DECISION ID	63257	Region 8
Santa Ana River, Reach 3		

Pollutant:	**Total Dissolved Solids**
Final Listing Decision:	**Do Not List on 303(d) list (TMDL required list)**
Last Listing Cycle's Final Listing Decision:	New Decision
Revision Status	Revised
Impairment from Pollutant or Pollution:	Pollutant

Regional Board Staff Conclusion: This pollutant is being considered for placement on the CWA section 303(d) List under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status.

One (1) line of evidence is available in the administrative record to assess this pollutant. Zero (0) of the two hundred ninety-seven (297) samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination on the CWA section 303(d) List in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Zero (0) of the two hundred ninety-seven (297) samples exceed the water quality objective and this does not exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

Regional Board Staff Decision Recommendation: After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(d) list because applicable water quality standards are not being exceeded.

Line of Evidence (LOE) for Decision ID 63257, Total Dissolved Solids **Region 8**
Santa Ana River, Reach 3

LOE ID:	82353
Pollutant:	Total Dissolved Solids
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	Total Dissolved
Beneficial Use:	Warm Freshwater Habitat
Number of Samples:	297
Number of Exceedances:	0
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	Numeric data generated from 297 samples collected had no exceedences of the site-specific objective.
Data Reference:	Data for Metals and Other Inorganic Pollutants in Orange County Water District, 1994-2010.
SWAMP Data:	Non-SWAMP
Water Quality Objective/Criterion:	The site-pecific objective for Total Dissolved Solids at Santa Ana River, Reach 3 according to table 4-1 of the Santa Ana Basin plan is 700 mg/L.
Objective/Criterion Reference:	Water Quality Control Plan, Santa Ana River Basin
Evaluation Guideline:	
Guideline Reference:	
Spatial Representation:	Data was collected from the following stations: SAR-ETIWANDA-01 SAR-HAMNER-01 SAR-MISSION-01 SAR-MWDXING-01 SAR-RIVERRD-01 SAR-VANBUREN-01
Temporal Representation:	Data was collected approximately once a month from February 1994 to August 2009.
Environmental Conditions:	
QAPP Information:	The samples were collected under the Orange County Water District Main Laboratory Quality Assurance Manual. November 2009.
QAPP Information Reference(s):	

DECISION ID	65478	Region 8
Santa Ana River, Reach 3		

Pollutant:	**Benthic Community Effects**
Final Listing Decision:	**List on 303(d) list (TMDL required list)**
Last Listing Cycle's Final Listing Decision:	New Decision
Revision Status	Revised
Sources:	Source Unknown
Expected TMDL Completion Date:	2027
Impairment from Pollutant or Pollution:	Pollutant

Regional Board Staff Conclusion:

Benthic Community Effects is being considered for placement on the CWA section 303(d) List under sections 3.9 and 3.1 of the Listing Policy. Under section 3.9, an additional line of evidence associating Benthic Community Effects with a water or sediment concentration of pollutant(s) is necessary to assess listing status.

Several lines of evidence are available in the administrative record to assess this indicator. One of the 3 benthic macroinvertebrate samples exceed (fall below) the California Streams Condition Index (CSCI) threshold for likely altered biological condition. The water segment does have associated pollutant(s) samples that exceed water quality objectives.

Based on the readily available data and information, the weight of evidence provides sufficient justification for placing Benthic Community Effects in this water segment on the CWA section 303(d) List.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Pursuant to section 3.9 of the Listing Policy, the water segment exhibits significant degradation in biological populations and/or communities as compared to reference site(s) using the California Stream Condition Index.
4. Pursuant to section 3.9 of the Listing Policy, the water segment does have associated pollutant(s) samples that exceed water quality objectives.
5. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not being met.

The California Stream Condition Index is a new scoring tool for bioassessment data that is applicable statewide, accounts for a much wider range of natural variability, and provides equivalent scoring thresholds in all regions of the state. The CSCI has been used in some assessments this reporting cycle and will be used in the future for water quality assessment purposes statewide over the regional indices of biologic integrity (IBIs). If CSCI scores have not been calculated for data and only IBI scores are available, IBI scores will still be used to interpret the data.

