

Dedicated to Restoring Wild Salmon for the Future Generations

### Local Contractors Help Improve Fish Passage

In the summer of 2013 SFEG worked with local landowners and contractors in the Silver Creek and Summer Creek watersheds to restore fish passage at 4 sites. At Summer Creek, which drains to the East Fork Nookachamps, Chris Kantola of Shoreline Excavating replaced a 3-foot diameter culvert that had blocked upstream passage for resident trout with a 30-foot bridge. In the Silver Creek neighborhood near Alger, the local road association and two individual landowners all qualified for funding to replace undersized culverts with larger culverts or bridges. Dirtworks Bellingham Inc., D.G. Buchanan, and Harkness Contracting each worked with us to

By SUE MADSEN, Restoration Ecologist

correct barriers on Silver Creek, East Fork Silver Creek and Bridle Creek. Together these projects provide improved access to over 6.4 miles of stream as well as extensive beaver pond complexes that provide high quality rearing habitat for juvenile coho salmon and other fish.

These were challenging, but supremely rewarding projects. Heavy rains in late September allowed dozens of Chinook salmon to move upstream past the Friday Creek hatchery, and thus our staff, contractors and landowners Jeff and Nancy Quivey watched with delight

as fish moved past the former barriers even as the new bridge was lifted into place and finished. Volunteers and local residents are monitoring upstream fish passage this fall. In early October more than 128 coho were counted building redds upstream of the new bridge on Silver Creek, and more than 20 coho made their way upstream through the new culvert on Bridle Creek. Landowners, WDFW staff and neighbors stop daily at the new bridge on the road shared by Fred Binshus and John and Vicky May to watch sleek coho pass under the bridge and upstream to newly accessible spawning grounds.

All of these projects were sponsored by Washington State's Family Forest Fish Passage Program (FFFPP). The FFFPP program provides financial assistance to help small forest landowners improve fish

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ABOVE: SFEG staff help Harkness Constracting assemble culvert

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**REDD:** A female salmon uses her tail to dig a nest in the gravel. After she deposits her eggs the male fertilizes them. The female then covers the fertilized eggs and the resulting nest is called a redd.

#### **MISSION**

Our mission is to build partnerships that educate and engage the community in habitat restoration and watershed stewardship in order to enhance salmonid populations.

#### **BOARD OF DIRECTORS**

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#### **BOARD MEETINGS**

The SFEG Board meets the 4th Tuesday of each month. The public is welcome to attend.

#### **STAFF**

Alison Studley, *Executive Director* Susan Madsen, *Restoration Ecologist* Debbie Denton, *Finance Manager* Michelle Murphy, *Stewardship Manager* Lucy DeGrace, *Outreach Coordinator* Joe George, *Restoration Technician* Andrew Beckman,

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One of the most critical aspects of the work that we do here at SFEG is forging and utilizing partnerships to maximize our on-the-ground impact and stretch each dollar as far as possible. Over the past 20+ years we have partnered with numerous local, state, federal, tribal and other non-profit groups on a variety of projects and educational programs.

This year SFEG partnered with 4 landowners in the Silver Creek and Summer Creek watersheds to replace 5 fish barriers with 3 new bridges and 2 new culverts that facilitate fish passage as well as flood flows and sediment transport. These projects were made available utilizing Washington State Department of Natural Resources (DNR) Family Forest Fish Passage Program (FFFPP), which funds fish passage projects on private roads that access timber lands. These projects opened up 6.4 miles of habitat previously cut off to anadromous and resident fish species as well as other wildlife. The environmental enhancements that these types of projects produce are one piece of the overall picture. Once these projects are completed, the landowners have a new crossing structure that not only provides safer access to their homes, but also increases their land value. The economic benefit also has a tangible impact to the local community. This year SFEG hired 4 separate local contractors to complete these projects – each one employing staff from the local area. These completed projects injected nearly \$600,000 into the local economy.

