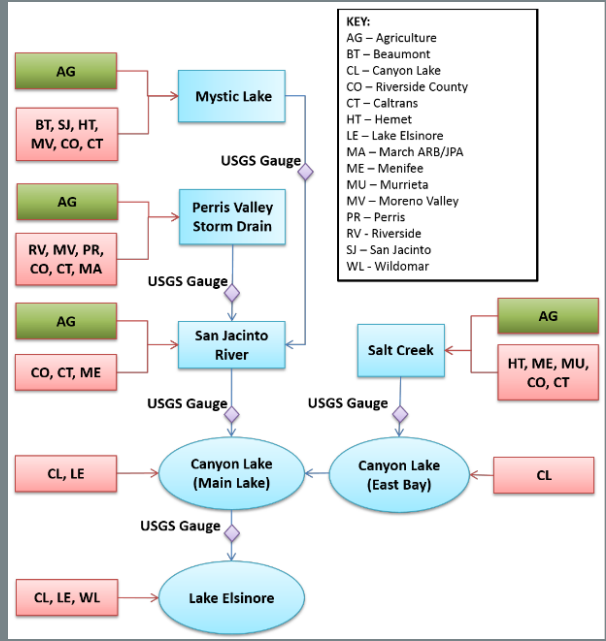
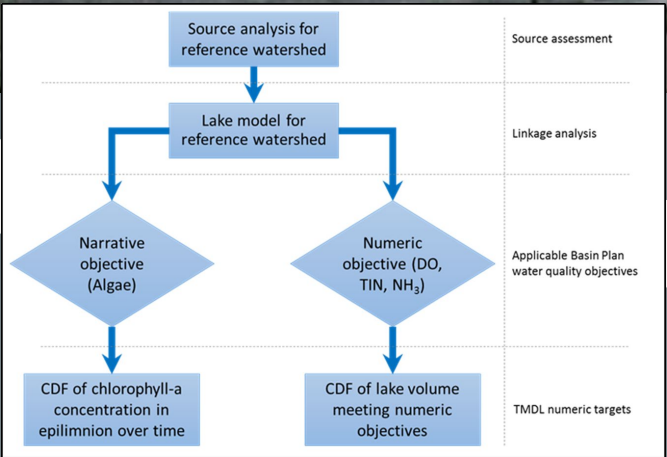
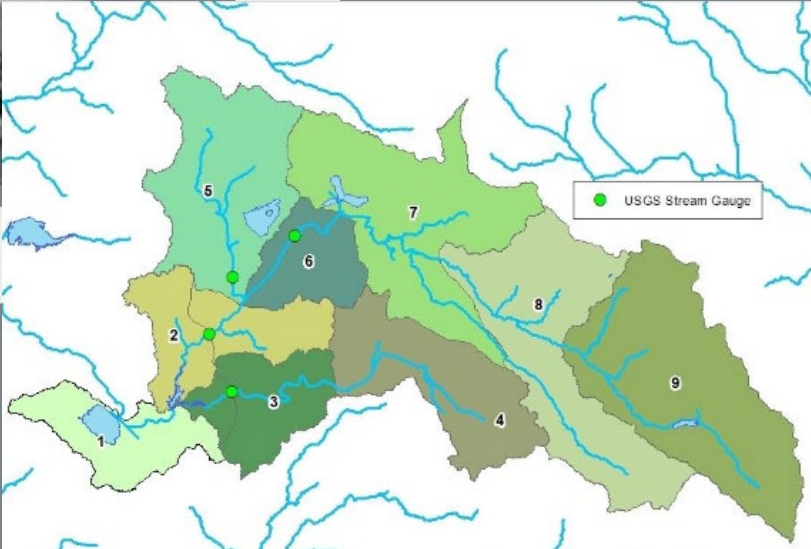
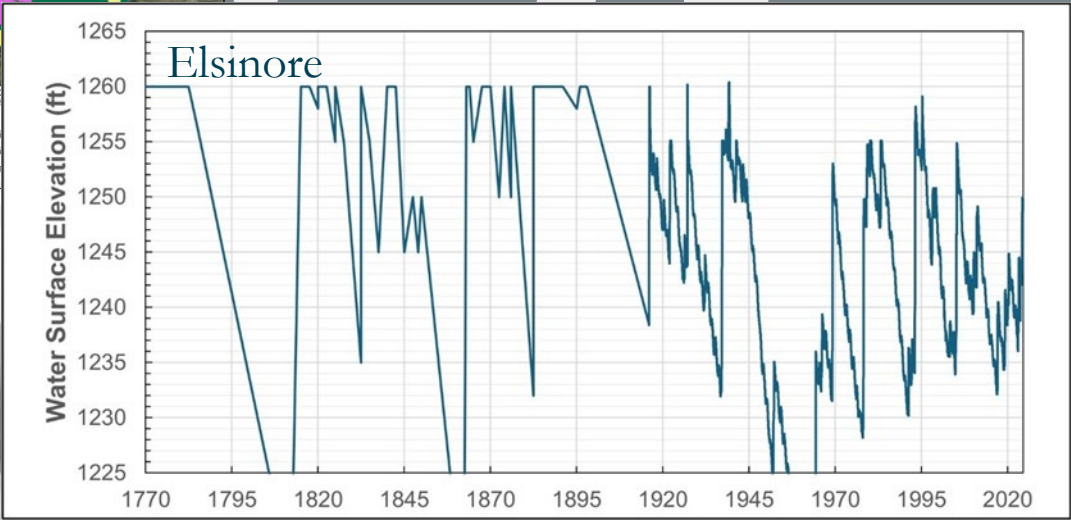
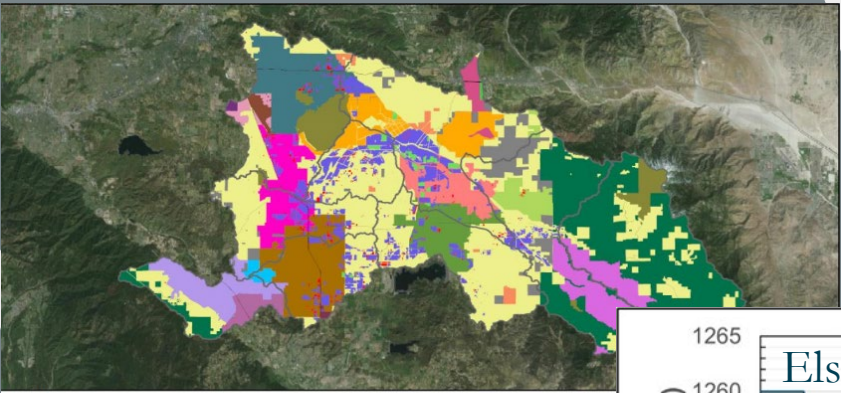


