STATE WATER RESOURCES CONTROL BOARD
DIVISION OF CLEAN WATER PROGRAMS

ENVIRONMENTAL REVIEW PROCESS GUIDELINES FOR STATE LOAN AND SMALL COMMUNITY GRANT APPLICANTS

June 13, 1994

PART I. PURPOSE

These guidelines detail the steps that must be taken by applicants to comply with the environmental review requirements for the State Revolving Fund (SRF) Loan Program, Water Reclamation Loan (WRL) Program, or Small Community Grants (SCG) Program administered by the State Water Resources Control Board (SWRCB), Division of Clean Water Programs (Division). Generally, the process set forth here is accomplished through compliance with the California Environmental Quality Act (CEQA). In addition, the SRF Loan Program is partially funded by the U.S. Environmental Protection Agency (EPA) and therefore subject to the requirements of the National Environmental Policy Act (NEPA). To meet NEPA requirements, the EPA established additional "NEPA-like requirements in the Operating Agreement with the SWRCB for administering the SRF Loan Program. Accordingly, applicants seeking SRF loans will be subject to "NEPA-like" requirements which are clearly emphasized in these guidelines.

Detailed requirements under CEQA are given in the CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3). Copies of CEQA and the CEQA Guidelines are available from the Department of General Services, Publications Section [(916)574-2200]. The guidelines presented here are intended to supplement the CEQA Guidelines with specific requirements for environmental documents which will be acceptable to the SWRCB when reviewing applications for wastewater treatment facility loans or grants; they are not intended to supersede or replace the CEQA Guidelines.

SWRCB regulations (California Code of Regulations, Title 23) state that "Whenever any public agency applies to the SWRCB for any ... discretionary financial assistance for a project to be undertaken by such public agency, the application shall be supported by either an Initial Study and a Negative Declaration or an 'EIR'". [Section 3750(b)]. For SWRCB funded projects, the applicant is usually the "Lead Agency" as defined under CEQA and will be responsible for the preparation, circulation and consideration of the environmental document prior to approving the project. The SWRCB and other agencies having jurisdiction over the proposed project are "responsible agencies" under CEQA and are accountable for reviewing and considering the information in the environmental document prior to approving any portion of the project.

If the applicant intends to use any of the tiering documents allowed under CEQA (e.g., Program EIRs, Master EIRs, etc.), or if the applicant intends to use an existing final document, a subsequent EIR, or a supplement or an addendum to an EIR, the Division should be notified as soon as possible. For SRF loans, the Division must ensure that federal agencies are afforded adequate review of environmental documents for projects that will be federally funded.

Questions regarding environmental procedures and practices should be directed to the State Water Resources Control Board, Division of Clean Water Programs, Environmental Services Unit, at (916) 227-4480. Questions regarding cultural resources should be directed to the Division's Cultural Resources Officer at (916) 227-4481.

PART II. DETAILED PROCEDURES

In the following procedures, all references to section numbers or appendices refer to the CEQA Guidelines. Figure A presents a generalized step-by-step approach describing the CEQA process for proposed SWRCB funded projects. The numbers in Figure A correspond to the numbered paragraphs below:

1. Prepare an Initial Study as described in the CEQA Guidelines, Section 15063. An "Initial Study" is a preliminary analysis prepared by the Lead Agency to determine whether an EIR (Environmental Impact Report) or a Negative Declaration must be prepared. The Initial Study must include a project description, an environmental setting and a discussion of potential impacts as outlined in Part 3 of these guidelines. If a checklist is used, it must be supplemented with explanations for each answer, including "no" answers. The criteria for "significance" of impacts are listed in Sections 15064 et seq

2. <Decision Point> Is there substantial evidence that the project may have a significant environmental effect which cannot be mitigated before public release of the environmental document? If yes, proceed to Item 8 for starting the EIR process; if no, proceed to Item 3 for the Negative Declaration process. Consult with the Division immediately if you intend to use an existing final document.

3. Prepare a Negative Declaration (Section 15371).

4. Circulate the Initial Study and Negative Declaration (IS/ND) (Sections 15072 and 15073). See Item 11 for more detail.

5. Public participation: A public hearing is strongly recommended when applying for any loan or grant administered by the Division, and is mandatory when applying for an SRF loan. An earnest public participation program can greatly improve the planning process and reduce the chance of delays due to public controversy. For assistance in this area, please feel free to call the Environmental Services Unit. See Item 12 for more detail.

6. <Decision Point> Do any comments reveal substantial evidence that the project may have a significant environmental effect? If yes, proceed to Item 8, and prepare an EIR; if no, no further environmental analysis is required.

7. Based on the lack of significant effects or commitment to adequate mitigation for significant effects disclosed in the Initial Study and the absence of significant comments received, the decision- making body should make a finding that the project will have no significant effect on the environment and adopt the Negative Declaration. Proceed to Item 16.

8. The State EIR Guidelines require that a Notice of Preparation (NOP) be distributed whenever an EIR is proposed. An NOP is a brief notice you send to notify the responsible agencies, trustee agencies, and involved federal agencies that an EIR will be prepared for the project. The purpose of the NOP is to solicit guidance from those agencies as to the scope and content of the environmental information to be included in the EIR. Public agencies are free to develop their own formats for this NOP. The contents of the NOP are described in Section 15082. If it is uncertain whether an EIR or a Negative Declaration is appropriate, an NOP should be distributed in order to cover both eventualities. You should send a copy of the NOP directly to the Division and to the State Clearinghouse at the addresses listed in item 11. Please consult with the Environmental Services Unit or with the State Clearinghouse at (916) 445-0613 if there are any questions about the procedures to be followed.

9. Incorporate any comments received in response to the NOP into the Draft EIR (Item 10).

10. Prepare Draft EIR. "EIR" or "Environmental Impact Report" means a detailed statement prepared under CEQA that describes and analyzes the significant environmental effects of a project and discusses ways to mitigate or avoid the effects. See Section 15120 et seq.

11a. Submit Draft EIR (or IS/ND) for review by the public and local, State and federal agencies (Sections 15085-15087).

The following review procedures are designed to coordinate the project with various federal, state, and local areawide plans and programs. Send three (3) copies of the environmental document (either a Draft EIR or IS/ND) to the Division's Environmental Services Unit. All correspondence with the Division regarding environmental documents (Draft EIRs, comments received, Final EIRs, IS/NDs, etc.) should be addressed to:

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF CLEAN WATER PROGRAMS
ENVIRONMENTAL SERVICES UNIT
P. O. BOX 944212
SACRAMENTO, CA 94244-2120

Draft EIRs and IS/NDs to be reviewed by state agencies must be submitted to the State Clearinghouse (Section 15205). Send ten (10) copies of the EIR or IS/ND to the State Clearinghouse, unless the State Clearinghouse approves a lower number in advance [Section 15205(e)]. You may use either the standard "Notice of Completion and Environmental Document Transmittal Form" included in the CEQA Guidelines (Appendix C) or develop a similar form to be used when submitting the documents. On the back side of the form, put a check on any of the "REVIEWING AGENCIES" that you would like Draft EIRs to be sent to including "SWRCB - Grants", otherwise the State Clearinghouse will select the appropriate review agencies. You must also use a copy of the completed form when sending documents to the areawide clearinghouse. You must also send a formal transmittal letter to the State Clearinghouse giving them the authority to distribute the copies of the Draft EIR. If a consultant is preparing the Draft EIR or IS/ND, the consultant must obtain a formal transmittal letter from you stating that you, the applicant, give permission to the consultant to send the copies of the document to the State Clearinghouse. The letter should also have the State Clearinghouse number from the NOP. If you need a shorter review period than what is required by the CEQA Guidelines, you, not the consultant, must submit a written request. This formal request can be included in the transmittal letter stating the reasons for a shorter review period. To send documents to the State Clearinghouse, use the following address:

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
OFFICE OF PERMIT ASSISTANCE
STATE CLEARINGHOUSE
1400 TENTH STREET, ROOM 121
SACRAMENTO, CA 95814

The focal point of the State's review is the State Clearinghouse. The review starts when the State

Clearinghouse receives your Draft EIR or IS/ND, at which time they will assign a Clearinghouse number to your project. If an NOP was previously filed, they will use the Clearinghouse number assigned to the NOP. This eight-digit number(e.g. SCH# 82061506) is very important and should be used on all documents, such as inquiry letters, supplemental drafts, final EIRs,etc. The State Clearinghouse will send you an "ACKNOWLEDGEMENT" card. If you have any questions about the State Clearinghouse procedures,call (916) 445-0613.

While you are encouraged to contact the regional and district offices of state responsible agencies, this does not replace the requirement to submit environmental documents to the State Clearinghouse for distribution [Section 15205(f)]. To ensure that responsible agencies, including this Division, receive copies of the environmental document, you should send copies directly to the agencies. You are also responsible for sending copies of the environmental documents to any local or federal responsible agency with jurisdiction over any part of the proposed project.

During the CEQA review period, you may receive comments directly from interested parties, and federal, state or local agencies. After the review period ends, the State Clearinghouse should send you a letter stating that the review process is closed and that review requirements have been complied with. Any comments from state agencies will be forwarded with the letter.

11b. If the project involves an SRF loan, we will need to send copies of the draft environmental document directly to federally designated agencies. In order for us to do this, you will need to send eight (8)copies of your draft environmental document to our office. The federally designated agencies must have at least forty five (45)calendar days to review each environmental document (including IS/NDs). The review is to be calculated as fifty one (51) calendar days from the date the environmental document was mailed to the reviewing agency. If any of these agencies identifies an issue of concern, the Division will consult with the agency to determine the necessary and appropriate actions to resolve the issue.

To ensure compliance with federal laws and regulations, the Division has been designated as the non-federal representative for all projects in California that involve an SRF loan. This designation is applicable for coordination and compliance under the Federal Endangered Species Act and the National Historic Preservation Act.

To comply with Section 7 of the Federal Endangered Species Act, the SWRCB will review SRF projects during the facilities planning process to determine if a project may affect threatened or endangered species. It is important that you identify any issues concerning sensitive species and notify the Division early in the planning stage. The Division will confer informally with the U.S. Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) as appropriate. You will need to provide the Division with any species lists, biological assessments and other documents which disclose information on the project's effect on sensitive species at the earliest date.

If there are threatened or endangered species that could be affected by a project, either directly or indirectly, the Division will evaluate the extent of any impacts as part of its environmental review process and submit its findings to the FWS/NMFS. If the Division, in consultation with the FWS/NMFS, determines that the project will affect any threatened or endangered species, it will notify the EPA of the need to request formal consultation. EPA will participate as lead agency in the formal consultation process.

Clearance from the State Historic Preservation Officer is required under Section 106 of the National Historic Preservation Act for all SRF projects. In order to avoid potential funding delays, you are encouraged to consider the potential effects of the proposed project on cultural resources (historic, ethnographic, prehistoric, and paleontological) at the earliest stages of project planning.

All projects must have a records search performed for the project's area of potential effect (APE) at the Regional Information Center for your area. The project's APE includes all construction areas, barrow pits, haul roads, staging areas, etc. You must send a USGS topographical map with all facility locations clearly marked on it along with a request for a records search to the information center. Send three copies of the results of the records search to the Division's Cultural Resources Officer. You are encouraged to contact the Cultural Resources Officer at (916) 227-4481 during the environmental planning stage for assistance in meeting Section 106 compliance requirements.

12. Public participation and review are essential to the CEQA process(Section 15087). Each public agency should include wide public involvement, formal and informal, consistent with its existing activities and procedures, in order to receive and evaluate public reactions to environmental issues related to its project. While CEQA itself does not require formal public hearings at any stage of the

environmental review process, at least one is required for an SRF loan project, and a hearing is recommended for all projects receiving funds from the Division. You must provide public notice 30 days in advance of public hearings for SRF loan projects and should also provide ample notice when formal meetings are scheduled. Public comments or controversies that are not responded to during the planning of a proposed project could result in the need for a Subsequent EIR at a later stage or lead to legal challenges, thus delaying the project and raising the cost significantly.

13. <Decision Point> Review all comments received during the review process, including any oral comments received at formal or informal public meetings. Decide whether or not the comments are significant. If they are significant, go to Item 14. If they are not significant or no comments were received, go to Item 15.

    If the project involves an SRF loan, send a copy of the comments to the Division at the above address and a copy to the appropriate California Regional Water Quality Control Board.

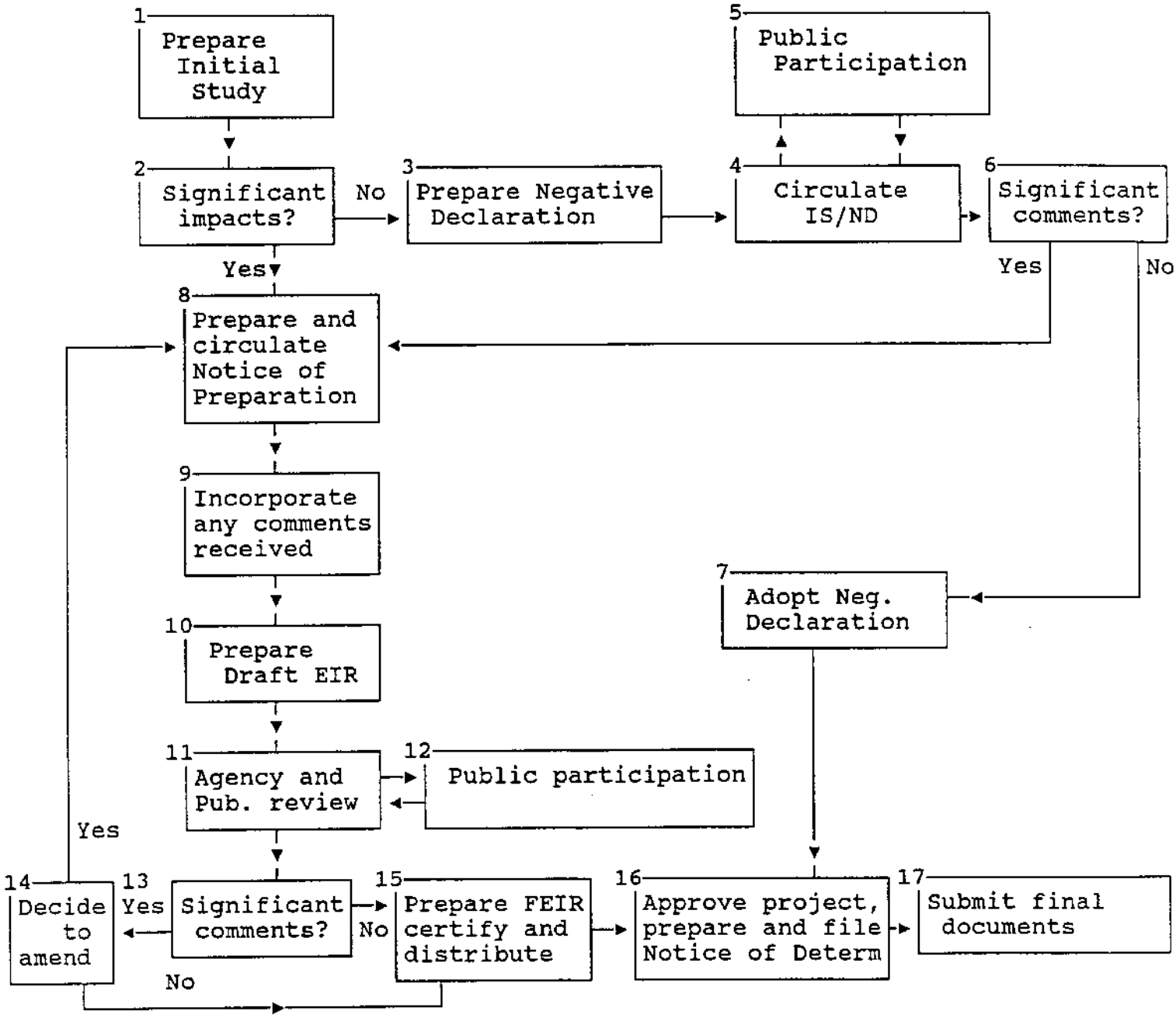
14. <Decision Point> If the comments are significant, consider whether they would require a complete revision of the EIR or the proposed project or whether mitigation measures could reduce the impacts sufficiently. If the EIR needs complete re-writing, return to Item 8. If mitigation measures can be devised, go to Item 15.

15. Incorporate comments and your responses to those comments (or state that no comments were received) and any necessary mitigation measures into the Final EIR. Include a plan for implementing and monitoring mitigation measures. Also include dates for all public meetings,hearings, etc. and the dates of notices for such hearings or meetings. The Final EIR must be certified by your decision making body. After resolving all comments and printing your Final EIR, send copies to all responsible agencies including the Division. You should also send copies to agencies and individuals commenting on the Draft EIR. See Section 15132 for the contents of a Final EIR.

16. Within five days after your decision making body has made a decision to proceed with the project, you must prepare and file a "Notice of Determination" (see Appendix D of the CEQA Guidelines) with the Governor's Office of Planning and Research and the local County Clerk. The contents of this Notice are given in Sections 15075 and 15094 for Negative Declarations and EIRs, respectively.

17. Submit copies of the following the Division at the address provided in item 11a: (1) the Final EIR or Negative Declaration including all comments and responses, (2) a mitigation implementation plan (when mitigation measures are proposed in the environmental document), (3)a notice of public hearing, (4) the Notice of Determination, and (5) a resolution certifying the EIR or adopting the Negative Declaration and making findings or statements under CEQA. In addition, send us a copy of any environmental field reports prepared for the project (e.g. biological assessments or archeological surveys).

Figure A



Prepared by the Environmental Services Unit of the Division of Clean Water Programs, State Water Resources Control Board.

