



August 25, 2011 Workshop

MPWMD Water Supply Projects in Progress

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MPWMD Water Supply Projects Adopted in April 2011

- Water Project 1 (finalize underground storage project in Seaside Basin);
- Water Project 2 (complete expanded storage project in Seaside Basin);
- Water Project 3 (pursue local desalination project);
- Water Project 4 (support MRWPCA Groundwater Replenishment Project);
- Water Project 5 (investigate Los Padres Reservoir capacity expansion).

Water Project Purposes of Smaller Projects

- Complement Regional Water Project (RWP), or serve as “Plan B” if RWP is significantly delayed or withdrawn.
- Reduce the need for rationing in the period before Regional Project comes on line, and help legalize the supply.
- Reduce need for full use of expensive RWP desalination plant.
- Provide water for legal lots of record and remodels after Phase 1 of RWP is constructed.

Water Project 1 (storage in Seaside Basin)

- “Phase 1 Aquifer Storage and Recovery.”
- Partnership of MPWMD and Cal-Am.
- Excess winter flow from Carmel River is treated, transported and injected into Seaside Basin via special wells, then taken in the dry season for customer use.
- Reduces impact to Carmel River and helps restore Seaside Basin.
- Santa Margarita Well #1 and Well #2 at Gen. Jim Moore Blvd. near Eucalyptus.

Water Project 1 Location



Water Project 1 Facilities



Water Project 1 Update

- Estimated average yield = 920 AFY.
- Over 1,110 AF injected in both 2010 and 2011; 4,346 total injected 1998-2011.
- Completed Santa Margarita Wells #1 and #2 and facilities building.
- Permanent power installation underway in coordination with PG&E.
- Continued coordination with Cal-Am re: system operation and capacity, pipeline easement, ownership/operations.

Water Project 2 (expanded storage in Seaside Basin)

- “Phase 2 Aquifer Storage and Recovery.”
- Partnership of MPWMD and Cal-Am.
- Second site for winter flow from Carmel River to be injected into Seaside Basin, then extracted in dry season.
- Two wells planned at Seaside Middle School site; one well is constructed.
- Estimated additional average yield is 1,000 AF, resulting in 1,920 AFY average for WP1 and WP2 combined.

