

The Intake

WDFW Hatcheries Division

October 2010
Volume 2, Issue 3

Hatchery Division Meeting at Mill Creek

Region 4 hosted the fall Hatcheries Division Meeting on September 21, 2010. A total of 60 staff eventually made it to the Mill Creek Office, bright and early Tuesday morning. Heavy traffic out of Olympia delayed key staff, but our hosts, Regional Fish Program Manager **Annette Hoffmann** and Region 4 Hatchery Operations Manager **Doug Hatfield**, opted to start the meeting on time. The schedule was adjusted so that the afternoon presentations became the first on the agenda. This move allowed Region 4 to showcase their current projects:

- **Steve Stout**, from **Marblemount Hatchery**, began with his presentation on the Ross Lake rainbow trout stocking project.
- **Kevin Kurras**, from **Baker Lake Hatchery**, showed off their recent remodel/complete upgrade and explained the modifications to their sockeye and coho programs.
- **Josh Lewis**, from **Kendall Creek Hatchery** spoke about the SF Nooksack River Chinook captive brood recovery program, which included collaboration with NMFS Manchester Hatchery (and use of some of their fancy equipment!).

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These presentations started the meeting out on a high note, before we dove into meatier, administrative issues. Division Manager **Heather Bartlett** discussed the move to individual e-mail accounts for all permanent staff (rather than the overall Hatchery e-mail account), along with the formalized criteria for non-permanent Hatchery Specialist vs. Hatchery Technicians (covered also in *The Intake: July 2010*), and changes to Commercial Driver License (CDL) requirements and testing. This segued into a discussion with Human Resources Manager **Cindy Lerch**, regarding issues (including work scheduling) surrounding temporary lay-off days.

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Office of Financial Management Staff Visit Some of Our Hatcheries

By Heather Bartlett, Hatcheries Division Manager

On August 23 and 24, operating and capital budget analysts from Office of Financial Management (OFM), legislative staff to the Capital Budget, and our own Agency's key budget staff visited six different facilities throughout the state to better understand hatchery operations. The itinerary was designed to show the diversity of facilities that WDFW owns and/or operates, or in the case of Cle Elum, operates under a co-management umbrella with the Yakama Nation.

- Both **Voights Creek** and **Soos Creek** hatcheries are numbers 1 and 3, respectively, on our Capital budget request to the Governor for facility rebuilds beginning next biennium.
- Cle Elum Hatchery** is a mitigation facility that was built and funded by the federal government. We felt that it was important to illustrate a more contemporary version of hatchery design and operation; one that was built with the expectation of being fully-integrated and operational within its watershed. In addition, it demonstrated what WDFW requires of other parties when they need to mitigate for their impacts.
- Mossyrock Hatchery** represents a traditional trout production facility; one that provides large economic benefits relative to its overall annual operational costs, but needs stability in operational dollars and maintenance funding.
- Cowlitz Salmon Hatchery**, funded by Tacoma Power, recently had a \$25M rebuild completed (see *The Intake: July 2010*). This facility is a key illustration of what a rebuild can and should look like, incorporating some newer technology as well as infrastructure to meet our more contemporary management needs - e.g. adult trapping and holding, crowding, spawning and sorting etc.
- The last facility visited was **Skookumchuck Hatchery**, which is literally being rebuilt right now. We wanted to ensure those that influence the final outcome of our Agency budget saw our phased approach to rebuilds, and what and how we spent past dollars.

Overall, we received some great feedback. OFM and the legislative staff found the site visits very educational and facility staff knowledgeable and helpful. I want to extend a big THANK YOU to: **Rich Eltrich, Jason Smith, Doug Hatfield, Brodie Antipa, Mark Johnson, Larona Newhouse, Tim Summers, Dan Atkins, and Jim Dills**, who hosted our visitors and led the tours at their respective facilities; **Lori Kishimoto** who developed the one-page hatchery "vital statistics" handouts that were so informative; and all the hatcheries' crews who did a lot of behind the scenes work to help make the tour possible.



Intake pipe
at Soos
Creek
Hatchery



Skookumchuck Hatchery renovations began in 2005 – Photos by Neil Turner

Fish Health Issues and Egg Transfers By John Kerwin, Science Division/Conservation Biology

We recently had an experience at one of our hatcheries that we want to pass along to all of you, as it served as a learning experience for many of us. We simplified things a little here, for the sake of brevity, but the following is our understanding of what happened.

