

River

NATURAL RESOURCES SURVEY
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Crossings

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Number 6

Happy Holidays!

With this issue we end our fourth year of publishing "River Crossings". Our circulation continues to rise, and we appreciate the many helpful comments and materials received over the years from our readers.



Here's wishing all of you a joyous holiday season and a very happy new year!

and their associated fishery resources and habitats;

- Identify and describe the known impacts of agriculture, navigation, flood control, power generation, irrigation and municipal water supply projects, nonpoint source pollution, dredging, channel maintenance, water level management, sediment and contaminant transport, vessel traffic, water withdrawal, and changes in salinity and various hydrologic conditions on the Basin's aquatic resources;
- Identify and describe techniques for mitigating those impacts;
- Analyze existing resource data with regard to regional depletion of

important fish stocks and the potential for their restoration;

- Identify major information gaps and technological needs to improve the cooperative management of Interjurisdictional fishery resources;
- Evaluate of the status, and the management, research, and restoration needs of the Basin's interjurisdictional fishery resources;
- Develop recommendations regarding the scope, schedule, regional priorities, and roles of participants in MICRA for undertaking cooperative management and research projects;
- Develop plans and test projects

Mississippi Interstate Cooperative Resource Agreement Act of 1995

Congressman Steve Gunderson (R/WI) has drafted legislation authorizing, "The Secretary (of the Interior), in cooperation with...(MICRA) to...conduct a (three year) pilot test of the Mississippi Interstate Cooperative Resource Agreement." Such a test would help leverage funding to:

- Identify and describe the Basin's interjurisdictional rivers

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for the restoration and enhancement of depleted fish stocks and their habitats;

- Evaluate the feasibility and success of the MICRA program and the merits of extending such a program to other interjurisdictional river basins in the United States.
- Estimate the funds required to implement recommendations and plans developed under the test project.

Gunderson plans to introduce this bill yet this Congressional session, and is currently seeking cosponsors. Interested persons are encouraged to contact their Congressmen, requesting that they sign on as cosponsors of such a bill.

Environmental Issues In the Federal Budget

According to environmental news sources, republican lawmakers have turned to the budget process to change natural resource policy in the U.S. They are using the budget to enact policy changes which they were unable to steer through both houses of Congress.

Major environmental issues impacted by this action include the following:

- **Arctic National Wildlife Refuge (ANWR):** The House Resources Committee [Chairman Don Young (R/AK)], and Senate Energy Committee [Chairman Frank Murkowski (R/AK)] have acted to open the heralded ANWR to oil and gas development. Proponents also include Alaska Gov. Tony Knowles (D), a majority of the state's Republican-controlled legislature, and some Alaska natives living inside the refuge. Drilling in ANWR has been hotly debated for almost two decades, raising considerable passion because the ANWR is considered one of the last unspoiled places on the Arctic plain and is home to hundreds of plants and animal species. It is a critically important

denning area for polar bears and for the Porcupine caribou herd on which the Gwich'in native people depend for survival. According to Interior Secretary Bruce Babbitt, oil produced from such drilling will be shipped to Japan rather than to the U.S., and he argues that this is nothing more than a rape of America's pristine natural resources by the greed of private oil companies.

- **National Parks Closures:** One of the most controversial moves made by the House Resources committee came at 10:30 p.m. on September 19, when Rep. Jim Hansen (R/UT) succeeded in tacking H.R. 260 (his broad national park system reform bill) onto the reconciliation bill. Just 10 hours earlier, H.R. 260, which had been dubbed a "parks closure bill" by opponents because it

establishes a commission to review the holdings of the park service for possible privatization, was defeated on the floor of the House by a bipartisan vote of 231 to 180. In conference, the Hansen amendment was approved 23-7. A number of Democrats joined their Republican colleagues in supporting the amendment, including traditional parks advocates Reps. George Miller (D/CA) and Bruce Vento (D/MN). Rep. Bill Richardson (D/NM), who led the effort to defeat the bill on the House floor, stood no chance for a repeat success in committee. Environmentalists were outraged.

- **National Parks Concessions:** Included in the reconciliation bill was another Hansen bill (H.R. 2107), which provides for the reform of federal policies with respect to concessionaires

River Crossings

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Mississippi Interstate Cooperative Resource Association
(MICRA)
P.O. Box 774
Bettendorf, IA 52722-0774

MICRA Chairman

Mike Conlin, Illinois Department of Conservation, Springfield

Executive Board

Mike Conlin, Member at Large

Marion Conover, Vice Chairman, Iowa Department of Natural Resources, Des Moines

Jack Wingate, Minnesota Department of Natural Resources, St. Paul

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Bob Hanten, South Dakota Game, Fish & Parks Department, Pierre

Bill James, Indiana Department of Natural Resources, Indianapolis

Gary Edwards, U.S. Fish & Wildlife Service, Washington, D.C.

Chris Ungate, Tennessee Valley Authority, Knoxville, TN

MICRA Coordinator/Executive Secretary and Newsletter Editor

Jerry L. Reamussen, U.S. Fish & Wildlife Service, Bettendorf, Iowa

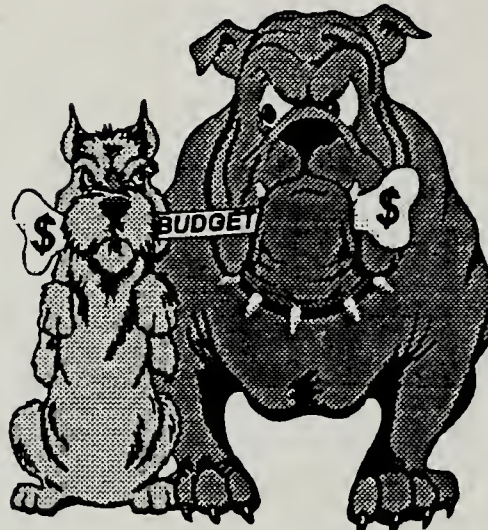
River Crossings is a mechanism for communication, information transfer, and coordination between agencies, groups and persons responsible for and/or interested in preserving and protecting the aquatic resources of the Mississippi River Drainage Basin through improved communication and management. Information 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.

operating on park system lands. The bill would, among other things, lift price controls on food and lodging services provided by park concessionaires. According to Bill Chandler of the National Parks and Conservation Association, "Under this bill, the sky's the limit for cashing in on the parks and park visitors."

● **Grazing:** The reconciliation bill imposes a new fee structure for livestock grazing and overturns Interior Secretary Bruce Babbitt's new rangeland regulations, which took effect August 21. The grazing provisions are nearly identical to that in H.R. 1713, an industry-backed grazing bill introduced by Rep. Wes Cooley (R/OR) and approved by the House parks and public lands panel on September 12. The new fee structure ties payment to the total gross value of cattle production and the current rate of return on 6-month U.S. Treasury securities. That would mean an approximate current fee of \$2.10/animal unit month (AUM), as compared to \$1.61 under existing rules, according to Brian Garber of the Public Lands Council. Like H.R. 1713, the measure codifies Bureau of Land Management regulations that were in effect prior to Babbitt's rules. The livestock industry much prefers the current regulatory framework to that proposed by Babbitt. In a letter to Rep. Young on September 19, Babbitt criticized inclusion of the grazing provisions, "The committee's provisions would allow states to define billable units of livestock on federal public rangelands, impose an administratively complex and expensive grazing fee formula, exempt livestock born on public rangelands from being subject to fees altogether, extend the term of grazing permits from 10 to 15 years, and exempt from NEPA compliance most important range management decisions," he wrote. Under the bill, general land use plans would remain subject to review under NEPA, but site specific decisions would not

require an environmental assessment.

● **Mining Reform:** In a press conference October 22, Babbitt directed some of his harshest comments at the committee's inclusion of what he called "sham mining reforms" that lift the moratorium on mineral patents and perpetuate many of the terms of the 1872 Mining Law. The House version re-opens the controversial practice of patenting, which under current law allows mining companies to take title to public lands for as little as \$2.50 or \$5.00/acre, but it requires companies instead to pay fair market value for the land's surface



rights. According to Interior Department figures, that means that a company like Faxe Kalk, Inc., which this year paid \$275 for an estimated \$1 billion worth of minerals on 110 acres of land would pay roughly \$22,000. American Barrick-Goldstrike Mines, which last year patented 1,673 acres and \$10 billion in gold reserves, would pay about \$100,375. Under the provisions of the 1872 mining law, the Canadian-based firm paid the government \$9,765 for the land. In addition, the House provisions call for a 3.5% royalty on net proceeds, with various exemptions and reductions. The Congressional Budget Office has said the royalty

would bring in "negligible revenues," and the Interior Department maintains that the cost of administration would likely exceed the amount collected.

● **Logging:** The Senate budget bill includes a provision, inserted by Sen. Ted Stevens (R/AK), which is aimed at increasing the amount of timber cut in Alaska's Tongass National Forest. The provision requires the Forest Service to implement a 1992 management plan, known as Alternative P, even though the agency is currently reviewing and revising its Tongass Land Management Plan. The provision permits the planning process to continue, but requires that any amendments to the plan or Alternative P maintain at least the number of acres suitable for logging under that alternative. It also insulates Alternative P from legal challenges, by declaring it "sufficient to satisfy all requirements of applicable laws." Alternative P provides for an annual 418 million board feet timber program, with a suitable land base scheduled for timber harvest of 1,649,000 acres. Environmental groups say the provision would dramatically increase logging in the Tongass National Forest. According to the Alaska Daily News the plan would require the Forest Service "to spend all of its time and money implementing a 4-year-old draft timber plan that could result in logging rebounding to a record-setting pace over the next decade." In an August 4 letter to Senate Appropriations Committee Chairman Mark Hatfield, Agriculture Secretary Dan Glickman denounced the measure for superseding the agency's planning process. "Alternative P is out-of-date, does not reflect current scientific information, and ignores the approximately 6,000 comments provided by the public when this alternative was first presented," he wrote. The bill's language also overturns a recent court decision requiring new environmental impact statements for certain timber sales. "It's a plain and

transparent effort, again without any debate on the merits of forest policy, to open up the Tongass to timber companies and continue the long discredited policy of giving away timber resources at below cost. In most instances so the logs can go to create more jobs in Japanese timber mills," a visibly frustrated Babbitt said October 22. "For the timber crowd swarming through Congress, that's their reward in this election cycle."

• **Land Sale:** Both the House and Senate reconciliation bills contains provisions that restructure the fee system for ski area operators on Forest Service lands, but the language also called for the possible sale of such lands to permittees. The provisions required the Agriculture Secretary to offer lands for sale to permittees within five years, or at the time their permits expire, whichever comes first. The Senate provision also directed the secretary to sell a minimum of \$100,000,000 in ski area lands by the end of fiscal year 2000, but that requirement was reportedly dropped in committee. The possible sale of Forest Service lands deeply concerns administration officials and environmentalists. "It sets a terrible precedent, because up to this point we have not had large tract sales," said one Forest Service employee. "This would be to my knowledge the first time we've ever faced or dealt with the sale of public lands on a large scale basis." Among the famous ski areas that could be affected by such a provision are Mammoth and Alpine Meadows in California, Sugarbush in Vermont, Attetash in New Hampshire, Telluride and Copper Mountain in Colorado, and Alta and Boreal in Utah. "This is opening a brand new Pandora's box," the official said. "If they do it here, what do they do



next?"

Environmentalists fear the provision harbingers a government-wide sell off of public lands. Rep. Jim Hansen earlier this year introduced a bill to transfer Bureau of Land Management (BLM) lands to the states in which they are located. He and a number of Western lawmakers are outspoken advocates of reducing the federal government's land base in the West. But for others, the privatization of public lands means the loss of public access and a squandering of a national heritage. "Allowing ski operators to purchase the most pristine parts of the mountain topography of the West would be an outrage," Babbitt said.

In Montana, a coalition of 10 state sportsmen's groups announced on October 18th a campaign to "save Montana's hunting heritage from the clutches" of Sen. Conrad Burns (R) "and his crazy attempts to sell off our public lands". Burns is co-sponsoring legislation to make each state an "all-or-nothing" offer of all BLM land within its borders. Montana contains more than 8 million acres of BLM land. Ron Moody, president of the Southeastern Montana Sportsmen's Association, said, "These bills serve big business and nobody else. ... It's time for grass-roots hunters and anglers in Montana to rise up and say, 'No way.'" Dick Wadhams, Burns' press secretary, called the campaign a political attack on Burns led by the MT Wildlife Federation, which he says is misrepresenting the issue. Wadhams said Burns would never "endanger" Montanans' enthusiasm for hunting and fishing on public lands. Burns has said even he would not vote for the bill he is co-sponsoring, but "you've got to come up with a radical idea to start a debate".

