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Wendy/Frank 97-126
United States Department of the Interior

FISH AND WILDLIFE SERVICE

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MAY 01 1997

April 25, 1997

Mr. Lester S. Snow
Executive Director
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, California 95814

Subject: Draft Impact Analysis Approach for Vegetation and Wildlife,
Including Special-Status Species

Dear Mr. Snow:

The Fish and Wildlife Service (Service) provides the following general and specific comments concerning the draft Impact Analysis Approach for Vegetation and Wildlife, Including Special-Status Species:

General Comments:

- (1) A general definition of quality should be given. Because "quality" is a subjective term, it is important to make clear what is meant by the term in the context of this analysis. A specific list of criteria should be developed to guide the analysis. Ecological/successional status and degree of disturbance/alteration should not be confused with quality. In addition, "habitat quality" is a relative term; what is high quality habitat for one species is not for another.
- (2) If "habitat" does not equal "plant community", then plant communities should be added to the analysis. It may be better to use the term plant community throughout.
- (3) A weighted scale seems more appropriate for impact measures. As it reads now, all measures are evaluated equally, when it might be better to give higher importance to special status species habitat and continuity of high quality natural communities. For example, it may be easier to make duck habitat from agricultural lands but much harder to create mature riparian forest. Much of the quantitative analysis is acreage based leading to the possibility that the "quality" component will be overpowered. Using a ranking system of 1 to 5 may be an appropriate method to evaluate habitat quality. However, basing such a system on "professional judgement" is not the most scientifically defensible approach. Professional judgement may be important along with other quantitative criteria in an evaluation, but the analysis ought to be based largely on specific quantitative and/or objective criteria to determine habitat quality. In addition, any system used to evaluate quality must take in account the fact that habitat quality is relative

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such that high quality habitat for one species is not necessarily high quality habitat for another.

- (4) For Special Status Species and Communities, it is important to analyze not just number of special status species but also how much and what part of these species' ranges are likely to be impacted. For example-
 - (a) Is the impact likely to affect 25 percent, 50 percent, or 90 percent of the species range?
 - (b) Will it involve the central portion of the range or more peripheral populations?
 - (c) Will it involve the largest existing population of a species, several smaller ones, or a combination of large and small?
- (5) An additional impact category is potential for non-native species introduction (this appears to be hidden within "Quality of natural communities").
- (6) There should be a brief mention of fisheries issues. Several of the measures that may result in a net benefit to wildlife may adversely affect fisheries.
- (7) Define "clean farming". Is the baseline condition "dirty farming", or is the assumption that new farming operations will be clean that are facilitated by increased storage or conveyance options. Certain crops (such as vegetables, cotton, etc.) are much more pesticide intensive than others (wheat, grain, hay). How will that be factored into the analysis?
- (8) A specific criteria should be defined to evaluate habitat value of agricultural land that relates to the species being considered. Agricultural land that has "habitat value" for one species may not for another.
- (9) More information on geographic area should be provided. This should include the Delta and the "Solution Scope Area".
- (10) CALFED needs to be aware of recovery objectives identified in Service recovery plans.
- (11) Where qualitative methods will be used in the analysis, clear identification of the criteria directing the evaluation is critical. It is not enough to state that "qualitative" methods were used.
- (12) Reclamation and the CVP program should provide relevant information along with NRCS and DWR Land and Water Use Analysts.
- (13) We continue to be concerned about the proposed level of organization to be used in the analysis. We are concerned, for example, that "riparian vegetation" is too broad a category. Each of the classification systems proposed as part of a hybrid system define habitat types more

specifically than this. The Service understands the need to work at a programmatic level. Nevertheless, to avoid overlooking impacts to more specific habitat or community types, the Service recommends a more detailed analysis.

