River Crossings

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Reservoirs of Opportunity

America's federally-constructed lakes (i.e. reservoirs) have enormous potential for boating, fishing and other types of recreation, according the report: *"Reservoirs of Opportunity"* prepared by the National *Recreation Lakes Study Commission* (NRLSC). "These lakes were created by dams for a variety of purposes, such as flood control or supplying water for power generation or for irrigation, but they have untapped potential for recreation," said Robert Armstrong, chairman of the eight-member NRLSC. "These lakes are great national treasures and we need to look at how to make the most out of their potential," added Richard Davies, NRLSC vice-chairman and director of the Arkansas Department of Parks and Tourism.

A total of 1,782 federal reservoirs, managed by 11 different federal agencies , are located in 47 states. The lakes provided by these reservoirs are visited by 900 million people annually, generating an economic impact of more than $44 billion. Lake use is growing by about 2% per year, creating additional pressure for recreation facilities. Compounding this problem, is a deferred maintenance backlog totaling $800 million.

The NRLSC identified a number of other problems and shortcomings:

- many facilities ranging from restrooms to boat docks and roads are inadequate, aging and falling apart;
- pollution and aquatic plant invasions threaten lake health;
- fish habitat is compromised, and with it, species survival and sport fishing;
- recreation - too often not integrated with overall project management - is sometimes left high and dry when water is drawn down for other purposes; and
- some recreational uses conflict with others.

A typical large federal reservoir.

The NRLSC made a series of recommendations to help fix these problems, including the following:

- make recreation a priority at federal lakes,
- energize and focus federal lake recreation leadership,
- advance federal lake recreation through demonstration and reinvention,
- create an environment for successful federal lake recreation management,
- identify and close the gap between recreation needs and services.
- encourage needed investments in recreation facilities at these lakes by partners, and especially the private sector.

The full NRLSC report can be found at http://www.doi.gov/nrls. Also, a copy of the final report can be obtained from: NRLSC, 1951 Constitution Avenue NW, Room 320 SIB, Washington, D.C. 20240; or by contacting: Tim Ahern, (202) 208-5089 or Bruce Brown, (202) 219-7104.

Source: *NRLSC News Release*, 6/4/99

Inside This Issue

Dam Removal Update

The electricity industry recently formed an alliance called the *Hydroelectric Licensing Reform Task Force,* reportedly to counter environmental lobbying on hydropower issues. The alliance – made up of trade associations and utilities, including the *American Power Assn.*; *Edison Electric Institute*; and *National Hydropower Assn.* – supports federal legislation designed to streamline regulatory processes for relicensing hydroelectric dams. Such legislation, recently introduced by Sen. Larry Craig (R/ID) and Rep. Edolphus Towns (D/NY), would force federal agencies to consider economics, irrigation, navigation, flood control, power output, drinking water supplies, and how a dam has reduced greenhouse emissions before adding conditions to permits.

Meanwhile, a report prepared by an Army Corps of Engineers (Corps) economics consultant, concludes that the federal government must breach four dams on the lower Snake River to honor treaty obligations with the Northwest tribes. This could provide substantial benefits to the tribes, such as improved salmon harvests and making lands available that are currently under water. But a panel of witnesses testifying at a House subcommittee hearing said removal of the Columbia and Snake river dams "will destroy the economy of the inland Northwest." The dams provide an estimated $328.7 million in annual benefits, $250.2 million of which is in the form of power generated for Bonneville Power Administration (BPA) customers. A group of Corps' consultants also estimates that other benefits include $35 million saved annually by barge customers who avoid using rail or truck transportation. But if the dams are breached, the value of recreation and fisheries is estimated to increase. Those industries would experience no net benefits from keeping the dams in place, nor would the truck and rail industries.

A recent report released by *Trout Unlimited* shows that unless steps are taken to stop their decline, "wild" Snake River spring and summer chinook salmon stocks could be extinct by the year 2017. Dr. Philip Mundy, a well-respected and widely published expert on Snake River salmon, conducted the study. At the same time, the *Portland Oregonian* reports that the federal/state effort to save the endangered salmon is closing in on the "dubious milestone" of $1 billion annually, and this expenditure "hasn't ended the threat of extinction."

Using information from six Cabinet-level agencies and four states participating in the effort, the *Oregonian* estimates that $935.5 million will be spent next year alone on restoration activities. The exact cost is hard to pin down because "nobody in the federal government keeps track of exactly how much money is spent saving fish." This has caused a new reality to sink in with Congress, and Sen. Ron Wyden (D/OR) said "I don't think we can make a case that this $1 billion is being well spent."

But the mix of federal vs private contributions to salmon spending may soon shift as the BPA and its customers take on responsibilityforfunding mitigation projects. However, in a memo to BPA four federal officials representing the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the US EPA and the Treasury Dept said that BPA might not generate enough money to cover all potential expenses, that predictions of spending between $437 and $724 million on fish and wildlife measures are too low, and that breaching the four lower Snake River dams could cost the BPA $658 million annually between 2002 and 2006. To cover these costs, the BPA plans to propose new electricity rates for 2001 to 2007, but in doing so industrial users say that federal officials are "derailing an important rate-setting process".

Meanwhile on 6/16, the U.S. Senate passed a spending bill that prohibits BPA from raising rates to pay for dam breaching. The provision, part of the $21.3 billion energy and water appropriations bill, was sponsored by Sen. Slade Gorton (R/WA). Gorton spokeswoman Cynthia Bergman said, "We'll try to stop any effort that this

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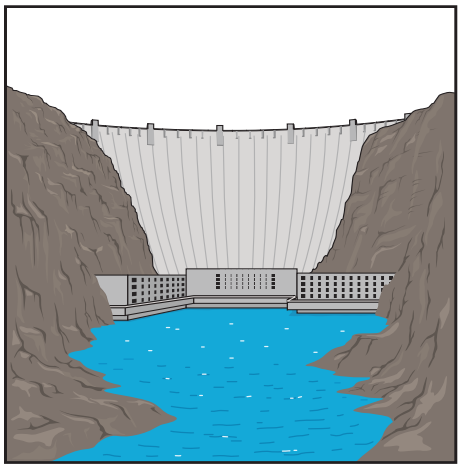
administration puts forward to advance its dam-removal agenda." Environmental and taxpayer groups say Gorton's proposal could set a dangerous precedent and force the federal government to foot the bill for restoration efforts.

At the same time, *Emerald People's Utility District* (EPUD), a small electric utility in west-central Oregon has become the first to call for breaching the four dams, saying the action would bring long-term economic benefits and would help save the salmon. The EPUD board voted in May to support partial removal of the dams and has written the Clinton administration voicing its position. The district says breaching would cost the BPA "millions" less than making reparations if salmon become extinct. The EPUD buys 75% of its power from the BPA and ranks among its top customers.

Also, OR-based *Portland General Electric* (PGE) has taken steps to remove some of its power-generating dams in order to save the threatened salmon and steelhead trout. PGE says that removing the aging Marmot Dam on the Sandy River and Little Sandy Dam on the Little Sandy River is financially sound. The dams generate 22 MW of electricity, and their removal would make available 22 miles of the two rivers for fish spawning. A *Portland Oregonian* editorial called PGE's decision a "win-win- win deal" for environmentalists, the city of Portland and PGE. The plan needs FERC approval but could begin within the year. But the Oregon state legislature has been attempting to give itself the power to block such dam removal. Opponents argue that the bill "injects too much politics into fish preservation programs", and Gov. John Kitzhaber (D) is considering a veto. The Oregon House also passed a bill requiring sediment studies before a dam can be removed. Democrats objected, calling the bill "another attempt to slow removal of the Savage Rapids Dam". Presidential candidate and Texas Gov. George W. Bush has reportedly said that Pacific Coast salmon should be protected, but not at the expense of the Snake River dams.

Meanwhile in June, the Tennessee Valley Authority (TVA) began tearing down its $83 million Columbia Dam on the Duck River because it is "the best thing to do environmentally." It will be the first time the agency demolishes one of its own dams. Environmentalists say the dismantling is "a minor thing" compared to the decision to turn the land over to the state for use as a recreation and wildlife management area. Former landowners on the 12,000 acre plot say the land-use decision is not a settled issue, and they are appealing dismissal of a lawsuit challenging the TVA's claim that it couldn't return the property to them.

In Maine, the long-awaited breaching of the 162 yr. old Edwards Dam took place on 7/1. It had blocked Atlantic salmon, shortnose sturgeon and other sea-run fish from the upper Kennebec River. Plans call for dismantling the entire 19 ft. high, 917 ft. wide structure by Thanksgiving, creating "potentially the strongest sea-run fishery in the eastern U.S." Removal cost is estimated at $5 million. FERC ordered its removal in 1997 to improve fish habitat, and in 1998 the state, the city of Augusta and the dam's operator, *Edwards Manufacturing Co.*, transferred ownership to the state to relieve *Edwards* of its liability. Environmentalists say the breaching will have nationwide significance, setting " a scientific, economic and philosophic precedent". But *National Hydropower Assn. (NHA)* officials warned environmentalists not to "get caught up in a national hysteria over dam-removal-at-all-costs,", but to first explain how they plan to replace the energy and drinking water provided by the dams.



Elsewhere in Maine, a state conservation group is asking the FERC to deny a license renewal request for five hydroelectric dams on the Presumpscot River. The *Sappi Paper Mill* in Westbrook has applied for new licenses to operate the dams for 30 more years, once the original licenses expire in 2001. But *Friends of the Presumpscot River* filed a motion in late June with the FERC, saying three of the dams "don't generate enough power to justify their environmental impact." The group aims to remove the dams to help improve water quality and restore fishing to "one of the most heavily dammed stretches of water in Maine." The FERC has not yet responded to the filing.

In Georgia, the Army Corps of Engineers is proposing to decommission the Savannah River Dam, built to support commercial shipping 16 years ago, because the dam no longer serves its intended purpose. If removed, the Savannah River will be lowered 6 ft., and Augusta Port Authority member Rick Toole says the decommissioning would be disastrous for Augusta, because the city's riverwalk would then be overlooking dry ground. The project currently creates a reservoir and pool along the riverwalk. But there is no local sponsor willing to take over operation and maintenance of the site, since the cities of Augusta, North Augusta and the Augusta Port Authority all have declined to become cost-sharing owners. The federal Water Resources Development Act requires that federal projects that no longer meet their authorized uses be abandoned or transferred to new owners who would own the sites and share future costs. Biologists say that sedimentation from development projects on the Savannah River have virtually wiped out the redhorse sucker. Strengthening the presence of the sucker in the Savannah River is the species' best chance of survival. Even though the fish is surviving in the Oconee River, it is not reproducing well. The Shavannah River's smaller fluctuations; clean, oxygenated rapids; and gravel bottom offers a much better breeding environment for the fish.

The *River Alliance of Wisconsin* is working to remove the Waubeka Dam in the Milwaukee River watershed. Removal could take place in 2000. The Department of Natural Resources plans to declare the dam abandoned this year and to study the effect of it's removal on the watershed. According to Chuck Fry, chairman of the *Waubeka Dam Preservation Committee*, "...proponents of dam removal portray themselves as environmentalists, but what they really are is a bunch of canoeists who don't want to get off their butts and walk around a dam." The committee fears the effects of flooding downstream and pollution of the river from released sediment if the dam is removed.

The states of Wisconsin and Pennsylvania lead the nation in dam removal. *American Rivers* and *Trout Unlimited* recently released a report of *Dam Removal Success Stories* recognizing Wisconsin's national leadership. Three of 12 case studies highlighted in the report occurred on Wisconsin rivers. Forty-nine of the other 121 dam removals listed also involved Wisconsin rivers. And in Pennsylvania, according to the Dept. of

Environmental Protection (DEP), over the last few years, about 35 dams have been removed. These have ranged from "earthen mounds a few feet high" to a dam 27 ft. high and 460 ft. wide. There are more than 5,000 such dams in the state, and at least 30 others are scheduled for removal, a number that is "growing every day," says Scott Carney of the state Fish and Boat Commission. Some dams are still beneficial, but several "are not being used for anything" and don't even have traceable owners, says Margaret Bowman of *American Rivers*. To help speed the dam removal permit process, the DEP has instituted "restoration waivers" that remove some of red tape .

The bottom line with dam removal is the fact that ***"the times they are a changing"***. The paradigm that "any river flowing to sea unimpeded is a waste of water and power" is "under attack." The U.S. has about 75,000 big dams, and about 25% of these have exceeded their average 50 yr. life expectancy. The FERC is refusing to relicense dams where environmental costs outweigh the value of hydropower produced, or is demanding that dams be "retrofitted" with fish ladders, a process often so expensive that owners choose to tear them down instead. The breaching of the Edwards Dam in Maine has "Hoover Dam-sized stature as a symbol of changing attitudes toward rivers and how Americans use them." Previously, all dam removals involved structures considered unsafe, but "now, dams are being removed for environmental and even recreational purposes". It must be recognized, however, that all dams are not removable, nor should they be removed. Each situation should be looked at on a case by case basis. As noted in the previous article some provide real **"reservoirs of opportunity"**.

