Port Hueneme Water Agency

250 North Ventura Road • Port Hueneme, CA 93041 • (805) 986-6563

PORT HUENEME WATER AGENCY BOARD OF DIRECTORS
ADJOURNED REGULAR MEETING

MARCH 9, 2016
4:00 PM

PORT HUENEME CITY HALL - CITY COUNCIL CHAMBER
250 NORTH VENTURA ROAD
PORT HUENEME, CA 93041

A G E N D A

1. CALL TO ORDER, ROLL CALL

2. AGENDA: *(Amend / Approve)*

3. PRESENTATION:

A. OCEAN DESALINATION
Action: Presentation by Susan Mulligan, Calleguas Municipal Water District General Manager.

4. CLOSED SESSION:

With respect to every item of business to be discussed in Closed Session, pursuant to the California Government Code:

A. CONFERENCE WITH REAL PROPERTY NEGOTIATORS
(Pursuant to Government Code Section 54956.8)

Real Property: 5751 Perkins Road, Oxnard.

Agency Negotiators: John Baker, Interim Executive Director; Karl Berger, Deputy Agency Counsel; Chris Theisen, Public Works Director; Steve Hickox, Water Superintendent; Lynn Takaichi, Consultant.

Negotiating Parties: City of Oxnard

Under Negotiation: Lease Price and Terms of Payment.

5. BUSINESS ITEMS:

A. APPROVAL OF MINUTES
Action: It is recommended the Board approve the Minutes of the February 10, 2016 Adjourned Regular Meeting.

B. CASH DISBURSEMENTS RATIFICATION
Action: It is recommended the Board ratify the cash disbursements listing for the period January 29, 2016 through February 26, 2016.

C. BRACKISH WATER RECLAMATION DEMONSTRATION FACILITY - OPERATIONAL PERFORMANCE
Action: It is recommended the Board receive and file this report.

D. WATER DEMAND REDUCTION UPDATE
Action: It is recommended the Board receive and file this report.

E. WATER SUPPLY STRATEGY REPORT FROM WATER CONSULTANCY INC.
Action: It is recommended the Board receive and file this report.

6. BOARD MEMBER REPORTS AND COMMENTS:

A. DISCUSSION: NBVC DESALINATION FACILITY TOUR
Action: It is recommended the Board discuss its desire to tour the NBVC desalination plant and the logistical considerations for arranging such a tour.

B. REQUEST OF VICE CHAIR SCHNOPP: DISCUSSION OF THE FREQUENCY AND SCHEDULING OF PHWA BOARD MEETINGS
Action: Vice Chair Schnopp recommends the Board discuss and take possible action on the PHWA Board meeting schedule.

7. NEW BUSINESS TO BE AGENDIZED

8. OPEN FORUM: *(Anyone wishing to speak to the Board on any matter NOT on the Agenda may do so at this time. Please approach the podium and give your name and city of residence clearly for the record.)*

ADJOURNMENT: Adjourn to the next Adjourned Regular Meeting to be held Wednesday, April 13, 2016 at 4:00 p.m. in the City Council Chamber.

Copies of staff reports or other written documentation relating to each item of business referred to in this Agenda are available for public inspection in the Office of the City Clerk and on the City's website at *www.cityofporthueneme.org*. Materials received after agenda packet distributions are made available to the public on the City's website and in the City Clerk's office at the same time they are provided to the Board. The public may address any item on the Agenda by submitting a speaker card to the Clerk prior to or during the time the matter is addressed by the Board. Speaker comments are limited to three minutes.

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, IF YOU NEED SPECIAL ASSISTANCE TO PARTICIPATE IN THIS MEETING, CONTACT THE OFFICE OF THE CITY CLERK AT 986-6503 OR THE CALIFORNIA RELAY SERVICE. NOTICE 48 HOURS PRIOR TO THE MEETING WILL ENABLE THE CITY TO MAKE REASONABLE ARRANGEMENTS TO ALLOW PARTICIPATION IN THIS MEETING.

Seawater Desalination in Ventura County: costs, benefits, and challenges

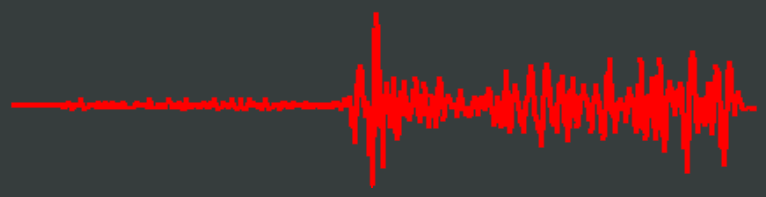
PORT HUENEME WATER AGENCY
BOARD OF DIRECTORS
MARCH 9, 2016

Topics

- The Problem & Alternatives
- Treatment
- Intakes
- Discharge
- Energy
- Connection to Existing System
- Permitting
- Cost
- Schedule
- Conclusions & Next Steps

3A

The Problem:
Calleguas has limited local supplies to meet customer demands during extended outages of imported supplies.



>1 month

What supply option(s) could meet Calleguas' reliability need?

Increase Lake Bard capacity

Recycled Water

Additional Purveyor Well Capacity

Water Use Efficiency Measures

Other?

New Lake

Stormwater Capture

Storage in Another Agency's Lake

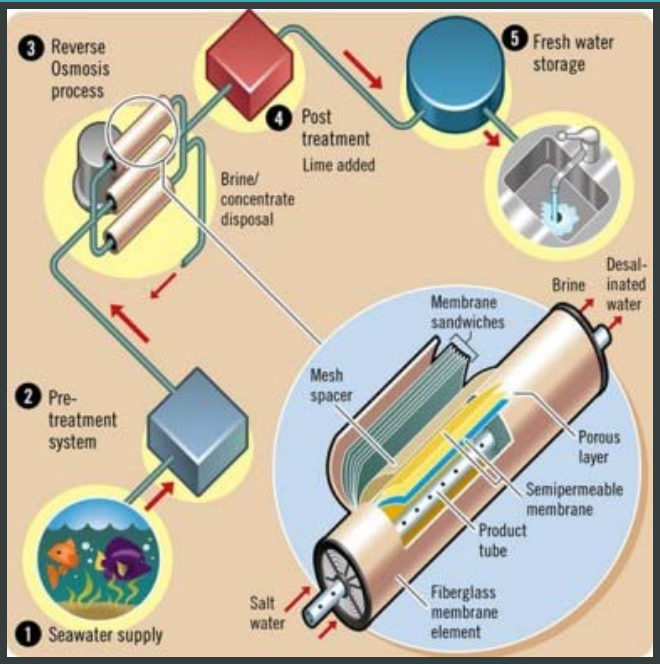
Additional ASR Facilities

Seawater Desalination

Note: The information to be provided about seawater desalination is conceptual.

