

Regional Project Technical Work Group  
*Regional Urban Water  
Supply Evaluation*

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*Innovative Solutions for Water and the Environment*

# *Today's meeting*

- Discuss evaluation approach
- Review preliminary results
  - Component Evaluation
  - Programmatic Evaluations
- Obtain feedback and seek consensus on approach
- Identify next steps and deliverables

# Criteria Summary

	<i>Component Level</i>	<i>Programmatic Level</i>
Schedule	X	X
Reliability	X	X
Permitting	X	X
Public Acceptance	X	X
Environmental	X	X
Regulatory		X
Additional Supply	X	X
Cost		X
Sustainability		X

# Considerations for Component Criteria

- **Schedule:**

- Estimated year of completion?
- Will the project be implemented in time to supply amount required?

- **Reliability:**

- Does supply depend on precipitation? Is supply sustainable?

- **Permitting:**

- Foreseen permitting issues?
- Have all necessary permits already been acquired?

- **Public Acceptance:**

- Are there parties that are strongly against the project?
- Are there parties that strongly support the project?

- **Environmental:**

- High energy consumption?
- Adverse impacts to fish and surrounding habitats?

# *Considerations for Programmatic Criteria*

- ***Regulatory:***

- Adequate to meet required supply for 95-10
- Responds to Seaside Adjudication?

- ***Additional Supply:***

- Amount in AFY

- ***Cost:***

- \$\$<\$\$\$\$<\$\$\$\$ (estimated)

- ***Sustainability:***

- Maximize use of fresh water sources, reduce use of desalination

# *Component Evaluation – Projects Evaluated*

- Water Recycling

- Regional Urban Water Augmentation Project
- Monterey Extension of Regional Urban Water Augmentation Project

# *Component Evaluation – Projects Evaluated*

- **Conjunctive Surface and Groundwater Management**

- Seaside Groundwater Basin Aquifer Storage and Recovery (Phase I and Expansion)
- Salinas Valley Water Project (Phases I, II, and III)
- Potable Treatment Facility (Seasonal Combination of Desal/River)
- Salinas Valley Groundwater Basin Replenishment (Desal/Intruded Groundwater)

# *Component Evaluation – Projects Evaluated*

- **Indirect Potable**
  - Seaside Groundwater Replenishment Project
- **Conservation Projects**
- **Stormwater Projects**

# *Component Evaluation – Projects Evaluated*

## ● **Desalination**

- Coastal Water Project Alternative Water Source (Intruded Groundwater)
- MCWD Pilot Desal Project
- MCWD Regional Urban Water Augmentation Project
- CWP Alternative Site (Basic and Regional)
- MPWMD's Sand City Desal Project
- City of Sand City Water Supply Project
- Seawater Conversion Vessel

# *Programmatic Evaluations*

- Supply scenarios
  - Supply necessary to meet regulatory requirements
    - **12,500 AF**
  - Regional supply required
    - Regulatory supply + future demands
    - **19,400 AF**

# Programmatic Evaluation – 12,500 AFY

Program	Water Supply (AFY)						
	Recycled Water	Conjunctive Mgmt		Groundwater Replenishment	Conservation	Stormwater Reuse	Desalination
		Seaside ASR / expansion	Salinas River				
<b>A</b>	<1,000	920	5,000	0	150	300	5,130
<b>B</b>	<1,000	920	9,930	0	150	300	0
<b>C</b>	<1,000	920	0	2,500	150	300	7,630
<b>D</b>	<1,000	920	0	0	150	300	10,130
<b>D'</b>	<1,000	920	0	0	150	300	10,130

# Programmatic Evaluation - 19,400 AFY

Program	Water Supply (AFY)						
	Recycled Water	Conjunctive Mgmt		Groundwater Replenishment	Conservation	Stormwater Reuse	Desalination
		Seaside ASR / expansion	Salinas River				
A'	3,000	920	5,000	2,500	300	500	7,180
A''	3,000	920	7,200	2,350	300	500	5,130
A'''	3,000	920	5,000	0	300	500	9,680
B'	3,000	920	12,180	2,500	300	500	0
C'	1,700	920	0	2,500	300	500	13,480
D''	1,700	920	0	0	300	500	15,980

