Forest Practices Technical Guidance

Standard Methodology for Identifying and Prioritizing Projects for the Small Forestland Investment in Stream Habitat Program

Objective

Forest Practices Technical Guidance is advisory guidance, developed by the State Forester through a stakeholder process, to assist landowners and resource professionals to implement the Oregon Forest Practices Act and forest practices rules. OAR 629-607-0300 requires the State Department of Forestry (ODF) to establish the Small Forestland Investment in Stream Habitat Program (SFISH) as a grant program to fund road improvement projects on small forestland owner lands.

The objective of this Forest Practices Technical Guidance is to describe landowner requirements for program participation, information collected to verify project eligibility, methods used to assess environmental benefits of a project, and outline the process used to ensure funding is prioritized for projects providing the greatest benefit to fish species addressed in the Private Forest Accord (PFA) Report. The processes and assessments outlined in this Forest Practices Technical Guidance will be performed by ODF or by ODF in close coordination with small forestland owners (SFOs).

Background

In 2022, the legislature passed Senate Bills 1501 and 1502 which changed the Forest Practices Act and directed the Board of Forestry to adopt administrative rules consistent with the PFA Report. The PFA Report memorializes the negotiated agreements between authors of a conservation coalition and working forest coalition. They negotiated to modify Oregon's forest practice regulations in support of developing a habitat conservation plan to provide the means to seek an Incidental Take Permit (ITP) under Section 10 of United States Endangered Species Act for the covered species identified in the PFA Report.

Included in the PFA policy package were incentives, minimum management options, and road assessment requirements specifically afforded to SFOs, including provisions for SFISH, a grant program to fund road improvement projects on lands owned by SFOs that result in environmental benefits to fish species addressed in the PFA Report or mitigate risks to natural resources arising from the construction, operation or maintenance of forest roads or related activities.

For purposes of the forest practices rules and this Forest Practices Technical Guidance, a "small forestland owner" means a landowner who:

(a) Owns or hold in common ownership interest in less than 5,000 acres of forestland in this state;

(b) Has harvested no more than an average yearly volume of two million board feet of merchantable forest products from the landowner's forestlands in this state, when averaged over the three prior years to:

(A) The date the department receives a harvest notification from the landowner; or

(B) If applying for a Small Forestland Investment in Stream Habitat Program grant, the date the landowner submits a grant application; and

(c) Affirms that they do not expect to exceed an average yearly volume of two million board feet of merchantable forest products to be harvested from the landowner's forestlands in this state for 10 years after the department receives the harvest notification or grant application; or

(d) Emergency exception: Any landowner who exceeds the two million board feet average harvest threshold from their land in the three years prior to submitting a harvest notification or grant application to the department, or who expects to exceed the threshold during any of the following 10 years, shall still be deemed a "small forestland owner" if the landowner establishes to the department's reasonable satisfaction that the harvest limits were, or will be, exceeded to raise funds to pay estate taxes or for a compelling and unexpected obligation, such as a court-ordered judgement or for extraordinary medical expenses.

Roads are essential infrastructure for a managed forest, but improperly drained forest roads can deliver sediment directly to streams, poorly designed or installed water crossings such as culverts can delay or prevent fish movement, and roads constructed on steep side slopes may have unstable fill that can fail and enter streams. Proper planning, construction, maintenance, and vacating of forest roads help minimize negative impacts to streams and the organisms that live in them.

The overarching purpose of SFISH is to help SFOs implement road projects on SFO owned roads that improve fish habitat on their forestlands. The goal of the program is to fund projects that will contribute to achieving the biological goals and objectives of the pending PFA Aquatic Habitat Conservation Plan (HCP) by improving fish habitat connectivity and minimizing sediment delivery to streams.

Terms

The following are some key definitions of terminology used throughout this guidance:

Abandoned roads (OAR 629-600-0100) – Roads that were constructed prior to 1972 and do not meet the criteria of active, inactive, or vacated roads. This does not include skid trails.

Active channel width (OAR 629-600-0100) – The active channel width is the stream width between the ordinary high-water lines, or at the channel bankfull elevation if the ordinary high-water lines are indeterminate.

Active roads (OAR 629-600-0100) – Roads currently being used or maintained for the purpose of removing commercial forest products.

Culvert – A type of stream crossing buried beneath the road surface creating a tunnel to channel water under the road allowing vehicles to travel over the stream.

Drain dip - shallow depression dug across a road to facilitate road surface drainage without interrupting vehicle passage.

Fill - Earth material used to build a structure above natural ground level, as with fill sections on the downhill side of a road.

Fill slope - The area on the downhill side of a roadway (or both sides in a through fill section) that must have excavated material placed.

Fish-bearing or fish stream - Type F and Type SSBT streams.

Fish passage barrier – A water crossing that hinders upstream fish passage when fish are expected to move. Movement is most often restricted by increased water velocities, insufficient flow depths, excessive jump heights, or blockage.

Flood-prone area - The width, measured perpendicular to the channel, susceptible to inundation during flooding, and commonly measured at twice the bankfull depth.

Ford – A type of stream crossing where the vehicle travels on the streambed or other installed structure with the wheels of the vehicle in the water if present.

Habitat conservation plan (OAR 629-600-0100) – A federal agencies' planning document designed to accommodate economic development to the extent possible by authorizing the limited and unintentional take of listed species when it occurs incidental to otherwise lawful activities. The plan is designed not only to help landowners and communities but also to provide long-term benefits to species requirements as identified in the Endangered Species Act.

High Conservation Value – Site locations determined to have a high conservation value and prioritized for SFISH funding that include but are not limited to areas of known chronic sedimentation, fish passage

barriers, stream diversions, or sites with a high diversion potential, areas of known hydrologic connectivity, or roads with a perched fill posing a significant hazard to fish-bearing streams.

Hydraulic drop – A rapid change in the depth of a channel of water from a high stage to a low stage that results in a steep depression in the water surface and is often caused by an abrupt change in slope.

Hydraulic jump – Local energy adjustments in a stream due to conflicting upstream and downstream constraints. Commonly seen below fords constructed of non-impervious materials where water at high velocity discharges into a zone of lower velocity, creating an abrupt rise in the water surface.

Inactive road (OAR 629-600-0100) – Roads used for forest management purposes exclusive of removing commercial forest products.

Incidental take permit – A permit issued to any private landowner, corporation, state or local government, or other non-Federal landowner wishing to conduct activities on their land that may impact an animal species listed as threatened or endangered under the federal Endangered Species Act.

Inlet – The upstream end of a culvert where water enters.

Invert – The bottom of the inside of a culvert that represents the lowest point in the internal cross section.

Outlet – The downstream end of a culvert where water exits.

Parcel (OAR 629-600-0100) - A contiguous single ownership recorded at the register of deeds within the county or counties where the property is located, including any parcel(s) touching along a boundary, but a railroad, road, stream, or utility-right-of-way may intersect the parcel. Single ownership is defined in ORS 527.620(14).

Perch - When a culvert's inlet or out is elevated above the level of the stream bottom, creating a potential fish passage barrier.

Perched fill - Road sidecast or fill that has the potential to fail and deliver sediment to a downslope fish-bearing stream.

Riffle – Segment of a stream characterized by fast, turbulent, shallow flow over submerged or partially submerged gravel and cobble substrates.

Road condition assessment - An assessment containing information on the condition of all roads, abandoned roads, culverts, and fish passage barriers located on the parcel of land where a planned harvest will occur or a grant-funded SFISH project may occur.

Road prism - The road geometry between the extreme points of excavation and/or fill.

Sidecast - Excavated material that is pushed from a road cut to a fill area.

SSBT use (OAR 629-600-0100) – A stream with salmon, steelhead, or bull trout present or otherwise used by salmon, steelhead, or bull trout at any time of the year as determined by the State Forester.

Stream simulation – Stream simulation combines fluvial geomorphology concepts and methods with engineering principles to design a water crossing that contains a natural and dynamic channel through the structure, restoring ecological processes and connectivity along the stream corridor.

Thalweg – The streamflow path following the deepest parts of a stream channel or embedded culvert.

Type F (OAR 629-600-0100) – A stream with fish use, or both fish use and domestic water use.

Type SSBT (OAR 629-600-0100) – A stream that is classified as a Type F stream and has SSBT use.

Vacated roads (OAR 629-600-0100) – Roads that have been made impassable and are no longer to be used for forest management purposes or commercial forest harvesting activities.

Water bar (OAR 629-600-0100) – A diversion ditch or hump in a trail or road for the purpose of carrying surface water runoff into the vegetation and duff so that it does not gain the volume and velocity which causes soil movement erosion.

Waters of the state (OAR 626-600-0100) – Includes lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, wetlands, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

Overview

The Oregon Forest Practices Act requires the State Board of Forestry, through the SFO Office, to make grants available to certain SFOs for road improvement projects that provide an ecological uplift for fish species addressed in the PFA Report or that mitigate risks to natural resources arising from SFO owned roads. In administering and implementing the program, ODF is to coordinate with the State Department of Fish and Wildlife (ODFW) to prioritize awarding grants to projects with a high conservation value.

This Technical Guidance details program requirements, discusses how projects are identified, describes how to conduct site-specific assessments, outlines the project prioritization process, and provides basic policies and guidelines for grant recipients. This Technical Guidance does not address all elements of project development or a Grantee's responsibilities in implementing projects. These details will be project specific and outlined in a grant agreement signed by the Grantee and ODF before starting a project. The process and assessments outlined in this Technical Guidance will be performed by ODF or by ODF in close coordination with SFOs.

Main Content

Landowner Requirements

To be eligible for SFISH a landowner must meet the definition of an SFO as defined in OAR 629-600-0100 and described above. In addition to meeting the definition, the landowner must provide the following information.

1) Documentation showing that timber harvest volumes over the three-year period prior to applying for SFISH did not exceed an average yearly volume of two million board feet.

2) Statement of affirmation indicating the landowner does not expect to exceed an average yearly harvest volume of two million board feet during the 10 years following the date they receive an SFISH grant.

3) A completed road condition assessment (RCA) that includes an assessment of all roads, abandoned roads, culverts, and fish passage barriers located on the parcel of land on which the SFISH funded project may occur.

An SFO applies to have their project assessed and placed on a ranking list for funding. If it's determined by ODF that the project is not eligible for SFISH funding an SFOs application will automatically be removed from the program, but this does not exclude an SFO from reapplying for future grants for projects that may be eligible.

