

U.S. Fish and Wildlife Service

Columbia River Fisheries Program Office Information and Education Program

FY 2013 Annual Report



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Vancouver, WA 98683**

***On the cover:** Students from Heritage High School studying macroinvertebrates in the Lewis River. Photograph by Donna Allard, CRFPO.*

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INFORMATION AND EDUCATION PROGRAM

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Abstract

The Columbia River Fisheries Program Office (CRFPO) Information and Education (I&E) Program promotes public stewardship of fish and wildlife resources and fosters support for conservation activities through outreach strategies to connect people with nature. To do this, the CRFPO informs constituents about our activities and provides education about our aquatic natural resources. In FY2013, the I&E program used several strategies to accomplish this goal. Throughout the year, educational and outreach materials were updated and distributed to a wide audience including teachers, government educators with Clark County and the City of Vancouver, and the public. The CRFPO also maintained a web presence (<http://www.fws.gov/columbiariver>) to disseminate information and education materials. CRFPO activities and fisheries-related research were also promoted through 31 publications, 38 blog posts, 139 Facebook posts, and career day. Aquatic-related educational activities such as macroinvertebrate field studies, salmon education, and career information were provided for students through various school programs. Lastly, several training sessions and informational talks on Pacific Lamprey biology and identification were delivered to college students, Tribal members, and state workers in FY2013.

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Introduction

In today's increasingly urbanized society, many people are unaware of the need to conserve America's fisheries resources and aquatic habitat. The Fisheries Program provides opportunities for young people and adults to learn about fish, other aquatic species and their habitats through outdoor learning events, providing field study opportunities, hosting events and developing tools for teaching conservation. We also are engaging youth and adults through partnerships with States and Tribes and through various youth employment programs. In doing so all of us will better understand the world around us, as well as how to enjoy and steward it for conservationists yet to come.

The goal of the Columbia River Fisheries Program Office (CRFPO) Information and Education (I&E) Program is to foster support for aquatic conservation activities through education and promotion of public stewardship for fish and wildlife resources. Toward that end, CRFPO works with other US Fish and Wildlife Service (Service) offices, the public, local agencies, and community groups throughout the year. The I&E program accomplishes this goal through the following objectives: 1) developing and distributing education and outreach materials related to fisheries and other aquatic conservation issues, 2) maintaining a web presence to disseminate information and research, 3) promoting CRFPO activities and fisheries related research, and 4) providing aquatic education to students and teachers, and participating in outreach events.

This annual report describes I&E program activities and products for the 2013 fiscal year. Many of these activities directly relate to a 2008 initiative launched by the Service called "Connecting People with Nature". This initiative incorporates natural resource conservation, environmental quality, and human health by encouraging people to go outside and enjoy nature.

The I&E Program is staffed by Fish Biologists Donna Allard (0.5 FTE) and Marci Koski (approximately 0.1 FTE). In addition to dedicated I&E staff, all CRFPO staff are encouraged to spend 4 to 8 hours of outreach time with kindergarten through college-age students during the year. All CRFPO staff are also requested to contribute to the CRFPO blog once each year.

Relationship to the Fisheries Program Strategic Plan

Implementation of the I&E Program demonstrates application of the Pacific Region's 2009-2013 Fisheries Program Strategic Plan. The following National goals (NG) and Regional objectives (RO) have been addressed by this program during the past year:

- NG1 Open, interactive communication between the Fisheries Program and its partners.
 - RO1.1 *Develop and maintain relationships with partners throughout the Pacific Region.* The I&E Program works with several internal and external partners to promote the activities of CRFPO, aquatic education and conservation, and outreach under the "Connecting People with Nature" initiative.
- NG2 America's streams, lakes, estuaries, and wetlands are functional ecosystems that support self-sustaining communities of fish and other aquatic resources.

RO2.4 *Expand opportunities to connect people with nature, engage citizen scientists and volunteers, and temporarily employ youth in the aquatic habitat conservation and monitoring programs and activities we lead or support.* Through the “Connecting People with Nature” initiative, the I&E Program promotes and encourages people, particularly children, to experience the outdoors and become stewards of healthy ecosystems.

Methods

Objective 1: Develop and distribute education and outreach materials related to fisheries and other aquatic conservation issues

Materials Development - Education and outreach materials were previously developed through the I&E Program. Materials target students, educators, and the general public. Student materials include educational activities for the CRFPO website’s kid’s activity page, and various booklets highlighting endangered, threatened, and aquatic species. Bookmarks, posters, and postcards describing listed and trust species such as bull trout, freshwater mussels, and Pacific Lamprey are available to the general public and educators. The I&E Program also previously developed and maintains a set of educational trunks and other materials available for checkout to teachers and other educators. These include:

- Aquatic Nuisance Species – a trunk of activities and materials to introduce students to the growing problem of aquatic nuisance species in the lower Columbia River basin
- Lewis and Clark – a trunk of activities and materials to introduce students to some of the central themes and contributions of the Lewis and Clark expedition
- Macroinvertebrates – a trunk designed to introduce students to macroinvertebrates as indicators of stream health
- Macroinvertebrate Costumes – a few of the more popular macroinvertebrates in larger than life form for use in educational skits
- Tracks Curricula – an activity introducing students to the basics of track identification and interpretation
- Fish of the Columbia River – a trunk containing information and activities which allow students to investigate and learn more about some of the lesser known species in the Columbia River: cutthroat trout, Pacific lamprey, freshwater mussels, and aquatic nuisance species.
- Fin Bin – a trunk of materials investigating salmon
- Bats – a trunk of materials that teaches students about bat adaptations, habitats, and importance to the ecosystem through a variety of activities incorporating math, science, and conservation
- Composting / Worm Bin – materials help students learn and understand the process of composting
- Of People and Fish – an educational trunk designed to allow students to explore the scientific and cultural history of events leading to the “salmon crisis”
- Cargo for Conservation – teaches about the illegal practice of wildlife smuggling

