

# River Crossings

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Number 1

## Remarks From the MICRA Chairman

On behalf of MICRA I am pleased to announce the “Early Professionals” Travel Stipend Program. The purpose of the program is to assist one biologist from a MICRA member state attend one professional/society meeting each year.

A \$1,000 “Early Professionals” Travel Stipend has been obligated for 2010. The funds will be used to provide travel support to the *Catfish 2010 Symposium*. Funding of the travel stipend for a meeting in 2011 will be discussed during the Executive Board’s Summer 2010 meeting.

While selection criteria include a January 1 annual submission deadline for future awards, we are under a much shorter time frame this year since the *Catfish 2010 Symposium*, will be held on June 20-22 in St. Louis, MO. Therefore, this year’s deadline has been extended to April 30.

So if you have a young professional on your agency’s staff engaged in freshwater catfish research, please encourage them to apply for the 2010 stipend. Selection criteria and application forms are available on the MICRA web site at: <http://www.waux.cerc.cr.usgs.gov/MICRA/>.

If you have any questions regarding the program, please contact me or Greg Conover at 618-997-6869, Ext. 18.

Bobby C. Reed,  
MICRA Chairman

## Asian Carp/Canal Saga Continues

On December 21 the state of Michigan filed a preliminary injunction and a petition in the U.S. Supreme Court against Illinois; the U.S. Army Corps of Engineers (Corps) and the Metropolitan Water Reclamation District of Greater Chicago (MWRD) seeking “immediate relief” in the form of temporary/emergency actions to prevent Asian carp from entering Lake Michigan, as well as permanent relief by severing the artificial connections between the Mississippi River and Great Lakes basins.



*Asian carp jumping below a dam on the Illinois River (Illinois Natural History Survey Photo).*

Temporary/emergency actions identified in the petition included:

- closing locks to block carp movement into Lake Michigan,
- plugging up the flooding threat along the Des Plaines River,
- installing additional barriers,
- operating the electric barrier at full voltage, and
- monitoring and eradicating any carp found in connecting waterways.

The petition, also sought permanent relief by opening up the nearly century-old case against Illinois pertaining to the Chicago Diversion (when the Chicago Sanitary Ship Canal and other artificial waterways were constructed, breaching the watershed divide between the lakes and the Mississippi River Basin, reversing the flow of the Chicago River, and diverting billions of gallons of Great Lakes water). The petition also refers to the Chicago Diversion as a public nuisance that will allow Asian carp entry into the Great Lakes watershed and asks for the artificial conduit for the carp (and other aquatic invasive species) to be severed.

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Michigan was joined in the lawsuit by Wisconsin, Minnesota, Ohio, New York, Pennsylvania and Ontario, which also fear that invasive Asian carp could damage fisheries and other industries dependent on the lakes.

The State of Illinois, the United States, and the Metropolitan Water Reclamation District of Greater Chicago filed respective responses to Michigan and the other Great Lakes states. Basically all three government defendants argue that:

- the Supreme Court should not get involved in the Asian carp crisis;
- federal, state, and local governments are already doing everything possible to stop the spread of Asian carp into the Great Lakes; and
- the risk of Asian carp entering the Great Lakes is overblown anyway.

U.S. Solicitor General Elena Kagan told the Supreme Court that granting the states' request to close the locks would endanger public safety and disrupt cargo and passenger vessel traffic. She said further that there is insufficient evidence to prove that enough carp have slipped past the electric barrier designed to keep the carp out to pose an imminent danger. Closing the locks would cause transportation costs to rise to nearly 10 percent of the total value of cargo and would devastate the region's \$1.5 billion shipping and freight-hauling business she said.

But Michigan contends that any economic losses from closing the locks would be small compared with those that would result from the carp invading the lakes. Minnesota Attorney General Lori Swanson agreed saying the federal government's argument is shortsighted and inadequate when set against the possible destruction of the Great Lakes. "There's no monetary comparison to an ecosystem," she said. "They're an American treasure. Once you contaminate them with Asian carp, that treasure is jeopardized and can't be changed. You can't pay Michigan or Ohio or Minnesota enough money to ruin the Great Lakes."

But on January 19 the Supreme Court in a one-sentence order refused to issue an injunction. The Court also did not address Michigan's request to reopen a decades-old case concerning Chicago's handling of the waterways. The court said it would rule later on the merits of the Asian carp case, but no date was given for that.

Interestingly, the Corps had received "environmental" DNA (eDNA) testing results on January 16 (three days before the court deci-

sion was released) suggesting the presence of Asian carp in Lake Michigan. But federal officials did not announce those results until January 19, just before the Supreme Court decision was released. That delay drew criticism from Michigan Attorney General Mike Cox (R), who filed the lawsuit on behalf of his state

U.S. Solicitor General Kagan sent a letter to the Supreme Court explaining why her office had not sent the latest data. She said her office was not given the results until 8 a.m. on January 19, just two hours before the court made its decision known. "As we prepared to inform the court about them, the court issued its order denying the preliminary injunction motion," Kagan wrote.

The use of eDNA to locate Asian carp was discussed in detail in the last issue of *River Crossings*. This past fall, University of Notre Dame scientists detected Asian carp eDNA upstream from the electric barrier designed to stop their invasion. In early December, the Illinois Department of Natu-

ral Resources led an action to poison nearly six-miles of the Chicago Sanitary and Ship Canal to kill off the invading carp while the electrical barrier was turned off for routine maintenance. A single Asian carp was collected immediately down stream of the electrical barrier during that effort.

Michigan Attorney General Cox said he had been stonewalled by Corps officials in his efforts to learn from them precisely how they intend to protect the Great Lakes from the Asian carp. He said, "The Great Lakes are our greatest natural resource, and we have a duty handed down to us from past generations to preserve them for future generations. They are also essential to our economy, our national image, and our way of life. We will do whatever is necessary to protect them".

As a result of the withheld eDNA results, Michigan renewed its plea with the Supreme Court on February 4 telling the justices that they had denied Michigan's request without knowing that scientists had detected genetic material from the carp in Lake Michigan for

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the first time. “The court should reconsider its ruling because of that disclosure and because the Army Corps and Illinois are moving too slowly to prevent a carp invasion of the lakes”, Cox said in a written motion. “It is sadly apparent that, left to its own inertia, the Corps is inclined to stall and rationalize away the facts until it is too late to prevent Asian carp from becoming established in Lake Michigan,” he said.

Cox’s motion also stated that a new Wayne State University study cast doubt on claims by Illinois and federal officials that closing the locks would cost the Chicago economy about \$190 million annually. The study by Dr. John C. Taylor, a transportation specialist, said losses likely would be closer to \$70 million. “This stands in contrast to the billions in economic activity and thousands of jobs at risk if Asian carp enter the Great Lakes,” Cox said. The Wayne State study further notes that cargo through the O’Brien Lock is already down 45% in recent years, as canal barge traffic has diminished in its economic importance to the region. And in response to Illinois’ claims that closing the locks would increase truck traffic (with resulting environmental impacts), the study determined that truck traffic would only increase by 0.1%.

The study titled “*Chicago Waterway System Ecological Separation: The Logistics and Transportation Related Cost Impact of Waterway Barriers*” was prepared by Taylor and James L. Roach. Dr. Taylor is an Associate Professor of Supply Chain Management at Wayne State University and a widely respected expert on the logistics of intermodal transportation.

In response to all of this, Sen. Debbie Stabenow (D) and Rep. Dave Camp (R), both of Michigan, have introduced similar legislation in both houses of Congress to close the locks. “It is clear Asian Carp pose an immediate threat to the Great Lakes, its ecosystem and the 800,000 jobs it supports,” Camp said in a statement. “The failure of the Supreme Court to act yesterday jeopardizes the future of the lakes, and it is clear we must take additional steps now,” he said. The two bills direct the Corps to immediately close the O’Brien Lock and Dam and the Chicago Controlling Works until a controlled lock operations strategy is in place. The bills also instruct the Corps to build barriers in several locations to keep the fish at bay, and to conduct two studies: one to curb the ef-

fects of the bills on shipping commerce and another to abate the effects on Chicago flood control. The bills also provide the Corps with authority to use fish poison, netting and other means to kill or slow the carp. Both bills are facing criticism from the shipping industry.

In a mid December letter to four federal agencies, 50 Great Lakes lawmakers also urged officials to consider closing key navigation locks, creating a permanent hydrologic separation between the lakes and the Mississippi River Basin, and increasing the voltage of the invasive species dispersal barrier. The U.S. EPA announced almost immediately after that that it would use \$13 million of the \$475 million funding for the *Great Lakes Restoration Initiative* to fight



***The question is – Will society allow the existing Great Lakes salmon fishery (left) to be replaced by an Asian carp fishery (right)? Many believe an Asian carp invasion of Lake Michigan holds that potential. Virtually everyone believes that such an invasion will have no positive effects on the lakes.***

the Asian carp. That money will go to the Corps to close conduits and to shore up low-lying lands between the Chicago Sanitary and Ship Canal and adjacent waterways such as the Des Plaines River. “The challenge at hand requires the immediate action we’re taking today,” said EPA Administrator Lisa Jackson.

Further political action on the issue included a February 9 U.S. House of Representatives Water Resources and Environment Subcommittee hearing to gather information on the subject. That hearing followed a White House Summit (see next article) held on February 8 between White House officials and the governors of Michigan, Wisconsin and Illinois to discuss the issue. A Sen-

ate hearing on the subject was held in the Energy and Natural Resources Committee on February 25.

Noah Hall, professor at Wayne State University Law School in Detroit said, “This (the lawsuit) is not political grandstanding or some kind of publicity stunt, this is a very solid case.” Hall said on his blog that the defendants’ attempt to minimize the risk of Asian carp entering the Great Lakes undermines their credibility about how serious they are in responding to the threat. The defendants seek to discredit the eDNA testing relied on by Michigan to show that Asian carp are close to the Great Lakes, but at the same time brag about how they poisoned a six mile stretch of water killing all aquatic life in an extreme effort to keep the carp away. “The truth is”, Hall says, “that the defendants have the same concerns about Asian carp getting into the Great Lakes as Michigan and the other states, but they are just not willing to take the steps needed to solve the problem”.

The bigger issue here is that the United States has entered this dispute squarely in support of the Corps and the State of Illinois, Hall said. “The United States should be supporting the efforts of Michigan, Ohio, Wisconsin, Minnesota, and New York in demanding immediate action to stop the threat of Asian carp entering the Great Lakes”, Hall writes. “As a candidate”, Hall says, “President Obama pledged a ‘zero tolerance’ policy on invasive species in the Great Lakes, but this action totally contradicts that rhetoric. In the Supreme Court, the United States is presenting the interests of its most environmentally irresponsible agency – the Army Corps of Engineers – and ignoring broader long-term interests shared by the U.S. EPA, U.S. Fish & Wildlife Service, and many members of Congress”, he said.

“The fact is” Hall says, “that Asian carp are here because of mistakes by the federal government, and now that same federal government is telling the Supreme Court and five Great Lakes states to let the Army Corps keep doing whatever it wants. That’s not the change we were promised.” “The carp invasion is a good textbook example of irreparable harm,” Hall said. “It is inexcusable that the administration has decided to side with their political allies in the state of Illinois to protect the narrow interests of their state, while the rest of the Great Lakes region and federal taxpayers will be forced to deal with the carp entering the lakes,” said Rep. Candice S. Miller (R/MI).

Conservation groups who weeks ago were aglow over Obama's billion-dollar plan for Great Lakes restoration were in a different mood after the federal government's response to the Michigan lawsuit. The groups said the restoration initiative might mean money down the drain if the administration doesn't recognize the threat carp pose to the lakes and take – or at least not oppose – action to close some navigational locks considered the last barrier standing between the carp and Lake Michigan. "The Obama administration has miscalculated the threat Asian carp pose to the Great Lakes," said Andy Buchsbaum, regional executive director of the *National Wildlife Federation's Great Lakes Regional Center*. "Without immediate action, an invasion of Asian carp will unravel many of the president's Great Lakes initiatives."

"EPA and its partners are stepping up to prevent the environmental and economic destruction that can come from invasive Asian carp," said Thom Cmar, an attorney with the *National Resources Defense Council*. He commended federal officials for taking immediate action but said they are dealing with an old problem, not the new one. "We think it's great that EPA is engaged and that the Army Corps is trying to come up with short-term solutions," Cmar said. "But that doesn't directly deal with the issue of Asian carp already being detected in those waters past the barriers."

Peter Annin author of the book, "*Great Lakes Water Wars*", noted that the region spoke in one voice when it demanded tough laws to block new water diversions from the lakes two years ago, and it did the same last year when it voiced support for Obama's Great Lakes restoration program. And now "This one critter is potentially going to turn that extraordinary regional cooperation on its head," he said. John Selleck, a spokesman for Michigan Attorney General Cox, said, "It's very troubling that the fate of Michigan's economy and ecology rests in the hands of a state that accounts for only 63 of the 10,000 miles of Great Lakes shoreline."

The competing interests of the states has undoubtedly put the Obama administration in a sticky position. As noted earlier, Obama pledged during his presidential campaign that he would have a "zero tolerance" policy for species invasions in the Great Lakes, which already are home to more than 180 non-native organisms. And the administration took keen aim at the Asian carp in particular, promising to "aggressively pursue policies and dedicate federal funds to control

and prevent" the species from colonizing the Great Lakes.

