

Incorporating Habitat and Species Considerations into Floodplain Management



FEMA

Association of Montana Floodplain Managers
24th Annual Conference
February 29th, 2024

Agenda

- National Flood Insurance Program (NFIP) Background
- Federal Endangered Species Act (ESA) Requirements
- Best Floodplain Management Practices for Species and Habitat



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Why does a flood risk reduction and insurance program care about protecting natural floodplain functions?

- Wetlands and other important ecological areas – such as **critical habitat for listed species** – are often found in floodplains and directly affect the quality of the local environment
- Natural floodplains provide numerous **flood risk reduction benefits by slowing runoff and storing flood water**, as well as considerable economic, social, and environmental values that are often overlooked when local land use decisions are made
- Federal Regulations require it
- Lawsuits



Photo credit: FEMA OEHP media library

Permits are Required for Development

All development in the SFHA requires a permit.

Definition of Development (44 CFR 59.1):

- **Any manmade change to improved or unimproved real estate**, including, but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

Communities must ensure they have a **process in place** to permit all development in the SFHA.

Ensuring State and Federal permits are obtained is required by the NFIP [44 CFR 60.3(a)(2)]

Community Name Floodplain Development Permit (See Terms & Conditions) Department Name Contact Information		Issue Date:	Expiration Date:
		Permit #	*Permit becomes void if there are changes to the effective Floodplain Hazard Map

The Floodplain Development Permit is the mechanism by which our community evaluates any and all impacts of activities proposed within our regulated floodplains. All activities must be in compliance with the Floodplain Damage Prevention Ordinance of the presiding jurisdiction, whether local, regional or statewide. The National Flood Insurance Program provides flood insurance to individuals at much lower premiums than could otherwise be purchased through private insurers, and makes certain federal funds are available to communities. In order for citizens to be eligible for the national flood insurance rates, or for communities to receive certain kinds of federal funds, the community must agree to meet minimum floodplain standards. This application packet is a tool to ensure that the activities in our community comply with the Floodplain Damage Prevention Ordinance.


Any party undertaking development within a designated floodplain must obtain a floodplain development permit prior to the work commencing. FEMA defines development in Title 44 of the Code of Federal Regulations part 59.1 as: *Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.* Other human activities that are considered development include but are not limited to: alterations of a structure through additions, demolition and remodeling, fences, retaining walls, moving/placement of remanufactured or mobile homes, campgrounds, storage of equipment, vehicles or materials (storage yards, salvage yards).

1 General Provision of the Floodplain Development Permit Terms

1. No work may start until a permit has been issued.
2. The permit may be revoked if:
 - a. Any false statements are made herein;
 - b. The effective Flood Insurance Rate Map has been revised;
 - c. The work is not done in accordance with the Floodplain Damage Prevention Ordinance of the presiding jurisdiction or other local, state and federal regulatory requirements.
 - d. The work is different than what is described and submitted to the community as part of the Floodplain Development Permit application.
3. If revoked, all work must cease until permit is reissued.
 - a. If the permit cannot be reissued, applicant acknowledges that they will be responsible to correct the issue which may require removal of any development that may have occurred.
4. Development shall not be used or occupied until the project has received final inspection, a final elevation and approval by the community.
5. The permit will expire if no work has commenced within 3 months of issuance and by the expiration date noted on the permit.
6. Applicant is hereby informed that other permits may be required to fulfill local, state, and federal regulatory requirements and acknowledges that it is their responsibility to ensure that all necessary permits are obtained.
 - a. This includes but is not limited to documentation showing compliance with the endangered species act.
7. Applicant hereby gives consent to the local Floodplain Administrator and his/her representative (including state and federal agencies) to make reasonable inspections required to verify compliance.
8. Applicant acknowledges that the project will be designed to minimize any potential drainage onto surrounding properties and will be responsible for any drainage issues that may arise.
9. I, the applicant, certify that all statements herein and in attachments to this application are, to the best of my knowledge, true and accurate. Furthermore, I have read and understand the relevant Floodplain Damage Prevention Ordinance for my community and will adhere to the ordinance and will or have already obtained all necessary state, federal and local permits for the proposed development.