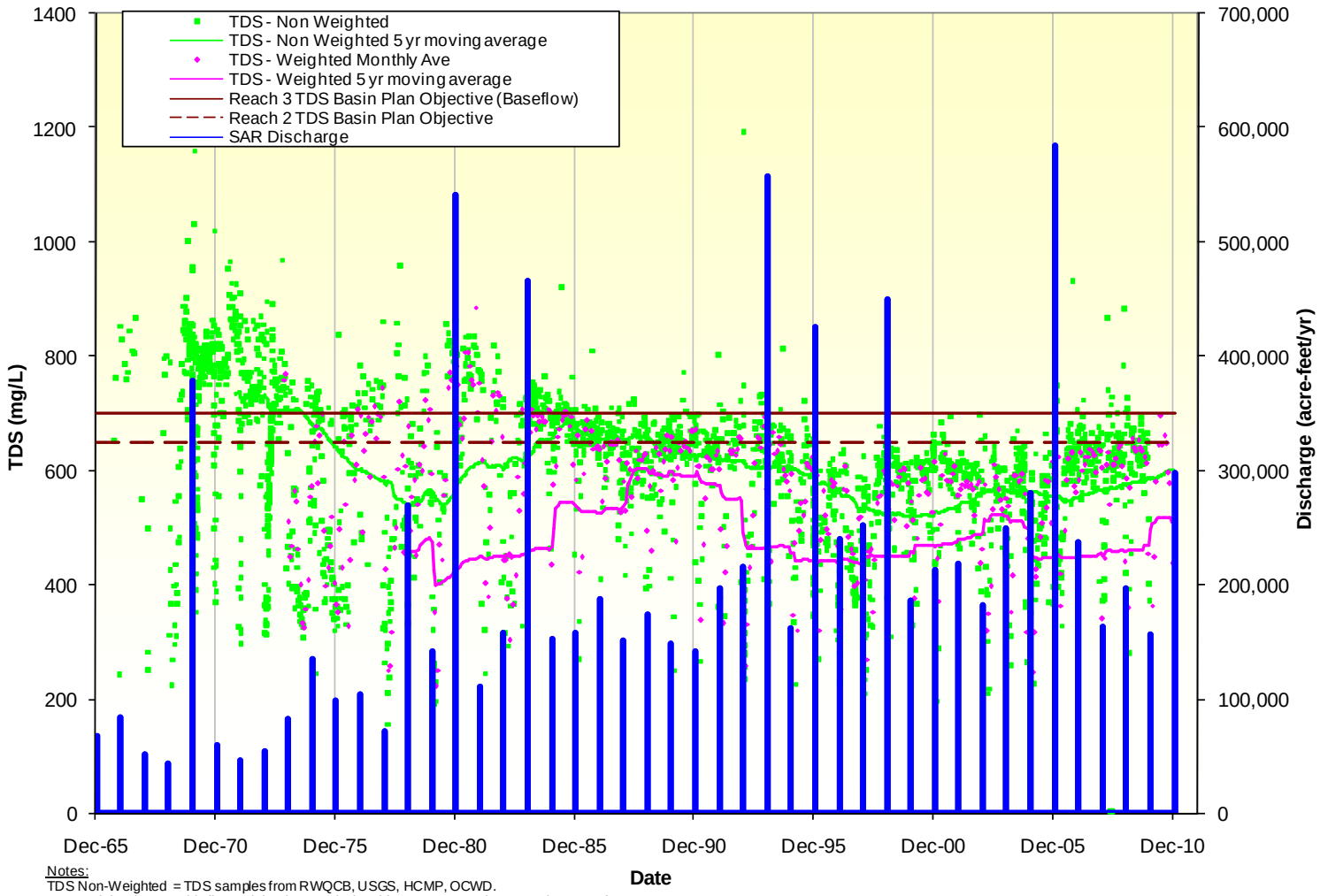
Regional Board Staff Decision Recommendation:

After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. Based on the readily available data and information, the weight of evidence provides sufficient justification for placing Benthic Community Effects in this water segment on the CWA section 303(d) List.

