Water Reuse – Current Status in Elsinore Valley Municipal Water District

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EVMWD Water Reclamation

RWRF – 8 mgd  HTCWRF – 0.5 mgd  RRCWRF – 1.2 mgd
Secondary Treatment
Train B
(4 mgd)
Belt Filter Presses - BFPs

- WAS Flow into BFPs
- BFP Flow After Polymer
- Dewatered Sludge
RWRF Flows / Effluent Reuse

• Current Flow 5.5 mgd – Projected to Reach Design Capacity (8 mgd) in 4 to 5 years

• Effluent Reuse – 100%
  • 0.5 mgd to Temescal Wash for Riparian Habitat
  • 5.0 mgd to Lake Elsinore Replenishment
  • Minor Amount used for Landscape Irrigation

• Lake Discharge Requires N/P Offsets – Met by Lake Aeration Project
Lake Elsinore Operation

Approx. Lake Volume = 1' Depth (El 1241 - El 1240) = 1 BG

Lake Elevation, ft

Overflow Weir (1262 ft)

Normal Operating Level - 1240 ft

Lake Volume 12 BG (at 1240' El)
Lake Elsinore Operation

Annual (Evaporation - Precipitation) = 4.7 feet/year = 4.7 BGY = 14,500 AFY

BGY = Billion Gallons / Year  AFY = Acre-Feet / Year
Recycled Water Replenishment = 1.7 to 2 BGY = 5,200 to 6,100 AFY = 36% to 42% of evaporation

Lake Elsinore Operation

100 year flood (1263.3’)
Overflow Weir (1262’)

Normal Operating Level - 1240’
Recycled Water Replenishment (1.7 to 2 BGY)

Recycled Water Replenishment = 1.7 to 2 BGY = 5,200 to 6,100 AFY = 36% to 42% of evaporation

BGY = Billion Gallons / Year
AFY = Acre-Feet / Year
EVMWD Recycled Water Irrigation System Overview
EVMWD Recycled Water Service Areas

- 4 Service areas (28 miles of RW Mains)
- 137 Irrigation Customers
- Irrigation Demands: 1300 AF/Year
Horsethief WRF Recycled Water

Horsethief WRF

HTC Service Area

Perc Pond

Horsethief Existing and Future Demands and Supply (MGD)

Future Demand (MGD)

Existing Demand (MGD)

Horsethief Existing Capacity (MGD)

Horsethief Expanded Capacity (MGD)

Average Existing Effluent (MGD)

- Existing Demands: 195 AF/Yr
- New Development (160 Af/Yr)
- Near Term Future Demands: 355 AF/Yr
**Railroad Canyon WRF Recycled Water**

- **Existing Demands:** 820 AF/Yr
- **RCWRF:** 520 AF/Yr
- **Diversion structure for additional flow**
- **Supplement from EMWD:** 300 AF/Yr
Wildomar / Summerly Recycled Water

- Deliveries from EMWD (4 Turnouts)
- Currently 0.8 mgd, Near term 1.3 mgd
- Increased pipeline capacity to 2 mgd
- Existing Demands: 430 AF/Yr
- Future excess deliveries to Wetlands
RWRF Flow Projections & Recycled Water Availability
RWRF Master Plan Recommendations
(Completed June 2016)

- Additional 8.8 mgd Capacity Needed by 2040 (3 Phases)
  - Phase 1 – 4 mgd (2021)
  - Phase 2 – 2.8 mgd (2029)
  - Phase 3 – 2 mgd (2035)

- Phase 1 Features
  - Design Just Started – Completion Expected Mid 2018
  - Construction Completion Expected 2020-21
  - Process – MBR without Sludge Digestion
  - Cost - $ 69 M – Phase 1 ($ 170 M for 3 Phases)
EVMWD WateReuse in Future

**IPR Potential**

- Up to 9 mgd RWRF Effluent Projected to Meet Lake Elsinore Replenishment

- For Surplus Future Effluent - IPR is on the Horizon

*The Subject of Next presentation*
QUESTIONS?