staff traveling to work are deteriorating. For CTP, Lower Aliso Creek flows are above 2 feet and below 6 feet.	Normal shift staffing during the day. Minimum 2 operators and 1 maintenance (mechanical or electrical) staff at each plant weekends. Minimum 1 management staff at JBL or RTP. Chiefs prepare schedules to switch to 24/7 "Red", if needed. Monitor storm developments and implement high flow procedures. RTP Chief (or designated person in charge) to contact IRWD and ETWD contacts to notify them of the elevated wet weather operations to ensure flows are limited to the Effluent Transmission Main. CTP staff prepares the site to be vacated by staff per SOP's. Continue interagency communications (Oso Creek and 3A)
Red	Flows in the plants have exceeded their normally expected flow by 50%. For CTP, Lower Aliso Creek flows are above 6 feet. For any plant, if there is an active or anticipated spill their	All available operations and management hands be prepared to report to their home treatment plant as scheduled during "Orange" level. Chief to call or text schedules to staff – 24/7 operations. Emergency Operation Center (EOC) formally setup at JBL.

	status will be elevated to "Red".	Monitor storm's development and implement high flow procedures. Onsite storm-water systems diverted to local creek system. Management to document and/or support documenting any damage, spills, etc. Management to contact WEROC to notify them of SOCWA's status and request any needed mutual aid assistance needs. CTP Chief (or designated person in charge) and staff vacate site and report to RTP. CTP staff will monitor creek conditions until it is safe to return. Continue interagency communications (Oso Creek 3A, ETWD and IRWD) SOCWA Management to continue to communicate with their counterparts at the Water Districts on SOCWA's status.
Purple	Code Purple indicates recovery after an event.	Normal staffing during the day minus staff that are too fatigued to work safely. Minimum 2 operators and 1 maintenance (mechanical or electrical) staff at each plant after hours or on the weekends until the next normal day shift begins. Continue interagency communications (Oso Creek 3A, ETWD and IRWD) Chief (or designated person in charge) to inspect the facilities that can be inspected safely. Facilities not inspected will remain at Purple until they are inspected (outfall alignment, CTP road, etc.). Management to contact WEROC on status change. EOC deactivated (Information is organized for reporting the following day.) Management declares end of the event for each facility.

Maintenance Program Update

O&M staff continues to add historical data to the Tabware equipment database, including manuals, parts lists, instructions, and lockout tagout procedures. Over the next year, 2 pilot programs will be implemented. The first will be the addition of equipment condition ratings for the equipment as it is serviced. Staff will be trained on how to enter condition data. The data will help identify equipment that needs to be replaced.

The second pilot program will be the use of the new scheduling module in Tabware. Again, the staff will be trained on the module by a Tabware representative from Asset Point. However, the pilot team will also work with the Tabware representative from Asset Point to setup the backbone data and information to allow for the scheduling module to be activated. O&M staff would update and maintain the backbone scheduling data and information after it is set up with support from Tabware On Call Services.

October Heat Wave

October was a very hot month. SOCWA's Heat Illness procedures, include preventative measures, monitoring of heat related illness, and proper treatment for individuals affected by heat illness. Several advisories were sent to all employees over the month that reminded employees and supervisors about the following:

- Availability of water and recommended quantities to drink.
- Use of shade at work sites
- Recommended timing of breaks from the heat
- Signs and symptoms of heat exhaustion and heat stroke
- Medical aid and emergency medical procedures

O&M staff curtails "Hot Work" during days with elevated temperatures and "Hot Work" is prohibited on red flag days (high winds). O&M staff also limits work in confined spaces during elevated temperature days due to the potential for even higher temperatures in smaller work spaces.

Co-Gen System Update

The new co-generation system at the J. B. Latham (JBL) Treatment Plant was completed during the summer of 2017. While in operation the co-generation system largely uses all of the available digester gas. However, the rate of production of digester gas decreases as the influent sewage flow to the treatment plant decreases. During the night hours the production of digester gas can fall below the minimum operating range of the co-generation engine. At that point, the engine will automatically shut down and the digester gas will be diverted to the gas flare. However, the automatic operation of the gas flare at the Latham Plant is no longer functional. JBL is not staffed during the night hours; there is no staff available to manually start the gas flare. Therefore, the Operations staff starts the flare and shuts down the co-generation engine at the end of each eight-hour day shift. When the Operations staff returns to work the next morning the co-generation engine is restarted. A project is currently underway to automate the operation of the flare. It is expected that the automation will be completed by January 2018. The flare modification will allow the co-gen engine to run 24 hours a day and reduce the flaring of digester gas.

The new co-generation system at the Regional Treatment Plant is expected to go through start-up in December 2017. The automatic operation of the gas flare system at the Regional Plant is currently automated. Therefore, digester gas flow through the flare system should undergo a significant decrease after the new engine is brought on-line.

Once the JBL flare automation and RTP engine projects are completed, the importation of electricity and flaring of digester gas will be reduced significantly.

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Engineering

J. B. Latham Treatment Plant DAF Thickener No. 2 Repair

The metal support channels beneath the aluminum treadplate surrounding the collector mechanism drive on the Dissolved Air Flotation Thickener (DAFT) No.2 at the J. B. Latham Treatment Plant have been found to be severely corroded. The level of corrosion is significant enough that the aluminum treadplate and aluminum covers is no longer deemed safe enough to use. Rehabilitation of DAFT units at the J. B. Latham Treatment Plant will be done as part of the Package "B" Facility Improvements which are currently under design by Carollo Engineers. It was determined to proceed immediately with the repair of the structural supports on DAFT No.2 due to the safety concerns. SOCWA has received one contractor proposal for the repairs in an amount not to exceed $85,000; SOCWA is in the process of obtaining a second proposal. SOCWA anticipates issuing a purchase order to proceed with this work in November, 2017.

Coastal Treatment Plant Access Road Repairs

The week of October 16, 2017, the Coastal Commission approved the emergency repairs to the CTP Access Road in the area located approximately 1 mile below the gated entry point. This was the area of creek bank erosion with the most damage to the access road that occurred during the January, February 2017 storm events. The remainder of the repair needs were determined to be permanent repairs whereby additional Coastal Commission permitting will be needed before those can be accomplished. The emergency repair project will proceed following a confirmation with California Department of Fish & Game as to their requirements for the work. For the emergency repair project, the work approved will allow for a replacement of damaged bank area with fill material; however, SOCWA staff does not consider that approach to be permanent repair and it is likely there could be a loss of the repaired area if similar storm conditions occur again.

Army Corp. of Engineers Draft EIR for Aliso Creek EcoSystem Restoration Project

SOCWA staff attended the presentation and public hearing held at the Laguna Hills Community Center on October 17, 2017. The project will be discussed during the Executive Officer's report to be presented at the upcoming South Orange County Watershed Management Area Executive Committee meeting on November 2, 2017. The Project Summary is attached hereto and the entire report document can be downloaded at:

http://www.spl.usace.army.mil/Missions/Civil-Works/Projects-Studies/Aliso-Creek-Study/

SOCWA staff will be assessing the impact of the proposed project on SOCWA facilities.

The public comment period will close November 13, 2017 at 5:00 p.m. Comments should be submitted to:

Mr. Eduardo T. DeMesa
Chief, Planning Division
U.S. ACOE, Los Angeles District
Attn: Deborah Lamb (CESPL-PDR-L)
915 Wilshire Blvd., Suite 930
Los Angeles, CA 90017
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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This document serves as a draft feasibility report, Environmental Impact Statement and Environmental Impact Report – known as a Draft Integrated Feasibility Report (Draft IFR) – for the Aliso Creek Mainstem Ecosystem Restoration Project. The Proposed Project analyzed in this Draft IFR is the implementation of an ecosystem restoration project within lower Aliso Creek in Orange County, California. The U.S. Army Corps of Engineers (Corps) is the lead agency under the National Environmental Policy Act (NEPA), and the non-Federal sponsor, Orange County Public Works (OCPW), Environmental Resources is the lead agency under the California Environmental Quality Act (CEQA).

This Draft IFR identifies the Federal interest in riverine ecosystem restoration and complementary recreation features within a significant largely undeveloped coastal canyon ecosystem resource in southern California. The study also identifies ancillary benefits to wastewater infrastructure located within the Proposed Project area that result from streambank protection features. Such measures are necessary to avoid negative impacts to the restored ecosystem that would result from the release of effluent or sludge, and construction activity required for repairs. Ancillary benefits are also identified for water supply infrastructure, as well as for passive recreation.

This Draft IFR was prepared as an interim and partial response to the resolution of the Committee on Public Works, House of Representatives, adopted May 8, 1964, for the Santa Ana River Basin and Area Streams, Orange County, California; and also to the Water Resources Development Act (WRDA) 2007, Section 4015, authorizing the Secretary of the Army "…to conduct a study to determine the feasibility of carrying out a project for streambank protection and environmental restoration along Aliso Creek, California."

This Draft IFR includes documentation of the planning process conducted for this feasibility study and the detailed evaluation and comparison of a final array of five alternatives, including the No Action alternative. The Draft IFR is prepared to comply with NEPA, CEQA, and applicable Federal, state, and local environmental laws and regulations. An outcome of the planning process is the identification of the National Ecosystem Restoration (NER) plan, and designation of the Tentatively Selected Plan (TSP).

