Order Code IB10120

Army Corps of Engineers Civil Works Program: Issues for Congress

Updated September 11, 2003

Nicole T. Carter and Pervaze A. Sheikh
Resources, Science, and Industry Division

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SUMMARY

The 108th Congress is likely to consider a number of ongoing issues related to the civil works program of the U.S. Army Corps of Engineers (Corps). Under civil works, the Corps plans, constructs, and operates water resources facilities for flood control, navigation, and ecosystem restoration purposes.

Appropriations and Budget Requests. Civil works funding is often contentious between Congress and the Administration, with appropriations typically providing more funding than requested. The President's request for civil works for FY2004 is $4.2 billion, 10% below the amount enacted for FY2003. In H.R. 2754, the House voted for a Corps civil works budget for FY2004 of $4.5 billion; the Senate Appropriations Committee recommends $4.4 billion in S. 1424.

Authorizations and WRDA. Congress typically authorizes Corps projects and makes policy changes as part of a biennial consideration of a Water Resources Development Act (WRDA). WRDA 2003 — H.R. 2557 — was marked up by the House Transportation and Infrastructure Committee in late July. The Senate Environment and Public Works Subcommittee on Transportation and Infrastructure appears to have given priority to reauthorizing the Transportation Equity Act; unless this Act becomes stalled, the Committee appears unlikely to consider a WRDA before late 2003 or 2004.

Project Development Reform. Provisions that would change some aspects of how Corps projects are formulated and reviewed have been included in H.R. 2557. Some supporters of Corps reform are seeking further changes and are concerned about other provisions in H.R. 2557.

Operational Changes. Three current initiatives could alter Corps operations. The Corps is formulating a new organizational and business structure for the agency. The Administration is attempting to increase competition between public and private sources of services for federal agencies, including the Corps. The Army is studying how to focus on its core war-fighting competencies that encompasses a review of the civil and military activities of the Corps.

River Management. Drought conditions in recent years and concerns over threatened and endangered species protection have raised questions about management of the nation's rivers. Questions include whether some river uses should take precedence over others. In this context, both the annual and long-term management of the Missouri River (S. 1378) and monitoring of the river's ecosystem and species (S. 531) are likely to be debated during the 108th Congress.

Ecosystem Restoration. During the last decade, Congress has expanded Corps involvement in ecosystem restoration. The Corps plays a significant coordination role in restoring the Florida Everglades. Changes in Florida law and implementation problems with Everglades restoration have raised concerns about the feasibility of such efforts and the proper federal role. More restoration projects with Corps participation, such as Coastal Louisiana restoration, may be proposed during the 108th Congress.

MOST RECENT DEVELOPMENTS

On August 22, President Bush announced the recess appointment of John Paul Woodley, Jr. to be Assistant Secretary of the Army for Civil Works.[1]

On July 18, the House passed H.R. 2754 (H.Rept. 108-212) — Energy and Water Development Appropriations for FY2004 — with $4.5 billion in funding for the Corps civil works program, a decrease of $156 million from the $4.6 billion budget enacted for FY2003. The Senate Appropriations Committee recommends $4.4 billion for civil works in its Energy and Water Development Appropriations bill (S. 2414; S.Rept. 108-105).

The House Transportation and Infrastructure Committee reported H.R. 2557 (H.Rept. 108-265) — the Water Resources Development Act (WRDA) of 2003 — following Committee markup in late July. During markup, the Committee added selected Corps reform measures and modified a provision on expedited project environmental review.

Missouri River mainstem dam operations are the subject of much controversy. In order to address perceived conflicts between recent judicial orders, six current lawsuits involving the Missouri River were consolidated, then transferred to the U.S. District Court for the District of Minnesota . In August, the Minnesota judge ordered the parties to appear for a status conference on September 8. The Corps has announced that it will release water from Kansas River reservoirs to support Missouri River navigation beginning in mid-September. In late July, the Corps released a *biological assessment* for its proposed action of updating the Master Manual that guides the operations of the Missouri River dams; the U.S. Fish and Wildlife Service (FWS) is expected to respond with a *biological opinion* on the impact to threatened and endangered species of the proposed flow regime and other actions.[2] (See River Management for more information on the Missouri River.)