Although some of the major environmental issues in the budget reconciliation bill lie outside of the Mississippi River Basin, this budget

process is setting dangerous precedents for the use and disposal of public lands nationwide, and everyone should be aware of and involved in that debate.

Many Republicans claim a mandate from the public to change the way government works, including the way environmental and natural resource policies are structured. But opponents dispute the notion that the 1994 election was in any way a referendum on the nation's environmental policies. "That's nonsense," Babbitt said. "These issues were not debated in the last election cycle. There are very few candidates in either party who would care to run for Congress saying, 'elect me and I'm going to dismantle the national parks system' ... or 'elect me and I'm going to open the Arctic National Wildlife Refuge.' It wasn't



an issue."

The process by which these changes are being made (i.e. through the budget reconciliation bill as opposed to in authorizing legislation) is distasteful to many. "They're doing so much of this without hearings - the public isn't going to find out about this until they read about it or are affected by it," said a Forest Service employee.

Republican leaders rightly claim that when they were in the minority, the Democrats often railroaded policy changes through Congress in budget bills. But it still bears noting that of the many controversial issues discussed above, only one came up for a full House vote - the park system reform or "parks closure" bill - and it was soundly defeated.

Babbitt and others blame the pervasive interest of industry lobbyists. "This is happening because the moneychangers are in fact swarming through the temples of democracy in the nation's capitol," he said.

Environmentalists have praised President Clinton for his strong stand on these issues because in so doing "... the president has ordered a halt to Congress's looting of our national heritage," said John Adams, director of the Natural Resources Defense Council. "Congress must now reverse its shameful actions...and correct an unprecedented abuse of the budget process that has benefitted mining, timber, agribusiness, oil and other industries."

But according to Greenwire, Congress may not do anything of the sort. In fact, much of what is now in the budget reconciliation bill will probably remain there as the national attention focuses on higher-ticket items in the budget-like welfare reform and Medicaid cuts. "Our biggest task is to make sure people understand what's going on. We're getting lost in the uproar in Washington," said Karl Gawell of The Wilderness Society. "Resources issues often play well in the constituency who gains some subsidy from them - I mean the cattle industry follows what's going on with grazing much better than the conservation community does. Our biggest fear, when you get into the budget is that we'll get lost in all the noise."

"The rumors that the environmental community is rebounding like it did in the James Watt era is simply wrong. We're spread thinner than I've ever seen us, and I think it's a very deliberate part of our opponents game," Gawell said. "I mean, I've heard from several people on the hill that they're just going to keep piling it on, knowing that we simply can't cover it all, and that they will get some things through no matter how well we

perform. I am afraid to say that it's probably true."

"Much is at stake in the next few weeks. Those who stand to reap the benefits of last year's election victory are no doubt savoring the moment. But for environmentalists, the picture is bleak indeed. Many of the policies they have fought so hard for over the past few years are about to be abandoned. Ultimately, the fate of these issues, if not the immediate future of the conservation movement, lies with President Clinton."

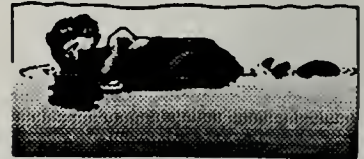
Source: Land Letter, SPECIAL REPORT, Vol. 14, No. 2 and Greenwire Vol. 5, No. 120

ESA Issues

The House Resources Committee, on October 12, marked up and passed the Young (R/AK)-Pombo (R/CA) Endangered Species Act (ESA) rewrite. That bill would:

- Make protection of endangered species on private lands voluntary and override the Supreme Court's June 29th ruling in the so-called "Sweet Home" case that prohibited destruction of endangered species habitat on private lands;
- Require the federal government to compensate landowners if their property values are diminished at least 20% by actions required under the ESA. Landowners could force the government to buy property that loses more than half its value;
- Rely more heavily on voluntary protection efforts by states and local governments. Among the provisions intended to assist landowners would be habitat conservation grants, land exchanges, species conservation planning, and technical and financial assistance;
- Create a network of National Biological Diversity Reserves consisting of public lands, with a "proactive" program to increase endangered species populations on them;

- Require more scientific review of listing decisions, and let states take over implementation of the ESA;



- Require a special vote of Congress to protect a species in one region if it thrives elsewhere;
- Limit federal power to ban imports of threatened foreign species legally captured or killed in other countries;
- Open several routes to knock species off the endangered list, even though they have shown no signs of improvement. These changes "could force the Interior Department to defend hundreds of endangered species listings at a time when Congress is cutting the agency's funding;"
- Automatically end protection for several species, including Columbia River salmon, unless Congress votes to grant them a special designation;
- End many protections for sea creatures, including otters, sea lions and turtles. One amendment would increase the likelihood that predator sea lions would be killed if necessary to protect Northwest salmon, making it clear that salmon protection under the ESA takes precedence over sea lion protection under the Marine Mammal Protection Act;
- Exempt shrimpers from federal turtle excluder device (TED) requirements as long as they contribute money to an effective program to save endangered sea turtles. The bill also includes provisions encouraging the U.S. to sign treaties establishing international sea turtle safeguards.



An amendment to the Young-Pombo bill, reportedly designed to

protect wildlife from harm on private lands, also has environmentalists skeptical. The amendment (also passed on October 12th) and pushed by Reps. Jack Metcalf (R/WA) and Jim Longley (R/ME) would prohibit habitat destruction that "proximately and foreseeably kills or physically injures" an endangered species. Jim Waltman of The Wilderness Society said the language would not protect habitat for migratory species.

During the House Resources Committee vote on the bill, committee member Dale Kildee (D/MI) made a "routine - and invariably honored" request for chairman Young's permission to put into the committee record five letters from religious groups. Young reportedly "resisted, saying it depended on which churches wrote the letters" and what the groups had to say, according to "sources" who attended the hearing. The letters were from the Presbyterian Church, American



Hebrew Congregations, the Mennonite Central Committee, the Evangelical Lutheran Church of America and the United Methodist Church's General Board. Young is reported to have "begrudgingly" entered the letters into the official record, including a "particularly nasty one" from the Methodists, which said: "An analysis of the Young/Pombo bill clearly reveals that the primary motive behind this legislation is not to protect God's creation. We believe that the driving force behind this legislation is greed".

The Young-Pombo bill's strong showing in committee does not assure smooth passage on the House floor. House Speaker Gingrich on October 13th said that the bill needs to satisfy moderate Republican concerns and that the bill removes too much protection from endangered species. Moderate GOPers and environmental interests complain that the bill fails to protect habitat and is "too generous" in compensating property owners.

Five committee Democrats supported the Young-Pombo legislation, while three GOPers - Wayne Gilchrest (MD), Jim Saxton (NJ) and Peter Torkildsen (MA) - opposed it. More than 130 lawmakers have circulated a letter criticizing the proposal as "too extreme." A group of about 30 "pro-environment" Republicans has "won a promise" from House Speaker Newt Gingrich to stall a vote on the bill until next year. The delay will give the green GOPers, who "bitterly oppose" it, "time to line up support for a more moderate approach." The delay is "evidence that the leadership is not going to stand by and let the extremists carry the day on environmental policy," said Rep. Jim Saxton (R/NJ), a GOP moderate who has drafted his own ESA rewrite.

Republican congressional aides say Gingrich is deliberately avoiding speaking out on the environment. According to one GOP staffer, Gingrich "has made it clear that he's not going to preside over the dismantling of environmental laws," but that to say so publicly would anger reform-minded Westerners and first-term reps.

Six doctors on October 16th assailed efforts to scale back the ESA, arguing that weakening the law could allow the extinction of plants and animals that yield medicine to treat cancer and other diseases. At a Boston news conference organized by

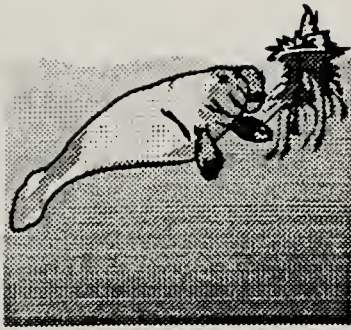
Physicians for Social Responsibility and the Wilderness Society, the doctors called on patients across the U.S. to write to lawmakers in support of the current ESA. Harvard Medical School's Eric Chivian said, "There is a profound lack of understanding about how human health is affected by the health of other species ... It is time for physicians to speak out".

However, Steve Hansen, spokesman for the House Resources Committee scoffed at the physicians saying, "it was ridiculous to argue that the bill would reduce availability of medicines." And Rep. Bill Brewster (D/OK), a pharmacist, says that liability under the current ESA "hinders the development of new drugs from rare plants and animals".

But others in the public health community also say that proposed Republican plans to cut the budget of the USEPA works against the national goal of reducing health costs. The American Public Health Association has issued an "action alert" to its 32,000 members, urging them to protest the cuts and GOP plans to limit the agency's enforcement powers.

On another front more than 175 state wildlife agencies and conservation groups, including the National Wildlife Federation and the Audubon Society, are pushing for a 5% federal tax on outdoor recreation equipment to benefit wild plants and animals not hunted for sport or protected by the ESA.

The proposal is modeled after a federal tax on ammunition, guns and fishing equipment that provides money to states to buy and manage forests, fields and lakes for hunting and fishing. Backers of the new tax say it would raise \$350 million annually for nongame species such as birds, snakes, frogs, chipmunks and other species for which there has been little protection.



The National Fish and Wildlife Foundation says many species, especially migratory songbirds, have declined at an alarming rate over the past few decades and may become ESA candidates. The goal of the tax is to prevent the species from becoming a rarity. "Legislation to impose the new tax is expected to be introduced into Congress next spring." Any bill creating a tax is usually considered a "pariah" in Congress, but "some key congressional members" say they may be willing to endorse this bill.

Source: Greenwire Vol. 5, Nos. 115, 117, 118, and 126; and NOAA Legislative Informer November 1995/Issue #15

New ESA Policy Enhances Native American Participation

The U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) announced on August 31, 1995 a new joint wildlife management policy designed to enhance the role of Native American Tribal governments in the endangered species program as it affects Tribal lands.

The new joint policy calls for both agencies to:

- Consult with and use the expertise of Native American Tribal governments when determining which species should be listed, conducting surveys on species populations, and implementing conservation measures;
- Provide notification to, use the

expertise of, and solicit information from Tribal governments when preparing proposed and final rules to list species; when considering impacts to reserved hunting and fishing rights and trust lands, and when exercising special regulatory authority for threatened species when reserved hunting and fishing rights are involved;

- Allow Tribal governments to participate in all phases of consultation about potential conflicts with endangered or threatened species;
- Use the expertise of Tribal governments in habitat conservation planning; and
- Include Tribal governments in all public aspects of recovery planning processes and implementation of monitoring programs for delisted species.

Partnerships currently underway include the following:

- Both services already are in partnership with 24 to 26 Tribes and the State of Washington in the "For the Sake of Salmon" effort to halt the declining salmon populations of the Northwest.



- In the southern Rocky Mountain area, 12 Tribes, including the Southern Utes (Colorado) and the Jicarilla and Mescalero Apaches (both in New Mexico) are developing fishery management plans for non-native fishes on their reservations.
- The Navajo Nation (Arizona, New Mexico) is developing a habitat conservation plan to cover the

Mexican spotted owl and several species that are candidates for ESA protection.

- In the East and Midwest, meetings and training sessions are being sponsored to introduce Tribes to endangered species programs.
- Under cooperative agreements, the Nez Perce Tribe (Idaho) is assisting in management of reintroduced wolves and of grizzly bears in the Bitterroot Wilderness.
- In Montana, the Blackfeet are assisting in conservation and habitat restoration for the bull trout, a candidate species.
- The Lakota Sioux (South Dakota) have requested introduction of blackfooted ferrets as part of their prairie management program, and the FWS is working with the Navajo Nation and the Hualapai Tribe to restore ferrets to Tribal lands in Arizona.

Source: U.S. Fish and Wildlife Service Bulletin August 31, 1995.

Clinton Has Best Enviro-Policy Ideas

According to a recent poll sponsored by the Times Mirror Center for People & the Press, President Clinton is viewed as having better ideas than the Republicans when it comes to protecting the environment.

When asked who has the "best ideas on" environmental policies, 45% of the respondents chose Clinton, 26% selected GOP congressional leaders, and 6% said "neither." Overall, 50% said they disapproved of GOP congressional leaders' policies, while 36% approved.

The telephone survey, conducted for Times Mirror by the Princeton Survey Research Center, interviewed 1,519 adults between Sept. 28 and Oct. 1 and has a margin of error of +/- 3%.

