ATTACHMENT 2

Proposed Basin Plan Amendments (underline/strike-out version)

[NOTE: The proposed amendments consist of the following: Remove Fecal Coliform Objectives for Water Contact Recreation (REC1) for Bays and Estuaries; Remove Fecal Coliform TMDL for REC1 for Newport Bay; Revise Compliance Schedule for Fecal Coliform TMDL for Shellfish Harvesting (SHEL) in Newport Bay; Add Certain Waters to Table 3-1 and Designate Beneficial uses for those Waters; Revise SHEL Beneficial Use Definition; Revise Table 4-1 to include Added Waters; Add Antidegradation Targets for REC2 Only Waters; Add Introductory Narrative for Chapter 6 Total Maximum Daily Loads.

These amendments are proposed to be incorporated in the Basin Plan in Chapter 3, Beneficial Uses, Chapter 4, Water Quality Objectives, Chapter 5 Implementation, and new Chapter 6 Total Maximum Daily Loads (TMDLs). If the Basin Plan amendments are approved, corresponding changes will be made as necessary to the Table of Contents, the List of Tables, page numbers, and page headers in the Plan. Formatting changes, including page numbers, page headers and table and figure identifiers may be modified for the purposes of possible re-publication of the Basin Plan. However, no substantive changes to the text, tables or figures would occur absent a Basin Plan amendment].

In the text and tables that follow, added language is underlined; deleted language is shown in strikeout type. Attachment 2 provides a clean version, showing how the amendments would appear in the Basin Plan.

CHANGES TO CHAPTER 3 – BENEFICIAL USES DEFINITIONS, SHELLFISH HARVESTING (SHEL):

Amend CHAPTER 3 – BENEFICIAL USE DEFINITIONS

~~Shellfish Harvesting **(SHEL)** waters support habitats necessary for shellfish (*e.g.*, clams, oysters, limpets, abalone, shrimp, crab, lobster, sea urchins, and mussels) collected for human consumption, commercial or sports purposes.~~

Shellfish Harvesting (SHEL) waters support habitats necessary for filter feeding shellfish (e.g., clams, oysters, and mussels) collected for human consumption, commercial, or sport purposes.

Amend CHAPTER 3 – TABLE 3-1 BENEFICIAL USES (relevant excerpts of this Table are shown below)

Table 3-1 BENEFICIAL USES - Continued

BAYS, ESTUARIES, AND TIDAL PRISMS	BENEFICIAL USE																			Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL	EST	Primary	Secondary
Los Cerritos Wetlands	+							X	X					X	X	X	X	X		X	801.11	
Anaheim Bay – Outer Bay	+					X		X	X					X	X	X	X	X			801.11	
Anaheim Bay – Seal Beach National Wildlife Refuge	+							X[1]	X					X	X	X	X	X		X	801.11	
Sunset Bay – Huntington Harbor	+					X		X	X	X					X	X	X	X			801.11	
Bolsa Bay	+							X	X	X				X	X	X	X	X	X		801.11	
Bolsa Chica Ecological Reserve	+							X	X					X	X	X	X	X		X	801.11	
Lower Newport Bay	+					X		X	X	X					X	X	X	X	X		801.11	
Upper Newport Bay	+							X	X	X				X	X	X	X	X	X	X	801.11	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

[1] Access prohibited per agency with jurisdiction

Table 3-1 BENEFICIAL USES - Continued

BAYS, ESTUARIES, AND TIDAL PRISMS	BENEFICIAL USE																			Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	MAR	SHEL	EST	Primary	Secondary
Santa Ana River Salt Marsh	+							X	X					X	X	X		X		X	801.11	
Huntington Beach Wetlands	+							X	X					X	X	X	X	X		X	801.11	
Tidal Prism of Santa Ana River (to within 1000' of Victoria Street) and Newport Slough	+							X	X	X					X	X		X		X	801.11	
Tidal Prism of San Gabriel River - River Mouth to Marina Drive	+		X					X	X	X					X	X		X	X	X	845.61	
Tidal Prism of Santa Ana-Delhi Channel – Bicycle Bridge at University Dr. at Upper Newport Bay to 1036 ft. upstream	+							u	X						X	X		X		X	801.11	
Tidal Prism of Greenville-Banning Channel – Santa Ana River Confluence to Inflatable diversion dam^	+							u	X						X	X		X		X	801.11	
Tidal Prisms of Flood Control Channels Discharging to Coastal or Bay Waters	+							X	X	X					X			X		X	801.11	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)
^ The diversion dam is 0.23 mile downstream of confluence with the Fairview Channel.

[1] Access prohibited per agency with jurisdiction
u REC 1 and/or REC 2 are not attainable uses as determined by UAA (See Table 3-2 and Chapter 3, Recreation Beneficial Uses)

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
LOWER SANTA ANA RIVER BASIN																				
Santa Ana River																				
Reach 1 – Tidal Prism to 17th Street in Santa Ana	+							X[2]	X		I				I				801.11	
Reach 2 – 17th Street in Santa Ana to Prado Dam	+	X			X			X	X		X				X	X	X		801.11	801.12
Aliso Creek	X				X			X	X		X				X	X			845.63	
Carbon Canyon Creek	X				X			X	X		X				X	X			845.63	
Santiago Creek Drainage																				
Santiago Creek																				
Reach 1 – below Irvine Lake	X				X			X[2]	X		X				X				801.12	801.11
Reach 2 – Irvine Lake (see Lakes, pg. 3-xx																				
Reach 3 – Irvine Lake to Modjeska Canyon	I				I			I	I		I				I	X			801.12	
Reach 4 – in Modjeska Canyon	X				X			X	X		X				X	X			801.12	
Silverado Creek	X				X			X	X		X				X	X			801.12	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

[2] Access prohibited in all or part per agency with jurisdiction

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Black Star Creek	I				I			I	I		I				I	X			801.12	
Ladd Creek	I				I			I	I		I				I	I			801.12	
San Diego Creek Drainage																				
San Diego Creek																				
Reach 1 – below Jeffrey Road	+							X[2]	X		X				X	X			801.11	
Reach 2 – above Jeffrey Road to Headwaters	+				I			I	I		I				I	X			801.11	
Other Tributaries: Bonita Creek, Serrano Creek, Peters Canyon Wash, Hicks Canyon Wash, Bee Canyon Wash, Borrego Canyon Wash, Agua Chinon Wash, Laguna Canyon Wash, Rattlesnake Canyon Wash, Sand Canyon Wash*, and other Tributaries to these Creeks	+				I			I	I		I				I	X			801.11	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

[2] Access prohibited in all or part per agency with jurisdiction
~~* Sand Canyon Wash also has RARE Beneficial Use~~

