



Steelhead photo contribute by Michael Kellet, Boise National Forest

## *FishTales<sup>©</sup>*

*A Weekly Peek at Fisheries, Aquatic  
Ecology and Watersheds in the*

**USDA FOREST SERVICE**

*January 17 - January 21, 2005*

### **Dave Cross -**

With a holiday on Monday and an administrative day off on Thursday, due to the Inauguration, it has been a short but busy week. I worked with staff from OGC, wilderness, and research and development to review comments on IAFWA's proposal for changes to the current policies and guidelines for fish and wildlife management in wilderness. This week I also worked with Jeff Kershener, Bill Lorenz and others on our staff, to complete our program of work for fiscal year 2005. I participated in two conference calls this week. One was the Brook Trout Joint Venture Steering Committee conference call where we discuss progress on the multi-state assessment, the outreach and communication strategy, and the Conservation Strategy. The first cut of the Conservation Strategy should be available to the committee for review in late February with a

final in late fall of 2005. The Book Trout Joint Venture is making good progress! The second call was with the program leader team lead by Kate Walker working on definitions for the performance and accountability efforts. Here again progress is being made.

This is the **last call** for Rise to the Future nominations for mentors, Recfish and Line Officers. If you have nominations please send them in no later than the close of business, Friday, January 28<sup>th</sup>.

## Bill Lorenz -

This short week I continued to work on appeals and participated in the conference call on performance and accountability definitions.

## News from Around the Country

- **Invaders Can Break An Ecosystem's Back**

The arrival of the right invasive species can be enough to send embattled native populations belly up. The research, by Ted Grosholz of the University of California, Davis, suggests ecosystems in California's Bodega Bay are headed for "invasional meltdown." For the past 45 years or so, the native *Nutricula confusa* clam has been holding its own against the eastern gem clam (*Gemma gemma*) from the Atlantic seaboard. Gem clams were present, but not plentiful, until about 1994. That year marked the arrival of the European green crab, delivered to the bay from Asia. Grosholz found that in laboratory experiments, the crabs on average ate native clams twice as often as gem clams, probably because the natives are larger. He reports in the Proceedings of the National Academy of Sciences that by decimating native clam populations so rapidly, the crab has dramatically worsened the spread of gem clam populations. The findings suggest that the addition of more invasive species can cause whole ecosystems to collapse like a house of cards.

- **Response by trout populations in alpine lakes to an experimental halt to stocking** Trip W. Armstrong and Roland A. Knapp  
Can. J. Fish. Aquat. Sci./J. Can. Sci. Halieut. Aquat. 61(11): 2025-2037 (2004).

**Abstract:** Trout are often stocked into alpine lakes based on the generally untested assumption that resident populations would go extinct without stocking. The objectives of our study were to estimate the proportion of currently or formerly stocked alpine lakes in the Sierra Nevada, California, containing naturally reproducing trout populations (*Oncorhynchus mykiss*, *Oncorhynchus mykiss aguabonita*, *Oncorhynchus clarki henshawi*), identify characteristics of lakes associated with successful reproduction, and quantify the effects of stocking termination on trout density and individual growth rates in reproducing

populations. We surveyed trout populations in 95 lakes in the John Muir Wilderness before and after a 4- to 8-year stocking halt and in 84 lakes in Sequoia–Kings Canyon National Park after a  $\geq 20$ -year stocking hiatus. Based on recruitment during the no-stocking period, 70% and 68% of study lakes in the John Muir Wilderness and Sequoia-Kings Canyon National Park, respectively, contained reproducing populations. Results indicated that lakes with  $>2.1 \text{ m}^2$  of spawning habitat and at elevations  $<3520 \text{ m}$  nearly always showed evidence of reproduction. For reproducing populations, stocking termination did not result in significant changes in population density, but may have increased individual growth rates. We conclude that most trout stocking in Sierra Nevada alpine lakes could be permanently halted with only minimal impact on the recreational fishery.