- Watershed Model – a watershed model which enables students to visually see the effects of siltation and storm runoff due to agricultural, farming, and urban development

Materials Distribution - Teachers learn about educational resources through the CRFPO webpage, word of mouth, through communication with I&E staff, and an educational listserv maintained by Clark County Department of Environmental Services. Handouts such as bookmarks, informational booklets, and similar items specifically developed by the I&E staff are available to teachers through the I&E Program.

Objective 2: CRFPO web presence

Three websites and one blog are maintained through the I&E Program. The websites include the Columbia River Fisheries Program Office site (<http://www.fws.gov/columbiariver/index.cfm>), the Pacific salmon webcam site (<http://www.fws.gov/pacific/webcam/>), the Pacific Northwest Native Freshwater Mussel Workgroup site (<http://www.fws.gov/columbiariver/musselwg.htm>), and CRFPO's blog, The Dish on Fish (<http://fish-notes.blogspot.com/>).



The CRFPO website includes general information about current programs and activities, a list of publications, a staff directory, a schedule of project presentations, and an education page listing all materials and services available to teachers as well as a page filled with kid's activities. The Dish on Fish blog complements the CRFPO website with up-to-date notes about the current activities of CRFPO employees presented in an informal, easy-to-read format. The Pacific salmon webcam site provides a live snapshot every 15 seconds of adult salmon returning to the Little White Salmon National Fish Hatchery as well as a few video clips of salmon. The webcam is located in the Little White Salmon River from April through October and then moved into a hatchery raceway where it records juvenile salmon. All of these sites are directly associated with the Service. The Pacific Northwest Native Freshwater Mussel Workgroup is an independent organization. However, because freshwater mussels are one of the Service's trust species, their site is also maintained by the CRFPO I&E Program. Although public, it is targeted towards those people with a specific interest in freshwater mussels. These websites are updated when changes in staff occur, jobs become available, or new publications or information is available. The blog is updated with new entries approximately once every two weeks. Additionally, all Service websites must be maintained in accordance with Service and Department of Interior policies.

In addition to the above websites, CRFPO has a Facebook page (www.facebook.com/ColumbiaRiverFisheriesPO). Our CRFPO website and blog are the primary means for housing information about the activities of CRFPO, but Facebook is a popular way to let the public and other Service programs and offices know that this information exists. Facebook page posts can be made quickly and easily, and can be spread through the Facebook network through “sharing”. CRFPO can quickly promote updates of and be promoted by other Service offices and programs. The CRFPO has several item-types that are posted to Facebook that are of interest to other Service offices, people in the environmental community, and the general public. These include:

- Field work and project updates, summaries, photos and video clips
- Notification of Dish on Fish blog updates
- Notification of new publications and reports available on the CRFPO website
- Sharing interesting and relevant websites, articles, etc.
- Increased support and publicity for other Service campaigns and programs (e.g., Luna the Lamprey, Fisheries program activities, events at National Fish Hatcheries, etc.)
- Upcoming community events

A CRFPO Facebook Committee was established to ensure that Facebook posts represent the office as a whole by collecting Facebook posts from all teams in the office. The Facebook Committee is chaired by M. Koski, who maintains the CRFPO Facebook page and does all posting to the page. The Committee had an initial meeting to talk about how the Facebook page works, and what types of posts are relevant. At the beginning of each month, the chair emails the Committee to request that each Committee member send the Chair two posts per month, for a total of approximately 14 posts per month (with a goal of posting 3 – 5 posts per week), including extra posts from the Chair. It is up to each Committee member to develop posts by asking their team about work or projects being conducted, or by finding articles, pictures, videos, etc. (see list above) to contribute. Once Committee members submit their posts to the Chair, the Chair reviews the post and works with the appropriate committee member to refine the content, if necessary. The Chair then uploads posts to the CRFPO Facebook page throughout the month. The time for a Committee member to develop posts varies from 30 minutes to an hour per month; the Chair spends approximately 1 hour per week maintaining the Facebook page.

Objective 3: Promote CRFPO activities and fisheries-related research

General promotion of conservation through CRFPO activities and functions is provided to the public through the CRFPO website, blog and Facebook page, emails, flyers, seminars, and other written material. More specifically, each time a new publication was posted on the CRFPO website or a new blog was written on The Dish on Fish, an email was sent out to CRFPO employees as well as an email listserv. The listserv includes Regional Office staff, Information and Education staff from other FWS offices, and other educators outside of the FWS who may be interested in a particular topic (Table 1).