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Santa Ana-Delhi Channel																				
Reach 1 – upper boundary of Tidal Prism to intersection of Sunflower Ave./Flower St.	+							u	X		X				X	X			801.10	
Reach 2 – Sunflower Ave./Flower St. intersection to Warner Avenue	+							u	X		X				X				801.10	
Big Canyon Creek	I							X	X		X				X	X			801.10	
Newport Coast Drainage																				
Muddy Canyon Creek	I							I	X		I				X	X			801.11	
Los Trancos Creek	I							X	X		X				X				801.11	
Buck Gully Creek	X							X	X		X				X				801.11	
Greenville Banning Channel																				
Reach 1-Inflatable Diversion Dam to California Street	+							u	u		X				X				801.10	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text

u REC 1 and/or REC 2 are not attainable uses as determined by UAA (See Table 3-2 and Chapter 3, Recreation Beneficial Uses)

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
San Gabriel River Drainage																				
Coyote Creek (within Santa Ana Regional Boundary)	X							X	X		X				X				845.61	
Carbon Creek	I				X			I	X		I				X				845.61	
Fullerton Creek	+							I	X		I				X				845.61	
Brea Creek	I							I	X		I				X				845.61	
UPPER SANTA RIVER BASIN																				
Santa Ana River																				
Reach 3 – Prado Dam to Mission Blvd. in Riverside	+	X			X			X	X		X				X	X	X		801.21	801.21, 801.25
Reach 4 – Mission Blvd. in Riverside to San Jacinto Fault in San Bernardino	+				X			X[3]	X		X				X	X	X		801.27	801.44

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

u REC 1 and/or REC 2 are not attainable uses as determined by UAA (See Table 3-2 and Chapter 3, Recreation Beneficial Uses)

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Reach 5 – San Jacinto Fault in Bernardino to Seven Oaks Dam[t]	X*	X			X			X[3]	X		X				X	X			801.52	801.57
Reach 6 – Seven Oaks Dam to Headwaters (see also Individual Tributary Streams)	X	X			X		X	X	X				X		X	X	X		801.72	
San Bernardino Mountain Streams																				
Mill Creek Drainage																				
Mill Creek																				
Reach 1 – Confluence with Santa Ana River to Bridge Crossing Route 38 at Upper Powerhouse	I	I			I			I	I				I		I	I			801.58	
Reach 2 – Bridge Crossing Route 38 at Upper Powerhouse to Headwaters	X	X			X		X	X	X				X		X				801.58	
Mountain Home Creek	X				X		X	X	X				X		X		X		801.58	
Mountain Home Creek, East Fork	X				X	X	X	X	X				X		X		X		801.70	
Monkeyface Creek	X				X			X	X				X		X				801.70	
Alger Creek	X				X			X	X				X		X				801.70	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
\+ Excepted from MUN (see text)

* MUN applies upstream of Orange Avenue (Redlands); downstream, water is excepted from MUN
t Reach 5 uses are intermittent upstream of Waterman Avenue
[3] Access prohibited in some portions per agency with jurisdiction

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																	Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Baldwin Lake Drainage																				
Shay Creek	X				X			X	X				X		X	X	X		801.73	
Other Tributaries to Baldwin Lake: Sawmill, Green, and Caribou Canyons and other Tributaries to these Creeks	I				I			I	I				I		I				801.73	
Other Streams Draining to Santa Ana River (Mountain Reaches‡)																				
Cajon Canyon Creek	X				X			X	X				X		X	X	X		801.52	801.51
Cajon Canyon Creek Valley Reach	X				X			I	X		I				X	X			801.52	
City Creek	X	X			X			X	X				X		X	X	X		801.57	
Devil Canyon Creek	X				X			X	X				X		X	X			801.57	
East Twin and Strawberry Creeks	X	X			X			X	X				X		X		X		801.57	
Waterman Canyon Creek	X				X			X	X				X		X				801.57	
Fish Creek	X				X			X	X				X		X		X		801.57	
Forsee Creek	X				X			X	X				X		X		X		801.72	
Plunge Creek	X	X			X			X	X				X		X	X			801.72	
Barton Creek	X	X			X			X	X				X		X				801.72	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use

‡ The division between Mountain and Valley reaches occurs at the base of the foothills of the San Bernardino Bernardino or San Gabriel Mountains

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
San Gabriel Mountain Streams (Mountain Reaches‡)																				
San Antonio Creek	X	X	X	X	X		X	X	X				X		X				801.23	
Lytle Creek (South, Middle, and North Forks) and Coldwater Canyon Creek	X	X	X	X	X		X	X	X				X		X	X	X		801.41	801.42, 801.52, 801.59
Lytle Creek Valley Reach	X				X			I	X		I				X	X			801.21	
Day Canyon Creek	X			X	X			X	X				X		X				801.21	
East Etiwanda Creek	X			X	X			X	X				X		X	X			801.21	
Valley Reaches ‡ of Above Streams	I				I			I	I		I				I				801.21	
Cucamonga Creek																				
Reach 1 – Confluence with Mill Creek to 23rd St. in Upland	+				X			u3	X			X			X				801.21	
Reach 2 (Mountain Reach‡) - 23rd St. In Upland to headwaters	X		X	X	X		X	X	X				X		X	X	X		801.24	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

‡ The division between Mountain and Valley reaches occurs at the base of the foothills of the San Bernardino or San Gabriel Mountains
u REC 1 and/or REC 2 are not attainable as determined by a UAA.(See Table 3-2 and Chapter 3, Recreation Beneficial Uses)
3 Access prohibited in some portions per agency with jurisdiction

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Mill Creek (Prado Area)	+							X	X		X				X	X			801.25	
Other Tributaries (Mountain Reaches ‡): San Sevaine, Deer, Duncan Canyon, Henderson Canyon, Bull, Fan, Demens, Thorpe, Angalls, Telegraph Canyon, Stoddard Canyon, Icehouse Canyon, Cascade Canyon, Cedar, Falling Rock, Kerkhoff, and Cherry Creeks and other Tributaries to these Creeks	I				I			I	I				I		I				801.21	801.23
Valley Reaches‡ of Above Streams	I				I			I	I		I				I				801.21	801.43
San Timoteo Area Streams																				
San Timoteo Creek																				
Reach 1A – Santa Ana River Confluence to Barton Road	+	I						I[3]	I		I				I	X			801.52	
Reach 1B – Barton Road to Gage at San Timoteo Canyon Rd.	+	I			I			I[3]	I		I				I	X			801.52	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