- **Brian W. Sanborn NRIS Water, WO-EMC writes** - As many of you are aware, Shaun McKinney (Branch Chief, NRIS Water) has moved on to the Natural Resources Conservation Service to head up a Water Quality technology development and transfer program. Shaun's position in NRIS will not be filled in the immediate future. I will be the primary NRIS contact for the Fisheries and Aquatic Ecology Programs, serving as the liaison between your programs and NRIS. Although NRIS is under the EMC staff organization, I am a firm believer that we work to support your programs. Biologists and ecologists in your programs are our primary customers, and our goal is to provide them with data management and analysis tools that make it easier for them to do their jobs. Providing them with useful tools for data capture, management and analysis will make them, and in turn your programs, more successful. For NRIS to meet the needs of your programs we need to keep abreast of the issues facing your programs and their changing data management needs. Keeping communications strong with the Fisheries and Aquatic Ecology programs is essential. I have worked with the majority of you over the years and look forward to working more closely with you in the future. If you have any questions, please feel to give me a call (541-750-7151)

I would like to start off by providing some information on NRIS, and specifically the NRIS happenings related to Aquatic Resources.

NRIS Organizational Changes – Up until recently NRIS has been organized around several resource specific applications; Water, Air, Terra, FSVeg, Fauna, and Human Dimensions. Given the need to better integrate our applications and more efficiently produce tools for the field we are doing a little reorganization. The model we are moving to includes a Development Group, a Resources and User Support Services Group, and an Administrative Group (this group is very small). The goal is to make Development decisions and focus development activities on aggregating many tasks common to all NRIS Business, while keeping focused on specifics needed for each resource area we support. We believe this will allow us to reduce redundancy, be more efficient, and in turn be more responsive to program needs.

The Terrestrial and Aquatic Fauna Project – Given the demands of the new Information Resources organization and the consolidation of data and application servers into regional data centers, many of our applications need to be re-tooled to conform to this new configuration. We are taking advantage of this opportunity to converge application components where they make sense. The first project of

significance in this undertaking is the integration of Aquatic and Terrestrial biota sampling. Since there are many similarities in the work flow of surveying critters, be they on land or in the water, we want to address this as one application. Many of the higher level needs are similar, such as surveys, grouping of observations or samples, managing taxa lists, etc. Of course once one gets to the more elemental data, there are differing requirements which we will still meet. Mary Barczak in Corvallis is the lead on this project. Feel free to contact her or myself for more information.

Field Data Recorders – One of the concepts we are looking into is focusing our data input onto field data recorders. While the needs for data management may require complex, normalized corporate databases, the task of data collection is more focused on specific tasks. By focusing our data input into task specific workflows, we can more easily support field data recorders. The concept is that you would have specific tasks (e.g. sampling biota in a stream, measuring stream fish habitat, collecting Rosgen channel classification data) with focused data capture interfaces based on simple data structures. The interface would be similar for field data recorders, laptops, or desktop PCs. The data would then be loaded into the corporate system, undergoing QA/QC in the load process. This also provides a more streamlined pathway to get legacy data into the corporate database. We are incorporating this concept into the Terrestrial and Aquatic Fauna described above.

## ***Regional Roundup: Region 6, Pacific Northwest - Dave Heller, Regional Fisheries Program Leader***

### **Northwest Regional Roundup**

The Pacific Northwest Regional Roundup features a look at the Columbia River Gorge National Scenic Area Aquatics Program update, and links to *The 2004 State of Salmon in Watersheds Report*, and *Streamline-a Watershed Management Bulletin*.

## **Columbia River Gorge National Scenic Area Aquatics Program update - January 2005**



## **Introduction**

The Columbia River Gorge National Scenic Area encompasses areas of both Washington and Oregon states and is approximately 292,000 acres in size. Around 71,000 acres (24%) is in National Forest ownership. The 83-mile gorge transitions from a wet Douglas-Fir forest with almost 120" of precipitation on the west end, to a dry pine/oak savannah with less than 10"



of precipitation on the east end. The elevation ranges from near sea-level to over 3000 feet, within several miles of the river. The "Gorge" is the major travel corridor for humans as well as fish and wildlife, containing 2 interstate highways, 2 railroad lines, 2 large dams with locks for barge traffic and fish ladders for the numerous aquatic species moving up and down the river. The Columbia River Gorge provides easy access to more than 2.2 million visitors annually. Compared to the other 16 National Forests in Region 6, the three words that best describe the Scenic Area are: unique, complex and spectacular.