In late August, the Corps released draft results of a review of the Corps process and structure. The document sets out a framework for developing a new corporate design for the agency. Implementation of some of the recommendations, such as changing cost-share requirements for feasibility studies, would require congressional action. (See Operational Changes for more information).

BACKGROUND AND ANALYSIS

The Corps is a unique federal agency located in the Department of Defense with military and civilian responsibilities; it is staffed predominantly by civilians. Through its military program, the Corps provides engineering, construction, and environmental management services to the Army, Air Force, government agencies, and foreign

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[1] For more information on recess appointments, see CRS Report RS21308, *Recess Appointments: Frequently Asked Questions*, by Henry B. Hogue.

[2] The biological assessment is available at: [https://www.nwd.usace.army.mil/pa/BA_7-30-03_final.pdf].

governments.[3] This report, however, focuses on congressional issues related to the Corps civil works program.

At the direction of Congress, the Corps plans, builds, operates, and maintains a wide range of water resources facilities under its civil works program. The Corps' oldest civil responsibilities are creating navigable channels and controlling floods. During the last decade, Congress has increased Corps responsibilities in the areas of ecosystem restoration, environmental infrastructure (e.g. municipal water and wastewater treatment plants and systems), and other non-traditional activities, such as disaster relief and remediation of formerly used nuclear sites. The economic and environmental impacts of Corps projects can be significant locally and regionally, and at times are quite controversial.

Appropriations and Budget Request. The civil works budget of the Corps consists primarily of funding for the planning, construction, and maintenance of specific projects; appropriations are made as part of the Energy and Water Development Appropriations bills. Funding for Corps civil works has often been a contentious issue between the Administration and Congress, with appropriations typically providing more funding than the Administration's request, regardless of which political party controls the White House and Congress. The FY2003 bill followed suit: at $4.6 billion, it was $457 million (11%) above the requested amount. For FY2004, the President requested $4.19 billion, a decrease of $445 million (10%) from FY2003. The House voted for $4.5 billion in funding for FY2004. The Senate Appropriation Committee recommends $4.4 billion. The Energy and Water Appropriations bill that includes civil works funding is expected to be taken up by the Senate following the August recess.

The Administration included in its request legislative proposals to pay for a larger range of activities from two trust funds — the Inland Waterways Trust Fund (IWTF) and the Harbor Maintenance Trust Fund (HMTF). These two trust funds have built up substantial authorized, unappropriated balances since the early 1990s, causing concern about why the funds were not being put to use and leading to interest in expanding their use to decrease the federal monies spent on inland waterways and harbors. IWTF monies derive from a twenty cents per gallon fuel tax imposed on vessels engaged in commercial transportation on inland waterways, plus investment interest. HMTF monies derive from receipts of a 0.125% ad valorem (i.e., percent of value) tax imposed upon commercial users of ports. These trust funds require annual appropriation by Congress. Spending of the trust funds is considered part of the Corps budget and, therefore, is subject to the congressional budget ceiling for energy and water development appropriations. Both the House and Senate Appropriations Committees disregarded the proposals related to the two trust funds. A provision in the proposed WRDA 2003 would actually increase the funding for harbor construction and maintenance for harbors between 45 and 53 feet in depth, yet does not propose using funds from the IWTF and HMTF. (See *Authorizations and WRDA* for more information.)