- (14) The Service does not agree that specific location data are lacking for all special status plant communities. In some cases, specific data on the locations and extent of special status plant communities are available. Some communities are mapped in RAREFIND; additional data are available but not mapped as yet. Todd Keeler-Wolf (CNDDB) would be able to answer questions about availability of data for specific communities. Because some data are available, the Service does not agree that qualitative analysis of all special status plant communities is appropriate. Where quantitative data are available, they ought to be used.
- (15) The "net" effects should not be used as the basis of the effects analysis (see flow diagram and (+)/(-) tables). Positive effects do not cancel out negative effects. Additionally, the number of special status species doesn't mean much unless it is measured in terms of population viability, diversity, or other means. Simply assessing the change in number of species and area of communities seems overly simplistic. Potentially, the indicators that EPA is developing for restoration activities could provide the specifics that this document lacks. Comparative narrative descriptions should be provided.

Specific Comments:

- (1) Page 1, paragraph 1, last sentence: "Construction of new water storage and conveyance facilities would most likely result in a loss primarily of native and agricultural habitat".

Comment: Native and agricultural habitat need to be clearly defined. Agricultural habitat in most cases is of much less value to vegetation and wildlife compared to natural ecosystems. If grasslands are included in agricultural habitat then it should be recognized that grasslands where cows are grazed have fairly high value for wildlife.

- (2) Page 1, paragraph 3, 2nd sentence: "Flow-related interrelated actions include reservoir operations and divisions".

Comment: Replace divisions with diversions.

- (3) Page 2, first complete paragraph, 1st sentence: "It is proposed that changes to vegetation and wildlife resources will be defined and analyzed by using various tools that will focus primarily on spatial analysis of changes in habitat area."

Comment: Prior to any type of analysis on changes to vegetation and wildlife resources, the current status (existing conditions) must

be defined. Changes can then be related to this current status. These changes may indicate increases to the rate of decline, no change to the rate of decline, or decreases in the rate of decline to vegetation and wildlife resources.

- (4) Page 2, 2nd complete paragraph, 1st sentence: "The assessment of impacts on wetland and terrestrial habitat will consider geographic extent, distribution, quality, and spatial configuration."

Comment: Similar to comment 3, the assessment is of the addition or reduction of impacts to the resources. This is determined through comparison of the project impact with the current status of the wetland and terrestrial habitat.

- (5) Page 2, paragraph 3: "... an increase or decrease in area of a particular habitat type will be used as an indication that populations of wildlife or plant species closely associated with the affected habitat type will be beneficially or adversely affected"

Comment: Area is a good indication but not the only one.

- (6) Page 2, paragraph 4, 1st sentence: "This approach, the guild approach, ..."

Comment: A list of the guilds used in this approach should be provided and the species being included in the "guilds" or habitat types. If they are the same as those chosen for the EPA indicators, it should be so stated. A guild implies a set of shared life history components not only habitat types.

- (7) Page 2, last complete paragraph, 2nd sentence: "The proposed system for impact analysis will probably be some hybrid of the Holland system, WHR, and CNPS classification system".

Comment: The modified Holland system used in the CVPIA PEIS should be used without the addition of other systems. The consistency was good with this method of analysis and the results could be compared with what was done in the PEIS.

- (8) Page 3, 2nd complete paragraph, 2nd sentence: "DFG's NDDB location information on special status plants and animal species and rare communities will be used in the analysis."

Comment: The Service's Sacramento Field Office has a more updated database that should be used in the analysis. Contact Mike Hoover or Larry Host at 916-979-2725.

- (9) Page 4 and 5: Quality of Natural Communities.

Comment: Quality of a community seems to relate to the species absence/presence, area, and spatial configuration but neglects habitat quality in terms of habitat suitability and specific habitat components as it relates to the needs of the species being

considered. The Assessment Tools seem to be geared towards getting acreage. Population viability analyses is a better tool to determine "the vigor of species populations". Survey results would determine "diversity of species".

- (10) Page 5, Assessment Methods, 2nd paragraph, 2nd sentence: "These impact mechanisms may decrease erosion and increase sedimentation creating depositional areas which would allow for the growth of early successional stages of the riparian community."

Comment: The growth of early successional stages would not be allowed under current flow control standards unless the river's potential capacity was correspondingly increased.

- (11) Page 5: table.

