River Crossings

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MICRA's 7th Annual Meeting

The Seventh Annual Meeting of the *Mississippi Interstate Cooperative Resource Association* (MICRA) was held on May 5-6 at the Clarion Resort in Hot Springs, AR. Highlights include the following:

- MICRA's multi-state paddlefish tagging survey has now tagged and released over 400,000 hatchery fish and nearly 4,000 free-ranging wild adult fish. Of this amount 450+ tag recaptures have already been made.

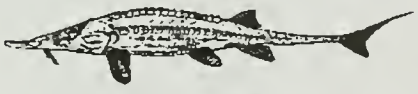
paddlefish

- The U.S. Fish and Wildlife Service (FWS), Office of Scientific Authority has received an application for a 6-month permit to export 3 metric tons of paddlefish eggs to Japan. Biologists estimate that a 3 metric ton harvest would require nearly 1,000 female paddlefish, each providing about 7 pounds of eggs at approximately $70 per pound ($469,000). It is not uncommon for commercial fishermen to kill about 4-5 males for each female while searching for eggs. An egg shipment of this magnitude (3 metric tons) could thus significantly impact already fragile, but extemely important, paddlefish populations. MICRA thus submitted a formal request that the FWS take action to establish a moratorium on the export of paddlefish eggs as caviar, until such time that a sustainable level of paddlefish harvest which is not detrimental to their populations can be determined. This will be possible through MICRA's *Basinwide Paddlefish Tagging Project*.

- Responsibility for maintenance of the basinwide paddlefish tagging survey was transferred from *Tennessee Technological University*, Cookeville to the FWS Marion, IL and Columbia, MO Fisheries Resources Offices. This transition will occur over the next year.

- A tagged, federally endangered, pallid sturgeon was found this spring by federal agents in an Illinois fish market. Because of the difficulty in distinguishing between the endangered pallid sturgeon and the shovelnose sturgeon MICRA submitted a formal request to the FWS asking that:

- the FWS forensics lab develop a quick and easy, definitive test to distinguish between the flesh and eggs of pallid sturgeon, shovelnose sturgeon, lake sturgeon, and paddlefish;



"pallid sturgeon"

- FWS agents, in cooperation with state biologists and conservation agents, inspect fish markets and determine the impact of the caviar and fish flesh industry on the pallid sturgeon; and

INSIDE THIS ISSUE

- the FWS enhance pallid sturgeon research efforts.
- A letter of support was provided for research on barriers to fish dispersal between the Great Lakes and waterways which connect it to the Mississippi River Basin.
- MICRA will hold a retreat in Stillwater, WI this summer to revisit and validate its Strategic Plan, pulling out 3 or 4 issues as focus areas.

American Heritage Rivers Initiative

The *American Heritage Rivers Program* is tentatively scheduled for public comment through a Federal Register Notice (FRN) in early June. This would be followed by a Presidential Announcement describing the updated initiative, based on comments received from the FRN announcement.

The USEPA is reportedly developing an initiative and nomination brochure. Such a brochure would be used by communities to recommend their river or river reach for nomination. It is hoped that the first designated river could be announced by the end of the summer, near labor day. A "rolling" designation process would then likely continue through the rest of the year rather than announcing all ten rivers at once.

The actual river selection process may be by a "blue ribbon" panel, but that decision has not yet been made. An alternative may be by participating agencies. Presently the USEPA and Corps of Engineers are responsible for design and printing of publicity materials and brochures. USEPA is in charge of developing information on grant programs, technical expertise, etc. that could be made available to communities that have a designated river. The Department of the Interior is in charge of training, while the U.S. Department of Agriculture is in charge of economic development. Application and scoring materials are under development.

Materials are reportedly scheduled to be available soon through the following web page: http://www.epa.gov/owow/heritage/rivers.html.

Death by a Thousand Cuts

"Death by a thousand cuts" was the way Rebbeca Wodder (American Rivers' President) described the fate of many of America's rivers at a news conference held at the National Press Club in Washington, D.C. on April 16. In their publication entitled, ***North America's Most Endangered and Threatened Rivers of 1997, American Rivers*** identified the follow problems:

- **Diffuse polluted run-off** from agricultural feed lots, development, streets, yards, and farm fields persistently degrades water quality;
- **Massive population growth** in fragile areas depletes much-needed water from arid streams;
- **Urban sprawl** chews up precious riparian acres; dams dry up river beds and degrade aquatic habitat;
- **Channelization** straightjackets riverways; and
- **Navigation, mining, logging, grazing, and irrigation-activities,** all heavily subsidized by the American taxpayers, are undermining conservation efforts at the expense of the public trust.

American Rivers

Each year, American Rivers calls attention to the plight of North America's most endangered and threatened rivers with the release of its ***"Most Endangered and Threatened Rivers Report"***. The Missouri River; imperiled by navigation, extensive floodplain development, and major flood control reservoirs and levees;

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tops this year's list. All rivers on the 1997 list suffer not so much from the threat of a single individual action, but rather from a complicated web of activities. These activities, though often less visible, are no less destructive. They pose a toxic mix that threatens food chains, natural energy and water cycles, aquatic habitat, and ultimately the people and communities that rely on their hometown rivers for drinking water, for recreation, and for economic stability. In essence, they threaten our rivers with "death by a thousand cuts".

American Rivers' 1997 Complete List of the 10 **Most Endangered Rivers** follows:

1. Missouri River (MT, ND, SD, NE, IA, KS, MO): To support navigation, the Army Corps of Engineers has waged a 50-year-long campaign to manage and control this once wild, dynamic waterway. As a result, the river has been dramatically altered: it has been shortened by almost 130 miles, and it is now one-third its original width. In addition, 98% of sandbars and islands are gone, and one-fifth of the river's native species are endangered. The end result of these efforts: a handful of barge operators now ship an infinitesimal amount of grain -- one tenth of one per cent of the grain grown in 4 of the states (MO, IA, KS, and NE) bordering the river.

2. Upper Hudson River (NY): The Upper Hudson River is believed to be the largest polychlorinated biphenyl (PCB) contamination site in the U.S., the source of which is General Electric Company (GE). PCBs are distributed over 190 miles of the Hudson River in river bottom sediments. New studies show that our 20 year policy of leaving the PCBs in place in the river has failed; PCBs; are still being released into the environment, damaging the river, and threatening public health and safety.

3. White Salmon River (WA): Threatening one of the gems of the northwest is one dam, the Condit Dam built in 1913, which is the only barrier to migrating fish in the White Salmon. After a 50-year-long free ride, the dam owner still refuses to either install fish passage or remove the dam. As a result, the White Salmon is known as the river with the "deadbeat dam."

4. San Joaquin River (CA): Despite record floods this year, commercial and residential development in the floodplains has resumed — even on sites that were under water during the recent flooding. More than 58,000 homes are planned or under construction in flood-prone areas. Billions of tax dollars are being misspent on flood control projects while losses rise because of rapid urbanization in flood-prone areas. Flood losses from the 1997 flood, the costliest in CA's history, may top $2 billion.

5. Wolf River (WI): The Wolf, one of the last wild riverways in the Midwest and a part of the National Wild and Scenic Rivers System, faces imminent and permanent ruin by a huge proposed zinc/copper mine. Often called one of WI's most beautiful rivers, the Wolf is threatened by an estimated 44 million tons of mine waste laced with mercury, lead, zinc, arsenic, and sulfuric acid.

6. Pinto Creek (AZ): Cambior, Inc., a Canadian mining company with a notorious environmental record, including the 1995 mining disaster in Guyana, is proposing to open a copper mine literally in the middle of Pinto Creek, one of the last intact stream systems left in the Sonoran desert.

7. Potomac River (WV, PA, MD, VA, DC) : Held up as a river restoration success story, the Potomac faces two major threats: (1) the widescale expansion of industrialized poultry farms -- which support 95 million birds -- and cattle feedlots in the Potomac headwaters. This industry threatens local drinking water supplies and potentially the drinking water for the Washington, D.C. area; and (2) Chapman's Landing: a proposed residential and commercial development which would convert riparian forest into a sprawling city the size of Annapolis, the capital of MD.

8. Mill Creek (OH): The most endangered urban river in the country, Mill Creek is one of the best examples of death by a thousand cuts. It is threatened by run-off from toxic waste sites, city streets, and sewage overflow. The state of OH now wants to downgrade the formal status of the river, effectively saying the river has no value and no restoration potential.

9. Lower Colorado River (AZ, NV, CA): The Lower Colorado is falling victim to the rush by southwest states to replenish depleted water supplies as population explodes and agricultural needs increase throughout the area. For the first time this year, demand for water will exceed the river's supply, stripping the fragile ecosystem of much of the water that sustains it. As surrounding states vie for the Colorado's waters, the needs of fish and other aquatic species are often ignored.

10. Tennessee River (TN, AL, MS, KY): Important watershed protection efforts of the Tennessee River will end if the Tennessee Valley Authority (TVA) succeeds in eliminating its environmental responsibilities so that it can compete in a new de-regulated electricity marketplace. These responsibilities have been part of the TVA's mandate since 1933.

American Rivers' 1997 list of the 20 **Most Threatened Rivers** (in alphabetical order):

1. Animas River (CO, NM): Animas La-Plata water project.
2. Apalachicola River (FL): dams, channelization to support uneconomic commercial navigation.
3. Blackfoot River (MT): proposed gold mine.
4. Clearwater River (ID): timber harvesting.
5. Columbia River, Hanford Reach (WA): agricultural development.
6. Ipswich River (MA): dams, dewatering, urban development, hazardous waste
7. Minnesota River (MN): agricultural run-off.
8. Neuse River (NC): agricultural run-off, urban development.
9. New River (CA, Mexico): industrial pollution.
10. Pagan River (VA): allegations of industrial discharge.
11. Red River (OK): water project.
12. Red River of the North (SD, ND, MN, Canada): water projects, agricultural development.
13. Rough and Ready Creek (OR): proposed mine.
14. Russian River (CA): dewatering,

development, urban and agricultural run-off.

15. Snake River (ID): dams and dewatering.

16. St. Croix River (MN, WI): suburban development, construction of environmentally destructive bridge.

17. Taku River (British Columbia, AK): proposed copper/gold mine.

18. Virgin River (UT, AZ, NV): water project.

19. White River (IN): urban development.

20. Yazoo River and Big Sunflower River (MS): water project

Source: North America's Most Endangered and Threatened Rivers of 1997, and American Rivers' News Release, 1025 Vermont Avenue, NW, Suite 720, Washington, D.C. 20005, (202) 547-6900; http://www.am rivers.org/amrivers/

America's Private Land - A Geography of Hope

Paul Johnson, native IA farmer and Chief of the USDA, Natural Resource Conservation Service (NRCS) offers a ray of hope to the future of this Nation's private lands management in his agency's new publication entitled, ***"America's Private Land - A Geography of Hope"***. We have seen Mr. Johnson's essay reprinted elsewhere, but thought it worthy of reprinting again for our readers in this issue of *River Crossings*. Mr Johnson's statement follows:

"Author and historian Wallace Stegner once wrote that the preservation of our Nation's last tracts of wildlands represented a "geography of hope." Stegner was right, and thanks to him and others who pressed for passage of the Wilderness Act of 1964, we can enjoy a national system of wildlands. Yet today we understand that narrowly circumscribed areas of natural beauty and protected land alone cannot provide the quality of environment that people need and want. We must also recognize the needs of America's private land and private landowners for us to truly have a geography of *hope*...

...*hope* that we can build economically and environmentally sustainable communities for ourselves and for our children,

...*hope* that we and our children and their children will retain the opportunity to renew ourselves and our spirits among that which remains wild and free, and

...*hope* for so much of the life with which we share this Earth.

'As we approach the next millennium, we must rededicate our efforts to conserve the land. We still live in a beautiful, largely natural world, but that world is increasingly characterized by accelerated change. World population growth and our urge to live richly are exerting unprecedented pressures on our soil, air, water, and other natural resources. Without intending to do so, we continue to push nonhuman life into ever-smaller places. Today, we run the risk of those places eventually becoming mere islands on a domesticated landscape.

'If Stegner were with us today, he likely would agree: A land comprised of wilderness islands at one extreme and urban islands at the other, with vast food and fiber factories in between, does not constitute a geography of hope. But private land need not be devoted to a single-purpose enterprise. With a broader understanding of land and our place within the landscape, our Nation's farms, ranches, and private forest land can and do serve the multiple functions that we and all other life depend upon.

'The farm on which my wife, my children, and I have lived and worked for the past 23 years is one example of how private land can function. We are but one of the 2 million farms and ranches that comprise much of the private land in America. We produce traditional commodities for the market place: corn, soybeans, oats, hay, milk, beef, mutton and wool, Christmas trees, and hardwood sawlogs. Elsewhere across the country, the crops vary, but the concept does not. Commodities for the marketplace are what our Nation's farms, ranches, and other private enterprises are about.

