

# COOPERATIVE WATER SOLUTIONS

FOR A SAFE, RESILIENT COMMUNITY



# CENTRAL COAST OF CALIFORNIA

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## MONTEREY ONE WATER

A public utility providing wastewater and water reuse services in northern Monterey County



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## MONTEREY ONE WATER

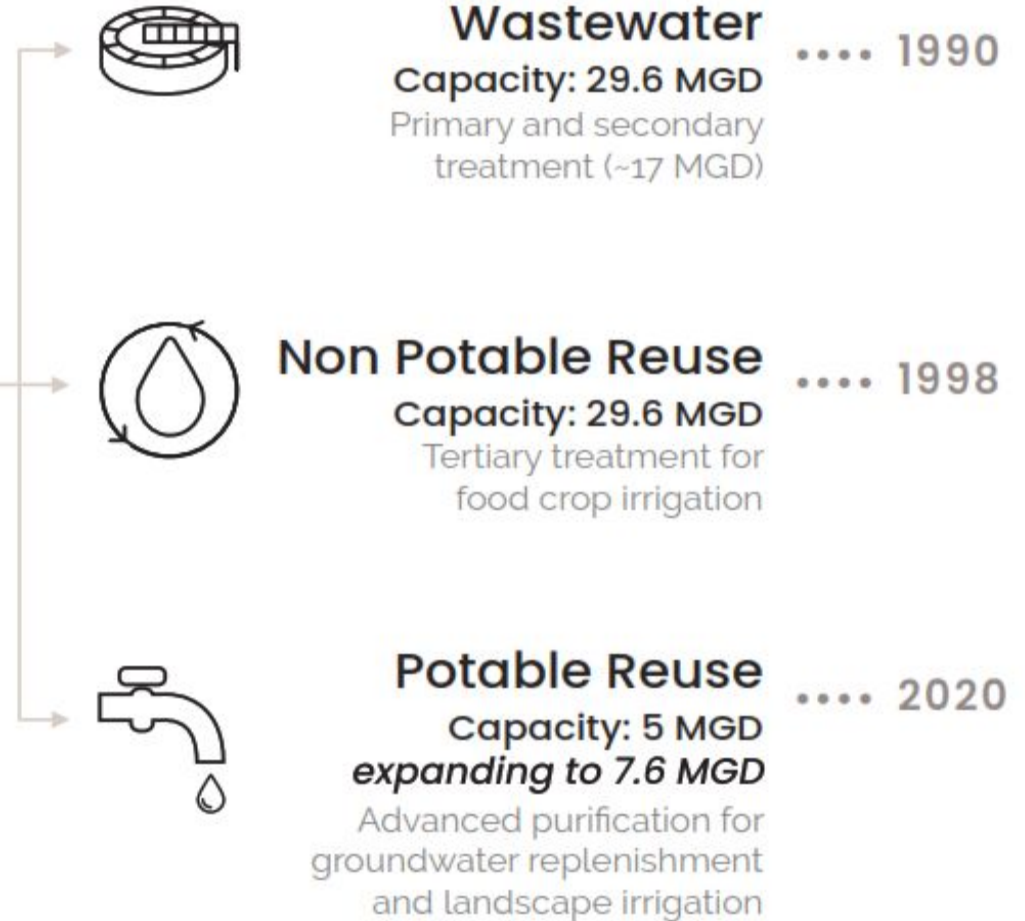
*A public utility providing wastewater  
and water reuse services in northern  
Monterey County*



