

# Santa Ana River Wasteload Allocation Model Update

Basin Monitoring Program Task Force

March 24, 2020



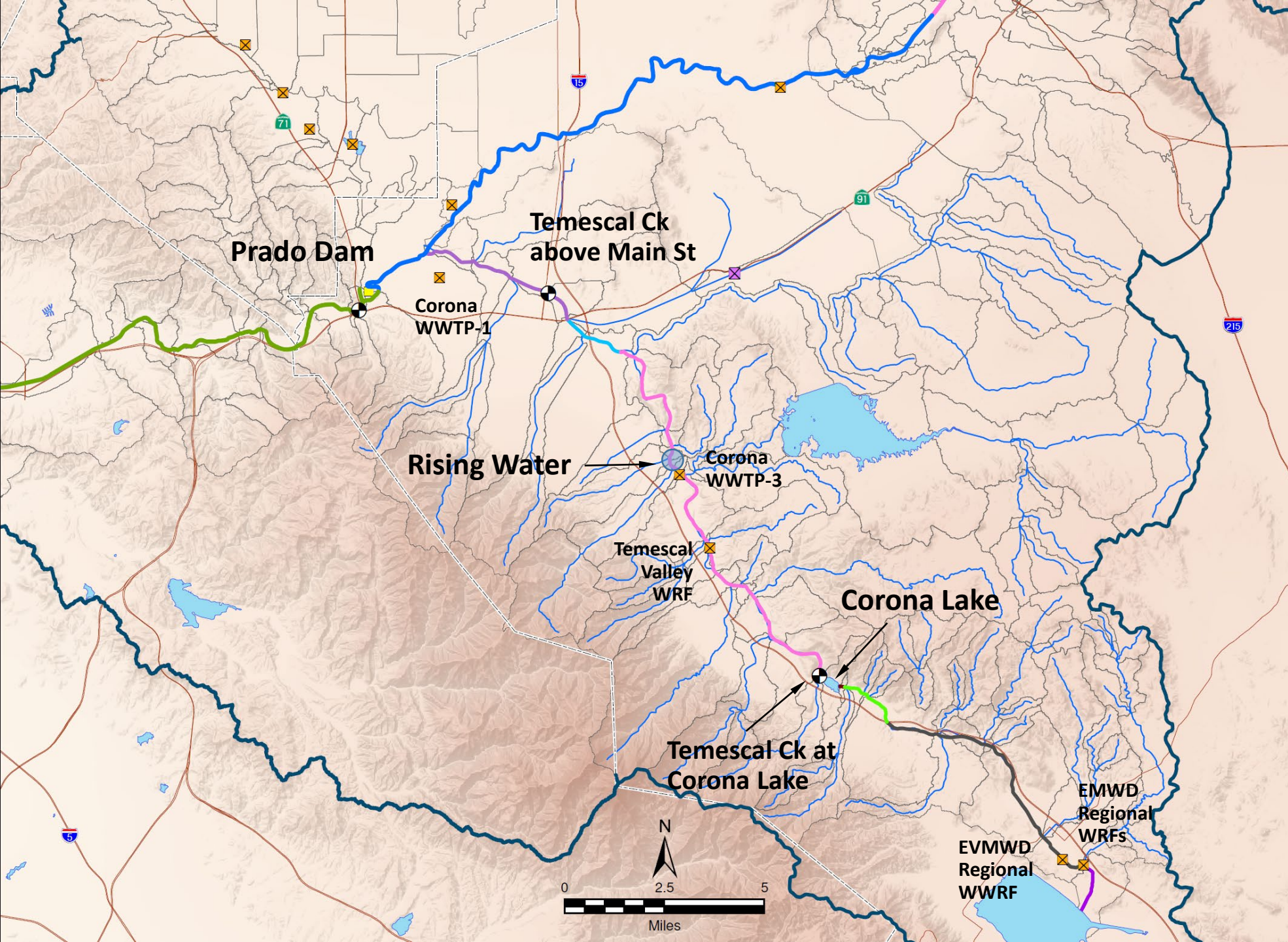
03/24/2020



# Timeline Following Submittal of Final Summary Report

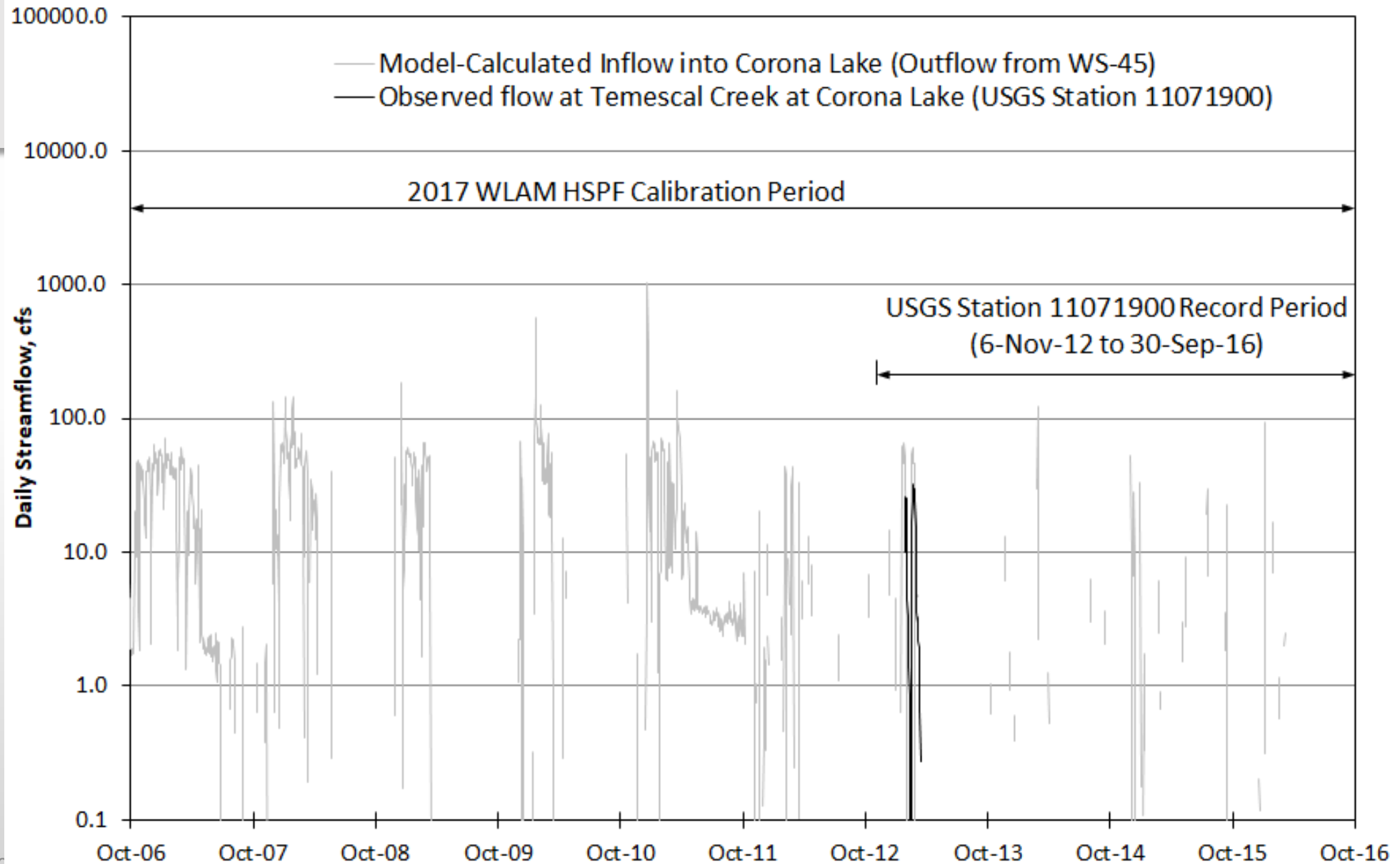
- **18-Nov-19: Received model file request from EMWD.**
- **13-Dec-19: Provided model files to SAWPA and EMWD.**
- **15-Jan-20: Received questions from WEI on model files.**
- **22-Jan-20: Responded to WEI's questions.**
- **5-Feb-20: Received follow-up questions from WEI.**
- **18-Feb-20: Responded to WEI's follow-up questions.**
- **5-Mar-20: Conference call with WEI**
- **18-Mar-20: Conference call with SAWPA/Risk Sciences/Tess Dunham**

