

River Crossings

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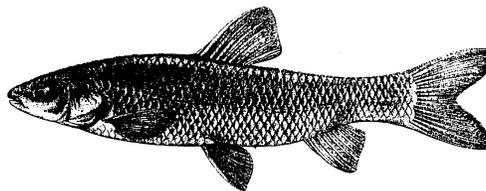
Number 2

Black Carp Petition

MICRA petitioned Jamie Rappaport Clark, Director of the U.S. Fish & Wildlife Service (USFWS), on 2/24/00 to list the black carp (*Mylopharyngodon piceus*) as an “injurious species of wildlife” coming under jurisdiction of the Federal Lacey Act. The Lacey Act prohibits the import and/or possession of any species listed as “injurious” without a Federal permit. MICRA expressed concerns that: (1) diploid (fertile) black carp are being used in the state of Mississippi as a control agent for snail populations in fish culture ponds, (2) the potential for the escape of these black carp to the wild is high, and (3) the nation’s mollusk populations (many of which are threatened or endangered) could be devastated should the black carp escape from captivity and establish wild populations.

Last fall MICRA learned that the state of Mississippi had decided to allow fish farmers in that state to import reproductively viable black carp from Arkansas to control snail populations, an intermediate host of the yellow grub, in catfish rearing ponds. This raised a significant “red flag” with other Mississippi River Basin states because other methods of grub control utilizing native fish species are available and have been used successfully. MICRA sent letters to the governors of Mississippi and Arkansas asking that all black carp presently stocked in Mississippi be recovered and destroyed, or kept in closely controlled, laboratory-like environments which could guarantee that escape to the wild would be prevented. MICRA also

expressed interest in assisting them, or any other state or federal agency, by providing the necessary resources and expertise, and using native species or other measures as alternatives to black carp in treating the grub problem. Although the situation is under review in Arkansas, MICRA’s request went unheeded in Mississippi, where stocking continues. Because of the urgency of the matter, MICRA filed the subject “injurious species” petition to solicit federal assistance in this matter.



“black carp”

Black carp were first introduced into the U.S. in the early 1970s as a “contaminant” in imported grass carp stocks. The second introduction came in the 1980s when the species was imported as a food fish, and as a biological control agent to combat the

spread of yellow grubs in aquaculture ponds. Four other Asian carp species (common, grass, bighead, and silver carps) have been introduced into U.S. waters, and all have been able to establish themselves in the wild, producing large wild populations (See River Crossings, Vol. 8, No. 6).

The large numbers of Asian carp that presently occur in certain parts of the Mississippi River Basin undoubtedly are producing significant negative impacts on native fish species. But the black carp poses an even greater threat to native invertebrate populations because it feeds almost exclusively on mollusks. Freshwater mollusks are the most endangered group of animals in North America, with over 70% of our native mollusk species in need of conservation.

Of even greater concern is the fact that 90% (191 species) of the native mussel species designated as endangered, threatened, or of special concern are found in the Southeastern states – not far from where the black carp are being stocked. Forty-eight percent

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or 102 of these species are endemic to that region of the U.S., and the black carp have the potential of driving some of these species to extinction. Black carp also could have a profound negative effect on native fingernail clam populations which serve as a primary food source for many migratory waterfowl species in the Mississippi flyway and elsewhere.

There is ample biological evidence to justify preventing black carp from being used anywhere in the U.S. for any purpose. But, the final decision on this matter, and therefore on the ultimate fate of our native mussel fauna, will most likely not be based on biological evidence, but on politics. Those who support the use of black carp are busy lobbying their Congressmen to protect their perceived right to continue that use. Those who oppose the use of black carp will have to do the same. Unfortunately, the former is driven by investments and profits, and the latter by concern for the public interest. The public interest usually doesn't win those battles!

Copies of all three MICRA letters on this subject can be downloaded in .pdf format from our Web Page at <http://www.waux.cerc.cr.usgs.gov/MICRA>. Those interested in conserving our freshwater mussels are encouraged to express those concerns to their Congressmen.

Corrupted Corps Economics?

Donald C. Sweeney II, a 23-year career employee of the U.S. Army Corps of Engineers (Corps) filed an affidavit in early February with the U.S. Office of Special Counsel (OSC) in Washington, D.C. accusing the Corps of altering economic data to justify construction of a major Upper Mississippi and Illinois river navigation project. Sweeney, a PhD economist from *Washington University* in St. Louis, had been assigned to lead the controversial project's economic study.

After a short review of Sweeney's detailed affidavit the OSC found on 3/6/00, substantial likelihood that the Corps had violated the law and wasted taxpayer money in its handling of the project. Sweeney's affidavit included names, dates, and email messages, criticizing the Corps for both the way in which he was treated in 1998, and how the Corps has since handled the project's economic analysis. Sweeney said that when his results didn't recommend

immediate construction, the economic analysis for the project – which was supported by both the navigation industry and his superiors – was turned over to other Corps' economists who were then pressured to come up with the "right" answer.

The OSC takes disclosures of serious wrongdoing from federal employees and is required to assure that the agency head, in this case Secretary of Defense William Cohen, conducts a thorough investigation. As a result of the OSC review, Special Counsel Elaine Kaplan ordered Secretary Cohen to investigate and report back to her within 60 days what corrective actions the Defense Department plans to take. Kaplan said, "there exists a substantial likelihood that officials in the Corps have engaged in violations of law, rule or regulation and a gross waste of funds" in connection with the proposed \$1-6 billion project.

Environmentalists have long been suspicious of the Corps' economic analyses, but this is the first time that "one of the Corps' own" has stepped forward and cried "foul". As a result a coalition of citizen organizations on 2/14/00 called for:

- a full and public investigation of the matter by an impartial body outside of the Defense Department, which they stressed cannot be trusted to investigate one of its own agencies;
- the appointment of an independent legal investigator to determine whether top officers of the Corps of Engineers violated federal law by manipulating the study, and whether they should be disciplined; and
- "whistle blowers" within the Corps to be protected from any reprisals by their superiors.

David Conrad, a water resource specialist of the *National Wildlife Federation* said, "The

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River Crossings is a mechanism for communication, information transfer, and coordination between agencies, groups and persons responsible for and/or interested in preserving and protecting the aquatic resources of the Mississippi River Drainage Basin through improved communication and management. Information provided by the newsletter, or opinions expressed in it by contributing authors are provided in the spirit of "open communication", and do not necessarily reflect the position of MICRA or any of its member States or Entities. Any comments related to "River Crossings" should be directed to the MICRA Chairman.

internal memoranda, e-mails and other documents that have come to light suggest a possibly broad conspiracy within the Corps to falsely justify what would be a costly and environmentally damaging construction project". "If true, this kind of manipulation could amount to a basic fraud on taxpayers, and an assault on the environment for the benefit of the barge industry, which already receives a 90% taxpayer subsidy," Conrad said. Richard X. Moore, Upper Mississippi River regional coordinator for the *Izaak Walton League* said, "These revelations throw a pall of doubt over the entire study, not just the Corps' economic findings; its engineering and environmental analyses are also suspect." "The Corps has squandered more than \$55 million in taxpayers' money on a pile of worthless paper," he said.

Carl Zichella, Midwest staff director of the *Sierra Club*, put it this way: "We never assumed that we could trust the Corps of Engineers and this proves it. Don Sweeney deserves the support and thanks of all Americans who want to protect the nation's greatest river system and who don't want to see it killed by more taxpayer subsidies to wealthy barge companies." "Dr. Sweeney should be applauded for his courageous actions," said Steve Ellis, director of water resources for *Taxpayers for Common Sense*. "Unfortunately, we must now watch the Corps of Engineers to ensure that it does not punish Dr. Sweeney for his principled stand on behalf of federal taxpayers." "It's clearly time to restore the Upper Mississippi and the Illinois rivers, not rebuild the existing locks or build new locks. This project would not help Midwest farmers nor the rivers," said Dan McGuinness, director of the Upper Mississippi River Campaign for the *National Audubon Society*.

Mark Muller, an environmental engineer with the *Institute for Agriculture and Trade Policy*, said the revelations about the Corps' study "confirms our suspicion that the navigation project was not going forward to benefit Midwest family farmers, but as a favor to special interests." Tim Sullivan, executive director of the *Mississippi River Basin Alliance*, said, "The barge industry and big agribusinesses contend that this expensive boondoggle would help Midwest farmers by increasing slightly the price paid for corn and soybeans that are barged down the Mississippi to foreign markets". "However, the only real winners would be a handful of international grain shippers and barge owners," he said. "The profits they would receive from an increase in this corporate subsidy won't trickle down to

farmers and rural communities. Spending more than \$1 billion in federal funds in the hope that a few pennies per bushel would return to farmers is an outrage."

Tim Searchinger, senior attorney for the *Environmental Defense Fund*, said, "I think it's satisfying. It's not surprising to us but it's still satisfying." "It's a heavy standard", Searchinger said, "to find a substantial likelihood of serious wrongdoing, and I think a small percentage of these complaints are actually referred for action. I also understand this is an unusually rapid referral." Jane McFarland, spokeswoman for the OSC agreed, saying that last year the OSC received 413 formal complaints, and found only 15 of them serious enough to refer to the head of a government department for action. The action in this case was taken quickly, McFarland said, after a whistle-blower brought the problems to the agency's attention on 2/4/00.

The barge industry, which is dominated by such agribusiness giants as *Cargill Inc.*, *ConAgra Corp.* and *Archer Daniels Midland Co.*, wants expanded locks and other costly navigation features to move barges faster



and give them bigger profits. But that could mean a doubling of barge traffic, and that alarms conservationists. They note that numerous studies by non-Corps biologists have shown that environmental quality of the Upper Mississippi and the Illinois rivers already have declined because of the lock and dams, which were built in the 1930s and 1940s. The dams keep the water at an unnaturally high level to allow for barge traffic, and this has severely disrupted the natural rise and fall of the rivers' water – a phenomenon that allows aquatic life to flourish. Also, barge traffic creates waves that push silt into fertile backwaters and wetlands along the two rivers, harming fish spawning areas and aquatic plants that provide food for waterfowl and other wildlife.

Once Army Secretary Cohen responds to

Sweeney's allegations, the OSC will give Dr. Sweeney a chance to react and then send its findings on to the President and Congress for any legislation deemed necessary. However, Congressmen such as Sen. Christopher "Kit" Bond, R(MO), strongly support the modernization project as critical for agriculture and industry. Bond also has defended the Corps' integrity against critics he says don't understand the Midwest and the importance of efficient river transportation. While saying he didn't want to judge the allegations under investigation, Bond said, "I remain adamant, however, that the issue of modernizing our locks and dams receive a full and fair public hearing."

Sen. Charles Grassley (R/IA) on 3/1/00 said he plans to have the independent General Accounting Office (GAO) examine Sweeney's allegations, as well as the official response that the Corps will provide. "Tainted government figures don't do anybody any good," said Grassley. "It erodes the taxpaying public's confidence in the federal government, hurts the Corps' credibility on Capitol Hill and even may jeopardize necessary navigational improvements to the Upper Mississippi." A long-time advocate for whistle-blowers, Grassley wants to assure that Sweeney's charges are taken seriously by the Defense Department. Furthermore, the Iowa senator plans to have the GAO weigh the original economic analysis with the changes made after Sweeney's release from the project. "The GAO can make an unbiased review that will guarantee Congress has all the unfiltered facts on the table," Grassley said.

Meanwhile, the Corps says it welcomes any independent review of the project, and says it will cooperate fully with appropriate authorities in addressing the issues. Prior to the allegations, the Corps' Headquarters staff said they had determined there was still a number of unanswered questions, and the Deputy Commander for Civil Works ordered an internal review. This review will include the economic data and assumptions as well as the economic model. To put the process in perspective, Corps officials say, no decision has been made on the study – it is premature to speculate on the outcome.

But Phillip Baumel, an *Iowa State University* economist, who has studied barge traffic for years, supports Sweeney's view. Baumel said in early March that demand for barge shipments wouldn't come close to the level needed to support the \$1-6 billion construction project that the Corps is considering. "Even with the Corps' grossly

overestimated benefits, they aren't warranted," he said. Further he said that a check of records showed that the Corps grossly overestimated the prospective rise in grain exports it uses to justify lock and dam work. In addition to inflating the financial pluses of the work, the Corps has failed to check alternatives, Baumel said. The cheapest would be to schedule barges much as jets are scheduled at airports rather than allowing the barges to arrive at the locks whenever they want, he said.

Edward Lotterman, formerly an economist at the *Federal Reserve Bank of Minneapolis*, suggested in a *St. Paul Pioneer Press* editorial that one option to solve this problem might be to create separate state and federal agencies to conduct cost-benefit and cost-effectiveness studies, rather than having them done by the agency that will carry out the project if approved. Lotterman said the federal GAO and Minnesota's Legislative Audit Commission are examples of agencies that maintain some degree of objectivity despite political pressures. Such an independent project evaluation body could be governed somewhat like the Federal Reserve System, with a board of directors appointed by the President and confirmed by the Senate, but with long enough terms of service and statutory autonomy to ensure insulation from political pressures.

Non-Corps biologists feel that the same kind of independent analysis should be done for the project's environmental studies. Having the Corps in charge of evaluating the environmental impacts of their own projects is like having the "fox guard the chicken coup", and this project is a case in point. How can an agency so bent on justifying the economics of a project be trusted to conduct unbiased and complete environmental analyses when they know the data being generated by the environmental studies will likely reduce the project's benefit/cost ratio?