Table 1. Listserv for notification of new CRFPO activities

Name		Affiliation
Amanda	Fortin	USFWS - Region 1 External Affairs
Cheri	Anderson	Gorge NFH - I&E
Erik	Anderson	Carson NFH - Admin
Dale	Baer	Wolfree - Educator
Mark	Bagdovitz	USFWS - Region 1 Fisheries
Corky	Broaddus	Leavenworth NFH - I&E
Judy	Bufford	Education Contractor - City of Vancouver
Amy	Carpenter	Hudson's Bay HS - Teacher
Michael	Carrier	USFWS - Region 1 Fisheries
Jane	Chorazy	USFWS - Region 1 External Affairs
Julie	Collins	USFWS - Region 1 Fisheries
Sean	Connolly	USFWS - Region 1 Fisheries
Carrie	Ebner	Wolfree - Educator
Scott	Eckert	USFWS - Region 1 External Affairs
Angela	Feldman	Dworshak NFH- Biologist/I&E
Vicki	Finn	USFWS - Region 1
Sally	Fisher	Clark County - Information Specialist
Sallie	Gentry	USFWS - Region 1
Taylor	Goforth	Western Washington FWO - I&E
Jana	Grote	USFWS - Region 1 Fisheries
Richard	Hannan	USFWS - Region 1 Deputy Regional Director
Jason	Holm	USFWS - Region 1 External Affairs
Matt	How	USFWS - Visitor Services & Communications
Joan	Jewett	USFWS - Region 1 External Affairs
Rich	Johnson	USFWS - Region 1 Fisheries
Meghan	Kearney	USFWS - I&E
Carrie	Kraten	Clackamas Community College - Educator
Christina	Meister	Western Washington FWO - I&E
Gala	Miller	Columbia Springs Environmental Education Center - Director
Virginia	Parks	USFWS - Archaeologist
Nancy	Pollot	Oregon State FWO - I&E
Erin	Rowland	Clark County - Educator
Cory	Samia	City of Vancouver - Educator
Craig	Springer	USFWS - Fisheries Program
Jennifer	Stone	USFWS - Region 5
Kim	Strassburg	Tualatin River NWR - I&E
Cielle	Swatland	Wolfree - Educator
Denise	Wagner	USFWS - NCTC
Bev	Walker	City of Vancouver - Educator

Objective 4: Provide aquatic education to students and teachers

The CRFPO I&E Program provides conservation education assistance by working with students and teachers both in the classroom and in the field, and attending student outreach events such as student forums. Requests from educators, agencies and organizations, and the general public are handled by the I&E Program throughout the year. These can include questions or requests for materials such as coloring books or bookmarks.

Partnerships have been formed both within the Service and with external agencies and organizations to carry out natural resource education programs. These external agencies and organizations include:

- City of Vancouver Watershed Stewards
- Clark County Department of Environmental Services
- Clark County Public Utilities
- Clark County Watershed Monitoring Program
- Columbia Springs Environmental Education Center
- Vancouver Watersheds Council
- Vancouver Water Resources Education Center
- Student Watershed Restoration Program

a) Classroom Visits and Field Trips

Typically, each year staff members visit one to five classrooms. Usually these visits entail a fish dissection but can also include speaking at green career fairs, or teaching students about lamprey, salmon, climate change, or aquatic insects.

Field trips with students consist of determining the health of a watershed either through water quality tests or aquatic insect collection and identification. Depending on whether the program is delivered through a specific program such as Salmon Watch or initiated by a teacher, equipment and general lesson plan guidelines are provided. Otherwise, in some cases, CRFPO provides equipment and guides for collecting and identifying macroinvertebrates.

b) Student Outreach Events

Each year, several partners sponsor the Columbia River Watershed Festival, a three day event held for 4th grade students in Clark County. The sponsors include Clark Public Utilities, Columbia Springs, City of Vancouver, Clark County Department of Environmental Services, and the Service. The students rotate through four activities throughout the day. CRFPO staff are invited to participate in this event as planners, presenters, or volunteers.

Most high schools now require seniors to finish a senior project to graduate. The project consists of two aspects. The seniors must write a paper on a topic of their choice as well as perform a given number of hours (it varies from 15 to 30 hours depending on the school) in a position

related to that topic. For instance, a student who writes a paper on salmon conservation may volunteer at a hatchery for service hours. The student must then make a presentation to three to five community members about their service hours. The community members ask questions of the student and then grade the student on this portion of the project. In addition to senior project reviews, numerous volunteer and career fairs are often held at local high schools at which CRFPO staff participates.

Additionally, to provide aquatic education and promote careers in the fisheries field, CRFPO hosts an annual career day for high-school students. Classrooms are recruited to participate in our career day. I&E staff at CRFPO are familiar with many teachers who typically engage their students in out of school activities such as field trips. CRFPO is divided into seven teams. Each year, four or five of the teams presents an activity at career day. The students learn from fishery biologists how to do everyday fisheries tasks such as radio-tracking and aging fish.

c) General Outreach Events

Staff may participate in general outreach events such as the Sturgeon Festival, Wenatchee River Salmon Festival, Clark County Home and Garden shows, or fishing day events. Other events may include speaking to Friends groups, clubs, or local watershed councils about our work activities.

Results

Objective 1: Develop and distribute education and outreach materials related to fisheries and other aquatic conservation issues

Printed materials related to Pacific lamprey were provided to Tribes for general educational use in FY 2013. Another request for handouts was fulfilled at a fishing day event in Richland, WA. A detailed summary is provided in Table 2.

Education trunks were checked out by teachers and other educators throughout the year (Table 3). As in past years, the Lewis and Clark trunk remains the most popular with teachers.

Table 2. Material Distribution List and Numbers Distributed

Requester	Organization/Event	Materials Requested	Number Requested
Michele Volz	Confederated Tribes of Grand Ronde	Pacific Lamprey Bookmarks	500
Matt Fox	Confederated Tribes of Warm Springs	Pacific Lamprey Experience	180
Wayne Heinz – Private Citizen/Volunteer	Kennewick Fishing Days	Fishing ABC’s Coloring Book	50
Wayne Heinz – Private Citizen/Volunteer	Kennewick Fishing Days	Salmon and Steelhead Coloring Book	25
Wayne Heinz – Private Citizen/Volunteer	Kennewick Fishing Days	Salmon of the Pacific Coast Brochure	25

Table 3. Education trunk checkouts during FY 2013.