Sources: Louis Jacobson, *National Journal*, 5/29/99; Nicholas K. Geranios, *AP/Portland Oregonian*, 5/26/99; *AP/Casper [WY] Star-Tribune*, 5/26/99; *Resource Committee release*, 5/27/99; Jim Barnett, *Portland Oregonian*, 6/16, 6/17 and 6/28/99; Fred Leeson, *Portland Oregonian, 5/27/99;* Jonathan Brinckman, *Portland Oregonian*, 5/19, 5/22, 5/26 and 5/27/99; Charles E. Beggs, *AP/Portland Oregonian online*, 6/4/99; Jacques Billeaud, *Knoxville News-Sentinel*, 5/26/99; Glenn Adams, *AP/ Baltimore Sun/others*, 6/27/99; Les Blumenthal, *Tacoma News Tribune*, 6/25/99; Dieter Bradbury, *Portland [ME] Press Herald*, 6/22/99; *Milwaukee Journal Sentinel*, 6/12/99; John Hughes, *AP/Boston Globe/others*, 5/31/99; Murr/Begley, *Newsweek*, 7/12/99; Steve Grant, *Hartford Courant, 7/1/99;* Alexandra Ravinet, *Augusta Chronicle*, 6/10/99; *USA To*day, 6/7/99; *Christian Science Monitor,* 7/8/99; *Milwaukee Journal Sentinel*, 7/5/99; *River Currents Online*, 6/11, 6/18 and 7/12/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 11/11/98 and 5/6, 5/20, 5/22, 5/26, 5/27, 6/1, 6/4, 6/8, 6/10, 6/17, 6/18, 6/22, 6/20, 6/30, 7/7, 7/8 and 7/14/99

Fish Passage Through Locks and Dams

The Upper Mississippi River (UMR) is impounded by a series of 29 navigation locks and dams that restrict fish movements. The St. Paul District, Corps of Engineers and the USGS, *Upper Midwest Environmental Sciences Center* examined the effects of locks and dams on fish movement to estimate the opportunity for upriver passage by adult migratory fishes. Of the 143 indigenous UMR fish species, 25 are either known to be migratory in the UMR or are probably migratory, based on behavior of the species in other river systems. These include: silver lamprey, lake sturgeon, shovelnose sturgeon, paddlefish, goldeye, mooneye, American eel, Alabama shad, skipjack herring, bigmouth buffalo, smallmouth buffalo, blue sucker, white sucker, spotted sucker, blue catfish, channel catfish, flathead catfish, northern pike, white bass, yellow bass, largemouth bass, smallmouth bass, walleye, sauger, and freshwater drum.

UMR Lock and Dam No. 3.

Design characteristics and operation of most UMR dams allow for some upriver and downriver fish passage. This can occur (1) through the locks, (2) through the gated sections of the dams, and (3) over the fixed-crest spillways. However, the navigation locks do not provide favorable pathways for upriver fish passage. Most upriver fish movement probably occurs through the gated sections of the dams, and the opportunity for passage is dependent upon (1) hydraulic conditions at the dams, (2) fish behavior, (3) timing of fish movements, and (4) fish swimming abilities.

Fish ascending UMR dams are most likely to be swimming at the "prolonged level" of swimming activity (rather than at "burst swimming speeds"). Species, body length, physiological condition, behavior, water temperature, concentration of dissolved gases, turbidity, and light all influence fish swimming performance. Models of prolonged swimming speed from literature sources were used to estimate critical velocities for UMR fishes as ranging from about 120 cm/sec for white bass to 42 cm/sec for northern pike.

Current velocities through dam gate openings were estimated using a physical hydraulic model of a typical UMR navigation dam and with standard hydraulic equations. Velocities through the gated sections of dams are highest when the gates are in the water, and a submerged orifice flow hydraulic condition occurs in the gate opening. When the dam gates are raised from the water during higher river discharges, uncontrolled conditions exist, and open channel flow occurs in gate bay openings. Estimates of current velocities through tainter gate openings from the physical model are as low as 60 cm/sec under uncontrolled flow conditions. Each navigation dam reaches its controlled discharge capacity, when the gates are raised out of the water, at different levels of river discharge. Opportunity for upriver fish passage through dams is greatest during uncontrolled conditions due to the lower velocities encountered through the dam gate openings. Dams with lower controlled discharge capacity may therefore present more frequent and longer windows of opportunity for upriver fish passage than dams with higher discharge capacity.

Through analysis of UMR (1) fish mark/recapture data, (2) hydraulic conditions at the dams, and (3) fish behavior and swimming performance information; estimated probability of opportunity for upriver passage through UMR locks and dams 1 (Minneapolis, MN) and 19 (Keokuk, IA) was zero. A limited number of the 25 UMR migratory fishes with the highest swimming speeds appear to have an opportunity for upriver passage through other UMR dams during most water years. Lake sturgeon,

shovelnose sturgeon, paddlefish, white bass, yellow bass, and skipjack herring are strong swimmers and tend to migrate high in the water column. Skipjack herring is a long distance migratory species restricted to the UMR below Lock and Dam 19. The other migratory species appear to be able to pass upriver through UMR dams only during periods (1) when hydraulic conditions are most favorable, (2) when uncontrolled conditions at the dams coincide with periods of upriver migration, (3) or not at all.

The consequences of restricted fish passage on adult UMR fishes may include:

- reduced reproductive success due to limited access or delay in reaching suitable spawning areas;
- reduced growth rates due to limited access to feeding areas;
- reduced over winter survival due to restricted access to wintering areas;
- increased reproductive success through concentration in tailwater areas below dams; and
- increased exploitation rates due to concentration of fish and anglers in tailwater areas.

Young-of-year and small fish may be subject to increased mortality and predation when stressed or disoriented by downriver passage through dams.

These consequences of restricted fish passage through dams may combine to limit the geographic range of some fishes and may reduce the size and health of UMR fish populations. Operational changes and structural modifications at UMR navigation dams are possible, but further studies of hydraulic conditions, behavior of migratory fishes, and alternatives for improving upriver fish passage are recommended.

Source: *Project Status Report 99-05*, Upper Mississippi River Long Term Resource Monitoring Program, USGS, La Crosse, WI 54603 Contact: Dan Wilcox, St. Paul District, US Army Corps of Engineers, (651) 290-5276, Daniel. B. Wilcox@usace.army.mil

UMRS Lock Expansions Proposed

Legislation recently passed by the U.S. Senate is intended to provide $2 million for a navigation modernization project on the Upper Mississippi and Illinois waterway system (UMRS). Sen. Peter Fitzgerald (R/IL), sponsored the project as an amendment to the Senate's $21.3 billion energy and water spending bill. This $2 million would open the door to a billion dollar plus navigation lock expansion project by funding initial work to redesign five locks on the Mississippi and two on the Illinois River.

Navigation locks on these rivers are currently 600 ft. long. The proposed project would lengthen them to about 1,200 ft. in order to accommodate modern-sized 15 barge tows. Tows navigating these rivers currently must be separated into two segments in order to negotiate exisitng locks. Environmental interests fear that this modernization will expand UMRS navigation capacity and create systemwide impacts on riverine species and habitats.

However, Sen. Fitzgerald says that, "At a time when American farmers are losing billions from record-low commodity prices, we need to work to ensure that they are able to transport their products to market in an efficient and cost-effective way." Speaking with similar urgency, the *National Grain and Feed Association* (NGFA) is calling for Congress to reevaluate the ability of the U.S. Army Corps of Engineers (Corps) to manage construction and rehabilitation of inland waterway system projects, calling their role an "impediment to modernization." The NGFA feels that funding for pre-construction and engineering phases of lock expansion must be provided immediately in order for U.S. agriculture to remain internationally competitive. The NGFA also raises the possibility of privatizing some of the Corps' functions and allowing other non-Defense Department related agencies to perform certain functions.

The barge industry has paid $300 million into an Inland *Waterways Trust Fund* through an inland waterways fuel tax. This trust fund, established in the early 1980's, is to be used by the Corps, with Congressional approval, to pay for 50% of the construction and rehabilitation costs for projects on the inland waterway system. Estimated cost of the proposed UMRS rehabilitation project is $1.3 billion, plus environmental mitigation costs. If the 50% cost share requirement of the *Waterway Trust Fund* were strictly adhered to, then construction would have to stop when $600 million was expended, but everyone knows that will not happen. So by providing the $2 million startup funding under this bill, the rehab project will get onto the books – *"sort of like letting the camel's nose into the tent!"* – so to speak. With annual appropriations, pretty soon the pro-ject will become a standard Corps' budget item, and pretty soon *"the whole camel will gradually work it's way into the tent."* The $300 million *Waterways Trust Fund* will soon be expended, and the taxpayer will be expected to pick up the balance of the check – *"caring for and feeding, not only of the camel, but for all of it's offspring as well"!* Careful public scrutiny of projects like this is merited.

Source: *Grain Transportation Report*, Agricultural Marketing Service, United States Department of Agriculture, 6/22/99

Ag Waste Update

Canadian scientists have "created the genetically altered *Enviropig* whose manure is expected to do far less harm to the environment" than ordinary "porkers". The *Enviropig*, developed at Ontario's *University of Guelph*, could help make hog operations cleaner and more cost efficient. The pigs are thought to be the first animals designed specifically to combat an environmental problem. Their cells contain DNA spliced from mice and a strain of bacteria. Unlike normal pigs, *Enviropig* manure contains less phosphorus to pollute waterways, and is thus safer to use on fields as fertilizer and hopefully should reduce contamination of surface water and underground springs .

Meanwhile, an Iowa hog farmer plead guilty in mid-June to criminally negligent violation of the Clean Water Act – the first federal case involving the act brought against a hog farm. The Justice Dept. said *Trace Inc.* "negligently discharged and caused to be discharged, untreated liquid swine manure" from its Howard County farm into Crane Creek, killing 109,172 fish, including 302 threatened American brook lampreys. The company was ordered to pay $30,000 restitution to the Iowa Dept. of Natural Resources Fish and Game Protection Fund, and a $10,000 fine.

A *Kansas State University* (KSU) study released in late June suggests that even pig-waste lagoons that meet current standards in that state pose a risk to regions with sandy soil and high water tables.

In Maryland a recent court decision ordering a Frederick County hog farm to scale back operations has focused attention on the growing number of "large-scale farms and their possible consequences" in the Chesapeake Bay watershed. Area governments "have been slow to recognize" the issue, and

some local farms have been built or expanded with "practically no county oversight", therefore operating without required discharge permits.

Also in Maryland about 50 farmers turned out at a public hearing in May to voice concern over proposed state regulations to reduce farm nutrient runoff into the Chesapeake Bay. The regulations were proposed to combat outbreaks of the toxic microbe *Pfiesteria piscicida*. But many farmers said there was a "rush to judgment" by environmentalists and state lawmakers in establishing the regulations. They say the link between farm runoff and *Pfiesteria* "has yet to be proven." Farmers are also concerned about economic impacts of the regulations.

Meanwhile, the national *Centers for Disease Control and Prevention* (CDC) are warning doctors nationwide to watch for symptoms that could be related to *Pfiesteria*. No specific incident prompted the warning, but the warmer spring temperatures made conditions ripe for an outbreak. The CDC warns people to avoid fishing, swimming or boating in areas with large numbers of diseased, dying or dead fish, which may signal the presence of *Pfiesteria*. The Virginia Dept. of Environmental Quality and other state agencies began sampling tidal waters for *Pfiesteria* in May and will continue through October. And *Virginia Commonwealth University* is leading a long-term study in an attempt to discover any *Pfiesteri*a-related health problems.

In Chesapeake Bay itself, a power struggle between single-cell dinoflagellates may be preventing *Pfiesteria* from "getting the upper hand". According to studies conducted by *Old Dominion University* researcher David Seaborn, *Pfiesteria* "fared poorly" when it had to compete for food with *crypotoperidiniopsis* – another dinoflagellate that is much more common in the bay. Seaborn's hypothesis, presented at a symposium sponsored by the *Virginia Academy of Sciences* in late May, "could explain" why the Chesapeake has not had "alarming" problems with *Pfiesteria*. He will be traveling to North Carolina this summer to test whether the competing organism is as common in that state's waters. If not, scientists could be on the right track, Seaborn says.