‡ The division between Mountain and Valley reaches occurs at the base of the foothills of the San Bernardino or San Gabriel Mountains
[3] Access prohibited in some portions per agency with jurisdiction

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Reach 2 – Gage at San Timoteo Creek to confluence with Yucaipa Creek	+				X			X	X		X				X	X			801.61	
Reach 3 – Confluence with Yucaipa Creek to confluence with little San Gorgonio and Noble Creeks (Headwaters of San Timoteo Creek)	+				X			X	X		X				X	X			801.61	
Oak Glen, Potato Canyon, and Birch Creeks	X				X			X	X		X				X				801.67	
Little San Gorgonio Creek	X				X			X	X				X		X				801.69	801.62, 801.63
Yucaipa Creek	I				I			I	I		I				I	X			801.67	801.61, 801.62, 801.64
Other Tributaries to these Creeks-Valley Reaches‡	I				I			I	I		I				I				801.62	801.52, 801.53
Other Tributaries to these Creeks-Mountain Reaches‡	I				I			I	I				I		I				801.69	801.67
Anza Park Drain	X							X	X		X				X	X	X		801.27	
Sunnyslope Channel	X							X	X		X				X	X	X		801.27	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

‡ The division between Mountain and Valley reaches occurs at the base of the foothills of the San Bernardino or San Gabriel Mountains
3 Access prohibited in some portions per agency with jurisdiction

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Tequesquite Arroyo (Sycamore Creek)	+				X			X	X		X				X	X	X		801.27	
Prado Area Streams																				
Chino Creek																				
Reach 1A – Santa Ana River confluence to downstream of confluence with Mill Creek (Prado Area)	+							X	X		X				X	X			801.21	
Reach 1B – Confluence with Mill Creek (Prado Area) to beginning of concrete-lined channel south of Los Serranos Rd.***	+							X	X		X				X	X			801.21	
Reach 2 – Beginning of concrete-lined channel south of Serranos Rd. to confluence with San Antonio Creek	+				X			X[3]	X			X			X				801.21	
Temescal Creek																				
Reach 1a – Lincoln Ave. to Arlington Channel confluence	+							u[3]	X		X				X				801.25	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
\+ Excepted from MUN (see text)

*** The confluence of Mill Creek is in Chino Creek, Reach 1B

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Reach 1b – Arlington Channel confluence to 1400 ft. upstream of Magnolia Ave.	+							u[3]	X		X				X				801.25	
Reach 2 –1400 ft. upstream of Magnolia Ave. to Lee Lake	+	X	X		X			X	X		X				X	X			801.25	
Reach 3 – Lee Lake (see Lakes, Page 3-41)																				
Reach 4 – Lee Lake to Mid-Section Line of Section 17 (downstream end of freeway cut)	+	X			X			X	X		X				X	X			801.34	
Reach 5 – Mid-section line of Section 17 (downstream end of freeway cut) to Elsinore Ground-water Subbasin Boundary	+	X			X			X	X		X				X	X			801.35	
Reach 6 – Elsinore Groundwater Subbasin Boundary to Lake Elsinore Outlet	+				I			I	I		I				I				801.35	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
\+ Excepted from MUN (see text)

[3] Access prohibited in some portions per agency with jurisdiction
u REC 1 and/or REC 2 are not attainable uses as determined by UAA (See Table 3-2 and Chapter 3, Recreation Beneficial Uses)

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Coldwater Canyon Creek	X	X			X			X	X		X				X		X		801.32	
Bedford Canyon Creek	+				I			I	I		I				I	X			801.32	
Dawson Canyon Creek	I				I			I	I		I				I				801.32	
Other Tributaries to these Creeks	I				I			I	I		I				I				801.32	
SAN JACINTO RIVER BASIN																				
San Jacinto River																				
Reach 1 – Lake Elsinore to Canyon Lake	I	I			I			I	I		I				I				801.32	802.31
Reach 2 – Canyon Lake (see Lakes Pg. 3-42)																				
Reach 3 – Canyon Lake to Nuevo Road	+	I			I			I	I		I				I	X			802.11	
Reach 4 – Nuevo Road to North-South Mid-Section Line, T4S/R 1W-S8	+	I			I			I	I		I				I	X			802.21	802.21
Reach 5 – North-South Mid-Section Line, T4S/R1 W-S8, to Confluence With Poppet Creek	+	I			I			I	I		I				I	X			802.21	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text

Table 3-1 BENEFICIAL USES - Continued

INLAND SURFACE STREAMS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
Reach 6 – Poppet Creek to Cranston Bridge	I	I			I			I	I		I				I				802.21	
Reach 7 – Cranston Bridge to Lake Hemet	X	X			X			X	X				X		X		X		801.21	
Bautista Creek – Headwaters to Debris Dam	X	X			X			X	X				X		X	X			802.21	802.23
Strawberry Creek and San Jacinto River, North Fork	X	X			X			X	X				X		X	X	X		801.21	
Fuller Mill Creek	X	X			X			X	X				X		X	X			802.22	
Stone Creek	X	X			X			X	X				X		X				802.21	
Indian Creek	X				X			X	X				X		X	X	X		802.21	
Other Tributaries: Logan, Black Mountain, Juaro Canyon, ~~Indian,~~ Herkey, Poppet*, and Potrero* Creeks and other Tributaries to these Creeks		I			I			I	I		I				I	X			802.21	802.22
Salt Creek	+							I	I		I				I				802.12	
Goodhart Canyon, St. John's Canyon, and Cactus Valley Creeks	I	I						I	I		I				X				802.15	
Perris Valley Channel	+							I	X		I				X	X			802.11	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

* Poppet and Potrero creeks have the RARE Beneficial Use

Table 3-1 BENEFICIAL USES - Continued

LAKES AND RESERVOIRS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
UPPER SANTA ANA RIVER BASIN																				
Baldwin Lake	+							I	I		I		I	I	I	I			801.73	
Big Bear Lake	X	X			X			X	X	X	X		X		X	X			801.71	
Erwin Lake	X							X	X				X	X	X	X			801.73	
Evans, Lake	+							X	X		X		X		X				801.27	
Jenks Lake	X	X			X			X	X	X			X		X				801.72	
Lee Lake	+	X	X		X			X	X		X				X				802.34	
Mathews, Lake	X	X	X	X	X			X[4]	X	X	X				X	X			802.33	
Mockingbird Reservoir	+	X						X[4]	X		X				X				802.26	
Norconian, Lake	+							X	X		X				X				802.25	
Prado Park Lake	+							X	X	X	X				X				801.21	
LOWER SANTA ANA RIVER BASIN																				
Anaheim Lake	+				X			X	X	X	X				X				801.11	
Irvine Lake (Santiago Reservoir)	X	X						X	X	X	X		X		X				801.12	
Peters Canyon, Rattlesnake, Sand Canyon, and Siphon Reservoirs	+	X						X[4]	X		X				X				801.11	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

