

MONTEREY ONE WATER

TOUR BRIEFING



Monterey One Water
Providing Cooperative Water Solutions

CENTRAL COAST OF CALIFORNIA

MONTEREY ONE WATER

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

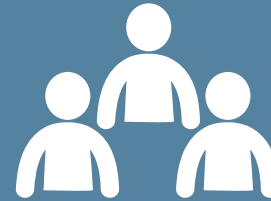


Monterey One Water
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Formed in 1972
in response to the Federal
Clean Water Act



265,000
Community Members
+ 7,000 business
in the service area

17 MILLION Gallons,
on average, of wastewater
processed each day

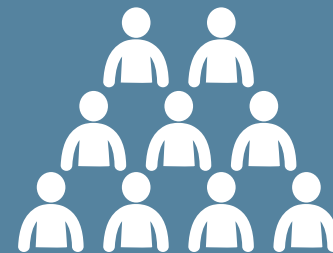


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29.6 MGD
Wastewater Treatment Facility
and Non-Potable Reuse Facility

5 MGD
Advanced Water
Purification Facility



90 EMPLOYEES



\$82 MILLION
Operating Budget

MONTEREY ONE WATER



MUNICIPAL WASTEWATER

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



DRAINAGE WATER FROM CROP IRRIGATION

Excess water from the irrigation process which drains into channels



INDUSTRIAL PROCESSING WATER FROM FOOD PACKAGING

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



URBAN DRY AND WET WEATHER RUNOFF

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

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

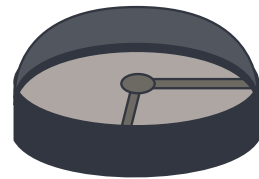
PRIMARY/SECONDARY TREATMENT



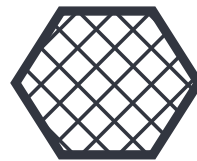
1
HEADWORKS



2
PRIMARY CLARIFIERS



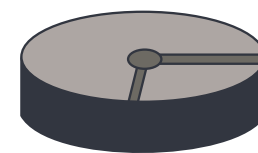
3
TRICKLING FILTERS



4
BIOFLOCCULATION



5
SECONDARY CLARIFIERS



THE FORK IN THE ROAD



Regulated Ocean Discharge
Predominantly Wintertime



Non-Potable Reuse
Agriculture Irrigation



Indirect Potable Reuse
Groundwater Replenishment



OCEAN DISCHARGE

Distance: Regional Treatment Plant to Coastline + 2 miles into the Monterey Bay

Outfall Pipe: 60 inch diameter; 100 feet below surface of the water; last 1,000 feet include discharge ports

Water Quality: Secondary effluent; meets California Ocean Plan

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 — (1) flocculation, (2) multi-media filters,
(3) chlorine disinfection

