

CROSSROADS

**CONGRESS,
THE CORPS OF ENGINEERS
AND THE FUTURE OF AMERICA'S
WATER RESOURCES**

March 2004

NATIONAL WILDLIFE FEDERATION
and
TAXPAYERS FOR COMMON SENSE

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This report would not be possible without the dedicated efforts of dozens of citizens' organizations and thousands of people outraged at the continued devastation and waste inflicted on priceless natural resources in their communities.

This groundswell of public alarm has spawned the Corps Reform Network, made up of more than 100 grassroots, regional and national organizations united to fundamentally change the way the Army Corps of Engineers manages the nation's water resources. Many are fighting uphill battles against well-financed opponents and a huge bureaucracy. Yet, they are taking the time to help each other, to identify common problems and constructive solutions needed to set the Corps on the right course for the future of the country and its natural and financial resources. A current list of Network members is available at www.nwf.org/greeningcorps.

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crossroads:

CONGRESS, THE CORPS OF ENGINEERS AND THE FUTURE OF AMERICA'S WATER RESOURCES

P R E F A C E

Across the nation, hundreds of water projects are being planned and constructed by the U.S. Army Corps of Engineers. Many of these projects pose serious harm to wildlife, sensitive natural resources, and our quality of life, often at significant and unnecessary taxpayer expense. These projects continue despite credible and mounting evidence of numerous flaws in project designs and economic justification, and a growing concern for the price they will extract. The fact that damaging and wasteful proposals continue to receive federal funds and are proceeding is a dramatic testament to the need to overhaul the Corps of Engineers.

The agency that has changed the course of America's mightiest rivers must now itself change. The Corps must cease to be a tool for lawmakers to bring home pork-barrel projects for special interests, and instead become an agency that works towards a more environmentally and economically sustainable America.

This report provides a blueprint for that essential reform. It also provides new information on the Corps' most wasteful water projects, illustrating the true toll they take on people and places and the need to stop all of these wasteful projects.

The only way to reform the Corps is for the public to demand change. The weight of the evidence demonstrates that the Corps will not fix itself. And many pork-barrel driven politicians are loath to change their ways.

It is our goal that *Crossroads* will arm concerned citizens with the facts and case histories that demonstrate the need for change, the consequences of the present course, and the solutions necessary for effecting real change.

The missions of the National Wildlife Federation and Taxpayers for Common Sense are to promote actions that lead ultimately to environmental and fiscal health, respectively. Corps reform is long overdue. It is time for people everywhere to demand that their representatives follow this prescription for action. Together, we can make the agency that has long been the enemy of nature and taxpayers into the ally of both.

National Wildlife Federation

Taxpayers for Common Sense

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Missouri River — Gavins Point Dam, South Dakota.
Photo Credit: U.S. Army Corps of Engineers

executive summary



The nation's largest water management agency, the U.S. Army Corps of Engineers, is at a crossroads. The Corps is poised to either continue down the path of wasteful water resource projects, or become an agency that spends taxpayer dollars responsibly and protects and enhances the environment.

At the start of the 21st Century, the nation faces record budget deficits and escalating water infrastructure needs. Congress and the Administration must redirect the nation to prioritize economically efficient, equitable and environmentally sustainable approaches to meet water resource challenges. The National Wildlife Federation and Taxpayers for Common Sense can envision a vital role for the Corps in the nation's future. But, first it must change.

Crossroads is the culmination of two years of exhaustive research. We have conducted scores of interviews, immersed ourselves in the Corps' planning guidance and regulations, engaged in the decision-making process for many of the projects discussed, researched numerous historical documents, and consulted with dozens of experts within and outside the federal government on a wide-range of water resources issues. *Crossroads* documents and chronicles significant problems throughout the Corps' civil works program, their economic and environmental toll, and illustrates how these problems prevent the Corps and its thousands of dedicated public servants from meeting the nation's true water infrastructure needs.

In addition, *Crossroads* identifies the 29 most threatening and wasteful Corps projects in the country. Collectively and individually, these projects demonstrate why the need to reform the Corps could not be more urgent. All of

these projects must be stopped. This report ranks the 14 most urgent threats among these wasteful projects in terms of their cost to federal taxpayers, harm to natural resources, and imminent critical junctures in planning, construction or operation.

Throughout its history, the agency's civil works program has deepened more than 140 ports and harbors, constructed 11,000 miles of inland waterway navigation channels, built 8,500 miles of levees and floodwalls, and erected more than 500 dams. Today, the Corps continues to operate and maintain more than 1,500 projects. Many other projects built by the Corps are operated locally. While some of this work has contributed to the nation's infrastructure, many of these projects have wasted billions of dollars, and have damaged – or threaten to damage – floodplains, rivers and coastlines.

If constructed, the 29 projects featured in this report would cost federal taxpayers \$12 billion and threaten more than 640,000 acres of wetlands and shoreline areas, about 6,500 miles of rivers and coastlines, eight national parks, seashores and wildlife refuges, and the Great Lakes. In addition, these projects directly threaten a host of water-dependent wildlife, including mallard ducks, sea turtles, migratory birds, black bear, wild game such as turkey and deer, and hundreds of types of fish and mussels. Some of the species at risk are threatened or endangered.

The Corps' current workload and \$58 billion project backlog are the result of long being beholden to special interests and members of Congress driven by the desire to bring home the bacon. A barrage of scandals and

independent investigations expose a trend of manipulated economic and environmental studies to justify building unnecessarily large-scale projects to benefit special interests. The Army Inspector General, the National Academy of Sciences, the General Accounting Office, and other federal and state agencies have all uncovered flaws in a shocking number of Corps projects.

One alarming illustration is the Corps' Deer Creek Debris Basin project in Southern California. The Corps maintains that this project will protect people and property against severe flooding, but many independent experts disagree. Despite the serious questions raised by the State of California and the Ontario International Airport, the Corps refuses to take a second look. The Corps' assurances of safety are putting more and more people (as well as billions of dollars of property) in harm's way.

In eastern Arkansas, the Corps is pushing an irrigation project that approximately half of the intended farmer "beneficiaries" do not want. In New Orleans, the Corps is proposing to put low-income, predominantly minority neighborhoods through a 10-year construction nightmare in order to expand a lock for declining traffic levels. On the Outer Banks of North Carolina, the Corps is committing to spending \$1.8 billion to continually replace 14 miles of beach for the next 50 years. In the Mississippi Delta, the Corps is planning to build the world's largest pump to de-water tens of thousands of acres of increasingly rare bottomland hardwoods. Along the St. Lawrence River and the Great Lakes, the Corps is dusting off previously discarded billion dollar proposals to expand the navigation system at great peril to the health of the largest freshwater body in the world. At Devils Lake, North Dakota, Senators directed the Corps to ignore economics altogether to launch a project that could only be justified with fallacious science.

A Blueprint

This is not the first time the need for reform and changes within the Corps has been recognized. In 1836, a House Ways and Means Committee report complained of 25 over-budget projects and expressed a desire for "actual reform, in the further prosecution of public works. . . ." In 1902, an Ohio Congressman, frustrated by Congress' endless pursuit of pork-barrel water projects, led Congress to create a review board to determine whether Corps projects were truly needed. Ironically, Congress abolished this board a decade ago, and continues to pursue scores of wasteful and questionable projects.

Crossroads describes the actions necessary to halt this destructive trend. In this report, we do not recommend abolishing the Corps, but instead advocate a new path towards economically responsible and environmentally sustainable water resource decisions.

First, the Corps must be made far more accountable to the public through a truly independent system of project review that ensures projects are economically sound and environmentally sustainable. Congress and the Administration must mandate that citizens be permitted to fully participate in the project planning process and compel the Corps to accurately and openly measure the success of its work. The Corps must also fully mitigate unavoidable environmental damage caused by its projects.

Second, the Corps must modernize its approach to water resources development and management by incorporating watershed-based planning, new technologies, contemporary economic modeling and current environmental laws. The agency must establish effective procedures to periodically review and update all existing projects.

Third, Congress and the Administration must set clear work priorities for the Corps and limit its projects to the agency's primary mission area of navigation, flood damage reduction and environmental restoration. Congress must deauthorize projects that fail to meet current needs and immediately cancel those that lack economic justification.

Finally, Congress and the Administration must ensure costs for its projects are shared equitably among project beneficiaries. Congress must enforce cost-sharing requirements consistently and revise formulas to provide financial incentives to conserve taxpayer dollars and protect natural resources.

Corps Reform Allies

A bi-partisan group of members of the House of Representatives have formed the congressional **Corps Reform Caucus** to educate each other, their fellow Representatives, and the general public about the issues. Separately, more than 100 local, regional and national public interest organizations have joined to form the **Corps Reform Network** to demand that Corps projects and programs become fiscally and environmentally responsible. The Network is working with members of Congress to stop business as usual and compel Congress to address the serious problems so clearly evident with the Corps' current program before pursuing new projects. In 2002, legislation to launch more than \$4 billion in new Corps projects was stopped in its tracks because the bill did not contain measures to reform the Corps.

The Bush Administration has also highlighted the need for reform. In its Fiscal Year 2004 Budget, the Administration proposed five broad "Principles for

Improving Program Performance" to change the way the Corps and Congress conduct business. In many respects, these principles are in line with the principles identified in *Crossroads*.

Even the Corps recognizes that it needs to change and that it cannot do it alone. In June 2002, Lt. General Robert B. Flowers, the Chief of Engineers, told Congress: "[T]he Corps must change . . . Transformation of the Corps won't be easy, but we stand ready to work with you . . . in the Congress, the Administration, interest groups, our partners and stakeholders, for the well being of the American people and the environment in which we live."¹

In recent years, Congress has blocked even suggestions to consider investigating whether the Corps ought to continue some of its current civil works functions and whether any or all of those functions should reside within the U.S. Army. Given the looming water challenges and the critical importance of water resources to the nation, this debate must occur soon.

Remaining on the current path of waste and destruction at the Corps is not an option. The Corps must change. *Crossroads* explains how. The question before Congress and the Administration is: When?

¹ *Issues Pertaining to Water Resources Development Programs Within the U.S. Army Corps of Engineers Hearing Before the Senate Comm. on Env't and Public Works*, 107th Cong. 1, 4 (Jun. 18 2002) (statement of Lt. Gen. Robert B. Flowers, Chief of Engineers, U.S. Army Corps of Engineers).



The Corps channelized the Kissimmee River
in central Florida - now the subject of a large restoration effort.
Photo Credit: U.S. Army Corps of Engineers

accountability:

Demand Accurate Analysis and Reliable Results

"Embarrassing."² That's how the Chief of Engineers described the Delaware River Deepening project after the General Accounting Office (GAO) revealed that the Corps' economic study of the 100-mile, \$286 million river deepening plan contained "several miscalculations, invalid assumptions, and the use of significantly outdated information"³ that added up to vastly overstated benefits for an unjustified dredging plan.

Unfortunately, this is becoming all too common. Corps studies, done to buttress billions of dollars of new water infrastructure, are often based on outdated data and fuzzy math. The results are water projects with unfulfilled economic promises and a trail of environmental destruction. Fundamentally, the Corps is not held accountable to the public for reliable project planning or project performance. This problem is fueled, in part, by what political scientists have called the "Iron Triangle" – formed by certain members of Congress anxious to bring home water projects, Corps officials eager to grow the agency and special interests intent on reaping the benefits of federally subsidized projects. Without public oversight and a mandatory, independent review of its project studies, the Corps bends rules, twists facts, manipulates numbers, and ignores or glosses over environmental concerns, failing to deliver the promised results. Under the status quo, the public cannot trust Corps civil works projects to be sound investments of taxpayer dollars or environmentally sustainable solutions.

To restore faith and confidence in the Corps' civil works program, Congress and the Administration must make

the agency accountable for its actions and decisions by:

- Establishing independent review of costly and controversial projects,
- Enhancing meaningful public participation,
- Measuring actual results, comparing with predictions, and making necessary project modifications, and
- Requiring full and concurrent mitigation.

The Deterioration Of Trust In The Corps

A combination of factors during the 1990s created a "perfect storm" of reduced accountability in Corps projects and programs. As has long been observed, the Corps' classic system of pork-barrel spending is integral to the Iron Triangle, with strong incentives to deliver projects with little regard for the merits. At the same time, the agency's internal review process has devolved to a point where it provides no effective, technical and policy review of planned projects. The national interest gets lost when decisions are driven principally by political relationships, without an effective system of checks and balances.

Corners of the Iron Triangle

The key corner of the Iron Triangle is members of Congress who want the political recognition for delivering federal dollars to their home states and individual districts. Corps water projects represent one of the most tangible forms of pork. Also, leaders of the authorizing and appropriations committees that oversee the Corps enhance their political power in Washington, D.C. by doling out projects as favors to loyal members, while punishing those who stray from the fold. (See "Partners in

² *Issues Pertaining to Water Resources Development Programs Within the U.S. Army Corps of Engineers Hearing Before the Senate Comm. on Env't and Public Works*, 107th Cong. (Jun. 18, 2002) (oral statement of Lt. Gen. Robert B. Flowers, Chief of Engineers, U.S. Army Corps of Engineers).

³ GENERAL ACCOUNTING OFFICE, REP. NO. GAO-02-604, DELAWARE RIVER DEEPENING PROJECT, 2 (Jun. 2002).

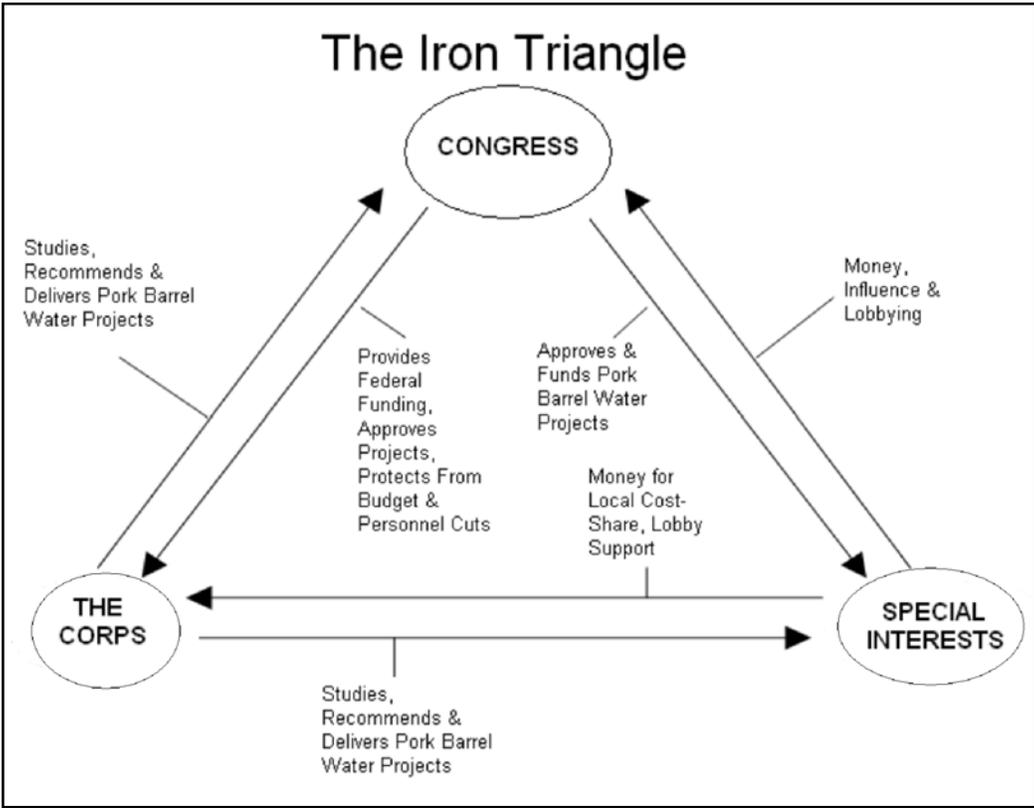
ACCOUNTABILITY

Crime: Congress and the Corps" p. 30). Members of Congress frequently communicate with Corps leaders to track the status of ongoing projects or studies. Lawmakers

almost always far less than the federal taxpayer share. These groups use their status and influence to control the direction and results of Corps project studies. They use

their money and political connections to influence Congress to approve and fund their favorite projects.

The final corner is the Corps itself in the role of project generator. Senior Corps officials are eager to fatten the agency's project-driven budget. If the Corps pleases members of Congress, it has a better chance of receiving more money in its annual budget. As the judge and jury on project proposals, the Corps studies and recommends projects to Congress that it will ultimately



are not bashful about conveying their desire for projects, sometimes articulating how the agency may be punished (with fewer funds) or rewarded (with more funds) based upon the agency's ability to please the member.

The second corner is special interests – entities that directly benefit from Corps water projects, or through construction and maintenance contracts. These special interests, such as barge companies, shipping lines, agribusinesses, wealthy landowners, and real estate developers, are intent on seeing federal money directed towards projects where they stand to benefit financially. In some cases, special interests include the local sponsor, who is responsible for paying a portion of the project, which is

construct. As a result, each project the agency studies represents an opportunity for the Corps to please Congress, special interests, and to grow its own budget. This internal pressure to justify projects makes it increasingly convenient and beneficial for the Corps to find ways to say "yes" to new projects.

The Secret Plan to "Grow the Corps"

In the late 1990s, Corps Headquarters and Division leaders initiated an elaborate secret plan to grow the agency's budget by 50% over five years. This growth initiative led Corps brass to target planning requirements as "impediments to growth."⁴ The Corps' growth initiative was exposed shortly after a senior Corps economist blew the

⁴ See Michael Grunwald, *Generals Push Huge Growth for Engineers*, WASH POST, Feb. 24, 2000, at A10; U.S. Army Corps of Engineers, Programs Management, *CW Program Growth Initiative, New Budget Authority, Direct Civil Works Appropriations* (power point presentation) (on file with National Wildlife Federation and Taxpayers for Common Sense).

whistle on a \$55.6 million economic study.⁵ A subsequent Army Inspector General investigation concurred with the whistleblower and found that senior Corps officials manipulated an economic model to justify the more than \$2 billion plan to expand the navigation locks on the Upper Mississippi River System.⁶ The Inspector General also found significant institutional pressure throughout the agency to deliver projects beyond the Upper Mississippi study.⁷

"The 'Grow the Corps' program placed pressure on Corps leaders and managers to justify projects."⁸

– Department of the Army, Office of the Inspector General

The Inspector General concluded that the Corps' "customer-service model," whereby the Corps treated the barge industry as its primary "partner," unduly influenced the direction of the project study. By allowing the barge industry an inordinate amount of influence over the

Upper Mississippi study, the Corps neglected the interests of its real customer – the federal taxpayer. The investigation concluded that the Corps' ability to be objective in its studies was in "jeopardy."⁹ Two separate follow-up reports by the National Academy of Sciences have echoed the Inspector General's report and criticized the Corps for ignoring cheaper and environmentally benign approaches to manage traffic more efficiently.¹⁰

Despite these documented failings, the pressure to justify the \$2.3 billion lock expansion remains unabated. The

Corps continues to downplay cheaper ways to manage river traffic, through measures such as scheduling and lock tolls. Instead it is using discredited economic models to justify this massive project.¹¹ (See "Upper Mississippi Navigation Expansion" p. 55).

Additional Projects with Discredited Analyses

- **Chesapeake & Delaware Canal.** Citizens uncovered miscalculations and invalid assumptions. See p. 79.
- **Dallas Floodway Extension.** OMB found that lower cost alternatives had not been evaluated. See p. 60.
- **Oregon Inlet Jetties.** GAO concluded the economic analysis to be unreliable. See p. 78.
- **Delaware River Deepening Project.** GAO and independent economists have revealed major errors in the two separate economic analyses. See p. 57.
- **Columbia River Deepening Project.** The Portland *Oregonian* exposed numerous flaws in the economic analysis that showed the project was unjustified. See p. 61.

⁵ NATIONAL RESEARCH COUNCIL, INLAND NAVIGATION SYSTEM PLANNING: THE UPPER MISSISSIPPI RIVER-ILLINOIS WATERWAY, 13 (Nat'l Academy Press, 2001); See Grunwald, *supra* note 4.

⁶ DEPARTMENT OF THE ARMY, OFFICE OF THE INSPECTOR GENERAL, REP. OF INVESTIGATION CASE 00-019 (Dec. 2000).

⁷ *Id.*

⁸ *Id.*, at 4-5.

⁹ *Id.*, at 6-7; see, *infra* note 35.

¹⁰ More efficient alternatives include tools that manage demand, such as scheduling, tradable lockage permits, and congestion fees. NATIONAL RESEARCH COUNCIL, *supra* note 5, at 4. NATIONAL RESEARCH COUNCIL, REVIEW OF THE U.S. ARMY CORPS OF ENGINEERS UPPER MISSISSIPPI RIVER-ILLINOIS WATERWAY RESTRUCTURED FEASIBILITY STUDY: INTERIM REPORT (Nat'l Academy Press, 2003).

¹¹ NATIONAL RESEARCH COUNCIL, *supra* note 10. Vernon Loeb, *Whistle Blows Again at Corps: Economist Says Locks Project Still Based on Flawed Model*, WASH. POST, Nov. 15, 2002, at A31. The Corps is using a "tow cost" model, which assumes that decisions to ship via barge are not sensitive to the price of water transportation until the next least costly mode of transportation is reached. At that point, no quantity will be shipped by barge. This model fails to recognize that commodities could have different uses that may not involve water transportation at all. It assumes that each barge shipment has the maximum willingness to pay. By contrast, the "spatial equilibrium" model recognizes that commodities may be shipped to different destinations, depending on commodity prices and transportation rates. The National Academy of Science noted that the model used to assess the Upper Mississippi River Navigation Expansion project (which was based on the spatial equilibrium model) was a major advance over the tow cost model because it models barge demand with users having a distribution of willingness to pay from the maximum down to the market price of barge service. The Academy recommended "that this spatial equilibrium model be used as a foundation for the feasibility study." NATIONAL RESEARCH COUNCIL, *supra* note 5, at 3, 41. Although application of the spatial equilibrium model theory needs to be further developed and refined, the Corps has decided to proceed with analyzing this project by reverting to the tow cost model. See Rock Island District, U.S. Army Corps of Engineers, *Restructured Upper Mississippi River – Illinois Waterway System Navigation Study Frequently Asked Questions*, at www2.mvr.usace.army.mil/umr-iwswns (last visited Aug. 7, 2003).

No Effective Review of Corps Projects

Over the past decade, changes – meant to "streamline" project planning – virtually dismantled an already inadequate review process, leaving no check on political pressures to approve projects. For 90 years before those changes, the Board of Engineers for Rivers and Harbors, consisting of Division Engineers and professional support staff, had conducted top-to-bottom reviews of new Corps project proposals, relatively independent of Corps Headquarter's influence. Congress created the Board in 1902 at the prompting of Representative Theodore E. Burton (R-OH), who was frustrated by Congress persistently pursuing questionable water projects. Burton proposed establishing the Board to review reports on river and harbor improvements submitted by Corps officers.¹²

In 1992, however, acting upon a cost-cutting recommendation from the Corps, Congress abolished the Board to simplify the planning process.¹³ Over time, the technical, substantive project reviews devolved to staff at the district level – where the greatest pressures from local sponsors and special interests exist.¹⁴ Several reorganizations and staff and budget cutbacks have rendered the internal review system worthless, and allow the external and internal pressures to approve projects to triumph over the nation's environmental and economic best interests.

Corps Incapable of "Independent" Review of Itself

Independent review is critical for ensuring accountability at the Corps. In recent attempts to conduct internal, sup-

posedly "independent" reviews of the Delaware River Deepening and Columbia River Deepening, the agency simply ignored key review findings that damaged project justification. In addition, the Corps' aborted attempts to internally review more than a hundred other projects further demonstrate the agency's inability to be objective about its own projects.

Delaware River Deepening Project

After the GAO issued its scathing audit finding "credible support" for just \$13.3 million in annual benefits, compared with \$40.1 million in annual costs,¹⁵ the Corps hired friendly consultants to provide an economic "reanalysis" of the \$286 million project. Locking the public out of the process, Corps leadership "resolved" issues raised by the consultants, concluding that the project's benefits barely exceeded the costs – a net return of just 14 cents on the dollar.¹⁶

A subsequent independent review uncovered major flaws in the reanalysis, including substantial errors, as well as questionable assumptions regarding data on oil shipments and costs of improving private channels and berths. The Corps also used an inappropriate discount rate and may have substantially under-estimated the costs of dredge disposal and environmental mitigation. (See "Delaware River Deepening Project" p. 57).¹⁷

Columbia River Deepening Project

After an *Oregonian* investigation revealed this project "would return just 88 cents in lower costs for each \$1 tax-

¹² NATIONAL RESEARCH COUNCIL, REVIEW PROCEDURES FOR WATER RESOURCES PLANNING, 15-18 (Nat'l Academy Press, 2002). See also, Martin Reuss, U.S. Army Corps of Engineers, Institute for Water Resources, Reshaping National Water Politics: The Emergence of the Water Resources Development Act of 1986, 6-7 (Oct. 1991) (Rep. Theodore Burton "opposed the 'pork-barrel' legislation that had become prevalent in Congress.").

¹³ Water Resources Development Act of 1992 § 223. See 33 U.S.C. § 541 note; NATIONAL RESEARCH COUNCIL, NEW DIRECTIONS IN WATER RESOURCES PLANNING FOR THE U.S. ARMY CORPS OF ENGINEERS, 45 (Nat'l Academy Press, 1999); 138 CONG. REC. H11,850 (daily ed. Oct. 5, 1992) (statement of Rep. Nowak); NATIONAL RESEARCH COUNCIL, *supra* note 12, at 22-23.

¹⁴ *Water Resources Development Act Issues Hearing Before the Senate Comm. on Env't and Public Works*, 107th Cong. 3-4 (Jun. 18, 2002) (statement of Montgomery Fischer, Policy Director for Water Resources, National Wildlife Federation); NATIONAL RESEARCH COUNCIL, *supra* note 12, at 23-24.

¹⁵ GENERAL ACCOUNTING OFFICE, *supra* note 3, at 5.

¹⁶ Philadelphia District, North Atlantic Division, U.S. Army Corps of Engineers, Delaware River Main Channel Deepening Project Comprehensive Economic Reanalysis Report, 21 (Dec. 2002), available at http://www.nap.usace.army.mil/cenap-pl/drmcdp/official_report.htm (last visited Aug. 21, 2003).

¹⁷ DR. ROBERT STEARNS, STRIKE THREE . . . THE CORPS FAILS AGAIN TO JUSTIFY THE DELAWARE RIVER DEEPENING 2-3, (Jul. 14, 2003) (commissioned by National Wildlife Federation and Delaware Riverkeeper Network), at <http://www.nwf.org/greeningcorps> (last visited Feb. 3, 2004).

payers spend,"¹⁸ the Corps handpicked another panel of consultants to review the Corps restudy of the plan to deepen the Columbia River. The Corps directed this review panel to make no recommendation about the merits of the project. Instead, the panel simply reviewed the agency's specific assumptions, methodology, interpretations and data used in the Corps' restudy. In addition to questioning the number of ships that would use the channel, the panel identified several unreasonable assumptions: that ship size would remain constant, that delays were solely related to channel depth, and that ships not currently using the full channel depth would benefit from the deepening.¹⁹ The panel also concluded that the Corps failed to examine the project in the context of other ports in the region. The Corps either ignored or dismissed most of these findings on its way to once again declaring the project economically justified.²⁰ (See "Columbia River Deepening Project" p. 61).

Sham "Pause"

Among the most egregious examples of the Corps' inability to conduct credible reviews of its project studies was the "pause" that Major General Robert Griffin, then Director of Civil Works, announced in the spring of 2002. Triggered by the imminent release of the GAO's negative audit of the Delaware River Deepening Project, the

"pause" halted more than 150 projects pending a review to ensure they are a "sound investment for our nation and are proposed in an environmentally sustainable way."²¹ Incredibly, after 16 days, the Corps cleared all but eight projects to proceed as previously planned.²² The Corps provided no documentation of its assessment, only naming the projects reviewed.²³ Then, one week later – again, with no explanation – the Corps identified a different list of projects that underwent the reassessment. Some of the projects cleared to proceed on the first list did not appear on the second list – leaving many wondering whether they had been reevaluated at all.²⁴

The Corps Habitually Overstates Project Benefits and Shortchanges the Environment

The lack of accountability within the Corps' program continues after projects are constructed. The Corps rarely follows up on completed projects or programs to evaluate whether the promised benefits were delivered, whether they are performing as planned, or whether ecosystems are responding as envisioned. Without follow-up evaluations, the Corps is doomed to repeat the mistakes of the past and guarantees its programs will not improve. The Corps continues new projects without reviewing results, without answering for unfulfilled promises, and without correcting past failures or environmental damage.

¹⁸ Jim Barnett & Brent Walth, *Key Parts of Corps Analysis Don't Hold Water: The Corps of Engineers Study Of Benefits Counted Empty Containers and Predicted Unrealistic Growth*, THE OREGONIAN, Mar. 3, 2002, at A10.

¹⁹ The panel pointed out that "benefits would only accrue to vessels now limited by channel depth, [for example,] those now leaving at departure drafts of 38 to 39 ft. that could load to 40 to 42 ft. with deepening." RESOLVE, Inc., Columbia River Channel Improvement Project: Technical Review of the Benefit and Cost Analysis in the Draft Supplement Integrated Feasibility Report and Environmental Impact Statement Dated July 2002, Summary Report of the Technical Review Process and Results, 27 (Sep. 9, 2002), at <https://www.nwp.usace.army.mil/issues/CRCIP/TechReviewReportFinal.pdf> (last visited Aug. 14, 2003). However, the Corps' final analysis assumed virtually all ships would depart at 3 feet greater depth. In other words, the deepening of the Columbia River from 40 feet to 43 feet would induce a vessel currently departing at 34 feet to now leave at 37 feet, or a vessel currently departing at 35 feet to now leave at 38 feet. Portland District, U.S. Army Corps of Engineers, Final Supplement Integrated Feasibility Report and Environmental Impact Statement on the Columbia River Channel Improvement Project, M-37 (Jan. 28, 2003), available at <https://www.nwp.usace.army.mil/issues/CRCIP/pubs.htm>. Removing these vessels from the equation would eliminate nearly 60% of the project's benefits.

²⁰ According to the review panel, "the absence of multi-port analysis is no longer reasonable in light of recent information." RESOLVE, Inc., *supra* note 19, at 37. In response, the Corps' final analysis simply stated that "interregional shifts in cargo are excluded from the projections." Portland District, U.S. Army Corps of Engineers, *supra* note 19, at M-31. Yet the Corps' analysis relies on a Port of Portland's study "no logistics" projection, which includes traffic diverted from other regional ports.

²¹ Michael Grunwald, *150 Water Projects Halted For Army Corps Review*, WASH. POST, May 1, 2002, at A2; Press Release, U.S. Army Corps of Engineers, Corps To Conduct Limited Review of Projects (Apr. 30, 2002), at <http://www.hq.usace.army.mil/cepa/releases/pa-02-10.htm> (last visited Aug. 26, 2003).

²² The Corps identified 172 projects that were reanalyzed, including 47 that were previously subject to an ongoing reevaluation. Of the projects that were not pending an ongoing reevaluation, 118 projects were identified as "Review Complete" and approved to proceed, while 8 were tagged for further evaluation as a result of this process. Michael Grunwald, *Corps Speedily Clears Way for 118 Projects*, WASH. POST, May 18, 2002, at A8.

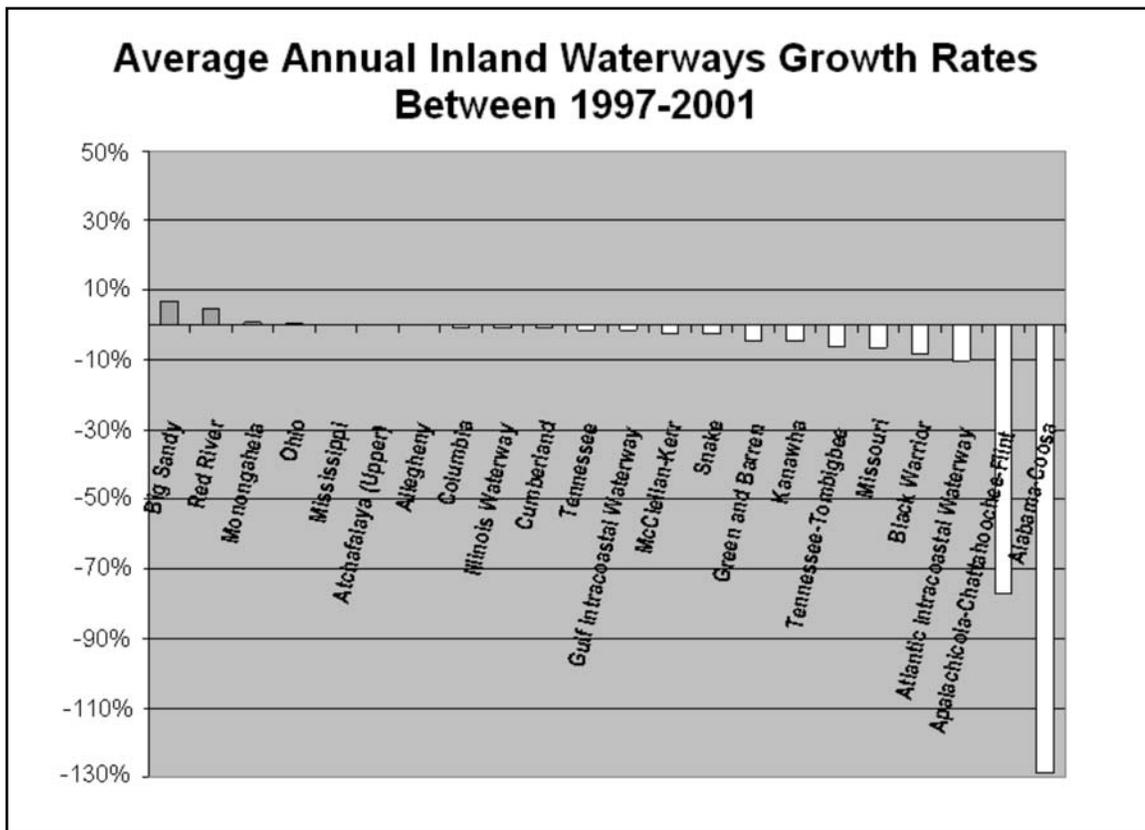
²³ *Id.*

²⁴ Press Release, Public Employees for Environmental Responsibility, Corps Changes List of Projects Under Review – Again; Zigzags Further Undercut Corps Credibility (May 28, 2002), at www.peer.org/press/242.html (last visited Aug. 7, 2003).

Overly Optimistic Predictions of Future Barge Traffic

Many inland waterway projects have failed to meet optimistic forecasts of future traffic. The nation spends — at 100% federal expense — more than a half billion dollars annually maintaining inland waterways, in many cases for a fraction of the traffic that justified initial construction. The Corps' program continues to fund all waterways, regardless of actual need or use.

The Corps compiles annual data on commercial traffic, but the agency seldom, if ever, compares predictions used to justify projects against the actual traffic. In a rare instance, Congress asked for such a comparison.²⁵ In its 2000 report responding to this request, *Projected and Actual Traffic on Inland Waterways*, the Corps demonstrated it is incapable of self-evaluation by rigging the study to exclude low-performing waterways and by practicing revisionist history on waterways that were included.²⁶



Completing the cycle of deception, in 2001 the Chief of Engineers reported to Congress that the agency's review found commercial traffic to be close to or greater than predictions in an "overwhelming majority" of cases.²⁷ In response, Public Employees for Environmental Responsibility (PEER), with the help of several

National Wildlife Federation and Taxpayers for Common Sense calculated the average annual growth rates for commercial traffic based on data available from the U.S. Army Corps of Engineers Institute for Water Resources Navigation Data Center. Sand and gravel tonnage, which the Corps considers non-commercial, is not included.

²⁵ *Energy and Water Dev. Appropriations for 2001 Hearing Before the House Subcomm. of Energy and Water Dev. of the Appropriations Comm.*, 106th Cong. (Mar. 28, 2000) (statement of Rep. Roger Wicker, "But I just wonder, for the major projects that we have had over time, over decades, and that this committee has approved, based on the figures that you have given them, have the numbers been "cooked"; have they been correct, and is there something that I can look at to see how we are doing as far as getting accurate forecasting?").

²⁶ NAVIGATION & WATER RESOURCES APPLICATIONS DIVISION, INSTITUTE FOR WATER RESOURCES, U.S. ARMY CORPS OF ENGINEERS, *PROJECTED AND ACTUAL TRAFFIC ON INLAND WATERWAYS*, Aug. 2000, at <http://www.iwr.usace.army.mil/iwr/pdf/InlandTraffic.pdf> (last visited Aug. 7, 2003). In this study, the Corps selected 15 traffic forecasts made on 10 inland waterways. Using 1998 data, the Corps concluded that 11 out of the 15 projections were either within 15% of what was forecasted or exceeded by actual traffic. Yet, only 5 of the 15 projections were associated with authorization proposals. Just one out of the five authorizing projections realized traffic greater than or equal to the forecast level. Had the Corps used 1999 data, none of the five projections would have met traffic forecasts. Low-performing waterways excluded from the evaluation were the Allegheny, Apalachicola, Atchafalaya, Atlantic Intracoastal, Big Sandy, Cumberland, Green and Barren, Gulf Intracoastal East, Kanawha, and Monongahela Rivers and Waterways. Public Employees for Environmental Responsibility, *Bias in Corps of Engineers Inland Navigation Traffic Forecasts and Recent Congressional Testimony*, 6 (Jun. 2001), at http://www.peer.org/corps_forecast_bias.html (last visited Aug. 7, 2003).

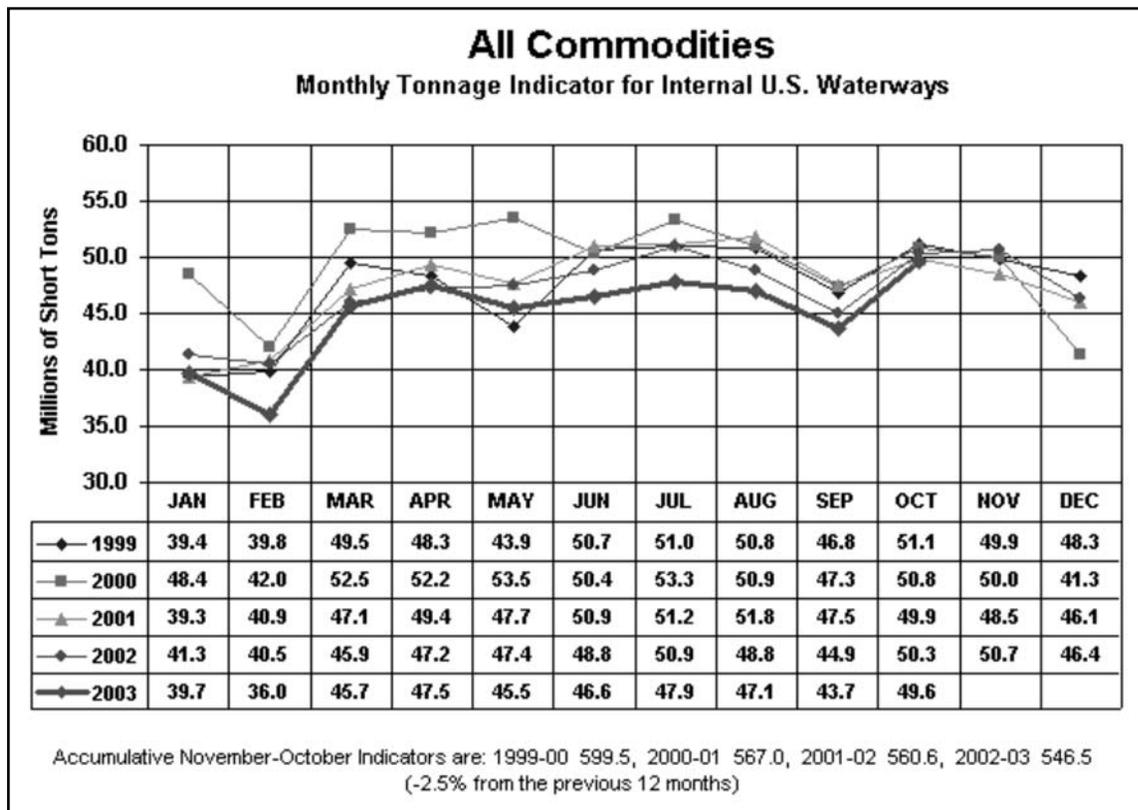
²⁷ *Hearing on Reforms to Address the Corps of Engineers' Feasibility Studies Before the Senate Subcomm. on Transp. and Infrastructure of the Comm. on Env't and Public Works*, 107th Cong. (Mar. 15, 2001) (oral statement of Lt. Gen. Robert B. Flowers, Chief of Engineers, Corps of Engineers), available at www.hq.usace.army.mil/executive/speeches/031501-epw.pdf (last visited Aug. 13, 2003).

retired Corps employees, documented many of the flaws in the Corps' 2000 report. In addition, using Corps data from 1995 through 1999, PEER reviewed waterway traffic growth rates on all of the nation's major developed waterways. Since the late 1980s, most inland waterways have exhibited low or even negative growth rates, and growth rates on waterways, as a whole, are trending downward.²⁸

Despite declining barge traffic, the Corps continues to plan new navigation projects, predicting increased inland waterway traffic of 33% by 2020.²⁹ Moreover, the Corps claims that general waterborne commerce will double by 2020, without clarifying where that growth will be – at ports or on inland waterways.

The Corps has failed to conduct the honest, objective and accurate assessments necessary to enable Congress, the Administration and the agency to make sound taxpayer

investments and water resource decisions. For instance, the Corps is maintaining many harbors and inland waterways at commercial depths that do not have the commercial traffic to justify ongoing operation and maintenance costs. In response, the Bush Administration has recommended that Congress deauthorize and eliminate funding for "navigation projects for harbors and river segments that have extremely low commercial use."³⁰



A review of tonnage that moved on U.S. inland waterways shows traffic has been essentially flat over the period between 1999-2003.
 Source: U.S. Army Corps of Engineers Institute for Water Resources Navigation Data Center

²⁸ Public Employees for Environmental Responsibility, *supra* note 26.

