

## PACIFIC GROVE PROPOSED SMALL WATER PROJECTS

The City of Pacific Grove (City), similar to other jurisdictions in the California American Water Monterey District service area, has a shortage of potable water due to limitations on existing water supplies from the Carmel River Aquifer and Seaside Groundwater Basin. The City currently uses approximately 100 to 125 acre-feet per year (AFY) of potable water for irrigation of the Pacific Grove Municipal Golf Links and the adjacent El Carmelo Cemetery. Replacement of this irrigation demand with non-potable supplies will create a new offset of at least 100 to 125 AFY of potable water per project, for use by California American Water in meeting its obligations to find replacement supplies.

Given the risk that the proposed desalination project may not be fully operational by the January 1, 2017 cut-off date, the ability of these projects to be up and running well in advance assumes greater significance to the total water supply portfolio.

The following are attributes of the City's proposals:

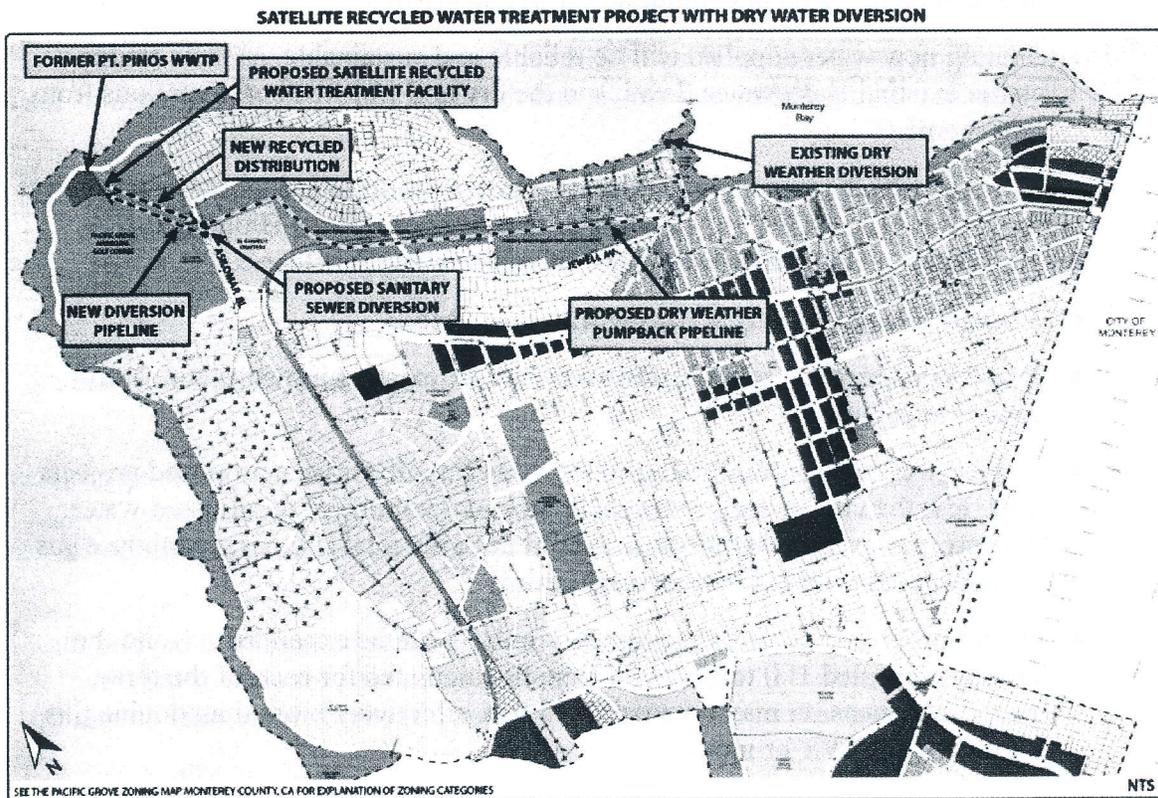
- ◆ New non-potable water supplies will be locally developed to offset current uses of potable water, through implementation of one or more of these proposed projects that can be operated in conjunction with one another.
- ◆ Resulting new water supplies will be reliable and sustainable, as their source water is existing wastewater flows, and the dry and wet weather diversions from urban runoff.
- ◆ The integration, treatment, and reuse of urban runoff produce a net water quality improvement for the City, the Pacific Grove Area of Special Biological Significance, and the Monterey Bay National Marine Sanctuary.
- ◆ No new discharges of any wastes will be produced.
- ◆ The proposed projects rely heavily on the use of existing infrastructure and available capacities.
- ◆ The energy consumption for all of the City of Pacific Grove's proposed projects will be less than the energy demand for an equal volume of desalinated water. Therefore, the proposed projects will all reduce the total and net greenhouse gas emissions that will otherwise be produced.
- ◆ With further investigation, the project proposals can be expanded beyond the currently identified 100 to 125 AFY benefit calculated for each of the three proposals. Expansion may be possible to cost effectively more than double this capacity to 250 AFY or more.
- ◆ Use of proven technologies and techniques for the development of non-potable water supplies.
- ◆ Planning, analysis, design, and construction are on a timeline that will not alter or slow the CPUC process for the MPWSP.

