Source analysis for

reference watershed

Lake model for

Narrative

objective

(Algae)

CDF of chlorophyll-a concentration in

epilimnion over time

reference watershed

objective (DO,

TIN, NH<sub>3</sub>)

CDF of lake volume

meeting numeric

objectives

Source assessment

Linkage analysis

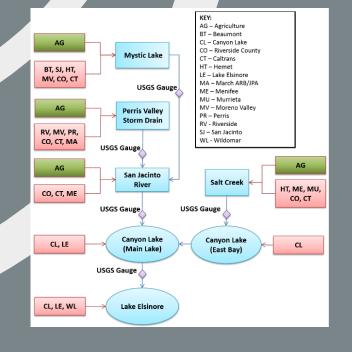
Applicable Basin Plan

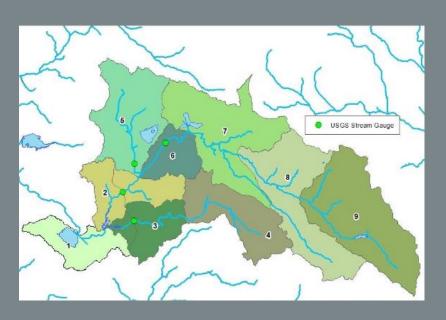
water quality objectives

TMDL numeric targets

# LECL TMDL Task Force Update to TMDL Revision

Presentation by Steve Wolosoff August 7 2023





# Agenda

- Review of Comments from Task Force
- Implementation Schedules for Phase 2 and 3



# **Comments Received**

	Section 1 Intro	Section 2 Problem	Section 3 Numeric Targets	Section 4 Source Assessment	Section 5 Linkage Analysis	Section 6 Allocations	Section 7 Implementation	Section 8 Monitoring	Section 9 CEQA	Section 10 Economics
Regional Board			<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>		<b>A</b>	
WRCAC	•	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	
EVMWD			<b>A</b>				<b>A</b>			
RCFC&WCD			<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>			
CG	<b>A</b>		<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>			<b>A</b>
LM			<b>A</b>	<b>A</b>	<b>A</b>					



- Section 1 Introduction (mostly editorial)
- Section 2 Problem Statement
  - Introduce disconnect between meeting allocations but not targets in 2004 TMDL
  - Characterize cyanobacteria
  - Present limits of understanding in 2023 requiring further special study



- Section 3 Numeric Targets
  - Need to carefully word the relationship between numeric targets for a reference condition, excessive algae, and beneficial use protection
  - Method for determining numeric targets is novel and not entirely clear to readers, need to ensure the approach is supported by guidance
- Section 4 Source Assessment
  - Watershed boundary revision near Diamond Valley Lake
  - Nutrient washoff concentrations for other livestock land use
  - Extent of unsewered residential significantly different from 2018 report
  - Consider a more dynamic atmospheric deposition source
- Section 5 Linkage Analysis (mostly editorial)



- Section 6 Allocations
  - Anticipated change to March JPA jurisdictional area
  - Banning jurisdictional area not in 2004 TMDL
  - Margin of safety basis
- Section 7 Implementation
  - More consideration of climate change should be included in implementation
  - More justification of 20-year period for Phase 2 as well as 10-year period for Phase 3
  - Compliance evaluation more frequently than every 5 years, suggest at least every 3 years
  - Single nutrient control approach
  - Consider adding more discussion on LEAMS effectiveness, including key findings in Horne and Anderson 2021



- Section 8 Monitoring
  - Categorize monitoring into condition, investigative, and effectiveness groups
  - Need to include expectation of additional monitoring beyond the condition assessment program that would be needed to support special studies and effectiveness evaluation of future controls
- Section 9 CEQA
  - Economic viability for declining agricultural pool should be considered including state provisions associated with Prime Farmland and Farmland with Statewide Importance



# Schedule - Phase 2

			Phase 2 Implementation - Year After Effective Date															
Task	Brief Description	1	2	3	4 5	6	7	8	9	10 1	1 12	13	14	15	16 17	7 18	19	20
Task 1 – Stakeholder Coordination	LECL Task Force collaboration at least quarterly																	
Task 2 – Revision to Existing Permits and Other Regulatory Actions	Update permits or other regulatory actions to support TMDL implementation																	
Task 3 – Revise Existing Watershed Implementation Plans	Revise existing Riverside County MS4 Program CNRP	Wat	ershe	O d Plan	s													
Task 4 – Implementation and/or Revision of Existing In-lake Water Quality Controls for Canyon Lake	Evaluate effectiveness of the Canyon Lake Alum Project and potential feasibility of implementation of other water quality control options			Stı	ıdy In	plem	ent Pr	eferr	ed Opt	ion(s)								
Task 5 – Evaluate In-Lake Control Options to Main Intended Uses in Lake Elsinore	Identify and evaluate feasible water quality control options that may be implemented to improve and maintain water quality in Lake Elsinore for its intended uses; identify preferred option(s)	Repo	ort															
Task 6 – Implementation of Preferred Option or Options for Water Quality Controls in Lake Elsinore	Prepare schedule to implement findings from Task 5 based on available funding and schedule	Wor	kplan	ı	mpler	nent P	referre	d Op	ntion(s)	)								
Task 7 – Revise Lake Elsinore Water Quality Criteria Based on In-Lake Treatment Controls, if applicable	Develop Work Plan to revise water quality criteria applicable to Lake Elsinore								Work	plan								
Task 8 – Special Study: Evaluate Cyanobacteria in Lake Elsinore	Evaluate HAB conditions in Lake Elsinore and options to manage cyanobacteria and toxicity		Stuc	,							Stu	dy (						
Task 9 – Special Study: Performance of Watershed Controls	Evaluate performance of updated watershed controls included in the revised and approved watershed implementation plans			٧	/orkpl	an Im	plem	ent Si	tudy									
Task 10 – Special Study: Reference Watershed Conditions	Conduct Special Study to validate basis for Phase 2 interim targets and allocations being representative of reference watershed conditions			V	/orkpl	o an Im	pleme	nt St	tudy		0							
Task 11 - Special Study: Lake-bottom Sediment Sampling and Core Flux Experiments	Evaluate status of nutrient enrichment in lake sediments		Q	tudy							Stu	dy						
Task 12 – Special Studies: Fishery Management	Evaluate status of Common Carp population in Lake Elsinore								Study	, 0							Study	<b>v</b>
Task 13 – Evaluate Status of TMDL Compliance with Interim Targets, Wasteload and Load Allocations	Evaluate status of compliance with TMDLs			0			0		0			0		0		0	)	
Task 14 – Evaluate Final TMDL Targets, Wasteload Allocations and Load Allocations	Re-evaluate final TMDL targets, wasteload, load allocations, and approaches to demonstrate compliance												Repo	ort O				
Task 15 – Identify Possible Revisions to the TMDLs	As appropriate, prepare necessary documentation to support revisions to the TMDLs														Report	0		
Task 16 – Surveillance & Monitoring Program (SAP)	Update existing SAP for the LECL TMDLs		) pling	and Ai	nalysis	Plan				Sa	mplin	gand	Analys	sis Plai	n			
Task 17 – Annual Water Quality Reports	Prepare annual water quality reports	0	0	0	0		0	0	0		0				0 0	0	0	0

