

CALIFORNIA AMERICAN WATER

# Monterey Peninsula Water Supply Project CPUC Cost Workshops Cost Impact of Contingencies

December 11 - 13, 2012



# Disclaimer

- This presentation contains material that are for discussion purposes.
- Various graphics, figures and tables contain numerous estimates which are beyond our control and subject to change.
- These items are for illustration purposes only.



## **Topics for Cost Workshop**

- Cost Impacts of Contingencies [Day 1: 2 PM 5 PM, Wed Dec 12 (Day 2): 9:30 AM – 12PM]
  - Brackish Source Water
  - Facility Siting
  - Plant Failure or Periodic Interruption
  - Outfall Use for Brine Disposal
  - Reduction in Demand Forecasts
  - Project Delay



## **Assumptions for Contingency Plan**

- Barring legal challenges, it is indicated in our Contingency Plan memo that each item in the Plan could be implemented by December 2017 assuming an SEIR NOD in November 2013 and an CPUC CPCN Order by January 2014.
- The CEQA process currently being conducted by the CPUC staff is the appropriate venue to review, analyze and select the least environmental impacted plan.



## **Assumptions for Contingency Plan** – cont'd

- Only if insurmountable obstacles occur (which could include schedule and cost) would CAW move to an alternate as identified in its contingency plan.
- This change from one plan to a contingent plan is done so as to avoid confusion in the Permitting process.



## **Current Schedule**

Task Name	Duration	Start	Finish		2012		2013		2014	20	15	2	016	201	7
E CAW Dayle at	4.460 days 2	Map 4/22/42	Thu 43/7/47	Q4 Q1	Q2  Q3  Q	)4  Q1	Q2 Q3 Q	4 Q1	Q2 Q3 Q4	Q1 Q2	Q3  Q4	Q1  Q; -	2   Q3   Q4	Q1 Q2 0 :	Q3  Q4
	1409 Gays :	WON 4/23/12	110 12/1/17		4.02										
File with CPUC	Udays	Mon 4723/12	Mon 4/23/12		4/23										
Permitting	709 days?	Mon 4/23/12	Thu 1/8/15	9						7					
CPUC Approval	450 days	Mon 4/23/12	Fri 1/10/14					D.				# # # # # # # # # # # # # # # # # # #			
Pre-Application Activities	180 days?	Mon 4/23/12	Fri 12/28/12			Þ.	ſ								
Application Preparation and Submittal	173 days?	Mon 12/31/12	Wed 8/28/13												
Permit Processing	300 days	Fri 11/15/13	Thu 1/8/15					¢		h		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
Feedwater Test Well	669 days	Mon 4/23/12	Thu 11/13/14												
Permitting	166 days	Mon 4/23/12	Mon 12/10/12			╞┼╴									
Site Acquisition	210 days	Mon 4/23/12	Fri 2/8/13			t h									
Design	90 days	Mon 2/11/13	Fri 6/14/13		L										
Driller Procurement	30 days	Mon 6/17/13	Fri 7/26/13				<u> </u>								
Construction	90 days	Fri 11/1/13	Thu 3/6/14				1		l						
Operation	180 days	Fri 3/7/14	Thu 11/13/14												
□ DB Delivered Items	1339 days?	Mon 10/22/12	Thu 12/7/17			-									
DB Contract Procurement	320 days?	Mon 10/22/12	Fri 1/10/14					╞╃							
Design / Construction / Startup	760 days	Fri 1/9/15	Thu 12/7/17							<u> </u>				:	
DBB Delivered Items	1191 days?	Mon 12/31/12	Mon 7/24/17			-									₽
Design Contract Procurement	215 days?	Mon 12/31/12	Fri 10/25/13			Ľ									
Design	391 days?	Mon 1/13/14	Mon 7/13/15							:	ի				
Bid	30 days	Tue 7/14/15	Mon 8/24/15								<u>ъ</u>				
Construction / Startup	500 days	Tue 8/25/15	Mon 7/24/17								<u> </u>			:	
Decision on GWR	0 days	Thu 10/1/15	Thu 10/1/15								- <b>4</b> 1	0/1			



# **Brackish Source Water**

Option	Description	Most Probable Additional Cost
1	Ranney Wells at Cemex	\$900,000
2	New Open Ocean Intake (OOI) at Cemex	\$7,800,000
3	Slants Wells at Portrero Rd	\$8,500,000
4	OOI at Marine Refactories Site	\$11,200,000
5	MLPP Spent Cooling Water	\$10,700,000
6	MLPP Intake Cooling Water	\$11,200,000
7	Use Marine Refactories Outfall as Intake	\$13,200,000
8	New OOI at Moss Landing	\$11,400,000



## **Options 1 - Slant Well or Ranney Wells at Cemex**







### **Option 2 - Open Ocean Intake at Cemex**



- Schedule 0 months assuming no legal challenges
- 2 to 10 years assuming legal challenges



### **Option 3 - Slants Wells at Portrero Rd**



### Impact to Project

Schedule – 0 months assuming no legal challenges



### **Option 4 - OOI at Marine Refactories Site**



- Schedule 0 months assuming no legal challenges
- 2 to 10 years assuming legal challenges



## **Option 5 - MLPP Spent Cooling Water**



- Schedule 0 months assuming no legal challenges
- 2 to 10 years assuming legal challenges



### **Option 6 - MLPP Intake Cooling Water**



- Schedule 0 months assuming no legal challenges
- 2 to 10 years assuming legal challenges



## **Option 7 - Use Marine Refactories Outfall as Intake**



- Schedule 0 months assuming no legal challenges
- 2 to 10 years assuming legal challenges



# **Option 8 - New OOI at Moss Landing**



- Schedule 0 months assuming no legal challenges
- 2 to 10 years assuming legal challenges