# OUR ROLE












## Providing Cooperative Water Solutions



# CENTRAL COAST OF CALIFORNIA

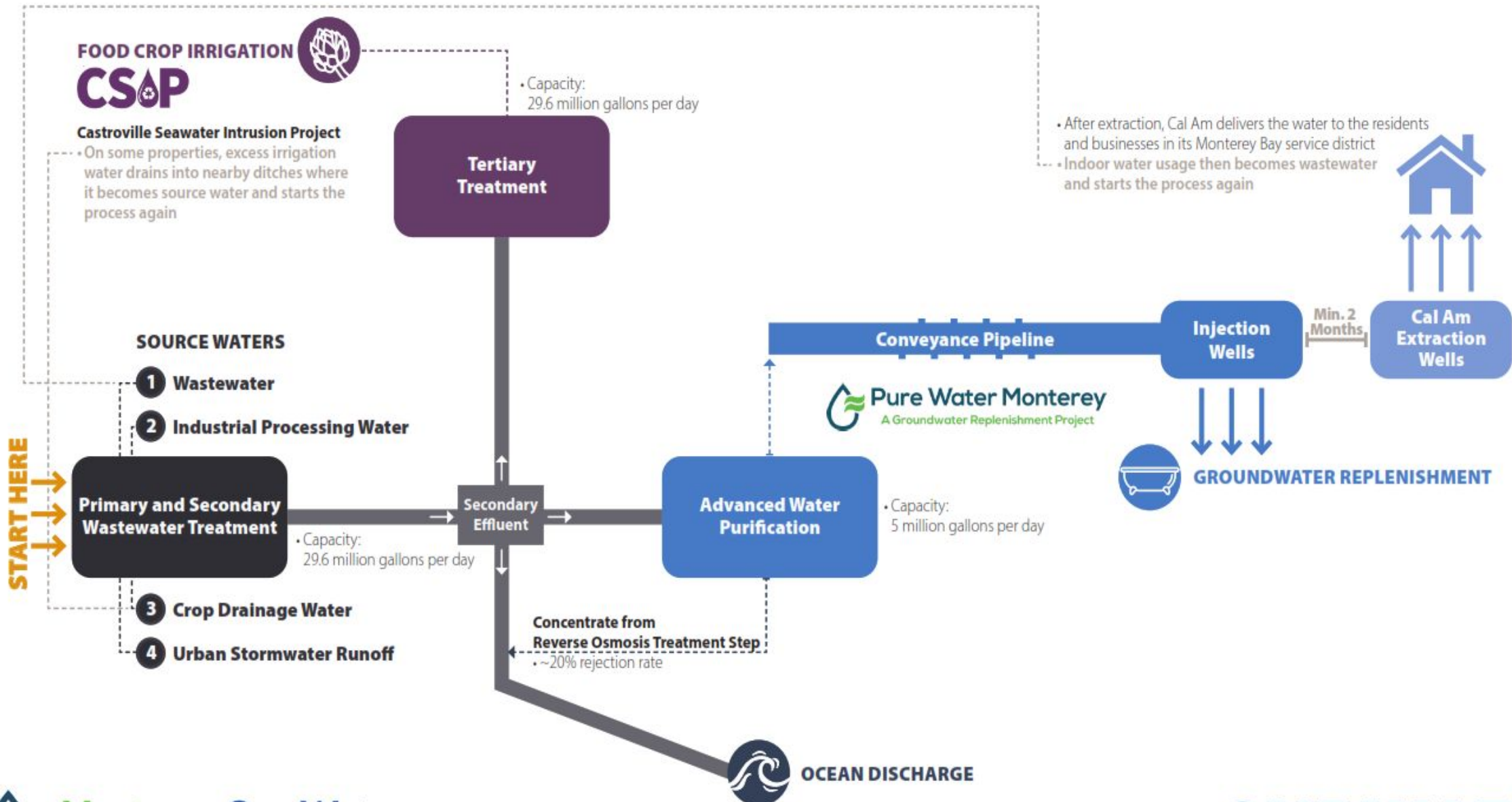
## MONTEREY ONE WATER

*A public utility providing wastewater and water reuse services in northern Monterey County*

-  Ocean Discharge Point
-  Treatment Plant
-  Service Area
-  Wastewater Pump station
-  Source Water Pump station
-  Ocean Discharge Pipeline
-  Pure Water Pipeline
-  Wastewater Pipeline
-  Source Water Pipeline



