



# *American Institute of Fishery Research Biologists*

*Promoting excellence in fishery science*

## ... BRIEFS ...

Website: [www.iattc.org/aifrb/](http://www.iattc.org/aifrb/)

VOL. 33, NO. 2

MARCH, APRIL 2004

## **Nominations Needed Now!**

### **Outstanding Achievement Awards**

Members have a responsibility for recognizing excellence. By providing nominations for the Outstanding Achievement Awards you enable the AIFRB to recognize individuals and organizations that are making outstanding contributions to our science. Two awards are given each year.

**Individual Achievement Award for 2005:** The Individual Achievement Award will be given to an individual who has made significant lifetime contributions to the advancement of fishery science. This is the highest award for achievement. Candidates will be rated on the following criteria: 1) significant publications, 2) exceptional service to the profession, 3) outstanding teaching or training of students, 4) important discoveries or inventions, and 5) significant contributions to the advancement of fishery science.

It is important that you address each of the criteria thoroughly in your nomination. The nominating letter should include name, address, telephone number and email address of nominee, a short resume of the nominee and a letter fully describing how the nominee meets the criteria above. Please include your name, address, telephone number and email address so we can contact you if additional information is needed.

**Group Achievement Award for 2004:** The Group Achievement Award will be given to an organization or a group with an outstanding record of scientific contribution to fishery science or fishery resource policy. It is the Institute's highest award for achievement and recognition of organizations that nurture excellence in fishery science. The organization will be rated on the following criteria: 1) sustained contribution of significant publications, 2) exceptional service to the fishery profession, 3) outstanding teaching or training of students, 4) important discoveries or inventions, and 5) significant contributions to the advancement of fishery science.

It is important that you address each of the criteria thoroughly in your nomination. The nominating letter should include name, address, telephone number and email address of the group leader, a short resume of the nominee and a letter fully describing how the group or organization meets the criteria above. Please include your name, address, telephone number and email address so we can contact you if additional information is needed. Also, please include a list of all the group nominators along with a short paragraph addressing how each nominator contributed to the Group Achievement Award nomination.

**Deadline:** Nominations for these two awards are due by close of business June 25, 2004.

Fishery scientists whose names were submitted and selected as runner-ups last year will also be considered. Submit nominations to: Dr. Linda Jones, Northwest Fisheries Science Center, 2725 Montlake Boulevard East, Seattle, WA 98112-2097. For your information and help in considering nominees, attached are the lists of Individual Achievement Awards 1979-2004 and Group Outstanding Achievement Awards 1982-2003.

If you have any questions, please contact Linda Jones, Awards Committee, at [Linda.Jones@noaa.gov](mailto:Linda.Jones@noaa.gov) or committee members Jack Helle at [Jack.Helle@noaa.gov](mailto:Jack.Helle@noaa.gov) or Bill Taylor at [Taylorw@msu.edu](mailto:Taylorw@msu.edu).

### **Previous Recipients: Individual Outstanding Achievement Award**

1979 – Elbert H. Ahlstrom, 1980 – James E. Sykes, 1981 – F. Heward Bell, 1982 – Richard H. Stroud, 1983 – Kenneth D. Carlander, 1984 – David W. Schindler, 1985 – Peter Larkin, 1986 – William G. Gordon, 1987 – William F. Royce, 1988 – Reuben Lasker, 1991 – Robert L. Burgner, 1992 – William W. Fox, 1993 – Arthur D. Hasler, 1994 – William E. Ricker, 1995 – Raymond J.H. Beverton, 1996 – Reeve M. Bailey, 1997 – William G. Percy, 1998 – John H.S. Blaxter, 1999 – Saul B. Saila, 2000 – John R. Hunter, 2001 – Kenneth E. Wolf, 2002 – Fred Utter, 2003 – Howard Bern, 2004 – Brian Rothschild

### **Previous Recipients: Group Outstanding Achievement Award**

1982 – Canadian Journal of Fisheries and Aquatic Sciences, 1983 – Great Lakes Sea Lamprey Control Program, 1984 – Harvesting Technology Division, NMFS, Pascagoula, MS, 1985 – Sport Fishing Institute, 1986 – International Pacific Halibut Commission, 1988 – Southwest Fisheries Center, NMFS, La Jolla, CA, 1992 – Cooperative Fish & Wildlife Research Units Center & Related Coop Units, 1997 – International North Pacific Fisheries Commission, 1998 – The Illinois Natural History Survey, 1999 – National Fish Health Research Laboratory, USGS, Kearneyville, WV, 2000 – International Pacific Halibut Commission, 2002 – The Great Lakes Fishery Commission, 2003 – Northwest Fisheries Science Center Ecotoxicology Research Team

The AIFRB is a 501(c)(3) tax-exempt nonprofit organization (EIN 61-6050711).

# President-Elect Jones Chosen

A total of 662 ballots were mailed out to AIFRB Members, Fellows, and Emeritus. Of these 261 ballots were returned. This represents a response of 39.4%. The winner of the election for President-Elect of AIFRB is Linda Jones. Verification of ballot counts was conducted by Ms Linda Lalicata (Graduate Student). The ballots will be held for one year should there be any challenges to the counts.

Linda Jones will take office as President-Elect immediately upon announcement of these results and will assume the role of President at the end of the 2005 Board of Control Meeting. At this time Dick Schaefer will assume the role of Past-President.

The Institute should be honored to have had two very impressive candidates running for the President-Elect position. We are immensely grateful to Doug Vaughan for his willingness to stand as a candidate for President-Elect. Dr. Jones is Deputy Science Director of the Northwest Fisheries Science Center, NOAA Fisheries (aka NMFS).

---

## Carlander Endowment Completed

Thanks to the generous support of the former graduate students of Dr. Kenneth Dixon Carlander the Ken Carlander Graduate Scholarship Endowment has now been established. This new endowment will provide an annual scholarship award to a fisheries graduate student of at least \$1000. The Department of Natural Resource Ecology and Management of Iowa State University is extremely grateful to those former students that answered the call to help us realize endowment status. Ken devoted his life to his students and the university was pleased to have the support needed to continue his tradition of giving for future generations of graduate students. The endowment principle now stands at \$29, 025. We would welcome any further contributions for those that want to help build the endowment. Make your check out to the Carlander Scholarship Endowment and send it to the department address: Department of Natural Resource Ecology and Management, Iowa State University, 253 Bessey Hall, Ames, IA, 5011-1021.