## PROJECT 1: PACIFIC GROVE SATELLITE RECYCLED WATER TREATMENT

Summary: Provide treatment of Pacific Grove wastewater at a new local satellite recycled water treatment plant (SRWTP) at the former Point Pinos Wastewater Treatment Plant and deliver recycled water to irrigation sites in the City.

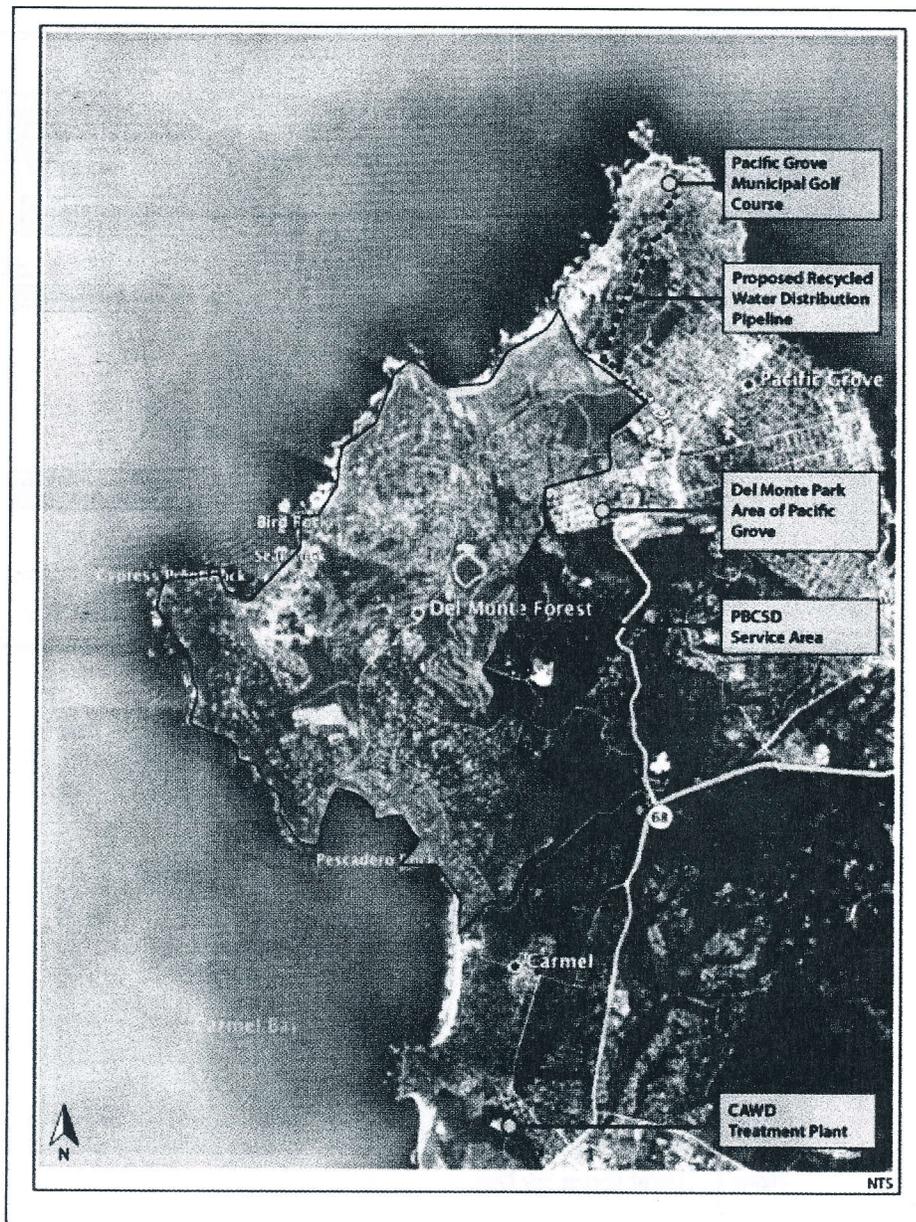
A new satellite recycled water treatment facility will be constructed at the former Point Pinos Wastewater Treatment Plant and deliver recycled water to irrigation sites throughout the City. Raw wastewater will be captured and diverted from the City's sanitary sewer Basin 1 and conveyed to the new satellite recycled water treatment plant via 1,100 lineal feet of new 8-inch diameter sewer pipeline constructed within the golf links. Approximately 1,300 lineal feet of new 12-inch diameter recycled water pipeline will be constructed to deliver water to the golf links, cemetery, and other irrigation demands.