## Schedule Phase 3

Task	Brief Description	P	hase	3 Pro	gram	of Im	plem	entati	on Ad	ctivitie	es
lask	brief Description	21	22	23	24	25	26	27	28	29	30
Task 1 – Stakeholder Coordination	LECL Task Force collaboration at least quarterly										
Task 2 – Revise Existing Watershed Implementation Plans	Revise existing Riverside County MS4 Program CNRP	( CNRF	o for N	/S4s							
Task 2 - Nevise Existing watershed implementation Plans	Revise other existing Watershed Implementation Plans, revise existing Irrigated Lands General Order, as needed	Othe	rwat	ershe	plan	5					
Task 3 – Evaluation of In Lake Water Quality Controls for Canyon Lake	Evaluation and implementation of existing in-lake water quality controls				Wo	( rkplan					
Task 4 – Implementation of New or Revised Water Quality Controls for Lake Elsinore	Implement new or revised water quality controls for Lake Elsinore as determined appropriate				Wo	( rkplan					
Task 5 – Special Studies – Fishery Management	Evaluate status of fishery populations in Lake Elsinore using consistent sampling and data analysis methods used in previous studies					Study					
Task 6 – Evaluate Status of TMDL Compliance with Final Targets, Wasteload and Load Allocations	Evaluate status of compliance with the final TMDL targets and allocations	(	>			>		C	)		•
Task 7 – Implementation of Gap Analysis	Based on results of Task 6, determine the load reductions remaining to be achieved to meet the final allocations and targets		F	Repor	) t						]
Task 8 - Special Study: Lake-bottom Sediment Sampling and Core Flux Experiments	locations in both Canyon Lake and Lake Elsinore to assess changes to nutrient enrichment after project		Stud	V				Study			
Task 9 - Evaluate Water Quality Control Options for Canyon Lake to Maintain Intended Aquatic Life, Recreational and Municipal Uses, if necessary	Evaluation of reasonably feasible lake management activities in Canyon Lake that may be implemented to improve and maintain water quality for intended uses.			Re	ort						
Task 10 - Evaluate Supplemental Water Quality Control Options for Lake Elsinore to Maintain Intended Aquatic Life and Recreational Uses, if necessary	Evaluate supplemental water quality control options for Lake Elsinore to maintain intended aquatic life and recreational uses, including reduction of harmful algae blooms in frequently used swimming beaches.			Rei	ort						
Task 11 - Implementation of New/Refined Water Quality Controls	Implement new/refined projects included in Phase 3 updates to the CNRP and other related watershed management activities (see Task 2); as necessary and applicable										
Task 12 – Surveillance & Monitoring Program	Update TMDL SMP (and QAPP) as needed; updates should include a program to conduct watershed aerial surveys of land use every 5 years, and HAB and cyanotoxin monitoring or both lakes	Sa m	pling	and Aı	nalysis	Plan					
Task 6 – Evaluate Status of TMDL Compliance with Final Targets, Wasteload a Load Allocations  Task 7 – Implementation of Gap Analysis  Task 8 - Special Study: Lake-bottom Sediment Sampling and Core Flux Experiments  Task 9 - Evaluate Water Quality Control Options for Canyon Lake to Maintain Intended Aquatic Life, Recreational and Municipal Uses, if necessary  Task 10 - Evaluate Supplemental Water Quality Control Options for Lake Elsi to Maintain Intended Aquatic Life and Recreational Uses, if necessary  Task 11 - Implementation of New/Refined Water Quality Controls  Task 12 - Surveillance & Monitoring Program  Task 13 - Annual Reporting Program	Annual Water Quality Reports	0	0	0	0		0	0	0	0	0
Task 14 – Adaptive Management	Meet any of the remaining implementation gap (see Task 7) through adaptive management; coordinate project refinements or enhancements with operators and other stakeholders through the TMDL Task Force										



# Project Schedule

- Complete draft of TMDL Technical Document to be submitted in October
- Regional Board planning staff in process of scheduling workshop around
   December 2023 and adoption hearing around May 2024