*From: Dept. of Natural Resource Ecology and Management, Iowa State University, Alumni Newsletter, Winter 2004*

---

## Carlander II: Carlander-Vasey Undergraduate Fisheries Scholarship Established

Fred Vasey, a student of Ken Carlander has provided the resources needed to create a \$500 annual scholarship for undergraduate students pursuing a degree in fisheries at Iowa State University. The scholarship is need-based and is targeted to students in their junior year. Fred is very appreciative of the support, both professional and financial, that Dr. Carlander provided during the time he was a graduate student. Fred spent most of his career with the Missouri Department of Conservation and wanted to create a scholarship focused on developing the next generation of fisheries undergraduates that will move on to graduate studies or into professional management positions. The University and Dept. of Natural Resource Ecology and Management greatly appreciate Fred's interest in helping to insure the creation of a new generation of natural resource managers and scientists.

*From: Dept. of Natural Resource Ecology and Management, Iowa State University, Alumni Newsletter, Winter 2004*



*Ken Carlander & Fred Vasey  
Photo Circa 1985*

# Northern California District Chooses New Officers

The new Director for the Northern California District is Diana Watters of the California Department of Fish and Game. She will be assisted by Vice-Director Dan Howard, Secretary-Treasurer Michele Barlow and Membership Committee Chair Tom Keegan.

## Northern California District Achieves Another MSG High Crab on the menu; Trout on the agenda

The Northern California District met Thursday, March 18<sup>th</sup> at Ping's Mandarin Restaurant in San Rafael to listen to a talk presented by Kristy Deiner of Sonoma State University. Kristy's talk was entitled The Effect of Landscape Features on the Genetic Structure and Diversity of Steelhead and Rainbow Trout in the Russian River Watershed.

A social hour preceded the dinner. The following is a subset of the menu that was available at a cost of \$15 per person: crab puff, pot stickers, won ton soup, prawns with honey pecan, dry sautéed green beans with chicken, and Mongolian beef.

*Submitted by: Michele Barlow*

---

## Menzel Takes Permanent Post in Washington, DC

Dr. Bruce Menzel is the new Fish and Wildlife National Program Leader in the Natural Resources and Environment unit at the Cooperative State Research, Education and Extension Service, Washington, DC. He took early retirement from Iowa State University to take the new job. Bruce had been serving a one-year Intergovernmental Personnel Act assignment in the same position. He was a faculty member at Iowa State University for 33 years, including 17 years as the Chair of the Animal Ecology Department.

*From: Dept. of Natural Resource Ecology and Management, Iowa State University, Alumni Newsletter, Winter 2004*

---

## Dombeck Honored

AIFRB Member and former Director of the U.S. Forest Service Mike Dombeck, PhD was recently recognized as the 2003 Recipient of the Renewable Natural Resource Foundation Award for Sustained Achievement. Dombeck's achievements include a lifelong commitment to conservation. He is recognized for his partnerships between government and conservation organizations.

*From: Dept. of Natural Resource Ecology and Management, Iowa State University, Alumni Newsletter, Winter 2004*

## Recent Losses

**Dr. E.J. Crossman** – December 21, 2003  
You can contact Mrs. Margaret Crossman at Royal Ontario Museum, Department Ichthyology, 100 Queens Park, Toronto, ONT Canada, M5S 2C6

**Joseph H. Rose** – December 2, 2003  
908 Meadowview Drive, Nampa, ID, 83651

---

## Member Missing: John J. Geibel

Anyone know of Mr. Geibel's Whereabouts? Last address known as Calf Fish Game, 350 Harbor Blvd., Belmont, CA, 94002. Please contact Barbara Warkentine, Alan Shimada, or Gene Huntsman.

# Members at Work: Chasing a Fish-Farming Dream

## Brooklyn College Professor Sees a City of Tilapia Tanks

*By Corey Kilgannon*

It takes a tough borough to breed a tender fish, AIFRB Fellow Dr. Martin P. Schreiber likes to say. And the roughly 3,000 Brooklyn-bred tilapia Dr. Schreiber grows in tanks in his aquaculture lab grow up hardy and with the requisite dose of attitude. To prove it, Dr. Schreiber, a biology professor at Brooklyn College, grabbed a handful of food pellets the other day and tossed them into a tilapia tank. The plump, purple fish gulped at the food in a frenzy that made the tank look like a Jacuzzi. But once on the dinner plate, they are sweet and flaky, said Dr. Schreiber, a Brooklyn native himself. “Two things Brooklyn water is good for,” he said, reciting another of his catchphrases. “Making bagels and growing fish.”

Dr. Schreiber, 68, has been preaching the virtues of tilapia for years – and growing them, too – in the lab he founded and runs as part of the Aquatic Research and Environmental Assessment Center on the college’s campus in Flatbush. And now that tilapia have become popular in restaurants and seafood stores, Dr. Schreiber’s vision of widespread tilapia-farming in New York City may finally have a chance of becoming a reality. “A few years ago, you mention tilapia and people’s eyes glaze over,” he said. “Now everyone’s talking about it.”

In addition to appearing on menus, the fish can cure a variety of urban ills, according to Dr. Schreiber. Promoting urban aquaculture in New York City and setting up fish farms can help feed the homeless, ease environmental problems and provide jobs, he said. He maintains that setting up a fish farm is simpler, less expensive and more profitable than one may think. “You could set a tank up in your basement and grow enough fish to pay your rent,” he said, noting that most tilapia are imported from South America and Asia. “Why import fish from countries thousands of miles away when we can grow it all in-house?”