Costs of water are between \$2,624 and \$3,042/AF, depending on the final annual volume of water produced.



## PROJECT 2: PACIFIC GROVE RECYCLED WATER

Recycled water will be obtained from the Pebble Beach Community Services District (PBCSD). Raw wastewater from 500 homes in the Del Monte Park area of Pacific Grove will be captured and diverted to the existing Carmel Area Wastewater District (CAWD) reclamation facility for treatment. The wastewater diversion will flow through the existing wastewater collection system owned by the PBCSD. Recycled water from CAWD will be stored in the Forest Lake Reservoir and returned to the City through existing CAWD and PBCSD recycled water systems to a delivery point near the Spanish Bay Golf Course in Pebble Beach. Approximately 10,000 to 13,500 lineal feet of new 12-inch diameter recycled water pipeline will be required to be constructed to deliver water to the golf links, cemetery and other irrigation demands. Costs of water are \$2,105/AF produced.



### PROJECT 3: PACIFIC GROVE STORM WATER RECYCLING

Summary: Divert storm water from the Greenwood Park and Congress Storm Drain Watersheds to the David Avenue Reservoir site, provide treatment, and deliver recycled water to irrigation sites throughout the City. A new 15-million gallon (MG) concrete reservoir or open storage reservoir will be constructed at the California American Water Company's David Avenue property to capture wet weather runoff. The storm water will be treated to meet aesthetic requirements and to comply with Title 22 Regulations for irrigation with non-potable water. Treatment will include a constructed wetland, microfiltration, ultraviolet radiation, and disinfection. Approximately 8,800 lineal feet of new 12-inch diameter recycled water pipeline will be required to deliver water to the golf links, cemetery irrigation and other irrigation demands. Costs of water are between \$6,875 and \$8,977/AF.