²⁹ See, e.g., Bob Pietrowsky, Director, Institute for Water Resources, U.S. Army Corps of Engineers, PowerPoint Presentation to the U.S. Section PIANC: 100th Anniversary Meeting, "Inland Waterways: The Funding Challenge," slide no. 8 (Apr. 18, 2002), available at <http://www.iwr.usace.army.mil/PIANC/Presentations/Vining%20PIANC1%20Apr%2002.pdf> (last visited Aug. 13, 2003); see also, Robert F. Vining, Chief, Programs Management, U.S. Army Corps of Engineers, PowerPoint Presentation to Nat'l Waterways Conference Annual Meeting, "The Infrastructure Challenge: So Many Demands, So Few Resources," slide no. 8 (Sep. 5, 2002), available at <http://www.waterways.org/meetings/2002/Vining.PDF> (last visited Aug. 13, 2003).

³⁰ BUDGET OF THE UNITED STATES FOR FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, 257, available at <http://www.whitehouse.gov/omb/fy2004>.

Projected and Actual Traffic on the Tennessee-Tombigbee (Tenn-Tom) Waterway

In its discussion of the Tenn-Tom Waterway in *Projected and Actual Traffic on Inland Waterways*, the Corps chose not to compare the real traffic levels to the wildly optimistic projections that were used to get the project constructed. Instead, the Corps picked the smaller (though still optimistic) projections made after the project's completion.³¹ When first authorized in 1945, the Corps predicted the Tenn-Tom would carry 5.76 million tons of commerce per year. After languishing for decades, the project had grown into a \$2 billion expenditure, and the Corps realized that this projection could never justify it. In 1976, Corps consultants delivered a new forecast that would get the project going – 28 million tons of commerce annually by 1986.³² However, the first year it opened, 1985, the Tenn-Tom carried just

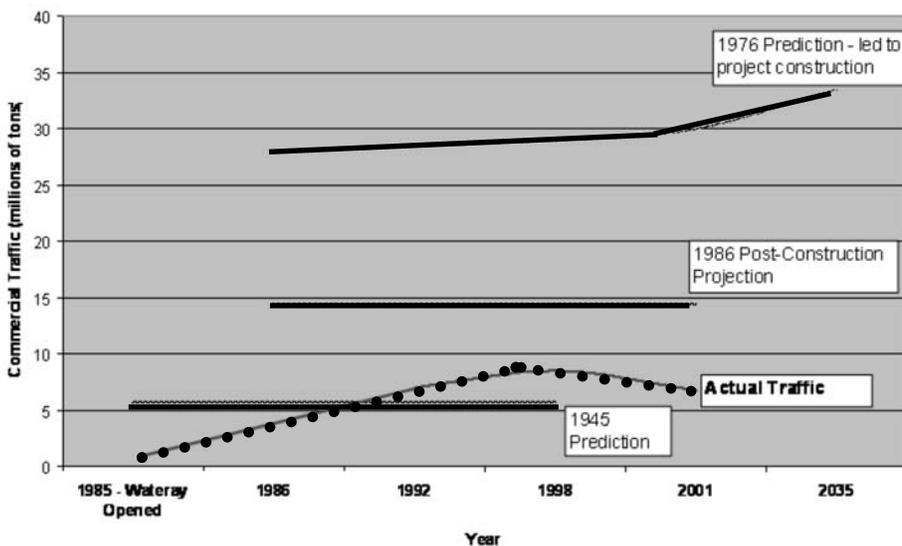


The Tennessee-Tombigbee Waterway grew from a \$300 million project to \$2 billion. Photo Credit: U.S. Army Corps of Engineers

1.36 million tons of commerce.³³ When it became clear that the 1976 predictions were outlandish, the Corps damage-control operation began. In 1986, a post-construction projection cut the 1976 prediction in half, but still proved to be hopelessly optimistic.³⁴ Despite the Corps' claim of accurate predictions, to date the Tenn-Tom has reached less than one-third

of the 1976 prediction (the one that led to construction) and less than two-thirds of the last revised projection.

Tennessee-Tombigbee Waterway Predictions v. Reality



³¹ See, NAVIGATION & WATER RESOURCES APPLICATIONS DIVISION, *supra* note 26, at 45-48.

³² *Id.*, at 46 (citing An Evaluation of the Transportation Economics of the Tennessee-Tombigbee Waterway, Kearney Management Consultants under contract to the U.S. Army Corps of Engineers, Feb. 1976).

³³ *Id.*, at 47.

³⁴ *Id.*, at 46-47 (citing Operational Forecast for Initial Traffic on the Tennessee-Tombigbee Waterway, Mobile District, U.S. Army Corps of Engineers, Aug. 1986). INSTITUTE FOR WATER RESOURCES, U.S. ARMY CORPS OF ENGINEERS, WATERBORNE COMMERCE OF THE UNITED STATES, CALENDAR YEAR 2001, PART 2 – WATERWAYS AND HARBORS, GULF COAST, MISSISSIPPI RIVER SYTETM AND ANTILLES, 128 (the Tenn-Tom carried 6.23 million tons in 1992), at <http://www.iwr.usace.army.mil/ndc/wcsc/pdf/wcusmvgc01.pdf> (last visited Aug. 7, 2003).

Projected and Actual Traffic on the Missouri River

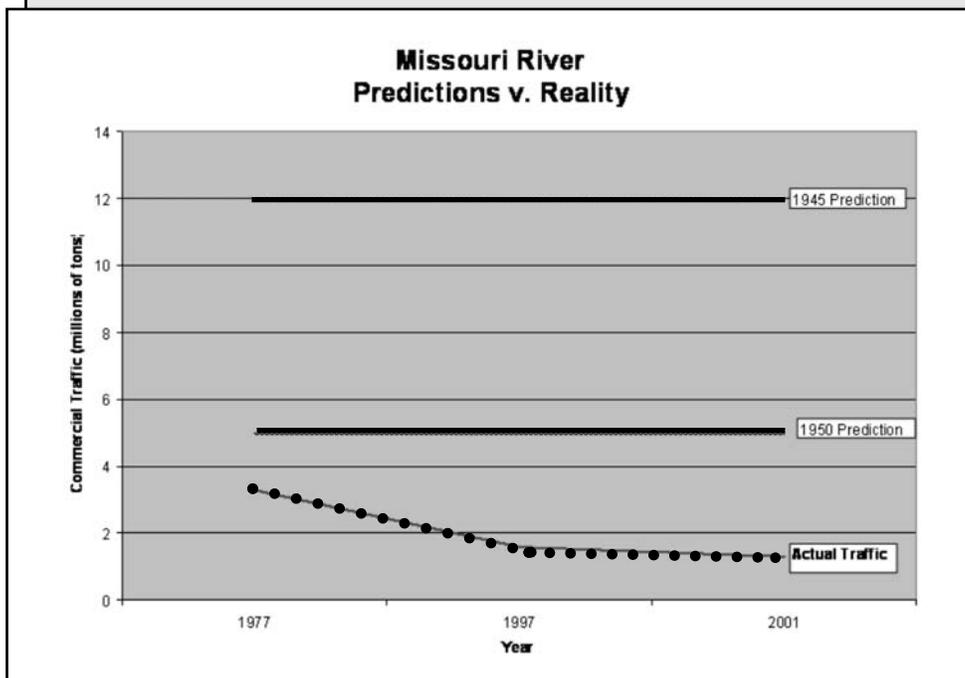
In its discussion of the Missouri River in *Projected and Actual Traffic on Inland Waterways*, the Corps included non-commercial traffic to boost actual tonnage figures.

In 1945, Congress authorized the navigation project for the stretch of the Missouri River between Sioux City, Iowa and St. Louis, Missouri based on predictions of 12 million tons of annual commercial traffic. This was later revised to 5 million tons of commercial traffic in 1950.³⁵ Commercial traffic on the lower Missouri River peaked in 1977 at 3.3 million tons, and by 1997 the traffic had dropped to 1.6 million tons. In just the last decade, commercial traffic has leveled off at an annual average of 1.5 million tons – just one-third of the *revised* prediction.³⁶ In 2000,



Training structures or wing dikes helped straighten and constrain the Missouri River. Photo Credit: American Rivers

when Congress directed the Corps to go back and compare actual traffic with its predictions, the Corps tried to cover its tracks by including *non-commercial* traffic figures to boost tonnage by 384%.³⁷ (See "Missouri River Navigation" p. 58).



³⁵ In 1945, the Corps combined two previous estimates for two different portions of the lower Missouri River to arrive at the 12 million ton estimate, as reflected in House Doc. 214. The Corps Division historian, however, found that in fact, the 12 million ton estimate "was not based on a Corps study, but was given to the Corps by an organization of private barge owners." NAVIGATION & WATER RESOURCES APPLICATIONS DIVISION, *supra* note 26, at 40-41. The Missouri River Division's 1950 economic evaluation predicted navigation tonnage on the river to increase from 4 million tons to 5 million tons 20 years after project completion. *Id.*, at 40.

³⁶ NATIONAL RESEARCH COUNCIL, THE MISSOURI RIVER ECOSYSTEM: EXPLORING PROSPECTS FOR RECOVERY, 74 (Nat'l Academy Press, 2002).
³⁷ In 1998, the Missouri River moved only 1.73 million tons of "commercial" tonnage, but the Corps added 6.65 million tons of non-commercial sand, gravel and waterway material movements to inflate actual traffic. The Corps itself points out in this analysis that sand, gravel and waterway material is not "commercial" tonnage and contribute little economic benefit. NAVIGATION & WATER RESOURCES APPLICATIONS DIVISION, *supra* note 26, at 41-43. In 2001, for example, the Missouri River transported less than 1.3 million tons of commercial traffic, compared with 8.44 million tons of non-commercial sand and gravel. INSTITUTE FOR WATER RESOURCES, *supra* note 34, at 38.

An Engineering Failure

Known more for its expertise in engineering rather than barge traffic predictions, the Corps is unwilling to admit when it makes engineering mistakes – even when people and property are at risk. Near Rancho Cucamonga and Ontario in Southern California's western San Bernardino County, a Corps flood damage reduction project sits on Deer Creek. The Corps built the Deer Creek debris basin in 1982 to catch and store rock, branches and other debris cascading down the San Gabriel mountains in the event of a major flood, while the floodwaters would escape down a concrete channel. The Corps claims the project will protect the more than 20,000 homes, two schools, a college campus and the nearly 100,000 people living below the dam from a flood that has a 1% chance of occurring each year.³⁸ Based on these safety assurances, this has become the fastest growing area in California with thousands of new homes built in recent years. However, outside experts including those from the Ontario International Airport and the State Department of Water Resources, have concluded that the debris basin is vastly undersized, providing only 75% to 60% of the protection alleged by the Corps.³⁹ The fall 2003 wildfires have increased the amount of debris, amplifying the risk of mudslides and damage to the communities in the valley.⁴⁰

As long as the Corps continues to certify the project, the ongoing development below the basin will continue. There is little question that millions (perhaps billions) of

dollars worth of property and human lives are at risk. The Deer Creek miscalculation further demonstrates that procedures are needed to objectively and independently review Corps projects where substantive concerns are raised.

Failed and Incomplete Environmental Mitigation

Finally, the Corps' track record on compensating for the damage its projects cause to fish, wildlife and wetlands is nothing short of abysmal. Federal laws require Corps projects, like private projects, to avoid impacts to wetlands and other waterways where practicable.⁴¹ If adverse environmental impacts cannot be avoided, the Corps is required to either modify the project or take additional steps to mitigate the harm. This is supposed to be undertaken concurrently with project construction.⁴² For projects with more than minimal impacts, the Corps is required to develop specific plans to mitigate fish and wildlife impacts.⁴³ Mitigation may include, for example, acquiring land to replace lost habitat, creating or restoring wetlands, or planting trees and other vegetation to stabilize soils and prevent erosion. In many cases, however, the Corps has not taken this responsibility seriously. The Corps will often recommend that a project proceed based on vague plans, which fail to confirm the availability of the lands to be purchased or to specify measures to be taken to restore habitat adversely affected by a project.⁴⁴ Despite the requirement to mitigate environmental impacts concurrently with project construction, in numer-

³⁸ Joe Mozingo, *Plan to Level Levee Alarms Residents*, L.A. TIMES, May 20, 2001, at B-1.

³⁹ *Id.* (A former hydrologic engineer who helped designed the Deer Creek debris basin believes it "has only 40% of the flood control capacity it was designed for."); CENTER FOR GOVERNMENTAL STUDIES, ALLUVIAL AMNESIA: HOW OFFICIALS IMPERIL COMMUNITIES BY DOWNPLAYING FLOOD RISKS, 12, n.11 (2002) (An engineer for the Los Angeles World Airport estimates the storage capacity of the debris basin "may be as little as 25% of the 292 acre-feet of debris that the Corps of Engineers estimates would be produced by runoff from a severe storm"), at www.cgs.org/publications/docs/alluvialamnesia.pdf (last visited Aug. 13, 2003).

⁴⁰ Buck Wago, *Cities Brace for Mudslides*, L.A. TIMES, Nov. 7, 2003; Paige Litz, *Mudslide Danger Looming*, L.A. TIMES, Nov. 14, 2003; *Californians Seek To Avoid Landslides* (NPR's All Things Considered, Nov. 11, 2003), available at <http://www.npr.org>.

⁴¹ Clean Water Act §§ 404(a), (b), 33 U.S.C. §§ 1344(a), (b); 40 C.F.R. § 230.10 ("no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.")

⁴² Water Resources Development Act of 1986 § 906, 33 U.S.C. § 2283(a).

⁴³ Water Resources Development Act of 1986 § 906, 33 U.S.C. § 2283(d).

⁴⁴ *Proposals for a Water Resources Development Act of 2002 Hearing Before the House Subcomm. on Water Resources and Env't of the Comm. on Transp. and Infrastructure*, 107th Cong. 6-7 (Apr. 10, 2002) (statement of Melissa Samet, Senior Director of Water Resources, American Rivers).

ous instances the Corps has walked away from a completed project without implementing the required mitigation because funding for construction has run out or needed land is unavailable.

In the cases where the Corps actually implements the required mitigation, the agency frequently shortchanges the environment. Ignoring the full extent and functions of the habitats, the Corps has replaced rare aquatic and riparian habitats with something drastically different. For example, the Corps' plan to mitigate 3,631 acres of ecologically-significant wetlands impacted by the Big Sunflower River dredging project (p. 53) is to plant tree seedlings on 1,912 acres of frequently flooded land. Even if the Corps were to actually complete this mitigation and the trees were to survive, the project would result in a loss of nearly half of the wetland acreage, as well as an enormous loss of wetland functions that cannot be replaced by simply planting trees.⁴⁵

The success of the Corps' mitigation efforts is largely unknown because the agency makes no effort to track whether promised mitigation has occurred, or more importantly, to determine the ecological impacts of its efforts. Mitigation plans often call for habitat development and restoration that may take years to implement successfully. As noted by a GAO expert scientific panel, the Corps' mitigation program "emphasizes the determination and design stages to the detriment of monitoring and evaluation stages" and "fails to require corrective actions in those instances where projects do not succeed."⁴⁶

The Corps is the federal permitting agency for any activities that involve dredging or filling U.S. waters (including wetlands).⁴⁷ With the exception of the Environmental Protection Agency's seldom-exercised veto authority, there is no check on whether the Corps itself complies with legal requirements to avoid, minimize and mitigate impacts to wetlands – requirements that the agency applies to other government and private entities. The Corps is allowed to approve its own dredge and fill activities, through its environmental review process, as part of project planning. The agency is currently proposing several projects with significant wetland impacts that the Corps would never permit a private entity to pursue.⁴⁸

The Road to Reform: Demand Accurate Analysis and Reliable Results.

In addition to the need for much stronger internal checks and accountability within the Corps, Congress and the Administration must help restore the public's faith and confidence in the Corps' civil works program.

- **Establish independent review of costly and controversial projects.** Congress and the Administration must require independent outside expert review of Corps studies for costly and controversial projects. Congress should require review by a panel of qualified independent experts for all studies of projects costing \$25 million or more, as well as studies of all projects that generate controversy because of threats posed to the environment or questionable economic

⁴⁵ *Id.*, at 7.

⁴⁶ GENERAL ACCOUNTING OFFICE, REP. NO. GAO-02-574, U.S. ARMY CORPS OF ENGINEERS: SCIENTIFIC PANEL'S ASSESSMENT OF FISH AND WILDLIFE MITIGATION GUIDANCE, 3 (May 2002).

⁴⁷ Clean Water Act § 404, 33 U.S.C. § 1344. The efficacy of the Corps' 404 regulatory program has also been criticized by the National Academy of Sciences, which found that the "goal of no net loss of wetlands is not being met for wetland functions by the mitigation program" and that "performance expectations in Section 404 permits have often been unclear, and compliance has often not been assured nor attained." NATIONAL RESEARCH COUNCIL, COMPENSATING FOR WETLAND LOSSES UNDER THE CLEAN WATER ACT, 2, 6 (Nat'l Academy Press, 2001).

⁴⁸ For example, the St. Johns Bayou/New Madrid Floodway project (p. 59) would impact 75,000 acres. The Yazoo Pump project (p. 53) would damage tens of thousands acres, while the companion Big Sunflower River also (p. 53) would damage an additional 3,631 acres. The Devils Lake Emergency Outlet (p. 63) would impact at least 6,000 acres of riparian habitat. The Clear Creek flood control project (p. 77) would impact 327 acres of wetlands.

ACCOUNTABILITY

justifications. The experts should represent various fields of study, including economics, engineering, biology, geology and hydrology. The process for selecting the experts and the experts themselves must be completely independent of the Corps and the interests surrounding the project under review.⁴⁹ This review can be structured without delaying the overall planning process by integrating the outside review into the existing system.

Independent project review would provide a check on Corps studies and counter-balance current political pressures to justify projects that fail to meet economic and environmental standards.

- **Enhance public participation.** Congress and the Administration should require the Corps to meaningfully engage the public and stakeholders early in the project planning process and make decision-making much more transparent. For example, the Corps should include the public in identifying the range of alternatives to be considered, rather than exclude them from "pre-decisional" analyses and communications. The Corps should also make all documents, studies, reports, and correspondence, as well as data collected in preparation for potential and current projects, available on the internet and other easily accessible public venues.
- **Measure completed project results, compare with predicted outcomes, and make necessary project modifications.** Congress and the Administration should require the Corps to evaluate and monitor whether projects deliver promised benefits, as well as project impacts, including tracking mitigation. Congress should require the Corps to report to
- **Require full and concurrent mitigation.** Congress and the Administration should also ensure that the Corps rigorously follows avoidance, minimization and mitigation requirements. The Corps should be prohibited from continuing to delay mitigation until after project construction. The Corps should be required to replace all impacted wetlands, and other fish and wildlife habitats, with a minimum of an acre of equivalent habitat for every acre destroyed. All mitigation must be completed before project construction is completed, with at least half of the mitigation implemented prior to beginning any project construction.

Congress and the Administration periodically on each project's overall performance, specifically including unintended consequences or results that differ from the original predictions that justified the project. This type of "look back" evaluation – as called for in the Bush Administration's FY 2004 budget – will help the Corps learn from past mistakes. Congress and the Administration should direct the Corps to use evaluations to modify projects, project operations and mitigation measures in order to correct errors, or, if necessary, decommission or dismantle projects that have unacceptable outcomes.

⁴⁹ NATIONAL RESEARCH COUNCIL, *supra* note 12.



Lock and Dam No. 17, near New Boston, Illinois, is one of 29 locks and dams on the Upper Mississippi River.
Photo Credit: U.S. Army Corps of Engineers



Seagull nest site on the Columbia river.
Photo Credit: U.S. Army Corps of Engineers

modernization:

Update Fundamental Approach to Water Resources Development & Management

The \$181 million Yazoo Backwater Pump project in Mississippi would destroy tens of thousands of acres of increasingly rare bottomland hardwood forests and wetlands – a single project damaging more than several years' worth of wetland losses permitted to private interests nationwide under the Clean Water Act. This proposal is half a century old – a relic from a bygone era when wetlands were considered useless swamps. Science now recognizes that wetlands serve critical functions in filtering, cleansing and storing water, and providing essential wildlife habitat. As a result, in 1990 President George H. W. Bush established the national "no net loss of wetlands" policy. Yet, the Corps continues to aggressively promote a project that in one fell swoop would set the nation years back in wetland protection goals.⁵⁰

The last several decades have brought many changes that affect the field of water resources development: such as new environmental laws, major advancements in economic and environmental sciences and technologies, and growth in watershed management. In fact, tremendous progress has been made in solving water issues with little or no structural changes, usually by working with – rather than against – nature. The Corps has not kept pace. The agency relies on anachronistic approaches that generate and perpetuate water projects that fail to meet 21st Century values.

Congress and the Administration must ensure that Corps projects reflect contemporary standards and advancements in water infrastructure planning by:

- Requiring comprehensive and watershed-based planning,
- Revising and updating the Corps' project planning rules,
- Increasing the benefit-to-cost threshold and revising the discount rate to improve the accuracy of economic analyses,
- Establishing effective procedures to periodically review and update all existing Corps projects, and
- Establishing river basin planning organizations.

The Corps' Planning Rules Are Woefully Out of Date

The Corps' planning guidance has been frozen in time for twenty years and must be updated to reflect evolving public attitudes and new advancements to better address water problems. The basic rules used by the Corps to plan and evaluate water resources projects, known as the *Principles and Guidelines*⁵¹ (usually referred to as the "P&G"), were written in 1983 by the Water Resources Council (WRC), which was disbanded shortly thereafter. The P&G dictates to the Corps how to consider environmental impacts, evaluate costs and benefits, and select

⁵⁰ U.S. Environmental Protection Agency, Comments to Yazoo Draft Reformulation Report and Draft Environmental Impact Statement (Nov. 3, 2000) ("The sheer size of the resources impacted by the project – more than 200,000 acres of wetlands, including some of the most valuable bottomland hardwoods in the region – raises concerns about significant degradation of the aquatic ecosystem. This action could undermine the Administration's goal of achieving an annual net gain of 100,000 acres of wetlands per year by 2005."), available at <http://www.epa.gov/region4/water/specialprojects/yazoo/letter.htm> (last visited Aug. 13, 2003); Vicksburg District, U.S. Army Corps of Engineers, Yazoo Backwater Area Reformulation Main Report, 85-87 (Sep. 2000) (stating that the "pumping plant would affect 23,500 acres of jurisdictional wetlands between the pump elevation 87 feet and 88.5 feet" and that "direct wetland losses due to the construction of the pump feature of the recommended plan will be 38 acres of bottom-land hardwoods and 110.5 acres of farmed wetlands"), available at <http://www.mvk.usace.army.mil/offices/pp/Yazoobackwater/report.asp> (last visited Aug. 13, 2003).

⁵¹ U.S. WATER RESOURCES COUNCIL, ECONOMIC AND ENVIRONMENTAL PRINCIPLES AND GUIDELINES FOR WATER AND LAND RESOURCES IMPLEMENTATION STUDIES (1983). While the P&G applies to four principal federal agencies that historically have planned new water projects – Corps of Engineers, Natural Resources Conservation Service, Bureau of Reclamation, and Tennessee Valley Authority – the Corps is essentially the only federal agency that continues to engage in planning new projects.

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project alternatives. Absent reconstitution of the WRC or new direction from Congress, it has been impossible to update the *P&G* to incorporate new laws, changing public values, or a wide-range of advances in economic and environmental sciences. This is a major reason why current Corps planning efforts fail to consider all economic and environmental values and impacts and fail to reflect a comprehensive watershed perspective. Additionally, the Corps uses economic assumptions that are unrealistic and produce skewed benefit-cost analyses. Finally, the project justification standard of benefits simply exceeding costs (dating back to the New Deal era) is no longer appropriate. It is from a time when a fair return on taxpayer investment was not a high priority.

P&G Fails to Produce the Best Project Alternatives

The *P&G*'s exclusive emphasis on national economic development (NED)⁵² should be balanced with increased focus on protecting and restoring the environment. The formulation and evaluation of NED as currently required by the *P&G* must be updated to incorporate new methods and approaches to solving water problems. As noted by the National Academy of Sciences, "strict adherence to the NED account may discourage consideration of innovative and nonstructural approaches to water resources planning."⁵³ Moreover, the *P&G* assumes that projects with very high benefit-to-cost

ratios are appropriate for federal action without considering whether a high return on an investment could indicate private sector interest.

The National Academy of Sciences found "the Corps' benefit-cost procedures may be inadequate in incorporating the full range of benefits associated with nontraditional, nonstructural projects."⁵⁴ Nonstructural projects, such as relocating high-risk properties and utilizing demand management practices, often benefit the environment while costing far less than structural approaches over the long run. The Corps frequently fails to account for the value of sustainable environmental protection, and ignores the value of services provided by natural water systems and wetlands, such as storing excess floodwater, cleansing and filtering water and providing habitat for wildlife.⁵⁵ In fact, under the current rules, the Corps can count draining wetlands as an economic benefit of a project. The *P&G* severely limits the Corps' ability to select an alternative with fewer environmental consequences, or one that could contribute to the national interest in ways other than economic development.

Examples of Nonstructural Solutions

Flood Damage Reduction can be accomplished by helping people and businesses move out of high-risk, floodprone areas, flood-proofing structures in lower risk areas, implementing zoning and building codes to direct new development out of harm's way, and restoring the natural functions of floodplains.

Navigation congestion on waterways and at ports can be alleviated by utilizing demand management tools such as lock tolls and other user fees, and scheduling traffic, as well as utilizing modern maritime information system technologies.

Water supplies can best be utilized through pricing policies, efficiency improvements, water conservation and reuse.

⁵² National Economic Development or NED is an account required to determine the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct net benefits that accrue in the planning area and the rest of the nation. *Id.*, at § 2(b). Generally, a plan recommending federal action is the "alternative plan with the greatest economic benefit consistent with protecting the Nation's environment (the NED plan), unless the Secretary of a department or head of an independent agency grants an exception to the rule. Exceptions may be made when there are overriding reasons for recommending another plan, based on Federal, state, local and international concerns." *Id.*, at § 6.

⁵³ NATIONAL RESEARCH COUNCIL, *supra* note 13, at 4.

⁵⁴ *Id.*, at 62.

⁵⁵ *Id.*, at 62-63.

Similarly, a recent panel of scientific experts commissioned by the GAO criticized "the Corps' reliance on economic tradeoffs to determine the acceptable [environmental] mitigation alternatives as presented in the [P&G]."⁵⁶ The panelists found the 1983 P&G runs counter to "current thinking, which emphasizes selecting the least damaging alternative and considering adjacent lands when determining which alternative to select."⁵⁷ They also criticized the guidance for not being "current because it does not consider mitigation activities in a landscape context."⁵⁸

Piece-Meal Approach To Aquatic Ecosystems

Among the most significant planning problems identified by the National Academy of Sciences is the Corps' tendency to favor single-purpose projects that focus primarily on local issues, rather than treating water resources as interdependent parts of ecological systems.⁵⁹ Perhaps the Chief of Engineers described the problem best:

[W]e need the Congress's help if we are truly to take a watershed approach. Right now, existing laws and policies drive us to single focus, geographically limited projects where we have sponsors sharing in the cost of the study. The current approach narrows our ability to look comprehensively and sets up inter-basin disputes. It also leads to projects that solve one problem, but may inadvertently create others. Frequently we are choosing the economic solution over the environmental, when we can actually have both. I believe the future is to look at watersheds first; then design projects consistent with the more comprehensive approach.⁶⁰

– Lt. General Robert B. Flowers

The Corps' analysis pays little or no attention to upstream and downstream impacts, and makes no attempt to integrate water quality, quantity, and ecology in the planning efforts.⁶¹ For example, addressing flooding in a single community may increase flooding downstream. In another case, the Corps channelized and confined the Mississippi River for navigation and flood control without considering that Louisiana relied on the river to carry sediments and nutrients to sustain its coastal wetlands. This is a major reason Louisiana is losing 25 to 30 square miles of coastline each year – the equivalent of about a football field every thirty minutes. These wetlands buffer the city of New Orleans and other communities from storms, and provide habitat to millions of migratory waterfowl – 70% of the ducks and geese that use the Central and Mississippi Flyways.⁶²

Single-purpose projects also miss opportunities to meet multiple needs and objectives. There are a wide variety of federal, state and local programs to protect, restore or enhance benefits of aquatic resources. Yet, the Corps' planning and cost-sharing rules create major impediments to coordinate and integrate such programs in project planning in order to maximize benefits to the public and the environment. Integrating environmental restoration into a project designed to meet other objectives, such as flood damage reduction or navigation, could attract contributions from a variety of sectors.

⁵⁶ GENERAL ACCOUNTING OFFICE, *supra* note 46, at 6.

⁵⁷ *Id.*, at 6-7.

⁵⁸ *Id.*, at 7.

⁵⁹ NATIONAL RESEARCH COUNCIL, *supra* note 13, at 52-54 ("The Corps now has the incentive to concentrate on individual projects of benefit to local interests who have indicated an ability and willingness to shoulder a substantial portion of project costs. Little incentive exists for sponsors of those projects to be concerned about upstream and downstream effects of their projects, and they have little interest in supporting planning studies to investigate those effects.")

⁶⁰ *Issues Pertaining to Water Resources Development Programs Within the U.S. Army Corps of Engineers Hearing Before the Senate Comm. on Env't and Public Works*, 107th Cong. 3 (June 18, 2002) (statement of Lt. Gen. Robert B. Flowers, Chief of Engineers, U.S. Army Corps of Engineers).

⁶¹ NATIONAL RESEARCH COUNCIL, *supra* note 13, at 52-57.

⁶² Laura Tangle, *Swamping Louisiana*, NATIONAL WILDLIFE MAGAZINE, Apr./May 2002, at 28.

Benefit-Cost Analyses Are Inherently Flawed

The outdated *P&G* also undermines the Corps' benefit-cost analyses through an inherently flawed discount rate. The standard criterion for assessing whether projects (other than for environmental restoration) can be justified is whether the benefits of the project outweigh the costs. The objective of a benefit-cost analysis is to calculate the "net present value" of an investment – that is, what are the expected benefits after subtracting the costs. Benefits of public works projects are generally realized further in the future (and may never fully materialize). Project costs, on the other hand, are relatively certain and occur earlier, usually within the first several years. Because benefits and costs occur at different times, their respective dollar values must be converted to a common point in time to be able to compare the two. This is referred to as *constant* or *real* dollars. Using constant dollars eliminates expected inflation by converting the value of a dollar to a particular year (e.g., "2002 dollars"). After converting the monetary value of benefits and costs into constant (or real) dollars, future

benefits and costs must be discounted with an appropriate discount rate, which adjusts for the value of money over time.

The Corps uses a flawed discount rate formula set in 1974 for its benefit-cost analyses, which today is leading to inaccurate and faulty assessments of project justifications. Most federal agencies must follow discount rate guidelines set forth and periodically updated by the Office of Management and Budget (OMB).⁶³ These guidelines, however, do not apply to the Corps. Instead, the *P&G* directs the Corps to obtain its discount rate annually from

Discount Rate calculates how much future benefits and costs are worth today by lowering future values to reflect the time value of money - \$100 in your hand today is worth more than \$100 fifty years from now. As the discount rate increases, the present value of future costs and future benefits decreases. Because benefits occur further in the future than most costs, the discount rate has a more profound effect on future benefits and can greatly distort the comparison of benefits and costs for long-term investments if it is not accurate.

"Real" Interest Rate is the rate that would be found if there were no inflation.

"Nominal" Interest Rate is the rate with inflation.

Time Value of Money is the concept that a dollar received today is worth more than a future dollar because today's dollar can be invested to earn interest.

the Water Resources Council.⁶⁴ But because the WRC has been defunct since 1983, the Corps turns to the U.S. Treasury for its discount rate, which is based on market interest rates for government securities.⁶⁵

⁶³ OMB CIRCULAR A-94, GUIDELINES AND DISCOUNT RATES FOR BENEFIT-COST ANALYSIS OF FEDERAL PROGRAMS (Oct. 19, 1992, revised Jan. 1, 2002), available at <http://www.whitehouse.gov/omb/circulars/index.html>.

⁶⁴ *Id.*, at § 4.b ("Specifically exempted from the scope of this Circular are decisions concerning: water resource projects (guidance for which is the approved *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies*)."). U.S. WATER RESOURCES COUNCIL, *supra* note 51, at § 1.4.11; Water Resources Development Act of 1974 § 80, 42 U.S.C. § 1962d-17 (this provision refers to the *Principles and Standards*, which were replaced in 1983 by the current *P&G*).

⁶⁵ "The interest rate for discounting future benefits and computing costs, or otherwise converting benefits and costs to a common time basis, is specified annually by the Water Resources Council, pursuant to Section 80 of WRDA 1974. Currently, however, [U.S. Army Corps of Engineers Headquarters] obtains the rate directly from the U.S. Treasury Department. Under the existing formula it represents the average yield during the preceding fiscal year on interest-bearing marketable securities of the United States which, at the time the computation is made, have terms of 15 years or more to maturity. The rate may not be raised or lowered more than one quarter of one percent for any year. The computation is made as of 1 October each year by the Treasury Department and the rate thus computed is used during the succeeding 12 months." U.S. Army Corps of Engineers, *The Digest of Water Resources Policies and Authorities*, EP 1165-2-1, at 5-10 (Jul. 30, 1999).

However, a decision to make a public investment must take into account more than the government's cost to borrow money – the interest rate on government securities. The decision must also consider displaced private investment by approximating the marginal, pretax rate of return on an average private sector investment. The Corps' discount rate is currently less than 6%,⁶⁶ while the private sector generally uses a discount rate closer to 10% for major capital improvement projects. Other federal agencies making public investment decisions use the OMB-set 7% discount rate.⁶⁷

In addition, using a rate based on government security interest rates fails to capture the true financial risk associated with Corps projects that frequently attempt to predict benefits 50 years into the future. While there is little risk associated with a security investment backed by the U.S. Treasury, "the final outcome of any infrastructure investment in either the private or public sector is much more uncertain."⁶⁸ The more risk there is that predicted benefits will not materialize, the higher the discount rate should be to reflect that risk in the present value. In light of the uncertainty of future benefits and the Corps' propensity to predict overly optimistic future scenarios (see "Overly Optimistic Predictions" p. 6), the discount rate should include an additional "risk premium" to capture the true risk associated with a project.⁶⁹

Moreover, for projects with a life of at least 50 years, the discount rate should reflect a long-term "real" interest rate average. Because the Corps obtains a new discount rate each year, however, it uses a rate based on that year's interest rates.⁷⁰ In recent years, interest rates – including government securities rates – have dropped to extremely low levels, driven largely by short-term monetary policy.⁷¹ The Corps' formula fails to consider the fact that interest rates will fluctuate considerably over the 50-year life of a Corps project. Using low interest rates lowers the discount rate, depressing the future value of money and inflating the present value of predicted benefits (and lowering the value of up-front costs). In contrast, the discount rate set by OMB for other federal agencies reflects an average over previous years.

Finally, the OMB guidelines specifically require public investment decisions to apply a "real" discount rate to constant dollar benefit-cost analyses in order to make financial "apples to apples" comparisons.⁷² The Treasury security rate used by the Corps is a "nominal" interest rate. A nominal interest rate includes inflation, while the Corps' benefits and costs are converted to constant dollars (without inflation). The Corps is effectively combining "apples" – the "real" costs and benefits – with "oranges" – the nominal discount rate.

⁶⁶ The 2003 discount rate was 5.875%. The 2004 discount rate is 5.625%

⁶⁷ OMB CIRCULAR A-94, *supra* note 63, at §§ 7.a, 8.a, b. Until late 1992, most federal agencies subject to the OMB guidelines used a 10% discount rate in benefit-cost analyses of public investments. On October 29, 1992, OMB established 7% as the required discount rate. *Id.*, at § 8.b.1. A 1% difference in the discount rate on a multi-million dollar investment over 50 years can significantly affect how much in benefits would be needed to justify the project.

⁶⁸ STEARNS, *supra* note 17, at 17.

⁶⁹ *Id.*

⁷⁰ The discount rate is pegged to the 15-year government securities rate. However, the discount rate may not be raised or lowered by more than 1/4 percent per year. Consequently, the discount rate generally trails the government securities rate.

⁷¹ Due to continued historically low interest rates, the mechanism for establishing Corps discount rates virtually guarantees that for the next several years, these rates will be well below the appropriate level for long-term capital investment decisions. As a result, the Corps will continue to promote economically questionable projects with inflated benefits.

⁷² OMB CIRCULAR A-94, *supra* note 63, at § 8.; *See also*, STEARNS, *supra* note 17, at 17.

Benefit-to-Cost Ratio Requirements Allow Small Return on Taxpayer Investments

The cost-justification trigger for Corps projects – that predicted benefits simply exceed the costs – was first established in the midst of the Great Depression.⁷³ The current benefit-to-cost ratio (BCR) threshold of 1-to-1 fails to require that taxpayers receive any return on their investments. Today, far too many projects are slipping by with BCRs that barely meet the current threshold. In light of the Corps' documented problems with assessing project costs and benefits, narrow benefit margins are a red flag and should trigger closer scrutiny of project economics. Historically, marginal Corps projects have not produced the benefits predicted, wasting federal funds. (See "Overly Optimistic Predictions" p. 6). Benefits from Corps projects should always significantly exceed costs before committing taxpayer dollars.

Furthermore, the current BCR ignores the costs associated with raising tax dollar revenue. Although there is a range of estimates, OMB approximates that the federal government must raise \$1.25 in taxes in order to net \$1 in revenue available for government spending.⁷⁴ As a result, the OMB guidance requires other federal agencies to account for this cost in their benefit-cost analyses.⁷⁵

The Impacts of an Outdated Planning Process

The Corps' flood damage reduction and coastal navigation projects illustrate the adverse consequences of the agency's

outdated approach to planning and developing water resources projects.

Ill-Conceived Flood Control Program

The Corps has spent \$123 billion to build and operate more than 500 large flood control projects and thousands of smaller projects nationwide, mostly within the past 50 years.⁷⁶ The Corps' traditional approach to reducing flooding largely relies on straight-jacketing rivers with levees and floodwalls, and quickly funneling floodwaters to downstream areas. These approaches sever hydrologic connections with wetlands and floodplains, and destroy their natural ability to store floodwater. Altering the hydrology, flows, and basic structure of streams and coastal areas is a major cause of the decline of many aquatic and water-dependent species.⁷⁷

What's worse, the Corps' approach has failed to reduce the nation's total flood damages. According to leading experts, the agency's attempts to control and reduce flooding have actually exacerbated flood damages by inducing



Missouri — In 1993, Mississippi and Missouri River floodwaters over-topped Corps levees. Photo Credit: U.S. Army Corps of Engineers

⁷³ Flood Control Act of 1936 § 1, 33 U.S.C. § 701a ("the Federal Government should improve or participate in the improvement of navigable waters or their tributaries, including watersheds thereof, for flood-control purposes if the benefits to whomsoever they may accrue are in excess of the estimated costs").

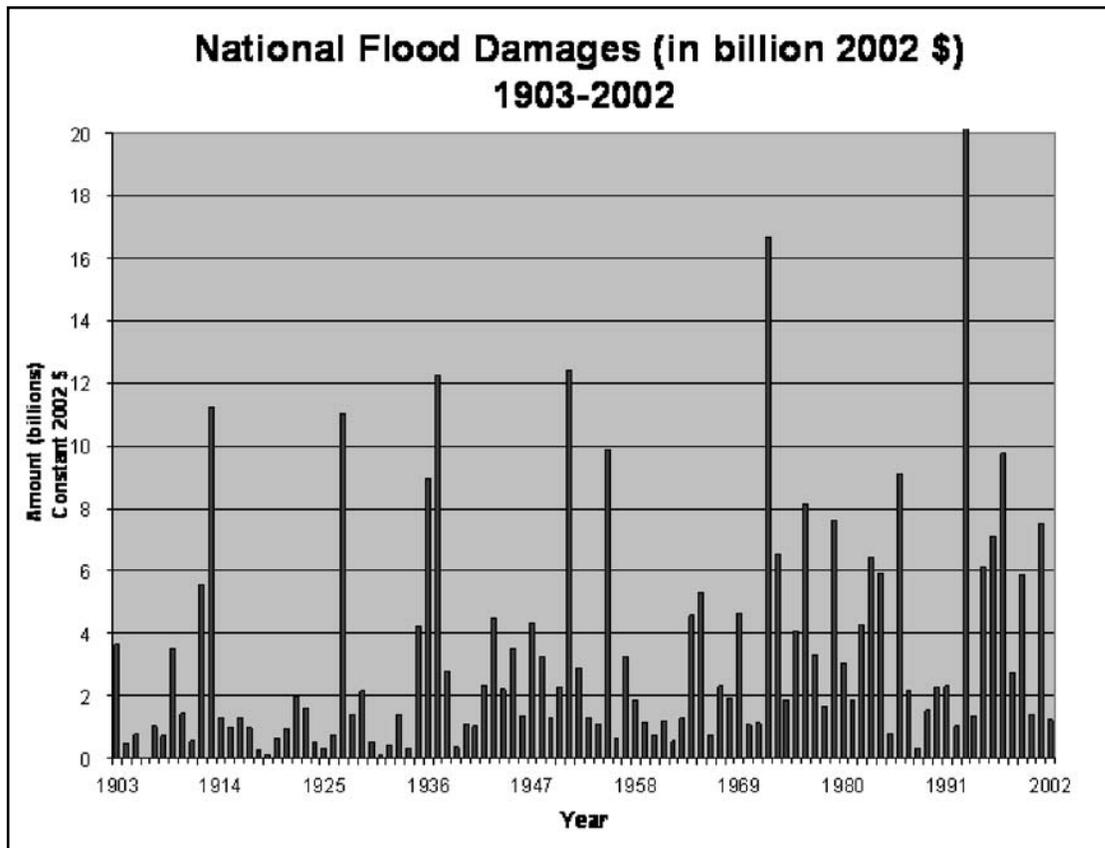
⁷⁴ OMB CIRCULAR A-94, *supra* note 63, at § 11. The Joint Economic Committee estimates that it costs \$1.40 to raise \$1 of tax revenue. JOINT ECONOMIC COMMITTEE, UNITED STATES CONGRESS, HIDDEN COSTS OF GOVERNMENT SPENDING (Dec. 2001), available at <http://www.house.gov/jec/hidden.pdf> (last visited Sep. 22, 2003).