ES.2 PROPOSED PROJECT SETTING AND SIGNIFICANCE

The Aliso Creek watershed is located in southern Orange County, California, approximately 50 miles south of Los Angeles, and encompasses an area of about 35 square miles. Aliso Creek flows nearly 19.5 miles from its headwaters at approximately 2,400 feet above sea level in the rugged Santa Ana Mountains within the Cleveland

National Forest to its outlet at the Pacific Ocean at Aliso Beach in south Laguna Beach, California. For discussion purposes, Aliso Creek is divided into 17 reaches (shown in Figure ES-2 and Figure ES-3).

Within the lower portion of the Aliso Creek watershed is the 4,200-acre Aliso and Wood Canyons Wilderness Park (Wilderness Park), a significant largely undeveloped natural resource in southern California. The Wilderness Park is a coastal canyon ecosystem with significant biodiverse value, supporting limited and scarce landscape habitat types unique to California, including coastal sage scrub, chaparral, native grassland, oak woodland, riparian woodland/forest, and freshwater marsh, and provides several important wildlife corridors that link wildlife habitat within and between protected open spaces in the region. The natural landscape supports many plant and wildlife species, including those listed as Federal and state threatened or endangered such as the least Bell's vireo and the coastal California gnatcatcher. There are relatively few protected coastal canyon ecosystems existing in southern California (Figure ES-1).

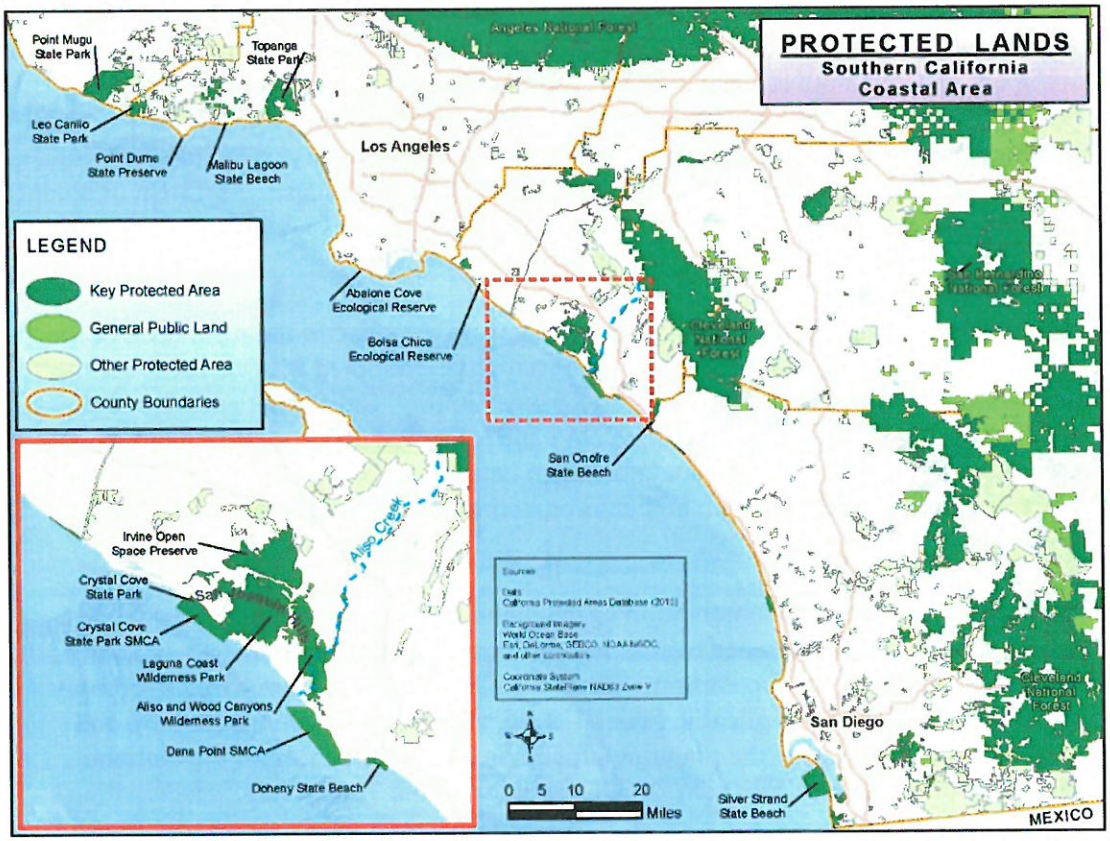

Figure ES-1 Protected Lands of the Southern California Coastal Area

The Wilderness Park is part of the broader 20,000-acre South Coast Wilderness area within the coastal San Joaquin Hills. Lower Aliso Creek watershed links two regionally significant ecosystems: the terrestrial greenbelt formed by the natural habitat of the South Coast Wilderness area, and the bluebelt of the coastal and offshore Laguna Beach State

Marine Reserve/Conservation Area, recently established by the Marine Life Protection Act.

Laguna Beach and the South Coast Wilderness area were designated a national landmark in 2017 by gaining recognition as a Historic American Landscape by the National Park Service. Other national recognition of the region includes designation of the Aliso Creek Regional Riding and Hiking Trail as a National Recreation Trail in 2012.

Natural habitat areas in Orange County are highly fragmented by development. Upstream urbanization within the Aliso Creek watershed has caused downstream degradation of riverine (aquatic and riparian) habitat quality within the Wilderness Park as a result of hydrologic alterations, floodplain function loss, channel modifications, loss in contributing sediment sources, channel instability (streambed incision and streambank erosion), and introduction and spreading of non-native plant species. Severe channel incision and severing of most of the stream's hydrologic connection to the floodplain results in the lowering of groundwater levels in the floodplain, with a consequent decline of riparian and floodplain habitat biodiversity, and shrinking of its areal extent, culminating in habitat type conversion. Within the incised channel, restricted and narrowed riparian and aquatic habitat is subject to confined high flows during large storm events, resulting in the increased likelihood of vegetation community and aquatic wildlife destabilization and loss.

A failed former non-Federal mitigation site within the Wilderness Park, referred to as the Aliso Creek Wildlife Habitat Enhancement Project (ACWHEP), has aggravated the stability of the Aliso Creek mainstem. Severe streambank and streambed erosion has occurred downstream of the structure, which now acts as a large drop structure. Incision downstream of the structure is about 25 feet.

An assessment from three decades ago indicated that California had lost 90 to 95 percent of its native riparian community (Faber et al. 1989). In neighboring San Diego County, a loss of 40 percent of riparian wetlands was recorded within a decade since the late 1980s (CDPR 1988).

Riparian ecosystems are dependent on perennial, ephemeral, or intermittent surface or near-surface water. Many species of wildlife rely on riverine ecosystems during some, or all, of their life cycles. Riverine corridors function as linkages for wildlife movement between habitat areas. Vegetation and habitat type connectivity maintain populations of migratory animals, provide corridors for gene flow, allow wildlife and plant dispersal to new areas, and provide movement corridors at both the local and regional level. Dispersal into connecting habitats increases the diversity of plants and animals that can be supported.

For the Aliso Creek watershed, habitat, species numbers, and diversity have declined due to the loss of connectivity between habitats. Aquatic linkages especially have been impaired by manmade channel modifications and the introduction of flow control structures and road crossings, creating barriers to aquatic wildlife and inhibiting

dispersal. Species diversity is highly dependent on habitat diversity. Linkages are critical for supporting multiple populations of species to assure continual exchange of genes within populations, which in turn help sustain genetic diversity. Within the Wilderness Park, linkages for aquatic species along a five-mile stretch of Aliso Creek, including its connection to its major tributary (Wood Canyon Creek), are severely fragmented by manmade changes.

Despite the watershed fragmentation, terrestrial wildlife corridors are still intact between the Wilderness Park and the other portions of the South Coast Wilderness Area to the west. Additionally, for some mammal species (including coyote, bobcat, and occasional mountain lion), the 19.5 miles of Aliso Creek still serves as a northerly wildlife corridor to the Cleveland National Forest, despite some short stretches where some channelized sections and narrow channel easements exist.

Species that depend on multiple habitat types for different activities or different life stages have also declined. Migratory birds that may rely on riparian habitat, face population declines due to losses of this type of habitat. Biological diversity in Aliso Creek has also been impacted by the introduction of non-native species. Invasive exotic plants, such as giant reed, castor bean, and tamarisk, alter the hydrology, community structure and function, nutrient cycling, and soil chemistry of riparian ecosystems, and they compete with, hybridize, or exclude native species and have reduced the quality of riverine habitat. Exotic predators, such as bullfrogs, have decimated populations of native fish and aquatic wildlife. Southwestern pond turtle, a California Species of Special Concern, and currently under review for Federal listing, are known to inhabit only a few locations in Orange County, including Aliso and Oso Creeks.

