

APPENDIX E

Receiving Water Condition and Urban Runoff Assessment

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Appendix E –Receiving Water Condition and Urban Runoff Assessment

Appendices E.1 and E.2 present an assessment of receiving water conditions and the impact of urban discharges in San Dieguito River WMA during wet and dry weather, respectively. The list of receiving water conditions was developed on the basis of the 2014/2016 303(d) list, applicable TMDLs, waterbodies with special biological significance, public input, and the priority pollutants or stressors identified from current and historical receiving water monitoring data. MS4 monitoring data compiled from the LTEA and WURMP Annual Reports, as well as any applicable TMDL WQBELs, are also evaluated in relation to the receiving water conditions to determine if a priority water quality condition existed.

The tables in Appendices E.1 and E.2 are presented by WQIP Subwatershed and 303(d) listed waterbody. In order to mirror the process used by the Responsible Agencies to assess the potential receiving water conditions for each waterbody, the data are presented in the order they were evaluated. The following is an illustration of how the reader might follow the process used to assess receiving water conditions.

- ❖ **303(d) Listings (Page E-5, reading left to right)** identifies the WQIP subwatershed, applicable TMDLs, and 303(d) listed waterbody, and then presents the associated pollutants, impaired beneficial uses, and potential sources of impairment for each waterbody as identified under the 2014/2016 303(d) list.
- ❖ **Receiving Water Assessment and Conditions (Page E-8, reading left to right)**
 - **Receiving Water Assessment** identifies the WQIP subwatershed, applicable TMDLs, and 303(d) listed waterbody, and then presents public input submitted in response to the public data call and NPDES receiving water monitoring station data. The receiving water priorities identified were noted as exceeding water quality benchmarks in the 2005-2010 LTEA, the FY 11 & 12 WURMP, or both.
 - **Receiving Water Conditions** summarizes the receiving water conditions identified through the 303(d) listings and receiving water assessment, and states the applicable lines of evidence.
- ❖ **Urban Runoff Monitoring Assessment (Page E-11, reading left to right)** identifies the WQIP subwatershed and 303(d) listed waterbody, and then presents the priority pollutants at the MS4 outfall, based on the Urban Runoff Monitoring Program and identified in the 2005-2010 LTEA, FY 11&12 WURMP Annual Reports, and the FY16-19 Annual Reports evaluated per the RMAR as well as the applicable WQBELs where appropriate.

Page E-16 then restarts the assessment with an evaluation of 303(d) listings for dry weather.

APPENDIX E.1

Wet Weather Receiving Water Condition Assessment

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Table E.1 Wet Weather Receiving Water Conditions

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	303(d) Listing(s)		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Above Lake Hodges	Bacteria TMDL	Cloverdale Creek	Nitrogen	Warm Freshwater Habitat	Unknown
			Phosphorus	Warm Freshwater Habitat	Unknown
			TDS	Agricultural Supply	Unknown
		Felicitia Creek	1,4-Dioxane	Municipal & Domestic Supply	Hazardous Waste
			Aluminum	Municipal & Domestic Supply	Unknown
			Indicator Bacteria	Water Contact Recreation	Unknown
			TDS	Municipal & Domestic Supply	Unknown
			Tetrachloroethylene/ PCE	Municipal & Domestic Supply	Industrial Point Sources
			Trichloroethylene/ TCE	Municipal & Domestic Supply	Industrial Point Sources
		Green Valley Creek	Benthic Community Effects	Warm Freshwater Habitat	Hydromodification, Illicit Connections/Illegal Hook-ups/Dry Weather Flows, Source Unknown, Unknown Point Source, Urban Runoff/Storm Sewers
			Bifenthrin	Warm Freshwater Habitat	Unknown
			Chloride	Municipal & Domestic Supply	Unknown
			Chlorpyrifos	Municipal & Domestic Supply, Warm Freshwater Habitat	Unknown
			Manganese	Municipal & Domestic Supply	Unknown
			PCP	Municipal & Domestic Supply	Unknown
			Sulfates	Municipal & Domestic Supply	Unknown
			Total Nitrogen as N	Warm Freshwater Habitat	Unknown
		Kit Carson Creek	PCP	Municipal & Domestic Supply	Unknown
TDS	Municipal & Domestic Supply		Unknown		