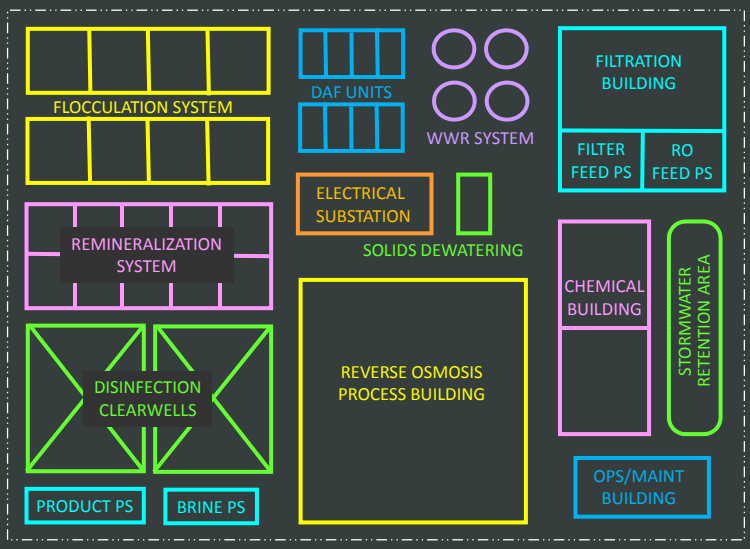
- Intended to…
  - give a general idea of facilities, costs, challenges, process, and schedule
  - give the Board enough information to make decisions about next steps
- Costs are based on a larger facility than is likely to be built (but unit costs would be similar)
- If Calleguas chooses to proceed with seawater desalination, much more work would need to be done (and money spent) to refine the information

Treatment


3 Reverse Osmosis process
4 Post treatment
Lime added
5 Fresh water storage
Brine/ concentrate disposal
Brine
Desal-inated water
Membrane sandwiches
Mesh spacer
2 Pre-treatment system
Porous layer
Semipermeable membrane
Product tube
Salt water
Fiberglass membrane element
1 Seawater supply

Site Footprint and Layout

7 to 12 acres would be needed for a 125 cfs facility



Considerations for Siting the Plant

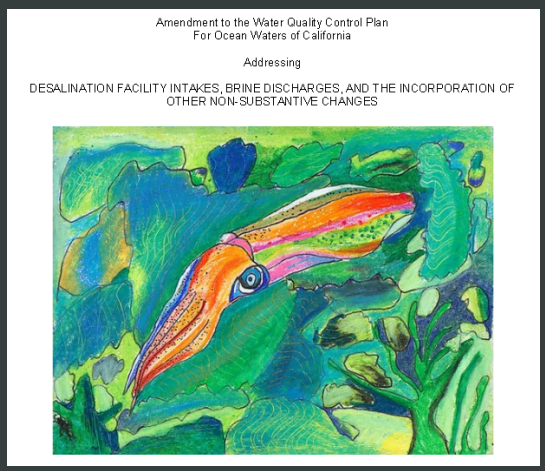
- What is the best location for the intake and outfall?
- Coastal Zone
  - Reduces the length and cost of intake & brine discharge pipes.
  - Additional permitting requirements, social impacts, risk of seawater rise.
- Inland
  - Limits coastal zone construction and the impact of associated regulations, closer to Calleguas' facilities.
  - Higher costs due to the longer intake & brine discharge pipes.

Seawater Intakes

MOST CHALLENGING PART OF THE PROJECT

Considerations for Selecting an Intake

Ocean Plan says "the best site, the best design, the best technology, and the best mitigation measures to **minimize intake and mortality of marine life**."



Amendment to the Water Quality Control Plan
For Ocean Waters of California

Addressing

DESALINATION FACILITY INTAKES, BRINE DISCHARGES, AND THE INCORPORATION OF OTHER NON-SUBSTANTIVE CHANGES

Major concern: Impingement & Entrainment

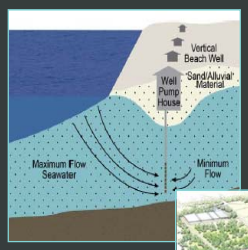
Types of Seawater Intakes

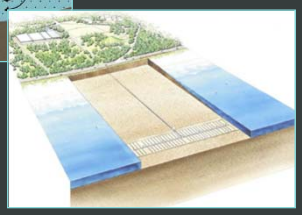
Subsurface

- Wells
- Infiltration Galleries

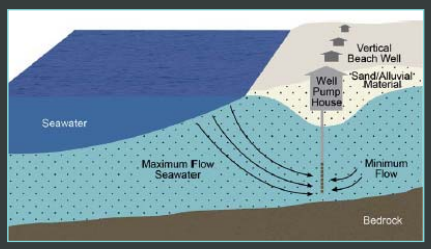
Open

- Velocity Cap (being phased out)
- Power Plant (being phased out)
- Wedge-Wire Screens

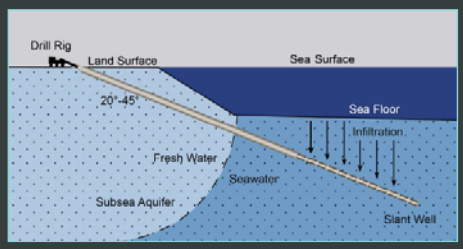




Wells

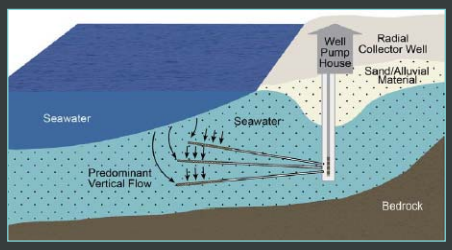


Beach Wells (Vertical Well)