Regional wastewater infrastructure, serving a population of more than 40,000, is susceptible to erosion-driven damage from Aliso Creek. Channel degradation from larger flow events has caused infrastructure damage in recent years exceeding $5 million in the lower watershed. Threatened wastewater pipeline infrastructure vulnerable to bank erosion poses a significant threat to human health and a measurable impact to the environment, valued beach recreation, and the local economy from potential major sewer line failure. Due to the instabilities in the creek, the South Orange County Wastewater Authority (SOCWA), a public utility, which operates the Coastal Treatment Plant (CTP) located within an isolated parcel at the lower end of the Wilderness Park, must routinely perform temporary emergency protective actions to their facilities.

Additional water supply infrastructure is susceptible to damage from Aliso Creek just downstream of Pacific Park Drive. The Joint Regional Water Supply System (JRWSS) is a water supply transmission line, owned by the public utility South Coast Water District, which provides a primary source of drinking water for more than 200,000 residents in southern Orange County communities. Two locations of the Joint Transmission Main, one in parallel, and one crossing under the creek, are threatened.

ES.3 PROPOSED PROJECT AREA

The Proposed Project area encompasses about a five-mile stretch of the Aliso Creek mainstem riverine system from the Pacific Park Drive area downstream to the SOCWA CTP Bridge, located about 1.2 miles upstream of the ocean outlet. The Proposed Project area includes approximately 700 feet of Wood Canyon Creek, and also 600 feet of Sulphur Creek to Alicia Parkway, from their respective confluence with Aliso Creek. The majority of the Proposed Project area lies within the Aliso and Wood Canyons Wilderness Park, which is owned, operated, and managed by the County of Orange.

ES.4 PURPOSE AND NEED

The purpose of the Proposed Project is to increase habitat function and value associated with aquatic and riparian ecosystem resources along approximately five miles of lower Aliso Creek. Intensive urbanization within the Aliso Creek watershed during the past 50 years has resulted in significant degradation to aquatic and riparian habitat quality and function, riverine and floodplain connectivity, and stream channel stability. Ecosystem restoration would also be supported by protecting critical wastewater infrastructure from creek erosion and instability. Ecosystem restoration project alternatives would not be sustainable without a solution to the infrastructure threat within the Proposed Project area. Failure of wastewater infrastructure would cause undesired impacts to any restoration effort. Long-term increases in habitat function and value would also provide incidental passive recreational enhancement. A secondary objective of the Proposed Project is to provide recreational opportunities compatible with the purpose of ecosystem restoration.

The need exists to diminish the adverse effects of manmade alterations affecting the lower Aliso Creek riverine system to support a healthy aquatic and riparian community, and to improve connectivity for wildlife species between the Aliso and Wood Canyons Wilderness Park and the broader South Coast Wilderness area, as well as with the Cleveland National Forest. The need also exists to protect critical wastewater infrastructure from streambank erosion and stream instability that poses a significant threat should pipeline rupture occur, with impacts to the environment and to the local economy which relies heavily on the recreational use and high esthetic value of the coastal zone.

ES.5 PLANNING OBJECTIVES

The investigation of the problems and opportunities in the study area led to the establishment of the following planning objectives:

- Improve the degraded aquatic and riparian habitat ecosystem function and structure, including the mosaic and heterogeneity of vegetation types, to increase plant and animal biodiversity for the Aliso Creek mainstem and tributary confluences within the Aliso and Wood Canyons Wilderness Park throughout the period of analysis. In

particular, promote instream connectivity (longitudinal, lateral, and vertical) to facilitate the reproductive viability of aquatic species.

- Improve the hydrologic and hydraulic regime to increase floodplain function and channel stability for the Aliso Creek system within the Aliso and Woods Canyon Wilderness Park throughout the period of analysis.
- Enhance the passive recreational experience that is compatible with the Proposed Project within the Aliso and Wood Canyons Wilderness Park throughout the period of analysis.

ES.6 KEY PLANNING CONSTRAINTS AND CONSIDERATIONS

Planning constraints restrict plan formulation and are specific elements that alternative plans should avoid.

- Avoid adverse impacts to designated critical habitat for the threatened tidewater goby.
- Avoid destabilization of existing historical landslide masses or other potential unstable slopes in the proposed project area.

Planning considerations are the overarching guidelines used to inform the development of, assess, and screen alternatives. There are several considerations specific to the study area.

- Avoid or minimize increases in flood and erosion damages to facilities and infrastructure as a result of a Federal project. This includes the ocean outfall section within the golf course property.
- Avoid or minimize impacts where possible to archeological resources in the project area.
- Avoid increase in manmade structures with visible construction elements (such as concrete) that would not be esthetically consistent with the natural setting of the Wilderness Park.
- Based on public input, assess options to improve the current operating use of the access roads within the Wilderness Park.

ES.7 PLAN FORMULATION

ES.7.1 Management Measures

A full array of structural and non-structural measures was formulated during the planning process and combined into various alternatives to address the planning objectives. Management measures address riparian and aquatic habitat structure and function, floodplain function, channel stability, and passive recreation.

ES.7.2 Focused Array of Alternatives

The process in developing the focused array of alternatives included the establishment of the No Action Plan (Alternative 1) and of three base alternatives (Alternatives 2, 3, and

4). The base alternatives address the reestablishment of floodplain function, as this is a foundational need associated with habitat restoration efforts within incised channel systems. The basis for Base Alternative 2 is to maintain a similar streambed elevation to existing conditions within the incised channel margins. The basis for Base Alternative 3 is to raise the streambed elevation to improve connection with the historic floodplain; and that for Base Alternative 4 is to raise the streambed elevation to establish an intermediate floodplain connection. Each base alternative possesses the minimum number of measures to achieve the basis (i.e. respective streambed elevation; geomorphically stable channel; vegetation; and streambank protection in key areas to preclude infrastructure threat) for that alternative and to create a sustainable aquatic and riparian habitat structure and function.

The formulation of the focused array consisted of assessing additional measures, which could be combined with each base alternative to create variations of the alternatives. The Institute for Water Resources Planning Suite software was utilized to perform cost effectiveness and incremental cost analysis (CE/ICA) on the various combinations of base plans and additional measures. Results of the CE/ICA yielded 27 cost-effective alternatives, of which five were identified as Best Buy Plans (including the No Action Plan). Cost-effective alternatives included Base Alternatives 2 and 3, and associated variations. Base Alternative 4 and its variations were not identified as cost-effective. Based on further screening conducted on the cost-effective plans, and the inclusion of an additional plan provided by the U.S. Fish and Wildlife Service (USFWS) in its Planning Aid Letter, dated August 28, 2015, a total of 12 alternatives were identified to comprise the focused array. The USFWS plan (Alternative C) is formulated based upon a similar restoration strategy as Base Alternative 2, but limits changes to the channel dimensions and streambed gradients to reduce impacts to existing riparian vegetation, and incorporates sediment augmentation efforts.

Criteria used in the evaluation of the focused array of alternatives included: aquatic species connectivity and viability; floodplain connectivity; quality and expanse of riparian habitat, including successional stage diversity; protection of critical infrastructure, and the relative need for onsite disposal areas. Metrics established to compare the focused array include how the alternatives compare in meeting the planning objectives, risk and uncertainty associated with bank erosion and threat to infrastructure, project sustainability (key factors for operability), flooding impacts to the east and west access roads, and potential impacts related to geotechnical issues (landslides) and cultural resources. Comparison of the focused array is presented in Table ES-1 and Table ES-2.

Table ES-1 Focused Array Comparison: Ecosystem Restoration Metrics

			Objective 1 Restoration of Riverine Habitat Structure and Function							Objective 2 Floodplain Connect; Channel Stability		
Alt	**Description** *(*Best Buy Plan)*	**Project Footprint**	**ACWHEP Removed**	**Aliso Aquatic Wildlife Connect (mi)**	**Wood Canyon Connect Aquatic Wildlife (mi)**	**Aquatic Wildlife Genetic Diversity Benefit**	**Riparian Veg Benefit: Channel**	**Riparian Veg Benefit: Overbank**	**Groundwater Rise**	**Floodplain Function Increase (net over No Action)**	**Sinuosity Gain (net over No Action)**	**Channel Stability (and no. of Riffles)**
1	**No Action**	-	No	2.2	0	At risk; barrier at ACWHEP	Unstable. Limited to early succes'l; frequent loss	Narrow; less dense; mostly late succes'l	No	-	-	-
2	**Maintain Similar Streambed Elevation**											
2.1	Base 2	SOCWA to ACWHEP (Rch. 4A-6)	No	2.2	0	At risk; barrier at ACWHEP	Limited to early succes'l; frequent loss	Narrow; less dense; mostly late succes'l	No	Slight	None	Yes; regime
2.2	2.1 + Sinuosity (Wood Canyon [WC])										Slight	
2.3	2.2 + Newbury Weirs										Slight	Yes; regime; (11)
3	**Restore Historic Streambed Elevation**											
3.1	Base 3	SOCWA to AWMA Br (Rch. 4A-9)	Yes	3.6	0	At risk; barrier at first 10-ft drop structure	Early and mid-succes'l	Wider, denser, mid-to late succes'l	Yes	Moderate	None	Yes; regime (34)
3.2	Base 3 + WC connect + WC Trailhead				3.5							
3.3*	3.2 +Widen/Recontour Channel +PPDBC	SOCWA to Pacific Park Dr. (Rch. 4A-12)	Yes	5 (Plus 3.5 mi Steward-ship	3.5	Promotes genetic diversity; Barriers removed	Early and mid-succes'l	Wider, denser, mid-to late succes'l	Yes	Substantial	None	Yes; regime (47)
3.4	3.3 + Sinuosity (PPD)										Slight	
3.5	3.3 + Sinuosity (PPD+WC)											