To apply for SFISH an SFO needs to fill out an SFISH application (Figure 1) which can be downloaded from the SFISH webpage (https://www.oregon.gov/odf/pages/sfish-program.aspx) and complete an RCA which can be downloaded from the RCA webpage (https://www.oregon.gov/odf/working/pages/road-condition-assessments.aspx).

For ODF Use Only	
Date received:	App.#
☐ SFO verification	☐ Project ranked
☐ RCA completed	☐ Welcome letter

Small Forestland Investment in Stream Habitat Program
Application for ROAD IMPROVEMENT PROJECT ASSESSMENT

The Small Forestland Investment in Stream Habitat Program provides grants to small forestland owners to improve fish habitat on their forestlands by replacing culverts and fords in fish streams, repairing abandoned roads, and fixing roads with a perched fill that present a risk to a fish stream.

Please complete this application along with a Road Condition Assessment to have your potential project assessed by ODF and placed on a ranking list for funding.

After your application is received, ODF will review the provided information to verify you meet the criteria of a small forestland owner and a local forester will contact you to set up a site visit. If you have not already completed a Road Condition Assessment, one must be completed to participate in the program.

For a Road Condition Assessment form, please visit the ODF website (https://www.oregon.gov/odf/working/pages/road-condition-assessments.aspx) or contact your local ODF office for assistance.

CONTACT INFORMATION

Landowner(s): _____

_____

Company/Corporation Name: _____

Mailing address: _____; City: _____

State: _____; Zip Code: _____; Home/Business Phone: _____

Cell: _____; Email: _____

Landowner representative: _____; Phone: _____

Email: _____

Main contact for project: ☐ Landowner ☐ Landowner representative

How did you find out about the program? _____

OWNERSHIP INFORMATION

How many acres of forestland in Oregon do you own? _____

Tax Lot(s): _____; County: _____

Tax Lot(s): _____; County: _____

Tax Lot(s): _____; County: _____

Figure 1. Page 1 of the SFISH Application Form.

Identifying, Assessing, and Selecting Projects

Projects must benefit fish species addressed in the PFA Report or mitigate risks to natural resources. Projects must also fall into at least one of three road improvement categories. The three types of eligible road projects are:

A. Replacement of culverts or fords in fish streams that are no longer functioning or do not meet design standards as specified in rule.
B. Abandoned road repairs that prevent sediment delivery to waters of the state or improve fish passage.
C. Remediation of roads with a perched fill that presents a significant hazard to fish-bearing streams.

The following sections of this Technical Guidance provide the details the program will use for identifying and gathering project specific data to support the policy laid out in rule that projects determined to have a high conservation value and provide the greatest resource benefit are funded first. The process uses a combination of office and field steps that include both quantitative methods and expert judgement, along with a committee review. The process is expected to evolve as knowledge and experience with the program grow, and those improvements will be included in future versions of this Technical Guidance.

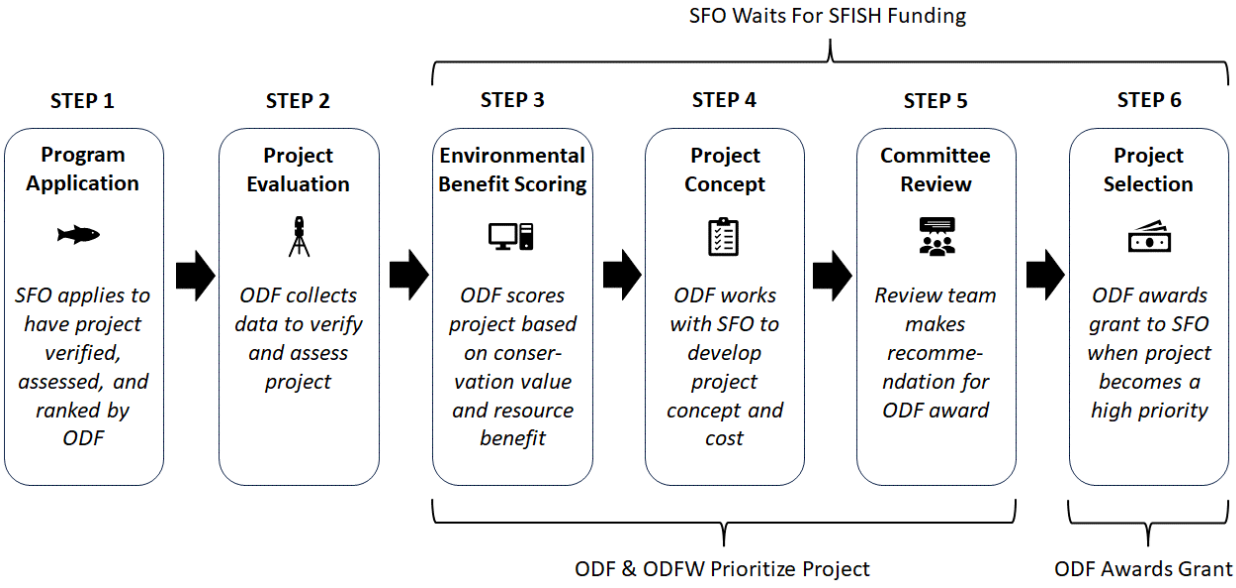


Figure 2. The major steps identifying, assessing, and selecting SFISH projects.

STEP 1: Program Application

There will be two primary ways by which SFISH projects will be identified. One will be when a landowner or landowner representative contacts ODF about the program. Under this scenario, the following two questions need to be answered:

1) Is the potential project on a parcel owned by a small forestland owner?
2) Will the potential project replace a culvert or ford in a fish stream, repair an abandoned road, or fix unstable road fill that could end up in a fish stream?

If the answer to both questions is yes, then the project may be an eligible project and the SFO needs to apply to have their project verified, assessed, and placed on a ranking list for funding. If an RCA is not already on file with ODF, one will need to be completed as part of the application process.

The second way will be the identification of potential projects through ODF review of RCAs submitted by SFOs notifying for an activity that includes the harvest of timber. If a potential project is identified in an RCA, ODF will contact the landowner to see if they would like to apply to have their project verified, assessed, and placed on a ranking list for funding. For RCA details see Forest Practices Technical Guidance: Road Condition Assessment for Small Forestland Owners.

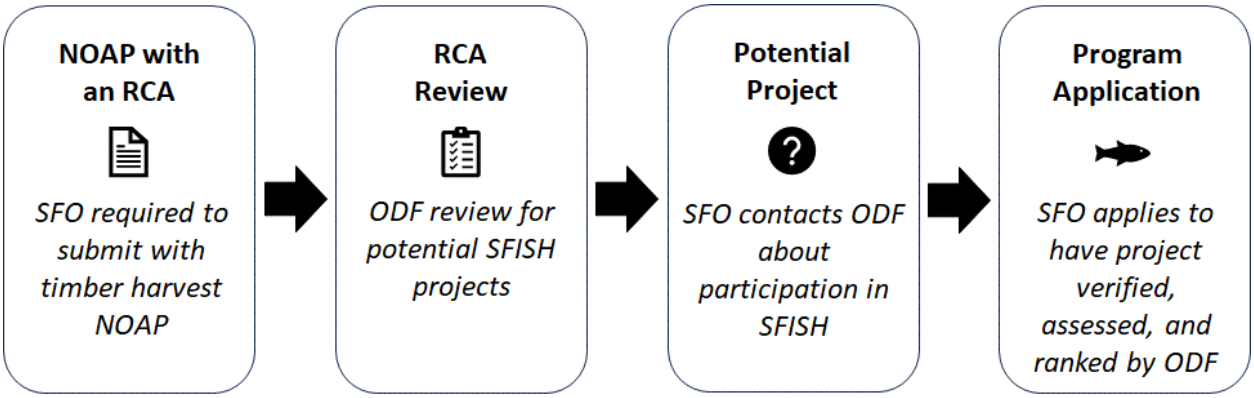


Figure 3. Workflow for identifying projects from a road condition assessment submitted with a timber harvest notification.

STEP 2: Project Evaluation

A. Project Eligibility

Whenever a potential project is identified and an SFO has applied for the program, basic information is collected by ODF to determine project eligibility. This information includes a determination of fish species present, geographic coordinates, classification of project type, conservation value, and ownership.

Detailed explanation of the data fields in the SFISH Project Eligibility Field Form (Figure 4) are provided in the following subsection.

SFISH Project Eligibility Field Form:

Date – Record the month, day, and year for the site visit.

Surveyor – Record the name of the person(s) responsible for the data collection.

Latitude/Longitude – Determine the geographic position of the site based upon the World Geodetic Survey 1984. It is best to retrieve geographic coordinate data in the field with a Global Positioning System unit to avoid confusion about the feature location. Coordinates should be collected at the most downstream end of the feature, e.g., the outlet of a culvert. Record coordinates in decimal degrees using four significant figures after the decimal.

Stream Name – Record the name of the waterbody where the site is located. Use federally recognized names, if registered in the Geographic Names Information System. If not registered, a well-established local name may be used. If neither is available, record 'unnamed'.

Tributary To – Record the name of the downstream waterbody into which the waterbody described in 'Stream Name' flows. Apply the same naming convention described for recording 'Stream Name'. If the downstream waterbody is unnamed, record 'unnamed', followed by the name of the next downstream waterbody that is named, followed by the word, 'trib'. E.g., 'unnamed Bear Cr trib'.

Project Type – Project Type is a determination of the type of road improvement project present at the site. For the SFISH Program, there are three types of road improvements that can be funded.

- 'Water Crossing' is the replacement of culverts or fords in a fish stream.
- 'Abandoned Road' is the repair/treatment of abandoned roads to prevent sediment delivery to waters of the state or to improve fish passage.
- 'Perched Fill' is the remediation of roads with perched fill that present a significant hazard to fish-bearing streams.

Species – Determine which covered fish species can access the site, assuming a lack of downstream human-made barriers. Consult online resources and contact local ODFW biologist to confirm the determination.

