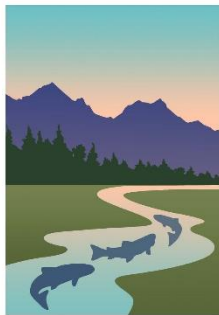




NOOKSACK SALMON ENHANCEMENT ASSOCIATION



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**Nooksack River Stewards Final Report
2016 Summer Season**

Introduction

The Nooksack River Stewards Program is a cooperative environmental education and outreach program of the United States Forest Service (USFS) Mt. Baker Ranger District and the Nooksack Salmon Enhancement Association (NSEA). The focus of this program is to provide education to recreational users of the Nooksack River about the anadromous salmonid populations in this system, particularly the threatened run of spring Chinook and bull trout that are present in the river throughout the summer recreational season.

History of the Program

In 1998, the USFS Mt. Baker Ranger District and the Washington Department of Fish and Wildlife (WDFW) created a cooperative seasonal position, the Nooksack River Steward, to monitor and protect salmonids and their habitat in the Nooksack River basin and to educate the public about salmonids and their habitat along the river and in local communities. In 2005, this USFS partnership changed from one with WDFW to one with NSEA.

A significant change in the way the River Stewards Program operates under NSEA is the use of a team of staff and volunteers rather than a single seasonal stewardship position. The 2005 River Stewards team consisted of one NSEA staff member and eight volunteers; six interns from Western Washington University and two interns from Northwest Indian College. In 2006, the program was run by one NSEA staff member and a team of three volunteers; one intern from Northwest Indian College, one intern from Western Washington University, and one community volunteer. In 2007, the team was again made up of one NSEA staff member and three volunteers; two interns from Western Washington University and one intern from the University of Montana. In 2008, two NSEA staff members and five volunteers comprised the River Stewards team; three interns from Western Washington University, one intern from Bellingham Technical College, and one intern from Pacific University in Oregon. In 2009, the River Stewards team included one NSEA staff member and eight volunteers; five interns from Western Washington University, one intern from Whatcom Community College, one intern from the University of Texas in Austin, and one community volunteer. In 2010 one NSEA staff member and four volunteers; three interns from Western Washington University and one intern from Whatcom Community College made up the River Stewards team. In 2011 the River Stewards team was made up of one NSEA staff member and three volunteer interns from Western Washington University, and in 2012 the River Stewards team was made up of one NSEA staff member and six volunteer interns from Western Washington University. In 2013 five interns and one staff member ran the River Stewards team. The 2014 team was made up of one NSEA staff member and five interns, one of whom has been a part of the River Stewards program for three consecutive seasons and provided great consistency and knowledge to the program. In 2015, there were three River Steward interns from Western Washington University led by two staff members. In 2016, five River Steward interns paired with one AmeriCorps member and one staff member composed the team.

River Stewards Program

Volunteer River Stewards were recruited by NSEA in May, before the start of the summer recreation season. Training began in early June as the River Stewards meet to

tour the area and learn more about the fish and their habitat within the Nooksack Basin. Additionally, the River Stewards team met periodically throughout the season to share information about their observations and experiences. These meetings helped create team cohesiveness and fostered a shared vision of how to be a successful steward.

The River Stewards maintain a strong presence in the North Fork Nooksack Basin throughout the summer, focusing particular attention on areas used by anadromous salmonids. The primary field base for the program is at the USFS Glacier Public Service Center. This location allows River Stewards to spread out from a common point and concentrate efforts in high use recreational areas along the North Fork Nooksack River, such as the Horseshoe Bend Trail, the Deadhorse and Canyon Creek dispersed campsites, Douglas Fir, Silver Fir, and Excelsior campgrounds, as well as the access points on lower Canyon, Cornell, Deadhorse, Glacier, Gallup and Thompson creeks. River Stewards met with visitors who utilize the river for fishing, boating, camping, and other recreational activities. River Stewards worked together to provide informal education regarding the impacts that different types of recreation can have on the native fish runs. River Stewards also provided formal environmental education opportunities for public and private groups, including area school and youth organizations, commercial and private rafting groups, campground guests, and others who may have questions, concerns or interest in the fish of the Nooksack River.