CHECKLIST FOR
ENVIRONMENTAL DOCUMENTATION
TO SEND TO SWRCB

	1.	8 copies of draft or final env. document to send to Federally designated agencies (SRF loans only)
	2.	3 copies of Cultural Resources Reports (SRF only)
	3.	Final environmental document
	4.	Comments and responses on draft environmental document
	5.	Mitigation implementation and monitoring plan
	6.	Notice of Determination filed with Governor's OPR
	7.	Notice of Public hearing (30 day advance notice) (SRF)
	8.	Resolution certifying EIR or adopting Neg. Declaration and containing CEQA findings including Statement of Overriding Considerations (if appropriate)
	9.	Additional documents incorporated by reference

PART III. BASIC OUTLINE FOR ENVIRONMENTAL DOCUMENTS

The purpose of the environmental review is to incorporate environmental considerations into the planning process. Prior to the selection of a specific project alternative, a thorough, unbiased and frank analysis of the environmental impacts of every reasonable project alternative should be made. It is intended that environmental concerns be considered on an equal basis with engineering feasibility, economics, and social considerations.

In order to assist you in preparing environmental documents for your loan or grant application, we have put together this outline. The outline details project-specific information that must be disclosed, when applicable, in all environmental documents, including Initial Studies, prepared in conjunction with an application for a wastewater treatment facility loan or grant administered by the SWRCB. This outline does not replace CEQA guideline requirements regarding elements of an environmental document and does not cover all necessary components of the document.

Information requirements differ with loan types and projects. For SRF loans, federal regulations require additional detailed information to obtain clearance for projects involving: (1) species protected under the Federal Endangered Species Act, (2) wetlands, (3) wild and scenic rivers, (4) coastal zone areas, (5) floodplains, (6) agricultural land, (7) cultural resources and (8) air quality. If the project involves an increase in treatment capacity, by either building a new treatment plant or expanding existing facilities, the service area and related growth inducing impacts must be considered in the environmental impact analysis. In addition, for capacity increases with SRF loans, population estimates and projections must be consistent with those used for the State Air Quality Implementation Plan. For water reclamation projects, the area of reuse must also be considered in the environmental impact analysis.

I. PROJECT DESCRIPTION

A. Describe Objectives that Qualify the Project for a Loan or Grant

1. Correction of any water quality problems associated with wastewater treatment facilities

a. Health Department violation

b. Cease and Desist Order

c. Nonconformance with Basin Plan or 208 Plan

d. Other (specify)

2. Capacity Increase

3. Wastewater reclamation

B. Explain How Objectives will be Accomplished

1. New facilities

2. Upgrading existing facilities

3. Correction of inflow and infiltration problems

4. Other

C. Describe Any Existing Facilities

1. Condition

2. Level of treatment

3. Collection and/or conveyance systems

4. Storage

5. Disposal/reclamation system.

6. Present capacity of facilities

a. Average Dry Weather Flow (ADWF) capacity

b. Peak Wet Weather Flow (PWWF) capacity

7. Present inflow of wastewater (give data source and approximate date of determination) (give in terms of ADWF for treatment or disposal facilities and PWWF for pipelines; indicate which)

a. Residential and commercial

b. Industrial

c. Total

d. Per capita flow

8. NPDES permit/Waste Discharge Requirements number

9. Present effluent quality (describe qualitatively and quantitatively)

10. Present disposal/release methods (include final location in description) for:

    a. Wastewater effluent

    b. Biosolids (or septage)

    c. Reclaimed water (for water reclamation projects)

D. New Facilities (describe any facilities that will be constructed or modified and operations)

1. Facilities (give physical dimensions)

    a. Treatment facilities

    b. Collection and/or Conveyance systems

    c. Outfalls

    d. Appurtenant structures

    e. Storage

    f. Other

2. Pertinent operational data

3. Disposal/release methods (describe final locations as applicable)

    a. For wastewater

    b. For biosolids

    c. For reclaimed water (for water reclamation projects)

4. Capacities (give in terms of ADWF for treatment or disposal facilities and PWWF for pipelines; indicate which)

    a. Design capacity (show how capacity was calculated)

    b. Any increase needed to serve existing development

        (1) Residential and commercial

        (2) Industrial

(3) Total

c. Any increase allowed for growth

(1) Residential and commercial

(2) Industrial

(3) Total

5. Population basis for capacity determination (include year)

a. Air Quality State Implementation Plan (SIP) Population Projection (for SRF loans)

b. Latest Estimates of Population Approved by the Metropolitan Planning Organization for the Area (for SRF loans)

c. Other Sources

E. Project Approvals and Planning Considerations (discuss the roles of planning and regulatory agencies which have permit or funding authority over the proposed project)

F. Project Location (description and map)

1. Existing facilities

2. New facilities

3. Storage sites

4. Disposal sites

5. Affected service area

6. Reuse sites (for water reclamation)

II. ENVIRONMENTAL SETTING (include a discussion of all the following detailed elements; if an element is not applicable to the project or is not present within the described area, give reasons or verify with investigative results)

A. Topography of the Region

1. Location of project area with regard to major topographical features

2. Elevations and slopes on project site

B. Land Use within Project Site, Affected Service Area and Reuse Sites (water reclamation).

1. Existing land uses

    a. Urban

    b. Rural

    c. Agricultural

    d. Recreational

    e. Industrial

    f. Other (specify)

2. Present population (within service area)

    a. Total

    b. Date of determination

    c. Source of information

3. Major economic activities (within service Area)

    a. Commercial

    b. Industrial

    c. Governmental

    d. Recreational

4. Zoning of the facilities site(s)

5. Land use plans and policies

C. Geology of the Region

1. Seismic hazards

2. Unstable substrate

3. Erosion potentials

4. Any other applicable geological information (details of the underlying geologic structure are not required unless the information directly relates to the water quality problem, e.g., fractured bedrock)

D. Climate

1. Annual precipitation

2. Seasonal weather patterns

E. Air Quality

1. Air basin

2. Nonattainment area for: (list appropriate items)

a. Ozone

b. Nitrogen dioxide

c. Sulfur dioxide

d. Particulates

e. Carbon monoxide

f. Not a nonattainment area

3. Status of local air quality plan

F. Major Botanical Features (plant communities or associations)

1. Affected Service area

2. Reuse sites (water reclamation)

3. Facilities site(s)

4. Collection and conveyance lines

5. Storage site(s)

6. Disposal site(s)

G. Important Fish and Wildlife (major species and economically or recreationally important species)

1. Affected service area

2. Reuse sites (water reclamation)

3. Facilities site(s)

4. Collection and conveyance lines

5. Storage site(s)

6. Disposal sites(s)

H. Threatened or Endangered Species (listed by the U.S. Fish and Wildlife Service [FWS] or by the State of California Department of Fish and Game [DFG]- indicate which) at Facilities, Conveyance Lines, Storage and Disposal Site(s), Affected Service Area and Reuse Sites (water reclamation)

1. Species list (approved by FWS and DFG)

2. Locations of populations

I. Critical Habitats (as defined by the U.S. Fish and Wildlife Service) at Facilities, Conveyance Lines, Storage and Disposal Site(s), Affected Service Area and Reuse Sites (water reclamation)

1. Type

2. Location

J. Wetlands at Facilities, Conveyance Lines, Storage and Disposal Site(s), Affected Service Area and Reuse Sites (water reclamation)

1. Name (if any)

2. Location

3. Size

K. Designated Wild and Scenic Rivers flowing through Facilities, Conveyance Lines, Storage and Disposal Site(s), Affected Service Area and Reuse Sites (water reclamation). Include Map if Present.

1. Name

2. Location

3. Classification

L. Water Resources

1. Surface water features (near the project and in the service area)

a. Lakes

b. Rivers

c. Estuaries

d. Ocean

e. Lagoons, marshes and other water features

2. Groundwater resources underlying the facilities, conveyance lines, storage and disposal site(s), affected service area and reuse sites (water reclamation)

a. Depth

b. Quality

c. Location

3. Present receiving water quality

a. Qualitative description

b. Quantitative analysis

c. Comparison to effluent quality

4. Water supplies for the service area

a. List of water purveyors

b. Percentage of supply from each source

M. Agricultural Land at Facilities, Conveyance Lines, Storage and Disposal Site(s), Affected Service Area and Reuse Sites (water reclamation)

1. Acres by type (e.g. prime, statewide significance, local significance)

2. Zoning

3. Present use

N. Cultural Resources (archaeological, paleontological, historic, ethnographic) Present at Facilities, Conveyance Lines, Storage and Disposal Site(s), Affected Service Area and Reuse Sites (water reclamation)

1. Description

2. Locations (do not include location maps or confidential reports in public documents)

O. Coastal Zone (indicate if the facilities or conveyance lines, or storage, disposal or reuse site(s) are in a coastal zone)

P. Floodplain (indicate if the facilities or conveyance lines, or storage, disposal or reuse site(s) are on a floodplain)

Q. Other Environmentally Sensitive Areas at Facilities, Conveyance Lines, Storage and Disposal Site(s), Affected Service Area and Reuse Sites (water reclamation)

1. Description

2. Location

III. RELATIONSHIP OF PROJECT TO OTHER PLANNING (briefly describe the project's relationship to and consistency with other applicable planning)

A. Water Quality Planning

1. Basin Plan (include beneficial uses of the receiving water as given in the applicable Basin Plan)

2. Areawide Wastewater Treatment Management Plan (208 Plan)

3. Special permits required as part of a phased project

4. Other (specify)

B. Air Quality Planning

1. State Implementation Plan for Air Quality

2. The applicable Air Quality Management Plan

C. Land Use Plans

1. City/county

2. Regional

3. Coastal zone

IV. PRIMARY AND SECONDARY IMPACTS, AND MITIGATION MEASURES (for the following subjects, list and explain impacts from project construction and operation, and any proposed mitigation measures. Include secondary impacts of other activities associated with or resulting from construction or operation of the project including impacts associated with future development within the service area.)

A. Water (quantity and quality)

1. Surface water

2. Groundwater

B. Air Quality

C. Geologic Stability

D. Soils (erosion)

E. Important Vegetation Types

F. Fish and Wildlife

G. Aesthetics

H. Noise

I. Recreation

J. Open Space

K. Cultural Resources

L. Threatened or Endangered Species

M. Environmentally Sensitive Areas

1. Environmentally significant agricultural land

2. Coastal zone

3. Wetlands

4. Wild & scenic rivers

5. Floodplains

6. Critical Habitats

7. Other Environmentally Sensitive Areas

N. Energy

O. Transportation/Circulation

P. Public Services

Q. Public Health and Safety

R. Population

S. Housing

T. Land Use

V. PROJECT ALTERNATIVES (discuss the environmental impacts, cost effectiveness, compatibility with proposed or existing projects, and reasons for rejection for each alternative; include future options, e.g., reclamation regionalization, etc.) (not required for Negative Declarations except when SRF loans are involved)

A. Alternatives for Each Major Phase or Component of the Project

1. Treatment processes

2. Disposal techniques

3. Outfall lines

4. Other

B. Alternative Siting Locations

1. Treatment facilities

2. Storage sites

3. Disposal/release sites

4. Outfall

5. Collection lines

6. Other

C. Alternative Projects Which Could Accomplish the Project Objectives

1. Inflow and infiltration correction

2. Upgrade existing facilities

3. Other

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES (discuss the resources necessary for construction and operation of your project) (not required for Negative Declarations)

A. Fuel for the Construction Equipment

B. Kilowatt-Hours of Electricity Needed to Operate the System,

C. Acres of Land Involved with the Project

D. Use of Chemicals in the Operation & Maintenance.

VII. SHORT TERM USES VERSES LONG-TERM PRODUCTIVITY (not required for Negative Declarations)

A. Project Benefits

1. Beneficial effects on water quality

2. Conservation of water

3. Other

B. Long-Term Effects

1. Current and potential beneficial uses that would be lost by construction or operation of the project.

2. Long-term health and safety risks created directly or indirectly by the project

C. Justification (explain why the project is justified now, rather than reserving an option for further alternatives)

VIII. CUMULATIVE AND GROWTH INDUCING IMPACTS (discuss the effects of growth and cumulative impacts on area resources, including air quality, public services, open space and agricultural land)

A. Cumulative Impacts (discuss effects of reasonably foreseeable projects in the area producing related or cumulative impacts including projects under the jurisdiction of other agencies)

1. Projects related to, or similar to the proposed project.

2. Projects which produce environment effects similar to those of the proposed project

B. Growth Inducing Impacts (if none, explain why not)

1. Ways in which the proposed project could encourage or accommodate growth directly or indirectly in the following areas:

a. Economy (e.g., building facilities that will create favorable conditions to attract businesses)

b. Population

(1) increasing the capacity of facilities to allow faster population growth

(2) increasing the supply of water available for population growth by replacing the use of existing water supplies with the use of reclaimed wastewater

c. Housing (e.g., expanding the service area to allow for more housing construction)

2. Impacts (secondary or indirect) associated with growth inducement

a. Air pollution

b. Water pollution

c. Diminished resources

d. Displacement of plants and animals

e. Loss of open space

f. Other

3. Regional and Local Planning (including Air Quality Management Plans)

a. Consistency of the project capacity projections with regional and local plans which deal with the demands and impacts of anticipated population growth accommodated by the project.

b. Ability of current planning to deal with growth by providing the necessary

infrastructure and support facilities while attempting to minimize adverse effects on the environment.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

555 Capitol Mall, Suite 235, Sacramento, CA 95814 (916) 445-3846

CUSTOMER SERVICE SURVEY

Our goal is to provide the public with the best possible service. Recognizing that sometimes we succeed and at times we will fall short, we want to know how well you feel we are doing. Please take a few minutes to answer the questions below, fold the sheet as indicated, and send your comments directly to me. Your comments will help us serve you and others better. Thank you.

– James M. Strock, Secretary for Environmental Protection

Which office did you contact?

- ☐ Office of the Cal/EPA Secretary (Sacramento)
- ☐ Air Resources Board
  - ☐ Headquarters (Sacramento)
  - ☐ El Monte Laboratory
- ☐ Department of Toxic Substances Control
  - ☐ Headquarters (Sacramento)
  - ☐ Berkeley, Region 2 Office
  - ☐ Clovis Satellite Office
  - ☐ Glendale, Region 3 Office
  - ☐ Long Beach, Region 4 Office
  - ☐ Sacramento, Region 1 Office
- ☐ Department of Pesticide Regulation
  - ☐ Headquarters (Sacramento)
  - ☐ Anaheim District Office
  - ☐ Berkeley District Office
  - ☐ Fresno District Office
  - ☐ Sacramento District Office
- ☐ Integrated Waste Management Board
  - ☐ Headquarters (Sacramento)
  - ☐ Fullerton
  - ☐ Redlands
  - ☐ Valencia
- ☐ Office of Environmental Health Hazard Assessment
  - ☐ Headquarters (Sacramento)
  - ☐ Berkeley
- ☐ State Water Resources Control Board (Sacramento)
- ☐ Regional Water Quality Control Board
  - ☐ Fresno
  - ☐ Los Angeles
  - ☐ Oakland
  - ☐ Palm Desert
  - ☐ Redding
  - ☐ Riverside
  - ☐ Sacramento
  - ☐ San Diego
  - ☐ San Luis Obispo
  - ☐ Santa Rosa
  - ☐ South Lake Tahoe
  - ☐ Victorville

	No Opinion	Strongly Agree	Agree	Disagree	Strongly Disagree
Staff was courteous.					
Staff was professional.					
Staff was knowledgeable.					
Your questions were clearly answered.					
You were helped in a timely manner.					
You were referred to the correct party for further information.					
Complete information was provided.					

Are there any staff persons you would like to commend? _____

Do you have any comments or suggestions on how we can improve our service to the public:

If you would like to speak to a manager directly, please provide your name, organization, and telephone number:

11/22/4

032

Dear Marie Meredith
RE: Santa Rosa Waste Water

We don't want a study of waste water to the ocean. It has been studied already. Citizens don't want it!

A

Waste Water is a resource to be used/recycle etc.

B

NO more tax $$ spent on this study.

We the citizens are fed up with this constant mis use of our $$.

I await your reply!

Regards,

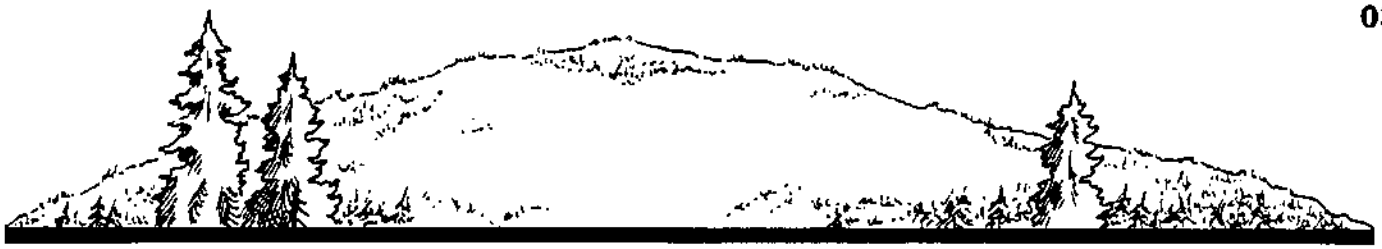
Mark Feldman

6700 Orchard Station Rd
Sebastopol CA 95472

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

NOV 28 1994

DEPARTMENT OF
COMMUNITY DEVELOPMENT



Friends of Cobb Mountain

November 21, 1994

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

Ms. Marie Meredith
P.O. Box 1678
Santa Rosa, CA 95402

NOV 28 1994

DEPARTMENT OF
COMMUNITY DEVELOPMENT

GRD
A

Dear Ms. Meredith:

I appreciated the opportunity of presenting the seismic concerns of the residents of the Cobb region in Lake County at the wastewater scoping hearing last Wednesday evening.