LOE ID:	82390
Pollutant:	Benthic-Macroinvertebrate Bioassessments
LOE Subgroup:	Population/Community Degradation
Matrix:	Water
Fraction:	None
Beneficial Use:	Warm Freshwater Habitat
Number of Samples:	3
Number of Exceedances:	1
Data and Information Type:	Benthic macroinvertebrate surveys
Data Used to Assess Water Quality:	Three samples were collected from three different sites on the Santa Ana River during 2006 and 2007 to assess benthic macroinvertebrates. One of the three samples collected had a CSCI score below the 0.79 threshold and therefore exceeds the water quality objective for the aquatic life beneficial use. The CSCI scores for the sites are 0.80 and 0.85 (2006) and 0.76 (2007).
Data Reference:	Data for Various Pollutants in the Streams of Region 8, 2009. Region 8 CSCI scores and data.
SWAMP Data:	SWAMP
Water Quality Objective/Criterion:	Inland surface water communities and populations, including vertebrate, invertebrate, and plant species, shall not be degraded as a result of the discharge of waste. Degradation is damage to an aquatic community or population with the result that balanced community no longer exists. The concentrations of toxic pollutants in the water column, sediments or biota shall not adversely affect beneficial uses.
Objective/Criterion Reference:	Water Quality Control Plan, Santa Ana River Basin
Evaluation Guideline:	The California Stream Condition Index (CSCI) is a biological scoring tool that helps aquatic resource managers translate complex data about benthic macroinvertebrates found living in a stream into an overall measure of stream health. The CSCI score is calculated by comparing the expected condition with actual (observed) results (Rehn, A.C. et al., 2015). CSCI scores range from 0 (highly degraded) to greater than 1 (equivalent to reference). CSCI scoring of biological condition are as follows (per the scientific paper supporting the development of the CSCI scoring tool): greater than or equal to 0.92 = likely intact condition, 0.91 to 0.80 = possibly altered condition, 0.79 to 0.63 = likely altered condition, less than or equal to 0.62 = very likely altered condition. Sites with scores below 0.79 are considered to have exceeded the water quality objective for the aquatic life beneficial use.
Guideline Reference:	The California Stream Condition Index (CSCI): A New Statewide Biological Scoring Tool for Assessing the Health of Freshwater Streams.
Spatial Representation:	The samples were collected from stations 801PFB019 (SMCR8_019), 801SAR110 (SMCR8_110), 801SAR151 (SMCR8_151).
Temporal Representation:	The samples were collected in June 2006 at stations 801PFB019 (SMCR8_019) and 801SAR110 (SMCR8_110) and in June 2007 at station 801SAR151 (SMCR8_151).
Environmental Conditions:	
QAPP Information:	Samples were collected for the RWB8's Probabilistic Stream Survey CY2006 and CY2007 following SWAMP protocols and data were stored in the SWAMP database.
QAPP Information Reference(s):	

LOE ID:	8263
Pollutant:	Salinity/TDS/Chlorides
LOE Subgroup:	Pollutant-Water
Matrix:	Water
Fraction:	None
Beneficial Use:	Warm Freshwater Habitat
Number of Samples:	4182
Number of Exceedances:	734
Data and Information Type:	PHYSICAL/CHEMICAL MONITORING
Data Used to Assess Water Quality:	Of the 4182 samples collected, 734 ecxeeded the Basin Plan objective. The exceedances occurred between the years 11/4/1966 through 12/27/2006
Data Reference:	2006 HCMP Database
SWAMP Data:	Non-SWAMP
Water Quality Objective/Criterion:	Santa Ana River Basin Plan Objective: 700 mg/l
Objective/Criterion Reference:	Water Quality Control Plan for the Santa Ana River Basin
Evaluation Guideline:	
Guideline Reference:	
Spatial Representation:	The samples were collected at six locations in the Santa Ana River as follows: at Etiwanda Avenue, at Hamner, at MWD Xing, at River Road, at Van Buren Blvd., and below Prado Dam.
Temporal Representation:	The samples were collected multiple times per month over several years beginning with 10/11/1966 through 2/21/2007
Environmental Conditions:	
QAPP Information:	The data's quality is deemed acceptable because it was submitted by an NPDES discharger in accordance with its Monitoring and Reporting Requirements.
QAPP Information Reference(s):	

Figure 3-1
Total Dissolved Solids (TDS) Below Prado Dam



Notes:
TDS Non-Weighted = TDS samples from RWQCB, USGS, HCMP, OCWD.
TDS Weighted = Monthly flow weighted TDS calculated from EC. Data prior to October 2003 from Watermaster, October 2003 to December 2004 from Welnc, 2005 to 2010 from SAWPA.

