

SIERRA
CLUB



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***Comments on Santa Rosa Subregional Long-Term Wastewater Project
Draft EIR/EIS***

October 5, 1997

General comments:

In preparation of an EIS: when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an EIS, and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking. 001

CEQA states that public comments on Draft EIRs are to identify significant effects, explain why the effect would occur, why it is significant and submit data or references in support of the comments. Significant effects can be direct or indirect (15126) for both short-term and long-term effects. The public should also submit additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects.

Significant effects are:

- conflict with adopted environmental plans and goals of the community;
- substantial negative aesthetic effect;
- substantially affect a rare or endangered species;
- interfere substantially with the movement of fish or wildlife;
- substantially degrade water quality;
- contaminate a public water supply;
- disrupt archaeological site;
- induce substantial growth;
- use water or energy in a wasteful manner;
- increase ambient noise levels;
- cause flooding, erosion or siltation;
- expose people or structures to major geologic hazard;
- substantially diminish habitats;
- conflict with established recreational uses of the area;
- impair agricultural productivity;
- interfere with emergency response plans

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DEPT. OF PLANNING
COMMUNITY DEVELOPMENT

Inadequate Study of Alternatives: Maximum Conservation

- 1) This alternative was not studied as a component of any of the alternatives. This decision may 002
have been based in part on the Water Conservation Element report prepared by West Yost & 003
Assoc. This report is incorporated in the DEIR. Table 9 in this report (and the supporting text)
states that:

"the maximum combined reduction in ADWF from all the more aggressive measures is 1.46mgd, which would reduce the ADWF from about 20.90 to 19.44mgd. Again, to achieve this level of savings all of the conservation measures would have to be fully implemented (100% penetration) throughout the Subregional Area through **mandatory** requirements on new construction, natural replacement of existing facilities, and aggressive retrofit programs. At the voluntary level, the combined reduction in ADWF from all the more aggressive measures is about .27 mgd, which would reduce the ADWF from about 20.90 to about 20.63 mgd."

This finding is in direct and significant disagreement with Paragraph 4, Page 3.1-21 of the main body of the Draft EIR/EIS which states that current conservation practices have reduced projected December 1997 flows from 20 mgd to 16.2 mgd. This is a 3.8 mgd or 19% reduction, much more than the West Yost report projects.

Since the actual savings through conservation is so much greater than that projected by the West Yost report, was the decision not to include Maximum Conservation as part of the study based on a faulty report? If current conservation measures have achieved a 19% reduction in flows, how 004
much more could really be achieved with more aggressive measures and greater penetration? If 005
significantly more flow reduction could be achieved through conservation, how would other
alternatives change in size, cost, environmental impact, etc. assuming the adoption of these more
aggressive conservation measures

- 2) The DEIR states that one reason why maximum conservation was not studied is that 006
behavioral changes would be required and these are "unreliable". Provide evidence to back this
up. Have other jurisdictions tried behavioral modification which did not work? Have other
systems tried conservation measures which include significant increases in rates above a threshold
level per household or per sq. ft. of living space? What were the results?

- 3) There is no discussion of reduction of infiltration/inflows to the wastewater treatment plant 007
from storm events. There should be a recalculation of conservation measures based on the
additional step of lining manhole covers, one of the easiest ways to effect a high percentage of
storm inflow.

Inadequate Study of Alternatives: Phased Approach 008

- 1) There is no discussion of when the various construction projects for each of the alternatives
would need to take place. For example, if the South County option were chosen with multiple
reservoirs, presumably all reservoirs would not be needed immediately. Provide analysis of how a
phased approach might be undertaken and whether any change in environmental impacts would
occur in a phased approach.

2) In the cost analysis of the various alternatives, there is absolutely no analysis of the time value of money. Analyze the present value of the costs of the various alternatives. 009

Inadequate Study of Alternatives: Winter Irrigation 010

1) A basic tenet of the project is that wintertime irrigation is not possible and that therefore storage needs to occur during winter months. Has wintertime irrigation been explored? Are there any crops which could be irrigated in this area during the winter months?