Table ES-1 Focused Array Comparison: Ecosystem Restoration Metrics

			Objective 1 Restoration of Riverine Habitat Structure and Function							Objective 2 Floodplain Connect; Channel Stability		
Alt	**Description** ***(*Best Buy Plan)***	**Project Footprint**	**ACWHEP Removed**	**Aliso Aquatic Wildlife Connect (mi)**	**Wood Canyon Connect Aquatic Wildlife (mi)**	**Aquatic Wildlife Genetic Diversity Benefit**	**Riparian Veg Benefit: Channel**	**Riparian Veg Benefit: Overbank**	**Groundwater Rise**	**Floodplain Function Increase (net over No Action)**	**Sinuosity Gain (net over No Action)**	**Channel Stability (and no. of Riffles)**
3.6*	3.3 + Oxbow			reaches to I-5)							High	Yes; regime (46)
3.7*	3.3 + Oxbow + Sinuosity (PPD)											
3.8*	3.3 + Oxbow + Sinuosity (PPD, WC)											
	USFWS Alternative											
C	Similar to Alt 2; limited grading	SOCWA to ACWHEP (Rch. 4A-6)	No	2.2	No	At risk; Barrier at ACWHEP	Limited to early succes'l; frequent loss	Narrow; less dense; mostly late succes'l	No	Slight	Slight; entrenched	No short term stability

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Table ES-2 Focused Array Comparison: Erosion Damage Reduction and Other Metrics

			Reduce Erosion Risk Damage		Other Metrics			
Alt	**Description** *(*Best Buy Plan)*	**Project Footprint**	**Infrastructure Protection**	**Risk and Uncertainty** *(Bank Erosion)*	**Project Sustainability**	**West & East Access Roads Flooding Impacts**	**Geotechnical** *(Potential Risk)*	**Cultural Resources** *(Potential Risk)*
1	**No Action**	NA	Piecemeal; emergency actions by SOCWA	High	NA	0.3 mi west side; 0.6 mi east side for 1% ACE (100-yr) storm event	Some risk; though generally low	Some potential losses
2	**Maintain Similar Streambed Elevation**							
2.1	Base 2	SOCWA to ACWHEP	Yes for AWMA Road and wastewater utilities	Low	Requires ensuring ACWHEP structure integrity	Similar to No Action	Some risk; though generally low with some potential moderate.	Relatively less potential impacts as smaller footprint than Alternative 3 variations
2.2	2.1 + Sinuosity (WC)							
2.3	2.2 + Newbury Weirs							
3	**Restore Historic Streambed Elevation**							
3.1	Base 3	SOCWA to AWMA Br	Yes for AWMA Road and wastewater utilities	Low		Some increase (15%) over No Action, mostly due to 1% ACE	Some risk; though generally low with some potential moderate. Raising streambed may assist buttressing effect.	Potential impacts
3.2	Base 3 + WC connect + WC Trailhead							
3.3*	3.2 +Widen/Recontour Chl +PPD Bypass	SOCWA to Pac Park Dr	Yes for AWMA Road and wastewater utilities; and water supply crossing (JRWSS)	Low	Requires PPD Bypass for connection to upstream Stewardship reaches (see section ES.8).			
3.4	3.3 + Sinuosity (PPD)							
3.5	3.3 + Sinuosity (PPD+WC)							
3.6*	3.3 + Oxbow						Some risk; though generally low with some	
3.7*	3.3 + Oxbow + Sinuosity (PPD)							

Table ES-2 Focused Array Comparison: Erosion Damage Reduction and Other Metrics

			Reduce Erosion Risk Damage		Other Metrics			
Alt	**Description** *(*Best Buy Plan)*	**Project Footprint**	**Infrastructure Protection**	**Risk and Uncertainty** *(Bank Erosion)*	**Project Sustainability**	**West & East Access Roads Flooding Impacts**	**Geotechnical** *(Potential Risk)*	**Cultural Resources** *(Potential Risk)*
3.8*	3.3 + Oxbow + Sinuosity (PPD, WC)						potential moderate to high. Raising streambed may assist buttressing effect.	
	USFWS Alternative							
C	Similar to Alt 2; limited grading	SOCWA to Pac Park Dr	Yes; for AWMA Road and wastewater utilities, but requires more protection than Alt 2 due to inherent uncertainty	Moderate	Requires ensuring ACWHEP structure integrity. Utilizes long term gravel augmentation. Higher costs for streambank protection and gravel augmentation renders this alternative less efficient than Alternative 2 variants, and possibly not cost effective.	Generally similar to No Action, but more uncertainty	Some risk; though generally low with some potential moderate.	Likely more potential impacts than Alternative 2 variations

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ES.7.3 Final Array of Alternatives

Further screening of the focused array was conducted using the criteria of effectiveness, completeness, efficiency, and acceptability. The final array of action alternatives that best satisfy the criteria were Alternatives 3.3, 3.6, 3.7, and 3.8. These four alternatives best meet the key planning objectives and the significance of plan outputs associated with restoration of aquatic and riparian habitat structure and function, aquatic species connectivity and viability, floodplain connectivity, and the improvement of geomorphic channel stability. The four alternatives provide wastewater infrastructure protection to the one percent annual chance of exceedance (ACE) (100-year event), and greatly limit the potential compromise of ecosystem restoration outputs due to erosion damage to pipelines. These alternatives also provide erosion protection to the JTM regional water supply pipeline crossing in Reach 11 as an ancillary benefit resulting from the restoration project features. All four of the alternatives raise the existing streambed elevation to pre-incised elevations (circa 1967) within the Wilderness Park. Alternatives 3.6, 3.7, and 3.8 additionally reconnect the abandoned oxbow. Alternatives 3.7 adds sinuosity to the stream alignment just downstream of Pacific Park Drive, while Alternative 3.8 adds the same feature in addition to sinuosity downstream of Wood Canyon Creek.

Table ES-3 presents a summary comparison of the NER-related outputs of the final array of action alternatives for ecosystem restoration.

Table ES-3 NER Outputs of Final Array Action Alternatives
(FY16 Price Levels; FY17 Discount Rate 2.875%)

	Alternative 3.3	Alternative 3.6	Alternative 3.7	Alternative 3.8
Average Annual Habitat Units				
Net Increase AAHU (Over No Action)	5,597	5,775	5,834	5,842
Incremental AAHU	5,597	177	60	8
Gross Project Costs				
First Costs	$91,611,965	$96,809,585	$98,724,986	$99,156,555
Interest During Construction	$3,238,387	$3,248,643	$3,251,585	$3,251,963
Total Gross Investment	$94,850,352	$100,058,228	$101,976,571	$102,408,518
Annual Costs				
Total Annual Costs of Gross Investment	$3,599,389	$3,797,018	$3,869,816	$3,886,207
Annual Cost of Maintenance (OMRR&R)	$187,446	$196,560	$197,890	$198,550
Total Average Annual Costs (AAC)	$3,786,835	$3,993,578	$4,067,706	$4,084.757
Incremental AAC	$3,786,835	$206,743	$74,127	$17,052
Incremental AAC/AAHU	$673	$1,167	$1,239	$2,145

Table ES-4 presents a brief summary of the beneficial and adverse effects associated with the final array of alternatives, with an emphasis on the resources that have the most significant influence pertaining to Plan Formulation.

Table ES-4 Final Array Comparison: Beneficial and Adverse Effects

Resource	Description	Alternative 1 (No Action)	Alternative 3.3	Alternative 3.6	Alternatives 3.7 and 3.8
Earth Resources	Construction Impacts	None	Short term, temporary and less than significant. Impacts further reduced with Environmental Commitments.		
			Disposal to onsite areas: 130,000 cubic yards. Beneficially adds to buttressing effect against potential landslides.	Disposal to onsite areas: 300,000 cubic yards. Beneficially adds to buttressing effect against potential landslides.	Disposal to onsite areas: 340,000 and 350,000 cubic yards, respectively. Beneficially adds to buttressing effect against potential landslides.
	Channel Geomorphology	Some further incision (varies from five feet maximum to 1 foot minimum, and widening as channel seeks dynamic equilibrium (est. 50 year min)	Streambed raised to approach historic pre-incised elevation. Geomorphically stable channel.		
	Sediment Yield to Ocean	As dynamic equilibrium approaches, average sediment delivery range approaches 20,000 to 60,000 tons/year	Similar yield to No Action but occurs sooner.		
	"S" Bend (Reach 4B)	Expected cutoff after 25 years of this distinctive feature, which offers channel complexity and associated habitat biodiversity (including freshwater marsh)	"S" bend remains intact.		
	Landslides	Loss of channel banks immediately adjacent to ascending canyon slopes could potentially compromise slope stability where ancient landslides have occurred. Cuts made into canyon slopes that expose adversely oriented bedding could potentially develop landslides along those bedding planes. The degree to which landslides toes are stabilized by relatively thick canyon alluvium fill and extent to which fluvial erosion has disturbed the buttressing effect has not yet been quantified.	Based on qualitative evaluation, some risk, though generally low. Some potential moderate risk to one ancient slide area, to be further addressed during Pre-Construction Engineering and Design (PED) phase.	Based on qualitative evaluation, some risk, though generally low. Some potential moderate risk to one ancient slide area, and higher risk to second one to be further addressed during Pre-Construction Engineering and Design PE) phase.	
			Raising streambed may bolster buttressing effect, increasing overall resistance to potential sliding.		