As a case in point, Upper Mississippi River biologists have been trying to get the Corps to assess the systemwide impacts of navigation since the late 1970's when construction of the new \$1+ billion Lock and Dam 26 at Alton, IL was under study. Construction of that project was ultimately justified through a political compromise that resulted in implementation of the on-going, multi-million dollar Environmental Management Program (EMP). The EMP was designed to enhance the environment while addressing problem issues such as

navigation impacts. But since the Corps controls the EMP purse strings, they have effectively prevented it from conducting any substantive navigation impact studies. The Corps reasoned that since the EMP was not considered a mitigation program, that the navigation impacts work should be conducted under their own, separate "Navigation Study". If conducted under the EMP, the states and other agencies would have had more direct involvement in study design and implementation – apparently something the Corps didn't want, and to this date the Corps' "Navigation Study" has not been satisfactorily implemented because too few samples have been collected to make the work statistically reliable.

Further, environmental interests can't help but speculate that the sort of economic and environmental "shell game" that has purportedly occurred on this project has also occurred elsewhere in the country on numerous other Corps' projects. Projects that, in most cases, have drastically altered our rivers and destroyed millions of acres of valuable fisheries and wildlife habitat.

The questions remain: What can or will be done about this? Does Congress have the will to make appropriate changes, or are these "pork barrel" projects just too tempting to overcome their desire to bring home the "pork" to their respective districts? And finally, does the taxpayer and the public really care enough to demand changes, or has the enemy been identified, and is it really all of us? If the latter is the case, will Dr. Sweeney simply be discredited, lose his job, or be reassigned to meaningless work elsewhere? And if so, who in their right mind will step forward in the future (as Dr. Sweeney has) to challenge the system?

A former Congressman once said that anyone who steps forward with information as potentially serious as this, simply has to be believed. They are putting their very livelihood on the line, because right or wrong, their life will change. What could their motive be other than professional ethics and wanting the truth to be known?

At the moment (1) the Army Inspector General is reviewing the allegations of misconduct by senior Corps officials, (2) the National Academy of Sciences is conducting an independent review of the study methods, and (3) the Undersecretary of the Army is reviewing the Army's management of the Corps of Engineers. Meanwhile, the barge industry has responded that inland waterways provide a less polluting and more

economical method of transporting bulk commodities than the alternatives of rail or truck. They stress that our Nation's global competitiveness in agricultures depends on improving the navigation system, and they defend the process and economic assumptions surrounding the navigation study!

Extensive coverage of this entire issue, including complete texts of news accounts, the text of Dr. Sweeney's testimony, and the OSC's News Release can be found on the *Environmental Defense Funds's* Web Site at: <http://www.edf.org/programs/ecosystems/mississippi/>

Sources: Institute for Agriculture and Trade Policy; Izaak Walton League of America; Mississippi River Basin Alliance; Mississippi River Revival; National Audubon Society; National Wildlife Federation; Sierra Club; and Taxpayers for Common Sense, *News Release*, 2/14/00; Senator Charles Grassley, *Press Release*, 3/2/00; Philip Dine, *Post-Dispatch Washington Bureau*, 3/7/00; Perry Peeman, *The Des Moines Register*, 3/7/00; *St. Paul Pioneer Press*, 2/27/00; and U.S. House of Representatives, Water Resource Committee, *Press Release*, 3/22/00

Summary of Dr. Donald Sweeney's Affidavit

The following is a paraphrased summary of some of the detailed points made by Dr. Donald C. Sweeney II in his testimony to the U.S. Office of Special Council on 2/4/00 regarding the Upper Mississippi/Illinois River navigation lock extension economic study discussed in the previous article. A Complete text of Dr. Sweeney's affidavit is available at: <http://www.edf.org/programs/ecosystems/mississippi/>

Dr. Sweeney has been employed as a regional economist with the U.S. Army, Corps of Engineers' (Corps) St. Louis District since 1978. Over his 23-year career he received excellent annual performance evaluations, reflecting the quality of his work and it's approval by his superiors. During this period he also received numerous awards for public service, including awards for excellence in navigation system planning and awards for sustained superior performance. All went well for Sweeney until June 1998 when he reported the results of his economic analysis of a \$1-4 billion Upper Mississippi/Illinois

River lock extension project.

Sweeney was responsible for the economic analysis of the six year, more than \$50 million study investigating the feasibility of the proposed lock improvement project. He also served as the advisor to an “economics” panel created by General Phillip Anderson, Commander of the Mississippi River Division (Vicksburg, MS).

The original study schedule called for public release of the recommended lock rehabilitation plan in September 1998. However, that release was postponed when the benefit/cost analysis developed by Sweeney and his associates indicated that major, expensive, large-scale, structural changes to the navigation system were not warranted for the foreseeable future. Instead Sweeney’s report recommended that the only measures economically feasible were:

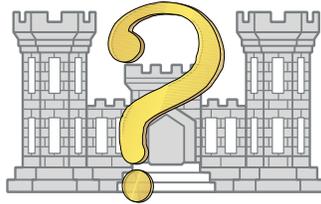
- those that the navigation industry itself could undertake (i.e. the industry could time their lockages and use “helper” boats to assist one another with lockages), and
- some relatively inexpensive small-scale Federal measures such as small modifications to the existing locks.

These results apparently infuriated navigation industry interests and Sweeney’s superiors, who wanted a favorable analysis for immediate construction of the new locks. As a result, in addition to postponing the scheduled release date for the recommended plan, Sweeney’s panel of economists largely ceased to function, he was removed from responsibility for the study’s economic work products, and another Corps economist was assigned responsibility for the work. Then ten months later, in July 1999, the Corps held a series of public workshops and announced that a “new” benefit/cost analysis showed that immediate, expensive, major structural changes to the navigation system (essentially doubling the length of seven system locks) were justified. Just the opposite of what Sweeney’s panel had recommended. Sweeney’s affidavit describes how the benefit/cost analysis developed by the team he supervised was intentionally and deliberately altered by his superiors.

Sweeney said these changed recommendations came as a direct result of instructions from top Corps officials who explicitly instructed the new personnel in charge of the study not to produce their best unbiased analysis, or for that matter, any analysis they actually believed to be valid or in compliance with Corps regulations. Instead

he said they were instructed to produce an “analysis” that immediately “justified” large-scale, expensive structural improvements.

At first, Sweeney said, the effort to alter the study attempted to find a project justification that was at least plausible. But he said even this attempt was contrary to Corps’ regulations (ER 1105-2-100) which require that planning studies evaluate all Federal water resource projects based on the most likely future project parameters. Eventually, Sweeney said even the self-serving standard of plausibility was abandoned when it also failed to support the directed study results. At that point, he said, key inputs to the benefit/cost analysis were arbitrarily altered by top Corps management officials to finally produce a seemingly favorable benefit/cost analysis for the project.



Sweeney said these altered benefit/cost numbers had no meaningful professional analysis backing them up, and were at least in many cases based on clearly erroneous rationales provided or directed by senior management. He said further that top Corps officials directed economists and engineers to:

- ignore most of the potential for towboats to help each other move through locks more rapidly during periods of high congestion, a practice that is currently used and that can dramatically reduce congestion at minimal increased public cost;
- alter a key term (the N value) used in estimating the real economic value of reducing barge congestion;
- alter the analysis to state that immediate lock extensions would save millions of dollars that would otherwise have to be spent simply rehabilitating the existing locks; and
- arbitrarily reduce the estimated construction costs of extending the length of existing locks despite the fact that the original construction cost estimates were approved by an Independent Technical Review Committee (ITRC) composed of Corps personnel and other experts.

The first three changes (noted above),

separately and together, Sweeney said, resulted in dramatically increased estimates for the economic benefits of lock extensions, and the fourth significantly reduced the estimated cost of the lock extensions. In the final analysis, Sweeney said, it appears that all four changes were necessary to produce a seemingly favorable benefit/cost ratio for immediately extending the length of existing locks.

Sweeney testified that under the Federal statutes, regulations, and policies that apply to the planning of all Corps’ water resource projects, the Federal objective is “to contribute to the national economic development consistent with protecting the Nation’s environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements.” This means that for the Corps to recommend a project its estimated national economic development benefits must exceed the estimated costs of building and operating the project, and the project must be consistent with protecting the nation’s environment.

However, none of the benefit/cost analyses described in Sweeney’s affidavit incorporated most environmental costs. The study team had early-on decided to separate the environmental analysis of the site-specific impact of extending the locks, which could immediately displace some wildlife habitat, from the so-called systemwide impacts of the overall project. Systemwide impacts involved such effects as fish mortality from increased barge traffic. Sweeney says these system costs, which have been estimated to be far greater than the site-specific costs, must be added to the financial costs of any project, thus reducing the net economic benefits even further.

At a January 2000 Navigation Environmental Coordinating Committee meeting, Sweeney said, Corps officials presented what was then described as the preliminary estimate of systemwide environmental costs for the “construction alternative” that involves extending the seven locks. That estimate put systemic environmental costs at \$10.5 million per year – a figure considered by environmental interests to be low because of the locations where data was collected, the number of samples collected, and the manner in which the data was being extrapolated systemwide. Sweeney said that the “new” Corps’ benefit/cost analysis indicated that the total net economic benefits for the construction alternative, not counting the environmental costs, is \$11.026

million. In other words, at least as of January 2000, the total average annual economic benefits for extension of the seven locks was estimated to be only \$526,000 – if one accepts the questionably low projections for systemwide environmental impacts.

Sweeney said further that:

- top Corps officials, including Maj. General Fuhrman, Maj. General Anderson, and Col. Mudd, repeatedly rejected the advice of a broad range of Corps economists, and continually attempted to transfer management, production and review of economic products in an effort to find economists who could or would justify large-scale improvements;
- the model developed by Sweeney’s study team was widely accepted by Corps’ economists; and
- because of concerns that he (Sweeney) was “out to shutdown the Corps,” General Anderson established a new panel to completely review again the economic products and to oversee the future production of economic products.

Sweeney said that public presentations or release of the preliminary economic analysis, scheduled as early as April 1998, were repeatedly postponed when the economic analyses did not support large-scale construction measures, and that deliberate efforts were made to distort the analyses of rehabilitation cost savings. He said the idea for changing this analysis was introduced at a meeting with the industry in May 1999 by Ron Keeney, the Chief of Programs and Project management in the Corps’ Huntington (WV) District. Keeney acknowledged that analyses to that date had shown no savings, but noted that his Division frequently finds such savings to help justify new projects. Sweeney said, new information describing such savings was then provided within days, but that no detailed documentation of the new analysis has ever been provided to the study team leaders or to the public, and it has undergone no independent technical review.

Sweeney said that the public explanation of the changed benefit/cost analysis (i.e. that the cost estimates of lock extensions included rehabilitation costs) contradicts information provided to him during his economic analysis, which included extensive engineering and economic analyses indicating that no major rehabilitation for major components would be required until at least 2033. However, the public explanation stated that

rehabilitation would be required on many locks in 2015 based on the definition of rehabilitation as something that occurs every 25 years.

According to Sweeney, “The evidence also shows that in the original economic analysis, the industry would and could use self-help much of the time to reduce the congestion costs even without any new construction”. However, the “new” Corps analyses (conducted in 1999) restricted the economic model to allow self-help only 5% of the time. Sweeney says further that, “No documentation of any analysis has ever been made to support this arbitrary restriction.”

Further he said, “The evidence also shows that the original costs for the expanded locks included a 35% contingency cost because of the innovative nature of construction techniques. The Independent Technical Review of the work products of the engineering work group required that the contingency cost estimate be set at this level because of the untried new construction techniques and engineering plan. The evidence shows that this contingency cost estimate was arbitrarily lowered without any documented or independently reviewed additional analysis within sixteen days following a meeting with navigation industry representatives on May 12, 1999”.

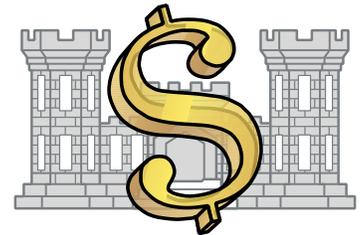
Sweeney said the evidence also shows that despite all these changes, and despite the use of projected increases in traffic demand that real world experience has shown to be greatly overestimated so far, the total net economic benefits are vanishingly small. For an alternative that involves immediate extension of seven locks, they amount to only around \$500,000 per year. Other alternatives may have slightly higher or lower numbers. This means that if any of the directed changes had not been made [i.e. changes to the elasticity of demand for barging (the N values); changes to the rehabilitation cost savings; changes to the self-help analysis; changes to the contingency costs], expansion of the locks would not have a positive benefit/cost analysis for the foreseeable future.

He concludes that even with all these changes, the alternative that would maximize net economic benefits would still be to postpone the start of lock expansion until at least 2011. That alternative would also allow experience to verify if traffic is in fact growing sufficient to justify lock extension at that time.

Corps’ Generals Push for Huge Program Expansion

If the previous two articles aren’t enough to cause one to question the integrity of the Nation’s top public construction agency, then the news that military commanders of the U.S. Army, Corps of Engineers (Corps) have launched a behind-the-scenes campaign to boost the agency’s \$4 billion civil works budget by more than 50% should be. Especially at a time when the Clinton administration is publicly questioning the agency’s traditional agenda of major water projects.