Trunk	School checkout/# Classes
Aquatic Nuisance Species	1/2
Lewis and Clark	4/16
The Bat Trunk	1/2
Tracks Curriculum and Materials	2/2
Of People and Fish	1/2
The Fin Bin	1/1
Macroinvertebrate Costumes	0
Watershed Model	0
Macroinvertebrate Trunk	0
Composting / Worm Trunk	0
Fish of the Columbia River	0
Fin Bin	0
Cargo for Conservation	0

In FY 2012, X-FIT funding allowed I&E staff to collaborate with staff from the Hatchery Assessment Team and begin development of a new education trunk about Aquatic Nuisance Species. The new education trunk was completed in FY 2013 and activities from the trunk were used at one school.

Objective 2: CRFPO web presence

The CRFPO website was updated to reflect changes in staff and programs and to highlight new projects on the main page. Approximately 31 new publications were posted in FY 2013. The salmon webcam was taken down this year due to connectivity and image refresh problems. The page remains online until new equipment is purchased.

A comparison between FY 2012 and FY 2013 CRFPO website hits shows an average increase in traffic of 13% for page loads and a 9 % decrease of total visitors (Figure 1). The number of page loads describes how many times a web page was visited. The number of total visitors includes multiple visits from all visitors. During FY 2013, the pages most visited included the staff page, publications page, and education page.

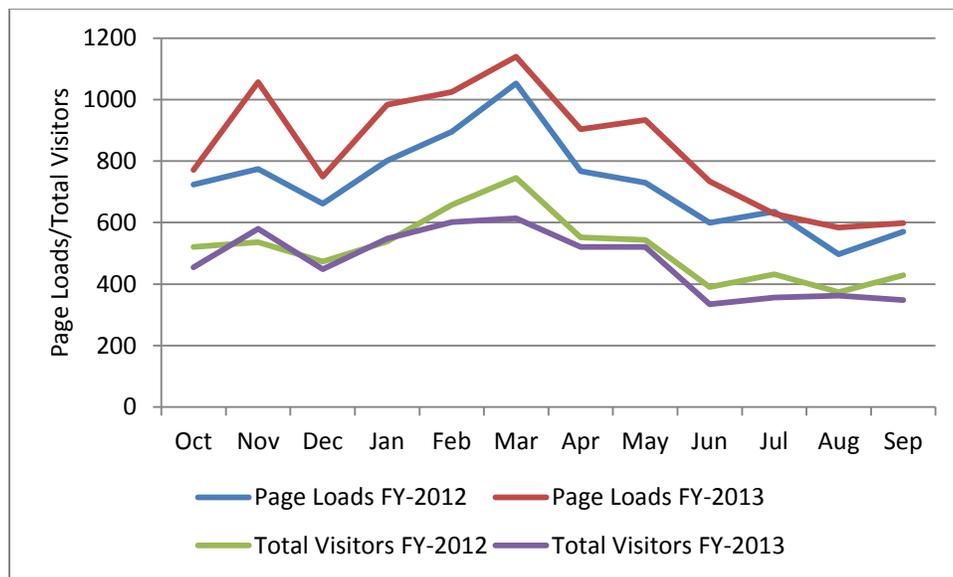


Figure 1. Number of Page Loads and Total Visitors to CRFPO website for FY 2012 and FY 2013

In FY 2013, a total of 38 blog entries were posted on The Dish on Fish by various CRFPO staff as well as Regional Office staff (Table 4). Topics ranged from discussions about specific projects to events that staff attended during the year. In 2013, eight posts were focused on aquatic nuisance species, a follow up to the newly developed education trunk. Towards the end of the school year in late spring, CRFPO staff and regional office staff launched an outreach

campaign titled “Don’t Let It Loose”. Ten posts were devoted to this campaign and discussed some aquatic species which are often let loose as unwanted pets or at the end of the school year. Of the 18 posts on the subject of aquatic nuisance species, 15 were posted by CRFPO staff and three by RO staff. The Dish on Fish had 17 followers and had an average of 526 visitors per month last year, a slight increase from 516 visitors during FY 2012. Overall, the number of page loads decreased about 10% and the number of total visitors (first time and returning visitors) decreased 1% from FY2012 and FY2013 (Figure 2).

Table 4. Blog posts by CRFPO team.

Team	Number of Posts
Administration	2
Analytical Services	5
Conservation Assessment	7
Executive	1
Hatchery Assessment	0
Marking	1
Water Management	2
I&E Staff	7
Non-CRFPO (Regional Office Post)	5