For more details and conditions regarding the FFFPP program please visit DNR's webpage at http://www.dnr. wa.gov. For more information about these projects please contact SFEG Restoration Ecologist Sue Madsen at 360-336-0172 ext. 302 or smadsen@skagitfisheries.org. We have also included some photos and project descriptions in this newsletter.



#### A SPECIAL NOTE:

We would like to dedicate this newsletter to Polly Fischer. Polly was a longtime SFEG board member, and a vocal advocate of fish and fishing. She passed away over the summer, and we miss her very much.

### Fish Passage

passage on private roads. Landowners

qualify for the program if they own land that is capable of supporting merchantable timber (and whose current landuse is not incompatible with growing timber) and if they harvest less than 2 million board feet of timber from those lands each year. Landowners interested in the program can get more information online at http:// www.dnr.wa.gov/BusinessPermits/ Topics/SmallForestLandownerOffice/ Pages/fp\_sflo\_fffpp.aspx or call Sue Madsen at SFEG (360-336-0172).

This work could not have been completed without the support of the FFFPP Program, engineers Jay Kidder of Chinook Engineering Inc., and Paul Tappel of Fisheries Engineers Inc, Landowners Garl Long, Jeff and Nancy Quivey, John and Vicky May, Fred Binschus, Bill Henry, and John Leighton. Big thanks also to all of our contractors and SFEG's Field Tech Staff!





In 2013, Skagit Fisheries Enhancement Group monitored 33 native planting sites with the help of interns and volunteers. Eight volunteers contributed just over

500 hours of time to the program, allowing us to assess all sites for which funding is no longer available.

The program gives volunteers an opportunity to gain plant identification skills and allows our organization to evaluate riparian planting projects and guide planning for the coming year.

After attending a training workshop in early June, participants signed up to monitor restoration sites during spring and summer and work with SFEG field staff and interns collecting data on plant health and coverage. SFEG aims to achieve survival of 70-80% for its sites and this monitoring effort allows us to follow up on projects that haven't met this goal. Monitoring data also provides details on noxious weed presence for individual sites, which will allow project leads to focus maintenance more effectively and time work accordingly.

BELOW: Volunteers learn to conduct vegetation monitoring

#### By ANDY BECKMAN

Kent Quickstad was recruited as an intern in June 2013 to lead most of the program. Kent initially had a brief training period with SFEG staff to get familiar with monitoring protocol, site locations, equipment use (e.g. GPS), and general expectations. He was also trained to enter and analyze data from vegetation surveys, some of which was used in grant reports. Kent coordinated and worked closely with volunteers on surveys, ensuring data was accurate, consistent, and complete. He completed his internship in September after donating 300 hours to the program. Independently, Kent also developed a dichotomous key on common plants found on many sites.

This work was made possible by project funds for planting projects, grant funding, and the many hours donated by dedicated volunteers. Grants from the Mountaineers Foundation and Washington Department of Fish and Wildlife's Aquatic Lands Enhancement Account covered monitoring costs such as mileage reimbursement for volunteers, staff support, equipment/ supplies, and data summarization for sites with no other funding available. Results from this work will be useful in future planning by SFEG staff and interns. For more about SGEG vegetation monitoring program, contact Andy Beckman at abeckman@skagitfisheries.org.

ABOVE: Dirtworks staff installing new culvert on Bridle Creek and crew from DG Buchanan lifting a bridge into place on East Fork Silver Creek Skagit Fisheries Enhancement Group

## Many Hands Make Light Work!

Monsoon conditions cannot stop SFEG's vigorous volunteers, as evidenced during this fall planting season. At the Skagit Land Trust Utopia property, crazy winds and heavy rain did not dampen the spirit or energy of the 47 volunteers who planted 870 trees! In all this season, 161 volunteers planted 2,260 plants, and helped winterize the SFEG nursery. In addition, the wonderful crew who attended the nursery work party also helped lay the basis for the Samish Indian Tribal Community's garden at the same site. Volunteers cleared some debris, created a raspberry garden, and planted strawberries in raised beds. We celebrated the partnership with a potluck after work was completed.