The poll signaled a "rising doubt" about certain Republican priorities

and a public "divided, issue by issue," on whether it trusts Clinton or GOPers more.

Source: Greenwire Vol. 5, No. 111

Flood Control At Any Cost

"The U.S. Army Corps of Engineers (Corps) used inflated property values to justify spending millions of tax dollars to repair agricultural levees damaged by Missouri River flooding", says Rudi Keller of the *Columbia, Missouri Tribune*. Keller wrote a series of articles for the *Columbia Tribune* in mid October describing government response to the 1993 and 1995 floods.

According to Keller's first article, entitled "At Any Cost", the Corps valued:

- An old mobile home used as a hunter's shack at \$25,000;
- Dirt paths linking farmers' fields at \$100,000/mile;
- A 20 X 40 foot building (worth maybe \$30,000 according to the owner) at \$125,000; and
- Homes left uninhabitable by the 1993 Flood at \$50,000 each - even ones that no longer existed.

Keller said, the Corps "used those estimates to help justify the biggest, most expensive round of levee repairs ever seen along the lower Missouri River." More than \$45.7 million has been spent in 110 levee districts after the 1993 flood, and a whole new round of repairs is under way to fix 55 of the same levees damaged during the 1995 floods.

Keller reported that since the *Columbia Tribune's* first inquiries in June, Corps economists have dramatically lowered the values given in some property categories, and eliminated others as justification for levee repairs. Corps

officials acknowledged that they didn't examine any homes, roads or other structures before assigning them values in the days following the 1993 flood. The Corps claims that such expedience was necessary because the situation was an emergency and levees needed to be rebuilt quickly.

It should be pointed out that the Corps and all other federal agencies were under tremendous pressure from Congress [(lead by Senator Christopher Bond (R/MO))] to get the levees rebuilt as fast as possible.

But according to Keller, in their zeal, "Corps officials not only used questionable values to justify their work", they also:

- Did not take history into account. As a result, the Corps spent hundreds of thousands of dollars to repair the same levees, some as many as four times in the past 20 years;
- Failed to consider what the land was being used for. Many of the Corps-funded levees are keeping water out of land recently purchased by federal and state agencies for use as wetlands; and
- Precluded on-site property inspections in each levee district.

Values were assigned to property and structures based on a list of standard prices developed by the Corps. Once a price was determined for a home in a particular levee district, that value was used for each home in the district, regardless of size or condition. Accordingly, taxpayers

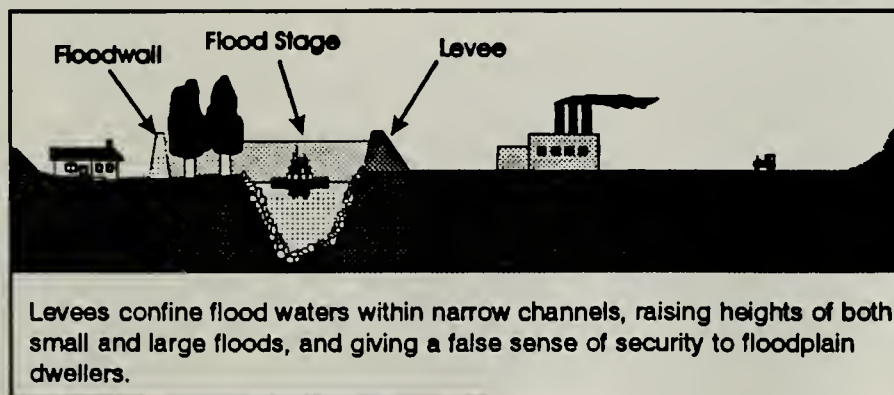
paid 80% of the costs for repairing 110 levees along the Missouri River and its tributaries.

To be eligible for federal funds, flood damage prevented by levee repairs must equal at least \$1.01 for every taxpayer \$1 spent. In other words, the agricultural profits and prevented damage to buildings must be worth more than the cost of repairs.

According to Keller, the *Columbia Tribune* examined economic justifications for 17 repair jobs in central Missouri. Most of those levees protect large tracts of farmland, but only four could be justified based on the value of the agricultural land they protect. So according to the *Tribune*, the Corps "...added its estimate of the value of buildings, roads and other structures that could be inundated in a new round of flooding. In doing so, they didn't take into account the condition of the property after the flood, as long as it had been there before the water rose."

For example, the Corps spent \$280,000 repairing a levee that protects homes in Cedar City, Missouri. Almost all of those homes have now been or are being demolished because the flood left them uninhabitable. Before demolition they were purchased with federal funds as part of a government buyout program. Maria Chastain-Brand (Corps sociologist) said her agency didn't consider whether the homes could, or would, be repaired before using them to help justify rebuilding Cedar City's levee.

Levee repairs moved much faster than home buyouts. Prodded by Congress, the Corps surveyed damages in September 1993 and awarded a \$280,000 contract



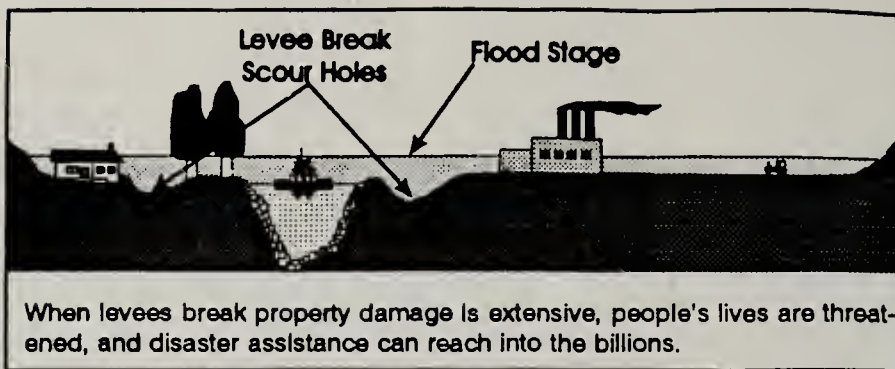
for levee work that December. Repairs were completed by May 1994. The buyout program didn't get under way in earnest for nearly a year.

This was the third repair job in less than seven years for the Cedar City and Capital View

drainage districts. But it was the first time that damage was so severe that protecting farmland alone wouldn't justify repair costs. According to Keller, "Based on the Corps' estimate of agricultural production, the levee repairs would provide just 77 cents of private benefits for every public dollar spent."

That's when the Corps took a look at other property behind the levee. From its files, the Corps decided the levee protects 174 homes, each worth \$50,000. The figures for both the number of homes and their value "are really exaggerated," said Melva Fast, Jefferson City's flood buyout administrator. Most homes were worth \$20,000 to \$30,000 before the flood, and that pre-flood value is the amount owners received when their homes were purchased, Fast said. "I have purchased all the properties, and I had one appraisal in the \$50,000 range," Fast said. Jefferson City officials were strict about the rules for moving back (into the floodplain) - homes that suffered damage beyond 50% of their replacement value had to be torn down or elevated when rebuilt.

George Hanley, chief of public affairs for the Corps' Kansas City district, said the agency also considered the value of a home's contents. "If anything, we figure our figures are



probably low based on that broad spectrum," Hanley said.

Sharon Lane a Cedar City resident disagrees. According to Keller, "She saw neighbors move out after taking as little as \$6,000 for their homes." "Probably two out of five" were worth as much as \$50,000 before the flood, counting both the homes and their contents, she said. The Corps' count of 174 homes in the Cedar City area was also about 50 too high, said Fast and Jim Beck, president of the Capital View Drainage District. The Corps' count was based on information compiled from previous floods.

Beck said he has no problems with the Corps' evaluation of his levee district. The bottom line is that he wanted the levee rebuilt. "It is very important for me and the Capital View Drainage District to maintain a working relationship with the Corps," he said. "I am not in a position to question their figures - and won't."

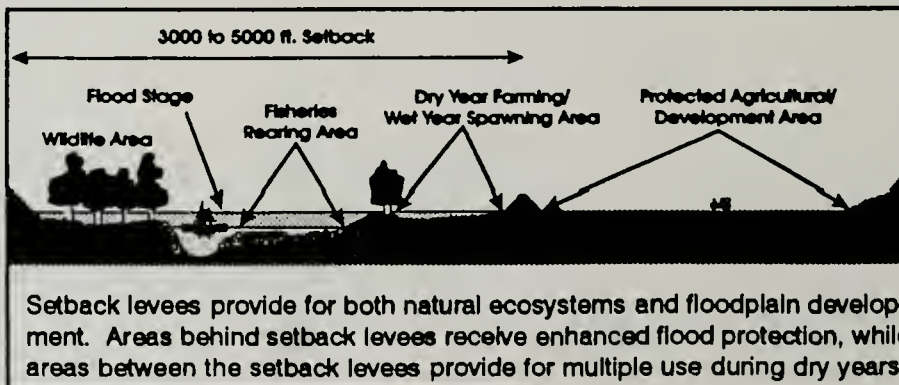
Even after all the property listed in Corps files was given Corps

determined values, three central Missouri levees couldn't pass muster. In one Moniteau County levee district, officials took matters into their own hands. Farming is the only business in the Jamestown bottoms of

Moniteau County, an area also known as Plowboy Bend. "Or rather," according to Keller, "it was the only business there until...owners of the land, across the river from Easley, became adept at 'farming governments' for cash to put their levees back and, later, additional money to buy their land."

The Corps' original estimated value of property protected by the Plowboy Levee included the mobile home (mentioned earlier), two irrigation systems and 11.4 miles of "local roads", mostly dirt paths used by farmers to get into their fields. According to Keller, "Corps economists gave the mobile home a value of \$25,000 (the cost of a new single-wide mobile home), although it was not listed on Moniteau County tax rolls and had only been used as a hunter's cabin." "The 'local roads' were given a value of \$1.14 million, or \$100,000/mile." Even using those valuations, the benefits did not justify the estimated public expense of \$1.48 million.

Private economic benefits only totaled 70 cents/ public dollar spent. Property owners were incensed, believing the Corps' estimates for repair costs were too high, said John Clay, vice president of the levee district. In fact, many of the levees repaired



ended up costing less than estimated - several came in at least one-third less than their forecast cost. Nonetheless, those estimates were the benchmark used when deciding whether levees were worth repairing. The levee district challenged the report, Clay said, arguing that the Corps missed a lot of property. Instead of 11.4 miles of those dirt paths, the district reported to the Corps that it used aerial photographs prepared by the USDA to determine there were actually 17.6 miles, increasing the value of the protected property by \$620,000. District officials also pointed out a 1.9-mile gravel road, which the Corps valued at \$380,000.

According to Keller, "All of the (levee) district's suggested changes were taken by the Corps without question." The additions raised the projected benefits to \$1.30 for every \$1 spent on repairs. A property added during the second review was Missouri Highland Farm, owned by Mary Hayes. She said nobody asked her the value of the building where she serves customers coming to pick her blueberries, gooseberries and other fruits. According to Keller, "The Corps based its value of \$125,000 on it being a 'commercial building with significant equipment investment.'" Hayes said it might be worth one quarter of that amount.

Chastain-Brand, Corps sociologist, said that at the time the 1993 valuations were done, roads didn't have to be on maps - or even repaired to pre-flood conditions - before the Corps included them at full value for the estimate of benefits of future flood protection. "They don't have to be public roads, publicly maintained," she said. "If these are roads that they need to get their crops in and out of the fields, that is a valid investment." When a levee district reported the existence of roads, certain standards were assumed, Chastain-Brand said. "We assume these local roads have a certain

amount of gravel on them." But nobody checked whether that is true, she added. "These are supposed to be done very quickly, and they do not have the time and money for detailed analysis and detailed field surveys," Chastain-Brand said.

Clay is quick to point out that the levee district only reported the additional property, Keller said. The Corps decided how to value it, Clay said. According to Keller, "the repairs made in Plowboy Bend after the '93 flood wouldn't have been approved if the more realistic 1995 figures had been used. Dirt paths are no longer given any value, and the estimated value of gravel roads has been lowered from an average of \$200,000 per mile to \$75,000 per mile." In addition to Plowboy Bend, four other levees would not have been repaired if the new standards were used.

Col. Richard Goring, who oversaw levee reconstruction for the Corps' Kansas City District until he retired in July, said all of the agency's actions - from setting values to rebuilding levees - were done within the framework of the federal law.

Top Corps officials denied that they inflated figures to aid the levee districts. Even though some items were eliminated and the value for others substantially reduced for this year's flooding, Hanley said the repairs done in 1993 remain justified. "Let's face it. These are not as precise as they could be, but they are a reasonably prudent effort."

