

MINUTES OF THE  
LAKE ELSINORE/CANYON LAKE TMDL  
TASK FORCE MEETING

August 3, 2009

TASK FORCE AGENCIES

Caltrans  
City of Canyon Lake  
City of Canyon Lake  
City of Canyon Lake  
City of Hemet  
City of Lake Elsinore  
City of Moreno Valley  
City of Murrieta  
City of Riverside  
City of Riverside  
City of San Jacinto  
City of Wildomar  
Elsinore Valley Municipal Water District  
Eastern Municipal Water District  
RBF  
Risk Sciences  
Riverside County Farm Bureau  
Riverside County Flood Control & WCD  
WRCAC

REPRESENTATIVE

Cathy Jochai  
James Grimm  
Lori Moss  
Nancy Horton  
Linda Nixon  
Pat Kilroy  
Kent Wegelin  
Bill Woolsey  
Jessica Chin  
Rob Vanzanten  
Mike Emberton  
Ron Grider  
Ron Young  
Edward Filadelfia  
Gian Villarreal  
Tim Moore  
Steve Pastor  
Jason Uhley  
Pat Boldt (SJRWC)

TASK FORCE AGENCIES NOT PRESENT

City of Beaumont  
City of Menifee  
City of Perris  
Cleveland National Forest  
County of Riverside  
March Air Reserve Base  
March Air Reserve Base JPA  
Metropolitan Water District  
Riverside County -Transportation  
San Bernardino National Forest  
USFS

OTHERS

MWH  
RWQCB  
RWQCB  
Stinnett Enterprise  
UC Berkeley  
Santa Ana Watershed Project Authority  
Santa Ana Watershed Project Authority  
Santa Ana Watershed Project Authority

Sarah Garber  
Cindy Li  
Hope Smythe  
Ray Stinnett  
Alex Horne  
Mark Norton  
Rick Whetsel  
Sara Villa

**Call to Order & Introductions**

The Lake Elsinore/Canyon Lake TMDL Task Force meeting was called to order at 2:17 p.m. by Mr. Young at Elsinore Valley Municipal Water District, 31315 Chaney Street, Lake Elsinore, California.

## Public Comments

Members of the public were invited to address the Task Force on matters within its jurisdiction. Hearing none, Mr. Uhley presented Agenda Item No. 3; Additions to the Agenda.

## Additions to the Agenda

Mr. Uhley asked if there were any additions to the Agenda. Hearing none, he presented Agenda Item No. 4; Approval of the Meeting Minutes.

## Approval of the Meeting Minutes

Upon motion by Mr. Young, the motion unanimously carried:

TMDL 09/05-01  
MOVED, approval of the May 18, 2009 Task Force meeting minutes.

## Action Items-Presentation:

### Dr. Horne – Lake Elsinore Special Nitrogen Studies

Dr. Horne presented to the Task Force the results of his study on Lake Elsinore titled, "Three Special Studies on Nitrogen Offsets in semi-desert Lake Elsinore in 2006-08 as part of the nutrient TMDL for reclaimed water added to stabilize lake levels." Dr. Horne described the context of the special N offset studies and the only affordable solution for *Eutrophication* in Lake Elsinore as likely to be *Bio-manipulation*, noting that the *Bio-manipulation* requires stable water levels so additional water is needed.

Nutrients in makeup water from recycling currently must be offset and Aeration was installed to provide a potential offset form both P & N. The P-offset had already been predicted and the three special studies were designed to determine N-offsets, if any. He noted that the Regional Board wanted to know more about the offsets. Dr. Horne stated that the 3 N-offset studies were *Denitrification*, Benthic felt, and N<sub>2</sub>-fixation. *Denitrification* is Nitrate to N<sub>2</sub>-gas, and Benthic felt is Ammonia taken up by bacterial bottom growths, and the N<sub>2</sub>-fixation is negative offset due to blue-green algae. Dr. Horne noted that his first theory is that aeration can act as a lift pump by mixing low oxygen deeper water with the higher oxygen surface water, and the Aeration itself does not add much oxygen, and Algal photosynthesis is the source of the oxygen needed. Dr. Horne noted that the missing component was nitrate, and the reason for that is because there is no oxygen at the bottom, therefore the nitrate doesn't exist.

More oxygen over the sediments allows more efficient growth of bacteria which form a mat. The mat takes up ammonia that would otherwise go into the water column. Effect is the same as if we had a lot of water lilies in the lake. Water would be clearer since lilies take nutrients away from algae. Dr. Horne gave a brief description of mat biomass and noted that his first Provisional Conclusion is the first year of lake aeration in 2008 increased bottom water dissolved oxygen, *denitrification*, and benthic microbial felt. Aeration did not give high rates on N<sub>2</sub> fixation.