# Issue No. 1 Use of Gaged Flow for Corona Lake Discharge

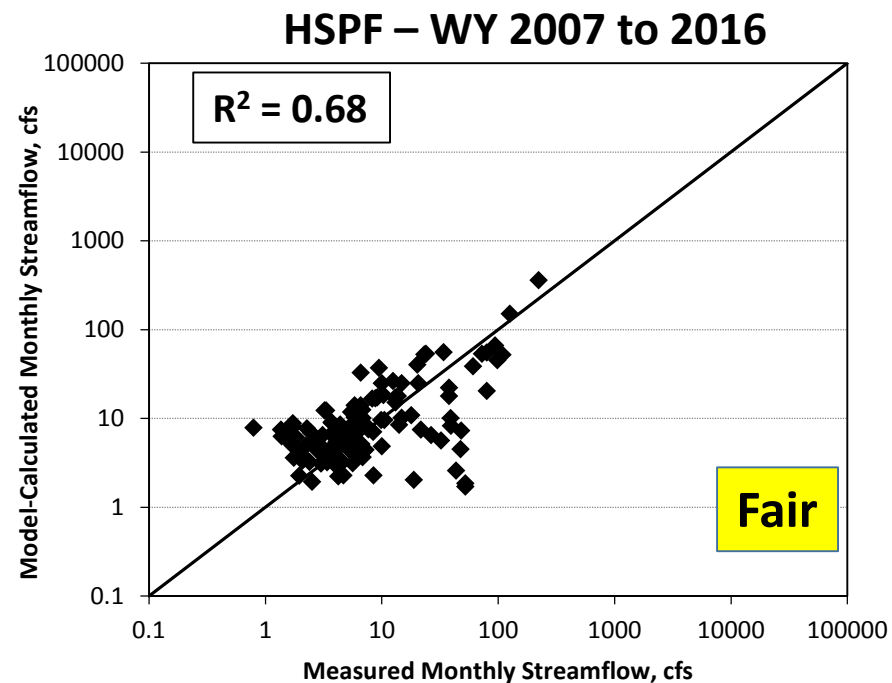