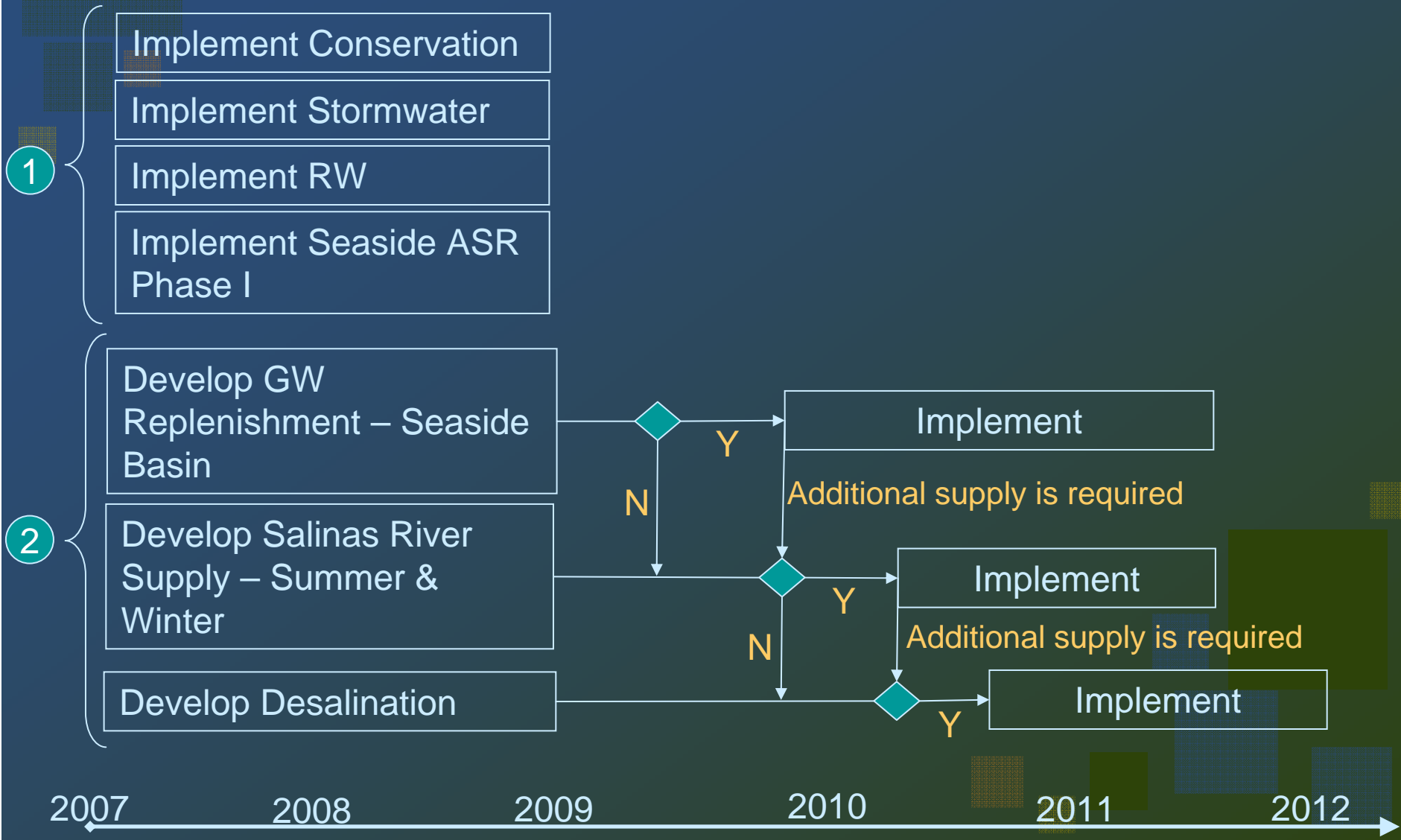
# Well Selection Greatly Impacts Desal Evaluations

Well Type	Source	Reliability	Permitting	Public Acceptance	Environmental	Cost per installation
Slant Wells	Ocean	◐	○	◐	◐	\$1M
Collector Wells	Ocean	◐	○	◐	◐	\$3.5M
Vertical Wells	Intruded groundwater	●	●	◐	●	\$250,000

- These costs only include installation of an individual extraction well (i.e. no cost of pumps, desal treatment, or O&M)