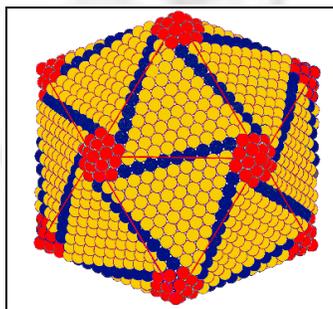
Background

The site in question was a PUD-funded facility. A tribal Co-Manager and/or a PUD biologist delivered approximately 16,000 white sturgeon eggs to the facility. The PUD had requested the eggs from the tribe for an incubation/hatching trial at the facility. There was a Future Brood Document Change Form in the works, but it hadn't been completed. A FHS 3 accepted the eggs and isolated them the best he could; the FHS 4 who had started the FBD change was at a meeting off-site. Fish Health staff were contacted: they investigated the fish health history of the eggs and quickly determined that the adult fish were not sampled for any pathogens, including viral pathogens.

The purpose of the white sturgeon program was to determine if the hatchery had the infrastructure capabilities to successfully incubate and raise white sturgeon. The adult broodstock used were believed to have been wild fish captured from the mid-Columbia. The eggs were disinfected with 100ppm iodophor for 10 minutes upon receipt, but it was determined that they had not been water hardened in iodophor at spawning.

Problem

A very limited amount of viral testing has occurred on white sturgeon in Washington State. We do know that white sturgeon may harbor an *iridovirus* called the **White Sturgeon Iridovirus (WSIV)**, and could be carriers of other viral pathogens as well. Several years ago there was an epidemic in juvenile white sturgeon at Abernathy Technology Center: the cause was *WSIV*. We also know that in the Great Lakes, Lake Sturgeon harbor a strain of *viral hemorrhagic septicemia (VHSV)* that has caused mortality in naturally-produced populations. This strain of *VHSV* is called **VHSV IVb**; the strain of *VHSV* in the Pacific Northwest is **VHSV IVa**. We don't know if white sturgeon in Washington can be carriers of *infectious hematopoietic necrosis virus (IHNV)* or *infectious pancreatic necrosis virus (IPNV)*. Therefore, because the broodstock had not been **sampled, we had no way** of assessing risk to the white sturgeon or other programs at the hatchery, one of which is an ESA-listed stock.



Schematic diagram adapted from N.G. Wrigley 1969 (J. Gen. Virol. 5:123-13)

The WDFW Virology Lab does not maintain the necessary cell lines to detect *WSIV*. In the past we have sent samples to the USFWS Fish Health Lab at Dworshak NFH where the required cell lines are maintained and they have run the viral assays on our behalf.

While the juvenile white sturgeon might survive to target size, there was an inadequate fish health history (e.g. virology documentation). There were also some genetic concerns expressed. Briefly, other white sturgeon supplementation programs (e.g. Lake Roosevelt) have strict genetic protocols in place, which were not followed in this instance. These genetic protocols are to ensure that any natural-occurring production is not genetically swamped in the waters where the juvenile white sturgeon are destined for release.

Microbiology Bytes: Iridoviruses

The word "Iridoviridae" is derived from Iris, who was the Greek goddess of the rainbow. This is due to the "rainbow like" iridescence observed in heavily infected insects and pelleted samples of invertebrate iridoviruses. This iridescence facilitated the first detection of an iridovirus when Claude Rivers, in 1954, discovered crane fly larvae (Tipula spp) glowing with patches of blue coloration. Iridoviruses have since been isolated from both invertebrate and non-mammalian vertebrate hosts. A common feature of most of these hosts is the aquatic or moist environment in which they are found. Iridoviruses have received attention because of the problems they pose to aquacultural practices, and because of their potential use in the biological control of insect pests.

Source: <http://www.microbiologybytes.com/virology/kalmakoff/Iridoviruses.html>

Decision

After a complete evaluation, recommendations from Fish Health staff, and in consultation and agreement with the relevant Co-managers, the decision was made at the Director's level to euthanize the eggs. No one was happy with this decision, but with the risks and unknowns it was certainly the right decision.

continued on page 4.