Homer Lawrence, a regional economist with the Corps, said that as the 1993 repairs progressed, the Corps realized that values were too high for some property behind levees. Homes in some levee districts, for example, were valued at \$40,000 instead of the \$50,000 applied to houses in Cedar City. Corps economist Holland said that reducing the standard value for

roads is an attempt to be more realistic.

Scott Faber, spokesman for American Rivers, said the reduced values used this year bolster his belief that the Corps was eager to justify the 1993 repair jobs because of its cozy relationship with the levee districts. "The Corps views these floodplain farmers as its constituency and refuses to follow the basic laws of economics," Faber said. "I don't want to sound too cynical, but the Corps is one of the greatest self-perpetuating agencies in history. The Corps is acting in its own economic self interest by looking the other way," Faber said.

In his second article Rudi Keller described how federal agencies pursued conflicting goals after Missouri River floods: "At the same time the Army Corps of Engineers was feverishly rebuilding levees..., several other government agencies were buying up land along the river for conversion into wetlands. The end result was an expenditure of millions of dollars to protect land that ultimately was set aside to allow flooding."

As indicated earlier in the Cedar City area north of Jefferson City, 107 homes and open lots were purchased. State, federal and local governments paid \$1.6 million for the buyout. Another \$689,000 was spent demolishing the buildings. At the same time, the Corps was repairing the levees that protected those buildings, at a cost of \$280,000 - bringing the total taxpayer costs for repairs and buyouts in that area to \$2.4 million. Public and private relief agencies spent hundreds of thousands more helping individual flood victims.

In the Jamestown bottoms of Moniteau County, more than \$1 million in public money was spent rebuilding the Plowboy Bend levee. By the time floodwaters topped the levee again in May of 1995, most of the landowners had agreed to sell out to the Missouri Department

of Conservation - deals have been made for 2,060 of the 2,800 acres behind the levees.

The Corps defends its decision to restore flood protection to areas that wound up in government hands by saying that although they were aware of the conservation department's efforts, Corps officials had no idea whether any deals would be successful, said Marge DeBrot, natural disaster program manager in the Corps' Kansas City office.

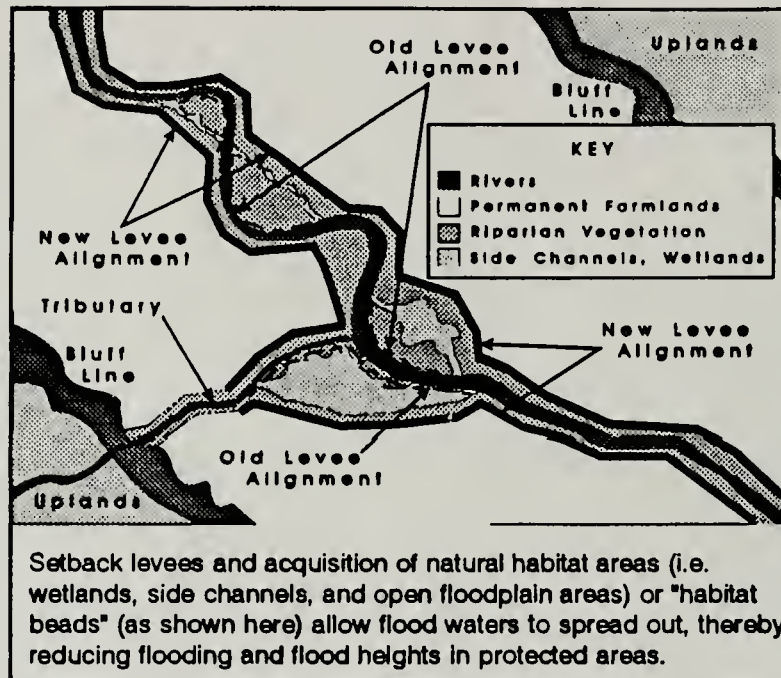
Some farmers, including levee association vice president John Clay, is nervous about having the Conservation Department as a neighbor. Now Clay must depend on the state agency as the major landowner in the levee district, to help pay for levee maintenance and possible repairs.

Norm Stucky of the Missouri Department of Conservation said his agency wants Clay's land, but it won't run him out to get it. "Clearly we are now part of that levee district," Stucky said. "We do not own all of Plowboy Bend, and we may never own all of it. But if the situation should ever arise where we would have the opportunity to own Plowboy Bend, our long-term plan would be to open it up and allow it to reconnect with the river."

Flood planners in Jefferson City would also like to see the home sites purchased in the buyout remain open to flooding. But the levee that protects those home sites was repaired by the Corps. Statewide, buyouts of homes cost \$40 million, and more than 3,000 homes in flood plains submerged during 1993 were acquired. Officials said this dramatically

reduced the cost of damages and extent of human suffering during the 1995 floods. "I think it's saved millions of dollars in this flood alone," said John Miller, Kansas City regional director of the Federal Emergency Management Agency.

President Bill Clinton ordered the Corps and other federal agencies to examine alternatives to traditional flood control policies soon after the 1993 Flood. But in the soggy fields, the push by landowners and Missouri Congressmen to rebuild levees was enormous. Farmers like Clay were clamoring for the Corps to



live up to promises of aid, while Missouri politicians at all levels were assuring farmers they would do everything they could to secure federal help. And despite President Clinton's order, a federal law charging the Corps with making flood control decisions directed the Corps to do as the farmers were asking.

Consequently, all the agencies trying to purchase land from farmers still had large pots of money available when floodwaters rose again in 1995:

- The Missouri Conservation

Department had spent only \$2.4 million of the \$10 million it had set aside;

- The U.S. Natural Resources Conservation Service had significant amounts of Emergency Wetlands Reserve funding left; and
- The U.S. Fish & Wildlife Service (FWS) had significant funding left over from their effort to create the Big Muddy National Wildlife and Fish Refuge.

The FWS, however, has successfully purchased 2,000 acres from willing sellers; and other deals are in the works. The FWS had avoided areas where the Corps put

levees back in place because it doesn't want land that isn't going to be permanently open to flooding, said J.C. Bryant, Refuge Manager. But because so much land is within levee districts, he said, his agency is now buying land behind levees in the hopes of eventually tearing the levees down. "If we could just create some (habitat) beads along that river, wide places for the river to expand, there would be a tremendous difference in the health of the river and the intensity of high flow events," Bryant said.

Federal wildlife officials acknowledge that it will take many years to meet

the goal of assembling 60,000 acres of refuge along the river. In the meantime, Bryant said, agencies must engage in a dialogue to avoid spending money to repair levees as other tax dollars are used to buy land.

Environmentalists have proposed raising the price offered to landowners. By giving them a one-time premium, said Scott Faber of American Rivers, the repeated calls for taxpayer bailouts would end. Faber said farmers and other landowners in river bottoms should be paid the cost of

restoring their land to production, the cost of restoring levee protection and any amount state or federal governments were offering based on fair market value.

"The big problem, after the flood was that farmers were not offered a fast or a fair offer," he said. "The key this time is to make farmers an offer that is reasonable - and do it quickly."

In Rudl Keller's third article he discovered what we have been saying all along - "levee system(s) increase the likelihood of flooding".

According to Keller, when floodwaters rose in 1995, long-time Missouri River bottom residents believed they were victims of near-historic amounts of rainfall. "They were wrong", Keller said, "It wasn't simply the amount of rainfall that caused widespread flooding in May. It was also the levees. The very system built to protect land along the river caused water levels to rise faster than at any point in the river's history."

The gauge at Boonville read 33.1 feet on May 19, 4 feet below the record level hit in 1993, but higher than at any other time on record. That fact obscures a more revealing figure - the amount of water in the river on May 19 wasn't anywhere near a record. In fact, that same amount of water could be expected every 10 years. What was unusual was how high the water rose.

Before 1993, the record for flooding at Boonville came in 1951, when the volume of water coursing down the Big Muddy was 550,000 cfs. It took far less water - 371,000 cfs - to push the river above 33 feet in 1995.

"Since 1934", Keller said, "the river has run over its banks

many more times than in prior years, a total of 45 times. That time period coincided with the Corps' most ambitious efforts to control the river and the construction of numerous private levees."

Tom Harris, a hydrologic technician with the U.S. Geological Survey, said the Corps has done so much channeling of the river that it has changed the waterway's profile. As a result, Harris said, a flow that wouldn't have caused flooding when the agency started measuring river levels in 1925 now pushes the river far above flood stage. Since U.S. acquisition of Missouri, the flow of a 100-year flood has been exceeded only twice - in 1844, when the river peaked at 710,000 cfs, and 1993, when the peak hit 755,000 cfs. The highest gauge reading in 1844 was 32.7 feet. In 1993, the gauge read 37.1 feet.

The change (in river elevation) during 10-year floods is more dramatic. In 1927, a flood of nearly equal flow to May's flood measured 23.9 feet on the Booneville gauge, compared to the 33.1 feet hit in 1995.

"Years of tradition are hard to break", Keller says. "But the 1993 Flood destroyed many things, and one of them might have been the Corps' view of levees and other flood-control devices. Scientists for the Corps now believe the practice of building up levees is fundamentally flawed."

They agreed with the Fish and Wildlife Service in their recent report (issued in June) that leaving some levees unrepaired and creating flood plain habitat areas or wildlife refuges would make flooding less severe by giving the water natural areas in which to spread out. Corps' researchers based that conclusion on a detailed, computerized study conducted on the effects of levees along the Missouri and Mississippi rivers. They concluded that levees built as high as the water rose wouldn't have been sufficient, because the existence of the levees themselves would have pushed the water higher still.

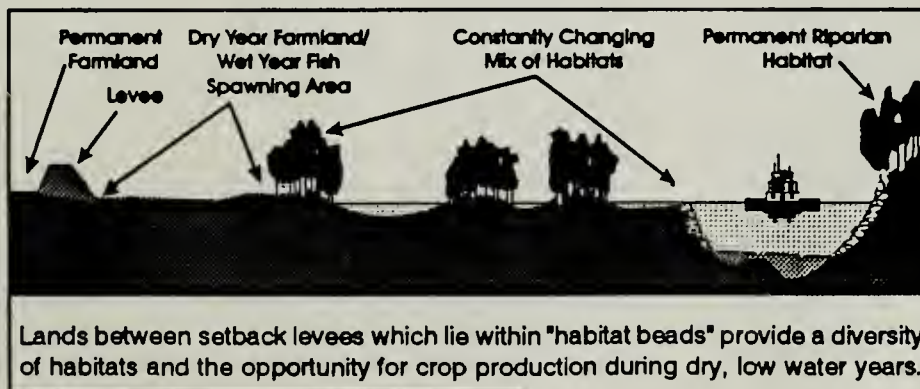
Along the Missouri, raising the levees would have increased flood heights an average of 3 to 4 feet and up to 6.9 feet at Waverly, one of the widest and lowest spots on the river between Kansas City and St. Louis. If those levees were removed altogether, the floodwaters would have been as much as 3 feet lower.

The study is significant because it will serve as the Corps' factual justification for making future flood-control decisions, said Dave Loss, who managed the study from the Corps' office in St. Paul, MN.

Scott Faber, spokesman for American Rivers, said the Corps study settles the debate about the viability of levees as flood-control devices. "The agency that has made its bread and butter on levees for two centuries is now saying that building more levees is

the wrong thing to do," Faber said. "You can't ask for a more convincing repudiation than the Corps saying levees are wrong and flood-plain management is right."

A Missouri state task force on



flood response convened by Gov. Mel Carnahan in the wake of the '93 flood agreed, "The aggregate result (of levees) appears to actually increase the flood danger by increasing the height and velocity of the river flow during floods."

The task force recommended that the state do a better job of coordinating flood plain management to mitigate the costly cycle of flood relief. In the short term, it suggested that farming levees not be rebuilt any higher than pre-flood heights. Without such guidelines, the result would be "levee wars," in which each community builds a higher levee to ensure river water flows elsewhere, the task force report said.

Keller's articles summarize the situation surrounding flooding very well - and not just in Missouri. The levee districts, some Congressmen, and the Corps wanted the levees repaired so badly that in doing so they were willing for the public to incur "ANY COST". This, despite the fact that other programs were available to give floodplain farmers relief, and in the face of growing evidence that levees only exacerbate flooding problems. All of this occurred at the same time that Congress is cutting environmental and social programs at the national level, and even shutting down the government, to supposedly balance the federal budget!