In Virginia, the Pagan River is showing signs of "ecological recovery" less than two years after pork processor *Smithfield Foods* stopped dumping hog waste into it, according to a study by the *Virginia Institute of Marine Science*. The study, paid for by *Smithfield Foods*, shows that levels of nitrogen, ammonia and phosphorus have declined, in some cases by10 fold, since 8/97 when *Smithfield Foods* ended its slaughterhouse waste discharges. Researchers sampled water for several pollutants at 12 stations on the river between 1996 and 1998. *Smithfield Foods* CEO Joseph W. Luter III said the study is encouraging because it shows "no long-term detrimental effects on the river." A company appeal of a federal water pollution fine related to the waste discharges is pending, and a state environmental trial lawsuit is scheduled for later this year.

In Delaware farmers will get up to $8 million over the next 15 years if they plant grass or trees along streams to protect water purity. The federal government has promised annual rental payments, plus special incentives, like money to plant and maintain vegetation, to farmers who participate in the voluntary program. Up to 6,000 acres of land along drainage ditches, streams, creeks and other bodies of water could be developed as natural buffers under the state's Conservation Enhancement Reserve Program. VP Al Gore announced creation of a similar program in Maryland two years ago. Also in Delaware state legislators in mid-June approved legislation that would create a permanent panel to draft and enforce rules curbing harmful runoff from farms and poultry houses. A newly created commission would regulate fertilizer use and storage by 7/1/00. Governor Carper is expected to sign the bill.

In South Dakota opponents of Constitutional Amendment 'E' filed a lawsuit in late June to block state enforcement of the law, which prohibits non-family farm corporations from owning interest in agricultural or ranch land, or livestock in the state. The amendment's language does not mention hogs, but the hog industry was central to the matter. Those filing the lawsuit say that instead of protecting family farmers, the amendment is making it difficult for them to compete with like-sized producers in other states.

In Minnesota Gov. Jesse Ventura (Reform) vetoed a "controversial" feedlot emissions bill on 5/25 that would have allowed farmers to exceed emissions standards when pumping out manure pits. The bill would have given small farmers permission to exceed the standards for 7 days at a time while cleaning the pits. Larger farms would have been allowed 21 days a year to exceed the standards without risking fines. Because of Ventura's veto, a provision remains in place that counts all feedlots run by the same owner as a single large lot, making it undergo "more intense pollution control scrutiny."

Also in Minnesota, British-based *Fibrowatt* is planning to build America's first turkey manure-burning power plant. The $65 million operation would generate 40 MWs of power. Turkey producers in Kandiyohi County have "already contracted with *Fibrowatt* for 370,000 tons of manure a year," according to Wilt Croonquist, executive director of *Kandiyohi County Rural Development Finance Authority* in Willmar. By-products of burning manure include nitrogen-free ash, which could be used as fertilizer, and steam heat. Minnesota "is a good choice for the plant," as the state produces 44 million turkeys/yr. If all regulatory conditions are met, the plant could open in 2001.

Finally, the Virginia Water Control Board voted 4-1 to approve a permit allowing a fertilizer company to spread treated human waste called sludge on nearly 3,000 acres of farmland in the Shenandoah Valley. Area residents oppose the permit, arguing that the sludge could contaminate underground water, spoil nearby land and hurt people. Farmers use the sludge for fertilizer, which is much more tightly regulated than manure or commercial fertilizer. But opponents say that much of the sludge would be spread in areas with sinkholes, caves and underground streams, increasing the likelihood of underground water contamination. Conservationists have warned that expanded use of wastewater sludge to fertilize valley fields could harm groundwater and rare plants and animals.

Source: Colin Nickerson, *Boston Globe*, 6/24/99; *DOJ release*, 6/25/99; *Wichita Eagle*, 6/24/99; Fern Shen, *Washington Post* 5/23/99; *USA Today*, 5/25/99; *AP/Washington Post*, 5/17/99; A.J. Hostetler, *Richmond Times-Dispatch*, 5/16/99; Ted Shelsby,

Baltimore Sun, 5/27/99; Lawrence Latane III, *Richmond Times-Dispatch*, 5/29/00; Jim Paterson, *Rural Electrification Magazine*, 5/99 issue; *AP/Washington Times*, 5/21/99; *Richmond Times-Dispatch*, 6/8 and 6/19/99; Todd Spangler, AP/Dover *Delaware State News*, 6/3 and 6/10/99; *Dover Delaware State News*, 6/10/99; Randy Dockendorf, *Yankton Press & Dakotan*, 6/28/99; Carson Walker, *AP/Yankton Press & Dakotan/others*, 6/29/99; *River Currents Online*, 6/4, 6/11 and 6/18/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 8/11/97; 5/12 and 11/3/98; 3/18, 5/14, 5/17, 5/21, 5/24, 5/25, 5/26, 5/27, 6/1, 6/3, 6/24 and 6/29/99

Mining Issues

Federal regulators ruled in mid May that West Virginia coal mine operators cannot leave mountaintop removal sites rolling or flat "unless the land will be used for public recreation". The U.S. Office of Surface Mining (OSM) rejected a proposed state law amendment that would allow "fish and wildlife habitat and recreation lands" as post-mining land uses that qualify for an approximate original contour (AOC) variance. AOC variances allow mine operators to leave sites flattened, if they show that post-mining uses require rolling or flat land. But the OSM decision said "fish and wildlife habitats do not require flat or rolling terrain...in order to be successful".

OSM officials also announced that they will no longer write reports when reviewing mountaintop removal permits from the West Virginia Division of Environmental Protection (DEP). According to Roger Calhoun, director of the OSM's Charleston field office, "detailed, written permit reviews are not necessary." The decision comes after the *Charleston [WV] Gazette* published stories based on two OSM reviews that found "numerous ways" in which the permits did not comply with state and federal regulations. The OSM has found six pending West Virginia mountaintop removal permits unacceptable. As part of it's efforts to implement a new state mountaintop removal law, the DEP will form a committee of industry lobbyists and citizens to help write regulations.

In the meantime, the *West Virginia Highlands Consvervancy* (WVHC) and other critics have sued Interior Secretary Bruce Babbitt and the OSM in an attempt to block mountaintop removal. At issue are DEP permits that do not require companies to comply with 100 ft. stream buffer zone rules. According to the DEP, the OSM says the buffer zone rules do not apply to valley fills, which are used in mountaintop removal to dispose of leftover rock and earth. But the lawsuit says that public comment and hearings should have been required. WVHC lawyer Jim Hecker called the rule amendment "arbitrary," adding that it "deprives the residents of America's coalfields of the full protection of the hydrologic balance, fish, wildlife and related values".

Also in mid June, the Army Corps of Engineers withdrew approval of a Clean Water Act permit for a 3,100 acre expansion of *Arch Coal Inc.'s Spruce No. 1 Mine* at its *Dal-Tex complex* near Blair, WV. This would have been West Virginias' largest mountaintop removal mine. The Corps said the permit had little chance of approval in light of a pending federal lawsuit. Environmental groups had challenged the project, and in March, Chief U.S. District Judge Charles Haden II stopped the Corps from issuing the permit. The Corps and environmentalists asked Haden on 6/25 to dismiss the Corps from the lawsuit, even though *Arch Coal* representatives challenged the Corps' authority to do so on procedural grounds.

In Pennsylvania a coalition of environmental and outdoor recreation groups threatened on 6/4 to sue the federal and state governments unless they boost funding for mine cleanups. Pennsylvania's more than 1,200 strip-mine sites are "oozing acid-laced water into rivers and streams" and causing the state's "single worst water-pollution problem." Acid mines have polluted more than 2,250 miles of the state's waterways and reportedly "killed virtually all aquatic life" in polluted rivers and streams. The coal industry has created a $28 million bond fund to pay for the cleanup bill, but environmental critics and state audits estimate the long-term cost at more than $1 billion. John Hanger, executive director of *Citizens for Pennsylvania's Future* said, "If something isn't done, the public is going to pay ... either...with polluted water, or it will pay with tax dollars." Meanwhile, the Pennsylvania Department of Conservation and Natural Resources (DCNR) Secretary announced in early June an $18,500 *Keystone Rivers Conservation Grant* to help eliminate acid mine drainage flowing into Babb Creek in Tioga County. The *Pennsylvania Environmental Defense Foundation Inc.* will use the grant to develop systems to treat polluted discharge from two abandoned coal mines.

In Montana, taxpayers will likely have to come up with as much as $400,000 to maintain the now-defunct *Zortman and Landusky* mines for the rest of the year, since the company maintaining the gold mines walked off the job in mid June. The state fired *Reclamation Services Corp*. of New York since it had already spent its annual budget in just six months. The company was formed when the now-bankrupt *Pegasus Gold Corp*. reorganized. *Pegasus* was the company that fought to build a cyanide leach gold mine near the headwaters of the Blackfoot River, prompting *American Rivers* to list it as one of the nation's most endangered rivers of 1998. Reclamation of the mines is expected to begin by the end of 1999 or in early 2000.

Also in Montana, the *Atlantic Richfield Co*. (ARCO) has paid the state $151 million as part of a 1998 settlement for polluting the Upper Clark Fork River Basin. The payment is part of a $260 million agreement with the state, the USEPA and the Confederated Salish and Kootenai Tribes. A federal judge approved the settlement on 4/19, culminating a 16-year battle in court over mining and smelting operations in Butte and Anaconda, MT. The state will put about $129 million into a damage restoration account for the river basin, with $10 million delegated for the contingency costs of cleaning up the Silver Bow Creek Superfund site. Negotiations surrounding ARCO's responsibility for the state's natural resource damage claims in other nearby regions have not yet been resolved

Meanwhile, the *Montana State University's Reclamation Research Unit* (MSURRU) provides a storehouse of knowledge for restoring and reclaiming thousands of abandoned mining sites. Since the 1970s, MSU scientists have been trying to "reintroduce some semblance of nature" by working with private companies, the USEPA and the state Dept. of Environmental Quality. Montana has more than 10,000 abandoned, polluted coal mines, and provides the laboratory for the six-person MSURRU staff. The unit offers expertise to companies undertaking new mining endeavors, while training about 10 students/yr. in the nation's only master's degree program in land rehabilitation. Unit director Dennis Neuman said his group would like to develop technology to "make mining environmentally benign" and prevent the industry from fleeing to Third World countries where regulations are less strict.

Finally, in New Mexico, *Land Renewal Inc*.,

an "offshoot" of the Albuquerque-based nonprofit *Center for Holistic Management*, is using a "variety of natural methods," including herds of cattle, to return mined land to its former natural state. Shannon Horst of *Land Renewal* said the cattle offer some advantages for traditional mine reclamation methods such as capping. Horst said capping tends to leave bare soil that becomes hard and "virtually impervious to the establishment of seeds." But the cattle activity helps break up the soil and "raises the rate of germination." The key to the method is to bring in a large number of cattle for a short time, typically 300 cattle on a single acre for one day. Other methods the company uses include enriching the soil with green waste such as grass clippings or chipping the foliage "ripped out by the mining process."

Sources: Ken Ward Jr., *Charleston [WV] Gazette*, 5/1, 5/14, 5/19, 6/13, 6/14 and 6/26/99; *Lexington Herald-Leader*, 5/15/99; *OSM release*, 5/4/99; Mark Jaffe, *Philadelphia Inquirer*, 6/5/99; *The Missoulian*, 6/25/99; Robin Frames, *Albuquerque Journal*, 6/21/99; Joe Kolman, *Billings Gazette*, 6/20/99; *AP/Billings Gazette*, 7/20/99; *River Currents On Line*, 6/11 and 6/25/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 4/1, 4/21, 6/7, 6/22, 6/23, 5/17, 5/19, 6/14, 6/28 and 7/20/99

Miscellaneous River Issues

Snow Removal Impacts - The California Dept. of Transportation has decided to end the "slushing out" snow-removal practice blamed for harming Lake Tahoe's water quality after the *Lahontan Regional Water Quality Control Board* cited the state agency for the practice. The "slushing out" technique uses large amounts of road salt, causing snow to melt quickly and overwhelm stormwater treatment traps. Sources: *AP/Contra Costa [CA] Times/others*, 6/14/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 6/15/99

Public Use Limits on Fed Lands - The Clinton Administration plans to ban most public use on 5 million acres of federal land in 6 states, reportedly "to placate environmental voters before the 2000 presidential election." In many cases "all recreational uses would be banned except walking and meditating." The six states are Alaska, Arizona, Colorado, Missouri, Montana and Utah. Western lawmakers are also concerned that the administration's proposal for a 2 yr. moratorium on mineral activity in Montana, Colorado and Missouri would eliminate jobs and tax revenues and make the U.S. more dependent on foreign oil. Sources: Audrey Hudson, *Washington Times*, 6/14/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 6/14/99

WY Land Acquisition - *The Nature Conservancy* in late May completed a $3 million purchase of the 15,000 acre Heart Mountain Ranch in Wyoming to prevent development in the Big Horn Basin. Sources: Robert Struckman, *Billings Gazette*, 6/4/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 6/8/99

