

## Information about DSPUD Water Sampling for N, P and Total Phosphorus

### Background

Starting January 15, 2009, DSPUD began taking additional samples from the Yuba River and analyzing those through a certified lab. Those reports are now available on the DSPUD website in a summary for easy review. PDFs of the actual lab reports are also available on the site ( [www.dspud.com](http://www.dspud.com) ).

The sampling will occur twice a week, weather permitting, and includes the following additional sites:

1. R-1 is above the DSPUD wastewater treatment plant discharge point
2. R-2 is 500 feet below the DSPUD wastewater treatment plant discharge point
3. Towle Mountain Bridge is roughly one mile below the DSPUD wastewater treatment plant discharge point

The water samples are being tested for the following constituents:

1. Nitrate as N
2. Phosphate as P
3. Total Phosphorus as P, Persulfate-Acid dgt.

### Frequently Asked Questions

#### What will I see on the spreadsheet?

The spreadsheet summary compiles the data from every completed analysis to date. It lists the date of sample, the report number, levels of Nitrate, Phosphate and Total Phosphorus and the sampling locations. This summary can give a general idea regarding:

1. the level of these constituents prior to the discharge point as well as below,
2. the assimilation ability of the river (compare data at discharge point with that from Towle Mountain Bridge, and
3. change in these parameters over time.

#### Where can I see the raw data?

The raw data as reported by Cranmer Analytical Laboratory is available on the DSPUD website along with summary data. This includes influent and effluent samples as well as the analytical method, receiving date and the "Chain of Custody" report.

#### What does the data tell me?

The data give a better "picture" of the assimilation ability of the Yuba River. In other words, how well are the Nitrate, Phosphate and Total Phosphorus being diluted by the river at the point of discharge and further down the river at Towle Mountain Bridge. This is important to evaluate the river's health and better understand the capabilities and performance of the DSPUD Wastewater Treatment Plant.

These data can also tell us if Nitrate, Phosphate and Total Phosphorus might be in the river *above* the DSPUD WWTP which might give helpful information when planning upgrades to the WWTP.

### **How is this sampling protocol different than before?**

The DSPUD has collected samples from the river and effluent as needed per the requirements of its operating permit. However, it is clear that much more information is needed to ensure that the Yuba River remains healthy. We have added more samples so that we can follow trends in weather patterns, flow, temperature, and human impact. With this information we can do the best possible job to protect the river and surrounding environment and also make informed decisions about potential plant upgrades.

These additional samples are also in direct response to feedback from citizens and concerned groups who requested more data about the DSPUD WWTP performance.

### **How do I navigate through the spreadsheet?**

The spreadsheet is simply a compilation of all the reports since January 15 when the first round of testing began. Along the top is the location of sample and the type of test. The left margin shows the date of sample and when that sample was received in the lab. The second column on the left shows the actual report number. If you want to see the actual data, you can then select that raw data report number that corresponds with that on the spreadsheet.

### **Why are there dates with blanks in the reporting area?**

When samples are received, it takes several days, sometimes a week or more, to analyze and complete the report. Therefore, there is a lag between when the sample was received and when it is actually reported. We will post the reports and update the spreadsheet as quickly as possible to reflect the new data coming in.

### **I see something called “reporting limit” on the raw data reports. What is that?**

The reporting limit is the minimum point that an analysis is accurate. In other words, if a constituent exists in any number lower than the reporting limit, the analysis may not be accurate. Often this results in something called a “non-detect” which means that the amount of that constituent in the sample was so low that it was virtually non-detectable.

Here is an example...The reporting limit for “Ammonia as N” is 0.1 mg/L (milligrams per liter). If a sample comes in that has .09mg/L, then the analysis may not even pick that amount up and it will be reported as a “non-detect”.

It is important NOT to confuse the reporting limit with the permit limits. The permit limit amounts are regulated by the Regional Water Quality Control Board, Central Valley Region and are specified in the DSPUD Wastewater Treatment Plant permit.

### **Do we know anything yet from these samples and reports?**

There are too few data yet to see a pattern forming.