APPLICANT'S NAME: _____

APPLICANT'S SIGNATURE: _____ **DATE:** _____



State and Federal Permits Required

- Review proposed development to **assure that all necessary permits have been received** from those governmental agencies from which approval is required by Federal or State law.
- This includes section 404 of the Clean Water Act
- Other common Federal permits that may be required (not an exhaustive list):
 - EPA NPDES Permit
 - ESA Incidental Take Permit



US Army Corps
of Engineers

2021 Nationwide Permits

Index of 2021 Nationwide Permits, Conditions, District Engineer's Decision, Further Information, and Definitions¹

Nationwide Permits

1. Aids to Navigation
2. Structures in Artificial Canals
3. Maintenance
4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities
5. Scientific Measurement Devices
6. Survey Activities
7. Outfall Structures and Associated Intake Structures
8. Oil and Gas Structures on the Outer Continental Shelf
9. Structures in Fleeting and Anchorage Areas
10. Mooring Buoys
11. Temporary Recreational Structures
12. Oil or Natural Gas Pipeline Activities
13. Bank Stabilization
14. Linear Transportation Projects
15. U.S. Coast Guard Approved Bridges
16. Return Water From Upland Contained Disposal Areas
17. Hydropower Projects
18. Minor Discharges
19. Minor Dredging
20. Response Operations for Oil or Hazardous Substances
21. Surface Coal Mining Activities
22. Removal of Vessels
23. Approved Categorical Exclusions
24. Indian Tribe or State Administered Section 404 Programs
25. Structural Discharges
27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities
28. Modifications of Existing Marinas
29. Residential Developments
30. Moist Soil Management for Wildlife
31. Maintenance of Existing Flood Control Facilities

A blue-tinted photograph of a coastal scene. In the foreground, dark, jagged rocks are partially submerged in the ocean. Waves are breaking over the rocks, creating white foam. In the background, a row of multi-story houses with balconies and railings sits on a hillside overlooking the sea. The houses have light-colored walls and dark roofs. The overall scene is serene but suggests a coastal environment where development meets nature.

Endangered Species Act (ESA) Requirements

Purpose of the Endangered Species Act

- The Endangered Species Act of 1973 **provides a framework** to conserve and protect threatened and endangered species and their habitats.
- The primary law in the United States for protecting species and the ecosystems upon which they depend.
 - Applies to **everyone** (individuals, developers, communities, agencies, etc.)
- Federal agencies **such as FEMA** must **use their authorities to help conserve listed species**.
- Federal agencies have specific requirements that must be met under the ESA



ESA Section 9 Prohibits “Take”

- The law prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife.
- “Take” means: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct
 - “Harm” may include significant habitat modification or degradation where it kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.



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ESA Section 7(a)(1)

- 7(a)(1): All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species.



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ESA Section 7(a)(2)

- 7(a)(2): Each Federal agency shall...ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered species or threatened species.