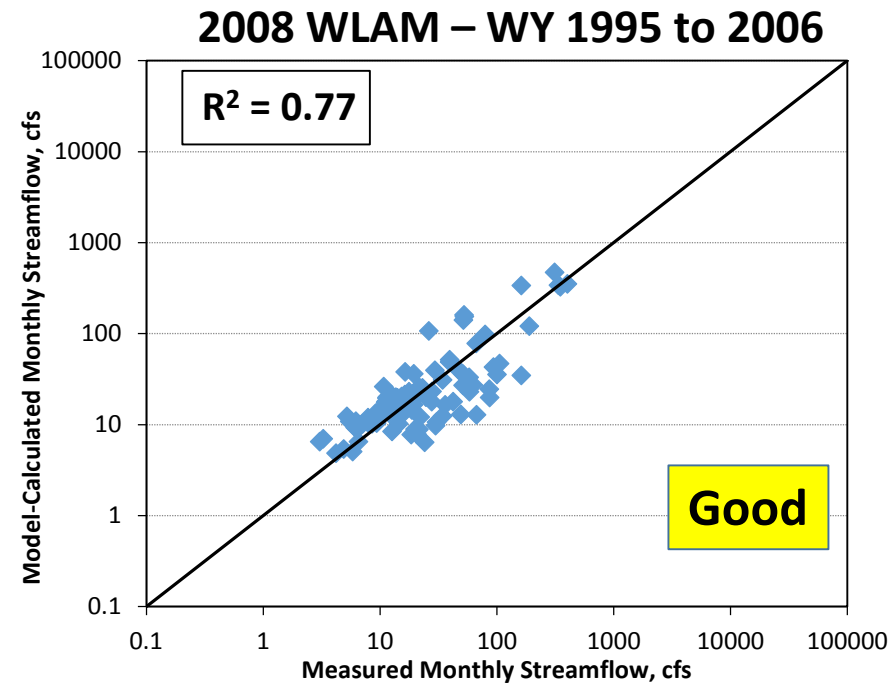
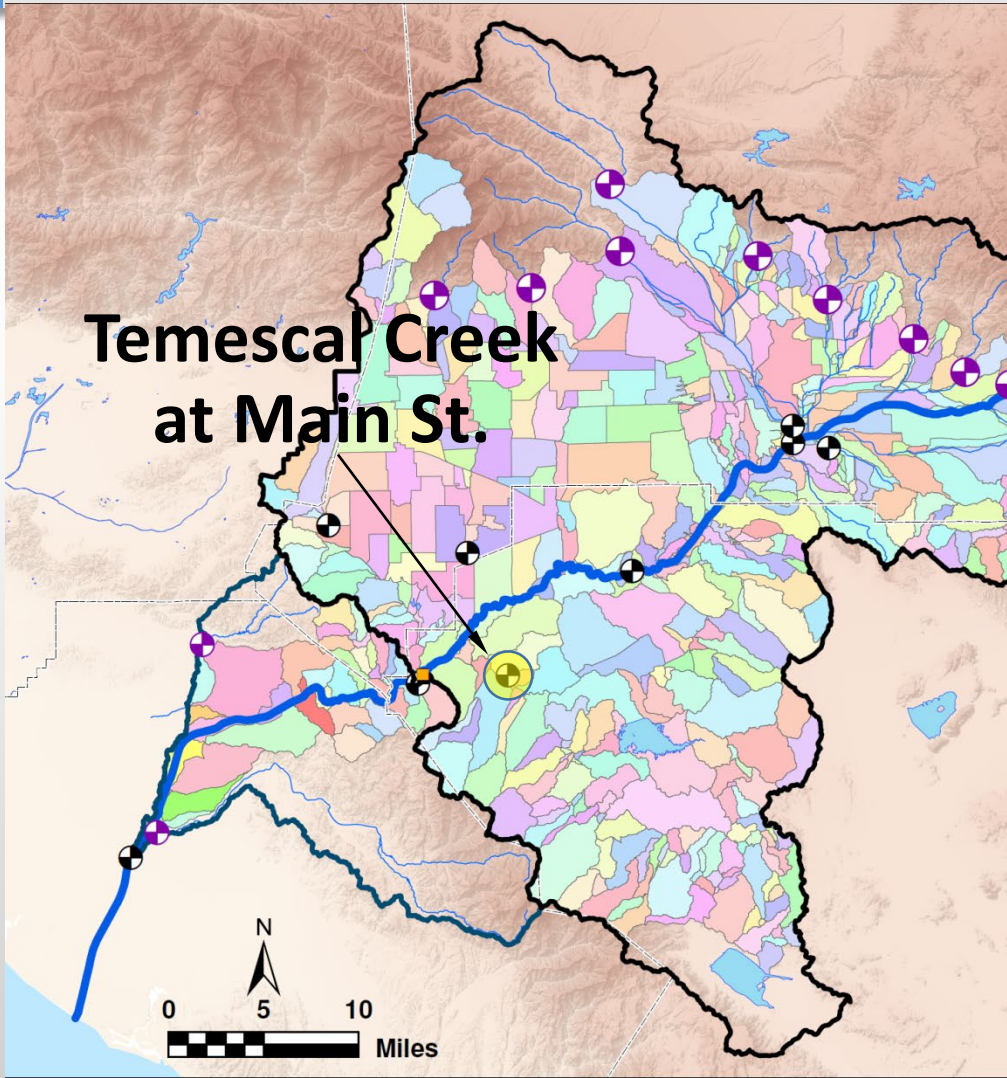