The Corps, an unusual Pentagon-based agency that has built more than \$100 billion worth of locks, dams and other water projects, recently developed a remarkably detailed “*Program Growth Initiative*” in a series of internal meetings and documents. In a slide presentation delivered to Corps officials nationwide, the program sets a goal of an unprecedented \$6.2 billion budget by 2005, with specific financial targets for every one of the agency’s various activities and divisions.



The slide show apparently was developed and distributed by military officials without the knowledge of the civilian assistant Army secretary, Joseph Westphal, who is supposed to control the agency’s civil works policy. When questioned by reporters from *The Washington Post* Westphal said, “Oh my God. My God. I have no idea what you’re talking about. I can’t believe this.” Westphal said after he was informed about the *Program Growth Initiative* during an interview, “I don’t think we should be in the business of searching for work. No way. We’ve got enough on our plate.”

Environmentalists and taxpayer activists charged that the Clinton administration’s appointees have essentially lost control of this hybrid agency, which is headed by civilians but mostly managed by military officers. Over the years, the Corps has expanded from a ragtag engineering company in George Washington’s army to a massive public works bureaucracy with

37,000 employees – three times the payroll of *America Online* – but the *Program Growth Initiative* is the strongest evidence to date of a concerted military effort to “grow” the agency, critics say. “You know, we always imagined what the Corps did in those smoke-filled rooms,” said Steve Ellis, director of water resources for *Taxpayers for Common Sense*. “Now the curtain is getting pulled back, and it’s exactly what we suspected, but even worse.”

The top military officials of the Corps involved are Lt. Gen. Joe Ballard, the Corps commander; Maj. Gen. Russell Fuhrman, the deputy commander; and Maj. Gen. Hans Van Winkle, the director of public works. The growth initiative presentation justifies the growth strategy by claiming an increased demand for Corps projects. It cites major environmental initiatives in the Everglades and the Upper Mississippi as well as a growing need for lock renovations on America’s troubled 11,000-mile system of navigable waterways. Corps generals have said publicly that with the federal budget in surplus, the nation needs to invest in upgrading its aging water transportation infrastructure, just as it is trying to improve its highways and airports.

But the presentation goes further than that, suggesting that expansion is the top priority for the agency regardless of need. It includes a “Program Growth” heading on every slide, and its subheadings are equally unsubtle. For example, the presentation cites certain “impediments to growth” – including the laws governing the agency’s conduct and the departure of some powerful friends on Capitol Hill – and calls for a “specifically targeted communications plan” to bring Congress and the Clinton administration on board.

The slide presentation does not identify the plan’s “Target Growth Areas,” explaining only that they would vary by division. But it does provide line-by-line, year-by-year budget targets for all eight Corps divisions plus headquarters, as well as final 2005 goals for the agency’s seven major program activities.

In recent weeks, Corps officials have insisted that they would never bias a study to support construction, that their duty is objective analysis. But the presentation’s justification of doubling the study budget proposes a “program with targeted studies that should lead to target construction activities with continuation of historical success rates.” “That’s how we measure

success around here – anything that gives us more work to do,” said one agency official who has seen the presentation. “The watchword is grow.” The complete slide show can be seen on the EDF Web Site at <http://www.edf.org/programs/ecosystems/mississippi>

Source: Michael Grunwald, *Washington Post*, 2/24/00

Wildlife Habitat and Flood Control

The concept of opening up floodplains and creating wildlife habitat that doubles as space for floodwater storage and conveyance and thus flood control, advocated by *River Crossings* for years, finally seems to be catching on with the U.S. Army Corps of Engineers (Corps).

Flooding has long been a problem in the vast Illinois bottomland of St. Clair, Madison and Monroe counties, in the East St. Louis area, but the Corps has never been able to win funding to help alleviate it. Now, administrators in the agency’s St. Louis District office have decided they have been taking the wrong approach. Instead of trying to sell the project as a flood-control program, they will now try to seek funding based on its environmental benefits. The reason is that the extensive benefit/cost analysis required to get federal flood-control money makes it difficult to win funding in such a sparsely developed area, said Corps project manager Deborah Roush.

“You have to have a lot of high-value structures that are getting damaged,” she said. “The area we’re looking at has a lot of agricultural land but it also has a lot of economically depressed areas that have

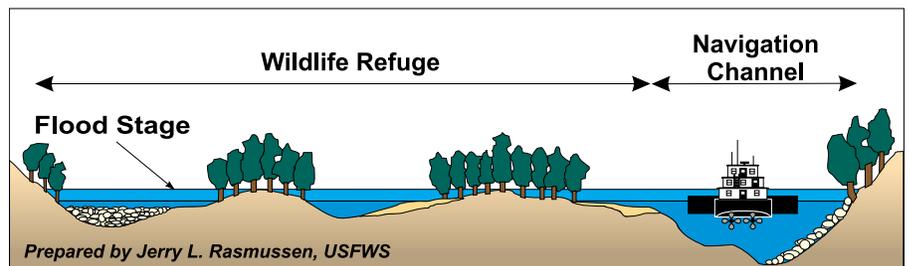
become more depressed as a result of the flooding.” Wildlife habitat restoration projects are judged by how much benefit they would bring to an area, Roush said. Corps officials hope it will be easier to obtain money for a project to restore hundreds of acres of land in an area rich with pre-settlement European and Native American history.

The proposed \$150-200 million project would turn hundreds of acres of agricultural and other sparsely populated land into wetlands, forests and prairies suitable for native Illinois wildlife. As it happens, such lands are also perfect holding pens for overflowing rivers and the storm-water runoff that pours into the American Bottoms region in the Illinois suburbs of St. Louis from the higher and more developed areas to the east.

Roush said she has not yet received any formal opposition to the plan. But Kevin Rund, director of local government for the *Illinois Farm Bureau*, said farmers are unlikely to be very receptive to the idea. Not only do they fear that the government would undervalue their land in a buyout, they generally reject proposals to separate them from their land. “Folks, as you might imagine, being so closely attached to the land, are very sensitive to property rights and are very sensitive to government or any other sector of society coming in and saying, ‘We’ve got a problem, we’re going to take your land,’” Rund said.

The Corps expects to continue studying the proposal until at least next fall. If funding is approved, Roush said design work could begin as soon as next winter.

Source: *Associated Press Newswires*, 2/4/00



Floodplain fish and wildlife refuges provide significant space for floodwater storage and conveyance. Floodwaters are allowed to spread out across the floodplain, more naturally, letting nearby developed areas breathe a sigh of relief as flood heights and pressures on their levees are reduced. During periods of lower water, these areas provide prime recreational areas for the same folks who received the flood control benefits. Flooding disaster payments are reduced, and everyone, including our precious fish and wildlife resources benefit.

Spatial Scale and Fish Response

The U.S. Geological Survey, Upper Midwest Environmental Sciences Center in cooperation with the natural resource agencies of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, is examining the spatial scale of annual variations in fish populations in the Upper Mississippi River (UMR) system. The project, which is funded through the Environmental Management Program (EMP) via the U.S. Army Corps of Engineers, Mississippi Valley Division, will compare catch-per-unit-effort of several fish species among UMR pools.

This summer and fall, fisheries crews from field stations in Minnesota, Iowa, and Missouri will use standardized, active electrofishing gears to sample fish communities in multiple aquatic habitats of the UMR. The Lake City, MN Long Term Resource Monitoring Program (LTRMP) field station, assigned to sample Pool 4, will expand their sampling to include pools 3 and 5. The Bellevue, IA LTRMP station, assigned to sample Pool 13, will expand their sampling to include pools 12 and 14. The Open River LTRMP station at Cape Girardeau, MO, assigned to sample the Cape Girardeau reach, will expand their sampling to include UMR reaches extending from the confluence of the Ohio River upstream to the confluence of the Kaskaskia River. In years 2001 and 2002, the study will be further expanded to involve LTRMP field stations in Wisconsin and Illinois.

Dr. Todd Koel and Randy Burkhardt, leaders of the LTRMP Fish Component, said this research will increase the spatial coverage of LTRMP fisheries sampling to the equivalent of 18 UMR navigation pools over the next 3 years. "Inter-annual variation of fish populations will be truly assessed at the systemic scale", Koel said. "The research will allow prediction of fish response to UMR system management alternatives such as water level manipulations, and it will help to define the spatial coverage of sampling required to accurately measure key parameters of the river's fish populations and communities". The LTRMP has 10 years of fisheries data from six "key" trend analysis areas. The degree to which these areas represent the remainder of the UMR in terms of fisheries will be critically evaluated in this study.

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Watershed Councils Criticized

Watershed councils formed over the past decade to help restore Northwest salmon habitat have been only marginally effective, according to a recent study by Virginia-based *Trout Unlimited* and Oregon-based *Pacific Rivers Council* (PRC). The evaluation of 14 councils said they have been unable to reverse the deterioration of salmon streams because they lack proper scope, expertise and funding. The report says that, "While doing a number of things well, councils are not a universal cure for all that ails Northwest watersheds and salmon." Aquatic biologist Charles Huntington and water consultant Sari Sommarstrom wrote the report.

Hundreds of watershed councils were established in California, Oregon and Washington over the past decade, funded by the government and staffed by volunteers, to fix salmon streams damaged by development. But the report found the councils had no control over adverse impacts upstream and downstream such as logging, grazing and irrigation. David Bayles of the PRC said, "We think streams need to be protected the length of the tributary."

The report also said the councils lack the technical knowledge to assess what the streams really need and the funding to do more than "shore up" isolated areas of salmon habitat. The report recommends expanding states' legal protections over entire streams and getting the councils to focus more on restoring highest-priority areas like spawning grounds.

Sources: Jim Carlton, *Wall Street Journal*, 1/28/00; and *Greenwire*, A National Journal Daily Briefing, 1/28/00

Pfiesteria Kills Lab Fish

A researcher from Virginia's *Old Dominion University* said on 3/10/00 that the one-celled organism blamed for sickening people and killing 30,000 fish on Maryland's Eastern Shore had killed fish in his laboratory experiments. The announcement by biologist Harold Marshall, at a conference in Annapolis of scientists who study *Pfiesteria piscicida*, bolsters the conventional understanding that the microbe was the main cause of the 1997 fish kills in Maryland's Eastern Shore waters.

Marshall's experiment involved exposing fish to *Pfiesteria*-laced water and waiting to see what happened. He said the result of his experiment "lends strong credibility to the position that *Pfiesteria* is linked to fish deaths in the wild." Marshall obtained water infected with *Pfiesteria* from North Carolina researcher JoAnn Burkholder and put it with fish in three tanks. Fish died in two of the tanks. He took water from a tank with dying fish and put it into three other tanks. Fish died in all three. He repeated the process, and fish died in two of three additional tanks. Marshall said it was unclear why the *Pfiesteria* brew did not kill fish in all tanks.

After Maryland's 1997 *Pfiesteria* eruptions, doctors determined that about a dozen people who had come into contact with Eastern Shore rivers laced with toxic forms of *Pfiesteria* had become sick, experiencing forgetfulness, nausea and other symptoms. Another person fell ill last year after being exposed to the Eastern Shore's Back Creek during a *Pfiesteria* eruption, officials said.

Some scientists have asserted that several fungi may have played a greater role than *Pfiesteria* in killing the fish. Skeptics of the fungus theory have worried that it could undermine support for policies aimed at suppressing *Pfiesteria*. After the 1997 eruptions of the microbe, Maryland passed laws restricting farmers' use of fertilizers that may spur *Pfiesteria*'s growth when agricultural runoff ends up in rivers and the Chesapeake Bay. Rob Magnien, head of Maryland's *Pfiesteria* study team, said many people seized on the findings about fungi and concluded that "therefore this *Pfiesteria* science is a bunch of bunk."

Vicky S. Blazer of the U.S. Geological Survey and Wolfgang Vogelbein of the *Virginia Institute of Marine Science* support the fungus theory saying that *Aphanomyces invadans*, a fungus linked to fish deaths in Asia, was most likely the culprit, though *Pfiesteria* may have provided a vehicle for the fungus to get into the fish. Vogelbein says that while *Pfiesteria* cannot be ruled out, it did not cause the lesions found on fish in the Pocomoke River.

However, scientists from *Virginia Commonwealth University* suggest that *Kudoa*, a parasite common to fish ponds, may have been responsible for the kills. The researchers have linked *Kudoa* to a fish kill in the James River even though there was evidence of *Pfiesteria*. But Magnien, says while *Pfiesteria* may not have caused

the lesions, “there is not strong evidence for any of the other theories. We’ve got to look at the full picture.”

The suggestion that *Aphanomyces invadans* was the culprit, with its connection to Asia, could create a concern among biologists in the Mississippi River Basin. The connection between *Aphanomyces invadans* and Asian fish kills, coupled with the presence of expanding populations of Asian carp in the Mississippi River Basin could become a major concern for the Basin’s fish populations. It’s not a very long jump to think that Asian carps in the Mississippi River Basin also may be carrying the toxic fungus and spreading it to our native fishes.