Some interest groups have criticized the types of projects being authorized and funded as part of the Corps civil works program. For example, local sponsors of navigation and flood control projects fear that the Corps' growing involvement in ecosystem restoration and

[3] More information on the Corps military program is available at: [http://www.usace.army.mil/military.html].

non-traditional responsibilities detracts from the agency's more traditional missions and consumes limited federal appropriations. One of these non-traditional responsibilities is *environmental infrastructure* — projects for municipal water supply and wastewater treatment facilities and surface water resource protection and development not necessarily associated with other Corps projects. Beginning with authorizations in WRDA 1992 (P.L. 102-580), Congress has authorized more than 200 environmental infrastructure projects and has funded a limited number of these. The President's FY2004 budget requests no funding for environmental infrastructure projects. However, the Senate Appropriations Committee's recommendations (e.g., §115 of S. 1424) and the House report on the civil works budget (H.Rept. 108-212, H.R. 2754) both contain provisions continuing the Corps' involvement in environmental infrastructure. Title V of H.R. 2557, the proposed WRDA 2003, includes numerous provisions for increasing the authorization and expanding the scope of at least 10 environmental infrastructure projects.

Beach nourishment is another category of controversial projects. Beach nourishment is the placement of sand on beaches either as a means of disposing of dredged material or to artificially widen beaches. Periodic replenishment is needed to maintain most widened beaches. Taxpayer advocacy groups criticize periodic nourishment as providing only temporary benefits; they also argue that the benefits of nourishment accrue largely to local, often private, interests, although the federal share of such projects is now 50%.[4] Proponents of Corps involvement in beach nourishment argue that it is an economical solution to storm damage: the sand placed on the beach may reduce the force of ocean waves, providing additional protection to shorefront structures. The President in his FY2004 budget request did not target beach nourishment activities for reduced federal funding, a change from past submissions by both Democratic and Republican Administrations. Senate Appropriations Committee's recommendations (S.Rept. 105-108, S.1424) and the House report on the civil works budget (H.Rept. 108-212, H.R. 2754) both contain funding for beach nourishment. H.R. 2557 would authorize beach nourishment activities. Another bill, H.R. 2558, would extend the period in which the Corps could provide beach nourishment for water resources development projects from 15 to 50 years from the date of initial construction.

Authorizations and WRDA. Congress typically authorizes Corps projects as part of a biennial consideration of a Water Resources Development Act.[5] The last WRDA was enacted in 2000. The House Committee on Transportation and Infrastructure has reported H.R. 2557 — WRDA 2003 — following a late-July markup. During markup selected Corps reform provisions were added. (See "Corps Reform" section for more information.) A House vote is expected as early as September. The Senate Environment and Public Works Subcommittee on Transportation and Infrastructure appears to have established reauthorization of the Transportation Equity Act as its first priority for 2003, indicating that consideration of WRDA is unlikely until late 2003 or 2004.

H.R. 2557 contains approximately 250 provisions authorizing projects or changes to projects and 33 general provisions that alter various aspects of Corps operations and policies. The bill authorizes nine major projects that fall under the Corps navigation, flood control,

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[4] Some environmental groups are against many beach nourishment activities because of possible harm to marine and coastal habitats for benthic animals like worms and clams.

[5] Appropriations bills have also been used as vehicles for authorizing projects.

environmental restoration, and storm damage reduction responsibilities. The bill also authorizes 41 smaller projects. The project-related provisions include modification of over 90 navigation, flood damage reduction, and environmental restoration projects. The bill also authorizes 32 studies. The more than 100 miscellaneous provisions include an increase in authorized appropriations or an expanded scope of activities for more than ten environmental restoration projects, the authorization of a 12-foot navigation channel for the Arkansas River (§5024), and the development of a comprehensive river basin restoration plan for the Kaskaskia River (§5041) 6and the Coastal Louisiana Ecosystem (§5051).

One of the more controversial sections of the bill — §2028 Project Streamlining — is intended to expedite project environmental review by authorizing the Corps to coordinate the activities of the federal, state, and local agencies and Indian tribes with jurisdiction over the project. The provision requires the Corps to develop a process to have the reviews and permitting by the agencies conducted concurrently to the maximum extent practicable and completed within a time frame established by the Secretary of the Army in cooperation with other agencies. Environmental groups generally oppose this type of streamlining. They argue that it limits the roles of the other agencies and that there is no demonstrated need for streamlining because environmental review is not a proven cause of project delays for most Corps projects. Streamlining supporters argue that the provision is largely directing the Corps to use authorities that it already has and that already exist in the regulations for implementing NEPA (National Environmental Policy Act, P.L. 91-190; 42 U.S.C. 4321). They contend that current practices are inefficient and time-consuming and that measures such as those in §2028 are necessary to expedite the sound development of the nation's water resource. A related provision — §2027 — provides for streamlining of the Corps regulatory responsibilities; the section consolidates the Corps' and other agencies' permitting processes.