'But private land is about much more than this. The foundation of our farm's productivity is our soil, a complex, living system that, although largely unrecognized as important in our national environmental policies, is in fact the basis of all life. If we farm our soil well, its productivity will be sustained by recycling what was once living into new life.

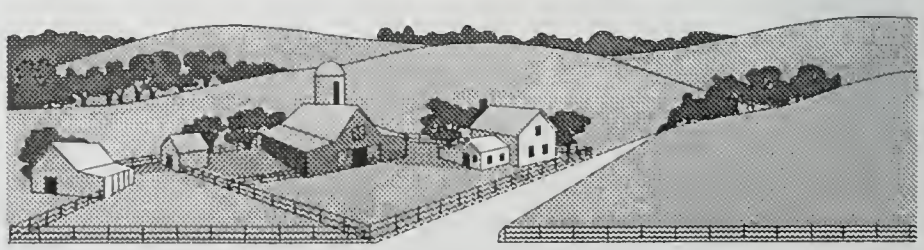
'Soil on our farm harbors a host of microorganisms that perform an array of functions that sustain life. They also buffer the multitude of foreign substances our industrial society releases into our environment. If we farm well, healthy soil will help to process those wastes, although agricultural land alone cannot possibly offset the need for less-polluting urban and industrial activities.

'Most water that we use falls first on our Nation's farms and ranches, where it is partitioned by soil into surface water, groundwater, and vapor that reenters the atmosphere through plants. If we manage our soil well, water will be used efficiently. By the time it leaves our farm, heading downstream to support our urban neighbors and other life, it will be clean.

'Soil on our farm is also a critical component of the carbon cycle. In this era of accelerated fossil fuel use, our soil, if farmed well, can sequester carbon, thus helping to stabilize global climate.

'Our farm, like all private land, is not only our home place but the home place of many plants and animals that inhabit this Earth with us. They are a part of creation and thus deserve our respect. If we farm well, we can continue to coexist with this rich array of life. Wilderness sanctuaries need not be the only home place for "noneconomic" species. Every farm and ranch and private woodlot in our Nation can and should be home to abundant wild life.

'Our farm, our neighbors' farms, and all other private land com-



prise a majority of the American landscape. As we use our land, we paint our individual and community portraits on the land. Done well, those portraits can be a source of pride.

'The story that follows is our attempt to present to you the state of America's private, nonurban land, but it is intended to be more than a national report card. We hope it prompts you to think about land in a different way.

'Private land in America produces abundant food and fiber. It does much more, however. Private land represents many rich, diverse places, full of life. Those places, when healthy, function in ways essential to the sustenance of all creatures on this Earth, including humankind.

'It should become obvious in reading this story that healthy, productive land does not simply happen. A good deal of thought, work, and conservation assistance--both technical and financial–are often requisite to success.

'America's farmers, ranchers, and woodlot owners work hard to produce multiple benefits from the land. If our Nation and those landowners are willing to partner together, we in the Natural Resources Conservation Service believe that America's private land, along with public land, can become our Nation's real geography of hope."

The full "story" that Mr. Johnson refers to is available in ***"America's Private Land - A Geography of Hope"*** from your local NRCS office or by contacting the U.S. Dept. of Agriculture, NRCS, Washington, D.C. 20250, 1-800-245-6340.

Conservation Provisions of the 1996 Farm Bill

The 1996 Farm Bill created many new opportunities for improving watershed management, wetlands and riparian corridors. In general the bill's conservation provisions:

- simplified existing conservation programs;
- improved flexibility and efficiency;
- created new programs to address high priority environmental protection goals;
- authorized more than $2.2 billion in additional funding for conservation programs;
- extended the Conservation Reserve Program (CRP) and Wetland Reserve Program (WRP);
- created new initiatives to improve natural resources on America's private lands; and
- required farm operators to agree to abide by Conservation Compliance and Wetlands Conservation (Swampbuster) provisions in order to qualify for market transition payments under basic commodity programs which replace traditional farm subsidies.

Details of separate farm bill programs, obtained recently from the U.S. Department of Agriculture (USDA) follow:

Conservation Reserve Program (CRP) - The CRP protects highly erodible and environmentally sensitive lands with grass, trees, and other long-term cover and is extended through 2002. The 1996 CRP provisions further:

- Allow up to 36.4 million acres to be enrolled at any one time. New enrollments can replace expired or terminated contracts;
- Allow owners or operators who entered into a contract before 1995 to terminate contracts on certain acres after giving written notice. Contracts must have been in effect for at least five years. Lands with high environmental values are not eligible for early release; and
- Give the Secretary discretionary authority to offer future early outs for CRP acres.

Environmental Quality Incentives Program (EQIP) - This new program combines the functions of the *Agricultural Conservation Program, Water Quality Incentives Program, Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program* and directs cost sharing and technical assistance to locally identified conservation priority areas. EQIP is funded at $130 million in fiscal year 1996 and $200 million annually thereafter. Livestock-related conservation practices receive 50% of program funding. The 1996 EQIP further:

- Establishes conservation priority areas where significant water, soil, and related natural resource problems exist, in cooperation with state and federal agencies and with the state technical committees;
- Gives higher priority to areas where state or local governments offer financial or technical assistance, or where agricultural improvements will help meet water quality objectives;
- Establishes 5-10 year contracts to provide technical assistance and pay up to 75% of the costs of conservation practices such as manure management systems, pest management, and erosion control;
- Defines land eligible for EQIP contracts as agricultural land that poses a serious problem to soil, water, or related resources;
- Does not allow large livestock operations (to be defined through a public rule-making process) to be eligible for cost-share assistance for animal waste management facilities, but they do remain eligible for technical assistance;
- Requires activities under the contract to be carried out according to a conservation plan;
- Limits total cost-share and incentive payments to any person to $10,000 annually, and to $50,000 for the life of the contract; and
- Phases in EQIP over six months, and then ends the *Agricultural Conservation Program, Colorado River Basin Salinity Control Program, Water Quality Incentives Program, and the Great Plains Conservation Program.*

Wetland Reserve Program (WRP) - The WRP is extended through 2002 and will have an enrollment cap of 975,000 acres. Program changes provide more flexibility and help landowners work toward a goal of no net loss of wetlands. The revised WRP:

- Requires that, beginning October 1, 1996, one-third of total program acres be enrolled in permanent easements, one-third in 30-year easements, and one-third in restoration only cost-share agreements. Individuals may choose the category for their eligible land;
- Stipulates that effective October 1, 1996, no new permanent easements may be enrolled until at least 75,000 acres of temporary easements have entered the program; and
- Provides landowners with 75-100% cost-sharing for permanent easements, 50-75% for 30-year easements, and 50-75% for restoration cost-share agreements. Cost-sharing

will help pay for restoration.

Wetland Conservation (Swamphuster) - The 1996 farm bill makes several policy changes to existing Swampbuster provisions to give farmers more flexibility in complying with wetland conservation requirements while protecting natural resources. These policy changes:

- Expand areas where mitigation can be used, allowing individuals to work with producers, conservation districts or other relevant entities to select the best area for mitigating wetlands;
- Provide more options for mitigation, including restoration, enhancement, or creation as long as wetland functions and values are maintained;
- Encourage effective and timely use of "minimal effect" determinations, allowing the Natural Resources Conservation Service (NRCS, working with state technical committees, to identify practices that have a minimal effect on the environment and put them on a "fast track";
- Stipulate that wetland conversion activities, authorized by a permit issued under Section 404 of the Clean Water Act, which make agriculture production possible, will be accepted for farm bill purposes if they were adequately mitigated;
- Revise the concept of "abandonment" to ensure that as long as land is used for agriculture, a certified Prior Converted cropland designation remains in effect. When done under an approved plan, landowners with Farmed Wetlands (FW) and Farmed Wetlands Pasture (FWP) may allow an area to revert to wetland status, and convert it back to an FW or FWP for agricultural purposes without violating the Swampbuster provision;
- Require wetland determinations to be certified by NRCS. Previous wetland determinations will be certified to verify their accuracy. A certified wetland determination will remain in effect as long as the land is used for agricultural purposes or until the owner or operator requests a review from the Secretary;
- Provide the Secretary with the discretion to waive penalties for ineligibility and to grant time to restore converted wetlands;
- Provide the Secretary with authority to identify for individual producers which programs are affected by Swampbuster violations and how much the penalty is; and
- Establish a pilot program for wetland mitigation banking in order to allow USDA to assess how well mitigation banking works for agriculture.

Wetlands Memorandum of Agreement (MOA) - The farm bill expands the definition of agricultural land contained in the interagency Wetlands MOA to include not only cropland and pasture land, but also tree farms, rangeland, native pasture land, and other land used for livestock production.

Conservation Research and Education - The farm bill creates the *National Natural Resources Conservation Foundation* as a charitable nonprofit corporation to fund research and educational activities relating to conservation on private lands. The foundation will promote innovative solutions to conservation problems through public-private partnerships. It will also accept private gifts of money or property to be used for conservation activities. Congress has authorized $1 million annually from 1997 through 1999. The new foundation will offer grants for research, education, and demonstration projects. Grants will also assist conservation districts in building resources to carry out local conservation programs. The foundation will be administered by a nine-member board of trustees appointed by the Secretary.

Conservation Compliance - The farm bill's new policy changes in the operation of Conservation Compliance:

- Direct USDA employees who are providing on-site technical assistance to work with landowners to correct an observed potential compliance problem. Landowners will have up to one year to take corrective action before a violation is reported;
- Encourage farmers to maintain records of residue measurement, including those provided by a third party. Where appropriate, USDA will use these measurements when conducting annual status reviews to determine erosion levels;
- Authorize county committees to provide relief in cases of undue economic hardship; and
- Revise "good faith" to ensure penalties are commensurate with violations.

NRCS Technical Guide - The farm bill requires public notice at the state level of future changes in the NRCS technical guide that affect Swampbuster and Conservation Compliance.

Conservation of Private Grazing Land - The grazing lands provision is a new program to provide technical, educational, and related assistance to landowners on the nation's 642 million acres of private grazing lands. In fiscal year 1996, $20 million is authorized. This amount increases to $60 million by the third year.

Farmland Protection Program - The Farmland Protection Program is a new program under which the Secretary will join with state or local governments to purchase conservation easements. Based on voluntary participation, it only applies to land which farmers want to preserve in agriculture. The program:

- Protects between 170,000 and 340,000 acres of farmland;
- Authorizes up to $35 million in total federal funding; and
- Requires land to be subject to a pending offer from a state or local farmland conservation program in order to participate.

Flood Risk Reduction - This program provides incentives to move farming operations off frequently flooded land by providing for a one lump sum payment to producers equal to 95% of the seven-year market transition payments, and other payments to offset estimated federal outlays on frequently flooded land. In return, the producer agrees to comply with applicable wetlands and highly erodible land requirements and to forego commodity loans, crop insurance, conservation program payments, and disas-

ter payments.

Wildlife Habitat Incentives Program (WHIP) - This new provision will help landowners improve wildlife habitat on private lands. The WHIP will have $50 million in CRP funds for wildlife habitat improvement. WHIP:
- Provides cost-sharing to landowners for developing habitat for upland wildlife, wetland wildlife, endangered species, fisheries and other wildlife; and
- Provides for consulting with state technical committees to set priorities for cost-share measures and habitat development projects.

Emergency Watershed Protection Program Floodplain Easements - The farm bill authorizes the Secretary to purchase floodplain easements under the Emergency Watershed Protection Program.

State Technical Committees - State technical committees help develop technical standards for conservation programs. The farm bill requires public notice of meetings and expands committee membership to include representatives of nongovernment organizations such as agricultural producers, non-profit conservation organizations, agribusiness, and experts on the economic and environmental impacts of conservation techniques.

Conservation Farm Option - This is a pilot program for producers of wheat, feed grains, upland cotton, and rice who are eligible for Agriculture Market Transition Contracts. Under this program, landowners may consolidate their CRP, WRP, and EQIP payments into one annual payment. The participants enter into a 10-year contract and adopt a conservation farm plan approved by the Secretary. Initially, $7.5 million is authorized, increasing to $62.5 million in 2002. Total authorized funding is $197.5 million.

Forestry Incentives Program (FIP) - This program, reauthorized until 2002, provides up to 65% cost share for tree planting, timber stand improvements, and related practices on nonindustrial private forest lands; with a limit of up to $10,000/person/yr. FIP forest maintenance and reforestation provide numerous natural resource benefits, including reduced wind and soil erosion and enhanced water quality and wildlife habitat as well as helping to assure a reliable future supply of timber. FIP is a nationwide program available to counties designated on the basis of a Forest Service survey of total eligible private timber acreage that is potentially suitable for production of timber products. Additionally, a landowner must:
- Own no more than 1,000 acres of eligible forest land, unless approved by the Secretary;
- Be a private landowner of a nonindustrial forest. Others may be eligible if they are not primarily engaged in the business of manufacturing forest products or providing public utility services;
- Have land that is suitable for conversion from nonforest land into forest land (afforestation); for reforestation; or for improved forest management; and
- Have land that is capable of producing marketable timber crops and meets minimum productivity standards established for FIP. At least 10 acres of eligible forest land is required for FIP.

