

SONOMA COUNTY WATER AGENCY  
MEMORANDUM

TO: Marie Meredith  
From: Erica Hendricks

here is the letter I received -  
I've included the envelope so you  
can see the postmark and  
our date stamp. I kept a copy  
of the letter.

Erica

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

OCT 11 1996

DEPARTMENT OF  
COMMUNITY DEVELOPMENT



*Marin Audubon Society*    *Box 599*    *Mill Valley, California 94942-0599*  
October 6, 1996

Erica Hendricks  
Sonoma County Water Agency  
P.O. Box 11628  
Santa Rosa, CA 94506

RE: SANTA ROSA SUBREGIONAL LONG-TERM WASTEWATER PROJECT DRAFT EIR/S

Dear Ms Hendricks:

The Marin Audubon Society submits the following comments on the above document. Although our comments may appear extensive, they reflect our review of less than one half of the documents. With one hard copy and one CD ROM, which was blocked so the information could not be transferred to small disks for broader circulation for those of us who do not have a CD ROM, provided during the last weeks of the comment period, we simply did not have the ability for the kind of review and evaluation we do on EIRs. 001

While the quantity and quality of information is generally improved over the last EIR/S, the EIS/R provides little comprehensive analysis. Components are addressed separately and there is a lack of overview and comprehensive analysis of the environmental impacts. Perhaps the length of the document and amount of information contributes to this deficiency. Our questions focus on the South County Alternative because that is about all we had time to focus on. 002

From our review of the information and knowledge of the baylands our preliminary position, unless additional data convinces us otherwise, is in opposition to use of baylands or adjacent lands in the South County alternative. We believe that the potential environmental impacts would be too detrimental to the Bay, the Petaluma River resources, wetlands and species of the Pacific Flyway. 003

We have the following questions and adequacy about the data and concerns: 004

#### AGRICULTURAL IRRIGATION (Alternatives 2 and 3)

Page 3.3-36 The discussion indicates that the bay flats would have an annual average irrigation application rate of 3.0 acres which is more than any other alternative. Explain why this is the case? What characteristics of the soil, topography etc. necessitates increases the acreage required to accommodate the irrigation? What is meant in the following paragraph that "potential irrigation sites have been evaluated?" What components were evaluated and how were sites chosen? 005

#### MONITORING AND MITIGATION 006

Would the Agency be able to hire the same contractor to monitor as it did to do the mitigation work? There should be a restriction that the same contractor cannot be chosen to monitor the mitigation, but that an independent contractor should be chosen.

*A Chapter of National Audubon Society*



RECYCLED PAPER

- 2.2.1 Irrigation Conservation and Management Programs 007  
 What powers would the city have to enforce restrictions if there  
 It would seem they would be at the mercy of the irrigators use of the water.  
 What ability would the Agency have to terminate irrigation contracts if  
 conditions are being violated when the agency needs to get rid of the water?  
 It seems this would be rather limited.]
- 2.2.3 Restrict Surface and Subsurface Irrigation Water Runoff 008  
 How would the methods used to restrict runoff be decided and who would decide?  
 Even if all of the suggested methods in this measure (sprinkler, drip  
 irrigation avoidance of root zones) are implemented and monitoring occurs,  
 what measures would be taken to if there is still a problem? As above, could  
 the Agency realistically terminate contracts when they need to discharge a  
 specified amount? How could the City realistically cut off the irrigation  
 water as stated on page 2.25?]
- How could landowners avoid surface ponding except for reducing irrigation? 009  
 What is there to prevent water from flowing into the petaluma River and  
 subsequently the Bay? How would the public have access to the monitoring and  
 irrigation records?]
- 2.2.4 Restrict Soil Erosion and Sediment Movement 010  
 How wide would the filter strips be? Would existing native vegetation be  
 used? What would happen if pollutants in the soils killed the plants? there  
 should be a program to replace the plants. We recommend that a wide buffer be  
 established outside of existing native plant strip.]
- There should be a requirement that all streams, wetlands and riparian habitats 011  
 be restored to preproject elevations and vegetative conditions immediately  
 after completion of the particular segment. Existing native plants should be  
 saved and replanted.]
- 2.2.5 Avoid Sensitive Biological Resources 012  
 Attempt should be made to save and replant in restoring the site all trees  
 that have to be removed for pipelines etc.]
- 30-foot setback construction setback from wetlands is not adequate. How was 013  
 this decided upon? Setbacks should be at least 100 feet wide and wider when  
 special status species are involved.
- How about setback from unvegetated wetlands? [From native oak trees?] 014
- There should be a further buffer between the dripline of trees because the 015  
 drip line is where roots extend. At least 50 feet should separate irrigation  
 and other activities and the drip line.]
- Two recommendations address riparian setbacks and both include cultivation. A 016  
 100-foot buffer should apply on both cases.]
- A 100 foot buffer should also be required between staging areas and wetland 017  
 and riparian edges.]
- It is not uncommon for there to be poor communication with the on-the-ground 018  
 construction workers with regard to project conditions. Who would be  
 responsible for communicating with construction workers and requiring them to  
 implement these protective provisions?]
- What are the applicable provisions of Sonoma County's tree ordinance? How 019  
 many trees would have to be replaced for each tree lost. There should be a  
 provision that existing trees to be removed must be removed and saved. If  
 these do not survive, new trees of the same native species should be planted.  
 Marin County does not yet have a tree ordinance.]

2.2.6 Agrochemical and Fertilizer Best Management Practices	020
What if grass strips become 'overwhelmed' with nutrients and pollutant runoff and the plants die? There should be requirement that vegetated filter strips be replanted if needed.	
2.2.8 Revegetate Temporarily Disturbed Sites	021
• Why should there be no revegetation requirement? If wetland vegetation is eliminated we see no reason why the project proponents should not be required to replace it. Use existing trees and shrubs for restoration.	
• Each site should be restored immediately upon construction/ installation of the project component i.e. installing pipeline through creek, not wait until entire pipeline is installed	022
• What enforcement will be required and who will do the enforcing?	023
• There is should be requirement that plants be replaced that do not survive after 6 month, and subsequent annual monitoring.	024
2.2.10 Stormwater Prevention Plan	025
It is not sufficient to "limit" grading and construction during wet season. All construction with the potential to cause erosion and siltation should be prohibited during rainy season.	
Use of coconut mesh or other natural materials to promote slope stability should be added. Sediment basins and hay bales are not very effective particularly in high flows.	026
What enforcement measures would be taken and by whom?	
2.2.11 Protect Creeks from Toxic Discharge	027
The construction management may need to take measures beyond the ordinary and reasonable to prevent toxic discharges, and this should be required if required if there is a threat of discharge to a creek.	
2.3.2 Agricultural Irrigation Demonstration Program	028
Isn't it a bit late to conduct a demonstration program after an alternative is chosen? Demonstration projects should be planned and implemented in advance of choosing an alternative so information can be utilized to make the decision. An alternative that depends on orchards and vineyard irrigation or any other irrigation program should not be chosen until the potential impacts are known and addressed.	
2.3.4 Slope Stabilization Design	029
What areas would require such extensive work to stabilize slopes?	
2.3.11 Sensitive Resource Conservation Program	030
Habitat restoration, particularly wetland restoration, is not a certain science. Evidence should be provided that the first mitigation option is to avoid impacts, as required by NEPA.	
We strongly disagree that mitigation for habitat loss, particularly all wetlands, riparian and oak woodland should be left up to the discretion of unnamed entities and by unidentified criteria sometime to be decided upon in the future apart from this EIS/R process. Who would be making these decisions, by what criteria and how would public participate?	031
We also strongly disagree with the proposed mitigation on Table 2.3-1 which proposes mitigation scenarios for creation, restoration and preservation with differing acreage. There should be a base mitigation acreage of 2 acres restored for each acre lost for all wetland types, wetlands of the same type should be required for replacement. Protecting or enhancing existing wetlands even if degraded should not count for mitigation because that would mean a net loss of these resources. Habitat mitigation projects should replace the lost habitat in-kind and the protections should be in perpetuity. Enhancement should require 3:1 ratio.	032
What is the Sonoma Bay Trust Preservation Plan, what	033

provisions does it contain and who developed it? 033 (cont.)