Inside the lab, in a building called Ingersoll Hall Extension, are 14 large tanks, with capacities ranging from 300 to 900 gallons. Some hold other kinds of fish, like platy and swordtails, used for biomedical research, but most contain tilapia, a hardy and fast-growing breed popular with fish farmers. Water conditions are controlled carefully, with extensive filtration systems and computerized climate and chemical controls.

Dr. Schreiber said that tilapia farming could become a thriving business in New York State, and that he hoped consumers would turn to the fish because of a recent study saying that farm-raised salmon had more contaminants than wild salmon. He would like tilapia farming to become associated with New York the way catfish farming is with Louisiana and salmon farming is with Maine.

Although he acknowledges that his plan is a pipe dream, it is gaining momentum. A “Brooklyn Tilapia” T-shirt is in the works. With help from Cornell University biologists, industry leaders, and local environmentalists and politicians, Dr. Schreiber is drafting a study promoting Brooklyn aquaculture to submit to city, state and federal officials. The plan calls for fish farms to be created at Brooklyn sites like Floyd Bennett Field, Coney Island, Red Hook and the Brooklyn Navy Yard, and from these places the tilapia could easily be distributed locally. “If we can just train the fish to swim to Fulton Street, we’d be all set,” Dr. Schreiber said, “but we don’t have a gene for that yet. But at least you could get fish on the table that was swimming a couple of hours earlier.”

Fish farming is not new in and around New York City. Until a few years ago, residents in Morris Park, the Bronx, bought tilapia from a small fish farm in the basement of a commercial building, and a small tilapia farm is tended by inmates in the Bayside State Prison in Leesburg, NJ. But Dr. Schreiber has grander dreams. “I envision fish farms all over the city,” he said. “The city is losing out. We have to wake up and see this could be an economic boon. It could create jobs.”

Fish farming also provides environmental benefits, he said, since species are less likely to be over-fished in the wild. The farms could be used like culinary or hotel management schools, to train students to be fish farmers, he said, and to grow other types of fish for bait shops, pet shops and medical research. Farms could be built on a smaller scale, in basements of apartment or office buildings, he said.

But not everyone shares Dr. Schreiber’s vision of tilapia utopia. “Growing our own fish in the city would be a wonderful thing, but is it economically viable, given the city’s competitive disadvantage?” asked Roger Tollefsen, president of the New York Seafood Council, an industry group based on Long Island. “You have higher labor and utility costs than most other areas of the country. Tilapia can be farmed anywhere, and transportation has come down in cost. Why produce it in our own backyard if transportation advances can bring a better product to our front door for cheaper? “Rather than give up on the ocean,” Mr. Tollefsen continued, “we should invest in cleaning it up, especially when the only thing we eat today that’s not farmed is wild-caught fish.” Dr. Schreiber said fish farming would complement, not supplant, the commercial fishing industry.

Before he settled on tilapia, Dr. Schreiber tried growing other types of fish. He experimented with flounder, but had a hard time working with saltwater tanks, and pike grew too slowly. Tilapia take about six months to reach market size. Tilapia, a freshwater fish also known as St. Peter’s fish, was harvested from the Sea of Galilee and is thought to have been served at the Last Supper. It is the sixth most popular fish in the United States, after tuna, salmon, pollock, catfish and cod, said Kevin Fitzsimmons, secretary-treasurer of the American Tilapia Association. About 412 million pounds of tilapia were consumed last year in this

country, up from 340 million in 2002, he said, and about 20 million pounds were raised in domestic fish farms.

Since the college is prohibited from selling the fish, Dr. Schreiberman donates hundreds of pounds at a time to local homeless shelters. He also uses it to curry support for his tilapia dream, donating filets to political events and restaurant chefs, as well as to his students and colleagues and anyone who visits the lab.

Dr. Schreiberman grew up in Brooklyn, fishing off the Canarsie piers. He lives near the ocean, in Belle Harbor, a Queens neighborhood in the Rockaways. A graduate of Brooklyn College, he received graduate degrees from New York University. He said he began working with fish because "I started with hamsters, but kept getting bit." Dr. Schreiberman has helped Israel set up fish farms in the desert, and has experimented with growing fish with enlarged ovaries, for caviar production. He has also cultivated seaweed for sushi and helped put fish in space, sending 200 swordtails to the space shuttle Endeavour in 1998 to study the effects of weightlessness on the development of their reproductive systems. A neuroendocrinologist, he studies environmental damage to the marshland and wildlife in Jamaica Bay and grows horseshoe crabs in the lab from fertilized eggs. His favorite time of the year is the week in spring when the crabs crowd beaches to mate. "Have you ever seen them having sex?" he said, smiling. "It's incredible."

These days, very little of the fish eaten in New York city comes from the once-thriving fishing ports in the New York area, but if Dr. Schreiberman has his way, New Yorkers will be liberated from the tyranny of imported seafood.

While in Cuba to lecture on benefits of a soy diet for farmed fish, Dr. Schreiberman received an award, showing up to the formal ceremony in shorts and his "So Many Fish, So Little Time" T-shirt. "They asked me, 'Didn't you know you'd be on the podium?'" he recalled. "I said: 'What do I know? I'm from Brooklyn.'"

*From: New York Times, March 22, 2004  
Submitted by and thanks to: Joe Rachlin*

---

## Another "Bad Fish" List

### Children, some women should limit their fish intake, government asserts

*By Randolph E. Schmid  
The Associated Press*

Washington – Americans should eat their fish but be wary of it, too. Government guidelines issued warn that high levels of mercury in some fish can pose a hazard for children and for women who are pregnant or nursing. At the same time, fish represent an important part of a balanced diet, said Lester M. Crawford, Deputy Commissioner of the Food and Drug Administration.

Americans hear conflicting information about what they should eat, and they have pressed for straight forward guidance on fish. "This advice is uniform, simplified and useful," said Benjamin Grumbles, acting Assistant Administrator of the Environmental Protection Agency. Crawford listed the three-part guidelines for women and children as: 1) do not eat shark, swordfish, king mackerel or tilefish because they contain high levels of mercury, 2) eat up to 12 ounces – two average meals – per week of fish that are lower in mercury, such as shrimp, canned light tuna, salmon, pollock and catfish, 3) check local advisories to determine the safety of fish caught by family and friends. If no such advice is available limit such fish to one six-ounce portion a week and don't consume any other fish that week. Children should be served smaller portions than adults, the agencies said, but they did not offer any age-specific guidelines.