Another provision in H.R. 2557 — §2003 — would increase the federal cost-share responsibilities by 25% for construction and 50% for operation and maintenance for deep draft navigation projects between 45 and 53 feet in depth. This increased federal responsibility is counter to reforms being pursued by taxpayer advocacy groups to limit federal funding for projects that have a significant portion of their benefits accruing to private and local interests and that are potentially environmentally damaging. Supporters of federal spending on harbors and §2003 note the national benefits of the goods transported and the increasing depth required by container ships.

Project Development Reform. Criticism of Corps projects has been heard for decades, particularly since the growth of environmental opposition to large water resources development projects in the 1970s. Although Congress passed greater local cost-sharing requirements in 1986, it has enacted few changes to how the Corps develops and evaluates projects. In response to two events in 2000, support for changing Corps project planning and review gained momentum.[6] Although some Members support Corps reform, other Members along with agriculture and navigation industries are satisfied with existing agency practices. After reportedly lengthy negotiations, House Transportation and Infrastructure Committee

[6] First, *The Washington Post* published a series of articles raising questions about the integrity of the Corps planning process. Second, a Corps economist went public as a "whistleblower" contending that Corps officials manipulated a benefit-cost analysis to support expensive lock improvements on the Upper Mississippi River-Illinois Waterway.

members added three procedural Corps reform provisions to H.R. 2557. Some of the provisions in H.R. 2557 address certain concerns raised by a House Corps Reform Caucus, and Representative Kind's Corps reform bill, H.R. 2566. Other provisions of H.R. 2557, such as the streamlining and permitting provisions (see *Authorizations and WRDA* section), are viewed by environmental critics of the Corps as counter to reform.

The Corps reform provisions that are now included H.R. 2557 cover peer review of projects, additional requirements for mitigating negative impacts on fish and wildlife projects, and project planning criteria that consider both economic and ecosystem restoration benefits. Section 2033 would establish a process for identifying projects to be peer reviewed and formulating the peer review panel. Under this provision, the peer review process could encompass a broad range of activities, including environmental and economic assumptions and analyses. Peer review would be limited to scientific or technical matter and would not cover policy or legal compliance. The panel's recommendations would be advisory in nature and included as an appendix to the Chief of Engineer's report. Section 2030 would tighten requirements for the timing of mitigation and would specify the contents of mitigation plans.

Section 2032 would make three primary changes to the planning process: (1) adds flexibility by permitting the consideration of both economic and ecosystem restoration benefits of projects during analysis and the selection of the alternative to be pursued; (2) allows for the study and recommendation of additional economic or ecosystem restoration benefits for projects with a different primary purpose; and (3) increases the scope of the benefit-cost analysis of flood damage reduction activities to include residual risk of flooding following project completion, upstream or downstream impacts of the project, and an equitable comparison of structural and nonstructural alternatives. Many reform advocates see these provisions as a good first step; however, they would have preferred stronger measures and that additional reform issues be addressed. For example, environmental groups have expressed concerns over the independence of the peer review panels as set forth under §2033, and they have argued that changes, such as updating the *Principles and Guidelines for Water and Related Resources Implementation Studies* that has guided federal water resource development since 1983, are still needed. (See CRS Report RL30928, *Army Corps of Engineers: Civil Works Reform Issues in the 107th Congress*.)

Operational Changes. There are currently three initiatives to change the operation of the Corps civil works program: the Corps USACE 2012 initiative, the government-wide President's Management Agenda and an Army initiative referred to as the Third Wave. The USACE 2012 initiative was started at the request of the Chief of Engineers who asked that a team, primarily composed of Corps staff, develop a future design for the structure of the Corps, in particular the headquarters and division organizations. In late August, the Corps released a draft of the results.[7] The draft document sets out a framework for developing a new corporate design for the Corps. Implementation of some of the recommendations, such as changes to the cost-share requirements for feasibility studies and to the funding process for the reconnaissance phase of project development, would require congressional action.