In addition we'd like to give thanks for the following project partners for this

season: Puget Sound Energy, Skagit Land Trust, Seattle City Light, and Skagit County Public Works. Several volunteer groups joined us this season: Pioneer Center North, Cascades Job Corps, Cub Scout Pack 4083 of La Conner and Pack 4067 of Sedro-Woolley.

A Job Corps student and a Job Corps staff member have each summed up their experiences with us:

### A Student's Experience

This fall, I had a great opportunity to volunteer with Skagit Fisheries Enhancement Group. I was one out of 30 students at Cascades Job Corps who was able to take a few hours out of their Saturday mornings to work hard and have the chance to help the community.

I volunteered on their first weekend, where a group of us had to clear out the back of a shed so the Samish Indian Tribal Community could create community garden space. There were many things we had to clear; pottery buckets, long metal poles, and even this chicken den that you could tell had been there for ages. The hard part was getting these really long black tubes out of the grass; a lot of the blackberry bushes and grass had grown over it and also a couple of large tree branches/logs had fallen on them. Needless to say we got plenty of exercise. We then had to clear all of the grass and sticker bushes with hand clippers and there was a lot to clear out, but it was all worth it in the end.

I think with the 3-4 hours we had worked there, we got a lot done. It was great to look back at what we had done and say we have cleared the back of the shed out the most efficiently and fun way we can. Another thing I think about when us Job Corps students do community service like this, is that they get the understanding of working with a team and being able to help the community and ask for nothing in return. Sure they get their hours for their different phases here at Job Corps, but they get an instant gratification on the hard work they have done to affect and connect to the community and be able to feel good about themselves. My roommate and I had a talk about the events that happened during that day and we talked about wanting to get involved more. I hope that we get the chance to work with Skagit Fisheries Enhancement Group again; it was wonderful to work with such a positive and optimistic group. I cannot wait for next spring.

**Taylor Anderson** Job Corps Student



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### A Note from Cascades Job Corps

For four consecutive Saturdays I was lucky enough to participate in very

important community service projects around Skagit County. Joining me were 30 hard-working Job Corps students and over 100 other SFEG volunteers. We were outside; digging, squeezing, and breaking mud to surround over 2,000 native plants and trees that will be future forests and habitats for countless birds and animals. Only positive remarks were heard from the group, even during the NASTY weather of November 2. These attitudes do more than make a day's work enjoyable. They have a priceless impact on those

working and observing nearby. These planting projects were important for many reasons but the most beneficial that I noticed was the interactions within the group. Most of the other volunteers had heard of Job Corps but knew little about us. While working so closely, on your knees, with dirt on your hands and face, the conversations seemed more real and heartfelt. The community was able to learn about Job Corps and our dedication to learning. They were able to witness our diversity and acceptance of others. They were able to join in and become inspired by our work ethic. We taught them, simply by being ourselves and enjoying it.

Another exciting element of planting trees is the vision of these areas in the future. We worked in fields overrun with invasive non-native species, mostly blackberries and canary grass. These weeds have taken over many of the open areas of this county and quickly choke out the native plant species that belong and add beauty to this area. The infant forests that we created will grow and become habitats to birds, bugs, elk, and deer. They will also provide shade and debris to the river systems that benefit healthy salmon runs that have diminished over years of habitat destruction.

There are more reasons we enjoyed planting trees so much. The fresh air and soothing soil tends to swipe away most stressors from our busy lives. Personal interactions and switching up the daily routine is fun! Plus, students added community service hours, getting



them one step closer to the next phase of National Technical Honor Society. These were great projects and each was a wonderful experience. I'd like to thank the Job Corps staff that provided transportation and pizza to fill our deserving bellies. I'd like to thank the Skagit Fisheries Enhancement Group for introducing us to the forest and helping to rekindle a relationship with Job Corps that will continue. And mostly, I'd like to thank the 30 Job Corps students who gave great effort and left with smiles on their faces. This experience has warmed my heart and I look forward to the spring planting sessions hosted by SFEG.