While the report praised the benefits of light tuna it said albacore tuna should be limited to one serving a week because these older fish can be higher in mercury than the young tuna that go into the light version. FDA scientist Dr. David Acheson said the method of preparing foods makes no difference in its mercury level. He also noted that processed fish such as fish sticks and fast-food sandwiches are usually made of pollock, which is low in mercury. Women who are pregnant, nursing or may become pregnant should limit their mercury exposure because it can affect the developing brain and nervous system of their children. Pollution from industry and other sources contaminates water and small fish that are then eaten by larger fish, concentrating the mercury that then may affect people who eat the fish.

Sen. Patrick Leahy, D-VT, criticized the report, saying that the administration is "only making mild gestures to a problem that demands strong action. The scientific evidence by now is clear and undeniable about the risk of mercury exposure to women and children." The Environmental Working Group, a consumer advocacy group, contended the guidelines favor the interests of the coal and seafood industries at the expense of children because they are not stringent enough. The Natural Resources Defense Council criticized the guidelines as not adequately warning parents of the danger of albacore tuna for children. It said the warnings are proof of the need to remove mercury from commerce. Rebecca Goldberg of Environmental Defense agreed, saying that previous EPA testing methods would have indicated that children should eat albacore tuna just once a month, not once a week.

People not singled out in the guidelines, such as men, should include fish in their diets because of its health benefits including being a good source of protein and heart-beneficial omega-3 compounds, said Crawford. Fish has become increasingly

popular in recent years because of these benefits. The American Heart Association recommends that people eat fish at least twice a week, even more often for those diagnosed with heart disease.

On the Net: Food and Drug Administration: <http://www.fda.gov>; Environmental Protection Agency: <http://www.epa.gov>; Environmental Defense: <http://www.environmentaldefense.org>; Natural Resources Defense Council: <http://www.nrdc.org>

*From: Sun-Journal, New Bern, NC, March 20, 2004*

---

## 2005 Federal Budget Cuts Funding for Chesapeake Bay-Related Programs

Congress stepped up spending for Chesapeake Bay-related activities when it approved funding for the current year in January, including more funds for oyster restoration and the National Park Service's Chesapeake Bay Gateways Network. But funding may be more problematic next year, as the Bush administration would sharply reduce spending for some Chesapeake activities in its \$2.4 trillion 2005 budget, which was released in February.

While it's not unusual for an administration to propose less funding than Congress ultimately approves, the administration is seeking strict caps on most domestic spending programs as it seeks to rein in a staggering federal deficit expected to top \$500 billion. Overall, it seeks to limit spending on those programs to 0.5 percent, less than the rate of inflation. If Congress abides by those caps, it could make it difficult to restore funding for the 2005 Fiscal Year, which begins Oct. 1, to the levels approved by Congress for this year.

Further, figures from the administration's Office of Management and Budget indicate that continued long-term cuts in those programs would be needed in the future to reduce the deficit. Although the current fiscal year began last October, Congress did not finalize its spending bills until January – just weeks before the President Bush released his 2005 budget proposals.

For the EPA's Bay Program Office, which supports the core efforts to coordinate the Chesapeake Bay cleanup effort, the president's budget would slightly increase spending, from the \$20.77 million approved this year to \$20.81 million in 2005. Next year's budget does not include \$2 million that Congress had approved for the Small Watershed Grants Program, which provides funding for local restoration efforts.

But the administration did propose a one-year, \$10 million competitive grants program to support innovative cleanup and restoration efforts within the watershed. It is a pilot program that would provide grants ranging from \$300,000 to \$1 million. EPA officials say the program will be rotated among various watersheds across the nation each year. "This selection of Chesapeake Bay for this pilot reflects the urgent need to protect the health of this national treasure that just happens to be in our front yard," said EPA Administrator Mike Leavitt.

At the same time, the administration calls for cutting the EPA's Clean Water State Revolving Loan Fund by \$492 million from the \$1.34 billion approved by Congress this year. Under the formula used to distribute funding, that would cost the Bay states nearly \$50 million in money used to support wastewater treatment plant upgrades and other water quality improvement projects. The administration proposed a nearly identical cut last year, but funding was restored by Congress.

The office of U.S. Sen. Paul S. Sarbanes, D-MD, released a statement calling Bush's budget "simply a bust for the Chesapeake Bay." Last fall, a bipartisan group of 22 federal lawmakers from the Bay watershed sent Bush a letter asking him to commit \$1 billion a year to help meet bay restoration goals.

The President requested \$2 million in 2005 for the National Oceanic and Atmospheric Administration's Chesapeake Bay Office, which supports fish monitoring programs, Bay grass restoration, fisheries research and ecosystem management planning in the Bay. That was the same as the administration's proposal for this year, but less than the \$3.5 million approved by Congress.

The administration did support \$500,000 for NOAA's work on developing multi-species management programs for Bay fisheries, the same as was approved by Congress. The budget includes no funding for NOAA's Bay education program; (Congress approved \$2.5 million for the current year), and it proposed \$600,000 for next year's blue crab research; (Congress approved \$2 million for this year).

While most of the administration's requests are in line with its original proposals from last year, some are actual cuts. For instance, the budget calls for eliminating funding for the National Park Service's Chesapeake Bay Gateways Network. For the current year, it proposed spending \$798,000 for the program, and Congress approved \$2.5 million – the most ever for the program.

It would also slash almost all Army Corps of Engineers oyster restoration money for the Bay, although it had supported the initiative in earlier years, and Congress had approved about \$5 million for this year – the most ever.

In agriculture, the administration would increase spending for conservation, but not to the levels approved in the 2002 Farm Bill. Instead, some of the conservation funds are being routed to programs emphasizing food and agriculture safety to address concerns such as mad cow disease.