⁷⁵ OMB CIRCULAR A-94, *supra* note 63, at § 11. Federal agencies must multiply the public cost of an investment by a factor of 1.25.

⁷⁶ \$123 billion is adjusted for inflation. Information Paper, U.S. Army Corps of Engineers, Civil Works Program Statistics as of September 30, 2002 (Jan. 1, 2003), at <http://www.usace.army.mil/inet/functions/cw/ccwcb/GWiz03.htm> (last visited Aug. 14, 2003).

⁷⁷ THE NATURE CONSERVANCY & ASS'N FOR BIODIVERSITY INFORMATION, PRECIOUS HERITAGE: THE STATUS OF BIODIVERSITY IN THE UNITED STATES, 245 (Bruce A. Stein et al. eds., 2000) ("91% of endangered fish and 99% of endangered mussels are affected by water development. Dams and other impoundments alone affect about 17% of listed species."); See also, Brian Czech, et al., *Economic Associations Among Causes of Species Endangerment in the United States*, *BIOSCIENCE*, Jul. 2000, at 593.

development in high-risk, floodprone areas and by increasing downstream flooding.⁷⁸ In the wake of the Midwest Flood of 1993, the Corps reviewed floodplain management of the lower Missouri River and Upper Mississippi River, and found that "[s]tructural flood protection projects have tended to induce floodplain development beyond what otherwise would have taken place. . . ."⁷⁹ While Corps projects have abated damages from



Source: The National Weather Service

smaller events, catastrophic damages from larger floods are increasing at a disturbing rate. Despite the billions of dollars spent, the nation's overall average annual flood damages have more than doubled in real terms – rising from more than \$2.6 billion per year in the first half of the 20th century to more than \$6 billion per year in the past ten years.⁸⁰

For years, the Corps' flood control program has failed to coordinate with other federal flood programs, such as the National Flood Insurance and federal disaster relief programs. The Corps' program also fails to encourage state and local governments to manage flood risks themselves, which would reduce and prevent the need for structural flood projects in the first place.⁸¹ The Association of State

⁷⁸ See REPORT OF THE INTERAGENCY FLOODPLAIN MANAGEMENT REVIEW COMM. TO THE ADMIN. FLOODPLAIN MANAGEMENT TASK FORCE, SHARING THE CHALLENGE: FLOODPLAIN MANAGEMENT INTO THE 21ST CENTURY (1994); NATIONAL WILDLIFE FEDERATION, HIGHER GROUND -- A REPORT ON VOLUNTARY BUYOUTS IN THE NATION'S FLOODPLAINS, 6-7 (1998); Larry Larson & Doug Plasencia, Association of State Floodplain Managers, *No Adverse Impact: A New Direction in Floodplain Management Policy*, Jun. 18, 2001, at <http://www.floods.org/PDF/NAIjournal.pdf> (last visited Aug. 14, 2003); H.R. 1428 "Two Floods and You are Out of the Taxpayers' Pocket" Act of 2001, and H.R. 1551 Repetitive Loss Reduction Act of 2001, and the National Flood Insurance Program Hearing Before the House Subcomm. on Housing and Community Opportunity of the Comm. on Fin. Serv., 107th Cong. (Jul. 19, 2001) (statement of David R. Conrad, Water Resources Specialist, National Wildlife Federation).

⁷⁹ U.S. ARMY CORPS ENGINEERS, FLOODPLAIN MANAGEMENT ASSESSMENT OF THE UPPER MISSISSIPPI AND LOWER MISSOURI RIVERS AND THEIR TRIBUTARIES, 10-26 (Jun. 1995). This report also found that projects, such as levees and floodwalls may "lead people, businesses, and communities to make decisions regarding continued floodplain development that increase the potential for large amounts of damage when extraordinary flooding occurs." *Id.*, at 2-26.

⁸⁰ The National Weather Service, Office of Hydrologic Development, Hydrologic Information Center, *available at* http://weather.gov/oh/hic/flood_stats/Flood_loss_time_series.htm (last visited Aug. 14, 2003). All numbers have been adjusted to constant 2002 dollars. See also, Alex Frangos, *U.S. Is Launching a Major Effort to Redraw Nation's Flood Maps*, WALL. ST. J., Sep. 19, 2003, at A1. Due to the damage caused by Hurricane Isabel, 2003 is likely to continue the trend of rising flood-related property damages.

⁸¹ SHARING THE CHALLENGE, *supra* note 78, at 74-80; NATIONAL WILDLIFE FEDERATION, HIGHER GROUND, *supra* note 78, at 123-27; Larson & Plasencia, *supra* note 78.

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Floodplain Managers is calling on all levels of government and the private sector to recognize the effects of activities that increase flood risk to adjacent and downstream areas, such as filling floodplains, developing land, and channelizing streams, and to plan accordingly to avoid or lessen those effects as part of any new development.⁸²

Despite these concerns, there is a significant bias against nonstructural solutions, such as buyouts and open space creation, within the Corps planning process. In calculating the benefits of flood projects, the Corps counts the value of land "protected" from flooding. The Corps often inflates the value of land behind a levee by speculating on future development potential. This inflated value often tilts the benefit-cost analysis toward structural projects.⁸³ In addition, the Corps fails to account for the "residual" risk associated with its projects – that is the potentially catastrophic risk of flooding if projects fail, if flood waters exceed design capabilities, or if changes in the watershed reduce the level of protection provided. At the same time, the current rules undervalue the inherent benefits of floodplains.⁸⁴ Congress recognized these biases in 1999, but the resulting law was vague and the Corps' interpretation preserved the status quo.⁸⁵

In a number of cases, local communities are demanding that the Corps incorporate designs that minimize structural features and emphasize buyouts, open space, parks and wildlife areas. One example is the Corps' Napa River flood control project in Napa, California, the state's third

most floodprone area. This innovative project includes buying out some 200 structures and buildings, widening bridges, constructing a short channel bypass, and restoring hundreds of acres of marshlands. For years, the Napa community rejected the Corps' traditional approaches. Ultimately the community hired engineering consultants, who radically redesigned the project. Once the Corps agreed to pursue the redesigned project, the community overcame a required two-thirds majority to pass new taxes and provide half the project's costs.

Irrational Port Planning

More than twenty major U.S. ports are now seeking over \$6 billion worth of new deepening projects in attempts to attract new business, often at the expense of other ports.⁸⁶ This "race to the bottom" is fueled by foreign shipping lines ordering massive container ships, and is further stoked by the Corps' existing planning system. Mega-container ships can cut transportation costs, but only if the ships are nearly full of cargo. To increase the chances that these big vessels will be used at full capacity, shipping lines are adopting a hub strategy – concentrating traffic at a few big ports, while smaller vessels serve other ports.⁸⁷ For instance, sixty percent of the nation's containers are now imported through California's twin ports of Los Angeles and Long Beach. Those containers are then placed on rail cars or trucks to be distributed to destinations across the country as far away as the East Coast.⁸⁸

⁸² Larson & Plasencia, *supra* note 78.

⁸³ A significant source of the benefits calculated for the purposes of a flood damage reduction project is based on land value in the affected area, derived from demographic information, including personal income and employment. U.S. WATER RESOURCES COUNCIL, *supra* note 51, at §§ 2.4.7 through 2.4.14. The Corps' emphasis on the value of land "protected" also disadvantages communities with homes of lesser value as compared to wealthier communities with higher valued homes.

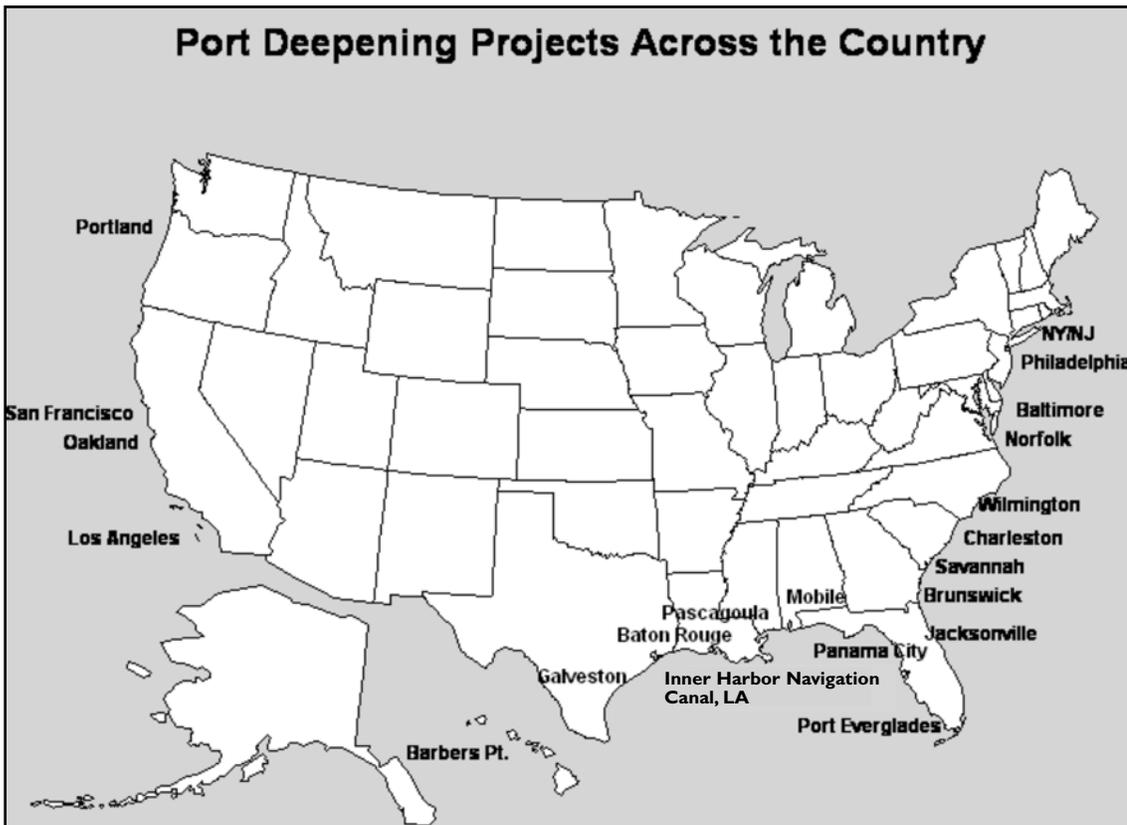
⁸⁴ *Id.*, at §§ 2.4.7 through 2.4.14.

⁸⁵ Water Resources Development Act of 1999 § 219, 33 U.S.C. § 2318(b) (requiring the Corps to "calculate the benefits of the nonstructural project using methods similar to those used for calculating the benefits of structural projects, including similar treatment in calculating the benefits from losses avoided."). Memorandum from Chief, Planning and Policy Division, Directorate of Civil Works, to Commanders, Subordinate Commands and District Commands, Regarding Implementation Guidance for Section 219 of the Water Resources Development Act of 1999, Nonstructural Flood Control Projects (Jan. 22, 2001) at http://www.usace.army.mil/inet/functions/cw/cecwp/branches/mp_and_dev/Wrda99/wrda99219.pdf (last visited Aug. 14, 2003).

⁸⁶ Taxpayers for Common Sense, Review of Army Corps of Engineers Fiscal Year 2003 Budget Justification Statements (2002) (on file with Taxpayers for Common Sense).

⁸⁷ Philip Siekman, *The New Wave in Giant Ships*, FORTUNE, Dec. 23, 2001; Aviva Freudmann, *Cargo Handoffs*, J. OF COMMERCE WEEK, Jun. 5, 2000, at 24.

⁸⁸ Don Phillips, *A Rail Model for Urban Congestion; L.A. Project Aids Shipping, Motorists*, WASH. POST, May 12, 2002, at A3.



Source: Taxpayers for Common Sense

The Corps "sells" port deepening as the only feature required for attracting mega-sized ships and achieving hub port status. Because dredging deeper channels is the Corps' principal port improvement tool, the agency ignores alternative port investments that may obviate the need for deeper channels. According to transportation economists the Corps hired to review the Columbia River Deepening Project, "[t]here is a pervasive assumption in the Corps and Port studies that containerized cargo growth at Portland is limited only by vessel capacity. This assumption is not substantiated."⁸⁹ In reality, "shipper port choice factors are typically far more complex, taking vessel schedules, rates, terminal conditions, and overall supply chain logistics into account."⁹⁰ Sufficient land and

labor, adjacent markets, and rail and truck networks are all critical to the selection of a hub port. (See, "Savannah Harbor Expansion Project" p. 72). Rather than seeking to be an all-purpose port, a more promising scenario for most is to become a niche port that caters to specialized shipping needs such as refrigerated produce or automobiles.⁹¹ Another scenario

is to act as a feeder port serving larger hub ports by transporting goods on smaller ships using existing infrastructure.

Justifiably, the Corps is not supposed to consider traffic simply shifted or diverted from one port to another as a benefit when calculating the national economic development potential of project alternatives. But neither should the Corps use this limitation to ignore the impacts that deepening one port has on neighboring ports. In the Columbia River case, the experts recommended that the Corps conduct a multi-port analysis to determine the regional effects of the project.⁹² On the south Atlantic coast, three ports are within 300 miles of one another and share much of the same coastal ecosystem – Wilmington, North Carolina; Charleston, South Carolina; and

⁸⁹ RESOLVE, Inc., *supra* note 19, at 25.

⁹⁰ *Id.*

⁹¹ Wilmington, Delaware, for example, has invested in refrigerated warehouses to accommodate fresh fruit, bananas and frozen meat shipments, which are transported on smaller ships. These ships prefer Wilmington's compact size and proximity to Interstate 95. Similarly, automobiles are relatively light cargo, but require more dockside space that congested ports often cannot provide. The Port of Wilmington, Delaware, at <http://www.portofwilmingtonde.com>; See also, Jim Barnett, *Delaware Port Competes in Niche Markets*, THE OREGONIAN, Mar. 5, 2002.

⁹² RESOLVE, Inc., *supra* note 19, at 25-28.

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Savannah, Georgia. The Corps assumes that each of these ports will maintain a constant share of the predicted increases of traffic to justify deepening all three ports. Yet, if all three South Atlantic ports are deepened, the three ports will not be fully utilized, wasting hundreds of millions of dollars and needlessly damaging a rich inter-related aquatic ecosystem.

An additional problem is that the Corps is not required to estimate how economic benefits are likely to be distributed. The Corps' national economic development analysis assumes that if there are transportation cost savings from a deeper channel or harbor, all of those savings will trickle down to the U.S. economy. As the experts reviewing the Columbia River project noted:

This assumption requires that transportation cost savings accrue to U.S. carriers, or are passed on as shipping cost reductions to U.S. shippers, U.S. consignees or other U.S. entities. . . . In this case, however, all of the container shipping lines serving Portland or likely to serve Portland are foreign. In the existing analysis, there is no demonstration regarding the portion of cost savings for foreign ocean carriers that would result in benefits to U.S. customers under the current and expected commercial context.⁹³

Similarly, in the case of the Delaware River Deepening project, the experts found that the degree of competition is important in determining how benefits are distributed. "Competitive firms pass all benefits on to their customers, which may be U.S. entities (imports) or foreign entities (exports). Where competition is less than effective, some

benefits may be retained by the shipping firm, in which case nationality of ownership may be of interest."⁹⁴ Yet, the Corps does not study the level of competition that exists to determine if predicted savings will indeed be passed on to U.S. entities and thus contribute to national economic development.

Moreover, the Corps often pursues port deepening projects without ensuring there is a clear plan for disposing dredge spoils in a cost-effective and environmentally safe manner. The lack of acceptable and reliable means for disposing dredge spoils is a major obstacle facing ports.⁹⁵ Just to maintain the depths of current ports and waterways, the Corps must annually dispose of more than 300 million cubic yards of dredge spoils, while an additional 100 million cubic yards of material is dredged from berths and private terminals. The annual volume of dredge spoils "equals a four-lane highway, 2-feet deep, stretching from New York City to Los Angeles."⁹⁶ The National Academy of Sciences estimates that approximately 5% to 10% of dredged material is contaminated with toxins.⁹⁷ As the number of suitable storage sites declines, the costs of ongoing maintenance and construction of deeper channels will increase. Additionally, the shortage of disposal storage sites is likely to increase pressure from ports to rollback critical environmental safeguards that protect habitat and fisheries.⁹⁸ (See "Columbia River Deepening" p. 61). While the Corps often touts "beneficial reuse" of dredge spoils as the solution, this policy has severe limitations particularly in large-scale dredging projects that yield massive amounts of dredged material.⁹⁹

⁹³ *Id.*, at 37.

⁹⁴ Planning and Management Consultants, Ltd., Delaware River Main Channel Deepening Project and Reanalysis of Project Benefits and Costs: An External Independent Review, 9 (Nov. 15, 2002) at http://www.usace.army.mil/inet/functions/cw/hot_topics/ext_ind_rev.pdf (last visited Aug. 14, 2003)

⁹⁵ NATIONAL RESEARCH COUNCIL, FREIGHT CAPACITY FOR THE 21ST CENTURY SPECIAL REP. 271, 3-39 to 3-40 (Nat'l Academy Press, 2002).

⁹⁶ American Association of Port Authorities, U.S. Public Port Facts, at <http://www.aapa-ports.org/industryinfo/portfact.htm> (last visited Aug. 14, 2003).

⁹⁷ NATIONAL RESEARCH COUNCIL, CONTAMINATED SEDIMENTS IN PORTS AND WATERWAYS: CLEAN UP STRATEGIES AND TECHNOLOGIES, 1 (Nat'l Academy Press, 1997).

⁹⁸ See, e.g., Scott Learn, *Ross Island Seeks Looser Rules*, THE OREGONIAN, Jan. 30, 2002, at C1 (mining company is asking state regulators to allow "slightly contaminated" material be deposited in lagoon).

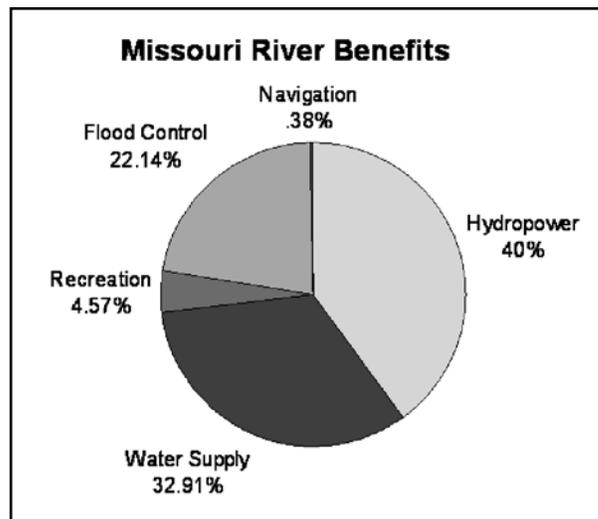
⁹⁹ These limitations include, for example: (1) the cost of transporting dredged material is higher compared to storing the material at a nearby site, and (2) the type and size of material as well as whether or not it is contaminated limits how the material can be reused. See Paul R. Krause & Kathleen A. McDonnell, *The Beneficial Reuse of Dredged Material for Upland Disposal* (Apr. 24, 2000), at 1-5 (on file with National Wildlife Federation).

Obsolete Operations and Maintenance

New construction projects with fresh in-flows of funding attract far more interest from Congress, the Corps and other parties than the operation and maintenance of existing projects. Yet, since the late 1980s, the Corps' construction budget has been exceeded by its operation and maintenance budget because of the mounting inventory of completed projects. The Corps operates and maintains about 1,500 water projects. At the time many of these projects were designed and constructed, the true environmental and economic consequences were either not fully known or were deemed acceptable and appropriate. But over time, laws, policies and societal values have changed, and the full ecosystem consequences are no longer justifiable. In addition, when projects fail to deliver the promised economic benefits, there is a need to reconsider and potentially alter or dismantle the project. As discussed in *Accountability*, however, the Corps is not oriented to review and modernize project operations in order to correct failures or to respond to changes. In many instances, the Corps is motivated more by politics than its responsibility to update and modernize projects.

For example, much has changed since the 1950s when the federal government altered the Missouri River. Many of the river's side channels and backwaters have been virtually eliminated, destroying important habitat for game species, as well as the endangered interior least tern and pallid sturgeon, and the threatened piping plover. According to the National Academy of Sciences, the Missouri River's ecosystem is now "impoverished."¹⁰⁰ The Corps favors the status quo, which benefits narrow navigation interests, even though other interests, such as hydropower, recreation and ecosystem restoration would

benefit greatly from modernizing the river's management. As critical decisions regarding the future of the Missouri River draw near, the Corps is shirking its responsibility to recommend updating the river's management, and is allowing Congress and the Basin states to escalate the issue into a regional battle. (See "Missouri River Navigation" p. 58).



Similarly, in the Pacific Northwest, hydropower dams have helped push stocks of salmon and steelhead to the brink of extinction. Scientists have concluded that partial removal of four Corps dams on the Lower Snake River is critical to the recovery of many of these stocks.¹⁰¹ While there has been a significant federal investment – already \$1.5 billion between 1997 and 2001¹⁰² – in failing attempts to help the endangered species recover, the Corps is avoiding the real solution.¹⁰³ In hopes of preserving the few benefits from the four dams, which facilitate a small amount of barge traffic from Lewiston, Idaho and generate just 3-5% of the region's electricity, the Corps continues to load juvenile salmon and steelhead on trucks

¹⁰⁰ NATIONAL RESEARCH COUNCIL, *supra* note 36, at 55.

¹⁰¹ See, National Marine Fisheries Service, Northwest Region, Biological Opinion, Reinitiation of Consultation on Operation of the Federal Columbia River Power System, 9-255 (Dec. 21, 2000), available at <http://www.nwr.noaa.gov/1hydrop/hydroweb/fedrec.htm> (referring to the Independent Scientific Group's 1996 report, *Return to River*, which concluded that recovery goals for salmon in the Columbia and Snake Rivers could be attained only by restoring the river to a more natural state). See also, *id.*, at 9-256 to 9-280 (estimating survival rates and population growth rates after breaching the four dams).

¹⁰² GENERAL ACCOUNTING OFFICE, REP. NO. GAO-02-612, COLUMBIA RIVER BASIN SALMON AND STEELHEAD, 2 (Jul. 2002).

¹⁰³ See National Wildlife Fed'n, et al. v. Nat'l Marine Fisheries Serv., et al., No. CR01-640-RE (D. Ore. May 7, 2003) (finding that the no-jeopardy conclusion in the 2000 Biological Opinion issued by the National Marine Fisheries Service to the Corps, Bonneville Power Administration and the U.S. Bureau of Reclamation for their operation of the Federal Columbia River Power System was arbitrary and capricious).

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and barges to transport them past the dams. The long-term costs of maintaining the Snake River navigation system and failed recovery efforts in the face of salmon extinction are far more expensive than retiring the dams. (See "Lower Snake River Navigation" p. 54).

Truck for "Operation Fish Run: Fish Line to the Pacific."
Photo Credit: U.S. Army Corps of Engineers



The Road to Reform: Update Fundamental Approach to Water Resources Development and Management.

Congress and the Administration must modernize and update the Corps' approach to water resources development and management.

- **Revise and update the Corps' project planning rules.** Congress should direct the Corps to work with independent experts to revise and update the *Principles and Guidelines* to make them much clearer and enforceable as regulations. The *P&G* must be updated to require the Corps to consider sustainable environmental management and national economic development as co-equal goals in formulating water resources projects.

The revised *Principles & Guidelines* should:

- establish long-term monitoring of project impacts and effectiveness,
- incorporate the latest economic and scientific advances and technologies,
- improve benefit-cost analysis to fully account for all costs, including environmental damages, and more accurately assess predicted benefits of alternatives, including those provided by the natural environment,
- improve economic analysis of port projects by requiring an estimate of how economic benefits derived from transportation savings will be distributed to the U.S. economy,
- eliminate biases against and impediments to using nonstructural and "demand management" approaches to solving water resources problems,
- eliminate benefits derived from draining wetlands,
- improve planning methods to promote interdisciplinary approaches to problem-solving, and
- require and establish periodic updating mechanisms to ensure that Corps planning and evaluation procedures will continue to incorporate advances in economic, environmental and engineering sciences.

- **Require comprehensive, watershed-based planning and thorough evaluations of port and harbor developments.** Congress and the Corps should direct project planners to utilize comprehensive watershed-based planning as the basis for water resources development and management planning. Congress should direct the Corps to consider its proposals in a comprehensive and intermodal framework - such as viewing navigation planning within the broader context of the full range of transportation modes available and viewing overall transportation needs in a regional or national context.
- **Increase the benefit-to-cost threshold and revise the discount rate to improve the accuracy of economic analyses.** Congress should require the Corps to ensure taxpayers get a solid return on their investment by raising the benefit-to-cost ratio threshold to at least 1.5-to-1. Congress should also direct the Corps to revise its discount rate formula to ensure that it approximates the marginal, pretax "real" rate of return on an average long-term private sector investment and reflects the true risk and uncertainty associated with 50-year life projects.
- **Establish effective procedures to periodically review and update all existing Corps projects.** Congress should require the Corps to monitor the results of its actions by collecting and analyzing data about existing projects and management practices. This data should be used to modify projects and management practices to reflect contemporary standards, values and economic advances. Congress should grant the Corps continuing authority to study and, where appropriate, modify constructed projects – including dam modification and removal to comply with existing laws. Congress should also define a clear process by which the Corps and other federal agencies may pursue necessary and appropriate modifications. In addition, Congress should review existing Corps projects, including all of the active projects identified in this report, and require the Corps to modify or eliminate projects that fail to meet contemporary needs.
- **Establish river basin planning organizations.** Congress and the Administration should establish river basin planning organizations in major river basins to bring together responsible federal, state and local interests to assist in overall coordinated planning of federal water resources development, management and restoration. A critical purpose of such planning organizations should be to encourage greater participation of the states, local governments and the private sector in planning to meet regional water needs, and to help identify future needs in a more comprehensive manner.



Sand pumped onto shoreline as part of beach renourishment
on Tybee Island, Georgia.
Photo Credit: U.S. Army Corps of Engineers

prioritization:

Focus on National Priorities

"Oh my God. My God. I have no idea what you're talking about. I can't believe this. . . . I don't think we should be in the business of searching for work. No way. We've got enough on our plate," said Assistant Secretary of the Army (Civil Works) Joseph Westphal, the civilian head of the Corps, after he learned from the *Washington Post* about an internal Corps initiative to grow its budget by 50% over five years.¹⁰⁴ By making the agency's growth paramount, the Corps placed its own priorities over the nation's interests. To simply expand the program and budget, without changing the way the agency does business, would be to pour more money down the proverbial drain. Under the current system, the Corps has amassed a \$58 billion construction backlog.¹⁰⁵ The backlog is a symptom of the agency's lack of priorities and Congress' failure to give clear direction to pursue sound projects in primary mission areas only. The vast number of incomplete projects spreads Corps resources too thin, stretching out project construction timelines and increasing costs, and diverts federal funds from the operation and maintenance of existing projects.

Congress and the Administration must establish and maintain clear priorities for the Corps by:

- Streamlining the deauthorization process,
- Requiring annual reports on the construction backlog,
- Immediately canceling projects that lack required economic justification,
- Stopping "mission creep" – projects outside the Corps' primary mission areas,
- Providing more rigorous congressional oversight of the Corps' program, and
- Demonstrating strong Presidential leadership on setting Corps priorities.

Failure to Prioritize:

- Diverts federal focus and funding from nationally important issues;
- Increases project costs;
- Stretches out construction schedules;
- Causes unnecessary environmental destruction;
- Keeps the program stuck in the past;
- Penalizes projects that address current and future needs;
- Perpetuates a pork-barrel driven process; and
- Blurs federal, state, local government and private sector responsibilities.

¹⁰⁴ Grunwald, *supra* note 4 and accompanying text.

¹⁰⁵ Taxpayers for Common Sense, *The Army Corps of Engineers \$58 Billion Construction Backlog (2002)* (on file with Taxpayers for Common Sense). Taxpayers for Common Sense conducted a detailed analysis of the construction backlog list provided by the U.S. Army Corps of Engineers in the summer of 2002. While the Corps-provided list of 1,023 projects that have not yet completed construction totals \$50.5 billion, several key projects and figures were left out including much of the Everglades Restoration project (\$1.5 billion), ten unlisted projects including the Mississippi River Levees project (\$1.6 billion), and 61 projects that were in the Corps backlog list but for which total project cost figures were not provided (estimated at \$4.5 billion). Accounting for these discrepancies brings the true total backlog cost to \$58 billion.

Partners In Crime: Congress and the Corps

For much of the Corps' history, the agency and Congress have worked together to deliver unjustified water projects as favors for powerful members of Congress.¹⁰⁶ Mounting criticism of this system of uncontrolled pork-barrel spending and environmental damage led to a stalemate and virtually no new Corps projects were authorized between 1970 and 1986.¹⁰⁷

"Critics described the Corps of Engineers as arrogant, elitist, and extravagant. Even supporters perceived miscalculation and inflexibility within the Corps."¹⁰⁸

– Martin Reuss, Corps Historian

Beginning in 1977, Congress and the Administration engaged in a vigorous debate regarding the Corps' missions and priorities, as well as the extent of the federal role in water projects. Concerns about discipline in the program led President Ronald Reagan to threaten to veto any new Corps water projects until Congress required consistent cost-sharing.¹⁰⁹ This battle culminated in the landmark Water Resources Development Act of 1986. The legislation established consistent cost-sharing for Corps projects, instituted new environmental and mitigation requirements, authorized 377 new water projects (\$16 billion worth), and canceled hundreds of old, outdated and unconstructed projects.¹¹⁰

In the 1990s, some of the key congressional supporters of reform, such as Senators Pete Domenici (R-NM), Daniel Patrick Moynihan (D-NY) and Alan Simpson (R-WY),

and Representatives Bob Edgar (D-PA), Silvio Conte (R-MA), Joel Pritchard (R-MA) and Berkley Bedell (D-IA),¹¹¹ either left Congress or shifted their focus. As years passed, the authorizing and appropriations committees' focus on reforms began to wane, and Congress and the Corps returned to the old days of large-scale, environmentally destructive boondoggles. Now, a new contingent is rising within Congress seeking to change and improve the Corps' program, and it is demanding new priorities

and better accountability. In the 107th Congress, several members of the House of Representatives formed the bi-partisan Corps Reform Caucus.¹¹² A bi-partisan

group of Senators has also begun to work together in this area.¹¹³

WRDA and Appropriations

The way Congress currently authorizes and funds Corps projects both enables and encourages the agency to pursue wasteful and destructive projects. Congress authorizes individual projects through massive omnibus bills – Water Resources Development Acts (WRDAs) – with little opportunity to evaluate individual project merits. Annual appropriations for Corps projects are often driven by the interests of members of Congress with political muscle; they tend to focus on local or parochial interests instead of overall national needs. Virtually every Corps project receives an earmark as a line-item in the annual appropriations bills or reports, removing any doubt about who is getting what and how much Corps pork. For example,

¹⁰⁶ Reuss, *supra* note 12 and accompanying text.

¹⁰⁷ *Id.*, at 36-39.

¹⁰⁸ *Id.*, at 36.

¹⁰⁹ *Id.*, at 135-136 (President Reagan resolved to veto an appropriations continuing resolution "if it contained one water project" and the White House "favored a number of previously authorized Corps of Engineers projects, but only if the administration's water policy reforms and user fees were accepted. . .").

¹¹⁰ Water Resources Development Act of 1986; *see also, id.*, at 1.

¹¹¹ *See, e.g.*, Reuss, *supra* note 12, at 145-99.

¹¹² As of January 2004, the Congressional Corps Reform Caucus consists of Representatives Earl Blumenauer (D-OR), Wayne Gilchrest (R-MD), Ron Kind (D-WI), Thomas Tancredo (R-CO), John Shadegg (R-AZ), Ellen Tauscher (D-CA), Lloyd Doggett (D-TX), Rob Andrews (D-NJ), Nathan Deal (R-GA), Frank Pallone (D-NJ), Charles Stenholm (D-TX), Mark Udall (D-CO), Edward Schrock (R-VA), Vic Snyder (D-AR), Peter Visclosky (D-IN), Adam Schiff (D-CA), Loretta Sanchez (D-CA), and Eni Faleomavaega (D-American Samoa).

¹¹³ During the 107th Congress, Senators Russ Feingold (D-WI), John McCain (R-AZ), Tom Daschle (D-SD) and John Ensign (R-NV) co-sponsored Corps reform legislation (S. 1987) introduced by Senator Bob Smith (R-NH).

between 1992 and 2000, 91% of the projects authorized in the Corps' new and heavily criticized "environmental infrastructure" program were located in the districts and states of Representatives and Senators sitting on five key committees.¹¹⁴ (See "Environmental Infrastructure" p. 65).

The WRDA and spending bills are generally assembled behind closed doors, leaving the public little opportunity to know what is happening. Hearings are seldom held on specific legislation and key documents are not made available to the public until immediately before their approval.¹¹⁵ The committees encourage members to submit requests for project authorization and funding – many having no studies or documentation. This inundates the committees with hundreds of requests. As a result, it is almost impossible for the committees to provide appropriate and effective oversight of the agency's program. Rather than attempting to prioritize the Corps' program or work, the committees authorize more projects than is reasonable or needed, and spread funding thinly over too many projects.

Broken Deauthorization Process

The deauthorization process is so riddled with loopholes that it is ineffective. WRDA 1986 created a mechanism where Corps construction projects that receive no funding for seven consecutive years are placed on a list sent to Congress. If these projects receive no funding within the next two and a half years, they are automatically deauthorized (meaning they are projects the Corps can no longer pursue).¹¹⁶ This common-sense approach was created to

help weed out old, unneeded projects and keep the Corps' workload manageable without the need for additional legislation. But Congress structured the system to allow members to easily save their pet projects. The current process gives members of Congress three bites at the annual appropriations "apple" to secure funding, which resets the deauthorization clock. There is no minimum level of funding required, nor does the funding have to be for project construction. Even a small amount of study funding – easily obtained – will keep a bad project on life support.

The President's Role

While numerous administrations have talked about gaining control over the Corps' budget and its workload, few have demonstrated the political will to challenge Congress by vetoing pork-filled WRDA and appropriations bills. Since the FY 2002 budget, President George W. Bush has attempted to tighten the Corps' budget and prioritize its work.¹¹⁷ The Administration's FY 2004 budget proposes prioritizing Corps funding among projects that support priority missions of navigation, flood control and ecosystem restoration with a focus on "projects that provide a very high net economic or environmental return to society."¹¹⁸ Congress largely ignores these budgetary attempts to focus and prioritize the Corps, continuing to pass pork-barrel spending bills as usual. But instead of standing his ground, the President has signed these bills into law, perpetuating the backlog and numerous wasteful projects.

¹¹⁴ Taxpayers for Common Sense, Summary of Environmental Infrastructure Projects in U.S. 1992-2000 (on file with Taxpayers for Common Sense). The 91% is based on representation during the 106th Congress on the following committees: House Transportation and Infrastructure, House Appropriations, House Rules, Senate Environment and Public Works, and Senate Appropriations.

¹¹⁵ Public access is a problem in all facets of the congressional process – not only for water resources issues. For instance, there are very few seats for the public in appropriation hearing rooms. Sometimes, the entire Energy and Water Development Appropriations bill mark-ups are closed to the public because a small part of the energy portion of the bill is classified.

¹¹⁶ Water Resources Development Act of 1986 § 1001, 33 U.S.C. § 579a. For project studies, the Corps prepares a list of studies that have not received funding for five consecutive years. If the study does not receive funding within 90 days, it is automatically deauthorized. Water Resources Development Act of 1986 § 710, 33 U.S.C. § 2264.

¹¹⁷ A BLUE PRINT FOR NEW BEGINNINGS: A RESPONSIBLE BUDGET FOR AMERICA'S PRIORITIES, 147 (Feb. 28, 2001) ("In allocating Corps funds, the budget gives priority to projects and programs that provide significant national benefits in the Corps' principal mission areas – commercial navigation, flood damage reduction, and environmental restoration and enhancement."), *available at* <http://w3.access.gpo.gov/usbudget/fy2002/pdf/blueprnt.pdf>.

¹¹⁸ BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, 254, *available at* <http://www.whitehouse.gov/omb/budget/fy2004/budget.html>.

Presidents, Congress and the Corps of Engineers

Harry S. Truman: Upon signing the 1950 Rivers and Harbors Act, President Truman expressed concern that "certain projects authorized in this Act . . . do not justify the expenditure of Federal funds" and that the federal government was still a long way "from the kind of comprehensive planning and action that is required if we are to conserve, develop and use our natural resources so that they will be increasingly useful as the years go by."¹¹⁹

Dwight D. Eisenhower: Upon vetoing the 1958 Rivers and Harbors Act, President Eisenhower stated, "I cannot overstate my opposition to this kind of waste of public funds," with respect to projects that "have no economic justification," and that he could not approve many of the projects in the bill "without destroying some of the most important governmental policies in the field of water resources development."¹²⁰

Jimmy Carter: In 1977, President Carter delivered his famous "hit list" of Corps and Bureau of Reclamation water projects with environmental, economic or safety problems. The list generated a major outcry from public works and appropriations committees in Congress. But the effort also spawned a cadre of strong reform advocates, who eventually led Congress to pass the reforms in the landmark WRDA 1986.¹²¹

Ronald Reagan: During the first six years of President Reagan's administration, he stressed that the burden on federal taxpayers should be reduced and particularly pressed for requiring substantial nonfederal contributions toward water projects. President Reagan's veto threats broke the impasse over reform legislation in Congress.¹²²

The Corps' Priority

Lacking clear direction from Congress to pursue only justified projects within the agency's primary mission areas, the Corps has instead made it a priority to expand and grow its program and its budget. Like many bureaucracies, its highest priority is self-perpetuation.

Having endured for more than two centuries, the Corps has become politically and bureaucratically savvy. The Corps understands that politics – not necessarily the nation's interest, community needs, or project merits –

¹¹⁹ President's Special Message to the Congress Following the Signing of the Rivers and Harbors Bill (May 22, 1950), *available at* http://www.presidency.ucsb.edu/site/docs/index_pppus.php.

¹²⁰ President's Message to Congress Vetoing Bill Authorizing Appropriations for Rivers, Harbors, and Flood Control Projects (Apr. 15, 1958), *available at* http://www.presidency.ucsb.edu/site/docs/index_pppus.php.

¹²¹ Reuss, *supra* note 12, at 48-64, 135-36.

¹²² *Id.*

often drive budgeting decisions. In fact, the 2000 program growth initiative identified "Loss of Congressional relationships" and "Changes in Congressional Committee control" as *impediments* to its budget growth. A good example of maintaining strong relations with key members of Congress was the Corps' attempt to justify a channel dredging project on the Dog River in Mobile, Alabama – which happened to flow by the backyard of the chairman of the subcommittee in charge of the Corps' budget. Internal Corps documents identified on a map the Congressman's house on the river to stress the project's political

importance, noting, "This project is Congressman Callahan's personal initiative."¹²³ The Corps could not justify the dredging project based on its commercial benefits to navigation. As a result, the agency re-classified the project as an "environmental restoration" project to get around the requirement that project benefits exceed costs, even though there were no significant environmental benefits.¹²⁴

New Corps Missions With No Direction

With most of the traditional, large water infrastructure projects built, the Corps is casting about for new areas of work that are already (and more appropriately) carried out



Slide from Corps' secret "Program Growth Initiative."

by other federal agencies, the private sector, or other levels of government. To gain market share in these new areas, the Corps has to offer a more attractive deal than is available through existing programs and markets. To expand its reach, the Corps uses tools, such as larger federal subsi-

"The project is Congressman Callahan's personal initiative. The yellow dot on the photo below shows Mr. Callahan's Mobile residence in relation to the Dog River."¹²⁵

– Mobile District, U.S. Army Corps of Engineers

dies, less rigorous project justifications, or less stringent rules. Waste is inherent in this duplicative approach.

¹²³ Mobile District, U.S. Army Corps of Engineers, Dog River Pilot Project, Alabama Issue Paper (Apr. 12, 2001) (on file with National Wildlife Federation and Taxpayers for Common Sense). Representative Sonny Callahan (R-AL) served as Chairman of the House Energy and Water Development Appropriations Subcommittee in the 107th Congress. Representative Callahan retired from Congress in 2002.

¹²⁴ Sean Reilly, *Callahan Makes Waves with Dog River Project*, MOBILE REG., Jun. 24, 2001; *See also*, Sean Reilly, *Dredging Project Offers a Lesson in Water Politics*, MOBILE REG., Nov. 1, 2001. According to news reports, the Corps completed the original project in the spring of 2002, but is now widening the channel from 40-foot to 100-foot and dredging three tributaries. As a result, the project's costs will increase from \$2.55 million to \$4.1 million. Sean Reilly, *River Dredging Near Congressman's Home Expanded*, MOBILE REG., May 5, 2002.

¹²⁵ Mobile District, U.S. Army Corps of Engineers, *supra* note 123.

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Without direction from the Executive Branch, the Corps, working with Congress, is "creeping" into new mission areas where the agency has very little experience. This

"The way I see it, the Corps is an agency that likes projects, no matter what they do to the environment. Give them a dollar and they'll push it any way you want."¹²⁶ – Representative Jack Kingston (R-GA)

"mission creep" includes, for example, Superfund clean-up management, school construction, municipal water supply, wastewater treatment, irrigation, and the fastest growing area of the Corps' work, beach building.¹²⁷ Each of these areas traditionally has been within the purview of the private sector or other government programs.