The Scenic Area was congressionally created in 1986 to preserve the world-renowned natural, cultural, recreational, and scenic resource of the only sea-level passage through the Cascade Range of Washington and Oregon. Besides the traditional FS duties of fire, recreation and conservation management, the Scenic Area office was also placed in the unique position of reviewing new uses and developments for not only FS lands but also a large segment of private and other governmental lands for consistency with the Scenic Area Management Plan. The FS also provides technical assistance to states and counties to implement natural and scenic resource protections and mitigation plans as requested.

The Aquatic personnel on the Scenic Area are Chuti Fiedler (Fish Biologist), Mark Kreiter (Hydrologist), and Cathy Flick (Biologist Technician). All 3 positions are shared with other Forests and Programs; with Chuti also acting as the Scenic Area wildlife biologist, Mark shared with the Mt. Hood National Forest, and Cathy shared with the watershed as well as the wildlife program.

Four of the current focus areas of the Scenic Area Aquatics program include:

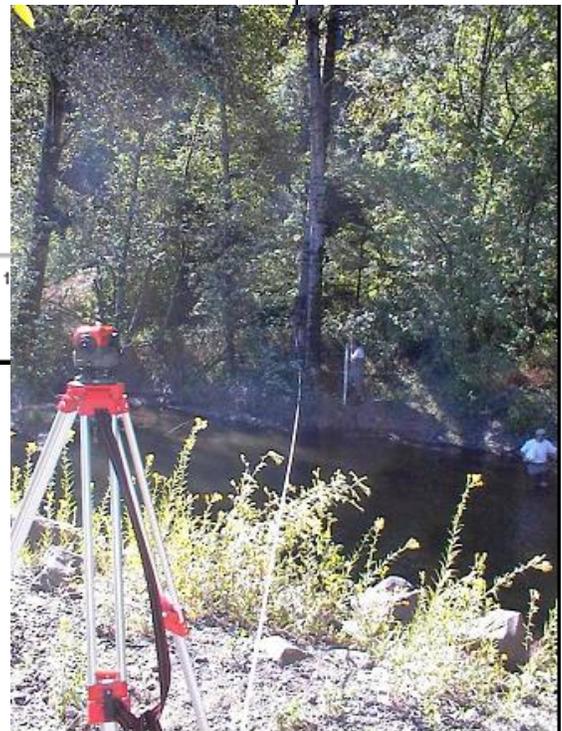
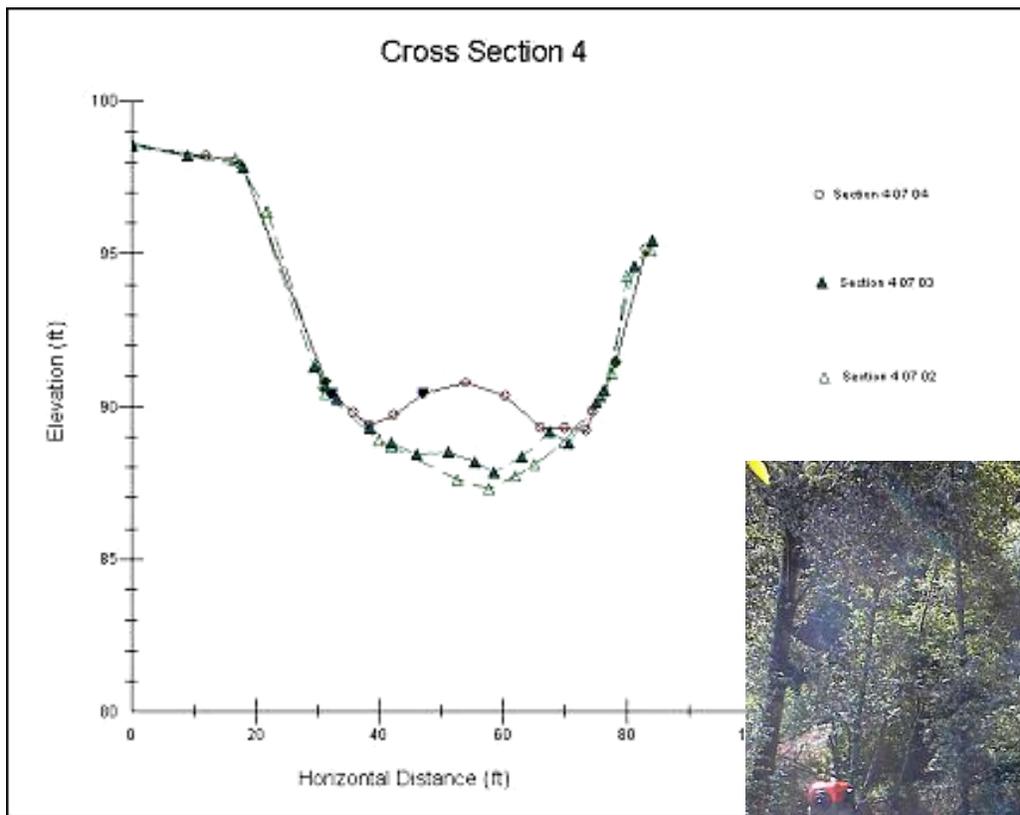
1. Resource protection and conservation.
2. Environmental education and awareness.
3. Fish passage and floodplain restoration.
4. Resource Inventory and Monitoring