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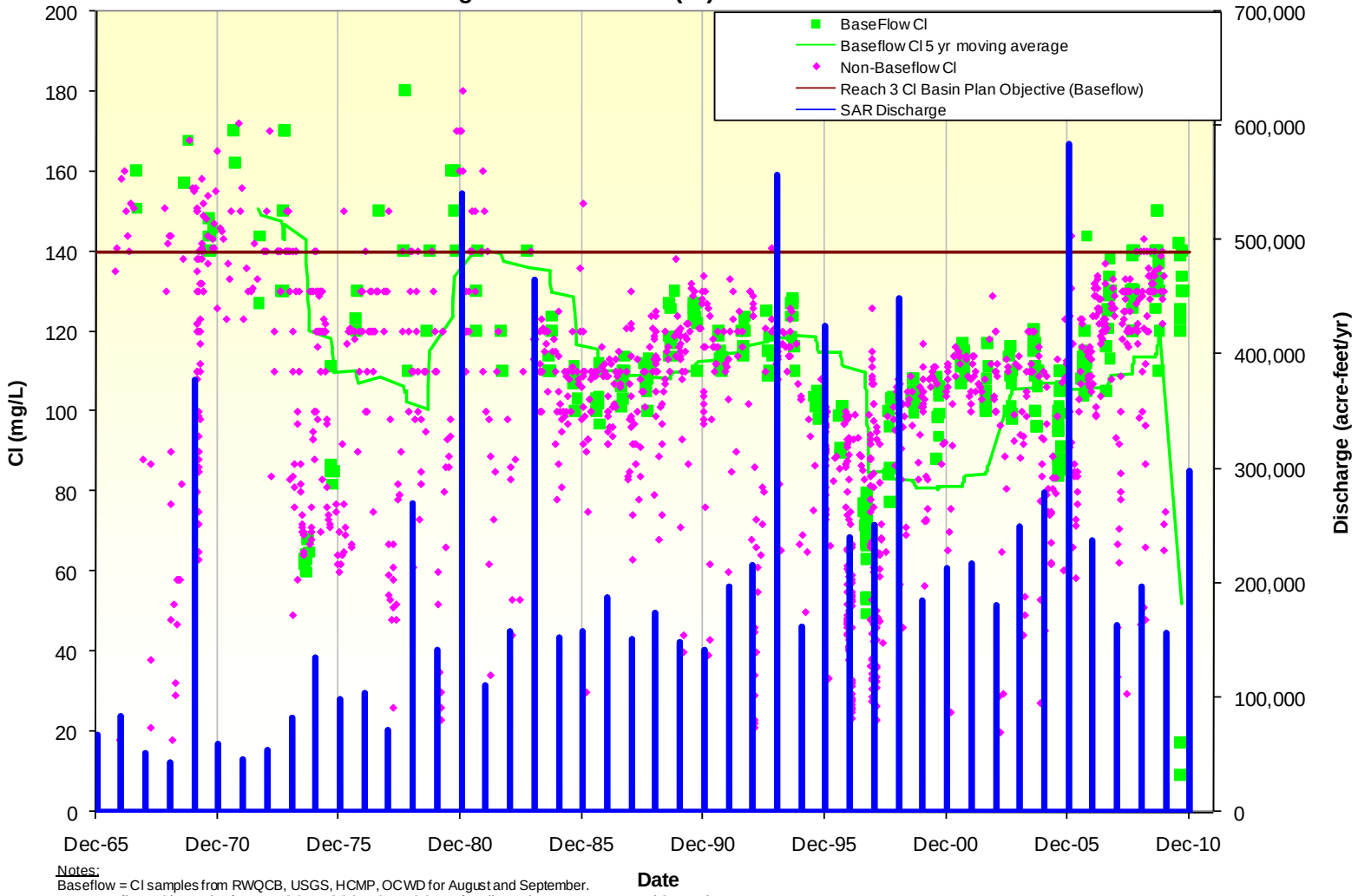
Figure 3-4. Chloride (Cl) Below Prado Dam



Notes:
Baseflow = Cl samples from RWQCB, USGS, HCMP, OCWD for August and September.
Non-Baseflow = Cl samples from RWQCB, USGS, HCMP, OCWD for all months except August and September.