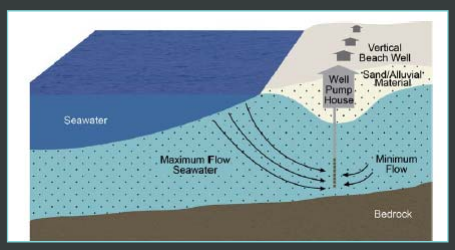
Slant Wells

Horizontal Directionally Drilled Wells



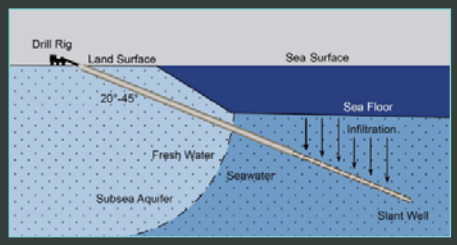
Collector Wells

Beach Wells



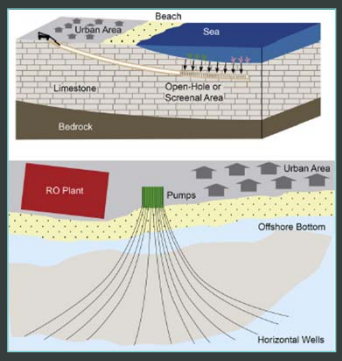
- Vertical wells drilled near shore line
- Technology Status: Proven
  - Widely used in on-shore applications
  - City of Sur, Oman
- Considerations:
  - Impact to onshore groundwater resources
  - Number of wells required to provide desired supply

Slant Wells



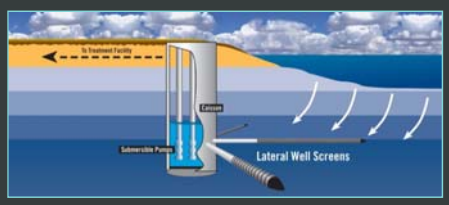
- Wells drilled at an angle near shore line
- Technology Status: Pilot testing
  - Dana Point, Monterey
- Considerations:
  - Similar to vertical wells except:
    - Decreased impact to onshore groundwater resources

Horizontal Directionally Drilled Wells



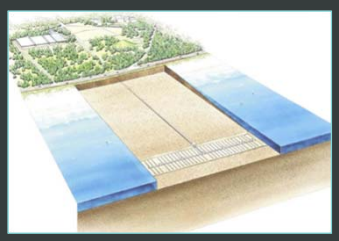
- Curved wells drilled beneath seafloor
- Technology Status:
  - Limited use for seawater desal (several projects in Spain)
- Considerations:
  - Similar to slant wells except:
    - Increased setback from shoreline
    - Decreased impact to onshore groundwater resources
    - Well maintenance more difficult

Collector Wells

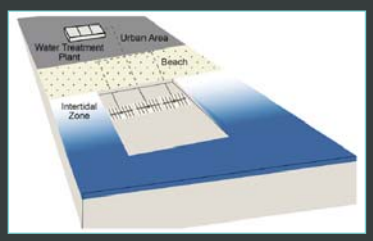


- Large caisson with screened lateral pipes
- Technology status:
  - Proven for other applications
  - Limited use for seawater desal (one site in Mexico)
- Considerations:
  - Impact to onshore GW resources

Infiltration Galleries

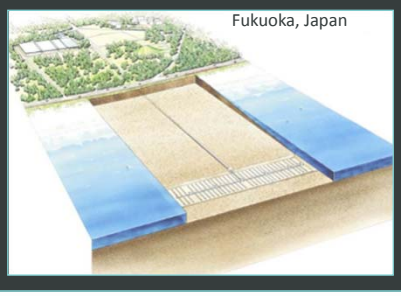


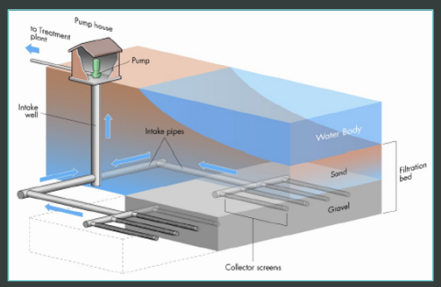
Seafloor Infiltration Gallery (SIG)



Beach Infiltration Gallery (BIG)

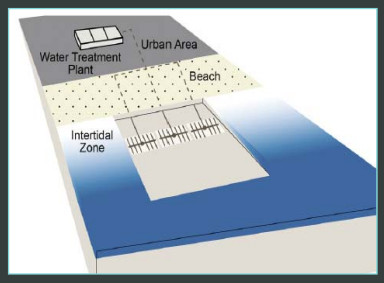
Seafloor Infiltration Galleries (SIG)





- Essentially a sand filter
- Technology status:
  - Limited use for seawater desal (Japan)
- Considerations
  - Area required to provide desired supply
  - Maintenance (removal of any accumulated fine-grained deposits)

Beach Infiltration Galleries (BIG)



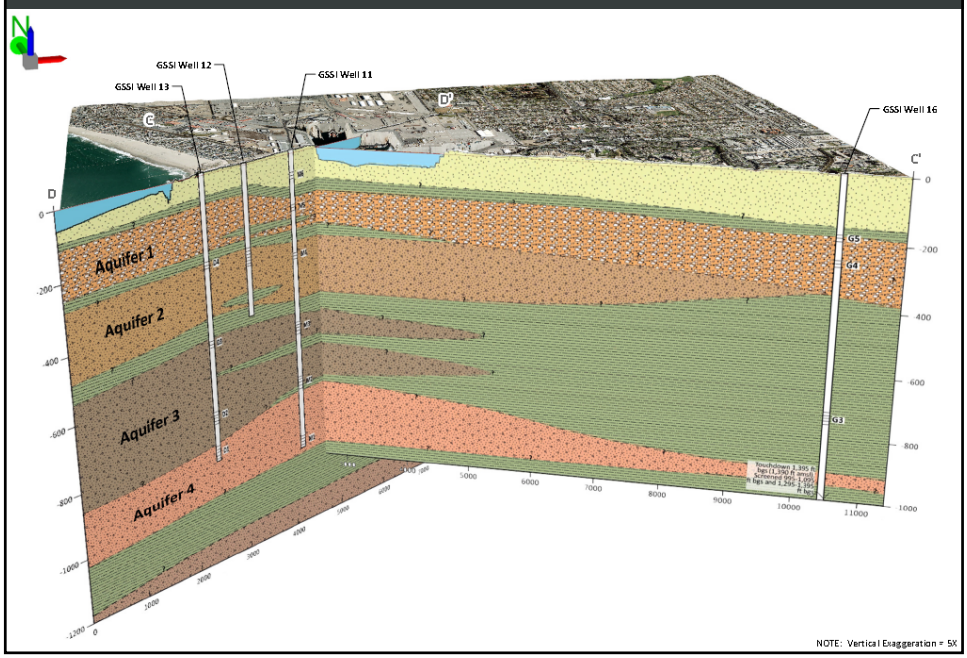
- Similar to SIG, but in the intertidal zone
- Technology status:
  - Proven for other applications
  - Limited use for seawater desal (Long Beach pilot)
- Considerations
  - Similar to SIG, except:
    - Can be self-cleaning via wave action
    - Susceptible to beach sand erosion/deposition