At the end of my presentation, one of the members of your consultant's review team, Dr. Robin Cort (I believe I have the last name correctly spelled), asked for the reasons why we consider the treatment of the seismic issue in the LACOSAN EIR/EIS to be inadequate. I replied that I would send a copy of our review of the Draft EIR/EIS, which I enclose herewith. I should add that the points made in our critique remain basically unanswered in the Final EIR/EIS for that project.

The fundamental problem seems to be that neither the industry nor the County are willing to acknowledge responsibility for earthquake damage that may result from the LACOSAN project, and that they duck this issue by claiming that it would be very difficult to prove that any particular injection procedure is the direct cause of a particular seismic event. This is undoubtedly true in some cases, but we would base our claims on a preponderance of evidence. There has been sufficient scientific study done, with published conclusions in professional journals, to verify the fact that episodes of seismic activity have directly followed specific injection procedures, and that the epicenters of the seismic events correlate with the locations of injection. I refer you and your consultants to the following articles.

Mitchel A. Stark, "Imaging Injected Water in The Geysers Reservoir Using Microearthquake Data", in *Geothermal Resources Council Transactions*, Vol. 14, Part II, August 1990, pages 1697ff;

David H. Oppenheimer, "Extensional Tectonics at The Geysers Geothermal Area, California", in the *Journal of Geophysical Research*, Vol. 91, No. B11, October 10, 1986, pages 11,463-11,476;

Donna Eberhart Phillips and David H. Oppenheimer, "Induced Seismicity inThe Geysers Geothermal Area, California", in *Journal of Geophysical Researech*, Vol. 89, No. B2, February 10, 1984, pages 1191-1207;

More recent work in this area has been done by a number of scientists, and most notably by Dr. Gillian Foulger and Dr. Bruce Julian at the U.S. Geological Survey offices in Menlo Park. I would refer you to these two authorities particularly regarding the point which I made in my presentation with respect to the "stress loading" of historic faults lying adjacent to The Geyser geothermal field, and the possible regional consequences of this side effect of the presently induced earthquake activity at The Geysers.

Please share this letter and information with Dr. Cort, and please also keep us informed at the above address of all developments and documentary materials relating to the consideration of The Geysers option and the planned EIR/EIS.

We thank you for your attention to these matters.

Yours sincerely,

Hamilton Hess

Hamilton Hess
Vice Chairman

Friends of Cobb Mountain, Inc.

Box 47, Cobb, CA 95426
(707) 928-5376

1 of 3

5 July 1994

Mr. Mark Dellinger
Energy and Resource Manager
Special Districts
County of Lake
255 North Forbes Street
Lakeport, CA 95453

Dear Mark:

Thank you for sending me a copy of the DRAFT EIR/EIS for the SOUTHEAST REGIONAL WASTEWATER TREATMENT PLANT FACILITIES IMPROVEMENTS PROJECT AND GEYSERS EFFLUENT PIPELINE PROJECT.
It was duly received at the address in the United Kingdom to which you sent it. I am grateful for the opportunity to provide a review of the seismicity section on behalf of Friends of Cobb Mountain.

Regrettably, I find the treatment of siesmicity to be gravely deficient, for it utterly fails to treat our concerns in an adequate manner. You will yourself recongnize this in light of our past discussions with you, the results of which were summarized in written form. This summary is included, together with my letter of May 11, 1993, to Supervisor Mackey in Appendix A, items 12 to 14, Volume 2 of 2 of the DRAFT EIR/EIS. I would point out that your response to my letter to Supervisor Mackey, in which you assured us that our concerns would be taken fully into account in the DRAFT EIR/EIS, is not included in this Appendix, and that the appropriate existing documentation regarding your concurrence with our concerns and your intent to deal with them directly is therefore lacking.

In light of the above, I am sure that you can understand my present frustration, disappointment, anguish, and indeed anger -- not at you personally, for we have always known you to be even-handed and conscientious -- but with the system which routinely produces EIRs in such a way that issues that are insoluable or seriously inconvenient for the project become massaged to become non-problems.

The general treatment of the causes of the seismic events resulting from steam production and fluid injection in The Geysers Geothermal field given in section 5.3.2 on pages 5-115 through 5-135 is in basic agreement with other studies of seismicity at the Geysers, but I would refer the editors of the EIR/EIS to the historical listing of seismic events at The Geysers from the late 194Os to the present which is available from the U.C. Berkeley Seismographic Station, and which we ourselves obtained from them six months ago. The form in which we received this information is particularly valuable and revealing, as it includes relevant data with respect to each recorded event, and encompasses not only seismic events of magnitude 3.O and above

in The Geysers geothermal field, but also all events during the same time period and in the same magnitude range within an area described by an approximately fifty mile radius from The Geysers. This data is also available, of course, from USGS in Menlo Park. In light of this information, the statement in the first paragraph on page 5-129 of the seismicity section of the EIR/EIS that "the frequency of earthquakes between M 3.O and 4.2 is relatively small and essentially many of these events are attributable to natural regional earthquakes" is completely false. There has been a phenomenal increase in seismic events above M 3.O at the Geysers since the beginning of commercial geothermal operations, and especially since the mid-197Os, and the locations and depths of these events -- with very few exceptions -- show that they are directly attributable to steam extraction and fluid injection activities at The Geysers. This phenomenon and its causes are, as you know, generally reported and acknowledged in published papers on the subject. Minimizing and attempting to obscure the real situation, if that has been the intent of the statement quoted above, only serves to undermine the credibility of the EIR/EIS.

The most objectionable aspect of the treatment of induced seismicity in this section of the EIR/EIS is in its total failure to address the publicly known concerns of local residents in a meaningful way. When mentioned, these concerns are either reduced to "insignificant" by statistical argument or brought to proposed resolution by a suggested public information campaign to allow residents "to better prepare for any real or perceved effects of induced earthquakes and natural earthquakes" (page 5-135). Public information is important, but it cannot be used as a substitute for addressing the issues themselves. It is, in fact, insulting to suggest to residents that if further earthquakes occur as a consequence of the proposed project they are the ones who must be prepared to cover the damages. The risk of major structural damage is dismissed with a "probably not". While acknowledging that "project-related induced seismicity potentially could contribute to minor local property damage, e.g., cosmetic cracks in plaster and stucco," we are told that "The impact is regarded as less than significant." (page 5-129). We are also told that "Seismic events under M 4.5 do not cause damage to structures unless, perhaps, they are already in a weakened condition" (page 5-129).

These statements provoke several serious questions: 1) What happens if major structural damage does occur? 2) Who is to be held responsible? 3) How is responsibility to be determined? 4) Who is to pay for the damage? 5) If it is to be assumed that homeowners are to pay, under what understanding of public liability law is this held? 6) Because cracks in plaster, stucco, and stone walls, stones displaced from chimneys, and perhaps broken dishes are deemed to be "less than significant," does this mean that their repair is to be regarded as routine home maintenance? 7) If this is the case, are homeowners expected to sustain the expense of such repairs? If so, how can this be regarded as just? 8) Is an existing weakened condition of a structure sufficient cause for exonerating from responsibility the party (or the project) who causes damage to that structure? 9) Who is responsible for determining pre-project conditions of all structures within the larger Anderson Springs area? 1O) How is that area itself to be defined? 11) Given the fact that residents of the Anderson Springs area, as well as elsewhere around the periphery of The Geysers, are presently weary of the frequent experience of induced earthquakes of M 3.O and above, why is it that the need for mitigations is summarily dismissed by the report? Further questions might well be asked.

The statement "No mitigation is required" cannot be justified. Not only is the issue of responsibility and compensation for damage a legitimate one, but also for reasons of reducing

psychological trauma for residents and frightened guests the sponsors of the presently proposed project should undertake the design and implementation of an injection program by which the locations and rates of injection will keep the resulting seismic events to a minimum in both occurrence and magnitude. This is an obviously needed mitigation which has already been publicly proposed and discussed.

I have not yet been able to communicate my reaction to the EIR/EIS to other members of the Board of Directors and of the Executive Committee of Friends of Cobb Mountain, but they will most certainly agree with my appraisal of the treatment of seismicity in this document. I believe that the least that can be done to repair the deficiency is to provide us with an opportunity to hold a round-table discussion with appropriate parties, at a time convenient to ourselves, for the drafting of a statement to be included within the Final EIR/EIS (not to be buried in an appendix) which will both recognize our specific concerns outlined in the questions posed above, and will deal with them in a straightforward, explicit and effective fashion. This meeting will not be able to be held until after the 10th of August, following the return of James Matzinger and my wife and myself from Europe. If this is not done, we will be forced to regard the Final EIR as seriously flawed.

With best personal regards.

Yours sincerely,

Hamilton Hess

Hamilton Hess
Vice Chairman

November 25, 1994

Marie Meredith
Environmental Coordinator
City of Santa Rosa
P.O. Box 1678
Santa Rosa CA 95402-1678

Re: EIR/EIS Scoping Meeting: Santa Rosa Subregional Long-Term Wastewater Project; November 17, 1994

Environmental Coordinator:

I was present at the meeting November 17, but was unable to stay past 9:00PM to get on the long list to speak at that meeting. I am therefore presenting my comments in writing, and this letter is in lieu of the Scoping Comment Form provided at the meeting.

The Draft Preliminary Scoping Report (PSR) says, under "Purpose of the Project" (p1):

> "The Santa Rosa Subregional Long-Term Wastewater Project is intended to provide for disposal of existing flows and increased wastewater flows generated by the future population which is projected in the General Plans of the communities making up the Subregional System. Wastewater flows through the Laguna Plant are projected to increase to 22.5 mgd ADWF by the year 2010 after reductions due to water conservation. This projected increase results in an annual average flow of 9,800 million gallons (mg), an increase of 40 percent over the current annual average flow of 7,000mg."

And also (p2):

> "By 1999 the Subregional System must put inplace a disposal solution to meet future capacity needs, no matter what weather conditions occur. The Santa Rosa Subregional Long-Term Wastewater Project is intended to provide this solution."
>
> (all emphasis added)

A

I therefore submit that the principal issue in question is the future population growth to be served by the Subregional Wastewater Reclamation System; and the ultimate impacts of that growth on the Subregional System.

Santa Rosa's 1991 General Plan says:

> "In the 1988 Key Issues Survey, Santa Rosa residents identified rate of growth as the most important issue faced by the city." (pI-1)

Santa Rosans did not identify sewage disposal per se as the principal issue in 1988--and indeed, the General Plan also says (pV-1) they identified traffic congestion as the second most important issue, following growth--and our City Council and Planning Commission have consistently disregarded the City's flagrant lack of a long-term wastewater solution. But I think we are all coming to the mutual understanding--if only because of our steadily increasing water and sewer rates, which for sewer are already about twice the statewide average --that wastewater disposal is the NUMBER ONE consequence of our continuing growth; and the Number One issue before local government today.

Santa Rosa's General Plan devotes barely a page and a half (pIV-11--12) to the Public Services and Facilities Element's Community Services Policies for wastewater--despite the fact that it must now be our <u>foremost</u> concern! And indeed, one of those Policies (PSF-11) reads:

> "To tie plant expansion to population growth";

and the Implementation Action for that Goal is (PSF-11a):

> "Ensure plant capacity is in place prior to occupancy of new housing units."

Yet the PSR says (p1):

> "The existing disposal system does not reliably dispose of existing flows under all weather conditions."

And also (p2):

> "As a result, the current Subregional System is weather-dependent, leaving it without a reliable, legally sanctioned, wastewater disposal option."

Thus the PSR states that the existing system does not reliably accomodate the <u>existing</u> flows--much less the future--and the Subregional System lacks a legal and reliable disposal option at this time. And of course, the project <u>itself</u> is designed to satisfy General Plan Goal PSF-11, in that (p1 of the PSR):

> "The expansion would provide treatment and disposal capacity through buildout of the General Plans of the Subregional Partners."

I would therefore contend that (to the extent that the City of Santa Rosa is allowing continued population growth, and especially the occupancy of new housing units) the City is currently in technical violation of our General Plan, and will continue to be for the foreseeable future.

Nevertheless, the General Plan also calls for a target population of 174,500 residents, by its horizon year 2010. Recently, I have heard figures of

185,000 to 187,500 used in public and private discussions. That is at least 50,000 more residents than today in Santa Rosa alone--not to mention the communities of Sebastopol, Rohnert Park, and Cotati--including existing residents of unincorporated areas who will be taken in by annexation.

I am convinced that the Santa Rosa General Plan is internally inconsistent at this time; in that the Public Services and Facilities Element and the Transportation and Circulation Element (among others) are not consistent with the growth called for in the Land Use Element and Housing Element. In other words, I believe that the General Plan does not adequately plan to accomodate and mitigate the wastewater and traffic impacts of the growth it anticipates and promotes.

That raises the issue of whether previous environmental studies have adequately considered the effects of that growth. The fact that the City of Santa Rosa is considering the Subregional Long-Term Wastewater Project demonstrates that the prior "solution" (a West County alternative) and the Environmental Impact Report (EIR) for it--which was thrown out by a court of law--were at least partial failures. Our City government wasted some or all of $4 million on that first EIR and the efforts since 1986 which led up to it.

The November 17, 1994 Press Democrat reported that the present effort--which had been estimated last year to cost $3 million--will now cost perhaps $7.7 million. When completed, the two EIRs will represent at least $11.7 of the taxpayers' money spent just to STUDY some of the possible solutions to our long-standing sewage problem. That $11.7 million compares to the cost of just $6 million to actually IMPLEMENT the cheapest of the options put forth so far.

To complete this description of the context for the proposed EIR/EIS which is now in the formal Scoping phase, let me suggest that the EIR for Santa Rosa's 1991 General Plan--which itself is just three years old now--is quite as worthless overall as the first wastewater EIR which the Court threw out in 1992. Lacking any concrete plan to mitigate the wastewater impacts of growth at General Plan buildout, there is simply no way to determine whether the Public Services and Facilities Element is in ANY way consistent with the target population in 2010.

I would note also that the recently adopted Southwest and Southeast Area Plans call for two whole new communities within the future boundaries of Santa Rosa: with the population equivalent of another Rohnert Park in the Southwest; and the equivalent of a city the size of Cloverdale in the Southeast. The same firm that prepared the EIR for the General Plan also prepared the two EIRs for the Area Plans (which are--essentially--one EIR)--and I strongly fear that those EIRs are no more useful than that first one.

Once again, the fundamental issue is Santa Rosa's GROWTH between now and 2010. I am therefore proposing that the EIR/EIS include still another option or scenario, which I will call for now the "Limited Growth Option".

I note that the City of Santa Rosa's tabloid flyer headlined: "What you need to know about Santa Rosa's Wastewater Disposal Problem", dated September 1993, which was available at the November 17 meeting, said over a year ago (front page):

> "Key Issues...*Growth: the real problem or a contributing factor?"

And also (page 2):

> "What if Nothing is Done? What happens if the City of Santa Rosa doesn't choose and implement a long-term wastewater management alternative? In brief, the system will remain vulnerable to the weather. Relatively dry conditions and low flows in the Russian River along with inadequate storage capacity and low demand for reclaimed irrigation water could result in the need to release treated wastewater in excess of legally allowed amounts in order to maintain the integrity of the system. Specific consequences of that action would include:...(2) A moratorium issued on new sewage connections within the Subregional System service area until additional needed facilities are in operation...To avoid such outcomes, it is imperative that the City of Santa Rosa, which manages the Subregional System, find and implement a solution to the System's weather-dependent wastewater disposal problem."
>
> (emphasis added)

It strikes me that: "A moratorium issued on new sewage connections within the Subregional System service area until additional needed facilities are in operation"--or at least a moratorium on connections within Santa Rosa--would respond directly to General Plan Goal PSF-11:

> "To tie plant expansion to population growth"

and also to its Implementation Action PSF-11a:

> "Ensure plant capacity is in place prior to occupancy of new housing units."

Yet the City's September 1993 flyer characterizes that action as a "consequence" if the city DOESN'T: "choose and implement a long-term wastewater management alternative". I would suggest that such failure to choose and implement an alternative is the equivalent of the "No Project" Alternative under CEQA.

Thus it seems to me that the City of Santa Rosa began over a year ago (September 1993) to prejudice the scoping process begun in August 1993 in favor of a General Plan buildout-related solution alternative. I believe that this is typical of the machinations of Santa Rosa's City government; but I find it extraordinary that the City should do so in the context of a massive and expensive public relations effort, which is clearly intended to ensure that the process will be safe

from some future legal challenge!

B
Ad

The Limited Growth Option, then, would amount to what the City said in September of 1993 would be a CONSEQUENCE of the failure to choose and implement a long-term wastewater management alternative. It would NOT, however, be the equivalent of the "No Project" alternative under CEQA; that alternative would be to grow to the General Plan buildout population levels, but do nothing to implement a long-term disposal alternative.

Rather, the Limited Growth Option would assume that the Subregional Partners would install a moratorium on growth until a viable long-term wastewater solution had been studied, chosen, reviewed, planned, funded, and anticipated to be in place within a reasonably foreseeable time. It would assume that the population to be served by the Subregional System would be frozen at a level contemporary with the preparation of the EIR/EIS; and including only those development projects which were already approved or under consideration at that time.

The Limited Growth Option would therefore not be a disposal alternative comparable to the six or seven selected so far, but an option or scenario for use in reviewing (as applicable) ALL of the Alternatives which are ultimately chosen during the Scoping Phase. Assuming that the development projects already approved or under consideration are not statistically significant, the Limited Growth Option would amount to a comparison (for each of the chosen Alternatives) of the effects of disposal of the present amount of wastewater with the predicted future amount at General Plan buildout.

Of course, the Limited Growth Option IS also a viable "Alternative" per se, in that it approaches the wastewater disposal problem at its source: continued Subregional GROWTH, especially in Santa Rosa. It is pointless to claim to be seeking a "solution" for wastewater disposal, while the City of Santa Rosa and its Subregional Partners continue to increase and perpetuate the PROBLEM!