- 'Chinook' includes all Oregon populations of *Oncorhynchus tshawytscha* in the Upper Willamette River evolutionary significant unit (ESU), Southern Oregon & Northern California coasts ESU, Oregon Coast ESU, and all Columbia River and Snake River ESUs.
- 'Chum' includes all Oregon populations of *Oncorhynchus keta* in the Columbia River ESU and Pacific Coast ESU.
- 'Coho' includes all Oregon populations of *Oncorhynchus kisutch* in the Oregon Coast ESU, Lower Columbia River ESU, and Southern Oregon/Northern California coasts ESU.
- 'Steelhead/Trout' includes all anadromous and resident Oregon populations of *Oncorhynchus mykiss* in the Lower Columbia River demographic population segment (DPS), Middle Columbia River DPS, Snake River DPS, Upper Columbia River DPS, Upper Willamette River DPS, Coastal Summer Steelhead species management unit (SMU), and Coastal Winter Steelhead SMU.
- 'Cutthroat' includes all populations of *Oncorhynchus clarkia lewisi* in the Westslope Cutthroat Trout SMU, all sea-run and resident populations of *Oncorhynchus clarkia clarkia* in the Coastal Cutthroat Trout SMU, and all populations of *Oncorhynchus clarkia henshawi* in Oregon Lahontan cutthroat trout recovery units and/or SMUs.
- 'Bull Trout' includes all populations of *Salvelinus confluentus* in Oregon bull trout recovery units and/or SMUs.
- 'Green Sturgeon' includes all Oregon populations of *Acipenser medirostris* in the Northern DPS.
- 'Eulachon' includes all Oregon populations of *Thaleichthys pacificus* in the Southern DPS.
- 'Whitefish' includes all Oregon populations of *Prosopium williamsoni* or Mountain whitefish.

Online fish distribution resources:

Oregon Fish Habitat Distribution and Barriers (https://nrimp.dfw.state.or.us/FHD_FPB_Viewer/index.html) – A web map that provides access to ODFW stewarded datasets for fish distribution and fish passage barriers. Some fish habitat distribution datasets are not comprehensive and some that are considered to be comprehensive do not identify every waterbody where the species may be present. Be sure to get concurrence from the local ODFW biologist.

Native Fish Conservation – Conservation and Recovery Plans (https://www.dfw.state.or.us/fish/CRP/conservation_recovery_plans.asp) – The online home of recovery and conservation plans for Oregon's native fish species.

High Conservation Value Site – Determine if the project is a high conservation value site. For the SFISH Program, there are six types of high conservation value sites.

- 'Sediment' is a site located in a basin or subbasin where sedimentation, mercury, or phosphorous has been identified as a water quality impairment, or a site where streambank or streambed erosion is occurring in response to a road or road feature (i.e., culvert or ford).
- 'Passage' is a site with a water crossing that is a potential fish passage barrier. These include culverts that are not fully embedded, have a perched outlet or hydraulic drop, are undersized, or have a blockage or structural damage that prevents or limits fish passage. This also includes

fords that have insufficient water depth, high water velocity, are perched, have a hydraulic drop, or have a hydraulic jump.

- 'Diversion' is a site where a plugged culvert has diverted the stream down the road or ditch.
- 'Diversion Potential' is a site with a culvert that if plugged, the stream would back up behind the fill and flow down the road or a road ditch rather than flow directly over the road fill and back into the natural channel. Diversion potential exists when you have undersized culverts on roads that have a continuous climbing grade across the culvert or where the road slopes downward away from a culvert in at least one direction.
- 'Hydro Connect' is a site where road runoff has full channel linkage or direct linkage to a stream. Full channel linkage is when a gully extends the entire distance from a discharge point, like a water bar or drain relief culvert, to a stream. Direct linkage is when runoff and sediment reach the stream directly at a water crossing.
- 'Perched fill' is a site where if a road fill slope or sidecast material were to fail the material would end up in a fish stream.

Site Comments – Record comments that describe conditions in the vicinity of the site. Appropriate comments may include a note of beaver activity, land use, fencing across stream, possible or known right of ways, etc.

Landowner Information – Record general contact information for the landowner.

App# _____

SFISH PROJECT ELIGIBILITY FIELD FORM

SITE INFORMATION

Date _____ Surveyor _____

Latitude _____ Longitude _____

Stream Name _____ Tributary To _____

Project Type ☐ Water Crossing ☐ Abandoned Road ☐ Perched Fill

Species ☐ Chinook ☐ Chum ☐ Coho ☐ Steelhead/Trout ☐ Cutthroat
☐ Bull Trout ☐ Green Sturgeon ☐ Eulachon ☐ Whitefish

HCV Site ☐ Sediment ☐ Passage ☐ Diversion ☐ Diversion Potential ☐ Hydro Connect
☐ Perched Fill

SITE COMMENTS

LANDOWNER INFORMATION

Name _____

Mailing Address _____

City _____ State _____ Zip Code _____

Contact Name _____

Phone (_____) - _____ - _____ Email _____

Figure 4. SFISH Project Eligibility Field Form.

B. Replacement of Culverts or Fords in a Fish Stream

The primary goal for this type of road project is to improve access to habitat for fish by replacing culverts and fords that restrict fish passage. For culverts a basic determination of conformity with stream simulation design requirements of OAR 629-625-0320 and culvert functionality needs to be made. The following four criteria should be assessed.

1) There is material throughout the length of the culvert that matches the streambed substrate;
2) The inlet width is greater than or equal to the active channel width for culverts with a slope up to one percent and greater than or equal to 1.2 times the active channel width plus 2 feet for all other culverts;
3) There is no perch or hydraulic drop; and
4) There is no structural damage or accumulation of debris creating blockages or jumps in the culvert.

If any of the four conditions is not met, the culvert is a potential fish passage barrier, and an SFISH Stream Crossing Assessment will need to be performed.

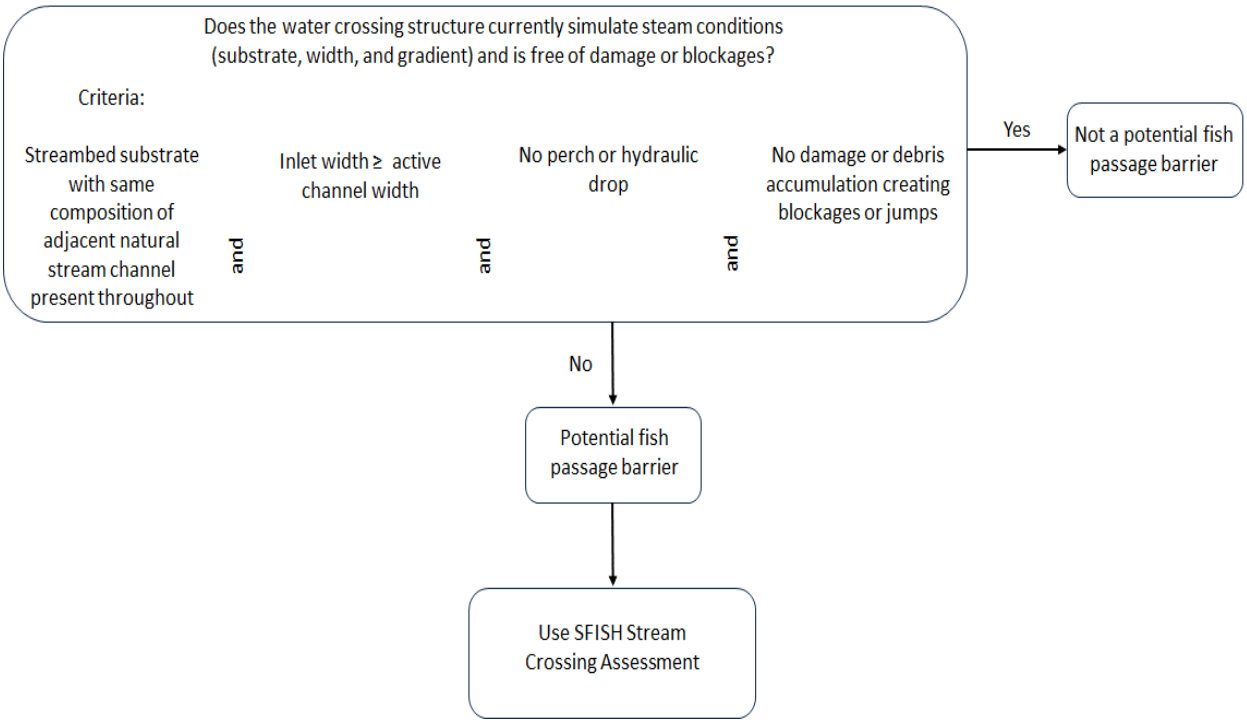


Figure 5. Criteria used to determine if a water crossing structure is a potential fish passage barrier.

Fords tend to be less of an issue for fish passage compared to culverts. However, the following should be considered when assessing a ford:

1) Is the ford too wide at streambed elevation, creating a low-flow barrier because of insufficient water depth?
2) Does the floor of the ford lack sufficient roughness or is there damming present, creating a velocity barrier at moderate to high flow?
3) Does the ford have a perch, hydraulic drop, or hydraulic jump, creating a jumping barrier?

If any one of these conditions exist, the ford is a potential fish passage barrier, and an SFISH Stream Crossing Assessment will need to be performed.

The stream crossing assessment outlined below uses site characteristics to determine if a water crossing simulates stream conditions, asks a series of questions about potential structural and fish passage issues, and uses hydraulic surrogates to calculate a field ranking for closed bottom culverts (Table 1). This allows the assessment to be done rapidly and over a wide range of stream conditions with a consistent comparable result. Consistent assessment will permit unambiguous data aggregation across all steam crossing sites, helping ensure culvert and ford replacement projects providing the greatest environmental benefit to fish are funded first.

Table 1. Scoring matrix used to prioritize closed bottom culverts. A cumulative score using five hydraulic surrogates is calculated. The five surrogates include culvert length, culvert embedment, culvert drop height, culvert slope, and stream width ratio.

Culvert Length (ft)	Value	Culvert Embedment	Value	Culvert Drop Height (in)	Value	Culvert Slope (%)	Value	Stream Width Ratio	Value
< 50	0	Full	0	< 6	0	< 1.0	0	<1.0	0
50-100	3	Partial	5	6-12	5	1.0-3.0	3	1.0-3.0	3
> 100	6	None	10	> 12	10	>3.0	6	>3.0	6

Cumulative Score	Priority	Value
0-14	Low	1
15-19	Medium	3
≥ 20	High	5

A review of the field form will be performed to identify issues other than the hydraulic surrogates that may hinder fish passage, determine if fish passage problems exist for open bottom culverts or fords, and evaluate the failure potential of a water crossing.

Detailed explanation of the data fields in the SFISH Stream Crossing Assessment Field Form (Figures 11 and 12) and methods to collect the data are provided in the following subsection. Some data will have already been collected on the SFISH Project Eligibility Field Form and can be transcribed onto the SFISH Stream Crossing Assessment Field Form.