VA Water Quality Court Order - A lawsuit filed by the *American Canoe Association* and the *American Littoral Society* has won a court order compelling federal officials to more aggressively monitor pollutants allowed in Virginia's waters. The suit claimed that USEPA was not enforcing the Clean Water Act, and will require Virginia to set pollution levels for the waterways. If the state fails to do so under a specified schedule, USEPA will draft guidelines and ensure compliance. Critics feel that USEPA settlement of the cases could lead to unnecessary intrusion by the federal government and give the agency power to dictate land-use patterns and economic development. Sources: *Washington Post*, 6/23/99 and *River Currents On Line*, 6/25/99

PA Steel Mfg. Cleanup - In an effort to reduce nitrate discharge into Pennsylvania's Connoquenessing Creek, the *Armco* plant in Bulter will be using hydrogen peroxide to clean its steel, rather than nitric acid. The plant must reduce the nitrate discharge or loose its state water-discharge permit. The company believes this is the first time a steelmaker has attempted to use peroxide to clean or pickle steel. Sources: *Philadelphia Inquirer*, 6/21/99 and *River Currents On Line*, 6/25/99

Platte River Pact Endangered Species - *Nebraskans First*, a coalition of groundwater irrigators, has called on the Interior Dept. (DOI) to halt work on the three-state Platte River agreement "until it meets all the provisions of the Endangered Species Act." The group says the DOI and the U.S. Fish and Wildlife Service "failed to notify" seven Nebraska counties when part of the Platte was designated as critical habitat for endangered whooping cranes. *Nebraskans First* says the failure invalidates the agreement under which Nebraska, Colorado and Wyoming share responsibility with the DOI for endangered Platte River species. At least 30 Nebraska irrigation applications remain "on hold" until the state can determine how much Platte River Basin water is required to ensure survival of the endangered pallid sturgeon. A draft policy being developed on the sturgeon would be the state's first formal policy on how to handle depletions of river water that may affect endangered species. Meanwhile in the upper reaches of the Platte, a federal judge dismissed a lawsuit filed by a group of ranchers, farmers and water users based in Walden, Colorado, who want to increase logging in a national forest as a way to save the Platte River's endangered species. The *Coalition for Sustainable Resources* argued that water runoff would increase if the U.S. Forest Service cut down half of the harvestable trees in the Medicine Bow-Routt National Forest. Increased water flow would benefit endangered species living downstream, they said. Citing the federal study of Platte River endangered species, U.S. District Judge Clarence Brimmer "ruled that the suit was premature" because "The experts that should be considering these matters are working [on] this problem." Sources: Julie Anderson, *Omaha World-Herald*, 5/25 and 5/26/99; *AP/Billings Gazette*, 5/26/99; *AP/Omaha World-Herald/others*, 5/23/23; and National Journal's GREENWIRE, *The Environmental News Daily*, 5/24 and 5/26/99

MT Oil Waste - A U.S. district judge fined a Conrad, Montana oil field management company $50,000 for violating the federal Safe Drinking Water Act. Judge Charles C. Lovell fined *Balko Inc.* for illegally dumping oil waste into unpermitted wells. Source: Erin P. Billings, *Billings Gazette*, 5/28/99

Cleaner Rivers? - A report written by specialists within the USEPA and released by *Public Employees for Environmental Responsibility* (PEER) finds a lack of credible, scientifically verifiable information that our nations rives and streams have become cleaner over the last two decades. The report gives an insider account of how USEPA and its State partners; through a mix of politics, bureaucratic inertia and bad science; perpetuate the fiction that official water quality reports are valid, by routinely presenting Congress and the public with conflicting, erroneous and manipulated data containing little accurate information on the actual condition of the nation's waterways. Source: *River Currents Online*, 6/11/99

OR Stream Access - Access to stream

banks along private lands is at the center of a debate in Oregon, as a bill sponsored by the *Association of Northwest Steelheaders* died in committee. The bill that would have granted recreational access to streambanks almost made it out of the Senate, but was killed by strong opposition from agricultural groups and other activist landowners. The *Steelheaders* now plan to press a lawsuit which the group hopes will force the state to declare more rivers as navigable, meaning the public has the right to use the banks below the normal high-water line. So far, only 10 Oregon rivers are officially declared navigable. Sources: *Portland Oregonian*, 6/22/99 and *River Currents On Line*, 6/25/99

WV Water Quality - The USEPA threatened again in late June to step in and draft a plan to "keep West Virginia's rivers and streams from getting any dirtier" if the state Environmental Quality Board (EQB) does not act soon. Four environmental groups had threatened to sue EPA in late May because the agency has not forced West Virginia to develop the plan. The groups filed a 60 day formal notice of intent to sue, saying the EPA has not adequately enforced the Clean Water Act, which requires states to implement a stream anti-degradation policy. The EQB approved an anti-degradation policy in 1995, and last year state officials developed a plan, as required by the 1972 Clean Water Act, but the plan has not been implemented. After a 7/98 hearing, EQB members decided not to submit the plan for legislative consideration. Instead they formed a committee of regulators, environmentalists and industry representatives to discuss it. The committee has not met, but now hopes to have a recommendation for state lawmakers by 8/00. Sources: Ken Ward Jr., *Charleston [WV] Gazette*, 5/29 and 6/24/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 6/25/99

WI Wetland Losses - A *Sierra Club* report says urban sprawl and loss of wetlands are major factors in destructive flooding across the state of Wisconsin. Citing Army Corps of Engineers data, the report says developers had a 99% success rate in securing permits to fill wetlands between 1988 and 1996. Sources: Tom Vanden Brook, *Milwaukee Journal Sentinel*, 6/22/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 6/24/99

Rare Non-game Fish Stocking - Knoxville, TN-based *Conservation Fisheries*, the only private facility in the U.S. devoted to the captive breeding and restoration of rare non-game fish, is restocking Tennessee streams with four endangered species – the smoky madtom, yellowfin madtom, duskytail darter and spotfin chub. Sources: Morgan Simmons, *Knoxville News-Sentinel*, 5/23/99 and National Journal's GREEN-WIRE, *The Environmental News Daily*, 5/25/99

VA Mountain Stream Pollution - A study by *University of Virginia* (UV) researchers has found that only about 50% of the state's mountain streams support trout, down from an estimated 82% before the mid 1800s. And "unless acidic emissions from power plants and other sources are reduced dramatically," only about 42% of the streams will support trout by the mid- 21st century. Sources: *UV release*, 5/11/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 5/25/99

Tribes Gaining Land Management Authority - In a deal that could be "the first of its kind" in the U.S., the Grand Ronde tribe in Oregon may gain authority to manage nearly11,000 acres of public forest land near its reservation. Under the agreement signed in mid June with the U.S. Forest Service, the tribe will write a 10 yr. management plan for 6,600 acres of the Siuslaw National Forest. U.S. Bureau of Land Management officials say they expect to sign a similar agreement in the next few weeks giving the tribe 4,200 more acres to manage in the South Yamhill River watershed. The agreements could lead to a "stewardship" experiment allowing the tribe to carry out fish, wildlife, stream and forest projects after two years. The move signals the "rising influence" of Native Americans in the management of public lands and natural resources that once belonged to them. This is evidenced by recent agreements over sacred sites in California, salmon management in the Columbia River and wolf reintroduction in Idaho. Sources: Courtenay Thompson, *Portland Oregonian*, 6/15/99; and National Journal's GREEN-WIRE, *The Environmental News Daily*, 6/16/99

Ranchers/Environmentalists Cooperate - Coalitions of ranchers and environmentalists are beginning to work together to meet the common objectives of fertile soil, clean water, flourishing wildlife and healthy ecosystems. The *Six-Six Group* in the Southwest has been working to preserve endangered ranches, adopt environmental restor-ation goals and implement grazing methods that are compatible with wildlife habitat. And the *Snowline Grazing Assn.* in Montana has fenced off riparian areas, put in water troughs to deter livestock from rivers, and pulled noxious weeds so they don't spread. Rancher Dean Welborn said, "We've gone out of our way to be good stewards of the soil." Furthermore, if cattle are forced off of public land because of increasingly strict regulations and steep grazing fees, ranchers would be driven out of business and wildlife habitat would be "divvied up" into suburban-style developments to accommodate booming Western population. Source: National Journal's GREENWIRE, *The Environmental News Daily*, 7/14/99

TN River Mussel Recovery - Biologists plan to "put more mussel into Muscle Shoals" by returning mollusk species to the Alabama riverbed where they once thrived. At least 34 mussel species, washed out by reservoirs, have disappeared from the 53 miles of the Tennessee River, once home to the "world's greatest collection of freshwater mussels." Government biologists say they're finally ready to reintroduce up to 16 species of endangered mussels into a carefully selected section of Muscle Shoals. But it hasn't been easy, said Richard Biggins, U.S. Fish and Wildlife Service fish and mollusk recovery coordinator. "It's 20 years ...that I've been working with these animals to get to this point." Sources: Katherine Rizzo, *AP/Lexington Herald- Leader*, 6/3/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/4/99

TVA Water Management Examined - A General Accounting Office (GAO) report released on 5/25 says the public should participate in re-examination of the Tennessee Valley Authority's (TVA) water level management policy. While the government report does not call for TVA to end its moratorium on changing lake levels, it recommended that Chairman Craven Crowell ensure that future studies include both costs and benefits of changing lake policy. TVA said that it lowers lakes such as the Douglas and Cherokee for flood control, hydroelectric power generation, navigation and environmental reasons. Lake users say TVA should delay water drawdowns until Labor Day instead of starting earlier in the summer. But the agency did not say whether it would consider making any lake level changes before the moratorium ends in 03/01. Meanwhile, TVA is forming a public advisory council to "help guide" its land and water stewardship programs. The *Regional Resource Stewardship Council* (RRSC) will help oversee flood control and preservation of 11,000 miles of public shoreline, 277,000 acres of reservoir land and 480,000 acres of

recreation lakes in TVA's seven- state region. The RRSC will have 20 members, seven appointed by the governors of each TVA state, with the rest representing TVA distributors, businesses, environmental interests and other parties. Also, starting next year, TVA's natural resources programs will be financed through a deal brokered by Sens. Fred Thompson (R/TN) and Bill Frist (R/TN), allowing restructuring of TVA's public debt to finance its programs. In addition, TVA will receive $7 million from Congress for natural resources programs, but only for its Land Between the Lakes preserve on the KY-TN border. Sources: Jacques Billeaud, *Knoxville News-Sentinel*, 5/25/99; Duncan Mansfield, *AP/Birmingham News online*, 6/29/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 5/25 and 6/30/99

Niobrara River Management - A federal judge ruled on 6/15 that the National Park Service (NPS) has delegated too much managerial control over a portion of the Niobrara River in northern Nebraska to a local council. The *American Canoe Assn.* and the nonprofit *National Parks and Conservation Assn*., which filed the lawsuit last year against NPS Director Robert Stanton and Interior Secretary Bruce Babbitt, had charged that the local council "failed to manage and protect the river." The river was "overcrowded" and polluted by pit toilets while surrounding campsites were "poorly managed." The ruling puts control back in the hands of the NPS, much to the liking of the groups that filed the suit, who "feared the arrangement for the Niobrara could set a precedent, chipping away at federal control of the park system." The Council made up of local residents with minimal NPS oversight was described as irresponsible and going beyond the agency's legal limits. The NPS hoped that creating a council with local representation was a way to gain acceptance among area residents for scenic-river designation because of the voice it gave them in river management. Sources: *AP/Yankton [SD] Press & Dakotan*, 6/17/99; *Omaha World Herald*, 6/16/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/17/99

Upper Mississippi Still At Risk - Though less polluted than it was decades ago, the Upper Mississippi River is "slowly deteriorating" from agricultural runoff and an inability to periodically flush itself of sediment, a multi-agency multi-state report says. The report, *"Ecological Status and Trends of the Upper Mississippi River System 1998*," says an elaborate lock and dam system has led to buildup of sediment, "leading to loss of aquatic life and plant diversity and the insects, fish, birds and waterfowl that depend on them." Dams, training structures and levees which provide adequate depth for barge traffic and protect floodplain agriculture have confined the river's erosive power to a central channel, while side channels and backwaters which fill with silt and sediment are no longer replaced during floods, slowly eliminating the places river wildlife need to feed, conserve energy and reproduce. Dam operations designed to provide sufficiently deep water for barges have eliminated

Sediments are choking Upper Mississippi River Backwaters.