Source: Columbia Daily Tribune, Columbia, MO 10-15,16, and 17-95

Waterways Restoration Act of 1995

H. R. 1331 introduced by Rep. Elizabeth Furse (R/OR) would declare it in the national interest to:

- Protect and restore the chemical, biological, and physical components of waterways and associated ecological systems such that their biological and

physical structures, diversity, functions, and dynamics are restored;

- Replace deteriorating stormwater structural infrastructures and physical waterway alterations that are ecologically damaging with cost effective, low maintenance, and ecologically sensitive projects;
- Promote the use of nonstructural means to manage and convey streamflow, stormwater, and flood waters;
- Increase the involvement of the public and youth conservation and service corps in the monitoring, inventorying, and restoration of watersheds in order to improve public education, prevent pollution, and develop coordinated citizen and governmental partnerships to restore damaged waterways; and
- Benefit business districts, local economies, and neighborhoods through the restoration of waterways and the development of multiuse greenway corridors.



The Secretary of Agriculture, acting through the Chief of the Natural Resources Conservation Service, would establish and implement a Waterways Restoration Program, providing technical assistance and grants, on a competitive basis, to eligible entities to carry out waterway restoration projects. Eligible projects would achieve ecological restoration or protection and one or more of the following objectives: flood damage reduction, erosion control, stormwater management, and water quality enhancement. Projects could be carried out on

Federal, State or private lands where the State or the private land owner is a sponsor or cosponsor.

Eligible projects would include any of the following:

- Restoration and monitoring of degraded waterways, including revegetation, restoration of biological communities, and changes in land management practices;
- Restoration or establishment of wetland and riparian environments as part of a multiobjective stormwater management system in which the restored or established areas provide stormwater storage, detention, and retention; nutrient filtering; wildlife habitat; and increased biological diversity.
- Reduction of runoff;
- Stream bank restoration using the principles of biotechnical slope stabilization;
- Establishment and acquisition of multiobjective floodplain riparian and adjacent floodprone lands, including greenways, for sediment storage, floodwater storage and conveyance, wildlife habitat, and recreation;
- Removal of culverts and storm drains to reestablish natural ecological conditions and reduce flood damages;
- Organization of local watershed councils in conjunction with the implementation of on-the-ground action education or restoration projects;
- Training of participants, including youth conservation and service corps program participants, in restoration techniques in conjunction with the implementation of on-the-ground action education or restoration projects;
- Development of waterway restoration or watershed plans which are intended for use within the grant agreement period to implement specific restoration projects;
- Restoration of any stream channel to reestablish a meandering, bankfull flow channel, riparian vegetation, and floodplain in order to restore the functions

and dynamics of a natural stream system to a previously channelized waterway; or to convey larger flood flows as an alternative to a channelization project;

- Release of reservoir flows to restore riparian and instream habitat;
- Watershed or wetland projects that have undergone planning pursuant to other Federal, State, tribal, or local programs and laws and have received necessary environmental review and permits;
- Early action projects which a watershed council wants to implement prior to the completion of its required final consensus watershed plan, if the project is determined to meet the council's watershed management objectives and is useful in fostering citizen involvement in the planning process.

Projects involving channelization, stream bank stabilization using methods other than biotechnical slope protection methods, construction of reservoirs, or structures would not be eligible for assistance unless necessary for reestablishment of the structure, function, and diversity of native ecosystems.

This bill currently has over 50 cosponsors, and shows great promise for restoration of streams and waterways across the country. For additional information interested persons should contact Congresswoman Furse's office at 316 Cannon Building, Washington, D.C. 20515, or at (202) 225-0855.

Groundwater Nitrate Removal In Riparian Buffer Zones

A recent New England study evaluated the potential of riparian buffer zones in removing groundwater nitrate, and attempted to identify the plant and microbial processes responsible for nitrate removal in riparian buffers. Investigators introduced solutions enriched with nitrate and a bromide

tracer to groundwater through dosing wells in different soil types within a riparian forest in Rhode Island.

Dosing wells were located at different groundwater depths in soils differing by drainage class (moderately well drained; somewhat poorly drained; and poorly drained). Each doser was surrounded by a nest of downgradient monitoring wells. Investigators quantified groundwater nitrate removal by coupling observations on the changes in the nitrate-tracer ratio with hydrologic factors at each dosing site.

Decreases in the concentration of the tracer were attributed to mixing, dispersion, and diffusion—assuming that these physical processes acted to reduce nitrate concentrations by the same amount. Decreases in nitrate concentrations in excess of the tracer were attributed to biological processes and collectively termed "removal." Detailed measurements of plant root and microbial biomass and activity were made in close coordination with the groundwater studies to determine what processes contributed to observed nitrate attenuation.

Investigators observed significant spatial and temporal variation in the site's physical and chemical parameters and in nitrate removal rates over a distance of 60 feet between the driest and wettest locations within the riparian zone. Groundwater in the drier locations was strongly aerobic and well below the biologically active A and B soil horizons. In contrast, groundwater in the wettest location was generally within the upper 20 inches of the soil surface and had low dissolved oxygen levels.

High groundwater nitrate removal rates were observed in the hydric location where soil is saturated for long periods of time and is anaerobic. Mean nitrate removal rates in poorly drained shallow

groundwater were 70% higher than in the shallow groundwater of drier locations.

The spatial variation in nitrate removal rates suggests that using riparian zones dominated by upland or transitional soils to prevent nitrate movement from agricultural areas into streams may be less effective than using sites dominated by wetter, hydric soils. The scale of the spatial variation presents challenges for widespread adoption of soil drainage classes into practical management guidelines for riparian forests.

The study site, as is typical of many riparian areas in southern New England, had very finely divided soil drainage classes (separated by approximately 30 feet) with distinct nitrate removal capacities. However, the resolution of standard soil maps and groundwater maps often used in geographic information systems developed for land management is too coarse to incorporate the observed differences. It may be necessary to develop high resolution, large-scale soil and groundwater maps to optimize the use of riparian areas for nitrate removal in agricultural watersheds.

Temporal patterns of nitrate removal in this study were complex. Removal rates did not increase significantly from March into June despite a groundwater temperature increase of more than 15 °F. But removal rates in November were more than double those in June, even though groundwater temperatures were lower in November. The fact that the highest removal rates were observed in the dormant season suggests that immobilization and denitrification processes, rather than plants, were responsible for much of the observed groundwater nitrate removal.

Laboratory microcosm studies confirmed that denitrification was the major microbial process

involved in the removal of nitrate in the groundwater of the riparian zone. Carbon availability was found to control denitrification. Qualitative measurements within the saturated zone of the riparian soils suggests that the hydric soils have a greater incidence of high-carbon media than the drier locations.

For further information contact A. J. Gold or P. M. Groffman, University of Rhode Island, 336 Woodward Hall, Kingston, RI 02881, (401) 792-2903 or FAX (401) 792-4561.

Source: Nonpoint Source News-Notes, October/November 1995, Issue #43,

A Citizen's Riparian Area Management Guide

The Lake County (Illinois) Stormwater Management Commission used a 319 grant to develop a citizen's guide for riparian area management. The guide covers water quality, riparian habitat, flooding, property value, and safety issues. It educates riparian homeowners on the causes and impacts of soil erosion, water quality degradation, and the importance of using BMPs for watershed management. In six sections it identifies the principles of riparian management:

- *More Is Not Better* addresses nutrient impacts from the misapplication of lawn fertilizer and provides proper application methods;
- *No Dumping Allowed* details nutrient impacts of yard waste and supports composting;
- *Excess Debris Spells Disaster* discusses the environmental and safety implications of "urban artifacts," such as the tires and natural debris that travel in stream channels;
- *Plant Yourself Some Roots* focuses on the benefits of establishing rooted streambank cover to prevent erosion; buffer strips to filter pollutants, and tiles, storm sewer outlets, and other

concentrated flow outlets to manage runoff;

- *Short Grass Doesn't Cut It* explains the negative impact of short grass on pollutant filtering ability, wildlife habitat, and weed and drought resistance; and
- *Tune Into Your Channels* highlights the benefits of natural, meandering channels in comparison to straightened channels and advocates vegetative structures to stabilize streambanks and shorelines.

Other sections discuss how to properly install bank stabilization measures and the advantages of native plants. The six principles are applicable across much of the United States. To date, the Commission has distributed nearly 5,000 copies of the citizen's guide.

Free copies of *Riparian Area Management: A Citizen's Guide*, can be obtained from the Lake County Stormwater Management Commission, 333-B Peterson Road, Libertyville, IL 60048, (708) 918-5260.

Source: Nonpoint Source News-Notes, October/November 1995, Issue #43

TVA Shoreline Management Partnership Initiative

Customer focus is a key management issue in the Tennessee Valley Authority's (TVA's) award-winning Shoreline Management Initiative. The Initiative, beginning a little over a year ago, considers alternative shoreline management scenarios and examines the economic and environmental impacts of residential shoreline development. Alternatives being examined compare the effects of buffers and unobtrusive development along the waterfront with more intensive development, such as retaining walls, lawns down to the water, and large docks along the waterfront. The initiative addresses the effect of development on

vegetation, wildlife, water quality, wetlands, cultural resources, aquatic habitat, scenic beauty, and public recreation opportunities. The ultimate objective is to establish a policy and decision-making framework that will define a long-range shoreline development strategy.

Before the project began, TVA and Auburn University asked Gallup to conduct a survey to get a concrete sense of what citizens want TVA to accomplish - 31% of those polled believe that TVA places top priority on the environment in the conduct of its public land stewardship, but 61% want to see a higher priority placed on the environment.

Some 13% of TVA shorelines are now developed for residential use; about 5% have been developed for commercial, industrial, and public facilities; and about 10% are in a protected class as wildlife refuges or as TVA designated habitat protection areas. Another 71% of the shoreline is undeveloped, presenting a broad range of opportunities. The Initiative is studying the cumulative effects of various development scenarios - the effect, for example, of developing another 25%, 50%, or 70% of the shoreline. Then, taking these projections separately, TVA can set development targets to ensure that a reasonable blend of developed and undeveloped shoreline area is maintained.

Tere McDonough, Project Manager, said the need for the Initiative became apparent when a developer applied for permits for several lots. He wanted a permit to dredge along the waterfront, to put riprap along the entire shoreline, and to build docks in front of each lot. When TVA managers looked at the site, McDonough said, they discovered that dredging wasn't needed, and that the properties were not eroding. A good stand of vegetation was flourishing along the shoreline and if left intact, no erosion problem would arise and riprap would not be needed. "TVA

was able to show the developer some ways to save big money."

TVA managers also looked at the potential visual effect of placing individual docks along the shoreline, and found that if the docks were nestled in embayments, the whole development would be much more appealing. The agency also identified wetlands - some on TVA land, some on private property - and was able to negotiate with the developer to protect those areas. This project became the turning point, and TVA saw that success was possible through negotiation and different approaches.

TVA's Shoreline Management Initiative has now moved beyond looking at individual lot-by-lot impacts to considering the cumulative environmental effects of overall shoreline development. TVA talked with over 1,200 people at a series of 13 public meetings and set up an 800-toll free information line to accept comments. The meetings generated some 7,800 comments from over 200 people. TVA received a good sense of what people considered valuable and important - the public is keenly interested in protecting the scenic beauty of the lakes, and water quality was foremost on everyone's mind.

Property owners also wanted to maintain their access rights to the waters, and their right to have facilities along the waterfront. By the same token, many property owners think that TVA needs more comprehensive standards for shoreline development because such standards will help protect their investments and property.

Participants also asked for education about how to better care for the shoreline environment. In response, TVA is considering developing an environmental handbook for property owners. TVA is also assessing shoreline erosion conditions and attempting

to characterize the shores as either mildly, moderately, severely, or critically eroded. This information can then be used to develop treatment plans for erosion control that move away from hard engineering approaches into bioengineering and vegetative treatment. It may be possible to develop a shoreline categorization system that will show the agency how such things as steepness of slope and erodibility of soils can be factored into development decisions to help protect sensitive areas.

TVA has historically taken a hands-off approach to funding erosion controls, but it is now exploring the use of cost-sharing incentives to encourage alternatives to riprap and retaining



"Help Save Our Shorelines"

walls - and perhaps also for the establishment of buffers in areas where TVA doesn't own the property. In addition, TVA is considering partnerships to acquire conservation easements. The agency is working cooperatively with farmers to put agricultural buffers along reservoirs and streams in the watershed, and with marina owners to install boat pump-out systems that will reduce the volume of waste entering the water from boats.

One thing we've learned," says McDonough, "is that the customer focus pays off." Communications and education comprise a major element in solving nonpoint source pollution problems. Water quality problems are many and involve a range of ecosystems, but two

things are certain. Science and public policy are not sufficient without the involvement of local communities and the participation of the businesses and residents who make their homes in the watershed. "You can't set policy in Washington, D.C., or in TVA's corporate towers and expect it to be implemented. You've got to get local people involved to hammer away at these problems."

