

Agenda Item No. 8

NPDES Permit Renewal
Monterey One Water Regional
Wastewater Treatment Plant

Order No. R3-2018-0017

December 6, 2018
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Central Coast Water Board

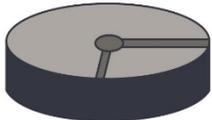
REGIONAL TREATMENT PLANT



1
HEADWORKS



2
PRIMARY CLARIFIERS



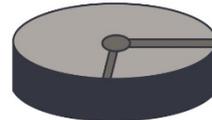
3
TRICKLING FILTERS



4
BIOFLOCCULATION

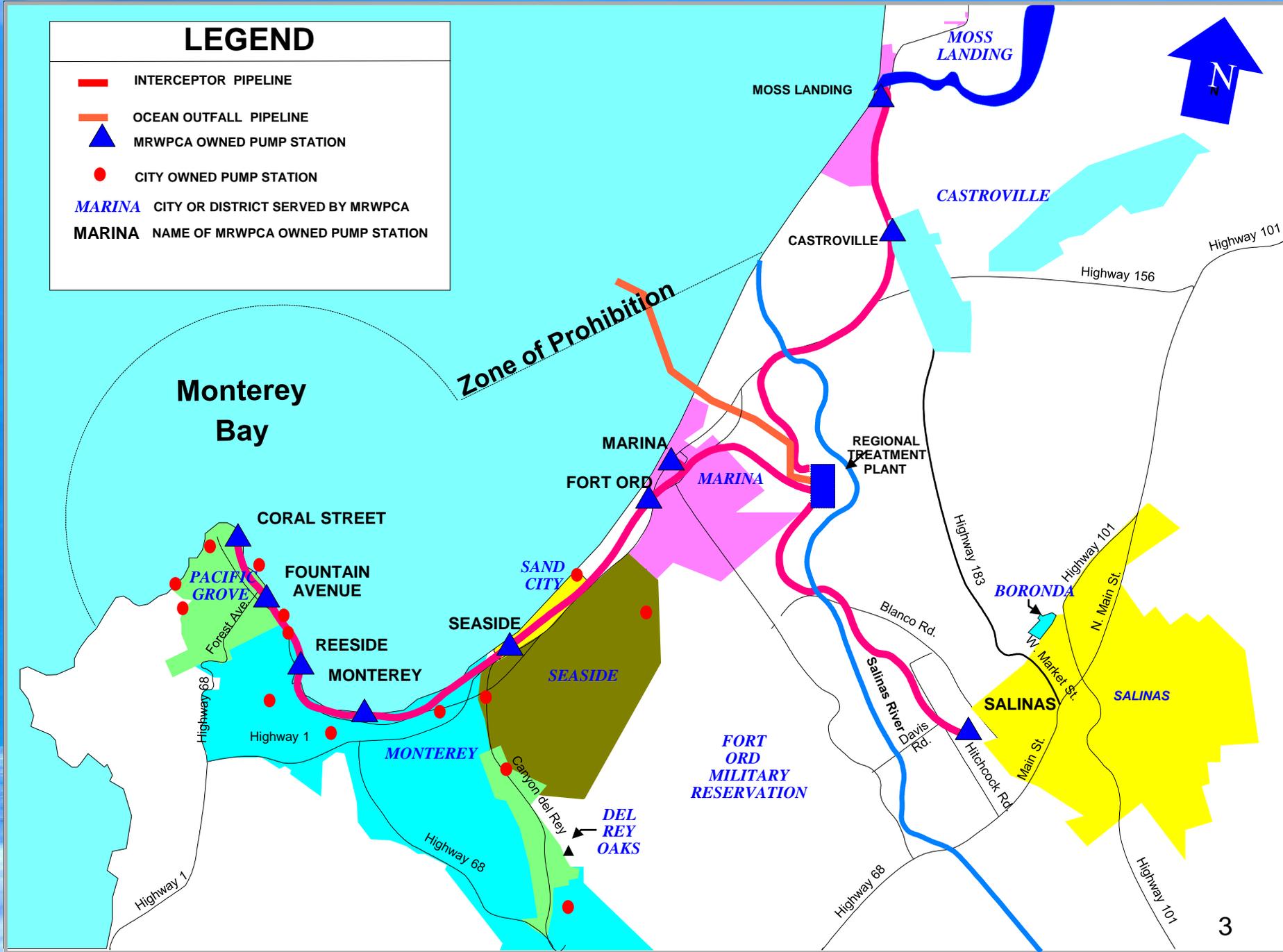


5
SECONDARY CLARIFIERS



LEGEND

-  INTERCEPTOR PIPELINE
-  OCEAN OUTFALL PIPELINE
-  MRWPCA OWNED PUMP STATION
-  CITY OWNED PUMP STATION
- MARINA* CITY OR DISTRICT SERVED BY MRWPCA
- MARINA** NAME OF MRWPCA OWNED PUMP STATION



Facility Background

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- POTW serving ~279,000
- 29.6 MGD Secondary Treatment Capacity
- Tertiary treatment for recycling up to 29.6 MGD (60+% of Incoming Wastewater Recycled)
- Revising Order due to new Pure Water Monterey AWPf RO concentrate discharge
- Order regulates discharge to Pacific Ocean (2 ½ Mile Outfall with diffuser at >100' depth)