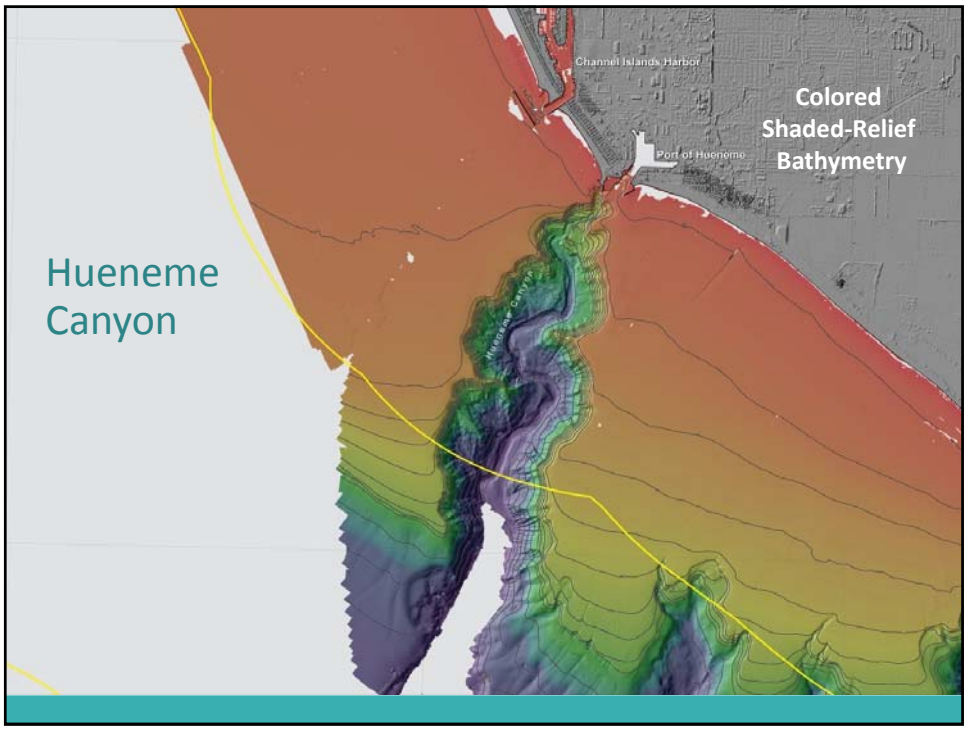
Beach Infiltration Galleries (BIG)

Long Beach Water Department ~0.5 MGD Pilot Project

Long Beach Water Department ~0.5 MGD Pilot Project
Dewatered Filter Bed At Low Tide

Geologic Cross-Section @ Port Hueneme

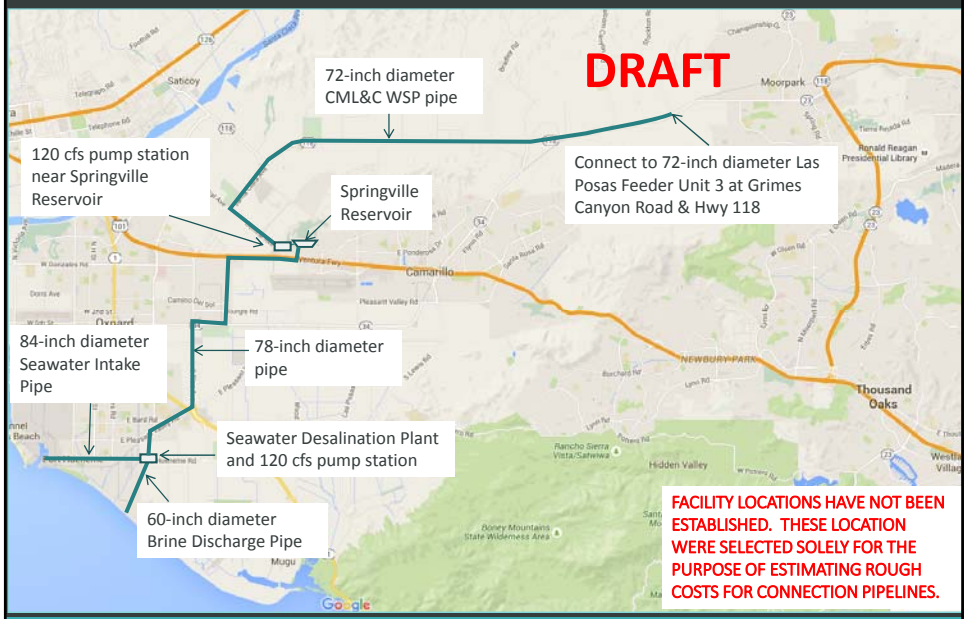




Brine Discharge

- With a recovery rate of 50%, for every 1 gallon of potable water produced 1 gallon of brine would need to be discharged.
- Limit of increase of 5% 300' from discharge.
- Facilities must be designed to avoid adversely affecting marine life.
- Requires a multi-port diffuser similar to the Hueneme Outfall.

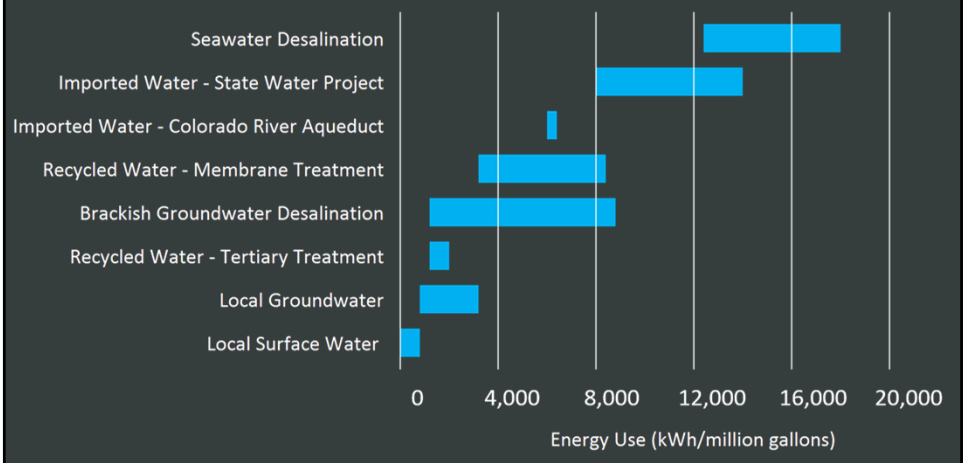
Connecting to Existing System



Energy

- Required for intake, treatment, and pumping to customers
- Largest single operating cost
- One of the more controversial aspects of seawater desalination

Energy



Note: Seawater desalination estimates do not include pumping to distribution system.