### **1. Resource Protection and Conservation**

***Scenic Area personnel review almost all new project proposals within a portion of the Scenic Area, regardless of ownership, for consistency with resource protection. In FY 2004, 32 projects were reviewed for aquatic resources conservation consistency. These projects were adjacent to approximately 8 miles of streams. Aquatics personnel identified opportunities to retrofit project designs***

**to protect or enhance fish habitat and water quality. Field visits with project proponents ensured that resource protection goals and objectives would be met. Select projects are being monitored over time to evaluate project effects. One example is an on-going project to protect Multnomah Falls Lodge and associated infrastructure from flood events. Working with Oregon Department of Transportation and NOAA Fisheries, Scenic Area personnel provide input to minimize environmental damage from periodic maintenance activities in and adjacent to an anadromous stream. The Scenic Area Aquatics Department also uses the yearly project monitoring data collection as an opportunity to expose local high school teachers and students to data collection and interpretation methods.**

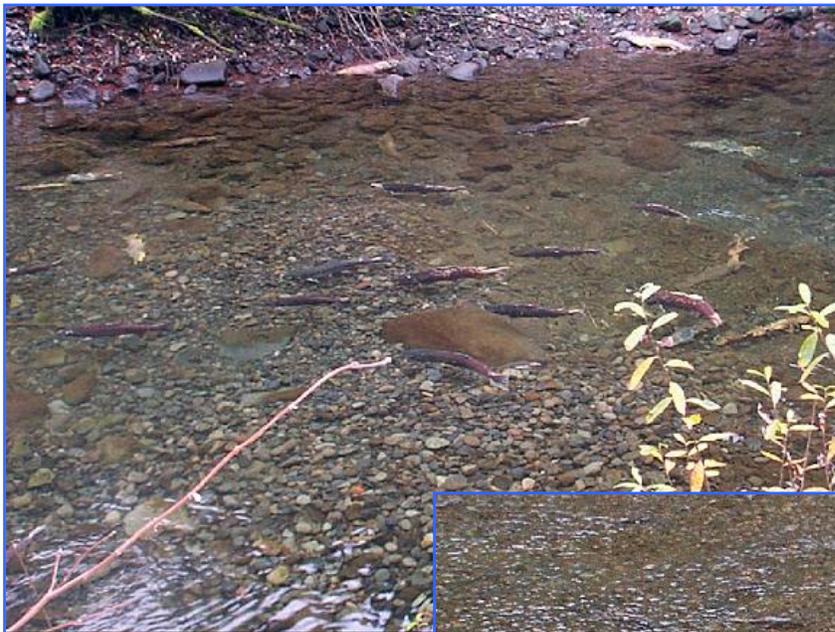
*Local high school teachers help collect cross-section data on Multnomah Creek.*