Comment: See General Comment number 15. The sum of changes do not adequately indicate the effects of an alternative. A positive and negative effect do not necessarily cancel each other out. These (+) and (-) must also be tied to the species, guilds, or habitats. There should be a table for each of the above. Does community quality tie specifically to vegetation quality, habitat quality, population viability, diversity, etc. These tables may be meaningless unless expanded and broken down into more specific descriptions.

- (12) Page 6, Assessment Example, Habitat-related Restoration Action, last sentence: "The level of impact/benefit on important groups of wildlife that use agricultural lands (e.g., waterfowl, shorebirds, wading birds, and greater sandhill crane) would be determined by assigning foraging and resting habitat values associated with each crop type."

Comment: The list of wildlife assumes that the agricultural lands are flooded or used as a foraging resting area. Pesticides and other agricultural chemicals may cause the site in question to be toxic. Some examples of raptors and their associated prey should be added (Swainsons hawk, burrowing owl and voles, field mice, etc. respectively).

- (13) Page 6, Assessment Example, Structure-related Action, 1st sentence: "Impacts of a proposed water storage facility on agricultural habitat could be calculated by using GIS."

Comment: Use GIS to calculate effects on other types of habitats, including "native" habitats.

- (14) Page 7, 4. Quality of Agricultural Land, 1st sentence: "The value of agricultural lands to natural communities is primarily dependent upon management practices."

Comment: Add "is primarily dependent upon type of crop and management practices".

- (15) Page 7, 4. Quality of Agricultural Land, 2nd sentence: "Variables which might affect the quality include cropping patterns (crops planted, relationship of land to natural habitat, etc.), irrigation practices, seasonal flooding and the degree to which "clean farming" is used."

Comment: Define "clean farming".

- (16) Page 8, Presentation Format, table.

Comment: An additional column should be added to the table, "Toxins". This would indicate whether pesticide, herbicide, and fertilizer use effects the quality of agricultural lands. If "clean farming" is farming without pesticides, this added column would add additional clarity as to the benefits of this practice.

- (17) Page 8 and 9: tables.

Comment: The tables should be specific to the species/guild or habitat in mind and (+) and (-) should not be canceled out, but listed as such. A qualitative description should accompany the (+)/(-).

- (18) Page 9, Presentation Format, table.

Comment: The "Instream Water Supply" heading should be caveated as to whether the flows are in addition to AFRP flows. If the CALFED action is to add flows on top of AFRP flows, then the resulting quality for "Habitat Size" and "Habitat Diversity" may be (0) or (-).

- (19) Page 9, 6. Number of Known Special-Status and/or Areas, with Critical Habitat Designation, 2nd sentence: "Since special-status species occur in distinct areas and in some cases, such as for plants, very small discrete sites, determining specific impacts will be difficult."

Comment: Add, "..., determining specific impacts and mitigative measures will be difficult".

- (20) Page 10, Assessment Example, 2nd sentence: "Four could experience a negative effect from the direct loss of habitat, and one could increase in population size or range by creating new habitat".

Comment: Add a third sentence, "All 10 species, however, may benefit if a proper ecosystem approach is taken when designing and implementing the action".

- (21) Page 10, Assessment Method, 1st sentence: "A quantitative assessment of impacts will be made based on the number of species and/or critical habitat areas..."

Comment: Is the assumption that an alternative that affects one species is better than one that affects three species? A more specific case

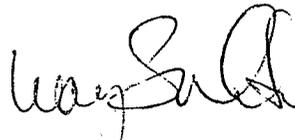
for effects on special status species should be made rather than just the number.

- (22) Figure 2. Impact Measures: "Increase in growth rate and health of riparian plant species leading to increases in nesting opportunities and food availability for avian species".

Comment: The Impact Mechanisms of decrease in erosion, increase in sedimentation, and increase in water supply during critical periods does not necessarily ---> increases in growth rate and health... A method of dealing with this is to state, "Expected increase in growth rate and health..."

If you have any questions or concerns about the above, contact Robert Pine at (916) 979-2725 or Jean Elder at (916) 979-2130.

Sincerely,



Wayne S. White
Field Supervisor

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RD, Region 1, Portland
USEPA, San Francisco, CA
Sac District-Corps, Attn: Jim Monroe, Regulatory, Sacramento