Sources: Joel McCord, *Baltimore Sun*, 2/7/00; and Todd Shields, *Washington Post*, 3/10/00

Miscellaneous River Issues

Upper Arkansas River (KS) Cleanup

Needed - Water officials say a 60-mile stretch of the Arkansas River in western Kansas “badly” needs cleanup to avoid a potential “laxative effect” on livestock and humans. The Upper Arkansas River Basin Advisory Board reported high levels of sulfates, ammonia and fecal coliform in the stretch of the river between Coolidge, and Garden City, KS. Susan Stover of the Kansas Water Office said too much sulfate can produce a laxative effect on humans and livestock and decrease crop yields. Margaret Fast, an environmental scientist with the Kansas Department of Health and Environment, said the cause of the problem could be local ditch irrigators who divert Arkansas River water to their fields across gypsum soil, which leaches sulfate into the water when it dissolves. The contaminants could also be coming from Colorado, Fast said. The Kansas Water Authority is now considering the advisory board’s recommendation to make cleanup of the three contaminants a priority. If approved, the measures could be included in the state’s water plan this summer. Sources: *AP/Topeka Capital Journal*, 1/31/00; and *Greenwire*, *The Environmental News Daily*, 2/2/00

Iowa Environmental Awareness Program

- Iowa launched an “unprecedented” effort in mid January to increase environmental awareness. The *Iowa Earth Year 2000* initiative is intended to encourage every Iowa town to organize at least one project in honor of the 30th anniversary of Earth Day

on April 22. Projects include planting buffer strips, monitoring water quality, restoring prairies and promoting cleanup days. Nearly 1,000 people, including Vice President Al Gore, environmental lawyer Robert F. Kennedy Jr. and actor Ed Begley Jr., participated in the rally and project-leadership training session. Representatives from 96 of Iowa’s 99 counties also attended. Paul Johnson, director of the Iowa Department of Natural Resources, said the gathering was probably the largest of its kind in the state’s history. Meanwhile, in early January Gov. Tom Vilsack (D) unveiled a \$13.86 million water quality initiative targeted at 159 polluted state waterways. Vilsack hopes to encourage more farmers to create buffers around their fields to reduce runoff, which Vilsack said could make the state eligible for as much as \$65 million in federal funding. Sources: Perry Beeman, *Des Moines Register*, 1/22/99; Mike Glover, *AP*, 1/4/00; and *Greenwire*, *A National Journal Daily Briefing*, 1/27 and 2/8/00

Reverse Drainage Wetland - A reclaimed farm field in Chesapeake, VA, is now wet enough to be considered a nontidal wetland and it is “teeming with wildlife.” The effort is part of the *Virginia Wetlands Restoration Trust Fund*, a joint project set up by the *Nature Conservancy* and the Army Corps of Engineers in 1995. Reclaiming the farm field in Chesapeake changes “100 years of land-use history” by creating a forested wetland to protect black bears, foxes, migratory songbirds and frogs. The *Nature Conservancy* hired *Davis Environmental Consultants Inc.* to fill in ditches that drained water off the property for agriculture. Rainwater now stays on the land longer, keeping it moist and muddy for wildlife habitat. So far, the trust has purchased 1,500 acres. And with \$2 million left in the fund, it is considering several other acquisitions. Sources: Scott Harper, *Norfolk Virginian-Pilot*, 3/14/00 and *Greenwire*, *A National Journal Daily Briefing*, 3/20/00

Pollution Immunity Bill in Oklahoma - A bill before the Oklahoma House would give farmers and industry immunity from prosecution as long as they have a pollution control plan and keep records. State Rep. Raymond McCarter (D) said he proposed the bill to protect Oklahoma’s waterways while giving farmers and ranchers “a certain amount of legal protection.” Terri Savage, a member of the Department of Environmental Quality’s board of directors said the bill “guts the current water quality laws.” Keith

Smith of the *Oklahoma Sierra Club* said, “This is absolutely the corporate polluters’ dream bill.” The *Farm Bureau of Oklahoma* (FBO) says producers need to know that if they’re doing everything possible “the state - rather than being punitive - needs to encourage them to find the best available technology and use it.” The bill was written by the FBO. The bill would also exempt municipalities and industry from sanctions as long as they keep records and conduct evaluations to determine the maximum amount of pollutants they can discharge into waterways “without exceeding water quality standards.” State Rep. Mike Thornbrugh (R), who is concerned about the effect on Tulsa’s water supply, said the bill “doesn’t pass the sniff test.” Sources: Mick Hinton, *Oklahoma City Daily Oklahoman*, 1/26/00; and *Greenwire*, *A National Journal Daily Briefing*, 1/27/00

Appalachian Logging Controversy

- A group of scientists says that preserving 750,000 acres of roadless areas in Southern Appalachia national forests as part of President Clinton’s preservation proposal will not harm declining species despite warnings from some wildlife officials that restricting logging could diminish habitat. Scientists from GA, AL, TN, VA and NC sent an open letter on 12/17/00 to the public and the U.S. Forest Service saying there is no evidence that a lack of logging can cause species such as the golden-winged warbler and the eastern towhee to decline. But there is evidence that too much logging can harm species, they said. The *Southern Appalachian Forest Coalition* released the letter on 12/20/99 in response to complaints from state wildlife directors in AL, GA, SC, TN and VA over Clinton’s proposal to protect 40 million acres of national forest land from roadbuilding, saying the move could harm wildlife species that rely on newly cut, young forest for habitat. Sources: David Pace, *AP*, 12/22/00; and *Greenwire*, *A National Journal Daily Briefing*, 12/22/99

Stream Size and Hypoxia

- Stream size is a major factor in the amount of nitrogen reaching the Gulf of Mexico, according to a recent U.S. Geological Survey study. The study supports previous findings that most of the nitrogen pollution flowing into the gulf from the Mississippi River originates far upstream in the upper Midwest and Ohio Valley states. But it also found that within these regions there are large differences in the percentage of nitrogen reaching the gulf, depending on the relationship of nitrogen sources to streams of different sizes in the

watershed. The study said the rates of nitrogen reaching the gulf from upstream areas near large rivers are much higher than those in areas near small streams. A color map of the percentage of stream nitrogen reaching the Gulf of Mexico from the Mississippi drainage basin can be found online at <http://www.usgs.gov/themes/nature.html>. Source: *Greenwire*, The Environmental News Daily, 2/18/00

Montana Public Opinion - Montana voters consider the protection of clean air and water as important as education, health care and taxes, according to a poll released on 3/2/00. The telephone poll of 600 voters was conducted in January for the *League of Conservation Voters* and the *Montana Conservation Voters Education*. Source: *Greenwire*, *A National Journal Daily Briefing*, 3/6/00

Classroom Environmental Education - Businesses and environmental groups are now spending money to influence children, and some say the material they generate is "incomplete, biased or just plain wrong." "Teachers are finding themselves at the center of the battleground for kids' minds," said Larry Beutler, editor of *Clearing*, a journal for environmental educators. Environmental education began in the early 1990s as "nature studies," but has since become more controversial as issues like toxic waste and endangered wildlife enter the public debate. Since 1990, 15 states have passed laws requiring environmental instruction in schools. And in a nationwide survey last April for the *North American Association for Environmental Education* and the *Environmental Literacy Council*, 62% of teachers said they offer some type of environmental instruction. The main topics are recycling, endangered species and energy conservation. But most educators are "ill-prepared" to teach students about such issues. Last year Congress appropriated \$7.2 million for the U.S. EPA's Office of Environmental Education, of which 25% is mandated for teacher training. Sources: Michelle Cole, *Portland Oregonian*, 2/7 and 2/8/00; and *Greenwire*, *A National Journal Daily Briefing*, 2/9/00

Ohio Pollution Enforcement Criticized - The U.S. EPA is investigating claims that Ohio has failed to enforce federal environmental laws, the Ohio EPA confirmed on 1/28/00. U.S. EPA deputy regional counsel Bertram C. Frey said the review of Ohio's water, air and hazardous-waste pollution programs is the most comprehensive evaluation of a state's

activities in the agency's history. Environmental groups have accused the state of not adequately enforcing the federal Clean Water, Clean Air and Resource Conservation and Recovery acts. The groups – *Ohio Citizen Action*, *Ohio Public Interest Research Group*, *Rivers Unlimited* and *Sierra Club* – want the government to revoke Ohio's authority to administer the programs and take over enforcement. The federal agency has never taken away a state program altogether. Frey said, "We want Ohio to have these authorities and enforce them. But we must give the petitions a fair review." Frey said the review will take several months and will likely include public meetings on the final report. The investigation comes as the *Environmental Working Group* released a report saying 14 of 22 major Ohio factories in a U.S. EPA database have violated the Clean Water Act at least once in the past two years, but only one has been fined. A report released by the group in May said 13 of 31 factories violated federal clean air laws at least once during a two-year period. Ohio EPA spokeswoman Heidi Griesmer did not challenge the number of violations reported, but said nine of the 14 factories cited have either been fined or are being "pursued for enforcement." Griesmer said the state will cooperate in the federal investigation. Sources: Randall Edwards, *Columbus Dispatch*, 1/31/00; and *Greenwire*, *A National Journal Daily Briefing*, 1/31/00

Ohio Mussel Suit - Ohio wildlife officials want the Army Corps of Engineers (Corps) to shell out \$258,507 to compensate for smothering thousands of freshwater mussels in the Muskingum River. A contractor hired by the Corps dumped dredge spoil – riverbed mud and muck – in the Muskingum River in October 1998, killing as many as 50,000 mussels, including several endangered species, according to a claim filed in February by Attorney General Betty D. Montgomery on behalf of the Wildlife Division. The contractor was dredging the Devola Lock chamber, part of the lock and dam system along the Muskingum River and the first lock upstream from the Muskingum's confluence with the Ohio River at Marietta. The spoil covered more than 650 feet of the riverbed in an area widely known among aquatic biologists, said Tom Watters, senior research associate for the Ohio Biological Survey. "In terms of number and diversity, it's the very best in the state," Watters said. "Immediately below the dam, the substrate is beautiful. It's all sand and gravel, and mussels are

everywhere." Watters surveyed the area in 1993 and found 42 mussels for each square meter of riverbed. About 20% were state or federal endangered species. Watters surveyed the area again after the dredging. He had to guess at how many were killed, he said, because the muck at the bottom of the river was too thick. "We're not talking a couple of inches," he said. "We're talking several feet." The Corps of engineers had little to say about the claim. "The Corps takes all issues concerning endangered species very seriously," Corps spokeswoman Kathy Rea said. "We are currently investigating, to see if there is any merit to the claim." The Corps has six months to respond. If the state is not satisfied, it can file a lawsuit in federal court. Source: Randall Edwards, *The Columbus Dispatch*, 3/24/00

Acid Rain Lawsuit - New Hampshire is joining the U.S. EPA's lawsuit to force several Midwestern power plants to reduce emissions. Gov. Jeanne Shaheen (D) and Attorney General Philip McLaughlin said on 2/7 the state will file a lawsuit against the coal-burning plants for violating the federal Clean Air Act. New Hampshire officials say mercury, sulfur dioxide and other emissions from the plants blow to New Hampshire and fall on fragile ecological areas as acid rain, snow or fog. Robert Varney, commissioner of the state Department of Environmental Services, said New Hampshire plants have reduced emissions by up to 75% over the last five years, but reductions are needed in other states too. Varney said, "[The lawsuit] does not ask for more regulation on upwind power plants, just that they abide by the rules that already exist when upgrading or constructing their facilities." Sources: AP/*Boston Globe online*, 2/8/00; and *Greenwire*, *A National Journal Daily Briefing*, 2/9/00

KY Mining Problems - An eastern Kentucky mining company was recently cited for a "litany" of violations in a case environmentalists say spotlights problems with the industry throughout the region. *Piston Coal Co.'s* mine in Perry and Breathitt counties was cited in January for violations that include ground and water contamination, operating an open dump on a reclamation site and burying a trailer there. Company officials say not all the citations are warranted, but environmentalists contend that such activities have been going on in the region for a long time, and usually aren't caught by the state. Raleigh Adams of *Kentuckians for the Commonwealth* said "We're trying to clean this area up, but this

just shows how a lot of companies aren't really interested in the area." State regulators say such violations are on the decline and the industry says there has been "significant improvement" over the past decade. David Gooch, president of *Coal Operators and Associates Inc.* said many companies have taken "big steps" to improve their records. But Tim Bush, a former *Piston* employee, says the company showed "little concern" for environmental problems. Bush said, "All they wanted to do was cover it up and get out of here." Sources: Lance Williams, *Lexington Herald-Leader*, 2/7/00; and *Greenwire*, A National Journal Daily Briefing, 2/9/00

White River (IN) Inquiry - Indiana officials have received more than 100 tips about the White River fish kill since a \$10,000 reward was announced, but they don't expect to pay out the money any time soon. The *Turn in a Poacher/Polluter (TIP) Fund* was established under the authority of a nonprofit corporation. The state announced its \$5,000 share of the reward money a few weeks ago. *Indianapolis Water Co.* contributed the other \$5,000. Sgt. Dean Shadley said many of the tips they have received are "pretty sketchy." State officials said they would probably announce when a payment is made, but would not necessarily identify the recipients. Meanwhile, Indiana's environmental agency has hired a "tough-as-nails" attorney to investigate the White River fish kill. Gov. Frank O'Bannon (D) signed off on the decision to hire former Justice Department attorney Linda Pence in early February, saying the hire was necessary because "the crisis is that big." A foamy discharge that came from a sewage treatment plant in Anderson, IN, in December 1999 is believed to have been caused by waste waters released into city sewers from *Guide Corp.*, an auto parts manufacturer. The company's lawyers say there is no direct evidence linking *Guide* to the fish kill. Eighty-eight tons of fish in the White River died in "one of the state's worst environmental disasters." State officials said private lawyers are frequently hired to represent state agencies but couldn't provide an example of a private law firm being hired to investigate an environmental case for the state. Pence will coordinate any potential enforcement action for the state departments of Environmental Management and Natural Resources. And although the state has yet to identify the "lethal pollutant" released into the river, Pence said, "I was hired to continue this investigation and make sure we do it as quickly as possible, no stone unturned."