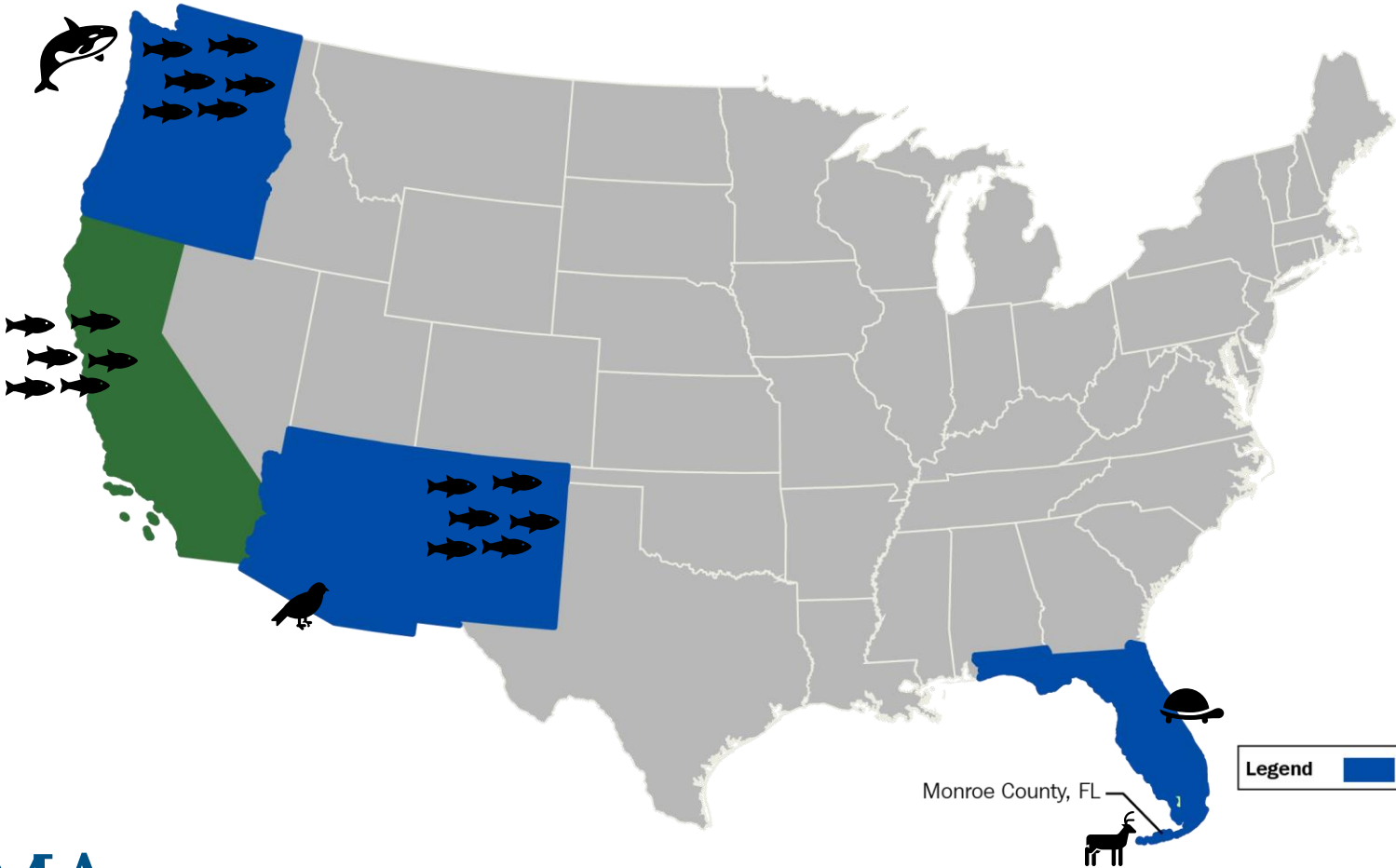
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NFIP ESA Lawsuits History – National Context

Driven by court cases in specific geographic areas and FEMA Regions for “failure to consult”



Identification of
NFIP ESA
Consultation Areas



Legend

Completed Consultation	Current Consultation
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ESA Section 7(a)(1)

- NFIP ESA Section 7(a)(1) Conservation Action Program promotes the conservation of threatened and endangered species and their habitat through three key components:

- Building awareness
- Helping with identification
- Promoting existing incentives and creating new incentives

[NFIP ESA Section 7\(a\)\(1\) Fact Sheet](#)

[Floodplains and Wildlife Conservation | FEMA.gov](#)

