Pure Water Monterey
Advanced Water Purification Facility
and
Groundwater Replenishment Project

Order No. R3-2017-0003

Central Coast Regional Water Quality Control Board Meeting - March 9, 2017

CALIFORNIA Water Boards

Agenda Item # 16

R3-2017-0003

Pure Water Monterey Advanced Water Purification Facility

and

Groundwater Replenishment Project

Monterey Regional Water Pollution Control Agency

Project Overview

R3-2017-0003 Highlights

- Seaside Basin
  - Protecting Beneficial Uses
    - Calculating Assimilative Capacity
    - Effluent Limits

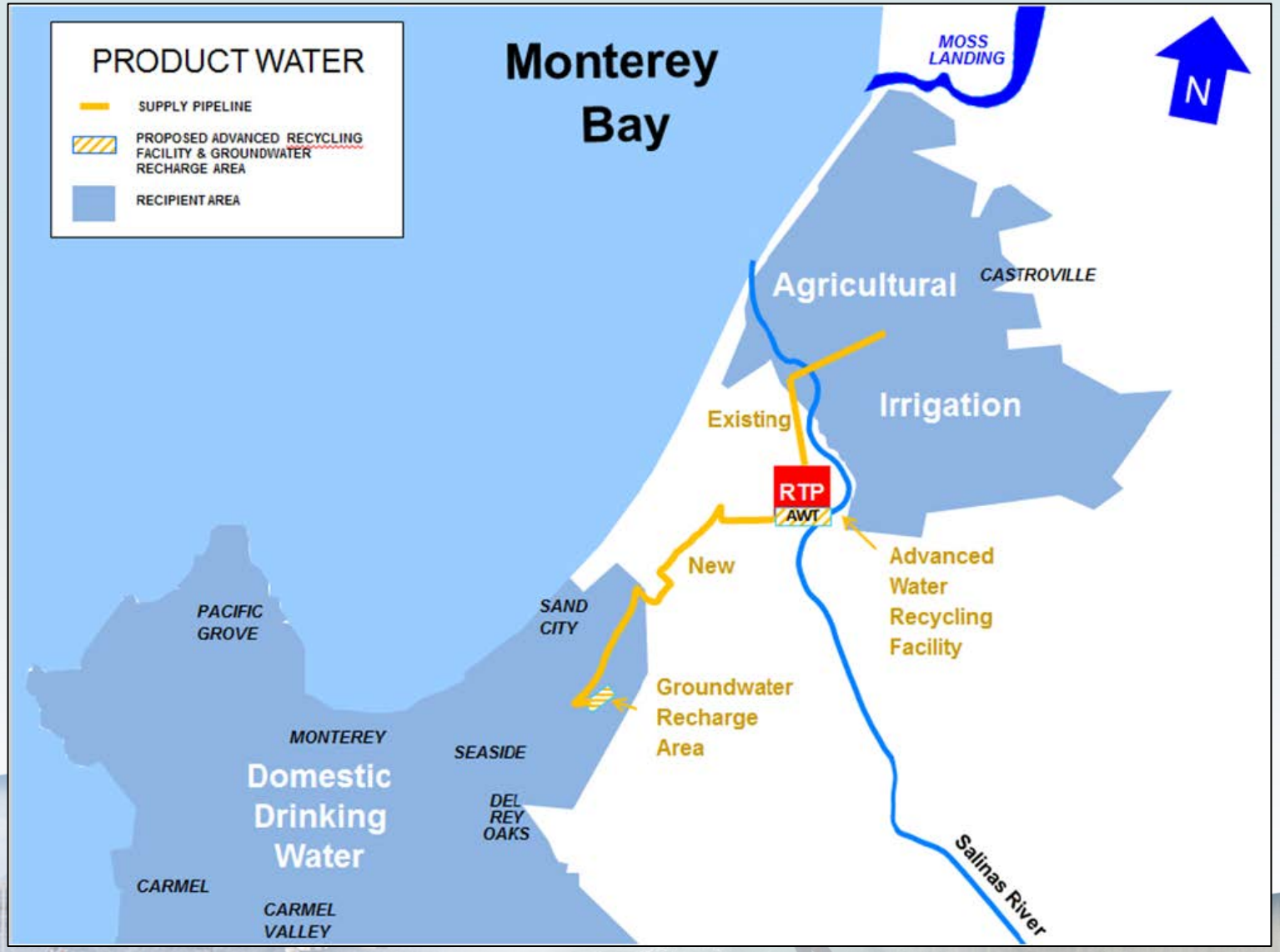
Permit Development

- Collaboration with Division of Drinking Water
  - Title 22 Engineering Report
  - Responses to comments
- NPDES Permit Revision

