

Santa Ana River Regional Monitoring Program

Monitoring Updates

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**CDM
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Outline

- Review of 2018-19 regional monitoring data
- Monitoring plan update
- Data needs to support TMDL revision



Recent Monitoring Results

2018-2019 Cool Dry Season *E. coli* Concentrations (MPN/100 mL)

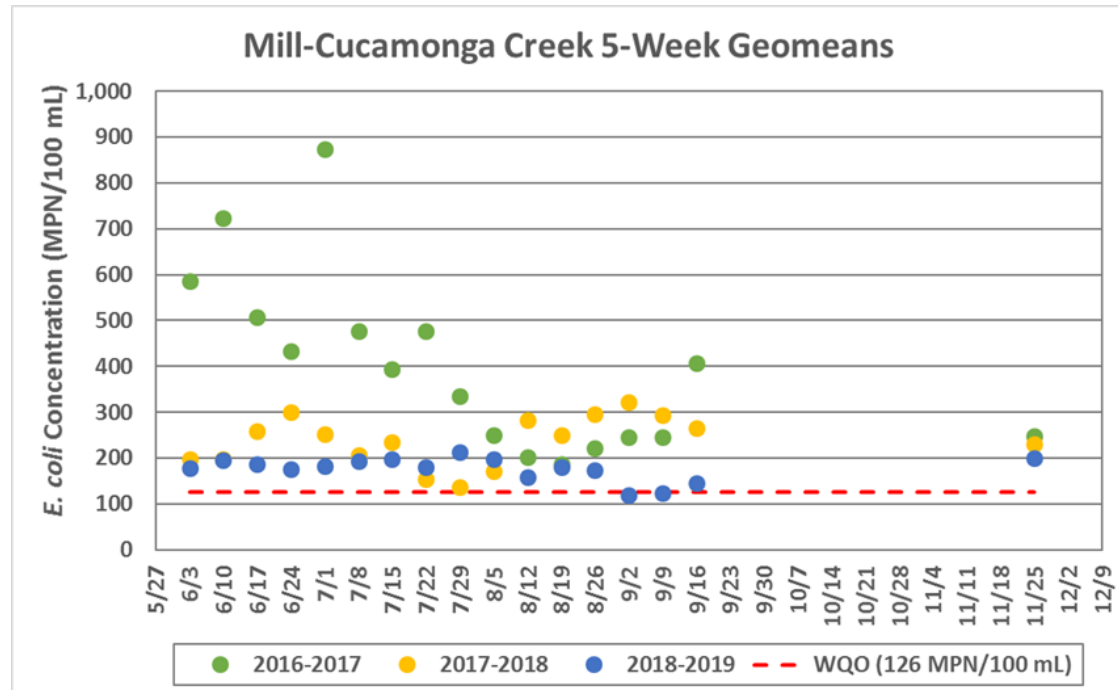
Site ID	County	Site	10/28	11/4	11/11	11/18	11/25	Geo mean
P1-1	Riverside	Canyon Lake	9	2	2	15	19	6.3
P1-2	Riverside	Lake Elsinore	16	8.4	14	34	12	15
P1-3	Riverside	Lake Perris	10	11	9.7	14	39	14.2
P1-4	San Bernardino	Big Bear Lake	280	26	9.8	7.4	2	16
P1-5	San Bernardino	Mill Creek Reach 2	1	BDL	BDL	BDL	BDL	1
P1-6	San Bernardino	Lytle Creek	36	16	34	34	43	31
WW-S1	Riverside	SAR Reach 3 at MWD Crossing	190	200	160	84	190	158
WW-S4	Riverside	SAR Reach 3 at Pedley Avenue	120	85	150	63	63	91
WW-C3	San Bernardino	Prado Park Lake	20	98	710	85	10	65
WW-C7	San Bernardino	Chino Creek	370	120	140	380	240	224
WW-M6	San Bernardino	Mill-Cucamonga Creek	170	110	300	150	390	201
P3-OC2	Orange	Borrego Creek	Dry	Dry	Dry	Dry	Dry	NA
P3-OC5	Orange	Los Trancos Creek	Dry	Dry	Dry	Dry	Dry	NA
P3-OC6	Orange	Morning Canyon Creek	NA	NA	NA	NA	NA	NA
P3-OC7	Orange	Peters Canyon Wash	426	281	384	1274	959	562
P3-OC8	Orange	San Diego Creek Reach 1	135	158	108	173	420	176
P3-OC9	Orange	San Diego Creek Reach 2	74	75	197	441	187	155
P3-OC11	Orange	Serrano Creek	269	31	41	1674	912	221

Overall Reduction in Bacteria Across Watershed

- Priority 1 – data suggest sites regularly support REC use
- Priority 2 – dry weather flow reduction, other projects working
- Priority 3 – several sites heading toward delisting
- Priority 4 – no exceedance of anti-deg targets in 2018