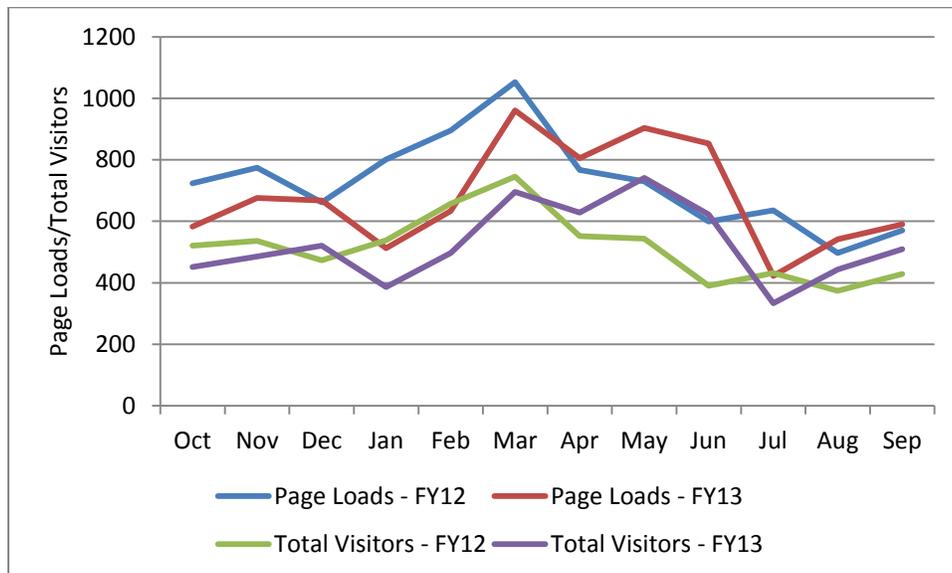


Figure 2. Number of Page Loads and Total Visitors at The Dish on Fish for FY 2012 and FY 2013

The CRFPO Facebook page went live August 10, 2012, and was maintained throughout FY 2013. Between October 1, 2012 and September 30, 2013, a total of 139 status updates were posted to the CRFPO Facebook page (Figure 3), averaging 2.7 posts per week, thereby falling just under the goal of 3 – 5 posts per week for the entire Facebook Committee. Status updates included pictures, videos, and links to web pages of interest (e.g., CRFPO blog, Pacific lamprey conservation programs, other Fish and Wildlife Service pages, etc.) (Figure 4). People who followed the CRFPO Facebook page had a higher rate of interaction with photos and videos, as opposed to links, which had number-of-clicks-to-number-of-posts ratios of 16:1 (photos), 17:1 (videos) and 1.9:1 (links).

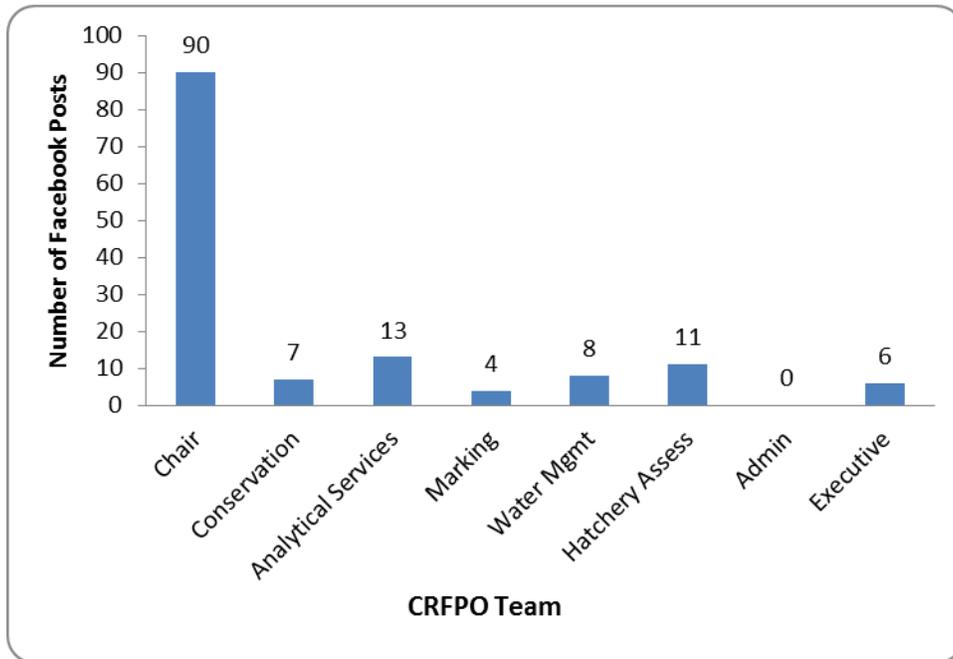


Figure 3. Number of posts per CRFPO team (and the Facebook Committee Chair) during FY 2013.

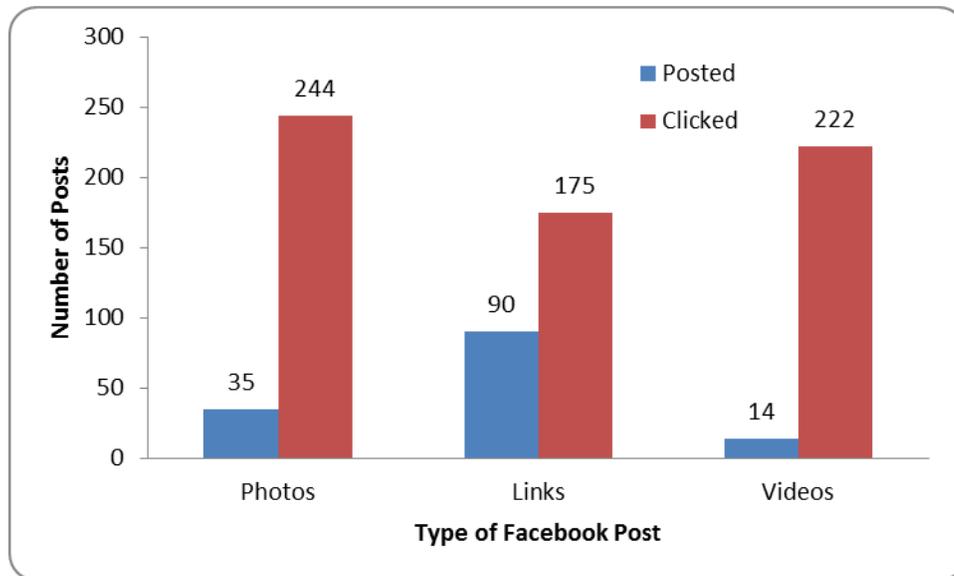


Figure 4. Types of Facebook posts made by CRFPO (blue) during FY 2013, and the number of times each type of post was "clicked" by Facebook users (red) (this includes "liking", visiting a link and sharing posts).