#### Josh Underdahl RA, Whitewater Dorm Cascades Job Corps



# ChumSalmon

By DAVID BEATTY

Chum salmon, Oncorhynchus keta, (aka dog, keta, silverbrite and calico salmon) is the most widely distributed of the Pacific salmon and, other than the pink salmon, is the second most numerous. It has the greatest total biomass, estimates of up to 45% of all Pacific salmon, because of its large body size (second to the Chinook). Historically, spawning chum occurred in North America as far south as the San Lorenzo River (Monterey Bay, California) and northward in streams along the entire eastern Pacific Ocean Coast and into the Arctic Ocean as far eastward as the Mackenzie River in Canada's Northwest Territory. Today, there are only sporadic chum runs in a few rivers south of Tillamook Bay, Oregon. In Asia, spawning chum occur as far west as the Lena River (Arctic Ocean) in Siberia and in streams along the western Pacific Ocean Coast to the southern island of Japan and the Korean Peninsula. Although chum in British Columbia and Washington do not have long distance river migrations, chum migrate more than 1,000 miles in the Yukon River. Chum are generally poor at leaping over obstructions and do not easily traverse fish ladders at dams. Consequently, extensive chum migrations in the Columbia River are limited.

In North America, chum return to northern rivers from June to September and from September to December in more southerly rivers. In Skagit County, spawning runs, "autumn or fall run chum" begin in late October and last into December. They spawn in Oyster Creek, Colony Creek, the Samish River and its low gradient tributaries, and the Skagit River and its low gradient tributaries. Chum often prefer to spawn at the edge of a stream, at the tail end of a deep pool and in side channels, especially if groundwater is upwelling through the gravel. Chum also spawn in small streams in the intertidal zone or just above tidewater. Hood Canal has a "summer run chum" Evolutionarily Significant Unit that is listed as threatened under the Endangered Species Act. The Columbia River chum ESU is also listed as threatened.

During the spawning migration, chum change from the bright silvery fish, lacking spots (unlike Chinook, coho and pink salmon) of the ocean to a body coloration that is darkened with blotches of dark maroon (the "calico salmon") and with a pronounced hooked jaw with large canine teeth especially in males (perhaps the origin of the name dog salmon, although this name is also attributed to its use as food for sled dogs in Alaska). Similar to juvenile pink salmon, juvenile chum salmon leave fresh water within a few weeks after the 1-inch fry emerge from the spawning gravel. They migrate into estuaries and bays and are physiologically adapted for living in salt water (have become smolts). During the first summer, schools of juvenile chum may be seen along the shoreline. Upon leaving the nearshore areas, they undertake extensive migrations in the northern Pacific Ocean before returning to the natal stream to spawn at an age of three to five years. In the ocean, chum feed extensively on a variety of zooplankton species and may compete with pink salmon for food. There is some evidence that the numbers of returning chum are lower in years when pinks return (odd years locally).

Commercially, they are harvested primarily by purse seine and gill net. They are canned, smoked, formed into fish burgers and the eggs are in high demand in Asia for salmon caviar. In rivers in Alaska and northern British Columbia, aboriginal people use fish wheels to harvest chum. Compared to Chinook, coho and sockeye, chum and pink salmon have a lower commercial value due to their lower fat content and pale flesh. However, bright (silverbrite), ocean caught chum deserve a better

TIM KNEPP © 01

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reputation than they receive in the fresh fish market. In Japan, upwards of one billion chum fry are released annually from numerous hatcheries and chum are also produced extensively in aquaculture. It is the most popular species of Pacific salmon in Japan, including its use in sushi and sashimi and its eggs as caviar plus the use of the toughened skin of sexually mature chum to make "salmon leather" for wallets and purses. Alaska has extensive chum hatcheries and chum hatcheries are present in British Columbia and Washington. They are popular in recreational fishing when the adults migrate to coastal waters and into streams. In Washington, two popular recreational fisheries for chum occur in lower Whatcom Creek (adjacent to the chum hatchery operated by Bellingham Technical College's Fisheries Program) and in southern Hood Canal in the vicinity of the Hoodsport chum hatchery.

