

CITY OF
SANTA ROSA

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January 5, 2006

Tam Doduc, Chair
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812

303 (d) Deadline:1/31/06

Dear Ms. Doduc:

Subject: 2006 303(d) List Recommendations for the North Coast Region

This letter summarizes concerns of the City of Santa Rosa (hereafter "Santa Rosa") with regard to the current proposal of the State Water Resources Control Board, set forth in "Staff Report - Revision of the Clean Water Act Section 303(d) List of Water Quality Limited Segments," September 2005 (Vol. I) (hereafter, "State Board Staff Recommendations") for specific water segments within the North Coast Regional Board's jurisdiction.

Santa Rosa has three points of disagreement with the State Board Staff Recommendations and one request for clarification as follows:

- Placing Santa Rosa Creek on the 2006 303(d) list for specific conductance
- Placing the Russian River Guerneville HAS on the 2006 303(d) list for pH
- Placing the Laguna de Santa rosa on the 3006 303(d) list for mercury
- Clarification of terminology for which water segments are recommended for listing

In addition, Santa Rosa concurs with the recommended delisting of the Laguna de Santa Rosa for nitrogen and phosphorus but requests that SWRCB expand the information provided in the SWRCB Fact Sheets Supporting Revision to the Section 303(d) List Region 1 (hereafter "Fact Sheets").

SANTA ROSA CREEK – SPECIFIC CONDUCTANCE LISTING RECOMMENDATION

The SWRCB's Water Quality Control Policy for Developing California's Clean Water Act Section 303(D) List (Listing Policy) states that

"Waters shall be placed in this category of the section 303(d) list if it is determined, in accordance with the California Listing Factors, that the water quality standard is

not attained; the standards nonattainment is due to toxicity, a pollutant, or pollutants; and remediation of the standards attainment problem requires one or more TMDLs.”

The listing for Santa Rosa Creek for specific conductance (conductivity) was based on exceedences of Basin Plan objectives for conductivity (Fact Sheet for conductivity). However, the only Basin Plan conductivity objectives for the Russian River HU are for upper and lower mainstem Russian River. The objective applied to Santa Rosa Creek is that for the upper Russian River. The footnote for this objective in the Basin Plan states “Russian River (upstream) refers to the mainstem river upstream of its confluence with Laguna de Santa Rosa.” Santa Rosa Creek is not tributary to the water to which the objective applies. Thus, this objective cannot be used as a basis for including Santa Rosa Creek on the 303(d) list for conductivity.

RUSSIAN RIVER – GUERNEVILLE HSA pH LISTING RECOMMENDATION

Table 6 of the State Board Staff Recommendations lists Russian River HU, Lower Russian River HA, Guerneville HSA as recommended for listing for pH. According to the Fact Sheet, the data set upon which the listing was based was collected entirely in Pocket Canyon Creek. Although the Fact Sheet states “This listing should be focused on Pocket Canyon Creek because sampling was limited to Pocket Creek a tributary to the lower Russian River within the greater Guerneville HSA.” However, the listing is for the entire Guerneville HSA. The State Board Staff Recommendations and Fact Sheet provide no evidence that other waterbodies in the Guerneville HSA (including the Russian River) are pH impaired. Therefore, only Pocket Canyon Creek should be listed for pH, not the entire Guerneville HSA.

LAGUNA DE SANTA ROSA MERCURY LISTING RECOMMENDATION

The State Board Staff Recommendations for listing the Laguna de Santa Rosa (Laguna) is based on screening values, developed by Brodberg and Pollock (1999), which are inappropriate for determining listing. Brodberg and Pollock (1999) states “The Screening Value (SV) approach is recommended by USEPA (1995) to identify chemical contaminants in fish tissue at concentrations which may be of human health concern for frequent consumers of sport fish. The SVs are not intended as levels at which consumption advisories should be issued but are useful as a guide to identify fish species and chemicals from a limited data set, such as this one, for which more intensive sampling, analysis or health evaluation are to be recommended.” Thus, the authors are stating that the screening values are only intended for determining when more study is needed.