What role would the agencies identified on Table 2.3-2 SENSITIVE BIOLOGICAL RESOURCES AND MANAGING AGENCY (page 2-79) have? Surely they will not be called on to monitor the Agency's mitigation. 034

No project alternative should be approved without more adequate information on mitigation for the project-caused impacts. Without information on potential mitigation sites there is no way to know whether adequate mitigation would be feasible. Where would 248 or 89 acres of jurisdictional wetlands be restored for the South County reservoir, for example? The Agency would have to buy appropriate land on which to restore in-kind habitat in the vicinity. 035 036

Potential mitigation sites should be near the site of loss and provide for in-kind habitat replacement. Wetlands should be mitigated at rate of 2:1, and should be protected in perpetuity by deed restriction. Also, what is a "naturalistic" habitat complex as referred to in the second paragraph page 2-80? 037 038

We do not see evidence to support the conclusion that the level of significance after mitigation for the reservoir or irrigation components in the South County would be less than significant. In particular, there is insufficient information about the wetland resources that presently exist in the baylands and how they would be impacted by the project, either through discharge or irrigation. 039 040

Five years is not sufficient time to determine the success of restoration for trees. 041

2.4.4 California Red-Legged Frog Capture and Relocation Program  
Has there ever been a successful capture and release program for red-legged frogs? Where is there suitable relocation habitat? Why aren't they already there if it is suitable habitat. 042

2.4.5 Nests Location and Monitoring  
More than 2.5 acres may be needed to protect raptor nests in some cases depending on terrain and vegetation. Also, how about other native and migratory nesting species? All native nesting species should be avoided. Species such as Green Heron, which are unusual in this area and do not nest in colonies should be identified and a program to identify and avoid these nests should be developed also. 043 044

Why is there no monitoring for constituents in the soil and irrigation waters for the South County? 045

#### AGRICULTURE

What length of creek, area of surface water and of riparian habitat are upstream from the dams for Tolay Creek? Table 3.3-2 indicates these are not included. What resources would be blocked from moving to the Bay/river? Wouldn't the reservoir block flows from the creek? How much? 046 047 048

The description of the South County and other reservoirs describe concrete conduits apparently to carry overflow and discharge it into downstream creeks. Describe the purpose of these conduits. Why could they not be designed to be above ground to allow for retention of values such as wildlife habitat? 049

#### TERRESTRIAL BIOLOGICAL RESOURCES

Discussion of the individual plant communities is fine but there should be an additional discussion of how these habitat function together and functions they provide for Pacific Flyway and resident wildlife. 050

Page 4.8-15 The loss of any of the amounts of Riparian Woodland noted on Table 4.8-15 should be considered significant because there is only about 2% left in the state.	051
Page 4.8-43 Diked baylands usually pond water in winter as a result of rainfall. Irrigation through flooding is not usually necessary.	052
Page 4.8-58 to 60 South County (including Bay Flats) There is no discussion of seasonal wetland habitats on bay flats as they are referred to, or diked historic baylands as they are usually called. The value of the baylands is habitats that provide essential habitat functions for shorebirds and other wildlife should be addressed. How they are a complimentary and necessary part of the Bay habitat system is completely missed. How and why are they are important; what birds use these baylands when and how? Over a million shorebirds move through bay during migration, most important refueling and overwintering habitat. There is not even a discussion of migratory birds even though acknowledged they are protected by Migratory Bird Treaty Acts.	053 054
Similarly, neotropical songbirds are in decline worldwide. The text should discuss the value of the oak woodlands and riparian habitat for these birds and what a 25% loss of habitat in Sonoma County would mean.	055
Page 4.8-69 The Marin Countywide Plan policies covering the Bayfront Conservation Zone should also be covered, not just streamside conservation policies. Cite some policies	056
Page 4.8-71 Are the Marin and Sonoma Resource Conservation Leagues really meant to be Districts?	057
How was it determined that the loss of 15% of the known occurrences of CNPS plants from Lists, 2,3 or 4 is acceptable? How was it determined that the permanent loss of 25% of sensitive terrestrial wildlife habitat is less than significant? What criteria were used to identify these losses as acceptable?	058 059 060
We believe the following information is needed How much of each habitat existed historically, how much exists now? Only 2% of riparian left in the state? Estimate the number of trees that would be loss with a 25%?	061 062
How were the migration or travel corridors mapped?	063
The statement is made on page 4.8-76 that surveys to assess terrestrial biological resources located within the agricultural irrigation areas were conducted from August through October 1995. Plant assessment should be done in spring.	064
We are shocked to read that "No focused wildlife surveys were conducted on the proposed irrigation areas." and that only special status species were recorded. This is absolutely unacceptable and a fatal flaw for bayland resources to be so ignored. This ignores the major value of the Bay wetlands is as overwintering habitat for migratory waterfowl and sh.	065
Why is there no discussion of migratory birds even though these species are protected by Migratory Bird Treaty Acts and many individual species are special status? The migratory birds that use the affected habitats should be identified and how they use the habitats should be discussed. The affected habitats are not just important for endangered threatened or rare species. Entire populations of specific species of the Pacific Flyway could be adversely affected.	066
Page 4.8-83 Mitigation for pipeline speaks to not constructing on occupied habitat of endangered species. What does occupied mean? If it is suitable	067

