

I4 Scoping Instructions

For 2021 Project Delivery Plan Update. Last Updated: 10/22/2020

Overview

These instructions apply to the following sub-categories of the I4 – Environmental subprogram:

- Fish Barrier Removal
- Chronic Environmental Deficiency (CED)
- Stormwater Retrofit
- Noise Reduction
- Habitat Connectivity

Asset Stewards (Subject Matter Experts)

The following asset stewards are referenced in these instructions, or are primary contacts related to I4 projects.

Title	Division or Office	Staff
Fish Passage Delivery Manager		
Stream Restoration Manager	Environmental Services	Susan Kanzler
CED Coordinator	Environmental Services	Jenni Dykstra
Noise Reduction	Environmental Services	Jim Laughlin

Fish Barrier Removal

Needs Identification

Fish passages are surveyed by the Washington Department of Fish and Wildlife (WDFW), which establishes barrier status and habitat gain. The HQ Environmental Services Office (ESO) then evaluates this WDFW survey data, and each fish barrier is given a priority rank amongst all other identified barriers not yet replaced. The priority rank is established in consideration with habitat gain, tribal interest, and some construction efficiencies if barriers need to be addressed simultaneously.

The [Fish Passage Site Management web application](#) contains information about fish passages and is updated weekly with information from WDFW. Fish passage information is also uploaded annually into [WebWSPMS](#).

Capacity Analysis

The Fish Barrier program is positioned to comply with the requirements of the federal injunction. Programmed projects that are new starts in 21-23 and are over the 2020 transportation budget are marked with a Construction Phase of “1 – Over-programmed”.

The Fish Passage Delivery Manager works closely with regions and CPDM on directing the program for injunction compliance. This occurs through many monthly and quarterly meetings. Specific fish passage sites will be communicated through these channels as the program develops.

Special Considerations

Pre-design and the Basis of Design (BOD)

Because fish barrier corrections often change design elements, a pre-design phase will often be necessary and a Basis of Design (BOD). Work with your ASDE to determine if the PIN is pre-design exempt and update the schedule to include the pre-design phase. If a pre-design phase is implemented, your ASDE may request separate BODs per fish passage site, or have the documentation for each site clearly separated in a single BOD.

Stormwater Retrofit and Fish Barriers

All fish passage sites that have not yet started design are to complete a [stormwater retrofit assessment](#). The assessment is an evaluation of the potential to add treatment or designate existing conditions as a new BMP (either to full or partial Highway Runoff Manual standards). The assessment template is on the scoping web page.

If there are approved stormwater BMPs, work with CPDM Priority Programming to determine if a separate PIN for the stormwater work needs to be created. The completed template, along with approvals, shall be attached to the Project Summary related to the fish passage site. No Project Summary will be necessary for the stormwater PIN if one is created as described above.

Wildlife Habitat Connectivity and Fish Barriers

Fish barrier sites that fall in or immediately adjacent to segments with high ranked habitat connectivity need will have habitat connectivity identified as a contextual need for the fish passage project. ESO Biology will proactively review draft Preliminary Hydraulic Designs (PHDs) for barrier corrections that fall in or near the high ranked highway segments and provide project offices with the result of this review in a Habitat Connectivity Memo. The review will identify minimum standards for wildlife habitat connectivity. The project office will use this information to scope and document the cost and schedule impact for providing habitat connectivity. Where there is additional cost and/or schedule to provide habitat connectivity, send an email to the Fish Passage Delivery Manager (Kim Mueller) and Priority Programming Manager (Tim Rydholm) with the additional dimensions needed, cost estimate, and schedule impact. They will review and provide approval. This approval will be documented in the Project Summary.

Chronic Environmental Deficiencies (CEDs) and Fish Barriers

When scoping fish barrier corrections, check if the site is within the vicinity of a CED. CEDs may require more work and coordination with external stakeholders. Work with both the CED coordinator and the Fish Passage Delivery Manager to determine the proper course of action when a CED is in the vicinity of the fish barrier correction.

Asset Tracking Tab in TEIS

For stand-alone projects and for fish barriers corrected in other transportation projects, update the Assets tab in TEIS to include the fish barrier(s) corrected by a project.

Fish Barriers in Other Transportation Projects

See the document [Instructions to Scope Fish Barriers Identified within Transportation Projects](#).

As other Transportation projects that would reconstruct or widen the roadway are scoped, or continue to be developed through design, keep in mind fish barriers that would be impacted by the proposed project. For projects in the I1 Mobility and I3 Economic Initiatives subprograms, if the project will impact the roadway prism at the location of the fish barrier, the project will be scoped (or updated) to include the replacement of the barrier.