Table E.1 Wet Weather Receiving Water Conditions (continued)

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	303(d) Listing(s)		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Above Lake Hodges	Bacteria TMDL	Lake Hodges	Color	Municipal & Domestic Supply	Unknown
			Manganese	Municipal & Domestic Supply	Unknown
			Mercury	Municipal & Domestic Supply, Commercial or Recreational Collection of Fish, Shellfish, or Organisms	Unknown
			Nitrogen	Municipal & Domestic Supply	Unknown
			pH	Municipal & Domestic Supply	Unknown
			Phosphorus	Municipal & Domestic Supply	Unknown
			Turbidity	Municipal & Domestic Supply	Unknown
San Dieguito River Above Sutherland Reservoir	Bacteria TMDL	Santa Ysabel Creek (Above Sutherland Reservoir)	Toxicity	Warm Freshwater Habitat	Unknown
		Sutherland Reservoir	Color	Municipal & Domestic Supply	Unknown
			Iron	Municipal & Domestic Supply	Unknown
			Manganese	Municipal & Domestic Supply	Unknown
			Phosphorus	Warm Freshwater Habitat	Unknown
			pH	Municipal & Domestic Supply	Unknown
Nitrogen	Warm Freshwater Habitat	Natural Sources, Source Unknown, Unknown Nonpoint Source			

Table E.1 Wet Weather Receiving Water Conditions (continued)

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	303(d) Listing(s)		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Below Lake Hodges	Bacteria TMDL	San Dieguito River, unnamed tributary below Hodges Dam	Indicator Bacteria	Water Contact Recreation	Unknown
		La Zanja Canyon	Indicator Bacteria	Water Contact Recreation	Unknown
		San Dieguito River	Benthic Community Effects	Cold Freshwater Habitat, Warm Freshwater Habitat	Agriculture, Hydromodification, Illicit Connections/Illegal Hook-ups/Dry Weather Flows, Source Unknown, Unknown Nonpoint Source, Unknown Point Source, Urban Runoff/Storm Sewers
			Indicator Bacteria	Water Contact Recreation	Agriculture, Highway/Road/Bridge Runoff, Municipal Point Sources, Urban Runoff/Storm Sewers
			Nitrogen	Warm Freshwater Habitat	Unknown
			Phosphorus	Warm Freshwater Habitat	Unknown
			TDS	Warm Freshwater Habitat	Unknown
		Toxicity	Warm Freshwater Habitat	Unknown	
San Dieguito River Below Lake Hodges	Bacteria TMDL	Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach	Indicator Bacteria	Shellfish Harvesting, Water Contact Recreation	Unknown