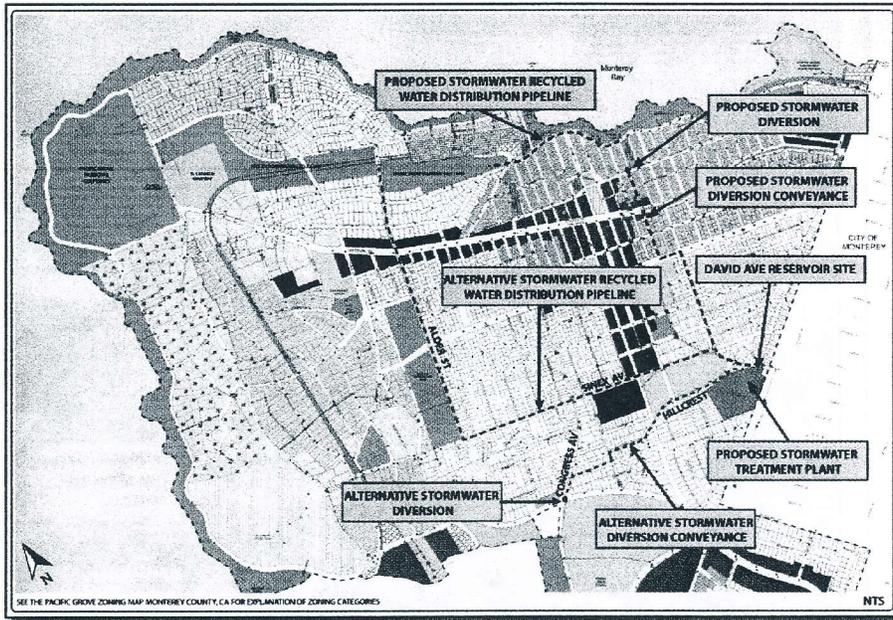


Figure 12 - David Avenue Site Plan



CITY OF PACIFIC GROVE  
300 Forest Avenue □ Pacific Grove, California

March 4, 2013

Mr. David Stoldt, General Manager  
Monterey Peninsula Water Management District  
5 Harris Court, Building G  
P.O. Box 85  
Monterey, California 93942-0085

RE: Pacific Grove Local Water Project

Dear Mr. Stoldt,

As you are aware, the City of Pacific Grove has been working very hard to raise the needed funds to complete the design and engineering of the Local Water Project, and to do so in a timely fashion, to ensure that the resulting non-potable water is available for all interested and nearby consumers before the State's imposition of the water cliff.

To date, the City and its partners have received approvals or commitments for three Federal and State grants. To secure those grants, the City has appropriated over \$875,000 in City matching funding, while one of our partners on one grant, the City of Monterey, has also appropriated \$150,000 in matching funds.

We fully expect that the efforts being funded by those grants and matching funds will take the Local Water Project to 40% design completion.

One of the remaining challenges we face is locating the funding and other resources capable of taking the design to 100% completion. Given the long lead times for most Federal and State grants, and the projected impacts of sequestration, the research we have undertaken to date has not been encouraging.

Therefore, I am writing to seek any assistance the District may be able to provide to help us keep this project on track and complete the engineering and design efforts already well under way. I am available to provide any information you require and to meet with you or your staff at your convenience. I appreciate all assistance the District may be able to provide.