The Brodberg and Pollock (1999) paper also includes USEPA screening values. According to Brodberg and Pollock (1999), the USEPA screening value for mercury is 0.6 ppm which

is double the Brodberg and Pollock report-specific screening value of 0.3 ppm. One value in the Laguna exceeds the USEPA screening. This one exceedance does not meet the Listing Policy minimum number of measured exceedances needed to place a water segment on the section 303(d) list, and the Laguna should therefore not be listed as impaired for mercury.

CLARIFICATION OF TERMINOLOGY

For Region 1 only, the State Board Staff Recommendations and the Fact Sheets state the HA, HU, and HSA (as appropriate) for each individual waterbody. For example, the mercury listing for the Laguna de Santa Rosa has Russian River HU, Middle Russian River HA, Laguna de Santa Rosa under Water Segment in Table 6 of the State Board Staff Recommendations. For other regions, only the specific waterbody is listed. This leads to two possible interpretations for Region 1 recommendations – either only the specific waterbody is recommended for listing or the waterbody and its, HA and HU are recommended for listing. In the Laguna de Santa Rosa example given above, it is not clear whether only the Laguna de Santa Rosa is recommended for listing or the Middle Russian River HA is recommended for listing or the entire Russian River HU is recommended for listing. Please revise the State Board Staff Recommendations and Fact Sheets to clarify and be consistent with other Region recommendations.

DELISTING OF THE LAGUNA DE SANTA ROSA FOR NITROGEN AND PHOSPHORUS

Thank you for fully considering the information we have provided concerning nutrients in the Laguna. We agree with the proposed delistings for nitrogen and phosphorus which are consistent with the delisting criterion that applicable water quality standards for the pollutant are not exceeded. The City requests that SWRCB expand its assessment of EPA's previous decision to add the Laguna nitrogen and phosphorus delisting to include the following points.

USEPA provided its rationale for listing the Laguna for nitrogen and phosphorus in a letter from Alexis Strauss, EPA Region 9 to Celeste Cantú, State Water Resources Control Board dated February 28, 2003 (hereafter "EPA review"). The criteria for nitrogen and phosphorus (1 mg/L and 0.1 mg/L, respectively) the EPA review relies upon to determine what nutrient levels would be protective of the receiving water are inappropriate for the following reasons:

- The EPA review cites as evidence for the reasonableness of the nitrogen objective (1 mg/L) the San Diego Regional Basin Plan. However, this objective was developed by taking a 1970's recommendation for phosphorus of 0.1 mg/L and applying a 10:1 N:P ratio, resulting in the N objective of 1 mg/L. The P recommendation is presumably the

EPA's "Red Book" recommendation and is outdated and not based on region-specific, let alone waterbody-specific, information.

- The EPA review cites as evidence for the reasonableness of both the nitrogen and phosphorus objectives the Malibu Creek Watershed TMDL document (EPA 2003, hereafter "MCTMDL"). The MCTMDL states that various nutrient standards, including the San Diego Regional Board standard, "have little predictive power in explaining the patterns in algal abundance or biomass within the Malibu Creek watershed". Just as there is "uncertainty as to what factors control algal abundances in the Malibu Creek watershed", uncertainty exists as to what factors control *Ludwigia* in the Laguna. The recent increases in *Ludwigia* in the Laguna are not accompanied by corresponding increases in nutrients. Thus, the nitrogen and phosphorus objectives cited by EPA as a basis for listing the Laguna were explicitly identified by EPA (as author of the MCTMDL) as unsuitable for that purpose.
- The EPA review cites as evidence of the reasonableness of both the nitrogen and phosphorus objectives the report Dodds and Welch (2000) *Establishing Nutrient Criteria in Streams*.
 - Dodds and Welch (2000) states that nutrient criteria should be set depending on the specific reason for setting the criteria. Dodds and Welch (2000) does not provide criteria when the outcome of concern is relieving an oxygen deficit but says an oxygen criterion would be probably greater than levels presented for benthic chlorophyll *a*. Dodds and Welch (2000) states "As more data become available, it will be possible to directly link frequency and severity of low DO events with nutrient loading."
 - The various standards Dodds and Welch (2000) provides for controlling benthic chlorophyll *a* were derived from data collected from temperate streams throughout the world and thus may not be applicable to streams in semiarid regions such as the Laguna. In temperate climates, rain falls for much of the year and is rarely torrential, resulting in more continuous vegetative ground cover and in little natural soil erosion. Regions with semiarid climates have fewer, often larger storms and less continuous ground cover. The main natural source of nitrogen in all watersheds is rainfall, and the main natural source of phosphorus is soil erosion. Thus rivers in semiarid climates tend to have excess phosphate and to be nitrogen-limited, while those in temperate climates have excess nitrate and tend to be phosphorus-limited. (Horne and Goldman, 1994. *Limnology*)
 - Additionally, Dodds and Welch (2000) state "[m]oreover, a large amount of the variance in benthic chlorophyll levels in streams is not related to nutrient levels." They also conclude that "a significant amount of monitoring data are necessary to refine recommendations for nutrient criteria," including seasonal means and maxima