In recent years, the Corps entered into a billion-dollar contract to build and renovate public schools in Los Angeles, and a hundred million-dollar contract for similar work in Washington, DC.¹²⁸ In the case of municipal water supply and wastewater treatment (also known as "environmental infrastructure"), the Corps is undercutting the Environmental Protection Agency's (EPA) Drinking Water and Clean Water State Revolving Fund Programs. The Corps' program is politically driven, has no minimum requirements for demonstrating community needs, and encourages overbuilding with the federal government subsidizing two-thirds of project costs. By contrast, EPA requires significant measures of need and comprehensive planning to address a range of water quality

concerns. In addition, EPA lends project funding, which helps to limit project size because the loans must be repaid with interest.¹²⁹ (See "Environmental Infrastructure" p. 65).

For the past century, Congress has resisted engaging the Corps in building large cross-basin water transfer projects for agricultural water supply. Congress created the Bureau of Reclamation to handle irrigation responsibilities for the arid western United States. Congress believed that public subsidies were not needed to support agriculture in other areas of the nation that have sufficient precipitation. As a result,



White River National Wildlife Refuge, Arkansas is threatened by the Corps' "mission creep" Grand Prairie project. Photo Credit: U.S. Fish and Wildlife Service

irrigation has not been among the Corps' primary mission areas. In recent years, however, Congress has authorized the Corps to pursue irrigation projects. Though the Administration continues to oppose the Corps' work in irrigation,¹³⁰ the agency is aggressively pursuing and

¹²⁶ Michael Grunwald, *In Everglades, A Chance for Redemption*, WASH. POST, Sep. 14, 2000, at A1.

¹²⁷ See *id.* Although beach replenishment has been a modest part of the Corps flood control program for several decades, in recent years it has exploded as a federal mission from what was traditionally a local responsibility. See, *infra* note 163.

¹²⁸ *Issues Pertaining to Water Resources Development Programs Within the U.S. Army Corps of Engineers Hearing Before the Senate Comm. on Env't and Public Works*, 107th Cong. 6 (June 18, 2002) (statement of Steve Ellis, Senior Director of Water Resources, Taxpayers for Common Sense).

¹²⁹ *Id.*, at 7

¹³⁰ Letter from Mitchell E. Daniels, Jr., Director of Office of Management and Budget, to the Honorable Harry Reid and Pete V. Domenici, Chairman and Ranking Member of the Senate Energy and Water Development Appropriations Subcommittee (Aug. 1, 2002) (on file with National Wildlife Federation and Taxpayers for Common Sense).

promoting the \$319 million Grand Prairie Area "Demonstration" Irrigation Project. Despite the massive cost, the project would serve less than 1,000 farms, approximately half of whose owners do not support the project. Additionally, the project would damage the White River, which supports more than 150 species of fish and two premier National Wildlife Refuges, providing habitat for the healthiest population of black bear in the lower Mississippi Delta, a million mallard ducks, and other eco-

nominally important game species. The Grand Prairie project is

the first of a half dozen similar irrigation plans in the area, with total costs of more than \$1 billion.¹³¹ (See "Eastern Arkansas Irrigation Projects" p. 52).

The Consequences of the Wrong Priorities

The lack of legitimate priorities has serious consequences on the Corps' program and the nation. The Corps has amassed a mammoth \$58 billion construction backlog¹³² and a \$1 billion backlog in high priority maintenance work.¹³³ With an annual construction budget of about \$1.5 billion, the construction backlog would take 35 to 40 years to complete, *assuming that no new projects are authorized*. Pumping more money into the Corps' construction budget to address the symptom – the backlog – would not address the underlying problem – the lack of priorities.

In a futile attempt to manage the Corps' budget in light of its growing backlog, recent administrations have refused to budget funds to start new construction projects. However, the "no new starts" policy avoids addressing the root causes of the problem and effectively concentrates funding on old projects. Under this funding process, outdated, ill-conceived projects are more likely to receive funding than new, worthy ones.

"Under the traditional path of adding projects with little or no restraint, the backlog continues to grow inexorably."¹³⁴ – The President's FY 2004 Budget

Failing to purge the backlog guarantees that limited funding is spread thinly over

a large number of projects, which lengthens the time to complete worthy projects and increases all project costs through inefficient construction schedules.¹³⁵ Failing to focus the Corps on issues of national importance also blurs the level of responsibility among the private sector and federal, state and local governments. There is virtually an unlimited demand for local infrastructure subsidized by

| | <u>Federal</u> | <u>Non-Federal</u> | <u>Total</u> |
|------|----------------|--------------------|--------------|
| 1986 | 11.5 | 4.5 | 16.0 |
| 1988 | 1.1 | 0.6 | 1.7 |
| 1990 | 2.5 | 1.4 | 3.9 |
| 1992 | 2.0 | 0.9 | 2.9 |
| 1996 | 3.8 | 1.4 | 5.2 |
| 1999 | 4.2 | 1.9 | 6.1 |
| 2000 | 4.3 | 3.0 | 7.3 |

¹³¹ Other federal irrigation projects planned for Arkansas include: Little Red River Irrigation Project, White River Irrigation Project, Black River Irrigation Project, Bayou Meto Basin Irrigation Project, Plum Bayou Irrigation Project and Boeuf-Tensas Irrigation Project. U.S. Army Corps of Engineers, Eastern Arkansas Region Comprehensive Study (1990) (on file with National Wildlife Federation).

¹³² Taxpayers for Common Sense, *supra* note 105.

¹³³ *The Army Civil Works Program, Fiscal Year 2004 Hearing Before the House Subcomm. on Energy and Water Development Comm. on Appropriations*, 108th Cong. (2003) (statement of Lt. Gen. Robert B. Flowers, Chief of Engineers, U.S. Army Corps of Engineers). "High priority work includes maintenance [that] would ensure attainment of performance goals – specifically, providing continued levels of service – in the budget year." *Id.* at 4.

¹³⁴ BUDGET OF THE UNITED STATES GOVERNMENT, FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, 254, *available at* <http://www.whitehouse.gov/omb/budget/fy2004/budget.html>.

¹³⁵ While the Corps rarely, if ever, receives "optimal funding" levels for project construction, the Corps assumes optimal funding in its economic justifications. As a result, in nearly every case, the Corps understates actual costs and overestimates benefits.

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the federal government. Yet, the more Congress and the Corps saddle the agency with essentially local or private sector responsibilities, the fewer resources the Corps can devote to issues of interstate and national importance.

Failing to Address Contemporary Needs

Finally, the lack of priorities in the Corps' program means that current and future water infrastructure needs do not receive the focus and attention they deserve. The "no new start" policy has put new innovative flood damage reduction projects at a tremendous disadvantage from ever getting implemented. In the Water Resources Development Act of 1999, Congress authorized a thoughtful, new program to expand the Corps' ability to implement nonstructural solutions for some of the country's most pressing flood risks.¹³⁶ The Flood Hazard Mitigation and Riverine Ecosystem Restoration Program, known as the "Challenge 21 Initiative," identifies 28 priority areas (such as Pima County, Arizona and Mill Creek, Ohio)¹³⁷ for the Corps to restore the natural flood storage functions of wetlands and floodplains and to help people move out of floodprone areas.¹³⁸ This program has been relegated to the "new start" category, and thus has received no funding. Without clear priorities, the Corps' construction backlog continues to grow and too many old and outdated projects receive drips of funding, while new innovative projects and programs fall by the wayside.

The Road to Reform: Focus on National Priorities.

Congress and the Administration must establish and maintain clear priorities for the Corps.

- **Streamline the automatic deauthorization process.** Projects that have not received any construction funding for five consecutive years (or three consecutive years after initiation of construction) should be disclosed by the Corps to Congress and the public. After a shortened period of congressional review, the projects should be deauthorized absent any new construction appropriations. Congress should prohibit study funding from resetting the deauthorization clock.
- **Require annual reports on the construction backlog.** Congress should require the Corps to present an annual report with basic information on each project in the construction backlog. This report should include: total project and federal cost, project benefit-to-cost ratio, remaining costs and elements required to complete project, benefit-to-cost ratio of uncompleted work, and a brief description of project features and impacts.
- **Immediately cancel projects that lack required economic justification.** According to the Corps, there are approximately \$5 billion worth of inactive projects¹³⁹ in the construction backlog that lack support from a local sponsor or economic justification. Congress should immediately deauthorize these projects. In addition, Congress should deauthorize projects that have not undergone significant construction and, according to the Corps' analysis, have costs that cannot be outweighed by the remaining economic benefits.

¹³⁶ Water Resources Development Act of 1999 § 212, 33 U.S.C. § 2332.

¹³⁷ In 1970, Congress authorized the \$30 million Mill Creek Flood Control Project. Since then, the Corps has spent at least \$110 million on just 40% of the project, which involves traditional channelization measures. Completing the project as originally designed is estimated to cost more than \$400 million. A better solution would include moving at least some of the floodprone properties out of the 25-year floodplain. The Corps is currently reevaluating project alternatives, including non-structural solutions.

¹³⁸ 33 U.S.C. §§ 2332(a) & (e).

¹³⁹ *Issues Pertaining to Water Resources Development Programs Within the U.S. Army Corps of Engineers Hearing Before the Senate Comm. on Env't and Public Works*, 107th Cong. (June 18, 2002) (statement of Lt. Gen. Robert B. Flowers, Chief of Engineers, U.S. Army Corps of Engineers).

- **Stop "mission creep" – projects outside the Corps' primary mission areas.** Congress and the Administration should immediately deauthorize "mission creep" projects that have not undergone significant construction and focus the Corps' budget on its principal missions. "Mission creep" dilutes the Corps' effectiveness, and makes the agency's efforts redundant of other federal agencies, state and local governments, and the private sector.
- **Provide more rigorous congressional oversight of the Corps.** Congress should provide much greater oversight of the Corps' civil works program and budget by holding comprehensive oversight hearings and directing an independent re-assessment to

clarify the agency's priorities. Setting clear priorities for the Corps will involve not only legislative and administrative changes, but also basic institutional and attitudinal changes on the part of the agency, Congress, and other levels of government to ensure that authorizing and funding decisions are based upon project merits.

- **Demonstrate strong Presidential leadership on setting Corps priorities.** The Administration should reject traditional pork-barrel Corps water project authorization and appropriations bills, even exercising a veto, as necessary. The Administration should work with reformers in Congress to support critical policy changes.



Great blue heron on a small creek in South Georgia.
 Photo Credit: U.S. Army Corps of Engineers



Lock and Dam no. 15, near the Quad Cities on the Mississippi River.
Photo Credit: U.S. Army Corps of Engineers

equity:

Provide the Right Financial Incentives

\$3,059,000,000. This is how much experts calculate new cost-sharing reforms reduced the total cost of the Water Resources Development Act of 1986.¹⁴⁰ Rather than relying on federal taxpayers to pay the full cost of water projects, these new cost-sharing rules provided important financial incentives to make communities evaluate their actual water resource needs and encourage smaller-scale, cheaper alternatives. Sharing the burden helps to stretch each federal dollar further so that more local communities can be supported.¹⁴¹

Prior to 1986, the level of project cost-sharing was often a reflection of the political muscle behind the project, rather than of the appropriate federal role. In some cases, the federal taxpayer was stuck with 100% of the project costs. WRDA 1986 established consistent cost-share rules for different types of water resources projects. Since then, however, the practice of avoiding and rolling back the cost-sharing rules has crept back. This, coupled with 17 years of experience with how cost-sharing is working – and not working – means it is time to fix the rules to reestablish fiscal discipline.

Congress and the Administration should establish a more equitable approach to funding Corps projects by:

- Enforcing and maintaining cost-sharing,
- Reducing federal subsidies for beach rebuilding,

Changing the Price of Pork

WRDA 1986 provided "a unique natural experiment in legislative budgeting." A study conducted by the National Bureau of Economic Research found that the new 1986 cost-sharing rules reduced overall project costs by 35% (\$3 billion). In fact, federal taxpayers saved more than \$3.059 billion because local communities assumed a portion of the now smaller projects. Overall, federal taxpayers realized a 48% savings (\$3.288 billion) compared to what they otherwise would have paid for projects authorized by the bill. Local costs increased by only 12% (\$229 million) – significantly less than the cost burden relieved from the federal taxpayer. The significant net savings resulted from communities choosing smaller-scaled, more efficient projects.¹⁴²

- Implementing flood damage cost-sharing levels commensurate with responsible floodplain management,
- Requiring users to contribute to inland waterways operation and maintenance costs, and
- Requiring port users to pay a fair share of the true costs of deepening and maintaining the harbors they use.

¹⁴⁰This WRDA bill was the first major authorization of new water projects since 1970. Between 1970 and 1986, however, new projects continued to be generated and requested by members of Congress. After the cost-sharing reforms to be instituted by WRDA 1986 became known, members of Congress were permitted to adjust the size of projects requested in light of the new local costs. The authors of *Changing the Price of Pork: The Impact of Local Cost Sharing on Legislators' Demands for Distributive Goods*, compared project size and costs "pre-cost-sharing rules" to the projects authorized after the cost-sharing changes. ALLISON F. DELROSSI & ROBERT P. INMAN, CHANGING THE PRICE OF PORK: THE IMPACT OF LOCAL COST SHARING ON LEGISLATOR'S DEMANDS FOR DISTRIBUTIVE PUBLIC GOODS, WORKING PAPER 6440, 3-4, 28-30 (Nat'l Bureau of Econ. Research, 1998).

¹⁴¹*Id.*, at 28-30.

¹⁴²*Id.*

Importance of Cost-Sharing

The passage of WRDA in 1986 ended a 16-year stalemate, with virtually no new water projects while Congress and several administrations haggled over project financing mechanisms.¹⁴³ This landmark legislation required a local sponsor for each Corps project to contribute a portion of the costs. Cost-sharing enables federal dollars to get "more bang for the buck," assisting more local communities, and provides a more equitable distribution of project costs. By requiring project beneficiaries to pick up a portion of the costs, it also serves as a hard dollars-and-cents measure of need. Finally, cost-sharing helps limit project size and cost, and encourages local sponsors to pursue alternatives that can meet the project's objectives more efficiently and with less environmental impact.

As an example, WRDA 1986 authorized a \$551 million project to deepen the Norfolk, Virginia harbor and the inbound and outbound channels from 45-feet to 55-feet.¹⁴⁵ Federal taxpayers were obligated to pay \$256 million of construction costs, but the law also required a local sponsor to contribute \$295 million.¹⁴⁶ The end result was that the local project sponsor, the Virginia Port Authority, opted to have the Corps build the most justified portions of the project first and proceed with other elements as needed. The Corps proceeded with deepening the harbor's

outbound channel by 5-feet, instead of 10-feet, to increase the efficiency of existing coal exports. The Port Authority deferred deepening the inbound channel, which was based on speculative benefits of attracting additional container ship traffic.¹⁴⁷ Delaying the additional project elements meant dredging 97% less material and saving about 95% on the total project cost.¹⁴⁸ Today, Norfolk Harbor is the second largest port (by tons) on the East Coast.¹⁴⁹

"[A] sound national policy requires that a comparable measure of responsibility for projects where there are identifiable beneficiaries must remain at the State and local level . . . the best test yet devised for insuring that a project is sound [is] the willingness of local people to invest their own money in a joint enterprise with the federal Government."¹⁴⁴

– President Dwight D. Eisenhower

The federal share of Corps projects is a collective taxpayer investment that ought to benefit the nation as a whole. As a fiscal tool, it is intended to encourage certain behaviors or actions that are perceived to be in the nation's interest, much like deducting mortgage interest from taxable income to promote homeownership. Sometimes the taxpayers' return from a Corps project is an increase in national economic development; other times it is an increase in social welfare that may be hard to quantify in monetary terms. Most navigation and flood damage reduction projects must be justified by their contribution to national economic development, while most environmental restoration projects are justified using different values, such as improvements to water quality and habitat.

¹⁴³ Before WRDA 1986, the last major Corps project authorization bill was the Flood Control Act of 1970. The Water Resources Development Act of 1974 contained mostly policy provisions with just a few project authorizations. In 1968, the Water Resources Council began to study cost-sharing for major flood control reservoirs and local protection works. A more full-blown debate over cost-sharing, however, did not occur until the Carter Administration, which led to a hiatus with no new Corps project authorizations. Reuss, *supra* note 12, at 30-50.

¹⁴⁴ President's Message to Congress Vetoing Bill Authorizing Appropriations for Rivers, Harbors, and Flood Control Projects (Apr. 15, 1958), available at http://www.presidency.ucsb.edu/site/docs/index_pppus.php (last visited Oct. 8, 2003).

¹⁴⁵ Water Resources Development Act of 1986 § 201.

¹⁴⁶ *Id.*

¹⁴⁷ U.S. Army Corps of Engineers, Fiscal Year 2003 Budget Justification Statement, Norfolk Harbor and Channels (Deepening), Virginia (Continuing), at 866; Norfolk District, U.S. Army Corps of Engineers, Navigation Management Plan for the Port of Hampton Roads, Virginia, tab. II-1, IV-11 (Feb. 2000), available at <http://www.nao.usace.army.mil/Planning/NMP/Report.asp> (last visited Nov. 19, 2003). Now, 17 years later, the port is moving forward with deepening the inbound channel to 50-feet. Media Advisory, U.S. Army Corps of Engineers, Norfolk District, Corps, Commonwealth to Sign Agreement to Deepen Hampton Roads Harbor Inbound Channel to 50 Feet (Apr. 23, 2003), available at http://www.nao.usace.army.mil/pao/releases/50-foot_channel_deepening.doc (last visited Oct. 22, 2003).

¹⁴⁸ The entire Norfolk Harbor expansion project would have required dredging approximately 380 million cubic yards of material over 50 years. Norfolk District, U.S. Army Corps of Engineers, Final Supplement I to the Final Environmental Impact Statement for the Norfolk Harbor and Channels, Virginia, Deepening and Disposal (May 1985), at 9. The unconstructed project elements would have required dredging 370 million cubic yards of material. U.S. Army Corps of Engineers, Norfolk District, Navigation Management Plan, *supra* note 147, at II-51 through II-58.

¹⁴⁹ U.S. Army Corps of Engineers, Navigation Data Center, *Tonnage for Selected U.S. Ports in 2000* (Rev. Nov. 4, 2002), available at <http://www.iwr.usace.army.mil/ndc/wcsc/portname00.htm> (last visited Aug. 18, 2003).

When federal subsidies generate little economic benefit or benefits that are only local, as opposed to national, there is little reason for federal investment. In the case of Norfolk Harbor, if the federal government had paid 100% of project costs and deepened the inbound and outbound channels by 10 feet, there would have been little additional benefit to the nation. Yet, taxpayers would have paid an additional \$200 million to dredge nearly 370 million more cubic yards of material and adversely impacted Chesapeake Bay fish and wildlife.¹⁵⁰

Cost-Sharing Under Attack

Because of the benefits of cost-sharing, President Reagan pursued a national water policy that removed the 100% federal subsidy from the Corps' work. Nonetheless, year after year, members of Congress attempt to avoid and rollback these cost-sharing rules in order to channel more federal dollars to home states and districts.

With each passing WRDA, there are more and varied mechanisms designed to escape cost-sharing. WRDA 2000 contained approximately 30 special credits and exceptions to the cost-sharing rules.¹⁵² The House of Representatives version of the Water Resources Development Act of 2003 hit a new high water mark by including more than 70 special credits, individual exceptions and waivers.¹⁵³

Cost-Sharing Rollbacks

In addition to individual exemptions and exceptions, there are aggressive attempts underway to rollback cost-sharing formulas. To make it cheaper for ports to become deeper, the nation's port lobby is working to undermine the 1986 rules. The lobby wants to increase the federal share from 40% to 65% for deepening the deepest harbor channels – those beyond 45 feet. The lobby is also seeking to double the federal share of operations and maintenance of these projects from 50% to 100%.¹⁵⁴ As discussed in *Modernization*, as shipping companies build larger container ships, virtually every port in the country is requesting deeper channels. However, because the nation needs only a few deep hub ports, billions of taxpayer dollars could be wasted appeasing a few foreign shipping lines. (See "Irrational Port Planning" p. 22).

Stealth Mechanism To Avoid Cost-Sharing

In WRDA 1996, the senators from Mississippi avoided cost-sharing requirements for the Yazoo Backwater Pump by slipping in an obscure provision that shifted the entire \$181 million tab to federal taxpayers.¹⁵¹ (See "Big Sunflower River Dredging and Yazoo Backwater Pump" p. 53).

¹⁵⁰ See, Norfolk District, U.S. Army Corps of Engineers, Navigation Management Plan, *supra* note 147, at II-51 through II-58, IV-17 through IV-18.

¹⁵¹ Water Resources Development Act of 1996 § 202(a)(2), 33 U.S.C. § 2213(e)(1) (redefining the start of construction to exempt the Yazoo Backwater Pump project from the 1986 cost-sharing requirements).

¹⁵² Water Resources Development Act of 2000, Pub. L. 106-451.

¹⁵³ H.R. 2557, 108th Cong. (passed by the House of Representatives on Sep. 24, 2003).

¹⁵⁴ See, e.g., Water Resources Development Act of 2003 § 2003, H.R. 2557, 108th Cong. (passed by the House of Representatives on Sep. 24, 2003); *Water Resources Development Act Issues Hearing Before the Senate Comm. on Env't and Public Works*, 107th Cong. 15 (Jun. 18, 2002) (statement of Tom Chase, Director of Environmental Affairs, American Association of Port Authorities); *Proposals for a Water Resources Development Act of 2002 Hearing Before the House Subcomm. on Water Resources and Env't of the Transp. and Infrastructure Comm.*, 107th Cong. 10-16 (Apr. 10, 2002) (statement of Hugh H. Welsh, Deputy General Counsel, The Port Authority of New York and New Jersey). Technically, the federal cost-share for deepening harbors that exceed 45 feet is 50%, but 10% of that amount is a loan to be repaid by the non-federal sponsor with interest over 30 years, some of which can be in the form of a credit for in-kind services and the value of purchased land, easements, rights-of-way, relocations and dredge disposal. The change sought by the port lobby would set the federal cost-share for deep draft harbors up to 53 feet at 75%, subject to the same 10% loan to be repaid by the nonfederal sponsor with interest over 30 years. Water Resources Development Act of 1986 § 101(a), 33 U.S.C. § 2211(a).

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The port lobby originally sought to make this cost-sharing change for future projects. But after WRDA 2000 authorized the \$1.2 billion project to deepen the Port of New York-New Jersey to 50 feet, the lobby shifted course. In a transparent effort to further subsidize this massive project, now the lobby is advocating for changing cost-sharing provisions so that they would apply to the Port of New York-New Jersey project – creating a \$450 million windfall for the port at taxpayer expense.¹⁵⁵

Race to the Bottom

The "race to the bottom" among ports is being fueled by shipping lines constructing new megaships that, if fully loaded, would require depths up to 53 feet.¹⁵⁶ These foreign-owned shipping lines can save money by transporting more cargo on fewer, larger ships. These shipping lines, unfortunately, do not directly contribute to the cost of new dredging projects.¹⁵⁷ Instead, U.S. taxpayers are left to pay the bill.¹⁵⁸

Most of the cost to maintain harbor depths is provided from the Harbor Maintenance Trust Fund, which is funded through the Harbor Maintenance Tax (HMT).¹⁵⁹ The HMT requires importers and domestic shippers to pay tax equal to 0.125% of the value of the commercial cargo they ship through the nation's ports.¹⁶⁰ However, there are

significant differences among ports and their maintenance costs vary widely. Some ports are naturally deeper and are less expensive to operate and maintain. Because the HMT and other federal subsidies are not tied to actual dredging costs, they mask physical realities, thus effectively eliminating key "price signals" and fiscal incentives in deciding where and whether to dredge channels and harbors.

Efforts to revise the HMT into a real user fee, reflecting actual port maintenance cost, have been stymied in recent years. In an attempt to get beyond the impasse, in 2003, the Administration proposed tapping the Harbor Maintenance Trust Fund – which is running a surplus of more than \$1.85 billion – for construction, in addition to maintenance.¹⁶¹

There has not been a thoughtful discussion of the appropriate federal role in port development since 1986. In fact, in WRDA 1999, Congress directed the Corps to complete a study of the fiscal and environmental impacts of increasing the federal share of deep draft dredging by May 30, 2001.¹⁶² It has not been completed. The House of Representatives continues to brush aside many of the issues surrounding port development, and attempts to increase the federal share of deepening costs at every opportunity. To date, the Senate has resisted the port lobby's entreaties on this subsidy.

¹⁵⁵ In WRDA 2000, the New York-New Jersey deepening project was authorized under the existing cost-sharing rules – a 40% federal contribution. In their recent efforts, the port lobby has advocated their proposed cost-share change apply to previously authorized projects for which construction contracts do not yet exist – a thinly veiled additional subsidy for the Port. Increasing the federal operation and maintenance obligation from 50% to 100% will provide a major new subsidy to existing deep water ports.

¹⁵⁶ Many existing port and channel depths can accommodate mega-sized container ships if they are not fully loaded. Lighter ships do not require the same depths that the heaviest ships require.

¹⁵⁷ It is not clear that the shipping lines pass on transportation cost savings to U.S. entities. *See supra* notes 93-94 and accompanying text.

¹⁵⁸ Prior to launching their push to rollback the deep draft dredging cost-share, the nation's port lobby locked-in full taxpayer funding for disposal of contaminated dredged materials in confined facilities. In 1986, Congress had set the appropriate federal share for construction of harbors with depths between 20 and 45 feet at 25%, with individual ports paying the remainder of confined disposal costs. Water Resources Development Act of 1986 § 101(a), 33 U.S.C. § 2211(a). But as environmental concerns have risen over dumping of contaminated sediments in open water (the cheapest disposal option), there was increased pressure on ports to dispose the toxic materials in confined facilities. In response, in WRDA 1996, Congress made the federal taxpayer assume 100% of confined disposal facility (CDF) construction costs by defining a harbor development's "general navigation features" to include CDF construction – a huge new subsidy for the nation's ports. Water Resources Development Act of 1996 § 201(b)(4), 33 U.S.C. § 2211(a)(5).

¹⁵⁹ 26 U.S.C. § 2261. The Harbor Maintenance Trust Fund, which derives its revenue from the HMT, as well as St. Lawrence Seaway tolls and investment interest, generated \$653 million in FY 2002 and is estimated to generate \$733 million and \$787 million in fiscal years 2003 and 2004, respectively. BUDGET OF THE UNITED STATES FOR FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, APP. at 856.

¹⁶⁰ In 1998, the U.S. Supreme Court found the HMT unconstitutional as it applied to exports under the export clause of the U.S. Constitution (U.S. CONST. art. I, § 9, cl. 5). *United States v. United States Shoe Corp.*, 523 U.S. 360 (1998).

¹⁶¹ Currently, funds from the Harbor Maintenance Trust Fund may be used to finance up to 100% of the costs to operate and maintain harbors. The budget proposes expanding the use of the fund to include all federal costs associated with coastal port and channel construction. BUDGET OF THE UNITED STATES FOR FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, APP. at 856-57.

¹⁶² Water Resources Development Act of 1999 § 401, 33 U.S.C. § 2211 note.

Counter-Productive and Damaging Subsidies

Despite the progress made in 1986 and subsequent years, the current cost-sharing rules for several types of Corps projects provide perverse financial incentives that encourage communities to seek unnecessarily costly and environmentally damaging projects. Whether for beach rebuilding or flood control projects, inland waterway operation or maintenance, the rules fail to equitably distribute costs between taxpayers and primary beneficiaries.

Subsidies for Wealthy Beach Communities

For more than 100 years, Congress generally rejected the notion that beach projects should be a Corps responsibility.¹⁶³ But after a series of hurricanes hit new post-World War II coastal development, Congress began to tap the Corps for beach protection and rebuilding projects. This decision launched a vicious cycle. Beach subsidies, along with federal flood insurance and increased disposable income, have fueled an explosion in coastal development. As coastal populations grew, so did the number of Congressional representatives for these areas.

Today, from Florida to New York to California, Corps beach rebuilding projects are increasingly becoming the primary "solution" to beach erosion – which is a problem only when buildings are built too close to the coastline and are at high risk for hurricane and storm damage. Beach rebuilding is now the fastest growing area of the Corps' work. Under the current cost-sharing formula, federal taxpayers subsidize 65% of the initial cost of this short-term, temporary solution. The sand pumped on the beaches continues to erode as a result of the natural forces

Wasteful Beach Projects

Dare County, North Carolina
– see p. 66.

New Jersey Beach Replenishment
– see p. 75.

Long Island, New York Beach
Replenishment
– see p. 76.

or is washed out to sea with the next major storm. During the 50-year term for most of these projects, the same beach will be rebuilt eight times or more depending on the replacement cycle.

In 1999, Congress revised the cost-sharing formula to require local sponsors of new projects to pay 50% of the cost to maintain the project and replace the sand after initial construction. This 15% local share increase, however, does not apply to the lion's share of beach projects that were authorized at the pre-existing 35% non-federal requirement for the ongoing 50-year maintenance.¹⁶⁴

Coastal communities claim that federally subsidized beach rebuilding projects are in the nation's interest because the beach is critical to the welfare of the local community. In truth, these projects provide primarily local benefits by increasing property values and widening what are often essentially private beaches. This happens despite the federal requirement for adequate parking facilities close to the beach or public transportation options.¹⁶⁵ As a result, in one case federal taxpayers from Oklahoma to Alaska

¹⁶³ Prior to the 1960s, the Corps generally viewed shoreline protection as a state responsibility. But the "Ash Wednesday Storm" that hammered New Jersey's beaches in 1962 launched the Corps into a widespread beach rebuilding program. ORRIN H. PILKEY & KATHARINE L. DIXON, *THE CORPS AND THE SHORE*, 5-9 (1996). While the undeveloped areas were able to rebound from the Ash Wednesday Nor'easter, developed areas were devastated. Nonetheless, coastal property owners rushed back to rebuild, which created even greater pressure for the Corps to become more involved in coastal engineering. CORNELIA DEAN, *AGAINST THE TIDE: THE BATTLE FOR AMERICAN'S BEACHES*, 145, 160-61, 195 (1999).

¹⁶⁴ Water Resources Development Act of 1999 § 215(a), 33 U.S.C. § 2213(d)(2)(A). The 15% increase was phased-in in 5% increments over the course of three years, 2001, 2002 and 2003.

¹⁶⁵ Tom Bayles, *Access Denied*, SARASOTA HERALD-TRIB., Dec. 1, 2002, at A1; Bill Adair & Amy Wimmer, *You Bought This Beach: The Politics of Sand*, ST. PETERSBURG TIMES, May 12, 2002; Jeffery J. Pompe & James R. Rinehart, *Estimating the Effect of Wider Beaches on Coastal Housing Prices*, 22 OCEAN & COASTAL MANAGEMENT, 141-52 (1994) (concluding that the width of the beach directly impacts the selling price of a single family home) (on file with the National Wildlife Federation).

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have contributed 65% of the \$3.1 million that was spent to pump sand on the northern two miles of Captiva Island, Florida. This stretch of beach – part of a \$10 million project – is occupied by the exclusive South Seas Plantation, which includes private homes and a gatehouse, staffed by a guard day and night, blocking the public's access.¹⁶⁶



Too often, public access to federally constructed beach projects is limited by lack of parking, fencing, and other restrictions, like this gatehouse at the South Seas Plantation in Captiva, Florida.
Photo Credit: Priscilla K. Costenbader

The current cost-sharing formula for beach projects is not only inequitable, but also perpetuates the cycle of development in high coastal erosion areas, which then demands more subsidized beach rebuilding projects. For example, despite zoning regulations intended to minimize new beachfront development, the State of Florida has permitted nearly 5,000 new homes, hotels, and condominiums to be built on beachfront subject to erosion – a 99% approval rate since 1978.¹⁶⁷ Between April 2001 and April 2002 alone, more than half of the 266 permits issued for shoreline development were for "critical erosion" zones that are authorized for federal beach rebuilding projects.¹⁶⁸

¹⁶⁶ Bayles, *supra* note 165.

¹⁶⁷ Paige St. John & Larry Wheeler, *Development Goes On As Beaches Deteriorate*, USA TODAY, Jul. 29, 2002, at 8A.

¹⁶⁸ Anton Caputo, *State Defends Shrinking Shore*, PENSACOLA NEWS J., Jul. 28, 2002.

¹⁶⁹ Press Release, Environmental Defense, Environmental Groups Request Comprehensive Assessments of Beach Dredging and Filling (Sept. 14, 2000), available at <http://www.environmentaldefense.org/pressrelease.cfm?ContentID=1186> (last visited Aug. 19, 2003); Letter from Dr. Ken Lindeman, Senior Scientist, Environmental Defense, et al. to Col. Joe R. Miller, District Engineer, Jacksonville District, U.S. Army Corps of Engineers Regarding Beach Dredge and Fill Projects (Jun. 27, 2000), available at http://www.environmentaldefense.org/documents/457_Army%20Corps%20Dredging%20Ehtm (last visited Aug. 19, 2003); see also, PILKEY & DIXON, *supra* note 163, at 99-101.

¹⁷⁰ The entire coastline of New Jersey, for example, is authorized to receive Corps-pumped sand. Michael Grunwald, *Whose Beaches, Whose Burdens? At \$60 Million a Mile, Rebuilding New Jersey's Shore Stirs Debate on Access, Effectiveness*, WASH. POST, Apr. 20, 1999, at A3.

The Corps calls its beach rebuilding projects "beach renourishment." But there is nothing nourishing about dredging machines mining sand offshore and blasting it on the beach through a pipe, and then smoothing the sand with bulldozers. This process can harm shallow-water reefs and habitat essential for fish and other species. In Florida, a handful of projects could bury more than 100 acres of near shore reefs used by more than 500 marine species. The process smothers crabs, mollusks, and shrimp, which are an essential source of food for birds and other marine species. It also buries fragile nesting habitats for sea turtles.¹⁶⁹ Increasingly, these separately considered projects are pieced together to encompass entire coastlines.¹⁷⁰ The Corps has never analyzed the long-term, cumulative impacts of its beach building projects to determine if they – like decades of altering the Mississippi River's floodplains and draining the Florida Everglades – will cause major harm to coastal ecosystems that will cost taxpayers even more money to repair down the road.

Flood Damage Reduction Projects Subsidize Poor Local Land-Use

One of the more perverse aspects of the Corps' flood control program is that the current cost-sharing formula rewards those communities that fail to manage their floodplains and flood risk wisely. At the same time, the formula penalizes communities that practice good floodplain management. Local sponsors must pay 35% of a flood control project's costs, regardless of whether the community has taken appropriate steps to keep homes and businesses out of high flood risk areas or to avoid other activities that exacerbate flooding problems.

Ironically, because the formula fails to discourage high-risk development, new building in the floodplain often bolsters the economic justification for expensive Corps levee or channelization projects.¹⁷¹

The Great Midwest Flood of 1993 - when the Mississippi and Missouri Rivers swelled far beyond their banks — showed all of America that our nation's flood control program was not working. It became clear that engineering rivers and coastlines could not hold back the forces of nature in every case. The Flood of 1993 caused \$12-16 billion in damages, with more than 1,000 levees having overtopped or failed¹⁷² and 100,000 homes damaged.¹⁷³ In the years following, the Federal Emergency Management Agency (FEMA) responded with common sense changes to its disaster relief and flood insurance programs. The Corps, on the other hand, has kept its head in the sand, and essentially continues with business as usual. For example, the Corps provides 80% of the cost to repair levees damaged by floods, often encouraging the rebuilding of levees that have frequent high-cost repairs, instead of supporting common sense alternatives.¹⁷⁴

FEMA Programs Encourage Wise Floodplain Management

Recognizing that an equitable flood damage reduction program ought to reward communities that help

themselves reduce flood risks, FEMA's Community Rating System (CRS) rewards flood insurance policyholders with substantially reduced rates based on measures implemented by communities aimed at reducing their vulnerability to floods.¹⁷⁵ In addition, FEMA has helped communities remove and relocate more than 30,000 floodprone properties with voluntary buyouts, and has encouraged hundreds of communities to increase efforts to reduce flood risk with a variety of nonstructural approaches.¹⁷⁶ (See, e.g., "Clear Creek Flood Control Project" p. 77). In contrast to FEMA's success, the Corps' flood control program continues to encourage unwise floodplain development and is not coordinated with other federal and state floodplain and disaster relief programs.



Crystal City, MO, May 17, 2002 -- Water stands in a former residential area that State and local officials included in a floodplain buyout program after the 1993 flood. Photo Credit: Federal Emergency Management Agency

¹⁷¹ ASSOCIATION OF STATE FLOODPLAIN MANAGERS, NATIONAL FLOOD PROGRAMS IN REVIEW - 2000, at 19-20, available at <http://www.floods.org/PDF/2000-fpm.pdf> (last visited Aug. 19, 2003); See also, NATIONAL WILDLIFE FEDERATION, HIGHER GROUND, *supra* note 78, at 125, 137-38.

¹⁷² While most of these were non-federal levees, about 60 federal levees failed or overtopped. Lee Larson, Chief, Hydrologic Research Lab., Office of Hydrology, NOAA/National Weather Serv., The Great USA Flood of 1993 (Jun. 1996), available at <http://www.nws.noaa.gov/oh/hrl/papers/area/great.htm> (last visited Aug. 19, 2003).

¹⁷³ *Id.*
¹⁷⁴ The Corps' emergency management rehabilitation program was authorized by Pub. L. 84-99.

¹⁷⁵ First introduced in 1990, FEMA implemented the CRS as a program for recognizing and encouraging community floodplain management activities that exceed the minimum National Flood Insurance Program (NFIP) standards. The National Flood Insurance Reform Act of 1994 codified the CRS in the NFIP. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance. Today, more than 900 communities participate in the CRS. There are ten CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction. Federal Emergency Management Agency, *National Flood Insurance Program Community Rating System, Biennial Report to Congress* (Oct. 2002), available at <http://www.fema.gov/txt/nfip/crsreport02.txt> (last visited Aug. 19, 2003).

¹⁷⁶ The 30,000 floodprone structures were relocated through local acquisition programs that received funding from FEMA's Hazard Mitigation Grant Program and Flood Mitigation Assistance Program since 1993. Statistics and a state-by-state breakdown of buyouts and relocations are available from National Wildlife Federation.

EQUITY

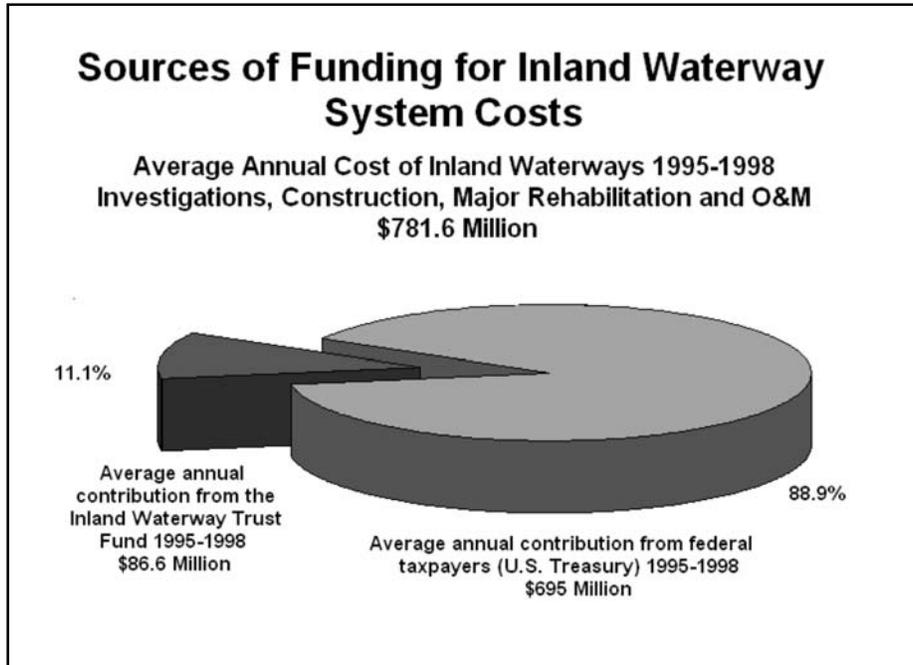
Sliding Cost-Share Formula For Flood Control

In response to increasing criticisms of the Corps' flood control program, in 1995, the agency developed and circulated a sliding cost-share formula for flood control projects. This new approach required a range of local cost-share contributions contingent upon the measures and activities undertaken by a local community to manage flood risk.¹⁷⁷ Such measures included credits for floodplain zoning, using voluntary buyouts and relocations for high risk properties, establishing open space and greenways for parks and wildlife, and conducting public awareness programs. In WRDA 1996, however, instead of pursuing a sliding formula that would reward wise activities and discourage poor floodplain

management, Congress decided to simply decrease the federal share across-the-board for all flood projects from 75% to 65%, making no distinction between responsible and irresponsible community floodplain management.¹⁷⁸

Inefficient Inland Waterway Navigation Subsidies

With the exception of the space shuttle, inland navigation is the most heavily subsidized form of transportation.¹⁷⁹ Overall, users of the roughly 11,000-mile inland waterway system pay just 11% of the system's total cost.¹⁸⁰ Under current law, the users – barge companies – pay half of the costs of new construction and none of the operations and maintenance costs.