Asian carp eDNA has been detected at five locations north of the electric barrier. One sample has been found in Calumet Harbor, inside the rim of Lake Michigan, suggesting the millions of dollars spent to deter the fish may have failed. "In terms of reliability, we know what we're picking up is bighead or silver carp DNA. We're confident in our methods," said Lindsay Chadderton, the aquatic invasive species director at *The Nature Conservancy*, who is working with Notre Dame scientist Dr. David Lodge on the project. "The question people seem to be asking is whether the DNA could have gotten there by other means," he said.

Some have speculated that passing boats may have collected carp tissue in their ballast water downriver and carried it across the electric barriers, while others say Asian carp are being used as bait in the canals and along the lakefront, triggering a positive result. But Chadderton said the DNA, found in water samples scooped up in 2-liter bottles and taken to a laboratory for analysis, indicate the Asian carp are alive. Cell tissue, he said, typically breaks down in between six and 48 hours, meaning there is a small window of time available to collect usable tissue. An even bigger indication, though, is that positive samples have been found in locations that follow the known movement of Asian carp upriver, he said.

Biologists have not yet seen "live" Asian carp within about 40 miles of Lake Michigan, so the DNA evidence is key to the legal and political discussions that have put the carp in the national spotlight. "Clearly there is a lot we know and a lot more we need to know," Chadderton said. "But this is the best tool we have, and we have to trust what it's telling us" But Illinois has questioned the eDNA findings, describing the procedure as "nascent technology" that has not undergone enough peer review to be considered credible. However, Notre Dame's Dr. David Lodge has said on numerous occasions that he has thoroughly shared the science behind his eDNA work with the Corps and others, and the U.S. EPA has stated it has a "high degree of confidence" in using his research for management decisions.

Meanwhile, while the interstate legal battle over Asian carp has largely focused on the potential effects of the invasive fish on the Great Lakes, the species are also threatening the fishing- and boating-driven economies of towns downstream along the Illinois River

and elsewhere. For example, in Spring Valley, IL, about 100 miles southwest of Chicago, residents suspect growing Asian carp populations are out competing sauger, a native species prized by local fishers. As evidence of that, fewer than 40 teams have signed up for the area's annual walleye fishing competition scheduled to take place this spring, down from about 225 teams in recent years. "Losing the river would be catastrophic," said Bill Guerrini, a Spring Valley resident who founded the local walleye fishing club. "That's what we're talking about here, the loss of the river. And, unfortunately, there are a lot of people who won't realize it until it's gone," he said.

And so the beat goes on!!

Sources: Noah Hall, Wayne State University blog, <http://www.greatlakeslaw.org/blog/>, 1/6/10; Jennifer Nalbene, *Great Lakes United list serve*, 1/7 and 2/5/10; Dan Egan, *Milwaukee Journal Sentinel*, 12/7/09 and 1/7, 1/11, 1/25 and 1/12/10; John Flesher, *AP/Star Tribune*, 1/5/09; *Christian Science Monitor*, 12/31/09; Larry Bivins, *Green Bay Press-Gazette*, 12/19/09; *AP/La Crosse Tribune*, 12/21/09; Jim Lynch, *Detroit News*, 1/21/10; John Flesher, *AP*, 2/5/10; Joel Hood, *Chicago Tribune*, 1/24 and 2/14/10; Taryn Luntz, *E&E Daily*, 1/22 and 2/8/10; *E&ENews PM*, 1/20/10; Gabriel Nelson, *Greenwire*, 1/19/10; Taryn Luntz, *Greenwire*, 12/15 and 12/22/09 ; and *Greenwire*, 12/4/09 and 1/6, 1/12, 1/13, 1/21, 1/25 and 2/14/10

## White House Asian Carp Summit

On February 8, Nancy Sutley, chairwoman of the White House Council on Environmental Quality, organized and held a *White House Summit on Asian Carp*. Participants included officials from the U.S. EPA (Lisa Jackson); the U.S. Army, Corps of Engineers; the U.S. Coast Guard and the Interior Department (Ken Salazar). Michigan Gov. Jennifer Granholm (D) and Wisconsin Gov. Jim Doyle (D) were in attendance, while Illinois Gov. Pat Quinn (D) participated by telephone.

Federal officials emerged from the meeting touting a \$78.5 million, 25-point plan called the *Asian Carp Control Strategy Framework* (Framework) intended to prevent spread of the carp into Lake Michigan, but without a permanent plan for the Chicago-area locks. Federal officials vowed, however, to institute "reduced openings" of the locks, adding that they would examine the possibility of permanently severing the connection

between Lake Michigan and the Mississippi River. Jo-Ellen Darcy, assistant secretary of the Army for Civil Works, said the Corps has not yet made a choice on the logistics of lock closures and said she could not provide a time line for a decision.

Charlie Wooley, deputy regional director of the U.S. Fish and Wildlife Service, said the administration's goal was to make sure Asian carp aren't able to breed a sustainable population in the Great Lakes, stopping short of Michigan's demands that they be kept out of Lake Michigan entirely. "We are considering every alternative to keep the Asian carp out of the Great Lakes, and closing the locks is one of those alternatives," Sutley said. "There are other pathways for the Asian carp to get into the Great Lakes ... so closing just those two structures would not necessarily be the silver bullet that we're all looking for."

But Michigan Attorney General Mike Cox (R), who filed the Supreme Court lawsuit in December (see previous article), issued a statement comparing reduced lock openings to "keeping criminals in jail four days a week and hoping the other three days go well." Noah Hall, a Great Lakes expert at Wayne State University Law School in Detroit, said that sort of compromise on lock closures is insufficient because it could only delay the spread of Asian carp. "All that's going to do is inconvenience the barge traffic," Hall said. "It's very popular to talk about policy in terms of compromise, but unfortunately, this is a very difficult issue to take that kind of position. Either there's separation, and you keep the carp out, or there's not, and you let the carp in."

The Framework largely includes directives for the use of existing agency funding and projects already under way. In the near term, the Framework focuses on keeping carp from establishing populations in the Great Lakes. In addition to reduced openings of Chicago's navigational locks, federal agencies will deploy enlarged field crews for physical and sonar observation, electro-shocking and netting operations within the waterway. Turnaround times on eDNA verification will be expedited and testing capacity will be doubled to 120 samples per week.

In March, 2010, a \$13.2M contract will be awarded for construction of barriers between the Chicago Sanitary and Ship Canal and Des Plaines River, which will prevent fish passage around the electric barrier in the

event of flooding where the two water bodies mix. A \$10.5M contract will also be awarded for construction and operation of a third electric barrier (i.e., Barrier IIB). Additionally, the Framework expedites a Corps study of the feasibility and impacts of permanent lock closure, the effectiveness of lock closings to block carp movement, the risks and costs associated with closure, and a discussion of alternatives.

The Framework also identifies a variety of longer term Asian carp management techniques for the duration of 2010 and beyond. This includes \$3M in funds for commercial market enhancements and \$5M for additional chemical treatments in the case of barrier failure. It also puts forth over \$1.5M in new research funding. Several research efforts will receive significant funding in the coming months to help inform decision makers of additional tools that might be available for Asian carp management, including development of biological controls like Asian carp-specific poisons, methods to disrupt spawning and egg viability, sonic barriers, and assessment of food sources and potential habitats.



***Pelicans doing their part to control Asian carp populations at the Mississippi River Dresser Island Conservation Area near St. Louis (www.dannybrownphotography.com photo)***

The Framework also identifies educational and enforcement tools to prevent Asian carp from being sold or purposefully transferred, and an investigation of Asian carp transfer in ballast and bilge water. The Framework will be updated as new partners and new action options are identified to help stop the spread of Asian carp. Federal agencies will also continue to work together and in collaboration with state and local agencies to fight the spread of Asian carp into the Great Lakes.

Some new funding for projects will come from the \$475 million appropriated by Congress for the *Great Lakes Restoration Initiative* this year. That includes \$3 million

for "commercial development" – in other words, thinning out carp populations by getting people to eat the fish.

Even before release of the Framework the U.S. Coast Guard, on December 19, established a regulated navigation area in the Chicago Sanitary and Ship Canal from mile marker 295 to 297.5. The regulation states that all vessels (towboats, barges, and recreational craft) are prohibited from transiting the zone if they intend to carry water attained from one side of the electric fish barrier and discharge that same water, in any form, within or on the other side of the barrier. The regulation applies to both north- and south-bound vessels. If vessels intend to discharge water, they must request permission from the Captain of the Port Sector Lake Michigan prior to transiting and any subsequent discharge will be done in a biologically sound manner.

This regulation serves as a precautionary measure to prevent the possible movement of live Asian carp, their viable eggs, or gametes from these carp across the fish barrier through discharge of non-potable water. The announcement notes that there is no direct evidence that this is an actual bypass vector, but the *Asian Carp Rapid Response Workgroup's Executive Committee* agrees it is a prudent measure to eliminate that possibility. As a precautionary effort, industry has been voluntarily complying with this practice since September.

The *Natural Resources Defense Council* (NRDC), which has advocated aggressive action to stop the carp, characterized the Framework as a head scratcher. "The complete absence of time lines and triggers for specific actions to be taken in response to specific events make evaluation of the Framework's details difficult," Thom Cmar, NRDC spokesman said in a statement. "But, we are concerned that the document released today still doesn't articulate a clear plan, based on the best available scientific information, that will actually work," he said.

"President Obama proved today that he'll do anything to protect the narrow interests of his home state of Illinois, even if it means destroying Michigan's economy," Michigan Attorney General Cox said in a statement. "Officials from his administration unveiled a 25 step 'plan' full of half-measures and gimmicks, when keeping Asian carp from devastating the Great Lakes \$7 billion fishery requires only one step – immediately closing the locks."

Cox also noted that the Obama administration on February 10 had offered to settle the Supreme Court legal dispute over how to keep the carp out of the Great Lakes, but no deal was reached. Cox told reporters that he and the Attorneys General from five other states in the region discussed the matter in a conference call with Ignacia Moreno, an assistant U.S. Attorney General for the Justice Department who handles environmental matters. Cox said he couldn't legally provide details of the talks because they were confidential negotiations toward a possible settlement. But he said, Moreno offered no changes in the \$78.5 million Framework.

Michigan and most other Great Lakes states have described the Framework as inadequate – largely because it doesn't close shipping locks in Chicago waterways that could give the invasive carp an opening into Lake Michigan. "Absolutely no headway was made and we're still stuck with this policy which will wreak havoc on the Great Lakes," Cox said.

The new *Asian Carp Regional Coordinating Committee*, which is implementing the Framework, held a public meeting in Chicago on February 12 to discuss the Framework, to answer questions, to get feedback, and to receive comments. A second such meeting was held in Ypsilanti, MI on February 17.

The entire Framework is available on line at [www.asiancarp.org](http://www.asiancarp.org).

Sources: *Council on Environmental Quality Press Release*, 2/8/10; *AP/La Crosse Tribune*, 2/10/10; Deb Price and Nathan Hurst, *Detroit News*, 2/9/10; Douglas Belkin, *Reuters*, 2/8/10; Jennifer Nalbone, *Great Lakes United list serve*, 2/3/10; and Gabriel Nelson, *Greenwire*, 1/19/10

### Bait Farmers Sentenced for Violating the Federal Lacey Act

Stephen P. Sinnott, Acting U.S. Attorney for the Western District of Wisconsin, announced in December and January the prosecution of several Wisconsin bait dealers under the Federal Lacey Act. They included *Hayward Bait and Tackle, Inc.*, of Hayward; *Friesses Minnow Farm, Inc.*, of Cumberland; *Gollon Bait & Fish Farm*, of Dodgeville; and *Gollon Brothers Wholesale Live Bait, Inc.*, of Stevens Point.

*Hayward Bait and Tackle, Inc.* and *Friesses Minnow Farm, Inc.* were each sentenced by U.S. District Judge Barbara B. Crabb to 36

months probation including special conditions for monitoring the defendants' compliance with state and federal law. *Hayward Bait and Tackle* was also ordered to pay a fine of \$5,000 and *Friesses Minnow Farm* was ordered to pay a fine of \$4,000. Each company was also ordered to pay the cost of the additional monitoring during the term of probation. Both bait dealers imported fathead minnows and white suckers from Minnesota into Wisconsin without acquiring the necessary permits for the importation. *Hayward Bait and Tackle* imported bait fish between January 17, 2005, and February 13, 2007 which had a market value of \$306,891, and *Friesses Minnow Farm* imported bait fish between January 10, 2006, and May 22, 2007, which had a market value of \$281,480. Both companies pleaded guilty to the charge on October 29, 2009.

*Gollon Bait & Fish Farm* was also convicted in December 2009 for illegally importing bait fish and was ordered to pay a fine of \$6,000 and sentenced by Judge Crabb to 36 months probation, including special conditions for monitoring the defendant's compliance with state and federal law.