During FY 2013, an additional 70 people “liked” the CRFPO Facebook page for a total of 152 people who “liked” the page (Figure 5). Females between the ages of 35 and 44 made up the highest percentage of CRFPO Facebook page likes, followed by males in that same and 45-54 age categories (Figure 6). People who like the CRFPO Facebook page receive posts from CRFPO in their newsfeed. Facebook Insights tracks metrics such as “talking about this” (the number of clicks, shares, and likes, unique to each post) and “reach” (how many unique people saw each post either directly or virally per post). People who have not liked the CRFPO Facebook page can be reached when a friend interacts with a CRFPO post and their action shows up in their newsfeed. The weekly number of people “talking about this” reached a high during the week ending February 3, 2013, with a maximum of 125 people talking about CRFPO posts, and with a maximum of 2279 unique people reached per post (Figure 5) (the post that triggered this response was a video of a bird fishing with a piece of bread, which was shared 34 times. The second-most popular post was an Independence Day fish painting that was shared 14 times, reaching a total of 1319 people).

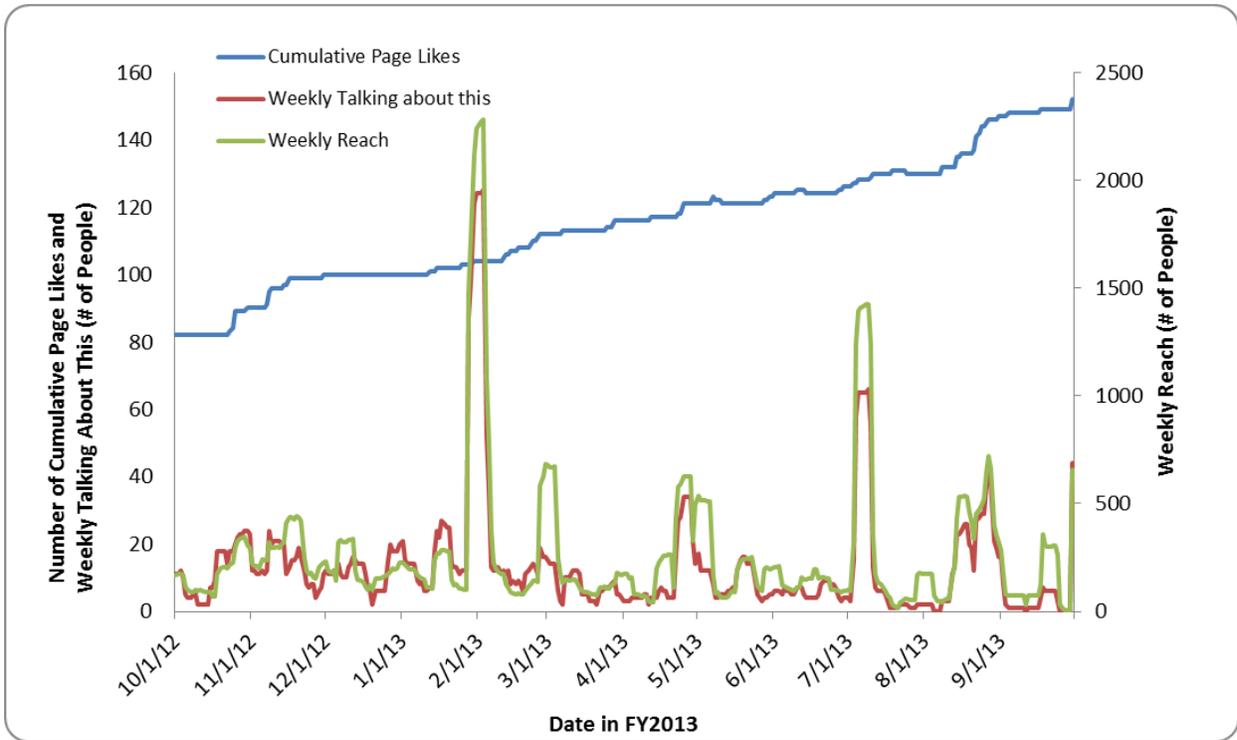


Figure 5. Number of cumulative page likes, weekly number of people "talking about this" and the weekly number of people reached for the CRFPO Facebook page during FY 2013.