**Monterey One Water**  
Providing Cooperative Water Solutions









# NON-POTABLE REUSE

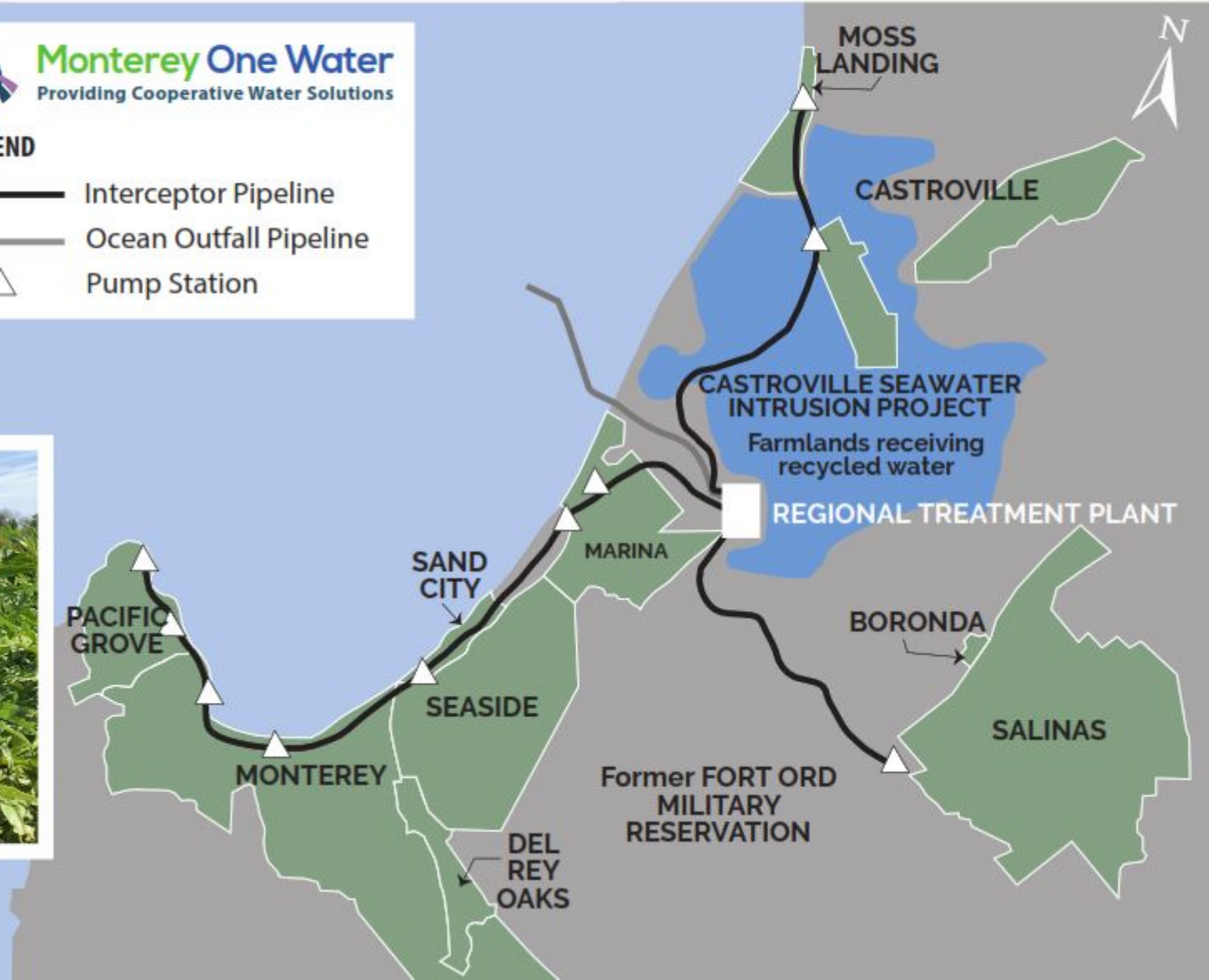
## CASTROVILLE SEAWATER INTRUSION PROJECT