[4] Access prohibited per agency/company with jurisdiction

Table 3-1 BENEFICIAL USES - Continued

LAKES AND RESERVOIRS	BENEFICIAL USE																		Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
SAN JACINTO RIVER BASIN																				
Canyon Lake (Railroad Canyon Reservoir)	X	X			X			X	X	X	X				X				802.11	802.12
Elsinore, Lake	+							X	X	X	X				X				802.31	
Fulmor, Lake	X	X						X	X		X		X		X				802.21	
Hemet, Lake	X	X			X		X	X	X	X	X		X		X	X	X		802.22	
Mystic Lake	I							I	I		I			X	X	X			802.11	
Perris, Lake	X	X	X	X	X			X	X	X	X		X		X	X			802.11	

X Existing or Potential Beneficial Use .
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

Table 3-1 BENEFICIAL USES - Continued

WETLANDS (INLAND)	BENEFICIAL USE																	Hydrologic Unit	
	MUN	AGR	IND	PROC	GWR	NAV	POW	REC1	REC2	COMM	WARM	LWRM	COLD	BIOL	WILD	RARE	SPWN	EST	Primary	Secondary
San Joaquin Freshwater Marsh**	+							X	X		X			X	X	X			801.11	801.14
Shay Meadows	I							I	I				I		I	X	X		801.73	
Stanfield Marsh**	X							X	X				X		X	X			801.71	
Prado Basin Management Zone[@]	+							X	X		X				X	X			802.21	
San Jacinto Wildlife Preserve**	+							X	X		X			X	X	X			802.21	802.14
Glen Helen	X							X	X		X				X				801.59	
Mill Creek Wetlands	+							X	X		X				X				801.21	
Gunnerson Pond	+							X	X		X				X	X			801.35	

X Existing or Potential Beneficial Use
I Intermittent Beneficial Use
+ Excepted from MUN (see text)

** This is a created wetland as defined in the wetland discussion
[@] The Prado Basin Management Zone includes the Prado Flood Control Basin, a created wetland as defined in the Basin Plan (see Chapter 3, pages 3-4 through 3-7)

CHANGES TO CHAPTER 4- WATER QUALITY OBJECTIVES

Amend CHAPTER 4 – WATER QUALITY OBJECTIVES, ENCLOSED BAYS AND ESTUARIES – insert the following between the Oxygen, Dissolved and pH objectives:

Pathogen Indicator Bacteria

Bays and Estuaries

REC-1 ~~Fecal coliform: log mean less than 200 organisms/100mL based on five or more samples/30 day period, and not more than 10% of the samples exceed 400 organisms/100mL for any 30-day period.~~ Enterococcus: geometric mean less than or equal to 35 organisms/100mL, based on at least 5 samples in a discrete 30-day (monthly) period.

Note: ~~The USEPA promulgated enterococci criteria for coastal recreation waters, including enclosed bays and estuaries, in 2004 (40 CFR 131.41). The established geometric mean enterococci value is 35/100mL. No averaging period was specified, leaving that determination to the state's discretion. USEPA also identified single sample maximum enterococci values, which vary based on the frequency of use of the REC1 waters. The Regional Board intends to consider a Basin Plan amendment in the future to formally recognize the enterococci criteria established for enclosed bays and estuaries, to define an appropriate averaging period for the application of the geometric mean criterion, and to define appropriate application of the single sample maximum values to varying areas within enclosed bays and estuaries in the Region.~~ The enterococcus geometric mean objective specified above was promulgated by USEPA in 2004 (40 CFR 131.41), based on USEPA's 1986 Ambient Water Quality Criteria for Bacteria. In 2012, USEPA published revised national Recreational Water Quality Criteria. The State Water Board is developing a statewide REC1 bacteria objectives policy to implement the 2012 Criteria. These statewide objectives, which are expected to be adopted in 2017, may supersede the enterococcus objective specified above.

Amend CHAPTER 4 – Table 4-1 WATER QUALITY OBJECTIVES, revise list of waters shown in the following pages:

Table 4-1 WATER QUALITY OBJECTIVES - Continued

INLAND SURFACE STREAMS	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
San Diego Creek Drainage									
San Diego Creek									
Reach 1 – below Jeffrey Road	1500	---	---	---	13	---	90	801.11	
Reach 2 – above Jeffrey Road to Headwaters	720	---	---	---	5	---	---	801.11	
Other Tributaries: Bonita Creek, Serrano Creek, Peters Canyon Wash, Hicks Canyon Wash, Bee Canyon Wash, Borrego Canyon Wash, Agua Chinon Wash, Laguna Canyon Wash, Rattlesnake Canyon Wash, Sand Canyon Wash and other Tributaries to these Creeks+	---	---	---	---	---	---	---	801.11	
Newport Bay Drainage									
Santa Ana-Delhi Channel									
Reach 1 – upper boundary of Tidal Prism to intersection of Sunflower Ave./Flower St. Intersection+	---	---	---	---	---	---	---	801.10	

\+ Numeric objectives have not been established; narrative objectives apply.

Table 4-1 WATER QUALITY OBJECTIVES - Continued

INLAND SURFACE STREAMS	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
Reach 2 – above Sunflower Ave./Flower St. intersection to Warner Avenue+	---	---	---	---	---	---	---	801.10	
Big Canyon Creek+	---	---	---	---	---	---	---	801.10	
Newport Coast Drainage									
Muddy Canyon Creek+	---	---	---	---	---	---	---	801.11	
Los Trancos Creek+	---	---	---	---	---	---	---	801.11	
Buck Gully Creek+	---	---	---	---	---	---	---	801.11	
Greenville Banning Channel									
Reach 1-Inflatable Diversion Dam to California Street+	---	---	---	---	---	---	---	801.10	
San Gabriel River Drainage									
Coyote Creek (within Santa Ana Regional Boundary)+	---	---	---	---	---	---	---	845.61	
Carbon Creek+	---	---	---	---	---	---	---	845.61	
Fullerton Creek+	---	---	---	---	---	---	---	845.61	
Brea Creek+	---	---	---	---	---	---	---	845.61	

\+ Numeric objectives have not been established; narrative objectives apply.