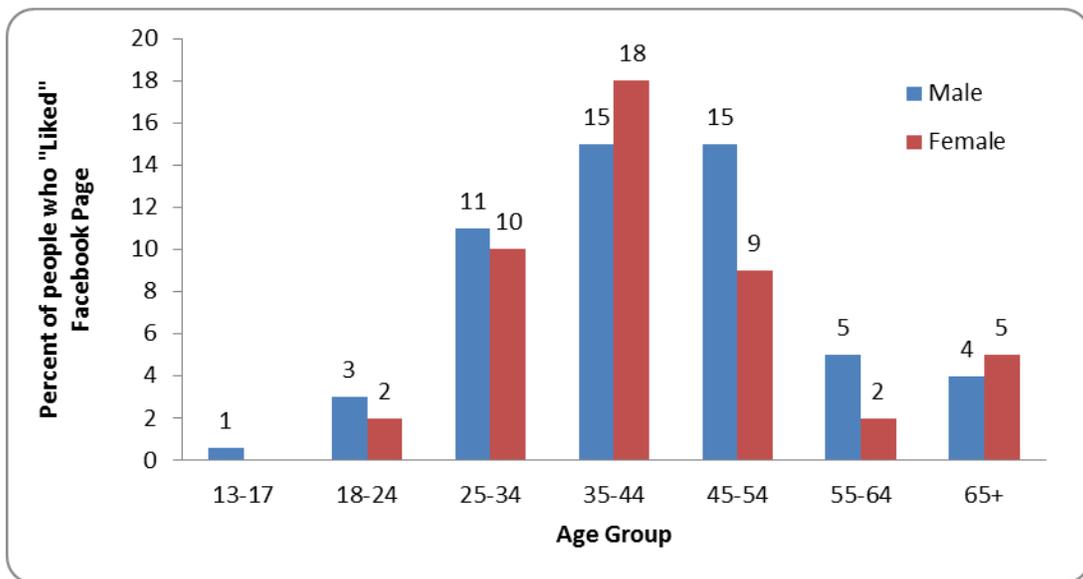


Figure 6. CRFPO Facebook page "likes" by age group and gender.

Objective 3: Promote CRFPO activities and fisheries related research

A total of 70 emails were sent out to a list of about 30 people (Table 1) when new publications or blog entries were posted on the CRFPO website or blog.

Two fact sheets highlighting CRFPO projects were developed in FY 2013. They summarized the PIT-Tag Effects Study and Pacific Lamprey Larval Rearing project. Both are available on the CRFPO website.

Seven seminars / workshops were delivered to the public, Tribal, and State personnel during the year. Lamprey project biologists delivered talks on their ongoing work, lamprey conservation and biology, and larval lamprey identification workshops. Our work with native trout and salmon in Tryon Creek was reported to interested parties at another seminar. Lastly, a biologist currently pursuing his PhD delivered a talk to other students at the Oregon State University.

Objective 4: Provide aquatic education to students and teachers

a) Classroom Visits and Field Trips

In FY 2013, CRFPO staff provided aquatic education to students in a variety of ways including five classroom visits. One visit entailed a salmon dissection and salmon biology discussion at Creative Science School. An aquatic nuisance species activity was also offered at this school. Staff visited a local kindergarten and talked about the salmon life cycle and anatomy. Staff participated at the Washington State University seminar series and presented a Pacific lamprey seminar. A similar seminar was presented to students at Mt. Hood Community College.

Staff mentored students in aquatic field studies a total of five times during the year. Four of these visits involved collecting aquatic insects. Students collected the insects and staff assisted them with identification. Another field trip involved a trip to the Lewis River State Fish Hatchery to learn about the role of hatcheries in conservation. Table 4 summarizes these events. Appendix A outlines the number of hours spent on each event, audience reached, and an activity description.

Table 4. Education and outreach events.

	Number of Events		Number of Students		Hours	
	2012	2013	2012	2013	2012	2013
Classroom Visits	2	5	44	181	9	20
Field Trips/Studies	10	5	265	190	83.5	36

b) Student Outreach Events

This year, the third CRFPO career day was facilitated through the I&E Program. Thirty two middle school students from Skyridge Middle School visited our facilities on April 29 and participated in four activities: radio tracking, fish dissection, aquatic nuisance species activity, and salmon migration mini golf. Out of 47 full time staff, 18 CRFPO staff spent a total of 89 hours preparing for and carrying out this event. The teacher expressed interest in joining us again.

One staff member was available as a class guide for the Columbia River Watershed Festival during FY2013. The festival was held at Vancouver Lake this year, with about 1100 students and almost 200 teachers and parents in attendance.

Staff participated at the 21st Annual SWRP Student Summit and at the high school senior project evaluations and grading at Ridgefield High School. One staff member spent time presenting and discussing teacher training opportunities, climate change educational resources, and new materials available for Earth Science Week with the Hockinson High School superintendent and science teachers. Staff also spent time at a career development workshop at Mt. Hood Community College and conducted mock job interviews with students there. Three staff members spoke about their work concerning lamprey and native trout to various watershed councils. Another spoke to the Oregon State University Fish and Wildlife Club about careers.

Most of the outreach activities are followed up with discussions or tests of knowledge, with students demonstrating what they have learned from the experience. Positive feedback is received by staff from both teachers and students after staff assistance at outreach events.

c) General Outreach Events

CRFPO staff did not attend any general outreach events in FY 2013.

All of the above activities are summarized in Appendix A.