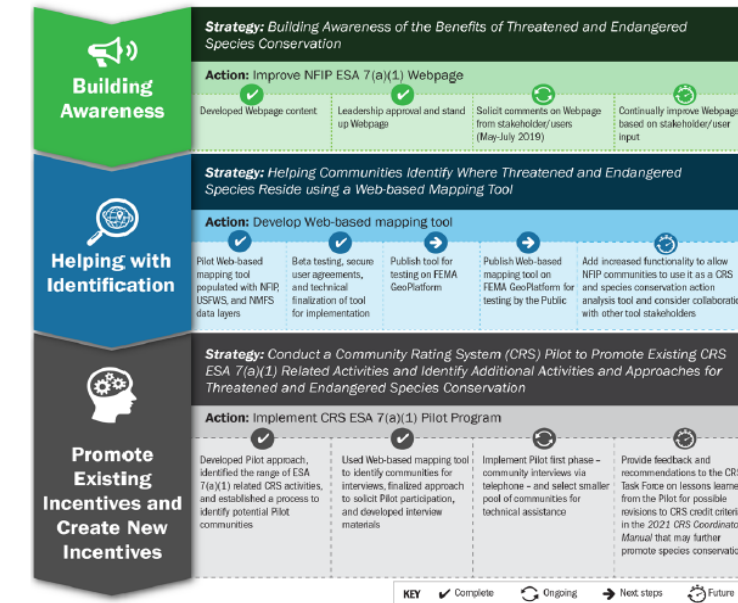
An Overview of Federal Emergency Management Agency's National Flood Insurance Program and Section 7(a)(1) of the Endangered Species Act

Updated: April 30, 2019

The Federal Emergency Management Agency (FEMA) has been meeting with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) to utilize its authorities under the National Flood Insurance Program (NFIP) to further the conservation of threatened and endangered (T&E) species pursuant to Section 7(a)(1) of the Endangered Species Act (ESA).

Overview

The NFIP ESA 7(a)(1) approach leverages existing FEMA flood risk mitigation priorities by promoting the creation, maintenance, and preservation of naturally functioning floodplains that benefit native flora and fauna generally, and T&E species and their habitat specifically. The following is an overview of key components, including intent and purposes for each action. Please note, actions are interrelated and mutually-supporting. FEMA coordinated with USFWS and NMFS to determine what actions effectively promote the conservation of T&E species and their habitat.



1



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To date, FEMA has accomplished the following key milestones



Build Awareness: Established FEMA's Floodplains and Wildlife Conservation webpages and reviewed and updated content to improve outreach efforts and access to resources



Help with Identification: Developed the FRESH mapping tool to help NFIP participating communities identify listed species ranges and designated critical habitats



Promote Existing Incentives / Create New Incentives: Established new Community Rating System (CRS) subelements: Floodplain Species Assessment (FSA) & Floodplain Species Plan (FSP)



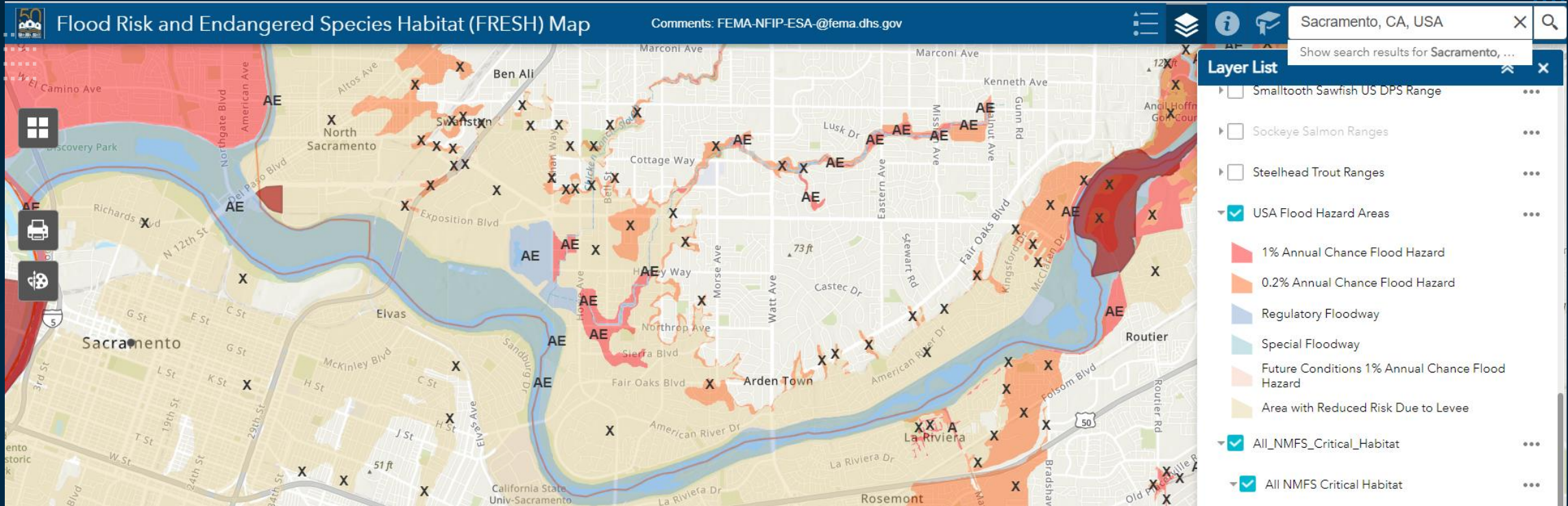
FEMA, USFWS, and NMFS signed an interagency **Memorandum of Understanding (MOU)** to formalize their shared commitment to the NFIP ESA Conservation Action Program's goals