LECL TMDL Task Force Update to TMDL Revision

Project Status Update
July 23, 2024



Agenda

- Review of TMDL revision
- Status Update on Task 5 Study

Table ES-11. Demonstration of Compliance with 2004 TMDL Allocations (LESJWA 2021)

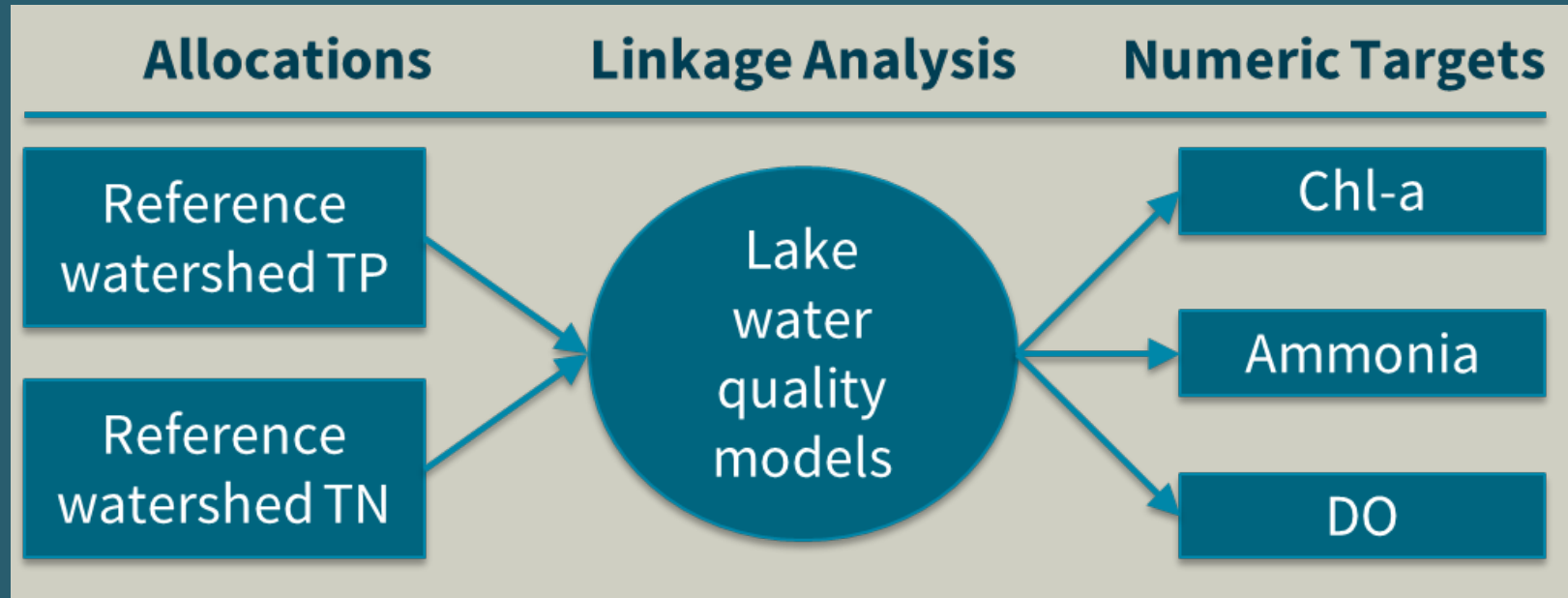
Average Annual Nutrient Load over 2011-2020 (kg/yr)	Canyon Lake		Lake Elsinore	
	TP	TN	TP	TN
Measured External Load	5,871	15,743	5,250	33,060
Allocation to Watershed in TMDL ¹	-3,845	-22,268	-6,922	-29,953
In-Lake Offsets	-2,079	0	-7,030	-44,000
Additional Load Reduction Required ²	-53	-6,525	-8,702	-40,893

1) TMDL minus allocations for internal sediment and atmospheric deposition.

