

THE QUESTION OF ENHANCEMENT VS MITIGATION

Vernon J. Smith
California Wildlife Federation

The basic implication and meaning of the words seems simple enough to understand. For me, however, their application in relation to a development project, can get complicated. In fact, we conservationists, for the most part, feel that whenever the terms occur in a document, we are going to lose. We have--historically, we are--presently, we will--in the future. At least until a better system is developed to compensate for losses, the present utilization of the terms spell doom to many of the important values we are concerned with.

Since man first scratched a diversion for a trickle of river water. Since he first adversely impacted the natural pristine area he occupied, it would be difficult to accept anything but the word mitigation up to and until that time when historical optimum conditions were restored.

The question then arises as to the obligation or responsibility of the 'project.' How to establish a base-line--mitigate for losses beginning when?

To what extent do you mitigate when the direct impact area is but part of a large and extensive system.

Certainly the National Environmental Protection Act and the California Environmental Quality Act provide some mechanics for recognition of potential losses and benefits in a way better than before. It is better--but there is no guarantee as to what is legitimately a project obligation to protect, repair, or improve.

This question--that of enhancement vs. mitigation--was considered at length by the California Advisory Committee on Salmon and Steelhead in the preparation of their third report to the Director of the California Department of Fish and Game and the state legislature, and was addressed in the introduction. It states,

"For over a century, California's natural resources have been exploited with little regard for effective conservation. Salmon

and steelhead populations, like other resources, suffered. The gradual destruction of fisheries habitat in the name of progress was not dramatic enough to stimulate public indignation. Today, however, an aroused public is demanding that our fragile environment and its resources be protected and restored. Progress has been slow because the damage has been severe, and corrective measures are costly. We cannot condone a token investment in protection and rehabilitation programs. In the case of salmon and steelhead, our goal should be full mitigation for past resource damage. By this we mean the restoration of the runs to the full carrying capacity of our rivers and streams. If this objective is to be achieved, problems must be defined, solutions developed, funds made available for implementation and, where applicable, new legislation enacted. The purpose of this report then, is to point out some of the critical salmon and steelhead problems and suggest action that should be taken now."

The report is called "The Time Is Now," and should be ready for distribution by the end of February. We hope it will compliment our first and second reports, "An Environmental Tragedy" and "A Conservation Opportunity."

Somewhere, in all of this, the irreversible nature of development projects must be recognized. This is something that can never be covered under the terms we are discussing. What I mean is that any natural system, as bad as its condition might be, stands little chance of being rehabilitated or improved back to its pristine state. How do you cover this loss--for to be sure--it is generally cast in concrete.

The word enhance, when finally considered, must really apply to something specific. You can't make EVERYTHING better, something has to lose. So, whose criteria should be used to make the determinations and set the priorities for enhancement--or are there any acceptable guidelines available?

Now, I'm sure you consider what I have said somewhat rhetorical and possessing no real value. I agree! However, I just don't know how constructive commentary can be when built on such vague terms and their general use in reference to environmental alterations when broadly applied. All I know is that funds for mitigation are easier to obtain than enhancement funds, and that neither are ever adequate.

However, because of the difficulty for proponents or opponents to agree on the level of mitigation or enhancement, important projects are held up. The courts, in due course, make the ultimate decision, and this just isn't the way it SHOULD work.

I would suggest that an alternative method be established which could separate the concerns relating to mitigation, protection, and enhancement from the basic project proposal. A method that would recognize qualified, professional measurements and evaluation without emotion, industry or agency bias, or the abused adversary relationships that cost everyone time and money.

I most certainly am not qualified to suggest detailed or exact ways to accomplish this--I can only suggest the possibility that a comprehensive land use planning study and classification system might. A sophisticated and flexible data base with qualified measurements of ALL existing values on relatively small segments of our land. Measurements made by competent, professional people. This information, accumulated in a computerized data bank, could be 'searched' to provide the best kind of material, in a usable form, for the decision maker.

Without the pressure of vested interests, a decision maker can utilize this cold, hard data describing all the values of the proposed site and its relation to the system in which it is found.

To save the tremendous amounts of money involved in nondecision hang-ups for both the developer and the people of the state--to provide maximum utilization of good factual data--to place as much as possible of the decision making process on a nonemotional and business-like basis--to provide recognition of competent professional input--and to provide a base for gauging any alteration of the natural system, we need a change. We need a solution to the mitigation, protection, enhancement dilemma.

An example of this constructive and progressive concept is reflected in the same report of the California Advisory Committee on Salmon and Steelhead previously referred to:

LAND USE PLANNING

The Natural resources of the North Coast are as diverse as the demands on these resources. The complexity of this natural system coupled with the complexity of public demands requires exceedingly complicated management decisions. Land-use planning regulates the development and utilization of these natural resources in those areas that affect salmon and steelhead habitats. "Good" decisions are needed to regulate the land uses that conform to the capabilities of the land, while giving careful consideration to the balance of many ecological, social, and economic decision-making factors that are involved.

Decision makers cannot make "good" land-use planning decisions unless they have adequate facts and the ability to digest these facts into a form useful for decision-making. Neither the complexity of the natural system nor the conflicts in demand are going to lessen. The time to develop the capacity for good land-use planning is now.

Improving the capacity of streams to produce anadromous fish requires the reduction of sedimentation impacts upon fish habitats as well as further watershed and water quality protection. What do the decision makers need to accomplish this task?

Decision makers need a land classification system of environmental information for the North Coast area. This system identifies and characterizes certain components of a specific environment to be used as a base for better land-use planning. Components such as soils, vegetation, and geologic conditions need to be classified in order to help recognize sensitive or hazard areas that are increasing sediment yield in anadromous fish streams.