Collaborative **Adaptive Management Framework** to periodically review and improve the components of the NFIP ESA Section 7(a)(1) Conservation Action Program



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Species Lists and Critical Habitat Maps as Compliance Tools

- The first step to understanding potential impacts of a project by identifying what species are present within the project area.
- Obtain a list of Threatened and Endangered Species and critical habitats in your community from FWS or NMFS
- Use critical habitat maps from FWS's Information for Planning and Consultation (IPaC) Online Tool and FEMA's Flood Risk and Endangered Species Habitat (FRESH) Mapping Tool.



National Flood Insurance Program
Community Rating System

CRS Credit for Habitat Protection

2018



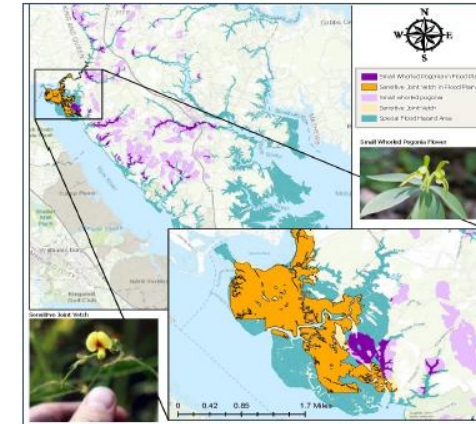
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Community Rating System

- Habitat Protection Credits
 - Public Information Activities
 - Outreach
- Mapping and Regulation Activities
 - Higher standards
 - Open space and habitat preservation
 - Stormwater Restoration Activities
 - Habitat Conservation Plan
- Floodplain Species Plans and Assessments

Floodplain Species Assessments and Plans

- **Floodplain Species Assessments (FSAs)** - determine which threatened and endangered species and critical habitat are or may be present in communities.
- **Floodplain Species Plans (FSPs)** –further research into conservation and recovery activities for those species and where community actions to support conservation will have the greatest impact.
- FSAs and FSPs encourage community officials to adopt a plan to implement those actions.
- **CRS credit is provided** for both the floodplain species assessment (element FSA) and the floodplain species plan (element FSP).



**Preparing
A Floodplain Species Assessment and
A Floodplain Species Plan**
for Credit under the
**Community Rating System
of the
National Flood Insurance Program**



2020

FEMA's two-pronged approach to meet Endangered Species Act Obligations

- At the national level, FEMA is re-evaluating the implementation of the NFIP consistent with the goals of the Endangered Species Act (ESA) working in collaboration with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS):



ESA 7(a)(2) Pre- Consultation Coordination Meetings



FEMA is working to identify the activities and potential impacts resulting from NFIP-related activities with the intent to identify conservation measures and/or changes to the NFIP to show that the implementation of the NFIP in participating communities does not adversely impact threatened and endangered species and their habitats and to reduce community floodplain flood risk



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The background image is a coastal scene with waves crashing against a rocky shore. In the background, there are several houses, some of which appear to be built on stilts or elevated foundations. The entire image is overlaid with a semi-transparent blue filter.