 **Monterey One Water**  
Providing Cooperative Water Solutions

**LEGEND**

-  Interceptor Pipeline
-  Ocean Outfall Pipeline
-  Pump Station



# NON-POTABLE REUSE

## CASTROVILLE SEAWATER INTRUSION PROJECT

**Challenge:** Seawater intrusion/groundwater quality

**Solution:** Recycled water for food crop irrigation

**Production Start:** April 1998

**Facility Size:** 29.6 million gallons per day

**Influent:** Secondary effluent

**Treatment:** Tertiary

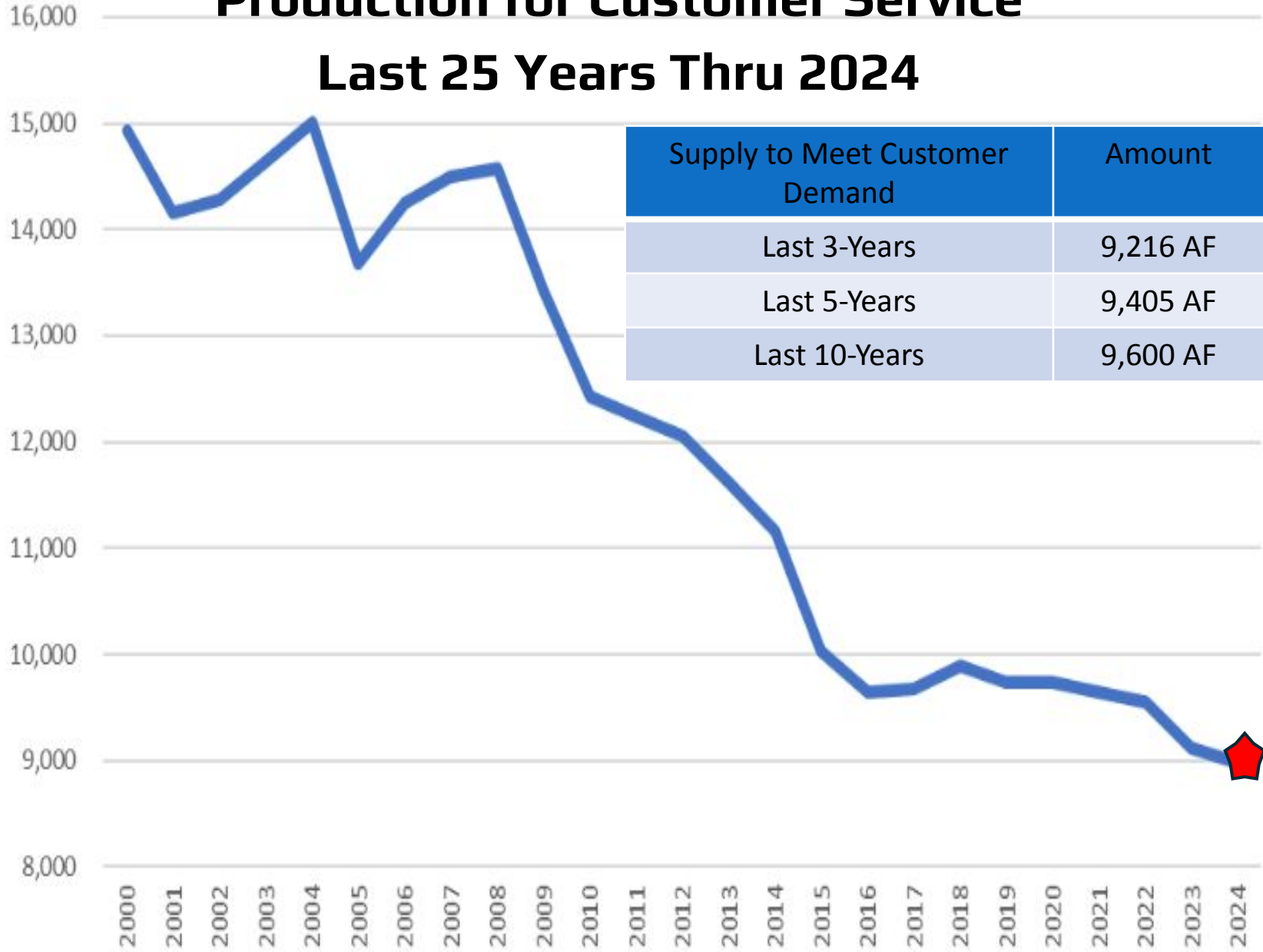


**Serves:** 12,000 acres of fertile farmland

**Annual Production:** 12,300 acre feet (average)



# Production for Customer Service Last 25 Years Thru 2024

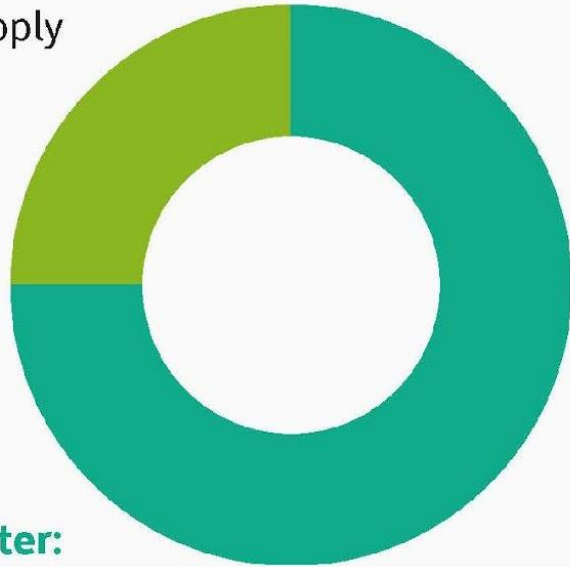


Below 9,000  
AF in 2024

# A CHANGING WATER SUPPLY

## Historic Sources

**Groundwater:  
Seaside Basin**  
25% of supply

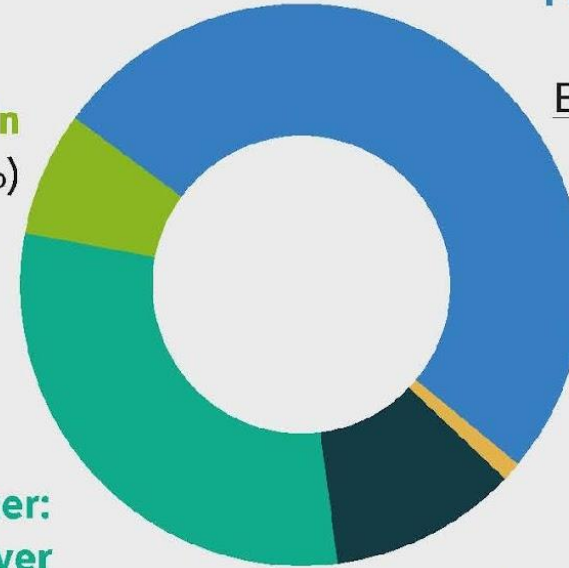