*Gollon Brothers Wholesale Live Bait, Inc.* pleaded guilty and was sentenced on January 8, 2010 to 24 months probation, including special conditions for monitoring the defendant's compliance with state and federal law, and was ordered to pay a fine of \$4,800. Between January 4, 2007, and continuing until May 14, 2007, *Gollon Brothers* transported and received bait fish including white suckers, shiners, and fathead minnows, having a market value of \$586,621.75, from companies in Minnesota and Arkansas without acquiring the necessary permits for the importation into Wisconsin.

Pursuant to federal law, the fine amount for each defendant is calculated in part upon the financial resources of the company and the measures taken by it to prevent a reoccurrence of the events giving rise to the conviction.

As part of the terms of probation, all four companies will be required to undergo additional testing and monitoring of their facilities and bait fish. These terms include facility inspections, additional testing of imported bait fish, prior notification to the U.S. Fish and Wildlife Service and the Wisconsin Department of Natural Resources of imports and exports of bait fish, and inspections of bait fish shipments into the state. The costs of this monitoring, which could reach \$120,000 for each company dur-

ing the course of the probationary term, will be born by the defendants. In sentencing the companies, Judge Crabb emphasized the potentially serious adverse effects to the fish population from the introduction of diseased bait fish, and noted that the special conditions set forth as a term of probation would help ensure compliance with federal and state regulations regarding the importation of live bait fish.

Sinnott stated that the special terms of probation in these cases required the most stringent provisions for monitoring bait farmers ever imposed in a federal prosecution. These cases are part of the overall efforts by the U.S. Fish and Wildlife Service and the Wisconsin Department of Natural Resources to protect the waterways in Wisconsin. Assistant U.S. Attorney Peter M. Jarosz handled the prosecution.

The federal Lacey Act makes it unlawful to import, receive, and acquire, in interstate or foreign commerce, any fish transported in violation of any law or regulation of any State. Wisconsin state law prohibits the importation and transportation of live fish into Wisconsin for use as bait without a valid import permit and health certificate certifying that the fish being imported are free from certain diseases. The Wisconsin law was enacted, in part, to protect Wisconsin resources, while allowing for the future growth of the fish farming industry.

Sources: *Office of the United States Attorney, Western District of Wisconsin Press Release*, 12/31/09 and 1/8/10

### Fish Disinfectant Prevents VHS Transmission

The disinfection solution iodophor, presently used for salmon eggs, has been found to eliminate active viral hemorrhagic septicemia (VHS) from fertilized walleye and northern pike eggs. Iodophor disinfectant solutions contain iodine formulated for use on fish eggs. The U.S. Geological Survey (USGS) and U.S. Fish and Wildlife Service researchers also found that although some of the disinfection treatments reduced the hatch, iodophor treatment at 90 minutes after fertilization did not alter egg hatch or fry development.

VHS has caused large fish kills in wild fish in the U.S., especially in the Great Lakes region, where thousands of fish have died from the virus over the last few years. The disease causes internal bleeding in fish, and although

in the family of viruses that includes rabies, VHS is not harmful to humans. Thus far, the virus has been found in more than 25 species of fish in Lakes Michigan, Huron, Erie, St. Clair, Superior and Ontario, as well as the Saint Lawrence River and inland lakes in New York, Michigan and Wisconsin.

Effective disinfection methods are critically important to natural resource agencies that collect eggs from wild fish stocks and to private aquaculture because the spread of the virus to a fish hatchery could be devastating, said Mark Gaikowski, the USGS researcher who led the research team. "If VHS virus is introduced into the aquaculture industry, it could lead to trade restrictions, as well as direct economic losses from the disease," Gaikowski noted.

Experts fear the disease could potentially spread from the Great Lakes into populations of native fish in the 31 states of the Mississippi River Basin. Regulatory agencies in the U.S. and Canada have already placed restrictions on the movement of fish or fish products that could pose a risk for the spread of VHS virus to regions outside of its known geographic range.

For more information about this subject, as well as recommendations on the disinfection process, see the new USGS Fact Sheet on line at: <http://pubs.usgs.gov/fs/2009/3107/>

## Mountaintop Removal Mining Controversy Continues

The debate over mountaintop removal mining, the method of strip mining that involves blowing tops off of mountains and dumping the rubble in valleys, has heated up over the past year, with the battle continuing both inside and outside of the courtroom, including protests and arrests which have mostly involved trespassing. At a late January meeting with coal industry executives and residents regarding concerns that industry officials had bullied them, West Virginia Gov. Joe Manchin (D) said, "We will not in any way, shape or form in this state of West Virginia tolerate any violence against anyone on any side." "If you're going to have the dialogue, have respect for each other", he said.

Sen. Robert Byrd (D/WV), in early December scolded mining companies for "scapegoating and stoking fear among workers over the

permitting process." Byrd also noted that mountaintop-removal mining requires fewer workers than other mining methods. "Supporting Appalachia's clean energy economy — not blowing up its mountains — is the way to secure a stronger economic future for the region," *Sierra Club* spokesman Oliver Bernstein said.

William Kovarik, who studies and teaches the history of environmental movements worldwide at Radford University in Virginia said, "Management is going out of its way to equate [the environmental activists] with terrorists, when in reality, they are their own neighbors, grandparents, retired coal miners and college students." Dehumanizing your opponent, he says, can lead to real violence.

The Government Accountability Office (GAO) in Washington, D.C. recently released two reports on mountaintop removal mining — one in December and a second in February. In the first report, requested by several lawmakers, the GAO was asked to review the characteristics of (1) surface coal mining and of (2) reclaimed lands that were disturbed by surface coal mining in the mountainous, eastern part of Kentucky and in West Virginia, where most such mining occurs. The 88 page report concluded that mine operators propose little development on land flattened by mountaintop removal. The report also said that despite the controversy over mountaintop removal there "is limited public access to information on the size, location and life span" of mining operations.

GAO relied on electronic databases of mining permits maintained by Kentucky and West Virginia. These permits identify the acres under open permit (i.e., the acres subject to mining associated with a permit that has not been closed) and how the land will

be reclaimed — including the post-mining land use; whether the approximate original contour (AOC) of the land will be restored, and the extent to which excess earth, rock, and other materials (known as "spoil") are placed in nearby valleys.

Based on permits issued between January 1990 and July 2008 GAO found that:

- The number of acres under open permit for surface coal mining increased by an average annual rate of 2.2 percent in Kentucky and 1.7 percent in West Virginia;
- The number of acres under open permit became more geographically concentrated;
- The length of time that permits were open varied from less than a year to more than 18 years; and
- In West Virginia, 28 contiguously permitted areas contained nearly half of the permitted acres.

Based on permits issued between January 2000 and July 2008 reclaimed lands had the following important characteristics:

- The most common type of post-mining land use in Kentucky was fish and wildlife habitat and, in West Virginia, it was forestland;
- Most permits required operators to reclaim the land to AOC, but there were some exceptions (called variances). Most of the variances were for lands where there was insufficient spoil to restore AOC because the land had been previously mined but not reclaimed and;
- Kentucky and West Virginia collectively approved nearly 2,000 fills to store at least 4.9 billion cubic yards of excess spoil in nearby valleys.

The second GAO report (68-pages), prepared for members of the Senate Energy and Natural Resources and Environment and Public Works committees, found that:

- Reforestation efforts at some reclaimed surface coal mine sites needed improvement;
- Surface coal mine sites have contaminated streams and harmed aquatic organisms;
- Valley fills may affect water flow; and
- Mine operators have not always returned mine sites to their AOC when required to do so under the Surface Mining Control and Reclamation Act.

The report said that federal and state regulators could do more to limit the damage and to ensure mine operators are held financially responsible for cleaning up industry messes. Ac-



Mountaintop Removal Mining (Vivian Stockman, Ohio Valley Environmental Coalition Photo)

According to the report, surface coal mining disturbed more than 400,000 acres of Appalachian forests between 1994 and 2003. Between 1985 and 2001, valley fills in the region buried 724 miles of headwater streams. Permits approved between October 2001 and June 2005 authorized the burial of another 367 miles of streams. The report noted, though, that the U.S. Army Corps of Engineers (Corps) was unable to specify exactly how many Clean Water Act permits for valley fills it has authorized over the years.

“Mountaintop-removal mining has lasting and far-reaching effects on surrounding lands and streams,” said Senate Energy and Natural Resources Chairman Jeff Bingaman (D/NM), who requested the GAO study. “This GAO review documents the extent of these effects and the mechanisms now in place to evaluate their impacts over time,” Bingaman said. “The results reinforce my belief that we need to take a close look at the quality of long-term monitoring and the financial assurances we require from the industry to ensure that any problems are promptly remediated.”

Under part of the mine permitting system companies are required to post reclamation bonds to ensure mine sites are cleaned up, and regulators are not supposed to release those bonds until sites are fully reclaimed. But the GAO report said available data show that damage often continues after bonds are released. Federal and state rules do not require mining regulators to monitor mine sites after bonds are released, and some voiced their opposition to doing so. The West Virginia Department of Environmental Protection (DEP), for example, said the GAO was suggesting the state take “never-ending jurisdiction” over mined lands.

The GAO report noted further that the Corps requires no bonds or other security to ensure mine operators complete their “mitigation plans” proposed to obtain Clean Water Act permits. GAO said that the Interior Department’s Office of Surface Mining Reclamation and Enforcement (OSM) has made an examination of strip-mining reclamation bond systems and found that they vary widely from state to state.

Meanwhile, the U.S. EPA has put some mining permits on hold as it re-examines the rules surrounding the practice, and has reached agreements with some mining operators which agreed to reduce by about half the length of stream that would be buried by valley fill debris. But many political leaders in West Virginia have complained about

EPA’s efforts to change the rules, saying the agency has failed to tell mine operators what standards they must achieve.

Randy Huffman, secretary of West Virginia’s DEP said, “There is a lot of validity to the concerns about the downstream impacts”. So DEP regulators now plan to stop considering certain coal mining permits until they can implement new rules requiring the operations to reduce their effect on water quality downstream. “If EPA’s not going to give us answers, we need to get our own,” Huffman said. “We need to get our own posture on this, and the end result is going to be a reduction in the size and scope of these operations.” Huffman said coal companies engaging in mountaintop removal mining typically obtain mining permits from the state, then ask the Corps for permission to dump excess rock and soil in what are called “valley fills.” By imposing stricter standards of its own, the state could clear up some of that uncertainty.

Kentucky has also issued tougher guidelines for surface mining that, while not mandatory, will likely result in more mining waste being deposited back on mine sites, rather than dumped into valleys or stream beds. The guidelines were hashed out over the past year by a coalition of federal and state regulatory officials, environmentalists and coal-industry representatives, after Kentucky’s state legislature twice failed to pass “stream saver” bills intended to reduce the environmental impact of surface mining. “This is going to dramatically change the way mining is done,” said Tom FitzGerald, a Kentucky environmental lawyer who helped broker the deal.

Under the guidelines, which are likely to be consulted by the Corps in their permitting decisions, companies will more often need to restore the contour and elevation of surface mines, FitzGerald said. The guidelines were issued in December in a memo signed by Carl Campbell, Kentucky’s Natural Resources Commissioner. The *Kentucky Coal Association* participated in construction of the guidelines and is prepared to abide by it, said Dave Moss, the association’s vice president. The changes likely will increase the costs of mining, but some sort of action was likely inevitable, he said. “We came to a solution we could live with,” he said.

Kentucky lawmakers in mid February also passed a nonbinding resolution aimed at protecting the state’s bee population from the dangers posed by mountaintop-removal mining. Experts say that when mining op-

erations dump debris in valleys and streams they cut off the flowering plants bees rely on to survive. So lawmakers are asking coal companies to plant more flowering plants on mined land to help restore the insect population. However, compliance with the resolution, which passed unanimously, is voluntary. Traditionally, companies have planted grass on mined land, but not the larger trees or plants — such as poplars or sourwoods — that insects need to survive. “That creates a desert from the bee’s perspective,” said bee researcher Tammy Horn from Eastern Kentucky University’s Environmental Research Institute.

Horn noted that some companies have already taken such action and are helping to reverse the decline in honeybees. Don Gibson of the *International Coal Group* in Kentucky said his company has set up 30 beehives on former coal sites and acknowledged the need for more research, especially as the honeybee population is falling due to colony collapse disorder. However, coal executives denied claims that mountaintop mining is destroying the ecosystem around the mines.

In West Virginia, state DEP officials told mining industry representatives at a mid January meeting that guidelines to further restrict damage to streams from mining are inevitable. “Things are unlikely to ever be the same,” said Tom Clarke, director of the department’s mining division. “We don’t know quite where things are going to end up, but you can be assured in the future the surface mines that are permitted will be smaller.” Of 23 mining permits in West Virginia targeted by U.S. EPA for more thorough review, only one has so far been approved, said Ginger Mullins, Corps official. Two applications have been withdrawn, while nine others are now ready for discussion with regulators.

Officials of the U.S. Department of the Interior said that while promising to find ways to reduce the impact of mountaintop removal mining on forests, streams and communities, the new director of the Interior Department’s OSM will not seek to ban the controversial practice. The 1977 federal strip-mining law specifically authorizes mountaintop removal, and any action to outlaw it would have to start with Congress, said OSM Director Joe Pizarchik. “That is a decision for Congress,” he said. “I would defer to their judgment.”

But mountaintop removal will be Pizarchik’s primary focus at OSM, he said, and the office will look to address the many concerns held by coalfield residents and the public.