Santa Rosa's General Plan acknowledges that citizens were preoccupied with the issue of growth at least as long ago as 1988. Press Democrat surveys and its Readers' Agenda series have echoed the same concern. Rohnert Park citizens have also asked for a cap on growth, and Sebastopol actually had its sphere of influence reduced by LAFCO in September.

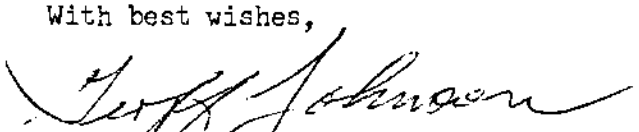
It is appropriate now to consider a wastewater disposal option which anticipates a future population which is far less than that of the Subregional Partners' General Plan buildout. Unless we limit the very source of our wastewater and other problems--which clearly is growth itself--we are going to continue to waste years of time and millions of dollars in a losing effort to keep pace with those problems.

Other than the references I have quoted above from the City's September 1993

flyer, I found almost nothing in the literature I picked up at the November 17 Scoping Meeting that treated Subregional growth as an issue, with the exception of (p3-2): "Will the General Plan assumptions regarding buildout be reexamined as a result of this project?" in the DPSR.

The Limited Growth Option, of course, directly examines those assumptions. I urge that it be included in the formal environmental review of the project.

With best wishes,



Geoffrey S. Johnson
2949 Lomitas Avenue
Santa Rosa CA 95404
(707) 545-2611

Martin Strain
P.O. Box 16
Tomales, CA 94971
(707) 878-2654
November 22, 1994

Marie Meredith
City of Santa Rosa
100 Santa Rosa Avenue, Rm 10
Santa Rosa, CA 95404

Dear Ms. Meredith:

I have attached a copy of the questions that I need answered in the scoping phase of the Santa Rosa/Subregional Long-Term Wastewater Project Environmental Impact Report/Environmental Impact Statement.

I am mailing separate copies to the BPU and the Army Corp of Engineers so that my questions won't be lost as in the first EIR process.

Sincerely,

Martin Strain

Scoping questions for the Santa Rosa
Wastewater Project EIR/EIS

1. What will be the impacts of nutrient loading from direct or indirect discharge of wastewater on the Esteros and the near-shore waters of Bodega Bay/Tomales Bay during a ten, twenty-five and fifty year span?

1a. Specifically address the impacts elevated levels of nitrites and nitrates have on toxic algal and dinoflagellate species.

1b. Estimate the economic impact of fish kills and shellfish closures due to this type of pollution.

1c. Discuss financial remuneration and mitigation measures to compensate the fishing, shellfishing and tourist industries for any losses.

2. How does the Subregional Wastewater System propose to identify and remove any and all chemical compounds from wastewater downstream from the industrial pretreatment processes?

2a. Specifically address how the system will identify over one hundred thousand chemical compounds and separate them from the waste stream.

2b. Estimate the morbidity and mortality of residents in the Russian River area and the Two Rock Valley from drinking treated waste water exclusively (100%) and diluted (to 20% and 5%) with Russian River water or Two Rock ground water.

2c. Estimate the morbidity and mortality of flora and fauna in the Esteros from contact with any residual waste chemical compounds.

2d. Estimate the length of time after the commencement of direct or indirect discharge that one, five, twenty-five and fifty percent of the population of each of the animal species inhabiting the Esteros begin exhibiting cancerous lesions, deformities and lowered reproductive rates.

2e. Determine the economic impacts to the fishing and shellfishing industries of long-term exposure of commercially valuable species to chemical residues in the waste stream.

Submitted by: Martin Strain
P.O. Box 16
Tomales, CA 94971
(707) 878-2654

Dated: November 22, 1994

A-4

NORTHWEST INFORMATION CENTER
OF THE HISTORICAL RESOURCES
INFORMATION SYSTEM
Sonoma State University
1801 East Cotati Avenue, Bldg. 300
Rohnert Park, CA 94928-3609

Marie Meredith
City of Santa Rosa
Dept. of Community Development
100 Santa Rosa Avenue, Room 3
Santa Rosa CA 94501

28 November 1994 File No.: 94-SO-104E

re: Draft EIR for the Santa Rosa Subregional Long-Term Wastewater Project

Dear Ms. Meredith:

Our office has no additional comment on the above referenced document. However, thank you for your continued concern for protecting cultural resources.

Sincerely,

Leigh Jordan
Assistant Coordinator

Paul Ogasawara
7099 Baker Ln.
Sebastopol, CA 95472
823-8881

NOV 29 1994

037

Paul Ogasawara

I applaud the City of Santa Rosa for giving me the opportunity to express my opinion to this wastewater problem.Most other cities only treat their effluent to a secondary level while Santa Rosa has cleaned their effluent to a tertiary level. However, Santa Rosa uses the tertiary treatment as a justification to allow for a 5% effluent flow compared to a 1% streamflow ceiling most others abide by.Now the city could be advocating a 20% limit without any comprehensive studies on the biological impacts.

The City of Santa Rosa is attempting a good faith effort to achieve an equitable and effective solution to this problem. Why then does the city limit the choices to only six when a seventh alternative would increase the variety of options?This seventh option would allow the city to proclaim that a fair and reasonable selection of alternatives were thoroughly examined and the public was not denied other superior alternatives because of a flawed procedural move.

All of the six alternatives have flaws.

#1 NO PROJECT- This isn't an alternative,it is a reality. We have not been doing anything,except waste 4 million dollars in an attempt to cram a flawed and ineffective alternative past the public.

#2 SOUTH COUNTY- This is the same area Novato, Petaluma, Sonoma and Napa plan on dumping their sewage.

#3 COMMUNITY SEPARATOR- This one is aptly named because no one will be able to live on these lands separating our communities once the extent of pollution is realized. They must think people are really stupid for them to believe groundwater injection is benign.

#4 WEST COUNTY-This will only negatively impact the Farralones / Point Reyes National Marine Santuary.Extensive legal challenges are anticipated, and the main reservoir site is controversial.

#5 GEYSERS- The only impediment to this alternative is the pumping costs, which run from 8 to 15 million dollars PER YEAR.

#6 20% RUSSIAN- The other alternatives allow 1%, this alternative will allow 20 TIMES that amount. I think all city and county officials and water board members should be forced to drink this water.

#7 ENHANCED TREATMENT- Is a radically different alternative. It solves the problems the others fail to do. It is feasable utilizing existing technology. Energy conservation through cogeneration make this alternative energy efficient and economically competitive.This solution could be implemented on an appropriate scale throughout the region.

ENHANCED TREATMENT is a process that would pasteuerize tertiary treated sewage effluent. Heavy metals and toxics would be excluded by monitoring and eliminating the source of pollution. The energy to do this would be provided by solar heat concentrators, biomass

cogeneration, biogass from effluent digestion tanks and even separated garbage.Energy is a major cost for any solution, so why not generate electricity that is needed anyway and use the waste heat to treat sewage and power many other industries.

The enhanced treated water could be used for landscape irrigation and totally eliminate the need to build more dams and eventually phase out the need to irrigate more farmlands. A massive and comprehensive retrofitting needs to be implemented, so it needs to be phased in gradually. First, all new development must have double piping.Second, all existing residences must be retrofitted for drinking and eating water in a logical and gradual manner. Once people realize that their water bill will decrease rapidly by not using drinking water to irrigate their landscapes,they will demand access to enhanced treated water.

People are trying to solve the sewage problem, and plan on spending millions to do it. Unfortunately, the sewage crisis is just a symptom of unplanned or poorly planned growth, and nothing can be solved until this issue is addressed.The population of Sonoma County has doubled in less than 30 years, but the infrastructure was designed for a lot less growth.Proper planning should include double piping of all future development,appropriate diversion of development profits back into infrastructure upgrading,and more development along mass transit corridors. I noticed that both reduced growth alternatives were rejected from the short list,thus denying the public a choice on which direction Sonoma County will opt for.The City of Santa Rosa is planning on spending $700,000 just on public relations with seven to eight million dollars for studies on whichever option is chosen. Would'nt this money be better spent on solving the problem like Enhanced Treatment?

Enhanced Treatment advocates solving the sewage into drinking water supplies problem by creating a new water district that utilizes Lake Sonoma as its source.Make a deal with Marin County to provide a longterm water source to Marin if Marin agrees to construct the delivery system. Guerneville and even communities like Camp Meeker could tie into it.

Finally, I would like to be the first person to publically advocate the removal of all the members of the Water Board. The only difference between the 1986 discharge that resulted in censure and an $100,000 fine and present operations is that the water board has lowered the standards so Santa Rosa is not breaking the law. New information on the hazards to drinking water in the United States makes me want to tighten laws and raise the standards, not lower them. I would just like to see them held accountable for their actions.

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

To: The City of Santa Rosa
Department of Community Development
100 Santa Rosa Avenue Room 3
Santa Rosa CA.
95401

From: Monica Maguire
975 McMinn Avenue
Santa Rosa CA.
95407

038

Subject: Santa Rosa Subregional Long- Term Wastewater Project

Alternative Four - West County Reclamation

S20C Dam Site and Reservoir (T-6A)

A What is the impact on the Tresch family if you continue to barrage them with this project? What will be their quality of life? What will be their livelihood? What will be their spiritual and emotional well being? As you are well aware they live down stream from the site. Their address is 1170 Walker Road.

What is the impact on the Stein family? They live at 1051 Walker Road. What will be their quality of life? What will be their livelihood? What will be their spiritual and emotional wellbeing?

The human environment is the main concern of the people directly affected by your project. The people who have not even arrived will never know where their waste goes. They just trust that paying the taxes, garbage and sewer bills will take of them.

I agree it's hard to figure out what to do . I appreciate your efforts and investigation into this matter. Another point I'd like to make is why I have to pay money for the wastewater project to be put on property where the landowners and neighbors don't want my SH--? I don't like that!

The emotional turmoil that the City of Santa Rosa has put our west county neighbors in is a crime. You are bullying their life style out of existence. Now there is talk of eminent domain. That you would force the Walker Road families to look at an ugly dam and wonder if their their drinking water is going to have chemicals in it, from the percolating effect of wastewater, is another crime.

B Santa Rosa is already growing toofast. What ever happened to the moratorium on building? It's disgusting when driving down the Dutton Avenue ramp.

C There is need of a traffic light. You can't turn right or left without taking your or someone elses life in your hands.

Please look at other sites where the landowners are willing to accept this project. Thank you.

Sincerely,

Monica Maguire

Monica Maguire

039

November 28, 1994

Ms. Marie Meredith
City of Santa Rosa, Department of
Community Development
P. O. Box 1678
Santa Rosa, CA 95402

Dear Ms. Meredith:

A

Upon attending your Wastewater Scoping Meeting of November 17, 1994, I learned that the Army Corps of Engineers has asked the City of Santa Rosa to add a sixth wastewater disposal alternative to your study--that alternative being Ocean Outfall.

I would like to make a few comments on that alternative. Ocean outfall I am sure would be the easiest and least costly alternative to complete. The main problem with ocean outfall would be that it could foster uncontrolled residential and commercial growth, and the resource of wastewater reuse would be eliminated. I would like to offer a suggestion. Couldn't ocean outfall and limited irrigation be incorporated? The treated wastewater could be used for irrigation in the Spring, Summer and Fall. This irrigation could be used as a Community Separator type irrigation and for some agricultural irrigation. Then in the Winter the wastewater could be pumped far out into the ocean.

B

I feel combining ocean outfall with irrigation would solve the following problems:

1. Provide 0% discharge into the Russian River.
2. Eliminate the need for costly reservoirs.
3. Reduce reservoir maintenance and operation costs.
4. Provide water for agriculture.
5. Provide for community separators.
6. Provide a solution that would not over tax your rate payers with high sewer bills.

The main remaining problem would be to build in a system to limit urban growth and to adhere to that system.

Hopefully you will consider some of my points while doing your study for the E.I.R.

Sincerely,

Allen Marcucci

Allen Marcucci
4535 Lakeville Hwy.
Petaluma, CA 94954

THOMAS WILLIAM YARISH

23 Nelson Avenue, Mill Valley, CA 94941 (415) 381-6970

City of Santa Rosa
Marie Meredith
P.O. Box 1678
Santa Rosa, CA 95402

CERTIFIED MAIL P 050 811 62

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

NOV 30 1994

DEPARTMENT OF
COMMUNITY DEVELOPMENT

District Engineer/Wade Eakle
U.S. Army Corps of Engineers
San Francisco District
211 Main Street
San Francisco, CA 94105

November 27, 1994

re: Santa Rosa Sub-regional Wastewater Treatment Plant Expansion.
Scoping Session NOP/NOI Comments.

The following is based upon, but not limited to, the oral testimony I gave at the November 17, 1994 scoping sessions in Santa Rosa. I am co-chair of the group known as "Friends of the Esteros," the lead plaintiff in the CEQA action that invalidated the earlier project EIR.

IMPACT ON PUBLIC SERVICES AND UTILITY RATES

A lot of attention has been brought to bear on the potential impact of the project on the region's economy, and most specifically on the utility ratepayers of Santa Rosa. Several critical components of this impact need to be identified and carefully analyzed, to wit:

A 1) The EIR needs to analyze the cost to the ratepayers of a minimal project designed only to accommodate the existing level of demand, factoring in aggressive implementation of wastewater recycling and reuse. These costs should be identified as deferred costs of the building booms of the 1970 and 1980 decades because the need for a sub-regional plant had been clearly recognized and studied by the City of Santa Rosa in the late 1970s;

B 2) The EIR needs to analyze the costs to ratepayers of a limited-growth scenario where the projected urban growth figures are substantially reduced and where all ancillary growth impacts are identified as either degrading or enhancing the quality of life for the existing population base (e.g., factors such as regional traffic congestion, demands for local public services, crime, unemployment, impacts upon the rates and availability of housing for low-income and senior citizen/retired populations, etc.);

C 3) The EIR needs to identify and analyze the broad range of cumulative impacts for a fully implemented wastewater project in terms of costs to existing ratepayers as both real rate increases and as substantial impacts on the "quality of life" issues identified in 2) above.

Is there an actual correlation between population growth and real economic growth? What is that correlation? Please identify the specific beneficiaries of the urban buildout. How many jobs will be created at what wage levels? Who will fill these jobs? How far will they have to commute? Can they afford to rent or purchase **available** housing? How many children can they support? What percentage will be single parents? What percentage will require some form of public subsidy? What new burdens will be created on public services and public utilities?

Essentially, the EIR needs to justify the projected urban build-out for the cities and areas served by the sub-regional facility;

4) The EIR needs to demonstrate that the existing population base demand of the sub-regional wastewater system has not already met or exceeded the available resources for fresh drinking water and for safe wastewater disposal. Substantial evidence already exists to show that the Russian River, for example, is already severely degraded by both urban and rural human use demands. How will Santa Rosa's discharges of wastewater and concurrent demand for greater increments of freshwater factor into the cumulative effects of other municipal and rural users?

WEST COUNTY WATER QUALITY AND LONG-TERM MANAGEMENT

1) The hydrology of the surface and sub-surface aquifers of the West County watersheds needs serious study, particularly with a concern to local groundwater quality impacts from the waste-water and from secondary pollution from the nearby Sonoma County landfill. Faults and fractures in the watershed--and particularly at the Button Ranch site--need to be carefully understood and delineated. A risk assessment needs to analyze the potential for earthquake induced changes in the geologic structures that may introduce pollutants into the West County aquifers.

One geologist suggested that the hydrostatic pressure from water stored at Button Ranch could force water into the nearby landfill. What is the actual risk, before and after an earth-quake?

Reliance on previous existing studies by Santa Rosa or the county may be problematical where these studies do not adequately identify or characterize potential geologic hazards or existing aquifers. Scoping Report Section 4, Tasks 22.1/page 24 and 22.3/page 30 minimize the need for hydrologic studies in West County watersheds. The term "hydrologic" is taken to include the flow of water in all aquifers, surface and sub-surface.

Given the increasing alarm about adverse human health ef-fects from pollutants in both drinking water supplies and in the food chain it is absolutely essential that all potential sources of pollution be identified for all the project alternative sites, and most particularly those sources potentially affecting human health.

2) There is no guarantee that West County irrigation-based agriculture will be viable in the long-term. Market forces and the questionable productivity of West County crop farming render long-term management scenarios for irrigation very uncertain. It is unclear how the sub-regional system will manage these irrigation projects in perpetuity given the failure rate of small farms, particularly in the absence of ranchers who are currently willing to host a storage reservoir or who have a serious interest in long-term irrigation project contracts with the sub-regional system.

Please identify the mechanisms by which the sub-regional system may safely and reliably manage and monitor proposed West County irrigation and storage systems into the indefinite future.

Please identify the long-term economic factors impacting both the ratepayers and the farmers who irrigate under contract.

Under what provisions might a West County farmer elect to discontinue irrigation? How might long-term irrigation effect productivity of West County soils?

OTHER ALTERNATIVES

Friends of the Esteros believes that a wastewater disposal project in the West County is neither economically nor environmentally defensible. We strongly recommend those project alternatives that: 1) keep the wastewater within the watersheds of its service area; 2) implement the highest degree possible of conservation, reclamation and reuse within the watershed of its origin; 3) observe the natural carrying capacity of watersheds and wildlife habitats; 4) provide fail-safe long-term management practices; 5) foster a high-degree of regional coordination of water and natural resource protections.

OTHER STUDY ISSUES

Friends of the Esteros incorporates by reference all prior commentary, administrative records, testimony, petitions, studies and correspondence on the sub-regional project from 1989 to the present date, specifically with reference to the CEQA action "Friends of the Esteros, et al v. the City of Santa Rosa." We would like once again to enter into the record the study prepared by NOAA on the nutrient loading of the West County watersheds and coastal estuaries.

Sincerely,

Co-chair, Friends of the Esteros.