Energy

- The following should be considered:
  - Use of Energy Recovery Devices on RO system
  - Incorporation of energy conservation measures into design and operation
  - Development of renewable energy sources

Carlsbad Desal Plant energy recovery devices

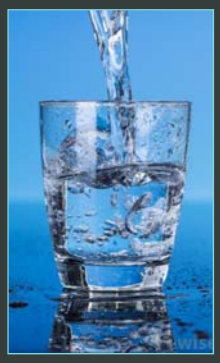
Permitting

Major Permits

- SWRCB Division of Drinking Water Domestic Water Supply Permit Amendment
- RWQCB NPDES Permit for Discharge
- SWRCB Permit for Intake
- State Lands Commission Lease
- California Coastal Commission Coastal Development Permit

SWRCB DDW
Drinking Water Supply Permit Amendment

- Requires a minimum of 3 to 4 years
- Applicable regulations:
  - Surface Water Treatment Rules
  - Microbial and Source Water Monitoring
  - Disinfection By-Products Rules
  - California Water Works Standards
  - Lead and Copper Rule
  - Cross-Connection Control



SWRCB DDW
Drinking Water Supply Permit Amendment

- Requirements:
  - Technical/Engineering Report
  - Operations Plan
  - Water Quality Emergency Notification Plan
  - Distribution System Monitoring Plan
  - Watershed Sanitary Survey
  - Drinking Water Source Assessment and Protection Program Documentation
  - CT (Disinfection) Analysis
  - Operations Maintenance and Monitoring Plan
  - Chlorine / Chloramine Residual Stability Analysis
  - Disinfection By-Product Formation and Blending Analysis
  - Corrosion Control Analysis
  - Algal Toxin Monitoring, Rejection, and Control Analysis
  - Endocrine Disruptor Monitoring, Rejection, and Control Analysis
  - Seawater Desalination Integration Plan
  - Tracer Study

RWQCB NPDES Permit for Discharge of Brine though the Outfall

- Requires a minimum of 2 to 3 years
- Requirements:
  - Characterization of Discharge
  - Whole Effluent Toxicity Study of Discharge
  - Hydrodynamic Modeling of Discharge
  - Discharge Salinity Tolerance Investigation
  - Discharge Monitoring Plan

SWRCB Permit for Intake of Seawater

- Not well understood because requirement to obtain permits for intakes was added as part of 2015 Ocean Plan Amendment
- Ocean Plan says: "the best site, the best design, the best technology, and the best mitigation measures to minimize intake and mortality of marine life."
- Selection of intake process will require an expert panel and public input process

State Lands Commission Lease

- Lease for use of tidelands & submerged lands within 3 miles seaward of the ordinary high water mark.
- Required for intake and discharge facilities.
- Requires a minimum of 2 years.
- Requires most permits to be obtained already (except Coastal Development Permit).

California Coastal Commission Coastal Development Permit

- CCC has jurisdiction over all activities seaward of the mean high tide line.
- Required for intake and discharge facilities.
- Requires a minimum of 2 to 3 years and permit cannot be granted until after all other permits are obtained.

California Coastal Commission Coastal Development Permit

- Requirements:
  - Hazardous chemical use documentation
  - Growth inducement potential
  - Intake alternatives analysis
  - Impingement and entrainment study
  - Impingement and entrainment minimization plan
  - Mitigation plan for impingement/entrainment and other environmental impacts
  - Brine discharge study and alternatives analysis
  - Plan for minimizing impact of brine discharge on marine life
  - Energy requirements
  - Energy minimization plan
  - Greenhouse gas minimization and mitigation plan
  - Water supply alternatives analysis, including:
    - Conservation (mandatory measures, voluntary measures, market-based incentives, etc.)
    - Recycled water
    - Reallocating existing supplies
  - Treatment technology alternatives analysis, including an examination of:
    - Chemical use
    - Energy consumption
    - Emissions
    - Footprint

Other Permits and Approvals - Federal

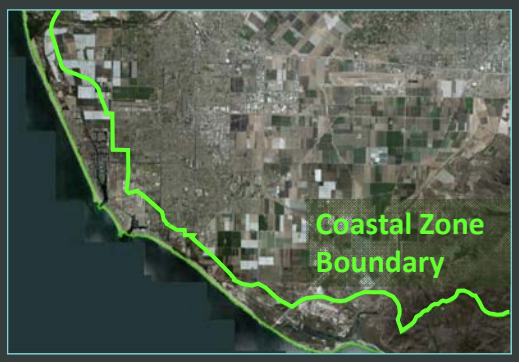
- US Fish and Wildlife Service
  - Incidental Take Statement and coordination under Section 7 ESA
  - Incidental Take Permit (ITP) under the Migratory Bird Treaty Act
  - Consultation under the Fish and Wildlife Coordination Act
- National Marine Fisheries Service
  - Consultation and biological opinion in accordance with Section 7 ESA
  - ITP per Section 104, Marine Mammal Protection Act of 1972
  - Consultation under Section 305(b), Magnuson-Stevens Fishery Conservation and Management Act
- U.S. Coast Guard
- U.S. Army Corps of Engineers
  - Individual Permit in accordance with Section 404 Clean Water Act
  - Individual Permit under Section 10 Rivers and Harbors Appropriation Act

Other Permits and Approvals - State

- SWRCB Coverage under NPDES General Permit for Storm Water Discharges Associated with Construction Activity
- Regional Water Quality Control Board Section 401 Water Quality Certification
- California Department of Fish and Wildlife
  - Incidental Take Permit in accordance with the California Endangered Species Act
  - Lake/Streambed Alteration Agreement
- California Department of Parks and Recreation Office of Historic Preservation Section 106 Consultation for National Historic Preservation Act

Other Permits and Approvals - State

- Coastal Development Permits from local agencies with approved Local Coastal Programs (cities or county), although decisions by these agencies can be appealed to the CCC
- Encroachment Permits (city, county, Caltrans, VCWPD)