Table 4-1 WATER QUALITY OBJECTIVES - Continued

INLAND SURFACE STREAMS	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
Baldwin Lake (see Lakes, pg. 4-51)									
Baldwin Lake Drainage									
Shay Creek+	---	---	---	---	---	---	---	801.73	
Other Tributaries to Baldwin Lake: Sawmill, Green, and Caribou Canyons and other Tributaries to these Creeks+	---	---	---	---	---	---	---	801.73	
Other Streams Draining to Santa Ana River (Mountain Reaches‡)									
Cajon Canyon Creek	200	100	30	10	1	20	5	801.52	
Cajon Canyon Creek Valley Reach+	---	---	---	---	---	---	---	802.52	
City Creek	200	115	30	10	1	20	5	801.57	
Devil Canyon Creek	275	125	35	20	1	25	5	801.57	
East Twin and Strawberry Creeks	475	---	---	---	---	---	---	801.57	
Waterman Canyon Creek	250	---	---	---	---	---	---	801.57	
Fish Creek	200	100	30	10	1	20	5	801.57	
Forsee Creek	200	100	30	10	1	20	5	801.72	
Plunge Creek	200	100	30	10	1	20	5	801.72	

\+ Numeric objectives have not been established; narrative objectives apply. .

‡ The division between Mountain and Valley reaches occurs at the base of the foothills of the San Bernardino or San Gabriel Mountains.

Table 4-1 WATER QUALITY OBJECTIVES - Continued

INLAND SURFACE STREAMS	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
Barton Creek	200	100	30	10	1	20	5	801.72	
Bailey Canyon Creek	200	---	---	---	---	---	---	801.72	
Kimbark Canyon, East Fork Kimbark Canyon, Ames Canyon and West Fork Cable Canyon Creeks	325	---	---	---	---	---	---	801.52	
Valley Reaches‡ of Above Streams with the exception of Cajon Canyon Creek	(Water Quality Objectives Correspond to Underlying GW Basin Objectives)							801.52	
Other Tributaries (Mountain Reaches‡): Alder, Badger Canyon, Bledsoe Gulch, Borea Canyon, Breakneck, Cable Canyon, Cienaga Seca, Cold, Converse, Coon, Crystal, Deer, Elder, Fredalba, Frog, Government, Hamilton, Heart Bar, Hemlock, Keller, Kilpecker, Little Mill, Little Sand Canyon, Lost, Meyer Canyon, Mile, Monroe Canyon, Oak, Rattlesnake, Round Cienaga, Sand, Schneider, Staircase, Warm Springs Canyon and Wild Horse Creeks, and other tributaries to those Creeks	200	100	30	10	1	20	5	801.72	801.71, 801.57

‡ The division between Mountain and Valley reaches occurs at the base of the foothills of the San Bernardino or San Gabriel Mountains.

Table 4-1 WATER QUALITY OBJECTIVES – Continued

INLAND SURFACE STREAMS	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
San Gabriel Mountain Streams (Mountain Reaches‡)									
San Antonio Creek	225	150	20	6	4	25	5	801.23	
Lytle Creek (South, Middle, and North Forks) and Coldwater Canyon Creek	200	100	15	4	4	25	5	801.41	801.42, 801.52, 801.59
Lytle Creek Valley Reach+	---	---	---	---	---	---	---	801.21	
Day Canyon Creek	200	100	15	4	4	25	5	801.21	
East Etiwanda Creek	200	100	15	4	4	25	5	801.21	
Valley Reaches‡ of Above Streams	(Water Quality Objectives Correspond to Underlying GW Basin Objectives)							801.21	
Cucamonga Creek									
Reach 1 – Confluence with Mill Creek to 23rd St. in Upland+	---	---	---	---	---	---	---	801.21	
Reach 2 (Mountain Reach‡) – 23rd St. in Upland to headwaters	200	100	15	4	4	25	5	801.24	
Mill Creek (Prado Area)+	---	---	---	---	---	---	---	801.25	

‡ The division between Mountain and Valley reaches occurs at the base of the foothills of the San Bernardino or San Gabriel Mountains.

Table 4-1 WATER QUALITY OBJECTIVES - Continued

INLAND SURFACE STREAMS	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
Bautista Creek – Headwaters to Debris Dam	250	130	25	20	1	30	5	802.21	802.23
Strawberry Creek and San Jacinto River, North Fork	150	100	10	15	1	20	5	802.21	
Fuller Mill Creek	150	100	10	15	1	20	5	802.22	
Stone Creek	150	100	10	15	1	20	5	802.21	
Indian Creek+	---	---	---	---	---	---	---	802.21	
Other Tributaries: Logan, Black Mountain, Juaro Canyon, ~~Indian~~, Herkey, Poppet and Potrero Creeks, and other Tributaries to these Creeks	150	70	10	12	1	15	5	802.12	802.22
Salt Creek+	---	---	---	---	---	---	---	802.12	
Goodhart Canyon, St. John's Canyon, and Cactus Valley Creeks+	---	---	---	---	---	---	---	802.15	
Perris Valley Channel+	---	---	---	---	---	---	---	802.11	

+ Numeric objectives have not been established; narrative objectives apply.

Table 4-1 WATER QUALITY OBJECTIVES - Continued

LAKES AND RESERVOIRS	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
UPPER SANTA ANA RIVER BASIN									
Baldwin Lake*+	---	---	---	---	---	---	---	801.73	
Big Bear Lake**	175	125	20	10	0.15	10	---	801.71	
Erwin Lake+	---	---	---	---	---	---	---	801.73	
Evans Lake	490	---	---	---	---	---	---	801.27	
Jenks Lake	200	100	30	10	1	20	---	801.72	
Lee Lake+	---	---	---	---	---	---	---	801.34	
Mathews, Lake	700	325	100	90	---	290	---	801.33	
Mockingbird Reservoir	650	---	---	---	---	---	---	801.26	
Norconian, Lake	1050	---	---	---	---	---	---	801.25	
Prado Park Lake+	---	---	---	---	---	---	---	801.21	
LOWER SANTA ANA RIVER BASIN									
Anaheim Lake	600	---	---	---	---	---	---	801.11	
Irvine Lake (Santiago Reservoir)	730	360	110	130	6	310	---	801.12	
Peters Canyon, Rattlesnake, Sand Canyon, and Siphon Reservoirs	720	---	---	---	---	---	---	801.11	

* Fills occasionally with storm flows; may evaporate completely
** Additional Objective: 0.15 mg/L Phosphorus
\+ Numeric objectives have not been established; narrative objectives apply.