MARIN CONSERVATION LEAGUE 041
A non-profit corporation founded in 1934

35 Mitchell Boulevard, Suite 11
San Rafael, CA 94903
Office telephone: 415 • 472-6170

November 28, 1994

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

NOV 30 1994

DEPARTMENT OF
COMMUNITY DEVELOPMENT

Marie Meredith
Santa Rosa Department of Community Development
P. O. Box 1678
Santa Rosa, Ca 95402

RE: Santa Rosa/Subregional Long-Term Wastewater Project Scoping Report

Dear Ms Meredith:

The Summary of the Environmental Consultants Proposed Scope of Work For the Environmental Study Phase is the basis for the following comments on the scoping report for the Santa Rosa wastewater project.

A

PROJECT DESCRIPTION. Section B. Wastewater Alternatives, p.3: What constituents are tested in wastewater before discharge for urban reuse, wetland creation and irrigation? How often are these constituents tested in one year, and what constituents have failed to meet regional water quality standards in the last five years? Have these tests included bioassays and if so what animals were used? .

B

TASK 22. HYDROLOGY, WATER QUALITY, GROUNDWATER AND WATER CONSERVATION. Section B. Water Quality. Although questions 13. and 14. on page 13. address water quality, additionally include answers to the following questions: What techniques for advanced treatment are being considered? Include in the discussion the microfiltration process for treating secondary treated waste. How does this process compare to the treatment system at the Laguna plant in both cost and effectiveness in removing heavy metals?

C

TASK 22. Section B. Water Quality, and Section C. Groundwater; as well as TASK 23. BIOLOGICAL RESOURCES. Section D, Western Sonoma County Agricultural Irrigation Biological Studies, should include responses to the following urban and agricultural irrigation comments: Map the lands to be irrigated. Will irrigation change existing land use? List crops that can and cannot tolerate reclaimed water. Identify the soil types that comprise these lands. Are these crops compatible with soils located on irrigable lands? Are the soils in these areas likely to absorb pollutants? What are the effects of irrigation runoff on

D

the streams and well water located near these irrigation areas if pollutants are present?.

TASK 22. Section B and C as well as TASK 23. Section D should also include discussion of the effects of flow augmentation on water quality and biological resources. The geographic areas that are effected by flow augmentation should be mapped. How will water be released to these areas? Map the piped areas for transport and release of water. Will the pipes be above or below ground? If these pipes leak, what would be the impacts on special status plants and animals? Indicate the discharge points for flow augmentatioon. What impacts to plants and animals would occur at these locations and at locations further down stream? What is the proximity of areas of transport and release of treated wastewater to well water? Will discharges result in temperature changes in receiving waters due to increases in velocity? If a temperature change does occur how will this effect aquatic life?

Additional Comments for Task 22: Section B. Water Quality p. 14.

#1. Effluent should be tested for pathogens, viruses and other water quality constituents in consultation with regional board, and environmental health staff. In addition it would be helpful to include a summary of the results of these tests in the EIR.

#2. Although the consultants will establish water quality in flow augmentation streams it seems ineffective to visit these steams for only one year, since water quality may increase or decrease during years of varying rainfall.

#3. Why will the consultants visit Green Valley/Atascadero system and Walker Creek only twice, while the other streams will be visited five times?

Additional Comments for Task 22. Section B. Water Quality p. 15.

8. It is not possible to determine the accuracy of the proposed Russian River Water Quality Model from the scoping summary.. Please throughly explain how this model will give valuable information with minimum sampling events and data collection.

Additional Comments for Task 22. Section B. Water Quality p. 16.

#9 May water quality model applications for discharge and flow augmentation scenarios be applied to other streams effected by project alternatives?

TASK 23: BIOLOGICAL RESOURCES: Section A. Terrestrial Biology

Terrestrial biological studies of reservoir sites should focus on the quality and function of habitat for all wildlife. How are these areas used by native and migratory species? Including birds, how will establishing reservoirs on proposed sites impact native and/or migratory wildlife?

Section B. Aquatic Biology

What water quality guidelines will be used to determine whether wastewater is safe for aquatic species, and what species will be used as indicators?

TASK 23.2.4: AQUATIC BIOLOGY SPECIAL STUDIES TO BE CONDUCTED. Section B. Stream Aquatic Life Surveys #1.and #3. and Sections C. and D. p.29.

Since insect populations are an integral part of the aquatic habitat, all sampling with the exception of flow augmentation studies should take place in spring and summer, before insects have left streams for a terrestrial existence.

Although samples of "benthos" and "benthic organisms" will be collected in the Laguna, the Santa Rosa Creek, the Russian River, the Petaluma River, and the Esteros Americano and de San Antonio, there is no invertebrate sampling taken from other named creeks where flow augmentation and irrigation may have some impact. Since zooplankton and larger invertebrates (including insect larvae) are food for both aquatic and terrestrial animals it is important to characterize these aquatic resources.

TASK 23.4.4: WETLANDS AND IRRIGATION SUITABILITY SPECIAL STUDIES TO BE CONDUCTED Section C. Wetlands Creation Design.

For created wetlands use maps to describe the proposed area. If a wetland already exists the area should be shown before and after the proposed project. Maps should be complete enough so that they may be used to locate the site should the reader wish to visit the area.

If a wetland exists, wetland design should specify the total number of acres to be created versus the number of acres existing. The design should specify the type of wetland that currently exists. This discussion should include the present vegetation type including special status plants. An inventory of special status wildlife should be discussed as well. A general discussion should include other plants and animals that may be effected by this project. Are there oak woodlands, vernal pools grasslands etc.? Will there be a wildlife corridor so that these areas are accessible to wildlife? If these areas provide a future problem for wildlife will there be any way to prevent them from using the area? A discussion of soil suitability should be included to insure that pollutants in the water would be less likely to leach into adjacent areas. What quantity of water will be stored in each created wetland and how deep will these wetland areas be? Will they be managed or unmanaged? Will there be any kind of monitoring programs? If so who will monitor the areas?

TASK 23.4.4: WETLANDS AND IRRIGATION SUITABILITY SPECIAL STUDIES TO BE CONDUCTED. Section A. Reconnaissance Level Irrigation Area Surveys p. 33.

Wetland location and assessment should be accurate. If aerial photos were taken during spring or summer months when seasonal wetlands are dry, these areas may not show up and an additional method for locating wetlands should be used..

Section E. Bioaccumulation:

S Most of the Santa Rosa /Subregional Wastewater project alternatives reflect expanded population growth. Assuming growth occurs, extrapolate from current data to predict future concentrations of toxics in clams at the time of maximum population, or build-out.

Thank you for the opportunity to comment.

Sincerely,

Jean Starkweather

Jean Starkweather,
President

Cd'A:js

WILLIAM R. WALTON III
REPRESENTATIVE
ESTERO MUTUAL WATER COMPANY
P.O.BOX 75
DILLON BEACH CA 94929
(707) 878-2660

EMWC

28 NOV 94

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

SANTA ROSA CITY COUNCIL
ATTN: MARIE MERIDITH
P.O. BOX 1678
SANTA ROSA CA 95402

(707) 543-3181

NOV 30 1994

DEPARTMENT OF
COMMUNITY DEVELOPMENT

COUNCIL MEMBERS:

REFERENCE IS MADE TO OUR LETTER OF 07 FEB 91 SHOWN AS ENCLOSURE 1. THE FULL TEXT OF THIS ENCLOSED LETTER WITH ITS OWN ENCLOSURES IS INCLUDED AS PART OF OUR REMARKS. WE REQUEST THAT ALL OF OUR REMARKS BE RECORDED IN THE NEW EIR/EIS FOR THE NEW ANALYSIS OF THE ENVIRONMENTAL EFFECTS OF SANTA ROSA'S TREATED SEWER WATER ON ESTERO DE SAN ANTONIO AND ESTERO MUTUAL'S DRINKING WATER SUPPLY.

THERE ARE ADDITIONAL QUESTIONS AS FOLLOWS:

A DO YOU HAVE A PLAN FOR RELEASING TREATED SEWER WATER FROM ANY AND ALL DAMS/RESERVOIRS IN THE WEST COUNTY OPTION? ARE YOU INCLUDING OVERFLOW VALVES AND PIPES IN YOUR DESIGN? DO YOU HAVE A DRAINAGE MAP WHICH SHOWS HOW AND WHERE THIS OVERFLOW WILL DRAIN INTO ESTERO DE SAN ANTONIO?

DO YOU HAVE ANY INFORMATION ON HOW QUICKLY THESE RESERVOIRS WILL FILL TO AN OVERFLOW POINT IN A SERIES OF NORMAL RAINFALL YEARS?

B DO YOU HAVE THE LAST THREE YEARS OF FULL CHEMICAL/BIOLOGICAL ANALYSIS OF YOUR TREATED SEWER WATER AT THE POINT OF RELEASE FROM YOUR TREATMENT PLANT AND/OR SIMILAR ANALYSIS AT OTHER POINTS FARTHER DOWN STREAM IN YOUR SYSTEM?

C WILL YOU ALLOW FRIENDS OF THE ESTEROS TO TAKE SAMPLES AND HAVE AN INDEPENDENT ANALYSIS MADE PERIODICALLY?

C1 IN ADDITION TO PLACING THIS LETTER IN THE EIR/EIS YOU ARE REQUESTED TO ANSWER THESE ENQUIRIES DIRECTLY IN WRITING IN 30 DAYS AND PRIOR TO THE PUBLICATION OF THE EIR/EIS AND TO SUPPLY THE FULL TECHNICAL INFORMATION REQUESTED IN THE ABOVE QUESTIONS WITH AN EXPLANATION OF WHAT IS MISSING AND WHY.

SINCERELY,

William R. Walton III

WILLIAM R. WALTON III
REPRESENTATIVE

CF: CHARTIER, FOE
TRESCH, FOE
LEE, EMWC
EMWCHD4/WPF/SEWER14.WPFprinted 29 NOV 94

ESTERO MUTUAL WATER COMPANY
Post Office Box 62
Dillon Beach, CA 94929

EMWC

February 7, 1991

SUBJECT: SANTA ROSA SUBREGIONAL WATER RECLAMATION SYSTEM - EIR/EIS (DEC 90)

REFERENCE: EIR/EIS PAGES 9-67 AND 9-68, IMPACT 9.1-11

SANTA ROSA CITY COUNCIL
DEPARTMENT OF COMMUNITY DEVELOPMENT
SANTA ROSA CITY HALL
100 SANTA ROSA AVE., ROOM 3
SANTA ROSA CA 95402

COUNCIL MEMBERS:

REFERENCE IS MADE TO THE REMARKS OF BILL WALTON FOR ESTERO MUTUAL WATER COMPANY (EMWC) DURING YOUR HEARING ON JANUARY 15, 1991 AND HIS REMARKS TO THE NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD ON JANUARY 24, 1991 AT THE MEETING IN THE ROHNERT PARK CITY HALL.

THE ENCLOSED FACT SHEET SUMMARIZES THE BASIC INFORMATION ABOUT THE EMWC'S FACILITIES LOCATED ON THE BANKS OF THE ESTERO DE SAN ANTONIO. ANY INCREASE IN THE HEIGHT OF THE WATER FLOWING IN THE ESTERO WOULD ENDANGER OUR WATER SUPPLY BY POSSIBLY FLOODING OUR COLLECTION POND THUS CONTAMINATING OUR DRINKING WATER, BY POSSIBLY DAMAGING OUR ELECTRICAL SERVICE AND 100 HORSEPOWER MOTOR/PUMP, AND BY POSSIBLY WEAKENING OR DAMAGING THE PG&E POWER POLE BRINGING ELECTRICITY TO THE SITE.

OUR INTEREST IN THIS MATTER IS NOT TO BLOCK THE IRRIGATION PORTION OF THE EIR/EIS, BUT RATHER TO INSURE THAT ADEQUATE LEGAL, FINANCIAL, AND STRUCTURAL ARRANGEMENTS ARE IN PLACE WELL BEFORE ANY INCREASE IN THE ESTERO WATER LEVEL OCCURS, IN ORDER TO COMPENSATE US IN A TIMELY AND ADEQUATE MANNER FOR REPAIRS AND REBUILDING OF OUR ESTERO SITED FACILITIES. AND, ADDITIONALLY, TO INDEMNIFY US AGAINST LOSS CAUSED BY CONTAMINATION OF THE WATER SUPPLIED TO OUR CUSTOMERS. ALL OF THIS WITHOUT RESORT TO LITIGATION, IN THE EVENT THAT DAMAGE RELATED TO A RISE IN THE WATER LEVEL OF THE ESTERO BEYOND A "NATURAL" LEVEL SHOULD OCCUR AT A FUTURE TIME.

WE REQUEST A MEETING WITH APPROPRIATE MEMBERS OF YOUR STAFF TO EXAMINE THE INFORMATION AVAILABLE TO SUPPORT YOUR STATEMENTS CONCERNING A 4.4' RISE, REDUCED TO 1' BY EVAPORATION, AND MITIGATION BY PUMPING OR SOME OTHER MEANS, PLUS AN ALL-IMPORTANT DEFINITION OF "...THE LEVEL THAT WOULD OCCUR NATURALLY." AND TO DISCUSS THE ARRANGEMENTS MENTIONED ABOVE TO PROTECT OUR INTERESTS. WE ALSO SOLICIT ANY IDEAS YOUR ENGINEERS MIGHT HAVE FOR STRUCTURAL CHANGES TO LESSEN OUR RISKS AT THE ESTERO.

EMWC February 7, 1991

SUBJECT: SANTA ROSA SUBREGIONAL WATER RECLAMATION SYSTEM - EIR/EIS (DEC 90)

F

PAGES 9-67 AND 9-68 OF THE EIR/EIS APPEAR TO PRESUME A SUMMER TIME IRRIGATION SEASON AND NO LASTING EFFECT DURING THE WINTER RAIN SEASON ON THE WATER LEVEL OF THE ESTERO. THIS IS NOT A SAFE PRESUMPTION OVER THE LONG TERM, SINCE A NUMBER OF RANCHERS HAVE VERBALLY TESTIFIED THAT WITH IRRIGATION THEY MIGHT RAISE THREE CROPS A YEAR OF CATTLE FORAGE. THIS MIGHT REQUIRE IRRIGATION DURING MOST OR ALL OF THE YEAR. ADDITIONALLY, THERE IS ALWAYS THE POSSIBILITY

G

THAT FUTURE GROWTH IN THE SANTA ROSA SEWAGE SERVICE AREA WILL PROMPT PLANNING FOR RELEASE OF THE TREATED SEWER WATER INTO THE STEMPLE CREEK/ESTERO DE SAN ANTONIO WHICH COULD RAISE ITS HEIGHT TO A DANGER POINT FOR OUR FACILITIES.

YOUR WRITTEN REPLY IS REQUESTED AS WELL AS THE INCLUSION IN THE EIR/EIS OF THIS LETTER AND YOUR REPLY.

OUR POINT OF CONTACT IS MR. WILLIAM R. WALTON III, (707) 878-2660.

SINCERELY,

Jack W. Wallace

JACK W. WALLACE
PRESIDENT

ENCLOSURES

CF: CAROL WILLIAMS, MARIN COUNTY PLANNING DEPT.
DAN CARLSON, UTILITIES DEPT. SANTA ROSA
CHRMN, NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD

FACT SHEET

JANUARY 1992

Estero Mutual Water Company (EMWC) is a small, non-profit California Corporation serving 167 lots and, potentially, 4 parcels in Oceana Marin, Dillon Beach, California. The lots and parcels are listed below:

a. Lots 69 through 89 in Unit 3. (21))
b. Lots 117 through 262 in Unit 5. (146)) (222)
c. Parcels J, K, L, M in Unit 5. (55))

Each lot owner is a shareholder in the EMWC, one lot equalling one share. Under present zoning, the parcels could be developed into approximately 55 multiple units, totaling approximately 222 units for the EMWC service area. We currently have 107 meters installed, and add 5/10 per year.

HOME OWNERS ARE URGED TO HAVE A PRESSURE REGULATOR INSTALLED IN THEIR WATER SYSTEM. Contact Manager John Brecina, (707) 878-2853, or your plumber. Charges are usually less than $150.

EMWC has 7 Directors and 4 Officers, all of whom serve without pay. A part-time Manager is paid $600 per month and a part-time Office Manager is paid $180 per month.

During 1988 and 1989 major improvements were made to the water system at our pumping station, reservoir, and treatment plant to help increase our supply of water after the three dry years and major breakdowns in our 20 year old equipment. A rate increase was necessary to pay for these improvements and our gradually increasing operating costs. The rates were last raised on September 1, 1989, and prior to that on July 1, 1986.

Physical facilities include the complete piping system underground, two wells, two storage tanks with a total capacity of 300,000 gallons, the water treatment plant, a watershed and creek, a reservoir with a capacity of 18 million gallons, plus a pumping station and collection pond at the Estero de San Antonio. The storage tanks provide reserve water and fire protection.

A current rate chart is enclosed. If you have any questions, contact Janet or Bill Walton, (707) 878-2660. *(RATE CHART REMOVED)*

William R. Walton III

WILLIAM R. WALTON III
SECRETARY

EMWCHD2/FACTS01.WPF/November 28, 1994

THE ENVIRONMENTAL FORUM OF MARIN
P.O. BOX 74
LARKSPUR, CA 94977
TELEPHONE: (415) 479-7814

043
CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

NOV 3 0 1994

DEPARTMENT OF
COMMUNITY DEVELOPMENT

A NON-PROFIT CITIZEN GROUP DEVOTED TO EDUCATION IN MARIN COUNTY ON ENVIRONMENTAL MATTERS.

Nov. 27, 1994

Marie Meredith
Department of Community Development
100 Santa Rosa Ave.
Santa Rosa, Calif. 1678

Dear Ms. Meredith;

Thank you for this opportunity to give you our concerns about the Santa Rosa Subregional Long-Term Wastewater Project.