periods of low summer flows when river bed sediments would consolidate, setting the stage for growth of marsh plants consumed by river wildlife. Additionally, dam operations elevate floodplain water tables, threatening long-term health of the river's floodplain forest. And construction in flood plains and conversion of prairies and forests to farmland has led to increased sewage and pesticide runoff from farms. The report was produced by the USGS, Army Corps of Engineers and states of MN, IL, IA, MO and WI. USGS biologist Robert Delaney said better funding is needed to help attack the problems. He called the money being spent now to restore and protect habitat "only a drop in the bucket" compared with what is needed. Sources: Dennis Lien, *St. Paul Pioneer-Press*, 6/17/99; *AP*, 6/17/99; *River Currents Online*, 6/18/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/17/99

Yellowstone River Lawsuit - Six environmental groups filed a lawsuit against the Army Corps of Engineers on 5/20, charging that the agency is destroying the Yellowstone River by allowing bank stabilization projects without studying their cumulative downstream effects. The lawsuit, filed in U.S. District Court in Billings, alleges that the Corps violates the National Environmental Policy Act and the Clean Water Act. The groups contend that the number of permits for projects along the river has increased "dramatically" as property values have increased and landowners have become less tolerant of the river's natural movement and flooding. They want the agency barred from issuing such permits until a study is completed that shows how bank stabilization projects will affect the river, its fisheries and surrounding wildlife habitat. Sources: Joe Kolman, *Billings Gazette*, 5/21/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 5/21/99

Yellowstone River Pollution - More than half of the fish in the Yellowstone River system had low levels of long-banned pesticides, "offering lasting evidence of a widespread DDT spraying campaign during the 1950s," according to a USGS study last year. "It tells us these chemicals last for a long time out there," Dave Peterson of the USGS said. DDT was banned in the U.S. in 1972. Fish from Yellowstone Lake contained the highest levels of DDT and its sister compounds, DDE and DDD. That suggests the source of the chemicals was upstream, inside Yellowstone National Park where DDT was sprayed between 1953 and 1957. Sources: Michael Milstein, *Billings Gazette*, 5/17/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 5/17/99

Missouri River Issues/Restoration - The *Sierra Club* stated in a recent report that the health of the Missouri River is at risk, and criticized the National Park Service (NPS) for poor implementation of recreational programs intended to enhance the River. The NPS agrees that it has done a poor job, though it has tried to secure funding for the programs. The *Sierra Club* claims that the NPS has turned management responsibility over to the Corps of Engineers, who seems only concerned about streambank stabilization. The *Sierra Club* believes that the river is a national resource and should be treated as such. Sen. Bob Kerrey (D/NE) agrees and has introduced his Missouri River Valley Improvement Act of 1999, a $320 million bill designed to revitalize riverfronts, attract recreation and tourism, and protect river wildlife. Kerrey's bill, co-sponsored by Sen. Tom Daschle (D/SD), authorizes new riverfront revitalization projects, interpretive centers, and recreational facilities; establishes a river monitoring program; and expands existing habitat restoration efforts in Nebraska, Iowa, Kansas and Missouri. The bill also requires the Corps and the Dept. of Interior to consider whether to

create a habitat restoration program for the Dakotas and Eastern Montana, acquire land from willing sellers to expand the River's refuge system, and study dam operations designed to aid cottonwood trees along the 149 mi. Wild and Scenic segment in Montana. The bill also amends the Flood Control Act of 1944 to put fish and wildlife on an equal footing with navigation, flood control, hydropower and irrigation. Sources: *Omaha World Herald*, 5/30/99; *American Rivers press release* 6/24/99; and *River Currents On Line*, 6/4 and 6/25/99

Fish Friendly Farming - Agricultural interests in the state of Washington will meet with state and federal agencies in September to establish new guidelines for farming near threatened and endangered fish. Negotiations will focus on making farm and irrigation practices more "fish-friendly" by establishing buffer zones and using fish screens to protect salmon stock. Participants – who will include the state departments of agriculture and ecology, the U.S. Fish and Wildlife Service and major agricultural interests – plan to brainstorm ideas that individual districts can use to develop their own salmon-protection plans. Farmers and government officials say an agriculture plan to ensure salmon protection could be modeled after a similar one recently adopted by the timber industry in which timber companies receive tax breaks in exchange for not cutting along salmon streams. Janet I. Tu, *Wall Street Journal*, 6/30/99; National Journal's GREENWIRE, *The Environmental News Daily*, 3/16, 6/9 and 7/1/99

Clarks Fork Logging Issues - The Clarks Fork of the Yellowstone River will not be threatened by proposed logging, thanks to a ruling by the U.S. Forest Service in favor of environmentalists that appealed a planned Shoshone National Forest timber sale. Arguing that the environmental study behind the timber sale study was faulty, the *Wyoming Outdoor Council, American Wildlands* and the *Alliance for the Wild Rockies* claimed that logging 140 acres above the Clarks Fork of the Yellowstone River would threaten the federally designated wild and scenic river, as well as destroy rare plants and habitat for endangered wildlife. Sources: *Omaha World-Herald*, 6/8/99; and *River Currents Online*, 6/11/99

Alabama Sturgeon Listing - The *Alabama-Tombigbee Coalition*, a business group, says that listing the Alabama sturgeon as an endangered species could interrupt river-based commerce over much of Alabama and the Tennessee-Tombigbee Waterway, because such a listing would mean all federally funded or regulated activities deemed harmful to the sturgeon would have to cease. A 1993 study by the *University of South Alabama* and *Troy State University* estimated that such a move would cost 20,000 jobs, mostly in the wood products industry. Meanwhile, according to a scientific poll, about 2/3 of Alabama voters support the sturgeon listing. State politicians are not as supportive: "We don't want these ugly fish in the state of Alabama, said state Rep. Johnny Ford, D-Tuskegee at a recent public hearing. The U.S. Fish and Wildlife Service (USFWS) wants the fish, which has disappeared from 85% of its natural habitat, put back on the endangered species list. Sam Hamilton, USFWS Regional Director in Atlanta, says that listing the sturgeon "...will not stop any commercial activities, period. There are already four federally listed species in those rivers, one a sturgeon. Adding another will not change anything." Some question whether the sturgeon is actually distinct at all, citing its striking similarity to the shovelnose and pallid sturgeons. Interior Secretary Bruce Babbitt reversed a 1994 attempt to list the fish after such questions arose. Sources: *AP/Biloxi Sun Herald/ others*, 6/22/99; *USFWS news release* 6/23/99; *River Currents On Line*, 6/25 and 7/16/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/22/99

Grazing Law Suit - The Sante Fe-based *Forest Guardians* filed a lawsuit on 6/1 seeking information from the U.S. Forest Service (USFS) about ranch loans based on the number of cows permitted to graze on public lands. The group also objects to USFS participation in the loans through a 1938 policy under which the agency agrees to turn grazing permits over to banks if a rancher defaults on a loan, ensuring continuation of grazing on public land after a foreclosure. *Forest Guardians* says that if a rancher's loan goes bad the permit should revert to the USFS instead of a bank, which sells the permit along with the ranch property. But ranchers say the number of cattle allowed by the permit on public land is included in the purchase price of ranches and that number is calculated by the IRS when it assesses inheritance taxes. Caren Cowan of the *New Mexico Cattle Growers Assn*. said, "This may be the defining case. This is very serious." Sources: Mike Taugher, *Albuquerque Journal*, 6/2 and 6/4/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/4/99

USFWS Criticized - Congressional investigators say the U.S. Fish and Wildlife Service (USFWS) is "mismanaging a popular conservation program and diverting tax-payers' money into a 'slush fund' to finance pet projects." House and General Accounting Office investigators say funds from the agency's $1 million *Director's Conservation Fund* has been "improperly" used for unauthorized purposes, such as research and projects on migratory birds. Money for the fund comes from excise taxes on hunting and fishing equipment, and Congressional investigators say it should only be used for administering state hunting and fishing grants. The agency said the spending was legal, and an agency spokesman said USFWS Director Jamie Rappaport Clark plans to eliminate the account next fiscal year. The GAO also said that the $31 million fund, designed to administer the Federal Aid in Wildlife Restoration Act and other conservation programs, was used for purposes not authorized by Congress. House Resources Chairman Don Young (R/AK), who requested the GAO audit, said it uncovered a "ream" of "improper, imprudent, irresponsible expenditures," including travel and relocation expense abuses and a lack of internal audits. Meanwhile, the USFWS has agreed to settle the disputed dismissal of biologist, James M. Beers after several months of negotiations. Beers said he was dismissed because of a disagreement with his superiors over a conservation group's request for grant money. Beers will receive $150,000 cash, 168 hours of annual leave, attorney fees, and a letter of apology. In 2/98, the agency proposed moving Beers from its Arlington, VA, headquarters to the Hadley, MA regional office, in connection with a transfer of some of his job duties. Two months later, the agency said it was dismissing Beers for not accepting the transfer. A U.S. Office of Special Counsel (OSC) investigation said the transfer violated federal personnel regulations because the USFWS did not transfer a significant portion of Beers' duties to the Hadley office. Rob Gordon of the *National Wilderness Institute* (NWI) said the settlement is a "huge victory" that will allow for disclosure of "the degree to which USFWS officials abused the public's trust in their management of conservation funds." Sources: Audrey Hudson, *Washington Times*, 7/21/99; *HRC release*, 7/20/99; *OSC release*, 6/2/99; *NWI release*, 6/3/99; Barbara J. Saffir, *Washington Times*, 5/27/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/3, 6/7, and 7/21/99

Ecoconscious Timber Sales - U.S. Forest Service (USFS) supervisors in Montana and northern Idaho are testing a new land stewardship contract method that emphasizes the end condition of the land rather than the board ft. of wood provided. The "eco-conscious" timber sales will define the desired condition of a piece of land, then request proposals from groups interested in doing the work. Regional forester Dale Bosworth said, "[Previously], whenever we got into a timber sale, everyone wanted to argue about how much volume we were going to take. No one discussed the health of the forest or the watershed or wildlife." Critics say the new approach will prevent counties from collecting the 25% they usually get from timbers sales. And some fear the USFS is "simply using the contracts to sneak timber sales past critics". Sources: *AP/Billings Gazette*, 5/17/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 5/17/99

Southeastern Water Rights Issues - Plans to settle a decade-old water war between Alabama, Florida and Georgia have hit another snag. A "technical glitch" threatens to derail negotiations toward a regional plan for sharing the waters of the Chattahoochee River and other area waterways that pass through the three states. Georgia, which controls the headwaters of all the shared rivers, has promised to regulate water flows from four big federal dams to keep Alabama's and Florida's supplies above a "certain minimum" during droughts. But Florida and Alabama negotiators "say there is no way they can easily verify whether they will get the amount of water Georgia proposes to send them." Officials say the states "are still so far apart in their demands" and that they may not meet an October deadline for reaching a settlement. If the negotiations fail, the Supreme Court will take up the dispute. Sources: Charles Seabrook, *Atlanta Journal-Constitution*, 5/24/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 12/22/98 and 5/25/99

PA Endangered Species Listing - The Pennsylvania Fish and Boat Commission has tripled the number of aquatic species listed as endangered from 9 to 28 and added 8 species to a conservation list for a total of 54. Mining industry representatives said the action would delay projects and increase costs, but the PA Dept. of Environmental Protection officials said water quality standards required to protect the fish are already maintained in most streams. Sources: *AP/Philadelphia Inquirer*, 7/20/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 7/20/99

FL Dredging Issue - For 41 years the U.S. Army Corps of Engineers has been dredging the Apalachicola River in Florida to allow for operation of a limited number of barges carrying fertilizers, fuel, asphalt and other cargo upstream to Georgia and Alabama. State scientists say that environmental damage from the dredging has reached a crisis point, and destroyed as much as 25 miles of productive river. The state is now proposing the most restrictive environmental permit in the project's history, asking the Corps to stop dumping dredged sand along riverbanks, and to restore river habitats. The Apalachicola River is an impressive ecosystem, with forested ravines, rare trees and mysterious, ancient swamps. It also fuels the marine system of Apalachicola Bay, home to 90% of Florida's yearly oyster harvest. Also one of the highest densities of amphibians and reptiles in North America lives in the upper part of the Apalachicola basin. Sources: Julie Hauserman, *St. Petersburg Times*, 6/7/99; *St. Petersburg Times*, 6/8/99 *; River Currents Online*, 6/11/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/10/99

CO Fish Ladder - A 3 yr. old fish ladder on Colorado's Gunnison River is now considered a success, so federal officials plan to build a second fish ladder on another nearby dam. The $1.2 million fish ladder built around the Redlands Diversion Dam, has allowed at least 42 endangered Colorado pikeminnow and 27,000 other fish to pass. The Colorado and Gunnison rivers near Grand Junction are home to 650 adult pikeminnow, considered the world's second-largest surviving population of the species. This fall, officials hope to start construction of a $3.4 million fish ladder around the Highline Diversion Dam on the Colorado. Combined with a plan to tear down the unused Price-Stubb Dam, the project would open another 55 miles of river for the fish. But efforts to tear down the dam have been complicated by a proposal to add a hydroelectric plant. Sources: Mark Obmascik, *Denver Post*, 7/6/99; *River Currents On Line*, 7/12/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 7/7/99