## 2. Environmental Education and Awareness

*The Scenic Area is visited by over 2.2 million visitors annually due to its location adjacent to a busy Interstate and within a half hour drive from the Metro Portland/Vancouver area. The Aquatics program places a high priority on projects that increase the environmental awareness of visitors to the Scenic Area. In the past year, new projects include involvement with the city of Cascade Lock's Sternwheeler Days Festival (Gorge-ous Fish and Wildlife staffed booths), Salmonwatch program partnered with Oregon Trout, and Fish Information of Multnomah Creek presentation at Multnomah Falls Lodge. On-going projects include Teachers-in-the-Woods program volunteers, and Interpretive signs being placed on Mulnomah Creek and Klickitat River (partnered with Friends of Multnomah Falls, Federal Highways Administration, and the city of Lyle).*

Salmonwatch at Eagle Creek, Nov 2004. Six local school classes traveled to Eagle Creek to share information on water quality, salmon biology, riparian species, and macroinvertebrates as discussed by FS, Army Corp, and Oregon trout volunteers. Many hundreds of spawning coho and Chinook salmon set a perfect backdrop to the field talks.



*Sternwheeler Days Festival at Cascade Locks. The 3-day festival featured the past and present history of the Columbia River Gorge, and was attended by approximately 6000-7000 people. The FS had 5 booths that included fish stories in the Salmon tent, the costume parade, hands-on fly-tying for beginners, local species in the Gorge (bats, birds, and mammals), life in dead snags, and bird box painting.*



### **3. Fish Passage and Floodplain Restoration**

*The Scenic Area has over 2000 miles of stream network including the mighty Columbia River flowing through the heart of the area. Millions of anadromous fish that annually travel up the Columbia River to other streams in Washington, Oregon and Idaho, rely on the many creeks and rivers in the Gorge for temporary*

***refugia during their long journey. Numerous human-made barriers that limit fish access remain in the Gorge from transportation infrastructure that was built around the turn of the century. Most streams have vertical barrier falls within a few miles (or shorter) of the Columbia River due to the inherent geology of the Columbia River Gorge. Although the anadromous fish use (coho, Chinook, steelhead) would be high, it is difficult to leverage funds to correct these problems due to the relatively short stream lengths that would regain fish use.***



Much of the delta and floodplain habitat within the Gorge has also been eliminated to facilitate roads, railroad lines, commercial/residential buildings, and crop cultivation adjacent to stream channels. One of the projects in the fall of 2004 removed a culvert and restored a historic overflow stream channel to Goodbear Creek.

*Before: A side channel dead-ended in a now-abandoned orchard. Salmon fry were trapped annually in the channel as they attempted to migrate downstream. Most of the fry became entrapped in the thick grass and died when the water drained away, despite rescue efforts by aquatics personnel.*



*After: This photo was taken immediately after stream channel restoration was completed. The channel has been reopened, allowing coho, Chinook, and steelhead fry unimpeded access to the Columbia River. The side slopes were reseeded with native grass seed mix and jute erosion cloth placed to reduce erosion. Willow cuttings and dogwood rooted cuttings were placed streamside, and the upslope will be re-vegetated with native hardwoods, such as highbush cranberry, elderberry, serviceberry, alder, and Oregon Ash.*



#### **4. Resource Inventory and Monitoring**

Scenic Area streams typically have warmwater, often introduced, fish species near the stream mouths, along with anadromous species below barrier waterfalls. Above the first barrier falls, resident trout and sculpin are the typical fish species in the stream. Due to the rugged and steep terrain, many of the headwater and mid-elevation streams still do not have adequate survey information. Aquatic personnel have been systematically sampling and documenting fish species for the last several years in an effort to accurately describe fish species throughout the Gorge. Streams without fish surveys, as well as streams with contradictory species accounts, have been our priority to correct in our GIS database. Streams within the Scenic Area typically have different trout species, separated merely by barrier falls. Genetic analysis of these populations to pinpoint pure stocks, subspecies identification and hybrid occurrences are sorely lacking. Photos show the typical trout species separated by a barrier falls within a stream in the Gorge.