Bridges are generally assumed to be passable by fish and the replacement of an existing bridge cannot be funded through SFISH. However, there are instances when bridges can create passage issues for fish.

Examples include bridges with closely spaced piers, abutments, or scour protection features that constricts channel width and increases water velocity, or where riprap placed for scour protection results in rock cascades that inhibit or prevent passage. Contact the SFISH Coordinator as there may be other funding sources available to replace bridges or any other physical barriers to fish passage such as weirs, dams, and levees.

SFISH Stream Crossing Assessment Field Form:

Note: Some of the terms described below are defined in the forest practices rules, have a relationship to the forest practices rules, or are used in other Forest Practices Technical Guidance, but as prescribed below are exclusively for the purpose of this assessment methodology. Water crossing rules, along with design standards are described in 629-625-0320 of the forest practice rules.

App# - Record the project application number assigned by the SFISH Program Coordinator.

Date – Record the month, day, and year for the site visit.

Surveyor – Record the name of the person(s) responsible for the data collection.

Latitude/Longitude – Determine the geographic position of the site based upon the World Geodetic Survey 1984. It is best to retrieve geographic coordinate data in the field with a Global Positioning System unit to avoid confusion about the feature location. Coordinates should be collected at the most downstream end of the feature, e.g., the outlet of a culvert. Record coordinates in decimal degrees using four significant figures after the decimal.

Stream Name – Record the name of the waterbody where the site is located. Use federally recognized names, if registered in the Geographic Names Information System. If not registered, a well-established local name may be used. If neither is available, record 'unnamed'.

Tributary To – Record the name of the downstream waterbody into which the waterbody described in 'Stream Name' flows. Apply the same naming convention described for recording 'Stream Name'. If the downstream waterbody is unnamed, record 'unnamed', followed by the name of the next downstream waterbody that is named, followed by the word, 'trib'. E.g., 'unnamed Bear Cr trib'.

Crossing Type – Select the type of water crossing being assessed. The crossing type will be a culvert or ford.

Material – Determine the construction material of the water crossing. If the water crossing is made of multiple materials, select the most dominant material, and describe in the comments. Common material types include:

- concrete (precast and cast-in-place)
- metal (steel and aluminum)
- native material (cobble, gravel, and sand)
- plastic (high density polyethylene and polyvinyl chloride)
- quarry rock (pit run and crushed rock)
- wood (logs, sawn lumber, glulam, and laminated veneer)

- other (bricks, blocks, stone, or clay). If the water crossing material is other, describe in the comments.

Diameter/Span – Measure the horizontal dimension of the water crossing to the nearest inch and consider the following conditions when measuring:

- For a culvert, measure at a point that is perpendicular to the streamflow. If the culvert is distorted at the outlet or inlet this measurement will need to be from inside the culvert barrel.
- If the widest point of the culvert is embedded below the surface of the streambed, measure the widest point possible above the streambed and make a note in the comments.
- If the horizontal dimension is different at the inlet and outlet of the culvert, record the lesser of the two measurements and make a note in the comments.
- This measurement is not applicable for fords.

Rise/Height – Measure the vertical dimension of the water crossing to the nearest inch and consider the following:

- For bottomless culverts measure from the top of the culvert to the streambed thalweg. If unable to measure at the thalweg, estimate and make a note in the comments.
- For closed bottom round culverts just enter the previously measured diameter/span.
- For closed bottom arch-pipe, elliptical, or box culverts measure from the top of the culvert to the invert. If streambed material is present, use a probe to reach the invert.
- If the invert is rusted-out, or the invert cannot be accessed due to the presence of deep bed material, measure from the top of the culvert to the streambed and make a note in the comments.
- This measurement is not applicable for fords.

Length – Measure the longitudinal dimension of the water crossing to the nearest inch.

- For open bottom culverts and fords measure the width of the road running surface.
- For culverts measure from the inlet to the outlet. This measurement can be made with a laser range finder by either sighting through the pipe to a fixed point (field partner) at the other end or measure the road running surface with a tape measure and then estimate the distance from road surface to each end of the culvert and sum the three numbers.

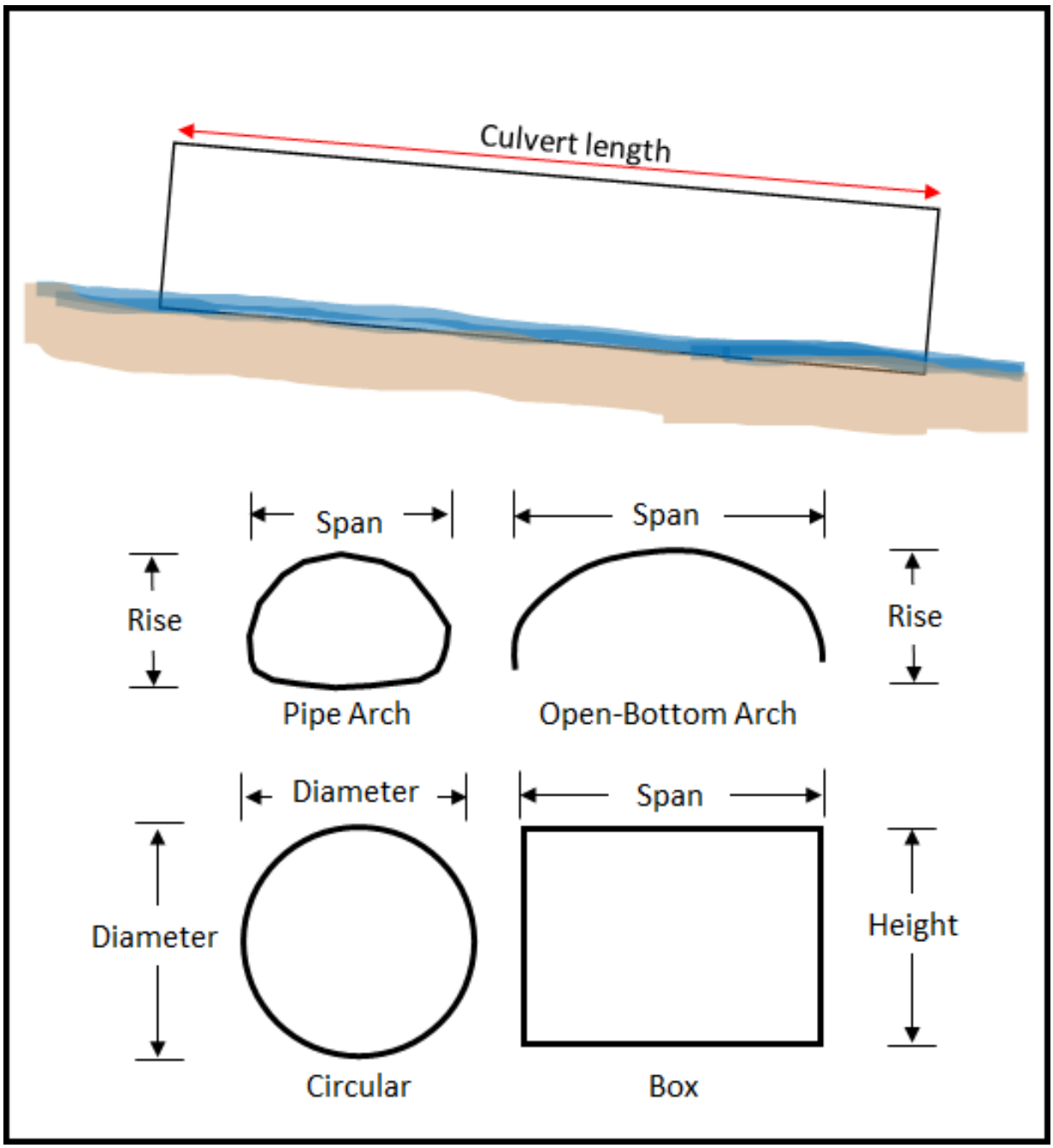


Figure 6. Illustration of culvert shapes and measurements.

Active Channel Width – Measure the active channel width to the nearest inch. The active channel width is the stream width between the ordinary high-water lines, or at the channel bankfull elevation if the ordinary high-water lines are indeterminate. Changes in bank vegetation, slope breaks, sediment size and color, water lines, or the point where needles, twigs, and cones begin to accumulate are all good indicators for determining the active channel width. Measure the active channel width at two riffles upstream and two downstream that are outside the influence of the water crossing structure or any tributaries entering the stream.

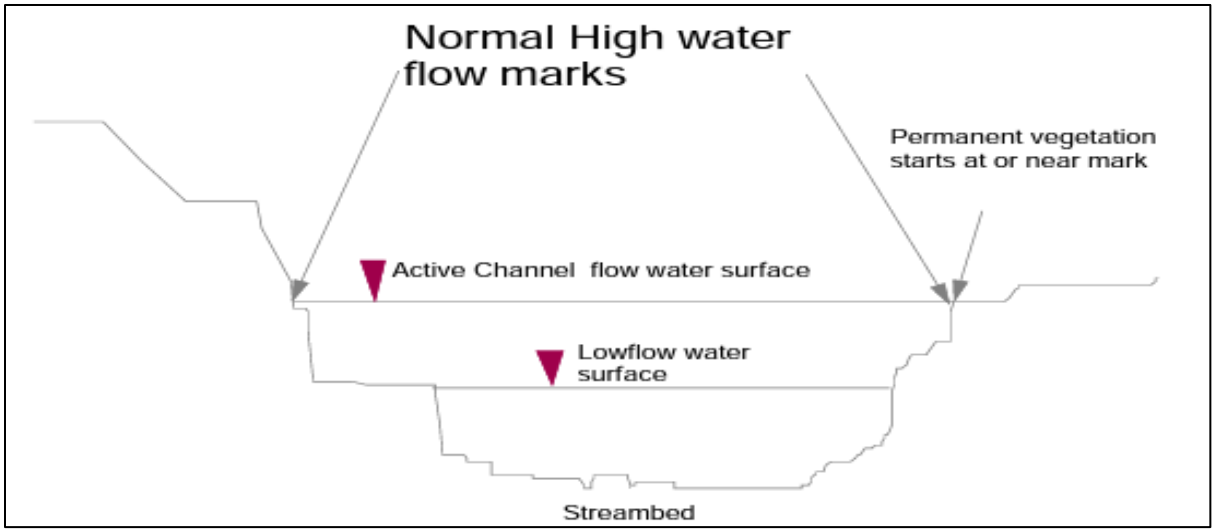


Figure 7. High water flow marks and active channel width schematic.