Farm Bill conservation programs are the largest single source of funding to support a variety of programs that help reduce runoff from agricultural lands.

*From: Bay Journal, March 2004*

# **The Ultimate Emeritus Status: How to recycle old fish biologists with a splash!**

Eternal Reefs (888-423-7333, [www.eternalreefs.com](http://www.eternalreefs.com)) in Atlanta, Georgia, mixes cremated human remains with pollutant-free concrete to make three-foot-high, bell-shaped artificial reefs. In three years the reefs, which are placed along the eastern seaboard, teem with coral, mussels, and seaweed. (Cremation lacks most, but not all, of the land-use, chemical, and resource-consumption problems of conventional burial, provided the body's not embalmed.)

*From: On Earth, Winter 2004*

---

## **Water Waste in Eastern Washington to Be Challenged**

In Eastern Washington, the Twisp and Methow Rivers are home to threatened or endangered chinook salmon, bull trout, and steelhead trout. The Twisp River is also important for spring chinook salmon because it has the highest density of spawning nests remaining in the Methow Basin. According to Washington state water officials, the Methow Valley Irrigation District draws more water from these two rivers than it needs, wasting up to half by transporting it through unlined ditches. Low flows left in the rivers heat up to levels unhealthy for the salmon. The state of Washington has told the irrigation district to stop the waste and bring its water withdrawals in line with what it can efficiently use. The irrigation district has sued to challenge the state's authority to issue such an order.

Earthjustice attorney Amy Williams-Derry successfully convinced the court to allow Earthjustice to intervene in the case on behalf of the Okanogan Wilderness League. Earthjustice will argue the state has the authority not only to order an end to the water wasting practices, but that it also has a duty under state law to curtail that waste to the maximum extent possible. As a result, the rivers will provide better habitat for threatened and endangered salmon, bull trout, and steelhead.

*From: In Brief, Spring 2004*

---

## **Suit Challenges Pollution Levels in Lake Okeechobee**

### **Suit Presses the Government for Stringent Pollution Limits**

The 750-square-mile lakebed of Florida's Lake Okeechobee is covered with a two-foot layer of muck, resulting from phosphorous-laden runoff from surrounding dairy farms. The highly elevated phosphorus levels in Lake Okeechobee means that the lake may soon cross the threshold into hypereutrophication. This would result in increased algal blooms and massive fish kills, devastating to the Lake Okeechobee ecosystem.

Total maximum daily loads (TMDLs) of phosphorus for Lake Okeechobee and its tributaries were set as a result of Earthjustice litigation under the Clean Water Act. TMDLs are intended to reduce nutrient pollution down to naturally occurring levels. The settlement required the first TMDL to be set for the tributary basin of the lake that contributes the majority of the phosphorus-laden dairy farm runoff. However, instead of requiring a reduction to natural levels, the new TMDLs would allow discharges of almost 20 percent of the total phosphorus limit for the entire lake even though this basin contributes only five percent of lake inflow. In addition, the concentration of phosphorus that would be allowed to flow into the lake is four times the phosphorus concentration established for Lake Okeechobee. This new TMDL effectively insures that the TMDL for the entire lake will continue to be exceeded.

Because these proposed TMDLs fail to protect Lake Okeechobee, Earthjustice's David Guest and Monica Reimer have filed suit on behalf of the Environmental Confederation of Southwest Florida, Save Our Creeks, and Florida Wildlife Federation, to demand effective protection of Lake Okeechobee from further phosphorus contamination.

*From: In Brief, Spring 2004*

# Tidegates Threaten Puget Sound Chinook Irrigation District Exemption Sets Bad Precedent

In the Skagit Valley of northwestern Washington, adjacent to Puget Sound, farmers have constructed tidegates to keep salt water out of farmlands. The result has been the loss of large portions of the brackish water estuary needed by juvenile salmon in the spring to grow large enough to survive in the ocean. The tidegates are flaps that allow farm runoff to drain out into the salt water while blocking the saltwater from flowing into the rivers. But the gates also render unusable much of the historic estuary in the Skagit River delta that is important habitat for young chinook salmon. The Puget Sound chinook have declined to the point where they are now on the endangered species list. Their survival depends on more prime estuary habitat. Tribes dependent on local salmon since time immemorial have appealed to farmers for years to work with them to modify the gates to accommodate the needs of baby salmon, to no avail. So in September Earthjustice attorneys, representing the Swinomish Tribe, notified an irrigation district that it intends to sue if the tidegates are not made more hospitable to salmon.

*From: In Brief, Spring 2004*

---

## Swordfish Fishery Plan Receives Waves of Support

At its 121<sup>st</sup> meeting in November, the Western Pacific Fishery Management Council unanimously approved a plan to re-establish Hawaii's swordfish industry with a model fishery that includes new measures to protect endangered sea turtles. Under the plan, Hawaii's longline fleet would be required to apply specific fishing technologies to decrease the accidental hooking of sea turtles. In addition, conservation measures would be implemented at beaches in the Western Pacific region where the highly migratory turtles have important nesting grounds.

Concern over the impacts of commercial fishing on endangered populations of sea turtles has led the National Marine Fisheries Service (NMFS) to keep Hawaii's swordfish fishery virtually closed since 2000. The new plan would re-open the fishery by allowing a yearly total of 2,120 days of fishing. This number constitutes approximately half of the annual fishing effort expended prior to the closure of the Hawaii-based swordfish fishery. The plan provides that all interested members of Hawaii's longline fleet would be eligible to receive an equal share of swordfish fishing days, which would be distributed by NMFS. No new limits would be applied to tuna longlining; however, a recent southern time/area closure affecting the tuna fishery would be removed.

NMFS is reviewing the new plan, and if it is approved, regulations to implement this new management regime are expected to go into effect on April 1, 2004. "The combination of conservation and technological measures makes this plan very innovative," said Kitty Simonds, the Council's Executive Director. "It is our expectation that international fleets will note its practicality and effectiveness and adopt similar measures. When this happens, we will have in place a comprehensive global plan, which will be a major boost to sea turtle recovery."