# Daily Streamflow at Temescal Ck at Corona Lake

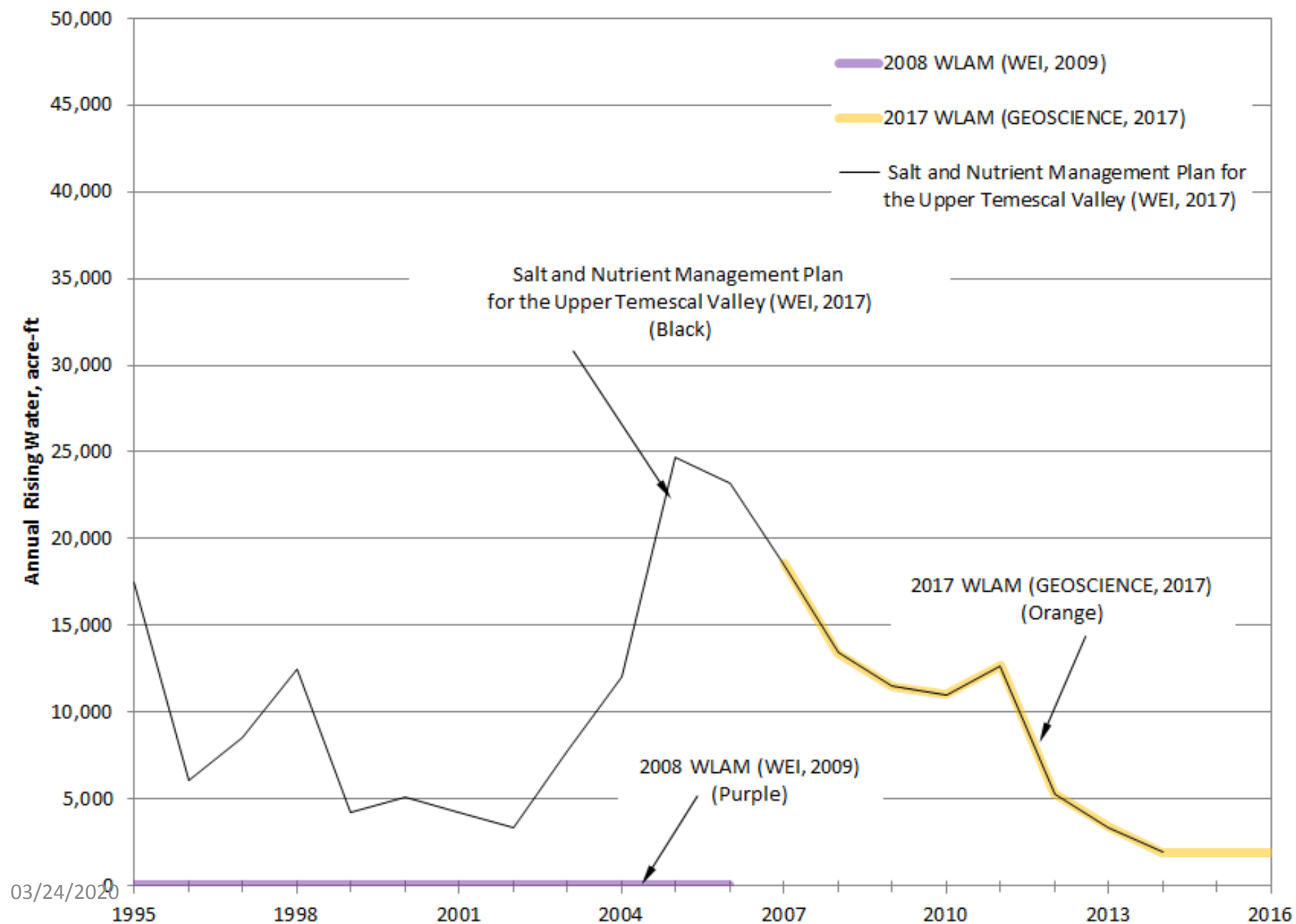


# 2008 WLAM vs. WLAM Update (HSPF) Monthly Streamflow



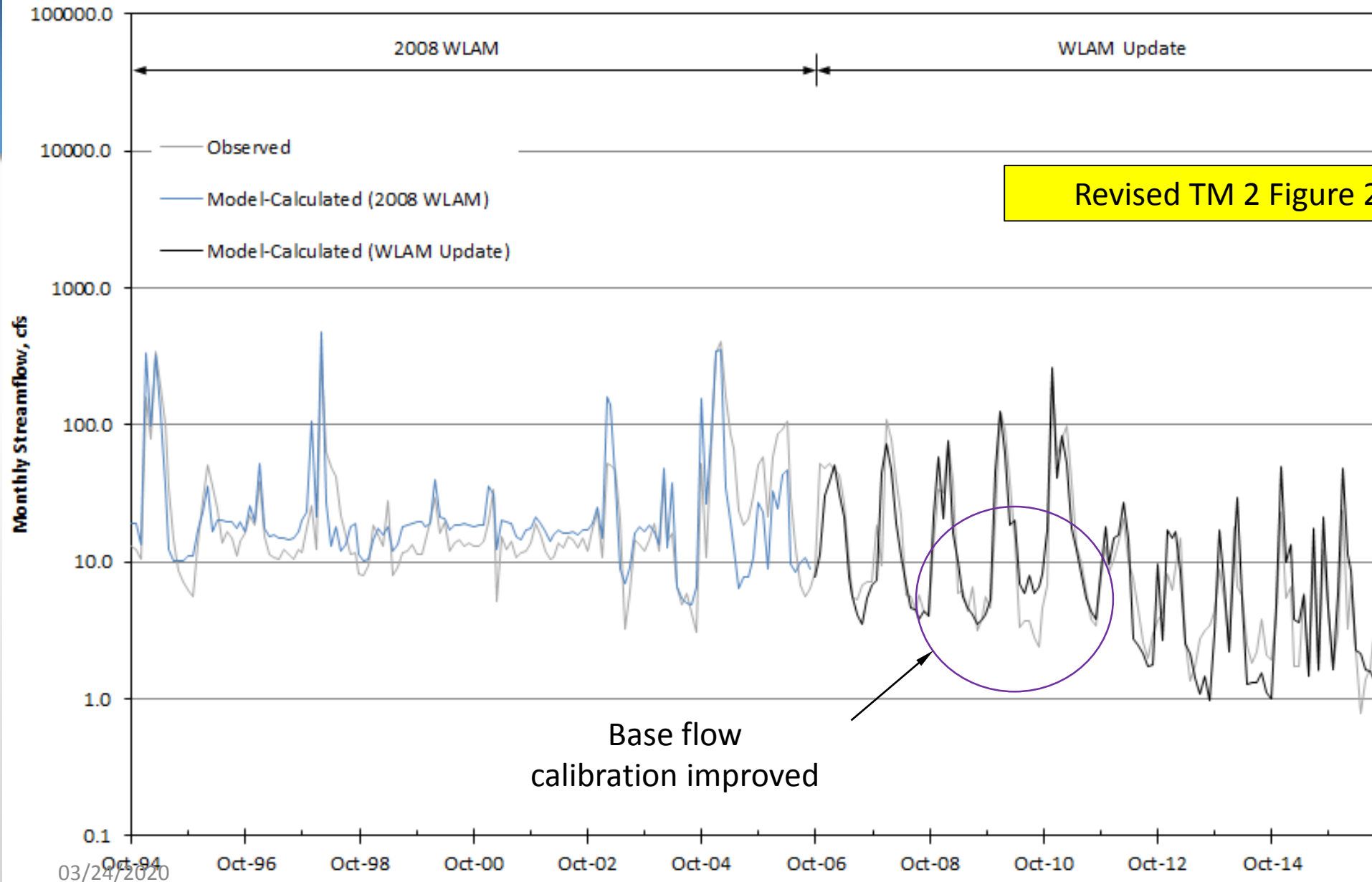
Source:  
13-Jun-17  
Monthly  