To determine the active channel width where multiple channels are present, include all un-vegetated gravel bars in the measurement. If multiple channels are separated by one or more vegetated islands, then calculate the width as the sum of all the separate active channel widths.

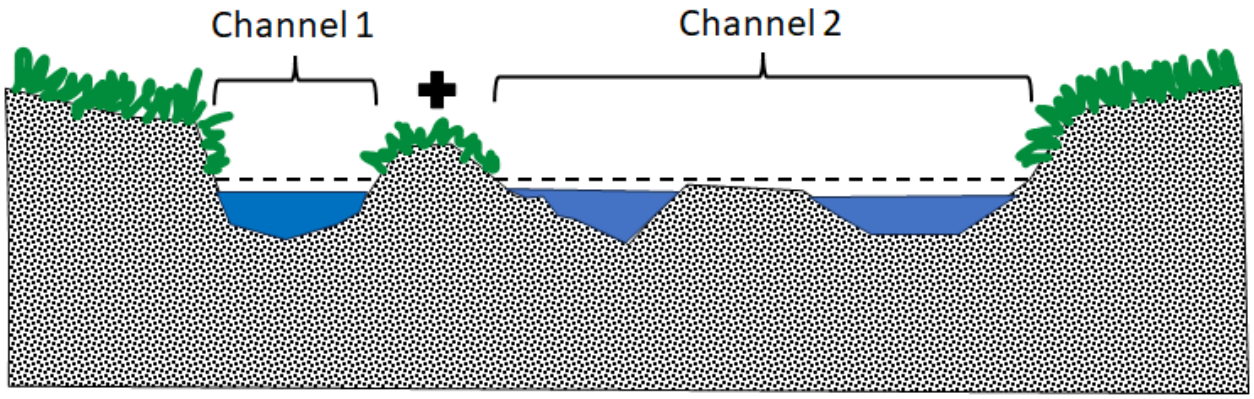


Figure 8. Illustration for measuring active channel width when multiple channels are present.

If the crossing has lakes or wetlands immediately upstream and downstream, record the water crossing diameter/span as the active channel width and describe in the comments. Also make note if there is evidence of overtopping. This includes indications of water erosion and the presence of drift material on the road running surface or on the crossing fill at a higher elevation than the water crossing.

Culvert Shape – Determine the shape of the culvert by using the measured span and rise.

- Circular or round culverts have a span that is equal to the rise. However, some damaged circular culverts may appear elliptical. Record the actual measured span and rise and select the shape the culvert would have been at initial installation.

- Pipe arch culverts are constructed or mechanically reshaped to create a lower profile so that the widest horizontal cross-section of the culvert is near the invert. Pipe arch culverts are also referred to as squash pipes.
- Open bottom arch culverts are any bottomless culverts, including 3-sided box structures.
- Elliptical culverts are oval-shaped and may be horizontally or vertically elongated.
- Box culverts are any square or rectangular culvert with four main sides. Box culverts may have haunch corners for reinforcement.
- Other culvert shapes such as pear, semi-circle, polygonal, or culverts that consist of 2 or more shapes throughout. Describe shape details in the comments.

Culvert Slope – Measure the slope of the culvert using a clinometer to the nearest half percent and consider the following:

- Take at least three measurements, average them, and be sure to use the percent scale.
- For sites with shallow fill measure from a fixed point above the inlet to the same height above the outlet. This can be done by marking your eye height on a stadia rod and having a partner hold it on top of the culvert outlet. You then sight the mark while standing on top of the culvert inlet.
- For sites with deep fill or if you don't have a partner, measure the slope by sighting a common spot in the culvert such as a rust or bolt line or the top of the culvert upstream.
- A more accurate method is to use a laser rangefinder/hypsometer with a slope function in place of a clinometer to sight the marked stadia rod or use an auto level to measure the vertical difference between inlet and outlet invert elevations, then divide the number by the length of the structure and multiply by 100.

Road Fill Depth – Measure or estimate the vertical distance from the culvert invert to the top of the road prism at the culvert outlet to the nearest foot.

Embedded – Measure the depth of embedment for closed bottom culverts to determine the degree of embedment. Measure the distance from the top of the culvert to the top of the stream substrate and subtract this number from the diameter for round culverts and rise/height for arch-pipe, elliptical, or box culverts. Take the measurement at both the inlet and outlet and average the two numbers.

Full: If the depth of bed material is ≥ 20 percent of the culvert diameter or rise/height, and streambed material covers the invert throughout the entire length of the culvert the culvert is fully embedded.

Partial: If streambed material covers the invert throughout the entire length of the culvert and the depth of bed material is < 20 percent of the culvert diameter or rise/height the culvert is partially embedded.

None: A closed bottom culvert that has any invert showing along its length is considered not embedded. This includes a culvert that has material both at its inlet and outlet but has bare sections in the middle or a culvert that has large boulders scattered throughout its length, but the intervening areas are bare.

Resembles Channel – Determine if the substrate inside the culvert resembles the native streambed material. For example, if the culvert is filled with coarse angular quarry rock and the adjacent streambed consists of a mix of cobble, gravel and sand, the material does not resemble the native streambed.

Perched Inlet – The culvert inlet is above the streambed elevation.

Outlet Drop (A) – Measure the distance from the culvert invert to the top of the current water level in the outlet pool to the nearest inch. See diagram for 'Drop Height'.

Outlet Control – Measure the distance from the top of the current water level in the outlet pool to the lowest point along the outlet control to the nearest inch. See diagram for 'Drop Height'.

Drop Height – Drop Height is the distance from the culvert invert to the top of the residual pool, which is the pool that would remain if flow from the culvert stopped, and the outlet pool drained until it became level with the outlet control. This method results in measuring the maximum height of a perch when one is present, but also allows the measurement to be the same regardless of the flow level. Outlet drop and outlet control are summed to determine the Drop Height.

If site conditions are not conducive to taking these measurements estimate the Drop Height and describe in the comments.

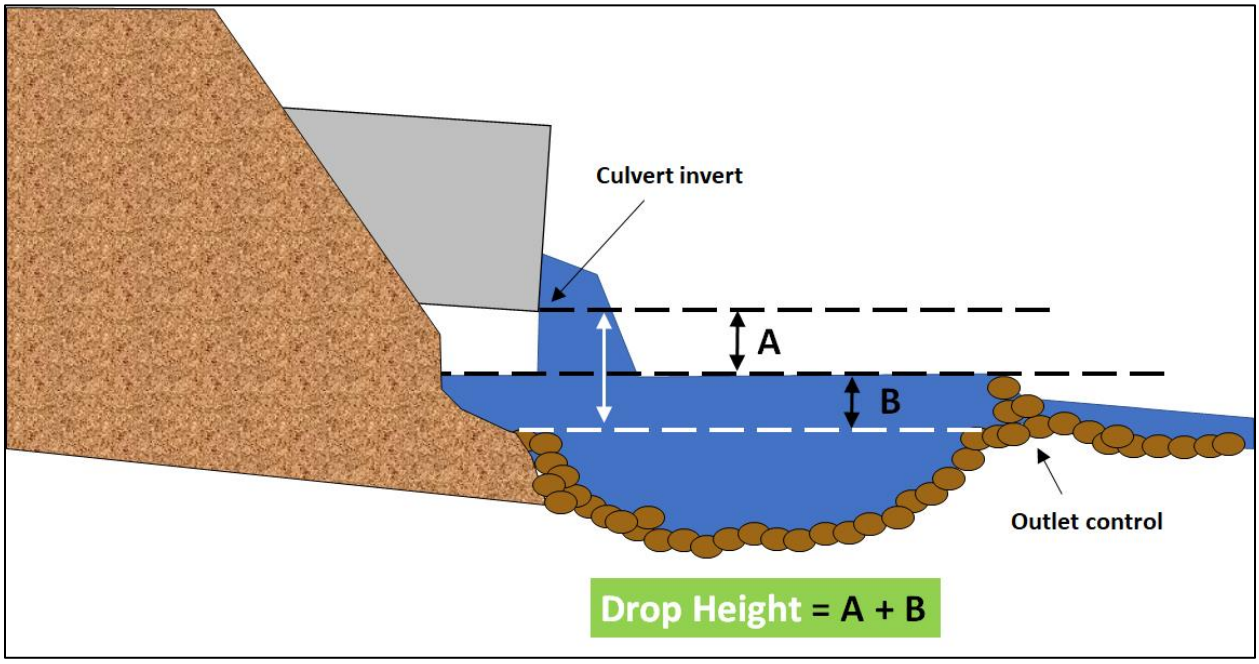


Figure 9. Diagram of locations and calculation used to determine culvert Drop Height.

Stream Width Ratio – Calculate the ratio of the active channel width to culvert diameter/span. For example, a site with an active channel width of 6 feet and a culvert diameter/span of 4 feet would have a stream width ratio of 1.5.

Crossing Issues –

- Culvert is damaged, has separated joints, holes in the bottom, or has a rusty bottom.

- Water flows under, over, or around the culvert.

- There is ponding of water upstream of the culvert.

- The culvert is clogged or keeps clogging with dirt or debris.

- The stream has undercut the culvert at the downstream end.

- There are whorls or eddies at the culvert entrance.

- Dirt from the fill over the culvert is falling into the water.

- There is sloughing, gullies, holes, or cracks in fill over the culvert.

- There is a change in water surface level inside the culvert or created by the ford.

- The water depth across the ford or in the culvert is shallower than in the adjacent stream channel.


- Fish have difficulty swimming through or over the water crossing because of fast moving water.



- There are culverts associated with the ford (vented ford).


- Debris hangs up on the ford or flow is dammed up at the ford.

Photos – A series of photos should be taken at each site. The upstream (inlet) and downstream (outlet) ends of a culvert, culvert barrel, and upstream and downstream habitat in the vicinity of the water crossing. For fords, a picture showing both approaches and the ford bottom should be taken.