**Surface Water:  
Carmel River**  
75% of supply

## New Supply Portfolio

**Groundwater: Seaside Basin**  
774 AFY (7%)

**Surface Water:  
Carmel River**  
3,376 AFY (30%)

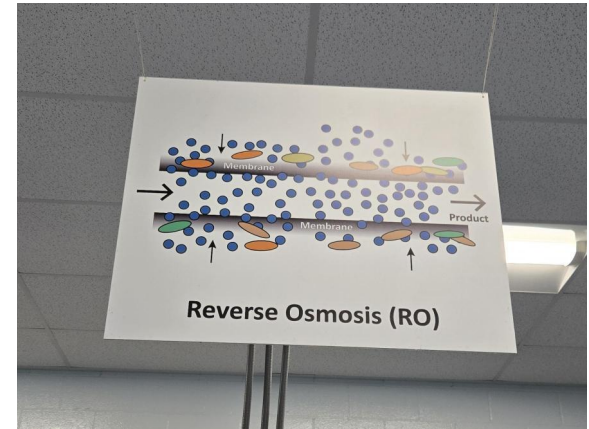


**Potable Reuse:  
Pure Water Monterey**  
Base: 3,500 AFY  
Expansion: 2,250 AFY  
Total: 5,750 AFY  
(51%)

**Desalination:  
City of Sand City**  
94 AFY (1%)

**Aquifer Storage & Recovery**  
1,300 AFY (12%)

*Desalination also under consideration by private water purveyor*



**Demonstration Facility  
Worth its weight in .....**



**Tours (Noise)**



**Tasting Station**



**Industry Engagement**



**Research & Development**

# HOW DID WE GET HERE?

## Project Timeline

2013

### PILOT STUDY

Pilot study conducted to determine water quality parameters of source water and efficacy of purification process

