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Authors

Wagner, Paul J.
Oman, Leni

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NATURE OF ROADS, INDUCED GROWTH, AND THE ENDANGERED SPECIES ACT: A PRACTICAL APPROACH FOR ADDRESSING THE INDIRECT EFFECTS OF TRANSPORTATION PROJECTS IN ESA CONSULTATIONS

Paul J. Wagner, Biology Program Manager, Washington State Dept of Transportation (WSDOT),
Environmental Affairs Office, PO Box 47331, Olympia WA 98504-7331
Phone: 360-705-7406, Fax: 360-705-6833, Email: wagnerp@wsdot.wa.gov

Leni Oman, Planning and Development Branch Manager, Washington State
Dept of Transportation (WSDOT), Environmental Affairs Office,
PO Box 47331, Olympia WA 98504-7331

Abstract

The relationship between a proposed transportation project and resulting land use changes must be analyzed to fully assess the effects of the project under section 7 consultation for the Endangered Species Act (ESA). This can be a complex, confusing and even controversial task. This issue becomes increasingly important as expanding human populations place more pressure on wild species and habitats; as more species are listed in developing areas and as transportation agencies move toward earlier coordination on environmental issues in project planning.

Develop an approach for addressing indirect effects of transportation projects in ESA consultations. Under the ESA federal agencies, must consult with the National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (USFWS) to determine the effects of federally funded project actions on threatened and endangered species. The consultation process includes an analysis of direct and indirect effects of the action as well as the effects of any interrelated or interdependent activities on listed species.

According to ESA definitions, *direct effects* occur at or very close to the time of the action itself. Examples could include construction noise disturbance, loss of habitat, or sedimentation that results from construction activity. *Indirect effects* are those that are caused by the action and are later in time (after the action is completed) but still reasonably certain to occur. General examples include, changes to ecological systems such as predator/prey relationships, long-term habitat changes, or anticipated changes in human activities including changes in land use.

Indirect effects for transportation projects can include changes in land use such as the development of undeveloped areas, when that change is induced by the action or can reasonably be expected to result from the action, which is the subject of consultation

Attention has often focused on the direct effects of habitat impacts or construction disturbance, but, questions also may arise regarding the relationship of a transportation project to land development in nearby areas and whether such development is considered an indirect effect as defined under the ESA. The causal relationships are not always plain and can vary with different circumstances. New roads may provide access to new areas and encourage land use change. At the same time, in some cases rapid urbanization can occur with little change to road infrastructure, though congestion relief projects may be triggered after the fact. Determining how to address these different situations is critical to effectively conducting ESA consultations on transportation projects.

WSDOT has coordinated an effort to develop guidance for addressing this issue. This document provides general guidance and a method for reviewing and analyzing the indirect effects relationship between transportation and land use development during the ESA consultation process. This approach help to identify 1) the types of projects which may lead to indirect effects, 2) when and how indirect effects may result, and 3) how these relate to determining the overall effect of the project on listed species. This approach has been developed through extensive coordination between WSDOT, NMFS, USFWS, as well as local and state land use planning and transportation organizations. This method is now being used in Washington State.