- habitat should be considered occupied. Unless nesting, bird are not always in the same place. They have to move around to find food. 067 (cont.)
- Page 4.8-84, Table 4.8-9 Is seems curious that the acreage of Coastal Oak Woodland for nine of the pipeline corridor sites is identical? How did this happen? 068
- Page 4.8-86, Table 4.8-10 How could the number of pipeline corridors be identical with regard to Oak-bay madrone woodland and oak woodland losses? 069
- Page 4.8-92 As above the loss of large acreage of sensitive wildlife habitat cannot be written-off simply because it comes in under an arbitrary percentage. The location, use by migratory birds food, cover, presence of other such habitats in the area vicinity, presence of habitats species also need and other characteristics must be considered. The loss of 413, 271, 343, 397, 179, 264, or 329 acres of sensitive wildlife habitat is a significant loss even if it is less than 25%. Does this mean it is okay to lose 25% of the wildlife that these habitats support? 070
- Page 4.8-93 What is the Cal Veg data used to calculate habitat percentage impacts? How up to date is this data? How much has been and is potentially to be lost through development or other activities? 071  
072
- Page 4.8-96 It is difficult to believe there are no major wildlife travel corridors within the boundary of any storage reservoir site? Contacting one person at Fish and Game is not adequate to justify a conclusion that no major terrestrial migration or travel corridors are located within the boundaries of any of the storage reservoir sites. How much study has Fish and Game, or any other entity done of movement corridors in Sonoma County? Unless there is adequate study over at least a year of use of reservoir sites, there can be no conclusion made that no major corridors exist. 073
- Page 4.8-101 Impact 8.71 and .72 state that special status wildlife species are supported by all of the proposed agricultural irrigation areas. The discussion goes on to indicate there is opportunity for future protection of species and that measures will ensure that all impacts to special status species are avoided by using exclusionary buffers around any identified plant species, riparian habitat, occupied burrows of sensitive ground-dwelling species. If you remove suitable habitat and prey species for ground-dwelling species, such as burrowing owls, by extensive modification of adjacent habitat, keeping the burrow won't make much difference. How will it be assured that suitable hunting or foraging habitat remains so support species on irrigated lands? 074
- What seasonal wetland resources would remain on proposed irrigation lands in the South County under the management program? How would these resources be protected by buffers? A 30 foot buffer is not sufficient to protect a wetland? Even if it is possible to protect seasonal ponded areas how would it be assured they retain hydrology to remain viable wetlands? 075  
076  
077
- Irrigation, tilling and other management would change the characteristics of the sites which will result in loss of habitat. The potential loss of habitat for migratory waterfowl and shorebirds of the Pacific Flyway on baylands must be addressed. These seasonal wetlands are an important component of the North Bay habitat system. Conversion to highly managed lands like Novato Sanitary District would be A significant impact. The impact would be locally significant, and internationally significant because of Pacific Flyway effects. The cumulative significance of the habitat loss of the project must be addressed. 078  
079
- Baylands and seasonal wetlands ar habitat for a number of special status species that are also protected under Migratory Bird Treaty Acts. The 080

BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM VOLUME 2 discusses a number of these special status species but information about the presence of individuals of these species on potential project sites is minimal. Where is the analysis of impacts of special status species for wetland habitat loss? species regularly use bayland habitats for foraging, roosting, and sometimes nesting: White tailed kite, Northern Harrier, Golden eagle, Long-billed Curlew, Tricolored blackbird, Merlin, Peregrine Falcon, Black Great Blue Heron, Loggerhead Shrike, San Pablo Song Sparrow, and Burrowing Owl. Most of these species are also protected under the Migratory bird Treaty Act. In addition, Black Rail, CA Clapper Rail, Double Crested Cormorant and Brown Pelican use adjacent marshes and waters. There must be analysis provided of impacts on these species.

080 (cont.)

Page 4.8-102 Impact 8.7.3 How wide would the buffers be? How would nesting Northern Harriers which occur wet spots in be avoided? 081 082

Page 4.8-115 Impact 8.9.5 The loss of riparian habitat for construction of the outfall along the Russian River should be mitigated. The location of the outfall should be moved or riparian vegetation should be restored nearby at a ratio of at least 2 acres restored for each acre lost. 083

Discuss how the potential to convert existing saltmarsh to freshwater marsh along Petaluma River. 084

#### AQUATIC BIOLOGICAL RESOURCES

Page 4.9-15 The Coastal Salt Marsh discussion should identify the Petaluma Marsh as the largest piece of undiked saltmarsh in San Francisco Bay and describe its unique characteristics, functions and values. For example, it is the only marsh that retains tidal ponds which once dotted large expanses of salt marsh along the Bay. 085

Page 4.9-16 All of the diked bayland or so called bay flats in the South County alternative are Palustrine wetlands. What functions do these shallow non-tidal wetlands serve for shorebird and waterfowl species of the Pacific Flyway? 086

Page 4.9-32 A site plan showing the South County watershed should be provided. To evaluate the potential adverse impacts of the project, it is important to understand the layout of the creeks and tributaries and how they flow. 087

Page 4.9-33 Evaluation of the value and condition of baylands should be sought from wildlife and wetlands scientists. The basis of the statements that the seasonal wetlands north of State Highway 37 have been greatly reduced and degraded should be stated. Some of these seasonal wetlands to provide habitat for large numbers of shorebirds. 088

Page 4.9-36 What is the basis for choosing 15% of Type A habitat and 25% of Type B in a local water shed as the cutoff for significance? How was 50% decrease in wet season streamflow would be needed for significance? As above, we find these percentages would all an excessive loss and recommend that they be reduced? 089 090 091 092

Page 4.9-40 Surveys of aquatic habitat should encompass migration season. 093

Page 4.9-56 If there is one red-legged from there is very likely to be more. Loss of habitat for this species should be considered a significant impact. 094

Page 4.9-59-60 Why has 210% been chosen as the percentage below which impacts of reservoirs would not be significant? wouldn't this mean a loss of riparian and wetland habitats? We think 20% is too great a loss of ponds or other 095



- aquatic habitats. Habitats suitable for Western Pond Turtles are obviously declining statewide otherwise why would the Turtle be a special concern species? 095 (cont.)
- Page 4.9-68 Standards for flows into the Petaluma River/San Pablo Bay should be just as stringent as those into esteros. This estuary is the largest and most important on the West Coast and should not have lower standards than others. 096
- Page 4.9-69 the analysis of Impact 9.5.7 states that, except for one steelhead trout, no other migratory fish were found in any of the stream systems that would potentially be impacted by this project. Is this really intended to be intended to say that no native fish are in any of the streams? 097
- What is a migratory fish? Shouldn't native and anadromous species be addressed? 098 099
- Page 4.9-72 How can fencing and revegetation mitigate for impacts of changing streamflows affecting aquatic habitat. This is an inappropriate and unacceptable mitigation. Blocking streamflows block the passage of any fish, change character of downstream resources and is not compensation for by fencing and plants. 100
- Page 4.9-75 Table 4.9-19 The basis for the evaluation that the agricultural component South County will not cause the loss of individuals or rare wildfire species should be explained further. As stated previously, baylands provide habitat for Long-billed curlew, burrowing Owl, and other special status species as well as the endangered salt marsh harvest mouse and others. 101
- It is also not clear how the evaluation was made on page 9.5-4, 9.7.5 that the irrigation would not cause the permanent loss of aquatic habitat. 102
- Page 4.9-77 Unless the species of concern and habitat conditions are known, it cannot be absolutely assured that "sensitive areas within agricultural irrigation areas can be protected by establishing buffer conditions? This is simply a promise which expects a leap of faith. To remain viable and functional, it is also not sufficient to retain habitat as isolated islands but it must be contiguous with other viable habitat to provide for foraging, cover and movement for wildlife. Fragmentation simply increases vulnerability of wildlife to predation, reduces genetic diversity and habitat values. 103
- Page 4.9-79 Why are the seasonal wetlands in the South County not identified in this Sensitive Aquatic Plant Communities Table 4.9-20 and Table 4.9-21? There should be a table addressing potential loss of seasonal wetlands for the South County alternative. 104
- Alternative 2 is not near an estero so it is not likely to drain into one. Explain why it would be impossible for overflow to runoff into streams with the South County alternative? 105
- Page 4.9-80 Buffering will not work to protect aquatic or terrestrial invertebrates from absorbing pollutants which would bioaccumulate in the food chain. How has bioaccumulation been accounted for? 106
- Page 4.9-85 What assurances are there that substantial increases of the discharge of reclaimed water to the Russian River would be limited to only 4 days? And besides, bioaccumulation could occur over time as a result of many limited discharges. 107
- Page 4.9-86 Demonstrate by identifying potential restoration sites and methods that California red-legged frog habitat losses would be fully mitigated through habitat creation, restoration and preservation and translocation. Promises and good intentions do not count. 108