2) If \leq zero, compliance with final allocations in TMDL for all watershed sources is effectively demonstrated



Review TMDL Revision



Allocations based on a reference watershed

- Phase II study to collect more data from Cranston and other reference sites

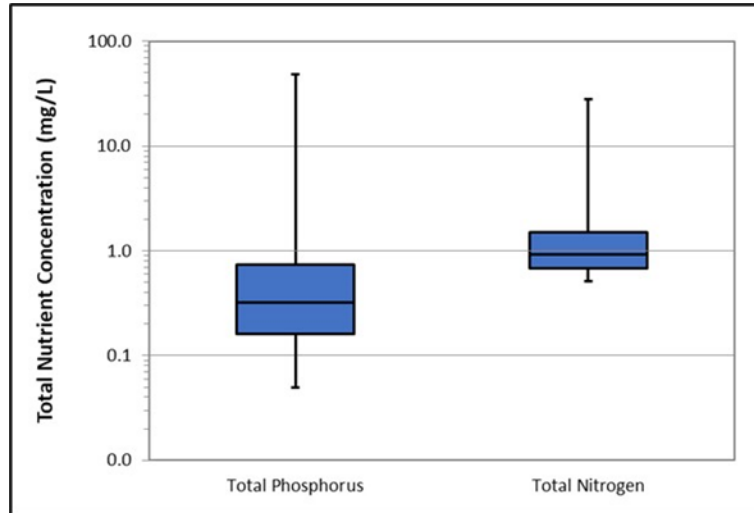


Table 3-2. Summary Statistics from Reference Watershed Site, San Jacinto River at Cranston Guard Station

Metric	TP (mg/L)	TN (mg/L)
Range of Samples	0.05 – 48.00	0.51 – 27.78
Range of Event Means ¹	0.11 – 10.13	0.58 – 7.09
25 th Percentile of Samples	0.16	0.68
25 th Percentile of Event Means ¹	0.22	1.00
Median of Samples	0.32	0.92
Median of Event Means ¹	0.39	1.15
75 th Percentile of Samples	0.73	1.50
75 th Percentile of Event Means ¹	1.07	2.62

¹ Number of samples per event varies

- MOS provided by using statistical values for all grab samples as opposed to event means (16-30 percent)



Expression of Allocations

- Separated by Lake
- Canyon Lake for sources in subwatershed zones 2-6

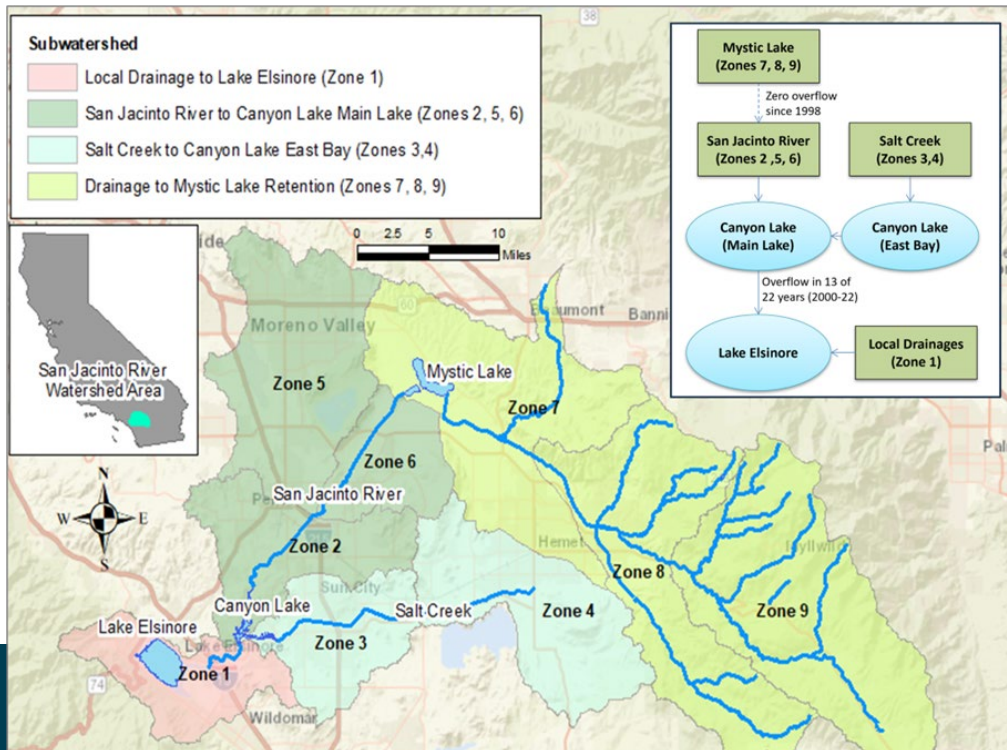


Table ES-7. Summary of Milestones, WLAs and LAs for Major Categories of Nutrient Sources to Canyon Lake from Subwatersheds below Mystic Lake