Protection and Informal Education

Throughout the summer, River Stewards met with recreationalists who were using the river for fishing, boating, camping, and other recreational activities and provide informal education regarding the impacts that different types of recreation can have on the fish residing in those waters. Typical contacts lasted anywhere from three to thirty minutes. River Stewards talked with the users about the salmonids currently in the river. They discussed the fish's habitat requirements for successful spawning and juvenile rearing. River Stewards then discussed any problems or issues that recreational users may exacerbate, such as wading on redds or building rock dams across tributaries which deny fish access to potential spawning or rearing reaches. River Stewards also distributed educational brochures filled with information on protecting and restoring native fish habitat.

A variety of signage stressing the importance of not disturbing spawning fish was placed in critical fish use areas throughout the basin to inform the public of the sensitivity of these areas. And for anglers, River Stewards distributed copies of WDFW's [Fishing in Washington](#) pamphlet and worked to help those interested in fishing the Nooksack interpret these regulations.

In 2009 a viewing railing was installed by USFS staff on the bridge overlooking Thompson Creek, a popular view point for visitors to the Mt. Baker-Snoqualmie National Forest to observe spawning spring Chinook and pink salmon. River Stewards now direct visitors to this site, which provided the general public with a wonderful up-close opportunity to observe spawning fish, but from a safe and non-impactful distance.

River Stewards spend much of their time in July and August monitoring the arrival of the spring Chinook salmon, riverine sockeye and bull trout, (and in the odd years the pink salmon as well) and giving presentations to commercial rafting companies and their

clients on the North Fork Nooksack River. This included meeting with the rafting guides to discuss ways to reduce the impacts that boats and boaters have on fish. River Stewards met with large groups of commercial rafting clients and private boaters at rafting put-ins along the river to educate them about the salmonids using the river, important salmonid habitat requirements, and ways that they can minimize their impacts on the fish and their habitat. The USFS initiates a voluntary boating closure for a specific reach of the river on the second Monday in August to reduce disturbance to spawning Chinook salmon and bull trout in particular. After the river closes, River Stewards monitor the closed reach for compliance.

Nooksack River Stewards also watched the river and its tributaries for poachers. When a person was observed fishing illegally, River Stewards first assessed the situation to determine if a field contact could safely be made. If the person appeared non-threatening, the River Stewards approached them and explained the regulations in a respectful manner. The person was then given a copy of the regulations and asked to follow regulations. If the River Steward determined that a field contact couldn't be made safely (the person appears threatening or intentionally poaching), he/she would make notes describing the person and their vehicle, as well as the time and location of the violation, and immediately reported it to WDFW Enforcement officers and the USFS District Enforcement officer for further investigation.

Formal Education

Nooksack River Stewards also gave *Noisy Waters* River Walks on Saturday and Sunday afternoon's along the Horseshoe Bend Trail that is open for public attendance. During the walks, River Stewards identified and discussed important salmonid habitat features, including the roles of native plants and macroinvertebrates in the riparian zone, preferred water quality parameters, and spawning needs. Fish sightings delighted visitors!

The 2016 summer season was especially successful due to the focus and concentration of local events. The River Stewards team hosted several formal presentations at local libraries and community centers on 6/24, 6/25, 8/26.

An interpretive talk was hosted in the Douglas Fir campground around the campfire with s'mores on 7/2 drawing in more than 20 visitors. Additionally a fish poetry night was hosted in partnership with a local restaurant on 7/15, and a children's story time was hosted at a local family pizza restaurant drawing in more than 25 youth to listen to stories around the outdoor fire pit. At this same restaurant, a fish trivia night was held on 9/2 drawing in more than 50 locals to put their knowledge to the test and win great local prizes.