A1 In your EIR we would like you to identify the most environmentally superior alternative, in particular one that will have no long-term effects on neighboring wetlands. You must show the routes of all pipelines and other facilities needed for water transport, storage, reuse or discharge and identify the potential impacts of the construction and use of these facilities. Further concerns follow.

In relationship to the creeks in areas to be considered:

A - Will the storage facilities be located on or off-stream? How will construction of these facilities affect the creeks?

B - In identifying possible storage facilities, describe the existing conditions of the streams along which they will be built, including a description of riparian vegetation, water quality, habitat value, use by wildlife, fish and other beneficial uses of the creek.

C

D

≡ -Describe how construction and operation of wastewater facilities would adversely affect the short and long-term functioning of each creek.

In Flow Augmentation questions:

F - Identify and describe the current conditions of all streams to be considered. Are there existing diversions from them? What is the impact of the diversions? Has it caused the streams to go dry in summer or any loss of riparian vegetation?

G - Describe the site where water would be added? What are the potential impacts? - i.e. loss of vegetation for buildings, erosion at this location or downstream. What are probable effects on wildlife.

- What is anticipated quality of wastewater when it enters the creek?

- What is the anticipated quality of the wastewater when it reaches the end of the stream and empties into San Pablo or Tomales Bay or the the Petaluma River.

- What will be the impact on habitat and species living in or along the stream?

- What precedent will construction of a system discharging water into a small stream have?

- Show the location of the discharge of all flow-augmented streams.

In regards to possible impacts on wetlands:

-Identify wetland acreage and type of wetland that will be filled, flooded, or adversely impacted. Describe the type of wetland to be impacted.

- What are the existing habitat values of the lands proposed for wetland creation? What will be the impact of the loss of habitat to the species now living there?

- Describe how the wetlands to be used for wastewater treatment will function. How will vegetation be managed?

- Will there be a backup system? Describe it. Describe all known studies of bioaccumulation in species and accumulation of consituents remaining in the wastewater in surrounding soil.

- What monitoring will there be to track pollutants and their possible impacts on the food chain?

- Wildlife will be attracted to created wetlands. How will you ensure the created wetlands have no adverse effect on this wildlife?

- Will there be any creation of wetlands on diked historic baylands along San Pablo Bay? If so, how will the loss of tidal salt marsh habitat be addressed?

When wastewater is to be used for irrigation:

- Are all soils suitable for growing an irrigable crop?

- Describe the potential for accumulation of heavy metals in the soil used for agrculture? Could harmful constituents end up in the food that will be grown?

- How will runoff from irrigation be handled to ensure that its quality does not degrade streams and other downstream resources?

- How will the potential for salt buildup in irrigated soils be handled?

The EIR should describe all the consituents left in the wastewater after tertiary treatment. What possible mitigation will there be for each adverse impact?

There is also no component in any of the alternatives for treatment of the effluent beyond tertiary treatment. Explain why this is not included.

Sincerely Yours,

Lindsay Rehm

Lindsay Rehm
Water and Bay Committee

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT

Gulf of the Farallones
National Marine Sanctuary
Fort Mason, Building 201
San Francisco, CA 94123
tel: 415/556-3509
fax: 415/556-1419

28 November 1994

Marie Meredith
City of Santa Rosa
Dept. of Community Development
100 Santa Rosa Ave., Rm. 3
Santa Rosa, CA 94501

Wade Eakle
Army Corps of Engineers
211 Main Street, SF District
San Francisco, CA 94105-1905

Dear Ms. Meredith and Mr. Eakle:

This is an addition to comments made and faxed to you on the proposed Notice of Preparation dealing with Santa Rosa Sewage options. A seventh option has been added which is an ocean outfall. For this option, as for the West County option, a determination of where the sewage water goes, components of that discharge,
A 1 disposition of components in the near shore or ocean environment, bioconcentrations of discharge water components by marine organisms and general oceanographic aspects, over two distinct upwelling seasons.

In Santa Rosa's internal memoranda of 17 November and 27 October, you do not mention the NOAA letter of 14 February (enclosed). The concerns of that letter have not been addressed by Santa Rosa to date. These questions still need to be answered as well and those raised in this letter and my recent letter of 16 November 1994.

Our office continues to be available to help whenever possible.

Sincerely yours,

Edward Ueber
Sanctuary Manager
Gulf of the Farallones and Cordell Bank
National Marine Sanctuaries

EU: cmg/AP5

c: L. Moore, SRD

REPEAT
029

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Gulf of the Farallones
National Marine Sanctuary
Fort Mason, Building 201
San Francisco, CA 94123
tel: 415/556-3509
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16 November 1994

Marie Meredith
City of Santa Rosa
Dept. of Community Development
100 Santa Rosa Ave., Rm. 3
Santa Rosa, CA 94501

Wade Eakle
Army Corps of Engineers
211 Main Street, SF District
San Francisco, CA 94105-1905

Dear Ms. Meredith and Mr. Eakle:

The Marine Protection, Research and Sanctuaries Act designates the Gulf of the Farallones National Marine Sanctuary (Sanctuary) the responsibility for protecting all living, historical and cultural resources found within it's boundaries. Activities proposed by Santa Rosa's EIR/EIS could have a direct and detrimental effect on those resources for which the Sanctuary is responsible. The following comments address your NOP for this project.

The Sanctuary has been involved with this process for over seven years and continues to assist and cooperate with Santa Rosa. However, the distribution of this notice was not forthcoming to the Sanctuary, but had to be requested from Santa Rosa. This has also happened in the past where the Sanctuary had either been left off the mailing list or been required to travel to Santa Rosa to purchase a document. What this does is shorten the Sanctuaries response time and makes, in this case, a 30 day notice become a 22 day notice; which thwarts the purpose of the 30 day requirement. We also only received the entire NOP today 16 November, as parts were left out by Santa Rosa, further shortening the thirty day notice to nine days.

We have particular problems with the 1% to 20% discharge to the Russian River being part of each option and then having it be an option by itself. How are we to discern which parts of which option will be needed if the percentage, in and of itself can fulfill the project needs? The percentage needs to be clarified first and then options developed on remaining needs (ie: 1% = M amount left; 5% = N amount left 10% = T amount left 15% = R amount left and 20% = zero amount left; where M>N>T>R>0). Then one can design a system to utilize; not generate; or dispose of the sewage water remaining after the Russian River discharge.

I am dismayed that all the indirect discharges to the Marine and Estuarine environments are included, but the direct discharge proposed previously for an ocean outfall is not. Why is this?

The Sanctuary has many questions on the West County project.

1. How much water will get into the Estero Americano and Estero de San Antonio (runoff, percolation, seepage and direct discharge)?

2. What is in the water, including pesticides, metals, nutrients?

3. When (time of year) will it get into the Esteros?

4. What is the maximum, minimum and mean mode of water flow in wet, dry, extremely wet and drought years?

5. Why is the same water use rate, of 0.67 million gallons/acre annually, used for agriculture in Rohnert Park, a very hot dry area, and also for Stemple Creek (west county) a very foggy cool area?

6. Please include page 8: b.; Environmental requirements: "The Marine Protection, Resource and Sanctuaries Act."

7. Please include the Names, acreage and crops farmers are going to grow in the Stemple Creek/Estero de San Antonio watershed and Americano Creek and Estero watershed.

8. Please review NOAA's letter of 14 February 1991 (attached) for all these concerns still exist.

Thank you for the opportunity to comment on this NOP. Please call if we can continue to be of assistance.

Sincerely yours,

Edward Ueber
Sanctuary Manager
Gulf of the Farallones and Cordell Bank
National Marine Sanctuaries

EU: cmg/AP5

c: L. Moore, SRD
J. Bybee, NMFS
B. Tasto, CF&G

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

Office of the Chief Scientist
February 14, 1991

File
Santa Rosa

Mr. Joseph D. Hall
Deputy Commissioner
Department of the Interior
Bureau of Reclamation
Sacramento, California 95825-1898

Honorable Nanci L. Burton
City of Santa Rosa
100 Santa Rosa Avenue
Santa Rosa, California 95404

Dear Mr. Hall and Mayor Burton:

The National Oceanic and Atmospheric Administration (NOAA) appreciates the opportunity to comment on the Santa Rosa Subregional Water Reclamation System Long-Term Wastewater System Draft Environmental Impact Report/Statement and Technical Appendices (DEIR/S).

These comments incorporate input from the Sanctuaries and Reserves Division (SRD) and Charting and Geodetic Service (C&GS), National Ocean Service (NOS), and the Southwest Region, National Marine Fisheries Service (NMFS).

The SRD is responsible for the management and protection of the Gulf of the Farallones National Marine Sanctuary (GFNMS) and NMFS is responsible for preserving and enhancing marine, estuarine, and anadromous fish resources and the habitats that support these resources. Based upon their review of the DEIS and all relevant supporting technical memoranda, we believe the proposed West County alternative will result in significant injury to the resources and qualities of the Estero Americano and Estero de San Antonio within the GFNMS. We are unable to ascertain the impacts on Bodega and Tomales Bays and ocean areas from this DEIR/S. NOAA opposes the West County alternative and recommends that a new document be prepared.

The DEIR/S will require much additional information before an accurate assessment of the impacts and benefits of each of the alternatives can be made. We suggest that an amendment and permit to allow discharge to Americano Creek should not be issued until the DEIR/S is revised and the resource agencies have reviewed the results.

If you have any questions about the resource comments, please contact Mark Murray-Brown, SRD/NOS, (202) 673-5126, or Chris Mobley, NMFS, (707) 578-7513. If you have questions about the geodetic control data, please contact George English, National Geodetic Survey, (301) 443-8631.

Sincerely,

David Cottingham

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosures

cc: James J. Slawson
NOAA/NMFS
Terminal Island, CA

Joseph Uravitch
NOAA/NOS
Washington, D.C.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION COMMENTS

ON THE

SANTA ROSA SUBREGIONAL WATER RECLAMATION SYSTEM LONG-TERM

WASTEWATER SYSTEM DRAFT ENVIRONMENTAL IMPACT STATEMENT

Introduction

NOAA's responsibility under the Marine Protection, Research, and Sanctuaries Act (MPRSA) (16 U.S.C. sec. 1431 et seq.), as amended, is to identify and protect areas of the marine environment possessing conservation, recreational, ecological, historical, research, educational or aesthetic qualities which give them special national significance.

NOAA designated the Gulf of the Farallones National Marine Sanctuary in 1981 for the purpose of protecting and preserving the extraordinary ecosystem, including marine birds, mammals, and other natural resources, of the waters surrounding the Farallon Islands and Point Reyes and to ensure the continued availability of the area as a research and recreational resource.

The Estero Americano and Estero de San Antonio were included within the Sanctuary because their estuarine qualities contribute to the national significance of the Sanctuary. The use of the esteros as receiving waters for Santa Rosa's treated sewage effluent is inconsistent with the primary purpose of the MPRSA to provide protection to the flora and fauna of the GFNMS.

General Comments

During the preparation of the DEIR/S, NOAA provided an independent, detailed and substantive review of all relevant technical memoranda used to support the DEIR/S. This review is attached and is an integral part of NOAA's comments. (This review will remain in draft form as NOAA will need to review and potentially revise its comments as new studies are released by the City, e.g., pgs. 48-50 include recent analysis of Technical Memorandum #9, which was circulated after the release of NOAA's review).

C The DEIR/S makes no reference to NOAA's review and does not incorporate any of the data which is directly applicable to the West County alternative. In many cases the data provided in

this review directly contradict conclusions drawn in the DEIR/S and yet none of these discrepancies are addressed. The DEIR/S should identify areas of controversy in the data and its interpretation and qualify its conclusions.

In most cases where significant impacts may occur from the proposed project, the DEIR/S proposes to mitigate the impact with further studies after the proposed projects have been implemented. This is unacceptable. The GFNMS is not an experimental area for large scale anthropogenic manipulation. Studies need to be done before the onset of any of the projects to determine the range of impacts and consequences to the environment. Mitigation measures should be based on completed research and should be identified in the DEIR/S as specific actions and projects.

The DEIR/S should be edited. Units constantly vary from Million Gallons a Year, to Million Gallons a Day, to Cubic Feet per Second, to Acre-Feet, etc., making it difficult to compare the various project components.

Hydrology

All of the alternatives are described in terms of a normal hydrologic year. Today, unusually dry years are the years that cause system problems. Under any of the proposed alternatives, unusually dry or wet years will greatly alter wastewater inflow, irrigation demand, surface runoff, estuarine receiving water salinity patterns, wetlands, wastewater discharges to various project components, etc. It is impossible to assess the habitat impacts and benefits predicted by the DEIR/S without a complete analysis of each alternative's operation over the range of possible hydrological conditions. Model years should include at least the 1977 and 1990 drought years, and the 1986 flood year.

Habitat

The West County and South County Alternatives propose a number of wetland and riparian enhancement projects to compensate for habitat losses due to reservoir creation and reclaimed wastewater discharges. The DEIR/S concludes that the enhancements will result in a net habitat benefit, based on Habitat Suitability Index (HSI) calculations. These results stem primarily from changing grassland areas to wetland or riparian areas, and from using fencing to exclude livestock from degraded wetland areas.

The DEIR/S concedes that much of the acreage proposed for enhancement is not in the control of the project proponents, and that many of the proposed enhancements require further study to assess their feasibility. Therefore, the DEIR/S actually portrays the minimum expected habitat losses and the maximum achievable habitat gains. Further, the expected losses presented in the DEIR/S do not include a number of potential impacts that are discussed below. In fact, based on the past record of

wetland/riparian creation and enhancement projects, it is likely that many of the predicted benefits might not be achieved, even if the proposed enhancement areas were readily obtainable.

The DEIR/S mentions some enhancement measures, including berm construction, elevation contouring, water control structure installation, reclaimed wastewater discharge and livestock exclusion fencing. Other enhancement components such as vegetation planting and site-specific flow management plans should be fully discussed.

The DEIR/S should provide information on the availability of all the required lands under each alternative, and should present binding mitigation agreements that guarantee effective mitigation for all habitat value and acreage losses.

Alternatives

Specific statements in the DEIR/S are incorrect. Conclusions are drawn with no supporting justification and the entire DEIR/S is written in such a way that it favors the West County alternative rather than objectively analyzing all reasonable alternatives.

The DEIR/S prematurely rejects variations on other alternatives that should be fully considered:

G 1. Full-scale irrigation, or at least a greatly enlarged irrigation base, should be carefully revisited.

G1 2. More elements of the conservation alternative, (a combination of water conservation, wastewater flow reduction, and wastewater reuse), should be incorporated into the final project alternative.

G2 3. Any West County alternative should consider using Stemple Creek instead of Americano Creek, as there is probably a greater chance of anadromous fishery enhancement in Stemple Creek.

H F15 Steelhead

All of the alternatives include continued discharge of reclaimed wastewater to the Laguna de Santa Rosa. Remnant steelhead runs traverse these waters on their way to spawning grounds in Santa Rosa and Mark West creeks. The current discharge to the Laguna may have been a principal factor in the reduction of these steelhead runs. Even without fish kills, increased ammonia, higher temperatures, and low dissolved oxygen content may be sufficient to cause migrating steelhead to avoid entering Laguna waters.

Persistence of the steelhead despite wastewater discharge does not necessarily support the conclusion that presence of tertiary treated water does not cause steelhead to avoid the Laguna (p.9-

10). Rather, it may attest to the persistence of the steelhead trout in the face of severely degraded environmental conditions. Instream steelhead studies should be performed to determine ways to enhance the remaining steelhead runs that pass through the Laguna. Reasonable solutions to current Laguna discharge concerns should be addressed in the alternatives. For example, enhanced treatment of all discharges to the Laguna de Santa Rosa might greatly improve steelhead passage.

I Geodetic monuments

(gen) A preliminary review of C&GS records indicates the presence of both horizontal (H) and vertical (V) geodetic control survey monuments in the proposed project area. Attached are the published geodetic control data for quadrangles 381223 (H&V). this information should be reviewed for identifying the location and designation of any geodetic control monuments that may be affected by the proposed project. If there are any planned activities which will disturb or destroy these monuments, C&GS requires not less than 90 days' notification in advance of such activities in order to plan for their relocation. C&GS recommends that funding for this project includes the cost of any relocation required for C&GS monuments.

General conclusion

Before the City's efforts and finances are expended on an ill-conceived and inadequately analyzed program, NOAA recommends that existing data be reanalyzed to determine deficiencies and areas
I1 of conflict. Other reasonable alternatives must be fully considered and discussed. New data collection and research is needed to investigate gaps and contradictory information.

The City should focus on determining exactly the magnitude and quality of the proposed input to the estero ecosystems and exactly how the structure and function of the esteros, Bodega and Tomales Bay ecosystems will change over the short and long term. The DEIR/S should carefully review all past resource agency
I2 concerns regarding the current Laguna discharge effect on steelhead and incorporate reasonable solutions to these concerns in the final wastewater treatment alternative. If areas of uncertainty and conflicting data remain, then this should be recognized, documented and provided to the decision makers so that they clearly understand the range of consequences of their decisions.

General comments on the West County Alternative

The DEIR/S fails to provide an adequate discussion of the impacts and consequences of the proposed and preferred West County alternative on the ecology and estuarine dynamics of the esteros.

J NOAA staff have spent a great deal of effort working with the City of Santa Rosa and its consultants to clearly express NOAA's concerns on this project. The consultants and City staff have made numerous statements that the proposed West County alternative would be of benefit to the GFNMS and that they would address NOAA's concerns. Not only do we see negative impacts occurring from the West County alternative to the GFNMS, but the DEIR/S fails to mention the jurisdiction of the GFNMS in any of the descriptions or figures of the esteros and fails to address NOAA's concerns.

