

**TMDL Task Force/Riverside Co MS4 Permit Deliverables Due in FY 2011-12:**

Schedule of Deliverables	Status
<b>2011</b>	
<ul style="list-style-type: none"> <li>- Regional Board has deferred the implementation of the Phase-2 Monitoring Program for for 12-24 months.</li> <li>- Task Force will implement revised monitoring plans for Lake Elsinore and Canyon Lake and continue to implement the Phase-1 watershed-wide monitoring program.</li> <li>- Task Force will submit a Comprehensive Nutrient Reduction Plan by the end of the year .</li> </ul>	
<b>Early 2011</b>	
<ul style="list-style-type: none"> <li>- Task Force will calculate load reduction required for each entity named in the TMDL and estimate cost of designing, constructing and operating the Phase 1 and Phase 2 Projects Alternatives.</li> <li>- Extend current O&amp;M Agreement for Lake Elsinore Aeration and Mixing Systems for 12 months (due to expire on June 30, 2011).</li> </ul>	
<b>Spring 2011</b>	
<ul style="list-style-type: none"> <li>- Task Force will estimate nutrient reduction credits available from each of the proposed projects and develop the preliminary CNRP implementation strategy including a draft Pollutant Trading Plan.</li> <li>- Task Force will employ the newly developed spreadsheet tool to calculate individual nutrient loads for each discharging entity named in the TMDL.</li> </ul>	
<b>Due April 30, 2011</b>	
<ul style="list-style-type: none"> <li>- The Task Force will submit an updated QAPP in accordance with the revised monitoring plans submitted to the Regional Board.</li> <li>- Transmit a signed copy of the revised O&amp;M Agreement for Lake Elsinore Aeration and Mixing Systems to the Regional Board.</li> </ul>	<ul style="list-style-type: none"> <li>-Updated QAPP submitted to Regional Board on 4/12/2011 and</li> <li>-Copy of Revised O&amp;M Agreement for Lake Elsinore Aeration and Mixing System submitted to Regional Board on 4/30/2011</li> </ul>
<b>Summer 2011</b>	
Task Force will seek financial commitments from those willing to sponsor the Phase 2 projects in return for nutrient reduction credits.	
<b>Due June 30, 2011</b>	
<ul style="list-style-type: none"> <li>- Submit Draft Comprehensive Nutrient Reduction Plan (CNRP) including:               <ul style="list-style-type: none"> <li>- a Phase-2 Monitoring Program</li> <li>- b Phase-2 Projects Plans</li> <li>- c Fishery management program (to begin in 2012 at earliest)</li> </ul> </li> <li>- O&amp;M Agreement for Lake Elsinore Aeration and Mixing Systems.</li> </ul>	Phase-2 Projects Plan for Lake Elsinore submitted to Regional Board on 6/30/2011
<b>Due August 31, 2011</b>	
- Annual Report: in-lake and watershed monitoring program.	
<b>Due December 31, 2011</b>	
- Submit Comprehensive Nutrient Reduction Plan (CNRP).	

**Long Term 2011-2020**

It is expected that the Regional Board will review and approve the CNRP sometime during 2012 and that project construction can commence no later than 2013. Beginning in 2011 through 2014 Stakeholders will implement specific Phase-2 nutrient control projects described in CNRP. All Phase 2 projects will be scheduled to be implemented by December 31, 2014 following which, stakeholders will commence collecting the water quality data necessary to assess actual effectiveness and demonstrate compliance with the Response Targets in 2015.

Completing construction of the first Phase 2 Alternative and operating the project in accordance with plans approved by the Regional Board would constitute interim compliance with the technology-based effluent limitations, the narrative water quality objectives, and the related TMDL targets until 2020. Each year, beginning in 2016, the LECL TMDL TF parties will prepare and submit a report to the Regional Board with data to support the claim that continuing operation of all Phase 1 and future Phase 2 projects as needed to achieve full attainment of the TMDL Response Targets by December 31, 2020.

**Long Term Monitoring Program**

Between FY 2011-2012 and 2014-2015 the watershed-wide monitoring program will be substantially reduced.

The CNRP will include a detailed, long-term monitoring program designed to demonstrate compliance with the TMDL targets.

**Long Term Modeling**

No future modeling planned as Task Force will devote available resources toward accelerated project implementation through the Comprehensive Nutrient Reduction Plan.