Table E.2. Wet Weather Receiving Water Assessment

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	Receiving Water Assessment					Receiving Water Conditions	
			Public Input	NPDES Receiving Water				Receiving Water Conditions	Line(s) of Evidence
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR		
San Dieguito River Above Lake Hodges	Bacteria TMDL	Cloverdale Creek	No Input	NA	NA	NA	New priority water quality condition due to the impairment of MUN from Manganese found at Green Valley Creek through an evaluation of MS4 data	Phosphorus and nitrogen not included as a wet weather condition because impact to WARM during wet weather is unknown. Phosphorus will be listed as contributing to impairment of WARM during dry weather.	
								TDS not included as a wet weather condition because impact to AGR during wet weather is unknown. TDS will be listed as contributing to impairment of AGR during dry weather.	
		Felicita Creek	No Input					Impairment of MUN due to Aluminum, 1-4 dioxane, TDS, Tetrachloroethylene/PCE, and Trichloroethylene/TCE in Felicita Creek during wet weather.	2014/2016 303 (d) List
								Impairment of REC-1 due to Indicator Bacteria in Felicita Creek during wet weather.	2014/2016 303 (d) List
		Green Valley Creek	No Input					Impairment of WARM due to Benthic Community Effects, Bifenthrin, Chlorpyrifos, Total Nitrogen as N in Green Valley Creek during wet weather.	2014/2016 303 (d) List
								Impairment of MUN due to Manganese in Green Valley Creek during wet weather.	2014/2016 303 (d) List, RMAR assessment of Annual Report MS4 Outfall Monitoring Data
								Impairment of MUN due to Chloride, Chlorpyrifos, PCP, and Sulfates in Green Valley Creek during wet weather.	2014/2016 303 (d) List
Kit Carson Creek	No Input	Impairment of MUN due to PCP and TDS in Kit Carson Creek during wet weather.	2014/2016 303 (d) List (MS4 program does not monitor for PCP)						
San Dieguito River Above Lake Hodges	Bacteria TMDL	Lake Hodges	No Input	SDC-TWAS-1, SDC-TWAS-2	Chlorpyrifos, Bifenthrin, BOD, COD, TSS, Turbidity, pH, Ammonia as N, Surfactants (MBAS), Toxicity (<i>H. azteca</i> acute), Fecal Coliform, Total P, Nitrate as N, TDS	Toxicity (<i>S. capricornutum</i> acute), Very Poor IBI, Fecal Coliform, <i>Enterococcus</i> , Total P, Dissolved P, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Hodges Reservoir through an evaluation of MS4 data	Impairment of COMM and SHELL due to Mercury in Lake Hodges during wet weather	2014/2016 303 (d) List
								Impairment of MUN due to Manganese in Lake Hodges during wet weather	2014/2016 303 (d) List, RMAR assessment of Annual Report MS4 Outfall Monitoring Data
								Impairment of MUN due to Color, Manganese, Nitrogen, pH, Mercury, Phosphorus, and Turbidity in Lake Hodges during wet weather	303(d)

Table E.2 Wet Weather Receiving Water Assessment (continued)

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	Receiving Water Assessment					Receiving Water Conditions	
			Public Input	NPDES Receiving Water				Receiving Water Conditions	Line(s) of Evidence
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR		
San Dieguito River Above Sutherland Reservoir	Bacteria TMDL	Santa Ysabel Creek (Above Sutherland Reservoir)	No Input	NA	NA	NA	NA	Impairment of WARM due to Toxicity in Santa Ysabel Creek during wet weather	303(d) and historical data
		Sutherland Reservoir						Exceedance of Fecal Coliform WQO at NPDES RW station during wet weather	RW monitoring data (historical and current) and Bacteria TMDL
								Impairment of WARM due to Nitrogen and Phosphorus in Sutherland Reservoir during wet weather	2014/2016 303 (d) List
								Impairment of MUN due to Color, Iron, Manganese, and pH in Sutherland Reservoir during wet weather	303(d)
San Dieguito River Below Lake Hodges	Bacteria TMDL	San Dieguito River, unnamed tributary below Hodges Dam	No Input	NA	NA	NA	NA	Impairment of REC-1 due to Indicator Bacteria in San Dieguito River, unnamed tributary below Hodges Dam during wet weather	2014/2016 303 (d) List
		La Zanja Canyon	No Input	NA	NA	NA	NA	Impairment of REC-1 due to Indicator Bacteria in La Zanja Canyon during wet weather	2014/2016 303 (d) List
		San Dieguito River	No Input	MLS (Below Lake Hodges)	TSS, Turbidity, Bifenthrin, Toxicity (<i>C. dubia</i> reproduction, <i>S. capricornutum</i> acute), Fecal Coliform, TDS	yes	NA	Nitrogen and Phosphorus not included as a wet weather condition because impact to WARM during wet weather is unknown. Nitrogen and Phosphorus will be listed as contributing to impairment of WARM during dry weather.	
								Impairment of WARM due to Benthic Community Effects, TDS, and Toxicity in San Dieguito River during wet weather	2014/2016 303 (d) List
Impairment of COLD due to Benthic Community Effects in San Dieguito River during wet weather	2014/2016 303 (d) List								
Impairment of REC-1 due to <i>Enterococcus</i> and Fecal Coliform in San Dieguito River during wet weather	303(d) and RW monitoring data (historical & current), and Bacteria TMDL								

Table E.2 Wet Weather Receiving Water Assessment (continued)