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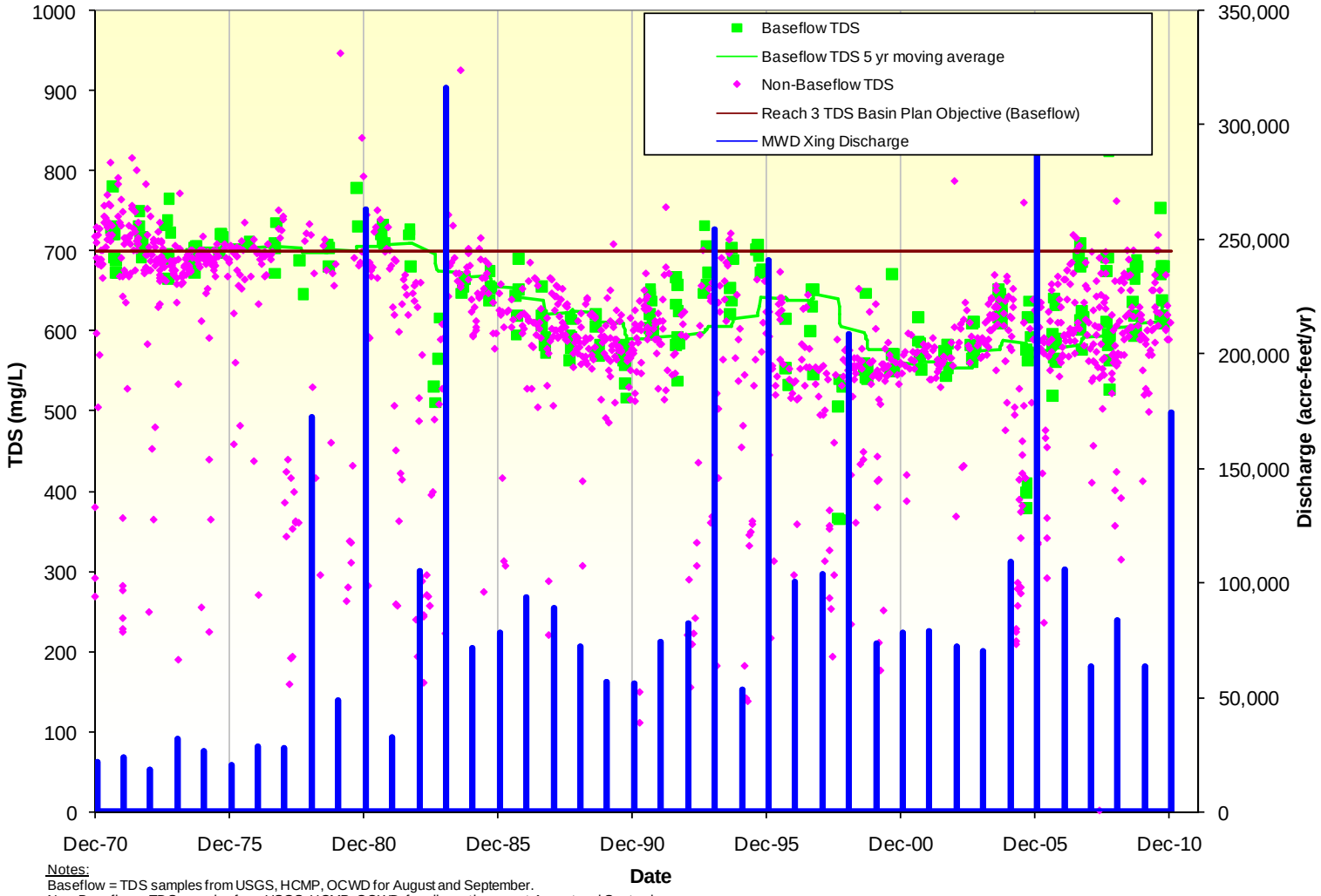
Figure 3-9. Total Dissolved Solids (TDS) MWD Crossing



Notes:
Baseflow = TDS samples from USGS, HCMP, OCWD for August and September.
Non-Baseflow = TDS samples from USGS, HCMP, OCWD for all months except August and September.

