

BIOLOGICAL INFORMATION IN THE IMPACT ASSESSMENT PROCESS: A CONSULTANT'S POINT OF VIEW¹

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The National Environmental Policy Act of 1969, which is the legislation underlying all federal impact assessments, requires a detailed statement by the responsible federal official on the "environmental impact of the proposed action." Other relevant phases in Section 102 (2)(C) of the Act refer to the "human environment," "man's environment," "long-term productivity," and "resources."

Biological information is necessary to describe man's environment, predict certain aspects of the potential impact of a proposed action, evaluate certain components of productivity, and to evaluate the commitments of certain resources. Such information comprises that body of original and secondary facts which deal directly with living organisms. The organisms may be terrestrial, aquatic, and/or amphibious. Data on the physical and chemical characteristics of the environment are not included, although knowledge of these characteristics obviously is useful to the interpretation of biological information.

Most environmental assessments, environmental impact statements, and similar analyses are conducted by or for a governmental agency or for an applicant who seeks to obtain a permit, license or other authorization from an agency. The consultant who will be responsible for the biological assessment may be contracted by:

- a) An agency that is preparing a report on one of its own projects
- b) An applicant who must submit a report to a regulatory agency
- c) An agency that will prepare an impact statement for a project proposed by an applicant.

Furthermore, the consultant may be contracted to prepare the entire environmental report, or he may be contracted to prepare, either in part or whole, only the biological aspects of the environmental report. In some cases, a biological consultant may be asked only to prepare an inventory of the site, or a description of the "existing environment." The applicant or his prime contractor then will assess the potential effects of the proposed project on the biological resources.

The scope and level of detail of the biological analyses are established by the agency in consultation with the applicant. Most agencies, whether they are federal, state, or local, have prepared guidelines for environmental impact assessments. Because the geographic area that is under the jurisdiction of a particular agency usually is diverse, and because the range of projects that may be reviewed is broad, the guidelines must be general enough to apply to any combination of site and project types. Furthermore, guidelines usually are drafted by persons with technical expertise, although not necessarily by trained biologists, and then rewritten by legal experts. In final form, the guidelines typically describe requirements only in outline form.

If the consultant is contracted to prepare the entire assessment, he normally will participate in discussions with the agency to establish requirements for the project. Where the biologist is a subcontractor, however, he may have little or no direct contact with the agency and probably will be supplied with a plan of study negotiated by a prime contractor or the applicant. The plan of study usually will not be detailed, but the level of effort available will be determined by the breadth of the scope of the study and the allocated budget.

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In regard to biological information, many guidelines refer to such broad, and often overlapping, categories as "plants, animals, and aquatic biota," "birds, animals, reptiles, and amphibians," and "trees, shrubs, and plants." Only a few guidelines specify on-site investigations, and most of these do not identify the level of effort required.

The current vagueness of guidelines doubtlessly reflects the relatively recent origin of the formal environmental assessment process and the need to issue guidance that will provide maximum flexibility to the staff of the agency to tailor requirements to each particular combination of site and project. Resistant sites, particularly those that have been intensely used and altered in the past, logically should require less biological effort than would be devoted to sensitive, pristine natural areas proposed for similar projects. An area proposed for use for a minor project, such as a boardwalk to provide access to the water, also should require less biological study than if it were proposed for filling.

The responsibility for prescribing the specific plan of study for a particular project resides in the agency staff, but it also must be shared by the consultant. If the agency appears to ask for an inordinate effort or superfluous detail, the consultant is obligated ethically to point out the apparent excesses and to reduce the financial obligation of his client, which may be the agency or an applicant. In contrast, if the consultant believes the agency has omitted a requirement which may be essential to provide information to identify important biological resources or to assess the proposed project adequately, he is obligated ethically to present his opinion to his client. In such a case, the consultant must substantiate his opinion carefully, indicate to the client any delays that could result during project review, and any potential threat to important biotic resources, to human health, and/or to the success of the project if the data are not collected.

In my opinion, every project site should

be inspected by competent field biologists. The dates of their inspections and the methods employed should be described in the assessment report. If, in their best professional opinions, the site does not support any significant biological resources, this fact should be stated and their observations should be summarized to provide basic documentation.

Sites which are judged to support significant biological resources should be inventoried in greater detail during the appropriate seasons to identify and evaluate the populations present. Spring, summer, and autumn inspections are appropriate for most areas. Winter inspections also are necessary for sites which may support wintering waterfowl, provide wintering yards or feeding areas, or provide sites for aggregations of hibernators.

Productivity, or peak standing crop as an index to productivity, is widely recognized as a relevant tool for comparisons of natural vegetation. Herbaceous vegetation types are most readily sampled for this characteristic, although basal area or volume measurements provide similar data for forest stand comparisons. Particularly in assessments of wetland resources, on-site sampling should be included to estimate the relative productivity of vegetation types on the project site. This information can be of value in determining site alternatives and in the preparation of management plans to mitigate unavoidable adverse impacts.

Public review of environmental assessments is a vital step in the process. Although agencies and consultants have developed considerable abilities to evaluate the existing resources of a site and to predict the effects of a project on those resources, other knowledge and other points of view may reveal important factors that were not evaluated or were evaluated inadequately. Biologists with long familiarity with an area often can provide information not evident from a superficial inspection or even from an intensive study limited to a single year.