Table ES-4 Final Array Comparison: Beneficial and Adverse Effects

Resource	Description	Alternative 1 (No Action)	Alternative 3.3	Alternative 3.6	Alternatives 3.7 and 3.8
Earth Resources (continued)	Coastal Effects	Upper estuary subject to slight aggradational trends; less likely in lower estuary, though fluctuation dependent on tidal and littoral effects. As Aliso Creek is the largest sediment contributor in the littoral cell, some potential narrowing of downcoast beaches to Dana Point over time due to reduction of sediment yield. Sea level rise could compound these effects.	Impacts to estuary and supply of sand to downcoast beaches expected to be similar to No Action.		
Water Resources	Construction Impacts	None	Short term, temporary and less than significant. Impacts further reduced with Environmental Commitments.		
	Floodplain Hydrologic Connectivity	Severely incised channel provides limited floodplain breakout for 10-year and 100-year flows. Current acres of floodplain: 2-year (56 ac); 10-year (78 ac); and 100-year (106 ac).	Raised streambed elevation increases floodplain widths by 112% for 2-year; 94% for 10-year, and 61% for 100-year.		
	Flood Inundation to Infrastructure	Limited flooding to east (unpaved) and west (AWMA Road) access roads within Reaches 4A to 9.	Total increase of 15% inundation (i.e. to total lengths of roads) over No Action. Corresponding impacts to access expected to be minor. No flood mitigation measures warranted except for paving of east road. Coastal Treatment Plant is not affected.		
	Groundwater Levels	Disconnected floodplain function will continue to provide very limited aquifer recharge opportunities.	Groundwater levels expected to incrementally rise along the raised streambed course, and for some distance laterally, due to channel seepage direct influence. Additionally, use of embedded sheet pile to accompany transverse rock riffle structure locations will raise local groundwater levels directly upstream of the structures for a limited distance as groundwater flows in the vicinity of the structures would tend to mound.		

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Table ES-4 Final Array Comparison: Beneficial and Adverse Effects

Resource	Description	Alternative 1 (No Action)	Alternative 3.3	Alternative 3.6	Alternatives 3.7 and 3.8
Biological Resources	Construction Impacts	None.	With the establishment of temporary suitable habitat areas adjacent to the Proposed Project area, impacts to biological resources would be minimal, and short term. Environmental Commitments will further reduce impacts.		
	Riverine and Floodplain Ecosystem	Continued decline and narrowing of riverine habitat corridor and biodiversity, primarily due to channel incision and severed floodplain connectivity, creek instability, and vegetation die back from perching effects of lowered groundwater levels. As riparian zone narrows, habitat type conversion would be likely to coastal scrub and annual grasslands. The prevalence of steep streambank slopes will degrade the value of the riparian structure that can establish within the channel margins.	With a hydrologically restored connection and a more stable geomorphic system, the quality of the aquatic, riparian, and floodplain ecosystem would be significantly increased within the restored area. Greater and more complex vegetation structure would develop, supporting a greater species richness, including federal and state listed special species. Disposal sites would be planted with coastal sage scrub and grasslands.		
			No added sinuosity.	Reconnection of abandoned oxbow would add an important gain in stream sinuosity and a corresponding benefit to increased morphologic variability and ecological function.	
					Some additional limited net gains in sinuosity (30 feet for Alternative 3.7; and 90 feet total for Alternative 3.8).
	Aquatic Species Connectivity	Aquatic wildlife connectivity remains impeded along lower Aliso Creek, including the connection to Wood Canyon tributary, due to severe channel incision and the presence of large barriers such as the ACWHEP structure. The quality of aquatic habitat in Aliso Creek will continue to deteriorate within a deeply incised channel and fragmented habitat to few non-native aquatic species.	Increased aquatic species connectivity for resulting from removal of manmade impediments would facilitate the reproductive viability of aquatic species. Within the Proposed Project area, connectivity would increase to 5 miles for the Aliso Creek mainstem (compared to 2.2 miles for No Action); and 3.5 miles for Wood Canyon (compared to limited/no connectivity under No Action). The inclusion of the Pacific Park Bypass increases the overall aquatic species connectivity of the mainstem by an additional 3.5 miles upstream, for a total of 8.5 miles.		

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Table ES-4 Final Array Comparison: Beneficial and Adverse Effects

Resource	Description	Alternative 1 (No Action)	Alternative 3.3	Alternative 3.6	Alternatives 3.7 and 3.8
Cultural Resources	**Construction Impacts**	None. Areas of identified cultural resources are largely protected from new development and would not be expected to change from existing conditions. It is probable, however, that sites may be disturbed or lost both by other human actions and through natural processes such as erosion.	For all action alternatives, with implementation of Environmental Commitments, direct and indirect impacts would be minimized, but with the partial to complete destruction of up to 12 archaeological sites and the potential for impacting human burials, impacts would be significant and adverse.		
			Impacts to cultural resources from disposal sites footprints would likely be avoided.	Impacts to cultural resources from disposal sites footprints would likely be avoided. Potentially slightly greater impact on cultural resources compared to Alternative 3.3 due to inclusion of reconnected oxbow	Impacts to cultural resources from disposal sites footprints would likely result from at least one of the disposal sites. Incremental greater impacts to cultural resources due to inclusion of reconnected oxbow and added sinuosity downstream of Wood Canyon confluence for both Alternative 3.7 and 3.8.
Utilities	**Construction Impacts**	None. Public agency wastewater infrastructure would remain at risk from continuing bank erosion posing a significant threat to public safety and a measurable impact to the environment and local economy. SOCWA efforts to protect pipelines at risk from storm flow-induced streambank erosion and undermining will be piecemeal and short-term "band-aid" solutions. Channel incision will continue to threaten the JTM water supply transmission pipeline, requiring periodic intervention to protect from undermining, with an impact to the environment.	Buried streambank protection at key locations would provide erosion protection up to the 1% annual chance of exceedance (100-year event) to SOCWA wastewater utilities lines and west (AWMA Road) access road (Reaches 4A to 9). JTM regional water supply line would be protected from channel undermining effects (Reach 11).		

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ES.7.4 Identification of National Ecosystem Restoration (NER) Plan

Based on the assessment of the final array of alternatives (1, 3.3, 3.6, 3.7 and 3.8), the plan that reasonably maximizes NER outputs relative to costs, meets planning objectives, reasonably avoids constraints, and provides significant ecosystem outputs is Alternative 3.6. This alternative is designated as the NER Plan and is also identified as the TSP.

In terms of costs and output metrics (Table ES-3), Alternative 3.6 provides 5,775 average annual habitat units (AAHU), an increase of 177 AAHU, or 3 percent gain over Alternative 3.3, at an incremental average annual cost (AAC) of $206,743. In comparing plans, it is useful to show the change in cost from one plan to another in a "per unit" basis. This would be in terms of AAC per AAHU. Alternative 3.6 has an incremental AAC/AAHU of $1,167 relative to Alternative 3.3, which is 73 percent higher than that of Alternative 3.3 ($673) relative to Alternative 1. The incremental investment in cost of Alternative 3.6 over Alternative 3.3 is considered worthwhile to pursue for riverine habitat improvement for the following reasons.

Compared to Alternative 3.3, Alternative 3.6 adds the stream reconnection through the abandoned river meander/oxbow associated, which would provide an important gain in sinuosity (about 850 feet of lengthened channel) and a corresponding benefit to increased morphologic variability and ecological function within the Aliso Creek system. The reconnected oxbow reach would provide an opportunity to create a wider areal expanse as a result of its high radius of curvature and pattern complexity that in turn would promote a mosaic of habitat types, including riparian forest or woodland, open ponded water and freshwater marsh within one distinct area. This areal expanse of riparian and aquatic ecosystem (net gain of over 500 feet wide and 10 additional acres, compared to Alternative 3.3) would be unique within the watershed, and also lies within the heart of the Wilderness Park where the coastal canyon floodplain is the widest. Amphibians, such as the southwestern pond turtle, a California Species of Special Concern under consideration for Federal listing, and salamander would benefit from the greater prevalence of moist soils. Slow moving waters promoted by the high radius sinuosity and resulting gentler stream grade would provide important refugia habitat. The reconnected meander oxbow area would allow for the development of a wider expanse of a heterogenetic, multi-layered habitat structure of functional riparian habitat for breeding, foraging and cover/resting opportunities that will benefit bird species including the Federally endangered least Bell's vireo and southwestern willow flycatcher, and the Federally threatened California gnatcatcher, as well as a variety of neotropical migrants species and California Species of Special Concern, including yellow-breasted chat, Swanson's thrush, yellow warbler, and yellow-headed blackbird.