But on 3/13/00, the *Indianapolis Star* found it necessary to file a lawsuit against two state agencies that have denied the paper's request to review subpoenas issued during the fish kill investigation. Indiana officials said in early January that the spill had not caused the White River to become "dead or sterile." Also officials said none of the 57 samples taken from wells along the river showed signs of carbon disulfide, which was suspected of killing the fish. Although it may be a few months until the long-term effects of the fish kill are known, officials are "cautiously optimistic" that the river will recover. Mussels, insects and other aquatic creatures that fish feed on have been found alive in the river, which bodes well for the river's future. Sources: Kyle Niederpruem, *Indianapolis Star*, 2/2/00; Niederpruem/Harris, *Indianapolis Star*, 2/2/00; Chris O'Malley, *Indianapolis Star*, 1/3/00; *Indianapolis Star*, 3/14/00; and *Greenwire*, The Environmental News Daily, 1/2, 2/1, 2/2 and 3/20/00

Michigan Zebra Mussel Infestations - A study released on 2/18 added 19 lakes to the 100 already identified as infested with non-native zebra mussels, which arrived in the Great Lakes 12 years ago. The *Michigan State University Extension Sea Grant* program completed the study in December 1999. Sources: Sally Farhat, *Detroit Free Press*, 2/23/00; and *Greenwire*, The Environmental News Daily, 2/24/00

Michigan Ballast Water Bill - State Sen. Ken Sikkema, R/Grandville on 1/26/00 introduced a bill requiring that ballast water acquired from outside Michigan waters be sterilized before a ship can enter Michigan's Great Lakes waters. The bill would also prohibit ships from discharging ballast into such waters without a permit from the Michigan Department of Environmental Quality (DEQ), which would be required to make inspections. But DEQ Director Russ Harding did not embrace the legislation, instead he is rebelling against anything that he said would "threaten a shutdown of Great Lakes shipping." John Jamian, executive director of the *Detroit/Wayne County Port Authority*, advanced dire predictions that the bill would chase ships away from Great Lakes ports. But Sikkema, a big player in Lansing and not one to be ignored, was informed by Harding in mid March that he has formed a work group on the issue dedicated "to get ballast water introductions of exotic species stopped within 12 months." Source: George Weeks, *The Detroit News*, 3/26/00

Alabama Wetlands Restoration

Recommended - During a visit in early March to southern Alabama wetlands, Interior Secretary Bruce Babbitt pledged restoration help for the Mobile-Tensaw Delta. Babbitt called on the state to buy sensitive land in the Delta and recommended more aggressive programs to prevent unregulated pollutants like farm fertilizers from entering the watershed. Sources: *AP/Birmingham News online*, 3/7/00 and *Greenwire*, The Environmental News Daily, 3/8/00

Minnesota Ag Runoff Laws Weakened

The Minnesota Pollution Control Agency said in early March that it would amend new state feedlot rules designed to reduce the flow of animal waste into waterways to make them less stringent on cattlemen and small farmers. Sources: Hogan/Albach, *Minneapolis Star Tribune*, 3/7/00; and *Greenwire*, The Environmental News Daily, 3/7/00

Snake River Sediments - Breaching four dams on the lower Snake River would release accumulated sediment downstream and could possibly harm young salmon habitat, according to a study by the Army Corps of Engineers (Corps). The sediment would settle behind the next dam, McNary Dam, but the sand and silt would be undetectable in the lowest stretches of the Columbia River, the study says. In addition, sand accumulating behind McNary Dam may clog irrigation pumps in the lake behind it, and dredging might be necessary to clear navigation channels. The sediment study is part of a \$20 million study the Corps has undertaken to study breaching the earthen portions of the dams. Sources: *AP/Seattle Daily Journal of Commerce*, 3/6/00 and *Greenwire*, A National Journal Daily Briefing, 3/6/00

Impact of Snow-Making on Streams

Environmentalists are concerned that New England ski resorts may have pumped an unusually large amount of water to make snow this winter, threatening the region's rivers and ponds. Environmentalists say snowmaking is imperiling aquatic habitats for fish and wildlife during the time of year when those habitats are most vulnerable, and that it poses a risk to drinking water by depleting supplies and reducing the capacity of rivers to dilute wastes dumped in them. They also claim Maine, New Hampshire and Vermont state agencies have little oversight over the resorts and are unaware how much water has been pumped. Mark Sinclair, the *Conservation Law Foundation's* Vermont

director said, "It's clear that water in New England is running uphill to the ski resorts. Snowmaking is a good illustration of the inadequacy of environmental regulation and enforcement in the New England states." Officials in all three states admit compliance monitoring of the resorts is loose and that agencies lack the means to track how much water the resorts are using. Skip King, vice president of Maine-based *American Skiing Co.*, said his company was "literally running every snow gun at as much capacity". But King said the company will not pump any more snow this winter than normal and much of the snow will melt into rivers. Sources: Robert Braile, *Boston Globe*, 1/28/00; and *Greenwire*, A National Journal Daily Briefing, 1/28/00

Yellowstone River Campaign - *American Rivers* announced a five-year plan on 1/26/00 to protect the Yellowstone River. The "Voyage of Recovery" campaign is intended to coincide with the bicentennial of the Lewis and Clark expedition, which began in 1804. Mark Albers, director of the group's office in Great Falls, MT, said the campaign's six-part strategy will include a new easement program designed to discourage bank stabilization by land owners. By 2004, the group hopes to voluntarily enroll half of the river's meander zones into easement programs. The group will also work with landowners and government officials to improve irrigation dams and will launch a public education strategy about threats to the Yellowstone. The group has already launched campaigns to restore other rivers used by Lewis and Clark, including the Missouri, Columbia, Snake, Mississippi and Ohio rivers. Sources: Clair Johnson, *Billings Gazette*, 1/27/00 and *Greenwire*, A National Journal Daily Briefing, 1/27/00

PA's Growing Greener Program Funded - Gov. Tom Ridge (R) released on 2/8/00 a budget proposal that includes \$135 million for the second year of his *Growing Greener* program. Sources: John M. R. Bull, *Pittsburgh Post-Gazette*, 2/10/00; and *Greenwire*, The Environmental News Daily, 2/10/00

Kentucky Oil Spill - Officials in Kentucky are not sure how much oil from a nearly 500,000 gallon spill on 1/27/00 seeped into the Kentucky River. A *Marathon Ashland Petroleum* pipeline near Winchester, KY, ruptured, creating what is "thought to be one of the worst [spills] in Kentucky history." Cleanup crews removed most of the crude oil, but said they don't know how much

remains trapped in porous rock. And they don't know how much could make its way to the Kentucky River, the main drinking water source for Lexington and other towns. Winchester Municipal Utilities plans to continue taking water from a reservoir until the path of the oil is known. The U.S. EPA plans to fine *Marathon Ashland*. Sources: Wayne Partridge, *Lexington Herald-Leader*, 2/8/00; and *Greenwire*, A National Journal Daily Briefing, 2/8/00

New Mountaintop Removal Regs Proposed - The West Virginia Division of Environmental Protection (DEP) has proposed new regulations governing mountaintop removal mining in an attempt to settle a federal court dispute over the practice. Under the new rules, coal operators could no longer leave mountaintop removal sites as undeveloped habitat for fish and wildlife or as flattened pastures if they have received variances from restoring the sites to their approximate original contour. Instead, new post-mining land uses for the sites would be required, such as planting hardwood forests or reclaiming sites for residential development. Gov. Cecil Underwood (R) released a press statement on 2/7/00 stating his full support for the proposed regulations. The regulations were negotiated by the DEP, the *West Virginia Highlands Conservancy* and the coal industry. The state Legislature must still approve them. Sources: Ken Ward Jr., *Charleston [WV] Gazette*, 2/8/00; and *Greenwire*, A National Journal Daily Briefing, 2/8/00

Cattails Choking Everglades - Cattails cover 61,053 acres of the Everglades, or 14.5% of wetlands surveyed by state researchers. According to the South Florida Water Management District, cattails in one part of the Everglades more than quadrupled in four years. The cattail "explosion" is caused by the nutrient phosphorous, which is added to farm fields and lawns to help crops and grasses grow. Cattails are native to the area, but they are driving out sawgrass and other vegetation and hindering biological activities that keep the Everglades healthy. Cattails block sunlight and decrease levels of dissolved oxygen necessary to maintain aquatic life. Part of the problem in stopping the spread of cattails is that officials have not figured out how to stop the flow of phosphorous into the Everglades from sugar cane fields, vegetable farms and Lake Okeechobee. Cane growers in the Everglades reduced total discharges of phosphorous by 49% last year by changing how they manage their irrigation water. Bill

Green of the *Sugar Cane Growers Cooperative* said they are "years ahead" of a schedule set by the state for phosphorous reduction. But scientists say the reduced concentrations of 107 parts per billion are still 10 times higher than what is needed to protect the Everglades. Sources: Cyril T. Zaneski, *Miami Herald*, 2/7/00; and *Greenwire*, A National Journal Daily Briefing, 2/7/00

Kudzu Fungus Found - Federal plant scientists say they have found a fungus that kills the voracious kudzu vine within hours. The native Japanese plant, introduced in the 19th century for erosion control and livestock forage, has since "crept over" an estimated 7 million acres in the South. The kudzu-killing fungus, known as *Myrothecium verrucaria*, also kills Southern cash crops such as cotton and soybeans. But plant pathologist C. Douglas Boyette says it can be applied to kudzu in lethal doses without endangering other plants. Boyette says the fungus kills kudzu within 24 to 48 hours. Still, Boyette is "skeptical" that the plant can be defeated. Boyette said, "I don't know about winning the war with kudzu, but we're going to do battle with it." Boyette says environmental and toxicological studies must be completed before the fungus mix is available, which could take as long as two years. An Agriculture Department spokesman said the government will likely seek a patent on use of the fungus against kudzu. Sources: Jeff Nesmith, Cox, *News Service/Miami Herald/others*, 2/6/00; and *Greenwire*, A National Journal Daily Briefing, 2/7/00

Salmon Controversy - Armed with a 17-minute video, an Oregon banker is attempting to place the spotlight on what he sees as questionable actions by state wildlife officials charged with saving salmon runs. Ronald Yechout's video, "*Hatchery Slaughter*," with a "jittery 'Blair Witch Project' feel," shows workers at the Oregon Department of Fish and Wildlife's Fall Creek Hatchery using aluminum baseball bats to kill hatchery-raised coho salmon. Biologists believe the hatcheries can do more harm than good by weakening the gene pool in wild salmon, so the state is rethinking its hatchery program. Yechout finds the state's actions questionable. Yechout said, "The state keeps telling us that our salmon are nearing extinction. But in reality, the state is exterminating them." Yechout's message is playing well with loggers, ranchers and fisherman, who are "tired of being blamed by environmentalists" for the salmon's decline. But state

officials say Yechout makes little or no distinction between wild and hatchery salmon, which may have “big” biological differences. Jim Myron of *Oregon Trout* complains that Yechout is just “a fisherman who likes to go out and fish and he is upset because the department is killing the fish he wants to kill.” Sources: Meera Louis, *Wall Street Journal*, 2/7/00; and *Greenwire*, A National Journal Daily Briefing, 2/7/00

Countdown to CARA . . .

The Conservation and Reinvestment Act (CARA, H.R. 701), coming up for a vote this Spring gives Congress the unique opportunity to invest more than \$2.8 billion from offshore oil and gas revenues in parks, wildlife, historic preservation, and coastal impact and restoration programs, as well as in a variety of other conservation programs. This bipartisan bill, which passed the House Resources Committee in 1999, represents a historic opportunity to achieve significant and permanent conservation funding by providing for a permanent revenue stream from Outer Continental Shelf (OCS) oil money to conservation programs.

It’s historic provisions include the following:

Title I - Impact Assistance and Coastal Conservation Fund creates a coastal conservation fund for coastal states and eligible local governments to mitigate the various impacts of OCS activities and provide funds for the conservation of our coastal ecosystems.

Title II -Land and Water Conservation Fund provides \$900 million annually, apart from the annual appropriations process, to the Land and Water Conservation Fund for federal and state land acquisition and conservation programs (50% to federal and 50% to states). Conservation easements and endangered and threatened species would also receive an infusion of funding.

Title III - Wildlife Conservation and Restoration Fund provides \$350 million to state fish and game agencies through the Pittman-Robertson program for wildlife conservation and education. This will nearly double available Federal funding for wildlife conservation.

Title IV - Urban Park and Recreation Recovery Program provides \$125 million for matching grants to local governments to rehabilitate recreation areas and facilities, and provide for the development of improved recreation programs, sites, and facilities.