Source	Phase II Milestone (kg/yr as 10-yr running average)		Phase III Final Allocation (kg/yr as 10-yr running average)	
	TP	TN	TP	TN
MS4 Jurisdiction Runoff (WLA)	3,939	11,326	1,970	8,371
Caltrans Jurisdiction Runoff (WLA)	52	151	26	111
March JPA Jurisdiction Runoff (WLA)	53	153	27	113
March ARB Jurisdiction Runoff (WLA)	55	158	28	117
CAFO (WLA)	1	2	0.4	2
Irrigated Agriculture (LA)	105	302	53	223
Non-Irrigated Agriculture (LA)	41	119	21	88
Other State/Federal/Tribal Jurisdictions (LA)	147	421	73	311
Reference Watershed Retention ²	-590	-1695	-295	-1253
Subtotal Watershed Allocation (below Mystic Lake)	3,804	10,937	1,902	8,084
Atmospheric Deposition (LA)	23	1,406	23	1,406
Sediment Nutrient Flux (LA)	1,190	3,955	683	2,741
Canyon Lake TMDL	5,017	16,298	2,608	12,230



Expression of Allocations

- Lake Elsinore for Zone 1 runoff, recycled water, CL overflows, and Mystic Lake overflows

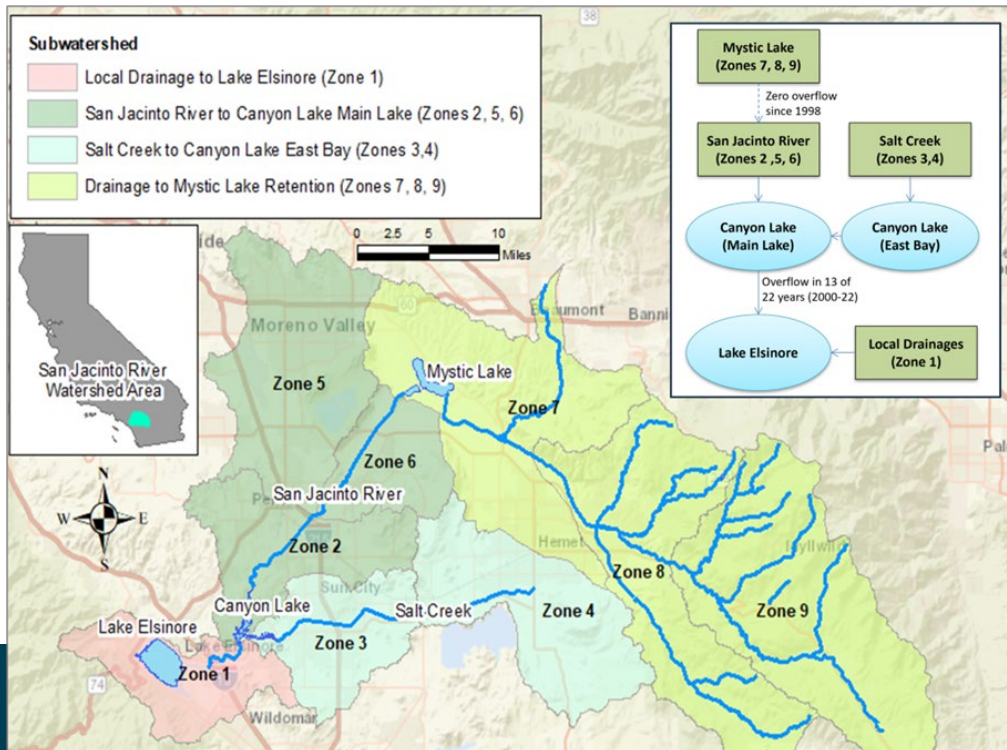


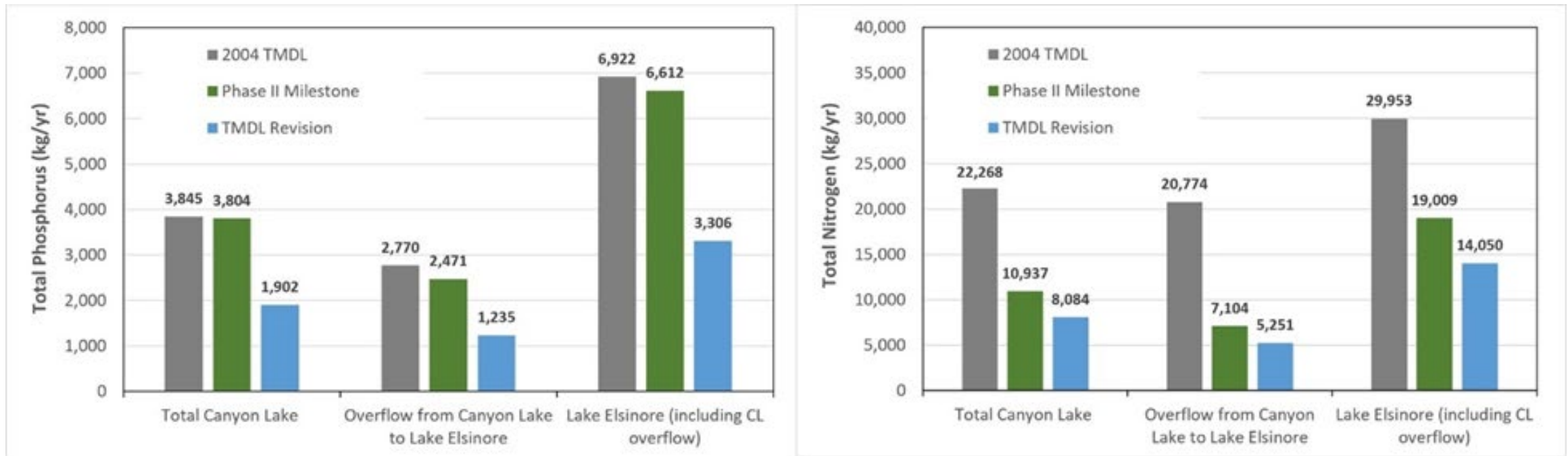
Table ES-8. Summary of WLAs and LAs for Major Categories of Nutrient Sources to Lake Elsinore

Source	Phase II Milestone (kg/yr as 10-yr running average)		Phase III Allocation (kg/yr as 10-yr running average)	