Serves: 12,000 acres of fertile farmland

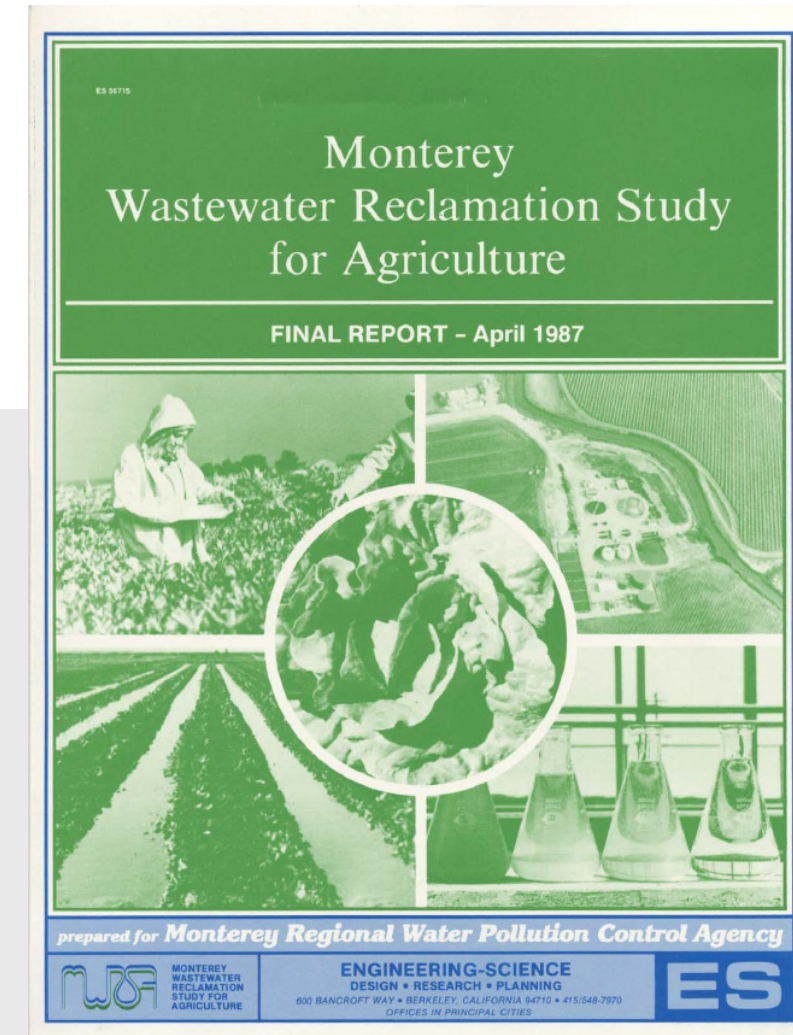