In addition to fish habitat monitoring, stream channel morphology and water quality monitoring are part of the yearly aquatics program here on the Gorge. Stream temperature monitoring is conducted on approximately 15 streams annually using continuous collection dataloggers. This information helps determine compliance with State Water Quality Standards as well as provide data for TMDL compliance. Channel cross-sections, longitudinal profiles and substrate composition are also monitored on various streams to determine channel condition and changes through time.

## LINKS:

For the first time the Washington Governor's "2004 State of Salmon in Watersheds Report" report has prominently featured USFS watershed restoration data accomplishments. Information was extracted from the Regional database IRDA (Interagency Restoration Database). Go to the link and check out the report: [www.governor.wa.gov/gfro](http://www.governor.wa.gov/gfro)

*Streamline is a Watershed Management Bulletin published by FORREX – A Forest Research Extension Partnership, which links people to knowledge, and facilitates continuous innovation and improvement in natural resource policy and management. For the most recent volume of Streamline go to:* [www.forrex.org/streamline/](http://www.forrex.org/streamline/)

## Regional Roundup Calendar

Region	Issue
Pacific Southwest Region	1/14/05
Pacific Northwest Region	1/21/05
Southern Region	1/28/05
Eastern Region	2/04/05
Alaska Region	2/11/05
Northern Region	2/18/05
Rocky Mountain Region	2/25/05
Southwest Region	3/04/05
Intermountain Region	3/11/05

**Migrational Opportunities (Federal job announcements:**  
[http://jobsearch.usajobs.opm.gov/agency\\_search.asp](http://jobsearch.usajobs.opm.gov/agency_search.asp))

- Job announcement: The International Association of Fish and Wildlife Agencies (IAFWA) seeking applications for a National Fish Habitat (NFHI) Research Liaison, under cooperative agreement with the USGS Biological Resources Discipline. The Liaison will develop a comprehensive database using existing information on past and current fisheries habitat projects in the United States. The database will be used to develop a NFHI central clearinghouse for methods, protocols, and project designs for the National Fish Habitat Initiative Conservation Plan.

The successful candidate will follow a work plan developed jointly by the IAFWA and the USGS-BRD Fisheries: Aquatic and Endangered Resources Program. The Liaison will work primarily out of the IAFWA offices in Washington, D.C., in cooperation with the USGS-funded Science and Research Liaison. The position is available immediately, and is funded for a term not to exceed 12 months from entry onto duty. Salary will be based on qualifications and experience.

For further information, contact:

Dr. Russ Mason  
Science and Research Liaison  
International Association of Fish and Wildlife Agencies  
444 North Capitol Street, NW  
Washington, D.C. 20001  
(202) 624-5853  
[rmason@iafwa.org](mailto:rmason@iafwa.org)

- **Director Public Lands Initiative**

Trout Unlimited (TU) is seeking to hire a national director for TU's Public Lands Initiative (PLI). The PLI was formed in 2002 primarily to organize TU members and other hunters and anglers in support of balanced, responsible public lands policies and protection. The PLI work is mostly in western states and has three divisions: Oil & Gas work; Roadless Lands Protection and Mining Restoration. Presently the PLI has four full time employees with current plans to double that number. Please refer to: <http://publiclands.tu.org/> for complete information on the PLI.

The PLI Director position will involve oversight of the PLI program and its employees. The ideal candidate will have strong organizational, leadership and people skills, be able to delegate responsibility and handle strong personalities. The position will be housed in the western United States (likely co-located with another TU office, if possible). The person should be an articulate and passionate advocate for public land conservation, fishing and hunting, and able to work in collaboration with state and federal agencies, other conservation and environmental groups and industry representatives. The Director must have experience in managing

budgets and staff and other attendant administrative requirements, well as experience in fundraising and grant writing.

Candidates must have strong written and public communications skills as well as good computer skills. The ideal candidate should have a college or advanced degree in a relevant field, live in a western state, and have a strong background of fishing and hunting and a love for wild places. Travel will be required. Fundraising experience will also be beneficial. Pay and benefits will be competitive.

If you think you would enjoy the team atmosphere that comes from working for an organization with a strong and broad conservation mission, if you want to ensure that America's last wildlands and watersheds remain intact for future generations, and desire to take advantage of a lifelong love affair with wild places, then email, fax, or mail your resume, cover letter and salary history to [sportsmen@tu.org](mailto:sportsmen@tu.org), Trout Unlimited, Attn: Chris Wood, 1300 North 17th Street, Suite 500, Arlington, VA 22209, 703-284-9400 (fax).