Everglades - The farm bill supports ongoing efforts to protect the Everglades ecosystem. This provision authorizes $200 million for restoration activities, including land acquisition. Authority is also provided to sell or exchange an additional $100 million in federal land to help protect the Everglades..

Bypass Flows on Forest Service Lands - A task force will be appointed to study the issue of bypass flows and related water rights on national forest land. In the interim, there will be an 18-month moratorium on bypass flow requirements during the renewal of Forest Service permits for water supply facilities.

For Additional Information Contact: Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, (202) 720-7327.

NRCS Buffer Strips

The U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), hopes to encourage farmers to convert marginal riverside lands into buffer strips. The NRCS's *National Conservation Buffer Initiative*, announced in April, promotes development of narrow strips of trees and grasses along streams and rivers to slow water, trap sediments, and filter pollutants from farm runoff. Under this program the USDA hopes to install 2 million miles of buffer strips across the nation by 2002.

Conservation practices which serve as buffers include filter strips, streamside forest buffers, and other measures which trap fertilizers and pesticides, stabilize streambanks, and help reduce water temperature. Despite significant controls on pollution sources like factories and water treatment plants, many of our rivers and streams remain too polluted to support fishing and swimming. Runoff from farms and city streets is a leading source of pollution for many rivers.

"This initiative is an effort to use grasses and trees to protect and enhance all the resources on a farm. It's an attempt to help producers not only maintain their best land in crop production but also to make good use of marginal land," said USDA Secretary Dan Glickman. "Conservation buffers can be a key to maintaining a healthy, productive farm."

Although the NRCS will lead the multi year effort; other USDA agencies-including the Farm Service Agency, Cooperative Extension Service, and Forest Service; state conservation agencies, conservation districts, agribusinesses, and agricultural and environmental organizations will help implement the program, Glickman said.

Six national agricultural corporations have pledged nearly $1 million over the next three years to complement the effort. The *National Corn Growers Association, National Council of Farmer Cooperatives*, and other groups are working with the corporations - *Cargill, ConAgra, Farmland Industries, Monsanto, Pioneer Hi-Bred International, and Terra Industries* - to help educate, encourage, and enable producers to install buffers.

Although buffer strips have been used in the past, resource managers are using new provisions of the 1996 Farm Bill to enroll more riverside lands

into federal easement programs. Several federal programs, including the CRP, WRP, WHIP, and the EQIP (See Previous Article), offer technical and financial help in establishing buffer strips. Buffers can also be used at strategic locations on nonagricultural landscapes, including urban areas, Glickman said.

Buffer strips are important to rivers and streams because they:

- help control polluted runoff from farms and city streets by holding and using nutrients and reducing sediment;
- provide recreation and scenic values;
- supply food, cover and water for a wide variety of animals and serve as migration routes for wildlife; and
- stabilize streambanks and reduce floodwater velocity, resulting in reduced downstream flood peaks.

Buffer types and their primary purposes include:

- **Contour buffer strips:** Strips of perennial vegetation alternated with wider cropland strips which are farmed on the contour. They can reduce sheet erosion and reduce movement of sediment, nutrients and pesticides.
- **Filter strips:** Strips of grass or other vegetation used to intercept or trap sediments, organics, pesticides and other pollutants before they reach a water body.

- **Riparian forest buffers:** Streamside vegetation consisting of trees, shrubs and grasses that can intercept pollutants from both surface and ground waters before they reach a stream.
- **Field borders:** Strips of perennial vegetation planted at the edge of a field. They can be used for a turn area or travel lanes for farm machinery.
- **Grassed waterways:** Strips of grass where water concentrates as it runs off a field. While they are used primarily to prevent gully erosion, waterways can be designed or combined with filter strips to help filter contaminants.

Buffer strips are most effective when used in combination with other conservation measures, including crop residue management and conservation tillage. For more information about the National Conservation Buffer Initiative, contact the NRCS at (202) 720-2791

Source: Mississippi Monitor, Vol. 1, No. 3, May 1997

Floods and Climate Change

In the April 27 issue of the *Minneapolis Star-Tribune*, Vice President Al Gore observed that recent flooding in the upper Midwest may be related to global warming. Gore said, "We cannot say with certainty that these events are caused by the onset of global climate change, but they are consistent with its predicted effects, and they should remind us all of the seriousness of the problem and the need to do something about it."

"Scientists around the world now overwhelmingly agree that humans are influencing the global climate ...largely by burning greater amounts of fossil fuels," Gore said. The effects could include rising sea levels, a higher number of heat-related deaths and diseases, and more severe floods, storms and droughts.

"As daunting as this challenge seems," Gore says, "we must commit ourselves to using energy more efficiently" and developing less polluting, renewable energy sources. And since the U.S. cannot solve the problem by itself, the Clinton administration seeks to negotiate international limits on greenhouse-gas emissions, "with the maximum amount of flexibility" provided for implementation.

"Based on these principles, we hope to forge an accord that addresses climate change while providing for continued economic growth and maintaining U.S. competitiveness in the world." Global climate change "is a problem without immediate or easy solutions," Gore concluded. But based on record of success implementing other environmental laws, it is clear "we all have a job to do -- and this is a tremendous time to do it".

In the meantime, a "handful" of scientific skeptics "is winning the political debate" about global warming, according to journalist Ross Gelbspan, who has written a new book on the subject called *The Heat Is On*. Backed by "millions" in energy industry public-relations campaigns and by industry's allies in the Republican-led Congress, Gelbspan says doubters like Patrick Michaels of the *University of VA* and Richard Lindzen of *MIT* "have convinced the public that there is far more doubt about the theory of global warming than really exists." Perhaps what "frustrates" believers most is that the skeptics often make "sensational charges without subjecting their work to rigorous [peer] review."

However, the targets of Gelbspan's criticism "say his book is little more than an attempt to intimidate researchers who sincerely question the severity of global warming."

Some environmentalists say the U.S.'s "inaction" on global warming has "at least as much to do with the national passion for fossil fuels as the influence of a few scientific skeptics." The doubters' prominence may also reflect journalists' "tendency to accentuate extremes" to present a "balanced" story. Bud Ward, editor of *Environment Writer* newsletter writes: "In this area of journalism, balance is the enemy of accuracy".

A report by William Fraser of the *University of MT* estimated that higher average temperatures have caused 30-40% of one Antarctic island's penguins to migrate further inland, where it is cooler.

Spring is arriving an average of eight days earlier in northern climates than it was 10 years ago, according to a report by *Boston University*, published

in the April 17 edition of *Nature*. Based on satellite data, the report concluded that a warming trend and a "dramatic lengthening" of the annual growing season exists from Alaska to Siberia.

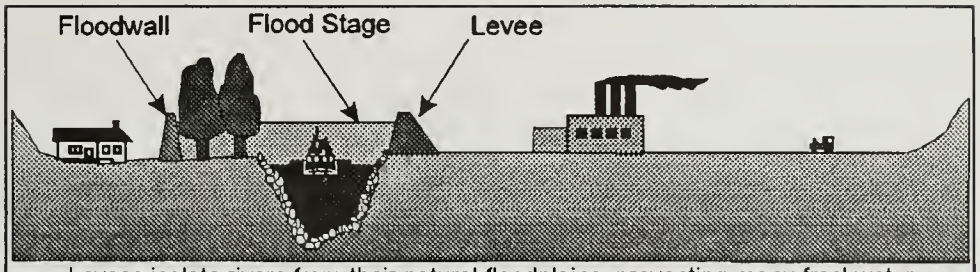
The cause is unknown, but the timing "is consistent with an enhanced greenhouse effect caused by the build-up of .... gases in the atmosphere," said the study, which marks the first direct observation of a change in the growth cycle of plants. The report's co-author, NASA's C.J. Tucker, "urged caution" in interpreting the finding that plants' carbon up-take increased 10% during the 10-year period. He suggested the outcome may be part of an "interannual trend" and not a result of human-induced activity. Lead report author Ranga Myneni said, "I don't think I'm ready to say that global warming is upon us". But Kevin Trenberth, of the *National Center for Atmospheric Research* in Boulder, CO, said the report corroborates other research that suggests a human-enhanced warming trend, which many scientists have linked to increasing pollution in the atmosphere.

Russian scientists said they have found two "vast" holes in the ozone layer above their country and warned people to restrict their exposure to the sun. Anatoly Yakovlev of Russia's meteorological office said one ozone hole stretched from northwest Russia to Belarus and Ukraine. The other covered the regions of Yakutsk and Krasnoyarsk in Siberia. Russian analysts believe the two holes stemmed from natural causes.

Sources: Greenwire Vol. 6, Nos. 213, 235 and 243

Longitudinal Changes in Mississippi River Floodplain Structure

Two of the most deleterious modifications to the Mississippi River have been (1) levee construction and (2) alignment and maintenance of the navigation channel. Altered hydrology and sedimentation patterns have progressed to the point that geomorphic processes have been severely disrupted. A growing body of evidence indicates that physical (geomorphic) processes and features control the biological structure and diversity of large floodplain rivers, particularly at large spatial scales.



Levees isolate rivers from their natural floodplains, preventing many freshwater organisms from gaining access to their natural feeding, breeding, and rearing areas, and thus from completing their life cycles. In this way populations of various species are destroyed and many species become threatened or endangered with extinction.

Scientists generally agree that the ecological diversity and integrity of large floodplain rivers are maintained by fluvial dynamics (annual flood pulses and channel-forming floods) and river-floodplain connectivity. Anything that tends to suppress the natural flood regime or constrain channel migration will disrupt these interactive pathways and lead to reduced ecological diversity and integrity.

The Mississippi River's channel (including the upper, middle, lower, and deltaic plain segments) is fixed in place along roughly 80% of its length as a commercial navigation channel by a variety of channel training structures (wing dams, dikes, and revetments). Thus along 80% of the river's length its fluvial dynamics; once responsible for channel migration across the floodplain, for alternating terrestrial and aquatic phases on the floodplain surface, and for sustaining a diverse array of aquatic habitat types and alluvial forest successional stages; have largely been arrested.

The table shown below displays total floodplain acreage and percentage of floodplain isolated from the main river channel by levees for six designated river segments. These data clearly show a progressive downstream isolation of floodplain land, with 90% of the total Mississippi River floodplain largely isolated from the main channel by levees. If the applied assumptions that geomorphic structure, fluvial dynamics, and river-floodplain connectivity largely control ecological diversity and integrity of large floodplain rivers are correct; then, given the current influences along the mainstem floodplain of the Mississippi River, future ecological conditions can be expected to deteriorate progressively downstream. To arrest these deteriorating ecological conditions, some level of physical remedial action, including habitat rehabilitation and enhancement, will be necessary and will

River Segment	Appox. Floodplain Acres (000s)	Floodplain Behind Levees
Headwaters	328	< 0.01%
Upper Mississippi (N)	496	3%
Upper Mississippi (S)	1,006	53%
Middle Mississippi	663	82%
Lower Mississippi	25,000	93%
Deltaic Plain	3,000	96%
TOTALS	30,493	90%

likely require sustained efforts.

Source: Delaney, R.L. and M.R. Craig. 1997. Longitudinal Changes in Mississippi River Floodplain Structure. Project Status Report, Upper Mississippi River, Long Term Resource Monitoring Program, USGS, EMTC, 575 Lester Avenue, Onalaska, WI 54650-8552, (608) 783-7550.

Lower Mississippi River Flooding

As noted in the previous article, the Lower Mississippi River (LMR) and the River's Deltaic Plain have been extensively leveed to protect both cities and farmlands. The area escaped disaster during the 1993 Midwest floods because the Ohio River was not in flood stage at the same time as the Upper Mississippi and Missouri. This year, however, heavy snowpack in the upper Midwest, coupled with heavy spring rains in the Ohio River valley had LMR flood control officials scrambling. If it hadn't been for cool temperatures and late Spring rains over the upper Midwest, LMR flooding could have made the Red River floods in ND and MN look like "preseason games".

Even so threats to some LMR dikes in the New Orleans area were significant enough to cause federal flood control officials to open the Bonnet Carre Spillway and flood Lake Pontchartrain. The Spillway and it's accompanying dike normally isolate the Lake, lying just north of New Orleans, from the River's flows.

The effect of 31 days of Mississippi River flow into and through Lake Pontchartrain is now a concern of local residents and fishermen. Officials at the *Lake Pontchartrain Basin Foundation* said they aren't sure how the torrent of chemical - and metal-laden sediments will affect their hopes of allowing swimming again on the Lake's south shore by the year 2000. Neil Armingeon, the foundation's environmental director said, "It's going to be a year before fishing returns to the level it was. Right before it opened, fishing was fantastic. The impacts of the spillway will be seen in an overall decrease in water quality, worse turbidity, and less clarity."