Meeting

## Annual Rising Water from Upper Temescal Valley to Temescal Basin



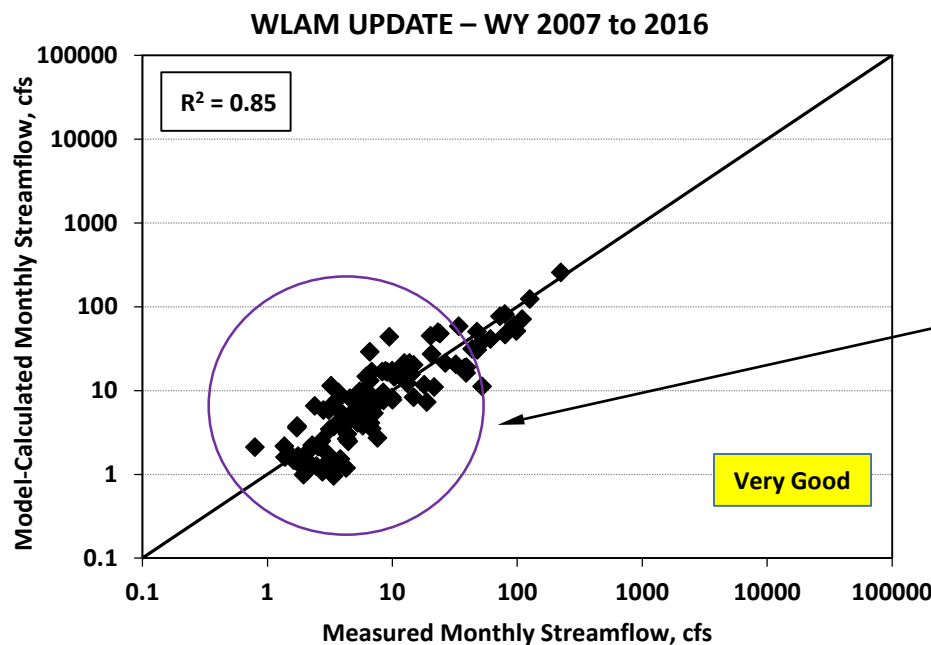
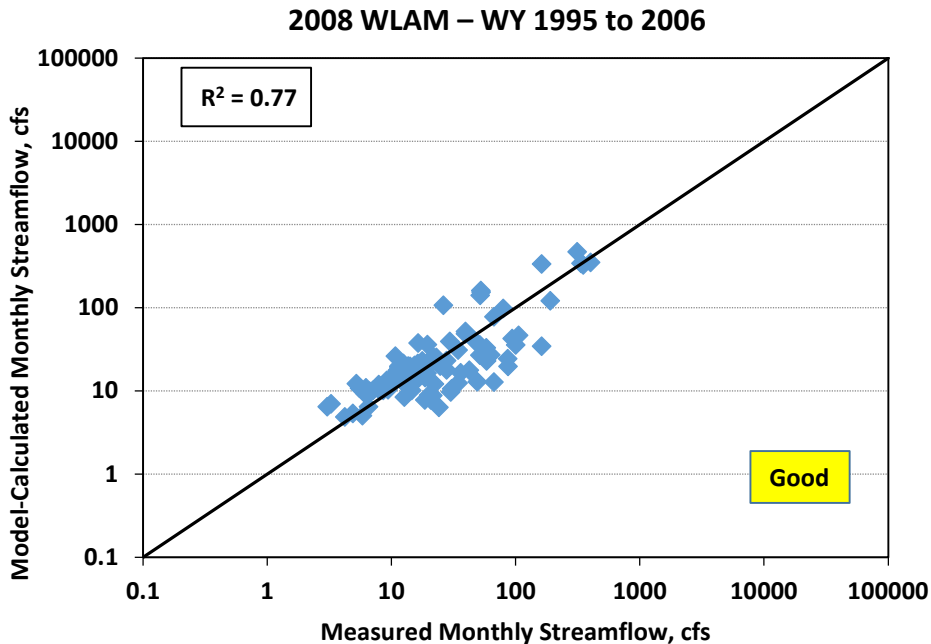
**Source:**  
**16-Nov-17**  
**Monthly**  
**Meeting**