Agricultural Drainage Water



Agricultural Wash Water



PWM Source Waters

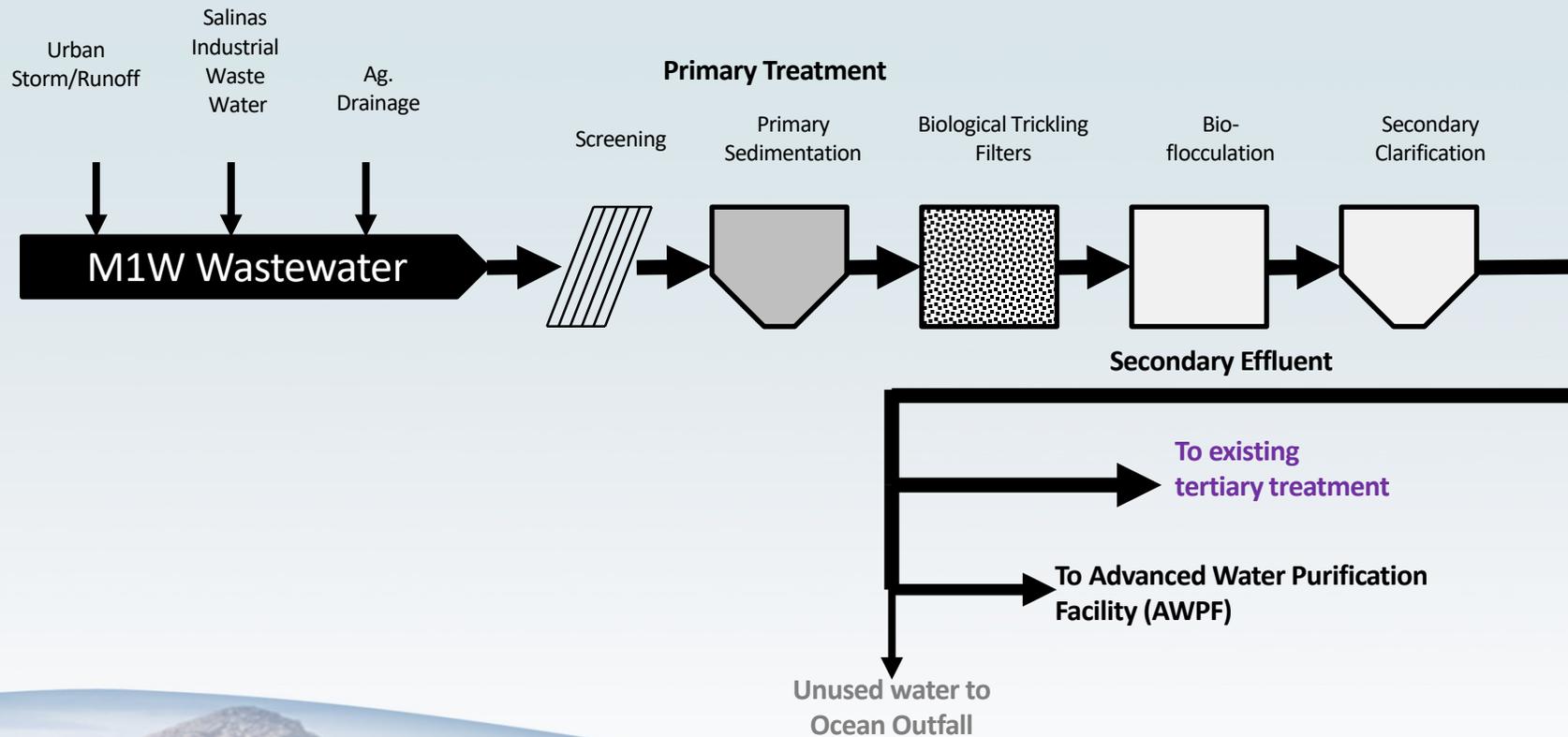
Secondary Treated Wastewater



Urban Storm Water Runoff



Blending of Sources then Primary & Secondary Treatment



HOW DOES ADVANCED PURIFICATION WORK?