- **Out reach notice** - The Gifford Pinchot National Forest is conducting outreach to identify candidates for an exciting and rewarding challenge as the Fishery Biologist at Mount St. Helens National Volcanic Monument (MSHNVN). The Forest is seeking to fill a permanent, full-time Fishery Biologist GS-0482-11 with a duty station of Amboy, Washington. The position will be advertised soon on the USA Jobs website: <http://www.usajobs.opm.gov/>

For more information regarding this position, please contact Karen Thompson, Watershed Resources Manager, at (360)449-7826, [karenmthompson@fs.fed.us](mailto:karenmthompson@fs.fed.us); or Cliff Ligons, Monument Manager at (360) 449-7800 [cligons@fs.fed.us](mailto:cligons@fs.fed.us)

- **Outreach Notice:** The Southern Region of the USDA Forest Service will soon advertise the position for Director of the Biological and Physical Resources (BPR) Unit. We plan to advertise it as a GS-15 or a GS-14/15. The results of this outreach will determine what grade(s) we advertise it.

The Southern Region of the USDA Forest Service encompasses thirteen Southern states, plus Puerto Rico and the Virgin Islands. Fourteen National Forests and Grasslands, four National Recreation Areas and the Savannah River Natural Resources Management and Research Institute make up the Southern Region. The Region accounts for approximately ten percent of the total Forest Service workforce. Most of the 3100 Forest Service employees within the Southern Region work in field offices overseeing National Forest operations, about 300 work in the Regional Office in Atlanta. The Regional Office has five primary staff areas: Natural Resources, State and Private Forestry, Operations, Civil Rights, and Public Affairs.

If interested, please contact Roberta Moltzen, Deputy Regional Forester, Natural Resources, telephone at 404-347-4177, or e-mail [robertamoltzen@fs.fed.us](mailto:robertamoltzen@fs.fed.us).

## *Hotlinks:*

- Forest Service Fisheries and Aquatic Ecology: <http://www.fs.fed.us/biology/fish/index.html>
- Fish Your National Forests: <http://www.fs.fed.us/fishing/>
- National Fish Habitat Initiative (NFHI): <http://www.fishhabitat.org>
- Large-Scale Watershed Restoration Projects: <http://www.fs.fed.us/largewatershedprojects/>
- Fish Ecology Unit: <http://www.fs.fed.us/biology/fishecology/index.html>
- Watershed and Air Management: <http://www.fs.fed.us/clean/>
- National Fishing and Boating Week: <http://www.nationalfishingandboatingweek.org/>
- NatureWatch: <http://www.fs.fed.us/outdoors/naturewatch/>
- Forest Service Research Stations – One stop shopping: <http://www.srs.fs.usda.gov/pubs/index.htm>
- Forest Service Research Station - Boise Aquatic Sciences Lab: <http://www.fs.fed.us/rm/boise/>

## *Sensory Stimulation:*

*"From birth, man carries the weight of gravity on his shoulders. He is bolted to earth. But man has only to sink beneath the surface and he is free."*

*Jacques Cousteau*

New Files for FishTales – FishTales can now be viewed in one of three ways. You can receive it via e-mail or go to our web site where it is available in a pdf or html version.

<http://www.fs.fed.us/biology/resources/pubs/fish/fishtales/>

**FishTales**® is a weekly update of activities of the Fisheries and Aquatic Ecology Program of the USDA Forest Service. All information presented is subject to change as projects evolve, opportunities arise and issues unfold. Contributions are welcome and should be submitted to Dave Cross at [dcross01@fs.fed.us](mailto:dcross01@fs.fed.us) or Bill Lorenz at [blorenz@fs.fed.us](mailto:blorenz@fs.fed.us) no later than close of business on Thursday afternoons. We reserve the right to edit contributions for clarity, brevity, and wherever possible, a dash of silliness and irreverence.

Positions listed are for outreach purposes only and are not full announcements. Interested individuals should contact the forests referenced or consult the USAJOBS website.

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