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	Receiving Water Assessment					Receiving Water Conditions	
			Public Input	NPDES Receiving Water			Receiving Water Conditions	Line(s) of Evidence	
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP			Annual Reports FY16-17/ RMAR
San Dieguito River Below Lake Hodges	Bacteria TMDL	Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach	No Input	MLS (Below Lake Hodges)	TSS, Turbidity, Bifenthrin, Toxicity (<i>C. dubia</i> reproduction, <i>S. capricornutum</i> acute), Fecal Coliform, TDS	Toxicity (<i>C. dubia</i> reproduction), Very Poor IBI, Fecal Coliform , TDS	NA	Impairment of WARM due to Toxicity in San Dieguito River during wet weather	303(d) and RW monitoring data (historical & current)
		Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth	No Input					Impairment of SHELL due to Indicator Bacteria at the Pacific Ocean Shoreline during dry weather.	303 (d)
								Impairment of REC-1 due to Indicator Bacteria at the Pacific Ocean Shoreline during wet weather	Bacteria TMDL

Table E.3 Wet Weather Urban Runoff Monitoring Assessment

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	Urban Runoff Monitoring Assessment			
			MS4 Outfall and Dry Weather Monitoring Program			TMDL(s)
			2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR	WQBELs
San Dieguito River Above Lake Hodges	Bacteria TMDL	Cloverdale Creek	TSS, Fecal Coliform	Fecal Coliform, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Green Valley Creek through an evaluation of MS4 data	<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)
		Felicita Creek				
Green Valley Creek						
Kit Carson Creek						
		Lake Hodges	TSS, Fecal Coliform	Fecal Coliform, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Hodges Reservoir through an evaluation of MS4 data	<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)
San Dieguito River Above Sutherland Reservoir	Bacteria TMDL	Santa Ysabel Creek (Above Sutherland Reservoir)	NA	NA	NA	<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)
		Sutherland Reservoir				

Table E.3 Wet Weather Urban Runoff Monitoring Assessment (continued)

WQIP Subwatershed	TMDL	303(d) Listed Waterbody	Urban Runoff Monitoring Assessment			
			MS4 Outfall and Dry Weather Monitoring Program			TMDL(s)
			2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR	WQBELs
San Dieguito River Below Lake Hodges	Bacteria TMDL	San Dieguito River, unnamed tributary below Hodges Dam	Fecal Coliform	Fecal Coliform	NA	<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)
		La Zanja Canyon				
		San Dieguito River				
		Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach	Fecal Coliform	Fecal Coliform	NA	<i>Enterococcus</i> , Fecal Coliform, Total Coliform (Order No. R9-2013-0001; Attachment E.6)
		Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth				

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Table E.4 Dry Weather Receiving Water Conditions

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	303(d) Listings		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Above Lake Hodges	Bacteria TMDL	Cloverdale Creek	Phosphorus	Warm Fresh Water Habitat	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source
			Nitrogen	Warm Fresh Water Habitat	Unknown
			TDS	Agricultural Supply	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source
		Felicitia Creek	Aluminum	Municipal & Domestic Supply	Unknown
			1,4-Dioxane	Municipal & Domestic Supply	Hazardous Waste
			Indicator Bacteria	Water Contact Recreation	Unknown
			Tetrachloroethylene/ PCE	Municipal & Domestic Supply	Industrial Point Sources
			Trichloroethylene/ TCE	Municipal & Domestic Supply	Industrial Point Sources
			TDS	Municipal & Domestic Supply	Agricultural Return Flows, Flow Regulation/Modification, Unknown Non-point Source, Unknown Point Source, Urban Runoff/Storm Sewers
		Green Valley Creek	Chloride	Municipal & Domestic Supply	Unknown
			Manganese	Municipal & Domestic Supply	Unknown
			PCP	Municipal & Domestic Supply	Unknown
			Benthic Community Effects	Warm Freshwater Habitat	Hydromodification, Illicit Connections/Illegal Hook-ups/Dry Weather Flows, Source Unknown, Unknown Point Source, Urban Runoff/Storm Sewers
			Bifenthrin	Warm Freshwater Habitat	Unknown
			Chlorpyrifos	Municipal & Domestic Supply, Warm Freshwater Habitat	Unknown

