

Mitigation for New Residential Marine Overwater Structures

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This guidance, prepared by WDFW, describes an approach to ensure hydraulic projects comply with applicable regulations in WAC 220-660. Habitat Biologists should consult with their supervisor before deviating from this guidance.

What is mitigation?

"Mitigation" means sequentially avoiding impacts, minimizing impacts, and compensating for remaining unavoidable impacts to fish life or habitat that supports fish life (WAC 220-660-030(100)). Project proponents are required to take all appropriate and practicable measures to avoid and minimize adverse impacts to fish life before compensating for remaining impacts.

What is avoidance?

Avoidance is the first tier in the mitigation hierarchy. Avoidance ensures that all or part of the design and construction has no direct or indirect adverse impacts on fish, shellfish and their habitats. Actions must avoid both direct and indirect impacts to fish life to be considered fully mitigated at this tier. Direct loss is the immediate and permanent removal or alteration of habitat, or habitat potential, by a project, or fish mortality caused by the project. Indirect loss of habitat occurs later in time and further away from the project location than a direct loss of habitat, but is still reasonably foreseeable and attributable to the project.

An impact is unavoidable when there is no appropriate and practicable alternative to the proposed design and construction methods to prevent the adverse impact.

Generalized examples of avoidance include:

- Selecting a location and/or design so specific adverse impacts to saltwater habitat will not occur.
- Constructing the structure with equipment operated from a floating barge to avoid equipment operating on the beach.
- Adding structural features that avoid adverse impacts to saltwater habitats. This could include installing float stops on a structure to prevent the structure from grounding on a shellfish bed or constructing a pier to span a forage fish spawning beach.

What is minimization?

Minimizing impacts, together with rectifying and reducing impacts over time, is the second tier in the mitigation hierarchy. "Minimization" is the reduction of the intensity of the impact to the maximum extent appropriate and practicable. Generalized examples of minimization include:

- Reducing the overall special extent of the overwater structure and/or the duration of the construction.
- Retaining key habitat features within the project area.

- Locating the float in the deepest water practicable¹.
- Adhering to the authorized work times.
- Constructing a pier, ramp and float to fully span forage fish spawning areas, and intertidal and shallow subtidal areas used by some juvenile salmonid species as refugia.
- Installing grating to reduce potential shading effects.
- Restoring areas disturbed by construction.

What is compensatory mitigation?

“Compensatory mitigation” is the restoration, enhancement, creation, or preservation of aquatic resources² to compensate for adverse impacts that remain after all appropriate and practicable avoidance and minimization has been achieved on-site. This is the third and final tier in the mitigation hierarchy. Compensation offsets project-induced losses to fish life and habitat, but cannot restore the lost fish resource³.

There are two-types of compensatory mitigation: in-kind and out-of-kind. In-kind mitigation involves providing replacement habitat that is physically and functionally the same as, or similar to, the habitat lost. Out-of-kind compensation provides substitute resources that are physically and functionally different from the habitat lost. While WDFW prefers in-kind/on-site mitigation, the department is required to consider off-site mitigation when it is more cost-effective and provides the most benefit to fish life (RCW 77.55.241, RCW 77.55.251, and RCW 90.74.020). Generalized examples of compensatory mitigation include:

- Enhancing the habitat of the existing area.
- Restoring or rehabilitating degraded habitats not disturbed by construction.
- Creating habitat in an area where none currently exists.
- Purchasing an area for preservation.

When is compensatory mitigation likely required?

New overwater structures that cause habitat function loss, use unproven techniques, cause loss of habitat quantity, or result in different less important⁴ habitat function require compensatory mitigation.

A direct loss of habitat is the immediate and permanent removal or alteration of habitat, or habitat potential, by a project. An indirect loss of habitat occurs later in time or farther away from the project location than direct loss of habitat, but is still reasonably foreseeable and attributable.

¹ Practicable means available and capable of being done after taking into consideration existing technology, logistics, and costs in light of a mitigations measure’s beneficial value and the proposed hydraulic project’s overall purpose, scope and scale.

² “Resources” means fish and their habitat for which WDFW has the authority to require the mitigation of impacts from a proposed hydraulic project.

³ Compensatory mitigation must compensate for temporal losses, uncertainty of performance, loss of habitat quantity by habitat type, and differences in habitat functions and value.

⁴ Habitat importance is an estimate of ecologically important function and the relative value of the hydraulic project site within the watershed.

A direct impact example is the immediate and permanent loss of benthic habitat from piling placement. If this loss occurs in habitat used by forage fish for spawning then compensatory mitigation should be required.

An example of an indirect impact is the loss of eelgrass from shading and from physical disturbance by shell hash. If the overwater structure could not be located to avoid eelgrass impacts, then compensatory mitigation should be required.

A monitoring and contingency plan is an option in those instances when there is a risk of an attributable indirect loss but it's not quantifiable. If the monitoring shows an indirect loss then the permittee would carry out the compensatory mitigation identified in the contingency plan.

When compensatory mitigation is likely not required?

- In general, WDFW does not require mitigation for:
 - Past impacts from previously hydraulic projects.
 - Cumulative impacts.⁵
- Repair and replacement of an overwater structure located in the existing footprint provided:
 - Replacement structure is the same size and configuration as the structure it's replacing.
 - Materials and construction complies with WAC 220-660-380 (e.g. grating, enclosed flotation, construction best management practices).
 - In-water construction complies with the appropriate authorized work times.
- Replacement or modification of an overwater structure in a different footprint provided:
 - Replacement or modified structure results in a net gain or at a minimum no-net-loss of saltwater habitat compared to the existing baseline.
 - Materials and construction comply with WAC 220-660-380.
 - In-water construction complies with the appropriate authorized work times.

⁵ Cumulative impacts, can be defined as changes to the environment caused by the combined impact of past, present and future human activities and natural processes. Cumulative impacts to the environment are the result of multiple activities whose individual direct impacts may be relatively minor but in combination with others result in significant environmental effects. The multiple impacts of different activities may have an additive, synergistic or antagonistic effect on one another and with natural processes. Cumulative impacts can be difficult to predict and manage due to inadequate environmental baseline data, complex ecological processes, and the large scale at which human development occurs.