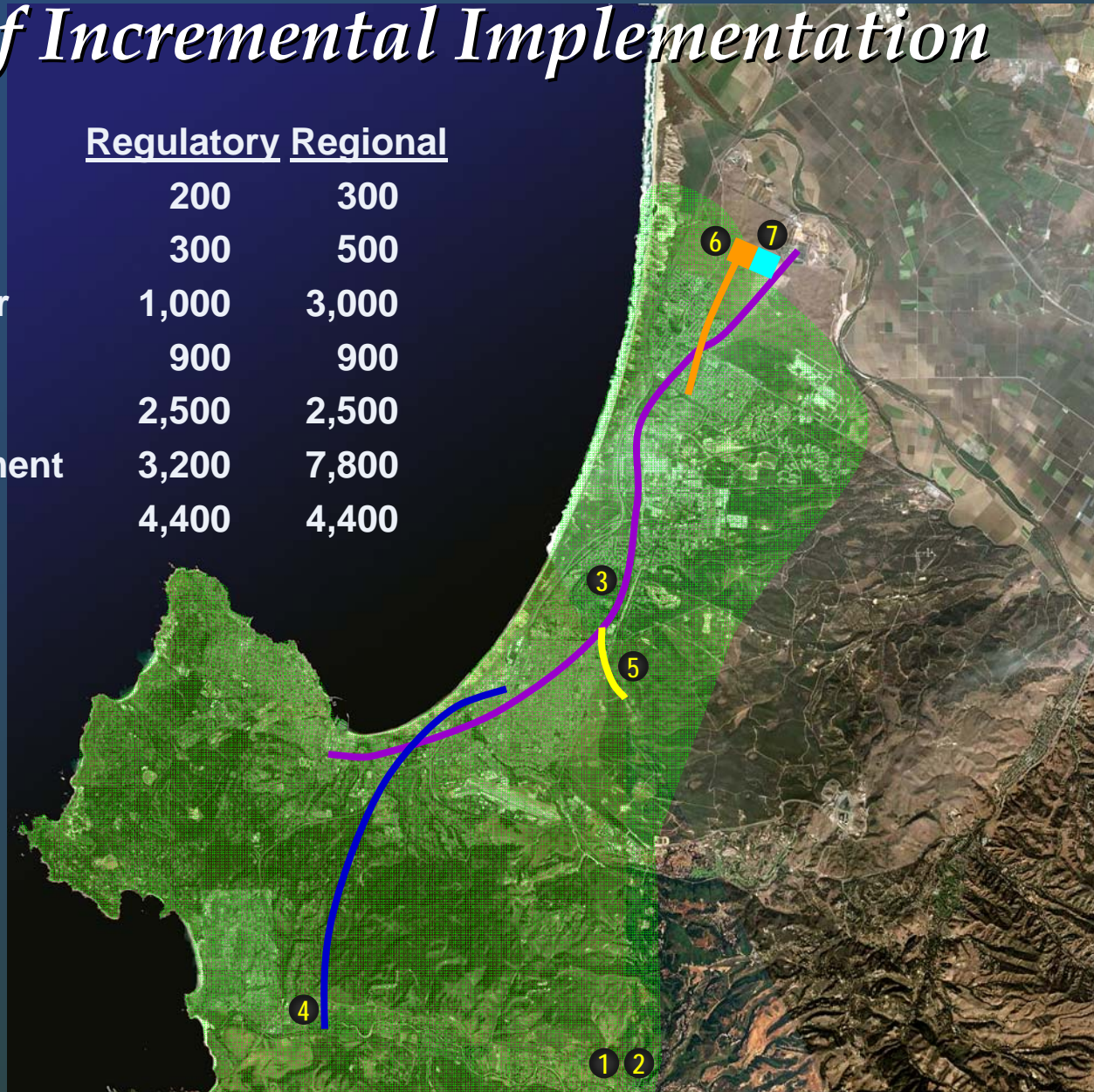
# Decision Tree

◆ Implementable?



# Example of Incremental Implementation

	<u>Component</u>	<u>Regulatory</u>	<u>Regional</u>
1.	Conservation	200	300
2.	Stormwater	300	500
3.	Recycled Water	1,000	3,000
4.	Seaside ASR	900	900
5.	GW Replenish.	2,500	2,500
6.	Conj. Management	3,200	7,800
7.	Desalination	4,400	4,400



## *Next Steps*

- Obtain feedback
- Prepare final evaluation matrices
  - Component screening
  - Program evaluation
- Prepare summary memorandum
- Present results and recommendations at the next meeting