Table E.4 Dry Weather Receiving Water Conditions (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	303(d) Listings		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Above Lake Hodges	Bacteria TMDL	Green Valley Creek	Total Nitrogen as N	Warm Freshwater Habitat	Unknown
			Sulfates	Municipal & Domestic Supply	Unknown Point Source, Urban Runoff/Storm Sewers, Natural Sources, and Unknown Non-point Sources
		Kit Carson Creek	PCP	Municipal & Domestic Supply	Unknown
			TDS	Municipal & Domestic Supply	Agricultural Return Flows, Flow Regulation/Modification, Unknown Non-point Source, Unknown Point Source, Urban Runoff/Storm Sewers
		Lake Hodges	Color	Municipal & Domestic Supply	Unknown Non-point Source, Unknown Point Source, Urban Runoff/Storm Sewers
			Manganese	Municipal & Domestic Supply	Unknown
			pH	Municipal & Domestic Supply	Unknown
			Mercury	Municipal & Domestic Supply	Unknown
			Nitrogen	Municipal & Domestic Supply	Agriculture, Dairies, Unknown Non-point Source, Unknown Point Source, Urban Runoff/Storm Sewers
			Phosphorus	Municipal & Domestic Supply	Agriculture, Dairies, Unknown Non-point Source, Unknown Point Source, Urban Runoff/Storm Sewers
			Turbidity	Municipal & Domestic Supply	Unknown

Table E.4 Dry Weather Receiving Water Conditions (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	303(d) Listings		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Above Sutherland Reservoir	Bacteria TMDL	Santa Ysabel Creek (Above Sutherland Reservoir)	Toxicity	Warm Fresh Water Habitat	Unknown Non-point Source
		Sutherland Reservoir	Color	Municipal & Domestic Supply	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source
			Iron	Municipal & Domestic Supply	Unknown
			Manganese	Municipal & Domestic Supply	Unknown
			pH	Municipal & Domestic Supply	Unknown
			Phosphorus	Warm Freshwater Habitat	Unknown
			Total Nitrogen as N	Warm Freshwater Habitat	Natural, Unknown, and Unknown Point Sources

Table E.4 Dry Weather Receiving Water Conditions (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	303(d) Listings		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Below Lake Hodges	Bacteria TMDL	San Dieguito River, unnamed tributary below Hodges Dam	Indicator Bacteria	Water Contact Recreation	Unknown
		San Dieguito River, unnamed tributary below Hodges Dam	Indicator Bacteria	Water Contact Recreation	Unknown
		San Dieguito River	Indicator Bacteria	Water Contact Recreation	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source
			Benthic Community Effects	Cold Freshwater Habitat, Warm Freshwater Habitat	Agriculture, Hydromodification, Illicit Connections/Illegal Hook-ups/Dry Weather Flows, Source Unknown, Unknown Nonpoint Source, Unknown Point Source, Urban Runoff/Storm Sewers
			Nitrogen	Warm Freshwater Habitat	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source
			Phosphorus	Warm Freshwater Habitat	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source
			TDS	Warm Freshwater Habitat	Unspecified Non-point Source, Unspecified Point Source
			Toxicity	Warm Freshwater Habitat	Unknown

Table E.4 Dry Weather Receiving Water Conditions (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	303(d) Listings		
			Pollutant(s)	Impaired Beneficial Use(s)	Potential Source(s)
San Dieguito River Below Lake Hodges	Bacteria TMDL	Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach	Indicator Bacteria	Water Contact Recreation	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source
		Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth	Indicator Bacteria	Shellfish Harvesting	Unspecified Non-point Source, Urban Runoff, Unspecified Point Source