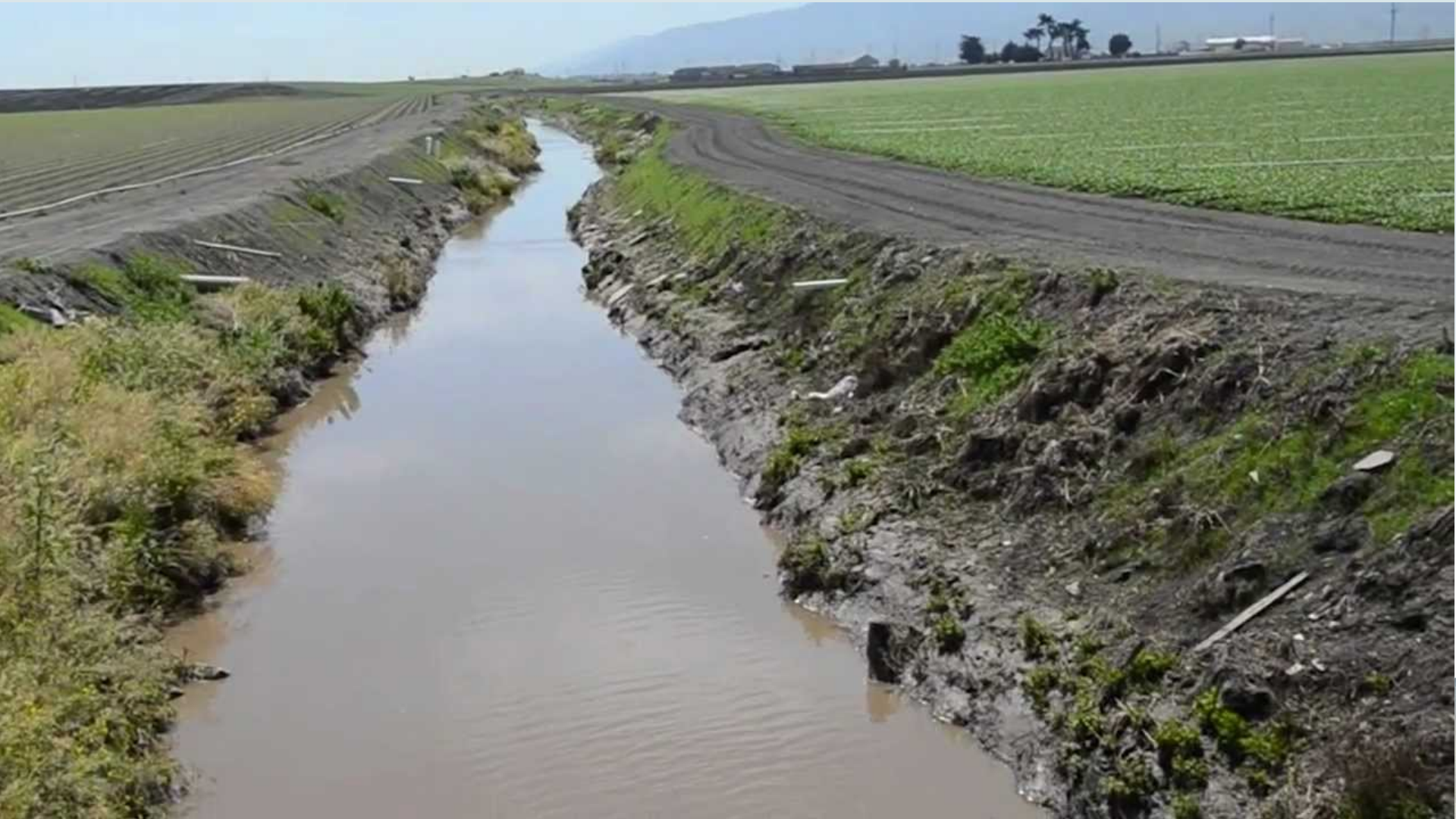
Comment Letters

- A total of three comment letters were received regarding these WDRs
  - Monterey Regional Water Pollution Control District
  - California American Water Company
  - Seaside Basin Watermaster

Conclusion


PRODUCT WATER
SUPPLY PIPELINE
PROPOSED ADVANCED RECYCLING FACILITY & GROUNDWATER RECHARGE AREA
RECIPIENT AREA
Monterey Bay
MOSS LANDING
N
Agricultural
CASTROVILLE
Irrigation
Existing
RTP
AWT
New
Advanced Water Recycling Facility
Groundwater Recharge Area
SAND CITY
PACIFIC GROVE
MONTEREY
SEASIDE
DEL REY OAKS
Domestic Drinking Water
CARMEL
CARMEL VALLEY
Salinas River

Questions?



ATTACHMENT 2

MATHEMATICAL RELATIONSHIP

ASSIMILATIVE CAPACITY USE AND FRACTION OF RECYCLED WATER

$$\begin{matrix}\text{Fraction of}\\ \text{assimilative}\\ \text{capacity used}\end{matrix} = \frac{\left(\begin{matrix}\text{Recycled water blended}\\ \text{with ambient}\end{matrix}\right) - \text{Ambient}}{WQO - \text{Ambient}}$$

Where,

$$\begin{matrix}\text{Recycled water blended}\\ \text{with ambient}\end{matrix} = \left(\begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) WQO + \left(1 - \begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) \text{Ambient}$$

assuming the recycled water quality is equal to the WQO.

$$\begin{matrix}\text{Fraction of}\\ \text{assimilative}\\ \text{capacity used}\end{matrix} = \frac{\left(\begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) WQO + \left(1 - \begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) \text{Ambient} - \text{Ambient}}{WQO - \text{Ambient}}$$

$$\begin{matrix}\text{Fraction of}\\ \text{assimilative}\\ \text{capacity used}\end{matrix} = \frac{\left(\begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) WQO + \text{Ambient} - \left(\begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) \text{Ambient} - \text{Ambient}}{WQO - \text{Ambient}}$$

$$\begin{matrix}\text{Fraction of}\\ \text{assimilative}\\ \text{capacity used}\end{matrix} = \frac{\left(\begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) WQO - \left(\begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) \text{Ambient}}{WQO - \text{Ambient}}$$

$$\begin{matrix}\text{Fraction of}\\ \text{assimilative}\\ \text{capacity used}\end{matrix} = \frac{\left(\begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}\right) (WQO - \text{Ambient})}{WQO - \text{Ambient}}$$

$$\begin{matrix}\text{Fraction of}\\ \text{assimilative}\\ \text{capacity used}\end{matrix} = \begin{matrix}\text{Fraction of}\\ \text{recycled water}\end{matrix}$$