The flow of 3 trillion gallons of polluted river water into the Lake angered fishermen and environmentalists. Pete Gerica, president of the *Lake Pontchartrain Fisherman's Association*, which represents 100 commercial seafood harvesters, said he didn't need a crystal ball to forecast the spillway's effects. Mr. Gerica said blue crabs are emerging only halfway from their shells before dying from the pollutants, silt and cold temperatures. "The damage is done," he said. "They could have left it open as far as I'm concerned."

But Army Corps of Engineers officials said they were keeping their word in shutting the spillway as the Mississippi River falls. Deputy District Engineer Gordon Clark pronounced the spillway's operation a resounding success in preserving the levees around New Orleans by diverting the heavy river currents. River levels and flows reached their fourth-highest level this century. "We took a load off the levees by opening it," Mr. Clark said. "It was a tough call. But I would say we made the right decision."

Corps environmental officials said the spillway opening will have a dramatic, but short-term effect on the Lake. While acknowledging that the summer's brown shrimp season is devastated, they said the following years might produce bumper oyster crops because seed oyster populations proliferate during low-salinity periods.

Lake Pontchartrain is a large natural embayment of the Gulf of Mexico, and also an ancient distributary or channel of the Mississippi River. The Lake has long been isolated from the polluting effects of today's modern river channel, and residents tend to forget the Lake's close relationship with the River. The fact that the Mississippi River spilled into Lake Pontchartrain, even by way of a manmade spillway, shouldn't be alarming unless you don't understand the history of the river, its geomorphology, and the way rivers work.

Over geologic history the river periodically changed its course back and forth across the entire Mississippi River Delta, creating and destroying channels, wetlands, and coastal marshes at will as it continually searched for the ever-changing path of least resistance to the Gulf of Mexico. The problem is that once again man has tried to confine the River within a designated channel. That channel normally directs the River past Lake Pontchartrain and New Orleans, far out onto the continental shelf, where it dumps its nutrient laden waters into the Gulf of Mexico. These nutrient laden waters are now contributing to a phenomenon known as *hypoxia,* or over-enrichment of Gulf of Mexico waters.

Like a prisoner, *Old Man River* would like to break out of its confining straightjacket and once again take a shorter route to the Gulf, enriching its marshes and estuaries as it goes. When this happens, and it eventually will, most certainly it will lay waste to human developments in its path and leave a trail of destruction in its wake. Most river scientists feel that its just a matter of time until this occurs, and with predicted flooding on the rise, and 93-96% of the Mississippi River floodplain isolated behind levees that time may come sooner rather than later!

Source: Mississippi Monitor, May 1997

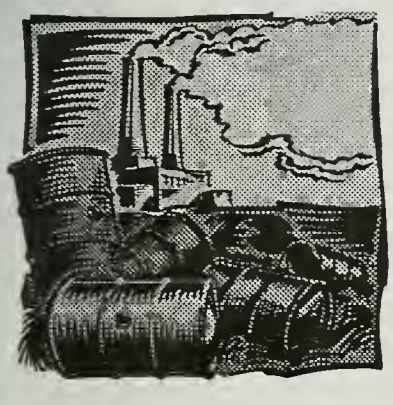
Miscellaneous River Issues

Alabama River: On April 8 the first Alabama Sturgeon was caught in the Alabama River. The fish will be used in a $400k cooperative state-federal captive breeding program to recover the species. Source: Associated Press

Gila and Salt rivers: The USEPA will establish limits for mercury pollution on portions of the Gila and Salt rivers in AZ under a consent agreement filed in U.S. District Court. The *Arizona Center for Law* sued the agency,

saying it wasn't enforcing the federal Clean Water Act. Source: *USA Today*, April 22.

Lower Mississippi River: Rain showers in West Helena, AR, forced crews on May 9 to build a levee around the BPS chemical-packaging plant to prevent poisonous runoff from entering Mississippi River tributaries. An explosion at the plant on May 8 released noxious fumes of agricultural chemicals including azinphosmethyl, methomyl and



thiophanate, forcing more than 300 people from their homes and closing a nearby medical center. By the time the USEPA declared the air safe on May 9, nearly 30 people were treated for symptoms of chemical exposure. The federal Occupational Safety and Health Administration and the USEPA plan to conduct a joint investigation into the cause of the explosion. Source: Greenwire Vol. 7, No. 8

Mississippi River Delta: A spill on May 16 of an estimated 210,000 gallons of oil from a ruptured underground pipeline near Lake Barre in Louisiana impacted the area's sensitive marshlands and shrimp populations. The oil from a Texaco pipeline created a seven-mile-long, two-mile-wide slick. Early reports indicated that more than 200 workers used containment booms to recover nearly 9,600 gallons of material. No cause has been determined. Source: Greenwire Vol. 7, No. 14

Mississippi Delta Flood Control Damage: The U.S. is urging Paraguay's President Juan Carlos Wasmosy to limit the damage of a proposed waterway project that could seriously harm the world's largest wetland in Paraguay, Bolivia and Brazil. The State Department calls Wasmosy "the most ardent supporter" of the planned Hidrovia, a "massive" waterway project designed to give Paraguay and Bolivia sea access. The project would reroute the Paraguay and Panama rivers, which are key water sources for a 54,000-square-mile ecosystem. Timothy Wirth, Undersecretary of State, arranged for Wasmosy to visit south Florida and the Mississippi Delta in mid April to see the damage caused there by Corps of Engineers flood control projects. Wasmosy asked for technical assistance and said seeing the American experience would be "very valuable". Source: By Line Article by Thomas Lippman, *Washington Post*, April 22.

NC Streams: Governor Jim Hunt (D) on April 8 announced that he supports a two-year moratorium on new and expanding hog operations. Hunt "stopped short" of calling on counties to use their zoning authority to regulate hog operations. But he said a moratorium could help the state complete research that might help the counties in drawing zoning restrictions. State Rep. Richard Morgan (R), whose proposed legislation on hog regulations features the zoning provision, said the zoning is a "gotta do." Morgan said, "It's crucial to the bill to let local county commissioners make decisions in their own counties. It puts teeth in the bill." Deb Carter, an attorney with the *Southern Environmental Law Center*, agreed, saying the state should not "impose complicated technical standards" on zoning. Source By Line Article by Dennis Patterson, *Durham Herald-Sun*, April 9.

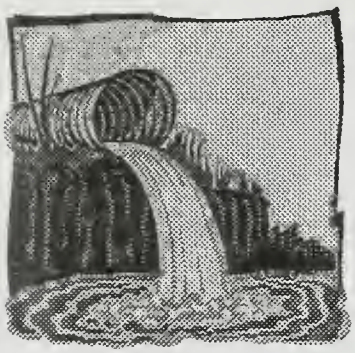
NC Wetlands: Beginning in May, NC developers and municipalities were given the opportunity to pay into a newly-created state wetlands bank designed to fund new or restored wetlands and compensate for acreage lost to construction, new highways and mining. Concern over the loss of wetlands to development prompted the state's Environmental Management Commission to create a fee schedule for each acre of wetlands. Some bank critics "question the need for a formal program at all." But others said the bank is the "most practical compromise between government and private interests." NC's protection efforts follow those of some 20 other states that have either established or are developing versions of wetlands banks. Source: Greenwire Vol. 6, No. 240

Neosho River and Tributaries: MO's attorney general on May 5 filed a lawsuit against poultry processing company *Simmons Foods Inc.* charging the firm repeatedly polluted waterways that flow into OK's Grand Lake of the Cherokees. Simmons spokesperson Doug Siemens claimed the firm has been in compliance with environmental laws since July 1996 when it installed a new wastewater treatment facility at its Southwest City plant. Source: By Line Article by Chuck Plunkett, *Little Rock Arkansas Democrat-Gazette*, May 6.

PA Streams: A coalition of environmental groups and the USEPA have reached a settlement to identify and restore PA's polluted streams and rivers. Environmentalists in January 1996 sued the EPA for failing to implement key provision of the Clean Water Act (CWA) in PA. The CWA requires states to evaluate all their waterways and set pollution limits for those that exceeded clean-water standards. About one half of PA's waterways have not been assessed. Under the negotiated settlement, approved by U.S. District Judge Marvin Katz on April 9, the state Department of Environmental Protection and the EPA will work together to evaluate and restore the waterways over the next 12 years. Environmentalists have similar suits still pending against the EPA relating to waterways in NJ and DE. Source: By Line Article by Kristin Holmes, *Philadelphia Inquirer*, April 11.

Pigeon River: "For the first time," the USEPA will study the economic impacts of pollution from a NC paper mill on people who live along the Pigeon River in TN. Revised water-discharge permits for *Champion International's* Canton, NC plant,

approved by the EPA on December 12 1996, included a variance that allowed the mill to bypass state water quality standards for water color. But "Tennesseans have long complained that the EPA focused solely on the thousands of jobs provided North Carolinians by the mill, while ignoring



the harm done by the mill's effluents ... downstream." The state of TN, in January, sued the EPA to overturn the permit, prompting Vice President Al Gore to ask the EPA to conduct meetings with state officials to resolve the issue. In the meantime, three TN legislators are proposing that the state no longer buy paper products from *Champion International Corp.* until the firm's NC paper mill stops polluting the Pigeon River. Greenwire Vol. 6, Nos. 224 and 240

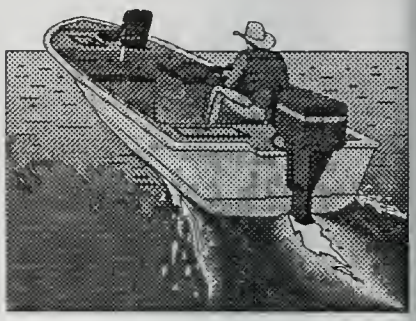
Platte River: WY Governor Jim Geringer (R) has "tentatively" endorsed a proposed cooperative agreement between his state, CO and NE that attempts to resolve a lengthy dispute over the protection of endangered species in the Platte River system. The proposed recovery plan would retain "enough" water in the central NE stretch of the Platte to maintain crucial habitat for endangered whooping cranes, least terns and piping plovers. In a May 9 letter to the U.S. Fish and Wildlife Service, Geringer said he believed the plan would remove the endangered species issue from an 11-year-old litigation between NE and WY concerning water use. Under the recovery plan, each state would increase the amount of stored water it sends to the central Platte, jointly adding an additional 130,000 acre-feet to the river. Geringer said he expected NE Gov. Ben Nelson (D) and CO Gov. Roy Romer (D) to also sign the agreement. If they do, Geringer said, officials could begin environmental review of the recovery plan while the states continue to negotiate other water-flow issues. Source: *Associated Press/Billings Gazette* May 10.

Russell Fork: The Army Corps of Engineers, in late April, defended the controversial Haysi Dam project in Dickenson County, VA, as the "best and least expensive" way to control floods on the Russell Fork, although it could wipe out 12 fish species along the river. Environmental interests have attacked the proposed $117.6 million dam as a waste of taxpayer money, saying it would cost more than $140,000 for every home protected by the project. Sources: Greenwire Vol. 7, Nos. 6 and 9

TX Streams: Aiming to reduce the impact of future droughts, the TX Senate on April 3 unanimously passed a bill that would create a "first-ever" water- conservation and drought-management plan. The bill, sponsored by state Senator J.E. Brown (R), calls for local planning for water needs, as well as conservation measures, water resource development and financial aid to communities. The bill would create a TX Water Trust to hold water rights dedicated to environmental needs. Brown said Texans would have faced "drastic" water rationing by 2010 without the plan. Ken Kramer, director of the *Sierra Club's* TX chapter, praised the measure but cautioned that public input is crucial when devising local conservation plans to ensure they don't "simply become wish lists" for economic interests. Last summer's drought cost the TX economy more than $5 billion and resulted in 95% of the state's 254 counties receiving federal disaster relief. TX is one of only three Western states without a comprehensive water plan. Source: By Line Article by Kathy Walt, *Houston Chronicle*, April 4.

Outboard Motor Pollution

The San Francisco-based *Earth Island Institute* on March 25 filed a lawsuit against the USEPA, saying the agency's regulations on marine outboard motors allow manufacturers to use "inferior" technology that causes "excessive" hydrocarbon emissions. The group claims that an estimated 14 million outboard motors and jet-skis are the nation's leading source of water pollution.



The institute also plans to file suit against 20 manufacturers who sell two-stroke motors in CA over alleged discharges of known carcinogens in violation of CA's Safe Drinking Water and Toxic Enforcement Act. Russell Long of *Ell's Bluewater Network* said, "These motors are the equivalent of 15 Exxon Valdez spills per year".