[7] The draft document, *USACE Main Report*, is available at: [http://www.hq.usace.army.mil/stakeholders/].

In contrast to the Corps-specific USACE 2012 initiative, the President's Management Agenda is government-wide and the Third Wave is Army-wide. The President's Management Agenda was undertaken by the Bush Administration as part of a movement toward more private entrepreneurial services by government; one of the five components of the President's Management Agenda is a competitive sourcing initiative. The President's Management Agenda directed executive agencies to competitively source commercial activities in order to produce quality services at a reasonable cost through efficient and effective competition between public and private sources. In July 2003, the Administration abandoned its mandated government-wide goals for competition of agency positions that perform commercial activities.[8] OMB has reached agreement with a number of agencies on individual plans; the Corps and OMB, however, have not settled on an agency goal.

The Army's Third Wave initiative is broader than the President's Management Agenda. The Third Wave is a search for ways to improve the Army's operations by focusing its energies on its core war-fighting competencies. This includes a review of all positions and functions (i.e., entire areas of responsibilities and missions, such as wetlands regulation) that are not part of the Army's core military competencies. Actions that can be considered under the Third Wave for non-core functions and positions include competitive sourcing, privatization, transfer of responsibilities to other agencies, and divestiture. A significant portion of the Corps workforce is included in the review phase of the Third Wave because much of the water resources work performed by the Corps is not considered essential to the Army's war-fighting competencies.

In response to the Third Wave, §102 of S. 1424, Energy and Water Development Appropriations of FY2004, states:

> None of the funds appropriated in this Act, or any other Act, shall be used to demonstrate or implement any plans *divesting* or *transferring* of any Civil Works missions, functions, or responsibilities for the United States Army Corps of Engineers to other government agencies without specific direction in a subsequent Act of Congress. (Italics added)

No similar language is in the related House appropriations bill H.R. 2754. Section 109 of Title I, Division D of P.L. 108-7, the Consolidated Appropriations Resolution for FY2003, did contain related language. Section 109 prohibits using funds to study or implement any "plans *privatizing*, *divesting* or *transferring* of any Civil Works missions, functions, or responsibilities" (italics added) without specific direction by Congress. To comply with §109, the Army is limiting its Third Wave review of the Corps during FY2003 to competitive sourcing, which it distinguishes from privatizing. No implementation actions under the Third Wave are anticipated to be undertaken before FY2004. Implementation is expected to begin in FY2004 and continue through FY2009. The Army will likely need congressional approval for many of the actions that it may propose as part of the Third Wave.

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[8] A "commercial activity" is a not inherently governmental good or service that can be obtained from the private sector. (Executive Office of the President, Office of Management and Budget, "Policy Letter on Inherently Governmental Functions," *Federal Register*, vol. 57, no. 190 (Sept. 30, 1992) p. 45100.) More information is available in CRS Report RL31024, *The Federal Activities Inventory Reform Act and Circular A-76.*

River Management. An array of interests are questioning current river management practices in the nation and how management can balance benefits (and harm) across multiple river uses, including in-stream uses. Two issues raised by proposed legislation that are representative of this reevaluation of river management policies are the partial removal of the Lower Snake River dams and the management of the Missouri River. H.R. 1097, the Salmon Planning Act, would provide the Corps the authority needed to partially remove four dams on the Lower Snake River if such a removal is found to be necessary by the Secretaries of Commerce and the Interior and the Administrator of the U.S. Environmental Protection Agency. The removal is aimed at ensuring the protection of Columbia River and Snake River threatened and endangered salmon and steelhead species by reducing hydrosystem-related mortality and facilitating migration.

