Title
Tackling fish protection in transportation projects in the Pacific Northwest

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Publication Date
2001-09-24
Problem Statement
Providing adequate transportation infrastructure and protecting fisheries are two objectives with acknowledged social and economical benefits, but are often perceived to be incompatible in transportation projects.

Study Objective
By examining several transportation projects in the Pacific Northwest, lessons are learned from planning efforts, best management practices, and mitigation that protect fisheries.

Methodology
Case studies of projects that range in size, context and purpose were analyzed to assess site-specific fisheries issues and the approach taken to avoid, minimize or mitigate potential impacts.

Case Study Findings

Twin Creeks TOD, Central Point, OR
The developer building a transit-oriented development wants to increase the utility and beauty of a channelized creek and enhance fish habitat.

Fisheries Issues
- Existing run of steelhead and past runs of coho.
- Restoration of degraded creek to proper function requires major channel reconstruction.

Approach
- Let optimal design for creek channel and habitat function dictate where development occurs.

Lessons Learned
- High quality, functioning ecosystems are a valuable amenity to developments.
- Let appropriate environmental design dictate the design of the development.

Fiber Optic Cable, Issaquah, WA
A fiber optics line over the Cascade Mountains on a degraded Forest Service Road had 11 creek crossings.

Fisheries Issue
- 11 culverts were barriers to fish migration.
- Road causing sedimentation of a fish-bearing river.

Approach
- Agreement with Forest Service included replacing culverts to allow fish passage and upgrading road.

Lessons Learned
- Fiber optic project benefited fisheries and transportation by partnering with Forest Service.
SR-500 Intersection Removal, Vancouver, WA
A bridge over a small salmon stream will be widened to reduce accident rates.

Fisheries Issue
- Designated Critical Habitat for chum, chinook, coho salmon, steelhead and bull trout.
- Bridge widening would remove existing riparian vegetation near best spawning area in system.

Approach
- Early discussions with NMFS and USFWS during conceptual design to identify fish protection tactics.

Lessons Learned
- Considering fisheries issues early in the process avoided design changes later.
- Regulatory agencies have a stake in project design and are familiar with it prior to permit application.

Jordan Road Bridge Repair, Madras, OR
Deck replacement on two narrow bridges over Lake Billy Chinook, a heavily used recreational area.

Fisheries Issues
- Water quality for a world-class bull trout fishery.
- Recreational and local traffic cannot be obstructed.

Approach
- Use state of the art BMP’s to prevent spills into lake.
- Develop innovative construction and traffic plan to allow access, particularly on summer weekends.

Lessons Learned
- Fisheries protection must not preempt local concerns.
- Public opinion may severely restrict the amount of protection afforded.

SR-35 Columbia River Crossing, Hood River, OR
Improve Columbia River crossing, by building a new bridge with or without removing the existing bridge.

Fisheries Issues
- Designated Critical Habitat for salmon and trout.
- Bridge design impacts fishery predation.
- In-water work will require major minimization and mitigation measures.

Approach
- Utilize environmental streamlining process to incorporate early involvement of agencies.

Lessons Learned
- Agencies recommend that fish issues be elevated to the same level as transportation and engineering issues in the early decision-making project stages.

“Tackle Box” of Recommended Practices
To successfully achieve seemingly contradictory objectives to protect fisheries while meeting transportation needs, key practices are recommended:
- Engage agencies in early project planning.
- Consider protection and enhancement of fish habitat very early in project design.
- Invest in habitat enhancement.
Early planning, design and resource agency involvement are cost effective and time efficient strategies. Benefits from agency coordination and wise investment in habitat enhancement reconcile resource protection and transportation development objectives.

Biographical Sketches: Doug Corkran, Senior Environmental Planner, Parsons Brinckerhoff – with a background in environmental planning, fisheries biology, and regulatory permitting, Doug has over 10 years experience in managing environmental projects. He has experience conducting resource surveys, writing NEPA documents and Biological Assessments, designing mitigation measures and working with federal, state and local agencies for land use and environmental permitting.

Angela Findley, Senior Environmental Planner, Parsons Brinckerhoff - has over seven years of experience that includes preparing NEPA documents; obtaining federal, state and local environmental permits; facilitating permit compliance; developing client / agency relationships; and integrating environmental policy and public involvement. Her background is in forestry policy, socioeconomics and conflict management.