K Habitat Throughout the DEIR/S frequent references are made to totals of wetlands created and enhanced in the West County option. Instead the text should read created or enhanced and specific subtotals of each type of impact be provided. These figures appear to be presented on pages 4-24 for wetlands in the Americano Creek Watershed.

L Statements are frequently made that elimination of a hypersaline environment is a beneficial impact. However, the Sanctuary was designated in part with the intent to protect exactly those species that have uniquely adapted to this type of rare and fragile ecosystem.

M Creeks watershed A common theme throughout the DEIR/S is that the Creeks flowing into the esteros are heavily degraded from local agricultural practices and that the proposed West County option is the only practical opportunity to prevent this degradation and initiate restoration. NOAA disagrees with this assessment of the Creek watersheds and the statement that the West County alternative would address these problems. Only in certain specific areas are the Creeks impacted, in some cases severely, by cow manure and trampling of the banks, but this is not the case throughout the upper watershed. In addition, the esteros at the receiving end of the Creeks are some of the most productive habitats within the GFNMS and on the west coast of the United States.

N The proposed project to discharge into the esteros will in fact compound the current degradation. NOAA encourages the recent initiatives by local, state and Federal agencies to work with the farmers to directly address the environmental impacts of agricultural practices and to mutually determine the most appropriate means of ensuring environmental protection of the Creeks and esteros and compatible agricultural practices.

O Water flow The actual amount of total proposed flow into the esteros from the West County alternative remains unspecified. It is clear that a combination of inputs from discharge across wetlands, direct runoff from irrigation, increased groundwater flow from percolation, leakage from under the dam, and riparian corridor restoration, will all contribute to the total flow into the esteros. Only restoration of the riparian corridor, an activity that could be done directly with the community, independently of this project, would be considered a positive impact. Statements that the esteros would be returned to a previous more natural state due to the project are not supported. Data presented in the technical memoranda are inadequate and misinterpreted (see NOAA review pgs. 8-10).

The time period over which water volume will be increased and phased in is not given. It may take a couple of years for changes to become evident. No alternative is given as to what
O1 will happen if impacts are significant. Engineering scenarios all use at least 5.0 cfs; salinity and nutrient impacts become significant at flows above 1-2 cfs. What will happen to surplus water? Where is the contingency plan for this scenario?

Figure 4-1 on page 4-2 is extremely misleading. For example, in the first diagram for the West County Reclamation Alternative the flow into the West County irrigation box needs an output arrow due to runoff to surface water and/or groundwater and with a
O2 value of respective quantities and an indication of whether the flow ends up in either Americano Creek or Stemple Creek and ultimately the esteros and Pacific ocean. Similar modifications should be done for all alternatives properly indicating the respective "sinks" and quantities of water involved.

P Resources The statements "Altered salinity would not be an adverse environmental effect, it would simply be a change. Plant and animal populations suited to the less saline conditions in parts of the Esteros would develop" highlight the inadequacies of the DEIR/S. What would be the changes resulting from the proposed project? How would the current species abundance and distribution change? What species would be lost due to these changes? How would the interaction of these species be altered? How would the productivity of the esteros change and how would this affect local coastal and open ocean species that depend upon the esteros for breeding and foraging habitat?

There is no data in the environmental assessment sections describing these changes other than unsubstantiated subjective conclusions stating "beneficial impacts" with no quantitative assessments provided.

Q Climate The omission throughout the DEIR/S of any discussion of climate and meteorology is significant. The microclimate within the estero watersheds is very different from that near Santa

Rosa. The Creek valleys are cooler and often covered in fog. This would dramatically affect evapotranspiration rates and subsequent calculations of runoff into the Creeks and esteros from irrigation and the wetlands. A discussion of climate and its effects on the proposed project needs to be included.

R

Current treatment There is a discussion of treatment plant system operations and technology on page 4-9 to 4-11. The text reads that the plant is at a current level of "tertiary" treatment. Although the term "tertiary" is an ill-defined term it implies at least that some extra level of treatment exists beyond secondary aeration basins and digesters. Such an upgrade however is proposed as a future action on page 4-32 with nitrification processes. Please clarify the current level of treatment. If the treatment plant is currently operating at advanced secondary rather than tertiary treatment what alternatives exist for the enhanced treatment alternative combined with uses not examined in this DEIR/S?

Specific Comments

Water Chemistry/Salinity

S

Pg. 2-7 The DEIR/S states that Regional Water Quality Control Board (RWQCB) shallow water discharge effluent copper concentration limits could be met by adjusting the pH of the Santa Rosa water supply and thereby reducing the copper concentration in influent wastewater. Copper in effluent to the Laguna de Santa Rosa should already be a concern, even without the DEIR/S. Therefore, the project proponents should already have implemented the pH change, and DEIR/S reviewers would now be sure that the predicted reduction in copper load is attainable.

T

Pg. 2-11 "Increased summertime flow into the Estero Americano as a result of the West County Reclamation Alternative would produce a change in salinity in the Estero... The Estero would be altered from a primarily saline environment to a freshwater/ brackish/ saline environment, more closely approximating the environment that existed in the Estero in the past. Altered salinity would not be an adverse environmental effect, it simply would be a change." Based on a maximum summer discharge flow of 7 cfs to the Estero, and estimates of resultant salinity changes, the DEIR/S suggests that 16 acres of salt marsh would be converted to brackish marsh over a fifty year period (pp.10-94 to 10-97). As mitigation, the DEIR/S offers to exclude livestock through fencing lower salt marsh portions of the Estero. Even if the predicted impacts were all that occurred, this would not be an acceptable mitigation for 16 acres of marsh conversion.

However, the DEIR/S notes that "The ultimate changes in water salinities and their effects on vegetation in the Estero Americano cannot be predicted with great certainty." This is the

crux of the problem. The acreage conversion estimates depend on the assumption that the only major change will be in salinity distributions, and that this has been modelled effectively. However, suspended solids, metals concentrations (esp. copper), selenium concentration, temperature, nitrate and ammonia concentrations, and a number of other variables would be altered.

Although most of these are modelled in the DEIR/S (p.9-56 to p.9-58), the models require many assumptions, including 7 cfs reclaimed water inflow, 25% animal waste-load reduction, influent wastewater copper load reduction by pH adjustment. It is also unclear whether the total of 7 cfs includes flows from increased surface and subsurface runoff from reclaimed wastewater irrigation. Thus, the net long-term effect of these changes to salt marsh habitat, Estero estuarine animal species, and other Estero vegetation (particularly eelgrass beds) is unknown. Given the lack of information on the long-term effects of wastewater discharge to natural wetlands, many wetland specialists recommend that wastewater discharge be limited to created, artificial wetlands (EPA San Francisco Estuary Project Wetlands Status and Trends Report, in press).

Land Use

U Pg. 2-14: Impact (6-3) - Inundation and conversion of agricultural lands would have less than a significant impact.

How much increase in agricultural productivity will occur? What type of pesticides and fertilizers will need to be applied and how much will runoff into the Creeks? Are the farmers willing to change their practices and are the soils adequate for such a change? How many of the 7,500 acres necessary for irrigation are actually available and are farmers willing to fence off their lands and control their livestock?

Flow scenarios to the esteros would be very different if farmers elected not to take the water or dropped out later. Before any analysis can be made it would be necessary to have evidence of long term, irrevocable agreements, preferably with deed encumbrances. In addition, the DEIR/S states the project is only U1 planned to deal with demands through 2010. Yet it is clear in the DEIR/S that some of the project elements are clearly expected to be used to meet the increasing demands after that date. What does this mean for future flows? The plan is too short-sighted with regard to the esteros.

Economic

Pg. 2-16: Impact (7-2) - Conversion of agricultural practices a beneficial impact.

What are the impacts of changing to other crops and what are the economic benefits and costs to the farmers as well as to the environment? It seems possible that an increase in agricultural practices and/or an increase in herd size would compound the problems referenced already rather than mitigate them. Whatever the choice of the farmers it is clear that a major change of land use is envisioned from this project and yet there is no analysis of the environmental consequences.

The analysis of economics relies on conditional statements such as the benefits that farmers "could, would, might, are likely to", etc. These uncertainties need to be resolved and compared to an economic analysis of the costs and benefits to the environment of the proposed project. The statement on page 7-12 that it is uncertain what choice the farmers would make regarding the water and their land practices leads one to assume that many of these questions still remain unasked.

Growth Effects

Pg. 2-17: Impact (8-3) - No significant impacts on water supply to the City.

It appears that although the population of Sonoma County within the City limits may benefit from the water supply, residents within the watersheds of the Creeks may have significant negative impacts including loss of wells from contaminated ground water. This externalization of economic costs from the City users to other neighbors needs to be considered as a consequence of the proposed action. This is of concern to NOAA as the transfer of water across watersheds (shown in Figure 9-1) now impacts the small esteros rather than the larger and currently used watershed of the Russian River.

Hydrology, Water Quality and Aquatic Life: Setting

Figures 9-3 to 9-5 need to include error bars to show degree of variability of data. Figures need to be added showing metal concentration variation, specifically for copper.

Pg. 9-24 In addition to providing enhanced flows with treated wastewater, any stream enhancement project needs to address the other factors that will limit fishery repopulation. These factors include stream habitat structure (pools/riffles), water temperatures, food supply, water quality, sediment loading, streambed composition (i.e. spawning gravel), etc. The DEIR/S should provide an in-depth assessment of the potential losses of existing fish (three-spine stickleback, striped bass, tidewater goby, plainfin midshipman, etc.), and an assessment of the potential gains in these and other fish species. Given the tidewater goby's persistence in both the Estero Americano and Estero de San Antonio, and the DEIR/S' recognition that this is a

highly sensitive species, one must conclude that aquatic habitat in the Esteros may not be as degraded as portrayed by the DEIR/S.

The decrease in anadromous fish populations is attributed via anecdotal evidence to a dam. What scientific evidence exists that this was the cause and what role have impacts played, if any, in the decrease of anadromous populations? It is unclear how the proposed project would affect anadromous fish
X1 populations. The list of fish species should be moved to an appendix and include invertebrates, birds and aquatic vegetation. In the setting it would be more useful to provide an explanation of how the different organisms interact and contribute to this unique type of ecosystem. Then impacts from the project can be understood in terms of how this ecosystem function would be altered.

The discussion of red tides and toxic dinoflagellates on page 9-28 needs to be greatly revised. There is a very large body of literature on red tides in general, and toxic dinoflagellates in particular. The Department of Health Services, State of
X2 California just released a report discussing toxic dinoflagellates in California which reviews reports going back approximately 20 years. The author, and the home of that branch of DHS, is in Santa Rosa. These references should be used rather than the 2 or 3 obscure papers cited.

One of the papers (actually an abstract) cited as a discussion of the effect of land clearing and nutrients on toxic dinoflagellate blooms is actually about a starfish, Acanthaster planci, which is called in the DEIR/S a toxic dinoflagellate. This error should be corrected. Acanthaster is the well known Crown-of-Thorns starfish that, it was feared, would eat and destroy all of the coral reefs in the Pacific. The paper cited in the DEIR/S was actually one of a number of similar papers attempting to connect the starfish outbreak with human activity. The paper is not relevant for the discussion on toxic dinoflagellates.

Pgs. 9-35 to 9-41 illustrate the shallow water table and the fact that water supplied to the surface as irrigation could rapidly saturate the water table that will affect local wells and
X3 additional flow into the Creeks and the esteros. The limited hydrological and water quality information presented poses more questions than answers. Among these questions are turbidity levels in the esteros near shore and subsequent light penetration level changes and floral changes.

The proposed flow rates and changing agricultural practices could dramatically increase the particulate loading in the estuarine and coastal systems leading to a significant increase in water
X4 column light attenuation and deterioration of water quality for both submerged macrophytes (seagrasses and algal macrophytes) and phytoplankton due to resuspension of sandy and fine clay soils in

this area. The clay/silt particles are of sufficiently small grain size that they will remain as suspended materials for a long period of time not only in the estuarine environments but in
X4 the coastal system. The ultimate consequence will be a reduction in the depth of the 1% light level (the euphotic zone), and as such, the impact will come under the EPA regulations limiting deterioration of this water quality parameter.

The impact of seasonal fluctuation in flow will greatly enhance erosion in both the estuarine and the freshwater systems. Increased erosional impacts will be greater in winter and spring due to increased winds and rain resuspending particulate matter. The late winter and spring is when seagrasses in central
X5 California "recharge" their carbon reserves and initiate rapid growth. Any limitations in light availability at this time not only impacts growth rate but strongly impairs the ability of the plants to recharge their subterranean reserves. Carbon limitation to the underground tissues result in death of the rhizomes and permanent loss of the plants and ultimately their associated food webs.

Pgs. 9-62 - 9-63 These pages suggest that anadromous fishes might be restored to Americano Creek. There is no evidence presented to suggest that there were any historic anadromous fish runs on the Americano Creek, and insufficient information to determine whether runs could persist if they were reintroduced. Therefore, any proposed project benefits from anadromous habitat restoration on the Americano Creek seem speculative at this point.

Pgs. 9-64 - 9-65 The potential benefits to aquatic life in the Estero Americano presented here will need additional documentation. Shifts in the null zone may not necessarily increase biological productivity. Sea lettuce beds may or may not increase, and this might or might not constitute a benefit to
X6 flat fish populations. Bed sediment changes and subsequent benefits to sole and flounder need to substantiated. The suggestion that increasing freshwater flows would increase zooplankton production and thereby provide additional food resources for salmonids in the estuary is unsubstantiated. The development of clean near-shore sands as spawning habitat for tidewater goby also needs further substantiation.

Pg. 9-68 The DEIR/S states that the increase in copper mass emission from the Estero Americano could cause a maximum increase of 0.5 percent in sediment copper concentrations in Tomales Bay, and that this is biologically insignificant. However, the DEIR/S
X7 does not discuss the current levels of copper bioaccumulation in Tomales Bay bivalves and other benthic species, and the potential cumulative effects of any additional copper loading and bioaccumulation to the environment. This should be addressed.

Hydrology, Water Quality and Aquatic Life: Impacts

Pg. 2-19: Impact (9-4) - A significant impact to surface flow and geometry to American Creek would be assessed by studies.

Although monitoring and possible future remedial action is offered as mitigation, no quantitative predictions are made as to the net changes in streambed configuration. These streambed changes could drastically affect the success of riparian, wetland, and aquatic enhancements proposed as part of the West County alternative.

The estuary's hydrology is the single most important controlling factor of the ecosystem. The amount and timing of freshwater inflows are both basic attributes that are altered by wastewater discharge. Wastewater inflows will increase the volume of freshwater inflow to the estuary and several negative impacts are involved. The statements that adverse impacts "can be reduced to less-than-significant level" is insupportable. There is no evidence that ecosystem functioning will be less than significantly altered by the changes proposed. In order to support this claim, it would be necessary to have a complete understanding of all existing functions, an accurate estimate of all future functions in perpetuity, and the ability to calculate the difference and test for significance.

Y1

During the summer it is clear that the flow of water entering the esteros would be entirely caused by the proposed project. The rationale for restricting treated sewage flow into the Russian River to 1% and yet proposing 100% project flow to the smaller esteros is based on the disputed assumption that the esteros are a degraded habitat (in contrast to the Russian River) and that the project flows would be beneficial to the esteros. However, restoration of the riparian corridor alone would lead to flows of approximately 1 to 2 cfs resulting in over 100% increase in current annual flow.

Y2

NOTE: Analysis format has omitted to treat Impact 9-3 on Page 2-19 "Discharge of reclaimed water to the Laguna de Santa Rosa would affect aquatic life." Subsequently all impact and mitigation Code Numbers from pages 9-48 to 9-93 need to be increased by one.

Pg. 2-19: Impact (9-5) - A beneficial change to water quality in Americano Creek.

Reclaimed water will increase metals loading (see NOAA review pages 16-24). What will be the cumulative impact of this additional loading? An agreement needs to be made with the farmers on what types of Best Management Practices they are willing to accept for the water before one can reach any conclusions on reduction of nutrient loading, in terms of

Y3

magnitude, location and season. As groundwater flow can be expected to increase into the esteros due to the project this
Y3 needs to be incorporated into future analytical considerations. How much and what quality groundwater will be added into the system?

Pg. 2-19: Impact (9-6) A less than significant change to water quality in Estero Americano.

The validity of the model used to derive these water quality assessments is contested (see NOAA review pages 12-16). The salinity change due to the project is expected to be dramatic. At station 4 it is predicted that the environment will entirely
Y4 convert from a saline to a freshwater environment. The change in species abundance is not quantified and the only changes described later regarding species abundance and distribution concern vegetation. There is no analysis on how the aquatic species and their interaction will change.

Although it is asserted that improved waste management practices in the watershed will be implemented to control nutrient loadings to the esteros, no information is given on how this will be accomplished. In fact, in the nutrient budget used to
Y5 demonstrate reduced nutrient loading, loadings due to animal waste remain unchanged and may even increase if irrigation encourages more intensive ranching. Calculated net nitrogen removal is based on invalidated assumptions about loss functions an on replacing commercial fertilizer applications with waste water nutrients (see NOAA review pages 48-50).

Pgs. 2-19, 2-20, Impacts (9-7, 9-12) - A significant change to hydrology in Estero Americano may involve the need to pump water out of the Estero.

The need to consider a pump to mitigate overfilling either estero implies there is a major threat of overloading the ecosystem. As mentioned above the esteros are too small a system to manage the
Y6 scale of this project.

Potential rises in Estero Americano and Estero San Antonio water levels would be prevented by pumping or other methods as needed. Estuaries often have a vertically stratified salinity and temperature distribution, such that the vertical positioning of the pump head could have a large influence on pumping impacts. Also, any pumps could uptake and kill fish. Pumps would also require frequent maintenance from clogging. Therefore, the installation, operation, and effects of pumping to maintain water levels in the estuaries should be described in greater detail.