The cooperative State-Federal Soil Vegetation Survey has made a fine start in mapping the soils and their productive potential for about fifty percent of the North Coast area. This effort needs to be expanded to include other critical factors important for sediment control and to complete the job for the entire North Coast.

Decision makers need better information regarding the relationships between fish resources and their habitats. This includes information dealing with fish production levels and their relationship to stream sediment types and amounts. More complete records of fish run sizes are needed for the various drainages. One should also know the importance of various reaches of stream systems to the various life stages of anadromous fish. This points to the need of an anadromous fish stream classification system for proper stream and fish management programs. This would include management policies establishing stocking guidelines in streams that maintain native fish populations.

Decision makers need to know the effects of various levels of sediment input, and its resulting stream turbidity, on angling success. The value of the North Coast sport fisheries is dependent upon the presence of fish and the fishability of the streams.

In order to rehabilitate degraded stream habitats, decision makers need to know the engineering and economic feasibility of reducing sediment yields through engineering practices, cover plantings, and reconversion of grassland to timber.

Decision makers need an accurate continuing record of sediment input into individual stream systems in order to reevaluate and modify land-use planning decisions. This will require a sizable monitoring and study program for each drainage area. In addition, facts are needed to determine the capacity of streams to transport sediment and their capacity to cleanse themselves once deposition has occurred.

Decision makers need to accurately define habitat alterations that occur subsequent to logging operations. This is required to predict possible habitat damage on other watersheds following such operations and to avoid or modify harvesting practices where resulting damage is excessive. Extensive studies are needed in developing and improving timber harvesting practices to reduce the impact of man's activities on the watershed.

Above all, decision makers need to have available a sophisticated computer-based systems analysis capacity to utilize and integrate available land-use planning data. Without some computer based decision making capacity, the decision maker will be deluged by the complexity of the very facts he must have to make good decisions. The need to develop comprehensive land-use planning capability of this sort is felt by decision makers across the country. Development will require a massive nationwide task force effort, with capabilities tailored to meet specific North Coast conditions.

There is no alternative The time is NOW!

The best land-use planning will not improve the fishery resources unless "good plans" are put into practice. The decision maker must have the authority to put these plans into practice. Innovative land-use legislation must be enacted to complement land-use planning capabilities if the gap between planning and practice is to be bridged.

THE ISSUE

Land-use planning and practices of a total watershed have a direct impact upon the salmon and steelhead resources of the area.

ACTION NOW!

1. Appropriations of adequate federal and state general funds are needed to:
 - a. Expand and intensify the current cooperative State-Federal Soil Vegetation Survey to provide the resource information base needed for planning;
 - b. Expand and intensify studies between fish resources and their habitats and between stream turbidity and sport fishing success;
 - c. Fully fund studies to develop new and efficient stream rehabilitation practices;
 - d. Establish an adequate flow and sediment monitoring network on north coast streams;
 - e. Fully fund development of alternate logging methods; and
 - f. Fully fund an integrated State-Federal task force to develop systems analysis technology to enhance the decision making process for future land-use planning.

2. There should be established an advisory committee to the California State Legislature to develop and recommend new and innovative land-use legislation.
3. Full implementation of multipurpose management of federal and state lands must be provided by more adequate federal and state general funds.
4. The State must enact legislation to control the conversion of timber land to grassland. Such legislation should include additional methods of taxation or other economic means to control this conversion and therefore reduce the resulting degradation of watersheds. The Legislature must also appropriate adequate federal and state funds to continue the conversion of grassland to timber on federal and state lands.
5. The State Lands Commission must be provided with additional state general funds to comply with recently enacted legislation requiring the identification of state-owned spawning and nursery areas important to salmon and steelhead resources.
State legislation must be passed to acquire, protect, restore, and preserve critical spawning and nursery areas.
6. The California Division of Forestry must strictly enforce the State Forest Practices Act to control sediment production from specific timber harvesting operations. Funds for increased enforcement procedures should be supplied by additional state general funds. Through the State Forest Practices Act of 1973, the Coast District Forest Practices Rules Committee must provide for a more comprehensive timber harvesting plan. A more comprehensive plan would include the establishment of adequate protective streamside buffer zones or green strips along all anadromous fish streams and tributaries on private or state lands.
7. Although the State Forest Practices Act of 1973 was established to control degradation of the habitat from individual or localized potential sediment sources the State Legislature should provide more stringent controls in the Act for area-wide or watershed coordination to reduce total sediment production.
 - a. Federal and state general funds are required for adequate research into the annual allowable timber cut for an area or watershed.
 - b. Legislation is also needed to provide controls on locations and timing of logging operations for a given watershed on private or state lands.
8. The Forest Practices Act of 1973 should be amended to provide the Department of Fish and Game with the responsibility for timely review of timber harvesting plans. These additional nonreimbursable responsibilities must be funded from sources other than the Fish and Game Preservation Fund.
9. Congress and the Legislature should provide authority and funding to those agencies associated with land-use planning functions to develop increased inter-agency and interdepartmental cooperation in the planning process.
10. Land-use planning, habitat protection, nongame programs, rare and endangered species protection, and exotic species control are areas of Department involvement that are currently funded by the license buyers. It is essential that some way be found to provide general fund support for these Department programs.

In the future--we might expect a percentage of project cost allocated for mitigation, protection, and enhancement based upon the degree of impact on the natural system, and determined by the criteria set to utilize data from such a land use planning/classification system.

Oh, well, it's just a thought....