Title V - Historic Preservation Fund fully funds the Historic Preservation Fund at \$100 million per year.

Title VI - Federal and Indian Lands Restoration Fund provides \$200 million to restore degraded Federal and Indian lands, protect resources that are threatened with degradation, and protect public health and safety.

Title VII - Conservation Easements and Species Recovery Fund provides \$150 million for conservation easements and landowner incentives for recovery of endangered and threatened species.

Title VIII - Payment-in Lieu-of-Taxes Fund provides \$200 million to the Payment In-Lieu of Taxes program.

The need for protection of America’s natural heritage has never been greater; and voters demonstrated their overwhelming support for land conservation spending in the 1998 and 1999 elections. So conservation groups are urging Congress to pass CARA and in so doing make conservation funding a permanent part of the American landscape.

CARA represents a major bipartisan legislative proposal that has more than 317 cosponsors. Also a unique coalition of governors, mayors, county officials, conservation and park leaders, wildlife advocates, and the outdoor recreation industry has come together in support of CARA to advocate for revitalized conservation funding. Best of all the strong economy makes it feasible for CARA’s enhanced federal partnership for conservation.

And, the start of a new Millennium presents a unique opportunity to continue the American spirit of conservation and recreation, which began at the beginning of the 20th century under President Theodore Roosevelt. If passed CARA will go a long way toward helping to protect our natural and cultural heritage for generations to come.

Readers are urged to learn more about this important legislation and to let their Congressmen know their views.

Nuisance Species of the Future

A respected creator of the Information Age has written an extraordinary critique of accelerating technological change in which he suggests that new technologies could cause “something like extinction” of humankind within the next two generations.

The alarming prediction intended to be provocative, is striking because it comes not from a critic of technology but rather from a man who invented much of it: Bill Joy chief scientist and co-founder of *Sun Microsystems Inc.*, the leading Web technology manufacturer. Joy was an original co-chairman of a presidential commission on the future of information technology. His warning, he said in a telephone interview, is meant to be reminiscent of Albert Einstein’s famous 1939 letter to President Franklin Delano Roosevelt alerting him to the possibility of an atomic bomb.

In a 24-page article in a recent issue of *Wired* magazine, Joy says he finds himself essentially agreeing, to his horror, with a core argument of the Unabomber, Theodore Kaczynski - that advanced technology poses a threat to the human species. Joy is disturbed by a suite of advances. He views as credible the prediction that by 2030, computers will be a million times more powerful than they are today. He respects the possibility that robots may exceed humans in intelligence, while being able to replicate themselves.

He points to nanotechnology- the emerging science that seeks to create any desired object on an atom - by - atom basis - and agrees that it has the potential to allow inexpensive production of smart machines so small they could fit inside a blood vessel. Genetic technology meanwhile, is inexorably generating the power to create new forms of life that could reproduce.

What deeply worries him is that these technologies collectively create the ability to unleash self-replicating, remutating, mechanical or biological plagues. These would be “a replication attack in the physical world” comparable to the replication attack in the virtual world that recently caused the shutdowns of major commercial Web sites.



“If you can let something loose that can make more copies of itself,” Joy said, “it is very difficult to recall. It is as easy as eradicating all the mosquitoes: They are

everywhere and make more of themselves. If attacked they mutate and become immune. That creates the possibility of empowering individuals for extreme evil. If we don't do anything, the risk is very high of one crazy person doing something very bad."

Genetic engineering and artificial intelligence thus may have the potential to create, in the not too distant future, a world not unlike what we can see right now by tuning in to some programs on the Sci-fi channel. Artificially created organisms could thus make today's aquatic nuisance species seem insignificant by comparison. We would be wise to tread lightly on this new business of creating artificial life.

Sources: *Washington Post*, 3/12/00 and *Quad City Times*, 3/13/00

International Biosafety Accord Reached

Delegates from more than 130 countries reached agreement on 1/29/00 in Montreal on the first global treaty "regulating trade in genetically modified seeds and crops". The United Nations - brokered protocol, an "outgrowth of the 1992 Convention on Biological Diversity, ... is mainly concerned with protecting the environment" and "is not really aimed at risks to human health from food made using biotechnology." The treaty concerns itself only with labeling commodities like wheat or corn for international shipment. The U.S., which did not ratify the biodiversity convention, agreed to endorse the new protocol.

The "key requirement" of the accord requires exporters to obtain permission from the importing country before the first shipment is made of a "living modified organism" designated for release into the environment, like seeds, fish or microbes. Advance notice of genetically modified commodities meant for eating or processing will not be required. The accord will provide for the establishment of a biosafety clearinghouse that will help countries share technical data on bioengineered products. The treaty affirms the rights of countries to regulate imports of such products.

Towards the end of the conference, the "big fight centered on a notification system for foods produced from engineered seeds and exported." While "most of the world wanted such a system," the U.S. and its "Miami Group" allies - Canada, Australia,

Argentina, Chile and Uruguay - said such a system would mire trade down in red tape. The two sides agreed to put off the question for two years. Environmentalists "were not happy about the two-year postponement."

Environmentalists and delegates from European and developing countries said the most significant achievement of the treaty was "perhaps the strongest formulation to date of the 'precautionary principle'". The principle allows countries to reject biotech imports if they think there is a safety risk. U.K. Environment Minister Michael Meacher called the inclusion of the principle "a very important precedent" However, few countries agree on what the principle is, and the protocol was left intentionally vague on the subject.

The question of who is liable for environmental damages "was kicked down the road." The protocol calls for further talks on liability, which are to end within four years. Biotechnology companies said the new accord may help the industry, "countering a perception that biotechnology is not adequately regulated." Robert Harness of *Monsanto Co.* said, "It solidifies the world's support for biotechnology. It sets up a framework for cooperation and information-sharing between nations, and it allows science-based decision-making." The agreement must be ratified by 50 countries to take effect, a process that could take two to three years.

Release of genetically altered organisms into the environment will most likely be the next major issue to face natural resource managers. Like aquatic nuisance species such as the Asian carps (see the November/December issue of *River Crossings*), genetically altered organisms could greatly impact our nation's aquatic resources.

Sources: Edward Alden, *Financial Times*, 1/31/00; Andrew Pollack, *New York Times*, 1/30/00; Joe Carroll, *Irish Times*, 1/31/00; John Burgess, *Washington Post*, 1/30/00; *London Observer*, 1/30/00; John Deane, *Press Association*, 1/29/00; Brandon Mitchener, *Wall Street Journal*, 1/31/00; Ruth Walker, *Christian Science Monitor*, 1/31/00; Ian Brodie, *London Times*, 1/31/00; Bill Lambrecht, *St. Louis Post-Dispatch*, 1/30/00; Maggie Farley, *Los Angeles Times*, 1/30/00; and *Greenwire*, A National Journal Daily Briefing, 1/31/00

Climate Change

The National Oceanic and Atmospheric Administration (NOAA) said on 3/10 that this was the warmest winter in the U.S. since the government began keeping records 105 years ago. The average temperature across the country from December to February was 38.4 °F, 0.6 degrees higher than last year, when the previous record was set. And, NOAA said, the warmest winter before that came in 1997-98 which tied the record set in 1991-92 with an average temperature of 37.5 °F. The past three winters have thus continued a warming trend that started in 1980, making the 1990s the hottest decade of the millennium since



instrumental measurement began in the 1860s," according to the U.N.-affiliated World Meteorological Organization (UNWMO). Further, 1999 was the fifth warmest year since 1860, with temperatures 0.33 °C higher than in the 1961-90 period and 0.7 °C higher than at the turn of the century. Based on "proxy" climate data from sources like tree rings and ice cores, UNWMO said further that the 1990s appear to have been the warmest decade in the last 1,000 years and the 20th century the warmest century in this millennium. During the past century, average global temperatures have increased about 1.1 degrees (from an annual mean of about 57 °F), but the pattern has been uneven, with some decades showing a cooling trend.

The high temperatures in 1999 are all the more "remarkable" because they occurred despite the cooling influence of the La Nina climate phenomenon in the Pacific Ocean. Phil Jones of the *University of East Anglia* in the United Kingdom said the data was "further evidence that global warming is probably happening". Thomas R. Karl, director of NOAA's National Climatic Data Center, speculates that if the rate of increase seen since 1997 continues, global average temperatures would increase by 5 or 6 degrees this century.

In many places this winter, precipitation was also scarce. Louisiana had its driest winter on record, and Alabama and Mississippi their third driest. Much of the warm and dry

weather can be laid to the La Nina weather phenomenon, which is characterized by unusually low temperatures in the equatorial Pacific. The opposite of the warm equatorial Pacific waters of the El Nino phenomenon, La Nina often leads to lower rainfall in the U.S. and other parts of the world. La Nina also can push the jet stream north, thereby raising temperatures across the country. The latest La Nina period began in mid-1998 and is expected to continue this year. Whether the mild seasons are also the result of global warming is unknown.

According to a study by an independent panel organized by the *National Academy of Sciences's National Research Council*, global warming is "undoubtedly real," and global surface temperatures have risen at an accelerated pace over the last 20 years. The panel of 10 U.S. scientists and one from the United Kingdom "concluded in the report that global warming in fact is occurring." The panel said Earth's average surface temperature has increased by 0.7 to 1.4 °F in the past century, and since 1979 the temperature has risen 0.5 degrees. "Partly deflating a key argument used by skeptics of global warming," the panel also "dismissed as insignificant" the contradiction found when comparing surface temperatures with atmospheric readings. Satellite readings show a smaller increase in temperatures than land-based readings. The panel concluded that both sets of data are accurate and that they don't have an explanation for the disparity. Panel Chairman John M. Wallace of the *University of Washington* said the difference between land and atmospheric readings "in no way invalidates the conclusion that the Earth's temperature is rising." The panel said possible explanations for the different readings could include cooling caused by volcanic eruptions in the 1990s and depletion of the ozone layer. The panel "hedged on whether the warming" would continue, and it did not say whether the warming trend is linked to greenhouse gasses.

But a report published in a recent issue of the journal *Science*, says that the Arctic region has lost 14,000 mi² of ice each year since 1978, and global warming caused by human activity is the likely cause. Research by an international team of scientists using simulated climate models suggests there is only a 2% chance that Arctic melting in the last 19 years is a result of natural climate changes. And the odds that this melting trend since 1953 occurred "by chance" are less than 0.1 %. Konstantin Vinnikov of the

University of Maryland, who led the study said, "It's not impossible that such a [melting] trend could appear from nothing, but the probability is so low that we made the conclusion that it is probably global warming." The study brought together five separate data sets all indicating a similar trend.

Some scientists say they believe that the North Atlantic region's climate is controlled by ocean currents that bring in heat from the tropics. This "oceanic conveyor belt" moves when saltier water sinks to the deep ocean near Greenland and is replaced by warmer water from the tropics. But the Arctic thawing might decrease the salinity, slow the current and could cause a long-term drop in the region's temperature. The findings of three recent studies may support this theory. One study found historical drops in the region's climate were connected with a weak current. Another study documented the thawing "of the vast sheet of ice that covers the far northern seas." And the third says human-induced activities may be responsible for the current thawing of the Arctic. But scientists cannot say how much fresh water might be needed to affect ocean currents enough to lower North Atlantic temperatures. Peter Schlosser of the *Lamont-Doherty Earth Observatory* said, "I don't think there's any accurate assessment out there that would tell us"

Meanwhile a study published in the journal *Nature*, concludes that ocean currents likely exerted "some control" over global temperature during the last ice age. Carsten Ruhlemann, a German marine geologist who supervised the study, said, however, that he doesn't know if the currents are an effect or cause of climate change. The research team analyzed sediment in the ocean floor off the island of Grenada, calculating the water's surface temperature thousands of years ago. The findings represent "a step toward understanding Earth's complicated cycle of warming and cooling."

Scientists said at a recent meeting of the *American Geophysical Union* in San Francisco said that a newly documented shift in Arctic wind patterns could be evidence of one way that greenhouse gases are warming the Earth. The scientists said the buildup of carbon dioxide and other greenhouse gases in the atmosphere has fed a 30-year trend of stronger winds encircling the Arctic and bringing warmer winters to the Northern Hemisphere. David Thompson of the *University of Washington* in Seattle

said the research does not rule out natural causes, but computer-based climate models cannot simulate the effect without including the influence of greenhouse gas buildup. And Thompson's colleague John Wallace said the trend "seems to be unprecedented." The shift is in so-called Arctic Oscillation – "weak" and "strong" patterns of atmospheric pressure that occur between the north pole and north mid-latitudes. The scientists discovered "to their surprise" that the Arctic Oscillation has increasingly favored the stronger pattern during the last 30 years, causing warmer, wetter conditions in Scandinavia, Siberia and parts of North America. The scientists suspect greenhouse gases are causing this inclination but can't yet prove it. In another announcement at the meeting, scientists said new data indicate that the dirt and soot humans release into the air are just as important as greenhouse gases in affecting global warming. Scientists still don't know whether dirt and soot enhances or minimizes global warming, but the find "introduces unexpected complexity into the climate change puzzle" by suggesting efforts to reduce greenhouse gas emissions may not be enough to control human-induced climate change.