Page 4.9-87 As above, the Western Pond Turtle mitigation habitat site should be identified, and the methods and preliminary plan presented to enable evaluation of whether it is feasible. 109

Page 4.9-88 Impact 9.4C The Corps would also require mitigation for the loss of seasonal wetlands on baylands. Why are these losses not addressed? Simply because aquatic habitat losses are small does not give license to consider them only local and not part of cumulative losses. Any aquatic habitat loss, no matter how small, must be added up and evaluated cumulatively. 110

Again, the location and method for creating new or restoring existing wetland habitats should be identified to enable evaluation of feasibility. 111

Over what period of time was the Risk assessment considered? Was irrigation over 50 75 and 100 years considered? 112

#### JURISDICTIONAL WETLANDS

Page 4.10-12 Why is there a new classification of cropland wetlands used here. Why not use the Palustrine classification used in the Aquatic Resources chapter? Jumping around with different labels from different consultants is confusing and not conducive to understanding the impacts. 113

"Prior converted cropland" has a very specific meaning under federal law and regulations. 114

Page 4.10-14 What differentiates Seasonally wet Vegetation wetlands from Palustrine or annual grassland wetlands? 115

How or where would unvegetated or minimally vegetated seasonal wetlands be classified? Seasonal wetlands on baylands often have this characteristic? This contributes to their value for shorebirds which can roost in large flocks and have broad view of predators coming. 116

Page 4.10-25 - 26 Seasonal wetlands on the bayland irrigation sites should be identified and their acreage, value and use by migratory and resident wildlife discussed. the discussion of the "bay flats" absolutely ignores seasonal wetlands on these lands. 117

Page 4.10-51 A minimum 30-foot buffer is recommended from irrigation application around all jurisdictional waters and 50-foot from upland riparian corridor of all stream and rivers. How were these widths determined? Data to support the adequacy of 30 and 50 feet to protect wetlands in these circumstances should be provided. We do not believe that 30 feet is sufficient to protect wetland values and integrity. Discing or tilling for crop growing could impact drainages. 118

Page 4.10-56 Where would mitigation wetlands for unavoidable impacts be created? Locations should be identified to enable reader to evaluate the feasibility of the mitigation. It is not enough to simply "promise" that wetland losses due to construction and operation would be fully mitigated. 119

What would happen if wetlands are lost later due to changes in drainage, cultivation, etc. Would they then be recreated somewhere else? Who would keep track of this? 120

#### APPENDIX A STORAGE RESERVOIR BOTANICAL RESOURCES

A site map of the South county irrigation area and Tolay Creek drainage should be provided. 121

The discussion of the wetlands, creeks and riparian systems at the Tolay Reservoir site is vague. The amounts and locations of these resources should 122

- be discussed and shown on a site plan. [How much of the wetland resources on page 21 of the Sycamore Environmental consultants report would be destroyed by the reservoir and associated drainages? In other words, where are all of the 143 wetland indicator species referenced on page 32?] 123
- [We fail to see the value in the comparison on page 36 of the project's potential reservoir sites with flora on other sites. Was this intended to make the reader believe the project losses would not be so significant? How were the other sites chosen? Certainly there must be other areas which could have also been used. [Is citing a large number or high percentage of introduced flora intended to convey the impression that the sites are already degraded and, therefore, not so important. We strongly disagree with this approach. With the significant acreage of natural systems already lost to development, we should look upon these systems as opportunities for restoration, not for destruction.] 124
- [It is our understanding that approximately 2% of California's riparian habitat systems remain. The percentages shown on page 40 indicate a higher percentage remains.] 125
- [The analysis of wetland habitats in this report is inadequate. Where are these systems? A site map should be provided. What functions do they serve] 126
- [On Table 5-1 the headings South County and West County should be reversed.] 127
- [The sensitive plant communities discussion should address the Petaluma Marsh as the largest remnant tidal marsh expanse that has never been diked in the Bay. This system has unique features, including tidal ponds, that once occurred throughout the Bay marshes, but no longer occur anywhere else. Although there seems to be little actual study of this area, this document should address the plant species as well as values for wildlife.] 128
- APPENDIX B AGRICULTURAL IRRIGATION BOTANICAL RESOURCES
- [If only the mapping of vegetation was used to identify wetlands, then a good deal of wetland resources on the baylands would fail to be identified.] 129
- [Why are the Cowardin categories not used? [What category are the palustrine seasonal wetlands that form on the baylands? [Wetland functions and values are not solely tied to vegetation, therefore, a classification that is solely dependant on vegetation, as these are, should not be the only category used.] 130 131 132
- [Again on Table 5-1 page 39 where would Palustrine seasonal wetlands that occur on baylands be categorized?] 133
- [The discussion of TRACE ELEMENTS on page 42 describes Questa Engineering's conclusion that even after 25 years of loading, accumulation (in soil) of nearly all metals in reclaimed water is very low and will not affect the productivity or toxicity level of the soil." Isn't this project expected to function longer than 25 years? What would the anticipated buildup in the soil of arsenic, boron, cadmium, copper, lead, mercury etc, after 50 and 100 years.] 134
- [Further, the impact on crops is not the only potential adverse effect. What would the potential for bioaccumulation in invertebrates and small mammals living in the soils, and in birds and other higher order species that feed on these species?] 135
- [The REYES SOIL discussion on page 43 states that hay crops and irrigated pasture will be grown in the baylands and lime and over-irrigation utilized which "will prevent the establishment of native brackish marsh vegetation. Thus, there will be little or no change from current conditions." Under current conditions ponded unvegetated wetlands and/or native brackish and/or 136 137

salt marsh vegetation does and has developed on many bayland sites. The difference is the intensity of the management. Perhaps there are no wetlands currently on the sites in this study area, but then no evidence has been presented either way. We strongly urge that there be a discussion of this issue, and that the NWI maps and infrared photos be presented for the potential bayland irrigation sites. It has been our ongoing concern that because of the intensity of the management, irrigation and cropping, that all wetland values would be obliterated from any bayland sites used for irrigation (except for drainageways), as they have been on the NSD sites. For any baylands irrigated, there should be assurances that there will be no loss of current or potential seasonal wetland acreage, functions or values. 137 (cont.)

We object to disregarding the loss native grassland communities as being less than significant (as stated on page 43, CONVERSION OF GRASSLAND COMMUNITIES FROM USE OF RECLAIMED WATER) simply because non-native species dominate. Wherever patches of non native grassland would be lost, acreage should be set aside for restoration of these habitats. 138

As mentioned above, we are concerned about the adequacy of the proposed buffers. 30 feet is not sufficient around wetlands. The wetland buffer should be 100 feet. It is not clear whether the 50 foot riparian buffer would be from the landward edge of the riparian vegetation? What would occur in areas where riparian vegetation is non-existent due perhaps to grazing, or other destruction? 139 140

There should be a discussion of the potential impacts of salinity change on the Petaluma Marsh with possible increase in fresh water flow. The same standards should apply as apply with the West County discharge. 141

#### ALTERNATIVES

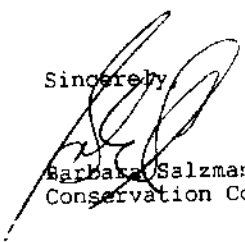
The discussion of the Russian River Alternative should address potential impacts on water supply for Sonoma and Marin Counties and show on a site plan where the intake and discharge points are located. 142

What is the size and flow capacity of the pipes that would be installed to the reservoirs. 143

And, we again request that reverse osmosis be evaluated as a component of the Russian River discharge. This process would assure that no contaminants that would risk aquatic resources or people health would reach the river. 144

Thank you for considering our comments.