# **Brackish Source Water**

Option	Description	Accuracy Range of Additional Cost (M)
1	Ranney Wells at Cemex	\$0.765 - \$1.125
2	New Open Ocean Intake (OOI) at Cemex	\$6.630 - \$9.750
3	Slants Wells at Portrero Rd	\$7.225 - \$10.625
4	OOI at Marine Refactories Site	\$9.520 - \$14.000
5	MLPP Spent Cooling Water	\$9.095 - \$13.375
6	MLPP Intake Cooling Water	\$9.520 - \$14.000
7	Use Marine Refactories Outfall as Intake	\$11.220 - \$16.500
8	New OOI at Moss Landing	\$9.690 - \$14.250



### **Open Ocean Intake Issues**



### <u>Red Tide Event – Bondi Beach,</u> <u>Australia – 11/27/12</u>

Left photo from: <u>http://www.surfertoday.com/environment/8270-red-tide-invades-the-waves-of-bondi-beach</u> Right photo from: <u>http://abcnews.go.com/Technology/slideshow/red-tide-hits-australian-beach-17817350</u>. (William West/AFP/Getty Images)



## **Mitigation Requirements for Intakes**

- Sand City Plant Beach Wells
  - \$25K annual fee for rip rap at end of Tioga St.
  - No costs for Impingement and Entrainment
- Carlsbad SWRO Open Ocean Intake
  - 66 acres of new wetlands to offset marine loss at a capital cost of \$23M and annual cost of \$250,000.



# **Facility Siting**

- CAW has completed the acquisition of 46 acres on Charles Benson Rd for desal plant for under \$800,000.
- CAW is in active negations with intake land owner. Three agreements have been reached to date allowing access and permitting to occur.
- In the Contingency Plan we explored 8 options of various intake, discharge and desal plant locations.



# **Facility Siting**

Option	Description	Est. Additional Time Assuming No Legal Challenges
1	Marine Refractory Site	7 - 9 months
2	Capurro Ranch Site	9 - 11 months
3	FEIR Plant Site at Moss Landing	0 months
4	FEIR Plant Site at Moss Landing w/ Portrero Rd Slant Intake Wells and MLPP Outfall for Brine Discharge	0 months
5	FEIR Plant Site at Moss Landing w/ Portrero Rd Slant Intake Wells and Brine Discharge at Marine Refractory Outfall	7 - 9 months
6	FEIR Desalination Plant Site at Moss Landing w/ Portrero Road Slant Intake Wells and Brine Discharge to New Outfall	7 - 9 months



# Facility Siting - cont'd

Option	Description	Est. Additional Time Assuming No Legal Challenges
7	FEIR Plant Site at Moss Landing w/ Marine Refractory Intake and Brine Discharge at MLPP Outfall	7 - 9 months
8	FEIR Plant Site at Moss Landing w/Marine Refractory Intake and Brine Discharge to New Outfall	7 -9 months



### **Intake and Desal Plant Location**





## Facility Sitings – Refactories & Capurro Ranch Site







# **Facility Sitings – FEIR Site**





## **Plant Failure or Periodic Interruption**

- As noted in Contingency Plan filing, we do not believe there to be an issue in regards to this issue because:
  - Existing Carmel River rights provide 2 3 months of water supply and have historically been able to meet existing customer demands.
  - As Carmel River ASR matures we will achieve 1 2 months of water supply.
  - Upon completion of ASR 5 & 6, an additional 1 month of water supply will be in storage.
  - Seaside Basin payback, as currently planned is averaged over a 5 year period and can be used to meet temporary interruptions.
  - For daily operations, we will have approximately 1 2 days of storage within system.
  - Finally, Seaside Basin payback volumes could be used in an emergency.



# **Outfall Use for Brine Disposal**

Option	Description	Most Probable Additional Cost
1	Modify existing MRWPCA Outfall	\$7,700,000
2	New Outfall at Cemex	\$19,500,000
3	Discharge with MLPP Spent Cooling Water	\$18,500,000
4	Modify Marine Refactories Outfall	\$22,500,000



## **Option 1 - Modify existing MRWPCA Outfall**



### Impact to Project Schedule – 0 months

assuming no legal challenges



### **Option 2 - New Outfall at Cemex**



### **Impact to Project**

Schedule – 7 to 9 months assuming no legal challenges



## **Option 3 - Discharge with MLPP Spent Cooling Water**



### Impact to Project

Schedule – 0 months assuming no legal challenges



### **Option 4 - Modify Marine Refactories Outfall**



### **Impact to Project**

Schedule – 7 to 9 months assuming no legal challenges



# **Outfall Use for Brine Disposal**

Option	Description	Accuracy Range of Additional Cost (M)
1	Modify existing MRWPCA Outfall	\$6.545 - \$9.625
2	New Outfall at Cemex	\$16.575 - \$24.375
3	Discharge with MLPP Spent Cooling Water	\$15.725 - \$23.125
4	Modify Marine Refactories Outfall	\$19.125 - \$28.125



## **Reduction in Demand Forecasts**

- As noted in Contingency Plan filing, we do not believe there should be a concern in regards to this issue because:
  - Existing usage is already 60 gpd/c.
  - If usage were to drop to 35 gpd/c (minimum amount determined to meet Health and Sanitary conditions), then desal plant operation levels would drop to a more typical operating level.
  - See slides by others for discussion on elasticity.



# **Project Delay**

- Based on most current schedule which indicates completion in the 4<sup>th</sup> Quarter of 2017. CAW is comfortable with cost estimates remaining as filed.
- For every 1% in inflation, total project cost will increase by approximately \$1.85M every six months.
- There are a couple of ways to handle this which we should discuss during the Financial Modeling portion of the project.