Water Project 2 Location

x



WP2: Production testing at Seaside Middle School for Well #1



WP2: Completed Seaside Middle School Well #1



Water Project 2 Update

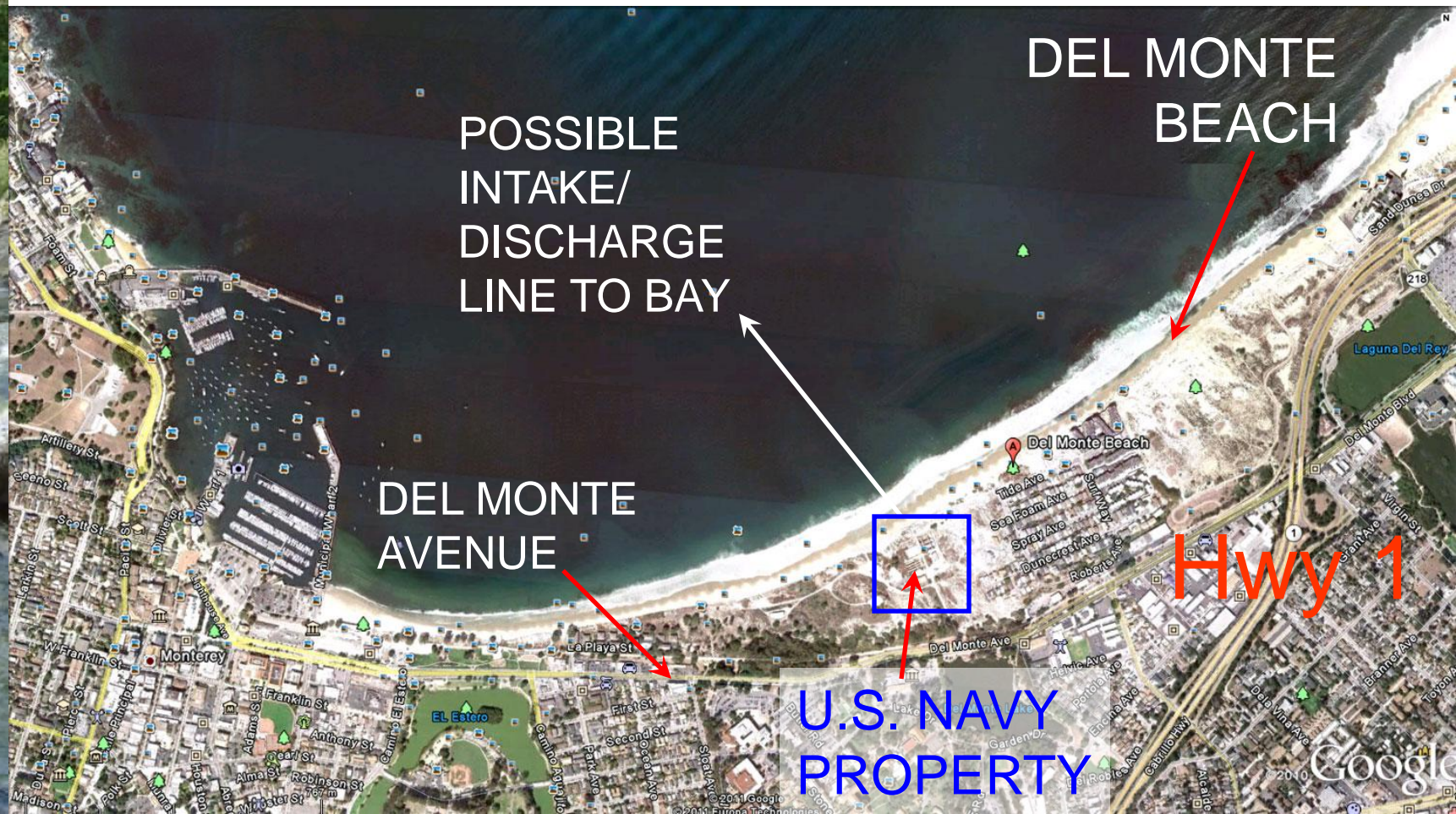
- Seaside Middle School Well #1 drilled and production testing completed.
- MPWMD and Cal-Am continue coordination on needed infrastructure to enable operation at full capacity in near-term and long-term.
- Cal-Am pipelines for Water Project 1 and 2 pending FORA and Seaside approvals.
- Draft final SWRCB water rights permit received; final permit expected soon.
- Work continues on project description and hydrology impact assessment in progress for planned CEQA Addendum.

Water Project 3 (local desal)

- Desalination is treating water or brackish water to remove impurities and salts to produce drinking water and a concentrated effluent. Seawater reverse osmosis (SWRO) uses membrane filters for coastal projects.
- MPWMD goal is a project that produces at least 2,000 AFY.
- MPWMD is exploring desalination sites at an abandoned treatment plant on U.S. Navy property at Del Monte Beach in Monterey and in the Sand City area.

Water Project 3 – Monterey Desalination Plant

CONCEPT LEVEL MAP



Water Project 3 – Monterey Desalination Plant

- Looking southwest toward abandoned City of Monterey wastewater treatment plant

U.S. NAVY PROPERTY AT DEL MONTE BEACH



Water Project 3 Update

- District staff met with local Navy officials, who support the concept; District Engineer to set meetings with staff at the Coastal Commission and Monterey Bay National Marine Sanctuary regarding intake and discharge requirements in Monterey Bay.
- Received presentations on (regional) Deep Water Desal proposal at Moss landing; proponent requests Memorandum of Understanding with MPWMD.

Water Project 4 (Support Groundwater Replenishment)

- Monterey Regional Water Pollution Control Agency (MRWPCA) would inject highly purified water from Marina treatment plant into Seaside Basin for later recovery that meets time and distance standards.
- Modeled after successful “Water Factory 21” project in Orange County, CA.
- MRWPCA and Marina Coast Water District also co-sponsoring the Regional Urban Water Augmentation Project (RUWAP) recycled water alternative.

Water Project 4 Facilities

MRWPCA Treatment Plant



Water Project 4 Update

- MPWMD has issued Resolutions of support and Memorandum of Agreement.
- Board committees and staff continue to coordinate with MRWPCA regarding the best ways to support the Groundwater Replenishment Project, including public education. MPWMD budget is constrained, but in-kind services are available.
- MRWPCA staff are here to answer questions and provide more detailed information.