The other lesson is that quick short-term fixes are not the solution. Science, public policy, and the participation of all stakeholders is needed if we really want to make changes over the long haul. That is the perspective of the Shoreline Management Initiative, and it has been quite successful.

Contact: Tere McDonough, Land Policy Specialist, Reservoir Land Management, Tennessee Valley Authority, 17 Ridgeway Road, Norris, TN 37828, (615) 632-1542 or FAX (615) 632-1534.

Source: Nonpoint Source News-Notes, October/November 1995, Issue #43

Missouri Forage and Grazing Management Project

Southcentral and southwest Missouri support the highest concentration of beef and dairy cattle in the state as well as five recreational lakes and several scenic rivers. This potentially uneasy mix of land uses works largely because a successful grazing demonstration project helps protect recreational waters while increasing the profitability of forage and livestock enterprises.

A 10-member committee representing farmers, ranchers, the agriculture industry, Soil and Water Conservation Districts, Cooperative Extension, and Natural Resources Conservation Service (NRCS)

directed the project. Two Resource Conservation and Development councils, the Missouri Department of Natural Resources, the NRCS, and a U.S. EPA 205(1)(5) grant funded a grasslands specialist to implement the project.

The Demonstration Project was conducted from mid-1992 to 1995 to help producers design, implement, and maintain grazing and watering systems and pasture establishment measures, in place of conventional silage feed



production and feed lots. In the recommended rotational grazing system, livestock were allowed to graze a section of pasture for one to three days before moving on to the next section. Each section rested 20 to 40 days between grazings.

This grazing system reduced erosion, limited livestock impacts on streams, and provided higher quality diets for improved livestock performance. Mark Kennedy, the project's grassland specialist explains, "From an animal standpoint, management intensive grazing ensures that plants are in a high state of nutrition when livestock graze. From a plant standpoint, it provides respite, and from an environmental standpoint, it more evenly distributes manure over the grazing area. It ties the animal needs to the plant needs."

The farms ranged in size from 40 to 4,000 acres. Kennedy tested soils on the farms, and helped producers maintain satisfactory plant fertility levels through nutrient recycling (i.e. from improved manure distribution). This step

also eliminated the need for supplemental fertilizer. In addition, grazing livestock "harvested" weeds such as ragweed and lambs quarters, eliminating the need for herbicides.

Farmers implementing the grazing systems under the pilot project did not receive cost-share - they were attracted instead by the cash-flow benefits of the system. In 1994, however, the Missouri Department of Natural Resources recognized the benefits of grazing systems and initiated a pilot cost-share program for three counties. This year, the cost-share program was extended to nine counties, and it is scheduled to go statewide in 1996. The project has revealed a high rate of return for demonstration farm producers:

- Over a 290-day

period, one operation using rotational grazing produced 733.38 lbs. of beef/acre and 1.02 T of hay/acre compared to conventional yields of 150 to 350 lbs. of beef/acre. Additionally, plant fertility levels remained high without commercial fertilizer or herbicide for five years.

- At a dairy operation, income over feed cost increased from a low of \$3.31/hundred weight (cwt) of livestock using a conventional feeding system to a high of \$5.61/cwt using a grazing system - a 59% increase in income. The cost of the water and fencing used in the grazing system was \$61/acre, or \$3,908; however, the cost-saving in feed was \$234/cow for a herd of 55 cows, or \$12,870. The dairy farmer also reported that the grazing system was less labor intensive than conventional systems, greatly reducing the time demanded for harvesting forage and managing manure.

Kennedy reports that rotational grazing systems limit livestock access to streams to short periods of time, improving stream bank conditions in comparison to those

in pastures grazed full-time. "Although even limited access is not ultimately desirable for the stream, it is preferable to perpetual access, and limits the intrusion of nonforage plant species into the grazing system," Kennedy explains. A water quality monitoring project on the Upper Niangua River is monitoring the impacts of no stream access, limited-access, and full-access grazing systems.

The demonstration project offers convincing evidence that changing livestock systems to reduce inputs in favor of increased management results in positive water quality and cost benefits - a change that Kennedy says, "replaces horsepower with brain power." A document entitled, "Pasture Management Guide for the Ozarks" is available.

For more information, contact Mark Kennedy, State Grassland Specialist, Top of the Ozarks RC&D, 1437A South Highway 63, Houston, MO 65483, (417) 967-4188 or FAX (417) 967-5283.

Source: Nonpoint Source News-Notes, October/November 1995, Issue #43

Eco-Friendly Farming

The Energy (DOE) and Agriculture (USDA) departments are joining efforts to improve farming techniques and reduce farmers' use of fossil fuels and pesticides. Under the joint five-year agreement, the departments' will explore ways to maximize crop yield, produce new products and improve food quality and safety.



The program will combine the DOE's "advanced computation and remote sensors" with the USDA's expertise in plant breeding,

biological pest control, and soil and water conservation, to help create "more sustainable" solutions to agriculture's current use of fossil fuels and chemicals.

Industry will be "encouraged" to participate in the program, "so new technology can be commercialized to create jobs and rural development." Future projects may include developing precision farming systems, improving technologies for previously untilled soil and pathogen detection.

Source: Greenwire Vol. 5, No. 132

States' Rights Meeting

Some 300 state officials gathered in Cincinnati in October for the three-day "States' Federalism Summit" and agreed on what Utah Gov. Mike Leavitt (R) called a "states' agenda" designed to give states more power to challenge federal laws and regulations. Such a change would signal a "new high-water mark" of state power, possibly threatening the feds' ability to impose, among other things, "broad" environmental regulations.

The officials, including seven governors, recommended:

- A new "federalism act" giving states a voice in the legislative process;
- A Constitutional amendment giving states the power to force Congress to reconsider laws or regulations that states find onerous;
- A mechanism allowing states to propose constitutional amendments; and
- Limits on Congress' ability to issue mandates on states.

Source: Greenwire Vol. 5, No. 123

Property Rights Driven by Industry

The Western property-rights movement is driven by interests

from mining, timber, real estate and other industries that contribute to key congressional committee members, according to a study released last week by the Washington-based Center for Responsive Politics.

While the property-rights movement "conjures" up images of "financially strapped landowners" fighting an "oppressive federal bureaucracy," the study "paints a different picture." The center found that Senate Judiciary Committee members from 1989 to 1994 received an average of \$95,722 from political action committees (PACs) supporting "takings" legislation that would compensate landowners when federal actions reduce the value of their land. Sens. Mike DeWine (R/OH) and Hank Brown (R/CO) received the most money from the PACs, \$276,666 and \$201,712 respectively.

The nonpartisan center, which tracks ties between money and politics, defines property-rights PACs as those representing mining, grazing, timber, real estate developers, water interests and farm bureaus.

In Nye County, NV, the county is suing the federal government for control over public lands, and has been given \$40,000 in former federal funds by Nevada's grazing boards to help with its suit. The money originates from grazing fees collected by the Bureau of Land Management, a portion of which are returned to the boards. According to state law, the money can be used for any "purpose beneficial to stock raising and ranching industries." Edward Presley, Nye County research specialist, said he is going to all grazing boards to ask for similar help. In some states, the fees are rerouted into local education.

The Sierra Club's Rose Strickland rejects the idea that fees are not federal funds: "Unless they're claiming that the federal forage is

free, the grazing fees they paid were for actual product that the cows consumed."

Source: Greenwire Vol. 5, Nos. 106, 123

Harassment Suit Against Miner

In a "first-of-a-kind action," Public Employees for Environmental Responsibility (PEER) have filed suit against Catron County, NM mine operator Richard Manning for harassment and malicious prosecution of two government officials. Catron County is considered the birthplace of the "County Supremacy" movement which challenges the legitimacy of federal land ownership.

The PEER suit stems from charges brought by Manning, a "property rights activist," against U.S. Forest Service Inspector Thomas Dwyer and the New Mexico Environment Department's Robert Salter for conducting a required water inspection on federal land Manning claims to own. After months of legal action, New Mexico courts dismissed Manning's case; his appeals were denied.

PEER claims that "across the west, 'wise use' bullies have declared war on state and federal resource managers who simply are doing their jobs, wrongly assuming they are unable to fight back." PEER General Counsel Jeffrey Ruch said, "Our lawsuit will demonstrate that those who harass public employees will have to pay a heavy price for their illegal acts." PEER has cited more than two dozen cases in which agency environmental staffers have been subjected to threats, intimidation or assaults. The suit asks for compensatory and punitive damages.

Source: Greenwire Vol. 5, No. 117

Yellowstone Mine Update

A federal judge on October 13th "dealt a blow to Canadian mining giant Noranda Inc.'s controversial effort to open a gold mine adjacent to Yellowstone National Park," ruling that the company is responsible for cleaning water pollution already at the site.

U.S. District Court Judge Jack Shanstrom ruled that under the federal Clean Water Act, Noranda affiliate Crown Butte Mines Inc. must obtain permits and clean up pollution caused by mining in the 19th century at the proposed New World Mine site. That process could take "many months, if not years."

The ruling came in a suit brought by environmentalists to block the New World Mine, which is located in drainages that flow into Yellowstone National Park. Environmentalists fear that toxic runoff from the mine could poison rivers and damage wildlife in Yellowstone. A Crown Butte spokeswoman declined to comment, saying the company hadn't yet reviewed the ruling.

Source: Greenwire Vol. 5, No. 116

Iowa Hog Lot Studies

Iowa legislative leaders agreed on October 10 to spend "millions of dollars" on research directed at solving the environmental and odor problems caused by large-scale hog facilities. House Speaker Ron Corbett (R) said he is confident the appropriation, which could total more than \$9 million over the next three years, will be approved by the legislature.

The study, to be conducted by Iowa State University, would research ways to control hog odor, safeguard lakes and streams and ensure the competitiveness of small farmers. Lawmakers will appoint a working committee to draft final details of the bill, which

would require large hog confinements to be located a minimum distance from public areas and mandate that producers file information on how they dispose of manure.

"Because of the spills this summer, I think more of the general public is concerned with the potential problems", Corbett said.

Source: Greenwire Vol. 5, No. 114

North Carolina and China Crackdown on Polluters

The FBI and North Carolina prosecutors on October 3rd "unveiled" a task force of federal and state enforcement bodies that will target intentional polluters for criminal prosecutions. Task-force members "say their goal is serious jail time for violators." In the past, prosecutors emphasized fines and civil penalties. The task force will rely partially on concerned citizens for tips about criminal polluters.



"Intentional Polluter"

Task-force members include the FBI; the USEPA; the US Attorney's Office; the State Bureau of Investigation; the state attorney general; and the state Department of Environment, Health and Natural Resources.

Meanwhile, in China the government plans to make some environmental crimes punishable by death. National Environmental Protection Agency Director General Xie Zhenhua said, "Those [industrial] units or individuals who cause serious pollution will be sentenced to imprisonment or even death."

The charge of "jeopardizing the environment" will soon be incorporated into China's criminal law, and China is also drafting new regulations on nuclear pollution, he said. China recently enacted a law to ban waste imports and regulate domestic waste treatment starting in April 1996. "Poorly funded environmental protection offices are battling to halt a barrage of pollution from heavy industry and also from millions of private and collective rural enterprises that have sprung up as a result of economic reform."

Source: Greenwire Vol. 5, No. 111

Platte River Water Plan

Officials from Nebraska, Colorado and Wyoming have unveiled a plan to divide North Platte River water among all users. The plan, reached in November, "a breakthrough in the states' efforts to resolve a decades-old water controversy," calls for each state to voluntarily contribute water, money and land to meet the needs of endangered birds and other wildlife.

Nebraska would set aside an "environmental account" of 60,000-100,000 acre-feet of water a year to be released as needed from Lake McConaughy. Wyoming would postpone its proposed Deer Creek Dam and raise water levels at Pathfinder Dam to store an extra 54,000 acre-feet of water. Colorado would recharge groundwater which would return to the river during the summer.

Each state would also contribute the equivalent of \$6 million in water projects and cash toward the needs of Platte River endangered species over the next six years. The three states have at stake the renewal of federal licenses for hundreds of small water projects in CO, the North Platte River reservoirs in WY, and the Kingsley Dam in NE.

But one of the "trickiest issues" to resolve is tri-state consensus on a "fair share" for each state to contribute toward meeting federal habitat goals. The states have proposed that each contribute water, money and land, but specific sums, water quantities and land shares from each state are still under discussion. Negotiations may go through December, with the final proposal subject to federal approval

Nebraska Gov. Ben Nelson's (D) aide Bill Head says all Nebraska water users – farmers, irrigators, environmental interests and recreationists – "seem to feel a sense of optimism they haven't shared before".