Further complicating the picture, another new study published in a recent issue of the journal *Science* said that a rapid increase in global temperature 55 million years ago may have been caused by a "sudden blowout of greenhouse gases from the ocean floor". American and Australian scientists found evidence that a sudden release of methane locked in the ocean floor may have prompted the ensuing 9-12 degree rise in the earth's surface temperature. Researcher Dorothy Pak of the *University of California* at Santa Barbara said the rise likely occurred within a few thousand years. And although the scientists don't know what caused the methane outbreak, researcher Gerald R. Dickens of *James Cook University* in Australia said it shows "the earth can, for natural reasons, suddenly change dramatically."

According to researchers at *Kansas State University*, prairie grasses, which serve as a "giant vacuum cleaner" sucking pollution from the air and storing it underground, could help offset global warming. Soil microbiologist Charles Rice said "simple changes" in farming techniques, such as leaving soil unplowed and adjusting crop rotation so land is left fallow for shorter periods, can lock up carbon in soil for "hundreds, if not thousands, of years." Plowing breaks up the soil and allows

microbes to release carbon into the air, but no-till planting keeps the carbon stored in the soil. Rice said that although such changes won't solve the problem of climate change, they could "buy enough time" for scientists to make nonpolluting energy sources more cost-effective.

A warming world may benefit some species and harm others, according to research published in the journal *Science*. Researchers at the *University of Science and Technology* in Trondheim, Norway, looked at the effect of climate cycles on a population of dippers, the national bird, between 1978 and 1997. They found that the birds' population had dropped in cold years and risen in warm years, but had risen overall. Another team of scientists from the *University of Oslo* analyzed 15 years of data on northern mammals and found that nine of 11 hoofed species declined after warm winters because of short-term population booms and subsequently increased competition for food. Camille Parmesan of the *University of Texas* at Austin analyzed distribution patterns of 57 non-migratory butterfly species in Europe, and found that about two-thirds have moved their ranges northward by as much as 240 kilometers in the last century. Parmesan said, "We ruled out all other obvious factors, such as habitat change, that could alter distributions. The only other factor that correlated was climate".

Warmer temperatures – already linked to higher rates of malaria, cholera and dengue fever – appear to have also caused more cases of childhood diarrhea, scientists say. The research, published in early February in *The Lancet* medical journal, suggests that global warming could cause the same trend. The disease, caused by bacteria, parasites or viruses, already kills an estimated 3 million children every year and sickens millions more, especially in developing countries. Researchers at the *Johns Hopkins School of Public Health* in Baltimore studied records of more than 57,000 children in Lima, Peru, and found that the number of children brought to clinics there daily in the winter of 1997-98 was double what it would have been had El Nino not occurred. Over a five-year period from 1993 to 1998, the scientists found an 8% increase in childhood diarrhea for every 1°C increase in temperature, regardless of whether it was summer or winter. Health services need to adapt to expected climate changes, especially given the evidence pointing to global warming, the researchers said

Meanwhile, religious leaders in Washington and other states plan to conduct a campaign this year to educate their congregations about global warming. Several of the state's church leaders announced in early January their commitment to the *Washington Interfaith Global Climate Change Campaign*. Elias Galvan, a bishop in the *United Methodist Church* said, "Human beings are called to love and care for nature, not destroy it." The Washington campaign will include hosting statewide training sessions about climate change; distributing materials in churches and synagogues to promote environmental themes in worship and education programs; and encouraging activism

Religious leaders are also taking on *Exxon Mobil Corp.* in an effort to convince the company of the threat posed by global warming. The New York-based *Interfaith Center for Corporate Responsibility*, along with other religious groups, officially launched *Campaign Exxon Mobil* in early January with "an array of weaponry" that includes a \$90 billion pension portfolio. The *Interfaith* group has used that pension in past campaigns to launch shareholder resolutions at the annual meetings of targeted companies. *Interfaith* wants *Exxon Mobil* to acknowledge the "immediate" threat posed by global warming, pursue the use of alternative fuels and reduce the company's emissions from fossil fuels. But the group has yet to sway the oil giant. Frank Sprow, *Exxon Mobil's* vice president for environment and safety said, "Global warming is an issue that is amazingly complex and so science-based, and there is a strong need to separate the grain from the chaff."

Meanwhile, a growing list of companies are taking up global warming as a priority in their operations, the *Financial Times* reports. *Ford Motor Co.* recently followed *Shell Oil*, *United Technologies* and *BP Amoco* in withdrawing from the *Global Climate Coalition*, the industry lobbying group that campaigns against climate change measures. Now environmentalists hope *Ford* will again follow those companies and join the *Business Environmental Leadership Council of the Pew Center on Global Change*, a "middle ground" group that

tries to bridge the gap between environmentalists and groups "in denial" about global warming. Many of the *Pew* group's 21 members have implemented internal programs to reduce greenhouse gas emissions. *BP Amoco* has an internal emissions-trading program among its 127 business units. The company is also the world's largest solar energy producer and plans to boost sales to \$1 billion by 2007. *United Technologies* has pledged to reduce its energy and water use by 25% as a percentage of sales by 2007. The company has already reduced energy use through numerous low-cost programs, including one in Florida that saved \$200,000 just by having employees turn off their computers each night. Judith Bayer, *United Technologies* director of environment and government affairs, says one thing common among the green companies is personal involvement by "visionary" chairmen. John Passacantando of DC-based *Ozone Action* says *Ford's* chief executive, William Clay Ford Jr., wants to "tell the truth about our most pressing environmental crisis"

Finally on another front, geologists "say there is a real risk that sooner or later a supervolcano will erupt with devastating force" somewhere in the world, "sending temperatures plunging on a hemispheric or even global scale." According to a report on the *BBC Two* program "Horizon," one supervolcano at Yellowstone National Park is about 40,000 years overdue for a major eruption. Bill McGuire of the *Benfield Grieg Hazard Research Center* at *University College*, London, says supervolcanoes can throw enough ash and gases into the atmosphere to cause a global cooling of as much as 3-10 °C.

And so the beat goes on....

Sources: *WMO* release, 12/16/99; Nuttall, *London Times*, 12/3/99; Frank D. Roylance, *Baltimore Sun*, 12/3/99; AP/*Los Angeles Times/others*, 12/3/99; Dan Vergano, *USA Today*, 12/3/99; Curt Suplee, *Washington Post*, 12/3/99; Jeff Donn, *AP/Boston Globe online*, 12/3/99; Robert C. Cowen, *Christian Science Monitor*, 12/21/99; Jean Hays, *Philadelphia Inquirer*, 12/17/99; William K. Stevens, *New York Times*, 11/23/99; *UNEP release*, 11/17/99; *AP/CNN Interactive*, 2/3/00; *BBC Online*, 2/4/00;

Alex Kirby, *BBC*, 2/3/00; Robert Lee Hotz, *Los Angeles Times*, 1/13/00; Jim Carlton, *Wall Street Journal*, 1/13/00; Joby Warrick, *Washington Post*, 1/13/00; H. Josef Hebert, *AP/San Francisco Chronicle/Examiner online*, 1/13/00; Agence France Presse, 1/13/00; AP/Seattle Post-Intelligencer/others, 1/11/00; Dianne Solis, *Dallas Morning News*, 1/9/00; Nancy Dunne, *Financial Times*, 1/6/00; and *Greenwire*, A National Journal Daily Briefing, 11/18, 11/23, 12/3, 12/7, 12/17 and 12/21/99; and 1/6, 1/11 and 1/13/00

A River That Works And A Working River

The *National Audubon Society* and the five-state *Upper Mississippi River Conservation Committee* released a report on 3/9/00 saying too much navigation and flood control has harmed the Upper Mississippi River. The groups urged policy makers to do a better job of controlling erosion, restoring flood plains and requiring locks and dams to adjust water levels periodically

to reflect natural high- and low-water conditions. The report also suggested building fish passages at some dams to allow fish to move up and down the rivers, and connecting flood plains to backwater channels to improve the exchange of nutrients and fish movement.

The report comes as the U.S. Army Corps of Engineers faces accusations that it “cooked the books” in its own report to justify expanding the locks and dams system (see previous articles in this issue of *River Crossings*). Meanwhile, Dan McGuinness, director of the *National Audubon Society’s Upper Mississippi River Campaign* in St. Paul, writes in a *Minneapolis Star Tribune* (3/9/00) op-ed that bigger locks and dams will destroy the Mississippi River. “What a rotten trick to play on people who love to hunt, fish and recreate on this river to falsely offer them a better future by building bigger locks and dams and continuing to ‘do business as usual’ on the river. ... Neither farmers nor river users should be duped into supporting this completely wasteful ‘modernization’ of the river,” McGuinness said.

Contact: Jon Duyvejonck, Upper

Mississippi River Conservation Committee, 4469 - 48th Avenue Court, Rock Island, IL 61201, (309) 793-5800, FAX (309) 793-5804, email: jon_duyvejonck@fws.gov

National River Cleanup Week

National River Cleanup week is scheduled for June 3-10 in support of the *Rivers 2000* celebration also scheduled in June. National River Cleanup week promotes the importance of keeping rivers and streams clean and encourages cleanups of local waterways.

America Outdoors coordinates the week by assisting local groups with information on how to conduct successful cleanups. *America Outdoors* also provides free trash bags for registered groups, as well as educational materials and safety tips. A video on “how to Conduct and Organize a River Cleanup” is available for \$9.95.

Contact: *America Outdoors*, (423) 558-3595, amoutdoors@aol.com.

Meetings of Interest

May 2-6: AQUA 2000, “Responsible Aquaculture in the New Millennium”, Acropolis Convention Centre, Nice, France. Contact: John Cooksey, worldaqua@aol.com

May 21-24: Missouri River Management: It’s Everybody’s Business, Radisson Inn, Bismarck, ND. Contact: Roger Collins, (701) 250-4492, roger_collins@fws.gov, <http://infolink.cr.usgs.gov/events/00.htm>

May 23-25: Sustainability of Wetlands and Water Resources Conference, University of Mississippi, Oxford, MS. Contact: Marjorie M. Holland, (601) 232-5874, mholland@olemiss.edu

June 15-17: Mississippi River Partnering Conference. Regal Riverfront Hotel, St. Louis, MO. Contact: U.S. Army, Corps of Engineers, Mississippi Valley Division, St. Louis District Office.

July 12-14: Water Conservation in the West, Holiday Inn, Casper, WY. Jointly sponsored by the Wyoming State Engineer’s

Office, the Western States Water Council and the Bureau of Reclamation. Contact: Sue Lowry (307) 777-5927, slowry@state.wy.us

July 17-21: EISORS (Eight Internat’l. Symposium on the Ecology of Regulated Rivers) - River Restoration, Toulouse, France. Contact: CESAC/CNRS, 29, rue Jeanne Marvig, 31055 Toulouse Cedex 04, France, Phone: 33-5 62 26 99 60, FAX: 33-5 62 26 99 99, www-cesac.cemes.fr/~eisors

July 23-26: International Congress on the Biology of Fish, Aberdeen, Scotland. Contact: Don D. MacKinlay, Fisheries & Oceans Canada, (604) 666-3520, FAX (604) 666-6894, e-Mail: MACKINLAYD@PAC.DFO-MPO.GC.CA or <http://www.fishbiologycongress.org>

Aug. 20-24: 130th Annual Meeting of the American Fisheries Society, Adam’s Mark Hotel, St. Louis, MO. Contact: Betsy Fritz, (301) 897-8616, ext. 212; bfritz@fisheries.org

Aug. 20: MICRA Paddlefish/Sturgeon

Committee Meeting, Adam’s Mark Hotel, St. Louis, MO (held in conjunction with the 130th AFS Mtg.). Contact Kim Graham, MO Dept. of Conservation, (573) 882-9880, FAX (573) 882-4517, email: grahal@mail.conservation.state.mo.us

Aug. 21-24: Black Bass 2000 Symposium, Adam’s Mark Hotel, St. Louis, MO (held in conjunction with the 130th AFS Mtg.). Contact: David Philipp, philipp@uiuc.edu or Mark Ridgway, ridgwama@pogov.on.ca

Dec. 3-6: Walleye Management Symposium: Recruitment, Stocking and Regulations. 2000 Midwest Fish and Wildlife Conference, Minneapolis, MN. Contact: Joe Larscheid, (712) 336-1840, FAX (712) 336-0921, joe.larscheid@dnr.state.ia.us

Mar. 14-17: Riparian Habitat and Floodplains Conference. Radisson Hotel, Sacramento, CA. Contact: Diana Craig, (707) 562-8930, dcraig01@fs.fed.us; or Lyann Comrack, (858) 467-4208, lcomrack@dfg.ca.gov

Congressional Action Pertinent to the Mississippi River Basin

Aquatic Nuisance Species

S. 493: P. Sarbanes D/MD. Requires the Secretary of the Army to conduct certain pilot projects to address the problem of toxic microorganisms in tidal and non-tidal waters.

S. AMDT. 637 to S. 1186: C. Levin, D/MI. Provides funds for development of technologies to control zebra mussels and other aquatic nuisance species.

Endangered Species Act Amendments

H.R. 3160: D. Young R/AK and 31 cosponsors. Reauthorizes and amends the Endangered Species Act of 1973.

Environment

S. 352: State and Local Government Participation Act of 1999, C. Thomas, R/WY and H.R. 2029: G. Radanovich, R/CA. Amends the National Environmental Policy Act (NEPA) of 1969 requiring Federal agencies to consult with State, county, and local agencies and governments on environmental impact statements.