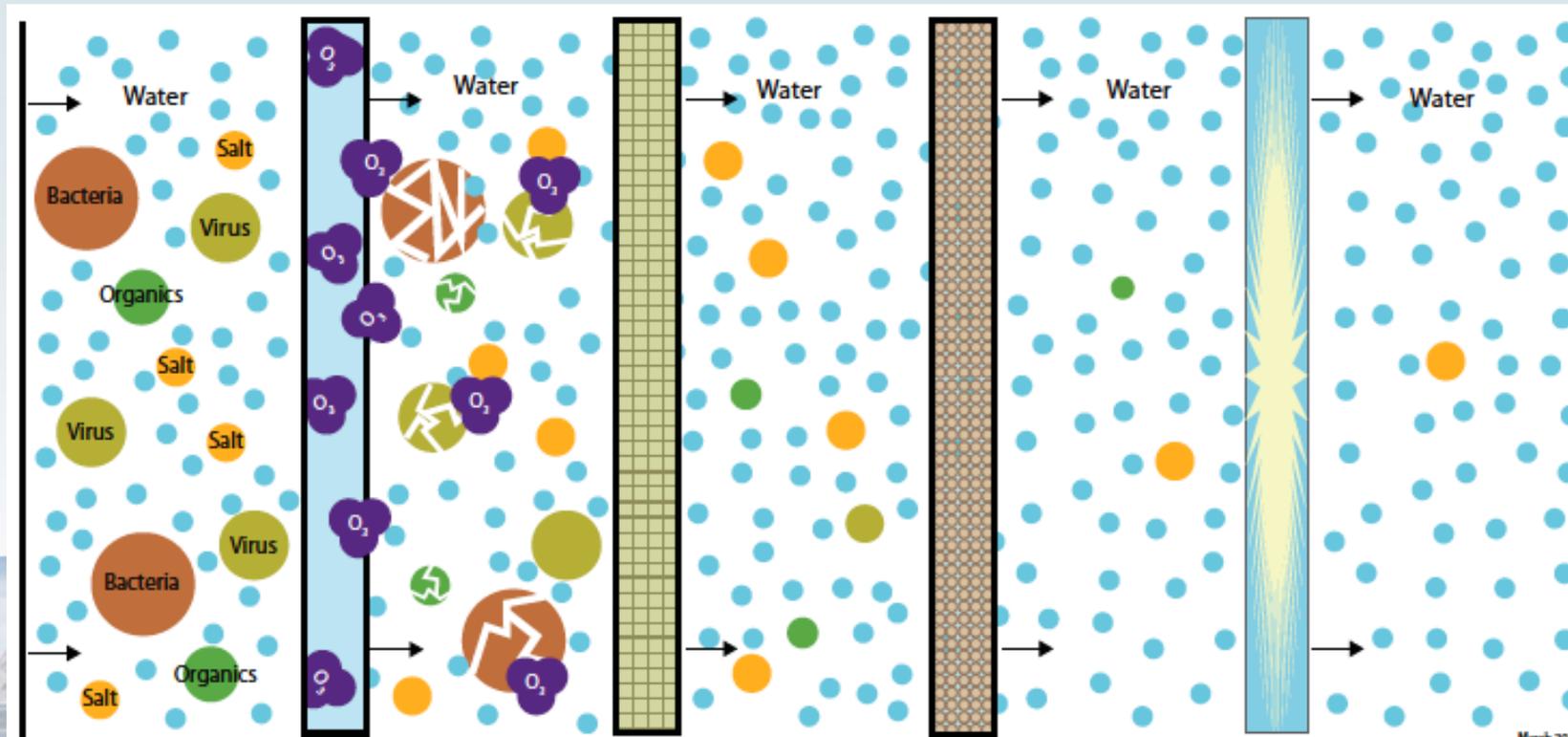
Treated
Source
Waters

Ozone
Treatment

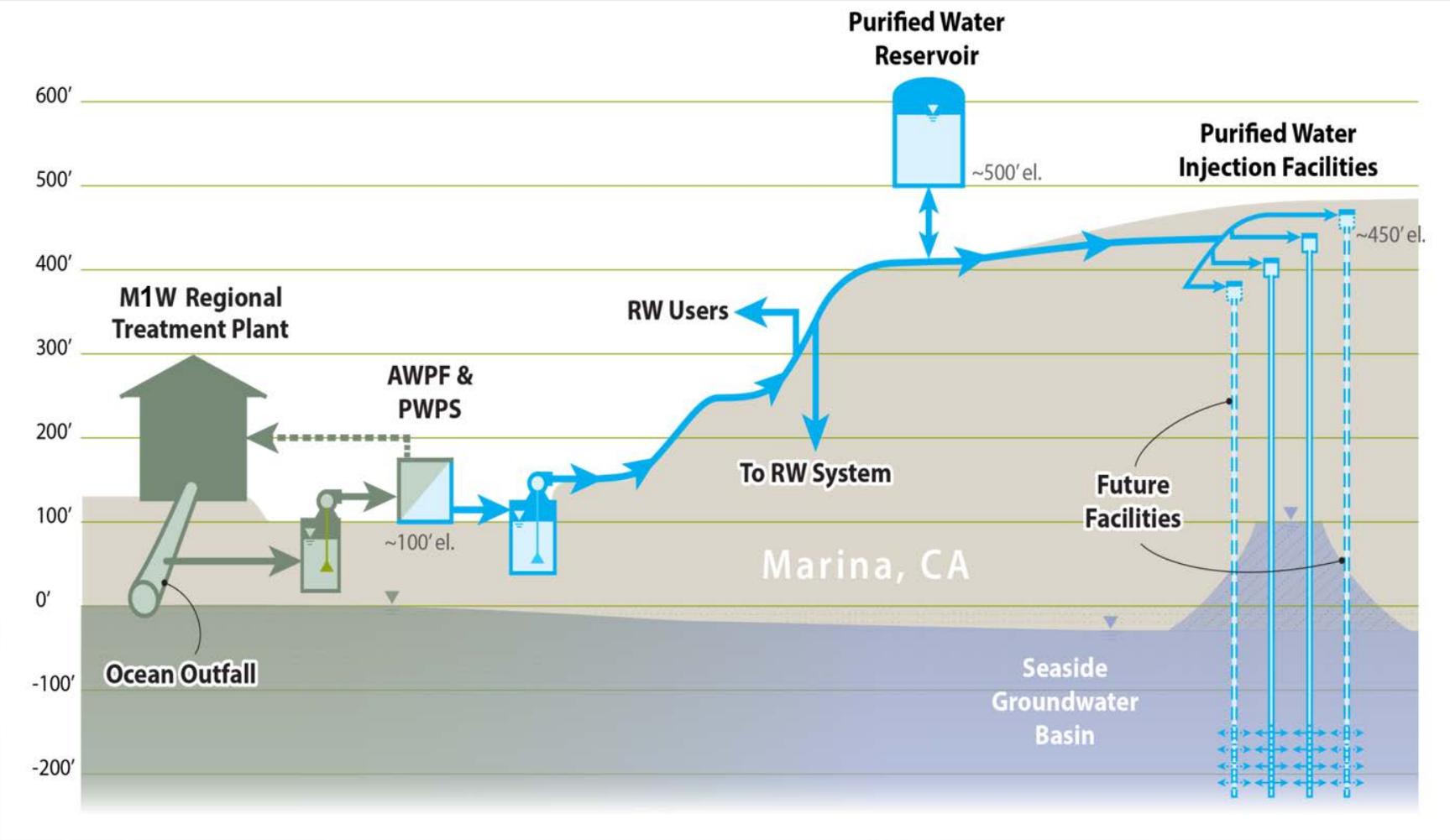
Membrane
Filtration

Reverse
Osmosis

UV
Disinfection
and Hydrogen
Peroxide



Injection into the Seaside Basin



Preparing for Climate Change through Pure Water Monterey

- Drought proof water supply
- Helps Monterey Peninsula reduce Carmel River use
- Improves water quality in Seaside Basin and reduces seawater intrusion
- Reduces pumping of Salinas Basin and reduces seawater intrusion
- Reduced pollutant discharge to MBNMS

Main Changes to Order

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Primary differences with No. 2014-0013:

1. Collection of new source waters increases the amount of water for recycling