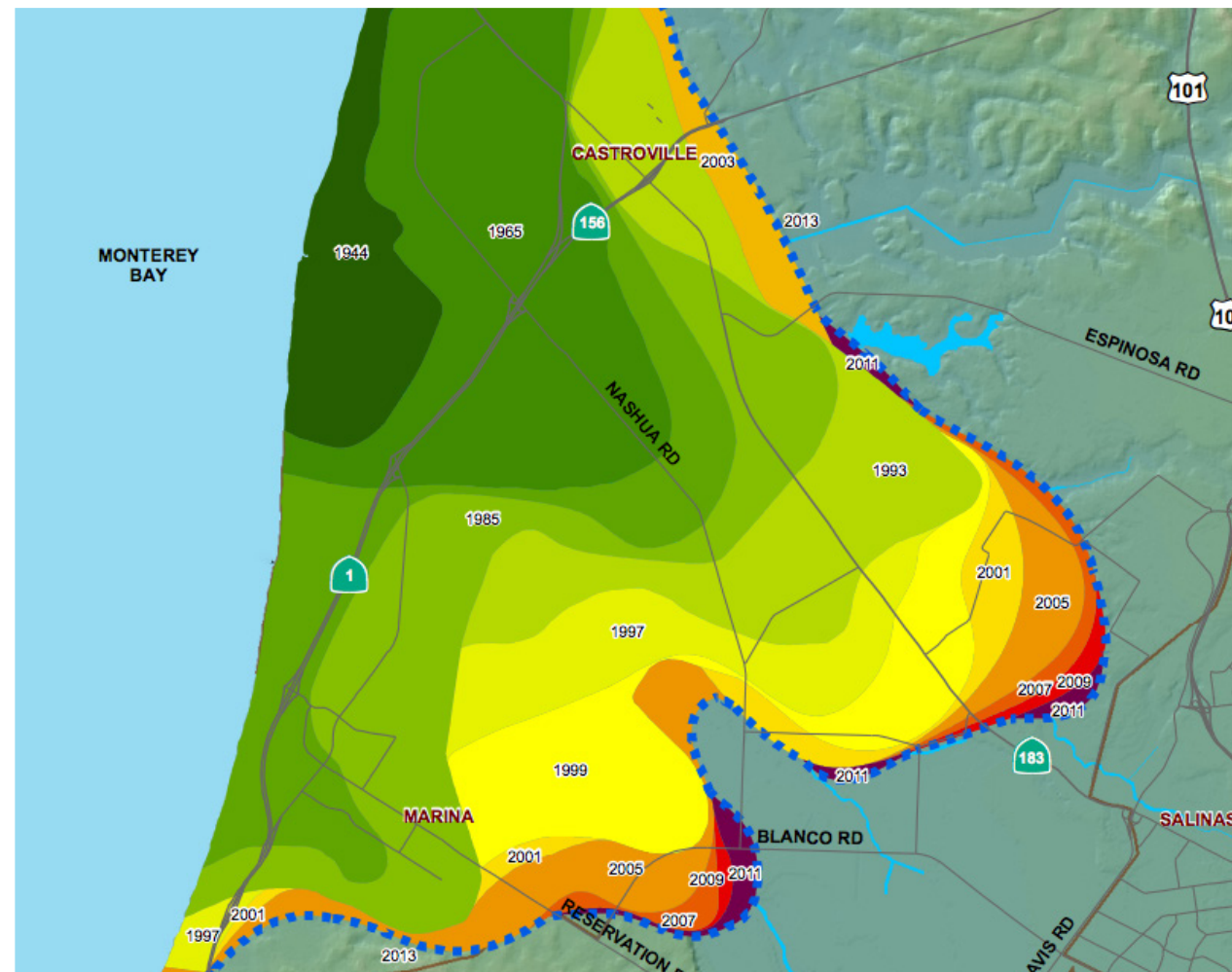
Annual Production: 12,300 acre feet (average)





