MONTEREY PENINSULA TER MANAGEMENT DISTRICT





Aquifer Storage and Recovery on the Monterey Peninsula

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ASR as a Supply on the Monterey Peninsula





4,846 AFY of supply are needed by 2022. An additional 5,600 AFY are needed to serve legal lots of record and to meet the Monterey County General Plan requirements.



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15,296 AFY

The Actual Water Supply Portfolio

Desalination Project				6,252 AFY
ASR – Carmel River Water Rights		ASR – Treated Industrial and Storm water		4,800AFY
Los Padres Dam / Carmel River	Seasid	e Basin	Local Water Projects	4,244 AFY



Replacement of Traditional Sources



The Water Supply Project will diversify the Monterey Peninsula's water supply portfolio. These new sources of water will be sustainable and help protect against drought while also protecting the natural resources of the Carmel River.



Phase 1: Feasibility Analysis





Overview of ASR Facilities



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Modeling Analysis







Water Rights Modeling





Mediterranean Climate

Flood



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Modeling Analysis











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Stratigraphy of Seaside Basin





Storage in Seaside Basin





Transference Capacity

Current pipeline capacity is limited to 3,500 GPM. The District currently has rights to divert 6,600 GPM.





Plans to Improve Capacity

The Monterey Pipeline has been approved and construction will begin in 2017. This will allow for delivery of the full water rights.



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505

Construction of ASR Facilities

Santa Margarita Site

- 2002 ASR1 was Drilled and Tested,
- 2003 2006 Water Rights Negotiations, Project Planning and Civil Design, CEQA, and NEPA,
 2007 Construction and Testing of ASR2,
- 2009 2012 Construction of Chemical and and Electrical Building and Facilities.

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Santa Margarita Site

Two ASR wells operated as a couplet Injection capacity 3,000 GPM (13.3 AFD) Production capacity 6,000 GPM Maximum annual volume 2,426 AFY Average annual project yield 920 AFY Season of diversion 12/1 to 5/31



Construction of ASR Facilities

Peninsula

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Seaside Middle School Site

- 2009 Exploratory Borehole was Drilled,
 2010 ASR3 was Drilled and Tested
 2011 Secured Easement from MPUSD and Expanded EIR to Cover New Site
 2012 Construction and Testing of ASR4
 2013 – 2014 Construction of Chemical and
 - and Electrical Building and Facilities.

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Seaside Middle School Site



Two ASR wells operated as a couplet Injection capacity 3,500 GPM (15.9 AFD) Production capacity 6,000 GPM Maximum annual volume 2,900 AFY Average annual project yield 1,040 AFY Season of diversion 12/1 to 5/31



Operations and Maintenance

1.00







Water Rights and Operations





Monitoring and Reporting



- Regional Water Quality Control Board
- State Water Rights Board
- Department of Fish and Wildlife
- NOAA Fisheries
- Department of Drinking Water



Inter Agency Cooperation





To Date 5,685 AF have been injected into the Seaside Basin.

The largest annual volume was 1,117, which was 11% of the supply.

Increased pipeline capacity should allow for full use of water rights and bring an extra 2,000 AF to the Monterey Peninsula.



Seaside Basin ASR Program Estimated Cost Summary

Cost to Date

- ASR Feasibility/Testing: \$1.8 M
- Santa Margarita Site: \$4.8 M
- Seaside Middle School Site: \$6.7 M Total \$13.3 M

Cost does not include pipelines





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Seaside Basin ASR – Current Status