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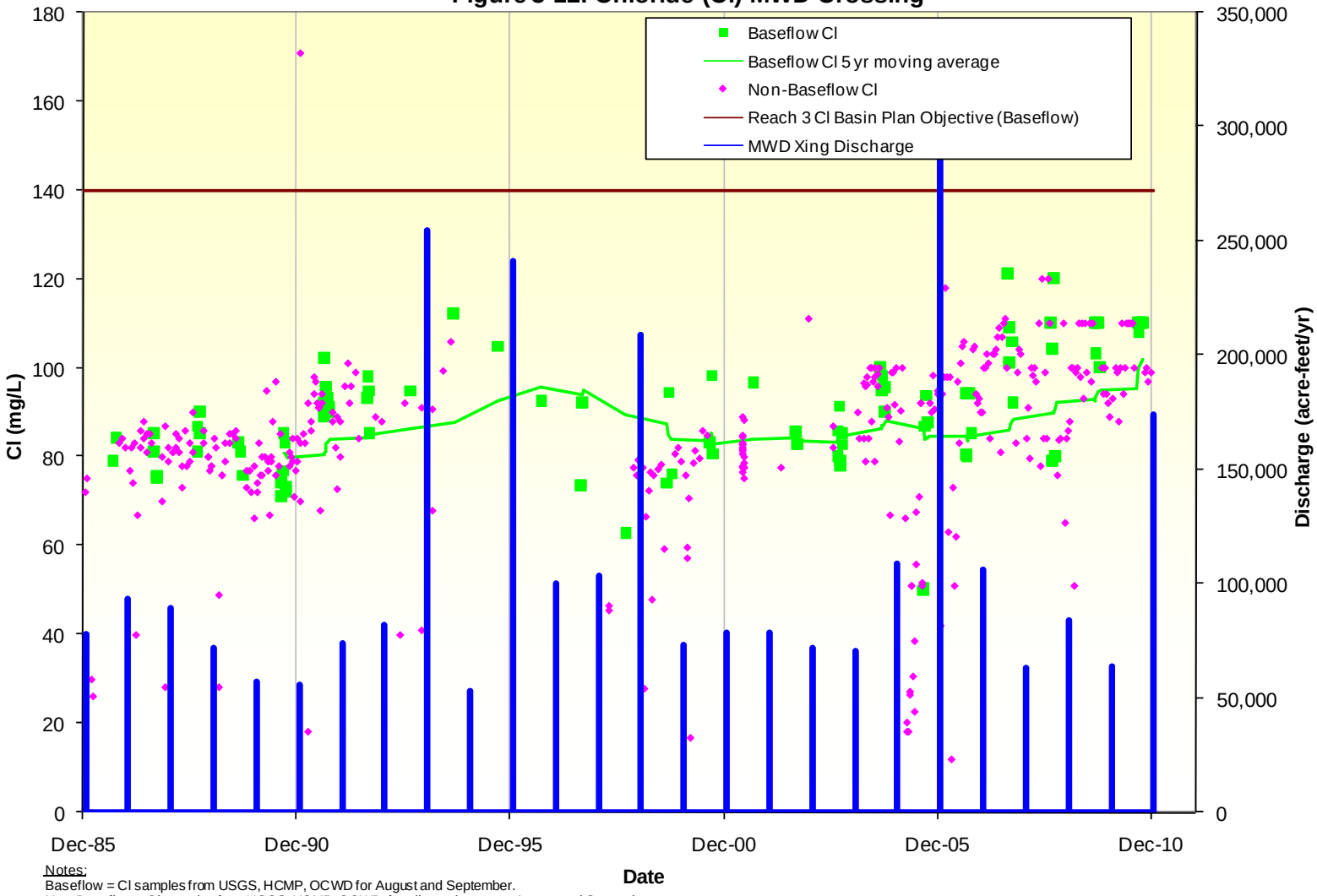
Figure 3-12. Chloride (Cl) MWD Crossing



Notes:
Baseflow = Cl samples from USGS, HCMP, OCWD for August and September.
Non-Baseflow = Cl samples from USGS, HCMP, OCWD for all months except August and September.

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