



Oregon City Summary Guidance for Floodplain Mitigation Assessment

Applicants for a Development Permit in the Flood Hazard Overlay District can use this document for a high-level summary but should consult FEMA's published document: *Floodplain Mitigation Assessment Regional Guidance for Oregon Draft Update 2024* for specific details.

What is a Mitigation Assessment?

A Mitigation Assessment or MA must achieve three goals:

1. Describe the existing site conditions where the proposed development and impacts are expected to occur
2. Describes the project and its impacts to the floodplain functions within the Special Flood Hazard Area.
3. Identify mitigation required to achieve no net loss.

The intention of an MA is to demonstrate compliance with the Endangered Species Act (ESA) and the Pre-Implementation Compliance Measures requirements.

ESA compliance measures require *No Net Loss* of three (3) floodplain functions essential to the survival of ESA-listed species under the jurisdiction of National Marine Fisheries Service within the implementation area, the establishment of riparian buffer zones (RBZ) measured from the Ordinary High-Water Mark (OHWM) of a fresh waterbody and the Mean Higher -High Waterline (MHHW) from a tidally-influenced waterbody, and beneficial gain requirement for development that is located within the RBZ.

What is the objective of a MA?

Ensure *no net loss* to ESA-listed species and their designated critical habitats by protecting those species and the natural functions of their designated critical habitats.

What does *No Net Loss* mean?

No net loss is defined as any development action resulting in negative impacts to one or more key floodplain functions that are then mitigated or avoided to offset said impacts.

No net loss is primarily achieved through mitigation, but practicing avoidance and minimization can lessen the impact of development and the amount of mitigation required to achieve compliance.

What are the Floodplain functions and how are they measured?

No net loss applies to three floodplain functions: floodplain storage, water quality, Vegetation.

Floodplain Function	Proxy (<i>No net loss</i>)	Mitigates Against
Floodplain Storage	Undeveloped space	Developed Space
Water Quality	Pervious surfaces	Impervious surface
Vegetation	Trees	Trees Removed

Floodplain functions and proxies per FEMA guidance document

When is a MA Required?

Whenever a development project is proposed in the Special Flood Hazard Area which is included in Oregon City's Flood Management Overlay District. Under the Permit-by-Permit approach the property owner must obtain a permit for development within the floodplain.

The MA must identify existing site conditions before development occurs, describes the impact of the proposed development on existing floodplain and instream habitat functions, and identify mitigation required to achieve no net loss.

No MA Required when:

1. Projects are listed as exempt in the BiOp for the NFIP in Oregon. These projects must be listed in the City's ordinance
2. Project and project actions that are covered under separate consultations under Section 4(d), 7, or 10, of the ESA.

3. Project under consideration that has already been covered by a full programmatic habitat assessment of all current and reasonable foreseeable future conditions throughout a jurisdiction.
4. Applicants that meet 2 or 3 above must provide proof of coverage.

What projects and activities are exempt from *No Net Loss* standards?

1. Normal Maintenance of structures, such as re-roofing and replacing siding, provide there is no change in the footprint or expansion of the roof of the structure;
2. Normal street, sidewalk, and road maintenance, including filling potholes, repaving, and installing signs and traffic signals, that does not alter contours, use, or alter culverts and is less than six inches above grade. Activities exempt do not include expansion of paved areas;
3. Routine maintenance of landscaping that does not involve grading, excavation, or filling;
4. Routine agricultural practices such as tilling, plowing, harvesting, soil amendments, and ditch cleaning that does not alter the ditch configuration provided the spoils are removed from special flood hazard area or tilled into fields as a soil amendment;
5. Routine silviculture practices (harvesting of trees), including hazardous fuels reduction and hazard tree removal as long as root balls are left in place;
6. Removal of noxious weeds and hazard trees, and replacement of non-native vegetation with native vegetation;
7. Normal maintenance of above ground utilities and facilities, such as replacing downed power lines and utility poles provided there is no net change in footprint;
8. Normal maintenance of a levee or other flood control facility prescribed in the operations and maintenance plan for the levee or flood control facility. Normal maintenance does not include repair from flood damage, expansion of the prism, expansion of the face or toe or addition of protection on the face or toe with rock armor.
9. Habitat restoration activities
10. Pre-Emptive removal of documented susceptible trees to manage the spread of invasive species.

Who can prepare and review the Mitigation Assessment?

A qualified individual or company may prepare the Mitigation Assessment.