The Missouri River is a prime example of the complexity of the river management issues in which the Corps is embroiled. How the nation uses and values its rivers has changed over time. Rivers are now seen as not only providing economic benefits but also recreational opportunities and species habitat. These changes have manifest themselves in law (e.g., Endangered Species Act and NEPA) and in interpretation of water resources statutes. This shift has caused a reexamination by the courts, agencies, and stakeholders of the distribution of economic and other benefits of river management alternatives. The debate over Missouri River management raises some fundamental questions about water resources management in the nation, such as whether some river uses should take priority over others (e.g., threatened and endangered species protection over inland waterway transportation) and how precedence should be decided (e.g., balancing competing uses vs. maximizing economic benefits).

Current drought conditions in the Missouri River basin have contributed to an ongoing debate on the operation of the basin's dams.[9] The controversy is drawn largely along state lines. Upper basin states, such as North Dakota and South Dakota, have strong lake recreational interests and would generally prefer stable reservoir levels. Lower basin states, such as Missouri, want to maintain management that supports navigation, power generation, and river recreation and continues current structural approaches to flood control. The difference between the operational regimes preferred by upper basin and lower basin states are exaggerated during drought.

Threatened and endangered species protection further complicates river management. The U.S. Fish and Wildlife Service (FWS) recommends a flow regime to avoid jeopardy of federally protected species of fish and birds. It recommends a spring rise in the river level and lower summer flows; this flow regime would mimic the river's natural fluctuation. Operations targeted for species protection could in many cases also support water conservation in the upper basin. Consequently, upper basin states are at times aligned with environmental interests in the debate over the Missouri River. Managing the river for species protection could imply a new operating regime for both drought and non-drought years. Although how to protect species protection can be affected by drought, the polarizing

[9] Drought conditions persist in many areas of the Missouri River basin despite near normal snowpack and precipitation. The depressed levels of runoff due to the dry soil conditions from the preceding years of drought have further reduced the already low reservoir levels of the mainstem reservoirs.

issue during drought is more often water conservation in the upper basin reservoirs vs. maintenance of flows for navigation.

These differing opinions on how to best manage the Missouri River have drawn attention to the Corps operating plan for 2003 and the ongoing revision of its Master Main Stem System Reservoir Regulation Manual (Master Manual). Since 1960, the Master Manual has guided the operation of the Missouri River's mainstem dams. The manual has been in revision for 14 years as the Corps has struggled with how to satisfy or balance all of the authorized purposes of the Missouri River mainstem dams: flood control, hydropower, water supply, water quality, irrigation, navigation, recreation, and fish and wildlife protection. Some assert that the congressional authorizations of these dams do not clearly establish priority purposes or a hierarchy among purposes. Others point to 33 U.S.C. 701-1, which states that navigation is not to conflict with the present or future beneficial consumptive uses listed.[10] This section was enacted in 1944 and did not list recreational and fish and wildlife protection uses.

If and how the economic value of different uses should be considered in management decisions is a contentious and complicated issue.[11] The recreation industry in the Missouri River basin is often cited as having benefits significantly greater than the navigation industry. The Corps calculates the total average annual navigation benefit under current operations at $7 million. It estimates recreation benefits in the basin at $85 million annually — $65 million in the upper basin and $20 million in the lower basin. These annual averages are often cited by those arguing to alter river management to give recreation a greater priority than under current practice. Although interesting, there are numerous reasons why the comparison of navigation and recreation annual averages do not help much when trying to select among alternative operating regimes.[12] Alternative regimes often differ most in their

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[10] "The use for navigation, in connection with the operation and maintenance of such works herein authorized for construction, of waters arising in States lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the ninety-eighth meridian, of such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes." (33 U.S.C. 701-1(b)).

[11] The Corps is restricted to considering national economic development benefits in evaluating alternatives for its projects. Under the *Principles and Guidelines*, the Corps is not directed to look at the regional *distribution* of these benefits; instead, it is tasked with considering the national benefit. The estimates presented in this paragraph were provided by the Corps in the Missouri River Revised Draft Environmental Impact Statement (RDEIS) of August 2001. Although the Corps evaluated the environmental impacts of alternative regimes, the Corps did not monetize these environmental benefits and include them in the calculation of total national economic development.