The removal of a fish barrier may also evolve from a P3 Major Drainage need. If the cross culvert is identified as fish bearing and further evaluation determines it to be a barrier to fish passage, then guidelines pertaining to fish passage will dictate the design of the drainage restoration and the project will be moved to the I4 Fish Barrier Removal subprogram/category. *Once moved to I4, the project will no longer prioritize based on P3 but it will prioritize against other work in the I4 fish passage program.*

Standards for CPMS Entry (standalone fish passage)

- Sub-Program: I4
- Sub-Category: IL
- Improvement Type Code: P1

Chronic Environmental Deficiency

Needs Identification

A Chronic Environmental Deficiency (CED) is a location along the state highway system where recent, frequent, and chronic maintenance or repairs to WSDOT infrastructure are causing impacts to fish or fish habitat. Typical CED sites include stream-adjacent roads where chronic bank erosion requires frequent application of scour protection, culverts or bridges located at a break in slope that require frequent sediment removal or stream channel relocation, or bridges experiencing erosion due to channel migration. More information can be found at <https://www.wsdot.wa.gov/environment/technical/disciplines/stream-restoration/ced-policies-procedures>.

The CED coordinator ranks CED priorities and then works with CPDM to identify which projects will be scoped and when they will be programmed for construction.

The list of CED locations is on the scoping web page, and these locations have also been uploaded into [WebWSPMS](#).

Special Considerations

CED projects need to meet the following two criteria:

1. Maintenance has been conducted on the site three times in the last ten years or an HQ Hydrologist has deemed the site an imminent threat, and
2. The maintenance or emergency activities have a negative impact on fish habitat.

Capacity Analysis

CPDM will coordinate with ESO on any locations that need to be scoped, and then communicate these directly with the region.

Standards for CPMS Entry

- Sub-Program: I4
- Sub-Category: IV
- Improvement Type Code: P4

Stormwater Retrofit

Needs Identification

Most of WSDOT's highways were constructed before the federal Clean Water Act and the Washington Water Pollution Control Act. These same highways do not have the facilities for the treatment of stormwater runoff quality or quantity. HQ ESO and HQ Hydraulics identifies and prioritizes these segments of highway requiring stormwater retrofit. Stormwater runoff needs will now be identified statewide, rather than being restricted to the Puget Sound Basin as in the past. The spreadsheet of ranked needs is available at the [Scoping web page](#).

See the [Stormwater Retrofit Management Plan](#), Stormwater Retrofit Guidelines (currently Section 3-4) in the [Highway Runoff Manual](#) (HRM), and [Stand-alone Stormwater Retrofit Considerations for Scoping](#) for more information.

Capacity Analysis

Earlier in 2020, CPDM and ESO worked with region program management on workshops for scoping the top three ranked stormwater retrofit needs in their region. This scoping is expected to be completed by the end of January 2021 so projects can be considered for programming as part of the 2021 project delivery plan.

Standards for CPMS Entry (standalone Stormwater Retrofit)

- Sub-Program: I4
- Sub-Category: IK
- Improvement Type Code: P2

Noise Reduction

Needs Identification

Noise Reduction needs are evaluated for neighborhoods built prior to May 14, 1976, before traffic noise was evaluated and are included on a ranked list of noise barriers maintained by HQ ESO. These noise barriers are referred to as retrofit noise barriers.

Special Considerations

Noise Reduction projects need to meet the following criteria:

1. Homes must have been built prior to May 14, 1976.
2. Noise barriers should be selected from the Tier 1 ranked list of retrofit noise barriers.
3. A formal noise study will need to be conducted during design of the noise barrier to evaluate whether the homes still exist in criteria 1 above and to more accurately model the length and height of the noise barrier.

Capacity Analysis

There is no identified capacity in Noise Reduction program, and additional locations are not expected to be scoped at this time.

Standards for CPMS Entry

- Sub-Program: I4
- Sub-Category: IM
- Improvement Type Code: P3

Habitat Connectivity

Needs Identification

Executive Order 1031.2, Protections and Connections for High Quality Natural Habitats, expresses WSDOT's intention to maintain and improve wildlife habitat connectivity. It identifies highway improvement projects for their role in achieving these aims. The construction of wildlife crossing structures and barrier fencing are specifically identified as effective actions that WSDOT can take to achieve the goals of the Executive Order.

Habitat Connectivity information is available in the GIS workbench under Fish and Wildlife, then "Habitat Connectivity (Non-Sensitive)". Habitat Connectivity information has also been added to [WebWSPMS](#).

Capacity Analysis

There is no identified funding for stand-alone habitat connectivity projects. Other types of highway improvement projects may consider habitat connectivity as a contextual need.