The rationale why Alternative 3.7 or Alternative 3.8 was not selected as the NER plan is as follows:

In addition to the oxbow reconnection, Alternative 3.7, compared to Alternative 3.6, adds the "sinuosity downstream of Pacific Park Drive" feature within Reach 11. Due to the relative narrowness of the floodplain within this reach (which lies in the more northern portion of the Wilderness Park where urbanization has constrained the floodplain laterally), this feature only provides a very small gain in sinuosity, or about 30 feet in length. Alternative 3.7 provides 5,834 AAHU, or a 1 percent gain over Alternative 3.6. Although the incremental AAC/AAHU are relatively close for the two alternatives, the relatively limited aquatic habitat ecological benefit that Alternative 3.7 provides and the incremental 40,000 cubic yards of excess materials requiring disposal makes the selection of this alternative less desirable compared to Alternative 3.6.

Alternative 3.8 is similar to Alternative 3.7, but also adds the feature "sinuosity downstream of Wood Canyon Creek" in Reach 5C. This feature adds about 60 feet of additional stream lengthening. With the limited incremental gain in AAHU (less than 1 percent), and the significant increase in incremental AAC/AAHU (about 73 percent higher than Alternative 3.7 at $2,145 versus $1,239), the additional investment is not warranted.

ES.8 TENTATIVELY SELECTED PLAN

ES.8.1 TSP Outputs

The TSP restores 191 acres of riverine (aquatic and riparian) habitat throughout the five miles of the Proposed Project area between the SOCWA CTP Bridge and Pacific Park Drive (Reaches 4A-12). Together with the upstream reaches (13 to 17B, referred to as the Stewardship Reaches) that are outside of, but contiguous to, the Federal proposed project area, the TSP reconnects 371 acres of riverine habitat type for 8.5 miles to the I-5 Freeway. Removal or modification to manmade structures that act as aquatic wildlife impediments within the Federal project footprint would increase connectivity for aquatic species to 8.5 miles throughout the reconnected area between the SOCWA CTP and the I-5 Freeway, and would reestablish lateral connectivity to the 3.5-mile-long high-quality habitat of the Wood Canyon Creek tributary. The ecosystem outputs are summarized in Table ES-5. The TSP features are displayed in Figure ES-2. The Stewardship reaches are shown in Figure ES-3.

Within the TSP Proposed Project area, recontouring of the streambanks to gentler side slopes and the creation of a widened channel margin that incorporates inset floodplain terracing would provide greater stability to the creek system, especially for larger flow events. With raising of the streambed elevation, localized groundwater levels associated with Aliso Creek would rise incrementally, improving the interface with riparian vegetation root systems to support a more extensive riparian habitat. Additionally, the lateral hydrologic connectivity to the 10-year floodplain would almost double to 151 acres; while the 100-year floodplain would increase by about 60 percent to 171 acres.