“The practice of mountaintop removal as it’s conducted today may not be as acceptable to the public as it was 20 or 30 years ago,” he said. Regulators, industry and residents will need to “sit down and figure out how we are going to deal with that,” he added. Pizarchik stressed OSM’s efforts to rewrite its buffer zone rule, which prohibits mining activities within 100 feet of streams. The Bush administration ignored and then essentially gutted the rule. OSM is now starting over on the rule and does not expect the revision to be completed until 2011, drawing criticism from environmentalists. The buffer zone rule will likely better define the AOC reclamation standard, Pizarchik added.

Mine operators should plan for increased monitoring of downstream water impacts, said Jeff Lapp of the U.S. EPA. Some firms could receive approval for only one or two valley fills, with additional approvals dependent on water monitoring, he added. “That may not be a palatable situation from your perspective, but from the agency’s perspective, I need to push back a little bit,” Lapp said.

Sources: *Surface Coal Mining: Characteristics of Mining in Mountainous Areas of Kentucky and West Virginia*, GAO-10-21, 12/9/09; Vicki Smith, *AP*, 12/19/10; Ken Ward Jr., *Charleston Gazette*, 12/9/09 and 1/6, 1/12, 1/25 and, 2/16/10; Deborah Yetter, *Louisville Courier-Journal*, 1/7/10; Roger Alford, *AP/Business Week*, 2/18/10; *E&ENews PM*, 11/24/09 and 1/6/10; ; and *Greenwire*, 12/10 and 12/21/09, and 1/7, 1/11, 1/13, 1/26, 2/17 and 2/19/10

### Cleanup Needed at Lake of the Ozarks

Missouri’s Lake of the Ozarks came under the spotlight last summer when reporters at the *Kansas City Star* revealed that state Natural Resources Department (DNR) officials sat for almost a month on a report that showed dangerous *E. coli* levels in the lake. Thirty-one of 56 samples contained bacteria levels higher than state standards, and some of those were 10 times the standard or more.

No one knows exactly how many health problems have been caused by leaking sewage for swimmers, boaters and other lake users *The Star* said. Without a convenient way to tally the toll on human health, solutions have not been urgently sought over the years. But make no mistake *The Star*

said, “Given the high level of contamination in the lake, people have gotten sick from the water”. As one public health official recently told *The Star*, “I don’t swim in the lake. Haven’t for years.”

*The Star* found several examples showing that for decades studies indicated that the lake at times had high *E. coli* levels:

(1) *Consulting Analytical Services International*, a Springfield, MO firm, reported in 1981 that the flow of sewage from a number of sources at times created a “definite health hazard” in certain areas. “Swimmers were commonly observed in the vicinity of several of the larger discharge plumes” their report said. The study warned the implications were enormous and could provoke government action. “The areas simply could be closed to whole-body contact by existing law and regulation,” according to the report, which was paid for with federal and state money for the city of Osage Beach.



Water contact recreation on a Lake of the Ozarks beach.

(2) The state health department conducted a study from 1997 to 2001 before ending it prematurely. The department wanted to see how effective a new law was in controlling sewage discharges into the lake, said Patrick Phillips, a department scientist who conducted the research. The study showed spikes in *E. coli*, especially after rainstorms, but to be viable, the sampling should have continued for seven years, Phillips said. “I was shut off,” said Phillips, who has since retired. He said his superiors gave him no explanation. Kit Wagar, the department’s communications director, provided raw data from the study, but said he could find no one in the department who knew anything about it. He said no department officials or scientists would speak to the media about water-quality studies at the lake or other contamination issues.

(3) In a 1999 study, *HNTB*, a Kansas City-based engineering firm, collected other re-

ports and concluded that contamination was significant enough to warrant action. The study recommended that one sewer district be formed. Each of the lake’s four county commissions would have had to approve a resolution, but that never happened, said Michael F. Bollinger, an environmental scientist for *AmerenUE*, who served on the task force that commissioned the study. Bollinger said that because of the *E. coli* scandal last summer, he redistributed the report to some managers at *AmerenUE* (the utility which owns the lake). The report made its way to other lake and government officials, some of whom were reading it for the first time.

As for last summer’s situation, two DNR scientists testifying before a recent State Senate hearing said their instincts told them to release the water-quality results as soon as they were available. But Scott Robinett, one of the scientists, said Suzanne Medley, DNR Director of Communications, ordered him not to give the report to the public. Robinett said he followed the orders even though the public was inquiring about whether the data were ready to be released.

Medley told Senate investigators that she told Jeff Mazur, a top aide to Governor Jay Nixon (D), about the report almost as soon as she knew about it. Not long after, it was learned that a second top Nixon aide also knew about the report. But Nixon has continued to deny that he knew anything about it *The Star* said. Medley, who resigned from the DNR, did not testify at the recent Senate hearings. But former deputy DNR director Joe Bindbeutel, who has publicly taken responsibility for the cover-up; and DNR director Mark Templeton, who was suspended for two weeks over providing the governor false information about beach closings, did testify.

Bindbeutel told Senate committee members that he waited to release the report because he wanted to develop a plan. He said it was unclear whether the *E. coli* contamination was from geese, farms or septic tanks. Bindbeutel would not say that he ordered Medley to not release the report, only that he recommended that she not release it. Templeton outlined changes already made within the department and new proposals suggested by Nixon. “Today is the day to start moving forward,” Templeton said.

But Sen. Brad Lager (R), chairman of the environmental committee conducting the hearings, said the lingering questions may prove costly to the department. “If you look

at what has happened, the violation of the public trust, the endangerment of the citizens and visitors of this state,” Lager said, “how this General Assembly could in good faith give additional resources ... to this dysfunctional of a department is wishful thinking.” Meanwhile, the DNR is facing a financial crisis and is asking to raise fees in this year’s legislative session.

“This is a long-term problem that requires long-term solutions,” said George Connor, professor of political science at Missouri State University in Springfield. “The solution would require making lots of people do many different things.” “I cannot account for decades-long delay in addressing these issues,” said Bill Bryan, deputy director of the DNR. “The record shows that we haven’t followed up on what we have learned. That is going to change,” he said. Bryan was appointed by Nixon in September to lead the lake recovery effort as part of a reorganization of the department after disclosures about the lake surfaced.

But the state faces some high hurdles in its quest for a cleanup. *The Star* found that since 1981, at least six studies warning that the pollution at times creates a danger to human health were shelved with no major reform actions taken. Because of the long term neglect, it will take a good deal of money to correct the situation and it will be difficult to crack down on leaky sewage plants because the DNR only has the staff to inspect those plants every five years unless someone complains. And many of the septic systems responsible for the waste problem belong to families who cannot afford to fix their aged, broken systems.

But Greg Gagnon, president and CEO of the *Central Bank of the Lake of the Ozarks*, said the contamination may not be as bad as the perception. He said most of the bacteria tests have been normal, and he expects the problem will be very manageable. “In the short run, obviously the headlines have a negative impact on Lake of the Ozarks,” he said. “But in the long run, I’m glad that the governor has shown so much interest in Lake of the Ozarks as well as the rest of the state.” Gagnon and nearly everyone agree that the lake is a state treasure that needs protecting. Tourism is big business. According to the *Tri-County Lodging Association*, 5 million people visit the lake annually, and some estimates say those visitors spend more than \$1 billion.

Ken Midkiff, an author on Missouri water-quality issues blamed much of the inaction

on decades of political and business interests seeking to avoid bad publicity. “The Lake of the Ozarks is an enormous generator of income, and nobody wanted to mess with that,” said Midkiff, who is chairman of the *Sierra Club Clean Water Campaign* in Missouri. So news about lake contamination “would really have impacted a lot of those resorts, boat sales and T-shirt shops.”

But Gagnon disagreed that business interests have blocked progress. He said they have invested millions of dollars in state-of-the-art sewer systems, and he thinks contamination may be less now than in 1976, when he moved to the lake. Businesses want the lake to be pristine, said Jim Divincen, executive vice president of the *Tri-County Lodging Association*. Lake contamination needs more study to determine its severity and especially its source, which could be fecal matter from wild animals and flocks of geese at the water’s edge, he said. “If it’s not, if it’s from raw sewage from a resident or commercial facility, it needs to be corrected,” he said. Divincen said he already has seen signs of change — a recent chamber breakfast for the first time included a discussion of a lakewide sewer system.

But even though some feel that press coverage may have exaggerated the lake’s contamination levels, the lake is straining under the pressure of the many unregulated septic tanks pouring into it. The area’s soil is poor at filtering waste, and the increasing number of full-time residents is only exacerbating the problems. Many residents don’t even bother with septic tanks, said Tracy Rank, an environmental public health specialist for Benton County. “There’s still plenty of straight pipes that go from the house to the lake,” Rank said. “It comes out through the bluffs.”

Additionally, when Nixon vowed to clean up the lake, he ordered DNR inspections of the more than 400 permitted wastewater treatment facilities, which are more sophisticated than septic tanks. The DNR found that about 100 bars, condominiums, resorts and others were violating state law. And when the department inspected its own plant at the Lake of the Ozarks State Park, it found an inadequate chlorinating system, and the agency had to write itself up. The DNR plant shows — and the department concedes — that its system for detecting contamination is far from watertight. Indeed, department officials and others say that inspections at the lake should be more frequent and more stringent than state law requires.

As for political pressure, Sen. Lager thinks that after this year’s events conclude there finally may be enough capital to pass legislation. “This is a problem that has spanned multiple governors from both Democratic and Republican parties,” he said. “This has really highlighted for me that not only did we have a breakdown in the process with DNR’s decision to cover up the report, there has been a conscious effort spanning back to the administration of Gov. Mel Carnahan where they have openly ignored recommendations to deal with the issue.”

DNR’s Bryan agreed that there may finally be enough momentum to overcome the decades of inertia. “We have a different situation today than we did in the past,” Bryan said. “We have different branches of government looking at the same challenges and expressing the will to move forward.”

So in late December Nixon proposed sweeping changes to the state’s water quality laws in an attempt to stem the flow of billions of gallons of sewage into all Missouri waterways. If enacted, the proposed laws would allow the state to designate certain waterways —including the Lake of the Ozarks — as “distressed,” and would allow the state to limit the number of permits for wastewater facilities at bodies of water under “serious stress.” Septic tanks, including the 50,000 at the Lake of the Ozarks, would be subject to inspections by the DNR for the first time.

The bottom line is that something obviously needs to be done about the Lake of the Ozarks situation. And one has to wonder about the situation at other highly developed lakes in the Basin.

Sources: Karen Dillon and Judy L. Thomas, *Kansas City Star*, 12/20/09; Karen Dillon, *Kansas City Star*, 12/29/09a and 12/29/09b; Karen Dillon and Jason Noble, *Kansas City Star*, 1/5/10; *Kansas City Star*, 12/21 and 1/8/10; *Greenwire*, 12/21/09

### Bag Tax To Fund River Cleanup

A 5-cent tax on every plastic and paper bag distributed by establishments selling food and alcohol in the District of Columbia went into effect on January 1. A portion of the proceeds from the tax, authorized by the District’s *Anacostia River Cleanup and Protection Act*, will go toward efforts to clean up the badly polluted Anacostia River.

The District’s city council already has received feedback from officials in neighbor-

ing Maryland and Virginia, where lawmakers will be introducing similar measures this spring. But thus far, the District of Columbia is the only jurisdiction to successfully implement such a tax. Seattle in 2009 voted against a 20-cent bag fee, and Colorado and Baltimore shut down similar proposals. New York City Mayor Michael Bloomberg proposed a tax in 2008, but it was dropped in favor of a recycling program.

Officials who worked on the District's bag tax say the secret to their success is in the water — and wording. They were careful to use the term “fee,” rather than “tax” in gaining support for the law. “A tax is something you have to pay,” said Charles Allen, chief of staff for Tommy Wells (D) of Ward 6, the councilman responsible for the legislation. “A fee is something you can avoid.” And “We’re making it about the [Anacostia] river, not about the plastic bag,” Wells added.

Businesses in the district will get to keep 1 to 2 cents of the fee collected, while the rest will go toward the *Anacostia River Protection Fund*. City officials estimate the tax will generate more than \$3 million in revenue this year, with decreasing revenue moving forward. The District of Columbia's per-bag tax is not the only solution to the plastics puzzle. Recycling measures such as in-store bins, as well as outright bans, have been implemented in jurisdictions nationwide. Delaware and Tucson, AZ, have found success with mandatory recycling programs. San Francisco in 2007 banned the distribution of noncompostable bags, and paper bags must have a certain level of recyclable content.

The trend is toward recycling programs, said Shari Jackson, director of *Progressive Bag Affiliates* at the *American Chemistry Council* (ACC), and there have been many legislative measures, as well as voluntary, independent efforts by retailers and manufacturers, to increase plastics recycling. The ACC contributed some \$500,000 to the anti-tax campaign in Seattle last year, where voters firmly defeated the proposed legislation.

