

Stream Habitat Improvement and Management

Conservation Practice Job Sheet

395 OR-JS

Natural Resources Conservation Service, Oregon

November 2011

Client Name: _____



Definition

Maintain, improve, or restore physical, chemical, and biological functions of a stream and its associated riparian zone, necessary for meeting the life history requirements of desired aquatic species.

Purpose

This practice may be applied as part of a conservation system to support the following purposes:

- Provide suitable habitat for desired aquatic species.
- Provide stream channel and associated riparian conditions that maintain ecological processes and connections of diverse stream habitat types important to aquatic species.

Where Used

The use of this practice should be considered in streams and their adjoining backwaters, floodplains, associated wetlands and riparian areas where geomorphic conditions or habitat deficiencies limit reproduction, growth, survival and diversity of aquatic species.

Planning for Aquatic Habitat and Species

This practice is normally applied concurrently with other practices as part of a conservation plan for a conservation management unit.

For example, most fish-bearing streams on the west side of the Cascade Mountains in Oregon support cold-water species and rely on woody vegetation in the riparian area to keep the water cool; to stabilize the banks and bed; to create instream cover and form pools; to support aquatic and terrestrial insect production; and to remove pollutants and sediment from surface runoff. Therefore the planned project should address the ecology and geomorphology of the area you are working as well as knowledge of aquatic species life history stages.

Assessing the riparian habitat of the stream reach being considered for this practice is an important part of developing a conservation plan. If there is no adjacent riparian habitat or the present riparian habitat is not functioning as it should for that site, using this practice to add spawning gravel or to create pools may not benefit aquatic life unless riparian problems are also addressed. Including Riparian Forest Buffer (code 391) as an associated practice may be appropriate. Instream habitat elements, together with adjacent riparian areas, are all components of a complex stream system that is in dynamic equilibrium.

The conservation plan and improved stream habitat should be site specific to the local hydrology, channel morphology geomorphic setting aquatic species, riparian and floodplain conditions and any habitat limitations; therefore, this practice must be based on a stream inventory, such as the NRCS Stream Visual Assessment Protocol 2.

Stream Habitat Improvement and Management may involve Aquatic Organism Passage (code 396) to make upstream habitat accessible. It could also include installing screens to keep fish out of surface water diversions, using Structure for Water Control (code 587).

This practice should be used as a component of a watershed plan that incorporates soil conservation; nutrient and pesticide management practices; and other management techniques; to control point and non-point sources of pollution. It should also be part of a long-range goal to restore geomorphic stability to the entire stream.

Design instream structures to be compatible with the dynamic nature of the system. Where practical, restore or maintain stream habitat forming processes such as natural flow regime, meander migration, sediment transport, recruitment and storage of large wood and floodplain interactions with the stream. Structures will not impede or prevent passage of aquatic organisms at any time, cause excessive bank erosion, cause unintentional lateral migration, aggradation or degradation of the channel or hinder channel-floodplain interactions.

Operation and Maintenance

Timing of project activity and instream construction is extremely important to reduce negative short-term impacts to aquatic species, such as sedimentation and turbidity. Following In-water Timing Guidelines is critical. In Oregon: http://www.dfw.state.or.us/lands/inwater/Oregon_Guidelines_for_Timing_of_%20InWater_work2008.pdf

An operation and maintenance plan shall be developed for all applications. The plan shall provide for periodic inspection (annually, at least) and prompt repair should the application of the practices cause streambank or streambed instability.

Specification and Job Sheet

Site-specific requirements are listed on the Job Sheet. Additional provisions are entered on the Job Sketch Sheet. Job Sheets are prepared in accordance with the NRCS Field Office Technical Guide and Practice Standard 395 (Stream Habitat Improvement and Management).

Client:		Date:	
Location:		County/SWCD:	
Contract #:		Tract/Field:	
Planner:		Proposed Treatment Acres:	
Planned Installation Date		Program	

Installation shall be in accordance with the following specifications, drawings, and other requirements. NO CHANGES ARE TO BE MADE IN THE SPECIFICATIONS WITHOUT PRIOR APPROVAL BY AN AGENCY REPRESENTATIVE.

Management Objective(s) (Describe landowner objective and the stream or ecosystem that is being targeted and the desired outcome.):

Purpose(s) of Practice:	
	Provide suitable habitat for desired aquatic species and diverse aquatic communities
	Provide channel morphology and associated riparian characteristics important to desired aquatic species
	Other(explain):

Habitat Evaluation Procedure:
List tools or methods used to assess habitat conditions (e.g., Stream Visual Assessment Protocol 2, or Other habitat inventory, etc.).