Hawaii's longliners make up 3 percent of the entire longline fleet in the Pacific Ocean. Throughout the three year swordfish fishery ban, many Hawaii longliners expressed concern that the closure did nothing to address interactions between turtles and foreign vessels, whose swordfish catch is often exported to consumers throughout the United States.

"Hawaii's longliners have a long record of working with the Council to develop mitigation measures that are effective in reducing harm to marine life," said Council member and Hawaii Longline Association (HLA) president Sean Martin, who noted that in the 1980's Hawaii's longliners were in the forefront of the effort to have Pacific tuna stocks protected under the Magnuson-Stevens Act. "In regards to turtles, we are now in a very good position to model practices that will quickly be exported to other nations where more needs to be done to protect endangered species," said Martin.

The Council's efforts to craft a plan that would become the foundation of a new model swordfish fishery began late last year after a federal judge's ruling invalidated NMFS' biological opinion concerning the status and management of sea turtles. The ruling also eliminated fishery regulations based on the opinion, including the ban on swordfishing. It also invalidated the biological opinion's "incidental take statement," which exempts vessel operators who accidentally hook or entangle sea turtles from legal prosecution. NMFS, the HLA and Earthjustice promptly requested a temporary reinstatement of these regulations out of concern that liability for a single incidental turtle catch could lead to the shutdown of the entire longline industry.

The court granted these requests in October, 2003, and also suggested that the Council develop new long-term fishery rules to be implemented by April 1, 2004, when existing regulations will be vacated.

In response, the Council convened a committee of scientists, fishery managers and representatives of industry and environmental organizations to review available information on how to best prevent injury to sea turtles. The Council reviewed the various proposals received from the committee and chose for its final plan one that would require swordfish longliners to use

circle hooks, mackerel-type bait and de-hookers. These new gear requirements have worked in the Atlantic swordfish fishery, where NMFS research has shown they substantially reduce turtle interactions.

“The research clearly indicates that the use of certain gear minimizes the impact on turtles,” noted Paul Dalzell, Council Senior Scientist. Citing NMFS research, Dalzell affirmed that gear restrictions in the Atlantic reduced the hooking of loggerhead sea turtles by 92 percent and hooking of leatherback sea turtles by 67 percent.

Dalzell said the new gear rules will give Hawaii longliners the opportunity to repeat the success they had with gear modifications that notably minimized their bycatch of seabirds. Seabird mortality was greatly reduced and the potential for a fishery closure averted, when the longline fishery voluntarily collaborated with the Council to test seabird-safe methods of fishing, including the use of towed deterrents and blue-dyed bait, Dalzell said. This resulted in conservation benefits to the birds and operational benefits to the fishermen, added Dalzell. “We have the science and technology that enables us to strike a balance between the health of ocean resources and the viability of an important industry,” he said.

As part of its plan, the Council undertook five conservation measures, which focus on protection of turtle nesting beaches and foraging habitats in the Pacific region. The Council and NMFS have now developed partnerships with local non-governmental organizations to halt the harvesting of turtle eggs and end or reduce threats from natural and man-made causes. “Maintaining these types of measures is a key component of the new plan,” Kitty Simonds observed. “If we don’t protect turtles in all life cycles, no amount of protection in the pelagic or coastal phase is going to make a difference.”

Vessel operators in the re-established swordfish fishery will face several other new restrictions, including a “hard limit” for loggerhead and leatherback sea turtles. This means the swordfish fishery will shut down for the remainder of the calendar year if vessel interactions with these species exceed the limit set in the new “incidental take statement” due to be issued by NMFS. Vessel operators will also be required to provide added protection for seabirds by using night-setting when targeting swordfish in waters above 23°N.

Hawaii’s swordfish fishery was once a highly lucrative enterprise. The shutdown of the industry prompted many vessels to become licensed in other regions which have fewer restrictions or to shift their focus to tuna. It is estimated the closure also led to the loss of 500 Hawaii jobs.

Supporters of the Council’s new plan say it marks the end of a three year period which has brought hardship to fishery participants, and prevented fishermen from adopting practices that might educate other nations in effective fishery management. “Now we can go forward and show the world a solution that is practical for fishermen and safe for turtles,” said Council Chair Roy Morioka.

For more information, contact Paul Dalzell at 808-522-6042.

*From: Pacific Island Fishery News, Winter 2004*

*Folks: I try very much to pursue geographic equity material in Briefs, but, lacking material, I do not cover New England well. Remember I will furnish self addressed posted envelopes (or reimburse postage) to those who will tear out appropriate news articles from newspapers, alumni newsletters, magazines etc. and send them to me. Is there a New Englander that will help? Editor.*

---

## Science Under Fire?

*By Jennifer Hattam*

Government scientists, beware: If you can’t tell the Bush administration what it wants to hear, you’d better keep quiet. In October 2003, a team of Fish and Wildlife Service biologists learned this lesson the hard way. After a decade of study, they had devised a rescue plan for the Missouri River’s endangered pallid sturgeons and least terns and threatened piping plover. But just when the biologists were about to publish a final report calling for changes in the amount of water released from the river’s dams, they found themselves yanked from the project. Under pressure from the Army Corps of Engineers and congressional supporters of the barge industry, Interior Department Assistant Secretary Craig Manson replaced the original scientists with an out-of-state “SWAT team.” Their second opinion, released after just 45 days of study, called for smaller changes in water flow than the original team had recommended for recovery of spawning fish and nesting birds.

According to Jeff Ruch, Executive Director of Public Employees for Environmental Responsibility, many professionals with “inconvenient” messages have been reassigned in Fish and Wildlife Service offices throughout the country. And the problem isn’t limited to one agency. The Bureau of Land Management recently announced plans to transfer 20 Boise, Idaho, staffers to a remote office. Ruch characterized the move as a “targeted political payback” to local ranchers who oppose BLM interference in their affairs.