The EPA began regulating two-stroke motors in August 1996, requiring them to emit 75% fewer hydrocarbon and nitrogen-oxide emissions. But Long said that available technology would enable a 97% reduction.

Source: Greenwire Vol. 6, No. 220

Freshwater Eels Threatened ?

At one time, freshwater eels were common in the Upper Mississippi River (UMR) bordering MN, IA, WI and IL, and its tributaries. However, the population has declined during the last fifty years to the point where this fish is now rare or uncommon.

Catching an eel by hook and line is generally a matter of chance and usually occurs while the angler is fishing for something else. The same holds true for eels caught commercially in the UMR. During 1974 through 1980, commercial catch of eels in WI from the UMR ranged from 534-954 lbs., but in recent years the catch has been steadily dropping off for unknown reasons to the 1994 catch of 147 lbs. The eel is an exceptionally good food fish and is frequently regarded as a luxury food in other countries. Adult eels in the UMR commonly reach lengths of 3 ft.

and weights of 4 lbs.

Eels are "catadromous" in that they spawn in the ocean and return to freshwater to live as adults — just the opposite of the more familiar "anadromous" salmon that live as adults in the ocean and then return to freshwater to spawn. Eels are hatched in the Sargasso Sea between Bermuda and the Bahamas.

"freshwater eel"

The young eels migrate to freshwater rivers and arrive off our coastal waters about a year after hatching. Only the females journey up the Mississippi River and its tributaries, while the males remain near the mouth of the Mississippi River where it empties into the Gulf of Mexico.

In order to reach the WI portion of the UMR, eels have to get past at least 15 locks and dams - dams that limit the movement of other free-ranging fish such as the skipjack herring and paddlefish. To accomplish this feat the small eels, about 2.5-3.5" long at this point, migrate upstream at night. They get past the dams by climbing and crawling up the sides of the dam."

Young eels also have to get around the swift-moving parts of streams that empty into the Mississippi River, leaving the water by clinging to the wet grass or to the surface of the wet rocks, the eels move over land until they have passed the swift section and then re-enter the water to continue their upstream migration. Sometimes they travel over flooded or even dew-wet fields and turn up eventually in a pond or lake with no apparent river access.

For additional information on the status of eels in WI Contact: Ruth Nissen, WI Department of Natural Resources, P.O. Box 7291, Madison, WI 57307, (608) 268-2621.

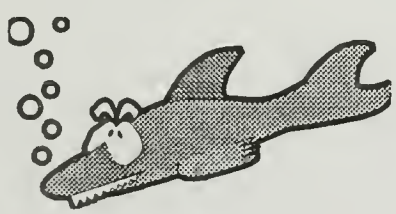
Source: Mississippi Monitor, May 1997

Hormone Disrupters May Affected Fish

In the broadest study of its kind to date, the USGS has found that pollution may be disrupting the sex hormones of fish in many streams across the country. Under the study, released on April 28, scientists analyzed about 600 carp from 25 streams in 13 states and the District of Columbia. The selected streams contained varying degrees and types of contaminants. Although some of the variations in hormones "probably resulted from natural variability," the data suggested some of the differences were caused by contaminants.

USGS Director Gordon Eaton said, "The finding of a correlation between hormone levels and contaminant levels in fish from such diverse locations is both a cause for concern and a call for further investigation." It is not yet possible to pinpoint which specific contaminants or factors may be related to the atypical hormone levels. However, the types of pollutants that were "significantly correlated" with hormone disruption were pesticides in water, phenol compounds in sediment and organochlorine compounds in biological tissue.

The study, a collaborative effort between the Biological Resources Division of the USGS and experts at the University of Florida, did not assess whether the hormone changes have negatively affected the fish.



Meanwhile, the USEPA in March "called for stepped up" research into whether synthetic chemicals disrupt hormonal systems in humans. "Although no conclusive evidence of a link has emerged," an agency report said that the chemicals have been shown to interfere with hormonal activities in animals and therefore pose a potential risk to humans. The EPA plans to award a series of research grants later this year, and has asked the National Academy of Sciences to review the scientific literature on the subject.

Debate over hormone disrupters hit a fevered pitch a year ago with the release of *"Our Stolen Future"*, which argued that industrial chemicals may already be affecting human health. The book by Theo Colburn, Diane Dumanoski, and John Peterson Myers provoked a vigorous defense by the chemical industry, which contended that evidence of health effects was far from certain.

Source: Greenwire Vol. 6, No. 212 and 244

Watchdog Satellites

Commercial imaging satellites being launched this year could provide pictorial images of environmental damages such as oil spills or deforestation "to anyone with a credit card and access to the Internet."

Consumers will be able to download pictures on their computers 90 minutes after the satellite collects them, according to Douglas Gerull, president of CO-based **EarthWatch Inc.**, which plans to put the first of two one-meter-resolution commercial satellites in orbit this summer. The new breed of satellites will create higher-resolution pictures that cost hundreds instead of the thousands they currently cost.

Access to this technology will give environmental interests and other "armchair watchdogs" unprecedented ability to monitor governments and corporations. In British Columbia, the Sierra Club has turned six-years' worth of satellite images of coastal forests into "a public relations success." The group will use the pictures -- showing the depletion of old-growth trees -- in an international campaign to counter loggers' claims that enough land already has been reserved for conservation.

But some predict that oil and mining firms will also use the pictures to "push into ever-more remote corners of the globe to ferret out pockets of remaining natural resources".

Source: By Line Article by Mark Clayton, *Christian Science Monitor*, May 7.

Nature's Economic Value Estimated at $30 Trillion

The earth's natural ecosystems generate trillions of dollars in goods and services each year - perhaps more than the combined gross national product of all the world's economies, yet these natural assets remain grossly undervalued and often unaccounted for in traditional markets. As a result, many critical environmental values necessary for economic prosperity and societal health are being severely diminished.

That is the conclusion of 32 prominent scientists and scholars who contributed to a new book ***Nature's Services Societal Dependence on Natural Ecosystems***. The book is the first systematic attempt to quantify the importance of environmental protection using the tools of economic-utility assessment and cost benefit analysis.

Many of nature's interrelated and highly complex large scale biochemical systems could never be replicated by even the costliest human technolgies, the book maintains. Thus attempts to quantify the true value of nature's services stretch the limits of science and economics.

"Preliminary estimates put the aggregate value of these services at or above the total GNP of the planet, on the order of $30 trillion, said Economist Geoffrey Heal of *Columbia University*. To cite just one example, he notes that New York City would have to spend $4 billion to build chemical treatment facilities if it did not benefit from relatively clean water from the Catskill Mountains. The value of over-the-counter medicines containing plant extracts is estimated at $84 billion annually, and scientists estimate undiscovered medicinal plants in the tropical forests are valued at $147 billion. The ecotourism potential of nature is estimated at nearly $500 billion.

The range of services provided by nature include the:

- detoxification and preservation of breathable air, potable water, and arable soil;
- global and regional climate stabilization;
- pollination, pest control, and disease resistance of plants;
- soil fertility enrichment;
- production of products ranging from seafood and forage to timber, fuels, fibers and pharmaceuticals; and
- preservation of genetic biodiversity.

In essence, the authors maintain, nature effectively subsidizes all economic activity on the planet. The value of such services are often not recognized or calculated until they are in decline - whether by toxic air pollution, soil erosion, acidification of streams, or overfishing.

"Ecosystem services are absolutely essential to civilization; they are priceless," said *Stanford University* ecologist Gretchen Daily. "Yet their lack of price (i.e. they are typically not traded in economic markets) has contributed to a widespread lack of awareness of their very existence, and to a corresponding misimpression that the ecosystems that supply them lack value." "The idea," according to Daily, is to "assess what

we know about the tangible value of environmental resources," and to create revenue-producing institutions that make it profitable to invest in such resources. Daily argues that since technology is usually an expensive substitute for natural systems like wetlands which filter water pollutants, "it usually pays to protect (or enhance) natural systems, even if one ignores their intangible benefits."

Columbia University economists Graciela Chichilnisky and Geoffrey Heal "would take the general approach a step further" by allowing private companies to invest in conservation and sell the resulting services. Some "obvious candidates" for such efforts include flood control, conservation of marine fisheries, carbon sequestration in trees and species diversity. According to Hea "If *Enron* can compete with the ol regulated utilities in energy sales, wh couldn't they sell watershed se vices?".

Meanwhile, MIT economics professo Paul Krugman writes in a recent issu of the online magazine *SLATE* tha the February 1997 endorsement b 2,500 economists of a statemen calling for "serious measures" to limi greenhouse gas emissions served as "an impressive demonstration of a little-known fact: ***Many economists are also enthusiastic environmentalists.***" Krugman, says that his "unscientific impression" is that "economists are on average more pro-environment than other people of similar incomes and backgrounds" since **standard economic theory "automatically predisposes those who believe in it to favor strong environmental protection."**

Due to their desire to make markets take environmental costs such as pollution and traffic congestion into account, **"economists who actually believe the things they teach generally support a much more aggressive program of environmental protection than the one we actually have,"** Krugman writes

Krugman joins James Galbraith of the *University of TX* at Austin, *Earth Island Institute* President Carl Anthony, *University of MD* economics professor Julian Simon and others in the current issue of *Mother Jones* in offering critiques of a March 4 cover story by entrepreneur Paul Hawken on the idea of "natural capitalism," or paying greater attention to the economic value of natural ecosystems.

These sources provide more ammunition for the growing movement in favor of "true-cost" or green accounting. Currently the depletion of environmental values and assets are not factored into calculations of Gross Domestic Product or other measures of economic productivity.

Source: Land Letter, Vol. 16, No. 10, New York Times 3/27/97, and Greenwire Vol. 6, Nos. 221 and 242; and Vol. 7, No. 11

Navigation and Economic Analysis Models Developed for UMR Navigation

Corps of Engineers (COE) studies to continually improve and expand Upper Mississippi River (UMR) navigation march on. The COE has recently developed an impressive video simulation (or game -- if you will) which displays tiny towboats and locks and dams on a computer screen.

Heading upstream, within a minute or so, the tows move more slowly, and lines start to form at miniature locks and dams. Dr. Don Sweeney, technical manager of the *Economics Work Group* and creator of the new **Traffic Simulation Model** says, "The picture simulates the reality of current traffic along the UMR". But the model, which was demonstrated at a February 18 meeting of the *Governors' Liaison Committee* (GLC), Sweeney says, is even more useful when specifications are changed to show what happens when traffic is increased by 25%.

With more towboats on the system, congestion forms more quickly on the computer screen, with delays reaching more than a day at a lock, compared to an average of a 3-7 hr. delay for a tow in 1995. When a time savings of 20 minutes is applied per towboat - the preliminary estimated savings of a small-scale measure - the images change again, and the back-ups are visibly reduced. When the computer is told to reduce the average lockage time by about an hour to 40 minutes per double-lockage, traffic flows freely on the model with few delays. Forty minutes is a rough estimate of the average time a lockage would take after construction of a new 1,200-foot lock. The existing average time for a double lockage is about 1 hour and 40 minutes.

The simulation of actual traffic patterns along UMR locks 22, 24 and 25 accurately reflects the workings of the entire river system, said Jeff Marmorstein, an operations research analyst who demonstrated the model for the *GLC* and *Economics Coordinating Committee*. The model illustrates the "cold start," he said, when traffic begins after the spring thaw and towboats start to move up-river. It then shows how traffic pulses through the system, eventually working its way downstream.

The model now is used in the St. Louis District for the *"Lock 24 Major Rehabilitation Study"* to illustrate what happens to the output of the river system if a single lock chamber is unusable or working at less than peak efficiency, Sweeney said. It will be applied to the Navigation Study efforts to help calculate the effects of any proposed measures for reducing traffic delays.

Although the display model simulates traffic flows at three locks, the actual model used by the Navigation Study team includes all 37 locks on the system and accounts for both the UMR and the Illinois Waterway.

According to Sweeney, the model will be able to show whether a savings of even 20 minutes per lockage can make a difference at various congestion levels. The display model indicates that in some situations putting a small-scale measure in place provides noticeable relief. "You still get some congestion, but nowhere near what you get in the without-project condition (i.e. without making any navigation improvements to the current system)," Sweeney told the governors representatives from the five participating states. "Clearly the small-scale measures buy you something." The larger construction measures, on the other hand, provide even greater benefits but involve more up-front costs, he said.

As might be expected, this model takes no account of the impact of increased navigation traffic on the river's natural resources. Also it does not account for the impact of crowding more tows onto the river and more industrialization on recreational use. All it really does is calculate a simple mathematical relationship between the amount of space a towboat occupies on the river and the amount of time it takes for a lockage, and then calculates through a digital display the number of tows, barges, and towboats that can be crowded onto the river, without impacting one another by having to wait to lock through. Recreational lockages are not factored in.

At the same time, COE economists have developed of a ***Regional Economic Development Analysis Model*** for MN, IL, IA, WI and MO. This model will evaluate the income and employment benefits resulting from the regional distribution of the three primary benefit categories:

- transportation savings,
- water compelled rates, and
- construction.