Catie-Kelly Corner *By Catie Mains and Kelly Henderson, Science Division/BDS-Hatchery Data Section*

Hatchery NPDES* General Permit Issuance

On June 28, 2010, the Washington Department of Ecology (WDOE) issued a five-year hatchery NPDES General Permit. This permit is for water discharges associated with fish hatcheries. This is the fifth issuance of the permit. There are 70 WDFW hatcheries and 10 private hatcheries covered under the General Permit, which became effective August 1, 2010. WDFW also has individual NPDES permits for four hatcheries: Bellingham, South Sound Net Pens, Puyallup, and Voights Creek. An EPA General Permit covers two additional hatcheries located on tribal lands: Ford and Klickitat.

WDFW (**Heather Bartlett**) submitted written comments to improve and clarify the General Permit, which WDOE accepted. There were no significant changes except in regards to sampling requirements. Under the previous permit, if a hatchery fell below 20,000 pounds fish on-station and 5,000 pounds food fed, you could suspend collecting samples; now samples must be collected whenever fish are on-station. If all fish have been released, sampling is to continue for an additional 30-day period after they were liberated, as long as there is effluent water to sample!

The process was facilitated by the exceptional job with record-keeping, according to inspections, at all hatchery sites. WDOE was impressed with the facilities they have visited so far, so keep up the good work and maintain those records!

As always, contact **Catie Mains** (360-902-2503) or **Ann West** (360-902-2680) if you have any questions.

For complete information on the General Permit go to:
http://www.ecy.wa.gov/programs/wq/permits/fin_fish/index.html

*NPDES = National Pollutant Discharge Elimination System



Fish Health *(continued from page 3)*

What Can Be Learned from this?

Obviously there was a series of communication errors or miscommunications between the involved parties. This is a good example demonstrating the importance of maintaining clear communication all around.

From the fish health perspective, if a hatchery facility has eggs brought to them and the Future Brood Document process isn't completed, or if there is an incomplete fish health history, facility personnel simply should not take receipt of the eggs/fish. That could buy us the appropriate amount of time to ascertain risks to the programs at the hatchery facility. If this happens you should always first try to contact the Fish Health Specialist for your facility; if they are not available, you can call **Joan Thomas** at the Virology Lab (360-902-2667) or **John Kerwin** (360-902-2681 office, 360-480-2695 cell).

Excerpt from the OIE Diagnostic Manual (4th ed.): Chapter 2.1.16

The white sturgeon iridoviral disease (WSIVD) is a significant cause of mortality among farm-raised juvenile white sturgeon (Acipenser transmontanus) in North America... [The virus infects] the skin, gills, and upper alimentary tract. Infections of the oral mucosa and olfactory organ epithelium are presumed causes of the cessation of feeding that leads to a progressive emaciation or starvation of the fish - the principal external sign of the disease. Cumulative mortality of up to 95% has been reported among groups of infected fish in the hatchery and secondary infections with external protozoa or bacteria often contribute to the overall mortality. Infected fish with moderate to severe emaciation began dying 2-3 weeks following exposure to the virus at water temperatures of 17-19°C. Hemorrhages on the abdomen and the ventral scuta may be present, but these are not specific for WSIVD. There are no specific internal signs of infection as the virus does not invade systemically.

Source: World Organization for Animal Health (OIE): International Database on Aquatic Animal Disease (IDAAD),
<http://www.collabcen.net/idaad/disease.aspx?id=49>

Hatchery Reform Summer Meetings

By James Dixon, HEAT

This summer, the Hatchery Evaluation and Assessment Team (HEAT) scheduled a series of pre-spawning season meetings with staff at hatchery facilities in Regions 4 and 6. These meetings are designed to address the current issues surrounding hatchery production: ESA listings, Hatchery Reform Project, HSRG, Integrated and Segregated broodstock management, and more. It is also particularly important for us to discuss the limitations that the programs have to implementing HSRG recommendations, and address ways in which the programs can meet them.

The meetings, lead primarily by HEAT staff **Tara Livingood** (Coast), **Kent Dimmit** and **Beata Dymowska** (Puget Sound), and Regional Hatchery Reform Managers **Randy Aho** and **Brodie Antipa**, are designed to promote an open-discussion format, and we tried to tailor the individual presentations to address the specific programs and issues at the facilities/ complexes. Hatchery staff from HS4s and below, and the Regional Biologists, were encouraged to attend.

The schedule was cut back this year because of personnel reductions in the HEAT Unit, so we weren't able to get to all facilities (sorry Region 5!). This is an annual process, and our goal is to cover all facilities at least every other year.