His preliminary results showed that the nitrogen offset was 3 times annual average goal of N in reclaimed makeup water (7.4 tonnes) but only 1.6 times the 19 tonnes actually added in 2008. These offsets should allow limited amounts of additional water in the future, however the offset is less than ideal to achieve the long-term management goal of year-round stable water levels. Dr. Horne also discussed his second provisional conclusion. Improvement in N removal at the treatment plant or elsewhere (wetlands?) may allow more N to be offset in the future. Modification of operation as experience is gained and future upgrading is possible. Dr. Horne asked if anyone had any questions. Mr. Norton asked if Dr. Horne thinks that the same type of bacteria that Lake Elsinore has will be the same as Canyon Lake. Dr. Horne stated yes. A discussion ensued amongst the Stakeholders.

## Items for Discussion:

### 303(d) TMDL Listing – Lake Elsinore Toxicity and Watershed Action Plan

Mr. Moore stated that the Regional Board was expecting the Task Force to comment on Lake Elsinore being added to the 303(d) listing. He noted that we have seen the draft MS4 Permits for Riverside County and the

permits require the development and submission of a Watershed Action Plan which is listed on the 303 (d) lists, for which a TMDL has not yet been developed. Mr. Moore stated that an obligation plan is going to arise to submit to the Regional Board, and it requires us to describe what it is that we are going to be doing by assisting the Regional Board with collecting monitoring data to support the TMDL. He noted that come next fiscal year we should include this item into our list. There was a brief discussion amongst the Stakeholders in regards to the MS4 Permits. It was asked if a presentation was ever given to the Regional Board about Lake Elsinore sediment toxicity. Mr. Young noted that he doesn't think it was done as a presentation but as a letter showing results. Ms. Smythe noted that she can present the results and put it in next meeting agenda. Mr. Moore suggested that there'd be some additional analysis to confirm the data results for the time being.

### Watershed Model Update

Mr. Whetsel informed the members of the Task Force that he is working on setting up a conference call with Cindy Li, Tim Moore, and Steve Carter from Tetra Tech. He noted that there was a request at the last meeting for some detailed scheduling and updated Tasks and he is going to discuss that in the call. He stated that the tentative schedule is to have it all completed by December and a deliverable is due off of this modeling Task in November of 2009, and at the minimum they'dl have a draft to meet the deadline, and the project will be done in six months.

### Lake Elsinore Biological Monitoring Program

Mr. Norton stated that the Regional Board approved the Lake Elsinore Biological Monitoring Program and he had the contract with him to be signed by Dr. Anderson.

## **Informational Items**

### LESJWA: Task Force Administration Status Update

#### TMDL Task Force Agreement

Mr. Norton noted that the Task Force Agreement expires in June 2010 and wants to discuss in future meetings to see if there are any changes that anyone would like to make to the Agreement.

#### TMDL Schedule of Deliverables

Mr. Whetsel stated that we've finished up the 2008/09 Watershed Monitoring and the Lake Monitoring for Canyon Lake and Lake Elsinore for nutrients and we should have a Draft Annual Water Quality Monitoring Report in the middle of September.

#### Task Force Budget FY 2008-09 Review

Mr. Whetsel noted that the invoices were sent out about two weeks ago for FY 2009-10. He stated that Agriculture with their efforts has submitted \$400,000 to the Task Force and has paid all FY2006-07 & 2007-08 & some of 2008-09. Ms. Boldt noted that another \$100,000 will be due in around September.

### LESJWA: Projects Status Update

#### Quagga Mussel Risk Assessment for Lake Elsinore and Canyon Lake

Mr. Norton stated that the contracts have been signed and there were some liability issues, but they were taken care of.

### LESJWA: Grant Project Status Update

#### Lake Elsinore Recharge Pipe Line – Performance Monitoring

Mr. Norton stated that they were still on hold for the Funding from the State.

#### Lake Elsinore Back Basin Wetlands BMP Project

Mr. Norton noted that the on the Back Basin Wetlands Project we have received a separate grant from the Inland Water Keepers for \$25,000 for consultation and with the City it appears that we can proceed with a Floating Islands Project and he'dl be bringing it to the LESJWA Board for their approval.

Mr. Norton also noted that they had a fish kill in Lake Elsinore. He stated that they had the aeration up and running and the cleanup was rapid and quick within two days and everything was back to normal. Since 2002 this was the first fish kill in Lake Elsinore. He noted that it was due to the dissolved oxygen and maybe because of the hot weather. There was a brief discussion amongst the Stakeholders.

EVMWD: Lake Elsinore/Canyon Lake Monitoring and Analysis - Nutrient & Pathogen (Task 4.2 & 4.3)

Mr. Young noted that everything on the Lake Elsinore and Canyon Lake Nutrient and Pathogen Monitoring is on its way and on schedule. He mentioned that Ms. Garber was here if anyone had any questions. Mr. Whetsel asked when a draft summary report for the Pathogen data will be available; Ms. Garber mentioned that around September or October.

**Schedule Next Meeting**

The next meeting is scheduled for Monday, October 26, 2009, at 2:00 p.m., at EVMWD.

**Adjournment**

There being no further business for review, the meeting adjourned at 4:18 p.m.