Sincerely,

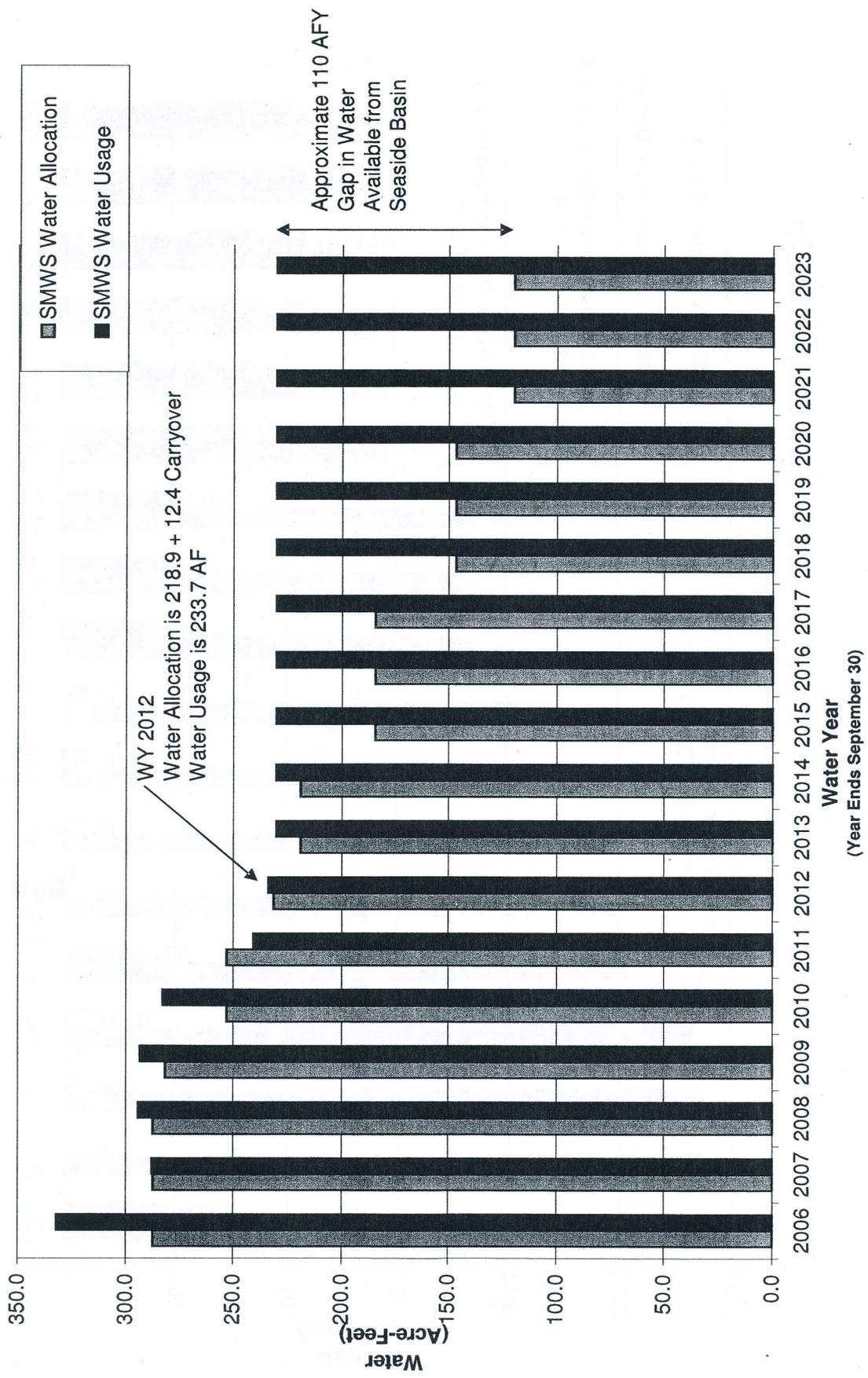
Thomas Frutchey  
City Manager

# Seaside Municipal Water System

DRAFT

## Water Usage

(Values beyond WY 2012 are Estimates)