Generally a qualified professional shall have a minimum of a bachelor's degree in wildlife or fisheries habitat biology, or a related degree in a biological field from

an accredited college or university with a minimum of four years' experience as a practicing fish or wildlife habitat biologist. (*FEMA Floodplain Mitigation Assessment Regional Guidance for Oregon Draft update 2024*)

Steps required to conduct an assessment:

Step 1: Describe the Project Area

Project area is the portion of property, properties, easements, or right-of-way where all project-related development activities are planned to occur. A description should include a narrative and a map. Information needed:

1. Location
2. Water Resource- watershed name based on the 5th field watershed
3. Regulatory Areas and other Site Conditions- such as the regulatory floodway or riparian buffer zone

See *Floodplain Mitigation Assessment Regional Guidance for Oregon Draft update 2024* for complete list of required information.

Step 2: Describe Project Area's Habitat

The project area's habitat is described in relation to three flood plain functions: floodplain storage, water quality, and vegetation and their respective proxies of undeveloped space, impervious surface, and trees. Information needed:

1. Floodplain Functions
2. Protected Species Identification

See *Floodplain Mitigation Assessment Regional Guidance for Oregon Draft update 2024* for complete list of required information.

Step 3: Describe the Project

Two key parts to include are the 1) final project i.e. what the area will look like and how it will be used when the project is completed; 2) the construction process that will be followed to complete the project.

Measures taken by the applicant to avoid, minimize, replace, or compensate for degradation to the habitat functions must be described in enough detail to allow assessment of all impacts of the proposed actions.

See *Floodplain Mitigation Assessment Regional Guidance for Oregon Draft update 2024* for complete list of required information.

Step 4: Assess the Environmental Effects

The 2016 NMFS BiOp has determined that development actions in the SFHA is likely to adversely affect the 16-ESA listed species, the Southern Resident killer whale, and essential fish habitat. Therefore, no further effects determinations are required, and it is assumed that mitigation will be required for development to achieve *no net loss* of key floodplain functions. Information needed:

1. *No Net Loss* Determination
2. Preparing the Mitigation Plan

See *Floodplain Mitigation Assessment Regional Guidance for Oregon Draft update 2024* for complete list of required information.

Step 5: Review Mitigation Alternatives

There are three major types of mitigation approaches to rectify an adverse effect. In descending order of preference and effectiveness they are avoidance, minimization, and mitigation. Mitigation is the only approach required to achieve *no net loss* and ESA compliance, but avoidance and minimization will help make the mitigation required to achieve this easier.

1. Avoidance- achieved through zoning
2. Minimization- applicant should address if minimization efforts are applicable
 - a. If the entire project cannot avoid some development within the SFHA, it may be able to minimize the physical area and magnitude of impacts on the three floodplain functions.
3. Mitigation- must be conducted for any loss to floodplain storage, water quality, and riparian vegetation in the SFHA.
 - a. This is measured through an increase in fill or structures below the Base Flood Elevation (BFE), an increase in impervious surfaces, and the removal of trees 6 inches dbh or higher.
 - b. *No net loss* of natural floodplain functions can be achieved through the ratios below:

Basic Mitigate Ratios	Unoccupied Space (ft³)	Pervious Surface (ft²)	Trees (6" < dbh ≤ 20")	Trees (20" < dbh ≤ 39")	Trees (39" < dbh)
Floodway and/or RBZ	2:1	1:1	3:1	5:1	6:1
RBZ-Fringe	1.5:1	1:1	2:1	4:1	5:1
Mitigation multipliers					
Mitigation onsite to Mitigation offsite, same reach	100%	100%	100%	100%	100%
Mitigation onsite to Mitigation offsite, different reach, same watershed (5th)	200%	200%	200%	200%	200%

Table 2: Mitigation Ratios Required to Achieve No Net Loss

Applicants should describe how the project will:

- Mitigate to create undeveloped space
- Mitigate against impervious surfaces added
- Mitigate for trees removed
- Mitigate in the Riparian Buffer Zone

See *Floodplain Mitigation Assessment Regional Guidance for Oregon Draft update 2024* for complete list of required information.

Step 6: Prepare the Mitigation Assessment

The objective of the Mitigation Assessment is to assure that actions are taken to sufficiently and appropriately mitigate for negative impacts on the ESA-listed populations and the natural functions and processes that support their habitats. The mitigation plan needs to provide sufficient detail to demonstrate how this will be done to achieve *No Net Loss*.

An example outline of a Mitigation Assessment:

1. Introduction, background, objectives
2. The project area and existing site conditions (See Step 1)
3. The project area's habitat as related to the three floodplain functions (See Step 2)

4. Project description (See Step 3)
5. Impact on habitat and ESA-listed species (See Step 4)
6. Mitigation measures applied to achieve no net loss (See Step 5)

See *Floodplain Mitigation Assessment Regional Guidance for Oregon Draft update 2024* for complete list of required information.

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