Source: Greenwire Vol. 5, Nos. 131 and 145

Watts Bar Pollution/Agreement

The Department of Energy (DOE), USEPA and Tennessee Department of Environment and Conservation recently formalized plans for reducing pollution risks in the lower part of Watts Bar Lake (Tennessee River) near the Oak Ridge Superfund site.



"Concerns have been raised" about potential health effects because of decades of discharges from the DOE's nuclear facilities upstream in Oak Ridge, but DOE studies recommend that the pollutants be left at the bottom of the lake.

The "Record of Decision" signed by the DOE and environmental regulators completes the study phase of the Superfund process. It calls for continued monitoring of Watts Bar Lake, dredging limitations to avoid deep-lying

pockets of pollution, and public advisories on fish consumption because of PCB contamination. In five years, regulators will reassess current restrictions and determine their sufficiency in protecting human health.

At the same time, after a 23-year struggle, the Nuclear Regulatory Commission on November 9th approved a low-power permit for the \$6.8 billion Watts Bar nuclear reactor. Watts Bar is the last commercial nuclear power plant still being built in the U.S. Many local residents remain concerned about the Tennessee Valley Authority's (TVA's) 1,270-megawatt power plant, which has been "plagued with stops and starts, controversy over design flaws, faulty construction, hundreds of worker complaints, shoddy government oversight and years of mistrust that still lingers."

TVA officials say those problems have been resolved and that the first of 193 uranium fuel bundles were loaded into the reactor core in early November. The plant can only run at 5% capacity under the current license.

Source: Greenwire Vol. 5, No. 132 and 136

St. Lawrence River Sturgeon Habitat Use

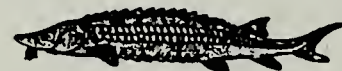
Gravel laid down to protect an intake pipe from zebra mussels attracted approximately 30 spawning lake sturgeon in 1994. In 1995, researchers from the National Biological Service (NBS) and the New York Department of Environmental Conservation (NYDEC), Watertown collected habitat information at the site and also recorded the spawning activity with a video camera. The camera footage shows 8 wild sturgeon displaying spawning activity, redhorse suckers (and lake sturgeon) feeding on eggs, lake sturgeon eggs and fry mixed among the gravel substrate, and

lampreys attached to lake sturgeon (as many as 10 on one fish).



"larval sturgeon"

Habitat parameters were reported to be as follows: size - 30 X 30 yds.²; depth - 13.5 ft.; velocity 6 in. above the bottom was 0.5 m/s; substrate size - #2 gravel; and substrate depth - 1.5 ft. Water velocity at the site is believed to be faster than the surrounding area upstream of the Moses-Saunders Power Dam. This, in addition to clean gravel, may be why the lake sturgeon homed in on it so fast. Prime time for spawning was a 2-3 day period (June 7-9) at 58-59 °F. At 60 °F, on June 16, no sturgeon were found on the site. The short spawning period may be due to the low numbers of sturgeon found at the site. Egg trays deployed to determine egg densities had a maximum of 100-200 eggs/m². Egg densities in the substrate were much lower; however, this may be the result of burial and increased predation. Lake sturgeon and redhorse suckers seemed to "shy away" from feeding over the egg trays.



"lake sturgeon"

Ultrasonic transmitters were successful in tracking movements and distribution of lake sturgeon below the power dam. The New York Power Authority with SUNY Environmental Science and Forestry collected 107 lake sturgeon, with 27 recaptures in 58 net nights. Fourteen lake sturgeon were radiotagged. Some lake sturgeon are highly migratory (approximately 30 km), while others are sedentary. One confirmed gravid female and one suspect gravid female were simultaneously

located at an area that exhibits spawning habitat characteristics. Nonviable lake sturgeon egg clusters and one fry were found at this suspect site; however, it is difficult to determine if they were deposited or the result of drift. One of the females was later found spent.

Future activities in the St. Lawrence River include placing and evaluating up to 6 more artificial spawning sites; one upstream of the power dam and up to 5 below. Activities above the dam will be performed by NBS, while below the dam, the Mohawk Tribe will conduct studies, with assistance from NBS. Tracking of lake sturgeon below the power dam is also expected to continue year-round.

Lake sturgeon were stocked again this year. The Oswegatchie River system received 5,000 juveniles. Oneida Lake received approximately 40,000 fry early this summer, in addition to 5,000 juveniles (8-9") this fall. The Oneida Lake fish will be monitored through current, ongoing assessments by Cornell University and it is expected the spring bullhead sportfishery will show some catches. Also, 3,000 juveniles were put in Cayuga Lake. All fish were from a St. Lawrence River egg source. All stockings are efforts toward the NY State Recovery Plan for Lake Sturgeon.

Contact: Lower Great Lakes Fishery Resources Office, University Center, 405 N. French Rd., Amherst, NY 14228, (716) 691-5456

Colorado River Endangered Fish Stocked

U.S. Fish and Wildlife Service (FWS) biologists recently released several hundred 5-8 inch endangered razorback suckers into the Green River at Dinosaur National Monument (Utah), and into the Gunnison River upstream

of Delta, CO.

This stocking is part of an effort to prevent extinction of one of the west's most endangered fish species. The upper Colorado River basin, including the Green and Gunnison rivers, is known to support only about 500 wild razorback suckers. These fish once were common throughout the basin.

Green River razorbacks were spawned in spring 1993 and 1995 from 10 adult fish taken from the River and held captive at the Ouray Endangered Fish Hatchery near Vernal, UT. Gunnison River fish were spawned in spring 1994 from 7 adults taken from the Colorado River and upper reaches of Lake Powell. These were raised at the Colorado Division of Wildlife's Bellevue Research Hatchery near Fort Collins.

Stocked fish were large enough to avoid predation by most non-native fish thought to feed on small endangered fish. Special tags (read by electronic scanners) were implanted in all fish released, additionally radio transmitters were placed in 10 of the Green River fish. These devices will enable FWS and Utah Division of Wildlife Resources biologists to monitor movement and survival of the young fish.

More than 6,000 razorbacks were stocked in the Green River in the late 1980s and a handful were released in the Gunnison River last year. However, few of these fish are known to have survived, leading scientists to conclude that stocking alone will not lead to recovery. Stocking may only serve as a stopgap measure to prevent further decline.

Biologists believe that many of the razorbacks remaining in the Green River were alive before Flaming Gorge Dam was completed in 1962. To learn if these Green River fish were reproducing, biologists placed "light traps" in river

backwaters during the spawning season. At night, newly hatched larval fish swim toward the light and through a small funnel-like slit, allowing them in, but preventing their escape. Using this technique, researchers found about 200 larval razorback suckers in the Green River in 1994. Now biologists are trying to learn why so few young fish survive to adulthood.

One major threat may be the lack of suitable habitat during their first few months of life. Just before the height of spring runoff, adult razorbacks deposit their eggs in gravel beds on the river bottom. Historically, young razorbacks would start moving downstream just as the river was peaking and spilling over its banks onto low-lying areas. The small fish would be washed onto the warmer flood plains, which produce hundreds of times more plankton on which larval razorbacks feed. The same thing is thought to have occurred with floodplain spawning and rearing species around the world.

Biologists theorize that in the past, these areas served as critical "nursery" habitats for young suckers, protecting them from predators and allowing them to grow very quickly. Now, with flood control provided by Flaming Gorge Dam and various dikes, significant flooding occurs much less frequently. Larval suckers are flushed down the main river channel and probably are eaten by larger fish.

To address the need for nursery habitat, the multi-agency Recovery Program for Endangered Fish of the Upper Colorado River Basin has initiated a flood plain habitat restoration program. Participants are working to better understand the needs of larval razorbacks and determine where restoration efforts would be most effective. They are also experimenting with ways to provide quality razorback sucker nursery habitat, without producing greater numbers of non-native

species that prey upon them.

"We are not trying to re-create the entire flood plain as it was 200 years ago," said Pat Nelson, FWS biologist. "The goal is to restore natural flood plain functions that are necessary for recovery of endangered fishes." The biologists realize the need to do this without increasing flood damage, mosquito problems, spread of noxious weeds or infringement on private property.

Area residents may want to take part in the habitat restoration program because of benefits beyond aiding endangered fish. Flood plain habitats serve as seasonal water storage areas, reducing the threat of flooding downstream during the spring and then releasing water during drier summer months. Wetlands also help replenish ground water supplies away from the river and trap and detoxify many natural and man-made pollutants. In addition, these areas provide important nesting and feeding habitat for ducks, geese, songbirds and other wildlife.

Of 14 fish species native to the upper Colorado River basin, four – the razorback sucker, bonytail chub, humpback chub, and Colorado squawfish – are now on the federal endangered species list. In the early 1900s, these fish were abundant and often were used for food by settlers.

Contact: Ms. Connie Young, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, CO 80225, (303) 236-2985, ext. 227

Barging, Drawdowns, Logging and Salmon

A recent National Research Council (NRC) report supports efforts to continue barging and trucking young salmon down the lower Snake and Columbia Rivers to improve their chances of survival.

The report joins previous studies that cautioned against reservoir drawdowns until they are proven effective for salmon survival.

The "prestigious" NRC said drawdowns would be too expensive and potentially counterproductive, and urged a sharp reduction in the use of hatcheries to "prop up numbers" of salmon. The report also called for landowners to cooperate on salmon habitat restoration efforts.

The results may "harden" the reluctance of federal agencies to schedule drawdowns of several Snake and Columbia River dams, and further weaken "waning political sentiment" in favor of that action. The report "buttresses" the claim of industries in the region, led by aluminum companies, barge shippers and irrigators, that drawdowns would be too costly. The study "undermines arguments" by environmental interests, some



states and Indian tribes that transporting salmon around dams has failed to stem their decline and that reservoirs must be lowered to imitate natural conditions.

Also, according to a new study by the Newport, OR based Coast Range Association (CRA), a conservation group, logging methods in the forests of Oregon's coastal mountains – most of which are privately owned – must change if dwindling salmon runs are to survive.

CRA studied land ownership patterns in the coastal mountains of 11 Oregon counties and found that 57% of forest land in the region is privately owned, "a

notable departure" from ownership patterns in the state, where 63% of all forest land is publicly owned. Federal and state forest policy has given "heavy weight to federal protection of endangered species," but on private lands, "government rules have less sway."

To protect salmon, CRA recommends that trees be harvested at 100-year intervals rather than on 40- to 60-year rotations. "Less frequent harvests would reduce damage from logging but produce similar lumber yields because the trees would be bigger." Timber managers believe logging is taking too much blame for the decline of salmon stocks. They note that ocean conditions, overfishing, dams and other factors have hurt salmon runs.

Source: Greenwire Vol. 5, No. 134 and 135

School Curricula Biased?

Thirty states require or strongly encourage environmental lessons as part of public school curricula, but experts warn that environmental education is "getting caught up in a potentially chilling controversy" over values, "reminiscent of the divisive disputes over evolution and sex education." Arizona has passed laws banning environmental advocacy in the classroom and "slashed" funding for programs. Florida, North Carolina and Wisconsin are considering similar measures.

In many schools, environmental education is "linked closely to scientific inquiry," but curricula also may include teacher-sponsored letter campaigns to save dolphins or stop logging. Conservatives assert that teachers and textbooks present business and technology in a bad light.

Meanwhile, consumer and environmental groups say big business has been effective in spreading its own propaganda

through environmental curricula. Officials of the North American Association of Environmental Educators concede that mandates for environmental education often do not include guidelines or a budget, so teachers wind up relying on free material from environmental groups and corporations that frequently promote causes and products.

Source: Greenwire Vol. 5, No. 137

Grass-Roots Environmental Course

The University of Montana plans to offer a 25-student course in grass-roots environmentalism next year featuring guest lectures from representatives of Greenpeace, the Sierra Club, and the Center for New Democracy. Boston-based

Green Corps is providing about \$65,000 for the course, which will receive no public money.

The undergraduate course, a joint project of activist C.B. Pearson and the University of Montana's environmental studies program, will help students learn "the real politics" of civic involvement, says Pearson. But the course has drawn the ire of logging contractor Bruce Vincent, who is concerned that the university is "running a boot camp for environmental attack troops." Other University of Montana programs, such as a lecture series funded by a \$500,000 endowment from Plum Creek Timber Company, are underwritten by the timber industry.

Source: Greenwire Vol. 5, No. 137

New Publications

Boxrucker, J. 1995. Sampling shad in southern impoundments. Oklahoma Dept. of Wildlife Conservation, 500 E. Constellation, Norman, OK 73072, 22pp.

Campbell, K.L. (ed.) 1995. Versatility of wetlands in the agricultural landscape. ISBN #0-929355-69-5. American Water Resources Association, 950 Herndon Parkway, Suite 300, Herndon, VA 22070-5528, (703) 904-1225. 74 pp.