Water-compelled rates are the degree to which water transportation availability moderates the cost of other transportation such as rail. When the analysis is complete, Dennis Robinson, an analyst with the *Institute for Water Resources* who will conduct the study, says that it will provide valuable information to states about how project benefits are spread throughout the region.

Robinson predicts that a hypothetical $100 million construction project along the Illinois Waterway would generate $203 million in goods and services and $66.9 million in wages and would create 2,250 jobs in a single year. Robinson says further that just looking at the construction impacts significantly understates the total regional benefits expected from all three categories; however, it does demonstrate the type of information that will be generated by the analysis as part of the *COE Navigation Study*.

Based on the assumptions used in the example, just over half of the benefits would be gained in the state of IL

(where the hypothetical project is based), about 20% in the eastern U.S., 15% in the western U.S., 4% in the lower Mississippi Valley, 2.5% in WI, and 1-1.7% in the other study states.

Unfortunately, again the COE states nothing about **the costs of such a hypothetical project** on the river's natural or social interests; or to *Natures Services* (as described in the preceding article in this issue of *River Crossings*). Biologists have long argued that faster lockages promote more lockages, more lockages mean more towboats, more towboats mean more shoreline developments and fleeting areas, and all of these things mean fewer fish and wildlife resources and an overall diminished recreational experience.

The COE's failure to adequately address these issues has been a concern of biologists and natural resource managers at least since the first locks and dams were built in the 1930s. COE navigation and economics studies seem to just march on unimpeded, while biological and natural resources studies proceed at a snail's pace or remain bogged down in bureaucracy. The few studies that are underway today were first proposed in the early 1980's during development of the UMR Master Plan and review of the construction of the 1200 ft. lock at Alton, IL..

That lock has long been completed and has now generated a demand to update and expand upstream locks (locks 22, 24, and 25) -- the very domino effect alluded to by environmental and railroad interests in the Lock and Dam 26 court case (i.e. by expanding one lock to reduce a "bottleneck" , the next upstream lock soon becomes a "bottleneck" -- and so it goes upstream). Each newly constructed downstream lock is used to help generate the economic justification for the next upstream lock. In this way over the course of time, the entire navigation system is rehabilitated and navigation is expanded without ever having to address the system-wide effects of a single major action.

If economists, are also environmentalists as stated by MIT economics professor Paul Krugman in the previous article of this issue of *River Crossings*, you couldn't prove it in the COE navigation studies. Perhaps the COE just doesn't hire the same kind of economist that Krugman refers to -- or perhaps Krugman is wrong in his statement.

However, the bottom line is that without adequate assessment of the natural resource and recreational impacts of any new construction to expand UMR navigation, the COE seems to again be proceeding "head-long" into another legal challenge from environmental interests. Perhaps this time, however, COE economists will have to confront economists of the type that Dr. Krugman refers to — those who also care about the future of the environment and our overall "quality of life".

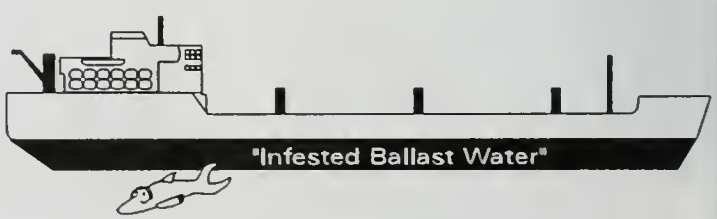
Source: Upper Mississippi River - Illinois Waterway System Navigation Study Newsletter, April 1997, Vol 4. No. 2

National Invasive Species Act of 1996

As noted in a previous issue of *River Crossings*, The **National Invasive Species Act of 1996** (PL 104-332) (NISA) passed just before the 1996 elections. Major credit for the legislation goes to Senator John Glenn (OH), who introduced it in the Senate (S. 1660) , and to Congressman Steve LaTourette (OH), who introduced it in the House of Representatives (H.R. 3217).

Some highlights of the legislation include:

- Creation of an enforceable national ballast management program targeted to all U.S. coastal regions.
- Requirement of detailed ballast exchange reporting by all vessels.
- Reauthorization of the mandatory Great Lakes ballast management program.
- Authorization of a Ballast Technology Development Program which will bring many more resources to the search for technological and management practice tools to replace ballast exchange. This program is especially important for regions which experience a great deal of coastwise trade, like AK and the Great Lakes.
- Continuation and expansion of the State Management Plans program to include an aquatic plants program.
- Authorization of funding for research and development of a dispersal barrier for the Chicago Ship and Sanitary Canal. This provision will help prevent transfers of organisms between the Great Lakes region and the Mississippi River Basin.
- Creation of voluntary national guidelines for recreational vessels to help prevent spread of alien species overland via trailered vessels.
- Region-specific research on effects of invasive species in the Gulf of Mexico, Narragansett Bay, Chesapeake Bay, Lake Champlain, the Great Lakes, California and the Pacific Coast, and Hawaii, and other regions yet to be determined.



The National Ballast Management Program will be mandatory after three years if the shipping industry record of compliance under a voluntary system is poor. Compliance records will be established via a mandatory reporting system which the U.S. Coast Guard will establish and actively monitor. Criteria for how much compliance is enough to protect coastal resources (and preempt an enforcement regime) will be developed by the national Aquatic Nuisance Species Task Force over the next year and a half. The Great Lakes ballast program remains unchanged (and mandatory) except that the scope of the program is clarified to include vessels which may enter the lakes reporting no ballast on board.

NISA does not require ballast exchange of vessels engaged in coastwise trade (where it is of little or of no use) and it exempts vessels which pass through the exclusive economic zone (EEZ) in coastwise crude oil trade between CA and AK. Improved ballast management technologies and practices are needed to address coastwise and NOBOB (no ballast on

board) situations. In the meantime, alternative exchange sites should be identified along U.S. coastlines for vessels to use when they are unable to conduct high-seas exchange for safety reasons. NISA also does not address planned introductions or terrestrial invasions.

Passage of the NISA is a real achievement for the exotic species network which led the national effort, but as Congress turns its attention to implementation of NISA and to legislation for planned introductions of exotic species and for terrestrial invasions, involvement of concerned people and organizations will again be critical.

To obtain copies of the NISA or of the proceedings of the National Forum on Nonindigenous Species Invasions of U.S. Marine and Fresh Waters, contact: Allegra Cangelosi, Senior Policy Analyst and Great lakes Ecosystem Director, Northeast-Midwest Institute, (202) 544-5200.

Source: Aquatic Nuisance Species Digest, March 1997, Vol. 2, No. 1

International Moratorium on Large Dams Requested

Delegates at the first International Meeting of People Affected by Dams have demanded an immediate international moratorium on the building of large dams. Attendees of the meeting, held March 11-14 in Curitiba, Brazil, said the moratorium should last until a number of demands are met, including the provision of reparations to the millions of people whose livelihoods have suffered because of dams.

Conference attendees came from dam-affected communities in India, Argentina, Chile, Mexico, Paraguay, Russia, Taiwan, Thailand and Lesotho. The meeting was organized by the *Brazilian Movement of People Affected by Dams (MAB)* with help from *(International Rivers Network) IRN* and an international committee including India's *Save the Narmada Movement (NBA), the Bioblo Action Group from Chile (GABB) and the France-based European Rivers Network*.

Delegates from Brazil's MAB made up the majority of people at the conference. Presently, Brazil has around 600 large dams (defined as over 15 meters), with another 494 more proposed.

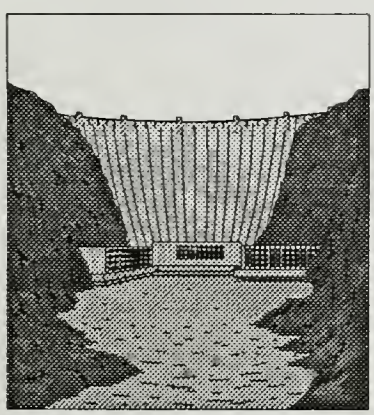
The full text, starting out somewhat like our own *Declaration of Independence*, reads as follows:

DECLARATION OF CURITIBA
Affirming the Right to Life & Livelihood of People Affected by Dams

"We, the people from 20 countries gathered in Curitiba, Brazil, representing organizations of dam-affected people and of opponents of destructive dams, have shared our experiences of the losses we have suffered and the threats we face because of dams. Although our experiences reflect our diverse cultural, social, political and environmental realities, our struggles are one.

'Our struggles are one because everywhere dams force people from their homes, submerge fertile farmlands, forests and sacred places, destroy fisheries and supplies of clean water, and cause the social and cultural disintegration and economic impoverishment of our communities.

'Our struggles are one because everywhere there is a wide gulf between the economic and social benefits promised by dam builders and the reality of what has happened after dam construction. Dams have almost always cost more than was projected, even before including environmental and social costs.



Dams have produced less electricity and irrigated less land than was promised. They have made floods even more destructive. Dams have benefitted large landholders, agribusiness corporations and speculators. They have dispossessed small farmers; rural workers; fishers; tribal, indigenous and traditional communities.

'Our struggles are one because we are fighting against similar powerful interests, the same international lenders, the same multilateral and bilateral aid and credit agencies, the same dam construction and equipment companies, the same engineering and environmental consultants, and the same corporations involved in heavily subsidized energy-intensive industries.

'Our struggles are one because everywhere the people who suffer most from dams are excluded from decision-making. Decisions are instead taken by technocrats, politicians and business elites who increase their own power and wealth through building dams.

'Our common struggles convince us that it is both necessary and possible to bring an end to the era of destructive dams. It is also both necessary and possible to implement alternative ways of providing energy and managing our freshwaters which are equitable, sustainable and effective.

'For this to happen, we demand genuine democracy which includes public participation and transparency in the development and implementation of energy and water policies, along with the decentralization of political power and empowerment of local communities. We must reduce inequality through measures including equitable access to land. We also insist on the inalienable rights of communities to control and manage their water, land, forests and other resources and the right of every person to a healthy environment.

'We must advance to a society where human beings and nature are no longer reduced to the logic of the market where the only value is that of commodities and the only goal profits. We must advance to a society which respects diversity, and which is based

on equitable and just relations between people, regions and nations.

'Our shared experiences have led us to agree to the following:

• We recognize and endorse the principles of the 1992 'NGO and Social Movements Declaration of Rio de Janeiro' and the 1994 'Manibeli Declaration' on World Bank funding of large dams.

• We will oppose the construction of any dam which has not been approved by the affected people after an informed and participative decision-making process.

• We demand that governments, international agencies and investors implement an immediate moratorium on building large dams until:

- There is a halt to all forms of violence and intimidation against people affected by dams and organizations opposing dams.
- Reparations, including the provision of adequate land, housing and social infrastructure, be negotiated with the millions of people whose livelihoods have already suffered because of dams.
- Actions are taken to restore environments damaged by dams - even when this requires the removal of the dams.
- Territorial rights of indigenous, tribal, semi-tribal and traditional populations affected by dams are fully respected through providing them with territories which allow them to regain their previous cultural and economic conditions -- this again may require the removal of the dams.
- An international independent commission is established to conduct a comprehensive review of all large dams financed or otherwise supported by international aid and credit agencies, and its policy conclusions implemented. The establishment and procedures of the review must be subject to the approval and monitoring of representatives of the international movement of people affected by dams.
- Each national and regional agency which has financed or otherwise supported the building of large dams have commissioned independent comprehensive reviews of each large dam project they have funded, and implemented the policy conclusions of the reviews. The reviews must be carried out with the participation of representatives of the affected people's organizations.
- Policies on energy and freshwater are implemented which encourage the use of sustainable and appropriate technologies and management practices, using the contributions of both modern science and traditional knowledge. These policies need also to discourage waste and over consumption and guarantee equitable access to these basic needs.

• The process of privatization which is being imposed on countries in many parts of the world by multilateral institutions is increasing social, economic and political exclusion and injustice. We do not accept the claims that this process is a solution to corruption, inefficiency and other problems in the power and water sectors where these are under the control of the state. Our priority is democratic and effective public control and regulation of entities which provide electricity and water in a way which guarantees the needs and desires of people.

'Over the years, we have shown our growing power. We have occupied dam sites and offices, marched in our villages and cities, refused to leave our lands even though we have faced intimidation, violence and drowning. We have unmasked the corruption, lies and false promises of the dam industry. Nationally and internationally we have worked in solidarity with others fighting against destructive development projects, and together with those fighting for human rights, social justice, and an end to environmental destruction.

'We are strong, diverse and united and our cause is just. We have stopped destructive dams and have forced dam builders to respect our rights. We have stopped dams in the past, and we will stop more in the future.

'We commit ourselves to intensifying the fight against destructive dams. From the villages of India, Brazil and Lesotho to the boardrooms of Washington, Tokyo and London, we will force dam builders to accept our demands.