## Assimilative Capacity for Nitrogen in Lake Elsinore

- A) Total Maximum Daily Load (TMDL): 239,025 kg/yr  
*(Resolution No. R8-2004-0037)*
- B) Existing Background Loads: 209,072 kg/yr  
 Sediment Releases in Lk. Elsinore = 197,370 kg/yr  
 Local Atmospheric Deposition = 11,702 kg/yr
- C) Natural Assimilative Capacity Available (A-B): 29,953 kg/yr
- D) Existing Non-Point Nitrogen Loads to Lk. Elsinore: 28,149 kg/yr

Source of N	From Canyon Lake Watershed	From Local Watershed	Total
Agriculture	9,364 kg/yr	371 kg/yr	9,735 kg/yr
Septic Systems	5,773 kg/yr	1,058 kg/yr	6,831 kg/yr
Urban Runoff	4,619 kg/yr	606 kg/yr	5,225 kg/yr
Open/Forest	3,233 kg/yr	567 kg/yr	3,800 kg/yr
CAFO	2,558 kg/yr	0 kg/yr	2,558 kg/yr
<b>Total</b>	<b>25,547 kg/yr</b>	<b>2,602 kg/yr</b>	<b>28,149 kg/yr</b>

*All N-load data is from Table 5-11 (pg. 54) in the Lake Elsinore and Canyon Lake Nutrient TMDL Technical Report (Rev. 5/21/2004)*

- E) Net Natural Assimilative Capacity Remaining (C-D): 1,804 kg/yr  
*(prior to the addition of reclaimed water or any offset provided by the aeration system)*



## Assimilative Capacity for Nitrogen in Lake Elsinore

E)	Net Natural Assimilative Capacity Remaining: <i>(from previous page)</i>	1,804 kg/yr
F)	Est. N-Offset Provided by Aeration System <i>(based on Dr. Horne's paper)</i>	17,509 kg/yr
G)	Total Estimated Assimilative Capacity Available <i>(available to offset new N loads)</i>	19,313 kg/yr
H)	Est. Additional Assimilative Capacity Obtained by Meeting the Transfer Allocation from Canyon Lake to Lake Elsinore	4,773 kg/yr
	(Existing Xfer Load from C.L. = 25,547 kg/yr Allowed Xfer Load from C.L. = 20,774 kg/yr Projected Reduction from C.L.= 4,773 kg/yr)	
I)	Expected Assimilative Capacity Available (G+H) <i>(after Canyon Lake meets the TMDL for N)</i>	24,086 kg/yr
J)	Actual Avg. Nitrogen Load in EVMWD's Discharge <i>(based on DMR data from 2008, 2009 &amp; 2010)</i> <i>(average discharge rate 2008-2010 = 5,660 ac/ft/yr)</i>	21,707 kg/yr

Note: an additional 5,791 kg/yr of assimilative capacity for nitrogen may be available if:

- \* CAFOs comply with existing discharge prohibitions in dairy permits (2,558 kg/yr)
- \* Forest loads(3,233 kg/yr) originating in subwatersheds #7, #8 & #9 are subtracted from the Xfer Load (consistent with Tetra-Tech's 2010 model updates).

Lake Elsinore and Canyon Lake Nutrient TMDL  
 Technical Report

Table 5-11. Total nitrogen and phosphorus loads to Canyon Lake and Lake Elsinore (weighted average of three hydrologic scenarios, all numbers are in kg/yr)

Weighted Average Nutrient Load Distribution

Nutrient Sources	Total Nitrogen				Total Phosphorus			
	Into Canyon Lake	From CL to LE	Local LE	Into Lake Elsinore	Into Canyon Lake	From CL to LE	Local LE	Into Lake Elsinore
Agriculture	11,057	9,364	371	9,735	4,413	3,670	60	3,730
Urban	5,794	4,619	606	5,225	1,142	736	124	861
CAFO	2,783	2,558	0	2,558	494	467	0	468
Open/Forest	3,586	3,233	567	3,800	2,144	1,978	178	2,157
Septics	7,071	5,773	1,058	6,831	518	441	69	511
subtotal of LSPC simulated loads	30,291	25,547	2,602	28,150	8,712	7,294	431	7,725
EFDC simulated export from Canyon Lake				48,935				9,047
Atmospheric Deposition	1,918			11,702	221			108
supplemental water	248			59,532	NA			14,883
subtotal of external sources	32,457			148,319	8,933	7,294	431	31,763
Internal CL loading	13,549			NA	4,625			NA
Internal LE loading	NA			197,370	NA			33,160
Total	46,006			345,689	13,558			64,923