*As Reported in Sierra, March-April 2004*

# Some local fish dealers upset about new federal reporting requirements

*By Patricia Smith  
Freedom ENC*

New Bern – Some local fish dealers are upset about a new federal rule that will require them to use a computer to file their records daily. The regulation mandates daily electronic filing beginning May 1 from those from Maine to North Carolina who hold a federal permit to deal in seafood such as summer flounder, sea scallops, scup, black sea bass, squid, monkfish, butterfish and spiny dogfish. Currently these dealers, 42 in North Carolina, are required to report landings once a week, and can do so by paper or phone. “It’s just a tremendous burden,” said Jerry Schill, president of the North Carolina Fisheries Association, a New Bern-based commercial fishing trade group. “It’s not just a matter of electronic reporting, it’s a matter of doing it every day,” Schill said. On some days, when packing is slow, that will not be a big problem, Schill said. “Other times it’s just wall-to-wall,” he said.

Those dealers that reported less than \$300,000 in annual fish purchases between 2000 and 2002 will have at least a year to comply. But fisheries officials said this would cover only a small percentage of dealers who hold federal permits, such as roadside vendors or those who fish, then sell their own catch. Those dealers who do fall under the new rules must report all seafood purchases daily, not just the federal species.

The rule was published in the Federal Register March 23. The Fisheries Association has retained the Norfolk, VA, law firm of Vanderverter Black and plans to file a lawsuit against NMFS by Friday to meet a 30-day deadline to do so, Schill said. The purpose of the new regulations, according to the Federal Register, is to improve monitoring of commercial landings by collecting more timely and accurate data, enhance enforceability of and promote compliance with existing regulations and ensure consistence in reporting requirements among fisheries.

*From: New Bern (NC) Sun Journal, April 21, 2004*

---

## NOAA Helps Coho Salmon Return to California Streams

*By Jim Milbury*

On January 12, state fisheries biologists, working with NOAA Fisheries, slogged through mud and rain with an ice chest full of mature coho salmon from Lagunitas Creek, a central California stream which has a self-sustaining salmon population, and released the fish into nearby Walker Creek, where the fish once thrived but are now absent.

The release of the fish, the first of three planned annual plantings, is just the latest example of federal and state efforts to use everything from elbow grease to DNA analysis to restore healthy populations of Pacific coast salmon.

Federal, state and local salmon recovery programs have helped produce recent record salmon returns of the fish from offshore waters to coastal streams of the Pacific Northwest where they spawn. But coho salmon on California’s central coast have not fared as well.

One of five salmon species found in California, coho were once prevalent, drawing significant commercial and recreational fishing. Since the 1940s, the number of coho salmon decreased significantly, with only six to 15 percent remaining. By 1993, commercial and recreational fishing was closed in California to protect the species.

Their populations have been listed as threatened under the Endangered Species Act since 1996 when coho were no longer “running,” or returning, to their native creeks and streams to spawn. Since then, NOAA Fisheries scientists believe the situation may have become even worse in some locations.

The life cycle of coho salmon in California lasts three years. The fish hatch in freshwater streams from egg nests called “redds” from March through May. They grow to maturity in their native stream for more than a year before beginning their migration to the ocean, where they remain for another year and a half. In November through February, these salmon return to the streams where they were born to establish redds of their own and then die.

The planting of coho salmon in Walter Creek resulted from a surprising discovery and a problem turned into an opportunity. “A little over three years ago we realized that coho salmon were declining, particularly in the Russian River Basin,” said Patrick Ruten, central California supervisor for the Protected Resources Division of NOAA Fisheries’ Southwest Region. “From what we knew, there was only one stream (in the Russian River Basin) that had a marginal self-sustaining run of coho salmon.” That stream, Green Valley Creek, is a relatively small waterway with less than two miles of suitable salmon habitat. The creek struggles to maintain a run of less than a 100 salmon returning from the ocean to spawn each year.

Coho salmon are identified by the year they are born, or “year class.” Since they have a three-year life cycle, a year class of 2004 would be expected to return as a run in the stream it was born in 2007. A population is considered self-sustaining if it has a run for each year of the three-year cycle.

“Historically, coho salmon were present in several tributaries to the Russian River. Currently, however, Green Valley Creek is the only tributary in the Russian River that has three year classes of coho salmon,” said Dan Logan, a scientist in NOAA Fisheries’ Santa Rosa office.

In 2000, a salmon recovery team composed of representatives from NOAA Fisheries, the National Park Service, the California Department of Fish and Game, water agencies, commercial fishermen, universities and local organizations designed a plan to save existing runs of salmon in the Russian River Basin and reestablish coho salmon in streams and rivers where they were once prevalent.

In 2001, the group began an annual program of capturing juvenile coho salmon in Green Valley Creek to raise in a hatchery as brood stock. The fish would be raised to adulthood and used to propagate their offspring for introduction back into the streams within the Russian River Basin.

Coho salmon from Green Valley Creek would also be bred with salmon caught in Lagunitas Creek, a nearby waterway with a relatively strong run of coho salmon, but in a watershed that empties into Tomales Bay instead of the Russian River Basin. It was thought that such a cross-breeding program would expand the gene pool of the salmon and increase their potential for surviving in the wild, an idea soon found to be potentially harmful to the project.

Every year since 2001, scientists from the California Department of Fish and Game and the National Park Service donned nets and buckets to catch juvenile coho salmon in Green Valley Creek and Lagunitas Creek in pools that were at high risk of drying up in the summer heat. The fish were then transported to the don Clausen Fish Hatchery at Warm Springs Dam in northern California. Here they were isolated and placed in separate pens by stream and year class waiting until they reached sexual maturity for breeding purposes.

As a precaution, Carlos Garza, a geneticist at the NOAA Fisheries Laboratory in Santa Cruz, decided to take tissue samples from every fish captured for genetic analysis before allowing the breeding to take place. The outcome of that analysis was nothing that scientists had expected. The fish from the two creeks were very dissimilar, even though they were from the same species and from streams flowing relatively close to each other.

“We really had to do the (genetics) work to know,” Garza said. “If we had assumed that because they (salmon from Green Valley Creek and Lagunitas Creek) were geographically proximate they would have been similar, we would have been wrong.”