Sincerely,

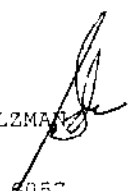
  
Barbara Salzman, Chair  
Conservation Committee



*Marin Audubon Society    Box 599    Mill Valley, California 94942-0599*

October 11, 1996

TO: DAN CARLSEN

FROM: BARBARA SALZMAN 

PHONE: (415) 924-9057  
FAX (415) 927-3533

I don't know what I was looking at to get this address, but I mailed this comment letter off on Monday as I was leaving town for 5 days. I had a call from Erica Hendrix on my machine when I got home this evening telling me that I had mailed it to the wrong place. She may have mailed it to you. However, since it is after office hours and I can't check with her, I am putting this in the mail on October 12.

I do hope you accept the comments even though they are late. I spent a lot of time on them but was rushed with trying to get ready to leave town.

Many thanks.

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

OCT 12 1996

DEPARTMENT OF  
COMMUNITY DEVELOPMENT

*A Chapter of National Audubon Society*



RECYCLED PAPER



Marin Audubon Society    Box 599    Mill Valley, California 94942-0599  
October 6, 1996

*Maria Hendricks*

Erica Hendricks  
Sonoma County Water Agency  
P.O. Box 11628  
Santa Rosa, CA 94506

RE: SANTA ROSA SUBREGIONAL LONG-TERM WASTEWATER PROJECT DRAFT EIR/S

Dear Ms Hendricks: *Maria*

The Marin Audubon Society submits the following comments on the above document. Although our comments may appear extensive, they reflect our review of less than one half of the documents. With one hard copy and one CD ROM, which was blocked so the information could not be transferred to small disks for broader circulation for those of us who do not have a CD ROM, provided during the last weeks of the comment period, we simply did not have the ability for the kind of review and evaluation we do on EIRs.

While the quantity and quality of information is generally improved over the last EIR/S, the EIS/R provides little comprehensive analysis. Components are addressed separately and there is a lack of overview and comprehensive analysis of the environmental impacts. Perhaps the length of the document and amount of information contributes to this deficiency. Our questions focus on the South County Alternative because that is about all we had time to focus on.

From our review of the information and knowledge of the baylands our preliminary position, unless additional data convinces us otherwise, is in opposition to use of baylands or adjacent lands in the South County alternative. We believe that the potential environmental impacts would be too detrimental to the Bay, the Petaluma River resources, wetlands and species of the Pacific Flyway.

We have the following questions and adequacy about the data and concerns:

#### AGRICULTURAL IRRIGATION (Alternatives 2 and 3)

Page 3.3-36 The discussion indicates that the bay flats would have an annual average irrigation application rate of 3.0 acres which is more than any other alternative. Explain why this is the case? What characteristics of the soil, topography etc. necessitates increases the acreage required to accommodate the irrigation? What is meant in the following paragraph that "potential irrigation sites have been evaluated?" What components were evaluated and how were sites chosen?

#### MONITORING AND MITIGATION

Would the Agency be able to hire the same contractor to monitor as it did to do the mitigation work? There should be a restriction that the same contractor cannot be chosen to monitor the mitigation, but that an independent contractor should be chosen.

*A Chapter of National Audubon Society*



RECYCLED PAPER

#### 2.2.1 Irrigation Conservation and Management Programs

What powers would the city have to enforce restrictions if there it would seem they would be at the mercy of the irrigators use of the water. What ability would the Agency have to terminate irrigation contracts if conditions are being violated when the agency needs to get rid of the water? It seems this would be rather limited.

#### 2.2.3 Restrict Surface and Subsurface Irrigation Water Runoff

How would the methods used to restrict runoff be decided and who would decide? Even if all of the suggested methods in this measure (sprinkler, drip irrigation avoidance of root zones) are implemented and monitoring occurs, what measures would be taken to if there is still a problem? As above, could the Agency realistically terminate contracts when they need to discharge a specified amount? How could the City realistically cut off the irrigation water as stated on page 2.25?

How could landowners avoid surface ponding except for reducing irrigation? What is there to prevent water from flowing into the Petaluma River and subsequently the Bay? How would the public have access to the monitoring and irrigation records?

#### 2.2.4 Restrict Soil Erosion and Sediment Movement

How wide would the filter strips be? Would existing native vegetation be used? What would happen if pollutants in the soils killed the plants? There should be a program to replace the plants. We recommend that a wide buffer be established outside of existing native plant strip.

There should be a requirement that all streams, wetlands and riparian habitats be restored to preproject elevations and vegetative conditions immediately after completion of the particular segment. Existing native plants should be saved and replanted.

#### 2.2.5 Avoid Sensitive Biological Resources

Attempt should be made to save and replant in restoring the site all trees that have to be removed for pipelines etc.

30-foot setback construction setback from wetlands is not adequate. How was this decided upon? Setbacks should be at least 100 feet wide and wider when special status species are involved.

How about setback from unvegetated wetlands? From native oak trees?

There should be a further buffer between the dripline of trees because the drip line is where roots extend. At least 50 feet should separate irrigation and other activities and the drip line.

Two recommendations address riparian setbacks and both include cultivation. A 100-foot buffer should apply on both cases.

A 100 foot buffer should also be required between staging areas and wetland and riparian edges.

It is not uncommon for there to be poor communication with the on-the-ground construction workers with regard to project conditions. Who would be responsible for communicating with construction workers and requiring them to implement these protective provisions?

What are the applicable provisions of Sonoma County's tree ordinance? How many trees would have to be replaced for each tree lost. There should be a provision that existing trees to be removed must be removed and saved. If these do not survive, new trees of the same native species should be planted. Marin County does not yet have a tree ordinance.

#### 2.2.6 Agrochemical and Fertilizer Best Management Practices

What if grass strips become 'overwhelmed' with nutrients and pollutant runoff and the plants die? There should be requirement that vegetated filter strips be replanted if needed.

#### 2.2.8 Revegetate Temporarily Disturbed Sites

- Why should there be no revegetation requirement? If wetland vegetation is eliminated we see no reason why the project proponents should not be required to replace it. Use existing trees and shrubs for restoration.
- Each site should be restored immediately upon construction/ installation of the project component i.e. installing pipeline through creek, not wait until entire pipeline is installed.
- What enforcement will be required and who will do the enforcing?
- There is should be requirement that plants be replaced that do not survive after 6 month, and subsequent annual monitoring.

#### 2.2.10 Stormwater Prevention Plan

It is not sufficient to "limit" grading and construction during wet season. All construction with the potential to cause erosion and siltation should be prohibited during rainy season.

Use of coconut mesh or other natural materials to promote slope stability should be added. Sediment basins and hay bales are not very effective particularly in high flows.

What enforcement measures would be taken and by whom?

#### 2.2.11 Protect Creeks from Toxic Discharge

The construction management may need to take measures beyond the ordinary and reasonable to prevent toxic discharges, and this should be required if required if there is a threat of discharge to a creek.

#### 2.3.2 Agricultural Irrigation Demonstration Program

Isn't it a bit late to conduct a demonstration program after an alternative is chosen? Demonstration projects should be planned and implemented in advance of choosing an alternative so information can be utilized to make the decision. An alternative that depends on orchards and vineyard irrigation or any other irrigation program should not be chosen until the potential impacts are known and addressed.