The District of Columbia's bag fee also did not come without some opposition of its own. People who have plastic bags tend to save them for trash pickup and other home uses, said Jackson. If they do not have access to those bags, they will have to buy them separately. “Reusable [bags] are not suitable for all purposes,” she said. Residents also have questioned the legislation's intended cause and whether the fee even will reach its final destination. The district's

fee also will result in the bags' diminishing availability, said Jackson, and in turn will affect the viability of both recycling programs and the products produced from film and other plastics, like pipes, fencing and other construction products. “[Plastic] is a fully recyclable material,” she said. “Education is a much better approach.”

“We are told this is all about the Anacostia River,” wrote Bryan Dierlam in a January 6 *Washington Post* opinion piece. “I suppose there can be no doubt about that, since, after the grocery stores are paid off with 1 or 2 cents per bag, the remaining proceeds go to an organization dedicated to cleaning the river. Of course, this is a move right out of Political Economics 101 — give the tax revenue to a special interest, and anyone who complains about the tax can be accused of opposing the work of that group.”

The district's strategy for passing the fee legislation was built on lessons learned from other municipalities, said Allen, as Wells and his staff researched past proposals and mapped out a plan based on those measures. They also reached out to local businesses, fellow councilmen and other stakeholders before formally introducing the measure. “A major part of our success was working with them in a collaborative way,” Allen said.

The benefit of a tax is that it can be applied widely across products, “highlighting the problem of disposables in general,” said Darby Hoover, senior resource specialist at the *Natural Resources Defense Council*. “The best legislation will acknowledge reduction as the ultimate goal,” Hoover said.

Source: Emily Long, *Greenwire*, 1/18/10

### All Green Stormwater Collection Plan for Philadelphia

Philadelphia has a ground-breaking idea about what to do with its stormwater — use it to feed grass and trees instead of letting it rush into the sewers. The concept may seem obvious. But for most cities, a stormwater management plan that doesn't expand sewers or treatment plants is counter intuitive.

Stormwater poses a costly and burgeoning problem in the U.S., where 772 cities have sewer systems that collect wastewater and storm runoff in the same pipes. The systems are designed to overflow during heavy rains, sending raw sewage and other waste into streams and rivers so as not to overwhelm treatment plants. In New York City, for

example, which averages an overflow a week, a rainy day means 500 million gallons of filthy discharges pouring into waterways, according to nonprofit watchdog group *Riverkeeper*. That foul brew contaminates drinking water, forces beach closures and pollutes shellfish beds.

Most cities are working with the U.S. EPA to curb overflows as part of a mandate to cleanse waters to federal standards. But the traditional options are expensive. Philadelphia, for one, found it would need to build a \$10 billion sewage tunnel under the Delaware River to solve its overflow problem the standard way — with so-called “gray” infrastructure. So the city is proposing an alternate solution: Invest \$1.6 billion to turn a third of the city green in the next 20 years. The plan involves replacing streets, parking lots and sidewalks with water-absorbing porous pavement, street-edge gardens and trees.

“We want to do anything we can do to return us as close as possible to the way nature intended the water cycle to be,” said Howard Neukrug, director of the Philadelphia Water Department's watersheds office. “But we need to do that within the context of a city that is fully grown, with incredible impervious cover everywhere.” Philadelphia is examining a number of options, Neukrug said, including digging up streets, planting trees and redesigning tree pits and curbs to trap water before it reaches sewer inlets. The city also may push for green roofs, rain barrels and other water-conserving measures for new and existing homes and buildings. “We recognized that if we manage stormwater where it lands, whether on the ground or on a roof, that in very many circumstances we can not only prevent that gallon of water from overflowing, but we may be able to find additional benefits for our customers,” Neukrug said. “Things that impact the urban heat island effect, things that improve the aesthetic of a community.”

The department contends the plan could give the city an economic boost, as well. “The city officials see this as a way of revitalizing their community,” said Nancy Stoner, co-director of the *Natural Resources Defense Council's* water program. “They see it as making it a more attractive place for people to live and work. Making it more healthful, creating green jobs, raising the property values, taking pollution out of the air.” A sewage tunnel would do none of those things, Neukrug said. “Every dollar you can spend above ground that would give you an equivalent water quality result to below

ground, it's probably better to spend that dollar above ground," he said.

Cities ranging from New York to Kansas City, MO, have said they are eager to explore green infrastructure, and a number of them already are using it to help them manage stormwater. But experts said Philadelphia is the first city to propose an all-green stormwater solution to federal regulators. "It's different from what any other city in the country is doing at his point," Stoner said. "It's the only stormwater plan I know of that basically is all green. It's really impressive for a place that's as densely populated and as paved over and urbanized as Philadelphia is."

The city's plan is now in the hands of EPA, which must decide whether to approve it. While the agency officially encourages cities and states to use green infrastructure, EPA has never been asked whether it alone is an acceptable way to address combined-sewer overflows. "The fact that they're proposing it to meet Clean Water Act regulatory requirements is fairly unique," said Jon Capacasa, director of water protection for EPA's Region 3 office in Philadelphia. "I think one of the key challenges will be putting the institutional measures in place to ensure the good vision here can be achieved."

Various city departments that oversee streets, sewers and development all must overhaul their regulations and coordinate their new policies to promote green measures if such a plan is to work, Capacasa said. For example, developers who aim to control stormwater through green technologies may find themselves stymied by road and building codes that demand traditional materials and designs. "There are a lot of barriers, because things have been done differently for years," Stoner said. "The structures just are not set up to facilitate this kind of integrated thinking."

Philadelphia also estimates its plan will fall slightly short of EPA requirements. The city says it would capture 80 percent of its sewage and wastewater under the proposal. That's 5 percent less than EPA wants. "The plan that's been submitted to us, in our initial review, doesn't get all the way to the endpoint," Capacasa said. "So there may be more work to do."

Neukrug said Philadelphia already is tackling the task of standardizing its building policies. The city reworked its stormwater regulations in 2006 to require all new buildings to capture the first inch of rainwater

and to grant expedited permit reviews to developers that use green infrastructure. And the Water Department is creating design templates and standardized instructions for other utilities, departments and private developers to use, he said.

"The city of Philadelphia fully endorses this concept," Neukrug said. "Our sister agencies are working very closely with us to figure out how to implement this program." But Neukrug acknowledges that addressing existing buildings will be a challenge. "How do you encourage private landowners, who for the next 50 years do not plan to make any changes to their property, how do you get them to change?" he said. "That's where it's most costly."

While the department is still hashing out the details, Neukrug said it is firm in its commitment to the idea. "We're not sure yet how we're going to be doing things five years from now, 10 years from now, other than we're pretty darn sure we're going to be moving forward with this green infrastructure concept," he said. "We can get there with green infrastructure. We just need time."

Source: Taryn Luntz, *Greenwire*, 12/24/09

### Federal Water Project Standards Under Review

The White House, in early December, released new draft standards for federal water projects that for the first time put environmental goals on the same plane as economic development concerns. The proposed overhaul of 1983 standards for the U.S. Army Corps of Engineers (Corps) directs the agency to fold non-monetary benefits into project assessments by measuring improvements to wildlife habitats and biodiversity.

It also aims to improve transparency in federal water planning, said Nancy Sutley, chairwoman of the White House Council on Environmental Quality, which coordinated the rewrite. "It is expected that the use of best science, peer review and full transparency will ensure that projects undergo a more rigorous study process, which should inform authorization and funding decisions," she said.

The draft also encourages a new policy for flood-plain management. It directs planners to consider nonstructural approaches — typically, using building codes, planning laws and education campaigns to manage flood

plains and protect public safety, wetlands and other natural resources — rather than proceeding with the construction of levees and dams. The new draft represents "sort of the first of this rethinking of the traditional way the federal government has approached local land use planning when it comes to flood-plain and water resources management," Sutley said.

The proposed guidelines would apply to all federal agencies involved in water planning, including the U.S. EPA, the Bureau of Reclamation and the Agriculture Department, among others. "One of the things we did in trying to get the principles and guidelines redrafted is to bring in a bunch of other agencies who were not at the table, and to make this less about the Army Corps of Engineers and more about how do we do water resource planning in a smart way," Sutley said. EPA played a large role in the revision discussions, as did the Corps, the Office of Management and Budget and the Federal Emergency Management Agency, she said.

The draft standards have been forwarded to the *National Academy of Sciences*, which is expected to complete its review by November 2010. The interagency discussion will now move to developing detailed guidance for implementing the standards. Sutley said each agency will then develop its own agency-specific implementation guidance by late 2010.

The White House also is launching a new effort to overhaul flood-plain management policy. Sutley said the Obama administration has re-established a flood-plain management task force that last met in 1994. The new group, which first met in November, is co-chaired by FEMA and the Corps and will recommend new policies for flood insurance and a possible new executive order for flood-plain management. A draft executive order would toughen federal policies that restrict the construction of dams, levees, roads and other structures in flood-prone areas. Sutley said she expects the task force to focus on flood insurance policies before moving to the executive order and other issues.

Industry and environmental groups say they are solidly behind the new White House policy, but they caution that the real impact will lie in details not yet hashed out. "A lot of people think the current principles and guidelines have been holding the country back, for the environment, for water planning and for smart, rational economics," said David Conrad, senior water resources specialist for the *National Wildlife Federation*.

For example, experts said that under current policy, planners would calculate the economic benefit of a flood-plain development project without considering the flooding it would cause in downstream communities or the havoc it would wreak on wetlands, wildlife or fisheries. Under the new plan, designers would consider the economic benefits of healthy ecosystems, as well as the wider public safety effects of a project.

“This is an important step in that direction, but a lot of issues have to be considered, and of course, the proof would be in the ultimate outcomes,” Conrad said. “Can we modernize water planning so that the environment doesn’t deteriorate as it has? Can we focus on using nonstructural approaches more to improve water quality, water efficiency, reduce flood damages? Those are the questions that will be asked of this draft as we go forward.”

“I think the goals are very noble,” said Rick Capka, chief operating officer of the water resources lobbying firm *Dawson & Associates*. “But my initial take is that it’s going to have a peculiar set of challenges to implement. How do you compare and contrast the benefits of each one of those categories and weight it? I just think the devil may be in the details as we move forward.”

Terry Sullivan, senior policy adviser for *The Nature Conservancy*, said his group is encouraged by the plan and the opportunity to begin to re-examine water resources management in the nation. But he, too, believes the administration has a tough task ahead in developing a workable template for evaluating projects. “As long as the measurements are standardized consistently in the planning process, they can serve well,” Sullivan said. “I think it’s going to take a lot of work, bringing together some of the better minds that have thought about it in the country. But that’s where really the rubber will meet the road — quantifying benefits and standardizing an approach.”

Water groups also worry that federal agencies may each interpret the standards differently. “When you don’t have something that is extremely objective, getting consistency across the agency lines may pose problems,” Capka said. “If the agencies are required to come up with some weighting, comparing apples to oranges, you have to somehow have a process where you make them all look like apples.”

Several groups said they see room for improvement in the draft and plan to weigh in

during public comment sessions. “It clearly removes the sole reliance on economic benefits, which I think is a positive,” said Brian Pallasch, managing director of government relations for the *American Society of Civil Engineers*. “However, one of our concerns [is] that there’s not enough emphasis placed on public safety,” Pallasch said. “Our comments likely will focus on the sense that the draft right now is probably focused on economic benefits and ecosystem issues, and we would like to add a third leg to the stool.”

Howard Marlowe, a lobbyist on beach issues, said he would like to see the guidance take a wider view. “I think this is a major step in the right direction,” Marlowe said. “But this is still very project-focused. I think we would like to get it into something that is broader than that, in terms of looking at the importance of cooperating with states when managing water resources.”

Two environmental organizations said the guidance should more forcefully direct planners to select options that encroach minimally on natural resources. “While *American Rivers* and *National Wildlife Federation* are appreciative of the effort to date, we wish to see the draft go further to implement the reforms mandated by Congress,” the groups said in a press release. “The new guidance should do this by establishing clear directives, such as requiring federal agencies to utilize non-structural and restoration approaches whenever practicable.”

Sources: Taryn Luntz, *Greenwire*, 12/3 and 12/4/09

### ESA Overhaul - a “Work in Progress”

U.S. Fish and Wildlife Service (FWS) Director Sam Hamilton said in mid December that his agency is considering wide-ranging revisions to the 1973 Endangered Species Act (ESA). “There is no question there are places we can make improvements in the way we do business,” Hamilton said. “We are taking a hard look ... to see regulatory-wise, administrative-wise, are there ways to improve?” The regulatory revisions are a “work in progress” that he said could provide new definitions for some key provisions, including those addressing critical habitat and consultations between FWS biologists and other agencies over projects that could harm protected animals and plants.

Hamilton said the FWS also wants to find new ways to encourage landowners to

protect species, expanding on the new “safe harbor” program that promotes private habitat protection while allowing normal land-use practices, like farming. “We need more thinking like that ... to encourage landowners,” Hamilton said. “We are going to spend a lot of time with that.”

Efforts to make major changes in ESA have not gone far in the past, in part, because of strong feelings about the law from both landowners and environmentalists. Western Republican lawmakers, landowners and businesses blame the ESA for hindering development while doing little to recover imperiled species. Environmentalists, on the other hand, say the law has protected hundreds of species from extinction.

“No matter which way you turn, somebody is not going to be happy,” Hamilton said. “Our focus is on trying to recover endangered species; our goal is to try to get them off the list. So as long as we keep our eye on that goal and work on definitions and work on policy to further that goal, we’ll be in good shape.”