'To reinforce our movement we will build and strengthen regional and international networks. To symbolize our growing unity, we declare that 14 March, the Brazilian Day of Struggles Against Dams, will from now on become the International Day of Action Against Dams and for Rivers, Water, and Life.

'Water for life, not for death!

'Approved at the First International Meeting of People Affected by Dams, Curitiba, Brazil, March 14, 1997."

Source: World Rivers Review, Volume 12, Number 2, April 1997

Catfish 2000

The First International Ictalurid (catfish) Symposium -- *Catfish 2000* will be held on June 22-25 at the River Center in Davenport, IA (319) 326-8500. The symposium will feature a wide array of presentations on ictalurid catfishes presented by speakers from Canada, Europe, and South America, as well as a full cross-section of the U.S.

In addition to keynote presentations, a total of 68 technical presentations are scheduled. These will discuss:

- biology and catfish ecology,
- habitat use and assessment,
- age and growth,
- feeding ecology,
- reproductive biology,
- movement and migratory behavior,
- population genetics,
- sampling methods and stock assessment,
- status and dynamics of recreational and commercial fisheries,
- effects of harvest regulations,
- stocking strategies,
- human dimensions,
- conservation of stocks at risk, and
- effects of introduced ictalurids.

A trade show will feature tackle for catfish anglers, boats, baits, and also equipment for testing water quality, sampling fish, and conducting other fisheries studies. Fishing seminars (open to the public) will be hosted by well-known catfish angling experts.

The local *In-Fisherman Club*, associated with the *Quad Cities Conservation Alliance*, will provide guides for catfishing trips on the Mississippi and other nearby rivers. Organized social events will include a good old fashioned riverside catfish fry with all the fixings and festivities. Additionally, trips and tours for spouses and families will be featured to local excursion boats, shopping centers, riverboat gambling casinos, theaters, museums, and historic sites.

At the conclusion of the symposium a panel will address the future direction for management of North America's catfishes. The panel will include various chiefs of federal, state, and independent management groups, angling authorities, and the general public. Following the panel discussion, MICRA and the Upper Mississippi River Conservation Committee (UMRCC) will host a facilitated workshop for state and agency resource managers and researchers to set a course for future catfish management.

The Proceedings of Catfish 2000, including peer-reviewed papers based on presentations at the symposium, will be provided to registrants. The proceedings will be made available to others for purchase.

Overnight accommodations for the symposium are available at the adjacent Black Hawk Hotel and the Radisson, just down the street, as well as at host of other more remote hotels and motels locations throughout the Quad Cities. A large attendance is expected so the steering committee urges attendees wishing to stay on sight to get their room reservations in early.

M.R. F.I.S.H. Project

MICRA learned in May that the National Fish and Wildlife Foundation (NFWF) has agreed to sponsor a challenge grant involving the public in habitat management and enhancement on the Upper Mississippi River (UMR) bordering IA. The project entitled, *"Mississippi River Fishers Involved in Saving Habitat (MRFISH)"*, is patterned after similar *"Fishermen Involved in Saving Habitat (FISH)"* projects in the Pacific Northwest on smaller streams.

The $10,000 M.R.F.I.S.H. project is expected to begin this summer, and will utilize volunteer labor to improve riparian habitat and fish cover by securing and maintaining fallen trees and snags in UMR aquatic and riparian habitats. It is estimated that 275 such fallen trees and snags can be secured with funding provided by the project.

John Pitlo, research biologist at IA's Bellevue Fisheries Research Station saw a need to secure fallen trees for fisheries and aquatic habitat. Many valuable trees and snags that provided cover and habitat for aquatic organisms were simply being washed away by high waters, creating significant losses to sportfishing and aquatic productivity.

Jerry Rasmussen, MICRA Coordinator/ Executive Secretary suggested to Pitlo that MICRA apply for challenge grant funding for such a project from the NFWF. The NFWF annually funds challenge grant projects, both large and small, to restore and improve natural ecosystems. While the MRFISH program will not construct new habitats, it will prevent important shoreline and riparian habitats from being washed away. Additionally, the project will have the added benefit of preventing fallen trees from washing downstream into the locks and dams, into public and private boat docks, and into the paths of commercial and recreational boats. The NFWF agreed and the project has been funded.

Partners in the project and their contributions include the following:
- NFWF - $5,000;
- MICRA - $5,000;
- U.S. Fish & Wildlife Service, Large Rivers Fisheries Coordination Office - administrative support;
- IA Department of Natural Resources - oversight and management of field work, as well as monitoring and documentation of project success; and
- Eastern IA Conservation Organizations - all labor.

Funding will be used to design and acquire adequate anchoring mechanisms, and complementary M.R. F.I.S.H. caps for volunteers. The latter will go a long way in encouraging participation and in advertising the concept both at club meetings and on the street.

Although the project is small, it is a first step in getting the public directly involved in large river habitat projects. If successful, other such projects may be completed elsewhere on the interjurisdictional rivers of the Mississippi River Basin.

Warmwater Fish Ladders

American shad are swimming up Chesapeake Bay tributaries "in numbers that haven't been seen for 20 years or more," aided by a series of "elevator-like" lifts that hoist them past hydroelectric dams and send them on their way to spawn near Harrisburg, PA.

The two fish lifts, operating since 1991 at the Conowingo Dam on the Susquehanna River in MD, have been deemed a success by the U.S. Fish and Wildlife Service. Two new lifts, at Safe Harbor and Holtwood dams in PA, have opened 46 more miles of river to spawning of American shad.

Biologists hope the lifts promote the "comeback" of shad, which has been "heavily damaged" from 200 years of overfishing and loss of spawning habitat. MD imposed a catch moratorium on the fish in 1980.

Conowingo operators report they have been lifting fish over their 90-foot dam at a record-setting pace since early April. Success so far has been limited at Holtwood, despite its $20 million price tag and billing as the largest lift in the country.

Officials say the fish at Holtwood

may be "confused" by great turbulence near the dam and unable to find the elevator door. Engineers are now working to manipulate the water flow.

Source: Greenwire Vol. 7, No. 9

Who Should Pay?

"After more than 60 years of successful wildlife management ranging from habitat restoration to restocking efforts, few people yet realize that sportsmen -- the men and women who fish and hunt recreationally -- were the first citizens to stand up and be counted in the drive for conservation in America. Those men and women voluntarily sponsored legislation and lobbied for legislation that enacted taxes on their sporting equipment purchases, with the revenue thus collected going directly to conservation efforts. That is not ancient history. It remains the most successful conservation story in America. In the 1995 fiscal year, those taxes generated $410.9 million dollars. Some of that money, collected by the federal government at the manufacturer's level, is allocated to the U.S. Fish and Wildlife Service. The rest if returned to the various states under the *Sport Fish and Wildlife Restoration Program*. Over the years, those taxes have raised billions of dollars.

'But something is askew in today's vastly expanded conservation movement. That movement has grown far beyond the ranks of hunters and anglers. A very significant portion of the modem conservation movement is designated as "non-consumptive" outdoor resource users. That group, composed of birders, hikers, campers, canoeists and others who do not hunt or fish, are quite vocal in their demands that conservation agencies such as the Department of Wildlife and Fisheries provide increasing opportunities for their preferred forms ot outdoor recreation. They want camping areas and well maintained trails, and convenient launching facilities on pristine, protected streams and rivers, and they want habitat protection and enhancement programs focused on songbirds. Trouble is, those "nonconsumptive" outdoor recreation groups do not demonstrate much willingness to help fund the very programs they demand.

'The facts in this issue are interesting. Most agencies, including this one, have well established, ongoing programs to protect and replenish so-called non-game species and unique native flora. Most of the conservation programs that benefit game animals and fish also benefit non-game species ranging from chipmunks to songbirds. Spokesmen for various sportsmen's organizations have done far more than such protectionist groups as the *People for the Ethical Treatment of Animals* or the *Fund for Animals* to support a small tax on birdseed and binoculars to benefit non-game programs. Those "consumptive" hunters and anglers have been footing the bills for years for the very programs many non-consumptive outdoor recreationists demand but resist paying for.

'As an example, at the request of this department's Natural Heritage Program, the Louisiana legislature created a Wild Louisiana Stamp to generate funds specifically for non-game protection and enhancement programs. The stamp sells for a mere $5.50, the same as a basic fishing license, and was required of anyone utilizing our Wildlife Management Areas (WMAs) for recreation other then hunting and fishing. Strangely enough, most of the non-consumptive portion of our constituents refused to buy those stamps when they were introduced in 1993. Today, four years into the program, many still resist and complain loudly about having to pay anything at all to utilize WMAs. Others avoid using WMAs just to avoid buying a Wild Louisiana Stamp. Something is askew in today's conservation movement.

'It should also be noted that every basic fishing license or basic hunting license sold in Louisiana makes federal matching funds available to this department. Those funds go into fish and wildlife management programs that benefit all species, including non-game wildlife. The sale of Wild Louisiana Stamps generates no federal matching money. One would think that non-consumptive users would elect to buy a basic fishing license, even if they did not elect to fish. Unfortunately, they choose not to do that.

'As the demand for non-consumptive outdoor recreation opportunities escalates, a strong effort is afoot to enhance funding for non-game wildlife conservation, outdoor recreation and environmental education by finally enacting that federal tax on birdseed and binoculars that I mentioned earlier. In addition, the tax would apply to other outdoor recreation gear such as camping equipment and canoes. For the average outdoor oriented family, the cost is projected to be about $5-10 per year. The benefit to the conservation of wildlife and outdoor recreation would amount to about $350 million per year. Louisiana would receive an estimated $5.8 million annually.

'But guess what? Some nonconsumptive outdoor recreation groups are opposing the tax, known as the *Fish and Wildlife Diversity Funding Initiative*. Nonetheless, support is steadily growing. At present, Louisiana Governor Mike Foster and the governors of seven other states have signed on to support the act, along with more than 1,000 organized groups representing a variety of interests.

'The message must be sent to Congress that it is high time for all outdoor recreationists to begin paying their share to support the conservation effort. What can you do, aside from purchasing at least a basic fishing license? Each of us should let our congressmen and senators know that we support this initiative, popularly known as *"Teaming With Wildlife."* With all of us working together, we can make the *Wildlife Diversity Funding Initiative* a reality. It will cost each of us a few dollars a year, but it will make a real difference for the future of wildlife in Louisiana and throughout the nation."

-- James H. Jenkins, Secretary, Louisiana Department of Wildlife and Fisheries, 11-1-96.

TEAMING WITH WILDLIFE
a natural investment

MICRA is on record in support of the "Teaming With Wildlife" Initiative.

Have Trunk, Will Travel

"Exotic Aquatics Traveling Trunks" are now available in MN to help educators teach students about the spread of harmful invasive species.

Each trunk contains preserved, museum-quality specimens of exotic species, a curriculum with nine lesson plans, books, maps, posters and an award-winning video produced by the MN Dept. of Natural Resources. Although the trunk was designed for grades 4-7, it can easily be adapted for younger or older students.

Doug Jensen, traveling trunk coordinator for *Minnesota Sea Grant* said, "The response has been overwhelming. In just under a month, I have over one-third of the available reservation slots filled for the 1996-97 school year.

For Duluth-Superior area teachers and educators, the trunks are offered free from *Minnesota Sea Grant* for a one-week period on the condition that they pick up and deliver the trunk. Otherwise, shipping, handling and insurance costs about $75.

The Exotic Aquatic Traveling Trunk project was sponsored and coordinated by *Minnesota Sea Grant* in collaboration with the University of *MN Bell Museum of Natural History*, National Park Service, U.S. Fish and Wildlife Service, *National Park Foundation* and MN Dept. of Natural Resources.

To receive a brochure or schedule a reservation, contact Doug Jensen, University of MN Sea Grant, Exotic Species Information Center, 2305 East Fifth Street, Duluth, MN 55812-1445, phone (218) 726-8712, email djensen@mes.umd.edu.

Zebra Mussel CD-ROM Available

A team of U.S. Army, Corps of Engineers Waterways Experiment Station researchers have developed a new zebra mussel CD-ROM. The **"Zebra Mussel Information System"** includes identification, biology, ecology, impact, detection and monitoring, risk assessment, management and a list of references on the zebra mussels.

"As the knowledge base concerning the biology and management of zebra mussels expands, it is becoming increasingly more difficult to access pertinent and up-to-date information," said researcher Michael Grodowitz. The program runs under Windows using a hypertext interface, illustrations, maps, color photographs and an interactive question-and-answer section to help the user identify adult and immature zebra mussels. There is currently no charge for the CD-ROM, but the number of copies is limited.