Pg. 2-19: Impact (9-8) - Less than significant impact of reclaimed water to Americano Creek would affect water quality to Pacific
Ocean.

Projected ocean impacts are based on in appropriate assumptions about mixing rates and estero water quality. It is assumed that the estero outflow mixes instantly with the volume of Bodega Bay, and that the quality of water leaving the estero always is represented by the time averaged, modeled composition at the mouth. The fact that composition will vary over a tidal cycle, as it does now, and that this will directly affect both the mixing properties and impact of the plume is ignored.

It is possible that a freshwater lens will develop concentrating the project water which would affect local coastal populations and the neighboring GFNMS including Bodega and Tomales Bay depending on its magnitude and drift (see NOAA review pgs. 12-16 and 24-30).

Pg. 2-20: Impacts (9-9 and 9-10) - Beneficial change to the aquatic life in Americano Creek and Estero Americano, respectively.

This conclusion is entirely without justification and the dramatic change that will occur to the ecosystem of the Creeks and esteros needs to reinvestigated. NOAA predicts that the project as proposed will in fact have a major adverse effect to the esteros. Even if there is no increase in nutrient loading (NOAA predicts nutrient loading will actually increase in the esteros as a result of this project, see NOAA review pages 48-50), the increased volume in freshwater flow through this system would have a significant impact on primary production at the ecosystem level. This would be considered a negative impact as it would lead to blooms of phytoplankton and/or filamentous macroalgae.

Changes to the benthos and invertebrate community from a saltwater to a freshwater environment will reduce productivity to the entire system. Example of predicted changes to the ecosystem include: the movement of Dungeness crabs seaward due to a loss of habitat, replacement of eelgrass (a spawning area for herring) with sea-lettuce (considered a nuisance species) and possible increase in the frequency and duration of toxic blooms (see NOAA review pages 24-30). Such changes cannot be considered anything other than a negative impact to the aquatic life in the watersheds of the proposed project. Mitigation of this loss by increasing the "health and vigor" of the remaining habitats would not be considered mitigation, even if the farmers do agree to reduce impacts from agricultural practices.

Changes in hydrology will not only allow exotic species to invade but allow invasive native species (e.g. cattails) to expand their distributions. Exotic species would replace native fish, mussels and clams. As a result, birds that nest in the native vegetation and feed on the fishes and invertebrates would lose their habitat and food sources. Many areas of native salt marsh will be displaced. Habitat for native slat marsh insects, birds, and other wildlife would decline as a result. The functioning of native estuarine ecosystem would be jeopardized by wastewater inflows.

It is unclear how the analysis of impacts can give a beneficial rating of impacts to the West County Option for American Creek and Estero Americano resulting from addition of reclaimed water (page 2-20, Impacts 9-9 and 9-10) when the same impacts to the South County (page 2-23, Impacts 9-18 and 9-20) are given a significant rating. This discrepancy is especially significant as it appears from page 9-78 that the detailed technical studies necessary to fully evaluate the West County Reclamation Alternative have not even been done. This tends to support NOAA's contention that each alternative has not been analyzed equally and objectively.

Further, NOAA does not agree that because a system is already stressed (San Francisco Bay) it is preferable to dispose of the treated sewage effluent into the relative "unstressed" environment of the Pacific Ocean (DEIR/S, pg. 9-78). Unstressed environments such as the GFNMS should remain so. In stressed environments such as San Francisco Bay, stress-inducing impacts should not be allowed to increase and preferably reduced.

NOTE: Format of Impact Number Codes on pages 2-23 to 2-24 does not correspond to respective Analysis Number Codes on pages 9-77 to 9-95.

Pg. 2-20: Impact (9-11) Less than significant impact of irrigation to water quality in Stemple Creek and Estero de San Antonio.

Potential adverse changes to water quality in Stemple Creek and the Estero de San Antonio would be monitored and compared with pre-project data. In addition to water quality monitoring, biological uptake (in plants and animals) and subsequent bio-accumulation would have to be carefully monitored. But, the DEIR/S offers no firm commitment to any specific remedial actions given a specific change in water quality.

Pg. 2-21: Impact (9-13) Addition of reclaimed water to Americano Creek may adversely affect marine life in Bodega Bay. (see comment to Impact 9-8 and generally see NOAA review pages 32-37).

Pg. 2-21: Impact (9-14) Storage of water may negatively impact groundwater quantity and quality tapped by local wells whose users would then need an alternate water supply.

It is certain that the same concerns regarding nitrogen loading from irrigation and impacts to surface water (pg. 9-71) will also apply to groundwater loading to wells due to leakage from the dam of the same water into the shallow water table. The impacts from this contamination to local water supply would be considerable and contribute as much or more than leakage from the dam to groundwater contamination.

Pg. 2-21: Impact (9-15) Irrigation in Stemple Creek and Americano Creek watersheds would significantly affect groundwater quantity and quality and would be a less than significant impact by careful siting and management of wastewater irrigation and possible abandoning of wells.

Though statements are made throughout DEIR/S and Tech Memos about how agricultural waste problem will be cleaned up, no method is given. Will the farmers cooperate and how will they agree? At St. Anthony's, source of much of the problem, all that is shown in DEIR/S is a narrow riparian corridor, less than 10 yds wide, between Creek and existing stock yards. There is no way this alone will stop polluted runoff. A dairy outside of Valley Ford, has a barrier which is bigger, but part of it - the vegetated filter strip - is on the cow side of the fence. What is to keep it from being trampled or eaten? What will be used to replace the copper sulfate presently used to treat foot rot? Will it be worse than copper? All of the mitigation appears to depend on the role of the "created and enhanced" wetlands.

One of the supposed benefits of waste-water application to the Estero is improved bacteriological water quality. The high numbers of fecal coliform seen at times in the upper Estero and Americano Creek are frequently contrasted to the low viable coliform count of the chlorinated wastewater. In performing this comparison, the DEIR/S fails to consider that the water running off of irrigated pasture, estimated in these reports to be 5% of the applied water, will be heavily contaminated by fecal coliform originating in the pasture. Since the manure deposited in the pasture will be bathed by fresh water and washed into receiving waters immediately, fecal coliform mortality will be reduced relative to dry manure exposed to ultraviolet irradiation from sunlight before being washed into the receiving body.

Waterfowl occupying the wetlands will also result in fecal coliform contamination, so that in fact fecal coliform contamination of the esteros may well be worse after the project is implemented than it is at present, when runoff from dairy barns, feed lots and pastures does not enter the Estero during the summer.

Pg. 2-23, Impact (9-20) "Discharge of reclaimed water could affect water quality and aquatic life in the Petaluma River. Further site-specific studies would be necessary to determine the potential for adverse impacts to water quality and aquatic life."

This is an example of the lack of detailed information required to assess the impacts of the South County alternative. Our agency supports efforts to strengthen remnant steelhead runs in the Petaluma River. Therefore, potential adverse impacts to the Petaluma River should be fully assessed.

Vegetation and Wildlife: Setting

AA Pages 10-1 to 10-74 give a long description of vegetation in the West County area but no analysis of their function in the system and the role these species play in the ecosystem's ecology.

Vegetation and Wildlife: Impacts

Pg. 2-24 and 2-25: Impacts (10-1 to 10-4) - Alteration of existing habitat at all enhancement sites would have potential adverse impacts that would be studied.

As stated above these studies need to be done and incorporated into the DEIR/S in order to fully evaluate the impact. To propose to do studies "after the fact" displays a lack of understanding of total ecosystem functioning and the role of wetlands in supporting natural biodiversity. It is not reasonable to make claims of what functions and values will be provided in the future without a better understanding of what functions are provided in the present.

Pg. 2-27: Impact (10-13) - Creation and enhancement of wetland will result in beneficial change from one plant community to another.

The analysis on pgs. 10-90 to 10-91 states that the benefit of the change will be a return of the enhancement sites from non-native species to a riparian and wetland habitat. The benefits
AA1 of this are subjective depending on the productivity and role this new vegetation will play in the ecosystem and whether it will be self-sustaining or reliant on artificially introduced water.

The statements that loss of wetland in one area can be compensated for in another area are not supported by NOAA's experience through research studies within the National Estuarine Research Reserve (NERR) system. Even five years after wetland construction efforts were started there was less than 60% functional equivalency between a restored/constructed marsh and its natural reference wetland. There is no evidence that

creation of a wetland acre will replace all the functions of destroyed ecosystem.

Contentions that the West County alternative would "provide nearly a twofold net increase in habitat value compared to existing habitat value" appear to be based on the wetland area and species present rather than wetland functioning. Full functional analyses require long detailed study of ecosystem processes to understand what the system does for biota that use it throughout the year, as well as those that just visit it. It is easy to say that habitat value will be doubled, but evaluations of restored sites fails to support such claims. (Also see NOAA review pages 8-11 and 37-47).

AA1

Pg. 2-28: Impact (10-19) - Irrigation of farm land will have a less than significant impact as vegetation changes from annual to perennial and,

Pg. 2-28 and 2-31: Impact (10-20 and 10-31) - Added flows to Americano Creek would change salinity and vegetation and wildlife habitat values from salt marsh to brackish marsh to be mitigated by increasing the health and vigor of salt marsh in lower portions of estero via excluding livestock through fencing.

NOTE: Impact 10-31 on pg. 2-31 states "see Impact 10-18". Reference should read "see Impact 10-20".

The claim that Estero Americano was formerly more brackish, so that reduced salinity is a change and not an adverse environmental impact, depends on (a) the assumption that we know what it used to be like over decades of pre-European settlement times, and (b) that the functions of the saline system is not now critical to regional wetland functioning. It is vital to recognize the role and value of the existing saline system within the region in order to then determine whether or not switching from saline to brackish would have a negative impact. Many other saline wetlands in California have been destroyed. The role of remaining saline habitats has thus increased, as salt-tolerant species have become increasingly dependent upon them. Some areas that are no longer the same as in 1800 are now critical habitats for rare and endangered species simply because their natural saline habitats have been so reduced in area. It does not follow that changing something as unique as the esteros to an "earlier" condition will have no negative impacts.

AA2

The arguments made on Page 10-97 are not supported by NOAA's experience from the NERR system. The invasion of salt marsh by brackish marsh species occur in one year's time if flood flows are followed by augmented flows. It is not reasonable to assume that conversions will take 50 years. The basis on which the predictions were made, namely that brackish marsh species invade when soil salinities average 10 ppt, is not supported by NERR

research. Rather, the one-time occurrence of low salinities can stimulate widespread invasions, by allowing seed germination. Once brackish marsh replaces salt marsh, ecosystem functions are substantially altered. (also see discussion above for Impacts 9-9 and 9-10)

Pg. 2-28 and 2-31: Impact (10-21 and 10-32) - Irrigation and seepage from the proposed storage reservoir would contribute water to Estero de San Antonio which would be pumped out. (see discussion above for Impact 9-7).

Pg. 2-29: Impact (10-23) - To compensate for 15 acres of riparian habitats lost to South County alternative reservoirs, the DEIR/S states that they should be "mitigated on site above or immediately below each reservoir site that now supports riparian habitats." What habitats are in these sites, and are they available? These issues need to be addressed.

Pg. 2-30: Impact (10-28) - "A preferred mitigation for the T-5 site would be to restore or enhance riparian and oak woodland habitats within the Stemple Creek watershed, upstream and above the reservoir site". What habitats are in these sites, and are they available? Similarly, are the reservoir sites required for the South County and West County options available?

Geology and Soils

Pg. 2-32: Impact (11-1) A significant impact exists from siting of the dam near an earthquake site. The significance is reduced by preparing for a future earthquake and the resulting damage.

Page 11-3 recognizes that the location of the proposed dam site is one of the most active seismic regions in the United States. The possibility of a catastrophic event occurring would cause widespread injury to life and property and destroy the entire estero ecosystem. The likelihood of this occurring and the magnitude of the threat need to be determined to evaluate whether such a dam should be built in the first place. Figure 11-19 should include locations of all possible dam sites showing their geographic relationship to the fault zones.

Pg. 2-34: Impact (11-5) - Because of potential susceptibility to earthquake damage, the EIR consultant suggests that four lowland reservoir sites (L3, L4, L6, and SP2) of the South County alternative be eliminated. This eliminates half of the proposed reservoirs, and reduces total capacity from 14,020 acre-feet to 10,670 acre-feet. Does this make the South County alternative unfeasible until alternative reservoir sites are found?

AC

Archeology

Pg. 2-39 to 2-41: (Impacts 12-1 to 12-6) - Six possible significant impacts have been identified to archeological resources which should be studied further to reduce impacts to less than significant.

Archeological resources are a major concern under the Sanctuary mandate. The studies proposed need to be implemented to evaluate the possible impacts and consequences of the proposed project on these valuable resources.

AD

Comments on Ocean Outfall Alternative

In general there is almost none of the data required to substantiate the conclusions drawn regarding this alternative. Comprehensive studies of the type required for the West County Alternative, regarding impacts and changes to ocean ecosystem functions, are necessary. Specific comments follow.

Setting

There is no discussion on the ecology and interaction of species of the Pacific Ocean that may be affected by the flow from the esteros.

Impacts

Pg. 2-23: Impact (9-23) A low significance of discharge to the Pacific Ocean affecting water quality and marine life.

There is no analysis or data at all to justify this conclusion. Data needs to be collected on the transport, fates and effects of the outflow from the esteros into the Pacific Ocean (see NOAA review pages 32-37).

Pg. 2-23: Impact (9-24) Discharge pipe has low significance of affecting nearby Area of Special Biological Significance (ASBS) and further study is necessary to avoid possible adverse impacts.

ASBS's are in part designated with the specific intent to protect these unique areas from adverse water quality impacts. The susceptibility of this ASBS to the discharge from the outfall needs to be determined fully in order to evaluate the ocean outfall alternative at an equal level with all other alternatives.

Pg. 4-26 - "The release to Americano Creek would be patterned as closely as possible to the flow regime that would optimize environmental benefits and would be expected to occur in a natural, undeveloped watershed." As stated on p.9-15, no measurements of flow are available for Americano Creek.

Simulations of existing flow regimes are presented on p.9-50, but the simulation assumptions are not discussed. Do the projected combined wastewater and natural flow regimes meet the desired beneficial flow regime? Can beneficial flow regimes be achieved from dry year to wet year, given the constraints on Russian River discharges, total irrigation demand, and total disposal needs? These questions must be answered before the feasibility of the proposed West County alternative enhancements can be assessed.

Pg. 4-31 - "Reclaimed water would be released from wetlands to San Pablo Bay via Port Sonoma Marina to optimize habitat value in the wetlands." As for the West County alternative, it is impossible to assess the feasibility of South County enhancement plans without a description of the wetland management plan and required enhancement flows, and a comparison of these flow requirements with overall project management constraints. These comparisons should include dry and wet years.

Pg. 4-32 - "The general pipeline layout... would accommodate reclaimed water flows of up to 40 MGD. Average projected flow in 2010 is 29.4 MGD, with flows in excess of 40 MGD to occur about 10% of the time." Flows of 40 MGD would be 33% higher than average flows of reclaimed water in the South County option. Any predictions of discharge effects on receiving wetlands and waters should account for these flows and should not just model the impacts of average discharges.

Pg. 4-42 - The outfall terminus of the Ocean Alternative pipeline would be located 1.5 miles offshore at a depth of 80 to 100 feet, near Salmon Creek. "Its precise location would be chosen to avoid rocky reefs and would be selected after extensive oceanographic and biological studies". More information should have been presented in the DEIR/S. How much commercial/recreational fishing, and what types, occur in the area of the proposed outfall? Even without any actual impacts to commercial/recreational fish species, what effect would this outfall have on local commercial and sport fishing? Potential impacts include losses of fishing areas, losses of gear by snagging on the outfall, and losses of sales due to public fears of seafood contamination. Based on simple reconnaissance surveys, what is the most likely location of the outfall, and what biological resources are present in the surrounding area? What are the potential biological impacts of the outfall to these resources? Some discussion is needed regarding these issues.

Other

Pg. 5-1 - The baseline surveys of the natural environment and the quality of its receiving waters were conducted from the summer of 1988 to the spring of 1990. This was during the most severe and prolonged drought since the 1976-1977 drought period. Therefore, assessments of habitat impacts and benefits based on this period

may not accurately reflect the normal condition of the natural environment and the quality of its receiving waters. This needs to be considered.

Pg. 10-77 - 10-86 - All alternatives include enhancement of up to 582 acres of existing wetland and upland habitat in the Laguna de Santa Rosa. However, these enhancements have not been developed beyond the conceptual design stage. Many of the proposed sites have not been secured and are thus only "potential enhancement sites". However, 582 acres is still the figure used to balance the negative impacts of the alternatives. As stated before, the DEIR/S should not underestimate potential habitat impacts and overestimate potential habitat benefits.

Pg. 9-81 - Site-specific studies are recommended to determine whether the Petaluma Hill Road, Adobe Road, and Lakeville/Sears Point areas would be suitable for irrigation as proposed under
AF the South County Alternative. Irrigation in the Petaluma Hill Road area is rejected because of its potential for affecting municipal water resources. The South County alternative depends on irrigation to these areas. Does this rule out the South County alternative as a viable option?

Pg. 9-87 - Toxic substance concentrations in Santa Rosa Reclaimed Water are average values. It is not clear whether ocean discharge concentration limits could be periodically exceeded given the variability of discharge water quality around the average. As for the South County alternative, compliance with effluent discharge limits of the State Water Quality Control Plan for Ocean Waters does not necessarily guarantee that there will be no significant adverse effects on the marine environment. For example, how would this substantial discharge affect salmon and steelhead returning to spawn in nearby Salmon Creek? Could the fish interpret the outflow as a winter freshet and enter Salmon Creek prematurely? Could the outflow make it more difficult for the fish to find the entrance to Salmon Creek? These issues need to be discussed.

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