Environmental Mitigation

- Carlsbad Desalination Plant mitigation project
- Restoration of 66 acres of intertidal wetlands
- Partnership with USFWS

Permitting Summary

Likely to drive the schedule

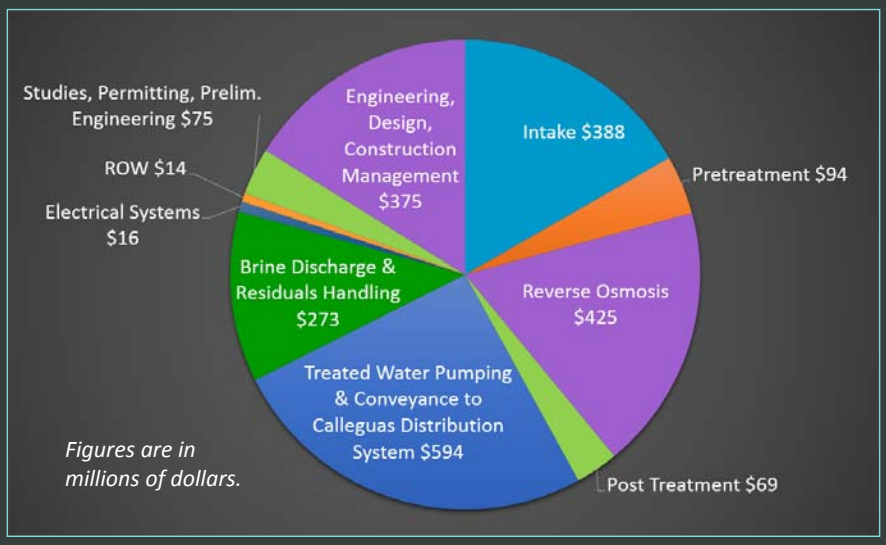
- Permit agencies should be engaged early and often in the planning process
- Permitting must be closely coordinated with:
  - public engagement/outreach
  - CEQA/NEPA
  - technical project development, particularly for intakes

What does it cost?

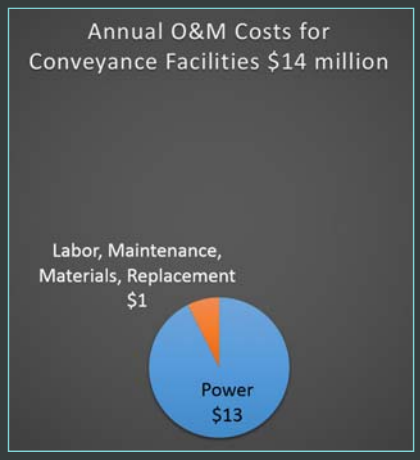
Notes:

- *Costs are conceptual and are not based on a specific location. Many assumptions have been made to develop these costs.*
- *Costs are based on a 125 cfs plant and slant wells.*
- *Costs do not include environmental mitigation, which cannot be estimated at this time.*

Total Capital Cost for a 125 cfs Seawater Desalination Plant (slant well intake): ~$2.3 billion

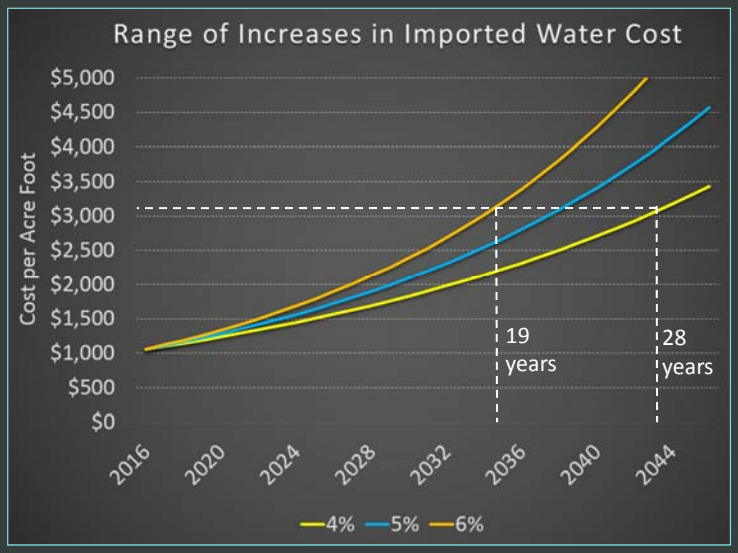


Annual O&M Costs for a 125 cfs Seawater Desalination Plant (slant well intake): ~$84 million



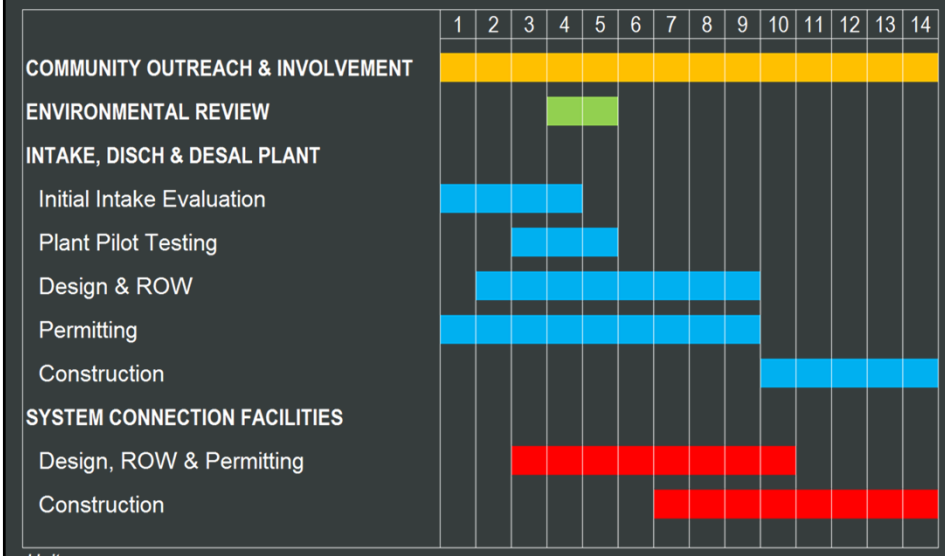
Figures in charts are in millions of dollars.