There is no recreational fishery for chum in the Skagit River in the fall of 2013 due to a predicted escapement of just 15,325 fish; a number that is far below the escapement goal for such a large river system. All Pacific salmon species stop feeding during the final stages of the spawning migration but, nonetheless, are attracted to a variety of lures and baits. Introductions of chum outside its natural range have not been successful. Unlike sockeye (kokanee), Chinook and coho (introduced into the Great Lakes), there are no resident. freshwater populations of chum. Compared to Chinook, coho and sockeye, chum and pink salmon are the least dependent on freshwater with respect to the duration of freshwater residence as juveniles. The deterioration of freshwater habitats perhaps has had a lesser effect on these two species and, in general, they seem less at risk than the other three species whose juveniles have a longer residence in freshwater.

### 2014 Membership



#### SFEG IS A MEMBERSHIP BASED ORGANIZATION

If you are enjoying reading this newsletter, perhaps its time that you became a member! Your membership dollars are critical to support the operation of SFEG (including producing this newsletter), allowing us to develop new projects with landowners, providing education programs to kids throughout our watersheds, and collecting monitoring data regarding restoration project sites to document successes.

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organization. All contribultions are tax edductible

### Salmon Safe By REBECCA WILLIAMS

The modern day grocery store is an ocean of labels, certifications and endorsements on food, food-like substances, cleaning products



and cosmetics. It's often hard to decipher the difference between things like "local" and "organic" or "cage free" and "free range" or "natural" and "cruelty free." In 2007 another certification was added to our grocery shopping literacy: "salmon safe." Salmon Safe is a Portland,

Oregon based non-profit organization founded by the Pacific Rivers Council. The organization consists of a partner-network that operates along the West Coast, covering key agricultural

and urban watersheds that impact

#### WHATCOM COUNTY

- Alm Hill Garden
- Bellewood Acres
- Fresh Breeze Dairy
- Hopewell Farm LLC
- Silver Springs Creamery
- Triple Wren Farm

SKAGIT COUNTY

- Bow Hill Blueberries
- Cascadian Farm
- Draper Valley Farms
- Everyday Flowers
- Hedlin Farms
- J4 Ranch
- Jello Mold Farm
- Jones Creek Farm
- Mother Flight Farm

Pacific Salmon. You can find "salmon safe" certified wine and beer, produce, meat, flowers and dairy products in supermarkets and natural food stores. The farm certification program is based on six different focus areas: riparian area management, water use management, erosion and sediment control, integrated pest management, animal management, and biodiversity conservation. Being certified "salmon safe" does not guarantee that it is certified "organic." Farms are certified by acre; today over 85,000 acres are certified "salm<u>on safe."</u>

So where can a northwestern Washingtonian expect to find "Salmon Safe" food? Here is list of farms from Whatcom, Skagit and Island Counties:

#### **ISLAND COUNTY**

Camelot Downs

For more information on Salmon Safe, visit their website at www.salmonsafe.org.



SKAGIT FISHERIES ENHANCEMENT GROUP PO Box 2497

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#### **RETURN SERVICE REQUESTED**

# Events Calendar AND Volunteer Opportunities

#### **Guided Hatchery Tours**

Through Jan 26 (Saturdays & Sundays), 10am-3pm

Trained volunteers will offer tours of the Marblemount Fish Hatchery. See the incubation room, learn about hatchery operations, and maybe even see spawning and hatching salmon and feasting bald eagles! For more info call the SFEG office at 360-336-0172 ext 304. To check on Marblemount road conditions call the hatchery at (360) 873-4241.

#### **Spring Planting**

March-April (Saturdays), 10am-1pm

Spring Planting Parties; Each Saturday in March and into April, 10am-1pm at various locations throughout the Skagit Watershed. Check your mail or our website in February for details.

## **FEBRUARY 6, 2014** SEDRO-WOOLLEY COMMUNITY CENTER

Once again this year we'll provide a tasty grilled salmon buffet dinner, present volunteer and partnership awards, and review the year in local salmon recovery. This year our fundraiser will feature a raffle of local goods and services.

Look for an invitation in your mail (or email) in early January. We hope to see you there!



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