The Inland Waterway Trust Fund (IWTF), derived from a 20 cents per gallon diesel fuel tax levied on commercial users, provides half of the construction and major rehabilitation costs for locks and dams.¹⁸¹ Funds collected

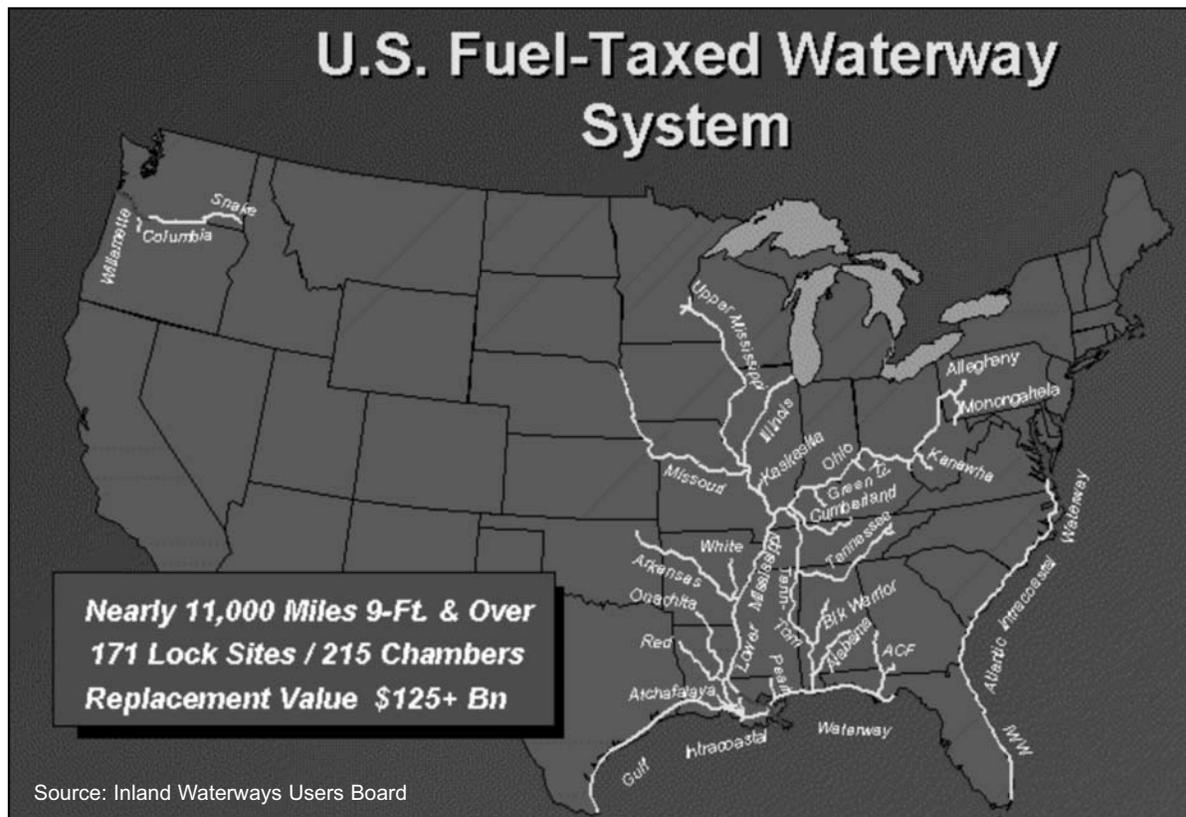
for the IWTF, however, do not have to return to the waterways where the revenue was generated. Instead, Congress (with advice and guidance from an inland

¹⁷⁷ Memorandum from John Anderson, Legislative Initiatives Branch, Directorate of Civil Works, to Jim Smyth, Office of the Assistant Secretary of the Army (Civil Works), Regarding Legislative Language for New Flood Control Policy with enclosures (Aug. 25, 1995) (on file with National Wildlife Federation).
¹⁷⁸ Water Resources Development Act of 1996 § 202(a), 33 U.S.C. § 2213.
¹⁷⁹ On a percentage basis, users pay less for the costs of the inland waterway navigation system than other transportation system users. CONGRESSIONAL BUDGET OFFICE, PAYING FOR HIGHWAYS, AIRWAYS AND WATERWAYS: HOW CAN USERS BE CHARGED? 3 (May 1992).
¹⁸⁰ The 11% contribution was calculated based on U.S. Army Corps of Engineers data for system costs and outlays for FY 1995, FY 1996, FY 1997 and FY 1998 (on file with National Wildlife Federation and Taxpayers for Common Sense).
¹⁸¹ The Inland Waterways Trust Fund was established by the Inland Waterways Revenue Act of 1978 and amended by the Water Resources Development Act of 1986. The fund derives revenue from taxes imposed on fuel for vessels engaged in commercial waterway transportation and investment interest. BUREAU OF TRANSPORTATION STATISTICS, U.S. DEPARTMENT OF TRANSPORTATION, GOVERNMENT TRANSPORTATION FINANCIAL STATISTICS 2001, 35. Inland Waterways Revenue Act of 1978 § 206, 26 U.S.C. § 9506; Water Resources Development Act of 1986 § 302, 33 U.S.C. § 2251. Beginning in WRDA 1986, Congress has required half of the costs for new inland navigation construction or major rehabilitation projects to come from the Inland Waterway Trust Fund. See generally, T.R. REID, CONGRESSIONAL ODYSSEY: THE SAGA OF A SENATE BILL (1980). Channel construction can also be funded through the IWTF.

waterways users board)¹⁸² decides which projects will be developed with IWTF funds. This funding mechanism does not work like a true user fee. It effectively removes the beneficiaries' cost-share – a basic measure of actual need. The nation's inland waterway system has been completed and the IWTF serves as little more than "slush fund" to expand and "improve" existing waterways. The IWTF has accumulated a chronic surplus of more than \$400 million that can only be used for new construction, while the inland waterway system suffers from a \$364 million maintenance backlog.¹⁸³

Inland waterway operations and maintenance (O&M) – as opposed to construction – is paid for *entirely* by federal

taxpayers – to the tune of \$590 million per year.¹⁸⁴ This arrangement has allowed low-volume, deadbeat waterways to cannibalize funding that would be better spent on high-volume, more efficient workhorses of the waterway system. The Mississippi, Illinois, and Ohio Rivers, and the Gulf Intracoastal Waterway carry 90% of the nation's inland waterway commerce. Yet, these workhorse rivers receive only about 60% of the inland waterways O&M funding. Seventeen low-volume waterways, on the other hand, carry just 2.3% of the nation's traffic. But these deadbeat waterways consume 30% of the system's O&M budget.¹⁸⁵ In FY 2002, operating and maintaining dead-beat waterways absorbed \$179 million that could have been used to reduce the maintenance backlog on the Mississippi and Ohio Rivers.¹⁸⁶



¹⁸² The Inland Waterways User Board is an industry Federal advisory committee established by Section 302 of the Water Resources Development Act of 1986. The eleven-member Board represents all geographic areas on the fuel-taxed inland waterway system of the United States. The Board's purpose is to make recommendations to Congress and the Secretary of the Army (Civil Works) on the priorities and spending from the IWTF for construction and rehabilitation projects on the fuel-taxed system. The Corps' Director of Civil Works serves as the Executive Director of the Board. Inland Waterways Users Board website, at <http://www.iwr.usace.army.mil/usersboard/Index.htm> (last visited Oct. 16, 2003). Each year, the Board appears to rotate its priorities among proposed construction projects.

¹⁸³ BUDGET OF THE UNITED STATES FOR FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, APP., at 855; Taxpayers for Common Sense, Analysis of Inland Waterways Subsidies, based upon the Energy and Water Development Appropriations Act, 2002 (Pub. L. 107-66) (on file with Taxpayers for Common Sense).

¹⁸⁴ Taxpayers for Commons Sense, *supra* note 183.

¹⁸⁵ *Id.* See also, *Recommendations Regarding Financing of the Inland Waterway Navigation System Hearing Before the House Comm. on Transp. and Infrastructure*, 106th Cong. (Nov. 3, 1999) (statement of Timothy D. Searchinger, Senior Attorney, Environmental Defense).

¹⁸⁶ Taxpayers for Common Sense, *supra* note 183.

EQUITY

In its FY 2004 budget, the Bush Administration proposed a more equitable common sense solution, by tapping the IWTF revenues to contribute one-quarter of the cost of operating and maintaining "high-use" inland waterways, while paying one-half for all other inland waterways.¹⁸⁷

Because users pay none of the costs to operate and maintain inland waterways, the navigation lobby fights for the Corps to maintain channels on deadbeat waterways, even if there is very little traffic, like on the Missouri (see p. 58) and Apalachicola (see p. 62) Rivers. There are other forms of transportation available at far less taxpayer expense, but as long as barge interests get waterways for free, they have little interest in exploring other options. Additionally, maintaining navigation on little-used rivers prevents efforts to restore these rivers to their once rich biological productivity.

The Road to Reform: Provide the Right Financial Incentives.

Congress and the Administration must ensure cost-sharing requirements are equitable, encourage responsible behavior, and protect taxpayers and the environment.

- **Enforce and maintain cost-sharing for water projects.** Congress and the Administration must recommit to enforcing consistent cost-sharing rules for all types of water projects. The ever-growing number of special credits, individual waivers and exceptions to these requirements are unfair. Congress and the Administration should reject the port lobby's efforts to increase the federal subsidy for deep-draft harbor dredging and maintain the current equitable cost-share formula.

- **Reduce federal subsidies for beach rebuilding.** Congress and the Administration should shift more of the responsibility for funding beach projects to states and localities by reducing federal taxpayers' cost-share burden from 65% to 35%. In addition, existing public access requirements should be enforced, ensuring that no federal funding goes to projects that lack proper public access.
- **Revise flood damage reduction cost-sharing levels to be commensurate with responsible floodplain management.** Congress and the Administration should establish a new, sliding cost-sharing formula that provides greater incentive for wise floodplain management at the local level and nonstructural flood damage reduction projects. The new formula should start at a base federal cost-share of no more than 50% for all Corps flood damage reduction projects. The formula would then include incremental increases in the federal share based upon a rating of activities and investments undertaken by local communities to manage floodplains wisely and to reduce flood risks, such as flood warning systems, zoning and relocations of flood-prone properties.
- **Require users to pay a share of inland waterway operation and maintenance.** Congress should pass legislation proposed in the Administration's FY 2004 budget that would require commercial inland waterway users to contribute to operation and maintenance (O&M) through the existing Inland Waterways Trust Fund. The Trust Fund would pay at least 25% of O&M costs for high-volume water

¹⁸⁷ "High-use" inland waterways are defined as those with more than 5 billion tons miles of traffic per year over the previous 5 years. BUDGET OF THE UNITED STATES FOR FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, APP., at 855.

ways that carry more than five billion ton-miles a year and at least 50% of the O&M costs for all other waterways.

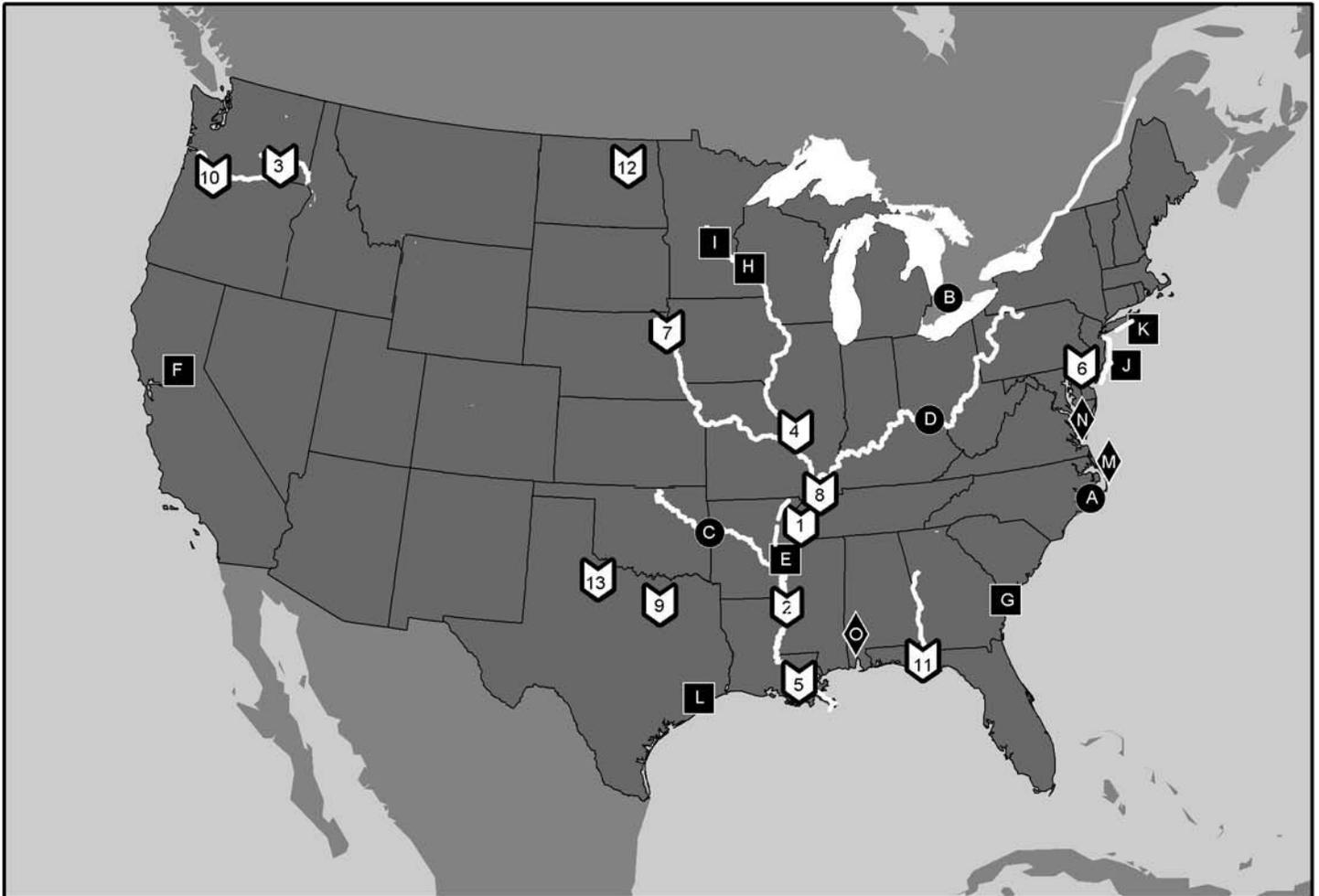
- **Implement a Harbor Services User Fee.** Congress and the Administration should replace the existing Harbor Maintenance Tax with a Harbor Services User Fee, based on vessels' carrying capacity and the

level of harbor services provided. Unlike the current HMT, the User Fee would be directly related to actual operations and maintenance costs. The receipts from the User Fee would also fund a portion of construction costs. The Administration has proposed a step towards this reform in its FY 2004 budget, by tapping the existing HMT for new construction projects.



A dredge pumps sand on beaches in Northern New Jersey as part of largest shoreline project ever undertaken by the Corps.
Photo Credit: U.S. Army Corps of Engineers

the nation's most threatening and



Most Urgent Threats



1. Eastern Arkansas Irrigation Projects (Arkansas)
2. Big Sunflower River Dredging and Yazoo Pump (Mississippi)
3. Lower Snake River Navigation (Idaho and Washington)
4. Upper Mississippi River Navigation Expansion (Illinois, Iowa, Minnesota, Missouri and Wisconsin)
5. Industrial Canal Widening (Louisiana)
6. Delaware River Deepening (Delaware, New Jersey and Pennsylvania)
7. Missouri River Navigation (Iowa, Kansas, Missouri and Nebraska)
8. St. John's Bayou and New Madrid Floodway (Missouri)
9. Dallas Floodway Extension (Texas)
10. Columbia River Deepening (Oregon and Washington)
11. Apalachicola River Dredging (Alabama, Georgia and Florida)
12. Devils Lake Emergency Outlet (North Dakota)
13. Wichita River Basin Chloride Control (Texas)
14. Environmental Infrastructure (Nationwide)

Emerging Threats



- A. Dare County Beach Replenishment (North Carolina)
- B. Great Lakes Navigation Expansion (Great Lakes and St. Lawrence River)

Emerging Threats Cont.

- C. Arkansas River Channel Deepening (Arkansas and Oklahoma)
- D. Ohio River Navigation System Expansion (Kentucky, Illinois, Indiana, Ohio, Pennsylvania and West Virginia)

Serious Concerns



- E. White River Navigation (Arkansas)
- F. Auburn Dam (California)
- G. Savannah Harbor Expansion (Georgia)
- H. Locks and Dam at Minneapolis (Minnesota)
- I. Lock and Dam #3 (Minnesota)
- J. New Jersey Beach Replenishment (New Jersey)
- K. Long Island Beach Replenishment (New York)
- L. Clear Creek Flood Control (Texas)

Watch List



- M. Oregon Inlet Jetties (North Carolina)
- N. Chesapeake and Delaware Canal Deepening (Maryland)
- O. Jackson Navigation Spur and Port Facility (Alabama)

wasteful corps of engineers projects

In March 2000, Taxpayers for Common Sense and the National Wildlife Federation exposed the 25 most financially wasteful and environmentally destructive Corps projects in the country in our report, *Troubled Waters: Congress, the Corps of Engineers, and Wasteful Water Projects*. Presenting a challenge to Congress and the Corps to reevaluate the nation's approach to water resources development, *Troubled Waters* called upon concerned citizens to engage on the local, regional and national levels in the movement to transform the Corps into a more responsible agency. Since then, citizens, along with conservation and taxpayer organizations, have blocked many of these projects, at least temporarily. Nearly all of these projects, however, are still in the planning stages and continue to represent a serious threat to taxpayers and the environment. In addition, the Corps continues to churn out new wasteful projects that threaten the environment and taxpayer. Four new Corps projects have earned a spot on the list of the most threatening and wasteful Corps projects in America.

These projects are grouped in the following categories:

Most Urgent Threats: Despite compelling evidence of unnecessary environmental destruction, faulty economic analyses, and, in some cases, waning support by those intended to benefit from the project, the Corps is determined to proceed with these 14 projects.

Emerging Threats: There are four new projects the Corps is pursuing that put billions of taxpayer dollars and critical water resources at risk: Dare County Beach

Replenishment Project in North Carolina, Great Lakes Navigation Expansion Study, Arkansas River Channel Deepening and Ohio River Navigation System Expansion.

Serious Concerns: Eight of the projects identified in *Troubled Waters* remain a serious concern. Citizens and public interest organizations have brought to light new information and facts that have forced the Corps to either reanalyze the economic justification and environmental impacts or consider new alternatives to these projects. The Corps, nonetheless, in many cases, is dragging its feet in an attempt to proceed with the original proposal.

Watch List: Finally, three *Troubled Waters* projects have been brought down. The Jackson Navigation Spur is no longer a concern because Congress deauthorized the project. The Oregon Inlet Jetties and Chesapeake and Delaware Canal Deepening Project have been shelved, but remain authorized projects that could rise from the dead in the future.

Until the reform principles set forth in this report are implemented, the worst Corps projects in America will continue to threaten the nation's aquatic resources and taxpayers' wallets.

most urgent threats

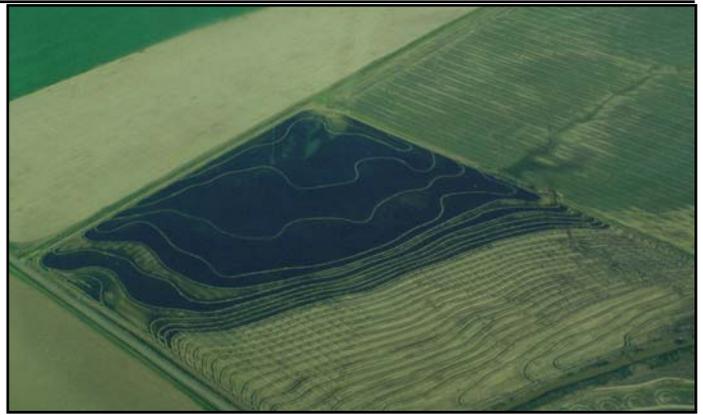
Eastern Arkansas Irrigation Projects

The Grand Prairie Area Demonstration project is a subsidized pump to sell subsidized water to grow subsidized crops.

The Project: The most wasteful project identified in *Troubled Waters*, the \$319 million Grand Prairie Project, threatens internationally-acclaimed wetlands and could pave the way for more than \$1 billion worth of irrigation projects proposed in eastern Arkansas.¹⁸⁸ Thanks to opposition from local citizens, farmers and conservation groups, the Corps has not begun constructing the pump. But project supporters are working hard to start construction this year.

The massive pump and 650-mile canal-and-pipeline distribution system would be able to deliver more than 100 billion gallons of White River water annually for irrigation in the Grand Prairie region, where irrigation for rice farming threatens to deplete two aquifers. Reducing the river's flow will damage the extraordinary White River and Cache River National Wildlife Refuges, along with habitat for the largest concentration of wintering mallard ducks in North America, and a diverse freshwater fishery with more than 100 fish species and 45 types of mussels. About half the Grand Prairie area farmers, the project's "beneficiaries," did not support the plan, citing the project's high local costs and environmental impacts. In addition, the project would cost federal taxpayers \$208,000 per farmer.¹⁸⁹ If constructed, it could hurt the region's multi-million dollar hunting, recreation, and eco-tourism industries. A poll of Arkansas voters found that an overwhelming majority opposed the project.¹⁹⁰

Project Politics: The Office of Management and Budget (OMB) opposes the Grand Prairie Project because it is not economically justified, would adversely affect two national wildlife refuges and the White River, and because agricultural water supply projects like this one should not be a Corps responsibility.¹⁹¹ (See "New Corps Missions With No Direction" p. 33). Despite strong local opposition, Senator Blanche Lincoln (D-AR) continues to support the project.



A coalition of farmers, environmentalists, local businesses, and sportsmen, developed an alternative to maximize water conservation features, such as this terraced rice field that reuses irrigation water multiple times. Photo Credit: David Conrad

Current Status: Working with other irrigation districts in eastern Arkansas, a coalition of farmers, environmentalists, local businesses, and sportsmen developed a sustainable alternative to address agricultural water needs in the region without tapping into the White River.¹⁹² The alternative plan would maximize irrigation efficiency and improve water conservation, and would cost less than half of the Corps' plan. Support for the Corps' pump and distribution system is waning because recent construction of on-farm reservoirs has helped farmers conserve water more cost-effectively.

In 2002, Congress appropriated \$12 million for the Grand Prairie project, but OMB restricted the money to on-farm water conservation. The Bush Administration also blocked a provision in a different bill that would have directed the Corps to start pump construction. No funds were provided for FY 2003, and the Administration again recommended no funding in the FY 2004 budget proposal. Nonetheless, project proponents have included a legislative "rider" in the FY 2004 spending bill, in order to re-direct money previously provided for on-farm work to instead start construction of the pump.¹⁹³

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¹⁸⁸ Memphis District, U.S. Army Corps of Engineers, Eastern Arkansas Comprehensive Study, Feasibility Report and Environmental Impact Statement (1990).

¹⁸⁹ *A Sustainable Alternative to Replace the Grand Prairie Area Demonstration Project* (May 2001), presented by Arkansas Chapter of the American Fisheries Society, Arkansas Chapter of The Wildlife Society, Arkansas Wildlife Federation, Augusta Chamber of Commerce, Augusta City Council, Augusta Improvement Club, Clarendon Chamber of Commerce, National Wildlife Federation, White River Conservancy, and Wildlife Management Institute (on file with National Wildlife Federation).

¹⁹⁰ An Arkansas Wildlife Federation and National Wildlife Federation poll conducted by the Tarrance Group in August 2003 found 63% of voters opposed the Grand Prairie project and only 29% supported it.

¹⁹¹ Letter from Mitchell E. Daniels, Jr., *supra* note 130.

¹⁹² *A Sustainable Alternative*, *supra* note 189.

¹⁹³ Energy and Water Development Appropriations Act, 2004, Pub. L. 108-137 (directing the Corps to "continue construction of water withdrawal features of the Grand Prairie, Arkansas project.").

most urgent threats

Big Sunflower River Dredging and Yazoo Backwater Pump - Mississippi

Pork-barrel politics driving destruction of tens of thousands of acres of some of North America's richest wildlife habitat.

The Projects: The Big Sunflower River Dredging Project and Yazoo Backwater Pump combined will cost federal taxpayers \$243 million and damage, in a single location, more wetlands than private-sector development has nationwide in the past seven years. Riders in the FY 2003 and 2004 spending bills direct the Corps to contract for the design and purchase of the Yazoo Pump, even though the final environmental impact statement has not been completed.

The \$62 million Big Sunflower River "maintenance" project will dredge virtually the entire width of the river for 104 miles. Designed to reduce the duration of flooding primarily on sparsely populated, marginal farmland, the project would cost \$1,100 per acre benefited – more than most area farmland sells for outright. The dredging will destroy 43% of the river's rich mussel beds, severely impact 3,631 acres of wetlands,¹⁹⁴ and resuspend toxins accumulated in the river's sediments.

Downstream from the dredging, the \$181 million Yazoo Pump would drain and damage tens of thousands of acres of ecologically significant wetlands by lifting water over Corps flood control levees and discharging the water into the Yazoo River. Though touted as a flood control project, 83% of the claimed benefits are from increased agricultural production – primarily for soybeans on frequently-flooded lands – while protecting few homes and businesses.¹⁹⁵ The Corps' economic justification overstates the agricultural benefits alone by \$144 million.¹⁹⁶ (See "Ill-Conceived Flood Control Program" p. 20).

Each project is at 100% federal expense. The Corps contends the Big Sunflower is not new construction, but rather "maintenance" of an existing channel – even though the river will be dredged seven times longer than the original 14-mile channel. Project proponents slipped an obscure provision waiving the Yazoo Pump's local cost-share requirements into WRDA 1996.¹⁹⁷



The Big Sunflower River and Yazoo Pump projects threaten to destroy some of the most valuable bottomland hardwoods in the Mississippi Delta. Photo Credit: Ted Wood

Project Politics: Senators Thad Cochran and Trent Lott (R-MS) are the main congressional proponents. The Bush Administration recommended severe funding cuts in the FY 2003 and 2004 budgets, but Congress has allocated \$22 million for the Yazoo Pump and nearly \$7 million for the Big Sunflower River Dredging in the last two years.

Current Status: The Mississippi Supreme Court revoked the state's water quality permit issued for the Big Sunflower project due to concerns that the dredging will stir up sediments contaminated with dangerous pesticides. After significant public pressure, the Corps initiated a new supplemental environmental impact statement at the end of 2002.

The Corps has delayed releasing a final environmental impact statement for the Yazoo Pump, but it is expected within the year. In spring 2003, a local newspaper revealed that the flood control claims are greatly exaggerated and confirmed the project is essentially drainage to increase production on marginal, frequently flooded agriculture land.¹⁹⁸ If the Corps' final analysis fails to document the true environmental impacts, other federal agencies will need to intervene to protect the environment and taxpayers.

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Cyn Sarthou, Gulf Restoration Network, 504-525-1528

¹⁹⁴ *Proposals for a Water Resources Development Act of 2002 Hearing Before the House Subcomm. on Water Resources and Env't of the Comm. on Transp. and Infrastructure*, 107th Cong. 7 (Apr. 10, 2002) (statement of Melissa Samet, Senior Director of Water Resources, American Rivers) (citing Final Project Report and Supplement No. 2 to the Final Environmental Impact Statement, Big Sunflower River Maintenance Project, Vol. I, App. B, U.S. Fish & Wildlife Coordination Act Report (Jul. 1996)).

¹⁹⁵ Ray Mosby & Natalie Perkins, *Yazoo Pump: Whose Homes Here Are Flooding?* DEER CREEK PILOT, Feb. 27, 2003, at 1 ("if, as is currently being advanced, there are 1,000 homes which the pump would protect from virtually annual flooding events, not many of them are apparently located within the lowest of the low area...").

¹⁹⁶ U.S. Environmental Protection Agency, *Yazoo Backwater Area: Technical Review of the Draft Reformulation Report*, 13-14 (Nov. 2 2000), available at <http://www.epa.gov/region4/water/specialprojects/yazoo/review.htm> (last visited Aug. 21, 2003). See also, *supra* note 50.

¹⁹⁷ Water Resources Development of 1996 § 202(a)(2), 33 U.S.C. § 2213(e)(1). See, *supra* note 151 and accompanying text.

¹⁹⁸ Ray Mosby & Natalie Perkins, *Yazoo Pump: Is It Really a Farm Project?*, DEER CREEK PILOT, Mar. 6, 2003, at 1 ("But it is indeed in the area of increased agricultural production that the Corps concludes the South Delta will achieve its greatest benefits from the pump."). See also, Mosby & Perkins, *supra* note 195; Ray Mosby, *Yazoo Pump: Protecting People or Political Pork?*, DEER CREEK PILOT, Feb. 20, 2003, at 1; Ray Mosby & Natalie Perkins, *Yazoo Pump: Which Names, Numbers Are Correct?*, DEER CREEK PILOT, Mar. 13, 2003, at 1.

most urgent threats

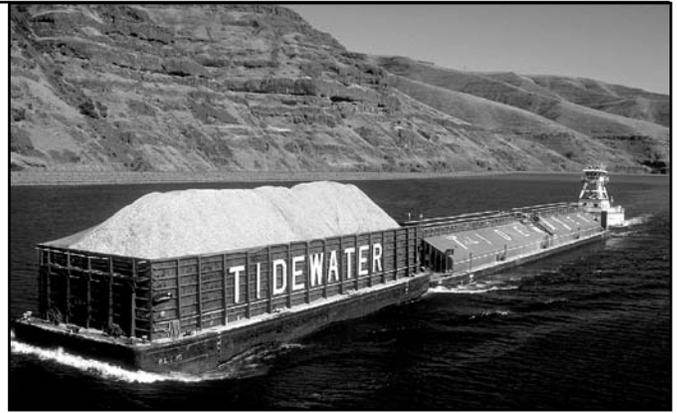
Lower Snake River Navigation – Idaho, Oregon and Washington

Corps keeps on trucking when removing four dams makes more sense for salmon and taxpayers.

The Project: The Columbia River Basin salmon "restoration" plan does more to preserve four dams on the lower Snake River than it helps recover endangered wild salmon and steelhead. Between 1997 and 2001, federal agencies spent \$1.5 billion on failing efforts to restore endangered salmon.¹⁹⁹ The Corps alone spent \$590 million on recovery efforts, including barging and trucking fish around the dams, even though partially removing the Ice Harbor, Lower Monumental, Little Goose, and Lower Granite locks and dams would be more economical and effective. The Corps operates these dams primarily for navigation from Lewiston, Idaho, and to generate 3-5% of the region's power. A free-flowing lower Snake River is key to saving four imperiled stocks of Columbia and Snake River Basin salmon and steelhead, because the dams block access to pristine spawning habitat and devastate young salmon migrating back to the ocean.²⁰⁰ Removing the dams and replacing lost energy with efficiency measures could create up to 15,000 new Northwest jobs.²⁰¹

The current salmon plan calls for annual spending of between \$500 million to \$1 billion to mitigate harm caused by the dams – far more over time than the Corps' one-time dam removal estimate of \$800 million. The Corps spends an additional \$13 million annually operating and maintaining the navigation channel.²⁰² This cost, combined with relatively light barge traffic, makes it among the nation's most wasteful waterways.²⁰³ (See "Obsolete Operations and Maintenance" p. 25). Moreover, salmon extinction caused by the dams could cost taxpayers billions in legal settlements and deprive the region of enormous economic and cultural benefits.

Project Politics: Representatives Jim McDermott (D-WA) and Tom Petri (R-WI) have introduced the Salmon Planning Act, which had 100 co-sponsors as of October 2003. The bill would require a federal assessment of current salmon recovery actions,



Four navigation dams built on the Lower Snake River have pushed endangered salmon and steelhead to the brink of extinction. Photo Credit: U.S. Army Corps of Engineers

dam removal engineering and economic mitigation studies, and authorizes the Corps to include dam removal in its recovery plan, if deemed necessary to save salmon and steelhead.

Current Status: In May 2003, a federal district court ruled that the 2000 salmon recovery plan for the Columbia and Snake river basins was illegal.²⁰⁴ The 2000 plan refused to mandate dam breaching, even though it has the greatest chance for restoring wild salmon and steelhead.²⁰⁵ Instead, the plan recommended habitat restoration activities. In the first two years, less than 30% of the plan's recovery actions were completed.²⁰⁶ The court ordered a new plan to be finalized by spring 2004 that demonstrates with greater certainty how to achieve recovery without dam breaching. If that is not possible, the new plan is to include an analysis of alternatives, including dam breaching. Recently, 118 members of Congress wrote the President emphasizing that the new plan should be fiscally responsible and consider all credible recovery options, including dam breaching.²⁰⁷

Contacts:

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202-546-8500 x112

John Kober, National Wildlife Federation, 206-285-8707 x108
Michael Garrity, American Rivers, 206-213-0330 x15

¹⁹⁹ GENERAL ACCOUNTING OFFICE, *supra* note 102, at 2.

²⁰⁰ Every salmon run in the Snake River basin is either extinct or listed under the Endangered Species Act.

²⁰¹ CHRISTOPHER G. PERNIN, ET AL., RAND SCIENCE & TECHNOLOGY, GENERATING ELECTRIC POWER IN THE PACIFIC NORTHWEST: IMPLICATIONS OF ALTERNATIVE TECHNOLOGIES (2002).

²⁰² In December 2002, a court halted the Corps' lower Snake river dredging plan until it can prove the dredging does not harm endangered salmon and steelhead. National Wildlife Fed'n v. Nat'l Marine Fisheries Serv., 235 F. Supp.2d 1143 (W.D. Wa. 2002) (order granting preliminary injunction).

²⁰³ Taxpayers for Common Sense, Most Expensive Segments of the Inland Waterways System (on file with Taxpayers for Common Sense).

²⁰⁴ National Wildlife Fed'n, et al. v. Nat'l Marine Fisheries Serv., et al., 254 F. Supp.2d 1196 (W.D. Wa. 2003) (order finding the no-jeopardy conclusion in the 2000 plan to be arbitrary and capricious).

²⁰⁵ See, *supra* note 101. In its Biological Opinion, the National Marine Fisheries Service recommended a host of measures and subsequent evaluations to determine whether the measures are being implemented effectively and whether breaching the dams is necessary to avoid jeopardizing the endangered species. National Marine Fisheries Service, Northwest Region, *supra* note 101, at 9-1 to 9-52.

²⁰⁶ During the first two years, the plan received only about 50% of the funding required for full implementation. See, Save Our Wild Salmon, *Salmon Plan Report Card – Year 2 – 2002*, available at http://www.wildsalmon.org/library_files/2002.ReportCard.pdf (last visited Oct. 9, 2003).

²⁰⁷ Letter from Members of Congress to George H. Bush, President of the United States regarding Pacific Northwest Salmon (Oct. 10, 2003) (on file with Taxpayers for Common Sense and National Wildlife Federation).

most urgent threats



Lock and Dam No. 14, near Pleasant Valley, Iowa, is one of 29 locks and dams that have turned the once mighty Mississippi River into stair step pools for 600 miles. Photo Credit: U.S. Army Corps of Engineers

Upper Mississippi River Navigation Expansion

Corps refuses to let economics get in the way of this billion-dollar boondoggle.

The Project: The Corps was caught manipulating economic models to justify a \$2.3 billion navigation lock expansion on the Upper Mississippi and Illinois Rivers, bringing the project planning to a temporary halt in 2001.²⁰⁸ Now the Corps is using outdated, discredited models to justify extending seven to twelve 600-foot locks to 1,200-foot in order to expedite traffic on the Upper Mississippi and Illinois Rivers. Constrained by levees and impounded by 37 locks and dams, scientists say the Mississippi and Illinois River ecosystems are moving toward collapse as their side channels and sloughs fill with silt and sediment.²⁰⁹ Barge companies are demanding longer locks to accommodate more barges, despite the fact that barge traffic has remained stagnant for more than 15 years. Expanding the navigation system would further impact numerous species of fish and mussels, the Mississippi Flyway, which supports more than 40% of North America's migratory birds, and 275,000 acres of the National Wildlife Refuge system.²¹⁰ (See "The Secret Plan to 'Grow the Corps'" p. 2).

Project Politics: Although the revised navigation study has not been completed, some politicians from the region, led by Missouri Senator Kit Bond (R), have indicated they plan to ask Congress to authorize the project, regardless of the study's results.

Current Status: In 2000, the Corps' lead economist blew the whistle on the \$55 million study.²¹¹ An Army Inspector General investigation confirmed that senior Corps officials ordered the economists to exaggerate demand for future barge traffic by underestimating the impact alternative destinations for grain, such as ethanol plants, would have on the amount that is ultimately shipped by barge.²¹² Later, the National Academy of Sciences confirmed the investigation, and added that the Corps grossly overestimated foreign demand for American grain. The Academy also found the Corps ignored the benefits of scheduling, congestion pricing and other inexpensive measures that

could immediately improve the flow of waterway traffic, including helper boats, mooring cells, and extended guidewalls.²¹³

Rather than follow the National Academy of Sciences recommendations, the Corps initially took a "shoot the messenger" approach and attacked the character of the whistleblower.²¹⁴ Subsequently, the Corps dusted off the old "tow-cost" economic model that ignores the fact that farmers have alternatives to barging grain on the river, such as shipping to different destinations or processing the grain in the upper Midwest.²¹⁵ In the FY 2004 budget, the Bush Administration criticized the "tow-cost" model for failing to capture common sense human behavior and for being a poor economic tool for estimating benefits of inland waterway navigation projects.²¹⁶ Most recently, the Corps has used improbable "scenarios" of future traffic and foreign demand that are similar to the original exaggerated traffic forecasts. This "scenario" approach allows the Corps to introduce an array of alternatives that are not cost-justified, enabling project navigation boosters in Congress to push for lock expansions without requiring a sound economic rationale to support it.²¹⁷

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²⁰⁸ Michael Grunwald, *Public Works Study Halted Army Corps' Analyses of Miss. River Projects Faulted*, WASH. POST, Mar. 1, 2001, at A4.

²⁰⁹ Rock Island District, U.S. Army Corps of Engineers, Report to Congress: An Evaluation of the Upper Mississippi River System Environmental Management Program (Dec. 1997), available at <http://www.mvr.usace.army.mil/pdw/rctfinal.htm> (last visited Sep. 12, 2003).

²¹⁰ NATIONAL RESEARCH COUNCIL, *supra* note 5, at 95 (App. B: Letter from Richard C. Nelson, U.S. Fish and Wildlife Service, to Col. William J. Bayles, District Engineer, U.S. Army Corps of Engineers (Aug. 31, 2000)).

²¹¹ *Id.*, at 13.

²¹² DEPARTMENT OF THE ARMY, *supra* note 6.

²¹³ NATIONAL RESEARCH COUNCIL, *supra* note 5, at 66-71, 106-11.

²¹⁴ See, e.g., *Hearing Before the Congressional Mississippi River Caucus*, 107th Cong. (Mar. 15, 2001) (statement of Col. James V. Mudd, Rock Island District Commander (1997-2000) U.S. Army Corps of Engineers) ("[Dr. Sweeney] lied to us all."), available at <http://www.mvr.usace.army.mil/PublicAffairsOffice/NavStudy/JamesMuddTestimony.htm> (last visited Dec. 8, 2003).

²¹⁵ See, *supra* note 11 and accompanying text.

²¹⁶ BUDGET OF THE UNITED STATES FOR FISCAL YEAR 2004, CORPS OF ENGINEERS – CIVIL WORKS, 256, available at <http://www.whitehouse.gov/omb/fy2004>.

²¹⁷ A second "interim report" by the National Academy of Sciences criticized the Corps for failing to respond to many of the previous panel's basic recommendations. NATIONAL RESEARCH COUNCIL, *supra* note 10; Loeb, *supra* note 11.

most urgent threats

Industrial Canal Lock Replacement – Louisiana

Enormous lock replacement for plummeting traffic threatens historic neighborhoods.

The Project: In 2000, the Corps launched the construction of a \$748 million²¹⁸ replacement of the Inner Harbor Navigation Canal (also known as the "Industrial Canal") lock in New Orleans with a longer, wider and deeper lock. The canal connects the Mississippi River to the Gulf Intracoastal Waterway and the Mississippi River Gulf Outlet, a little used alternative to the Mississippi River itself. To date, Congress has appropriated more than \$70 million for project construction. The economic, social, human health, environmental and safety costs of the new, bigger lock far exceed the few benefits.

The Corps used predictions of a 50% increase in barge traffic to justify construction. In reality, barge traffic has decreased 50% since 1988 – an obvious trend the Corps avoided by excluding data from 1994-1997 from its 1998 economic study.²¹⁹ (See "Overly Optimistic Predictions" p. 6). The lock replacement includes hundreds of millions of dollars for a longer and deeper lock, suitable for ocean-going vessels, even though almost all ocean traffic uses other existing facilities and the Corps itself found this project element was not cost-justified. Moreover, the Corps recently sank millions into rehabilitating the existing lock it now wants to replace.

Project construction could resuspend toxic sediments that would contaminate nearby wetlands and drinking water sources. Independent testing indicates that canal sediments at the actual dredging depth contain unhealthy concentrations of toxic substances, such as naphthalene, arsenic, and chromium. Earlier Corps studies missed this fact by not testing sediments at these depths.

The adjacent, mostly minority and low-income neighborhoods, including historic Holy Cross, would be impacted the most by construction. After nearly 50 years of controversy, the Corps offered residents just \$38 million to "make up" for more than a decade of pile driving, demolition and other construction



The most expensive lock replacement in U.S. history threatens public with toxic contamination, traffic jams, pollution and depressed property values. Photo Credit: U.S. Army Corps of Engineers

impacts. The Corps is also studying adding a tunnel to mitigate 45-minute, mile-long traffic jams that would occur as cars wait for ships to pass drawbridges – affecting commuters and emergency vehicle response times. A tunnel would cost tens of millions of dollars, further undercutting the project's questionable economics.

Project Politics: The New Orleans area congressional delegation supports the project, with Congressmen Billy Tauzin (R), William Jefferson (D) and David Vitter (R) in the lead. A major project beneficiary is Bollinger Shipyards, Inc. – the only shipyard on the north side of the lock. Bollinger's CEO, Donald "Boysie" Bollinger, served on the Board of the Port of New Orleans, the project sponsor, until 2002.