[12] For evaluating the economic impacts of alternative release regimes, a comparison that would be useful for the stakeholders involved could be an evaluation of the difference in the amount and the distribution of benefits among upper basin states and lower basin states under the proposed management options during both drought and non-drought conditions. Such a geographically based analysis comparing the various alternatives could benefit from an analysis that evaluates the risk and consequences of multi-years drought and that considers the trends and projects for navigation and the multiple types of recreation (e.g., reservoir boating and fishing, river boating, camping, fishing, etc.). For example, this type of analysis could allow for the comparison of the overall impacts of a

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economic benefits not during an average year but during drought years. Also, upper basin recreation is reduced but it does not disappear when the reservoir levels are drawn down. Finally, the impact of lower flows on river recreation is also complicated because some types of recreation would likely increase while other types would decrease.

During the extended revision of the Master Manual, Members of Congress have tried to provide direction on Missouri River management to the Corps, such as language proposed and enacted in appropriations bills in the past three years. (See CRS Report RL31807, *Appropriations for FY2004: Energy and Water Development* for more information.) In an attempt to direct the Master Manual revision process and the Missouri River management, S. 1378 would transfer authority to revise the Missouri River Master Water Control Manual and to operate the Missouri River mainstem dams from the Secretary of the Army to the Secretary of the Interior. Another consequence of the extended revision process has been numerous legal challenges to the Corps operation of the mainstem dams.

Lawsuits on the management of the Missouri River are being used to legally challenge not only the specifics of operations of that river but also national river management practices. Many view the conflict in the Missouri River as a harbinger of increasing competition for water in basins across the nation and as a testing ground for legal action to induce changes in river management policy. Missouri River mainstem dam operations are the subject of much controversy this summer.[13]

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[12] (...continued)
water conservation management option that has a higher storage elevation as the trigger for moving from full service to minimum service navigation flows. The lost benefits during a drought under such a regime (e.g., greater reduction in navigation and power generation benefits, less of a reduction in reservoir recreation benefits) could be compared with the current operating practice.

[13] In May 2002, the District Court for the District of Nebraska entered an injunction that required the Corps to maintain flows sufficient to provide navigation on the Missouri. The Corps compliance with the Nebraska District Court's injunction was seemingly complicated by a mid-July injunction contempt order by Judge Gladys Kessler of the U.S. District Court for the District of Columbia. Judge Kessler called for the Corps to lower releases to protect endangered birds and fish. Lower summer releases, as required by Kessler, would reportedly not provide a sufficient flow to permit reliable navigation. Meanwhile, the 8th Circuit upheld the Nebraska District Court's injunction in June 2003, but determined in late July 2003 that the stay it had entered during the pendency of the appeal was to remain in effect until August 20, 2003.

In order to address the perceived conflicts in orders, six current lawsuits involving the Missouri River were consolidated by a multi-district litigation panel, then transferred to the U.S. District Court for the District of Minnesota whereupon Judge Paul A. Magnuson immediately stayed all proceedings for fourteen days. On August 4, 2003, Judge Magnuson concluded that the Corps is not subject to conflicting obligations, because the only injunction in effect is Judge Kessler's injunction requiring lower flows. Judge Magnuson further declared that the stay on Judge Kessler's contempt order would remain in effect because the court had not received any of the files from the District Court for the District of Columbia to consider procedural motions such as contempt orders, but that his court could not overrule Judge Kessler's substantive injunction ruling. Consequently, Judge Kessler's July 12 injunction which required low flows from July 15 to August 15 remains in effect.

The 8th Circuit Court of Appeals is currently considering some of the issues related to these (continued...)

The monitoring and possible restoration of the Missouri River is the subject of S. 531, Missouri River Enhancement and Monitoring Act of 2003. The bill would establish a basin stakeholder committee to make recommendations on means to restore the river ecosystem and support a research program dedicated to the monitoring and recovery of the river's threatened and endangered species. S. 531 addresses two elements of the debate over the Missouri River: the availability of scientific data and the role of stakeholders in the decision making process guiding the river's management.