Contact Michael J. Grodowitz, U.S. Army Corps of Engineers Waterways Experiment Station, CEWES-ER-A, 3909 Halls Ferry Road, Vicksburg, MS 39181, (601) 634-2972, email growdowm@ex1.wes.army.mil

PA Fish Wall Chart

A series of full color 17"x22" charts displaying coldwater; Warmwater; migratory; miscellaneous game, pan, and forage species is available from the state of PA. The price is only $1.41 each plus $2 shipping (1-5) or $3 (6 or more). Send check or money order to the Fish & Boat Commission, Publication Section, P.O. Box 67000, Harrrisburg, PA 17106-7000.

Fishes of AL and the Mobile Basin

This 832 pg. hardbound book was released in December. Species accounts provide a color photograph, range map, physical characteristics, adult size, habitat, and biology. The book is available through the Alabama Geological Survey, P.O. Box O, Tuscaloosa, AL 35486. Send check or money order for $50 plus $6 for shipping and handling.

Meetings of Interest

July 10-13: 3d Annual Mississippi River Conference, St. Louis, MO. This year's theme will be *"Health of the River: Health of the People"* Contact: Mississippi River Basin Alliance, Box 3878, St. Louis, MO 63122, (314) 822-4114, FAX (314) 821-4292.

July 14-15: Rocky Mountain Symposium on Environmental Issues in Oil and Gas Operations, Colorado School of Mines, Golden, CO. Contact: Ms. Sherri Thompson, U.S Bureau of Land Management, Lake-wood, CO 80215, (303) 239-3758, FAX (303) 239-3799.

July: III International Symposium on Sturgeon, ENEL Training Centre, Piacenza, Italy. Contact: Dr. P. Bronzi, ENEL spa - CRAM via Monfalcone, 15-20132 Milan (Italy) phone: + +39-2-72243412 or 3452, FAX: + +39-2-72243496,E-mail:bronzi@cram.enel.it.

July 27-30: Voluntary Solutions in Nutrient Management, Tunica, MS. Contact: Gwen Necaise, MS Soil and Water Conservation Commission, (601) 354-7645.

August 18-20: Wild Trout VI, "Putting the Native Back in Wild Trout", Montana State Univ., Bozeman, MT. Contact: Robert Gresswell, U.S. Forest Service, Pacific Northwest Research Station, 3200 SW Jefferson Way, Corvallis, OR 97456, (541) 750-7410, gresswer@ccmail.orst.edu

August 24-28: 127th Annual Meeting of the American Fisheries Society, Monterey, CA. Contact: Paul Brouha, (302) 897-8617, Ext. 209.

September 1997: Clean Enough? A Conference on Mississippi River Water Quality, New Orleans, LA. Contact: University of New Orleans Metropolitan College, Office of Conference Services, Lakefront Campus, Education 122, New Orleans, LA 70148.

Early November 1997: Ecological Restoration as a Key Element of Regional Conservation Strategies - 9th Annual Society for Ecological Restoration Conference , Ft. Lauderdale, FL. Contact: SER, 1207 Seminole Highway, Suite B, Madison, WI 53711, (608) 262-9547

December 6-10: Symposium on the Effects of Riparian Land-Uses on Aquatic Ecosystems. Milwaukee, WI. Contact: John Lyons, WI Dept. of Natural Resources, 1350 Femrite Dr., Monona, WI 53716-3736, (608) 221-6328, FAX (608) 221-6353, lyonsj@dnr.state.wi.us.

May 3-6, 1998: Watershed Management: Moving from Theory to Imple mentation, Denver, CO. Water Environment Federation. (703) 684-2400.

May 23-28, 1998: First International Ictalurid Symposium - Catfish 2000, Davenport, IA. Contact Steve Eder, Missouri Dept. of Conservation, P.O. Box 180, Jefferson City, MO 65109-0180. (573) 751-4115, FAX (573) 526-4047.

Congressional Action Pertinent to the Mississippi River Basin

Agriculture

H.R. 246 and H.R. 247 (Peterson, D/MN) extension of existing and expiring contracts under the **Conservation Reserve Program.**

H.R. 640 (Hostettler, R/IN) amends the wetland conservation provisions of the **Food Security Act of 1985 and the Clean Water Act** to permit the unimpeded use of privately-owned crop range and pasture lands that have been used for the planting of crops or the grazing of corn in at least 5 of the preceding 10 years.

H.R. 861 (Moran, R/KS) authorizes a farmer or rancher whose bid for re-enrollment of land into the **Conservation Reserve** is rejected to unilaterally extend the contract for a final year.

H.R. 1185 (Minge, D/MN) to ensure that land enrolled in the land conservation program of the state of MN known as *Reinvest in MN (RIM)* remains eligible for enrollment in the **conservation reserve** upon the expiration of the **RIM** contract.

Brownfields

H. R. 1396 (Rothman, D/NJ) to assist states and local governments in assessing and remediating brownfield sites and **encouraging environmental clean-up programs.**

H.R. 1462 (Visclosky, D/IN) to authorize the EPA Administrator to establish a pilot project providing loans to states to **establish revolving loans for the environmental cleanup** of brownfield sites in distressed areas that have the potential to attract private investment and create local employment.

Fish and Wildlife

S. 361 (Jeffords, R/VT) amends the **Endangered Species Act** to prohibit the sale, import, and export of products labeled as containing endangered species.

S. 491 (Ford, R/KY) to amend the **National Wildlife Refuge System Administration Act of 1966** to prohibit the Fish and Wildlife Service from acquiring land to establish a refuge of the National Wildlife Refuge System unless at least 50% of the owners of the land in the proposed refuge favor the acquisition.

S. 751 (Shelby, R/AL.) to protect and enhance **sportsmen's opportunities and conservation of wildlife.**

H.R. 374 (Young, R/AK) amends the **Sikes Act** to enhance fish and wildlife conservation and natural resources management programs.

H.R. 478 (Herger, R/CA) amends the Endangered Species Act of 1973 to improve the ability of individuals and local, state and federal agencies to comply with that act in building, operating, maintaining or repairing flood control projects.

H.R. 752 (Chenoweth, R/ID) amends the Endangered Species Act of 1973 to ensure that persons that suffer or are threatened with injury resulting from a violation of the act or a failure of the Interior Secretary to act in accordance with that act have standing to commence a civil suit on their behalf.

H.R. 1155 (Fazio, D/CA) to exempt certain maintenance, repair and improvement of flood control facilities in CA from the Endangered Species Act.

Flood Insurance

H.R. 230 (McCollum, R/FL) to ensure that insurance against the **risk of catastrophic natural disasters,** such as hurricanes, earthquakes, floods, and volcanic eruptions, is available and affordable, and to provide for expanded hazard mitigation and relief.

Forests

H.R. 101 (Baker, R/LA) amends the National Forest Foundation Act to extend and increase the matching funds authorization for the foundation, to provide additional administrative support to the foundation, to authorize the use of investment income, and to permit the foundation to license the use of **trademarks, trade names, and other such devices** to advertise that a person is an official sponsor or supporter of the Forest Service or the National Forest System

House Resources Committee on April 8 held a hearing on **livestock grazing** policies on public domain national forests.

House Agriculture and House Resources committees held a joint hearing April 9 to review **forest ecosystem health conditions** in the U.S.

H.R. 1376 (Eshoo, D/CA) to amend the Forest and Rangeland Renewable Resources Planning Act of 1974 and

related laws to strengthen the protection of biodiversity and ban clearcutting on federal lands and to designate certain federal lands as Northwest Ancient Forests, roadless areas. and special areas where logging and other intrusive activities are prohibited.

Government Affairs

S. 34 (Feingold, D/WI) to phase out federal funding of the **Tennessee Valley Authority.**

Grazing

H.R. 547 (Nadler, D/NY) requires the Interior and Agriculture secretaries to **establish grazing fees** at fair market value for use of public grazing lands.

Land Acquisition

H.R.1487 (Campbell, R/CA) to provide off-budget treatment for one-half of the receipts and disbursements of the **Land and Water Conservation Fund,** and to provide that the amount appropriated from the fund for a fiscal year for federal purposes may not exceed the amount appropriated for that fiscal year for financial assistance to the states for state purposes.

Mining

S. 325, S. 326, and S. 327 (Bumpers, D/AR) to repeal the percentage depletion allowance for certain **hardrock mines,** provide for the reclamation of abandoned hard-rock mines, and ensure federal taxpayers receive a fair return for the extraction of locatable minerals on public domain lands, respectively.

Parks

S. 301 (McCain, R/AZ) and H.R. 682 (Kolbe, R/AZ) authorizes the Interior Secretary to set aside up to $2 per person from **park entrance fees** or assess up to $2 per person visiting the Grand Canyon or other national parks to secure bonds for capital improvements to the park.

H.R. 104 (Bartlett, R/MD) authorizes the **private ownership and use of National Park System lands.**

H.R. 302 (Skaggs, D/CO) a bill entitled the **"Rocky Mountain National Park Wilderness Act of 1997".**

H.R. 901 (Young, R/AK) to preserve the sovereignty of the United States over public lands by requiring that **United Nations heritage designations** be subject to congressional approval.

Public Lands

S. 477 (Hatch, R-UT) amends the Antiquities Act to require an Act of Congress and the consultation with the governor and state legislature prior to establishment by the president of national monuments in excess of 5,000 acres.

S. 691 (Murkowski, R/AK), to require public review and the authorization of Congress for any **presidential designations** of national monuments, biosphere reserves, and world heritage sites on public lands;

S. 749 (Dorgan, D/ND) to provide for more effective management of the **National Grasslands.**

H.R. 919 (Miller, D/CA) establishes **fair market value pricing** of federal natural assets, and for other purposes.

H.R. 1196 (Skaggs, D/CO) to amend the **Colorado Wilderness Act of 1993** to extend the interim protection of the Spanish Peaks planning area in the San Isabel National Forest.

Refuges

H.R. 511 (Young, R/AK) to amend the **National Wildlife Refuge System Administration Act of 1966** to improve the management of the refuge system.

H.R. 512 (Young, R/AK) to prohibit the expenditure of funds from the **Land and Water Conservation Fund** to create new National Wildlife Refuges without specific authorization from Congress.

H.R. 952 (Miller, D/CA) to clarify the mission, purposes and authorized uses of the **National Wildlife Refuge System** and to establish requirements for administration and conservation planning of that system.

House Resources Committee approved on April 30, H.R. 1420, the National Wildlife Refuge System Improvement Act of 1997 reforming the management of the National Wildlife Refuge System.

Takings

S. 709 (Hager, R/NE) to protect private property rights guaranteed by the fifth amendment to the Constitution by requiring federal agencies to prepare **private property taking impact analyses** and by allowing expanded access to federal courts.

H.R. 95 (Solomon, R/NY) to ensure that federal agencies establish the appropriate procedures for assessing whether federal regulations might result in the **taking of private property,** and to direct the Agriculture Secretary to report to the Congress with respect to such takings under programs of the Dept. of Agriculture.

Transportation.

S. 468 (Chafee, R/RI) to continue the federal role in developing a national intermodal surface transportation system through programs that ensure the safe and efficient movement of people and goods, improve economic productivity, preserve the environment, and strengthen partnerships among all levels of government and the private sector;

S. 586 (Moynihan, D/NY) to reauthorize the Intermodal Surface Transportation Act of 1991.

Senate Commerce Committee held a hearing April 24 on the reauthorization of the **Intermodal Surface Transportation Effficiency Act.**

H.R. 1609 (Molinari, D/NY) to reauthorize the **Intermodal Surface Transportation Efficiency Act of 1991.**

Water and Wetlands

H.R. 128 (Crapo, R/ID) to preserve the authority of the states over waters within their boundaries, to delegate the authority of the Congress to the **states to regulate water.**

H.R. 227 (McCollum, R/FL) directs the Secretary of the Army to conduct a study of **mitigation banks.**

H.R. 238 (Robert Menendez D/NJ) to **amend the Oil Pollution Act of 1990** to make the act more effective in preventing oil pollution in the nation's waters through enhanced prevention of, and improved response to, oil spills, and to ensure that citizens and communities injured by oil spills are promptly and fully compensated, and for other purposes.

H.R. 550 (Oberstar, D/MN), Non-Point Source Water Pollution Prevention Act of 1997 amends the **Clean Water Act** to establish requirements and provide assistance to prevent nonpoint sources of water pollution, and for other purposes.

H.R. 640 (Hostettler, R/IN) amends the wetland conservation provisions of the **Food Security Act of 1985 and the Clean Water Act** to permit the unimpeded use of privately-owned crop range and pasture lands that have been used for the planting of crops or the grazing of corn in at least 5 of the preceding 10 years.

Wilderness.

House Resources Committee panel held a hearing April 15 on implementation of the **1964 Wilderness Act** on Bureau of Land Management and Forest Service lands.

H.R.1567 (Hansen, R/UT) to provide for the designation of additional **wilderness lands in the eastern U.S.**

Sources: Land Letter, STATUS REPORT, Vol.16, No. 2, 5, 8, 11, and 13; and NOAA Legislative Informer, March 1997, Issue #22

River Crossings

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