MT Fish Reclamation - Ted Turner's proposed project to poison about 77 miles of stream in the Cherry Creek area southwest of Bozeman, MT is raising controversy as the state works to implement the largest project of its kind in decades. The goal is to kill non-native fish species in order to reintroduce native Westslope cutthroat trout. Though poisoning of non-native fish in order to reintroduce natives is not a new practice in Montana or neighboring states, the role of Ted Turner is bringing the project national attention. Opponents say it makes no sense to kill fish in order to reintroduce others, and that water quality and possible contamination of Bozeman's water supply is a concern. Supporters feel the project offers a unique opportunity to safely and economically try to save a dwindling population of Westslope cutthroat trout. Sources: *Bozeman Gazette* 6/29/99; and *River Currents On line*, 7/2/99

Great Lakes Too Clean? - "After 30 yrs of stricter environmental standards" that have dramatically cleaned up the Great Lakes, some fishers are seeking an increase in dumping of strictly regulated nutrients to boost fish numbers. Some fishers say walleye, coho salmon and other game fish catches are declining as the water becomes cleaner. Fisherman Sam Romano said the removal of microorganisms from Lake Michigan has "broken the food chain." Regulated dumping of phosphates from agricultural runoff and sewage treatment water, they say, could stimulate algae growth and increase fish populations. Meanwhile, researchers have discovered what appear to be the first known cancerous tumors on tiny crustaceans living in Lake Michigan, raising new questions about water pollution. The tumors were more prevalent in samples taken close to shore and in predatory species. Sources: *Philadelphia Inquirer*, Raad Cawthon, 5/15/99; Peter Kendall, *Chicago Tribune*, 5/26/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 5/17 and 5/27/99

Petroleum Eating Bacteria - Researchers from *Mississippi State University* (MSU) and the Mississippi Dept. of Transportation have unveiled a new way to clean petroleum-polluted soils with natural bacteria that "eat" gasoline. The process uses "bio-cells," bacteria that already exist in local soils and "are very common at petroleum- contaminated sites," says Mark Zappi of MSU. Early study results show reduction of gasoline at the study's petroleum contam-ination site to regulatory standards within 2 weeks. Smaller amounts of other petroleum products took several more weeks to re-move. Zappi says the process, "simple to construct and operate" can be easily dup-licated. Estimated cost

runs from $20 to $40/yd^3, about half the cost of using a land-fill. Sources: *Biloxi [MS] Sun Herald*, 6/1/99; and National Journal's GREENWIRE, The *Environmental News Daily*, 6/2/99

Western Water Issues

Montana Gov. Marc Racicot (R) and Crow Tribal Chairwoman Clara Nomee signed a "landmark" agreement on 7/6 settling a long-running dispute over water rights on major streams in southeastern Montana. The deal earmarks portions of the Bighorn River, Little Bighorn River and Pryor Creek for the tribe, including storage and natural flow. It also preserves all the river basins from any future water allocations. The state would pay the Crow Tribe $15 million over the next 10 years to settle a dispute over coal tax and pay for protecting water resources on the reservation.

Meanwhile, speaking at a conference in Boulder, CO, Interior Secretary Bruce Babbitt proposed setting minimum water levels to "keep natural river systems healthy" and touted a three-way approach to enable the West's growing population to meet water consumption needs. Babbitt said water supply problems in the West are the result of allocation and distribution. He told water officials and others that the problems could be solved through (1) better conservation, (2) development of water markets, and (3) enhanced use of underground water storage. "Some Western cities use as much as 40% of their water resources on lawn and landscape maintenance", Babbitt said. "Conservation should begin by recognizing that Western cities were not meant to resemble Brazilian rain forests or suburbs of Minneapolis." Las Vegas Valley Water District investigator Dave Hunt said, "There is a mind-set here that since water is such a necessity for life, God or the government will just take care of it so that there will always be enough. That's the kind of thinking we have to change." Babbitt's speech signaled his "intent to use the final months of the Clinton Administration to continue redirecting water toward environmental uses rather than increased residential growth and agricultural irrigation." He also said that no new dams should be built in the U.S., while several should be removed, noting "many really don't serve much purpose anymore." But he stopped short of calling for removal of any major projects.

Meanwhile, the Interior Dept. began work on new rules to govern water surpluses and shortages in the Colorado River. The new rules will "spell out" which states will be first in line when there is a surplus water flow and which states get turned away when shortages occur. Arizona wants any new policy to specifically address shortages. Under current regulations, California is guaranteed its full share of 4.4 million acre-ft./yr before Arizona can begin diverting any of its 2.8 million acre-ft. share. And California is legally entitled to surplus water when it exists. Babbitt "has grown increasingly impatient with California" over Colorado River water allocation, as the state has been using nearly 1 million acre-ft./yr more than its allotment.

Late snowfall in Colorado this year enabled the U.S. Bureau of Reclamation to renew plans to intentionally flood the Colorado River near its confluence with the Gunnison River to aid the endangered razorback sucker and Colorado pikeminnow.

Sources: Rene Sanchez, *Washington Post*, 5/16/99; Mark Jaffe, *Philadelphia Inquirer*, 7/19/99; *NPR Morning Edition*, 7/16/99; Erin P. Billings, *Billings Gazette*, 6/17/99; Erica Curless, *Billings Gazette*, 7/7/99; Shaun McKinnon, *Phoenix Arizona Republic, 5/21 and 6/9/99;* Brent Israelsen, *Salt Lake Tribune, 6/9/99;* Tony Perry, *Los Angeles Times, 6/9/99;* Steve Lipsher, *Denver Post*, 5/22/99; and National Journal's GREENWIRE, The *Environmental News Daily*, 5/17, 5/21, 6/2, 6/9, 6/18 7/8 and 7/19/99

Ballast Water Rules Extended

Rules used to prevent foreign "invasive" species from entering the Great Lakes through ship ballast water tanks were extended to all U.S. ports on7/1. The U.S. Coast Guard is asking all ships to exchange their ballast water at least 200 miles from their U.S. destination, refilling them with sea water. Also, ships that have been outside U.S. waters will be required to state what they did with their ballast water and submit to random inspections, so the Coast Guard can determine if current efforts to ward off invasive species introductions are adequate, or if exchange of ballast water should be mandatory. Because ballast exchanges are time-consuming and can be dangerous, shippers are looking at developing technologies such as filtration, ultraviolet light and the use of heating and centrifugal force to prevent invasive species such as zebra mussels and round gobies from entering U.S. waters.

Speaking of the round goby, recent studies indicate that it is moving toward the Mississippi River Basin headwaters from the Great Lakes via a Chicago area ship canal faster than expected. Negotiations are underway to determine if the canal needs to be poisoned before the gobies reach the Illinois River and gain access to the rest of the Basin. Planned construction of an electric barrier has been delayed, and negotiations continue as to who should pick up the goby eradicatioin and removal costs.

A report by *Cornell University* ecologist David Pimentel estimates that non-native, invasive species cost the U.S. more than $122 billion annually. And according to an article in *Businees Week,* invasive species are fast becoming one of the "most costly ecological problems" in the U.S. The *Environmental Defense Fund* says about 400 of the 958 species federally listed as threatened or endangered are at risk because of invasive species. The magazine says that efforts to combat the invaders "have been far too fragmented," as 24 federal agencies exercise some authority over their regulation. A Clinton Administration order (*see River Crossings Vol. 8, No. 2*) calling for an *"Invasive Species Council* "goes part way toward rectifying the situation." Some environmentalists have called for the creation of a "white list" that would ban entry of plants and animals until they are proven not to be a threat.

Sources: *AP/New York Times*, 5/25/99; Dan Weikel, *Los Angeles Times*, 7/1/99; Gene Linn, *Journal of Commerce*, 7/9/99; Ellen Licking, *Business Week*, 5/24/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 2/11, 5/25 7/1, and 7/9/99

Climate Change Update

Global warming, environmental degradation and rising populations in ecologically vulnerable areas are likely to increase the frequency and severity of natural disasters, according to a report issued on 6/24 by the *International Federation of Red Cross and Red Crescent Societies*. The *1999 World Disasters Report* said last year's disasters were the worst on record, driving an estimated 25 million people – or 58% of the world's refugees – from their homes. For the first time, "environmental refugees" fleeing droughts, floods, deforestation and degraded land outnumbered those displaced by war, the report said. Red Cross Pres.

Astrid Heiberg emphasized the phenomenon of "chain reaction" disasters. Indonesia, for example, she said, started out with a drought, then fires, then lack of food, and then riots...So it's a long chain reaction that is hitting more and more people.

Also a team of earth scientists and infectious disease experts, reporting in the journal *Science*, said there is a link between ocean warming and epidemic outbreaks. They said that warm ocean waters increase the amounts of rain and vegetation, which can serve as a breeding ground for disease-carrying mosquitoes. The scientists from NASA's *Goddard Space Flight Center* and the *Walter Reed Army Institute of Research* said health officials could use rising ocean temperatures as warning signs for upcoming epidemics. The study focused on the deadly Rift Valley Fever that has plagued eastern Africa, where scientists were able to use weather patterns to predict 3 major outbreaks of the disease as much as 5 months beforehand.

An article in the journal *Nature*, also said that rising winter temperatures will generate more severe storms in western North America and western Europe. Drew Shindell, based at both *Columbia University* and the *Goddard Institute for Space Studies*, said average winter temperatures in the Northern Hemisphere have risen 9 °F in the last 30 years – ten times more than the global average. Shindell said, "Greenhouse gases may be affecting the weather a lot more than we thought." Researchers from *Columbia University* said winters in Europe, Asia and North America have become warmer and wetter in the last 35 years as a result of rising greenhouse gases.

Meanwhile, researchers at *Nehru University* in New Delhi "warned that glaciers in the Himalayas are melting at an alarming rate and could cause a catastrophe if meltwater lakes overflow into surrounding valleys." *New Scientist* magazine reported that all the glaciers in the central and eastern Himalayas could disappear by 2035 if present trends continue. The Indian study is consistent with others that have shown glaciers are retreating worldwide

Winter warming "is ultimately caused by global warming, but the more proximate cause is a change in the jet stream." A NASA study says warming has accelerated the jet stream, carrying more heat from the Pacific Ocean to North America. Cities in the northeastern U.S. could see a large increase in the number of days on which the thermometer reaches 90 °F or higher. *CBS "Evening News"* Reporter Randall Pinkston said, "Right now in (northeastern) cities, 90 °+ readings only happen 10-15 times/yr, but researchers warn, in the next century, global warming could make these dog days a lot more common." *Environmental Defense Fund's* Michael Oppenheimer says New York, Washington, and St. Louis, could have as many as eighty 90° degree days 100 years from now, and Dallas could have 130.

A report in the journal *Nature* says that human activities are responsible for most of the gases that have eroded Earth's protective ozone layer. The study used snow to measure trapped gases and determine atmospheric history. The report found that

detectable amounts of major ozone-depleting gases were not present in the atmosphere before humans began using chlorofluorocarbons, halogens and chlorinated solvents for air conditioning, aerosol sprays and dry cleaning. The study found "no significant natural emissions" involved in the ozone layer's depletion. NASA's James Butler said, "We've known about this for a long time. We just didn't have any measurements to say that it's true".

A "major" study released in early June by the *UN* and *World Meteorological 0rganization* said aircraft emissions are a growing factor in climate change and "stricter regulation and new levies on the aviation sector could be needed." The study said the "much vaunted advances in aircraft technology would not be enough to keep future pollution at bay, and warned that further measures might be needed." Although aircraft emissions currently account for as little as 3% of the effect of fossil fuels on the atmosphere, that could grow by 4-5 times over the next 50 yrs, the study said.

The *World Wildlife Fund* (WWF) and the Redmond, WA-based *Marine Conservation Biology Institute (MCBI)* say that global warming may also be causing a "continuous El Nino" and threatening the world's oceans. The report, released on 6/8, is a synthesis of recent academic studies looking at the broad picture of global warming. It says that warmer waters are leading to decreases in zooplankton populations, seabirds and marine mammals; shrinking coral reefs; causing harmful algae blooms; and contributing to the decline of salmon. In many cases, species appear to be suffering from lack of food connected to ocean warming, said Elliott Norse, head of the MCBI. If recent trends continue, warmer ocean temperatures could push the entire salmon species out of the Pacific Ocean in 40-50 yrs, said David Welch of *Fisheries and Oceans Canada*, a contributor to the report. Critics, skeptical of the report. included John Carlisle, director of the *National Center for Public Policy Research.* He said, "There is no firm evidence that man-made global warming is even occurring. The fact is that the Earth's temperature is naturally fluctuating."