Table E.5 Dry Weather Receiving Water Assessment

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	Receiving Water Assessment							Receiving Water Conditions	
			Public Input	NPDES Receiving Water			SMC Program			Receiving Water Conditions	Line(s) of Evidence
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP	2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR		
San Dieguito River Above Lake Hodges	Bacteria TMDL	Cloverdale Creek	No Input	SDC-TWAS1, SDC-TWAS-2	BOD, TSS, Turbidity, Surfactants (MBAS), Toxicity (<i>C. dubia</i>), Very Poor IBI, O/E, <i>Enterococcus</i> , Total N, Benthic Algae, Total P	Toxicity (<i>S. capricornutum</i> acute, <i>C. dubia</i> reproduction), Very Poor IBI, <i>Enterococcus</i> , Total P, Dissolved P, TDS	No Data	Sulfates, Poor IBI, Total N, Total P, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Green Valley Creek through an evaluation of MS4 data	Impairment of WARM due to Eutrophication (Phosphorus) in Cloverdale Creek during dry weather.	303(d) and RW monitoring data (historical & current)
										Impairment of WARM due to Nitrogen in Cloverdale Creek during dry weather.	2014/2016 303(d) List
		Impairment of AGR due to TDS in Cloverdale Creek during dry weather.	303(d) and RW monitoring data (historical & current)								
		Impairment of MUN due to Aluminum, 1-4 Dioxane, Tetrachloroethylene/PCE, Trichloroethylene/TCE, and TDS in Felicita Creek during dry weather.	303(d)								
		Impairment of REC-1 due to Indicator Bacteria in Felicita Creek	2014/2016 303(d) List								
		Impairment of MUN due to TDS in Felicita Creek during dry weather.	303(d) and RW monitoring data (historical & current)								
		Impairment of MUN due to Chloride, Manganese, and Chlorpyrifos, and PCP in Green Valley Creek during dry weather.	303(d), RMAR (MS4 monitoring data)								
		Impairment of WARM due to Benthic Community Effects, Bifenthrin, and Total Nitrogen as N in Green Valley Creek during dry weather.	2014/2016 303(d) List								
Green Valley Creek	No Input										

Table E.5 Dry Weather Receiving Water Assessment (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	Receiving Water Assessment							Receiving Water Conditions	
			Public Input	NPDES Receiving Water			SMC Program			Receiving Water Conditions	Line(s) of Evidence
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP	2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR		
San Dieguito River Above Lake Hodges	Bacteria TMDL	Green Valley Creek	No Input	SDC-TWAS1, SDC-TWAS-2	BOD, TSS, Turbidity, Surfactants (MBAS), Toxicity (<i>C. dubia</i>), Very Poor IBI, O/E, <i>Enterococcus</i> , Total N, Benthic Algae, Total P	Toxicity (<i>S. capricornutum</i> acute, <i>C. dubia</i> reproduction), Very Poor IBI, <i>Enterococcus</i> , Total P, Dissolved P, TDS	No Data	Sulfates, Poor IBI, Total N, Total P, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Green Valley Creek through an evaluation of MS4 data	Impairment of MUN due to Sulfates in Green Valley Creek during dry weather.	303(d) and RW monitoring data (historical & current)
		Kit Carson Creek	No Input							Impairment of MUN due to PCP in Kit Carson Creek during dry weather.	303(d) (MS4 program does not monitor for PCP)
										Impairment of MUN due to TDS in Kit Carson Creek during dry weather.	303(d) and RW monitoring data (historical & current)
		Lake Hodges	No Input	SDC-TWAS1, SDC-TWAS-2	BOD, TSS, Turbidity, Surfactants (MBAS), Toxicity (<i>C. dubia</i>), Very Poor IBI, O/E, <i>Enterococcus</i> , Total N, Benthic Algae, Total P	Toxicity (<i>S. capricornutum</i> acute, <i>C. dubia</i> reproduction), Very Poor IBI, <i>Enterococcus</i> , Total P, Dissolved P, TDS	No Data	Sulfates, Poor IBI, Total N, Total P, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Hodges Reservoir through an evaluation of MS4 data	Impairment of MUN due to Color, Manganese, pH, and Mercury in Lake Hodges during dry weather.	303(d)
										Impairment of MUN due to Manganese in Lake Hodges during dry weather.	303(d), RMAR (MS4 monitoring data)
										Impairment of MUN due to Eutrophication (Nitrogen and Phosphorus) in Lake Hodges during dry weather.	303(d) and RW monitoring data (historical & current)
										Impairment of MUN due to Turbidity in Lake Hodges during dry weather.	303(d) and historical data
									Elevated <i>Enterococcus</i> levels at the NPDES RW station during dry weather.	RW monitoring data (historical and current)	