2015

### ENVIRONMENTAL CERTIFICATION

Final Environmental Impact Report certified by Board of Directors

2017

### BIDDING & CONSTRUCTION

Project components go out to bid and construction begins

Groundbreaking ceremony is held with internal and external stakeholders to celebrate this exciting milestone

2020

### PROJECT COMPLETION

Inspection and operational approval from the State's Division of Drinking Water received in February 2020  
Operations commence for groundwater replenishment

### PROJECT APPROVAL

Approval of project concept granted by CA Department of Public Health\*

Planning, design, and environmental processes begin, including formation of an Independent Advisory Panel

*\*Project approvals now granted by the State's Division of Drinking Water*

2014

# MONTEREY ONE WATER



## **MUNICIPAL WASTEWATER**

Inside water usage from the residents and businesses of our 10 member cities/districts

**(Consistent)**



## **DRAINAGE WATER FROM CROP IRRIGATION**

Excess water from the irrigation process which drains into channels

**(As Needed/Available)**



## **INDUSTRIAL PROCESSING WATER FROM FOOD PACKAGING**

Water used to wash packaged produce, e.g. bagged salads, pre-washed veggies

**(As Needed/Available)**



## **URBAN DRY AND WET WEATHER RUNOFF**

Outside water usage that drains into a city's stormwater pipe system

**(As Needed/Available)**

**4 SOURCE WATERS combine to form  
influent into M1W's Regional Treatment Plant**



# Pure Water Monterey

A Groundwater Replenishment Project

**Challenge:** State and court-mandated reductions to surface water and groundwater due to habitat degradation and limited natural replenishment (respectively)

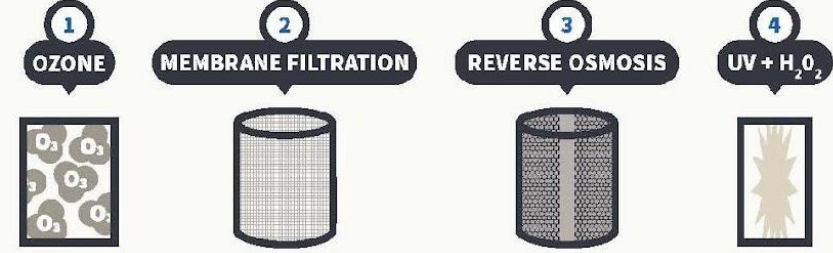
**Solution:** Recycled water for groundwater replenishment

**Production Start:** February 2020

**Facility Size:** 5 million gallons per day (expansion under construction)

**Influent:** Secondary effluent

**Treatment:** Advanced purification



**Serves:** Private water supplier's Monterey District of 104,000 residents, almost 5,000 businesses, and more than 9 million visitors a year