However, a study published in the 6/10 issue of the journal *Science* concluded that shifting habitats of butterflies in Europe may be a sign that global warming is occurring. The U.S.-led international study found that 66% of the species studied had moved between 22 and 150 mi. farther north over the past 30-100 yrs, while only 3% had moved farther south. The continent is 1.4 °F warmer than it was 100 yrs ago, and the average temperatures experienced by butterflies then is now found 75 mi. farther north.

Meanwhile, the European Space Agency's *Living Planet Program* will conduct a $640 million project, the biggest ever investigation into the Earth's climate. It will use orbiting satellites to study the global climate system; collect data that could help predict natural disasters; and show the effects of global warming. The first mission announced on 6/7, will be a 3 yr effort to examine polar ice caps, . The next mission will investigate the amount of moisture and salt in the soil.

Finally, a year-long, interfaith campaign designed to develop support for action against global warming is getting underway in Michigan, Pennsylvania, West Virginia and Iowa. Richard Killmer, environmental justice director for the *National Council of Churches* (NCC), sponsor of the initiative, says the four states "have been chosen for specific reasons" related to their political and industrial situations. For example, Michigan is the center of the auto industry, while Iowa has the earliest presidential caucuses, Killmer said. Interfaith groups at

the state level are planning "extensive educational, political and media strategies; including lobbying legislators, unions and business leaders; getting churches involved in energy conservation; and placing opinion pieces in local media. The first of several training sessions for activists was held in mid June in Dewitt, MI. The 4-state effort is the latest chapter in an interfaith global warming project launched by the NCC in 1998. For more information on the NCC's *Eco-Justice Working Group*, including its campaigns on global warming and other issues, visit http://www.webofcreation.org/NCC/Workgrp.html

Sources: Clare Nullis, *AP/Los Angeles Times, 6/24/99;* Paul Brown, *London Guardian, 6/24/99;* Elizabeth Olson, *New York Times, 6/24/99;* Alex Kirby, *BBC, 6/24/99; Swiss Radio International, 6/24/99; AP/nando.net*, 6/3/99; *Reuters/Baltimore Sun*, 6/3/99; *Evening News, CBS*, 6/2/99; Thomas Maugh, *Los Angeles Times*, 6/3/99; Charles Arthur, *London Independent*, 6/3/99; Ross Anderson, *Seattle Times*, 6/8/99; Michael Paulson, *Seattle Post-Intelligencer*, 6/8/99; Barrie McKenna, *Toronto Globe & Mail*, 6/9/99; Al Kamen, *Washington Post*, 6/9/99; Ann Schrader, *Denver Post*, 6/24/99; Mark Jaffe, *Philadelphia Inquirer*, 6/25/99; Lee Siegel, *Salt Lake Tribune*, 6/25/99; *AP/Houston Chronicle*, 6/10/99; Adam Sherwin, *London Times*, ,6/8/99 ;*BBC Online*, 6/7/99; *NCC release*, 6/10/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 5/28/98, 6/2, 6/3, 6/7, 6/8, 6/9, 6/10, 6/14, 6/24, and 6/25/99

Genetic Engineering Issues

When it comes to genetically modified organisms (GMOs), "Americans (1) are more ignorant of the science, (2) get less news about the issue and (3) are more trusting of government regulators than their European counterparts," according to a study published in the latest edition of the journal *Science.* Researchers at the *London School of Economics and London Science Museum* conducted public opinion surveys on the issue in 1996 and 97 in the U.S. and 17 European countries. Japanese consumer groups have lobbied "intensively" for significant restrictions on genetically altered foods, and consider labelling "just one step" in their anti-GMO campaign.

Meanwhile, scientists at *Cornell University* reported in the 5/20 issue of the journal *Science* that altering plant genes can have unintended consequences. Their work revealed that pollen from genetically modified corn could be fatal to the monarch butterfly, casting a shadow over the emerging bioengineered crop industry. But because the biotechnology industry is in its infancy and "the stakes are high and the future is unclear," a consensus on the safety of genetically altered food and plants "is not likely to be reached for some time." Industry representatives say the field has been "thoroughly studied" by federal regulators. Val Giddings of the *Biotechnology Industry Organization (BIO)*, a consortium of more than 850 biotechnology companies and academic institutions, said "there's an enormous wealth of information that says DNA-altered food is as safe as/or safer than" any other.

But opponents point to the *Cornell* study showing that pollen from corn infused with genes from the bacterium *Bacillus thuringiensis* (Bt) is toxic to monarch butterfly larvae when sprinkled on milkweed, the caterpillars' main food. Bt is a natural bacterium that kills caterpillars, corn borers and other worm-like pests. Using the altered corn, farmers have been able to reduce the amount of pesticides applied to kill pests. But under laboratory conditions, almost half of the monarch butterfly larvae that ate milkweed dusted with Bt corn pollen died within 4 days, compared to 100% survival for larvae that ate Bt-free milkweed. Implications of the study are ominous since the U.S. "corn belt" is the heart of the monarch butterfly's breeding range, and about 20% of the U.S. corn crop this year is bioengineered Bt corn. "Several scientists have expressed concern that if the new study's results are correct, then monarchs – which already face ecological pressures, but have so far managed to hold their own – may soon find themselves on the endangered species list."

Giddings writes in a letter to *Nature* that "industry is fully committed to exploring the significance of this report" but that "outside the laboratory, most Monarch larvae would never encounter significant amounts of corn pollen. This means the real potential for any negative impact is negligible". But the *European Commission* (EC) responded to the study saying it will freeze the approval process for genetically altered corn, warning that similar products developed by *Monsanto* and *Novartis* could also be affected if *European Union* (EU) scientists conclude they threaten the environment. A leading member of the European Parliament said that biotechnology companies should be made liable for any problems caused by their products.

Discussions about the need "for an international science-based review to assess benefits and risks of genetically modified foods" dominated an international conference of farm industry leaders held in St. Louis in late May. At the *World Agricultural Forum's 1999 World Congress*, Liam Downey, director of an Irish agricultural education program called *TEAGASC*, suggested that an international scientific review could inject "some rationale into what is becoming an increasingly emotional debate." Other experts agreed, but there was no consensus about who would conduct such an investigation – it could not be done by governments or private industry, but would have to be done by some sort of global project. French Farm Minister Jean Glavany said he would not rule out a moratorium on genetically modified corn if it threatens the environment, and he appointed an expert panel for advice on the matter. In the UK, the Green Party said voters should make this summer's elections to the European Parliament a referendum on the government's handling of this issue.

U.S. Agriculture Secretary Dan Glickman announced in a 7/13 speech at the *National Press Club* a strengthening of federal oversight for genetically modified crops, and reassured consumers that the altered foods are safe. He also announced formation of a 25 member committee, made up of representatives from government, agriculture, environmental and consumer groups, and ethicists, that will advise him on biotech issues. He said voluntary labeling of modified foods should be looked at because consumers "generally want to know what's in their food". He said that long-term studies of biotech crops will be conducted by a network of 12 regional centers the Clinton Administration plans to establish. The centers would evaluate the products for their effects on the environment, consumer health and agricultural pests.

Meanwhile, bug-resistant crops have eaten away at demand for some insecticides, placing the annual $33 billion global pesticide market on the verge of a "shake-up". Cotton farmers, for example, have reduced pesticide use by 12% in the last 3 yrs. Overall, St. Louis-based *Monsanto Co.* "has emerged as a big winner." The company developed genetically modified seeds resistant to the company's *Roundup* weed-killer, making it much easier to use. Madison, NJ-based *American Home Products Corp.* "is seriously considering" quitting the pesticide business." The com-

pany's *Cyanamid* unit "has suffered the most from *Roundup's* rejuvenation." But Switzerland's *Novartis AG* and London based *AstraZeneca PLC* "are gearing up to go head-to-head" with *Monsanto*. *AstraZeneca* said it has received U.S. approval to market *Touchdown*, which has a chemistry similar to *Roundup's*, so it can be used on *Roundup*-resistant seeds. And *Novartis* is working on a gene that could immunize plants to a new class of herbicides.

On a positive environmental note, genetic scientists at the *University of Pennsylvania* are working to engineer a plant "capable of sucking up cadmium, arsenic and mercury" in soil. Researcher Philip Rea said plants have a natural defense to naturally occurring heavy metals, which he and his colleagues are trying to take advantage of. Rea said, "The options are to find a native plant that has the capacity to do the job, or engineer a plant that can do it for you." Rea has isolated and cloned a gene found in a "weedy little sprout" called *Arabidopsis thaliana* that gives the plant the ability to soak up heavy metals. The next step will be to insert the gene into a plant that might be used in field tests.

Meanwhile, Canadian researchers say they have discovered a genetically modified form of geraniums that could absorb metal and organic pollutants, helping to clean "everything from abandoned gas stations to old mining lands." The geraniums may be the only known plant species that has the ability to absorb both multi-metal and organic chemical contaminants. When planted in contaminated soil samples the familiar plants cleaned the soil to the point that it could later be used for farming. The team found that without exhibiting any signs of toxic stress, the plants, in 2 wks., can soak up as much as 3,300 mg of cadmium, 18,700 mg of lead, 6,400 mg of nickel and 650 mg of copper for every kg of plant tissue.

Scientists at the *University of Toronto* have successfully engineered a microorganism that forms ethanol using only carbon dioxide and sunlight. In a process they have patented, the scientists took genes from a bacterium that naturally forms alcohol and inserted them into a Cyano-bacterium, which performs photosynthesis like plants. The new genes produce "foreign" enzymes that yield alcohol as one of the natural side-products of photosynthesis. The alcohol yield is limited, but scientists hope to improve it by inserting more foreign genes into the microbe

Up to now, most genetic engineering has involved transplanting genes from one species to another. But a new method, called chimeraplasty, makes it simpler to analyze and change genes already present in plants. Researchers hope the new method will be more acceptable to environmentalists. However, it may be several years before plants modified through chimeraplasty will be available to farmers.

Clive Cookson, news analyst for the *Financial Times* says that the monarch butterfly study, mentioned earlier, has moved attention away from potential human health threats caused by genetically modified foods, back to "the environmental impact of growing such crops." Cookson points to the butterflies as "the most serious evidence so far that modified crops can cause environmental damage." But Cookson concludes that, "analysts see little chance that a potential threat to monarch caterpillars will stop ... the 'economic juggernaut' of the modified food industry." Experts warned the *National Academy of Sciences* in late May that "More problems like monarch [butterfly] fatalities will occur" unless the U.S. government does a better job of regulating biotechnology. A 12 member panel of academy scientists is writing a review of the risks and benefits of biotech crops. Margaret Mellon of the *Union of Concerned Scientists* said biotechnology regulation should be the sole province of the USEPA rather than the three agencies currently involved. But Robert Harness of the St. Louis-based *Monsanto Corp*. said the government's current regulatory structure works fine.

Sources: Michiyo Nakamoto, *Financial Times*, 7/15/99; Anita Manning, *USA Today*, 6/29 and 7/14/99; Glen Martin, *San Francisco Chronicle*, 5/20/99; Rick Weiss, *Washington Post*, 5/20/99; *Reuters/MSNBC*, 5/20/99; *Wall Street Journal* , 5/21/99; Michael Smith, *Financial Times*, 5/21 and 6/24/99; *New York Times*, 5/21/99; *Reuters/PlanetArk*, 5/28 and 6/24/99; Oliver Poole, *London Telegraph*, 6/24/99; Tim Todd, *Bridge News/Journal of Commerce*, 5/27/99; Michael McCarthy, *London Independent*, 5/26/99; Ingersoll/Kilman, *Wall Street Journal*; 7/14/99; *Journal of the National Academy of Science, 7/20/99;* Carolyn Abraham, *Toronto Globe & Mail*, 7/16/99; *PR Newswire*, 5/19/99; Scott Kilman, *Wall Street Journal*, 6/16 and 7/20/99; Mark Jaffe, *Philadelphia Inquirer*, 6/14/99; Edwin Colyer, *Financial Times*, 5/21, 5/22, and 5/23/99; Bill Lambrecht and Robert Steyer, *St. Louis Post-Dispatch*, 5/25/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 5/20, 5/21, 5/24, 5/25, 5/28, 6/14; 6/16, 6/24, 6/29, 7/14, 7/16 and 7/20/99

Deformed Dragonflies

Deformities were found in dozens of dragonflies studied last summer in northern Minnesota, but experts are unsure what caused the problem. Researchers discovered the deformities while surveying dragonfly populations at 90 sites between May and September 1998. Dragonfly "skins", shed as the insects molted from nymph to adult stage, were found with deformities, including misshapen mouth parts, abdomens, antennae, and occasional missing leg segments. Between 4 and 38% were deformed, depending on the site. The deformities were not found in samples taken from several other sites.