S. 481: Environmental Crimes and Enforcement Act of 1999, C.E. Schumer, D/NY. Provides for protection of government employees and the public from environmental crimes.

S. 1066: P. Roberts, R/KS. Amends the National Agricultural Research, Extension, and Teaching Policy Act of 1977 to encourage use of and research into agricultural best practices to improve the environment, and for other purposes.

S. 1090: J. Chafee, R/RI and H.R. 2956: F. Pallone D/NJ and 30 co-sponsors. Reauthorizes and amends the Comprehensive Environmental Response, Liability, and Compensation Act of 1980.

S. 1426, T. Harkin (R/IA) and 5 co-sponsors : Amends the Food Security Act of 1985 to promote the conservation of soil and related resources, and for other purposes.

S. 1622: B. Lincoln (D/AR) and 5 co-sponsors. Provides economic, planning, and coordination assistance for the development of the lower Mississippi River region.

H.R. 408: C. Peterson, D/MN. Amends the Food Security Act of 1985 to expand the number of acres authorized for inclusion in the Conservation Reserve Program (CRP).

H.R. 525: Defense of the Environment Act of 1999, H.A. Waxman, D/CAS. Requires any Congressional provision that reduces environmental protection to: (1) identify and describe the provision, (2) assess the extent of the reduction, (3) describe actions taken to avoid the reduction, and (4) recognize any statement of the Comptroller General in assessing the reduction.

H.R. 728: K. Lucas, D/KY. Amends the Watershed Protection and Flood Prevention Act providing cost share assistance for rehabilitation of structural measures constructed as part of water resource projects previously funded by the Secretary of Agriculture.

H.R. 3448: J. Greenwood R/PA and 3 co-sponsors. Improves management of environmental information and encourages innovation in the pursuit of enhanced environmental quality

Fish Management

S. 1653 and H.R. 4010: J. Chafee, R/RI and E. Faleomavaega, D/Am.Sam. Reauthorizes and amends the National Fish and Wildlife Foundation Establishment Act.

H.R. 3810: R. Ney, R/OH. Permits any individual 62 years of age and older to engage in recreational fishing in navigable waters of any State without obtaining a license.

Forests

S. 1368: R. Torricelli, D/NJ. Amends the Forest and Rangeland Renewable Resources Planning Act of 1974 to strengthen protection of native biodiversity and ban clearcutting on Federal lands, and to make various special designations.

S. AMDT. 1588 to H.R. 2466: R. Bryan D/NV. Makes certain funds available, by reducing subsidies to the below-cost timber program administered by the Forest Service, to other Forest Service programs including wildlife, fish habitat management, and threatened and endangered species.

Hydropower

S. 740: L. Craig, R/ID and E. Towns, D/NY. Amends the Federal Power Act to improve hydroelectric licensing processes by granting the FERC statutory authority to better coordinate participation of other agencies and entities, and for other purposes.

Property Rights

S. 333: P. Leahy, D/VT, H.R. 598: R. Santorum, R/PA, and H.R. 1950: S. Farr, D/CA. Amends the Federal Agriculture Improvement and Reform Act of 1996 to improve the farmland protection program.

S. 1028: O. Hatch, R/UT. Simplifies and expedites access to Federal courts for parties whose rights and privileges, secured by the Constitution, have been deprived by actions of Federal agencies, entities or officials acting under color of State law.

S. 1202: B.N. Campbell, R/CO. Requires a warrant of consent before land inspections may be carried out to enforce any law administered by the Secretary of the Interior.

H.R. 1002: Declaration of Taking Act., D. Hunter, R/CA. Amends the subject act to require that all government condemnations of property proceed under that Act.

H.R. 1142: D. Young, R/AK. Ensures that landowners receive equal treatment to the government when property must be used.

H.R. 2263: N. Johnson R/CT. Amends IRS Code of 1986 to encourage contribution of capital gains real property for conservation purposes.

H.R. 2550: T. DeLAY (R/TX). Compensates owners of private property for the effect of certain regulatory restrictions.

Public Lands

S. 338: B.N. Campbell, R/CO; S. 568: C. Thomas, R/WY and H.R. 154: J. Hefley, R/C. Establish fee systems for commercial filming activities on public lands.

S. 446: B. Boxer, D/CA. Provides for permanent protection of U.S. resources in the year 2000 and beyond.

S. 510: B.N. Campbell, R/CO and H.R. 883: D. Young, R/AK. Preserves U.S. sovereignty over public and acquired lands, and preserves state sovereignty and private property rights in non-federal lands surrounding public and acquired lands.

S. 826: C. Thomas, R/WY. Limits federal acquisition of lands located in States where 25% or more of the land in the State is owned by the U.S.

S. 1049: F. Murkowski, R/AK, and H.R. 1985: B. Cubin, R/WY. Improves administration of oil and gas leases on Federal lands, and for other purposes.

S. AMDT. 1636 to H.R. 2466: J. Breaux, D/LA. Authorizes the Fish and Wildlife Service to retain and use fees collected for certain damages to Louisiana and Texas refuges to assess and mitigate or restore damaged resources, and monitor recovery.

H.R. 701: D. Young, R/AK. Conservation and Reinvestment Act (CARA) provides investment of offshore oil and gas revenues in parks, wildlife, historic preservation, and coastal and restoration programs, as well as a variety of other conservation programs.

H.R. 1199. R.W. Pombo, R/CA. Prohibits expenditure of Land and Water Conservation Funds for new National Wildlife Refuges without Congressional authorization.

H.R. 1207: B.F. Vento, D/MN. Prohibits the U.S. government from entering into agreements related to public lands without Congressional approval.

H.R. 1284: Minnesota Valley Refuge Bill, D. Young, R/AK. Protects the Minnesota Valley National Wildlife Refuge and protected species to ensure that scarce refuge land in and around the Minneapolis, MN metro area are not subjected to physical and auditory impairment.

H. R. 1396: C. McKinney, D/GA. Saves taxpayers money, reduces the deficit, cuts corporate welfare, and protects and restores America's natural heritage by eliminating the fiscally wasteful and ecologically destructive commercial logging program on Federal public lands, and facilitates the economic recovery and diversification of communities dependent on the Federal logging program.

H.R. 1500: J. Hansen, R/UT. Accelerates the wilderness designation process by

establishing a timetable for completion of wilderness studies on Federal lands.

H.R. 2222: G. Miller, D/CA. Establishes fair market value pricing of Federal natural assets, and for other purposes:

Regulations

S. 746: Regulatory Improvement Act of 1999, S.M. Leven, D/MI. Improves the ability of Federal agencies to use scientific and economic analyses to assess cost/benefits and risk assessments of regulatory programs.

H.R. 1864: J. Hansen, R/UT. Standardizes public hearing processes for Federal agencies within the Dept. of the Interior.

H.R. 1866: J. Hansen, R/UT. Provides a process for the public to appeal certain decisions made by the National Park Service and the U.S. Fish & Wildlife Service.



Water Resources

S. 294: R. Wyden D/OR. Directs the Secretary of the Army to develop and implement a comprehensive program for fish screens and passage devices.

S. 610: M. Enzi R/WY. Conveys certain U.S. Bureau of Land Management lands in Washakie and Big Horn counties, WY to the Westside Irrigation District.

S. 685: M. Crapo, R/ID and H.R. 2456. M. Simpson, R/ID. Preserves state authority over water within their boundaries and delegates states the authority of Congress to regulate water.

S. 1178: T. Daschle D/SD. Conveys certain features of Oahe Irrigation Project, SD to the South Dakota Commission of Schools and Public Lands for the purposes of wildlife habitat mitigation, on the condition that current preferential leaseholders have

the option to purchase.

S. 1279: R. Kerrey, D/NE. Improves environmental quality, public use and appreciation of the Missouri River and provides additional authority to the Army Corps of Engineers to protect, enhance, and restore Missouri River fish and wildlife habitat.

S. 1659: C. Burns R/MT and H.R. 2974: R. Hill R/MT. Conveys the Lower Yellowstone Irrigation Project, the Savage Unit of the Pick-Sloan Missouri Basin Program, and the Intake Irrigation Project to the appurtenant irrigation districts.

S. 1762: P. Coverdell R/GA and B. Lincoln AR. Amends the Watershed Protection and Flood Prevention Act authorizing the Secretary of Agriculture to provide cost share assistance for the rehabilitation of structural measures constructed as part of water resources projects previously funded by the Secretary under such Act or related laws.

S. 2027: C. Burns, R/MT. Authorizes the Secretary of the Army to design and construct a warm water fish hatchery at Fort Peck Lake, MT.

H. Con. Res. 86: E. Blumenauer (D/OR). Concurrent resolution expressing the sense of Congress regarding Federal decisions, actions, and regulations affecting water.

H.R. 2984: B. Barrett R/NE. Directs the Secretary of the Interior to convey to the Loup Basin Reclamation District, the Sargent River Irrigation District, and the Farwell Irrigation District, NE, property comprising the assets of the Middle Loup Division of the Missouri River Basin Project, NE.

H.R. 3002: D. Young R/AK. Provides for the continued preparation of certain useful reports concerning public lands, Native Americans, fisheries, wildlife, insular areas, and other natural resources-related matters, and to repeal provisions of law regarding terminated reporting requirements concerning such matters.

H.R. 4013: R. Kind R/WI and 9 co-sponsors. Upper Mississippi River Conservation Act establishes a water quality monitoring network and an integrated computer modeling program to reduce the river's sediment and nutrient intake. It also calls for expansion of various USDA incentive programs.

Water Quality

S. 20: Brownfield Remediation and Environmental Cleanup, F.R. Lautenberg D/NJ. Directs EPA to establish a grant program for States and local governments to inventory and conduct site assessments of brownfield sites. Defines brownfield sites as facilities suspected of having environmental contamination that could limit their timely use and can be readily analyzed.

S. 188: R. Wyden, D/OR. Amends the Federal Water Pollution Control Act (FWPCA) to authorize use of the revolving loan funds for construction of water conservation and quality improvements.

S. 493: P. Sarbanes, D/MD. Requires the U.S. Army, Corps of Engineers to conduct pilot projects on toxic microorganisms in tidal and non-tidal waters.

S. 669: P. Coverdell, R/GA. Amends the FWPCA to ensure compliance by Federal facilities with pollution control requirements.

S. 914: B. Smith, R/NH and H.R. 828: J. Barcia, D/MI. Amends the FWPCA requiring discharges from combined storm

and sanitary sewers to conform to the *Combined Sewer Overflow Control Policy* of the USEPA.

S. 968: B. Graham, D/FL. Authorizes USEPA to make grants to States for water source development to maximize the supply of water and protect the environment through development of alternative water sources, and for other purposes.

S. 1621 and H.R. 2957: M. Landrieu D/LA and D. Vitter R/LA and W. Jefferson D/LA. Amends the FWPCA to authorize funding to carry out certain water quality restoration projects for Lake Pontchartrain Basin, LA.

S. 1787: M. Baucus D/MT, and 2 co-sponsors. Amends the FWPCA to improve water quality on abandoned or inactive mined land.

H.R. 155: Municipal Biological Monitoring Use Act, J. Hefley, R/CO. Amends the Clean Water Act (CWA).

H.R. 684: Farm Sustainability and Animal Feedlot Enforcement Act, G. Miller, D/CA. Amends the CWA.

H.R. 1290: W.B. Jones, R/NC. Amends the FWPCA related to wetlands mitigation banking.

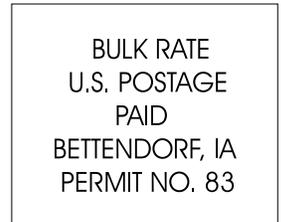
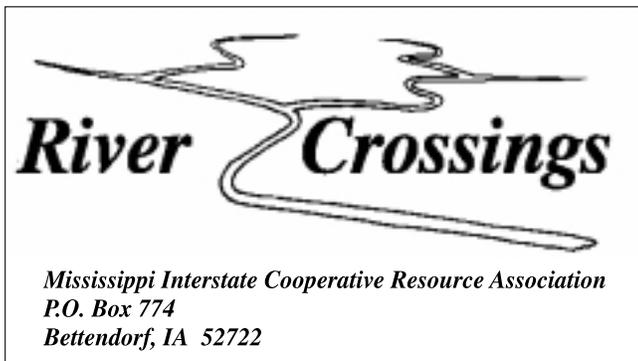
H.R. 1549: P. Visclosky, D/IN. Amends the FWPCA to establish a National Clean Water Trust Fund to carry out projects to restore and recover U.S. waters from damages resulting from FWPCA violations.

H.R. 1578: J. Hostettler, R/IN. Amends the wetland conservation provisions of the Food Security Act of 1985 and the FWPCA to permit unimpeded use of privately owned crop, range, and pasture lands that have been used for the planting of crops or the grazing of livestock in at least 5 of the preceding 10 years.

H.R. 1712: B. Stupak, D/MI. Amends FWPCA to authorize an estrogenic substances screening program.

H.R. 2328: J. Sweeney, R/NY. Amends the FWPCA to reauthorize the Clean Lakes Program.

H.R. 2449: C. Norwood, R/CA. Amends the FWPCA relating to Federal facilities pollution control.



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