#### 2.3.4 Slope Stabilization Design

What areas would require such extensive work to stabilize slopes?

#### 2.3.11 Sensitive Resource Conservation Program

Habitat restoration, particularly wetland restoration, is not a certain science. Evidence should be provided that the first mitigation option is to avoid impacts, as required by NEPA.

We strongly disagree that mitigation for habitat loss, particularly all wetlands, riparian and oak woodland should be left up to the discretion of unnamed entities and by unidentified criteria sometime to be decided upon in the future apart from this EIS/R process. Who would be making these decisions, by what criteria and how would public participate?

We also strongly disagree with the proposed mitigation on Table 2.3-1 which proposes mitigation scenarios for creation, restoration and preservation with differing acreage. There should be a base mitigation acreage of 2 acres restored for each acre lost for all wetland types, wetlands of the same type should be required for replacement. Protecting or enhancing existing wetlands even if degraded should not count for mitigation because that would mean a net loss of these resources. Habitat mitigation projects should replace the lost habitat in-kind and the protections should be in perpetuity. Enhancement should require 3:1 ratio. What is the Sonoma Bay Trust Preservation Plan, what



provisions does it contain and who developed it?

What role would the agencies identified on Table 2.3-2 SENSITIVE BIOLOGICAL RESOURCES AND MANAGING AGENCY (page 2-79) have? Surely they will not be called on to monitor the Agency's mitigation.

No project alternative should be approved without more adequate information on mitigation for the project-caused impacts. Without information on potential mitigation sites there is no way to know whether adequate mitigation would be feasible. Where would 248 or 89 acres of jurisdictional wetlands be restored for the South County reservoir, for example? The Agency would have to buy appropriate land on which to restore in-kind habitat in the vicinity.

Potential mitigation sites should be near the site of loss and provide for in-kind habitat replacement. Wetlands should be mitigated at rate of 2:1, and should be protected in perpetuity by deed restriction. Also, what is a "naturalistic" habitat complex as referred to in the second paragraph page 2-80?

We do not see evidence to support the conclusion that the level of significance after mitigation for the reservoir or irrigation components in the South County would be less than significant. In particular, there is insufficient information about the wetland resources that presently exist in the baylands and how they would be impacted by the project, either through discharge or irrigation.

Five years is not sufficient time to determine the success of restoration for trees.

2.4.4 California Red-Legged Frog Capture and Relocation Program  
Has there ever been a successful capture and release program for red-legged frogs? Where is there suitable relocation habitat? Why aren't they already there if it is suitable habitat.

2.4.5 Nests Location and Monitoring  
More than 2.5 acres may be needed to protect raptor nests in some cases depending on terrain and vegetation. Also, how about other native and migratory nesting species? All native nesting species should be avoided. Species such as Green Heron, which are unusual in this area and do not nest in colonies should be identified and a program to identify and avoid these nests should be developed also.

Why is there no monitoring for constituents in the soil and irrigation waters for the South County?

#### AGRICULTURE

What length of creek, area of surface water and of riparian habitat are upstream from the dams for Tolay Creek? Table 3.3-2 indicates these are not included. What resources would be blocked from moving to the Bay/river? Wouldn't the reservoir block flows from the creek? How much?

The description of the South County and other reservoirs describe concrete conduits apparently to carry overflow and discharge it into downstream creeks. Describe the purpose of these conduits. Why could they not be designed to be above ground to allow for retention of values such as wildlife habitat?

#### TERRESTRIAL BIOLOGICAL RESOURCES

Discussion of the individual plant communities is fine but there should be an additional discussion of how these habitat function together and functions they provide for Pacific Flyway and resident wildlife.

Page 4.8-15 The loss of any of the amounts of Riparian Woodland noted on Table 4.8-15 should be considered significant because there is only about 2% left in the state.

Page 4.8-43 Diked baylands usually pond water in winter as a result of rainfall. Irrigation through flooding is not usually necessary.

Page 4.8-58 to 60 South County (including Bay Flats)  
There is no discussion of seasonal wetland habitats on bay flats as they are referred to, or diked historic baylands as they are usually called. The value of the baylands is habitats that provide essential habitat functions for shorebirds and other wildlife should be addressed. How they are a complimentary and necessary part of the Bay habitat system is completely missed. How and why are they are important; what birds use these baylands when and how? Over a million shorebirds move through bay during migration, most important refueling and overwintering habitat. There is not even a discussion of migratory birds even though acknowledged they are protected by Migratory Bird Treaty Acts.

Similarly, neotropical songbirds are in decline worldwide. The text should discuss the value of the oak woodlands and riparian habitat for these birds and what a 25% loss of habitat in Sonoma County would mean.

Page 4.8-69 The Marin Countywide Plan policies covering the Bayfront Conservation Zone should also be covered, not just streamside conservation policies. Cite some policies

Page 4.8-71 Are the Marin and Sonoma Resource Conservation Leagues really meant to be Districts?

How was it determined that the loss of 15% of the known occurrences of CNPS plants from Lists 2, 3 or 4 is acceptable? How was it determined that the permanent loss of 25% of sensitive terrestrial wildlife habitat is less than significant? What criteria were used to identify these losses as acceptable?

We believe the following information is needed How much of each habitat existed historically, how much exists now? Only 2% of riparian left in the state? Estimate the number of trees that would be lost with a 25%?

How were the migration or travel corridors mapped?

The statement is made on page 4.8-76 that surveys to assess terrestrial biological resources located within the agricultural irrigation areas were conducted from August through October 1995." Plant assessment should be done in spring.

We are shocked to read that "No focused wildlife surveys were conducted on the proposed irrigation areas." and that only special status species were recorded. This is absolutely unacceptable and a fatal flaw for bayland resources to be so ignored. This ignores the major value of the Bay wetlands is as overwintering habitat for migratory waterfowl and sh.

Why is there no discussion of migratory birds even though these species are protected by Migratory Bird Treaty Acts and many individual species are special status? The migratory birds that use the affected habitats should be identified and how they use the habitats should be discussed. The affected habitats are not just important for endangered threatened or rare species. Entire populations of specific species of the Pacific Flyway could be adversely affected.

Page 4.8-83 Mitigation for pipeline speaks to not constructing on occupied habitat of endangered species. What does occupied mean? If it is suitable

habitat should be considered occupied. Unless nesting, birds are not always in the same place. They have to move around to find food.

Page 4.8-84, Table 4.8-9 It seems curious that the acreage of Coastal Oak Woodland for nine of the pipeline corridor sites is identical? How did this happen?

Page 4.8-86, Table 4.8-10 How could the number of pipeline corridors be identical with regard to Oak-bay madrone woodland and oak woodland losses?

Page 4.8-92 As above the loss of large acreage of sensitive wildlife habitat cannot be written-off simply because it comes in under an arbitrary percentage. The location, use by migratory birds for food, cover, presence of other such habitats in the area vicinity, presence of habitats species also need and other characteristics must be considered. The loss of 413, 271, 343, 397, 179, 264, or 320 acres of sensitive wildlife habitat is a significant loss even if it is less than 25%. Does this mean it is okay to lose 25% of the wildlife that these habitats support?

Page 4.8-93 What is the Cal Veg data used to calculate habitat percentage impacts? How up to date is this data? How much has been and is potentially to be lost through development or other activities?