One researcher, Bill Smith of the Wisconsin Dept. of Natural Resources, said he has seen tens of thousands of dragonfly specimens over the past decade in Michigan, Minnesota and Wisconsin and that nearly all have been normal, except for some that came from a few Michigan streams near former iron mines. Environmental scientists and Minnesota officials say it's too early to say what caused the deformities, but they do not appear to be related to frog deformities found in other parts of Minnesota. The *Rivers Council of Minnesota* has called for further investigation.

Sources: Tom Meersman, *Minneapolis Star Tribune*, 6/9/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/10/99

Environmental Interest Down

Americans are increasingly pessimistic about solving environmental problems, so much so that they're starting to lose interest in the issue altogether, say researchers who reviewed public opinion surveys. Findings released on 6/1 by the nonprofit *Public Agenda on behalf of the American Geophysical Union*, indicate that 40% of Americans said in 1997 that they worried a great deal about the ozone layer, down from 51% just 8 yrs. earlier. And 24% said they cared much about global warming, down from 35% in 1989. The cause for greatest concern for respondents – water pollution – also experienced a decline in interest.

Villanova University administrator John Immerwahr, who led the review, blamed the declines not on apathy but on "frustration with invisible, long-term processes like global warming."

Also, according to a national poll conducted jointly by Democratic pollster Peter Hart and Republican pollster Robert Teeter, American high school students are not as "green" as expected. When asked which statement was closer to their own view, "Protecting the environment should be one of our country's top priorities, even at the cost of some jobs or higher prices," or "Protecting the environment is important, but not at the cost of some jobs or higher prices," 53% chose protection even if it cost jobs or high prices, but 43% chose jobs and lower prices over the environment. The poll, which surveyed 501 high school students May 17-24, was commissioned by the *Close Up Foundation* and *Prentice Hall*.

Sources: *AP/San Francisco Chronicle/ Examiner online*, 6/2/99; Charlie Cook, *Off to the Races*, 6/22/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 6/3 and 6/28/99

Population Growth and Species Extinctions

World population may have passed the 6 billion mark in mid July, according to the U.S. Census Bureau. Despite a gradual slowing of the overall growth rate, world population doubled in less than 40 yrs, and it took only 12 yrs to jump from 5 to 6 billion. An estimated 78 million people are born each year, equivalent to adding a city the size of San Francisco every 3 days, or the combined populations of France, Greece and Sweden every year. If the trends continues, the U.S. will double its population of 270 million in about 60 yrs. *Population Action International*, a coalition of population groups, says the effect of continued population growth "will be sweeping," with human population growth leading to the extinction of at least 27,000 plant and animal species/yr.

Sources: *London Independent*, 7/19/99; Robin Wright, *Los Angeles Times*, 7/17/99 and National Journal's GREENWIRE, *The Environmental News Daily*, 7/19/99

Religion and the Environment

A coalition of Catholics, liberal Protestants, evangelicals and Jews announced in late May a $16 million decade-long initiative to help give environmentalism a larger role in religion. The New York-based *National Religious Partnership for the Environment* said that $16 million pledged from member denominations will go to (1) local and national educational programs, (2) environmental publications for clergy and laity, and (3) the "integration of environmental projects into their human service agencies."

In mid May, Roman Catholic bishops from the Northwest and British Columbia released a draft document outlining a theological view about caring for the Columbia River and the environment. The bishops called the river "living water," and the document included pledges or goals to (1) stop using fertilizers and pesticides at Catholic schools and churches, (2) reduce gold in church ornaments in order to encourage responsible mining practices, and (3) restrict use of snowmobiles and off-road vehicles. It will serve as the foundation for a pastoral letter to be completed next year on the Columbia River watershed. The resulting pastoral letter is expected to guide Catholics and "spark discussion" among environmentalists, scientists and business people in the region. In a *Portland Oregonian* op-ed, Mark O'Keefe expands on the significance of the bishops' document, saying that in the past, environmentalists have blamed Christianity's belief that humans should reign over the Earth for "much of the rape and pillage of the Earth's natural resources." However, Christianity's shift emphasizes "the duty of humanity to care for the Earth," a change that could influence environmental issues or help explain the "why" of environmental protection.

Sources: John Rivera, *Baltimore Sun*, 5/28/99; George Bullard, *Detroit News*, 5/27/99; Mark O'Keefe, *Portland Oregonian*, 5/12 and 5/16/99; and National Journal's GREENWIRE, *The Environmental News Daily*, 5/19 and 5/28/99

Recent Publications

Sheehan, R.J., R.C. Heidinger, P.S. Wills, M.A. Schmidt, G.A. Conover, and K.L. Hurley. 1999. Guide to the Pallid Sturgeon Shovelnose Sturgeon Character Index (CI) and Morphometric Character Index (mCI). Fisheries Research Lab, S. Illinois Univ., Carbondale, IL SIUC Fish Bull. 14, 16 pp.

Kincaid, H.L., L.J. Mengel, M.J. Gray, and S. Brimm. 1999. National Fish Strain Registry -- Paddlefish and Sturgeon, Species Tables of Reported Populations. U.S. Fish and Wildlife Service. Resource Publ. 53 pp.

USGS. 1999. Ecological status and trends of the Upper Mississippi River System 1998: A report of the Long Term Resource Monitoring Program. USGS, Upper Midwest Environ. Sciences Center, La Crosse, WI. 54601. LTRMP 99-T001. 236 pp.

Meetings of Interest

August 29 - Sept. 2: 129th Annual Meeting of the American Fisheries Society, Adam's Mark Hotel, Charlotte, NC. Contact: Betsy Fritz, (301) 897-8616, ext. 212, bfritz@fisheries.org

Sept. 7-9: International Shallow Water Fisheries Sonar Conference. University of Washington, Seattle. Contact: Melanie Milnes, mmilnes@biosonicsinc.com.

Sept. 16-17: Improved Decision-Making for Water Resources: The Key to Sustainable Development for Metropolitan Regions. Univ. of Chicago, Chicago, IL. Contact: UIC OCEPS, (800) 453-3728 or www.uic.edu/depts/oceps/sea-grant/

Sept. 19-24: International Conference on Diseases of Fish and Shellfish, Rodos Palace Hotel and Conference Centre, Rhodes, Greece. Contact: Maura Hiney, 011/353-91-524411 or nuigalway.ie.

Sept. 21-22: Vegetation of the Upper Mississippi and Illinois River System: Status, Management and Ecological Systems, Radisson Hotel, La Crosse, WI. Contact: Penny Tiedt, (608) 785-6503, FAX (608) 785-8221 or rada@mail.uwlax.edu

Sept. 23-25: International Conference of the Society for Ecological Restoration, Presidio, San Francisco, CA. Contact: SER, (608) 262-9547, (608) 265-8557 or ser@vms2.macc.wisc.edu

Oct. 13-16: Conservation Planning -- From Sites to Systems, Natural Areas Assoc. & The Wildlands Project, Tucson, AZ. Contact: www.twp.org

Oct. 19-22: Predicting Species Occurrences - Issues of Scale & Accuracy, Snowbird, UT. Contact: (202) 885-2750, www.ets.uidaho.edu/coop/1999_symposium. htm

Oct. 24-27: 4th Microcomputer Applications in Fish and Wildlife Conference, Caesars Tahoe Hotel, Stateline, NV. Contact: Jeff Trollinger, (804) 367-1185 or jtrollinger@dgif.state.va.us

Oct. 27-29: Confronting Uncertainty: Managing Change in Water Resources and Environment Conference. Contact: Yassine Djebbar, (604) 436-6714 or Ydjebbar@gvrd.bc.ca.

Oct. 27-30: Spatial Processes and Management of Fish Populations Symposium, Anchorage, AK. Contact: Brenda Baxter, (907) 474-6701.

Nov. 16-17: Wetlands & Remediation, Salt Lake City, UT. Contact: (614) 424-6510 or Nehringk@battelle.org

Nov. 29 - Dec. 3: Congress on Recreation and Resource Capacity, Snowmass Village, Aspen, CO. Contact: Susan Scott Lundquist, (970) 491-4865 or FAX (970) 491-2255.

Dec. 4-9: Watershed Management to Protect Declining Species, Seattle, WA. Contact: Amer. Waterworks Assoc., (425) 649-7140

Congressional Action Pertinent to the Mississippi River Basin

Endangered Species Act Amendments

S. 1100 and S. 1210: J. Chafee, R/RI. Addresses designation of critical habitat, and assists in the conservation of endangered and threatened species of fauna and flora found throughout the world.

S. 1305: C. Thomas, R/WY: Improves the listing, recovery planning, and delisting process, and for other purposes.

H.R. 494, 495 and 496: W.M. Thomas, R/CA. Endangered Species Fair Regulatory Process Reform, Land Management Reform and Criminal and Civil Penalties acts,

H.R. 960: G. Miller, D/CA. Strengthens the commitment to protect wildlife, safeguard children's economic future, and provide assurances to local governments, communities, and individuals.

H.R. 1101: R. Pombo, R/CA. Improve sthe ability to prevent flood disasters.

H.R. 1763: K. Calvert, R/CA. Limits required mitigation costs for public construction projects to less than 10% of total project cost.

H.R. 2017: W. Herger, R/CA. Enables Federal agencies responsible for the preservation of threatened and endangered species to rescue and relocate individuals that would be taken in the course of certain reconstruction, maintenance, or repair of Federal or non-Federal manmade flood control levees.

H.R. 2131 and 2253: K. Calvert, R/CA. Prohibits the requirement to mitigate for impacts of past activities, and the use of any item or information obtained by trespassing on privately owned property, or otherwise taken from privately owned property without consent of the property owner.

Environment

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

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

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

S. 1090: J. Chafee, R/RI: Reauthorizes and amends the Comprehensive Environmental Response, Liability, and Compensation Act of 1980.

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

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

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

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

H.R. 1836: D. Bereuter, R/NE. Balances the wind and water erosion criteria and wildlife suitability criteria for the 18th CRP signup.

Hydropower

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

Population Growth

H. Con. Res 17: Population Growth Resolution T.C. Sawyer, D/OH. Expresses the sense of Congress that the U.S. should develop, promote, and implement, at the earliest possible time and by voluntary means consistent with human rights and

individual conscience, the policies necessary to slow U.S. population growth.

Property Rights

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

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

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

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

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

Public Lands

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

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

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

S. 532: D. Feinstein, D/CA and H.R. 1118: (T. Campbell, R/CA. Increases funding to resume state grant funding for the Land and Water Conservation Fund and development of conservation and recreation facilities in urban areas under the Recreation Recovery Programs.

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

S. 1949: F. Murkowski, R/AK, and H.R. 1985: B. Cubin, R/WY. Improves administration of oil and gas leases on Federal lands, and for other purposes.

H.R. 488: Northern Rockies Ecosystem Protection Act of 1999, C. Shays R/CT. Special designation of lands in the states of ID, MT, OR, WA, and WY.

H.R. 701: D. Young, R/AK and **H.R. 1118 T. Campbell, R/CA.** Provide funding for Land and Water Conservation Fund, Urban Parks and Recreation, and Teaming With Wildlife.

H.R. 798: G. Miller, D/CA. Provides for permanent protection of U.S. resources in FY 2000 and beyond through **Land and Water Conservation Fund** funding, **Urban Parks and Recreation** and various other conservation programs.

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

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

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

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

H.R. 1500: J. Hansen, R/UT. Accelerates the Wilderness designation process by establishing a timetable for completion of wilderness studies on Federal lands.

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

Regulations

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

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

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

Tennessee Valley Authority

S. 123: TVA Funding Act, R.D. Feingold D/WI. Phases out Federal funding for the Tennessee Valley Authority.

Water Resources

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

S. 507: Water Resources Development Act, J. Warner R/VA and H.R. 1480: R. Shuster, R/PA. Provides for construction of various projects in U.S. rivers and harbors.

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

H.R. 1444: P. DeFazio, D/OR. Authorizes the Secretary of the Army to develop and implement projects for fish screens, fish passage devices, and other similar measures to mitigate adverse impacts of irrigation system water diversions in the states of OR, WA, MT and ID.

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

Water Quality

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

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

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

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

S. 914: B. Smith, R/NH and H.R. 828: J. Barcia, D/MI. Amends the FWPCA requiring discharges from com-bined storm and sanitary sewers to conform to the *Combined Sewer Overflow Control Policy* of the USEPA.

S. 968: B. Graham, D/FL. Authorizes USEPA to make grants to State agencies with responsibility for water source development, for the purposes of maximizing the available water supply and protecting the environment through the development of alternative water sources, and for other purposes.

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

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

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

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

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

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

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

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

Source: Congressional Affairs Update, USFWS, 6/2 and 6/25/99

River Crossings

Mississippi Interstate Cooperative Resource Association
P.O. Box 774
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