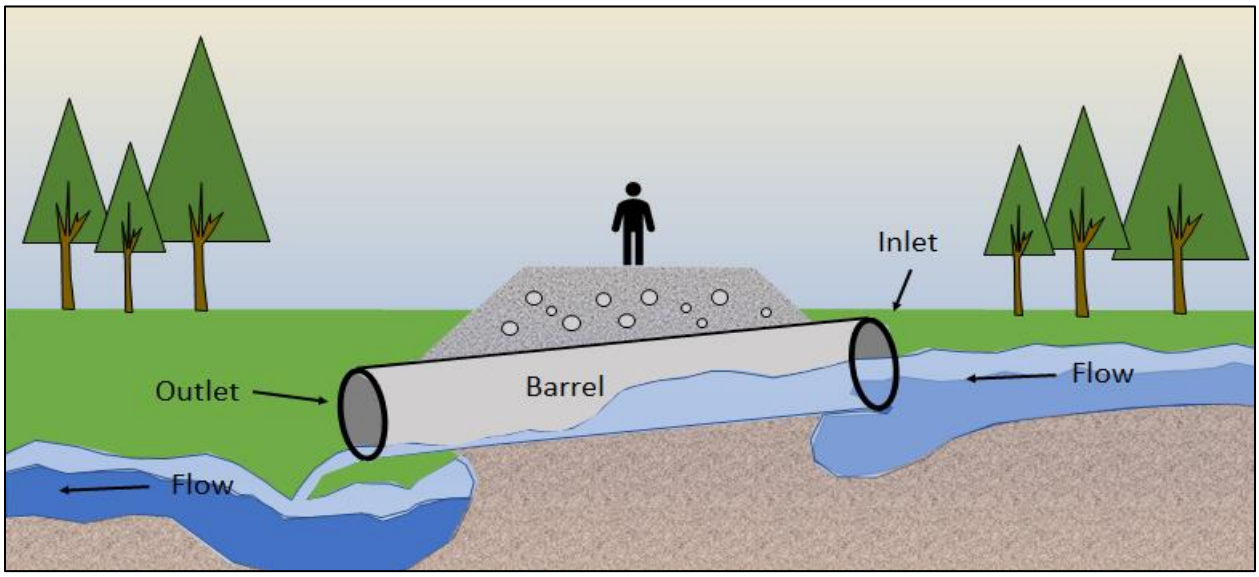
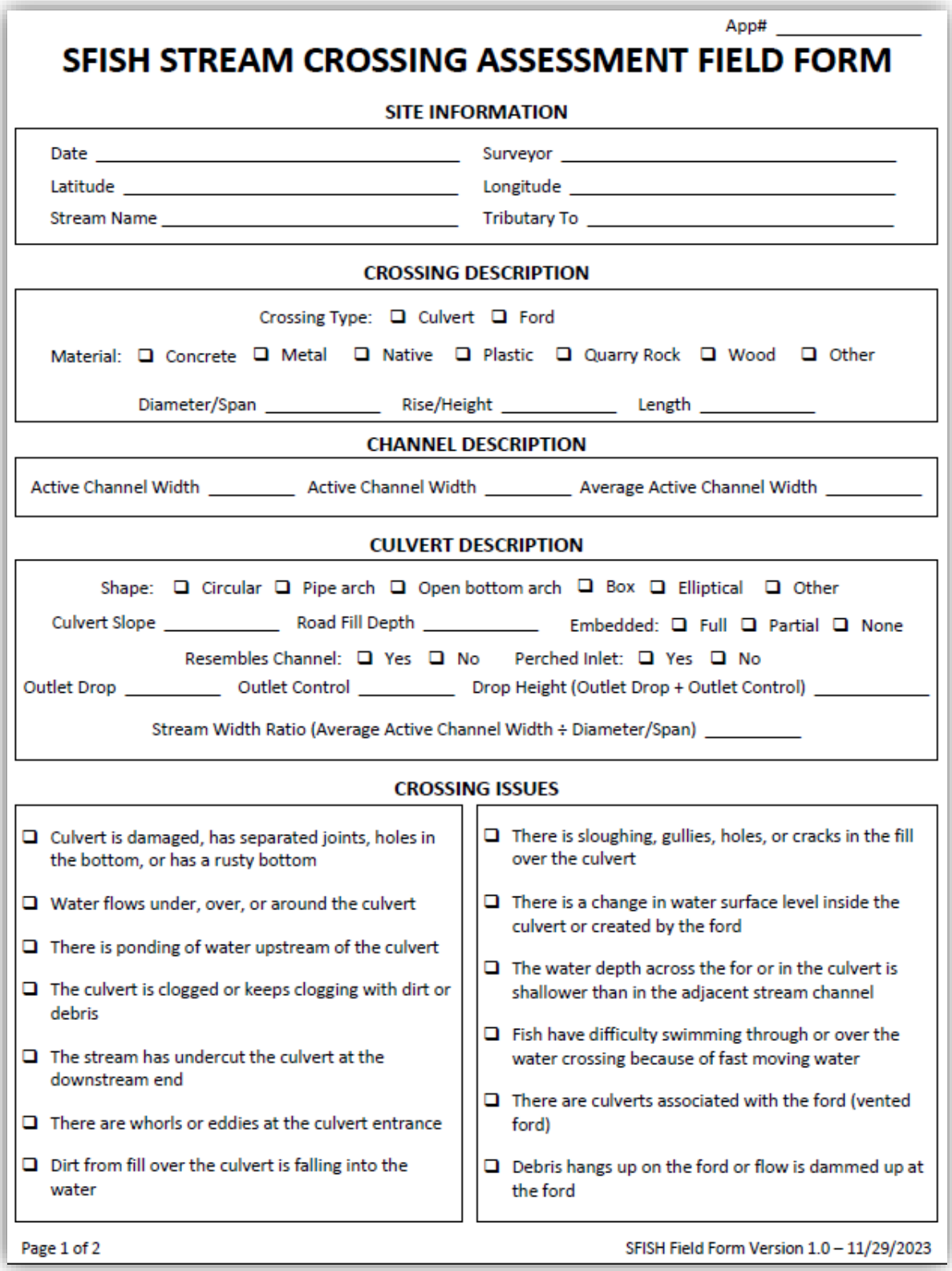


Figure 10. Culvert photo locations.

Site Comments – Add any other relevant site-specific characteristics or features present.



App# _____

SFISH STREAM CROSSING ASSESSMENT FIELD FORM

SITE INFORMATION

Date _____ Surveyor _____

Latitude _____ Longitude _____

Stream Name _____ Tributary To _____

CROSSING DESCRIPTION

Crossing Type: ❑ Culvert ❑ Ford

Material: ❑ Concrete ❑ Metal ❑ Native ❑ Plastic ❑ Quarry Rock ❑ Wood ❑ Other

Diameter/Span _____ Rise/Height _____ Length _____

CHANNEL DESCRIPTION

Active Channel Width _____ Active Channel Width _____ Average Active Channel Width _____

CULVERT DESCRIPTION

Shape: ❑ Circular ❑ Pipe arch ❑ Open bottom arch ❑ Box ❑ Elliptical ❑ Other

Culvert Slope _____ Road Fill Depth _____ Embedded: ❑ Full ❑ Partial ❑ None

Resembles Channel: ❑ Yes ❑ No Perched Inlet: ❑ Yes ❑ No

Outlet Drop _____ Outlet Control _____ Drop Height (Outlet Drop + Outlet Control) _____

Stream Width Ratio (Average Active Channel Width ÷ Diameter/Span) _____

CROSSING ISSUES

- ❑ Culvert is damaged, has separated joints, holes in the bottom, or has a rusty bottom
- ❑ Water flows under, over, or around the culvert
- ❑ There is ponding of water upstream of the culvert
- ❑ The culvert is clogged or keeps clogging with dirt or debris
- ❑ The stream has undercut the culvert at the downstream end
- ❑ There are whorls or eddies at the culvert entrance
- ❑ Dirt from fill over the culvert is falling into the water
- ❑ There is sloughing, gullies, holes, or cracks in the fill over the culvert
- ❑ There is a change in water surface level inside the culvert or created by the ford
- ❑ The water depth across the for or in the culvert is shallower than in the adjacent stream channel
- ❑ Fish have difficulty swimming through or over the water crossing because of fast moving water
- ❑ There are culverts associated with the ford (vented ford)
- ❑ Debris hangs up on the ford or flow is dammed up at the ford

Figure 11. Page 1 of the SFISH Stream Crossing Assessment Field Form.

App# _____

SFISH STREAM CROSSING ASSESSMENT FIELD FORM

PHOTOS

Culvert: ❑ Inlet ❑ Outlet ❑ Barrel Habitat: ❑ Upstream ❑ Downstream

Ford: ❑ Approach ❑ Bottom

SITE COMMENTS

Figure 12. Page 2 of the SFISH Stream Crossing Assessment Field Form.

C. Abandoned Road Repair

The lack of inspection and maintenance of drainage structures and unstable road fills along abandoned roads can result in soil movement and sediment delivery to stream channels. Unmaintained and undersized culverts are of particular concern because they can be a barrier to fish passage, pose an increased risk of failure, and may have a high diversion potential.

Figure 13. Photos of an abandoned road that poses a risk to waters of the state.

Assessment of abandoned roads will be dependent upon the specific issue(s) present at the site. If fish stream culverts are present, they will be assessed using the same methods as described in the prior subsection and those with perched fill will use the methods outlined in the next subsection of this Technical Guidance. All abandoned roads will need to be assessed for delivery of sediment to waters of the state by completing the SFISH Abandoned Road Assessment Field Form (Figure 11).

Table 2. Scoring matrix used to prioritize abandoned roads. A cumulative score is calculated using questions about visible geomorphic impacts, road drainage system condition, and road surface condition.

Connectivity to Stream	Value	Drainage Structures	Value	Road Surface	Value
Between 100 – 200 feet (Q3)	1	Bars or dips (Q8)	2	Native material	2
Within 100 feet (Q2 or Q6)	5	Ditches (Q9)	4	Granitic or Sandy	4
Direct (Q1, Q3, or Q5)	10	Culverts (Q7)	6	Erosion present	6

Cumulative Score	Priority	Value
1-4	low	1
5-9	medium	3
≥ 10	high	5

A detailed explanation of the data fields in the SFISH Abandoned Road Assessment Field Form are provided below. Some data will have already been collected on the SFISH Project Eligibility Field Form and can be transcribed onto the SFISH Abandoned Road Assessment Field Form.

SFISH Abandoned Road Assessment Field Form:

App# - Record the project application number assigned by the SFISH Program Coordinator.

Date – Record the month, day, and year for the site visit.

Surveyor – Record the name of the person(s) responsible for the data collection.

Latitude/Longitude – Determine the geographic position of the site based upon the World Geodetic Survey 1984. It is best to retrieve geographic coordinate data in the field with a Global Positioning System unit to avoid confusion about the feature location. Coordinates should be collected at the most downstream end of the feature, e.g., the outlet of a culvert. Record coordinates in decimal degrees using four significant figures after the decimal.