Table 4-1 WATER QUALITY OBJECTIVES - Continued

WETLANDS (INLAND)	WATER QUALITY OBJECTIVES (mg/L)							Hydrologic Unit	
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Primary	Secondary
San Jacinto Freshwater Marsh**	2000	---	---	---	13	---	90	801.11	
Shay Meadows+	---	---	---	---		---	---	801.73	
Stanfield Marsh+**	---	---	---	---	---	---	---	801.71	
Prado Basin Management Zone @	---	---	---	---	---	---	---	801.21	
San Jacinto Wildlife Preserve+**	---	---	---	---	---	---	---	802.11	802.14
Glen Helen+	---	---	---	---	---	---	---	801.59	
Mill Creek Wetlands+	---	---	---	---	---	---	---	801.21	
Gunnerson Pond+	---	---	---	---	---	---	---	801.35	

** This is a created wetlands as defined in the wetlands discussion (see Chapter 3)

+ Numeric objectives have not been established; narrative objectives apply

@ Includes the Prado Flood Control Basin, a created wetland as defined in the wetlands discussion (see Chapter 3). Chino Creek, Reach 1A, Chino Creek, 1B, Mill Creek (Prado Area) and Santa Ana River, Reach 3 TDS and TIN numeric objectives apply (see discussion)

CHANGES TO CHAPTER 5 – IMPLEMENTATION

Amend Antidegradation targets for REC2 only waters

Table 5-REC2 Only Targets-FW

REC2 Only Waterbody	*E. coli* Densities (cfu/100 mL)				
	Geometric Mean	Std. Dev.	N	Max. Observed	75%
Temescal Creek, Reach 1a and 1b	~~192~~ 353	~~34~~ 1.1	~~108~~ 36	9,200	~~359~~ 725
Santa Ana-Delhi Channel, Reach 1 and Reach 2	~~411~~ 399	~~110~~ 1.5	~~56~~ 55	12,590	~~1,104~~ 1,067
Cucamonga Creek Reach 1	509	1.5	197	23,000	1,385

Amend CHAPTER 5 IMPLEMENTATION
Newport Bay Watershed

3. Impairment due to Pathogen Indicator Bacteria ~~Bacterial Contamination~~

Densities of pathogen indicator bacteria that exceed objectives established in the Basin Plan for Newport Bay and other bays and estuaries in the Region ~~Bacterial contamination in the waters of Newport Bay~~ can directly affect two designated beneficial uses: water-contact recreation (**REC-1**) and shellfish harvesting (**SHEL**). The Orange County Health Care Agency (OCHCA) conducts routine bacteriological monitoring and more detailed sanitary surveys as necessary, and is responsible for closure of areas to recreational and shellfish harvesting uses if warranted by the results.

In response to the finding of impairment of the REC1 and SHEL beneficial uses of the Bay based on the results of coliform bacteria monitoring, in 1999, the Regional Board adopted Fecal Coliform TMDLs for Newport Bay (Resolution No. 99-10). These TMDLs were based on the fecal coliform objectives specified in the Basin Plan at that time to protect REC1 and SHEL.

The fecal coliform objectives for SHEL have not changed since 1999. However, in 2004, the USEPA promulgated new, enforceable objectives to protect REC1 in coastal recreational waters, including Newport Bay (USEPA Water Quality Standards for Coastal and Great Lakes Recreation Waters; Final Rule. 40 CFR131.41. Federal Register, Vol. 69, No. 200, November 16, 2004). These objectives are based on

enterococcus, another type of pathogen indicator bacteria. The promulgation was based on USEPA's 1986 Ambient Water Quality Criteria for Bacteria, which recommended enterococcus criteria to protect water contact recreation in marine waters. When promulgating these new objectives, USEPA did not remove established fecal coliform objectives for REC1 from the water quality standards of states subject to the promulgation, but strongly encouraged these states to do so. This was because USEPA-sponsored investigations leading to the 1986 criteria recommendations had demonstrated that fecal coliform are not a reliable indicator of public health risk to swimmers nor, therefore, a reliable measure of the protection of the REC1 use.

In 2016, in accordance with USEPA's 2004 recommendations, the Regional Board revised the Basin Plan to remove the fecal coliform objectives for REC1 in the bays and estuaries of the Region (Resolution No. R8-2016-xxxx). Since fecal coliform objectives were no longer part of the water quality standards applicable to Newport Bay, the Regional Board also removed the Fecal Coliform TMDL for REC1 for the Bay.

At the time of these Regional Board actions, a stakeholder process was expected to be initiated to review pathogen indicator issues in Newport Bay, including the consideration of the need for and nature of a TMDL based on enterococcus to protect the REC1 use, and to review and potentially revise the SHEL TMDL. In light of this anticipated stakeholder process, and because it was recognized that development, adoption and implementation of new or revised TMDLs would take some time, the Regional Board also extended the compliance date for the SHEL TMDL from December 30, 2019 to December 31, 2022.

As indicated in CHAPTER 4 WATER QUALITY OBJECTIVES, Pathogen Indicator Bacteria, *Bays and Estuaries*, the State Water Board is developing a statewide REC1 bacteria objectives policy to implement USEPA's more recent (2012) bacteria quality criteria for recreational waters. These statewide objectives may supersede the enterococcus objective for REC1 for bays and estuaries that is specified in Chapter 4 (and that, as described above, is based on USEPA's 1986 recommended criteria). If the statewide objectives do supersede the Basin Plan objectives, then the need for and nature of an enterococcus TMDL based on the statewide objectives will need to be considered. Depending on the timing of the State Water Board's action, it is possible that this can be a part of the stakeholder process noted above.

In light of these anticipated actions, it is expected that substantive revisions to the TMDL description that follows will be necessary. Such revisions can and should be incorporated in future Basin Plan amendments. These amendments should include the incorporation of the new/revised TMDLs in CHAPTER 6 TOTAL MAXIMUM DAILY LOADS.

~~Because of consistently high levels of total coliform bacteria, the upper portion of Upper Newport Bay (Upper Bay) has been closed to these uses since 1974. In 1978, the shellfish harvesting prohibition area was expanded to include all of the Upper Bay, and the OCHCA generally advises against the consumption of shellfish harvested anywhere in the Bay. Bacterial objectives established to protect shellfish harvesting activities are~~

rarely met in the Bay. (Fecal coliform objectives for the protection of shellfish harvesting and water-contact recreation are shown in Chapter 4, "Enclosed Bays and Estuaries". The OCHCA has relied on total coliform standards specified in the California Health and Safety Code. Fecal coliform are a subset of total coliform.). Certain areas in the lower parts of the Upper Bay and in Lower Newport Bay (Lower Bay) are also closed to water-contact recreation on a temporary basis, generally in response to storms. In these areas, there is generally good compliance with water-contact recreation bacterial objectives in the summer.