for benthic and planktonic chlorophyll *a*, associated water column nutrients and diurnal DO concentrations.

During the State Board's Workshop held in Sacramento on December 6, 2005, several individuals spoke in opposition to the staff's proposal to de-list the Laguna for nitrogen and phosphorous. However, none of these commentators provided any specific data or independent scientific information that contradicts the bases for your staff's recommendation to de-list the Laguna. In fact, the gist of these comments was that, "since the Laguna has a *Ludwigia* problem, it must be caused by nitrogen and phosphorous" without citing any scientific bases for this conclusion.

A few speakers referred to a 0.1 mg/L "standard" for phosphorous, and stated that the City violates this "standard" in its effluent. However, as noted above - - and by your staff in its de-listing recommendation, there is no numeric standard. There is only a narrative standard and, as acknowledged by Mr. Peter Kozelka from the US EPA during the December 6th Public Workshop, it is extremely difficult to translate the narrative standard into a numeric one. For this reason, and taking into account specifically the Listing Policy that the State Board adopted last year, it is inappropriate to list the Laguna at this time for nitrogen and phosphorous. As your own staff concluded, "there is no applicable guideline that can be used to interpret the narrative standard" at this time.

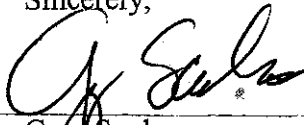
Contrary to the claims made by some at the December 6 Workshop, de-listing the Laguna for nitrogen and phosphorous will not "send the wrong message" to the community. Indeed, it would simply be an acknowledgment that the State Board intends to follow its own Listing and De-Listing Policy when making these highly complex and technical decisions. Further, de-listing the Laguna for nitrogen and phosphorous would have absolutely no negative impact on the regionwide effort to address the *Ludwigia* problem in the Laguna. As the State Board heard on December 6th, there are numerous efforts currently ongoing to address the *Ludwigia* problem, and the City of Santa Rosa has been a financial contributor towards those efforts. Further, the City has repeatedly indicated its willingness to help fund the appropriate study of the Laguna to determine specifically what the limiting pollutant(s) are.

Some commentators have suggested incorrectly that it is appropriate to list the Laguna for nitrogen and phosphorous, and then complete the studies to determine whether they are the limiting pollutants in the Laguna. Aside from being contrary to the State Board's Listing & De-Listing Policy, this approach is likely to have real-world and very expensive implications for dischargers such as the City of Santa Rosa. The reason is that, while the TMDL work - - including the studies mentioned - - is waiting to begin, the City is likely to be given NPDES permit effluent limits that might either be impossible or impractical to meet, or could cause the City to pursue costly new treatment facility construction in an effort to remove additional nitrogen and phosphorous. In either event, requiring the City to pursue new treatment technologies or risk the spectre of permit violations, all while not

knowing now what the real problem pollutant(s) are is illogical and unfair to the thousands of ratepayers who will have to shoulder the financial consequences of such an action.

Thank you for your consideration of our comments. If you have any questions or need additional information, please contact Dr. David Smith at 707 237-6992.

Sincerely,



Greg Scoles,
Deputy City Manager

cc: Santa Rosa Board of Public Utilities
David Smith, Merritt Smith Consulting
Craig Johns, California Resources Strategies
Catherine Kuhlman, NCRWQCB