Further Explanation Required: Mitigation and Monitoring Program 011

1) On Page 2-78 in Table 2.3-1 there is a table which specifies ratios for a mitigation program for sensitive biological resources impacted by the construction of reservoirs. This table indicates mitigation ratios of 1:1 for Creation, 2:1 for Restoration and 3:1 for Preservation. Provide more explanation for how these ratios were chosen. Given the failure rate for creation of resources like wetlands it seems that these ratios may be backwards.

Further Explanation Required: Net Economic Impacts 012

1) Table 4.18-18 on Page 4.18-49-50 presents a comparison of the various alternatives on Total Income, Direct Employment, and Total Employment. These comparisons are apparently as compared to General Plan and ABAG growth projections. Since these are only projections, a comparison to current income and employment should be provided. Otherwise explain the large negative impact of the "No Project Alternative".

2) In the NEPA/CEQA Required Sections on Page 5-12 the report states: 013

The lack of adequate infrastructure is a constraint to economic development.
In the Santa Rosa/Sonoma County area, the lack of adequate wastewater disposal will preclude future development.

Much more analysis of the socio-economic and environmental impacts of this finding needs to be supplied in the analysis of the No Project Alternative. What would be the impacts on housing costs in the area and other nearby areas if development were frozen? What would be the impacts on traffic? Would there be any lessening in the need to build other infrastructure improvements? Would there be impacts on the type of jobs available in the area? What would all of the environmental impacts be? 014
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Further Analysis Required: Environmental Estrogens 018

1) The report entitled "Human Health Effects and Wildlife Effects of Environmental Estrogens" by Parsons Engineering and which is part of the DEIR is essentially only a summation of the literature on the subject. Suggest an actual fishery study to determine whether estrogenic effects are observed in current holding ponds or the Laguna.

Further Analysis Required: New Endangered Species Listing

019

As of September 17, 1996, the US Dept. of the Interior Fish and Wildlife Service is seeking the addition of Endangered Species Act listing for Sonoma alopecurus, Clara Hunt's milkvetch, white sedge, Vine Hill clarikia, Pitkin Marsh lily, Calistoga allocarya, napa bluegrass, Kenwood Marsh checkermallow and showy Indian clover. Address impacts and mitigation steps on all impacted alternatives needed if listed. (See Federal Register Vol.60, No.148 August 2, 1995.)

Further Analysis Required: Agricultural Irrigation Options

020

1) The reservoir storage sites analyzed are all very large entailing major construction and disruption of wildlife and plant habitat. Why was no analysis done of smaller storage site options?

2) There is no study of the potential use of storage reservoirs for recreational purposes (fishing, swimming, boating, etc.). Is this contemplated? If so, provide full analysis of all public health considerations, traffic, noise, socio-economic, all other NEPA/CEQA/ required analysis. If no such use is contemplated, why not?

021

3) There is a list supplied of ranchers in the West County who are supposedly interested in using reclaimed water for agricultural irrigation. How was this list compiled? How current is this information, and what is the degree of commitment to take the water? Has this list been compared to the list of West County ranchers who have signed other documents with West County interest groups stating they will not take reclaimed water? Why was no similar list provided of supposedly willing South County recipients?

022

Further Analysis Required: No Action Alternative

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The report states that the No Action Alternative does not meet Regional Board Reliability Requirements, and would result in discharges to the River as high as 10%, in violation of the City's Permit. Provide further analysis of this Alternative with modifications to the existing system. Could increased conservation, increased urban irrigation, and increased agricultural irrigation using one or more projects like the Gallo Cotati project bring this alternative into compliance?

