PLANNING GUIDELINES FOR STANDARD APPROACHES TO MITIGATION SITE MONITORING AND MAINTENANCE

Under the authority of the Memorandum of Understanding between the California Department of Transportation (CALTRANS) and the U.S. Fish and Wildlife Service (SERVICE) executed on November 7, 1988, the Sacramento Field Office and CALTRANS jointly agree to these planning guidelines in order to improve the success of project mitigation within the jurisdiction of the two agencies.

CALTRANS and the SERVICE agree that establishment of proper success criteria, monitoring and maintenance of mitigation sites, and guarantees that financial resources are available to provide remedial site work and alternate mitigation, if necessary, are essential to the successful implementation of any mitigation plan. The purpose of these guidelines is to define CALTRANS and SERVICE roles and responsibilities in implementing mitigation projects and monitoring efforts to ensure that mitigation projects will fully offset project impacts for the life of the project. The planning guidelines apply to all CALTRANS projects within the jurisdiction of the Sacramento Field Office of the SERVICE.

A. DEFINITIONS

For the purposes of these guidelines, the following definitions apply:

"Mitigation Project" - A planned creation or restoration of native habitat for the purposes of compensating for project-related adverse effects on fish and wildlife habitats.

"Mitigation Site" - Location where mitigation project is implemented.

"Establishment Period" - The period of time, after plants are installed, necessary for them to adjust to and become established in the environment. The plants will be self-sustaining at the end of the establishment period.

"Monitoring" - Regularly scheduled evaluation of the status of a mitigation project.

"Success Criteria" - Standards against which mitigation project performance is compared to determine if the mitigation project has fully offset habitat losses caused by the project. A monitoring program to measure whether success criteria have been met will include many or all of the following: visual observations (plant health, evidence of disturbance, evidence of

natural reproduction, etc.), photographic documentation and quantitative field measurements of habitat variables (plant species diversity, basal area of trees/acre, stems/acre, percent cover of each vegetative strata, dbh, plant height), species diversity, wildlife censusing and species diversity, and hydrologic and water quality monitoring.

"Performance or Mitigation Goal" - The ultimate self-sustaining community or habitat desired. The goal will be described in terms a qualitative and quantitative description of the community or habitat type desired.

"Successful Project" - A project that has met or exceeded all success criteria or a project that by mutual agreement of CALTRANS and the SERVICE is expected to meet success criteria with little chance of failure.

"Natural Disasters" - Widespread, random occurrences not under the control of CALTRANS or the SERVICE that would substantially affect or alter the composition of the vegetation at the site and in surrounding areas. Such occurrences include severe drought, widespread disease or pest epidemic, fire or severe flood event.

"Maintenance Activities" - Routine predictable activities to aid the establishment and performance of the mitigation site. Such activities include weeding, repair of hardware, maintenance of water control structures, etc.

"Remedial Measures" - Actions taken to rectify localized or widespread failure of a mitigation project. Such actions include erosion control, re-grading, replanting, pest management, modification of hydrologic conditions on site, etc. In some cases, implementation of an alternative mitigation project may be required.

B. MONITORING

Monitoring is undertaken for a variety of reasons:

1) To determine whether plants have survived the initial planting, seeding or transplanting.

2) To determine when plants have successfully established.

3) To monitor growth rates and natural recruitment.

4) To identify unanticipated problems which may affect site performance.

5) To document wildlife usage.

6) To determine if the mitigation site is self-perpetuating.

7) Ultimately, to determine if the mitigation project has successfully offset project impacts to fish and wildlife.

It is recognized that the creation of different habitat types will vary in complexity and, thus, the length and complexity of monitoring will vary. At a minimum, monitoring must be conducted until all success criteria have been met or until it is mutually agreed by CALTRANS and the SERVICE that the site is trending towards success and the likelihood of unforeseen problems or of failure to achieve the mitigation goal is slight. The length and complexity of monitoring and maintenance efforts depends on several factors:

1) The degree of severity of the impact being mitigated.

2) The size of the mitigation site.

3) The degree to which the mitigation involves experimental or untested methods or design parameters.

4) The habitat types being created or restored.