**Annual Production:** 3,500 acre feet (after expansion – 5,750 acre feet)

## POTABLE REUSE

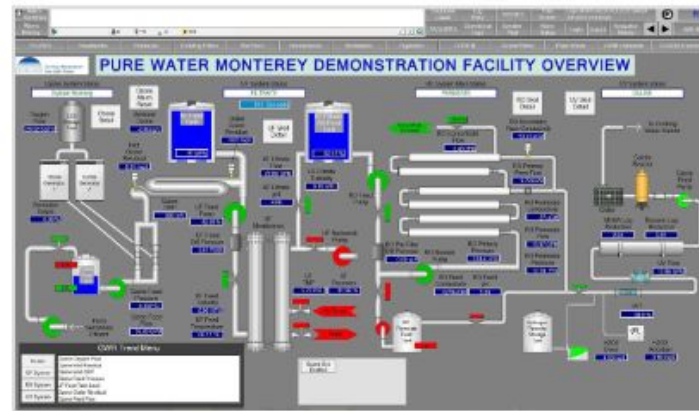
# PURIFIED WATER QUALITY

## Monitoring and Reporting Program

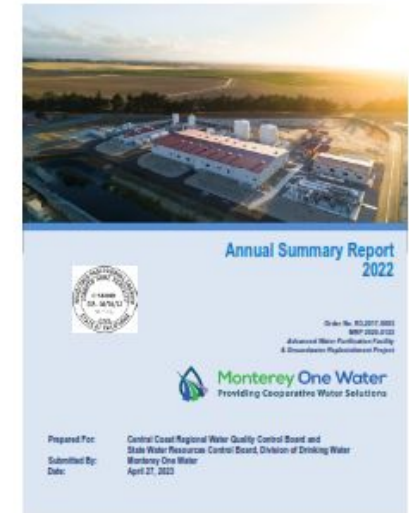
### State Certified Laboratory



### Sampling & Monitoring



### Water Quality Reports



## 20 MILLION DIGITAL DATA POINTS PER YEAR

- Real-time, online monitoring throughout the purification process

## 16,746 LAB-VERIFIED DATA POINTS PER YEAR

- Extensive sampling and testing of treatment steps and product water in Seaside Groundwater Basin  
After successful three years of operation, monitoring reduces to 12,692 data points

# Peaking Plant



**PWM PRODUCTION CAPACITY:  
23.3 AF PER DAY**

Consistent Production: 15.8 AF per day

-VS-

Peaking Production: Variable up to 23.3 AF per day based on CSIP demands and water rights

● Recycled Water: Agriculture  
*25-Year Monthly Average*

● Pure Water Monterey  
*Varied monthly production for annual total of 5,750 AF*

MONTEREY ONE WATER

# Pure Water Monterey

**Expanded: 5,750 Acre Feet Per Year (AFY)**

**June 2024**

US EPA WIFIA loan secured

**July 2024**

Awarded construction contracts to expand purification and injection facilities

**Spring 2025**

AWPF expansion testing and startup

**Summer/Fall 2025**

Injection well expansion testing and startup

*First water to follow testing and startup*



# Pure Water Monterey

Expansion Project: Additional 2,250 Acre Feet Per Year

## TWO COMPONENTS

Advanced Water Purification Facility (AWPF): 20% Complete  
Injection Wells: 40% Complete

## PROJECT COST

Total: \$69 M  
Grant Funding: \$42 M





# RECYCLED WATER POWERED BY RENEWABLE ENERGY

PIPELINE FROM REGEN MONTEREY TO THE ADVANCED WATER PURIFICATION FACILITY (AWPF)

Construction: Underway

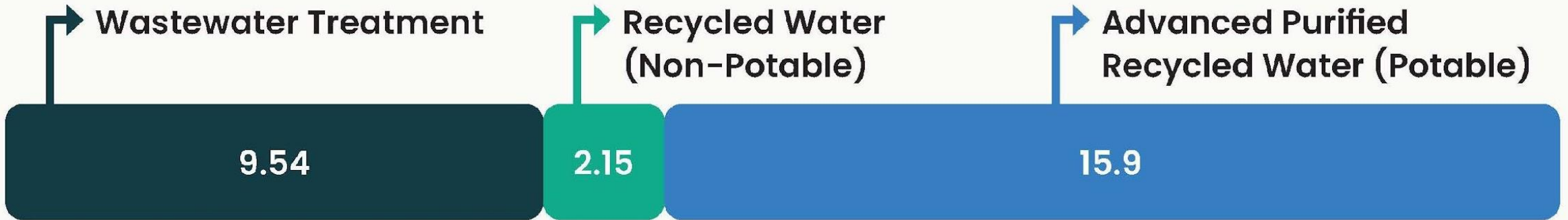
Estimated Completion: 2024

AWPF



# ENERGY DEMANDS

● Annual Average (GWh/yr)



Advanced purified recycled water production **INCREASES ENERGY DEMAND BY ~136%**



**Monterey One Water**  
Providing Cooperative Water Solutions

# THANK YOU

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