Overall costs are estimated at ~$2,700 to $3,100 per acre-foot



Schedule, Conclusions, and Next Steps

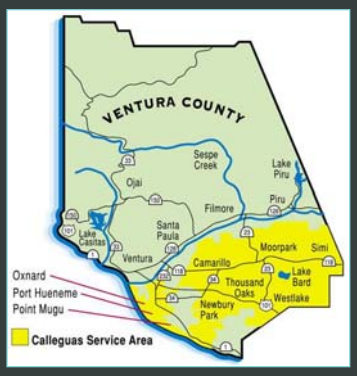
ESTIMATED PROJECT SCHEDULE - CALLEGUAS SEAWATER DESALINATION FACILITES



Units are years.

Conclusions

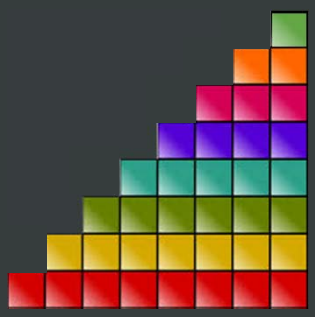
- The cost is very high
- Permit agencies and the public will expect
  - The greatest environmental protections possible, which will create pressure to downsize any proposed desal plant
  - Evaluation of alternative means of meeting the project goals



Calleguas' Next Steps

- Perform an evaluation of alternative projects which, in whole or in part, could meet the outage reliability goal.
- Discuss supply options with purveyors and potential project partners.
- This will provide the necessary information to plan what projects could most effectively meet the outage reliability goal.
- Seawater desalination may be all or part of the solution.

In the next year or two, we will know more about wellfield capacity, Delta tunnels, and intake permitting of other seawater desal plants.



PORT HUENEME WATER AGENCY BOARD
ADJOURNED REGULAR MEETING

FEBRUARY 10, 2016

MINUTES

Chair Estomo called the meeting to order at 4:00 p.m. in the City Council Chamber at Port Hueneme City Hall, 250 North Ventura Road, Port Hueneme, California. The Deputy Agency Clerk called the roll:

PRESENT: Board Members Douglas A. Breeze, Keith Moore, Jonathan Sharkey; Ex-Officio Member Robert Nordahl; Vice Chair Sylvia Muñoz Schnopp; Chair Jim Estomo.

ABSENT: None.

STAFF PRESENT: John Baker, Interim Executive Director/Agency Clerk; Karl Berger, Deputy Agency Counsel; Alvin Burrell, Interim Finance Director; Chris Theisen, Public Works Director; Steven Hickox, Water Superintendent; Karen Koditek, Administrative Specialist (serving as Deputy Agency Clerk).

AGENDA:

The Board had previously received copies of the Agenda.

Member Breeze, seconded by Vice Chair Schnopp, moved to approve the Agenda as presented. Motion carried unanimously.

CLOSED SESSION:

The Deputy Agency Counsel made the following announcement:

With respect to every item of business to be discussed in Closed Session, pursuant to the California Government Code:

A. CONFERENCE WITH REAL PROPERTY NEGOTIATORS (Pursuant to Government Code Section 54956.8)

Real Property: 5751 Perkins Road, Oxnard.

Agency Negotiators: John Baker, Interim Executive Director; Karl Berger, Deputy Agency Counsel; Chris Theisen, Public Works Director; Steve Hickox, Water Superintendent.

Negotiating Parties: City of Oxnard

Under Negotiation: Lease Price and Terms of Payment.

The Board recessed to Closed Session at 4:01 p.m. The Board reconvened at 5:17 p.m. following the Closed Session. The Deputy Agency Counsel announced no reportable action was taken.

BUSINESS ITEMS:

A. APPROVAL OF MINUTES
Action: It is recommended the Board approve the Minutes of the January 13, 2016 Adjourned Regular Meeting.

Member Sharkey, seconded by Member Breeze, moved to approve the Minutes as presented. Motion carried 5-0.

B. CASH DISBURSEMENTS RATIFICATION
Action: It is recommended the Board ratify the cash disbursements listing for the period November 28, 2015 through January 28, 2016.

Member Breeze, seconded by Member Sharkey, moved to approve staff's recommendation as presented. Motion carried 5-0.

C. APPOINTMENT TO THE ASSOCIATION OF WATER AGENCIES OF VENTURA COUNTY BOARD OF DIRECTORS
Action: It is recommended the Board select two PHWA Directors, one to serve as Director and one to serve as Alternate Director to the Association of Water Agencies of Ventura County ("AWA") Board of Directors, for a two-year term for 2016 and 2017.

Discussion ensued among the Board.

Member Breeze, seconded by Member Sharkey, moved to reappoint Member Moore, who is currently serving as PHWA Director for AWA, and Member Breeze, who is currently the Alternate Director. Motion carried 5-0.

D. BRACKISH WATER RECLAMATION DEMONSTRATION FACILITY - OPERATIONAL PERFORMANCE
Action: It is recommended the Board receive and file this report.

The Water Superintendent gave a report. Discussion ensued among the Board and staff.

Member Sharkey, seconded by Member Moore, moved to receive and file the report as presented. Motion carried 5-0.

E. WATER SUPPLY STRATEGY REPORT FROM WATER CONSULTANCY INC.
Action: (Informational Only.)

Lynn Takaichi, Principal of Water Consultancy Inc., gave a report. Discussion ensued among the Board, staff, and Mr. Takaichi.

Member Sharkey, seconded by Member Breeze, moved to receive and file the report as presented. Motion carried 5-0.

BOARD MEMBER REPORTS AND COMMENTS:

A. REQUEST OF MEMBER BREEZE: DISCUSSION OF THE FREQUENCY AND SCHEDULING OF PHWA BOARD MEETINGS
Action: Member Breeze recommends the Board discuss and take possible action on the PHWA Board meeting schedule.

Member Breeze gave a report. The Board approved by acclamation to continue meeting monthly.

NEW BUSINESS TO BE AGENDIZED:

Member Sharkey mentioned an opportunity to tour a local desalination plant.

Chair Estomo requested a tour of the Navy Base's desalination plant.

Vice Chair Schnopp requested a progress report on how well PHWA member agencies are conserving water in compliance with State-mandated water use reductions.

OPEN FORUM:

Member Moore discussed an initiative he is working on with AWA regarding new water programs and the continued drought.

ADJOURNMENT:

Chair Estomo, without objection, adjourned the meeting at 5:53 p.m. to the next Adjourned Regular Meeting to be held Wednesday, March 9, 2016 at 4:00 p.m. in the City Council Chamber.