2. RO concentrate discharge from Pure Water Monterey
3. Four sets of effluent limits dependent on proportions of secondary effluent, RO concentrate, and hauled saline waste
4. Additional monitoring to account for new source waters

Comments & Responses

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- Comments received from the Otter Project
 - Requested increased monitoring for nutrients
 - Requested TSO to cease discharge or remove nitrogen
- Detailed responses provided in the Staff Report
 - Increased monitoring for nutrients
 - No TSO for discharge as no link with HAB from M1W
 - Project decreases nutrients to MBNMS

Staff Recommendations

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- Adopt Order No. R3-2018-0017 with recommended changes in supplemental sheet
 - Presentation by M1W regarding Pure Water Monterey
 - Presentation regarding HABs in Monterey Bay by Dr. Mine Berg of CCLEAN
 - Questions?

Ratio of RO Concentrate + Hauled Saline Waste to Total Effluent	Dm for Compliance with Ocean Plan Table 1 Parameters
0-0.127	145
0.128 – 0.421	259
0.422 – 0.744	388
≥ 0.745	473

Table F-1. Dilution Factors for Implementing Effluent Limitations

Total Flow (MGD)	Secondary Effluent (MGD)	Dm
1.57	0.4	473.4
2.77	1.6	388.3
9.17	8.0	258.7
29.6	29.5	145 ¹

1. The modeling results indicated a Dm of 169.3 would correspond to the total effluent flow of 29.6 MGD; however, the Discharger proposed the more conservative Dm of 145, which is the allowable dilution in Order R3-2014-0013.