In its final months, the Bush administration’s Interior Department managed to finalize ESA regulatory changes that would have made project consultations optional between FWS biologists and other agencies. But in response to an outcry from environmentalists and biologists, Congress allowed the Obama administration to retract the Bush rules without going through normal reviews, and Interior Secretary Ken Salazar withdrew the rules last April.

The Bush administration’s regulatory revision started by focusing on one issue: What constitutes “adverse modification” of critical habitat? The effort expanded to address dozens of other issues, but left “adverse modification” alone. Hamilton said the FWS is now re-examining the issue. “It’s on the list,” he said. “Hopefully, we can deal with that. I am optimistic because we have some of the best and brightest working on it.”

“We would like them to make it clear that any action that results in appreciably diminishing the value of critical habitat for survival or recovery is considered as adverse modification,” said Bob Irvin, senior vice president for conservation programs at *Defenders of Wildlife*.

Larissa Mark, an environmental policy analyst at the *National Association of Home Builders* (NAHB), said the major problem for her group is the maze of requirements

for ESA permits that can delay projects for months or years. Consultations that are supposed to be completed in less than one year can take up to four times that long, according to an analysis from the Government Accountability Office. "Either builders pass on those costs or have to absorb those costs, and in today's market, it is hard to absorb additional costs," Mark said. NAHB supported regulatory changes put forward by the Bush administration that would have streamlined the consultation process.

In early December, nearly 130 scientists asked the U.S. Interior Department to change the Bush administration policy on how agencies decide whether a species is endangered. At issue is guidance issued in 2007 that redefined when the FWS would protect a species as "endangered" or "threatened." Then-Interior Solicitor David Bernhardt issued guidance that recommended agencies focus on plants and animals most at risk in their current locations, rather than throughout their historic range or in other locations where species may be healthy.

The scientists now want Interior Secretary Ken Salazar to rescind that memorandum, saying it sharply limits the scope of the ESA by limiting analysis to species' current range and by specifying that species will be listed only in the portion of range considered significant. "We are concerned that these interpretations will result in imperiled species not receiving protection and limit where species that are listed are ultimately recovered," they wrote. "We are also concerned that the memorandum will limit protection for endangered species to small portions of range where they may not be recoverable," they said. Duke University's Stuart Pimm, Michigan Tech University's John Vucetich and the *Center for Biological Diversity's* Noah Greenwald headed up the letter.

"Ignoring loss of range when determining whether species require protection as endangered species makes little sense," Pimm said in a statement. "Resetting the clock to the present day could result in many species that have lost significant portions of range being wrongfully denied protection." The policy could be overturned, they said, by a memo from Salazar or the new Interior solicitor, Hilary Tompkins.

Environmentalists agree that the Obama administration can change the law without going through the complex process for redrawing regulations. For instance, they say, the Bush administration changed how the FWS determines whether a species is "threatened"

or "endangered" through internal guidance.

Sadly, FWS Director Hamilton (age 54) passed away in late February after suffering chest pains while on a ski trip to Colorado. How his passing may affect the timing and focus of FWS actions on this issue is unknown.

Sources: Noelle Straub, *Greenwire*, 12/10/09; and Allison Winter, *Greenwire*, 12/24/09

## Court Rulings and Wetlands Protections

A recent report on Tennessee wetlands by the *National Wildlife Federation, Ducks Unlimited* and *Trout Unlimited* found that at least five of the state's important wetlands have lost federal protection as the result of Supreme Court decisions that created widespread confusion over Clean Water Act jurisdiction. The court's *Rapanos-Carabell* ruling in 2006 and the *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* decision in 2001 removed protections for many isolated waters and non-navigable wetlands and created complicated tests for regulators to use to determine jurisdiction.

Subsequent agency guidance has stripped protections from 20 million acres of isolated wetlands, or 20 percent of the remaining wetlands in the lower 48 states. In Tennessee, protections are in doubt for more than half of the state's approximately 787,000 acres of wetlands and 60 percent of the state's stream miles, the report says. "One of the things we hear time and time again is because they're small, they're not important," said John McFadden, one of the study's authors. "Well, they make up the majority of our drinking water collection systems, and as a result of that they're incredibly important."

Headwater tributaries, their adjacent wetlands and geographically isolated waters together provide significant habitat for fish and wildlife and are the source of most of the water for Tennessee rivers and streams, the study says. Small headwater streams make up at least 60 percent of the total length of the state's streams and provide drinking water to almost 3 million Tennesseans, according to the report.

The study authors analyzed U.S. Army Corps of Engineers jurisdictional determinations in Tennessee from January 2007 to May 2009, noting 48 cases in which the

agency decided a waterway did not warrant federal protection. The report highlights five such waters, including wetlands associated with a vital tributary to the Tennessee River, a wetland that affects the Reelfoot National Wildlife Refuge and wetlands that are at risk of being lost to development.

"Without the restoration of comprehensive Clean Water Act protections, it is almost certain that the number of waters in Tennessee polluted or destroyed without federal safeguards will grow," the report warns. "It is also equally certain that this will result in the degradation and pollution of the great rivers, lakes, and streams Tennesseans depend on for drinking water, agriculture, hunting, fishing and other forms of recreation."

The groups are pressing Congress to pass *Senate Bill 787* which would remove the word "navigable" from the Clean Water Act. Supporters say the measure would restore protections that were in place before the two high court rulings, but opponents, which include powerful farm and industry groups, say it would expand jurisdiction further than ever before and impose burdensome new regulations.

The report is the first of four the conservation groups are planning to release. Subsequent studies will evaluate wetland jurisdictional losses in Montana, South Carolina and Colorado.

Sources: *E&E Daily*, 12/9/09; and Taryn Luntz, *Greenwire*, 1/27/10

## Nonpoint Source Pollution Online Training Available

The U.S. Environmental Protection Agency (EPA) offers numerous free, Web-based watershed training options for a variety of audiences. The agency's *Watershed Academy Web* offers more than 50 free, self-paced training modules that represent a basic and broad introduction to the watershed management field (see [www.epa.gov/watertrain](http://www.epa.gov/watertrain)).

The modules are appropriate for a wide array of audiences — from government employees to interested citizens. EPA continually updates and adds modules as needed. For example, the agency recently added a new module called "*The Effect of Climate Change on Water Resources and Programs.*"

EPA has organized the online modules into the following six themes:

- *Introductory/Overview Modules*: These

introduce the principles of the watershed approach and the value of working at a watershed level.

- *Watershed Ecology Modules*: These show that watersheds are natural systems that can provide substantial benefits to people and the environment.
- *Watershed Change Modules*: These describe both natural and human-induced changes in watersheds, and compare normal changes with changes of concern.
- *Analysis and Planning Modules*: These show how watershed planning, monitoring and assessment are important first steps for solving problems.
- *Management Practices Modules*: These show how watershed management challenges such as urban runoff, cropland management, forestry and other issues are addressed by techniques that reduce environmental impacts.
- *Community/Social/Water Law Modules*: These cover social issues, communications, relevant laws and regulations.

The *Watershed Academy* also offers ongoing Webcast seminars, which can be accessed live or be downloaded later. See: [www.epa.gov/watershedwebcasts](http://www.epa.gov/watershedwebcasts). The two most recent Webcasts include:

- “*National Lakes Assessment: Reporting on the Condition of the Nation’s Lakes.*” Held in early January 2010, this Webcast discusses EPA’s newly released draft report, *National Lakes Assessment: A Collaborative Survey of the Nation’s Lakes*. This report presents data on the extent of lakes that support healthy biological communities, offers information about selected stressors impacting lake quality, and describes recreational indicators of lake condition.
- “*An Urgent Call to Action: Nutrient Innovations Task Group Report.*” Held in early December 2009, this Webcast presents findings from a new report that characterizes the scope and major sources of nutrients that enter our water bodies, and offers recommendations for ways to address the problem.

The site also offers archived versions of 44 other Webcasts, as well, addressing subjects ranging from implementing total maximum daily loads to launching a water quality monitoring program.

Also, to help people better understand the regulatory framework and technical issues associated with the National Pollution Discharge Elimination System (NPDES) stormwater permit program, EPA holds training sessions, workshops and Webcasts. The NPDES training Web site ([www.epa.gov/npdes/training](http://www.epa.gov/npdes/training)) currently includes 26 Web-

casts covering various aspects of stormwater, including:

- how to communicate your stormwater message to the public;
- how to identify illicit discharges to your stormwater system;
- how to manage stormwater before and after construction; and
- how to use green infrastructure to manage stormwater.

Because municipal stormwater runoff is discharged into surface water bodies through pipes and man-made ditches, it is technically considered a point source pollutant when the collection system serves a significant urban population (as defined in EPA’s municipal stormwater rule), and is regulated by EPA’s NPDES stormwater permit program. However, pollutant sources in the municipal stormwater stream are primarily nonpoint source in origin — sediment from disturbed land areas, fertilizers and pesticides from lawns, and petroleum products from roads, parking lots and other impervious surfaces.

EPA also offers a free, self-paced, Web-based NPDES permit writers training.

Source: *Nonpoint Source News-Notes*, February 2010, Issue #89

### Series Discusses Challenges of Stream Restoration

*Stormwater* magazine recently completed a three-part series on restoring streams. All three articles in the “*Challenges of Stream Restoration as a Stormwater Management Tool*” series are available online.

- Part 1: *A designer’s perspective* discusses the key challenges that frequently pose the greatest risks to the success of a stream restoration project. It can be found at: [www.stormh2o.com/may-2009/stream-restoration-management.aspx](http://www.stormh2o.com/may-2009/stream-restoration-management.aspx).
- Part 2: *Planning for construction* identifies key issues that a project manager should consider during the construction phase. It can be found at: [www.stormh2o.com/sep-2009/challenges-stream-restoration.aspx](http://www.stormh2o.com/sep-2009/challenges-stream-restoration.aspx).
- Part 3: *Lessons learned* offers insights from landowners, designers and contractors who have worked on stream restoration projects. It can be found at: [www.stormh2o.com/november-december-2009/challenges-of-stream.aspx](http://www.stormh2o.com/november-december-2009/challenges-of-stream.aspx).

Source: *Nonpoint Source News-Notes*, February 2010, Issue #89

### Climate Change Update

Despite the deep freeze felt in many parts of the Nation this winter, according to NASA the past decade was the warmest on record. In fact, 2009 surface temperatures were the second-warmest on record since data collection began in 1880. The warmest year was 2005 and the remaining hottest years have occurred since 1998. “When we average temperature over 5 or 10 years to minimize that variability, we find global warming is continuing unabated,” James Hansen, director of NASA’s *Goddard Institute for Space Studies* said. Also, the last three summers melted Arctic sea ice more than at any point in modern history, although 2009 was a slight improvement from the previous two years.

Also, in recent years the Patagonia mountains, located in the southernmost region of South America, have sprung up as the weight of glaciers melted away, researchers led by Reinhard Dietrich of *Institut für Planetare Geodäsie*, Technische Universität Dresden, Germany reported in a recent issue of the journal *Earth and Planetary Science Letters*. GPS-based measurements indicate that between 2003 and 2006, the mountains grew at a rate of 1.5 inches per year. In 2005, similar measurements at Glacier Bay, Alaska found the mountains there rising at a rate of 1.3 inches per year. According to the recent estimate, 30 years from now, the most famous peaks of Patagonia — like Mount Fitzroy — will be about 3.3 feet higher.

In Wyoming climate change could cause mountain snowpack, which provides most of state’s surface water, to melt earlier in the springtime, complicating water management in the nation’s fifth-driest state, according to a report released in late January by the University of Wyoming. The report also notes that the lack of water flowing into Wyoming makes the state more vulnerable to drought, which is likely to be intensified by higher temperatures that result from climate change. To plan for such scenarios, Wyoming must take actions such as building reservoirs and conserving water, Steve Gray, state climatologist and director of the *Water Resources Data System*, said.

Rising carbon dioxide (CO<sub>2</sub>) levels in the atmosphere might be causing hardwood trees in forests by the Chesapeake Bay to grow two to four times faster than expected, researchers said in a study published in late January in the *Proceedings of the National Academy of Sciences*. The unexpected growth spurts in mid-Atlantic trees sug-

gest that these forests might blunt or delay the impact of climate change by soaking up some greenhouse gases (GHGs), though the authors warn the trees are no panacea. Geoffrey Parker, a senior scientist at the *Smithsonian Environmental Research Center* in Edgewater, MD, says he has been methodically measuring tree girth since he began working at the facility in 1987. On average, the woodlands his team are tracking are bulking up by an extra 2 tons per acre annually, he reports. That is as if a new tree 2 feet in diameter sprang up every year. The ecologists are not sure what is driving the growth or when it began, but they do know that the CO<sub>2</sub> levels in the air at the *Smithsonian's* research center have increased 12 percent in the past 22 years.