Current Status: During a public hearing in 2002, the Corps admitted contaminated sediments would likely be flushed into Lake Pontchartrain during construction. In 2003, citizen and environmental groups, and local residents sued the Corps because the project poses serious threats to public health. If the contaminated sediments enter the lake, it would set back years of clean up efforts, and could kill marine life, contaminate fish eaten by the public, and harm local children who swim in it.²²⁰

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²¹⁸ U.S. Army Corps of Engineers, Fiscal Year 2004 Budget Justification Statement, Inner Harbor Navigation Canal Lock, Louisiana (continuing), at 393.

²¹⁹ Coleman Warner, *Bottleneck*, TIMES -PICAYUNE, Apr. 21, 2000, at A1. In 1988, the high tonnage year, traffic was more than 28,000 tons. By 2001, barge traffic was down to 13,770 tons.

²²⁰ The lawsuit plaintiffs include the Holy Cross Neighborhood Association, Gulf Restoration Network and Louisiana Environmental Action Network. Mark Schleifstein & Ben Newhouse, *Judge to Rule on Lock Lawsuit Financing Troubles Delay Corps Project*, TIMES -PICAYUNE, Sep. 2, 2003; Mark Schleifstein, *Lock Project Suffers Court Setback: Opponents Can Use Hazardous Waste Law*, TIMES -PICAYUNE, Nov. 6, 2003.

most urgent threats

Delaware River Deepening – Pennsylvania, New Jersey and Delaware

Corps caught cooking the books twice.

The Project: The General Accounting Office (GAO) dismantled and discredited the Corps' justification for deepening the Delaware River's 106-mile main shipping channel from 40 to 45 feet. The June 2002 report found that the project costs far exceeded the benefits and that the Corps relied upon "miscalculations, invalid assumptions, and outdated information" to inflate benefits by 200%.²²¹ The Corps' latest estimated project cost is \$286 million.²²²

The project's economics hinge on reduced costs for six crude oil refineries along the river. However, oil shipment increases predicted by the Corps ten years ago never materialized, and it appears highly unlikely that the refineries would pay for the work necessary to use a deeper channel. The Corps' plan relies on acquiring three south New Jersey sites to dispose of nearly 70 million cubic yards of dredge spoils.²²³ Contrary to this plan, Gloucester County is in the process of purchasing two of the sites, intending to prevent the Corps from dumping the spoils there due to concerns about toxics, drinking water, wildlife, and local economics. Without these sites, the project could cost at least \$190 million more if the Corps must dump the millions of cubic yards of spoils in abandoned Central Pennsylvania mines.²²⁴

Critical errors exist in the Corps' environmental analysis, such as failing to address potential damage to water quality from toxic contamination.²²⁵ The Corps also ignored potential harm to air quality and public health caused by increased diesel emissions from the dredging in a three-city area suffering from severe air pollution. The dredging would also threaten water supplies, blue crabs, horseshoe crabs, as well as migrating shorebirds dependent upon them, recovering oyster populations and endangered shortnose sturgeon.²²⁶



The General Accounting Office found that dredging the Delaware River to 45 feet would waste taxpayers' money.
Photo Credit: U.S. Army Corps of Engineers

Project Politics: Congressmen Robert Andrews (D-NJ) and Michael Castle (R-DE), and Senator Jon Corzine (D-NJ) have fought against the deepening. Despite the evidence, Senator Arlen Specter (R-PA) continues to push for it. The Bush Administration secured a \$10 million cut from the project's FY 2003 appropriation and opposed funds included in the FY 2004 appropriations bills. Citing concerns, the New Jersey State Legislature has refused to provide necessary funding for the project. Delaware has also rejected project funding.

Current Status: Following the GAO's report, the Corps stopped all progress towards construction, conducted a reanalysis of the project, and subjected the new study for "review" by handpicked consultants. Released in December 2002, the reanalysis continues to claim project benefits outweigh costs, but independent experts have found the agency's economic conclusions wanting and that the new study inflates transportation savings to crude oil shipments by 30%.²²⁷ (See "Corps Incapable of 'Independent' Review of Itself" p. 4). Moreover, the Corps' cost estimates depend on the Delaware River Port Authority acquiring the necessary disposal sites, which could be far more expensive than predicted if the south New Jersey sites are unavailable.²²⁸ New Jersey has revoked the Corps' coastal zone permit needed to start the project. A necessary subaqueous lands permit has not been issued by Delaware and the state's hearing officer has recommended against permit approval.

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²²¹ GENERAL ACCOUNTING OFFICE, *supra* note 3, at 1.

²²² U.S. Army Corps of Engineers, Fiscal Year 2004 Budget Justification Statement, Delaware River Main Channel, New Jersey, Pennsylvania and Delaware (continuing), at 742. *See also*, Philadelphia District, North Atlantic Division, U.S. Army Corps of Engineers, *supra* note 16, at 17-19.

²²³ Philadelphia District, North Atlantic Division, U.S. Army Corps of Engineers, *supra* note 16, at 5. The Corps cut its previous estimate of 88 million cubic yards of dredge material to 70 million to shave tens of millions of dollars from the project costs in order to get over the benefit-to-cost threshold.

²²⁴ DELAWARE RIVERKEEPER NETWORK & NATIONAL WILDLIFE FEDERATION, DELAWARE RIVER DEEPENING PROJECT: OUTSTANDING ENVIRONMENTAL AND COMMUNITY ISSUES 13-14 (Aug. 9, 2002) (*citing* Letter from Lt. Col. Debra Lewis, U.S. Army Corps of Engineers, Philadelphia District, to Congressman Robert E. Andrews (D-NJ) with attachment, *Proposed Scenario Placement of Dredged Material Pennsylvania Strip Mines* (Mar. 2, 2000), Delaware River Port Authority & U.S. Army Corps of Engineers, *Beneficial Use of Dredged Material Initiatives*) (on file with National Wildlife Federation).

²²⁵ *Id.*, at 15-16.

²²⁶ *Id.*, at 17-32.

²²⁷ STEARNS, *supra* note 17 and accompanying text. *See also*, Letter from Philip J. Doherty, President of Maritrans Operating Company, L.P., to Lt. Gen. Robert B. Flowers, Chief of Engineers, U.S. Army Corps of Engineers, Regarding the Delaware River Main Channel Deepening Project Comprehensive Economic Reanalysis

most urgent threats

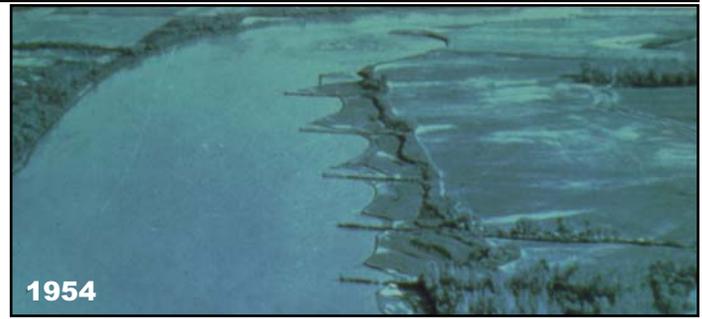
Missouri River Navigation

Corps ignores real economic benefits in order to maintain river for a few barges.

The Project: For more than a decade, political gamesmanship and Corps inaction have frozen economic and environmental progress on the Missouri River. Starting in the late 1930s, the Corps constructed the river's navigation, hydropower and flood control system, consisting of several upstream dams and a navigational channel between Sioux City, Iowa and St. Louis, Missouri. The Corps and shipping interests justified the primary emphasis on barge navigation by predicting 5 to 12 million tons of annual commercial traffic. Instead, the system carries approximately 1.5 million tons of commercial traffic annually. Noncommercial, short-haul, sand and gravel, including materials used to simply maintain the system, account for about 85% of the river's total traffic.²²⁹ (See "Overly Optimistic Predictions" p. 6).

To accommodate this trickle of barge traffic, the river's natural pattern of high spring flows and low summer flows were replaced with static flows from April through November. The U.S. Fish and Wildlife Service, the National Academy of Sciences, and basin state fish and wildlife management agencies have concluded that restoring the river's natural flow regime is critical to long-term survival of its native species, including the "endangered" pallid sturgeon and least tern, and the "threatened" piping plover.²³⁰ In fact, restoring the river's natural flow would increase the total national economic development benefits of the Missouri by increasing hydropower, recreation, and other benefits. According to the Corps' own economic analysis, navigation benefits account for less than four-tenths of one percent (0.4%) of the project's total national economic benefits.²³¹ (See "Obsolete Operations and Maintenance" p. 25). But local barge interests and agribusiness groups are fighting to maintain the status quo, arguing that the mere availability of barge navigation depresses truck and rail transportation rates, which flies in the face of common sense and economics.

Project Politics: Senator Kit Bond (R-MO) opposes modernizing Missouri River management and has attempted to insert



Rock navigation structures put in place to create a channel have made the Missouri River swift and narrow – destroying habitat essential for the region's fish and wildlife. Photo Credit: American Rivers

"riders" to prohibit any such changes. Senators from upstream states, led by Senators Tom Daschle (D-SD) and Max Baucus (D-MT), are concerned about the negative effects of current dam operations on the economic and environmental interests in their states.

Current Status: In 2001, the Corps appeared willing to endorse a proposal to mimic the river's natural regime to be more responsive to the contemporary environmental and economic needs of the river. But the Corps avoided the hard decision by delaying its identification a "preferred" alternative for river management. Though Corps has not yet issued a final plan for operating the dams, in July 2003, a court ordered the Corps to reduce the amount of water released from the upstream dams in order to protect endangered and threatened species.²³² However, it took two additional court decisions to get the Corps to comply.²³³

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²²⁹ NAVIGATION & WATER RESOURCES APPLICATIONS DIVISION, *supra* note 26, at 38. See, *supra* notes 35-37 and accompanying text.

²³⁰ U.S. Fish and Wildlife Service, Biological Opinion of Missouri River Projects (2000); NATIONAL RESEARCH COUNCIL, *supra* note 36.

²³¹ U.S. Army Corps of Engineers, Revised Draft Environmental Impact Statement for the Missouri River Master Water Control Manual (Aug. 2001), at 7-179; National Wildlife Federation, et al., Comments to U.S. Army Corps of Engineers on the Revised Draft Environmental Impact Statement for the Missouri River Master Water Control Manual (Feb. 28, 2002), at 8-9 (on file with National Wildlife Federation); see also, NATIONAL RESEARCH COUNCIL, *supra* note 36, at 75-76. See, *supra* note 100 and accompanying text.

²³² American Rivers, et al. v. U.S. Army Corps of Engineers, et al., No. 03-241 (D.D.C. Jul. 12, 2003) (order granting preliminary injunction). See Eric Pianin, *Missouri River Flow Cut Back at Judge's Order: Army Corps, Conservation Groups at Odds Over Applying Endangered Species Act*, WASH. POST, Jul. 14, 2003, at A2.

²³³ American Rivers, et al. v. U.S. Army Corps of Engineers, et al., No. 03-241 (D.D.C. Jul. 22, 2003) (order holding the Corps in contempt of Court's July 12, 2003 order and establishing a \$500,000 per day fine for non-compliance). See also, Eric Pianin, *Judge Holds Corps in Contempt in River Dispute*, WASH. POST, Jul. 23, 2003, at A2. After continuing to refuse to comply with the D.C. District Court's preliminary injunction order because the Corps felt it conflicted with an earlier federal court ruling, a judge designated to decide the dispute ruled that the Corps must comply with the Endangered Species Act and the preliminary injunction order. See Eric Pianin, *Judge Orders River Level Lowered; Endangered Species Act Takes Precedence*, WASH. POST, Aug. 7, 2003, at A19.

most urgent threats

St. Johns Bayou Basin/New Madrid Floodway – Missouri

Closing off natural backwater flooding areas is the wrong answer for economic development.

The Project: The Corps is pushing this \$108 million²³⁴ project to close the New Madrid Floodway, long designated by the Corps as a flood relief valve. The project's primary beneficiaries are a few wealthy, politically-connected Missouri bottomland owners, who would benefit from growing more federally-subsidized soybeans on these Mississippi River bottomlands. Small towns with local flood problems, like East Prairie and Pinhook, are being used as window-dressing to justify this agricultural flood control and drainage project. In truth, East Prairie will remain highly susceptible to localized flooding because it lacks internal stormwater drainage. Raising a small bridge across a bayou that occasionally floods could relieve the flood-related isolation experienced by the Village of Pinhook at far less cost. The Corps' obsession with this expensive project obscures efforts to find real solutions for these communities.

This project consists of two huge pumping stations and closing a 1500-foot gap in the Mississippi River frontline levee, which would block the largest remaining area along the middle Mississippi where floodwaters can naturally expand into the river's floodplain. Ninety-five percent of the river is already cut-off from its floodplain in this region and closing off this area will increase flood risk in upstream communities. Increased cropping and investment in the frequently flooded backwater will make it more difficult to use the New Madrid Floodway – a safety valve designed to protect communities like Cairo, Illinois in the event of a large flood.

The project will drain tens of thousands of acres of wetlands and eliminate 75,000 acres of increasingly rare backwater habitat that is critical to the health of Mississippi River fisheries and migratory waterfowl. Agribusiness interests have engineered a 95% federal subsidy thanks to East Prairie's designation as a rural Enterprise Community, even though the town will receive little, if any, economic benefit because localized flooding prob-



Mississippi River backwater in May 2003 flowing through the intentional gap in the Mississippi River levee towards New Madrid Floodway, which is integral to protecting upstream communities, like Cairo, Illinois, from flooding. Photo Credit: David Conrad

lems will continue. The Corps is ignoring major, unmitigable environmental damages and exaggerating estimates of crop yields to inflate the agricultural benefits, in order to justify the project's costs.

Project Politics: Project proponents Congresswoman Jo Ann Emerson (R-MO) and Senator Kit Bond (R-MO), serve on the key Corps appropriations subcommittees. Representative Emerson included \$5.1 million dollars in the FY 2003 spending bill in an attempt to initiate project construction. The Bush Administration recommended no funding for this project in the FY 2004 budget, but Congress appropriated \$4 million in the final bill.

Current Status: In June 2002, the Corps released its final environmental impact statement,²³⁵ which virtually ignored resource agency concerns and provided entirely inadequate environmental mitigation. After initially denying the Corps water quality certification, under political pressure the Missouri Department of Natural Resources settled with the Corps. In August 2003, the Corps announced final approval of the project, clearing it to proceed to construction. Conservationists have appealed the state's certification.

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²³⁴ U.S. Army Corps of Engineers, Fiscal Year 2003 Budget Justification Statement, St. John's [sic] Bayou – New Madrid Floodway, Missouri (continuing), at 725.

²³⁵ See, Memphis District, U.S. Army Corps of Engineers, Revised Supplemental Environmental Impact Statement for the St. Johns Basin-New Madrid Floodway Project (Jun. 2002), available at http://www.mvm.usace.army.mil/StJohns/Studies/FINAL_RSEIS.pdf (last visited Nov. 18, 2003).

most urgent threats

Dallas Floodway Extension – Texas

The Corps is ignoring far less expensive and less damaging alternatives that could better protect people from flood damages.

The Project: Despite opposition from the Bush Administration and a court injunction, the Corps is determined to proceed with the \$154.4 million²³⁶ plan to extend existing Dallas levees and cut a 600-foot wide swath (swale) through the Great Trinity Forest, eliminating more than 30,000 trees. The Corps' most recent environmental analysis fails to analyze the cumulative environmental impacts of the Dallas Floodway Extension (DFE) in conjunction with other transportation projects planned for the Trinity River floodplain, as required by a court order,²³⁷ and the Corps is continuing a shell game to avoid better solutions for the Dallas area.

The project's principal economic justification is increased flood control for downtown Dallas. Yet, most of these benefits could be obtained for a fraction of the cost by simply raising one of the existing Dallas levees by two feet.²³⁸ If the Corps were to pursue this option, the levee extension would most likely not be economically justified. To get around the economics, the Corps has proposed digging a swale and using that material to extend the levees (DFE project), and later raising the downtown levee – essentially divvying up the flood protection benefits in order to justify two different projects. A less expensive alternative is for the Corps to raise the existing Dallas levee, and conduct a voluntary buyout in floodprone neighborhoods, such as Cadillac Heights, which is suffering from toxic contamination. This would provide the most effective flood protection for the Dallas area with dramatically less impact to the floodplain environment.²³⁹

Project Politics: Mayor Laura Miller supports the voluntary buyouts, but continues to support cutting down the forest and extending the levees. Senator Kay Bailey Hutchison (R-TX) and Representative Eddie Bernice Johnson (D-TX) are the



The Dallas Floodway project would destroy 30,000 trees in the Great Trinity Forest (foreground) – one of the nation's largest urban forests. Photo Credit: U.S. Army Corps of Engineers

major project backers. In both the FY 2003 and 2004 budgets, the Administration recommended no funding for this project. But in each year, Congress appropriated nearly \$10 million and attempted to override the Administration by directing the Corps to start constructing the project as designed.

Current Status: In October 2001, the Office of Management and Budget strongly recommended that the Corps stop the project as planned and study lower-cost alternatives.²⁴⁰ In April 2002, the Corps was poised to start construction when a U.S. district court ordered the Corps to halt until it had completed an analysis of the cumulative impacts of all actions planned for the Trinity River floodplain.²⁴¹ Although the Corps has completed its supplement to the environmental impact statement, it has not conducted a complete analysis of the DFE with transportation projects planned for the future. The Corps is ready to proceed to construction, if cleared by the courts.

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²³⁶ Fort Worth District, U.S. Army Corps of Engineers, Final Supplement No. 1 to the Environmental Impact Statement for the Dallas Floodway Extension, Trinity River, Texas, at 2-4 (Apr. 2003), available at <http://www.swf.usace.army.mil/pao/dfe/dfeprojectnotes.htm> (last visited Sep. 29, 2003).

²³⁷ Texas Comm. on Natural Resources, et al. v. Maj. Gen. Hans Van Winkle, et al., No. 400-cv-384 (N.D. Texas, Apr. 10, 2002).

²³⁸ Fort Worth District, U.S. Army Corps of Engineers, Dallas Floodway Extension Project, Information Paper, Dallas Floodway System Phasing (Aug. 3, 2001), at 5, tab. 3 (estimating that raising the existing East Dallas Levee would cost approximately \$21.7 million at 1998 price levels, compared with a \$110 million estimate for the DFE project), available at http://www.swf.usace.army.mil/pao/dfe/pdfs/ASA_DFE_OMB_Analysis_Encl.pdf (last visited Sep. 30, 2003).

²³⁹ *Id.* See also, Fort Worth District, U.S. Army Corps of Engineers, Initial Assessment, Dallas Floodway Extension Reevaluation of the Cadillac Heights Floodplain Evacuation Measure (Jun. 14, 2001), at 5, tab. 2, available at http://www.swf.usace.army.mil/pao/dfe/pdfs/ASA_DFE_IA_Report_Final1_Encl.pdf (last visited Sep. 30, 2003). In 1991, the Corps estimated that the Cadillac Heights Floodplain Evacuation plan for the standard project flood zones would cost about \$8.7 million at 1998 price levels. Combining this plan with raising the existing East Dallas Levee would cost far less than the DFE.

²⁴⁰ Letter from Mitchell E. Daniels, Jr., Director of Office of Management and Budget, to Thomas E. White, Secretary of the Army, Regarding the Dallas Floodway Extension Project (Oct. 3, 2001), available at http://www.swf.usace.army.mil/pao/dfe/pdfs/DFE_Daniels_Ltr_to_White.pdf (last visited Aug. 21, 2003).

²⁴¹ See, Victoria Loe Hicks, *Judge Halts Work on Trinity Levees*, DALLAS MORNING NEWS, Apr. 11, 2002.

most urgent threats

Columbia River Deepening – Oregon and Washington

Corps ignores its outside reviewers' economic criticisms to keep dredge project alive.

The Project: Preempting bad news, four days before *The Oregonian* series ran, the Corps announced plans to reevaluate the economics of deepening 103 miles of the Columbia River from 40 to 43 feet.²⁴² The newspaper's exhaustive investigation of the project revealed the Corps had overstated benefits by more than 100% and that the project would return just 88 cents on the dollar.²⁴³ The project is meant to allow container and grain cargo ships to reach the Port of Portland more fully loaded. The Corps created an outside economic panel to review its reevaluation, but then ignored many key criticisms.²⁴⁴

The \$148.4 million deepening of the Columbia River would create 14.5 million cubic yards of spoils – with an additional 90 million cubic yards to be dredged over the next 20 years to maintain the depth. The Corps cannot determine an acceptable plan for disposing these spoils. Dumping off-shore would smother Dungeness crab habitat, a regional fishery worth between \$31.7 and \$84.4 million,²⁴⁵ increase the hazards of crossing the river's bar, and remove nourishing sediments from the system. Dumping in the estuary would degrade already-damaged habitat essential for threatened and endangered salmon, crab, sturgeon, and other aquatic life. Restoring the estuary is critical to recovering threatened and endangered salmon populations and necessary to offset negative impacts caused by the Basin's extensive hydropower system.

Project Politics: Oregon and Washington members of Congress support the project. The Administration has proposed no construction funding. But, in FY 2003 Congress allocated \$2 million for dredge spoil disposal under the guise of "habitat restoration." In FY 2004, Senator Patty Murray (D-WA) added \$5 million for project construction.

Current Status: The Corps selectively responded to its panel's criticisms. For instance, while accepting panel recommendations for cost-savings, the Corps ignored issues negatively affecting the project's economics.²⁴⁶ (See "Corps Incapable of



If constructed, the Corps' Columbia River Deepening project would produce more than 100 million cubic yards of dredge spoil material over the next two decades. Photo Credit: American Rivers

'Independent' Review of Itself" p. 4). The panel identified false project benefits from transporting empty containers and recommended analyzing the project in the wider, regional context of other Northwest container ports.²⁴⁷ Transportation savings are assumed to contribute to national economic development. But in this case, the outside panel stated that because all shipping lines²⁴⁸ serving Portland are foreign-based, they "would attempt to retain any cost savings and minimize any rate reductions to U.S. shippers or consignees."²⁴⁹ (See "Irrational Port Planning" p. 22). The Corps did not adequately address these and other issues.

In 2002, the National Marine Fisheries Service issued a biological opinion reversing its opposition. This decision will likely be challenged in court. Although Washington and Oregon initially denied the Corps' request for water quality certification, state regulators have since approved the project with a variety of limiting conditions.²⁵⁰ The White House has not budgeted this project because of a policy not to add to the Corps' backlog by funding new construction. Consequently, congressional boosters will likely be able to provide only small amounts of funding, which will delay construction significantly.²⁵¹ The Corps has issued its Record of Decision, clearing the project to proceed.

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²⁴² Press Release, Portland District, U.S. Army Corps of Engineers, Corps to Update Project Environmental Statement, Economics (Feb. 28, 2002), available at <https://www.nwp.usace.army.mil/pa/news/archive/2002/02-35.htm> (last visited Sep. 23, 2003). The first article in *The Oregonian's* exposé ran on March 3, 2002.

²⁴³ Barnett & Walth, *supra* note 18.

²⁴⁴ See, *supra* notes 18-20 and accompanying text.

²⁴⁵ Aloysius J. Didier, Jr., The Pacific States Marine Fisheries Commission, The Pacific Coast Dungeness Crab Fishery, 1 (Mar. 2002) (submitted to the Senate Comm. on Commerce, Science and Transp. and the House Comm. on Resources), available at <http://www.psmfc.org/reports/WOCCrabReport.pdf> (last visited Aug. 20, 2003).

²⁴⁶ Dylan Rivera & Jim Barnett, *Estimates Improve On Deeper Columbia*, THE OREGONIAN, Jan. 29, 2003.

²⁴⁷ RESOLVE, Inc., *supra* note 19, at 24, 37-38.

²⁴⁸ "Shipping lines" own the vessels that carry goods. "Shippers" own the goods carried on the vessels.

²⁴⁹ RESOLVE, Inc., *supra* note 19, at 38.

²⁵⁰ Both Oregon and Washington issued conditional water quality certifications and conditional Coastal Zone Management Consistency concurrences. Press Release, Portland District, U.S. Army Corps of Engineers, Corps Receives Approval for Columbia Channel Project (Jun. 24, 2003), at <https://www.nwp.usace.army.mil/issues/crcip/NR/NR30.htm> (last visited Aug. 20, 2003). The Washington State permit has been appealed by the environmental organization, Columbia River Alliance for Nurturing the Environment. See, Dylan Rivera, *Washington Board Issues Stay on Columbia Dredging Permits*, THE OREGONIAN, Aug. 15, 2003.

²⁵¹ Jim Barnett & Dylan Rivera, *Deep Channel on Columbia Faces Delay*, THE OREGONIAN, Sep. 18, 2003.

most urgent threats

Apalachicola River Dredging – Florida, Alabama and Georgia

America's most wasteful waterway is more expensive than shipping goods by limousine.

The Project: The last significant shipper has pulled off the Apalachicola River.²⁵² But the Corps continues to spend more than \$10 million annually maintaining the river for phantom barges, solidifying its place as America's most wasteful waterway. During the last full year that barging existed, the channel cost taxpayers between \$30,000 and \$60,000 for each barge trip. Decrying this subsidy, Congressman Tom Tancredo (R-CO) remarked it would be cheaper to ship goods by limousine.

The Apalachicola, formed by the confluence of the Chattahoochee and Flint Rivers, travels 106 miles across Florida's panhandle. It is the most wasteful portion of the little-used Apalachicola-Chattahoochee-Flint (ACF) Navigation System. The Corps plans called for constructing and maintaining a 290-mile 9-foot deep channel from Columbus, Georgia to the Gulf of Mexico.²⁵³ But due to low flows and heavy sedimentation the Corps cannot maintain the channel for more than short periods. To accomplish even this minor feat, the Corps withholds water behind upstream dams, making periodic releases for navigation windows. The inherent unreliability of the channel virtually guarantees that no commercial shipper will make the necessary investments to utilize the waterway.

The ongoing dredging and disposing of spoils at 146 different sites along the Apalachicola's banks have smothered biologically rich wetlands and natural bank habitat with mountains of sand, one of which is now the highest point in northern Florida, and is destroying critical habitat for shoal bass and federally threatened gulf sturgeon. Near the Corps' disposal sites, gamefish populations have declined by 50% to 75%. Also at risk from the continued dredging is Apalachicola Bay, one of the Southeast's cleanest estuaries, which produces 15% of America's annual oyster harvest.²⁵⁴

Project Politics: Senators Richard Shelby (R-AL) and Jeff Sessions (R-AL) remain stalwart defenders of dredging the Apalachicola, hoping that someday Alabama shippers



"Sand Mountain," and similar Corps dredge disposal sites along the Apalachicola, have smothered biologically-rich shoreline habitat under giant piles of sand.
Photo Credit: Stan Kirkland

may want to use it. In July 2002, Senators Bob Graham (D-FL) and Bill Nelson (D-FL) introduced legislation to deauthorize the project and develop a restoration plan for the Apalachicola. Representative Allen Boyd (D-FL) introduced an identical bill in the House.

Current Status: Supporters of a proposed marina in Columbus, Georgia are pressuring for continued dredging under the mistaken premise that eliminating dredging for commercial barges on the Apalachicola would adversely impact recreational boating use. In fact, according to the Corps, continuing to maintain the river for commercial navigation "strands recreational facilities" and sacrifices additional recreational benefits.²⁵⁵ The Florida Senators and Governor Jeb Bush (R) are trying to cut funding for the project, but face objections from the Alabama Senators. In FY 2001 and 2002, the Administration budgeted enough funds to dredge the Chattahoochee only. In each instance, Congress thwarted efforts to reallocate funds away from the Apalachicola by providing more than 10 times the funding recommended in the Administration's budgets. The Corps, whose 5-year permit expires in 2004, will be applying for Florida approval to continue the dredging.

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²⁵² In 2001, 99% of the few barges using the Apalachicola River belonged to Martin Marietta Aggregates, a sand and gravel hauler. Of the 284 loaded barges moving through Jim Woodruff Lock in 2001, 280 were Martin Marietta Aggregates. In 2000, 303 of the 336 barges also belonged to the company. Nearly all of the Martin Marietta barges traveled only 1 1/2 miles south through the Jim Woodruff Lock to the company's headquarters. Bruce Ritchie, *Closing Prompts Dredging Criticism Debate Fueled After Company Shuts Down*, TALLAHASSEE DEM., Apr. 21, 2002, at B1. In 2003, only about a half dozen barges used the river.

²⁵³ The 290 miles of waterway includes approximately 25 miles of the Flint River from Bainbridge, Georgia.

²⁵⁴ The Apalachicola River basin also contains Florida's most extensive bottomland hardwood forests. But the ongoing dredging tends to cut off river flows to side channels and sloughs.

²⁵⁵ Letter from Joseph W. Westphal, Assistant Secretary of the Army (Civil Works), to Honorable Bob Barr (Aug. 14, 2000), encl. 1 Summary of Apalachicola-Chattahoochee-Flint Navigation Project (on file with Taxpayers for Common Sense).

most urgent threats

Devils Lake Emergency Outlet – North Dakota

Exaggerated weather predictions to justify flood control scheme threatens Hudson Bay watershed with pollution and invasive species.

The Project: The Devils Lake Outlet project cannot pass economic and environmental muster. So, the Corps assumes absurd and unprecedented weather conditions to create an economic "benefit" from the \$208 million plan. The project would pump water from the Devils Lake basin into the Hudson Bay watershed via the Sheyenne River and the Red River. Because the lake has no natural outlet, it contains high concentrations of salts, dissolved solids and other pollutants. If constructed, the outlet could transfer invasive species to the Hudson Bay and increase flooding and erosion on the Sheyenne and Red Rivers. As a result, Minnesota, Manitoba, and the Canadian government strongly oppose this proposal. Additionally, Missouri is concerned the project is part of the larger Garrison Diversion – an expensive inter-basin transfer project long sought by North Dakota interests to grab Missouri River water.²⁵⁶

Project Politics: To circumvent the congressional committees overseeing the Corps, Senators Byron Dorgan (D-ND) and Kent Conrad (D-ND) attached a rider to the FY 2003 spending bill that authorized \$100 million for project construction, waived requirements that benefits exceed costs, and eliminated the law requiring consultation with Canada on the project's effects and treaty compliance.²⁵⁷

Current Status: The Corps dreamt up an unprecedented "wet future scenario" – 21 straight years of rainfall that exceeds the average by about 25% – to create an economic "benefit."²⁵⁸ The Corps' manufactured scenario assumes just the right amount of precipitation to increase the lake level to the point that justifies the outlet – not too much, not too little. Even the Corps admits "the probability that the lake will rise exactly in this way is zero."²⁵⁹ In fact, lake levels have fallen nearly two feet after two years of drought. Based on realistic hydrologic predictions, the outlet's benefit-to-cost ratio is .19-to-1, without counting major environmental costs. The FY 2003 rider, however, end-runs basic cost justification.²⁶⁰



The Canadian government, the states of Minnesota and Missouri, the Great Lakes Commission and many conservation organizations oppose the inter-basin transfer of water that would be part of the Devils Lake project.

Senator John McCain (R-AZ) and Minnesota Senators Mark Dayton (D) and Norm Coleman (R) led an effort to strip the rider from the FY 2003 bill. Although the effort failed (35 to 62), it helped steel Minnesota's resolve to oppose the project. The Corps released its final environmental impact statement in April 2003, where a doubling of the project cost from \$97 million to \$208 million debuted.²⁶¹ In October, the Corps signed off on the project. However, the project's Clean Water Act approvals are likely to be contested. In January 2004 Secretary of State Colin Powell issued a highly controversial and unilateral decision that the project does not violate the U.S.-Canada Boundary Waters Treaty. Neither the Bush Administration budget nor the House or Senate Appropriations Committees FY 2004 spending bills include added funding for the Devils Lake Outlet. North Dakota is threatening to begin construction of its own outlet, also risking Treaty violation, but will likely seek federal funding to construct the project.

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²⁵⁶ Long-term Goals and 2002 Resolutions of the North Dakota Water Users Association and the North Dakota Water Resources Districts Association, *available at* <http://www.savetheshenyenne.org/ndwaterusers.htm> (last visited Aug. 21, 2003).

²⁵⁷ Consolidated Appropriations for Fiscal Year 2003, Pub. L. 108-7.

²⁵⁸ St. Paul District, U.S. Army Corps of Engineers, Final Devils Lake, North Dakota, Integrated Planning Report and Environmental Impact Statement (Apr. 2003), at S-4.

²⁵⁹ *Id.*, at 5-57; *see also*, St. Paul District, U.S. Army Corps of Engineers, Draft Devils Lake, North Dakota, Integrated Planning Report and Environmental Impact Statement (Feb. 2002), at 5-71.

²⁶⁰ *See, e.g.*, St. Paul District, U.S. Army Corps of Engineers, *supra* note 258, at S-12.

²⁶¹ St. Paul District, U.S. Army Corps of Engineers, *supra* note 258, at F-5.

most urgent threats

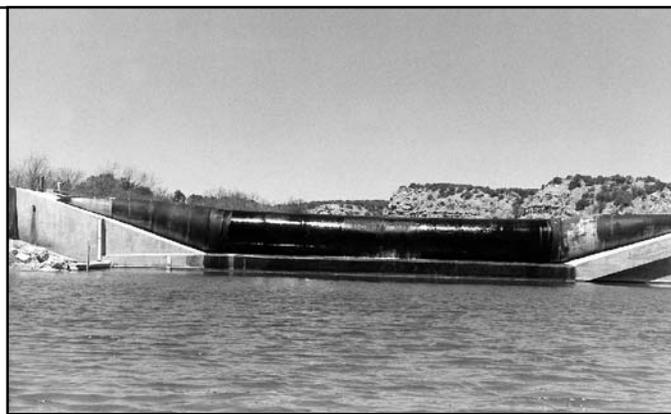
Wichita River Basin Chloride Control – Texas

Corps wasting money attempting to reverse 200 million years of North Texas ecological history.

The Project: The Corps is attempting to desalinate remnants of an ancient inland sea in the Red River Basin. The plan calls for damming additional natural springs and pumping salt water through more than 24 miles of pipeline into a brine storage reservoir. It is intended to primarily benefit area farmers and subsidize water treatment costs for the City of Wichita Falls. A similar structure in the Wichita River Basin has been operating for more than 15 years. Yet, irrigated agriculture has actually declined and the City has used the project only once. With a \$54 million initial construction cost, operating the Wichita River project will cost more than \$1 million annually for at least 100 years. It is one element of the shelved \$300 million Red River Basin Chloride Control project.

Drinking water and irrigation projects are a local responsibility and outside the Corps' primary mission areas. (See "New Corps Missions With No Direction" p. 33). Congress, however, waived project cost-sharing requirements, forcing federal taxpayers to pay 100% of the costs.²⁶² The economic analysis relies on unrealistic or overly optimistic assumptions regarding benefits of reducing water's salinity.²⁶³ The justification also counts on questionable benefits to industries in Shreveport, Louisiana, more than 300 miles downstream. The Corps predicts chloride concentrations there would be reduced by less than 1%, a miniscule amount that makes it unlikely that the predicted benefits could ever be measured or actually occur.

The U.S. Fish and Wildlife Service, Oklahoma Department of Wildlife Conservation, and Texas Parks and Wildlife Department have serious concerns because the Corps selected the most environmentally damaging alternative with no effective mitigation plan. Approximately half of the average stream flows would be diverted to the brine reservoir and Lake Kemp water levels could be reduced by 10-15 feet in some years. The



The Wichita River Chloride Control project proposes to dam-up and desalinate naturally salty springs in northern Texas.
Photo Credit: U.S. Army Corps of Engineers

brine storage reservoirs may also accumulate toxic levels of selenium. In a similar situation at Kesterson Reservoir, California, toxic selenium concentrations killed and deformed large populations of waterfowl in the mid-1980s.

Project Politics: Congressman Mac Thornberry (R-TX) is the project's principal advocate. The primary supporters have been the City of Wichita Falls, the Red River Authority, which sees this as a stepping stone to the larger, halted, Red River Chloride Control Project, and a local irrigation district that stands to make millions of dollars by re-selling the desalinated water. Anglers oppose these projects due to predicted increased turbidity in reservoirs and negative impacts to fish.

Current Status: The Corps district recommended the project in its April 2003 final reevaluation report, apparently unconcerned that "[t]he current Administration's policies do not support the control of chlorides . . . through implementation of Corps projects" or that "current Administration's policies would also require a non-Federal sponsor to share in the initial costs . . ."²⁶⁴ Despite the Administration's opposition, Congress has approved \$5.1 million for project construction in the last three years, paving the way for the Corps to potentially start this year.

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²⁶² Water Resources Development Act of 1986 §1107(a).

²⁶³ U.S. Fish and Wildlife Service Division of Economics, Comments on Draft Supplement to the Final Environmental Statement of the Authorized Red River Chloride Control Project, Wichita River Only Portion (Oct. 28, 2002), at 5 (on file with Taxpayers for Common Sense and National Wildlife Federation); Industrial Economics, Inc., Peer Reviews of Economic Analysis Conducted for the Red River Chloride Control Project, Wichita River Basin Project Reevaluation conducted by Dr. Ronald C. Griffin, Dept. of Agricultural Economics, Texas A&M University and Dr. James S. Shortle, Dept. of Economics and Rural Sociology, Pennsylvania State University (on file with National Wildlife Federation and Taxpayers for Common Sense).

²⁶⁴ Colonel Robert L. Suthard, Jr., District Engineer, Tulsa District, U.S. Army Corps of Engineers, District Engineer's Findings and Conclusions on the Final Supplement to the Final Environmental Statement for the Authorized Red River Chloride Control Project, Wichita River Only Portion, April 2003 (Jun. 27, 2003), available at <http://www.swt.usace.army.mil/library/Chloride%20Control%20-%20Wichita%20River%20Basin/Index.htm> (last visited Oct. 22, 2003).

most urgent threats

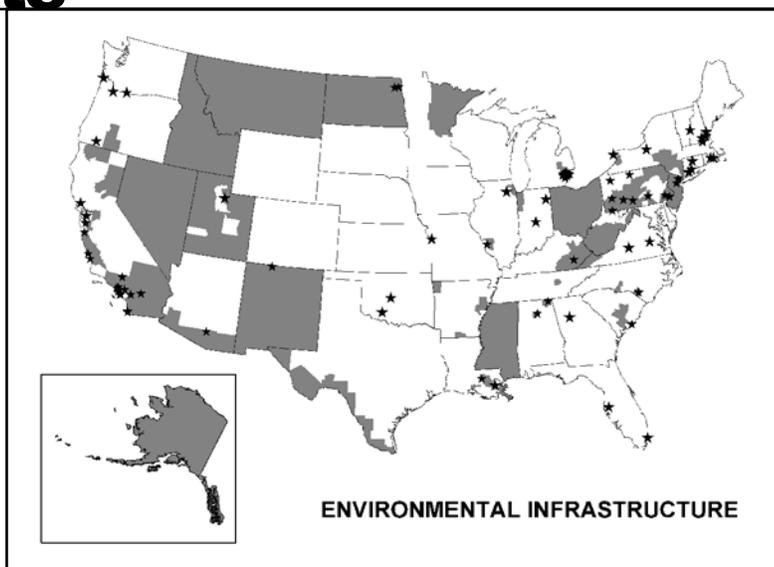
Environmental Infrastructure – Nationwide

Corps slush fund for powerful members of Congress.

The Project: Between 1992 and 2000, Congress authorized 135 Corps municipal water supply, drinking water treatment and wastewater treatment "projects" totaling more than \$1.6 billion.²⁶⁵ This "environmental infrastructure" program either federalizes local water supply responsibilities or undercuts the Environmental Protection Agency's (EPA) state revolving funds (SRF) by providing much larger subsidies.²⁶⁶

Under the Clean Water and Safe Drinking Water SRFs, EPA distributes funds to states according to a formula. States then decide which infrastructure projects will receive loans from the revolving funds, which must be fully repaid at low interest rates by municipalities. Under the Corps program, on the other hand, Congress designates a geographic area, such as a state, city, county (or even a congressional district) for water infrastructure funding. Congress provides grants for 65% of the costs for unspecified water projects in these areas with no strings attached. The Corps projects are not subject to stringent environmental studies or standard economic analyses. Unlike the SRFs, which require more comprehensive planning to ensure cost-effectiveness and limit adverse environmental impacts, the Corps' program promotes suburban sprawl by subsidizing water infrastructure costs of new development. (See "New Corps Missions With No Direction" p. 33).

Project Politics: Former House Transportation and Infrastructure Committee Chairman Bud Shuster (R-PA) launched the Corps' environmental infrastructure program in 1992. The South Central Pennsylvania Environmental Infrastructure "pilot" program²⁶⁷ included all of the counties that made up his congressional district and the adjacent district of Representative John Murtha (D-PA), a senior appropriations committee member. Since then, the program has grown rapidly with powerful members of Congress adding to it at every opportunity. An analysis by Taxpayers for Common Sense



States and counties receiving Corps environmental infrastructure projects are shaded. Cities receiving Corps environmental infrastructure projects are marked with a star. Source: Map created by Brad Nunley

found that more than 90% of these projects are located in a district of a member of Congress who sits on a committee with jurisdiction over the Corps or its budget.²⁶⁸ This program has become a slush fund to deliver projects to districts of powerful members of Congress.

Environmental infrastructure "projects" nearly killed the Water Resources Development Act of 2000, when Senate Environment and Public Works Committee Chairman, Bob Smith (R-NH) refused to include them in the final bill. The bill passed without the projects, but Chairman Shuster made an end-run and inserted them into the FY 2001 omnibus spending bill.²⁶⁹

Current Status: Neither the Clinton nor the Bush Administrations have supported the program because it is outside of the Corps' mission. Yet, Congress has been increasing appropriations each year, appropriating \$72 million in FY 2004 and designating 13 new areas.²⁷⁰

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²⁶⁵ See, e.g., Water Resources Development Act of 1992 § 219(f), as amended by the Water Resources Development Act of 1999 § 502(b) and Miscellaneous Appropriations Act, 2001, Pub. L. 106-554 § 108.