Monitoring should begin with a "time-zero" report including an as-built drawing. As a general guideline, mitigation sites should be monitored annually for at least the first three to five years. Subsequently, monitoring may be reduced to every other year and ultimately to every five years if the mitigation project is meeting interim success criteria or if CALTRANS and the SERVICE agree that is is progressing satisfactorily. If substantial replanting, hydrologic modification or site alteration is required, the monitoring schedule would begin anew in those areas affected by such adjustments. Monitoring reports will be prepared and submitted to the SERVICE in each year monitoring is required.

C. SUCCESS CRITERIA

Success criteria shall be established to ensure the ultimate mitigation goal is reached and should include the following considerations:

1) Must be defined in relation to the habitat objectives established for the mitigation project.

2) Should be both quantitative and qualitative nature to allow for a clear determination that the mitigation goal has been or will be obtained.

3) Should be established for each habitat type to be created by the mitigation project by making "baseline" habitat variable and wildlife use measurements at the impact

sites. Alternatively, "model" sites could be used to establish success criteria if agreed to by both CALTRANS and the SERVICE.

4) Interim success criteria are necessary to assure that the mitigation project is progressing satisfactorily. Interim criteria will include, for example, such items as dates for mitigation project start-up, grading, plant installation, and completion, as well as vegetation parameters such as survival, plant cover, etc.

D. FINANCING OF MITIGATION PROJECTS

CALTRANS shall fund, or cause to be funded, the mitigation projects in full including design, land acquisition, construction, maintenance, monitoring and remedial measures. CALTRANS shall generally use funding available to CALTRANS for this work. The design, land acquisition, construction, maintenance and monitoring up through the plant establishment period shall generally be funded out of project funding committed to the highway project responsible for the impacts. Beyond that time period, maintenance, monitoring and remedial work will be funded out of post-project maintenance and monitoring funds and funds which are available to each District for discretionary projects from the Minor Program (up to the program ceiling of $300,000 per project.) If funds beyond that amount are required to ensure the success criteria are met or to implement an alternative mitigation project, CALTRANS shall undertake a new highway project authorization to fund such work. Alternate mitigation will need to include additional acreage to compensate for additional temporal loss of fish and wildlife values.

E. CALTRANS WILL:

1) Develop project specific success criteria (See Success Criteria definition) taking into account the factors listed in B. above. The success criteria shall be submitted to the SERVICE for concurrence.

2) Develop and implement a monitoring program incorporating all factors described in B. above. The monitoring program shall have the concurrence of the SERVICE.

3) Properly maintain mitigation site as natural habitat, or provide for the proper maintenance as natural habitat by an entity acceptable to the SERVICE, generally in perpetuity.

4) Alert the SERVICE immediately of any significant performance problems along with suggested remedial measures.

5) Carry out, or provide funding for, remedial measures.

6) In the event that remedial measures fail, meet with the SERVICE to determine alternative compensation measures, and implement all measures deemed necessary.

7) In the event of a natural disaster, meet with the SERVICE to determine what remedial actions should be taken to ensure recovery of the mitigation site to a natural functioning system.

F. THE SERVICE WILL:

1) Review the success criteria and monitoring strategy provided by CALTRANS and provide comments and recommendations, and concurrence where required.

2) Review and comment on any remedial measures provided by CALTRANS.

3) Assist CALTRANS in determining satisfactory alternative compensation in the event that remedial measures fail.

4) Assist CALTRANS in determining appropriate measures for site recovery following any natural disasters.

G. EFFECTIVE DATE, TERMINATION OR MODIFICATION

These planning guidelines will become effective when approved by the CALTRANS Chief of Environmental Analysis and the SERVICE Sacramento Field Supervisor and shall continue in force and effect until terminated by either party. These guidelines may be amended by mutual consent of the signatory parties.

For the CALIFORNIA DEPARTMENT OF TRANSPORTATION

E. W. Blackmer, Chief
Office of Environmental Analysis

10/29/91
Date

For the UNITED STATES FISH AND WILDLIFE SERVICE

Wayne S. White, Field Supervisor
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11/12/91
Date