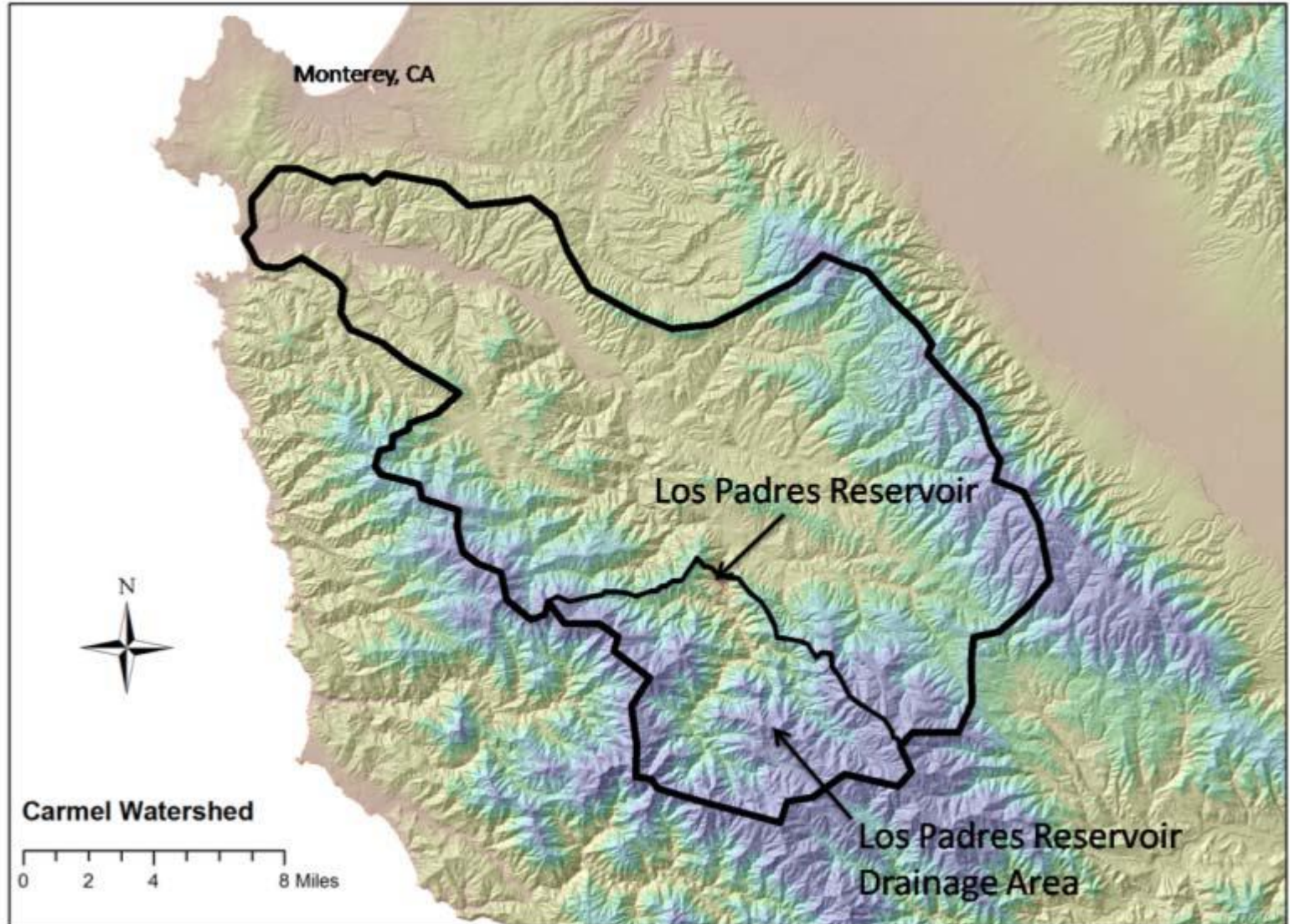
Water Project 5 (expand Los Padres Reservoir capacity)

- Explore possibility of expanding capacity via dredging and/or a small increase in spillway elevation, perhaps a rubber dam in dry season.
- Stored water in Los Padres is essential for adequate river flow and recharging the lower Carmel River aquifer in the dry season. Currently the required summer/fall release is at least 5 cfs (inflow is often less).

Water Project 5 Location



x



Water Project 5 (dredge)

x



Water Project 5 (storage)

x



Water Project 5 Update

- MPWMD has contacted Cal-Am (dam owner) regarding its interest in expanded capacity. To date, Cal-Am has indicated that it is not interested in pursuing this option, given other priorities with Regional Project.
- MPWMD has also discussed this concept with National Marine Fisheries Services, which favors dam removal. We believe the released storage in summer greatly benefits the river, fish and community.

For More Information

- www.mpwmd.dst.ca.us
- All presentation materials will be posted on the website under Meetings/Board Meetings/August 25, 2011.
- Monthly and quarterly Water Supply Project summaries.
- Check “Important Announcements” or “Water Supply Projects.”