²⁶⁶ See, *supra* note 129 and accompanying text.

²⁶⁷ Water Resources Development Act of 1992 § 313.

²⁶⁸ See, *supra* note 114 and accompanying text.

²⁶⁹ Miscellaneous Appropriations Act, 2001, Pub. L. 106-554 §§ 108, 109.

²⁷⁰ See H.R. Conf. Rep. 108-357, at 10-18, to accompany Energy and Water Development Appropriations Act, 2004, Pub. L. 108-137.

emerging threats

Dare County Beach Replenishment – North Carolina

Kill Devil Hills' fame for Wright Brothers' flight may be clouded by shame of nation's biggest beach boondoggle.

The Project: North Carolina Representative Walter Jones, Jr. (R) slipped a provision into WRDA 2000 for a \$1.8 billion project to widen 14.2 miles of beaches in Dare County, North Carolina.²⁷¹ Initial construction will cost \$71.7 million – \$5 million per mile of beach. But, because of high erosion rates, project maintenance will cost federal taxpayers \$22.7 million annually for the next 50 years. The risk to properties can be addressed more effectively – or eliminated completely – with voluntary buyouts and relocations.

Kitty Hawk, Kill Devil Hills and Nags Head on the Outer Banks of North Carolina are known for outstanding fishing and beautiful beaches. The project's offshore sand mining would occur in critical wintering grounds for striped bass and other commercially valuable fisheries. The project calls for pumping 79 million cubic yards of sand onto these beaches – disrupting shorebird habitat and burying food sources.²⁷²

This effort will consume millions of taxpayer dollars in exchange for limited protection of million-dollar oceanfront properties. The protection is only temporary. The Corps cannot prevent beaches and barrier islands, like the Outer Banks, from migrating due to wind, wave and ocean currents.²⁷³ Ironically, the Corps concluded that spending \$300-400 million to buy-out or relocate at-risk properties was impractical because it did not "fully address the problem of long-term beach erosion and storm erosion."²⁷⁴ The Corps dismissed these solutions by assuming all of the costs would be incurred up front and that there would be little interest.²⁷⁵ The Corps admits the project "is not expected to bring an increase in visitation" to the beaches.²⁷⁶ A guiding example of the success of relocation is the recently moved Cape Hatteras Lighthouse.²⁷⁷



After decades of trying to hold back the ocean to protect Cape Hatteras Lighthouse, the National Park Service moved the Lighthouse 1,600 feet back from the eroding shoreline. Photo Credit: Mike Booher



Project Politics: Representative Walter Jones, Jr. (R-NC) strongly supports the project. In 2002, Dare County Commissioners hired a firm for \$15,000 per month to lobby for the federal portion of this project and others.²⁷⁸ The President has zero-budgeted this project for past two years, but in FY 2003, Congress appropriated \$500,000 for project construction, and another \$1 million in FY 2004.

Current Status: The local communities and the state would not undertake this project without federal assistance.²⁷⁹ To lock-in a higher federal taxpayer share of the project's costs, the Corps scrambled to complete project planning before new cost-sharing rules took effect.²⁸⁰ Some private property owners are objecting to providing public access points and parking every half-mile.²⁸¹ The Corps is also studying whether to expand the project by two miles in Kitty Hawk – an area of beach the Corps originally concluded could not be cost-justified. The Corps is scheduled to begin construction between late 2004 and early 2005.

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²⁷¹ Water Resources Development Act of 2000, Pub. L. 106-541 § 101(b)(24).

²⁷² The material to be dumped on the beaches over the life of the project would move with the currents towards Oregon Inlet – six miles below the bottom of the project area – increasing shoaling and the difficulty of managing the inlet's navigation channel. See "Oregon Inlet Jetties" (p. 78).

²⁷³ See, e.g., Cornelia Dean, *Nature Tries to Shift Outer Banks But Man Keeps Shoveling It Back*, NY TIMES, Sep. 22, 2003.

²⁷⁴ Wilmington District, U.S. Army Corps of Engineers, Final Feasibility Report and Environmental Impact Statement on Hurricane Protection and Beach Erosion Control for Dare County Beaches (Bodie Island Portion) (Sep. 2000), Vol. II, App. H-10 to H-11.

²⁷⁵ *Id.*, at H-11. The Corps dismissed buy-outs and relocations without determining interest levels and by erroneously assuming the buy-outs must be funded simultaneously, rather than over longer periods of time as needed and as opportunities arise.

²⁷⁶ Wilmington District, U.S. Army Corps of Engineers, *supra* note 274, at H-49.

²⁷⁷ See, Outer Banks Lighthouse Society, *Time and Again . . . A Summary of the 75 Years of Struggle at the Cape Hatteras Lighthouse*, at <http://www.outer-banks.com/lighthouse-society/history.asp> (last visited Nov. 18, 2003).

²⁷⁸ Sandy Semans, *Hiring Lobbyist Accomplished by Narrow Margin*, THE OUTER BANKS SENTINEL, May 8, 2002.

²⁷⁹ Wilmington District, U.S. Army Corps of Engineers, *supra* note 274, at H-7.

²⁸⁰ Section 215(a) of WRDA 1999 phased in changes to the cost-sharing formula for beach projects. The federal share of renourishment would be incrementally reduced to 50% by 2003. For projects with feasibility studies completed after January 1, 2001, the federal share for periodic renourishment decreased from 65% to 60%. The Corps rushed to complete the Dare County beach feasibility studies in less than 3 months.

²⁸¹ Sibley Fleming, *Nags Head Historic Property Owners Give Thumbs Down, 'Cottage Row' Owners Don't Want Beach Access Sliced Through Their Properties*, THE OUTER BANKS SENTINEL, Aug. 24, 2003.

emerging threats

Great Lakes – St. Lawrence River Navigation System Expansion

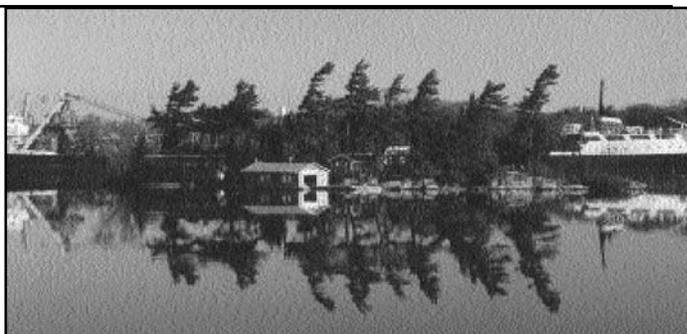
Pursuing an expensive Great Lakes fantasy once again jeopardizes the largest body of surface fresh water.

The Project: Predictions of increased ocean-going shipping through the Great Lakes have never come true. Yet, the Corps is dusting off previously rejected proposals to deepen and widen shipping channels and expand locks to accommodate additional and larger ocean-going ships. These ships could be 275 feet longer, 30 feet wider and up to 8 feet deeper than parts of the current system allow. The studies alone will cost at least \$20 million, with construction in the range of \$10-15 billion.

According to the Corps' preliminary estimates, expanding the navigation system would require dredging hundreds of millions of cubic yards of sediments. This dredging would occur in some of the region's most fragile areas, destroy fish habitat, and re-suspend PCBs, mercury and other buried pollutants. Extensive dredging would also result in lower lake levels negatively affecting critical fish habitat and businesses dependent on water levels, like marinas, recreational boat ramps and industries using lake water for cooling.

In addition, the Great Lakes have been ravaged by aquatic invasive species introduced from ocean-going ships, such as zebra mussels, which densely coat surfaces like intake pipes that supply drinking water to 26 million people. The constant onslaught of invasions is dramatically and permanently altering the food web, and crippling the region's \$4 billion dollar fishery. Seventy-two percent of the aquatic invasive species that have entered the Great Lakes since the opening of the St. Lawrence Seaway have come through the ballast tanks of ocean-going ships.²⁸² Expanding the navigation system will exacerbate the problem.

Project Politics: Great Lakes port authorities hoping to realize a pipe-dream have pushed for the navigation expansion project. New York Governor George Pataki (R), Senators Charles



The St. Lawrence River in Upstate New York. The Corps is studying a project to deepen and widen the St. Lawrence River channel to accommodate large ocean-going vessels' passage to the Great Lakes. The project would also involve major blasting of islands and the river bottom. Photo Credit: Stephanie Weiss

Schumer (D) and Hillary Clinton (D), Representative John McHugh (R) and many other New York representatives oppose the project because of its impacts on the St. Lawrence River. Additionally, Canada, which controls 13 of the 15 locks on the St. Lawrence Seaway and owns half of the shoreline on four of the five Great Lakes, has balked at participating as a full financial partner in the Corps' feasibility study, and only recently joined in the preliminary review.

Current Status: In February 2003, the Corps modified its reconnaissance report and retreated from moving into the feasibility phase – for now. Opposition from conservationists and the State of New York led Congress to direct the Corps to undertake a 30-month supplemental study to evaluate the engineering, ecology and economics of the system in its current configuration before the agency studies the feasibility of changing the navigation system. Once completed, the supplement and reconnaissance study will have cost more than \$5 million. To ensure their concerns are addressed, in May 2003 Canada agreed to cooperate in evaluating the existing and future needs of the Great Lakes navigation system as part of the supplemental study.

Contacts:

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²⁸²International Association for Great Lakes Research, Research and Management Priorities for Aquatic Invasive Species in the Great Lakes (2002), at <http://www.iaglr.org/scipolicy/ais> (last visited Aug. 22, 2003).

emerging threats

Arkansas River Channel Deepening – Arkansas and Oklahoma

Congress to the Corps: Forget about the study. Just go ahead and build it.

The Project: In 2000, the Corps started a localized study of navigation issues in the vicinity of Ft. Smith, Arkansas. The study has evolved into an analysis of water flows in the entire 445-mile Arkansas River McClellan-Kerr Navigation Channel from Catoosa, Oklahoma near Tulsa to the Mississippi River, and the potential to deepen the current 9-foot navigation channel down to 12 feet. The Corps plans to complete the study in March 2005. The study alone will cost federal taxpayers \$5.7 million. Although the Corps has not completed cost estimates, some have suggested the project could cost upwards of \$80 million.

The study has produced major controversy in Arkansas and Oklahoma regarding the potential harm to the river's fish and wildlife resources if the project were to proceed. Deepening would likely involve substantial dredging and scouring the channel with periodic high-flow releases from upstream dams. The dredging would mostly occur in the upper end of the reservoirs created by the 17 dams of the navigable portion of the river, which are the best sportfishing areas on the river. In at least one location, the Corps would straighten and relocate the channel.

The Corps completed the McClellan-Kerr navigation project in 1970. Many ports have since gone out of business, and river traffic has been virtually flat at approximately 12 million tons annually (non-commercial sand and gravel made up approximately 5 million of the total tonnage) - only about 25% of the project's design capacity.²⁸³ (See "Overly Optimistic Predictions" p. 6).



Barge tow on the Arkansas River.
Photo Credit: U.S. Army Corps of Engineers

Project Politics: Representatives John Boozman (R-AR) and John Sullivan (R-OK) are the project's primary advocates.

Current Status: The Corps began scoping the Phase II navigation-deepening portion of the study in May 2003. Two months after the study's launch, Representatives Boozman and Sullivan moved to obviate the study by adding a provision to the House version of the Water Resources Development Act of 2003²⁸⁴ to deepen the river channel to 12 feet. Even that is no longer needed since a rider in the Energy and Water Development Appropriations Act for FY 2004 authorized the project. This is despite the fact that the Corps had barely begun to examine whether there is a need for deepening.

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David Conrad, National Wildlife Federation, 202-797-6697

²⁸³ Comments of Jim Wood, Chairman of Arkansas River Study Committee, Arkansas Wildlife Federation on Scoping for Arkansas River Phase II Navigation Study Submitted to Parson Engineering, Inc. 6 (Jun. 23, 2003) (on file with National Wildlife Federation).

²⁸⁴ Water Resources Development Act of 2003 § 5024, H.R. 2557, 108th Cong. (passed by the House of Representatives on Sep. 24, 2003).

emerging threats

Ohio River Navigation System Expansion

Corps building redundancy on the Ohio River.

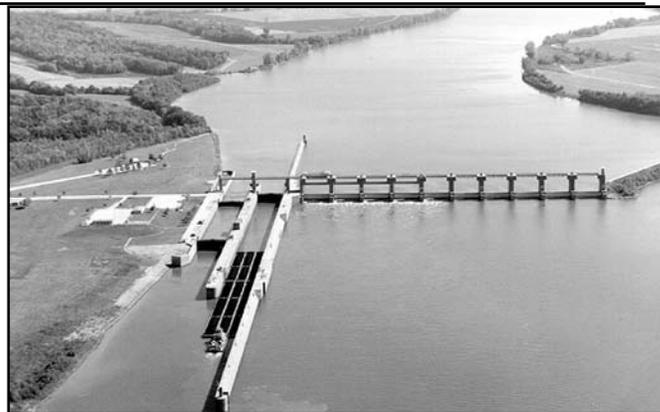
The Project: The Corps is conducting a \$33 million study of the Ohio River mainstem navigation system – 20 locks and dams along 981 miles of the Ohio from Pittsburgh, Pennsylvania to Cairo, Illinois. Virtually every dam on the system has a 1,200-foot main lock chamber and all have a smaller auxiliary chamber that can be used in case of main chamber outages. The Corps is attempting to use delays during rare lock outages to justify lock expansion, which could ultimately cost more than \$2 billion.

More than 30% of all inland waterway traffic is carried on the Ohio River and 55% of that traffic is coal. But more than 60% of the river tonnage moves locally, and virtually all shipments are low-value bulk commodities with a long "shelf-life."²⁸⁵

Although occasional delays may slightly increase shipping times, expanding the auxiliary lock chambers from 600-feet to 1,200-feet would provide unnecessary 100% system redundancy and availability – a ridiculous level for low value commodities. Shippers have alternatives for moving goods through the region, such as rail and truck, and the Corps appears to be paying lip service to nonstructural or low-cost solutions, such as scheduling, tolls, congestion fees, helper boats and mooring cells.

The Ohio River supports approximately 159 species of fish and 50 species of freshwater mussels – 51 are classified as endangered or species of concern.²⁸⁶ It provides some of the region's highest quality riverine, wetland, and bottomland habitats, which are important for waterfowl, shorebirds and songbirds. Because the Ohio is losing habitat to erosion, development, and commercial activity, it is important that the Corps seriously examine nonstructural options.

As communities become increasingly dependent on the river for drinking water, recreation, and other quality of life matters, there has been growing regional interest in balancing navigation



Expansion of the John T. Myers Lock and Dam on the Ohio River is proceeding ahead of the rest of the navigation system.
Photo Credit: U.S. Army Corps of Engineers

functions with improving water quality and river habitat. Thus, there are concerns that expanding the navigation system could set back these community efforts.

Project Politics: DINAMO, a consortium of Ohio River navigation interests, states its "singular purpose" is to plan and expedite the expansion project.²⁸⁷

Current Status: The Corps is required to study the entire system and then consider recommending expansion or other improvements. Undercutting the integrity of the comprehensive study, a separate study of the three river locks (Emsworth, Dashields, and Montgomery) is being conducted and two other lock expansions have already moved forward separately. The J.T. Myers and Greenup auxiliary lock expansions will cost hundreds of millions of dollars and were authorized separately in the Water Resources Development Act of 2000. The Ohio River study will be released for public comment in fall of 2004.

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²⁸⁵ Louisville District, U.S. Army Corps of Engineers, Ohio River Mainstem Systems Study, Interim Feasibility Report: J.T. Myers and Greenup Locks Improvements – Main Report (Apr. 2000), at 4-7, available at <http://www.lrl.usace.army.mil/pd/MyersGreenup/InterimReport.htm> (last visited Oct. 24, 2003).

²⁸⁶ William D. Pearson & B. Juanelle Pearson, *Fishes of the Ohio River*, 89 (5) OHIO J. SCI. 181-87 (1989); JAMES E. JOHNSON, PROTECTED FISHES OF THE UNITED STATES AND CANADA 42 (American Fisheries Society 1987); U.S. Fish & Wildlife Service, Draft Fish & Wildlife Coordination Act Report on the Ohio River Ecosystem Restoration Project Partnership Program, 19, 24 (May 2000).

²⁸⁷ DINAMO is the Development of Inland Navigation in America's Ohio Valley, headquartered in Pittsburgh, PA, at <http://www.dinamo-waterways.org/about.html> (last visited Nov. 6, 2003).

serious concerns

White River Navigation – Arkansas

Project threatens America's Amazon for a trickle of barges.

The Project: The Corps is attempting to justify this \$66 million²⁸⁸ project with optimistic predictions of increased barge traffic that will never materialize. The project would deepen the White River through the use of wing dikes and dredging along approximately 250 miles of the lower river to facilitate year-round barge traffic.

The Corps has taken a "Field of Dreams" approach - if we build it, they will come - on deepening one of America's least used waterways. The Corps has a bad track record of predicting increased traffic on other small tributaries that never materialized.²⁸⁹ (See "Overly Optimistic Predictions" p. 6). A study conducted by an economist found fundamental flaws in the Corps' initial analysis, including faulty methods and data, designed to return a positive benefit-to-cost ratio. When these flaws are corrected, the project's costs exceed its benefits.²⁹⁰

The Corps has proposed building wing dikes – rocks piled perpendicular to the riverbank to concentrate the river's flow in the channel to scour the river bottom – which function much like placing a thumb over the end of a garden hose to increase pressure. This would flush sediments downstream to settle at the mouth of tributary side channels and bayous, blocking natural outflow, which dry out adjacent wetlands. Constructing the dikes will destroy 247 acres of bottomland hardwood forest and aquatic habitat.²⁹¹ This project, along with the irrigation projects proposed in eastern Arkansas (see p. 52) will damage the second largest tract of bottomland hardwood forest remaining in the lower Mississippi Valley, which supports a multi-million dollar waterfowl and hunting and fishing economy. The project will cut through the White River and Cache River National Wildlife Refuges, referred to by a former Secretary of the Interior as "America's Amazon."²⁹²

Project Politics: Congress scrapped the project in 1988 after a decade of opposition from sportsmen, local communities and conservation groups, but pressure from the Arkansas Waterways



Bruce Babbitt called this area America's Amazon, but the navigation project would scour the river's channel and dewater this wildlife paradise.

Photo Credit: David Conrad

Commission reinitiated the study in 1996. The Arkansas legislature has rejected state funding for this project on four separate occasions. The Administration and Congress denied project funding for 2003.

Current Status: With several potential water projects affecting the White River Basin, Congress launched a comprehensive study – a multi-agency, multi-state effort led by the Corps – to gather biological, hydrological, social and economic data to guide long-term decisions regarding the White River. Undercutting the intent of the comprehensive study, the Corps and proponents of the navigation project are trying to ram the project forward before the comprehensive study is complete. Further undercutting the comprehensive study process, the Corps released an April 2003 preliminary draft navigation study that again recommends the project.²⁹³

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Jeff Barger, National Wildlife Federation, 512-476-9805

²⁸⁸ Memphis District, U.S. Army Corps of Engineers, Summary Report of the Preliminary Draft White River Navigation General Reevaluation Report, 29-30 (Apr. 2003), available at <http://www.mvm.usace.army.mil/whiteriver/home.htm> (last visited Oct. 9, 2003).

²⁸⁹ See, *supra* notes 25-37 and accompanying text.

²⁹⁰ Dr. S. Keith Berry, Cost-Benefit Analysis of the White River Navigation Project (on file with National Wildlife Federation).

²⁹¹ Memphis District, U.S. Army Corps of Engineers, *supra* note 288, at 35-36.

²⁹² This statement was made by former Secretary of the Interior, Bruce Babbitt. Michael Grunwald, *New Twist in River Wars Recreation Vies With Navigation for Commercial Use*, WASH. POST, Jan. 10, 2000, at A13.

²⁹³ Memphis District, U.S. Army Corps of Engineers, *supra* note 288.

serious concerns

Auburn Dam - California

Doolittle dam would destroy American natural treasures.

The Project: No Corps project provides a better example of the political struggles that can underlie Congress' involvement in water project decision-making. While opposition across California and in Congress has remained steadfast since the early 1990s, the struggle over the Auburn Dam – and implementing alternatives to better manage and improve the existing Sacramento-area flood control features – has become a regular issue in water infrastructure related legislation, largely due to the persistence of Congressman John T. Doolittle (R-CA).

The proposed \$2-3 billion "multi-purpose" Auburn Dam would be the most expensive dam in U.S. history. In 1975, the Bureau of Reclamation (BuRec) halted Auburn Dam construction when earthquakes near California's new Oroville Dam sparked a major reassessment of seismic dam safety. Construction never resumed after Reagan-era cost-sharing reforms required local backers to assume a significant portion of project costs. In 1998, after a multi-million dollar study, BuRec could not identify any federal role in constructing Auburn Dam. The dam would drown 50 miles of two popular American River canyons in the Sierra foothills east of Sacramento.

Project Politics: Proposals for Auburn Dam were defeated in Congress in 1992 and 1996, and it again failed to win authorization in 1998. In 1992, 1996 and 1999, Congress authorized less controversial and less costly measures to improve Sacramento's flood protection at the existing levees and Folsom Dam. Representative Doolittle has sought every opportunity in water project bills and appropriations bills to slow or stop modifications to existing facilities because it would diminish his purported "need" for a multipurpose Auburn Dam. California Representatives Robert Matsui (D) and Ellen Tauscher (D), and Senators Barbara Boxer (D) and Diane Feinstein (D), along with Representative Jim Oberstar (D-MN) have led a series of fights to ward off Auburn Dam and support progress on alternatives. The local sponsors, the Sacramento Area Flood Control Agency and the State Reclamation Board, support the alternative approaches.



The \$2 billion plus Auburn Dam would drown more than 50 miles of two highly popular wildlife river canyons visited by more than 500,000 people per year. Photo Credit: Mark Leder-Adams

Current Status: Historically, Representative Doolittle has banked on close ties with the House Republican leadership to block progress on Sacramento flood control issues to preserve his dream of Auburn Dam. He has attempted to require fully federally funded Auburn Dam feasibility studies. The House-passed version of WRDA 2003 included provisions to raise the Folsom Dam by 7 feet and to increase the funding ceiling for levee strengthening,²⁹⁴ after Doolittle blocked these provisions from previous WRDA and appropriations bills. These provisions were also included in the Energy and Water Development Appropriations Act for Fiscal Year 2004.

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²⁹⁴Water Resources Development Act of 2003 §§ 1001(a)(2), 3008, H.R. 2557 (passed by the House of Representatives on Sep. 24, 2003). The Folsom Dam raise would be a "dry" raise – providing additional flood storage in the event of large storms. The dam's operations would also be revised to release some water before a major predicted storm in order to improve its overall flood storage capacity. This would substantially increase downstream flood protection.

serious concerns

Savannah Harbor Expansion Project – Georgia

Savannah is among the nation's fastest growing ports – without a deepening project.

The Project: The Port of Savannah has been experiencing record growth, thanks in large part to important intermodal investments that enhance connections with ground transportation and a growing Asian import business. Having improved its competitive position over the last several years without the \$262 million proposal to deepen 36 miles of the Savannah River from 42 to 48 feet, the Corps is struggling to justify the economic benefits and environmental impacts of the deepening project.

The Corps' original economic studies failed to consider how shipping lines would respond to other types of developments and investments and the cost-effectiveness of handling cargo at other regional ports. Because dredging deeper channels is the Corps' principal port improvement tool, the agency ignores alternative port investments that may obviate the need for deeper channels. Although the nearby Port of Charleston is naturally deeper, Savannah has proven that depth is not everything.²⁹⁵ Savannah's state-of-the-art intermodal container transfer facility means their customers can enjoy substantial savings on transporting cargo by rail beyond a 250-mile radius of the port. The intermodal facilities provide overnight rail service to Atlanta and offer a seamless 3-day (or less) delivery to major American hubs.²⁹⁶ Savannah has also secured investments from large-scale Asian importers, such as Wal-Mart, Best Buy and Home Depot.²⁹⁷ (See "Irrational Port Planning" p. 22).

Savannah Harbor is across the river from the Savannah National Wildlife Refuge in South Carolina. Among the major environmental concerns is that deepening the river would damage rare freshwater tidal wetlands in the Refuge, allowing salt-water to intrude further up the already-stressed Savannah River. The dredging would also decrease dissolved oxygen levels, pushing endangered shortnose sturgeon closer to extinction.

Project Politics: As a subcommittee chair of the powerful Appropriations Committee, Congressman Jack Kingston (R-GA) continues to push for the expansion project and Congress continues to fund the Corps' studies. In the FY 2004 budget,



Landside investments in ship to rail and truck transfer have already begun to increase Savannah harbor traffic without deepening the channel. Photo Credit: U.S. Army Corps of Engineers

the Administration for the first time recommended no further funding for the studies.

Current Status: Draft studies of the project were published in the late 1990s. Under a Federal District court order, the Corps is required to conduct a complete reevaluation of the project and its impacts. A draft study is due out in 2004.

The Corps has so far ignored the possibility that dredging the river to the Port of Savannah's Garden City Terminal may not be needed if a private company succeeds in developing a new terminal in Jasper County, South Carolina, which is significantly closer to the ocean than Garden City. Citizens are pressuring the Corps to consider whether the expansion project is necessary and to seriously consider less costly and less environmentally damaging alternatives.

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 803-256-0670

²⁹⁵ See, *supra* notes 89-91 and accompanying text.

²⁹⁶ Georgia Ports Authority, Information on the James D. Mason Intermodal Container Transfer Facility, at <http://www.gaports.com/mason.html> (last visited Aug. 22, 2003).

²⁹⁷ Associated Press, *Port of Savannah Rises to No. 4, Surpasses Charleston, SC*, MIAMI HERALD, Mar. 21, 2003. In recent years, Savannah has attracted business away from Charleston, SC and even briefly surpassed Charleston in the rankings of the nation's busiest ports during 2003.

serious concerns

Locks and Dams at Minneapolis

Expensive locks bleeding taxpayer dollars need a vision for the future.

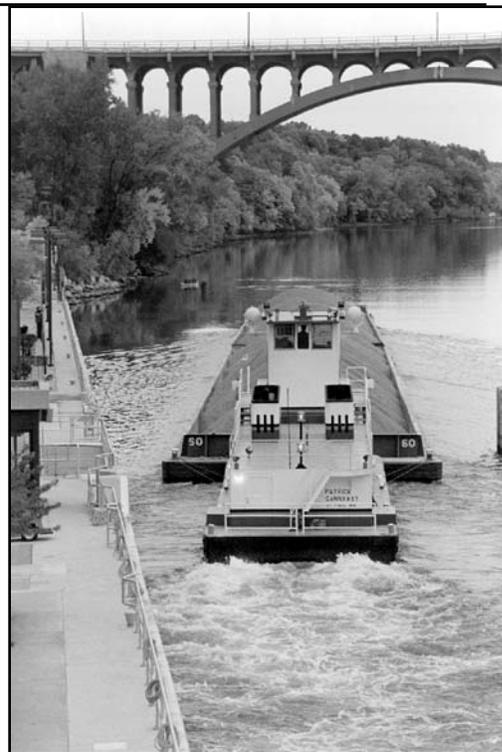
The Project: The 7.8 miles the Mississippi flows between Minneapolis and St. Paul is the river's uppermost navigable portion and is among the most highly subsidized sections of waterway in America. Within the City of Minneapolis, the river falls more than 100 feet. Each year the Corps spends \$3 million to maintain three locks and dams to lift and lower a trickle of barges on this short reach. Minneapolis plans to close its Upper Harbor Terminal, which draws most of the commercial barge traffic, and relocate the three businesses that use barges. Then much of the riverside industrial development above St. Anthony Falls could be converted to housing and parkland.

This segment's barge traffic has already fallen to 750,000 tons per year – well below the million tons the Corps says is needed for the locks to remain economically viable. The Minneapolis locks are useless to long-haul shippers. They can move only 2-barges at once, while the locks between St. Paul and St. Louis can accommodate several times that amount. Ending federal navigation subsidies on this short reach would have virtually no impact on farmers and the local economy, and would not affect grain shipments to St. Paul.

Before the locks and dams, St. Anthony Falls was one of the largest, steepest and most continuous rapids on the Mississippi. It was the upstream limit for migrating fish, providing rich and unique habitat for more than 120 species of fish and large populations of eagles and ospreys feeding below the falls. Today, the rapids could be restored as spawning habitat for shovelnosed sturgeon and paddlefish. And, due to improved water quality, it is a native mussel reintroduction site, especially because invasive zebra mussels have not become established here.

Project Politics: The few businesses using barges continue to support the 100% federally-subsidized locks. A scrap metal facility is resisting the City's redevelopment plans, even though other appropriate relocation sites with bulk transportation service are available. More than 60% of the tonnage transported is short-haul sand and gravel for a nearby cement plant.

Current Status: Minneapolis wants to make the Mississippi River more than a channel for barge traffic. Proposals range from building a recreational whitewater park, to seasonally clos-



The three uppermost locks in the vicinity of Minneapolis, Minnesota, accommodate only two barges per tow as opposed to several times that amount on the rest of the Upper Mississippi system.

Photo Credit: U.S. Army Corps of Engineers

ing locks to expose the rapids and restore fish and wildlife habitat, to removing the dams altogether. This last option would reclaim 200 to 300 acres of floodplain parkland and could make available 7-8 miles of rapids and 12-15 miles of shoreline for recreational users. The City has already invested more than \$1 billion in water quality cleanup and billions more are planned for riverfront redevelopment. These investments highlight the costs of continued lock operation and the potentially foregone benefits of restoration. This year, an interagency team is expected to finalize a "Vision Document," to explore potential improvements for "fish, wildlife, and human habitat" along the river.

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serious concerns

Lock and Dam #3 – Minnesota and Wisconsin

Threats to state-listed endangered species leading to improved multi-purpose project.

The Project: Located 6 miles upstream from Red Wing, Minnesota, Lock and Dam #3 is part of the Upper Mississippi River navigation system. The Corps proposed a \$15 million project to rebuild the extensive dike system at Lock and Dam #3, which helps contain the river and direct it through the dam, rather than around it. The proposal was to reconstruct two of three earthen embankments along Wisconsin's border, which connect the gated part of the dam to high ground. In 1999, just as construction was slated to begin, surveys identified one of the healthiest, diverse mussel beds remaining in the Upper Mississippi River, including several endangered species listed by the states of Minnesota and Wisconsin. This data forced the Corps to reconsider its plan.

Project Politics: Over the years, conservation organizations, the States of Minnesota and Wisconsin, and the U.S. Fish and Wildlife Service raised major concerns over the project's impacts to important fish habitat and state-listed mussels. In April 2000, the Corps, the region's resource agencies and members of the public formed an interagency planning team to reevaluate the proposal.

Current Status: The reevaluation process is ongoing and substantial changes in the proposal are reportedly taking shape. The Corps has combined the embankment project with plans for a lock safety guidewall project and a fish passage project to address issues more comprehensively. Minnesota and Wisconsin have proposed alternatives to the embankment project that could accomplish its goals with far less construction, while protecting bottomland forests. Corps and State personnel are considering reducing the proposed 13,000 feet of embankments to approximately 2,100 feet with a spillway to pass floodwaters.



Lock and Dam #3 near Red Wing, Minnesota, is undergoing a collaborative process with the states of Wisconsin and Minnesota that could meet the project's goals and protect the environment. Photo Credit: U.S. Army Corps of Engineers

This change will substantially reduce the original project's destruction of 40 critical acres of forested bottomlands, including 200 year-old cottonwood trees. Innovative fish passage features, using a natural stream design rather than fish ladders, would open up fish migration access to more than 100 miles of Mississippi and St. Croix River habitat. While the new proposal is not definitive, planning is proceeding and draft reports are expected in April 2004. There is increased optimism that an agreement will be reached on a project design.

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serious concerns



Ocean City, New Jersey — Congress has effectively authorized the entire New Jersey shoreline through a series of beach rebuilding projects. Photo Credit: U.S. Army Corps of Engineers

New Jersey Beach Replenishment

Beach "project" the length of the state would wash billions of taxpayer dollars out to sea.

The Project: New Jersey wants to "widen" all 127 miles of its coastline, even though this approach to "shoreline protection" is not sustainable fiscally or environmentally. In FY 2003, the state received more than \$16 million federal tax dollars for beach projects – more than a quarter of the total funding provided for beach projects.²⁹⁸ "Replenishment" projects are not designed to last. Corps beach projects can wash away with the next major storm – sometimes only months after construction. Sand pumping activities in New Jersey could cost as much as \$9 billion over the next 40 years.²⁹⁹ Many New Jersey beach towns have hired lobbyists to secure annual project funding.³⁰⁰

The process of sand pumping harms coastal environments by dredging in sensitive off-shore aquatic habitat. Some New Jersey projects have virtually destroyed certain stocks of fish species, such as blackfish. Sand pumping activities also induce additional or more intensive, risky development along the coastline, resulting in new or expanded structures that rely on future periodic sand pumping for protection. (See "Subsidies for Wealthy Beach Communities" p. 43).

While the Corps requires beach replenishment projects to be "public beaches," many New Jersey beaches are increasingly inaccessible to the public by limited parking, expensive beach badges, lack of public restrooms, "no trespassing" signs, or private fences intended to discourage visitors. For example, Bay Head, New Jersey requires beach-goers to pay \$100 for two beach badges for the season, and provides just 35 parking spots and no public restrooms.³⁰¹ In Sea Bright there are only six parking spots over a 1.3 mile stretch of pumped beach, while at Long Beach Island, which is scheduled to receive "new sand" in a few years, 3 1/2 miles of beach lack public access.

Project Politics: The New Jersey congressional delegation strongly supports sand pumping projects. Beach lobbyists and their allies in Congress have been seeking to expand the Corps' beach building authority and to create loopholes to help beach communities get around current cost-sharing rules.

Current Status: In 2001, the Administration sought – but failed – to reduce the federal taxpayers' burden for periodic and ongoing sand replacement from 65% to 35%. Several members of Congress have joined the Administration in seeking to reform the cost-sharing formula for beach projects. Two successive Administrations have sought to cut funding for New Jersey and other beach projects; however, the Corps' sand pumping program remains the fastest growing area of its work. This endeavor could be more costly than envisioned. Comparing ocean conditions and weather patterns to previous storm cycles, scientists are predicting more frequent and more intense storms for the Atlantic coast over the next few decades.³⁰² Currently, public interest organizations are working to improve public access to the state's beaches, and are also working with the State's Department of Environmental Protection to prevent future damage to marine life.

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²⁹⁸ Marlowe & Company, *How Much Has Congress Appropriated For Beach Nourishment Projects This Year?*, at 6-7 (Feb. 18, 2003), at http://www.asbpa.org/beachap-props03_tablefinal.pdf (last visited Aug. 22, 2003); see also, Marlowe & Company website at www.netlobby.com (last visited Aug. 22, 2003).

²⁹⁹ According to *The Washington Post*, the plan to pump sand on all 127 miles of coastline, plus an additional 25 miles on the bayside from 2003 through 2045 would cost approximately \$60 million per mile. Grunwald, *supra* note 170.

³⁰⁰ See, Marlowe & Company, Partial List of Clients, at <http://www.netlobby.com/clients.htm> (last visited Aug. 22, 2003).

³⁰¹ Nancy Keates & Mei Fong, *Freedom of Beach*, WALL ST. J., Jun. 28, 2002, at W12.

³⁰² Anita Huslin, *Bay's Rise May Add To Impact of Storms*, WASH. POST, Sep. 29, 2003, at B1.

serious concerns

Long Island Beach Replenishment

Taxpayers subsidize beach lifestyles of the rich and famous.

The Project: Intense development on Fire Island and the Hamptons has increased appetites for building bigger beaches to protect against hurricanes and Nor'easters, like 1991's "Perfect Storm"³⁰³ that caused hundreds of homes to fall into the sea. The Corps has already spent \$24 million studying a proposal to widen and maintain 83 miles of barrier island beaches on Long Island from Fire Island to Montauk Point, estimated to cost at least \$800 million.³⁰⁴

In 1960, Congress authorized 50 stone groins and seawalls, in addition to beach sand-pumping. In 1978, the Carter Administration halted the project because the Corps had not considered "nonstructural" alternatives or cumulative impacts. Better long-term alternatives include acquiring and preserving undeveloped land and voluntarily relocating homes damaged by storms. The Corps has agreed to "reformulate" the overall project, but is undercutting that effort by pushing separate "interim" sand-pumping projects.

The Corps skewed its last study by including storm damage reduction benefits for bayside homes on Long Island's mainland. U.S. Fish and Wildlife Service scientists are skeptical whether these homes would realize these benefits. Rather, the project would primarily benefit properties located on the barrier island's primary dunes. Moreover, many of the most at-risk homeowners have been flooded or damaged repeatedly by storms and continue to rebuild, often tapping federally-subsidized flood insurance. Rebuilt Westhampton beachfront homes are now topping \$3 million.³⁰⁵ The Corps will have to rebuild the beaches at least every five years – making the \$800 million a conservative estimate.

Attempting to control constantly shifting barrier islands is a losing battle against Mother Nature. Hard structures or sand-pumping prevent new marshes from forming and can actually increase flood risks over the long-term. Altering the barrier island ecosystem will harm vital breeding and feeding grounds for threatened piping plovers, oysters and other wildlife. (See "Subsidies for Wealthy Beach Communities" p. 43). This project, and increased development associated with it, jeopardizes the integrity of the 26-mile long federally protected Fire Island National Seashore.



Building and rebuilding \$3 million dollar oceanfront homes is behind the Corps' effort to spend hundreds of millions of dollars on Long Island beach rebuilding projects. Photo Credit: Hank Smeal

Project Politics: The exclusive Fire Island Association is driving the project's Fire Island portion, but due to project design concerns, New York has refused to provide the local cost-share for this proposed "interim" project. The federal taxpayer is picking up the full tab for the Westhampton "interim" project because poorly engineered Corps groins resulted in severe erosion, eventually causing many homes to be destroyed during the Perfect Storm.³⁰⁶

Current Status: The Corps will complete the reformulation studies in 2004.³⁰⁷ Meanwhile, the Corps could begin pumping sand on the area west of Shinnecock Inlet immediately. New York's concerns led to suspending the Fire Island interim project. Instead, the Corps will include Fire Island in the overall project reformulation. After 40 years, the Corps is finally considering some less expensive and more environmentally responsible nonstructural options, but sand-pumping is likely to continue to remain the primary focus.

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³⁰³ A monster storm off the Eastern Seaboard on October 30, 1991 was dubbed by the National Weather Service as the "perfect storm." National Climatic Data Center, The Perfect Storm, October 30, 1991, at <http://www.ncdc.noaa.gov/oa/satellite/satelliteseye/cyclones/pfctstorm91/pfctstorm.html> (last visited Aug. 22, 2003).

³⁰⁴ The Corps is also planning to pump sand on 9 miles of oceanfront between Jones Inlet and East Rockaway Inlet, for an additional \$85 million. New York District, U.S. Army Corps of Engineers, Fact Sheet on Atlantic Coast of New York – Jones Inlet to East Rockaway Inlet, Long Beach Island, New York, available at <http://www.nan.usace.army.mil/project/newyork/factsheet/pdf/lbeach.pdf> (last visited Nov. 11, 2003).

³⁰⁵ John Rather, *West Hampton Dunes*, NY TIMES, Aug. 10, 2003, at 14LI.

³⁰⁶ The Corps settled a lawsuit with Westhampton Dune homeowners by promising the sand-pumping project to begin immediately without having to wait for the results of the reformulation study.

³⁰⁷ New York District, U.S. Army Corps of Engineers, Fact Sheet on Fire Island to Montauk Point, NY, at <http://www.nan.usace.army.mil/project/newyork/factsheet/pdf/fimp.pdf> (last visited Aug. 23, 2003).

serious concerns

Clear Creek Flood Control – Texas

Need for nonstructural, watershed approach to reduce flood damages has never been more clear.

The Project: First authorized in 1968, this \$149 million river-straightening project³⁰⁸ has never been a cost-efficient or effective way to reduce flooding along Clear Creek. But after the Federal Emergency Management Agency (FEMA) helped relocate a majority of the Creek's flood-prone residents out of harm's way in 2001, the notion of a massive channelization project became more ludicrous. The Corps' original project would straighten, deepen and widen Clear Creek – removing 10 miles of river bends in 45 miles to speed floodwater downstream faster during major storms, in an effort to reduce flooding in the rapidly developing south Houston suburbs. In the mid-1980s the Corps slightly reduced the project's size. By the mid-1990s, however, opposition to the environmental impacts and costs, and the project's potential to exacerbate flooding in eight downstream communities around Clear Lake grew. Clear Creek is one of the last natural, free-flowing bayous remaining in the Houston area.

In the late 1990s, community leaders and the region's governments began to discuss the use of voluntary buyouts of "repetitive-loss" buildings as a less expensive alternative to reduce flood damages. In June 1999, the Corps agreed to start a multi-year "General Reevaluation Review" of the Clear Creek project – now slated for completion in 2005. While the Corps agreed to consider more nonstructural approaches, the study still includes a wide array of traditional "channel modification" options. (See "Ill-Conceived Flood Control Program" p. 20).

Project Politics: The area's congressional delegation and many key local officials are open to supporting nonstructural solutions to reduce damages and protect the Creek's environment. The three local co-sponsoring agencies for the study are: Harris County Flood Control District, Galveston County, and more recently, upstream Brazoria Drainage District No. 4, making a truly watershed-wide management plan possible.