Respectfully submitted,

_____
John Baker
Interim Agency Clerk

APPROVED:

_____
CHAIR ESTOMO

PORT HUENEME WATER AGENCY
CASH DISBURSEMENTS
For the period January 29, 2016 through February 26, 2016

March 9, 2016

Presented are the cash disbursements issued by the Finance Dept. for the period January 29, 2016 through February 26, 2016. Shown are cash disbursements by date of occurrence and

Date	Type of Payment	Attachment	Amount
January 29, 2016 - February 26, 2016			
	A/P Checks 5289-5291	A	$155,928.94
Total			**$155,928.94**

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ATTACHMENT A

Transactions for 1/29/2016 - 2/26/2016

Date: 3/1/2016

Vendor Name	Description	Check Date	Number	Amount
FOX CANYON GROUNDWATER MGMT AGENCY	JUL-DEC'15 GROUNDWATER	2/11/2016	5289	668.75
UNITED WATER CONSERVATION DISTRICT	CBC0001 020-0110	2/25/2016	5290	5.02
UNITED WATER CONSERVATION DISTRICT	HUE0001 020-0090	2/25/2016	5290	61,457.90
UNITED WATER CONSERVATION DISTRICT	PHW0002 020-0125	2/25/2016	5290	90,417.27
WATER CONSULTANCY, INC	SERVICES THRU 1/31/16	2/25/2016	5291	2,340.00
WATER CONSULTANCY, INC	SERVICES THRU 1/31/16	2/25/2016	5291	1,040.00
				$155,928.94

Port Hueneme Water Agency

250 North Ventura Road • Port Hueneme, CA 93041 • (805) 986-6563

AGENCY AGENDA STAFF REPORT

TO: PHWA Board

FROM: Chris Theisen, Public Works Director

SUBJECT: BRACKISH WATER RECLAMATION DEMONSTRATION FACILITY - OPERATIONAL REPORT

DATE: March 9, 2016

RECOMMENDATION:

It is recommended the Board receive and file this report.

BACKGROUND/ANALYSIS:

This report presents an update on the operational status of the Brackish Water Reclamation Demonstration Facility (BWRDF) from January 26, 2016 to February 18, 2016.

During this operational reporting period, the overall PHWA demand averaged 2.6 MGD with UWCD supplying 88 percent and CMWD supplying 12 percent. There were no interruptions of service, and the water quality delivered to each of the PHWA customers continues to meet all State and Federal regulatory standards.

The Silt Density Index (sampled twice a day) averaged 3.3 and the BWRDF was in by-pass mode during the report period. Operations staff will continue to monitor United's water quality to determine when this source is permissible for membrane treatment. While in by-pass mode, a blend of United water with Calleguas water will be dictated by system demand periods and source water availability to maximize our take of United's water supply.

SUMMARY OF OPERATING COMMITTEE MEETING:

On February 3, 2016 the Operating Committee met to discuss groundwater credit transfers. Mr. Hickox will update the spreadsheets and present a draft of the transfers to the Operating Committee for review. Once approved by the operating

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committee, staff will present the proposed internal-transfers to the Board for final approval.

NEXT PHWA BOARD MEETING

The next PHWA Board meeting is scheduled for April 13, 2016 at 4:00 p.m.

FISCAL IMPACT:

The action, if taken as recommended, will not have a fiscal impact.

Port Hueneme Water Agency

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AGENCY AGENDA STAFF REPORT

TO: PHWA Board

FROM: Chris Theisen, Public Works Director

SUBJECT: WATER DEMAND REDUCTION UPDATE

DATE: March 9, 2016

RECOMMENDATION:

It is recommended the Board receive and file this report.

BACKGROUND/ANALYSIS:

This report provides a summary of the PHWA's compliance with water conservation mandates imposed by the Fox Canyon Groundwater Management Agency (GMA) and the Metropolitan Water District of Southern California (Metropolitan). Recall that the PHWA has historically purchased approximately 80% of its water from the United Water Conservation District (United) and 20% from the Calleguas Municipal Water District (Calleguas).

Groundwater Reduction Requirements

PHWA is under the jurisdiction of the GMA for groundwater purchased from United.

The GMA board passed Emergency Ordinance E, effective July 1, 2014, which required all groundwater pumpers in its jurisdiction to gradually reduce their water demand from a baseline amount by 20% over 18 months in three discrete six-month periods. To avoid penalties, an agency needed to meet the reductions in each period and then needs to remain at a 20% reduction thereafter.

The baseline amount for an agency is the average demand for the 10-year period from 2003 to 2012. The ultimate maximum allowable demand to avoid penalties for PHWA, therefore, is 80% of that amount, or 3,471 acre-feet. This amount is referred to as the Temporary Emergency Allocation, or TEA.

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PHWA has avoided any penalty surcharges to date because it met the reduction requirements in each of the three six-month periods, and it is anticipated that PHWA's demand will continue to be less than the TEA value.

The table below shows PHWA's reduction percentages compared to the required percent reductions dictated by GMA's Emergency Ordinance E.

Reduction Period	Required Reduction	PHWA's Reduction
7-1-14 through 12-31-14	10%	46%
1-1-15 through 6-30-15	15%	26%
7-1-15 through 12-31-15	20%	26%

Surface Water Reduction Requirements

PHWA is subject to the requirements of Metropolitan for surface water purchased from Calleguas.

Metropolitan initiated a Water Supply Allocation plan effective July 1, 2015 which required purveyors to reduce their water demand for State Water from a baseline amount. The baseline amount for an agency is the average demand for the two-year period from 2013 and 2014.

The required reduction is a complicated formula considering an agency's past demand, conservation efforts, and availability of local water sources. PHWA's required reduction is 5.6%. That reduction has been achieved, and staff believes it will continue to be achieved.

FISCAL IMPACT:

The action, if taken as recommended, will not have a fiscal impact.

Water Consultancy

February 29, 2016

Memorandum

To: Mr. Chris Theisen, Director of Public Works
City of Port Hueneme

From: Lynn M. Takaichi

Subject: Status Report No. 6
PHWA Water Supply Strategy Implementation
WC-023

This memorandum summarized activities performed from January 4, 2016 to present. This status report is organized by the tasks listed in the Task Order.

1. Attend Meetings with Other Utilities
   - None. Meeting with OH Pipeline Users scheduled for March 8.
2. Attend Meetings with Regulatory Agencies
   - None
3. Attend Meetings with PHWA Board and Committees
   - Attended PHWA Board meeting (2/10)
   - Prepared status report
4. Assist PHWA with Negotiation Assistance to Modify Existing Agreements
   - No activity
5. Continue to refine PHWA Water Supply Strategy
   - No activity
6. Assist PHWA with Developing a Long Term Water Supply Strategy
   - No activity