A new “*Forest Carbon Index*” released in early December by a Washington-based non-partisan think tank (*Resources for the Future and Climate Advisors*) uses a range of data to pinpoint the best places to channel billions of dollars that could flow to forests under global efforts to address climate change. Forests can be instrumental in achieving emissions reduction targets, providing a quarter of needed climate solutions through 2020, according to the analysis. Brazil, Indonesia and nations in the Amazon-Andes and Central America are poised to be key players in an emerging market for forest carbon, the groups said. Global payments for forest carbon could equal almost \$20 billion annually through 2020, they said. The groups compiled data on biological, economic, governance, investment and market readiness conditions for every forest and country in the world to produce the *Forest Carbon Index*. The index estimates each nation's potential to attract forest carbon investment based on profit potential and country-specific risk factors. Using the index, policy makers and businesses can estimate each nation's potential to contribute to climate solutions through its forest carbon assets, the groups said.

Images of natural phenomena obtained through U.S. spy satellites and other classified sensors are now helping to shed light on issues like Arctic sea ice melts and climate trends. The collaboration, which had been used to advise the federal government on environmental stewardship from 1992 to 2001, was discontinued during the early years of George W. Bush's presidency. It was resurrected last year after a plea from former Vice President Al Gore to Sen. Dianne Feinstein (D/CA), chairwoman of the Senate Intelligence Committee. Norbert Untersteiner, a professor at the University of Washington

who specializes in polar ice, a member of the team of about 60 security-cleared scientists who analyze the data, says the information sharing is crucial because there is “no way to send out 500 people” across the top of the world to match the intelligence gains from the partnership. The environmental surveillance program is “basically free,” according to monitoring team member Ralph Cicerone, president of the *National Academy of Sciences*. And it has little or no impact on regular intelligence gathering, federal officials say. Most of the sharing involves the release of data that have already been gathered, or the use of sensors to record environmental data when the sensors are idle or passing over wilderness. Precautions are still taken to keep reconnaissance abilities secret. For example, classified images are blurred when given to the scientists.

Meanwhile, a weather-monitoring satellite launched earlier this decade has provided extensive data on the movement of atmospheric CO<sub>2</sub> and reconfirmed a mechanism that sees rising temperatures causing increased water vapor, a potent greenhouse gas (GHG). The *Atmospheric Infrared Sounder* (AIRS) aboard NASA's *Aqua* satellite measures global temperature and cloud cover through infrared monitoring twice a day. While the instrument improves weather forecasting, it has also revealed the levels and movements of GHGs in the midtroposphere. Using data from AIRS, Andrew Dressler, an atmospheric scientist at Texas A&M University, confirmed the water vapor feedback loop, where increasing temperatures caused by rising GHGs cause increased water vapor, leading to further warming. The measurements closely fit climate models previously developed by scientists, leading Dressler to say “water vapor is really not much of an uncertainty anymore”.

The world's emissions of CO<sub>2</sub> are too high to keep the planet from excessive warming by 2050, according to a report released in early December by the accounting company, *PricewaterhouseCoopers* (PwC). The economists apportioned out a carbon “budget” among the world's countries and modeled the economic trajectories for each of the G20 countries leading up to 2050, factoring in economic output, political circumstances and each region's potential for renewable power sources. “We're overdrawn,” said John Hawksworth, lead author and head of the macroeconomics unit in London. “We have to eliminate the annual deficit and then we have to pay back the debt,” he said. The PwC model suggested that only Russia was on track for the 2000 to 2008 period,

with India close to its desired trajectory and Saudia Arabia the furthest off course. To get back on the right path, the world would need to cut the carbon emitted per dollar of economic output by about 3.5 percent a year by 2020, the study finds. Even so, the world would have to make up for the accumulated excess from the past decade.

Meanwhile, a report from the *Center for Climate Strategies* says that Kentucky's GHG emissions are increasing twice as fast as the rest of the United States. The study found emissions rose 33 percent from 1990 to 2005, compared with 16 percent nationally. Kentucky's emissions are projected to rise 62 percent above 1990 levels by 2030 if left unchecked. Kentucky's reliance on coal and its aluminum manufacturing industry led to higher emissions, said Rodney Andrews, council member and University of Kentucky energy researcher.

But according to the *Energy Information Administration*, GHG emissions from the U.S. energy sector have fallen and won't reach 2008 levels again until 2019. “The recession will have a lasting impact” on gross domestic product, total energy use and CO<sub>2</sub> emission levels, EIA Administrator Richard Newell said at the unveiling of his agency's *2010 Energy Outlook's* reference case. The recession's pinch on CO<sub>2</sub> emissions from power plants, transportation and industry from 2008 to 2009 won't be made up for a decade, under a projected 0.3 percent average annual growth, EIA says. With no change in policies, U.S. emission levels from energy-related sources will grow a total of 8.7 percent from 2008 to 2035. Energy-related sources currently account for about 85 percent of U.S. GHG emissions.

Meanwhile, the *Copenhagen Accord*, unveiled in December, falls far short of what many world leaders had hoped to accomplish. The three-page text carries no legal obligations on the countries who signed it, but instead establishes a political agreement that nations would limit an increase in global surface temperatures to no more than 2 °C above pre-industrial levels. Wealthy countries would “commit to implement” their own individual 2020 targets in a special appendix attached to the back of the document. The U.S., for example, pledged to reduce emissions 14 to 17 percent below 2005 levels by 2020. Elsewhere in the agreement, fast-developing countries agreed to implement emission cuts “in the context of sustainable development,” while the least developed nations and small island states also may take voluntary action so long

as they get funding from wealthy nations. Developing countries also pledged to submit reports to the United Nations' climate office every two years on their emission cuts. But any cuts that countries make without international funding will only be subject to domestic measurement, reporting and verification. Their reports to the United Nations will include provisions for "international consultations and analysis under clearly defined guidelines that will ensure that national sovereignty is respected." And any cuts for which developing countries want the financial assistance of the international community will be recorded in a registry and subject to international measurement. Wealthy nations also agreed to pay poor countries \$10 billion annually through 2012. They did not put any medium- or long-term money on the table, but the agreement continues to hold out the possibility of mobilizing \$100 billion annually by 2020 "in the context of meaningful mitigation actions and transparency on implementation." The accord also calls for an immediate start to forest carbon offsets. U.N. Secretary General Ban Ki-moon said he would work over the next year to turn the "accord" into a final legally binding agreement. He said the United Nations would "closely coordinate" with Mexican President Felipe Calderón who will host the next annual climate conference, scheduled for Nov. 8-19, 2010.

India plans to move forward with its plans to combat climate change without waiting for global finances to shore up its efforts. "We've got to do what we've got to do," said Jairam Ramesh, the country's environment minister. "I don't see India's climate change program being driven by international finance. International finance has its supportive role to play, it doesn't have a lubricating or a catalytic or a start-up role," he said. India is ranked as the world's fourth largest polluter from burning fossil fuels. The country is not offering any new measures to combat climate change, Ramesh said.

At the Copenhagen talks the U.S. announced its membership in a research alliance of 19 countries exploring options for reducing GHG emissions from agriculture and increasing food production. The group — which includes Australia, Canada, France, Germany, Great Britain and India — will share findings and collaborate on research under the Copenhagen agreement. "No single nation has all the resources it needs to tackle agricultural greenhouse gas emissions while at the same time enhancing food production and food security," Agriculture Secretary Tom Vilsack said in a statement. Agriculture currently produces 14 percent of global GHG, according to the U.S. Department of Agriculture. Vilsack pledged to more than triple USDA spending

on agricultural climate-mitigation research to \$130 million over the next four years, up from just over \$10 million last year. Overall, USDA said it expects to invest more than \$320 million in the next four years in climate change mitigation and adaptation research for agriculture.

Sources: James Kanter and Andrew C. Revkin, *New York Times*, 12/9/09; Charles J. Hanley, *AP*, 12/7/09; Eilperin/Fahrenthold, *Washington Post*, 1/28/10; John M. Broder, *New York Times*, 1/21/10; *Billings Gazette*, 1/31/10; William J. Broad, *New York Times*, 1/5/10; Kenneth Chang, *New York Times*, 12/16/09; Alex Morales and Todd White, *Bloomberg*, 12/1/09; Gaurav Singh, *Bloomberg*, 1/7/10; Larry O'Hanlon, *MSNBC/Discovery News*, 1/27/10; James Bruggers, *Louisville Courier-Journal*, 1/28/10; Timothy B. Wheeler, *Baltimore Sun*, 2/2/10; Allison Winter, *Greenwire*, 12/8 and 12/16/09; Katherine Ling, *Greenwire*, 12/14/09; Darren Samuelsohn and Lisa Friedman, *Greenwire*, 11/25 and 12/17/09; Darren Samuelsohn and Lisa Friedman, *Greenwire Updates*, 12/17, 12/18 and 12/19/09; Nathaniel Gronewold, *Greenwire*, 12/21/09; Noelle Straub, *Greenwire*, 12/3/09; *Greenwire*, 12/1, 12/7, 12/8, 12/16, 12/18/09; and 1/5, 1/7, 1/22, 1/28, 1/29, 2/2 and 2/4/10

### Meetings of Interest

**April 8-9:** Species Introductions and Re-introductions: Opportunities and Challenges, Joint American Fisheries Society and Wildlife Society Symposium. Mississippi State University. See: [www.cfr.msstate.edu/wildlife/symposium](http://www.cfr.msstate.edu/wildlife/symposium).

**April 20-21:** Mississippi River Basin Panel on Aquatic Nuisance Species (MRBP). Nashville, TN. Contact: [MRBP@fws.gov](mailto:MRBP@fws.gov)

**May 30-June 3:** 34th Annual Larval Fish Conference. Santa Fe, NM. See: [www.larvalfishcon.org](http://www.larvalfishcon.org).

**Jun. 20-22:** Second International Catfish Symposium. St. Louis, MO. See: [www.catfish2010.org](http://www.catfish2010.org)

**Jun. 21-24:** International Symposium on Genetic Biocontrol of Invasive Fish. Minneapolis, MN. See: [www.seagrants.umn.edu/ais/biocontrol](http://www.seagrants.umn.edu/ais/biocontrol)

**Jul. 7-12:** Joint Meeting of Ichthyologists and Herpetologists. Providence, RI. See: [www.dce.ksu.edu/conf/jointmeeting/future](http://www.dce.ksu.edu/conf/jointmeeting/future).

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**Jul. 25-30:** Climate Change and Fish - Fisheries Society of the British Isles Conference. Belfast, Northern Ireland. See: [www.fsbi.org.uk/events.htm](http://www.fsbi.org.uk/events.htm)

**Aug. 1-6:** 95th Annual Meeting of the Ecological Society of America. Pittsburgh, PA. See: [www.esa.org/pittsburgh](http://www.esa.org/pittsburgh)

**Aug. 29- Sep. 2:** 17th International Conference on Aquatic Invasive Species. San Diego, CA. See: <http://www.icaais.org/>

**Sep. 1-2:** 3rd Annual Meeting of the North American Chapter of the World Sturgeon Conservation Society. Chico Hot Springs Resort near Livingston, MT. Contact: [Molly\\_Webb@fws.gov](mailto:Molly_Webb@fws.gov)

**Sep. 5-9:** 6th International Symposium on Aquatic Animal Health. Tampa, FL. See: <http://aquaticpath.epi.ufl.edu/isaah6>

**Sep. 12-16:** American Fisheries Society 140th Annual Meeting. Pittsburgh, PA. See:

[www.fisheries.org](http://www.fisheries.org)

**Sep. 20-24:** Third International Symposium on Ecology and Biodiversity in Large Rivers of Northeast Asia and North America. Memphis, TN. See: <http://yosemite.epa.gov/nerl/nerlreg.nsf/registration?openform>

**Sep. 27-30:** Wild Trout Symposium. West Yellowstone, MT. See: [www.montana.edu/cs/images/wild\\_trout/fish.jpg](http://www.montana.edu/cs/images/wild_trout/fish.jpg)

**Sep. 27-30:** The Working Waterways and Waterfronts National Symposium on Water Access 2010. Portland, ME. See: <http://www.wateraccessus.com/>

**Oct. 19-21:** Freshwater Mollusk Conservation Society 2010 Workshop - Regional Fauna Identification and Sampling. Kirkwood, MO. Contact Steve McMurray (573) 882-9909 or Heidi Dunn (636) 281-1982

**Dec. 12-15:** 71st Midwest Fish and Wildlife Conference. Minneapolis, MN. See: [www.midwest2010.org](http://www.midwest2010.org)

## Congressional Action Pertinent to the Mississippi River Basin

### Climate Change

**S. 137.** Brown (D/OH). Creates jobs and reduces U.S. dependence on foreign and unsustainable energy sources by promoting the production of green energy, and for other purposes.

**S. 1035.** Reid (D/NV) and 2 Co-sponsors and **H. R. 3727.** DeGette (D/CO) and 7 Co-sponsors. Enhances the ability of drinking water utilities in the U.S. to develop and implement climate change adaptation programs and policies, and for other purposes.

**S. 1667.** Collins, (R/ME) and 4 Co-sponsors. Provides for the development and coordination of a comprehensive and integrated U.S. research program that assists the people of the U.S. and the world to understand past, assess present, and predict future human-induced and natural processes of abrupt climate change, and for other purposes.

**S. 1733** Kerry (D/MA) and Boxer (D/CA) and **H. R. 2998.** Waxman (D/CA) and Markey (D/MA). Creates clean energy jobs, achieves energy independence, reduces global warming pollution and transitions to a clean energy economy.