Data collected by the OCHCA demonstrate that tributary inflows, composed of urban and agricultural runoff, including stormwater, are the principal sources of coliform input to the Bay. As expected, there are more violations of bacterial standards in the Bay during wet weather, when tributary flows are higher, than in dry weather. There are few data on the exact sources of the coliform in this runoff. Coliform has diverse origins, including: manure fertilizers which may be applied to agricultural crops and to commercial and residential landscaping; the fecal wastes of humans, household pets and wildlife; and other sources. Special investigations by OCHCA have demonstrated that food wastes are a significant source of coliform. Many restaurants wash down equipment and floor mats into storm drains tributary to the Bay and may improperly dispose of food waste such that it eventually washes into the Bay. Such discharges likely contribute to the chronic bacterial quality problems in certain parts of the Bay.

Another source of bacterial input to the Bay is the discharge of vessel sanitary wastes. Newport Bay has been designated a no-discharge harbor for vessel sanitary wastes since 1976. Despite this prohibition, discharges of these wastes have continued to occur. Since these wastes are of human origin, they pose a potentially significant public health threat.

The Regional Board, the City of Newport Beach (City), the County of Orange, the City of Newport Beach Harbor Quality Committee, and other parties have taken or stimulated actions to enforce the vessel waste discharge prohibition. The principal focus of these efforts has been to make compliance with the prohibition convenient and therefore morelikely. Vessel waste pumpouts have been installed at key locations around the Bay andare inspected routinely by the OCHCA. A City ordinance addresses people-intensive boating activities to ensure proper disposal of sanitary wastes. The ordinance requires that sailing clubs, harbor tour, and boat charter operations install pumpouts for their vessels. Another City ordinance addresses vessel waste disposal by persons living on their boats. Efforts have also been made to ensure that there are adequate public rest rooms onshore. The City also sponsors an extensive public education campaign designed to advise both residents and visitors of the discharge prohibition, the significance of violations, and of the location of pumpouts and rest room facilities. The effectiveness of these extensive vessel waste control efforts is not known.
As noted, the fecal waste of wildlife, including waterfowl that inhabit the Bay and its environs, is a source of coliform input. The fecal coliform from these natural sources may contribute to the violations of water quality objectives and the loss of beneficial uses, but it is currently unknown to what extent these natural sources contribute to, or cause, the violations of bacterial quality objectives in Newport Bay.

~~Reports prepared by Regional Board staff describe the bacterial quality problems in the Bay in greater detail and discuss the technical basis for the fecal coliform TMDL that follows (Ref. 21, 22). Implementation of this TMDL is expected to address these bacterial quality problems and to assure attainment of water quality standards, that is, compliance with water quality objectives and protection of beneficial uses.~~

Amend CHAPTER 5 IMPLEMENTATION
Newport Bay Watershed

3.a. Fecal Coliform TMDL to Protect SHEL

A prioritized, phased approach to the control of pathogen indicator bacterial quality in the Bay is specified in this TMDL. This approach is appropriate, given the complexity of the problem, the paucity of relevant data on bacterial sources and fate, the expected difficulties in identifying and implementing appropriate control measures, and uncertainty regarding the nature and attainability of the SHEL use in the Bay. The phased approach is intended to allow for additional monitoring and assessment to address areas of uncertainty and for future revision and refinement of the TMDL as warranted by these studies.

Table 5-9f summarizes the TMDL, Waste Load Allocations (WLAs) for point sources of fecal coliform inputs and Load Allocations (LAs) for nonpoint source inputs. As shown, the TMDL, WLAs and LAs are established to assure compliance with ~~water contact recreation standards no later than December 30, 2014 and with~~ shellfish standards no later than December 31~~0~~, 2022~~19~~. WLAs are specified for vessel waste and urban runoff, including stormwater, the quality of which is regulated under a County-wide NPDES permit issued by the Regional Board. This runoff is thus regulated as a point source, even though it is diffuse in origin. LAs are specified for fecal coliform inputs from agricultural runoff, including stormwater, and natural sources. The TMDL is to be adjusted, as appropriate, based upon completion of the studies contained in Table 5-9g. Upon completion of these studies, an updated TMDL report will be prepared summarizing the results of the studies and making recommendations regarding implementation of the TMDL. The results of the studies may lead to recommendations for changes to the TMDL specified in Table 5-9f to assure compliance with existing Basin Plan standards (objectives and beneficial uses). The study results may also lead to recommendations for changes to the Basin Plan objectives and/or beneficial uses. If such standards changes are approved through the Basin Plan amendment process, then appropriate changes to the TMDL would be required to assure attainment of the revised standards. Revision of the TMDL, if appropriate, would also be considered through the Basin Plan amendment process.

Upon completion and consideration of the studies and any appropriate Basin Plan amendments, a plan for compliance with the TMDL specified in Table 5-9f, or with an approved amended TMDL, will be established. It is expected that this plan will specify a phased compliance approach, based on consideration of such factors as geographic location, the priority assigned by the Regional Board to specific locations for control

actions (see Section 3.a.ii, “Beneficial Use Assessment”), season, etc. Interim WLAs, LAs and compliance dates that lead to ultimate compliance with the TMDL will be established.

The TMDL and its allocations contain a significant margin of safety. The margin of safety can be either incorporated implicitly through analytical approaches and assumptions used to develop the TMDL or added explicitly as a separate component of the TMDL. A substantial margin of safety is implicitly incorporated in the TMDL in the fact that the TMDL does not apply criteria for dilution, natural die-off, and tidal flushing. The TMDL, WLAs, and LAs are established at concentrations equivalent to the water quality objective

Table 5-9f: Total Maximum Daily Load, Waste Load Allocations, and Load Allocations for Fecal Coliform in Newport Bay <u>To Protect SHEL Beneficial Use</u>

Total Maximum Daily Load for Fecal Coliform In Newport Bay	Waste Load Allocations for Fecal Coliform in Urban Runoff, including stormwater, Discharges to Newport Bay	Load Allocations for Fecal Coliform in Agricultural Runoff, including stormwater, Discharges to Newport Bay	Load Allocations for Fecal Coliform from Natural Sources in all Discharges to Newport Bay	Waste Load Allocations for Vessel Waste
~~**As soon as possible but no later than (14 years after State TMDL Approval)***~~			**In Effect**	**In Effect**
~~5 Sample/30 days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30 day period.~~	~~5 Sample/30 days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30 day period.~~	~~5 Sample/30 days Geometric Mean less than 200 organisms/ 100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30 day period.~~	~~5 Sample/30 days Geometric Mean less than 200 organisms/100 mL, and not more than 10% of the samples exceed 400 organisms/ 100 mL for any 30 day period.~~	~~0 MPN/100 mL~~ ~~No discharge.~~
~~**As soon as possible but no later than (20 years after State TMDL Approval)***~~ **<u>December 31, 2022</u>**				**In Effect**
Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.	Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.	Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.	Monthly Median less than 14 MPN/100 mL, and not more than 10% of the samples exceed 43 MPN/100 mL.	0 MPN/100 mL No discharge.