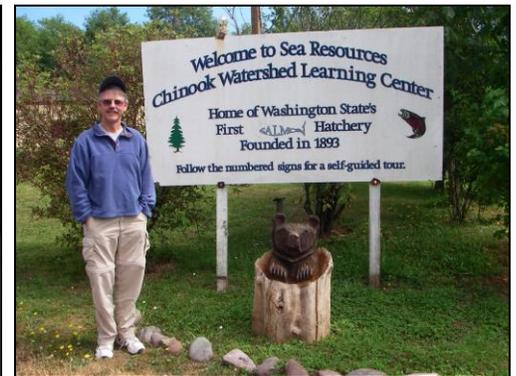
	Site	Facilities
August	Bingham Cr	Bingham
	Fork Cr	Fork Creek, Nemah, Naselle
	Issaquah	Issaquah, Tokul, Wallace, Whitehorse
	Lake Aberdeen	Lake Aberdeen, Humptulips
	Sol Duc	Sol Duc, Bogachiel
	Bellingham	Bellingham, Kendall, Samish, Marblemount
September	Eells Springs	Eells Springs, George Adams, McKernan, Hoodspout
	Minter	Minter, Coulter, Hupp Springs
	Soos Creek	Soos, Voights
	Tumwater Falls	Tumwater Falls, Skookumchuck, Lakewood
	Dungeness	Dungeness, Hurd Creek, Elwha

Beata Dymowska and Kent Dimmit at Soos Creek Hatchery



After 31-Years, This Old “Dawg” Is Ready For Some New Tricks

On September 30, the Hatchery Evaluation and Assessment Team (HEAT) will lose another one of its members; **Kent Dimmit** is retiring after 31-years of dedicated service to the Agency. His illustrious career in the “Salmon Culture Division” began in 1979, as a Fish Culturist 1 at **Skykomish Hatchery** (now **Wallace River Hatchery**). He worked at **Soos Creek Hatchery** (then “Green River Salmon Hatchery”) in 1982, before promoting to Hatchery Manager at **Icy Creek Hatchery** in 1983. Kent became a biologist in 1985. He began his long career in



Photos provided by Carol Froelich

Hatchery Assessment in 1986, with a brief side trip (1997-2000) to work as RFEG Volunteer Services coordinator. His experience and knowledge, along with his strong dedication to the resource, has provided invaluable expertise and insight in his final position as Puget Sound coordinator in the HEAT Unit. Here, he ably rose to the challenge of working to transform hatchery management to support salmon recovery goals.

Kent’s energy and enthusiasm is reflected in his very vocal (many would say “rabid”) support of his beloved University of Washington Huskies. He and his wife, Carol, are true fans in every sense of the word, and have never wavered in their support in good times or bad. Kent (“Dawger”) shares his insight and opinions on his regular blog on Husky sports, and is a long-time season ticket holder... he has even been known to follow the team to several away games each year! His deep support is reflected in his vast knowledge of college teams. Kent has also both coached and played on the Agency recreational softball team, and has regularly participated in the Agency’s annual Combined Fund Drive Golf Tournament.

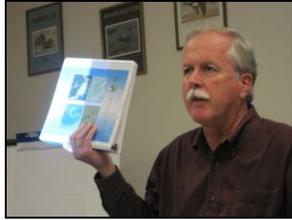
Knowing Kent, he will not take his retirement lying down. And to that we say, “Go, Dawg, Go!”

Hatchery Division Meeting

(continued from page 1)

After lunch, **John Kerwin**, from the Conservation Biology unit, gave a presentation on IHNV outbreaks, particularly in Olympic Peninsula coastal facilities and streams. He used this as an opportunity to remind the facilities of publication of the New Fish Health Manual (available in hard copy and electronically, on disc). Resident Native Fish Program Manager **Jim Uehara** gave a presentation on the Integrated Hatchery Plan for Inland Fisheries. Hatchery Evaluations Manager **Mark Kimbel** gave us an update on the second Egg/Carcass Stakeholders Meeting, held on September 20. Hatcheries Admin Ops Manager **Denise Dewey** finished the day with a discussion on fish feed costs and rebates from p-card purchases. Also, Construction and Maintenance Manager **Neil Turner**, reminded everyone doing housing inspections at the facilities to especially check the caulking around the bathtubs in the bathrooms.

The next Division Meeting is in March; Region 5 will host. Hope to see you there!