NON-POTABLE REUSE

CASTROVILLE SEAWATER INTRUSION PROJECT





NON-POTABLE REUSE

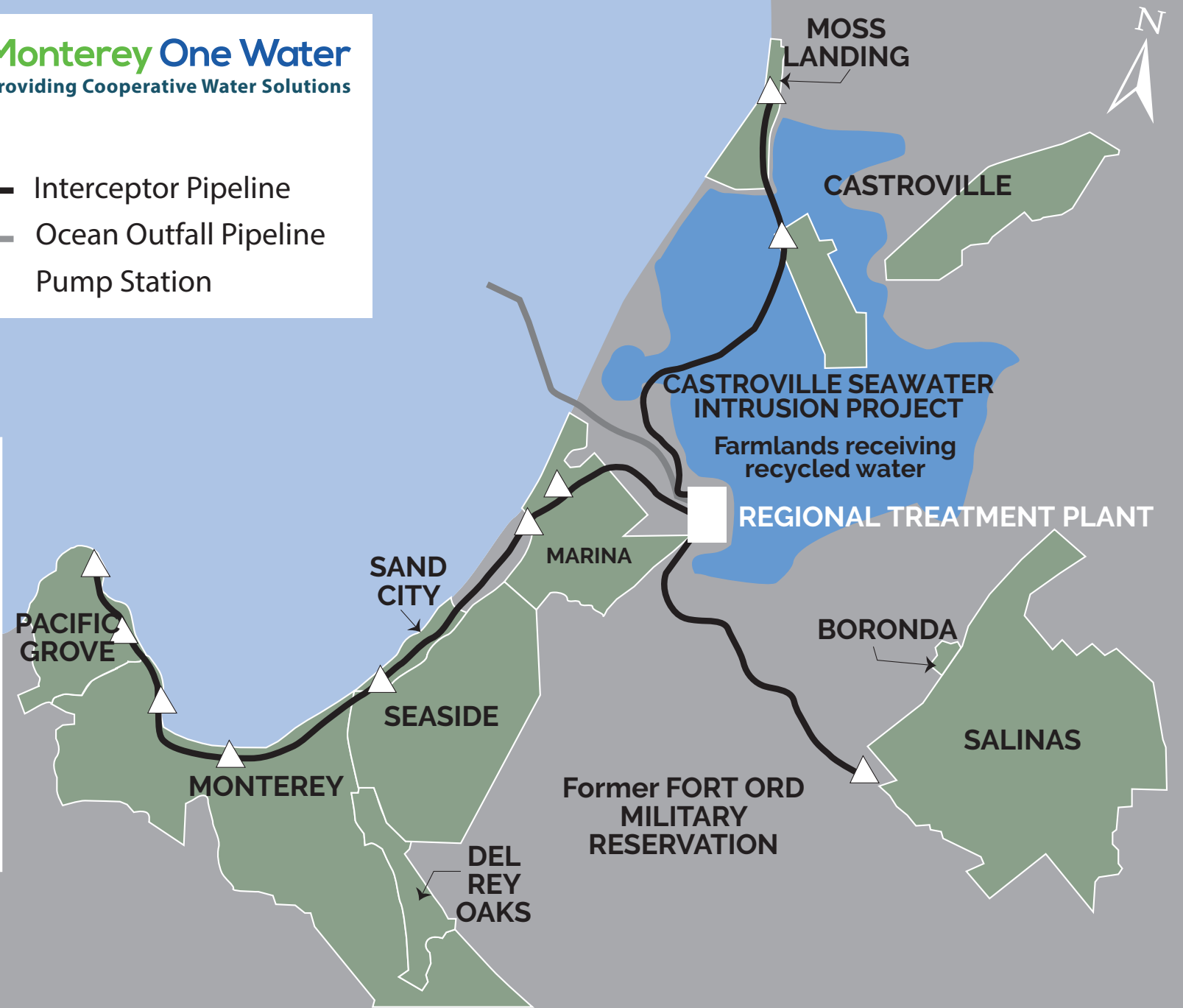
CASTROVILLE SEAWATER INTRUSION PROJECT



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LEGEND

- Interceptor Pipeline
- Ocean Outfall Pipeline
-  Pump Station





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

Influent: Secondary effluent

Treatment: Advanced purification — (1) ozone pretreatment, (2) membrane filtration, (3) reverse osmosis, and (4) advanced oxidation

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 for groundwater replenishment

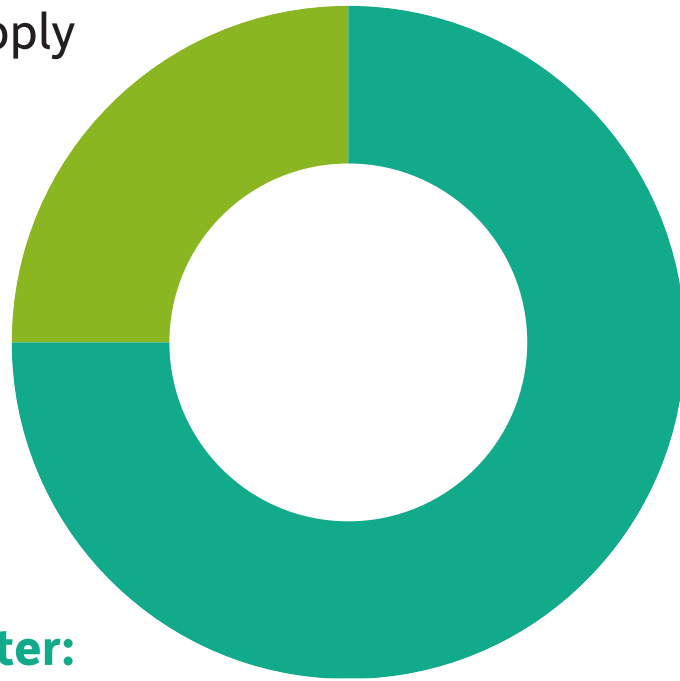
POTABLE REUSE

WHY DO WE NEED PURE WATER MONTEREY?