Best Floodplain Management Practices for Species and Habitat

If Take Cannot be Fully Avoided or Mitigated

- **A Take Statement or Permit (ITS/ITP)** is an option to achieve compliance
 - Issued for anticipated incidental take of a listed species
- Communities can apply for a Section 10 Incidental Take Permit and develop a Habitat Conservation Plan (HCP)
- Federal agency will consult under Section 7 if there is a federal nexus
- Due to the **time and relative expense**, many communities will not be able to opt for a HCP as the primary route for compliance

44 CFR § 60.3(a)(2)
requires that a
permit be obtained
for Take

Easiest path to ESA
compliance is to
avoid take



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Common Types of SFHA Development That May Cause Take

- Placement of fill, flood control, or in-stream structures
 - Loss of flood storage
 - Changes in discharge, velocity, and sediment load
 - Impact to fish passage
- Creation of impervious surfaces:
 - Increased runoff velocities, increased peak flows, or increased pollution loading in watercourses
- Removal of native vegetation:
 - Damage to riparian areas or the removal of large trees that are important habitat

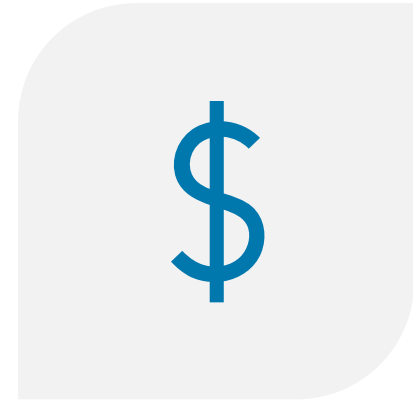
Categories of Mitigation When There is a Potential for a Take



AVOID: AVOID THE IMPACT ALTOGETHER BY NOT TAKING A CERTAIN ACTION OR PARTS OF AN ACTION OR BY MODIFYING THE ACTION



MINIMIZE: MINIMIZE THE IMPACT BY LIMITING THE DEGREE OR MAGNITUDE OF THE ACTION AND ITS IMPLEMENTATION.



MITIGATE: COMPENSATE FOR THE IMPACT BY REPLACING OR PROVIDING SUBSTITUTE RESOURCES OR ENVIRONMENTS.

Methods to Avoid a Take

- When a project would impact species or habitat, **avoidance is preferred**.
- Avoidance: measures that, if taken, would **avoid impacts to or adverse effects of a project**.
- These measures include:
 - Design changes, schedule changes, low impact development requirements, creation of buffer zones around habitats.
 - Consider limiting types of development within the SFHA



Methods to Minimize Impacts

- If avoidance is not possible, **minimizing the impact** should be considered next
- Measures should **reduce the impact to the resource** to the maximum extent practicable.
- Incorporate elements into design that minimize impacts
 - Reduce impervious surfaces
 - Prohibit the placement of fill
 - Minimize removal of native vegetation
 - Protect habitat that species need to spawn, breed, feed, and grow to maturity.



Low impact development practices
Source: Puget Sound Partnership, 2012

The background of the slide features a photograph of a coastal town. In the foreground, there is a field of tall, green grass with small white flowers. In the middle ground, there are several houses, including a prominent white two-story building with a porch. The sky is clear and blue.