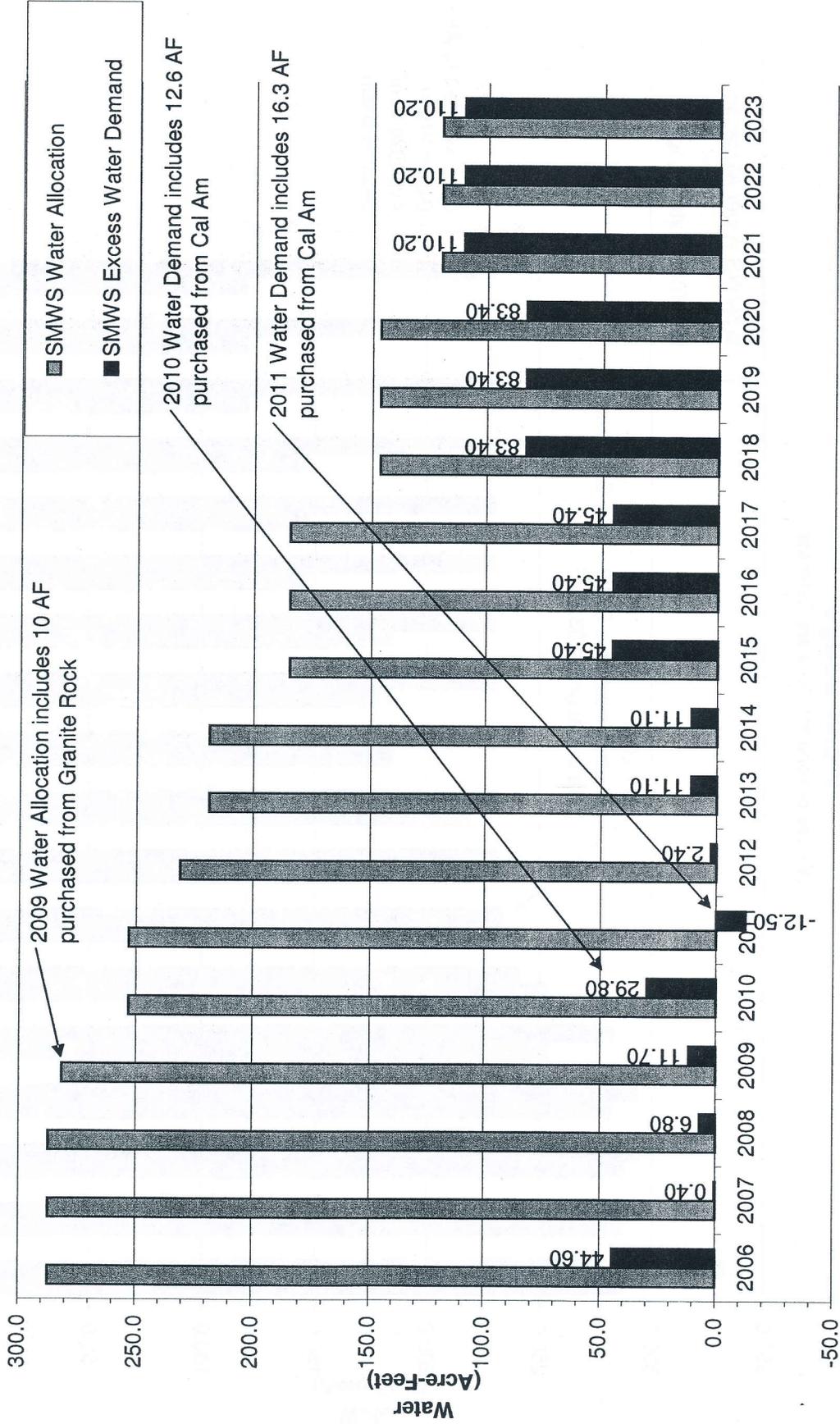


# Seaside Municipal Water System

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## Water Demand in Excess of Water Allocation from Seaside Basin

(Values beyond WY 2012 are Estimates)