Historic Sources

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

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



New Portfolio

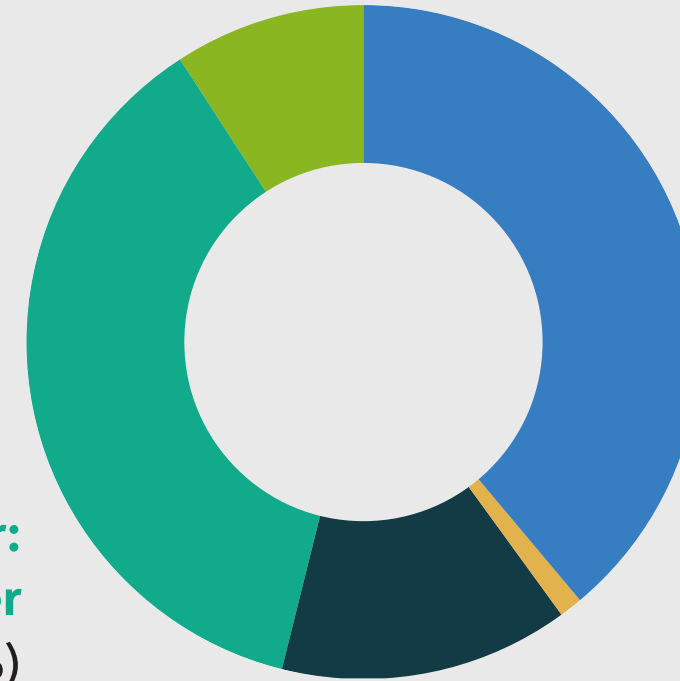
Groundwater: Seaside Basin
774 AFY (9%)

**Surface Water:
Carmel River**
3,376 AFY (37%)

**Potable Reuse:
Pure Water Monterey**
Base: 3,500 AFY

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

Aquifer Storage & Recovery
1,300 AFY (14%)



Additional desalination facility also under consideration by private water purveyor

PILOT STUDY

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

2013

2015

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 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

ENVIRONMENTAL CERTIFICATION

Final Environmental Impact Report certified by Board of Directors

2017

PROJECT COMPLETION

Inspection and operational approval from the State's Division of Drinking Water received in February 2020

