Mitigation Sequencing

Mitigation sequencing is a multilevel process that is used to guide wetland mitigation decisions and protect wetlands. The mitigation sequence spans the life of a transportation project, from planning, through development, and construction into long-term stewardship. The definition of sequencing varies somewhat, but is required by:

- Governor's Executive Order 90-04 requires that Washington state agencies use the definition of "mitigation". A short version of this definition is: **Avoid > Minimize > Rectify > Reduce > Compensate > Monitor.**
- CEQ defines "mitigation" as a sequence in Section 1508.20 of NEPA. This definition does not include monitoring the impact.
- WAC 197-11-768 also defines "mitigation" for SEPA. This definition includes the elements required by EO 90-04.
- To obtain a permit from the Corps to fill wetlands, the Section 404(b)(1) Guidelines must be met. These guidelines require the applicant to take all appropriate and practicable steps to **avoid** and **minimize** adverse impacts to waters of the US. Unavoidable impacts require compensatory mitigation to comply with the Section 404(b)(1) Guidelines.
- WSDOT's Wetlands Protection and Preservation Policy specifies that employees must incorporate wetland protection into all phases of a project starting with system and corridor planning and ending with long-term stewardship. Project staff are required to consider ways to make as little impact to wetlands as possible in all stages of the project. All unavoidable impacts to wetlands and other "waters" require compensatory mitigation. Any relevant and reasonable mitigation measures that could improve the project must be identified.

For more information on how the mitigation sequence is incorporated into each phase of a WSDOT project see Wetlands and the Transportation Decision-Making Process (pdf 71 kb). During every phase of project development through construction, each step in the mitigation sequence must be considered before proceeding to the next. This means that opportunities to avoid an impact must be evaluated before compensation for the impact is considered. Some of these sequencing activities may not be appropriate for some projects. **Avoiding Impacts**

Avoiding impacts is the most beneficial to the environment, and it prevents delays for permits and costs for mitigation.

1. Mitigation sequencing may start in the **Transportation Planning** stage of the decision-making process with the development of alternatives. Otherwise reasonable options may be removed from further consideration at this stage because there are other reasonable alternatives that **avoid** large wetland impacts. Advance mitigation options are considered if appropriate and available.
2. **During Project Scoping** WSDOT identifies and evaluates alternative solutions to find the most cost effective and overall environmentally acceptable solution to a transportation need. WSDOT prepares an Environmental Review Summary to identify

potential environmental impacts, any proposed mitigation, environmental documentation requirements, and environmental permits. Early mitigation options are considered and implemented if appropriate and feasible.

- Additional information on WSDOT's policies during this stage is available in the Environmental Procedures Manual Chapter 300.

Minimizing Impacts

3. In implementing NEPA, Council on Environmental Quality (CEQ) regulations require that mitigation for impacts be considered whether or not the impacts are significant. Agencies are required to identify and include in the action all relevant and reasonable mitigation measures that could improve the action. In the Design and Environmental Review stage, the NEPA process develops and analyses alternative project footprints that **avoid** and **minimize** wetland impacts. As the design is advanced, any additional opportunities to **avoid** and **minimize** impacts must be considered. **Compensation** must be included as an integral part of the alternatives development and analysis process. In considering all disciplines, the least environmentally damaging practicable alternative is selected.
    - Additional information on WSDOT's policies during this stage is available in the Environmental Procedures Manual Chapter 400.
    - Mitigation measures are addressed in question 19a of the "Forty Most Asked Questions and Answers on the CEQ Regulations".
4. During the Environmental Permitting stage Part 7 of the JARPA application requires a very similar mitigation sequence Corps of Engineers in Instruction Form B. In the permitting phase, as the design is nearing 60%, affirmative steps to **minimize** impacts include **design modifications** such as steepening slopes, building retaining walls instead of using the default road prism slope, and asymmetrical widening on the non-wetland side. A **compensatory mitigation** plan for a specific site is submitted with the permit application for wetland impacts. Permit terms and conditions are included in contract documents.
    - Additional information on WSDOT's policies during this stage is available in the Environmental Procedures Manual Chapter 500.

Rectifying and Compensating for Impacts

5. Permitted temporary impacts are **rectified** by re-planting when construction activities have ceased in that area. .

    During the construction phase, **compensatory** mitigation sites are constructed and monitored to insure they provide substitute resources for those lost. The mitigation sequence ends when the U.S. Army Corps of Engineers and Washington State Department of Ecology provide written agreement that the compensatory wetland mitigation site has met its permit requirements.

Reducing the Impact Over Time

Usually, this does not apply to wetlands and WSDOT projects.

Monitoring the Impact

6. Under SEPA and Executive Order 90-04 (pdf 27 kb), compliance assurance **monitoring** is conducted to insure that unpermitted impacts are avoided. Appropriate corrective measures are implemented when needed.