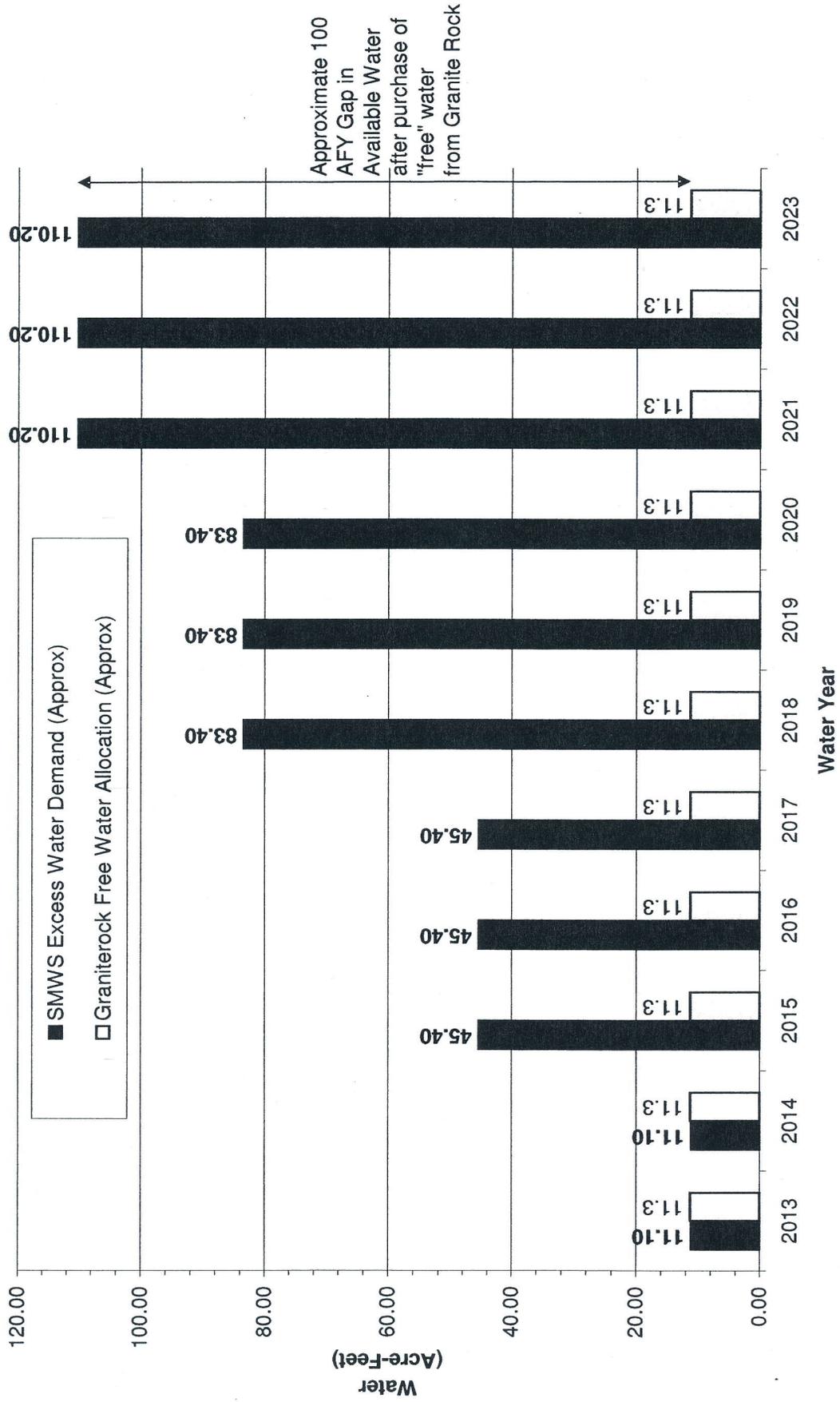
Water Year  
(Year Ends September 30)

# Seaside Municipal Water System

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## Purchase Excess Water Demand

(Values beyond WY 2012 are Estimates)



# Burnett wants to tap underground water

■ Hopes city can receive credit for reducing amount drawn from river

By KELLY NIX

WITH NO water from Cal Am available for new projects, residential remodels or business expansions — and none likely to be available anytime soon — Carmel Mayor Jason Burnett is calling for the city to tap what is believed to be substantial underground water resources within the city limits for landscaping and other non-potable uses.

Among its top goals for the year, he wants the city council to look into tapping the city's own water supplies, including shallow water-bearing rock formations and underground springs.