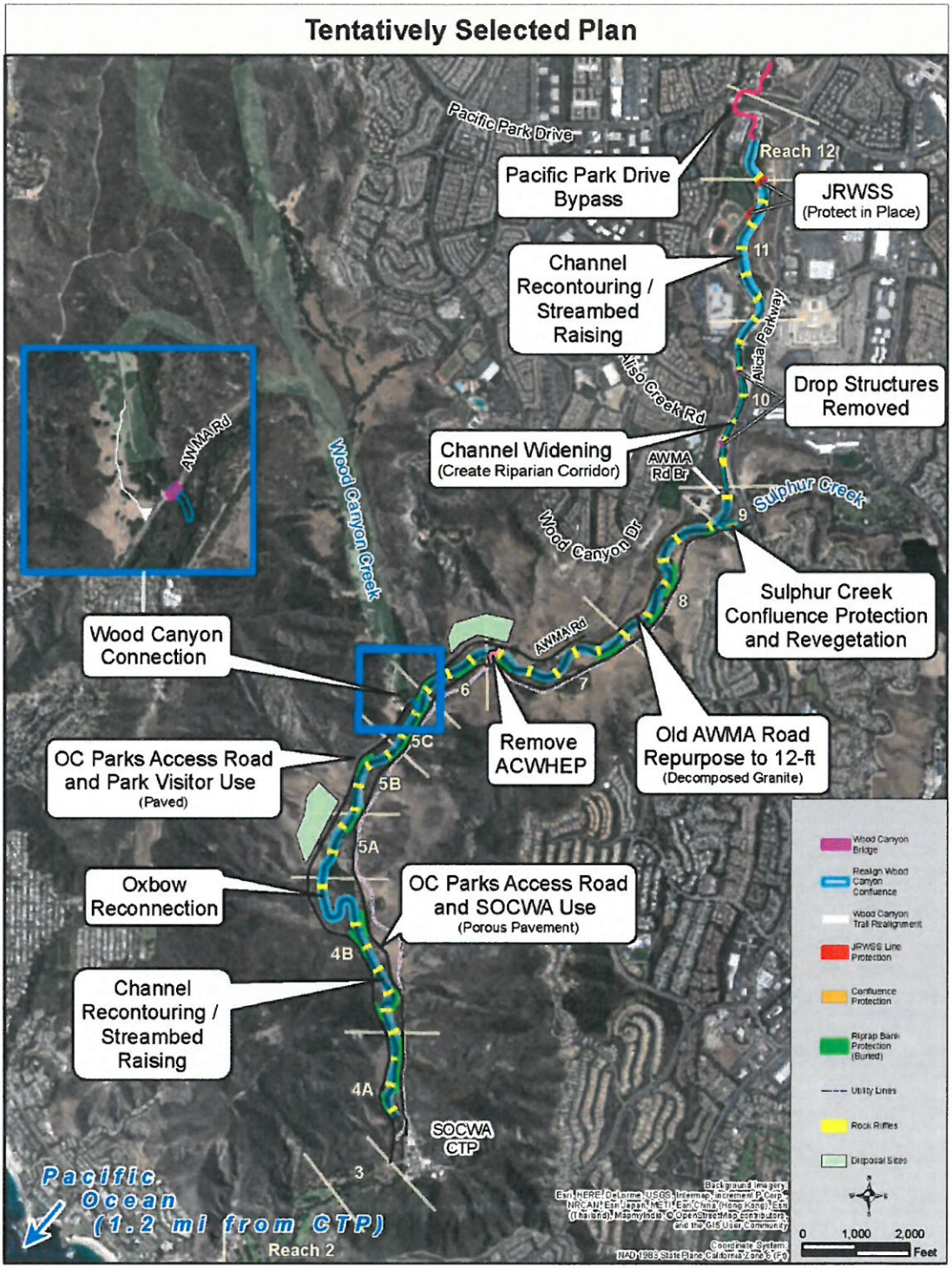

Figure ES-2 Tentatively Selected Plan

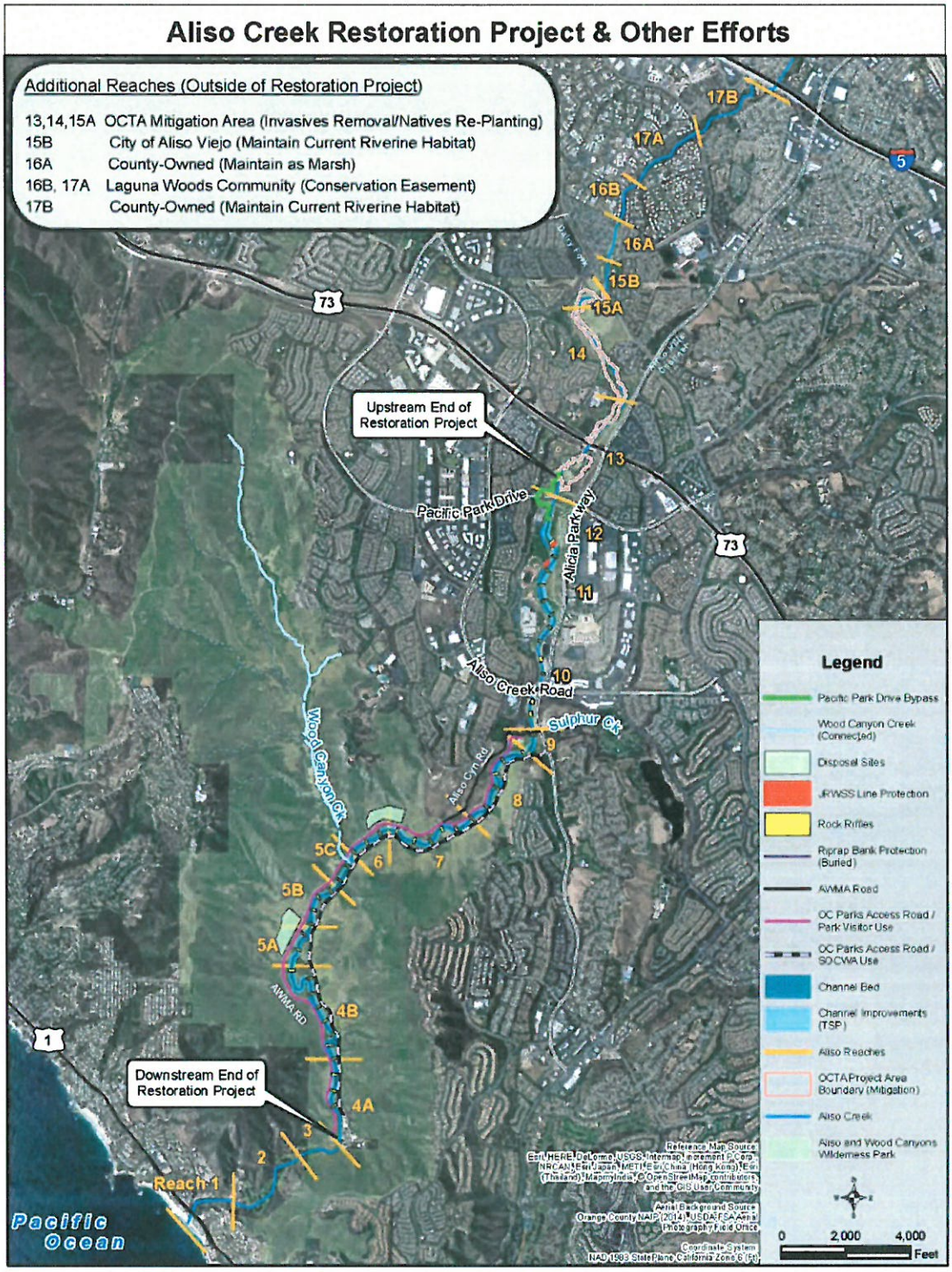

Figure ES-3 Tentatively Selected Plan and Stewardship Reaches

Table ES-5 Ecosystem Outputs Associated with the TSP

Description		Habitat Value (HU)		HU Incr. Gain at Year 50	Riverine (Aquatic and Riparian) (acres)		Riverine Incr. Gain at Year 50	Aquatic Species Connectivity
		Year 0	Year 50		Year 0	Year 50		
No Action[1]		2,994	2,350	-	154	99	-	2.2 miles
TSP	Restored Habitat Area (Direct Restoration)	5,626	6,541	178% over No Action	191	191	93% over No Action	5 miles (Aliso Creek)
	Reconnected Habitat Area							
	Wood Canyon Creek	1,030	1,030	-	84	84	-	3.5 miles
Stewardship Reaches[2]	Pacific Park Drive to I-5	1,198	1,198	-	96	96	-	3.5 miles
Restored Habitat Area plus Reconnected Habitat Area		7,853	8,768	273% over No Action	371	371	275% over No Action	8.5 miles (Aliso Creek); 3.5 miles (Wood Canyon Creek trib)
HU Net Gain (over No Action)		4,859	6,418					
AAHU[3] Net Gain (over No Action)		5,775						
AAHU No Action		2,762						

[1] Area of No Action Alternative encompasses same area to be pursued under with-project actions for restored habitat areas.
[2] Stewardship reaches comprise additional reaches upstream of the Proposed Project upstream limit, from Pacific Park Drive to the I-5 Freeway. These reaches are under the jurisdiction of either Orange County, the City of Aliso Viejo, or the City of Laguna Woods.
[3] AAHU is average annual habitat unit value over a 50-year period of analysis (Years 0, 5, 25, and 50).

The inclusion of inset floodplain terraces would more than double the two-year floodplain to 118 acres. Table ES-6 provides a summary of hydrologic connectivity. Flooding impacts associated with the increased floodplain is limited to some inundation of the east and west access roads within the Wilderness Park, at a level slightly greater (about 15 percent) than without-project conditions. Accordingly, no flood mitigation measures were included to address induced flooding in these areas other than paving the existing east dirt access road in Reaches 4A-9.

Table ES-6 Floodplain Connectivity Increases Associated with the TSP

Footprint	2-Year		10-Year		100-Year	
	Floodplain (acres)	Incremental Gain	Floodplain (acres)	Incremental Gain	Floodplain (acres)	Incremental Gain
Without-Project (Existing)	56	-	78	-	106	-
TSP (Restored Habitat Area[1])	118	112% over Without-Project	151	94% over Without-Project	171	61% over Without-Project

[1] Does not include reconnected habitat area of Wood Canyon Creek tributary.

With a hydrologically restored connection and a more stable geomorphic system, the quality of the aquatic, riparian, and floodplain ecosystem would be significantly increased within the restored area. The TSP would enable greater and more complex vegetation structure to develop, comprising of stands of trees (willow, sycamore, and cottonwood) with varying heights and canopies, dense shrub understories (arroyo willow, sandbar willow, mulefat), and herbaceous plants that interface with open water and freshwater marsh habitat. This vegetation structure, or stratification, would support a greater species richness, including federal and state listed species. The increased connectivity for aquatic species resulting from removal of manmade impediments would facilitate the reproductive viability of aquatic species.

The TSP would also provide water quality improvement as an output of ecosystem restoration. These benefits were not quantified and are considered ancillary to the Proposed Project. The increased hydrologic connection to the floodplain would allow more opportunity to settle out fine suspended sediments and their associated nutrient loads, thereby promoting improved instream and coastal receiving water quality.

In addition to ecosystem restoration benefit outputs, the TSP provides incidental erosion damage reduction benefits. These benefits are associated with the protection of regional wastewater conveyance and water supply infrastructure from streambank and streambed erosion threat. For SOCWA wastewater conveyance infrastructure, there is a net reduction of average annual damages of $646,000 within the Proposed Project area for bank erosion protection features related to the TSP. These features are necessary to safeguard the restoration benefit outputs. For the JTM water supply transmission infrastructure, a quantitative erosion damage reduction analysis was not performed. However, the current erosion threat to the pipeline crossing would be significantly diminished as an outcome of the ecosystem restoration features that are related to the strategic placement of required grade control (rock riffles) structures. Benefits related to erosion damage reduction are considered incidental to the construction of the ecosystem restoration project.

ES.8.2 Stewardship Reaches 13-17B

Though not critical to aquatic species sustainability, the reconnection to 3.5 miles of additional aquatic and riparian habitat between Pacific Park Drive and the I-5 Freeway would provide a beneficial increment to the TSP, providing a larger reconnected area of this habitat type.

For the additional 3.5 miles of the Aliso Creek riverine corridor (Reaches 13 to 17B) upstream of the Proposed Project limit, the various landowners of the subreaches (Orange County, Aliso Viejo Community Association, and the City of Laguna Woods), would continue to pursue stewardship practices in protecting and maintaining natural resources in accordance with their adopted resource management plans. These additional reaches of Aliso Creek mainstem would not involve any implementation actions by the Federal government. Figure ES-3 shows the TSP in context with the other local efforts.

ES.8.3 Recreation Plan

The objective of the recreation plan is to enhance the passive recreational experience associated with the Proposed Project. The recreation plan formulated for the NER Plan was developed through coordination with the non-Federal sponsor to take advantage of existing recreation facilities, as well as proposed ecosystem restoration improvements, while complying with Corps policies and regulations pertinent to recreation improvements at ecosystem restoration projects.

The recreation plan includes the construction of five interpretive kiosks within the Proposed Project at key locations. The kiosks would be located along points of recreational access for the public, which includes the Aliso Creek Bikeway and AWMA Road, both paralleling the west side of Aliso Creek within the Wilderness Park. The kiosks provide educational value and are intended to increase public understanding and appreciation of the restored habitat and diverse ecosystem functions within the Wilderness Park. Proposed locations of the kiosks are as follows:

- Vicinity of Pacific Park Drive, west side along Aliso Creek Bikeway.
- Vicinity of Ranger Station/Visitor Area.
- Three locations along AWMA Road between the Ranger Station and SOCWA CTP Bridge.

Based on the economic recreation benefits analysis performed using a unit day value method, there are two benefits considered: the incidental recreation benefits associated with the NER project, which will enhance the recreation experience due to improved visual quality and environmental setting for recreation users, and the benefit associated with the recreation plan due to the addition of the kiosks. For benefits related to the ecosystem restoration project, the TSP provides $308,000 in incidental equivalent annual recreation benefits, or a 32 percent gain over without-project conditions. For benefits related to the kiosks, there is an incremental gain of $11,000 in equivalent annual

recreation benefits, or a 0.8 percent increase over benefits related to the ecosystem restoration project. The recreation plan has a benefit to cost ratio of 11:1.

ES.8.4 Plan Implementation

ES.8.4.1 Lands, Easements, Right-of Way, and Disposal Sites (LERRDs)

The majority of the land associated with the project footprint is owned by the County of Orange, and is within the boundaries of the Wilderness Park. The TSP would require approximately 174.16 acres in fee ownership; 21.37 acres of permanent easements; and 30.16 acres of temporary easements. No borrow sites would be necessary for implementation of the TSP. No facility or utility relocations would be necessary for implementation of the TSP; the TSP proposed utility actions would be to protect in place, remove as abandoned, and protect in-place and modify.