	TP	TN	TP	TN
Local Lake Elsinore Watershed				
MS4 Jurisdiction Runoff (WLA)	548	1,575	274	1,164
Caltrans Jurisdiction Runoff (WLA)	11	33	6	24
Other State/Federal/Tribal Jurisdictions (LA)	64	183	32	135
Subtotal Watershed Allocation (local watershed)	623	1,791	311	1,324
Watershed Above Mystic Lake				
MS4 Jurisdiction Runoff (WLA)	1,890	5,434	945	4,016
Caltrans Jurisdiction Runoff (WLA)	42	120	21	89
CAFO (WLA)	3	8	1	6
Irrigated Agriculture (LA)	119	342	59	253
Non-Irrigated Agriculture (LA)	26	75	13	55
Other State/Federal/Tribal Jurisdictions (LA)	3,050	8,769	1,525	6,481
Minus Reference Watershed Retention ²	-4,928	-14,168	-2,464	-10,472
Subtotal Watershed Allocation (above Mystic Lake)	201	579	101	428
Canyon Lake to Lake Elsinore (LA)	2,471	7,104	1,235	5,251
Supplemental Water	3,317	9,535	1,658	7,048
Atmospheric Deposition	156	9,682	156	9,682
Sediment Nutrient Flux	15,227	104,559	10,221	91,232
Lake Elsinore TMDL	21,995	133,250	13,683	114,964



TMDL

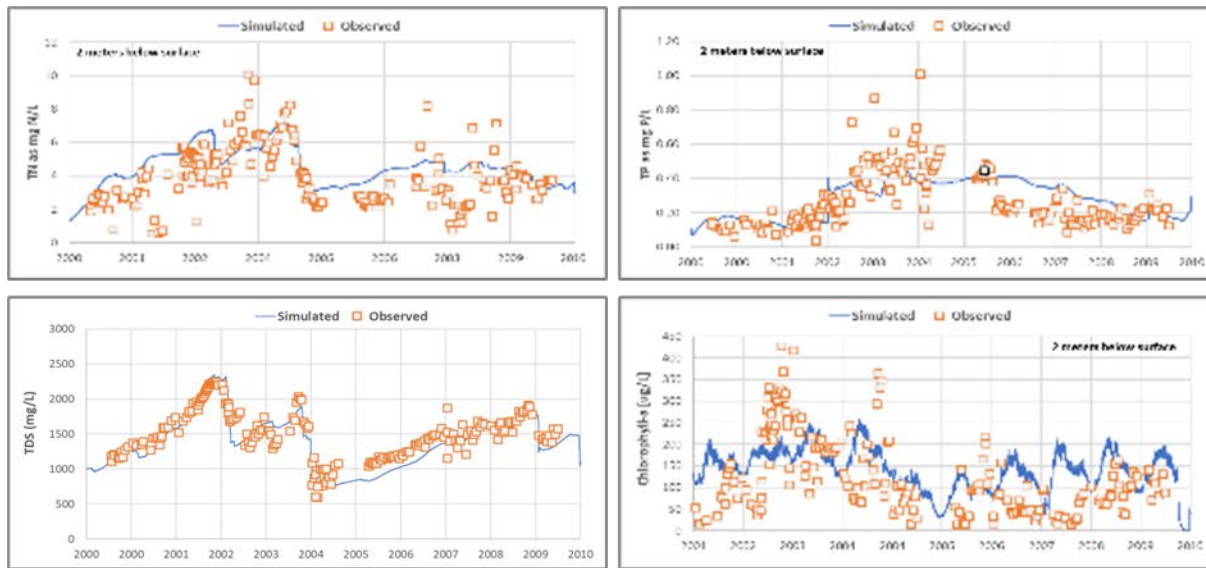
- Comparison of all external load allocations in revised TMDLs to 2004 TMDLs