Stream Name – Record the name of the waterbody where the site is located. Use federally recognized names, if registered in the Geographic Names Information System. If not registered, a well-established local name may be used. If neither is available, record 'unnamed'.

Tributary To – Record the name of the downstream waterbody into which the waterbody described in 'Stream Name' flows. Apply the same naming convention described for recording 'Stream Name'. If the downstream waterbody is unnamed, record 'unnamed', followed by the name of the next downstream waterbody that is named, followed by the word, 'trib'. E.g., 'unnamed Bear Cr trib'.

Sediment Delivery Detail – Answer the series of questions to facilitate determination of sediment delivery potential for the site.

Site Comments – Provide any additional field observations that may be relevant.

Photos – Photos should be taken that capture the site issues identified in the sediment delivery detail.

App# _____

SFISH ABANDONED ROAD ASSESSMENT FIELD FORM

SITE INFORMATION

Date _____ Surveyor _____

Latitude _____ Longitude _____

Stream Name _____ Tributary To _____

SEDIMENT DELIVERY DETAIL

- ❑ Sediment deposits, rills, or gullies reaching the high-water line or flood-prone area of waters of the state.
- ❑ Sediment deposits, rills, or gullies ending within 100 ft of the high-water line or flood-prone area of waters of the state.
- ❑ Sediment deposits, rills, or gullies ending 100-200 ft from the high-water line or flood-prone area of waters of the state.
- ❑ Turbid water draining directly into waters of the state during runoff events.
- ❑ Road surface runoff draining directly into waters of the state at a water crossing.
- ❑ Rilled, gullied, or rutted water crossing approaches.
- ❑ Culverts with separated joints, rusted bottoms, smashed ends, or bent ends.
- ❑ Flattened or breached water bars or drain dips.
- ❑ Scouring or downcutting of the road ditch.
- ❑ There are indication of surface erosion.
- ❑ The road surface is composed of native-soil.
- ❑ The native-surfaced road is composed of granitic or sandy soils.

SITE COMMENTS

PHOTOS

Figure 14. Abandoned Road Assessment Field Form.

D. Roads with a Perched Fill that Present a Significant Hazard to a Fish-Bearing Stream

The goal for this type of road improvement project is to remove or stabilize road sidecast or fill that has the potential to fail and deliver sediment to a fish-bearing stream. Fill slope failures are most frequently associated with a lack of proper fill compaction, oversteepened fill, building on too steep a side slope, and/or inadequate surface protection.

In wet areas with weak fill material and drainage problems, the natural slopes for steep sections of road where a failure may occur can be as gentle as 50%. Whereas in areas with well-drained materials with uniform slopes and no indications of old slides, fill may be stable on slopes up to 70%.

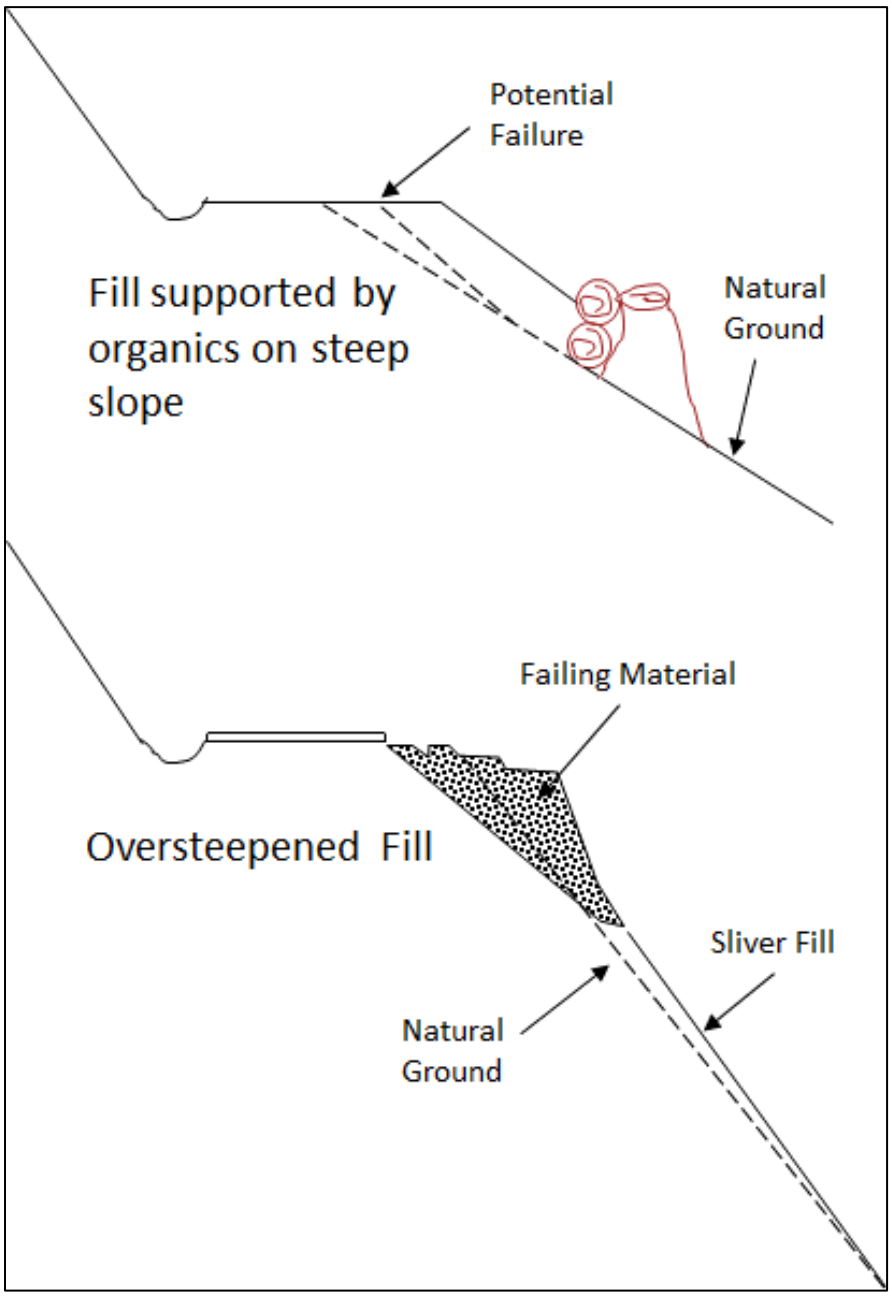


Figure 15. An illustration of road fill perched on debris and a road section with oversteepened fill.

Road segments where the natural slope on the downhill side of the road fill exceeds 50% or the road prism has indicators of movement, such as rilling, slumping, cracks, or old sidecast slides; and there is less than 100 feet to a fish-bearing stream after the slope gradient drops to and remains below 40% will be assessed.

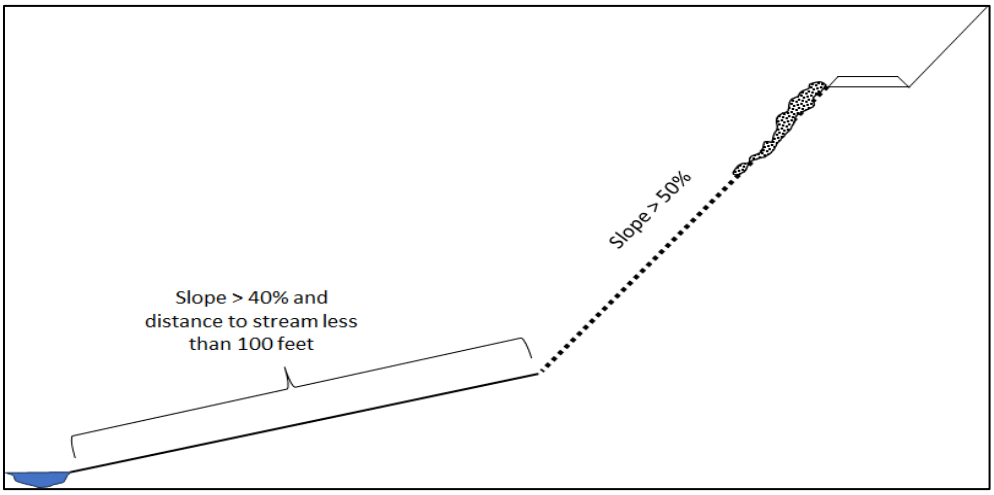


Figure 16. Road with perched fill on an open slope that may present a hazard to a fish-bearing stream.

For sites where delivery may occur in-directly to a fish stream, there are other features indicating slope failure potential, or there is evidence of a large-scale problem a geotechnical specialist should be consulted.

Variables that will be considered when assessing perched fill projects are slope steepness, indicators of movement, vegetation cover, fill condition, and fill depth. Detailed explanation of the data fields in the SFISH Perched Fill Assessment Field Form (Figure 14) are provided in the following subsection. Some data will have already been collected on the SFISH Project Eligibility Field Form and may be transcribed onto the SFISH Perched Fill Assessment Field Form.

Table 3. Scoring matrix used to prioritize perched road fill. A cumulative score using five road stability surrogates is calculated. The five surrogates include natural slope steepness, signs of movement, vegetation cover, fill condition, and fill depth.

Slope (%)	Value	Movement	Value	Vegetation	Value	Fill Condition	Value	Fill Depth (ft)	Value
< 60	0	None	0	Forest	0	good	0	< 5	0
60-70	5	Cracks or drop	5	Grass, brush, reproduction	3	Organics exposed	3	5-15	3
> 70	10	Slides	10	None	6	≥ 15	6	>15	6

Cumulative Score	Priority	Value
0-14	Low	1
15-19	Medium	3
≥ 20	High	5

SFISH Perched Fill Assessment Field Form:

App# - Record the project application number assigned by the SFISH Program Coordinator.

Date – Record the month, day, and year for the site visit.

Surveyor – Record the name of the person(s) responsible for the data collection.

Latitude/Longitude – Determine the geographic position of the site based upon the World Geodetic Survey 1984. It is best to retrieve geographic coordinate data in the field with a Global Positioning System unit to avoid confusion about the feature location. Coordinates should be collected at the most downstream end of the feature, e.g., the outlet of a culvert. Record coordinates in decimal degrees using four significant figures after the decimal.

Stream Name – Record the name of the waterbody where the site is located. Use federally recognized names, if registered in the Geographic Names Information System. If not registered, a well-established local name may be used. If neither is available, record 'unnamed'.