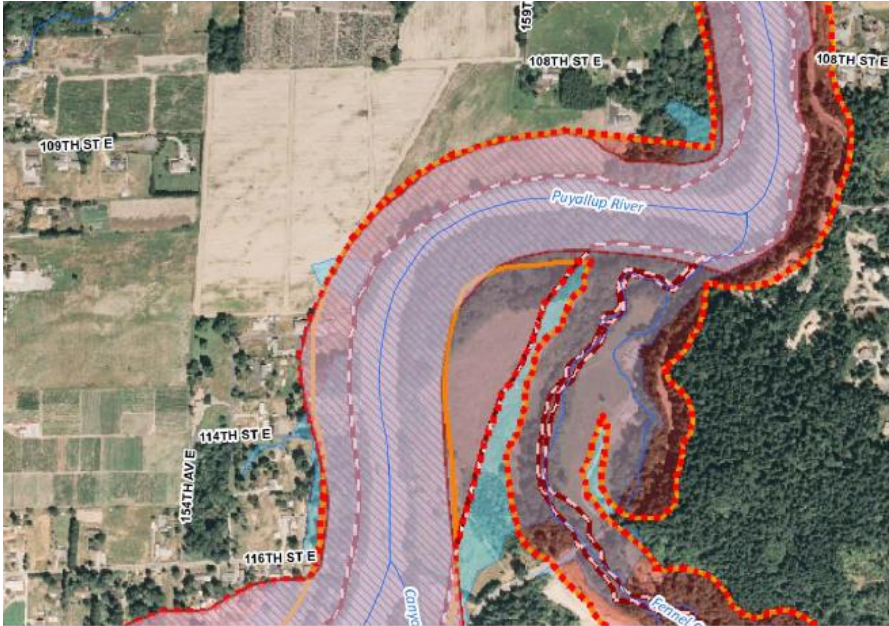
Methods to Mitigate Impacts of SFHA Development

- When projects are unable to avoid adverse impacts to a threatened or endangered species, **mitigation represents an alternative way** to support conservation.
- Mitigation may include the implementation of measures that can **compensate an action's impacts either onsite or offsite**. These are typically negotiated during the compliance review process.
- Offsetting impacts may include:
 - Balanced cut and fill ratios/compensatory storage (not always a 1 to 1 ratio)
 - Retention of stormwater on site
 - Developers to purchase "credits" for projects that are conserving and restore valuable natural resources.

ESA Compliance Recommendations

Identify ways local regulations can incorporate compliance requirements:

- Adopt language in local floodplain management ordinances requiring ESA compliance documentation.
- Clarify what forms that documentation may take
- Define terms like “adverse effect”
- Identify actions that could support the concepts of avoiding, minimizing, and mitigating actions
- Administer and enforce all adopted regulations
- Master Plans



Floodplain Management and the Endangered Species Act

A Model Ordinance

January 2012



FEMA Region 10



Adopt Higher Standards

- Restrict development in ecologically sensitive areas
- Restrict development in certain portions of the SFHA (i.e. floodway)
- Prohibit the placement of fill within the SFHA, or near a watercourse
- **Restrict certain types of development:**
 - Bridges instead of culverts for stream crossings
 - Require natural bank stabilization techniques
 - Elevation of buildings on piers or pilings
- **Best practices for avoidance:**
 - Adopt riparian buffer zones
 - Identify and regulate channel migration zones
 - Establish development setbacks
 - Adopt stormwater management requirements

Rely on Qualified Professionals

- Floodplain Administrators are not expected to be experts in everything – they can rely on the certifications and expertise of others to inform their permitting and compliance decisions.
- Require analyses or documentation by a qualified professional to provide assurance that no potential for take exists.
- Different professionals may be relied upon for different types of analyses:
 - Wildlife biologist, ecologist, environmental engineer, attorney, etc. may support the development of documents like a Biological Assessments

Resources

- [Floodplains and Wildlife Conservation | FEMA.gov](https://www.fema.gov)
- Flood Risk and Endangered Species Habitat (FRESH) Mapping Tool
 - [Flood Risk and Endangered Species Habitat \(FRESH\) Mapping Tool](#)
 - [Flood Risk and Endangered Species Habitat \(FRESH\) Map](#)
- Letters of Map Change: [Documentation of ESA Compliance for LOMCs](#)
- Community Rating System (CRS)
 - [CRS Credit for Habitat Protection](#)
 - [Preparing a FSA and FSP for CRS](#)
- Fish and Wildlife Service Information for Planning and Consultation (IPaC): [IPaC: Home](#)



Questions?

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