Aquatic Resource Information:				
Stream or Lake Name:	Tributary to:	Targeted Species:	ESA Listed Species:	Other:

Existing Habitat Conditions & Limiting Factor(s):		
Describe current habitat conditions and possible limiting factor(s) in the planning area. Consider the quantity, quality, distribution, and connectivity of food, water, and cover elements needed to meet the life history requirements of targeted aquatic species throughout the year and life cycle. Summarize the following using the Stream Visual Assessment (SVAP2) data or attach SVAP2 to this Job Sheet.		
Channel Condition:	Hydrologic Alteration:	Bank Condition:
Riparian Area Quantity:	Riparian Area Quality:	Canopy Cover:
Water Appearance:	Nutrient Enrichment:	Manure or Human Waste Presence:
Pools:	Barriers to Aquatic Species Movement:	Aquatic Invertebrate Habitat:
Fish Habitat Complexity:	Aquatic Invertebrate Community:	Riffle Embeddedness:
Salinity:	Other:	Other:

SVAP2 Score/Rating Prior to Implementation. (Note: SVAP2 total score must be 0.5 or above to meet Quality Criteria) Describe cause for low habitat conditions:

Projected SVAP2 Score/Rating Post Implementation (provide new SVAP2 numbers for low habitat condition scores above and describe how they will be met):

Maintain Current Habitat Condition (Habitat Elements must meet minimum Quality Criteria level to be addressed in this section):

Maintenance of Existing Habitat (Check if the SVAP2 elements meet quality criteria and no improvement to individual elements could be improved). Describe below how the habitat elements will be managed and maintained at or above quality criteria levels.

Habitat Improvement Recommendations: Describe management actions that will be taken to remove or reduce limiting habitat factors and improve each aquatic habitat element listed above (SVAP). Describe any equipment used, managed grazing in the riparian area, fords, or other disturbance activity that shall be restricted during critical periods such as migration or spawning. Identify any additional management requirements, including noxious weed and invasive plant control. (Check all that apply to address limiting factors identified above). Habitat recommendations **MUST** be appropriate for site (i.e., do not place boulders into a stream where there should not be boulders). Complete Job Sheet(s) for Supporting Practices and attach to this Job Sheet.

Creation of Instream Habitat		Supporting Practices						
Establishment of instream large wood to create pools and cover	Log jams	Open Channel 582	Streambank and Shoreline Protection 580	Channel Stabilization 584	Obstruction Removal 500	Clearing and Snagging 326		
	Log weirs or vanes							
	"Undercut bank" logs							
	Single, anchored logs							
Placement of clean spawning gravel _____ (amount)	Open Channel 582	Streambank and Shoreline Protection 580	Channel Stabilization 584					
Placement of boulders for habitat	Channel Stabilization 584							
Creation of Side-channel habitat _____ (length)	Open Channel 582	Streambank and Shoreline Protection 580	Channel Stabilization 584					
Creation of alcove or backwater habitat	Open Channel 582	Pond 378						
Removal of levee or dike restricting stream access to floodplain _____ (length).	Open Channel 582	Streambank and Shoreline Protection 580	Channel Stabilization 584					
Improvement or protection of a Spring critical to inland fishes habitat	Fence 382	Use Exclusion 472						
Riparian Vegetation Improvement		Supporting Practices						
Increase buffer width	Riparian Herbaceous Buffer 390	Riparian Forest Buffer 391	Tree/Shrub Establishment 612	Fence 382	Use Exclusion 472			
Increase buffer diversity	Riparian Herbaceous Buffer 390	Riparian Forest Buffer 391	Tree/Shrub Establishment 612	Fence 382	Use Exclusion 472			

Notes:

Implementation Procedure/Guidelines: List methods or guidelines used to designing habitat elements (e.g., Standard Local Operating Procedures [SLOPES], USFWS Partners for Fish and Wildlife Restoration guidelines, etc.)

Operation and Maintenance: Client agrees to annual monitoring of this practice to determine: 1) if aquatic wildlife habitat objectives are being met, 2) if facilitating practices are functioning or need repair, and 3) if modifications are needed.

PRACTICE APPROVALS:

1. Planning Approval:

Practice Code No.	PRACTICE	LEAD DISCIPLINE	CONTROLLING FACTOR	UNITS	JOB CLASS				
					I	II	III	IV	V
395	Stream Habitat Improvement and Mgt	CED and Aq.Bio	Instream Habitat	bfw	5	10	15	<u>20</u>	<u>all</u>
			Riparian Buffer	Ft. Width (per side)	20	50	75	150	all

Approved by: _____

Job Title / I & E JAA: _____ Date: _____

2. Supporting Practice Design Approval: Attach Supporting Practice Job Sheets with appropriate Job Approval Authority to this Job Sheet.

Refer to Design Engineering Drawings and Specifications in Casefile

Engineer or Technician Preparing Designs: _____

Approved by: _____ Date: _____

Job Title: _____

This practice is classified as Job Class: _____

Design Approved by: _____ Date: _____

Job Title: _____

CLIENT'S ACKNOWLEDGEMENT STATEMENT:

The Client acknowledges that:

- a. They have received a copy of the specification and understand the contents and requirements.
- b. The following information must be provided to NRCS by the client before this practice can be certified as applied:
- c. It shall be the responsibility of the client to obtain all necessary permits and/or rights, and to comply with all ordinances and laws pertaining to the application of this practice.

Accepted by: _____ Date: _____

CERTIFICATION:

I have completed a review of the information provided by the client and certify this practice has been applied.

Certification by: _____ Date: _____

Job Title: _____

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication program information (Braille, large print, audiotape, etc.) should contact the USDA Office of Communications (202) 720-2791.

To file a complaint of discrimination write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.