Table E.5 Dry Weather Receiving Water Assessment (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	Receiving Water Assessment							Receiving Water Conditions	
			Public Input	NPDES Receiving Water			SMC Program			Receiving Water Conditions	Line(s) of Evidence
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP	2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR		
San Dieguito River Above Lake Hodges	Bacteria TMDL	Lake Hodges	No Input	SDC-TWAS1, SDC-TWAS-2	BOD, TSS, Turbidity, Surfactants (MBAS), Toxicity (<i>C. dubia</i>), Very Poor IBI, O/E, <i>Enterococcus</i> , Total N, Benthic	Toxicity (<i>S. capricornutum</i> acute, <i>C. dubia</i> reproduction), Very Poor IBI, <i>Enterococcus</i> , Total P, Dissolved P,	No Data	Sulfates, Poor IBI, Total N, Total P, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Hodges Reservoir through	Poor IBI at the NPDES RW station during dry weather.	RW monitoring data (historical and current).
										Toxicity to <i>C. dubia</i> at the NPDES RW station during dry weather.	RW monitoring data (historical and current)
San Dieguito River Above Sutherland Reservoir	Bacteria TMDL	Santa Ysabel Creek (Above Sutherland Reservoir)	No Input	NA	NA	NA	NA	NA	SMC assessment Santa Ysabel Creek IBI Fair	Impairment of WARM due to Toxicity in Santa Ysabel Creek during dry weather.	303(d)
		Sutherland Reservoir	No Input	NA	NA	NA	NA	NA		Impairment of MUN due to Color, Iron, Manganese, and pH in Sutherland Reservoir during dry weather.	303(d)
										Impairment of WARM due to Eutrophication (Total Nitrogen, Phosphorus) in Sutherland Reservoir during dry weather.	303(d)

Table E.5 Dry Weather Receiving Water Assessment (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	Receiving Water Assessment							Receiving Water Conditions	
			Public Input	NPDES Receiving Water			SMC Program			Receiving Water Conditions	Line(s) of Evidence
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP	2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR		
San Dieguito River Below Lake Hodges		San Dieguito River, unnamed tributary below Hodges Dam	No Input	NA	NA	NA	NA	NA		Impairment of REC-1 due to Indicator Bacteria in San Dieguito River, unnamed tributary below Hodges Dam during dry weather	2014/2016 303 (d) List
		La Zanja Canyon	No Input	NA	NA	NA	NA	NA		Impairment of REC-1 due to Indicator Bacteria in La Zanja Canyon during dry weather	2014/2016 303 (d) List
	Bacteria TMDL	San Dieguito River	Ammonia	MLS (Below Lake Hodges)	BOD, Toxicity (<i>S. capricornutum</i> acute), Poor IBI, O/E, <i>Enterococcus</i> , Fecal Coliform, Total N, Benthic Algae, TDS	Toxicity (<i>C. dubia</i>), Very Poor IBI, <i>Enterococcus</i> , Total N, Total P, Dissolved P, TDS	Chloride, Sulfates, TSS, Very Poor IBI, O/E, Total N, Benthic Algae, TDS	NA	New priority water quality condition due to the impairment of WARM from eutrophication (phosphorus) found at San Dieguito River through an evaluation of MS4 data. San Dieguito River SMC assessment IBI very poor	Impairment of REC-1 due to <i>Enterococcus</i> in San Dieguito River during dry weather	303(d) and RW monitoring data (historical & current), and Bacteria TMDL
										Impairment of REC-1 due to Fecal Coliform in San Dieguito River during dry weather.	303(d) and RW monitoring data (historical), and Bacteria TMDL
										Impairment of unknown conditions due to Eutrophication (Ammonia)	Public Input
										Impairment of WARM due to Nitrogen and Phosphorus in San Dieguito River during dry weather.	303(d), RMAR (MS4 monitoring data)
										Impairment of WARM due to TDS in San Dieguito River during dry weather.	303(d) and RW monitoring data (historical & current)
										Impairment of COLD and WARM due to Benthic Effects in San Dieguito River during dry weather.	2014/2016 303(d) List
										Impairment of WARM due to Toxicity in San Dieguito River during dry weather.	303(d) and RW monitoring data (historical & current)