Anonymous. 1995. Proceedings of the workshop for the conservation and management of lake sturgeon in the Great Lakes. Lower Great Lakes Fishery Resource Office, University Center, 405 N. French Rd., Amherst, NY 14228, (716) 691-5456.

Meetings of Interest

February 23-26: AFS Southern Division Midyear Meeting, Adam's Mark Riverview Plaza, Mobile, AL. Contact: Patricia Mazik, Chair, Program Committee SFCL, Rt. 3, Box 86, Marion, AL 36756 (334/683-6175).

February 26-27: Urban Conservation 2000: A Virtual Reality, Seattle, WA. Contact: Nancy Hersellus, Ext. 18, or Timothy Kautza, Ext. 12, 1-800-THE-SOIL

March 11-15: Hec-1, Flood Plain Hydrology, New Brunswick, NJ. Contact: Suzanne Soules, Cook College Office of Continuing Professional Education, P.O. Box 231, New Brunswick, NJ 08903-0231. (908) 932-9271.

March 4-6: 4th Symposium on Biogeochemistry of Wetlands, The Monteleone, New Orleans, LA. Contact: Karen Cros, Wetland Biogeochemistry Institute, Louisiana State University, Baton

Rouge, LA 70803, (504) 388-8810 or FAX (504) 388-6423.

March 5-7: Sixth International Zebra Mussel and Other Aquatic Nuisance Species Conference, Dearborn, MI, hosted by Michigan Sea Grant, (800) 868-8776.

March 22-27: 61st North American Wildlife and Natural Resources Conference, Adams Mark Hotel, Tulsa, OK. Contact: Dick McCabe, Wildlife Management Institute, 1101 14th St., NW, Suite 801, Wash., D.C. 20005, (202) 371-1801 or FAX (202) 408-5059.

May 16-17: 23rd Annual Conference on Ecosystem Restoration and Creation, Tampa, FL. Contact: Fred Webb, Dean of Environmental Programs, Hillsborough Community College, Plant City Campus, 1206 N. Park Road, Plant City, FL 33566, (813) 757-2104.

June 10-14: 20th Annual National Conference, Association of State Floodplain Managers, San Diego, CA. Contact: Diane Alicia Watson, ASFP Executive Office, 4233 W. Beltline Hwy., Madison, WI 53711, (608) 274-0123, FAX (608) 249-4484.

June 11-14: Symposium on Social, Economic and Management Aspects of Recreational Fisheries, Dublin, Ireland. Contact: Dr Phil Hickley, National Rivers Authority, 550 Streetsbrook Road, Solihull B91 1QT, United Kingdom, Tel: 0121 711 5813 or FAX 0121 711 5824.



Agriculture

S. 854 (Lugar, R/IN) forms the basis of the conservation title of the 1995 Farm bill, including recommendations for the **Conservation Reserve Program, Wetlands Reserve Program, Conservation Incentive and Cost Share programs**. The **Farm Bill** would no longer allow permanent easements under the **Wetlands Reserve Program**, favoring shorter term easements instead. The **Conservation Reserve Program** would be capped at the current level of 36.4 million acres. The bill would combine all other conservation programs into a new program, the **Environmental Quality Incentives Program**, focused on problems of livestock waste management. Approved by the Agriculture Committee on September 28.

S. 935 (Sarbanes, D/MD) amends the Food Security Act of 1985 to establish a program to promote development of riparian forest buffers in conservation priority areas.

H.R. 67 (Bereuter, R/NE) extends the **Conservation Reserve Program** for 10 years and the **Wetlands Reserve Program** for 5 years.

H.R. 2284 (Pombo, R-Calif.) provides incentives for the owners and operators of agricultural land to provide habitat for protected species.

Fish & Wildlife

S. 191 (Hutchison, R/TX) and **H.R. 490 (Smith, R/TX)** amends the **Endangered Species Act** imposing a moratorium on new listings and critical habitat designations.

S. 455 (Kempthorne, R/ID) clarifies consultation procedures under the **Endangered Species**

Act on management of federal lands.

S. 503 (Hutchison, R/TX) freezes **Endangered Species Act** listings and critical habitat designations.

S. 851 (Johnston, D/LA) amends the **Clean Water Act** reforming the wetlands regulatory program. Hearings held July 19 and Aug. 2.

S.1152 Conrad Burns (R/MT) amends the **Endangered Species Act** with common sense amendments to strengthen the act; enhance wildlife conservation and management; augment funding; and protect fishing, hunting, and trapping.

S. 1364 Kempthorne (R/ID) reauthorizes and amends the **Endangered Species Act** and for other purposes.

S. 1365 Kempthorne (R/ID) provides federal tax incentives to owners of environmentally sensitive lands to enter into conservation easements for the protection of endangered species habitat, and for other purposes.

S. 1366 Kempthorne (R/ID) amends the IRS Code of 1986 to allow for deduction from the gross estate of a decedent an amount equal to the value of real property subject to an endangered species conservation agreement.

H.R. 1714 Dooley (D/CA) amends the **Endangered Species Act** to require expeditious review of species being considered for listing under the act or currently listed under the act.

H.R. 2160 (James Saxton (R/NJ) entitled "**Cooperative Fisheries Management Act of 1995.**" Reauthorizes the Interjurisdictional Fisheries Act.

H.R. 2217 Pete Geren (D/TX) entitled the "Common Sense

Amendments for An Endangered Species Act."

Senate Environment Committee on August 3 held a hearing on legislation reauthorizing the **Endangered Species Act**.

H.R. 2275 (Young, R/AK and Pombo, R/CA) reauthorizes and amends the **Endangered Species Act**. Marked up on October 12.

H.R. 2284 (Pombo, R/CA) provides incentives for the owners and operators of agricultural land to provide habitat for protected species.

Forests

S. 647 (Lott, R/MS) amends the **Forest and Rangeland Renewable Resources Planning Act of 1974** to require that major changes to forest management plans be phased in over time to minimize impact to communities.

H.R. 1089 (Cremeans, R/OH) ensures that acquisition of lands for inclusion in the National Forest System does not result in a loss of tax revenue to the affected county.

H.R. 1439 (Metcalf, R/WA) amends the **National Forest Management Act of 1976** to require that the timber sale program conducted by the Forest Service on forest system lands be financed only by receipts from the sale of timber under the program.

Government Affairs

S. 169 (Grassley, R/IA) curbs the practice of imposing unfunded federal mandates on states and local governments.

S. 1001 (Glenn, D/OH) reforms the regulatory process, providing for cost-benefit analysis risk assessment of major rules, and calls for a review of existing rules.

S. 1346, Abraham (R/MI) requires periodic review of federal regulations.

H.R. 2500, Michael Oxley (R/OH) amends the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

Grazing

S. 193 (Campbell, D/CO) establishes a forage fee formula on Agriculture and Interior department lands.

S. 629 (Thomas, R/WY) prohibits requiring environmental assessments for grazing permit renewal under the **National Environmental Policy Act**.

S. 636 (Daschle, D/SD) requires the Agriculture Secretary to issue new term grazing permits on National Forest System lands to replace expired or expiring grazing permits.

S. 852 (Domenici, R/NM) and H.R. 1713 (Cooley, R/OR) provides for the uniform management of livestock grazing on federal lands. Senate Energy Committee approved on July 19. **H.R. 1713 (the Livestock Grazing Act)** was approved by the House Resources Committee full committee action on September 12.

H.R. 1375 (Cooley, R/OR) provides for extension of expiring term grazing permits for lands within the National Forest System.

Mining

S. 504 (Bumpers, D/AR) amends the Mining Law of 1872, imposing a royalty on mineral operations and reforming the process for mineral development.

S. 506 (Craig, R/ID) amends the Mining Law of 1872 imposing a royalty on mineral operations and reforming the process for mineral development.

S. 639 (Campbell, R/CO) amends and reforms the Mining Law of 1872 providing for the disposition of locatable minerals on federal lands.

Parks

S. 964 (Johnston, D/LA) amends the Land and Water Conservation Fund Act of 1965 giving the Interior Secretary authority to collect entrance fees at National Parks for direct use on priority park maintenance and repair projects.

H.R. 260 (Hefley, R/CO) provides for a plan and management review of the National Park System, and reforms the process for considering additions to the system.

H.R. 1260 (Hefley, R/CO) establishes guidelines for determination of National Heritage Areas.

H.R. 1301 (Vento, D/MN) establishes the National Heritage Area Partnership Program.

H.R. 1449 (Roberts, R/KA) provides for establishment of the Tallgrass Prairie National Preserve in Kansas.

H.R. 1846 (Richardson, D/NM) establishes the Yellowstone Headwaters National Recreation Area within Montana's Gallatin and Custer National Forests

Public Lands

S. 93 (Hatfield, R/OR) amends the Federal Land Policy and Management Act providing for ecosystem management on public lands. Referred January 4 to Committee on Energy and Natural Resources.

S. 449 (Simon, D/IL) establishes the Midewin National Tallgrass Prairie in Illinois.

S. 518 (Thomas, R/WY) limits federal acquisitions in states where 25% or more of the land is owned

by the United States.

S. 1031 (Thomas, R/WY) and H.R. 2032 (Hansen, R/UT) transfers lands administered by the Bureau of Land Management to the states. House Resources Committee held a hearing August 1 on H.R. 2032

S. 1151 (Burns, R/MT) establishes a National Land and Resources Management Commission to review and make recommendations for reforming the management of public lands

H.R. 2107 (Hansen, R/UT) amends the Land and Water Conservation Fund Act of 1965 to improve the quality of visitor services provided by federal land management agencies through an incentive based recreation fee program

Recreation

H.R. 104 (Emerson, R/MO) rescinds fees required for use of public recreation areas at lakes and reservoirs under jurisdiction of the Army Corps of Engineers.

Refuges

H.R. 91 (Sensenbrenner, R/WI) prohibits land or water acquisition for the National Wildlife Refuge System if wildlife refuge revenue sharing payments have not been made for the preceding year.

S. 1013 (Conrad, D/ND) authorizes the Interior Secretary to acquire land for the purpose of exchange for privately held land for use as wildlife and wetland protection areas.

H.R. 1112 (Brewster, R/OK) and S. 976 (Nickles, R/OK) transfers the Tishomingo National Wildlife Refuge to the state of Oklahoma.

H.R. 1875 (Young, R/Ak) improves management and establishes purposes of the National Wildlife Refuge System.

Rivers

H.R. 1260 (Johnson, D/SD) ensures equity in and increased recreation and economic benefits from the Missouri River system.

H.R. 1331 (Furse, R/OR) creates a voluntary non-regulatory technical assistance and grants program within the Natural Resource Conservation Service's existing Small Watershed Program.

Takings

S. 135 (Hatch, R/UT) establishes a uniform federal process for protecting private property rights.

S. 145 (Gramm, R/TX) provides for protection of private property rights.

S. 605 establishes a uniform system for protecting property rights and compensating landowners adversely affected by regulations.

H.R. 9 (Archer, R/TX) creates jobs, enhances wages, strengthens private property rights and reduces the power of the federal government.

H.R. 971 (Wyden, D/OR) ensures that homeowners have access to information and opportunities to comment on actions that may decrease home values, and establishes a compensation program for development that produces pollution or otherwise impacts home values.

Water and Wetlands

S. 49 (Stevens, R/AK) amends the **Clean Water Act** providing for exemptions to wetlands regulations and protection of property rights in Alaska.

S. 626 (Hatfield, R/OR) amends the Watershed Protection and Flood Prevention Act establishing a technical assistance and grant program for waterways restoration.

S. 639 (Warner, R/VA) authorizes civil works programs for the Army Corps of Engineers which preserves the navigation of channels and harbors and provides for flood control and storm damage reduction.

H.R. 198 (Smith, R/MI) amends the Food Security Act of 1985 permitting conversion of wetlands smaller than one acre in size.

H.R. 226 (Dingell, D/MI) amends the Safe Drinking Water Act assuring the safety of public water systems.

H.R. 961 (Shuster, R/PA) reforms and reauthorizes the **Clean Water Act**. Passed the House May 16, 1995.

H.R. 1132 (Oberstar, D/MN) amends the **Clean Water Act** providing for improved non-point source pollution control.

H.R. 1262 (Pallone, D/NJ) amends the **Clean Water Act** improving enforcement and compliance programs.

H.R. 1268 (English, R/PA) establishes a comprehensive program for conserving and managing wetlands.

H.R. 1438 (Lowey, D/NY) amends the **Clean Water Act** to provide funding to the states for estuary conservation.

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Mississippi Interstate Cooperative Resource Association
P.O. Box 774
Bettendorf, IA 52722-0774

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