Operations commence for groundwater replenishment

PROJECT TIMELINE

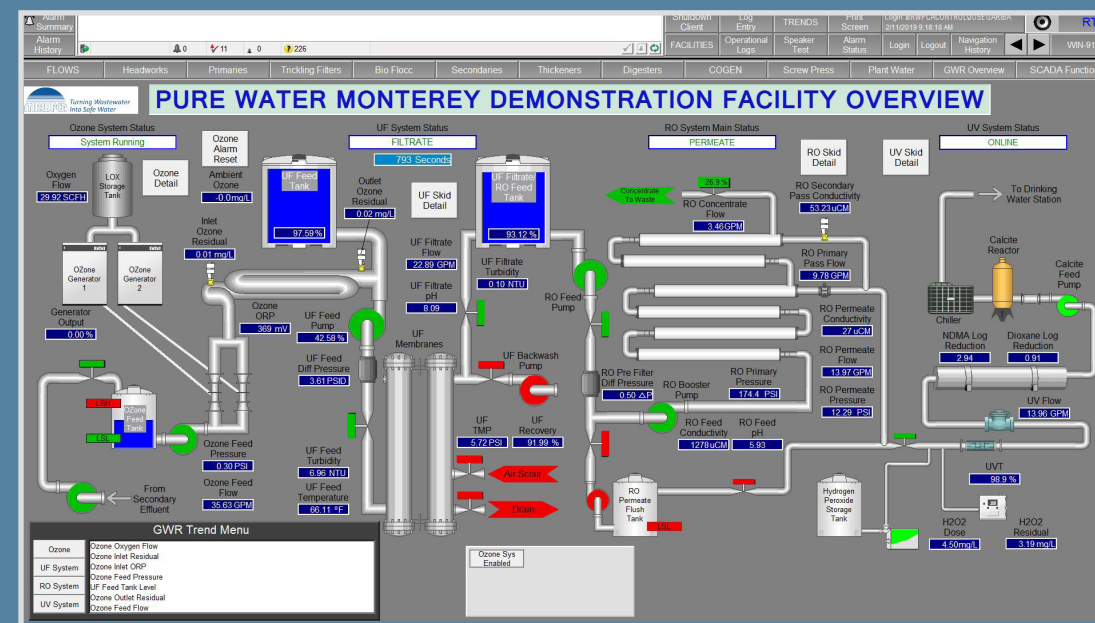
WATER QUALITY

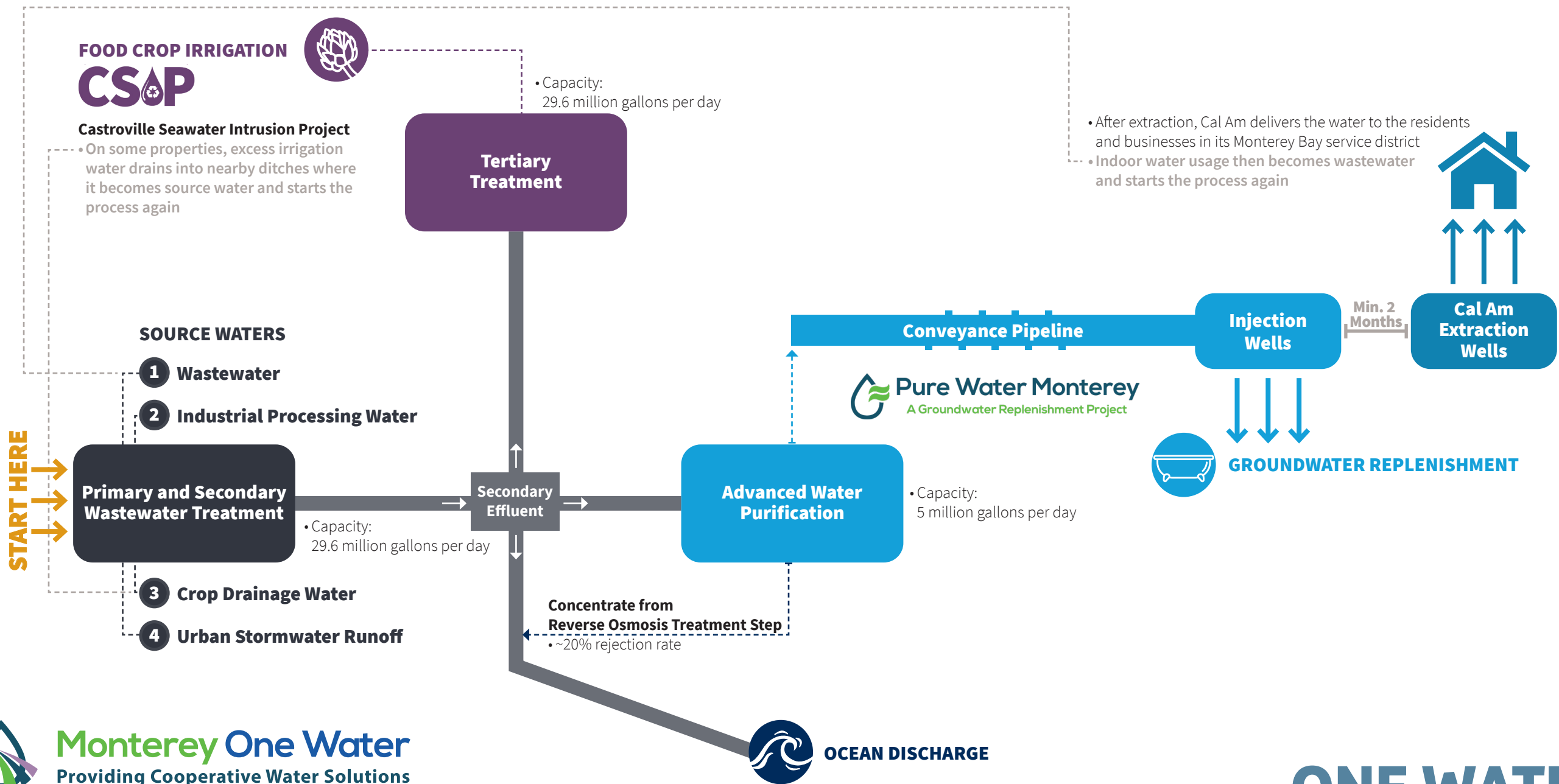
20 MILLION DIGITAL DATA POINTS PER YEAR

- Real-time, online monitoring throughout the purification process

15,905 LAB-VERIFIED DATA POINTS PER YEAR

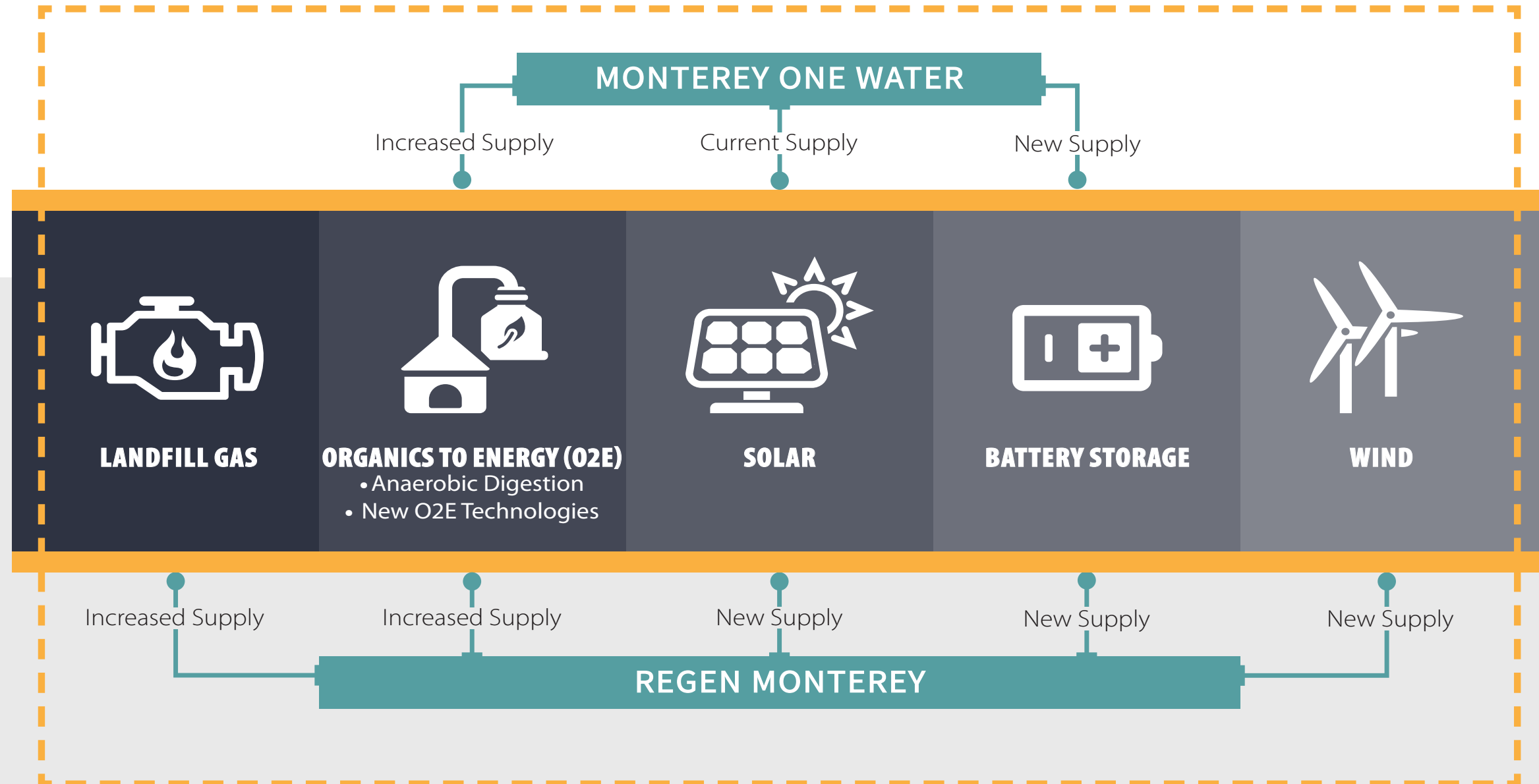
- Extensive sampling and testing of product water prior to injection
- Continued sampling of Seaside Groundwater Basin to monitor improvements in quality





MONTEREY MICROGRID PROJECT

ENERGY RELIABILITY • INTER-AGENCY COLLABORATION • UTILITY SUSTAINABILITY





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