SONOMA COUNTY WATER AGENCY

FILE:WC44-1-1 CITY OF SANTA ROSA LONG-RANGE WASTEWATER MANAGEMENT PLAN

October 7, 1996

Marie Meredith, Environmental Coordinator
City of Santa Rosa
100 Santa Rosa Avenue, Rm. 10
Santa Rosa, CA 95401

SUBJECT: SANTA ROSA SUBREGIONAL LONG-TERM WASTEWATER PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT/STATEMENT (EIR/EIS)

The Sonoma County Water Agency (Agency) has reviewed the City of Santa Rosa's Subregional Long-Term Wastewater Project Draft EIR/EIS and appreciates the opportunity to comment on the document. Our comments are directed at the Public Health and Safety impacts of Discharge Alternative 5A discussed in the Draft EIR/EIS.

PUBLIC HEALTH AND SAFETY IMPACTS 001

The occurrence of pathogens in the Russian River and potential sources of pathogens are of primary concern to the Agency because of their potential affect on water produced by the Agency's Ranney Collector wells and how the Agency's water is regulated in the future. The Agency's has specific issues regarding the public health impacts of Discharge Alternative 5A (Russian River discharge), which would move the existing point of discharge at the Laguna de Santa Rosa to a point on the Russian River just upstream of the Agency's existing collector wells. The distance and travel time from the existing Laguna discharge point to the Agency's collector wells eliminates many of the potential public health impacts of tertiary wastewater discharges; however, Discharge Alternative 5A largely eliminates this positive effect.

In addition, the Agency offers the following specific comments on the discussion of Alternative 5A in the Public Health and Safety chapter and the corresponding appendix in the Draft EIR/EIS: 002

Sub-appendix F to Appendix J-3 (Human Health Risks from Chemical and Biological Components of Reclaimed Water) discusses the ability of the city's chlorine disinfection process to inactivate *Giardia*, apparently based on the detention time achieved in the chlorine contact chamber at the Laguna Treatment Plant. The inactivation analysis is based on criteria contained in the existing Surface Water Treatment Rule. The estimated occurrence of *Giardia* and *Cryptosporidium* in Appendix J-3 is based on four sampling events over a three month period in 1994. This sampling detected no *Cryptosporidium* and a maximum *Giardia* concentration of 13.8 cysts/100 L. However, subsequent sampling conducted from May to September of 1996 at the Laguna Treatment Plant has detected both *Giardia* and *Cryptosporidium* in plant effluent. Additional sampling should be collected which represent the full range of seasonal operating conditions before drawing conclusions about the occurrence of these pathogens in treated wastewater.

Of greater concern to the Agency is the fact that the analysis for Discharge Alternative 5A does not discuss the effectiveness of the treatment process for *Cryptosporidium*, which are far more difficult to inactivate than *Giardia*. Although no *Cryptosporidium* were identified in the four samples above, they were detected in the samples collected in 1996. We believe that the analysis for Discharge Alternative 5A should also address the ability of the treatment process to remove or inactivate *Cryptosporidium*. 003 In addition, we understand that the city is currently in the design phase of a project to change disinfection at the Laguna Treatment Plant from chlorine to ultraviolet (UV) disinfection. The analysis should also discuss the effectiveness of UV disinfection for *Giardia* and *Cryptosporidium* inactivation. 004

P.O. BOX 11628 - SANTA ROSA, CA 95406 - 2150 W. COLLEGE AVENUE - SANTA ROSA, CA 95401 - (707) 526-5370 - FAX (707) 544-6123

October 7, 1996

As discussed in Appendix J-3, one of the Agency's five Ranney collector wells, Collector Well No. 5, is characterized as being under the direct influence of surface water for the purposes of the Surface Water Treatment Rule. Collector Wells Nos. 1 to 4 are not considered to be under the direct influence of surface water. The Agency is currently preparing to begin sampling under the EPA's Information Collection Rule (ICR), which will provide data on the occurrence of *Giardia* and *Cryptosporidium* nationwide. Data collected under the ICR will be used to develop the proposed Enhanced Surface Water Treatment Rule (ESWTR), which is expected to be released by the EPA within 2 to 3 years. Treatment requirements under the ESWTR will be targeted at inactivation of *Cryptosporidium* because conventional chlorine disinfection has been shown to be relatively ineffective for inactivation of *Cryptosporidium*. 005

The Agency has serious concerns about a potential source of *Cryptosporidium* and other pathogens under Alternative 5A at a point just upstream of the Agency's collector wells. Without the mitigating effects of distance and time from the point of discharge that occur with the existing Laguna discharge, Discharge Alternative 5A has the potential to trigger requirements for greater pathogen removal rates at Collector Well No. 5, or jeopardize the "not under the direct influence of surface water" status of Collector Wells Nos. 1 to 4. This risk will be even greater under the pending ESWTR. The Agency could only achieve greater removal efficiencies through additional filtration or alternative disinfection methods, either of which would be extremely costly for the Agency to implement.

In addition to the ESWTR, the EPA is presently considering the proposed Groundwater Disinfection Rule (GDR), which will apply to all of the Agency's Ranney Collector wells which are not considered to be under the direct influence of surface water. When issued, the rule will contain criteria for natural groundwater disinfection resulting from filtration in the aquifer, which will depend on the distance from potential contamination sources. The Agency is concerned that a discharge point directly above its collector wells, as proposed under Discharge Alternative 5A, could result in a treatment requirement which could only be accomplished by costly alternative disinfection methods. 006

The evaluation criteria discussed on page 4.7-28 of the Draft EIR/EIS (Evaluation Criteria with Points of Significance for Pathogenic Viruses, Bacteria and Other Disease Organisms), consider impacts to be significant if Project alternatives would cause the water quality at a domestic water intake to exceed Maximum Contaminant Levels (MCLs) for fecal coliform or *E. coli*. In light of the points discussed above, we believe this criterion is too limited to identify and fully address all potential Public Health and Safety impacts of Discharge Alternative 5A. While the treatment requirements under the ESWTR have not yet been adopted, the rule has been issued in draft form and is certain to result in additional treatment-based standards in the near future. We suggest that the criteria be expanded to also define impacts as significant if they could result in regulatory requirements for greater treatment at any downstream domestic water intake. Mitigation measures for any resulting significant impacts should address the potential cost of any additional treatment. 007

In summary, the Agency is committed to providing its customers with the highest quality water possible and has serious issues with Discharge Alternative 5A, which would increase the exposure of its customers to treated wastewater discharges and eliminate the mitigating effects of the existing discharge configuration. Alternative 5A would move the existing discharge to a point just upstream of all of the Agency's collector wells, which serve a population of approximately 500,000 people, and would benefit no one in terms of public health and safety. 008

Again, we appreciate the opportunity to comment and would like to thank the City's staff for their cooperation and assistance during the comment process. If you have any questions regarding the comments, please contact me at 522-1900.

JIM FLUGUM, P.E. - SENIOR CIVIL ENGINEER

d:\rs3\u\cl\ursula\sr_subrg.jn