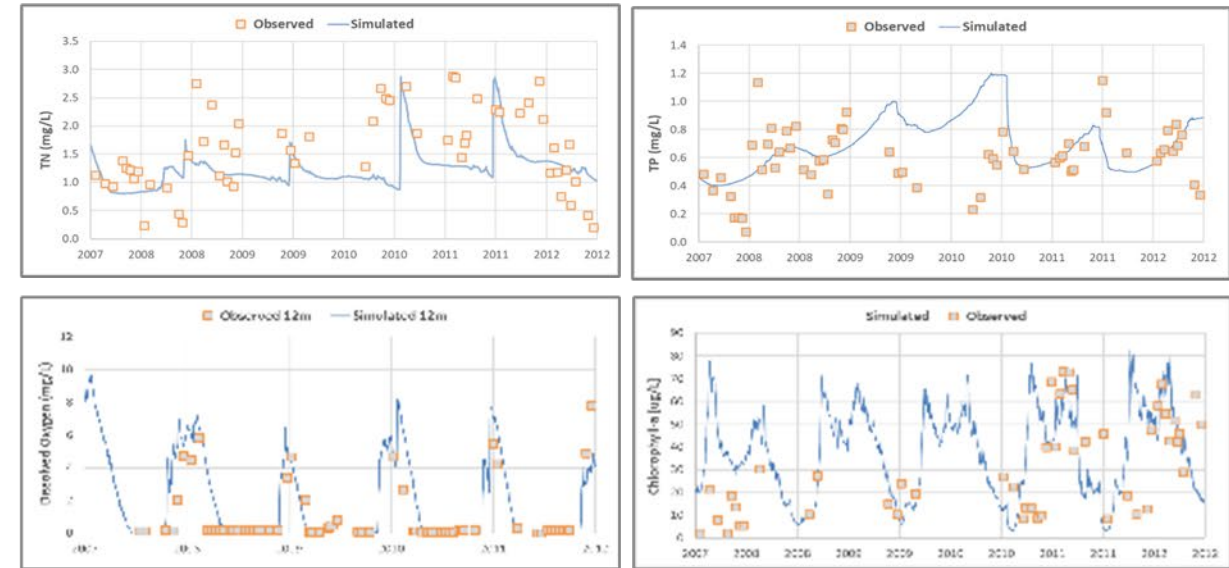
Linkage Analysis

- New performance measures included

Calibration plots for Lake Elsinore

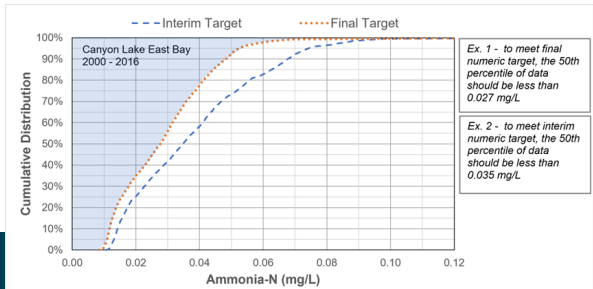
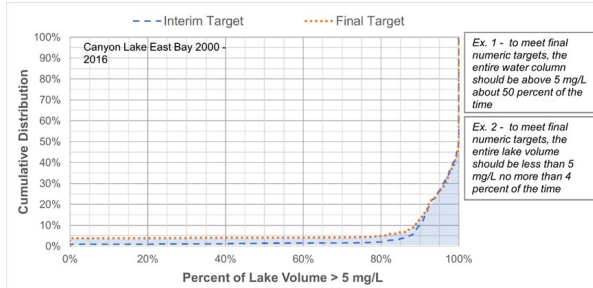
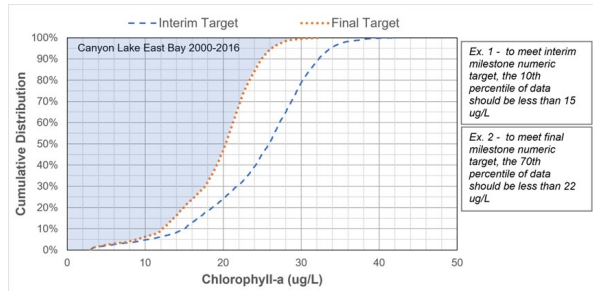