Inadequate response to Issues: The Geysers - Alternative 4

024

1) Nowhere is there any mention of the Power Plants served by the proposed injection wells. There needs to be an identification in order to determine feasibility of the project. For example, the nearest plants are likely to be PG&E 7,8,9,10,11 and 12. Unit 7 was built in 1972, Unit 8 was built in 1972, Unit 9 was built in 1973, Unit 10 was built in 1973, Unit 11 was built in 1975 and Unit 12 was built in 1979. This was not the best time period for building efficient plants and these plants are aging, some of which are going to be over 30 years old by the time full production of injection takes place. PG&E has had to rearrange financing (as the "largest corporate issuer of variable rate tax-exempt bonds in the country with approximately \$925 million currently

outstanding") so it can continue to pay off its' bonds currently set at \$2,722,870,000 (which recently received extended maturity from the year 2008 to the year 2023), which includes bonds for The Geyser power plants #21, 22, 23 and 24 which were never built. 024(cont.)

2) There is a partial induced seismicity study based on 10 Unocal wells for current injection and induced seismicity, however the study is fallacious based on two missed elements of data. First the quantity of injection water is never correlated between total area injection wells and the corresponding increase in volume of wastewater injected over the life of the project. Second, there is no correlative analysis between the injection volume introduced at a given rate and the increased size and amount of quakes. Information is available from the Department of Oil and Gas which shows well type, gross injection quantity, injection rate and days of injection. This information is not confidential. Following is an example of a Unocal injection well in the approximate project scope area showing 143,046 kg injection for 30 days injection with injection rate of 198.7 and a blank for steam production rate:
09790203", "UNION", "GEYSR", "3", "N", "P", "79", "19", "11", "N", "08", "W", "MD", "GDC", "1", "0", "81", "4", "INJN", "CI", "30", "0,0,143046,0,0,0.000", "0,0,0,0,198.7,0,0,0,0", "0,000,0,0" 025

3) Include new information from the results of the September 12, 1996 "Mock Spill Cleanup" exercise on big Sulphur Creek should be included to assess waterway impacts. A dye was released simulating a hazardous substance spill. The participants were Fish and Game Department, Department of Forestry, Unocal, PG&E, and North Coast Regional Water Quality Control Board. 026

4) Are the injection sites to be located in the area of the highest decline? (See map of 25% decline rate - 1991 GeothermEx, Inc Fig 4.11 vs 4.12 Generalized exponential decline rates c. 1990.) Isn't this the worst potential for restoration when it is the most depleted and will take the longest to recover? 027

5) Show actual mathematical calculations of projected steam production increase predicted from projected steam increase and the equivalent rate of production. This is to test the statement or finding that radon and hydrogen sulphide fallout will never be more than the highest production period of 1987. (See Division of Oil, Gas and Geothermal Resources publication on District No. G3 on Generating Capacity (MWe) Gross.) This is important because The Geysers is probably the largest source of atmospheric sulfur in California (Suter, 1978) and sulfur dioxide has been shown to be a phytotoxicant. 028

6) Does the Board of Public Utilities take legal and oversight responsibility for all aspects of the project? The Division of Oil and gas under regulatory laws pertaining to wells and well closing has limited oversight. Limited regulatory authority is given to the State Water Resources Control Board, the Department of Fish and Game, the Air Resources Board and the Dept. of Forestry and Fire Protection. Under the warren-Alquist State Energy Resources Conservation and Development Act of 1974, a state energy commission is to have responsibility to develop and coordinate a program of research and development of geothermal resources. But the Federal Geothermal Steam Act of 1970 reserves to the Secretary of the Interior the right to require 029

production of more than one component of the geothermal resources. The Bureau of Lands Management will have to confer with the U.S. Fish and Wildlife Service in the granting of Right of Way under the Authority of the Federal Land Policy and Management Act of 1976 because of the impacts on the listed species of the Red Legged Frog and the candidate species, the Yellow Legged Frog. Does this project fall within the scope of a state or federal agency for monitoring of mitigation steps? 029 (cont.)