Egg/Carcass Stakeholder Process

By Mark Kimbel, Hatchery Evaluations Manager

WDFW was directed by the 2010 legislature to “work with appropriate stakeholders to facilitate the disposition of salmon to best utilize the resource, increase revenues to regional fisheries enhancement groups, and enhance the provision of nutrients to food banks.” A report summarizing the resulting discussions, outcomes and recommendations is due to appropriate legislative committees by November 1, 2010.

Meetings were held in Olympia, facilitated by the Ruckleshaus Center. The first stakeholder meeting, on September 2, 2010, focused on developing a “common understanding” of the issues among all stakeholders: though not mentioned in the 2010 legislation, many expressed their interest in nutrient enhancement. The second meeting was held on September 20, 2010, and focused on input from the stakeholders regarding their specific recommendations to improve the program.

Everyone in the room agreed that: 1) the food bank program was valuable and should continue or be enhanced; 2) the RFEGs need more funds to continue their good work; and 3) nutrient enhancement has value and should be continued or enhanced.

Recommendations will be drafted and provided to the Regional Fish Program Managers for review. The recommendations will also be a topic of discussion at the October 4 Hatchery Reform meeting. With agency buyoff, WDFW staff will present the recommendations at the third and last stakeholder meeting scheduled for October 8 or 12.

Egg/Carcass Distribution Protocol Reminders

Priorities:

1. Watershed escapement and hatchery broodstock needs
2. Tribal obligations associated with Ceremonial & Subsistence (C&S)
3. Other
 - a. Food bank
 - b. Contract buyer
 - c. Nutrient enhancement
 - d. Education & Research

Guidelines:

- All food quality fish should go to food banks – focus on males
- All other useable fish should be sold
- Males should be used for nutrient enhancement
- Round female salmon should be sold



WDFW Fish & Egg Disposition Tickets (Form-3):

Mandatory Information -

- **Disposal/Sold** fish cannot go on same ticket as **Food bank** because they are going to two different receiving facilities
- No cut or split females can be consumed by humans through food bank donation; spawned males can be donated
- Spawned fish can be sold (except steelhead)
- All mortalities are unusable condition; they cannot go to food bank or be sold.

Note: Local food banks/charities should be encouraged to go through [Northwest Harvest](#). Also, they should note that authorization letters allow donated fish for human consumption-only.

Hatcheries are popular field trip destinations for area schools

“Where Are the Big Fish?” By Josh Benton, FH2 Puyallup Hatchery

One of the great aspects of working in Hatcheries...at a hatchery...is the fact that we are the face of the Program and the Department. Aside from a few bitter anglers who lament about “the good ol’ days, when you could walk across the backs of salmon and steelhead in [Insert Name Here] River,” most people are genuinely curious and appreciative of what we do.

I have worked at a few facilities, most of which are open to the public, and a lot of people come through at all times of the year. Our most frequent visitors are groups of school-aged kids on a field trip. These are typically the most fun as they are little sponges, ready to soak up all that you have to offer.

Typically, I welcome them as they arrive, introduce myself, and then ask them, “Who’s ready to work!?! We’ve got some bathrooms that need cleaning!” followed by 4-5 seconds of silence. That usually makes a few eyes go wide!

These field trips are a unique educational experience. Think about it: where else can these kids (or anybody else) go for free to see, fish up-close and personal...eggs, juveniles, and adults...all in one place?



At the right time of year, visitors will be able to see almost the entire life-cycle, right there before their eyes! At **Puyallup Trout Hatchery**, our close proximity to town has long made us a popular destination from area schools. Preschoolers through college students can visit us almost any time of year to see rainbow trout and German browns first-hand. Private companies like Trout Lodge, and even most tribal facilities, will not allow as much public access as we do.

Schools schedule field trips to watch spawning activities as well. For years now, at **Soos Creek Hatchery** in Auburn, a local teacher has brought a large group of local high school students to help handle the thousands upon thousands of fall Chinook and coho that return every year. At **Voights Creek Hatchery** in Orting, kids of all ages come to witness spawn



Photos provided by Josh Benton

days; but be careful...once you hit 16 (with parental permission of course), you better remember to bring your waders or grab a hose and start washing buckets!

It is very important for all of us, as such visible representatives of the Department, that we give a positive impression to visitors. Not only to the young kids who haven’t yet formed an opinion but to the adults as well, whose opinions of the Department are based only by how successfully they fish/hunt or by the media, and not by actually meeting the individuals who are working everyday to improve their recreational experience. At some point, we all have to answer the question, “Where are the big fish?”

What hatchery is this?