Tributary To – Record the name of the downstream waterbody into which the waterbody described in 'Stream Name' flows. Apply the same naming convention described for recording 'Stream Name'. If the downstream waterbody is unnamed, record 'unnamed', followed by the name of the next downstream waterbody that is named, followed by the word, 'trib'. E.g., 'unnamed Bear Cr trib'.

Natural Slope Steepness – Measure the natural slope steepness on the downhill side of the road using a clinometer to the nearest half percent and consider the following:

- Try to pick a point as far down the hill as possible to even out minor variations on the ground.
- For sites with lots of brush you may need to use a brightly colored target such as a hard hat.

Indicators of Movement – Indicate if the site has cracks, rills, gullies, a drop in the outside prism, or signs of old sidecast slides.

Vegetation – Indicate if the vegetation on the sidecast or road fill is none, cover (grass or brush), reproduction, or forest.

Fill Condition – Indicate if the fill is at least 15% steeper than the natural slope, organic material is exposed, or good.

Fill Depth – Estimate fill depth at the outside edge of the road to the nearest foot as a vertical measurement.

Site Comments – Provide any additional field observations that may be relevant, including if the perched fill is located on an open slope or is channel confined.

Photos – Photos should be taken that capture the site issues, including one looking downslope from the road, one looking upslope from the stream, and the road profile.

App# _____

SFISH PERCHED FILL ASSESSMENT FIELD FORM

SITE INFORMATION

Date _____ Surveyor _____

Latitude _____ Longitude _____

Stream Name _____ Tributary To _____

SIDECAST/FILL DETAIL

Natural Slope Steepness _____

Indicators of movement (circle all that apply): None Cracks Rills Gullies Drop in Prism Slides

Vegetation (circle one): None Cover (grass or brush) Reproduction Forest

Fill Condition (circle one): 15% steeper Logs/Debris exposed Good

Estimated Fill Depth _____

SITE COMMENTS

PHOTOS

- ❑ Looking downslope from the road
- ❑ Looking upslope from the stream
- ❑ Left side profile
- ❑ Right side profile

Figure 17. SFISH Perched Fill Assessment Field Form.

STEP 3: Environmental Benefits Scoring

After Step 1, Program Application, and Step 2, Project Evaluation, a project will be scored. ODF will use a decision support tool that integrates field assessment data with GIS data to generate a project score. The score will not to be a rigid prioritization of the project, but rather a filter that ranks a project based on its ecological uplift potential in comparison to other projects being considered for funding using a standardized set of attributes.

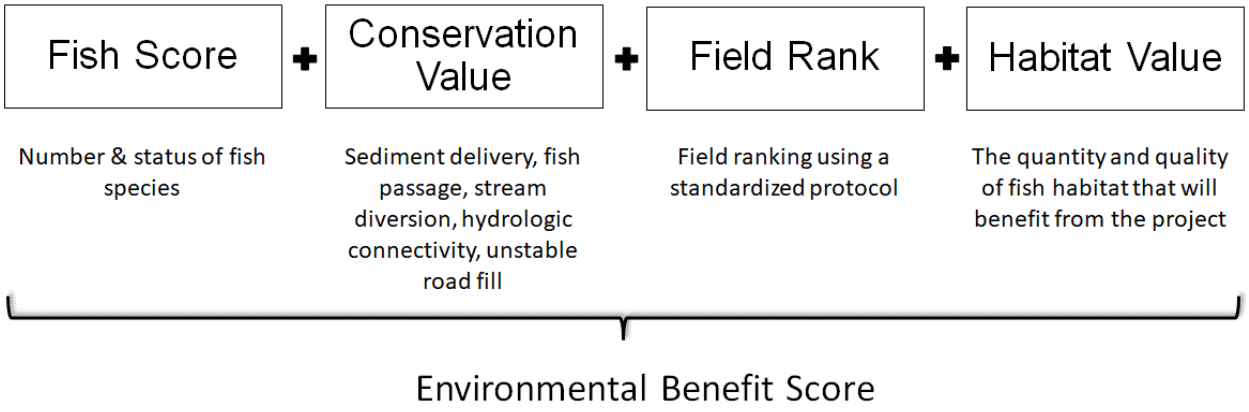


Figure 18. Conceptual model for environmental benefit scoring.

STEP 4: Project Concept

After an environmental benefit score is generated, ODF will work with the SFO to develop a project concept and cost estimate. This may require consultation with technical experts such as engineers, hydrologist, geomorphologists, and fish biologists.

All project information will be compiled and presented for a committee review.

Additional information may need to be compiled for abandoned roads, including an analysis of net benefits for waters of the state and a feasibility assessment to determine the most practicable alternatives to repair the abandoned road segment. Alternatives may include vacating the segment, no action, and any other reasonable alternative.

All project information will be compiled by ODF and presented to a committee for review.

STEP 5: Committee Review

Review will be conducted by the SFISH Review Team (SRT). The purpose and duties of the SRT are to review SFISH fundable projects and make recommendations to ODF regarding the awarding of money in the SFISH Fund.

The SRT will consist of five members. The composition of the SRT will be:

Two members from agency staff: ODF's Small Forestland Owner Implementation Support & Tracking Manager and ODFW's Fish Screening & Passage Program Manager. Two members from existing agency

advisory committees: one from ODF's Committee for Family Forestlands and one from ODFW's Fish Passage Task Force. One member from a nongovernmental organization promoting freshwater aquatic habitat conservation.

ODF, in coordination with ODFW, will invite the Fish Passage Task Force and the Committee for Family Forestlands to appoint one of their members to the SRT. And the agencies will recruit and select a representative from a nongovernmental organization promoting freshwater habitat conservation.

The term of members from non-agency staff is two years. Non-agency members may be reappointed but may not serve more than three full terms.

The SRT will consider a project's environmental benefit score along with additional factors such as time waiting for SFISH funding, local or regional importance, other high-conservation value objectives, and potential efficiencies gained through coordinating grant-funded activities with other activities at a project site.

STEP 6: Project Selection

After a project from the SRT recommend list is approved by ODF for funding, ODF will work with the SFO to finalize project details, which include but are not limited to specifications, timing, efficiencies, SFO responsibilities, and other factors as necessary. The SFO and the program will work together and mutually agree on the most efficient and effective way to complete the project. A grant agreement will be developed and entered between the SFO and ODF based on the agreed upon details.

Project Implementation Policies and Guidelines

Grant Agreement

Grant agreements detail the SFOs responsibilities in implementing a project. ODF cannot disburse funds until an agreement is in place. If the guidance in this Forest Practices Technical Guidance conflicts with any part of the grant agreement, the grant agreement shall take precedence.

- Grants can be made only to eligible SFOs.
- SFOs must be able to plan, administer, and complete the project.
- The SFO is responsible for all project permitting and reporting.

Additional guidance will be added to this Forest Practices Technical Guidance covering budget amendments, accounting requirement, payment, reporting, and project close-out.

References

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Appendix A: Oregon Administrative Rules

629-607-0300
Small Forestland Investment in Stream Habitat Program

(1) The department shall establish the Small Forestland Investment in Stream Habitat (SFISH) Program Fund as a grant program to fund projects on small forestland owner lands. The Small Forestland Owner Assistance Office shall manage the SFISH Program in consultation with the Department of Fish and Wildlife.

(2) The SFISH Program shall make funding available to qualified small forestland owners for the purposes of improving fish habitat on their forestlands for the following projects:
   (a) Replace fish stream water crossing structures, not bridges, mostly culverts that are no longer functioning, or still functioning but not designed consistent with requirements of OAR 629-625-0320;
   (b) Repair abandoned roads; or
   (c) Reconstruct, vacate, or relocate roads with a perched fill that present a significant hazard to fish-bearing streams. Not more than 10 percent of available SFISH funds may be used for perched fill remediation projects in any year.

(3) To be eligible for the SFISH Program, in addition to a landowner meeting the definition of a small forestland owner in OAR 629-600-0100, the small forestland owner must provide the following information:
   (a) Documentation showing that no more than an average yearly volume of two million board feet of merchantable forest products has been harvested from the landowner's forestland in the state of Oregon when averaged over a three-year period prior to the date the Small Forestland Owner Assistance Office receives the grant application;
   (b) A statement of affirmation to the Small Forestland Owner Assistance Office that the landowner does not expect to exceed an average yearly volume of two million board feet of merchantable forest products to be harvested from the landowner's forestland in Oregon during the 10 years following the date the Small Forestland Owner Assistance Office awards grant-funds, and
   (c) A road condition assessment containing the information detailed in OAR 629-625-0920, that includes an assessment of all roads, abandoned roads, culverts, and fish passage barriers located on the parcel of land, as defined in OAR 629-600-0100, on which a grant-funded SFISH project may occur.

(4) The SFISH Program shall optimize state funding by prioritizing funding for site locations determined to have a high conservation value. Examples of high conservation value sites will include but are not limited to:
   (a) Areas of known chronic sedimentation;
   (b) Fish passage barriers;
   (c) Stream diversions, or sites with a high diversion potential;
   (d) Areas of known hydrologic connectivity; or
   (e) Roads with a perched fill posing a significant hazard to fish-bearing streams.

(5) The SFISH Program will consider the greatest resource benefit, and prioritize funding projects which best address the following:
   (a) Removal of fish passage barriers consistent with Department of Fish and Wildlife requirements under ORS 509.585 and OAR 635-412-0015, as implemented through the forest practice rules;

(b) Minimize the potential for sediment delivery to waters of the state;
(c) Minimize stream diversions at water crossings;
(d) Minimize hydrologic connectivity between roads and waters of the state;
(e) Remove perched fill that presents a significant hazard to fish-bearing streams through reconstruction, relocation, or vacating; or
(f) Length of time that the grant has been submitted and under consideration for funding; or
(g) Meet high-value conservation objectives as determined by the department in consultation with other state and federal agencies.

(6) The Small Forestland Owner Assistance Office in coordination with the Department of Fish and Wildlife, will prioritize funding for the following projects on high conservation value sites:
(a) Water crossing structure, not bridge, mostly culvert replacements on fish streams;
(b) Repair of abandoned roads; and
(c) Perched fills that present a significant hazard to fish-bearing streams.

(7) The small forestland owner will collaborate with the Small Forestland Owner Assistance Office on projects approved for SFISH funding to determine project details, which include but are not limited to specifications, timing, efficiencies, involvement, and other factors as necessary. The small forestland owner and the Small Forestland Owner Assistance Office will work together and mutually agree on the most efficient and effective way to complete projects.