"You could add up all these sources and have a couple of dozen acre-feet of water to use," Burnett told *The Pine Cone* this week.

The idea is that by developing these small water sources, the city might not only be able to keep its open spaces green and provide water for use on private gardens, it might also be eligible to receive precious water credits for drinking water, which mostly comes from the Carmel River and has been sharply curtailed because of environmental restrictions.

The council Tuesday voted to pursue eight initiatives this year, including maintaining "a leadership role in developing a long-term solution to the region's water supply while continuing to pursue a replacement and replenishment regional

water supply and developing additional local water conservation and non-potable water supply alternatives."

Likely the easiest and least expensive new source of water is to tap into a perennial spring underneath the Harrison Memorial Library that might be able to produce five acre-feet (about 1.6 million gallons) of water per year. The water from the spring could be used to irrigate nearby Devendorf Park, which the city irrigates with drinking water, Burnett said.

"We would only have to run [a pipe] about 50 feet from the library to Devendorf for the project," he said.

The project would, in the long run, cut down on the cost to irrigate Devendorf, which is responsible for city's highest water bill.

The city also has rights to another five acre-feet of water from the Pebble Beach reclamation project, a \$67 million project the Pebble Beach Co. uses to irrigate its seven golf courses.

While the city has never taken advantage of the water, Burnett said he's had recent talks with the Pebble Beach Co. and the

Monterey Peninsula Water Management District about using it. The P.B. project, which includes a 100 million gallon reservoir that was completed in 2008, saves about 1,000 acre-feet of water per year, enough to serve 3,000 homes.

Another source is the Del Mar perennial spring at the bottom of Ocean Avenue, which produces about 10 acre-feet of non-potable water per year. The city uses the water for

landscape irrigation, but Burnett said the council will look at ways to expand the use of the water — that is stored in a new 25,000-gallon tank — for other municipal applications.

"This water is connected to the irrigation system for Scenic Road, is used by the street sweeper and fire department, and can be used for drinking water in emergencies," public works superintendent, Stu Ross told *The Pine Cone*.

And an underground conveyance system separate from California American Water's own pipes would be required for the projects. But they might pay off if the water district issues the city drinking-water credits equal to the amount of new recycled water the city develops.

While the city council will hash out the details of the projects and estimated costs in the coming months, Burnett acknowledged council members may determine the projects are simply too expensive to pursue.

"It may turn out to be cost prohibitive, or at least cost prohibitive most of the time," he said.

Other concerns include how the projects might clash with the State Water Resources

Control Board's 2009 cease and desist order that compels Cal Am to drastically reduce pumping of the Carmel River — the Peninsula's primary water source.

Water district general manager Dave Stoldt said the order states that any new development of water must be used toward the reduction of the Carmel River supply first.

"What is not clear," Stoldt said, "is if you are taking a non-potable source, is that actually new development [of water] under this section of the cease and desist order? My view is that it may not be."

Regardless, Stoldt said the district supports developing new water supplies and said it will work with Carmel and other cities to do that. Pacific Grove has proposed three small water recycling projects, including building a new wastewater treatment plant and collecting runoff to use for irrigation for its golf course, cemetery and other sites.

All these new sources of water could also be used for landscaping on private property. Every gallon put on someone's garden from a small, local water source would be a gallon that didn't have to be taken from the Carmel River.

3. **Comments from Panel Members on Expenditure of Revenues Raised by the Water Supply Charge on Water Supply Related Activities**  
Stoldt responded to questions from the committee members. He stated that at future meetings, the committee will review portions of the draft MPWMD FY 2013-14 budget; discuss project costs in relation to the requirement that 15% of Ordinance No. 152 proceeds should fund general unallocated administrative overhead; and participate in tours of the District's Aquifer Storage and Recovery Project. The meetings should be limited to approximately 1.5 hours in length.

**Adjourn**

The meeting was adjourned at 3:45 pm.