Conclusions

Summary

1. Education/Outreach Materials Development

- Educational Trunk Checkout – 6 trunks a total of 10 times

2. CRFPO Web Presence

- CRFPO Website – Maintained and updated; usage increased from 2012 to 2013
- Salmon Webcam Website – Offline
- Blog – Posted 38 entries in 2013, averaging one entry every 1.4 weeks
- CRFPO Facebook Page – 152 total “likes”, maximum weekly reach of 2279 users; posts featuring photos and videos received the most interaction

3. Promotion of CRFPO Fisheries Research and Activities

- Program Fact Sheets - 2

4. Education Outreach/Activities (Appendix A)

- CRFPO Career Day – 32 students, 1 teacher
- Classroom Visits – 5 (181 student contacts)
- Field Trips – 5 (190 student contacts)
- CRFPO Staff Outreach Time – 25 Staff members participated a total of 222.5 Hours
- Student Forums – 3 (90 student contacts)
- Educational Events – 1 (1100 student contacts)

Requests from teachers and the public for materials such as bookmarks, booklets, and brochures were honored while supplies lasted. No new materials have been ordered. The Lewis and Clark trunk remains most popular with educators. Once in a school, multiple classes use the trunk. Other trunks were checked out only once or twice, and some, none at all. Unless educators are actually teaching subject matter available in the trunks, they often do not have the time to use them due to other teaching priorities. For the most part, there is no local connection between CRFPO staff and teachers to advertise our materials and educational services we offer. In the future, it may be worthwhile to target local teachers to determine what would make educational trunks and materials more useful in their classrooms, and notify them of the materials we have that are available for their use.

The CRFPO website remains a clearing house for information about the work that is performed by the CRFPO, including the publications page, which is regularly updated. New and updated content will keep visitors interested in the website and returning for more information. The “Dish on Fish” is updated regularly, but the following has not increased since 2012. While the

posts are aimed at the layperson, a greater variety of posts by more staff may help diversify the blog and increase readership. Further, content that is posted on the CRFPO website and blog should be publicized through social media to let readers know it exists. However, Facebook posting contributions by CRFPO teams represented on the Facebook committee declined by over half during 2013. At this time, the CRFPO Facebook page is being updated only sporadically, and most web content (i.e., CRFPO website updates and blog posts) are publicized through the Regional Office Facebook pages.

Promotion of CRFPO research and activities needs to be increased. Outreach (or in-reach) needs, whether they are brochures, posters, briefing documents or fact sheets, should be developed based on the identified needs of each project and targeted audience. Project biologists should work with I&E staff to develop these products.

CRFPO staff participated in several outreach events and educational activities. A complete listing of staff participation at all events is included in Appendix A. This participation is integral to the success of the I&E program meeting its overall goal. Having contact directly with students whether it be in the field, classroom, student forums, or career days seems to be an effective part of the program and falls directly in line with the “Connecting People with Nature” initiative.

Acknowledgements

The I&E staff would like to thank all of the CRFPO staff for their blog posts and participation in educational activities and outreach events.

Appendix A: Outreach hours performed by each CRFPO team in FY 2013

Team	Time (hours)	Audience Reached (Students, Adults)	Activity Description
Executive			
Tim Roth	4	32 students	Career Day
		6 students, 6 adults, 2 teachers	Senior Project Judging/Paper Reviews/Q & A/Discussion
Christina Wang Luzier	6		
	2	20 students, 3 faculty	Pacific Lamprey Seminar
	8	50 adults	Lamprey Biology and Conservation
Administration			
Larry Fishler	2	32 students	Career Day committee member, tour guide.
	6	4 th grade students	Columbia River Watershed Festival
Andrea Houts	3	32 students	Career Day
Valerie Sinesky	4	32 students	Career Day

Team	Time (hours)	Audience Reached (Students, Adults)	Activity Description
Conservation Assessment			
Tim Whitesel	5	32 students	Career Day
	6	30 students	Student Watershed Research Projects Summit
	3	1 student	University of Portland, Internship Mentoring
Brook Silver	6	32 students	Career Day
Donna Allard	9	60 students	Salmon Watch
	8	30 students	Macroinvertebrates Collection and Identification
	4	50 students	Salmon Dissection – Creative Science School
	10	32 students	Career Day
Greg Silver	17	25 biologists	Larval Lamprey Identification Workshop
Jeff Jolley	2	30 students, faculty	Pacific Lamprey Seminar
	2	30 adults	Pacific Lamprey Seminar
	1.5	20 adults	Pacific Lamprey Seminar
	2	20 students, 3 faculty	Pacific Lamprey Seminar
	8	50 adults	Lamprey Biology and Conservation
Sam Lohr	8	30 students, 6 adults, 5 faculty	Aquatic Invertebrate Collection
Marci Koski	3	32 students	Career Day
Michael Hudson	2	30 adults	Tryon Creek Monitoring Presentation

Team	Time (hours)	Audience Reached (Students, Adults)	Activity Description
Hatchery Assessment			
Doug Olson	5	32 students	Career Day
	4	30 students	Mock Interviews, Mt Hood CC
	4	30 students	Career Development Workshop, Mt Hood CC
Rod Engle	4	32 students	Career Day
	2	11 students	Gyotaku, salmon biology, fish anatomy
Maureen Kavanagh	5	32 students	Career Day
Jen Poirier	8	100 students/1 teacher	Aquatic Nuisance Species Education
	4	32 students	Career Day
William Brignon	2	30 students	Career Development
	4	Visitors to Oregon Zoo	Delivery of bull trout for display at zoo
Water Management			
Don Anglin	6	32 students	Career Day
	2	1 superintendent, 4 teachers	Hockinson School District – discuss various topics
Joe Skalicky	6	32 students	Career Day
	3	6 scouts, 4 siblings, 4 parents	Tour of Lewis River State Fish Hatchery
Paul Sankovich	8	60 students, 6 adults	Introduction to macroinvertebrates
Darren Gallion	8	50 children	Kid's Fishing Day – Carson NFH
Ryan Koch	8	32 students	Career Day
David Wills	4	32 students	Career Day
Analytical Services			
Julie Harris	4	32 students	Career Day

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