Calibration plots for Canyon Lake

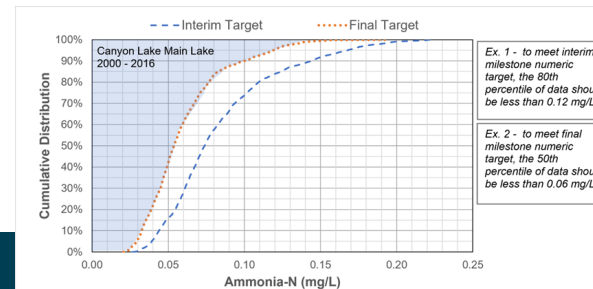
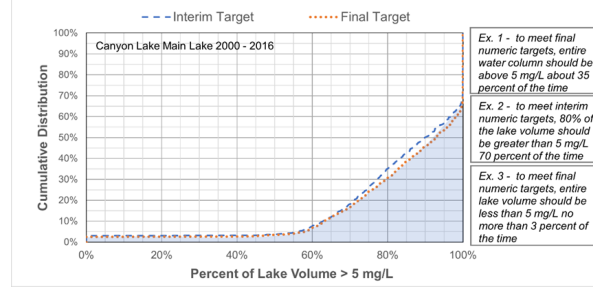
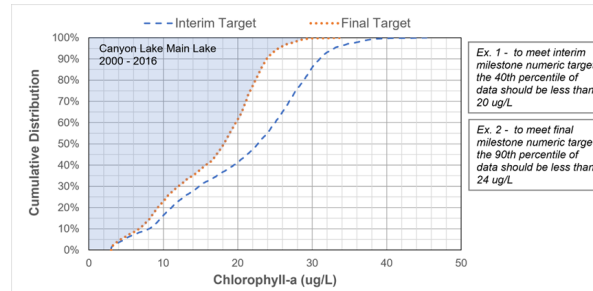


Numeric Target CDFs

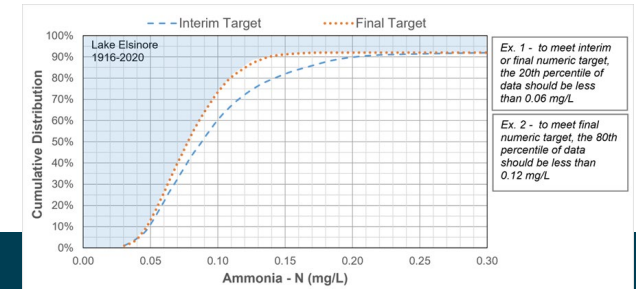
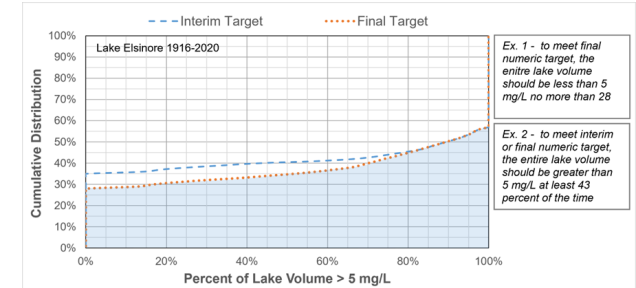
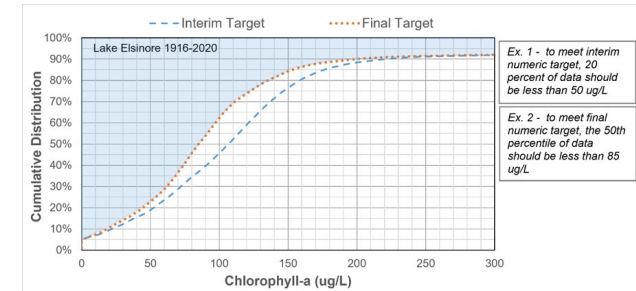
Canyon Lake – East Bay