Table 5-9g: Fecal Coliform Implementation Plan/Schedule Report Due Dates

Task	Description	Compliance Date-As Soon As Possible but No Later Than
Task 6	Source Identification and Characterization Reports (Section 3.a.ii.d) Submit Source Identification and Characterization Reports for: a) The Dunes Resort b) Urban Runoff (including stormwater) c) Agriculture (including stormwater) d) Natural Sources	 a) 7 months after Regional Board approval of plan(s) b) 13 months after Regional Board approval of plan(s) c) 16 months after Regional Board approval of plan(s) d) 16 months after Regional Board approval of plan(s)
Task 7	Evaluation of Vessel Waste Program (Section 3.a.ii.e) a) Submit Proposed Plan for Evaluating the Current Vessel Waste Program b) Submit Report on the Evaluation of the Vessel Waste Program	 a) (Within 3 months) [2] b) 12 months after Regional Board approval of plan
Task 8	TMDL, WLA, and LA Evaluation and Source Monitoring Program (Section 3.a.ii.f) a) Submit Proposed Evaluation and Source Monitoring Program Plan(s) b) Implement Evaluation and Source Monitoring Plan(s) c) Submit Monthly and Annual Reports (Reporting Period: April 1-March 31)	 a) 3 months after completion of Tasks 2, 4a, and 6 b) Upon Regional Board approval of plan(s) c) Monthly within 30 days, Annual Report by September 1
Task 9	Updated TMDL Report Submit updated TMDL report for: ~~a) REC-1~~ ~~b~~a) SHEL	 ~~a) 6 months after completion of Tasks 2~~, 4 ~~a~~, ~~6, and 7~~ ~~b~~a) 6 months after completion of Tasks 2, 4b, 6, and 7

Table 5-9g: Fecal Coliform Implementation Plan/Schedule Report Due Dates

Task	Description	Compliance Date-As Soon As Possible but No Later Than
Task 10	Adjust TMDL, if necessary; adopt interim WLAs, LAs, and Compliance Dates (Section 3.a.ii.h) ~~a) REC-1~~ ~~b~~ a) SHEL	 ~~a) 12 months after completion of Updated TMDL Report for REC-1 (Task 9.a)~~ ~~b~~ a) 12 months after completion of Updated TMDL Report for SHEL (Task 9.b)
[1]Note: Provided that the monitoring program plan(s) fulfills the minimum requirements specified in this TMDL, approval of the TMDL shall constitute Regional Board approval of the monitoring program plan(s).		
[2]Note: Within specified time periods of State TMDL approval (i.e., approval by the Regional Board, the State Water Resources Control Board, and the Office of Administrative Law). Upon State TMDL approval, this parenthetical "formula" will be replaced by the date certain, based upon the date of approval.		

3.a.i. TMDL Implementation

The Regional Board is committed to the review of this TMDL every three years or more frequently if warranted by these or other studies. ~~The County of Orange, the Cities of Tustin, Irvine, Costa Mesa, Santa Ana, Lake Forest, and Newport Beach, The Irvine Company and the Irvine Ranch Water District have undertaken to prepare a health risk assessment for Newport Bay for water contact recreation and shellfish harvesting beneficial uses. This study will evaluate whether exceedances of fecal coliform objectives correlates with actual impairment of beneficial uses and may recommend revisions to the Basin Plan objectives and/or beneficial use designations. Because this study is in progress, it is not required by this TMDL implementation plan, but will be considered in conjunction with the studies required by the implementation plan.~~

Add CHAPTER 6 TOTAL MAXIMUM DAILY LOADS (TMDLs) and Introductory Narrative; Revise Subsequent Chapter Numbering

~~CHAPTER 6 MONITORING AND ASSESSMENT~~

CHAPTER 6 TOTAL MAXIMUM DAILY LOADS (TMDLS)

The Federal Clean Water Act (CWA) Section 303(d) requires that States identify waters that do not or are not expected to meet water quality standards (beneficial uses, water quality objectives and the antidegradation policy) with the implementation of technology-based controls. Once a waterbody has been placed on the 303(d) list of impaired waters, states are required to develop a Total Maximum Daily Load (TMDL) to address each pollutant causing impairment. A TMDL defines how much of a pollutant a waterbody can tolerate and still meet water quality standards. Each TMDL must account for all sources of the pollutant, including: discharges from wastewater treatment facilities; runoff from homes, forested lands, agriculture, and streets or highways; contaminated soils/sediments, legacy contaminants such as DDT and PCBs, on-site disposal systems (septic systems) and deposits from the air. Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (permitted discharges) and contributions from nonpoint sources, including natural background. In addition to accounting for past and current activities, TMDLs may consider projected growth that could increase pollutant levels. TMDLs establish numeric targets that, when attained, are expected to correct impairment and achieve water quality standards. To meet those targets, TMDLs allocate allowable pollutant loads to each of the identified sources.

In 2013, USEPA announced a new collaborative framework for implementing the CWA Section 303(d) Program with states.[1] This new "Vision Framework" encourages states to consider alternatives to the development and implementation of TMDLs as the first response to correct water quality impairment. USEPA recognized that alternative approaches, such as the Non-TMDL Action Plans (Action Plans) identified for certain metals in Newport Bay incorporated in

[1] USEPA .A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program. 2013.

this Chapter (see 6.1 Zinc (Zn), Mercury (Hg), Arsenic (As), Chromium (Cr): Zn, Hg, As and Cr Non-TMDL Action Plans (Action Plans) for Newport Bay) may be a more efficient yet equally effective way to address impaired waters. Where such alternative restoration approaches are implemented but prove to be ineffective, TMDLs must be developed to assure that water quality standards are achieved.

California state law (Porter-Cologne Water Quality Control Act, California Water Code Section 13000 et. seq.) requires regional boards to formulate and adopt water quality control plans, or Basin Plans, for all areas within their jurisdiction. The Basin Plans must include an implementation plan that describes how the water quality standards established in the Basin Plans will be met. TMDLs are typically are adopted into the Basin Plans through the Basin Planning process and, pursuant to state law, must include implementation plans. The TMDLs incorporated in this Chapter include implementation plans and, where appropriate, compliance schedules.

CHAPTER 7 ~~WATER RESOURCES AND WATER QUALITY MANAGEMENT~~ MONITORING AND ASSESSMENT

CHAPTER 8 WATER RESOURCES AND WATER QUALITY MANAGEMENT