What Garza found was that the coho salmon from Green Valley Creek were very different genetically from those captured in Lagunitas Creek. At least some of these differences are believed to be related to specific traits necessary for their survival in that particular watershed. Had coho in the Russian River Basin been bred with salmon from Lagunitas Creek, a different watershed, many of these survival traits that had evolved over many years could have been lost and their ability to repopulate the Russian River Basin reduced or even nullified.

Garza also determined that the salmon from Green Valley Creek were from only a few distinct families and that many were as genetically related as brothers and sisters. In response, he developed a method to ensure genetically similar individuals were not bred with one another by using a plan of mating a salmon from one family with a salmon from another family.

“We used the genetic data to construct a breeding matrix,” Garza said. “The matrix ensures individuals that are close kin are not mated together because that leads to inbreeding with a loss of genetic variation and deleterious traits. It is also designed to ensure that all of the families are represented in future generations.”

With the genetics and breeding patterns understood for the Green Valley Creek coho salmon, the question then became what to do with the coho salmon from Lagunitas Creek. They could not be bred with the other coho salmon and they could not be returned to their stream because of concerns over spreading disease from the hatchery back to the native population.

“To a certain extent we ended up in this situation where we had this problem,” Garza said. “And we turned this problem into just a great opportunity.”

The team looked closely at historical records for streams in the same watershed as Lagunitas Creek. What they found was Walker Creek, a small tributary to Tomales Bay. Salmon runs were now extinct there, but some salmon habitat had been restored over the last twenty years. The team saw this as the best prospect to revive a coho salmon population in a stream devoid to these fish for decades. The January 12 planting followed.

The restoration team will continue to plant fish in Walker Creek in 2005 and 2006. If salmon runs return there in 2007, 2008, and 2009, plantings may continue. Streams and creeks in the Russian River Basin will be stocked with fish from Green Valley Creek. The stream location and method of planting are still being determined.

But with a brood stock safe in the hatchery, scientists now have the option of releasing mature salmon to spawn, planting juveniles that will travel to the ocean and return, or planting artificially fertilized egg nests in the streams.

*From: NOAA Report, February 2004*

## ***District Directors***

### **Alaska, Northern**

Joseph F. Margraf, Jr.  
University of Alaska  
P.O. Box 757020  
Fairbanks, AK 99775-7020  
ffjfm1@uaf.edu

### **Alaska, Southeast**

Bruce Wing  
P.O. Box 210265  
Auke Bay, AK 99821-0265  
bruce.wing@noaa.gov

### **Arizona - New Mexico**

G. Morris Southward  
Statistics and Res. Inst.  
New Mexico State University  
Box 30003 Dept. 3130  
Las Cruces, New Mexico 88003-8003  
southward@nmsu.edu

### **California, Northern**

Diana Watters  
California Dept. of Fish and Game  
350 Harbor Blvd.  
Belmont, CA 94002-4018

### **California, Southern**

Raymond R. Wilson  
CSULB Biol Sci  
1250 N. Bellflower Blvd.  
Long Beach, CA 90840  
rwilson1@csulb.edu

### **Capital**

Frank M. Panek  
National Fish Health Research Laboratory  
1705 Leetown Rd.  
Kearneysville, WV 25430

### **Carolinas**

Robert L. Dixon  
NOAA, 101 Pivers Island Road  
Beaufort, NC 28516  
robert.dixon@noaa.gov

### **Florida**

Thomas W. Schmidt  
USDI Nat'l. Park Service  
Everglades Nat'l. Pk., S. Fla. Res. Ctr.  
P.O. Box 279  
40001 State Rd. 9336  
Homestead, FL 33014  
tom\_schmidt@nps.gov

### **Great Lakes, South Central**

Dora R. Passino-Reader  
National Fish. Center  
1451 Green Road  
Ann Arbor, MI 48105-2897  
dora\_reader@usgs.gov

### **Gulf of Mexico, Northeast**

Vacant

### **Keystone**

Joseph W. Rachlin  
Dean of Nat. & Soc. Sci.  
Lehman College of CUNY  
250 Bedford Pk. Blvd. W.  
Bronx, NY 10468-5189  
rachlin@alpha.lehman.cuny.edu

### **New England**

Kevin D. Friedland  
Director, UMass/NOAA CMER Program  
Blaisdell House  
University of Massachusetts  
Amherst, MA 01003-0040  
friedlandk@forwild.umass.edu

### **Oregon-SW Washington**

Vacant

### **Texas**

Lance Robinson  
Texas Parks and Wildlife Dept.  
Seabrook Marine Lab  
Seabrook, TX 77856

### **Washington, NW**

Bruce S. Miller  
School of Aqu. & Fishery Sci.  
University of Washington  
Box 355020  
Seattle, WA 98195  
bsm@u.washington.edu

**BRIEFS**, the newsletter of the American Institute of Fishery Research Biologists, is published six times a year. It is intended to communicate the professional activities and accomplishments of the Institute, its District, and Members; the results of research; the effects of management; unusual biological events; matters affecting the profession; political problems; and other matters of importance to the fishery community. Comments and contributions should be sent to the Editor, Dr. Gene R. Huntsman, 205 Blades Road, Havelock NC 28532, feeshdr@starfishnet.com. Subscription \$30 a year to Institutions and Non-Members. Officers-Richard Schaefer, 6211 Madawaska Rd., Bethesda, MD 20816, dickschaef@aol.com - President; Barbara Warkentine, SUNY-Maritime College, Science Dept., 6 Pennyfield Ave., Fort Schuyler, Bronx, NY 10465-4198, synodus@aol.com - Secretary; Allen Shimada, NMFS, Office of Science and Technology, 1315 East West Highway, Silver Spring, MD 20910, allen.shimada@noaa.gov - Treasurer. ISSN-8755-0075

Morehead City, NC 28557  
Permit No. 125  
**PAID**  
U.S. Postage  
**NON-PRFT**

*American Institute of Fishery  
Research Biologists*  
c/o Allen Shimada  
NMFS, Office of Science and Technology  
1315 East West Highway  
Silver Spring, MD 20910  
Return Service Requested