Page 4.8-96 It is difficult to believe there are no major wildlife travel corridors within the boundary of any storage reservoir site? Contacting one person at Fish and Game is not adequate to justify a conclusion that no major terrestrial migration or travel corridors are located within the boundaries of any of the storage reservoir sites. How much study has Fish and Game, or any other entity done of movement corridors in Sonoma County? Unless there is adequate study over at least a year of use of reservoir sites, there can be no conclusion made that no major corridors exist.

Page 4.8-101 Impact 8.71 and 8.72 state that special status wildlife species are supported by all of the proposed agricultural irrigation areas. The discussion goes on to indicate there is opportunity for future protection of species and that measures will ensure that all impacts to special status species are avoided by using exclusionary buffers around any identified plant species, riparian habitat, occupied burrows of sensitive ground-dwelling species. If you remove suitable habitat and prey species for ground-dwelling species, such as burrowing owls, by extensive modification of adjacent habitat, keeping the burrow won't make much difference. How will it be assured that suitable hunting or foraging habitat remains to support species on irrigated lands?

What seasonal wetland resources would remain on proposed irrigation lands in the South County under the management program? How would these resources be protected by buffers? A 30 foot buffer is not sufficient to protect a wetland? Even if it is possible to protect seasonal ponded areas how would it be assured they retain hydrology to remain viable wetlands?

Irrigation, tilling and other management would change the characteristics of the sites which will result in loss of habitat. The potential loss of habitat for migratory waterfowl and shorebirds of the Pacific Flyway on baylands must be addressed. These seasonal wetlands are an important component of the North Bay habitat system. Conversion to highly managed lands like Novato Sanitary District would be a significant impact. The impact would be locally significant, and internationally significant because of Pacific Flyway effects. The cumulative significance of the habitat loss of the project must be addressed.

Baylands and seasonal wetlands are habitat for a number of special status species that are also protected under Migratory Bird Treaty Acts. The

BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM VOLUME 2 discusses a number of these special status species but information about the presence of individuals of these species on potential project sites is minimal. Where is the analysis of impacts of special status species for wetland habitat loss? species regularly use bayland habitats for foraging, roosting, and sometimes nesting: White tailed kite, Northern Harrier, Golden eagle, Long-billed Curlew, Tricolored blackbird, Merlin, Peregrine Falcon, Black Great Blue Heron, Loggerhead Shrike, San Pablo Song Sparrow, and Burrowing Owl. Most of these species are also protected under the Migratory bird Treaty Act. In addition, Black Rail, CA Clapper Rail, Double Crested Cormorant and Brown Pelican use adjacent marshes and waters. There must be analysis provided of impacts on these species.

Page 4.8-102 Impact 8.7.3 How wide would the buffers be? How would nesting Northern Harriers which occur wet spots in be avoided?

Page 4.8-115 Impact 8.9.5 The loss of riparian habitat for construction of the outfall along the Russian River should be mitigated. The location of the outfall should be moved or riparian vegetation should be restored nearby at a ratio of at least 2 acres restored for each acre lost.

Discuss how the potential to convert existing saltmarsh to freshwater marsh along Petaluma River.

#### AQUATIC BIOLOGICAL RESOURCES

Page 4.9-15 The Coastal Salt Marsh discussion should identify the Petaluma Marsh as the largest piece of undiked saltmarsh in San Francisco Bay and describe its unique characteristics, functions and values. For example, it is the only marsh that retains tidal ponds which once dotted large expanses of salt marsh along the Bay.

Page 4.9-16 All of the diked bayland or so called bay flats in the South County alternative are Paslustrine wetlands. What functions do these shallow non-tidal wetlands serve for shorebird and waterfowl species of the Pacific Flyway?

Page 4.9-32 A site plan showing the South County watershed should be provided. To evaluate the potential adverse impacts of the project, it is important to understand the layout of the creeks and tributaries and how they flow.

Page 4.9-33 Evaluation of the value and condition of baylands should be sought from wildlife and wetlands scientists. The basis of the statements that the seasonal wetlands north of State Highway 37 have been greatly reduced and degraded should be stated. Some of these seasonal wetlands to provide habitat for large numbers of shorebirds.

Page 4.9-36 What is the basis for choosing 15% of Type A habitat and 25% of Type B in a local water shed as the cutoff for significance? How was 50% decrease in wet season streamflow would be needed for significance? As above, we find these percentages would all an excessive loss and recommend that they be reduced?

Page 4.9-40 Surveys of aquatic habitat should encompass migration season.

Page 4.9-56 If there is one red-legged frog there is very likely to be more. Loss of habitat for this species should be considered a significant impact.

Page 4.9-59-60 Why has 210% been chosen as the percentage below which impacts of reservoirs would not be significant? wouldn't this mean a loss of riparian and wetland habitats? We think 20% is too great a loss of ponds or other

aquatic habitats. Habitats suitable for Western Pond Turtles are obviously declining statewide otherwise why would the Turtle be a special concern species?

Page 4.9-68 Standards for flows into the Petaluma River/San Pablo Bay should be just as stringent as those into esteros. This estuary is the largest and most important on the West Coast and should not have lower standards than others.

Page 4.9-69 the analysis of Impact 9.5.7 states that, except for one steelhead trout, no other migratory fish were found in any of the stream systems that would potentially be impacted by this project. Is this really intended to say that no native fish are in any of the streams? What is a migratory fish? Shouldn't native and anadromous species be addressed?

Page 4.9-72 How can fencing and revegetation mitigate for impacts of changing streamflows affecting aquatic habitat. This is an inappropriate and unacceptable mitigation. Blocking streamflows block the passage of any fish, change character of downstream resources and is not compensation for by fencing and plants.

Page 4.9-75 Table 4.9-19 The basis for the evaluation that the agricultural component South County will not cause the loss of individuals or rare wildfire species should be explained further. As stated previously, baylands provide habitat for Long-billed curlew, burrowing Owl, and other special status species as well as the endangered salt marsh harvest mouse and others.

It is also not clear how the evaluation was made on page 9.5-4, 9.7.5 that the irrigation would not cause the permanent loss of aquatic habitat.

Page 4.9-77 Unless the species of concern and habitat conditions are known, it cannot be absolutely assured that "sensitive areas within agricultural irrigation areas can be protected by establishing buffer conditions? This is simply a promise which expects a leap of faith. To remain viable and functional, it is also not sufficient to retain habitat as isolated islands but it must be contiguous with other viable habitat to provide for foraging, cover and movement for wildlife. Fragmentation simply increases vulnerability of wildlife to predation, reduces genetic diversity and habitat values.

Page 4.9-79 Why are the seasonal wetlands in the South County not identified in this Sensitive Aquatic Plant Communities Table 4.9-20 and Table 4.9-21? There should be a table addressing potential loss of seasonal wetlands for the South County alternative.

Alternative 2 is not near an estero so it is not likely to drain into one. Explain why it would be impossible for overflow to runoff into streams with the South County alternative?

Page 4.9-80 Buffering will not work to protect aquatic or terrestrial invertebrates from absorbing pollutants which would bioaccumulate in the food chain. How has bioaccumulation been accounted for?

Page 4.9-85 What assurances are there that substantial increases of the discharge of reclaimed water to the Russian River would be limited to only 4 days? And besides, bioaccumulation could occur over time as a result of many limited discharges.

Page 4.9-86 Demonstrate by identifying potential restoration sites and methods that California red-legged frog habitat losses would be fully mitigated through habitat creation, restoration and preservation and translocation. Promises and good intentions do not count.