Table E.5 Dry Weather Receiving Water Assessment (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	Receiving Water Assessment							Receiving Water Conditions	
			Public Input	NPDES Receiving Water			SMC Program			Receiving Water Conditions	Line(s) of Evidence
				Applicable Receiving Water Station(s)	2005-2010 LTEA	FY 11 & 12 WURMP	2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR		
San Dieguito River Below Lake Hodges	Bacteria TMDL	Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach	No Input	MLS (Below Lake Hodges)	BOD, Toxicity-S. capricornutum acute, Poor IBI, O/E, Enterococcus, Fecal Coliform, Total N, Benthic Algae, TDS	Toxicity-C. dubia, Very Poor IBI, Enterococcus, Total N, Total P, Dissolved P, TDS	Chloride, Sulfate, TSS, Very Poor IBI, O/E, Total N, Benthic Algae, TDS	NA	NA	Impairment of REC-1 due to Indicator Bacteria at the Pacific Ocean Shoreline during dry weather.	Bacteria TMDL
		Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth	No Input							Impairment of SHELL due to Total Coliform at the Pacific Ocean Shoreline during dry weather.	303(d)

Table E.6 Dry Weather Urban Runoff Monitoring Assessment

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	Urban Runoff Monitoring Assessment ^(a)			
			MS4 Outfall and Dry Weather Monitoring Program			TMDL(s)
			2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR	WQBELs
San Dieguito River Above Lake Hodges	Bacteria TMDL	Cloverdale Creek	Chloride, Sulfates, <i>Enterococcus</i> , Fecal Coliform, Total N, Total P, TDS	Chloride, Sulfates, <i>Enterococcus</i> , Fecal Coliform, Total N, Total P, Dissolved P, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Green Valley Creek through an evaluation of MS4 data	<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)
		Felicita Creek				
Green Valley Creek						
Kit Carson Creek						
	Bacteria TMDL	Lake Hodges	Chloride, Sulfates, <i>Enterococcus</i> , Fecal Coliform, Total N, Total P, TDS	Chloride, Sulfates, <i>Enterococcus</i> , Fecal Coliform, Total N, Total P, Dissolved P, TDS	New priority water quality condition due to the impairment of MUN from Manganese found at Hodges Reservoir through an evaluation of MS4 data	<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)
San Dieguito River Above Sutherland Reservoir	Bacteria TMDL	Santa Ysabel Creek (Above Sutherland Reservoir)	NA	NA	NA	<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)
San Dieguito River Below Lake Hodges	Bacteria TMDL	San Dieguito River, unnamed tributary below Hodges Dam	NA	NA	New priority water quality condition due to the impairment of WARM from Eutrophication (Phosphorus) found at San Dieguito River through an evaluation of MS4 data. San Dieguito River SMC assessment IBI very poor	NA
		La Zanja Canyon	NA	NA		NA
		San Dieguito River	<i>Enterococcus</i> , Total P, Total N, TDS	Chloride, Sulfates, <i>Enterococcus</i> , Fecal Coliform, Total N, Total P, Dissolved P, TDS		<i>Enterococcus</i> , Fecal Coliform (Order No. R9-2013-0001; Attachment E.6)

Table E.6 Dry Weather Urban Runoff Monitoring Assessment (continued)

WQIP Sub-watershed	TMDL	303(d) Listed Water-body	Urban Runoff Monitoring Assessment ^(a)			
			MS4 Outfall and Dry Weather Monitoring Program			TMDL(s)
			2005-2010 LTEA	FY 11 & 12 WURMP	Annual Reports FY16-17/ RMAR	WQBELs
San Dieguito River Below Lake Hodges	Bacteria TMDL	Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth	<i>Enterococcus</i> , Total P, Total N, TDS	Chloride, Sulfates, <i>Enterococcus</i> , Fecal Coliform, Total N, Total P, Dissolved P, TDS	New priority water quality condition due to the impairment of WARM from Eutrophication (Phosphorus) found at San Dieguito River through an evaluation of MS4 data. San Dieguito River SMC assessment IBI very poor	<i>Enterococcus</i> , Fecal Coliform, Total Coliform (Order No. R9-2013-0001; Attachment E.6)

^(a) No MS4 Outfall and Dry Weather Monitoring Program provided in the FY 11 &12 WURMP.