



# Monterey Peninsula Groundwater Replenishment Project

*Providing A Safe And Sustainable Water Supply*

## **BENEFITS OF THE GROUNDWATER REPLENISHMENT PROJECT**

All over the world, water supplies are being stretched to the limit. In the Monterey region, we are challenged with an adjudicated water basin and limited water supplies, increased environmental constraints, and periodic droughts. Conservation is not sufficient to provide enough water for the region's needs; importing water is expensive and not viable for the future – we need a portfolio of reliable, cost-effective, environmentally responsible water supplies. The Monterey Peninsula Groundwater Replenishment Project addresses these needs.

Groundwater replenishment involves further purification of tertiary treated recycled water, which will then be injected into the Seaside Groundwater Basin. This process has been proven to be safe and effective, prevent seawater intrusion and augment over-drafted water supplies. Conserving and reusing this valuable water resource, instead of sending it into the ocean, is efficient and provides a long-term, sustainable water supply for our communities.

There are numerous successful groundwater replenishment projects around California and the world. For example, the award-winning Orange County Water District project has been producing purified water that meets drinking water standards, and using it to create a seawater intrusion barrier for more than a quarter of a century. Monterey is seeking to follow this example.

### **The Monterey Peninsula Groundwater Replenishment Project (GWR) Can Be Operational by Early 2017**

Continued planning for the Monterey Peninsula Groundwater Replenishment Project includes:

- Detailed planning for pilot test facilities began in late 2011
- Conducting pilot plant testing and developing final design criteria will begin in 2012
- Ongoing public outreach and involvement
- Preparing final design and obtaining regulatory approvals/permits is projected for 2013
- Construction estimated to begin in 2014
- Start-up estimated late 2016 or early 2017

### **Monterey Regional Water Pollution Control Agency (MRWPCA) Has 20 Years of Experience Implementing Large and Successful Water Projects**

The Agency's world-renowned agricultural water recycling project demonstrates a high level of technical expertise, successful partnerships, a proven record of safety, and strong support by the Salinas farmers who use the water on food crops. MRWPCA has over 20 years of experience completing 14 projects including the entire regional wastewater collection, pumping and treatment system – the projects total over \$156 million.

### **Groundwater Replenishment Provides a Reliable and Sustainable Water Supply**

Groundwater replenishment water is highly drought resistant. Even during times of drought, valuable wastewater is still generated by our own community.

### **The Water Supply is Locally Controlled**

The Monterey Peninsula Groundwater Replenishment Project will ensure local control of our water future. In other areas of California, water supply is "imported" and comes from places far away from where it is used; thus it is subject to limitations of supply.

### **Protects Drinking Water Quality and Guards Against Seawater Intrusion**

The Seaside Groundwater Basin is geologically connected to the ocean. Injecting water into the groundwater aquifer maintains adequate water levels to prevent seawater intrusion caused from overdraft or overuse.

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### **Helps Preserve the Marine Sanctuary**

In addition to providing a dependable, locally controlled water supply, groundwater replenishment will reduce the discharge of treated wastewater into the sensitive Monterey Bay National Marine Sanctuary.

### **The Technology is Proven**

The state-of-the-art technology that will be used for the Monterey Peninsula Groundwater Replenishment Project is based on Orange County's very successful and award-winning Groundwater Replenishment Project. This same technology has also been used for years in many other industries that require purified water.

### **Project is Strictly Regulated**

There are strict regulations and monitoring requirements in place to ensure the safety of groundwater replenishment projects. The California Department of Public Health, Regional Water Quality Control Board, and other agencies will issue permits, regulate, and monitor the Monterey Peninsula Groundwater Replenishment Project after proper studies have been completed that confirm that the proposed use is safe and appropriate. MRWPCA has an excellent history of regulatory compliance.

### **Public's Health and Safety is Protected**

Water purified through microfiltration, reverse osmosis, and ultraviolet oxidation with light and hydrogen peroxide is ultra-pure. Bacteria, viruses, and other contaminants are unable to penetrate this barrier system. Additionally, injecting and filtering this water back into the groundwater will, over time, increase the quality of our water supply. There has never been a documented case of illness attributed to recycled water. Based on more than 20 years of experience, groundwater replenishment projects have an excellent and proven safety record.

### **The Public Supports Groundwater Replenishment**

The Monterey Peninsula Groundwater Replenishment Project has been studied and was supported by the Monterey Regional Water Supply Reliability Collaboration, Division of Ratepayer Advocates. This group consisted of representatives from environmental, business, civic, and ratepayer associations who gathered to discuss and recommend the most cost-effective, environmentally beneficial, and productive water supply options for the Monterey region. Community stakeholder interviews have been very positive for the Monterey Peninsula Groundwater Replenishment Project.

### **Ensuring Future Supplies Through Climate Changes**

According to the California Department of Water Resources, winter weather over the past 50 years has become progressively warmer. This trend has been associated with more precipitation as rain rather than snow in Sierra Nevada. This change means that the reduced amount of snowmelt limits the overall California water supply. Securing local water supplies now will help ensure a less volatile resource for our future. Thus, the Monterey area will be more prepared to address climate change issues with this local, sustainable and drought-proof water supply project.

### **The Monterey Peninsula Groundwater Replenishment Project is Energy Efficient and Has a Low Carbon Footprint**

When compared to importing water supplies or to using seawater desalination, groundwater replenishment provides a more cost-effective alternative because it requires less energy. There is no need for storage facilities and MRWPCA's ocean outfall is already available for brine disposal. The facilities for advanced treatment of the recycled water will be built on the existing Regional Treatment Plant site.