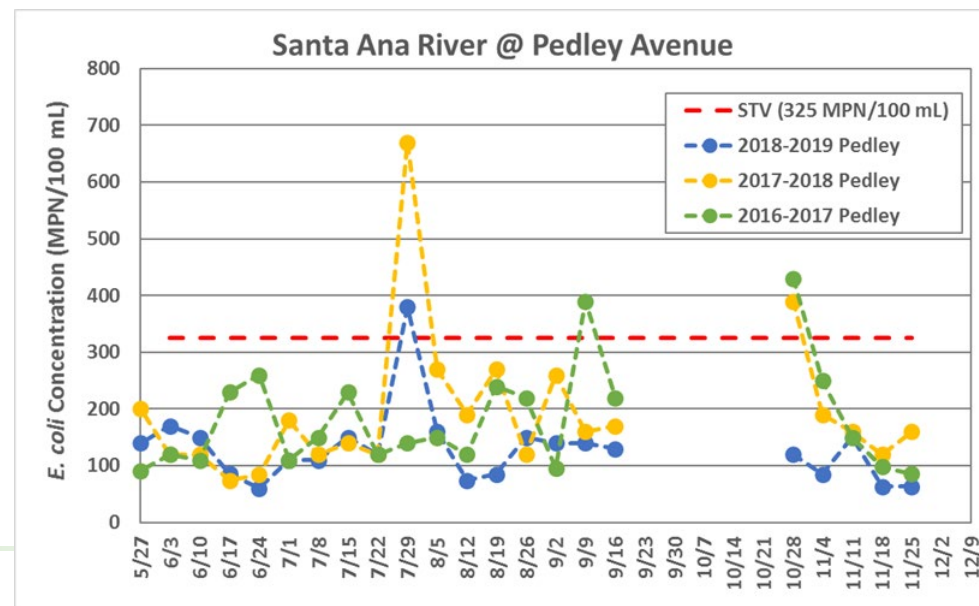
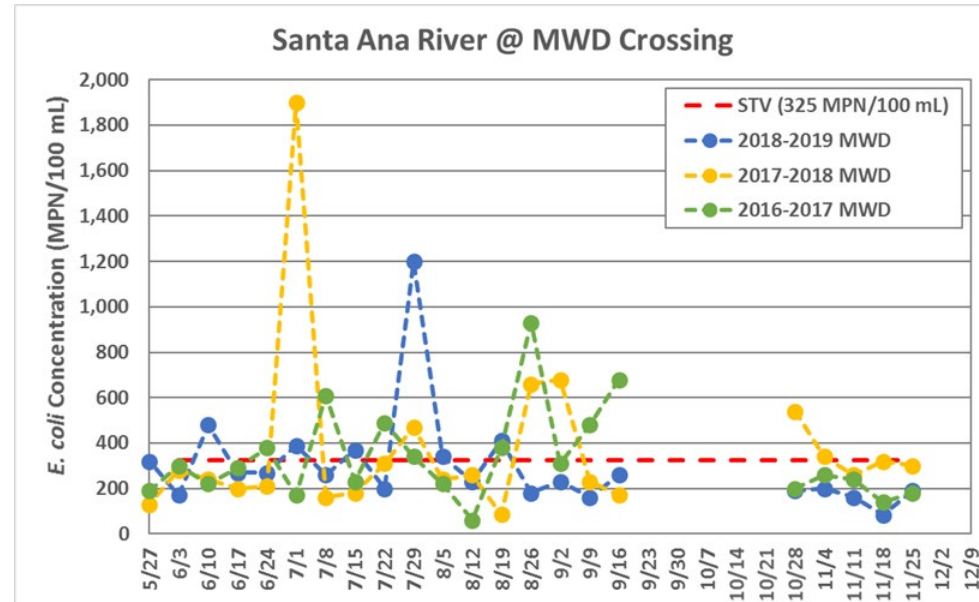
Effectiveness from Existing Controls

- Dry weather diversions
- Outdoor water waste reductions
- Source identification and elimination
- Education and outreach programs
- Mill Creek wetlands



Santa Ana River Reach 3

- Typical concentration is higher at site upstream of Riverside WQCP
- Sharp rise in concentrations occur at both sites - not always concurrent, throughout dry season





Monitoring Plan Updates

Monitoring Plan Update

- Periodic updates required in BPA
- Effective for 2018-2019 monitoring year
 - Delisted Lake Fulmor & SAR Reach 2 from Priority 3 sites
 - City of Newport Beach will monitor Los Trancos Creek & Morning Canyon Creek instead of the Regional Board
 - Buck Gully Creek Priority 3 monitoring frequency to increase from 5 weekly samples to weekly to obtain >26 geomeans with goal to delist
- Effective for 2019-2020 and after
 - Cucamonga Creek at Hellman Ave (P4-SBC1) monitoring frequency to increase to monthly to achieve approximate sample size of 80
 - Priority 3 monitoring will be extended to 6 weeks

Monitoring Plan Update

- Incorporate statewide provisions for REC uses
- Review sites near tidal zone for appropriate bacteria sampling (*E. coli* vs Enterococci)
- Update the urban source evaluation methods to provide data needed to support TMDL revision, including:
 - Update Tier 1 sampling program
 - Latest analytical methods including MST tools
 - Preservation of grab samples for follow-up MST analysis