ES.8.4.2 Geotechnical Investigations

Geotechnical investigations would be conducted during the Preconstruction, Engineering and Design (PED) phase to supplement those conducted during the feasibility phase. These investigations would be necessary to better address the existing level of stability and reduce any potential risk of reactivation of identified ancient slope failures (landslide masses), or destabilization of some other areas currently unaffected by sliding, as a result of the planned excavations and grading of alluvial soils associated with the channel alignment. Additionally, any segments of the proposed alignment that are adjacent to an identified unstable ascending slope, whose stability could be undermined should localized channel widening result during larger storm events, would need to be evaluated for risk level in coordination with the engineering team. The outcome of the geotechnical investigations would allow reconciliation of any potential destabilization concerns and recommend adjustments, as warranted, to project design and construction, including any protective mitigation measures.

ES.8.4.3 Cultural Resources Investigations

A comprehensive cultural resource inventory of the Area of Potential Effects (APE) would occur during the PED phase to supplement site investigations conducted during the feasibility phase. The Corps, in consultation with the California State Historic Preservation Office (SHPO) and the Affected Tribes, would execute a programmatic agreement (PA) prior to PED. The PA will layout the procedures for the cultural resource inventory, the evaluation of any resources located during the inventory, and a process for avoiding, minimizing, and mitigating any adverse effects. If adverse effects to resources determined to be eligible for the National Register of Historic Places cannot be avoided, the Corps, California SHPO, the Affected Tribes, and the County of Orange would execute a Memorandum of Agreement during PED specifying a treatment plan, which would be undertaken by the Corps prior to or during the project construction period to address adverse effects.

ES.8.5 Costs of the TSP

Table ES-7 summarizes the benefits and costs for the Tentatively Selected Plan. Project first cost includes costs for all real estate interests, construction of the ecosystem restoration features, monitoring and adaptive management measures, cultural resources data recovery, and costs to construct the recreation features. The first cost of the project also includes the cost for the next phase of study, the PED phase.

Table ES-7 Summary of Benefits and Costs for TSP
(FY16 Price Level; FY17 Discount Rate 2.875%)

Item	Amount
NER First Cost	
Real Estate	$17,115,000
Construction	$61,454,200
PED (including EDC)	$9,525,400
Construction Management (S&A)	$3,994,500
Monitoring and Adaptive Management	$3,517,000
Cultural Resources (Data Recovery)	$703,400
Geotechnical Investigations	$500,000
Total NER First Cost	**$96,809,500**
NER Average Annual Cost	
Annual Cost of Total Gross Investment	$3,797,000
OMRR&R	$196,600
Total Average Annual Cost (AAC)	**$3,993,600**
Total AAC per Average Annual Habitat Unit (AAHU)	**$692**
Restored plus Reconnected Habitat	**371 Acres**
NER Average Annual Benefits	
Net AAHU	5,775
Incidental Streambank Erosion Protection (Wastewater Conveyance)	$646,000
Incidental Streambank Erosion Protection (Water Supply Conveyance)	Not quantified. Protects water supply for more than 200,000 residents
Recreation	
First Cost	$25,000
AAC	$1,000
Average Annual Benefits	$11,000
Benefit-to-Cost Ratio	11
Incidental Annual Recreation Benefits (NER)	$308,000
TSP Total Project First Cost	**$96,834,500**

ES.8.6 Project Cost Sharing

The apportionment of total project costs between the Federal government and the non-Federal sponsor, as established by Section 103 of the WRDA of 1986 (Public Law 99-662), as amended, is displayed in Table ES- 8. Standard cost-sharing policy for

ecosystem restoration projects is described in current guidance (Engineer Regulation 1105-2-100) as follows:

ES.8.6.1 Ecosystem Restoration

- The non-Federal share will be 35 percent of the project or separable element implementation costs (preconstruction, engineering and design and construction) allocated to ecosystem restoration.
- The non-Federal sponsor is responsible for providing 100 percent of the LERRDs and OMRR&R.

The value of LERRDs shall be included in the non-Federal 35 percent share. Table ES- 8 also includes a line item for Federal administrative costs. These costs represent Federal administration and review activities relating to the non-Federal sponsor's provision of LERRDs for the project, and are therefore a cost-shared component of the project and are not part of LERRDs.

ES.8.6.2 Recreation

- Recreation costs will be shared equally.

Table ES- 8 Federal and Non-Federal Apportionment of Total Project First Cost

Item	Federal	Non-Federal	Total (Rounded)
Real Estate			
Non-Federal Sponsor LERRD	0	15,500,000	15,500,000
Non-Federal Sponsor Administrative Costs	0	1,550,000	1,550,000
Federal Administrative Costs	65,000	0	65,000
Subtotal – Real Estate	65,000	17,050,000	17,115,000
Construction			
Construction	61,454,200	0	61,454,200
PED (including EDC)	9,525,400	0	9,525,400
Geotechnical Investigations	500,000	0	500,000
Construction Management (S&A)	3,994,500	0	3,994,500
Subtotal – Construction	75,474,100	0	75,474,100
Monitoring/Adaptive Management			
Monitoring	1,406,800	0	1,406,800
Adaptive Management	2,110,200	0	2,110,200
Subtotal Monitoring/Adaptive Management	3,517,000	0	3,517,000
Pre-Adjusted Total Cost-Share Amount (65/35)	79,056,100	17,050,000	96,106,100
Adjustment for Cost-Share	-16,587,135	16,587,135	0
Total (65/35)	**62,468,965**	**33,637,135**	**96,106,100**
Percent of Total	*65%*	*35%*	
Other Costs			
Recreation (50/50)	12,500	12,500	25,000
Cultural Resources (Data Recovery; Initial Federal)	703,400	0	703,400
Total Cash Contribution	**63,184,865**	**16,599,635**	**78,784,500**
Total Project Cost	**63,184,865**	**33,649,635**	**96,834,500**

ES.9 NEXT STEPS IN THE PLANNING PROCESS

Comments provided on these alternative plans during the public draft review period, and other comments on the Draft IFR and technical appendices, will be considered by the Corps and OCPW. After the close of the public review (and other concurrent reviews), the Corps will prepare for the Agency Decision Milestone meeting, when feedback on any significant comments and impacts to the NER Plan/TSP will be presented to a panel of Corps senior leaders. A decision will be made at that meeting regarding the selection of a plan to carry forward for feasibility-level design in order to complete the feasibility study and recommend to Congress for authorization.

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South Orange County Wastewater Authority
2018 Meeting Calendar

January

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

March

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

May

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

June

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Board Meeting (8:30 a.m.) Executive Committee (9:00 a.m.)

Engineering Committee (8:30 a.m.) and Board Meeting (10:00 a.m.)

Finance Committee (10:30 a.m.) Engineering Committee (8:30 a.m.)

Regular SOCWA meetings are held at 34156 Del Obispo Street, Dana Point, California

Red numbered dates indicate SOCWA holidays and weekends

Harbor Developer Named by Board of Supervisors

Dana Point Harbor Partners selected as primary developer for the next 66 years

BY DANIEL RITZ, DANA POINT TIMES

During their meeting on Oct. 17, the Orange County Board of Supervisors unanimously selected Dana Point Harbor Partners (DPHP) as the primary developer, operator and manager of the Dana Point Harbor for the next 66 years.

With this vote, the Board of Supervisors has directed Orange County Chief of Real Estate Officer Scott Mayer to enter into lease agreement negotiations with DPHP. If everything goes in alignment with the timeline proposed by DPHP, a draft contract agreement should be completed within the next 120 days.

Beyond the acronym • The DPHP development team consists of three co-managing members, each responsible for their respective property type.

Burnham Ward Properties will oversee the commercial core, Bellwether Financial Group will manage the wet and dry marinas and R.D. Olson Development will manage the hotel sector. A county staff report lists relevant project experiences as the South Coast Collection, Long Beach Exchange, Paséa Hotel in Huntington Beach, Lido House Hotel in Newport Beach and the Alamitos Bay Marina in Long Beach.

The single master-lease between the county and DPHP was an important element in the Board of Supervisor's decision. Fifth District Supervisor Lisa Bartlett described it during the meeting as "everyone being in the same bucket."

Universal local support • James Lenthall, president of the Dana Point Boaters Association, announced late last week that his group had joined the merchants of the Dana Point Harbor in unified support of DPHP, who at that time had been determined as the county staff's recommendation.

Lenthall said in an email after the decision was announced that, "The Dana Point Boaters Association is pleased that the supervisors agreed with us, and the merchants, and so many others in our community that Dana Point Harbor Partners is the superior choice to rebuild our harbor and carry it with us into the future. Though the supervisors did use today to challenge county staff on the technicalities of their review process, there was never a challenge to the outcome of the process or the recommendation of a developer."

Shannon Levin, Dana Point Harbor manager, said that she was excited that the community, boaters and merchants have a viable project to look forward to as well as a solidified developer.

"I think that this resounds that DPHP was the right selection," Levin said. "Their management structure, financials and timeline are what the community desires. We are all ready to move on with a long-awaited project." **DP**