Current Status: After the Tropical Storm Allison floods in June 2001, FEMA approved the buyout of nearly 500 "repetitive loss" homes in the Clear Creek watershed. Even before Allison, many of these homes already had among the nation's highest



Clear Creek, south and west of the city, is one of the last unchannelized bayous remaining in the greater Houston area.
Photo Credit: Houston Chronicle

cumulative flood insurance claims for properties with repeated flooding. Nearly 250 of the homes approved for buyout have been purchased and removed from harm's way. Clear Creek provides the Corps an important opportunity to develop a comprehensive, watershed-wide flood damage reduction plan in concert with local governments, the State, and other federal agencies. Using new federal policies and floodplain data, Clear Creek watershed communities have the opportunity to set aside floodplains for green space and natural detention, and to develop multi-hazard maps and a comprehensive community-based watershed plan for safe development, all while protecting the property rights of their residents. At the same time, the plan would reduce the huge costs to taxpayers of repeated flood disasters. Clear Creek is also among the 28 priority areas identified for the Corps' Challenge 21 program (See "Failing to Address Contemporary Needs" p. 36).

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³⁰⁸U.S. Army Corps of Engineers, Fiscal Year 2004 Budget Justification Statement, Clear Creek, Texas (continuing), at 2024-25.

watch list

Oregon Inlet Jetties – North Carolina

Deauthorization is needed to finally kill 30-year old wasteful jetty project that would not die.

The Project: For more than thirty years, North Carolina's Outer Banks faced the threat of massive stone jetties to help establish a 20-foot deep channel at Oregon Inlet. The Administration scrapped the \$108 million proposal after reams of negative economic studies and decades of opposition from the agencies responsible for managing environmentally sensitive lands and waters where the jetties would have been built. Instead of constructing the jetties and deepening the channel, the Corps will maintain the inlet at its current 14-foot depth.³⁰⁹

The Corps planned to construct a two-mile long jetty anchored to the Cape Hatteras National Seashore and extend the existing terminal groin at Pea Island National Wildlife Refuge by a half-mile. Doing so would have destroyed 93 acres of seashore and 33 acres of refuge.³¹⁰ Not including operation and maintenance costs, the project would have created a federal subsidy of \$500,000 for each of the 215 commercial and charter fishing boats that use the inlet. The 50-year costs would have exceeded \$600 million due to increased operation and maintenance.³¹¹ Even with the jetties, the channel would have continued to be unsafe for navigation during one quarter of the commercial fishing season. Additionally, the project threatened the world-class Albermarle and Pamlico Sound fisheries by interfering with larval fish movement and destroying essential fish habitat,³¹² as well as habitat for imperiled piping plovers, loggerhead turtles and green sea turtles.

Project Politics: The jetties' staunchest supporter, Senator Jesse Helms (R-NC), has retired, but his successor, Senator Elizabeth Dole (R-NC), along with Representative Walter Jones, Jr. (R-NC) have indicated their support for the deadbeat project. The Administration zero-budgeted the project in past budgets.

Current Status: Senator Helms slipped a rider onto an unrelated FY 2001 appropriations bill to accelerate jetty construction. Instead of going along, Congress followed the lead of Senators Max Baucus (D-MT) and John Edwards (D-NC), and asked the General Accounting Office (GAO) to audit the project.³¹³ GAO concluded the Corps' economic analysis relied on outdated and incomplete data, unsupported assumptions, and failed to account for risk and uncertainty in key variables that could significantly affect the project's benefits and costs.³¹⁴ The Corps agreed that a new economic analysis would be needed.³¹⁵ Separately, in 2001, the National Oceanic and Atmospheric Administration (NOAA) referred the project to the President's Council on Environmental Quality (CEQ) to resolve concerns that the project would result in unacceptable environmental impacts and that the Corps failed to consider less damaging alternatives.³¹⁶ In May 2003, CEQ Chairman James Connaughton announced that the Department of the Interior, NOAA, CEQ, and the Corps agreed to maintain the current 14-foot inlet channel without the jetties. Some local project supporters, however, are trying to keep the jetty project alive by downplaying the effectiveness of dredging the channel.

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Bill Kane, North Carolina Wildlife Federation, 828-294-0332

³⁰⁹ Press Release, Council on Environmental Quality, Federal Agencies Reach Consensus Ending Development of the Oregon Inlet Jetty Proposal (May 1, 2003), available at <http://www.whitehouse.gov/news/releases/2003/05/20030501-17.html> (last visited Sep. 30, 2003).

³¹⁰ Letter from Gale A. Norton, Secretary of the Interior, to James L. Connaughton, Chair, Council on Environmental Quality, encl. (Nov. 15, 2001) (on file with National Wildlife Federation).

³¹¹ Wilmington District, U.S. Army Corps of Engineers, Manteo (Shallowbag) Bay North Carolina, Supplemental No. 2 General Design Memorandum, 6-16 (Aug. 2001).

³¹² Referral Document of National Oceanic and Atmospheric Administration, National Marine Fisheries Service to the Council on Environmental Quality on Corps' Manteo (Shallowbag) Bay Project, North Carolina Final Supplement III to the Environmental Impact Statement, 6-11 (Oct. 16, 2001), available at <http://www.whitehouse.gov/ceq/referrals.html> (last visited Aug. 22, 2003).

³¹³ Miscellaneous Appropriations Act, 2001, Pub. L. 106-387 § 3104.

³¹⁴ GENERAL ACCOUNTING OFFICE, REP. NO. GAO-02-803, OREGON REGION INLET JETTY PROJECT, 18 (Sep. 2002).

³¹⁵ Michael Grunwald, *GAO Rebukes Corps on N.C. Project*, WASH. POST, Oct. 6, 2002, at A22.

³¹⁶ Referral Document of National Oceanic and Atmospheric Administration, National Marine Fisheries Service, *supra* note 312.

Jackson Navigation Spur and Port Facility – Alabama

Grassroots and cost-sharing bring a dose of reality, stopping City's fantasy project.

Congressman Sonny Callahan (R-AL) inserted a rider on a 1986 omnibus spending bill that directed the Corps to pursue this pipe-dream barge navigation project. This potential nightmare died thanks to the concerted efforts of grassroots activists determined to highlight the problems of this proposal to construct a 1,000-foot spur canal off the Tombigbee River and port facility. In 2000, the City of Jackson, Alabama decided to withdraw its proposal to construct the port facility after concluding, "the benefits from the proposed federal port did not justify the escalation of costs" ³¹⁷ Congress subsequently deauthorized the Jackson Navigation Spur in the Water Resources Development Act of 2000. Now that the project is dead, taxpayers will save \$23 million and 690 acres of U.S. Fish and Wildlife Service designated critical wetlands and forest habitat have been preserved.

Contacts:

Cyn Sarthou, Gulf Restoration Network, 504-525-1528
Kristen Bryant, Alabama Environmental Council,
205-322-3126

Chesapeake and Delaware Canal Deepening – Maryland

Real-life "Mr. Smiths" go to Washington to stop this wasteful project.

In January 2001, after a \$5 million, four-year reevaluation failed to justify the proposal, the Corps reluctantly suspended this \$46 million project. The Chesapeake and Delaware (C&D) Canal and connecting channels provide a secondary access to the Port of Baltimore. The project would have deepened 57 miles of the waterway from 35 to 40 feet. Four tireless Maryland citizens – dubbed the Cecil County Quartet by the *Washington Post* – spotlighted scores of mathematical errors, overly optimistic predictions and invalid assumptions in the Corps' reanalysis. In 1996, the Quartet revealed the original project justification was predicated on a miscalculated "net present value" that boosted the project's benefit-to-cost ratio from an unacceptable 0.65 to a "justified" 1.21. ³¹⁸ The Cecil County Quartet received the Taxpayers for Common Sense 2001 "Mr. Smith Goes to Washington" Award for their outstanding grassroots effort to stop this wasteful government spending.

To keep hopes of the project alive, the Maryland Port Authority (MPA) requested the Corps only suspend for three years – rather than cancel – the project. This last ditch effort avoided formal project deauthorization and gave MPA the opportunity to revive the project if shipping trends or political winds changed. To date, MPA's prediction that downward trends would reverse has not occurred, and in fact, the economically critical containership traffic has already declined to about one-fifth of the levels assumed in the 1999 economic estimates. But because Congress has not deauthorized this project, it could still rise from the dead and breathe new life. Meanwhile the MPA retains the project on its unpublished dredging schedule for 2007/2008.

Congressman Wayne Gilchrest (R-MD), the only member of Maryland's Congressional delegation willing to question the project, supported the citizen activists and helped force the Corps and MPA to address the economic reanalysis errors identified by the Quartet. Maryland Governor Ehrlich supported the project while he served as a Congressman.

Contacts:

John Williams, Cecil County Banks Study Committee,
410-398-6844
Donald Burton, C&D Canal League, 410-885-2492
Bill Jeanes, C&D Canal League, 410-275-8483

³¹⁷ Press Release, City of Jackson (Feb. 4, 2000) (on file with Taxpayers for Common Sense).

³¹⁸ Michael Grunwald, *A Race to the Bottom*, WASH. POST, Sep. 12, 2000, at A1.



Egret in Yazoo area in Mississippi.
Photo Credit: Ted Wood

new direction:

A More Efficient, Equitable and Environmentally Sustainable Approach to Water Management

Over the past two centuries, the nation has piled more and more demands on our water resources. Managing water for drinking, transportation, electricity, fish and wildlife habitat, flood control, wastewater, recreation and irrigation, is increasingly complex and expensive. Meeting and balancing these water demands present challenges that are beyond the Corps of Engineers, or any single federal agency.

The Corps cannot and should not address all of the nation's looming water challenges. If the Corps is to be relevant this century, it must change. It must be integrated with other responsible agencies if the Corps is to be able to help the nation meet its water needs. Much of the world looks to the United States as a leader in new directions and solutions in water resources management. Thus far, our leadership is falling far short of its reputation and potential.

River Management, "American Style"

During the 19th Century, the nation used rivers to move goods and settlers. In the 20th Century, the nation further manipulated rivers to produce electricity, distribute water to arid lands, prevent periodic flooding, transport waste and sewage, and increase land development. The response to the Great Flood of 1927, for instance, launched the nation on a course to drain, ditch, dam and dike river systems to prevent flooding. Today, we continue to rely on water infrastructure strategies devised more than 75 years ago, even though our values, needs, and demands on water resources have changed radically.

Key 21st Century Water Resources Challenges

The nation currently faces broad challenges that relate to water and how we use it. If we remain on our present course, these problems will become worse and increasingly difficult to overcome. These challenges will require innovative thinking, new ideas and greater coordination to balance all of the demands on our water resources.

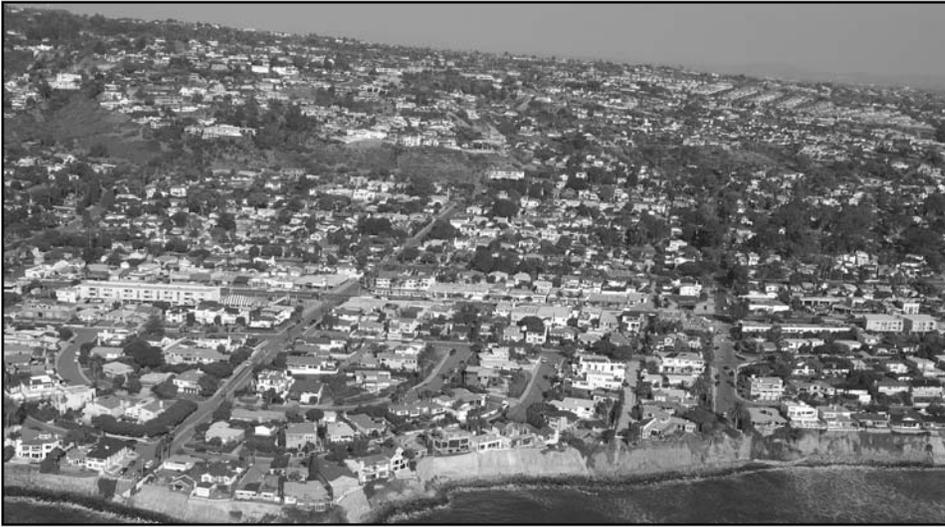
Managing Limited Supplies of Clean Water

Many of our water supplies are stressed by increasing demands from population growth and development, aging infrastructure and groundwater mismanagement. At the same time, there are many financial disincentives to conserve, protect and restore water, and too many programs that encourage waste and inefficient use of this limited resource. According to then-EPA Administrator Christine Todd Whitman, water quantity and quality may be the biggest environmental issues we face in the 21st Century.³¹⁹

Between 1950 and 2001, the U.S. population increased by 120 million people – an 80% increase. By 2050, according to the U.S. Census Bureau, there may be another 120 million living in the U.S. The nation's driest areas, like Las Vegas, Tucson, Phoenix, and southern California, are some of the fastest growing, placing enormous pressure on limited water supplies.³²⁰

³¹⁹ Marianne Lavelle & Joshua Kurlantzick, *The Coming Water Crisis*, U.S. NEWS & WORLD REP., Aug. 12, 2002, at 22.

³²⁰ *Id.*, at 6-7.



Aerial view of a portion of California's crowded coastline. Photo Credit: © 2002-2003 Kenneth Adelman, California Coastal Records Project, www.Californiacoastline.org

But, water wars are no longer reserved for the arid western United States. Today, relatively water-rich areas like Florida, Georgia and the Carolinas are sparring over water shortages due to intense growth and unclear rules about who is entitled to the limited resources.³²¹ Meanwhile seven states in the nation's heartland are battling over how to manage the Missouri River, pitting the economic interests of states upriver against those downriver.³²²

By far the largest drain on our nation's water supply, however, is agriculture. In the western United States, the federal government has continued Depression-era policies to promote farm and ranch development through huge irrigation subsidies. With 69% of its water withdrawn from surface and ground waters for agricultural uses,³²³ the West accounts for about 80% of the nation's total irrigation water usage.³²⁴ Yet the amount of water withdrawn for

irrigation purposes normally far exceeds actual use, because much water is lost during distribution from the source to the crops. The amount of irrigated farmland has increased steadily since the beginning of the 20th Century.³²⁵ According to EPA, about 40% of the freshwater taken from rivers, lakes, reservoirs and aquifers nationally is for agricultural irrigation.³²⁶

When aging water pipes fail, pressure drops, sucking dirt, bacteria and other pathogens into water delivery systems. Current responses treat the incidents in an isolated fashion, by



The City of Atlanta and Georgia are battling neighboring Alabama and Florida over water allocations from the Chattahoochee River. Photo Credit: © 2003 Christian L. Deichert Photography, <http://cldphoto.com>. Used by permission.

³²¹ Bruce Ritchie, *Judge Blocks Atlanta Water Deal*, TALLAHASSEE DEMOCRAT, Oct. 17, 2003, at B1. Bruce Henderson, *Who Gets the Water?: The Carolinas Face New Limits As Growth Outpaces Supply*, THE CHARLOTTE OBSERVER, Dec. 29, 2002, at 1A.

³²² Laura Cadiz, *A Battle Over Treasured Waters*, THE BALTIMORE SUN, Nov. 24, 2002, at 1A.

³²³ Western Water Alliance, *The Western Way of Water: Using the West's Most Precious Resource*, 4-5 (Jun. 2003), available at http://www.westernwateralliance.org/resc_reports.html (last visited Aug. 19, 2003).

³²⁴ U.S. Environmental Protection Agency Region 5, et al., *Ground Water Primer, Water Supply & Demand* (May 8, 1998), available at <http://www.epa.gov/sea-home/gwprimer.html> (last visited Aug. 19, 2003).

³²⁵ Michael O'Donnell & Jonathan Rademaekers, U.S. Geological Survey, *Water Use Trends in the Southwestern United States 1950-1990*, available at http://geochange.er.usgs.gov/sw/impacts/hydrology/water_use (last visited Nov. 11, 2003).

³²⁶ U.S. Environmental Protection Agency, *How We Use Water In These United States*, available at <http://www.epa.gov/water/you/chap1.html> (last visited Aug. 19, 2003).

flushing out the contaminants and increasing the chlorine dose. There are other concerns regarding water supply and wastewater treatment systems, such as the lack of capacity, combined sewer overflow, and outdated technologies.

EPA estimates that capital needs for clean water and drinking water infrastructure over the next twenty years will be more than \$600 billion.³²⁷ Much of this nation's infrastructure, delivering water services to businesses and residents, is more than a century old and increasingly will require more repairs, replacements and updating. Each year there are approximately 237,600 water main breaks in the U.S. Approximately 268 million Americans rely on about 54,000 community water systems for their drinking water.

Finally, the primary source of drinking water for about 50% of the nation is underground aquifers – 97% for rural populations.³²⁸ Increasing demands on groundwater are sapping aquifers faster than they can be replenished, but people continue to expect clean water to flow from their faucets at little or no cost to them.

The rate at which aquifers are replenished varies from tens to hundreds of years, depending on climate, geology, depletion rates and other factors.³²⁹

Withdrawals of groundwater are expected to rise in the coming century as the population increases and available sites for surface reservoirs become more limited.³³⁰

Increased Vulnerabilities From "Natural" Disasters

Although they are called "natural" disasters, human activities often set the stage for damage and destruction by placing people and property in harm's way. Growing populations, and development in floodplains and arid areas, raise the stakes each time a hurricane, flood or drought occurs.³³¹ Storms are causing ever greater damages, not necessarily because the storms are more severe, but because there is more high-risk development. For instance, riverine flood damages in constant dollars have increased from approximately \$2.6 billion per year in the first half of the 20th century to more than \$6 billion per year in the past ten years.³³²

Moreover, a majority of scientists predict that increases in average global surface temperatures will likely result in more frequent, heavier rainfall events in coming decades,



Damage caused by Hurricane Isabel on North Carolina's Outer Banks.
Photo Credit: Sidney Maddock

³²⁷ U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER, CLEAN WATER AND DRINKING WATER INFRASTRUCTURE GAP ANALYSIS, EPA-816-R-02-020, *Executive Summary* (Sep. 2002), at <http://www.epa.gov/OWM/gapreport.pdf> (last visited Aug. 27, 2003).

³²⁸ U.S. Environmental Protection Agency Region 5, et al., *supra* note 324.

³²⁹ NATIONAL RESEARCH COUNCIL, ENVISIONING THE AGENDA FOR WATER RESOURCES RESEARCH IN THE TWENTY-FIRST CENTURY, 7 (Nat'l Academy Press, 2000).

³³⁰ *Id.*

³³¹ See, e.g., Sara Shipley, *A Special Report on Development in Missouri's Flood Plains*, ST. LOUIS POST-DISPATCH, Jul. 27-31, 2003.

³³² See, *supra* note 80 and accompanying text.

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which could mean both more extreme flooding conditions and escalating catastrophic flood losses.³³³ At the same time, warmer air temperatures are likely to cause more frequent and longer drought conditions, particularly for interior portions of the U.S.³³⁴

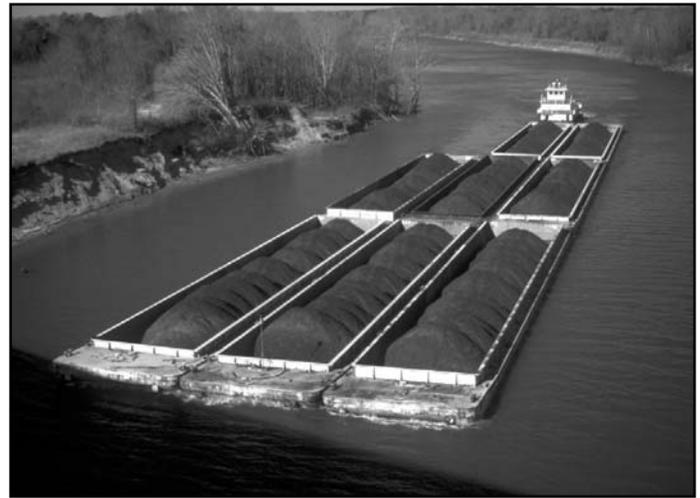
Due to changes in climate and other factors, sea levels in many locations are rising relative to the land.³³⁵ It is estimated that global sea level rose by 4 to 8 inches on average during the past century, and sea levels are predicted to rise between 1 to 3 feet by 2100.³³⁶

At the same time, development along our coastlines is exploding. According to the Pew Oceans Commission, half of the United States population lives in coastal counties, which comprise only 17% of the nation's land area. Population density along the coasts is already five times the national average. With approximately 3,600 people moving to the coasts *each day*, the coastal population is expected to increase another 20% by 2015.³³⁷

Communities are increasingly relying on temporary, shortsighted, band-aid solutions for storm protection, many of which are subsidized by the Corps. (See "Subsidies for Wealthy Beach Communities" p. 43).

Marine Transportation and Trade

The nation's water resources act as critical financial and transportation arteries. Trade – particularly for coastal ports – is expected to steadily increase in the coming years, although the full extent and location of that growth is not yet known. The management



An eight barge tow on the Tennessee-Tombigbee Waterway. Photo Credit: U.S. Army Corps of Engineers

and development of the maritime transportation system, however, is uncoordinated and divided among several agencies with different interests and expertise. While virtually every port lobbies for additional development, much of the trade is concentrated, with the leading 10 ports accounting for 80% of the foreign container cargo in 1997 (the twin ports of Los Angeles-Long Beach accounted for nearly one-third by themselves).³³⁸ Additionally, much has



A container vessel navigates the Kill Van Kull on its way to Newark Bay and the Port of New York-New Jersey. Photo Credit: U.S. Army Corps of Engineers

to be done on the landside – the intermodal connections to move goods to and from the ports – as well as on the water-side, in order to modernize our national cargo transportation network.

While waterborne commerce at the nation's coastal ports has steadily grown over the years, traffic levels on the inland navigation system have remained

³³³ U.S. DEPARTMENT OF STATE, U.S. CLIMATE ACTION REPORT 2002, 99 (May 2002), available at yosemite.epa.gov/oar/globalwarming.nsf/content/ResourceCenterPublicationsUSClimateActionReport.html (last visited Nov. 11, 2003).

³³⁴ *Id.*, at 100-01.

³³⁵ Additional factors contributing to sea level rise are natural coastal subsidence, groundwater and oil extraction, and changes to sediment transport patterns.

³³⁶ U.S. DEPARTMENT OF STATE, *supra* note 333, at 103.

³³⁷ PEW OCEANS COMMISSION, AMERICA'S LIVING OCEANS, 49-52 (May 2003).

³³⁸ NATIONAL RESEARCH COUNCIL, APPLYING ADVANCED INFORMATION SYSTEMS TO PORTS AND WATERWAYS MANAGEMENT 6 (Nat'l Academy Press, 1999).

stagnant or even decreased. A few waterways remain the workhorses of the system, while others carry few, if any, barges. The major challenge facing the inland waterway system is in decisions regarding what river segments should be maintained for commercial navigation – particularly given the maintenance backlog for important parts of the system, and the distressed environmental conditions of many of the waterways.

The increasing demands, management and maintenance at our nation's ports and waterways will intensify impacts on fragile estuaries, bays and fisheries. The safe and responsible disposal of hundreds of millions of cubic yards of sediment dredged annually from the bottoms of waterways will increasingly challenge our ability to manage navigation systems to keep pace with trade, but not create overcapacity or damage critical ecosystems.

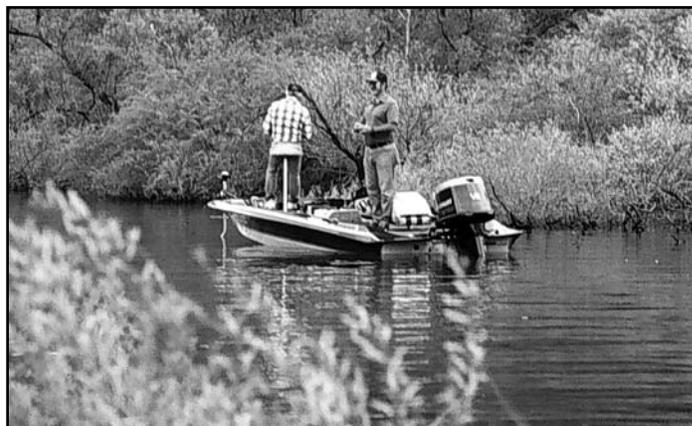
Environmental Restoration

North America's freshwater ecosystems are among the most imperiled in the world. More than 70,000 acres of



The endangered least tern depends on sandbars exposed by low river flows along the Missouri River for nesting habitat.
Photo Credit: U.S. Army Corps of Engineers

wetlands are lost each year, and more than 291,000 miles of rivers and streams are too polluted to support fishing and swimming.³³⁹ As public demand increases for protecting and restoring the natural environment, federal and



According to the U.S. Fish and Wildlife Service, recreational activities, like fishing and boating, contribute \$50 billion annually to the U.S. economy. Photo Credit: U.S. Army Corps of Engineers

nonfederal programs in this area have grown substantially.³⁴⁰ Yet these programs have been largely ineffectual because they are often uncoordinated and segregated from other programs and policies.

Ecosystems provide important natural services, such as storing excess flood water, replenishing groundwater, cleansing and filtering water supplies, and providing habitat for imperiled and popular game species. They also support economically important recreation and tourism activities, such as fishing, hunting and bird watching. But about 20% of the more than 4,000 native animal species that depend on streams, lakes, wetlands, or riparian areas are considered “imperiled” or “critically imperiled.”³⁴¹ We

³³⁹ See, Letter from American Water Resources Association to President George W. Bush, Senate Majority Leader Bill Frist and House Speaker J. Dennis Hastert (Dec. 31, 2002) (on file with National Wildlife Federation).

³⁴⁰ The National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA), Natural Resources Conservation Service (NRCS), Fish and Wildlife Service (USFWS), and U.S. Army, for example, comprise the Estuary Habitat Restoration Council under the Estuary Restoration Act. In addition, EPA administers the Clean Water State Revolving Fund, the National Estuary Program and Section 319 Nonpoint Source Pollution Management Program. The USFWS manages its Coastal Program, the National Coastal Wetlands Conservation Grant Program and Partners for Fish and Wildlife Program. NOAA's programs include the Coastal Protection and Restoration Program, the Community-Based Habitat Restoration Program, Damage Assessment and Restoration Program, Marine Sanctuaries Program National Estuarine Research Reserve System. The NRCS administers the Wildlife Habitat Incentives Program and the Wetlands Reserve Program. Each of these involves states and local communities to varying degrees.

³⁴¹ THE H. JOHN HEINZ CENTER FOR SCIENCE, ECONOMICS AND THE ENVIRONMENT, THE STATE OF THE NATION'S ECOSYSTEMS, 18-19 (2002).

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are rapidly learning that engineering solutions to replace the services and resources lost through poorly planned development often costs far more than allowing nature to do the job for free.³⁴²

Current Water Resources Management

Many of our 21st Century water challenges have their roots in shortsighted or misguided policies, failed inter-agency coordination, subsidies that fail to value the resource, and lack of a national vision.

Fragmented Approach

Historically, rather than address systemic water problems, we have tended to address emerging issues simply by adding new policies and programs without fixing the old ones. For example, in 1990, the President declared a "no net loss of wetlands" policy, but a variety of Corps and other programs that promote wetland loss remain in place.

Further fragmenting the national approach to water resource challenges is the diverse group of agencies responsible for various aspects of water policy. The Western Water Policy Review Commission documented that the federal government has "15 federal bureaus and agencies with water-related programs operating in the western states, responsible to 6 cabinet departments, 13 congressional committees and 23 subcommittees, and funded by 5 different appropriation subcommittees" in Congress.³⁴³ Not surprisingly, "turf" becomes a recurrent issue.

The battles between the Corps and the U.S. Bureau of Reclamation over building dams around the west are legendary and were chronicled in the book *Cadillac Desert*.³⁴⁴ Similar battles over water management occur between many other agencies today, such as the Environmental

Protection Agency, Maritime Administration, Natural Resources Conservation Service, Bureau of Reclamation and the Corps. These agencies have different agendas and interests, as well as separate chains of command that do not converge until they reach the White House. The combination of agency in-fighting and parochial decision-making results in a failure to responsibly manage water problems with a comprehensive, multi-disciplinary approach.

Additionally, there are issues not only at the federal level but also between different levels of government. Some areas are the purview of the states, such as water rights in the western U.S., and others are reserved for the federal government or localities. Another wrinkle is the balance between public and private sector responsibilities. Federal government over-involvement in areas that can adequately be addressed by the private sector or by other levels of government distorts incentives and often leads to inappropriate development or subsidies.

Water Subsidies that Undervalue the Resource

Among the most significant policies negatively affecting the state of the nation's water resources is the persistence of subsidies that lead people and businesses to undervalue current resources. In light of the current water challenges, the nation should strive to conserve, reuse and recycle water. Yet, many water project subsidies provide disincentives to conservation, protection and restoration of water resources. Some subsidies, for example, promote the increased use of irrigation, instead of encouraging farms to pursue cheaper alternatives that conserve, reuse and recycle water. Subsidies must be reviewed to ensure that federal taxpayer investments are serving the nation's policy objectives, not short-term parochial interests. (See "Eastern Arkansas Irrigation Projects" p. 52).

³⁴² See generally, GRETCHEN DAILY & KATHARINE ELLISON, *THE NEW ECONOMY OF NATURE* (2002).

³⁴³ Western Water Policy Review Advisory Commission, *Water in the West: Challenge for the Next Century*, 5-20 (Jun. 1998).

³⁴⁴ MARK REISNER, *CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER*, Rivals in Crime (Ch. 6) 176 (1986).

In another case, many U.S. ports charge rates that are below their costs, which suggests that excess port capacity exists. According to the Transportation Research Board, many ports continue to rely on various forms of public aid and subsidies just to break even.³⁴⁵ Similarly, the federal government subsidizes operation and maintenance of inland waterways, rather than charging user fees, keeping some waterways open for only a trickle of barges. (See "Inefficient Inland Waterway Navigation Subsidies" p. 46).

Lack of Leadership and Direction

A fundamental problem facing the nation's water resources is the lack of responsible and effective leadership and direction from recent administrations and Congress. For instance, neither entity has been willing to seriously address how water infrastructure financing policies are working in light of the longer-term needs of the nation and the roles of other sectors. Yet financing policies will remain an underlying driver for how to invest in these efforts in the decades ahead.

The large number of agencies and committees in Congress that are responsible for decisions affecting water resources means that our nation's water policy is often heading in several directions at once: on the one hand promoting certain actions, such as propping up prices to lessen the financial impact of a crop surplus, while on the other hand subsidizing irrigation, which often increases production of the same crops.

Additionally, rather than thoughtful decision-making about whether certain agencies or

another level of government should meet a developing water resource need, the job is often handed out by default or for political expediency. For example, the EPA administers largely state-driven revolving loan funds for meeting wastewater treatment needs. However, the Ranking Member of the House committee overseeing the Corps hid a provision in an omnibus water bill that directed the agency to provide wastewater treatment services, paying two-thirds of project costs.³⁴⁶ Driven by the large subsidy, the program has grown exponentially, duplicating the EPA loan program. (See "Environmental Infrastructure" at 65).

The Corps' "Find Work" Agenda

After two centuries, the Corps is not a political neophyte and has been aggressive about filling the leadership vacuum. To be sure, the Corps has proven its ability to get things done, but many of the agency's actions are making the nation's water problems worse. The Corps does not have sole responsibility for managing and developing water resources – nor should it – but its projects and actions are often shortsighted and fail to meet the nation's future comprehensive water resource needs.



Missouri — During the Midwest Flood of 1993, the Corps' levees could not hold back Mississippi and Missouri River floodwaters. Photo Credit: U.S. Army Corps of Engineers

³⁴⁵ TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES, SPECIAL REP. 271, FREIGHT CAPACITY FOR THE 21ST CENTURY, 3-10 (Nat'l Academy Press, 2002).

³⁴⁶ Water Resources Development Act of 1992 § 313.

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For example, the Corps builds flood control projects that chase floods from one community to the next, when it could be helping local communities manage their flood risks more effectively. The Corps is seeking to build new locks for navigation, while missing the opportunity to utilize less costly demand management approaches to address traffic congestion. The Corps proposes to construct large-scale restoration projects, such as in Coastal Louisiana, but continues to permit wetland destruction in the same areas, which helped cause the environmental deterioration in the first place. The Corps has held itself up as premier environmental restoration agency, but its highly engineered, expensive projects deter local interests from paying a share of the costs.

The Chief of Engineers has testified before Congress about the need for the agency to change, but has yet to propose serious legislative reforms needed to fix the agency's systemic problems. The Corps has issued Environmental Operating Principles that are intended to move the agency toward sustainable development, but has yet to apply these "principles" to the nation's most destructive and wasteful projects.³⁴⁷

As officers within the Army, Corps district and division commanders rotate out of their posts every 2-3 years before moving to another post, usually outside the water resources field. Military officers seeking promotion want to make their mark by approving and constructing projects within their short tenure. Most water resources problems are complicated issues with long histories, and it is virtually impossible for Army officers to come on to the job with the necessary background and understanding to meaningfully address these issues during their short stint. Additionally, the constant turnover and the need for quick "successes" disrupts continuity and discourages larger-scale

water management and development approaches to these issues that have profound future implications. For decades, the Corps has relied on engineered, project-by-project approaches to water resources development. The Corps' short-term orientation is failing to address root causes of water problems.

In recent years, Congress has blocked even suggestions to consider investigating whether the Corps ought to continue some of its current civil works functions and whether any or all of those functions should reside within the U.S. Army.³⁴⁸ Given the looming water challenges and the critical importance of water resources to the nation, this debate must occur. There must be a thoughtful discussion about whether our water resources would be better served if other federal agencies, or state and local governments, or the private sector carried out some or all of the Corps' civil works functions.

A New Vision and Direction

In the 21st Century, the United States can and must lead the world in defining a new vision for managing water resources. The Corps' role in that vision likely lies in facilitating maritime commerce, responsible floodplain management, and ecosystem restoration in an equitable, sustainable and cost-effective manner. But first, the Corps must be reformed into an agency grounded in the principles of accountability, modernization, prioritization and equity within a better framework for effectively addressing the nation's water resource needs.

It is time for Congress and the Administration to define a future direction that ensures a modern, economically efficient and environmentally sustainable and appropriately limited role for the federal government in the management of water resources.

³⁴⁷ U.S. Army Corps of Engineers, Environmental Operating Principles (Mar. 26, 2002), available at <http://www.hq.usace.army.mil/cepa/envprinciples.htm> (last visited Aug. 29, 2003).

³⁴⁸ Consolidated Appropriations Resolution, 2003, Division D, Title I, Section 109, Pub. L. 108-7; Energy and Water Development Appropriations Act, 2004, Section 102, Pub. L. 108-137.

The nation's future water resource policy must be governed by these five core principles:

- 1.** The federal government's primary role in water resource management should be to provide leadership in facilitating projects and policies that reflect a comprehensive and coordinated national vision.
- 2.** The federal government's involvement in water resources projects should be limited to circumstances in which the government would produce more economically efficient and nationally beneficial outcomes than state or local entities or the private sector. Subsidies should be limited and the government should strive for full-cost recovery through cost-sharing and user fees for projects that have discernable economic benefits.
- 3.** The federal government should recognize that it has special stewardship responsibilities for common or boundary resources, and work collaboratively with states to ensure that costs of water resource projects in these areas are shared equitably.
- 4.** The federal government's water resource efforts should work with natural systems and watershed-based planning and management that balances flow, quantity, and quality issues and protects and enhances wildlife habitat. Sustainable economic development and environmental protection ought to be the co-equal goals of water resources management. The nation's water resource policy should encourage people and structures to back away from the edge of the coast and out of high-risk floodplains, deter unnecessary environmental destruction, as well as promote and encourage greater water efficiency and waste reduction, and support innovative technologies that can increase and protect water supplies.
- 5.** The federal government must create a more responsible and comprehensive water resources planning and development framework to help ensure limited federal resources are allocated in a targeted, forward thinking way. To improve interagency, inter-governmental and private sector coordination, there should be a substantial consolidation of agency functions and a cabinet-level coordinating body should be formed. To assist this process, Congress and the Administration should establish national water commission to study and recommend how to restructure overall water resources functions.

about this report

Criteria for Selecting Projects. The wasteful projects listed in this report include twenty-five that were selected by Taxpayers for Common Sense and the National Wildlife Federation as the "most wasteful Corps of Engineers Projects" in the nation for *Troubled Waters: Congress, the Corps of Engineers, and Wasteful Water Projects* (March 2000). Four new projects were added to the list due to their significant cost and the importance of the natural resources affected.

Criteria for Ranking the Most Urgent Threats. The report authors, National Wildlife Federation and Taxpayers for Common Sense, categorized the 29 projects by imminence of the threat. The 14 most urgent threats represent the projects that are closest to implementation and have the greatest impact on the environment and highest cost to taxpayers. They were ranked according to the following criteria:

- *Urgency or Nearing Implementation* – High ranking went to projects that have received large construction appropriations over the last three fiscal years, that have statutory language pushing the project further along, that have cleared major steps in the Corps' planning process or are no longer under review, and that have strong congressional support for implementation.
- *Price Tag* – High ranking went to projects with high overall costs to federal taxpayers, costs that outweigh the benefits, and are unnecessary or do not achieve stated goals.
- *Natural Resource Value and Impact* – High ranking went to projects that destroy riverine, coastal and wetland ecosystems, put endangered or threatened species at risk, affect large diversity of species, expose humans and wildlife to hazardous chemicals, harm federal or state protected lands, or violate agency policies or federal law.

Cost Estimates

Cumulative Waste of the 29 Projects – In calculating the cumulative waste highlighted by this report, only costs to federal taxpayers have been used. For new projects that have not been built, the total estimated cost of the project's life has been used. For ongoing projects, the average operation and maintenance cost over five years has been used. For beach building projects, one-tenth of the total cost of the project's 50-year life has been used. For environmental infrastructure, the total project funds authorized between 1992 and 2000 have been used.

Cost of Individual Projects – Costs reported for individual projects are the total project costs, federal and non-federal. Project cost estimates are derived from studies, reports or statements of the U.S. Army Corps of Engineers. Other economic values are derived from various federal, state and local government agencies, expert scientists and economists, knowledgeable non-governmental interest groups, and credible media reports.

Alternatives

The National Environmental Policy Act (NEPA) and Corps planning guidelines require study of multiple project alternatives and evaluation of each alternative's economic and environmental impact. While *Crossroads* does not necessarily endorse any specific alternative, certain alternatives have been described that thus far have been inadequately considered by the Corps. National Wildlife Federation and Taxpayers for Common Sense recommend that the Corps follow the letter and the spirit of NEPA and their guidelines.

Project Politics

National Wildlife Federation and Taxpayers for Common Sense have conducted a careful review of the actions of congressional proponents and opponents of the identified projects. The actions of other public officials and interested third parties have also been reviewed. The research included extensive consultation with and input from taxpayer advocacy groups, environmentalists, community activists, scientists, economists, and others across the nation.

cost-sharing rules for corps civil works projects

COMMERCIAL NAVIGATION

Coastal Ports

| Type | Nonfederal Share* (Construction) | Federal Share (Construction) | Nonfederal Operations & Maintenance |
|----------------------|----------------------------------|------------------------------|-------------------------------------|
| < 20 ft. Deep Harbor | 20% | 80% | 0% |
| 20-45 ft. Harbor | 35% | 65% | 0% |
| > 45 ft. Deep Harbor | 60% | 40% | 50%** |

* The federal government will loan up to 10% of this amount to be repaid with interest over a 30-year period. LERRDs (see below) may offset some or all of this amount.

** The 50% nonfederal contribution applies to the portion of costs to maintain the harbor deeper than 45 feet.

Inland Navigation

| Type | Nonfederal Share (Construction/ Rehabilitation) | Federal Share (Construction/ Major Rehabilitation) | Nonfederal Major Operations & Maintenance |
|------------------|---|--|---|
| Inland Waterways | 50%* | 50% | 0% |

* The Inland Waterways Trust Fund provides nonfederal share.

FLOOD DAMAGE REDUCTION

Riverine

| Type | Nonfederal Share (Construction) | Federal Share (Construction) | Nonfederal Operations & Maintenance |
|-----------------------------|---------------------------------|------------------------------|-------------------------------------|
| Structural Flood Control | 35%* | 65% | 100% |
| Nonstructural Flood Control | 35%** | 65% | 100% |

* Structural flood control projects require a 5% cash outlay prior to construction. The remainder of the cost-share may be provided by LERRDs (see below).

** The nonfederal cost-share of nonstructural flood control projects may be provided entirely by LERRDs (see below)

Note: The nonfederal share for structural flood control projects authorized prior to 1996 require a 25% minimum total contribution.

Shoreline Protection

| Type | Nonfederal Share (Initial Construction) | Federal Share (Initial Construction) | Nonfederal Operations & Maintenance (50 yrs) |
|---------------------------|---|--------------------------------------|--|
| Beach Replenishment | 35% | 65% | 35%* |
| Other Structural Projects | 35% | 65% | 100% |

* Projects authorized and approved after December 31, 2002 require a 50% nonfederal contribution.

AGRICULTURAL WATER SUPPLY +

| Type | Nonfederal Share (Initial Construction) | Federal Share (Initial Construction) | Nonfederal Operations & Maintenance |
|--|---|--------------------------------------|-------------------------------------|
| Non-Irrigation Project and Irrigation Projects in Eastern States | 35% | 65% | 100% |

+ Generally associated with multiple-purpose projects.

Note: For irrigation projects in the 17 Reclamation (western) states, the Corps funds initial project construction, which is supposed to be repaid in conformity with Reclamation law.

MUNICIPAL AND INDUSTRIAL WATER SUPPLY

100% funded by nonfederal interests.

HYDROELECTRIC POWER

100% funded by nonfederal interests.

LERRDs

In most cases, nonfederal interests provide lands, easements, rights-of-way, dredge disposal areas, and relocations (LERRDs) and receive credit toward its share of the project for the value LERRDs.

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The nation's largest member-supported conservation advocacy and education organization, the National Wildlife Federation (NWF) unites people from all walks of life to protect nature, wildlife, and the world we all share. NWF has educated and inspired families to uphold America's conservation tradition since 1936.

For more information about National Wildlife Federation, please visit: www.nwf.org

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Taxpayers for Common Sense (TCS) is a non-partisan advocate for American taxpayers. TCS is dedicated to cutting wasteful spending and subsidies in order to achieve a responsible and efficient government that lives within its means.

For more information about Taxpayers for Common Sense, please visit: www.taxpayer.net

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