**Hydrographs of Measured and Model-Simulated Monthly Streamflow at the Temescal Creek at Main Street  
Water Years 1995 to 2006 (2008 WLAM) and Water Years 2007 to 2016 (WLAM Update)**

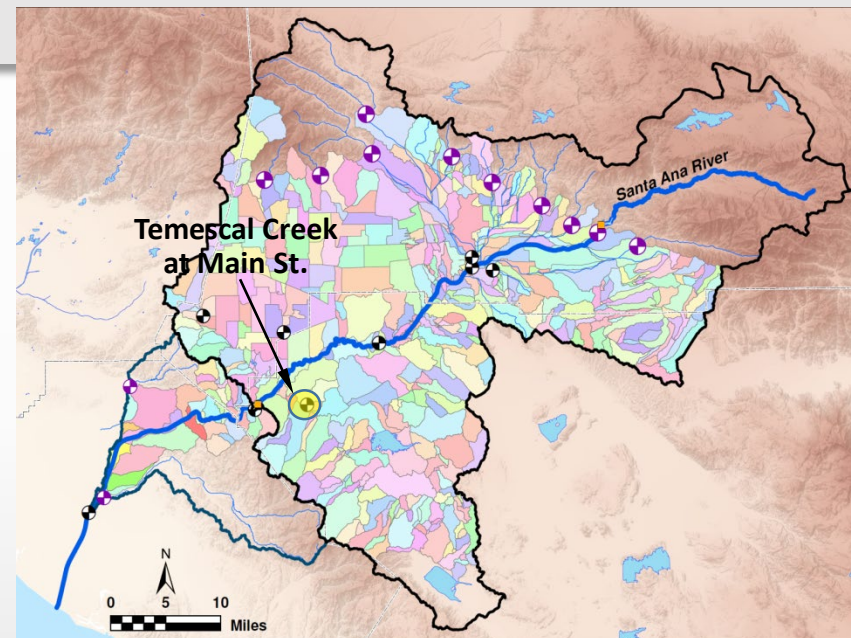


**Figure 28**

**Source:  
16-Nov-17  
Monthly  
Meeting**



Revised TM 2 Figure 46



Baseflow calibration improved with very good calibration performance

SCATTERPLOTS OF MEASURED AND MODEL-SIMULATED MONTHLY STREAMFLOW AT THE TEMESCAL CREEK AT MAIN STREET WATER YEARS 1995 TO 2006 (2008 WLAM) AND WATER YEARS 2007 TO 2016 (WLAM UPDATE)