Page 4.9-87 As above, the Western Pond Turtle mitigation habitat site should be identified, and the methods and preliminary plan presented to enable evaluation of whether it is feasible.

Page 4.9-88 Impact 9.4C The Corps would also require mitigation for the loss of seasonal wetlands on baylands. Why are these losses not addressed? Simply because aquatic habitat losses are small does not give license to consider them only local and not part of cumulative losses. Any aquatic habitat loss, no matter how small, must be added up and evaluated cumulatively.

Again, the location and method for creating new or restoring existing wetland habitats should be identified to enable evaluation of feasibility.

Over what period of time was the Risk assessment considered? Was irrigation over 50 75 and 100 years considered?

#### JURISDICTIONAL WETLANDS

Page 4.10-12 Why is there a new classification of cropland wetlands used here. Why not use the Palustrine classification used in the Aquatic Resources chapter? Jumping around with different labels from different consultants is confusing and not conducive to understanding the impacts.

"Prior converted cropland" has a very specific meaning under federal law and regulations.

Page 4.10-14 What differentiates Seasonally wet Vegetation wetlands from Palustrine or annual grassland wetlands?

How or where would unvegetated or minimally vegetated seasonal wetlands be classified? Seasonal wetlands on baylands often have this characteristic? This contributes to their value for shorebirds which can roost in large flocks and have broad view of predators coming.

Page 4.10-25 - 26 Seasonal wetlands on the bayland irrigation sites should be identified and their acreage, value and use by migratory and resident wildlife discussed. the discussion of the "bay flats" absolutely ignores seasonal wetlands on these lands.

Page 4.10-51 A minimum 30-foot buffer is recommended from irrigation application around all jurisdictional waters and 50-foot from upland riparian corridor of all stream and rivers. How were these widths determined? Data to support the adequacy of 30 and 50 feet to protect wetlands in these circumstances should be provided. We do not believe that 30 feet is sufficient to protect wetland values and integrity. Discing or tilling for crop growing could impact drainages.

Page 4.10-56 Where would mitigation wetlands for unavoidable impacts be created? Locations should be identified to enable reader to evaluate the feasibility of the mitigation. It is not enough to simply "promise" that wetland losses due to construction and operation would be fully mitigated. What would happen if wetlands are lost later due to changes in drainage, cultivation, etc. Would they then be recreated somewhere else? Who would keep track of this?

#### APPENDIX A STORAGE RESERVOIR BOTANICAL RESOURCES

A site map of the South county irrigation area and Tolay Creek drainage should be provided.

The discussion of the wetlands, creeks and riparian systems at the Tolay Reservoir site is vague. The amounts and locations of these resources should

be discussed and shown on a site plan. How much of the wetland resources on page 21 of the Sycamore Environmental consultants report would be destroyed by the reservoir and associated drainages? In other words, where are all of the 143 wetland indicator species referenced on page 32?

We fail to see the value in the comparison on page 36 of the project's potential reservoir sites with flora on other sites. Was this intended to make the reader believe the project losses would not be so significant? How were the other sites chosen? Certainly there must be other areas which could have also been used. Is citing a large number or high percentage of introduced flora intended to convey the impression that the sites are already degraded and, therefore, not so important. We strongly disagree with this approach. With the significant acreage of natural systems already lost to development, we should look upon these systems as opportunities for restoration, not for destruction.

It is our understanding that approximately 2% of California's riparian habitat systems remain. The percentages shown on page 40 indicate a higher percentage remains.

The analysis of wetland habitats in this report is inadequate. Where are these systems? A site map should be provided. What functions do they serve

On Table 5-1 the headings South County and West County should be reversed.

The sensitive plant communities discussion should address the Petaluma Marsh as the largest remnant tidal marsh expanse that has never been diked in the Bay. This system has unique features, including tidal ponds, that once occurred throughout the Bay marshes, but no longer occur anywhere else. Although there seems to be little actual study of this area, this document should address the plant species as well as values for wildlife.

#### APPENDIX B AGRICULTURAL IRRIGATION BOTANICAL RESOURCES

If only the mapping of vegetation was used to identify wetlands, then a good deal of wetland resources on the baylands would fail to be identified.

Why are the Cowardin categories not used? What category are the palustrine seasonal wetlands that form on the baylands? Wetland functions and values are not solely tied to vegetation, therefore, a classification that is solely dependant on vegetation, as these are, should not be the only category used.

Again on Table 5-1 page 39 where would Palustrine seasonal wetlands that occur on baylands be categorized?

The discussion of TRACE ELEMENTS on page 42 describes Questa Engineering's conclusion that even after 25 years of loading, accumulation (in soil) of nearly all metals in reclaimed water is very low and will not affect the productivity or toxicity level of the soil. Isn't this project expected to function longer than 25 years? What would the anticipated buildup in the soil of arsenic, boron, cadmium, copper, lead, mercury etc, after 50 and 100 years. Further, the impact on crops is not the only potential adverse effect. What would the potential for bioaccumulation in invertebrates and small mammals living in the soils, and in birds and other higher order species that feed on these species?

The REYES SOIL discussion on page 43 states that hay crops and irrigated pasture will be grown in the baylands and lime and over-irrigation utilized which "will prevent the establishment of native brackish marsh vegetation. Thus, there will be little or no change from current conditions." Under current conditions ponded unvegetated wetlands and/or native brackish and/or

salt marsh vegetation does and has developed on many bayland sites. The difference is the intensity of the management. Perhaps there are no wetlands currently on the sites in this study area, but then no evidence has been presented either way. We strongly urge that there be a discussion of this issue, and that the NWI maps and infrared photos be presented for the potential bayland irrigation sites. It has been our ongoing concern that because of the intensity of the management, irrigation and cropping, that all wetland values would be obliterated from any bayland sites used for irrigation (except for drainageways), as they have been on the NSD sites. For any baylands irrigated, there should be assurances that there will be no loss of current or potential seasonal wetland acreage, functions or values.

We object to disregarding the loss native grassland communities as being less than significant (as stated on page 43, CONVERSION OF GRASSLAND COMMUNITIES FROM USE OF RECLAIMED WATER) simply because non-native species dominate. Wherever patches of non native grassland would be lost, acreage should be set aside for restoration of these habitats.

As mentioned above, we are concerned about the adequacy of the proposed buffers. 30 feet is not sufficient around wetlands. The wetland buffer should be 100 feet. It is not clear whether the 50 foot riparian buffer would be from the landward edge of the riparian vegetation? What would occur in areas where riparian vegetation is non-existent due perhaps to grazing, or other destruction?

There should be a discussion of the potential impacts of salinity change on the Petaluma Marsh with possible increase in fresh water flow. The same standards should apply as apply with the West County discharge.

#### ALTERNATIVES

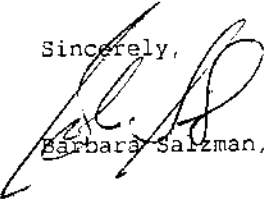
The discussion of the Russian River Alternative should address potential impacts on water supply for Sonoma and Marin Counties and show on a site plan where the intake and discharge points are located.

What is the size and flow capacity of the pipes that would be installed to the reservoirs.

And, we again request that reverse osmosis be evaluated as a component of the Russian River discharge. This process would assure that no contaminants that would risk aquatic resources or people health would reach the river.

Thank you for considering our comments.

Sincerely,



Barbara Salzman, Chair

Conservation Committee