Canyon Lake – Main Lake

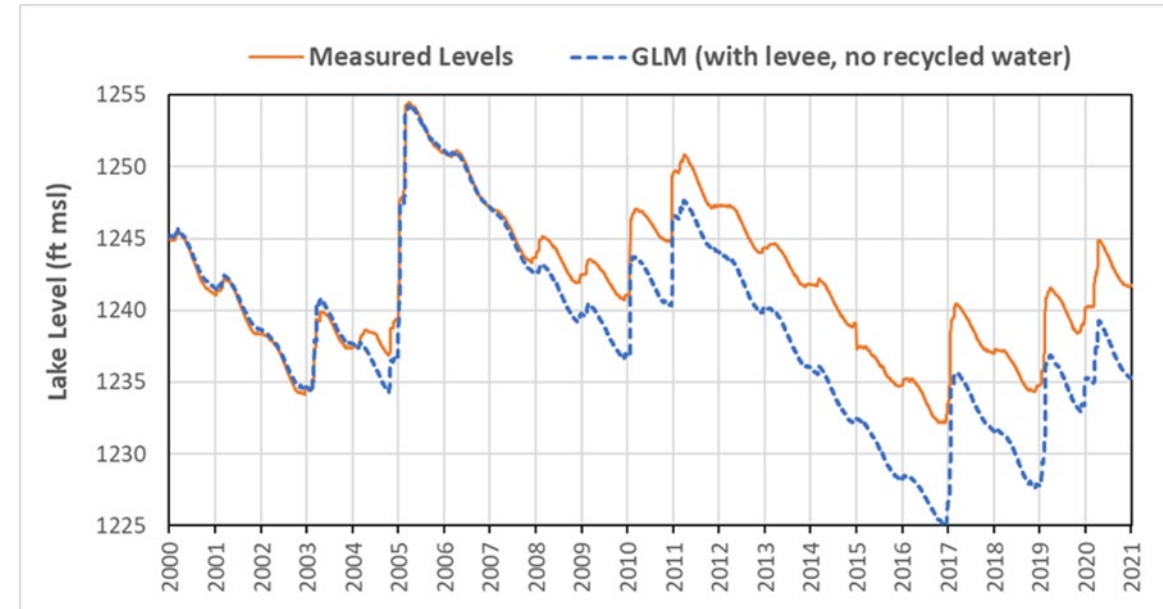


Lake Elsinoe



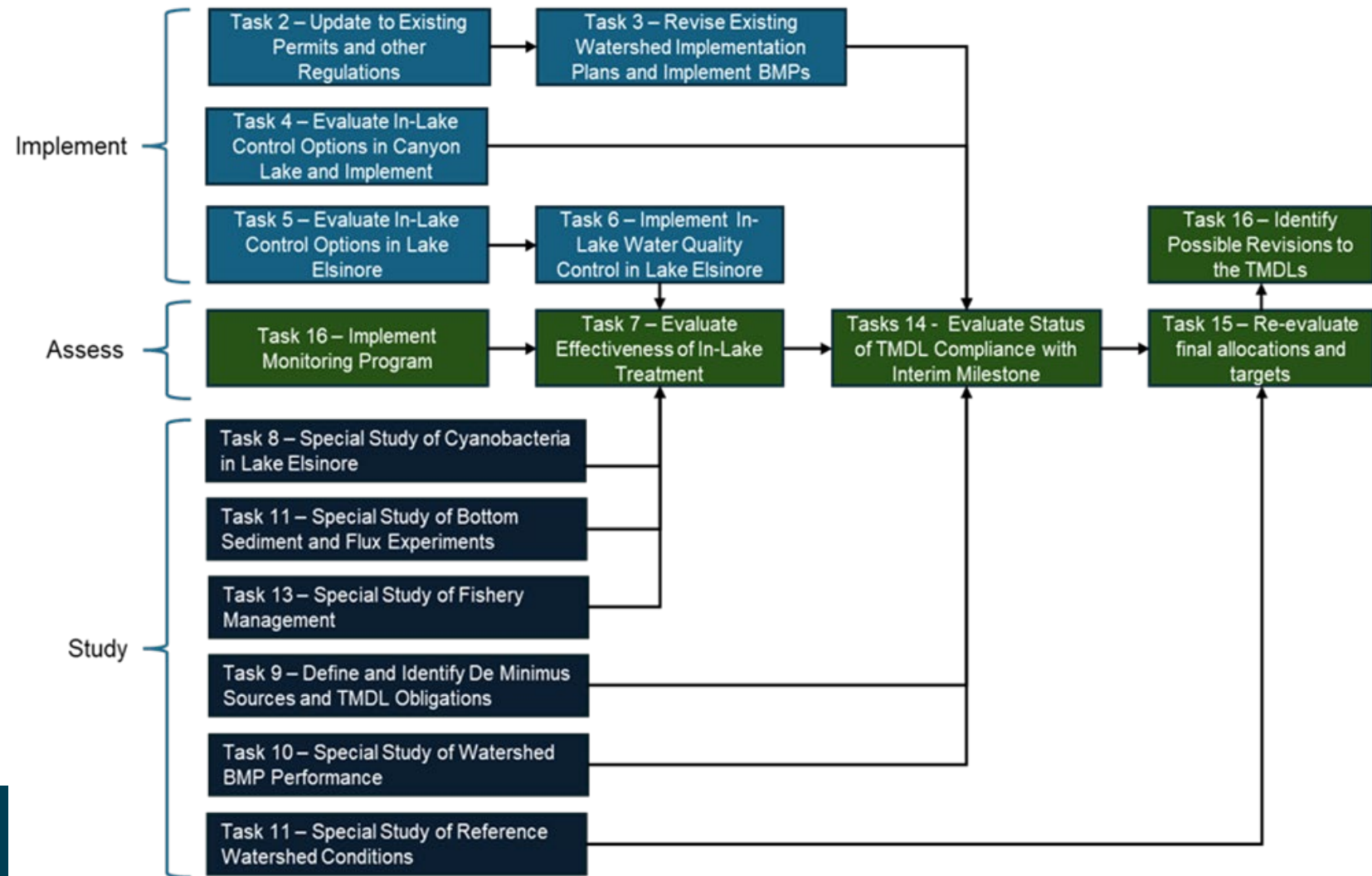
Implementation

- Addition of an interim reconsideration at Year 10
- Task 7 to require consideration of long-term TDS impacts of a wet lake management strategy
- Task 8 to be coordinated with future developments in statewide HAB provisions



Implementation

- Phase II tasks lead to future reconsiderations



Task 5 Status Update



Task 5 Status Update

- Study to Evaluate LEAMS Future Options
- Completed: Options identification, condition assessment
- Underway: Conceptual design and costing, alternative evaluation, sediment study
- Ongoing coordination with City of Lake Elsinore Lake Management Program