**S. 1933.** Bingaman (D/NM) and 3 Co-sponsors and **H. R. 2192.** Grijalva (D/AZ) and 9 Co-sponsors. Establishes an integrated Federal program to protect, restore, and conserve the Nation's natural resources in response to the threats of climate change and for other purposes.

**H. R. 232.** Baldwin (D/WI) and 3 Co-sponsors. Provides for creation of a Federal greenhouse gas (GHG) registry, and for other purposes.

**H. R. 391.** Blackburn (R/TN) and 9 Co-sponsors. Amends the Clean Air Act to provide that GHGs are not subject to the Act, and for other purposes.

**H. R. 594.** Stark (D/CA) and McDermott (D/WA) Amends the Internal Revenue Code of 1986 to reduce emissions of carbon dioxide by imposing a tax on primary fossil fuels based on their carbon content.

**H. R. 1438.** Fortenberry (R/NE). Prohibits any Federal agency or official, in carrying out any Act or program to reduce the effects of GHG emissions on climate change, from imposing a fee or tax on gaseous emissions

emitted directly by livestock.

**H. R. 1666.** Doggett (D/TX) and 21 Co-sponsors. Amends the Internal Revenue Code of 1986 to establish an auction and revenue collection mechanism for a carbon market that ensures price stability with environmental integrity.

**H. R. 1760.** Inslee (D/WA) and 2 Co-sponsors. Mitigates the effects of black carbon emissions in the U.S. and throughout the world.

**H. R. 1862.** Van Hollen (D/MD) and 3 Co-sponsors. Caps the emissions of GHG through a requirement to purchase carbon permits, to distribute the proceeds of such purchases to eligible individuals, and for other purposes.

**H. R. 1905.** Capps (D/CA) and 3 Co-sponsors. Amends the Coastal Zone Management Act of 1972 to require the Secretary of Commerce to establish a coastal climate change adaptation planning and response program, and for other purposes.

**H. R. 2306.** Dicks (D/WA). Provides for the establishment of a National Climate Service, and for other purposes.

**H. R. 2407.** Gordon (/TN). Establishes a National Climate Service at the National Oceanic and Atmospheric Administration.

**H. R. 2685.** Bordallo (D/GU) and 9 Co-sponsors. Establishes a National Oceanic and Atmospheric Administration and a National Climate Enterprise, and for other purposes.

**H. R. 2757.** Kind (D/WI) and 3 Co-sponsors. Requires the return to the American people all proceeds raised under any Federal climate change legislation.

**H. R. 3129.** Luetkemeyer (R/MO). Prohibits U.S. contributions to the Intergovernmental Panel on Climate Change.

### Conservation

**S. 655.** Johnson (D/SD) and 3 Co-sponsors. Amends the Pittman-Robertson Wildlife Restoration Act to ensure adequate funding for conservation and restoration of wildlife, and for other purposes.

**S. 1214.** Lieberman (ID/CT) and 7 Co-

sponsors and **H. R. 2565.** Kind (D/WI). Conserves fish and aquatic communities in the U.S. through partnerships that foster fish habitat conservation, to improve the quality of life for the people of the U.S., and for other purposes.

**H. R. 404.** Grijalva (D/AZ) and 23 Co-sponsors. Establishes the National Landscape Conservation System, and for other purposes.

**H. R. 631.** Matheson (D/UT). Increases research, development, education, and technology transfer activities related to water use efficiency and conservation technologies and practices at the U.S. EPA.

**H. R. 1080.** Bordallo (D/GU). Strengthens enforcement mechanisms to stop illegal, unreported, and unregulated fishing, and for other purposes.

**H. R. 1328.** Bishop (D/NY) and 2 Co-sponsors. Amends the Internal Revenue Code of 1986 to allow an unlimited exclusion from transfer taxes for certain farmland and land of conservation value, and for other purposes.

**H. R. 2188.** Kratovil (D/MD) and 3 Co-sponsors. Authorizes the Secretary of the Interior, through the U.S. Fish and Wildlife Service, to conduct a Joint Venture Program to protect, restore, enhance, and manage migratory bird populations, their habitats, and the ecosystems they rely on, through voluntary actions on public and private lands, and for other purposes.

**H. R. 2807.** Kind (D/WI) and Jones (R/NC). Sustains fish, plants, and wildlife on America's public lands.

**H. R. 3086.** Bordallo (D/GU). Coordinates authorities within the Department of the Interior and within the Federal Government to enhance the U.S.'s ability to conserve global wildlife and biological diversity, and for other purposes.

### Endangered Species Act (ESA)

**S. 724.** Barrasso (R/WY) and Vitter (R/LA). Amends the ESA to temporarily prohibit the Secretary of the Interior from considering global climate change as a natural or man-made factor in determining whether a species is a threatened or endangered species, and for other purposes.

**Energy**

**S. 531.** Bingaman (D/NM) and Murkowski (R/AK). Provides for the conduct of an in-depth analysis of the impact of energy development and production on the water resources of the U.S., and for other purposes.

**S. 539.** Reid (D/NV). Amends the Federal Power Act to require the President to designate certain geographical areas as national renewable energy zones, and for other purposes.

**H. R. 2227.** Murphy (R/PA) and 6 Co-sponsors. Greatly enhances America's path toward energy independence and economic and national security, to conserve energy use, to promote innovation, to achieve lower emissions, cleaner air, cleaner water, and cleaner land, and for other purposes.

**H. R. 2300.** Bishop (R/UT) and 34 Co-sponsors. Provides the U.S. with a comprehensive energy package to place Americans on a path to a secure economic future through increased energy innovation, conservation, and production.

**Federal Water Pollution Control Act (FWPCA)**

**S. 696.** Cardin (D/MD) and Alexander (R/TN). Amends the FWPCA to include a definition of fill material.

**S. 787.** Feingold (D/WI) and 23 Co-sponsors. Amends the FWPCA to clarify the jurisdiction of the U.S. over waters of the U.S.

**S. 1005.** Cardin (D/MD) and 3 Co-sponsors. Amends the FWPCA and the Safe Drinking Water Act to improve water and wastewater infrastructure in the U.S.

**H. R. 700.** McNerney (D/CA) and Tauscher (D/CA). Amends the FWPCA to extend the pilot program for alternative water source projects.

**H. R. 1262.** Oberstar (D/MN) and 9 Co-sponsors. Amends the FWPCA to authorize appropriations for State water pollution control revolving funds, and for other purposes.

**Invasive Species**

**S. 237.** Levin (D/MI) and 4 Co-sponsors and **H. R. 500.** Ehlers (R/MI) and 20 Co-sponsors. Establishes a collaborative program to protect the Great Lakes, and for other purposes.

**S. 462.** Boxer (D/CA) and Vitter (R/LA). Amends the Lacey Act Amendments of 1981 to prohibit the importation, exportation, transportation, and sale, receipt, acquisition, or purchase in interstate or foreign commerce, of any live animal of any prohibited wildlife species, and for other purposes.

**S. 594.** Casey (D/PA) and Stabenow (D/MI). Requires a report on invasive agricultural pests and diseases and sanitary and phytosanitary barriers to trade before initiating negotiations to enter into a free trade agreement, and for other purposes.

**S. 1713.** Reid (D/NV) and 4 Co-sponsors and **H. R. 3748.** Berkley (D/NV) and Titus (D/NV). Establishes loan guarantee programs to develop biochar technology using excess plant biomass, to establish biochar demonstration projects on public land, and for other purposes.



**S. 2946.** Stabenow (D/MI) and **H.R. 4472.** Camp (R/MI). Directs the Secretary of the Army to take action with respect to the Chicago waterway system to prevent the migration of bighead and silver carps into Lake Michigan, and for other purposes.

**H. R. 48.** Biggert (R/IL). Amends the Lacey Act, to add certain species of carp to the list of injurious species that are prohibited from being imported or shipped.

**H. R. 51.** Kirk (R/IL). Directs the Director of the USFWS to conduct a study of the feasibility of a variety of approaches to eradicating Asian carp from the Great Lakes and their tributary and connecting waters.

**H. R. 669.** Bordallo (D/GU) and 9 Co-sponsors. Prevents the introduction and establishment of nonnative wildlife species that negatively impact the economy, environment, or other animal species or human health, and for other purposes.

**Mining**

**S. 140.** Feinstein (D/CA) and **H. R. 699.** Rahall (D/WV) and 20 Co-sponsors. Modifies the requirements applicable to locatable minerals on public domain lands, consistent with the principles of self-initiation of mining claims, and for other purposes.

**S. 409.** Kyl (R/AZ) and McCain (R/AZ) and **H. R. 2509.** Kirkpatrick (D/MI) and Flake (R/AZ). Secures Federal ownership and management of significant natural, scenic, and recreational resources, to provide for the protection of cultural resources, to facilitate the efficient extraction of mineral resources by authorizing and directing an exchange of Federal and non-Federal land, and for other purposes.

**S. 796.** Bingaman (D/NM) and **H.R. 699.** Rahall (D/WV) and 20 Co-sponsors. Modifies the requirements applicable to locatable minerals on public domain land, and for other purposes.

**S. 1777.** Udall (D/CO). Facilitates the remediation of abandoned hardrock mines, and for other purposes.

**H. R. 493.** Rahall (D/WV). Directs the Secretary of the Interior to promulgate regulations concerning the storage and disposal of matter referred to as "other wastes" in the Surface Mining Control and Reclamation Act of 1977, and for other purposes.

**H. R. 3203.** Lamborn (R/CO) and Bishop (R/UT). Promotes remediation of inactive and abandoned mines, and for other purposes.

**National Environmental Policy Act (NEPA)**

**H. R. 585.** Lee (D/CA) and 5 Co-sponsors. Directs the President to enter into an arrangement with the *National Academy of Sciences* (NAS) to evaluate certain Federal rules and regulations for potentially harmful impacts on public health, air quality, water quality, plant and animal wildlife, global climate, or the environment; and to direct Federal departments and agencies to create plans to reverse those impacts that are determined to be harmful by the NAS.

**H. R. 996.** Nunes (R/CA) and McCarthy (R/CA). Temporarily exempts certain public and private development projects from any requirement for a review, statement, or analysis under the NEPA of 1969 (42 U.S.C. 4321 et seq.), and for other purposes.



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**Public Lands**

**S. 22.** Bingaman (D/NM). Designates certain VA, WV and OR lands as components of the National Wilderness Preservation System, to authorize certain programs and activities in the Department of the Interior and the Department of Agriculture, and for other purposes.

**S. 32.** Spector (R/PA) and Casey (D/PA). Requires FERC to hold at least one public hearing before issuance of a permit affecting public or private land use in a locality.

**S. 452.** Crapo (R/ID) and Risch (R/ID) and **H. R. 2025.** Minnick (D/ID) and Simpson (R/ID). Ensures public access to Federal land and to the airspace over Federal land.

**S. 1470.** Tester (D/MT). Sustains the economic development and recreational use of National Forest System land and other public land in the State of Montana, to add certain land to the National Wilderness Preservation System, to release certain wilderness study areas, to designate new areas for recreation, and for other purposes.

**H. R. 1041.** Melancon (D/LA). Directs the Secretary of the Interior to study the suitability and feasibility of designating sites in the Lower Mississippi River Area in the State of Louisiana as a unit of the National Park

System, and for other purposes.

**Public Service**

**S. 277.** Reid (D?NV) and 32 Co-sponsors. Amends the National and Community Service Act of 1990 to expand and improve opportunities for service, and for other purposes.

**S. 1442.** Bingaman (D/NM) and 2 Co-sponsors and **H.R. 1612.** Grijalva (D/AZ) and Rahall (D/WV). Amends the Public Lands Corps Act of 1993 to provide service-learning opportunities on public lands.

**Water Quality**

**H. R. 135.** Linder (R/GA) and 3 Co-sponsors. Establishes the *21st Century Water Commission* to study and develop recommendations for a comprehensive water strategy to address future water needs.

**H. R. 276.** Miller (R/MI). Directs the Administrator of the USEPA to convene a task force to develop recommendations on the proper disposal of unused pharmaceuticals, and for other purposes.

**H. R. 631.** Matheson (D/UT). Increases research, development, education, and technology transfer activities related to water use efficiency and conservation technologies and

practices at the USEPA.

**H. R. 1145.** Gordon (D/TN). Implements a *National Water Research and Development Initiative*, and for other purposes.

**H. R. 3202.** Blumenauer (D/OR) and 3 Co-sponsors. Establishes a *Water Protection and Reinvestment Fund* to support investments in clean water and drinking water infrastructure, and for other purposes.

**Water Resources**

**S. 637.** Baucus (D/MT) and Tester (D/MT). Authorizes the construction of the *Dry-Redwater Regional Water Authority System* in the State of Montana and a portion of McKenzie County, North Dakota, and for other purposes.

**S. 1712.** Reid (D/NV), and 2 Co-sponsors and **H.R. 3747.** Berkley (D/NV) and Titus (D/NV). Promotes water efficiency, conservation, and adaptation, and for other purposes.

**H. R. 172.** Salazar (D/CO) and Markey (D/CO). Provides for the construction of the *Arkansas Valley Conduit* in CO.

Sources: <http://www.gpoaccess.gov/bills/index.html>; and <http://thomas.loc.gov/cgi-bin/thomas>