The NSEA Fish-tival event was held on 9/3 from 10-2pm at the Silver Lake Park and was very well received. This event was open house style, geared towards families and drew in more than 80 local families to create fish art, ID macroinvertebrates and go on a native plant scavenger hunt.

Data Collection

Nooksack River Stewards were involved in several types of data collection for the USFS and grant funders, including the Whatcom Community Foundation and Western Native Trout Initiative. Data was collected on the number of contacts that the River Stewards made with the public on a daily basis and whether any impacts to fish or habitat were occurring. River Stewards also monitored recreational use along the North Fork of the Nooksack, and documented the types of uses and number of users in each area visited.

River Stewards maintained and updated an inventory of all dispersed campsites, access, and signage areas on National Forest lands along the North Fork Nooksack River and its tributaries. Inventoried sites were monitored throughout the summer recreation season with the number of users and user activities recorded.

Summary

Nooksack River Stewards closely monitored and tracked all program progress throughout the season, and met regularly to develop effective strategies. During these meetings NSEA staff worked to prioritize the River Stewards activities to ensure that efforts were efficient and educational goals were being met. Fortunately, we were able to meet and exceed our goal of 2,000 contacts made for the 2016 summer season, tallying 2,445 total contacts. The season was successful in continuing to build important partnerships in the upper North Fork community and support the Mt. Baker Snoqualmie National Forest in stewarding public lands, and it educating its users about native fish populations.

Table 1 - Summary of Program Performance for 2016

Performance Measure	Results
Contacts	2,445
Presentations/events	30
Volunteer Hours	1,230

Table 2 - Summary of the River Stewards Program Informal Education Activity

Year	Number of Active River Steward Days	Number of People Contacted	Average Number People Contacted Per Day
1998	68	89	1.31
1999	112	145	1.29
2000	67	87	1.30
2001	107	139	1.30
2002	202	262	1.30
2003	85	110	1.29
WDFW/USFS Subtotal	641	832	1.30
2005	31	2,015	65

2006	19	1,650	87
2007	30	1,921	64
2008	31	2,100	68
2009	32	1,586	50
2010	36	1,572	44
2011	32	1,204	38
2012	30	2,303	67
2013	30	2,296	76.5
2014	32	2,002	59
2015	15	866	57
2016	32	2,445	79
NSEA/USFS Subtotal	991	21,960	63

Table 3 - Summary of Formal Education Presentations for 2016

Type of Presentation	Location	Number of Presentations	Number of People at Presentations
Whitewater Rafting Presentations	Horseshoe Bend Trailhead	6	135
Community events	Douglas Fir Campground, Chair 9, Grahams Restaurant, Silver Lake Park, North Fork and Deming libraries	8	177
River Walks	Horseshoe Bend Trail	16	204
Total		30	516

Table 4 – Summary of Volunteer Hours for River Stewards Program

Year	Volunteer Hours
2005	1,078.25
2006	242
2007	341.5
2008	467.75
2009	797.75
2010	884.75
2011	692
2012	1,099
2013	1,127.5
2014	748
2015	273.5
2016	1,230
Total	8,982

Pictures from the 2016 River Stewards Season



The River Stewards' salmon education booth at the Glacier Public Service Center, ready for visitors to enjoy hands-on information about salmon.



Volunteer River Steward interns teaches whitewater rafters about local native fish and stewardship ethics to keep in mind while rafting the North Fork Nooksack.



River Steward Danika Kraft leads an interpretive *Noisy Waters Nooksack River Walk* along the Horseshoe Bend Trail. This interpretive walk includes testing water quality, looking closely at the macroinvertebrates in the river, identifying native plants, and learning about salmon and their habitat.



Nooksack riverine sockeye stock, returning to the river in late August in very limited numbers.



River Steward intern, Danika Kraft leads a group of visitors on a river walk along the Horseshoe Bend Trail.



River Steward intern team hosted a children's story time around the campfire with s'mores and raffle prizes in partnership with a local restaurant in Glacier, WA.