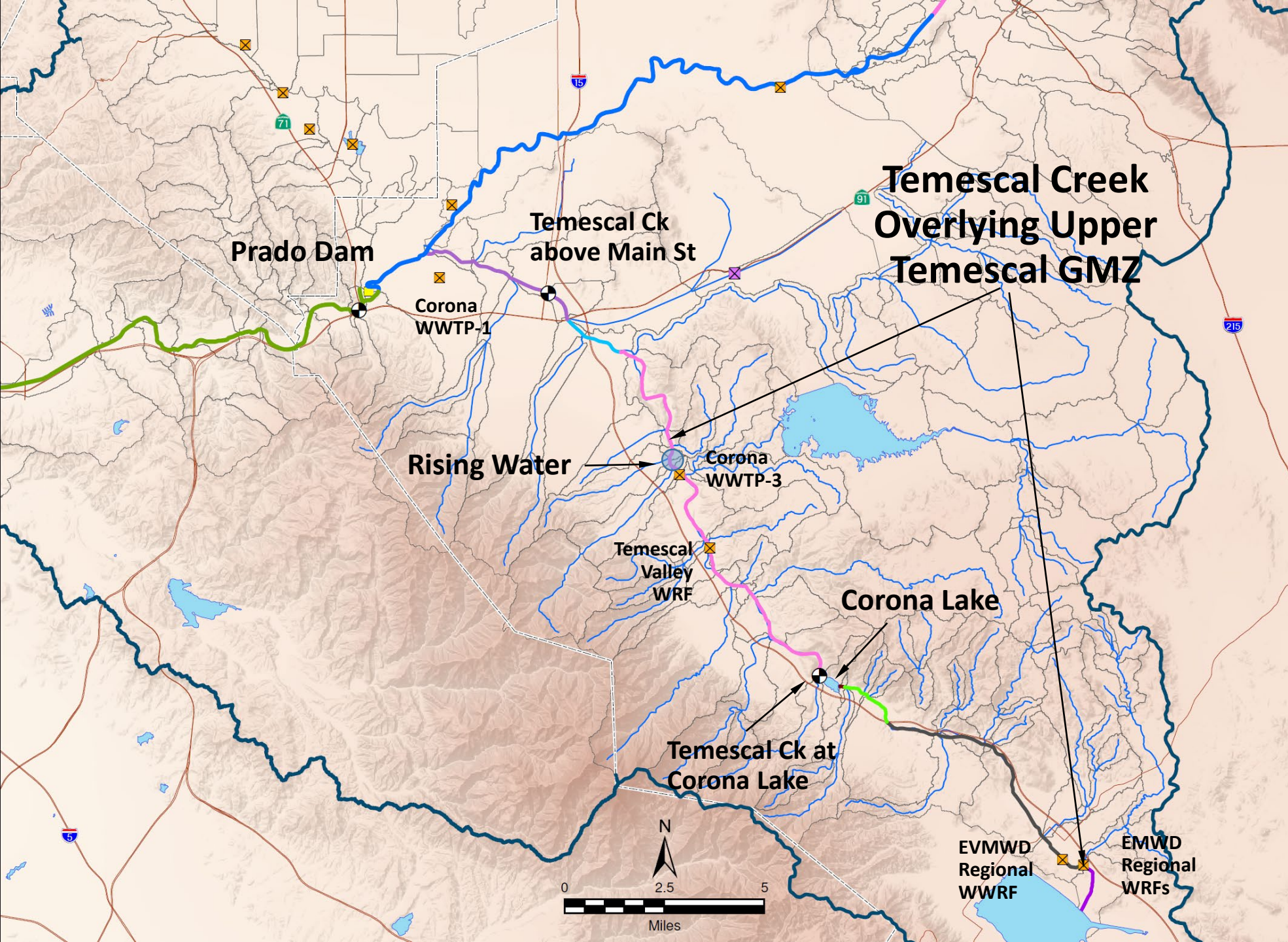
Source:  
16-Nov-17  
Monthly  
Meeting



# Proposed Revision to Address Issue No. 1

- **Recalibrate model using model-simulated flow in Temescal Ck at Corona Lake.**
- **Adjust rising water in Temescal Creek.**
- **Rerun model Scenarios A through F.**

## Issue No. 2 Underestimation of Streambed Recharge Concentrations



# TDS of Streambed Recharge of Temescal Creek Overlying Upper Temescal GMZ

## Draft TM No. 6 (19-Jul-19)

Water Year	Streambed Percolation (ac-ft)	
		Retrospective
2005	9,357	412
2006	6,776	546
2007	5,716	519
2008	4,241	390
2009	4,328	351
2010	4,898	331
2011	7,141	378
2012	3,490	226
2013	3,866	269
2014	2,231	62
2015	2,692	74
2016	2,413	51
<b>Maximum</b>	<b>9,357</b>	<b>546</b>
<b>Average</b>	<b>4,762</b>	

## Revised in Final Summary Report (12-Nov-19) Per Risk Sciences Comment No. 30 on Draft TM No. 6

Water Year	Streambed Percolation (ac-ft)	
		Retrospective
2005	9,357	428
2006	6,776	604
2007	5,716	645
2008	4,241	567
2009	4,328	474
2010	4,898	408
2011	7,141	417
2012	3,490	353
2013	3,866	429
2014	2,231	214
2015	2,692	189
2016	2,413	203
<b>Maximum</b>	<b>9,357</b>	<b>645</b>
<b>Average</b>	<b>4,762</b>	

# Proposed Revision to Address Issue No. 2

- Revise post-process calculation

Date	Recycled Water Discharge [cfs]	Streambed Recharge [cfs]	TDS in Streambed Recharge [mg/L]	Draft TM No. 6 (19-Jul19)	Summary Report (12-Nov-19)	Proposed Revision
2/11/2013	0.8	0.9	0	Included	Excluded	Included
2/16/2013	36.4	2.1	682	Included	Included	Included



# Schedule

- **Complete the proposed revisions in one month**