7) Analysis and mitigation plans did not address the activation of slides from increased, cumulative earthquakes. The Geysers is notorious for slides (slides are what have caused groundwater resources in the area). Please expand on the determination of the increase of slides due to the proportionate increase in earthquakes and from spills. (See Plate 1A Preliminary Geologic Map of The Geysers Steam Field and Vicinity, Sonoma County, Showing Locations of Landslides, Earthquake Epicenters and Mines, Geology by Robert J. McLaughlin, 1974, U.S. Geology Survey and Plate 1B/1C Geology and Relative Slope Stability, Map of Earthquakes, Slides and Mines drawing by M.B. Bailey.) 030

8) Identification of landslides that would be triggered due to construction activities including but not limited to blasting and drilling. 031

9) Project participants maintain financial assurance agreements or bonds which will be available for cleanup in the case of spills, landslides, mishaps or site reclamation for all activities associated with this project 032

10) Address cost and mitigation/implementation plans for pipe and facility removals if project fails. In Scoping response, this was "Not incorporated into Scope" because "at the end of the project, the pipeline would be drained and left in the ground" however, how the project states the pipe will be partially above ground. Did not address other facilities such as pumping stations and tanks. 033

11) When is an Act of God not an Act of God? The answer is when mankind induces an outcome. The outcome in this case is the induction of seismic tremors. If it is manmade then man becomes liable for the results of his action. What will be the compensation made to area residents that suffer a decline in real estate values or an inability to maintain a safe environment? Liability and accountability for damages to person or property; creation of a nuisance or a condition hazardous or detrimental to the general public or to the property in the vicinity of the project. 034

12) Pipe breakage flow patterns for full length of pipeline; example disruption of traffic at Highway 101; runoff pattern in climb up to water tanks; water tank collapse; and align with contour map showing speed of runoff and what is in path, include estimate of sediment flows and impacted waterways. Include the location of existing and former drilling waste sumps. Include the location of cinnabar and mercury mines and tailing sites. Include the location of serpentine/asbestos soils. 035 | 036
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13) Monitoring process for detecting viral and bacterial contamination of the effluent and injection derived steam to assure absence or destruction of pathogens prior to atmospheric release. 039

- 14) Fish in The Geysers show very high levels of the toxic elements of mercury, lead, zinc and copper and Big Sulphur Creek is a EPA designated depleted waterway. What are the restrictions due to that designation on the potential impact from spills, slides, etc? 040
- 15) Analysis did not assess the truck impacts on Pine Flat Road for Dewitt 97 acre Pine Flat Quarry site. (Only assessed Dewitt Russian River instream project.) 041
16. Electrical rates are 40% higher in California. With the passing of the recent state bill to deregulate the electric utility industry as of September 24, 1996, how does this now impact the fiscal viability of this project? 042
- 17) Project participants will be required to post an abandonment notification #X years in advance before relinquishing responsibility for disposal of treated effluent. 043
- 18) All project participants will be responsible for removal of all project facilities when abandonment occurs. All surfaces will be revegetated with native plants and maintained for #X years after 044
- 19) In 1969, the tax court in Reich v Commissioner of IRS held that the natural steam at The Geysers qualified for a depletion allowance. The producers were also entitled to write off as expenses the intangible costs of drilling and developing The Geysers field. The court held that the geothermal steam in question is not ordinary ground steam that is fed by constant water seepage, which would make it inexhaustible and rather the judges reasoned, it is locked in closed spaces like natural gas and is not replenished by seepage. It was therefore held to be depletable and subject to the same tax treatment as natural gas with respect to depletion allowance. Under current tax laws, there is nothing to require that the resultant tax savings be reinvested in exploration and development to ensure a continuing supply to the resource being depleted. At the time it was thought that future court challenges to the depletion allowance for geothermal resources were certain. Can you address the financial impact to the change in tax laws for a renewable resource, not a depletable resource? Can you address the requirement that as a renewable resource, income must be redirected and reinvested and that impact on the feasibility of the project? 045