Answer: Tokul Creek Hatchery, circa 1930s

Staff Happenings

By Rachel McDaniel, Hatcheries Division Admin Assistant

With best regards, we wish the following employees success in their new positions:

Ace Trump, FHS4, Spokane Hatchery

Marilyn Scott, Acting FHS3, Klickitat Hatchery

Join me in wishing the very best to **Kent Dimmit** (see “*Old Dawg*” on page 5) and **Rich Eltrich**, Region 6 Hatchery Ops Manager, on their well-deserved retirement and new ventures. Their last day with the Agency is September 30.

Kent’s retirement party is scheduled for October 15, at Ramblin’ Jacks in Olympia, starting at 6 p.m. Please contact James Dixon (360-902-2676) for details.

“Do not follow where the path may lead. Go instead where there is no path and leave a trail.”

~Harold R. McAlindon

Salmon Days are here again! By Darin Combs, FHS4 Tokul Cr/Issaquah Hatchery

The salmon are returning to **Issaquah Hatchery**! Around Issaquah, this means that the annual Salmon Days Festival is right around the corner. For over 40 years, the community of Issaquah has come together to celebrate the upstream migration of adult Chinook, coho and sockeye salmon.

This annual award-winning festival (see *Did you know...*), which occurs on the first weekend in October, features live music, arts and crafts vendors, and food from around the world. The reason the celebration is, of course, the salmon. The center of the Salmon Days festival is WDFW's Issaquah Hatchery: located in the heart of Issaquah, the hatchery draws an estimated 300,000 visitors annually; around half of those visits occur during Salmon Days weekend!

During the festival, hatchery visitors can observe salmon-spawning behavior in Issaquah Creek or get a close-up view through the viewing windows at the fish ladder and holding pond. The hatchery also offers a variety of interactive displays and informational kiosks that educate visitors of all ages, including



Photos by John Kugen, FHS3 Issaquah Hatchery

Did you know....?

➤ **Issaquah Salmon Days** received the [2010 Silver Grand Pinnacle Award for Best Overall Event in 2009](#) from the International Festivals & Events Association (IFEA); it took first place in the same category last year. The festival also picked up 12 other awards at the ceremony in St. Louis, including Best Environmental Program (silver), Best Volunteer Program (bronze), Best Poster (silver), and Best Program (gold). The IFEA/Hass & Wilkerson Pinnacle Awards attracts entries from more than 2,000 festivals worldwide, including Seattle's Bumbershoot and the Pasadena Tournament of Roses.

➤ Salmon Days also won [seven Summit Awards in 2009](#) from the Washington Festivals and Events Association, including top honors, against Sequim Lavender Festival and Bite of Seattle.

WDFW's popular Pacific Salmon display. Each year, hatchery personnel gather specimens of all the Pacific salmon, male and female, from various hatcheries around the state. These fish are frozen and stored until Salmon Days, when they are displayed, on ice, and used to educate visitors. It's a great way for WDFW staff to interact with the public.

Fortunately, the three-person hatchery crew does not have to shoulder the challenge of preparing for and managing such a big event all by themselves. The Friends of Issaquah Salmon Hatchery (FISH) is a non-profit organization that shares a symbiotic relationship with the hatchery; this volunteer group takes the lead role in educating visitors not only during Salmon Days, but year round. Throughout the fall, FISH recruits and trains more than 60 volunteer docents who lead tours for more than 9,000 people annually, at an average of 10 people per tour. These volunteers can be found here seven days a week, often until dark, answering questions about the hatchery, the salmon life cycle and the watershed. During Salmon Days these volunteers can be seen at various strategically-located sites around the hatchery, ready to provide pertinent and interesting information to the public.

This year the 2010 Salmon Days Festival will be held October 2-3.



Washington Department of Fish and Wildlife Hatcheries Division 600 Capitol Way N., Olympia, WA 98501

The Washington Department of Fish and Wildlife (WDFW) serves Washington's citizens by protecting, restoring and enhancing fish and wildlife and their habitats, while providing sustainable and wildlife-related recreational and commercial opportunities.

<mailto:fishpgm@dfw.wa.gov>
<http://wdfw.wa.gov/fish/management/hatcheries.html>

Comments are always welcome and much appreciated. This newsletter is for you; to keep us connected, share information, and motivate us to new levels of scientific exchange and hatchery management. Suggestions are being taken for future articles. Tell us what you want to read about!

– Contact: Lori Kishimoto