In 2002 in its report *The Missouri River Ecosystem: Exploring the Prospects for Recovery*, the Natural Research Council raises the prospect of moving beyond mitigating the harm caused to individual species by dam operations to restoring the Missouri's riverine ecosystem.[14] Resistence to operational changes that would reduce navigation appear to be more complicated than just the economics of the barge industry. An active barge industry means that the navigation channel and levee system are maintained, thus protecting the agriculture, industry, river recreation, and urban growth that have developed on land where the meandering Missouri's side channels, backwater, and main channel borders used to be and on lands that were historically flooded on a regular basis with the natural fluctuation of the river's flow. If dam operations were to be altered such that a predictable flow sufficient for navigation were not available, navigation on the river could end, raising doubts about the benefits of maintaining a navigation channel and suggesting an increased feasibility of riverine ecosystem restoration. A restored channel would raise flood protection concerns. Those supporting restoration indicate that a more natural channel and its associated floodplain would provide natural flood storage capacity. The NRC report suggests some of the challenges if restoration were to be pursued:

> If it is decided to enact management actions to improve the state of the ecosystem, and if those management actions are to be effective, some degree of Missouri River meandering must be restored. Allowing the Missouri River to meander would require a significantly wider public corridor in some portions of the channel than currently exists. This would require close coordination with those who live and work along the river. In some cases, significant improvements in river ecology may require relocations.

This non-structural approach to flood control is a controversial element in the larger debate on flood hazard mitigation and flood insurance.

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[13] (...continued)
cases; its mandate is expected on August 27. Accordingly, Judge Magnuson has ordered the parties to appear for a status conference on September 8. Absent relief from the court, the Corps will reportedly reduce releases from the Gavins Point Dam from 25,000 cubic feet per second (cfs) to 21,000 from August 12 to August 15; after August 15, it will return releases to 25,000 cfs. The 25,000 cfs release will reportedly provide flows sufficient to sustain minimum service navigation on the river.

[14] The Corps is currently mitigating environmental impacts of the Missouri River Bank Stabilization and Navigation Project through the acquisition of land and subsequent habitat development. Although the efforts of the Corps appear to have produced localized benefits by providing flow and habitat diversification, the mitigation project does not represent an attempt at river restoration or fundamentally alter the structural approach to flood control.

The future of the Missouri River is likely to arise multiple times as a legislative issue during the 108th Congress. Although interest in river restoration remains primarily among the environmental and natural resources communities, court action is raising the prominence of species protection as a management driver. This elevation of species protection has resulted in increasing recognition that the recreation vs. navigation juxtaposition may be an over-simplification of the tradeoffs among alternative management regimes. Consequently, there is growing interest in the release of the Corps' revised Master Manual as indicated by S. 1378 and the outcome of the consolidated lawsuits.

Ecosystem Restoration. The Corps has been widely criticized for the environmental harm its water resources projects may cause to sensitive ecosystems, such as the Florida Everglades and Coastal Louisiana. To address this criticism, the Corps has adopted environmental operating principles and expanded its professional development programs to support greater environmental protection in its project development processes. The most dramatic change in Corps environmental protection efforts in the last two decades has developed out of its reworking of existing projects to provide not only mitigation but also ecosystem restoration. Ecosystem restoration is new for the Corps and remains a relatively young science; these factors contribute to uncertainty on how to best undertake restoration and what outcomes to anticipate.

Authorities for Corps involvement in ecosystem restoration come from provisions within laws that authorize either Corps actions or specific restoration activities. WRDA 1986 (P.L. 99-662; 33 U.S.C. 2309a(c)), for example, provides the Corps with authority to modify existing project structures and operations to restore environmental quality within a Corps project area and the area affected by the project. WRDA 1990 (P.L. 101-640; 33 U.S.C. 2316) directs the Corps to adopt environmental protection as a primary mission of its water resources projects. Recently, the Corps has used or sought separate authorizations to conduct individual ecosystem restoration programs.

The Corps' largest involvement in a restoration effort is in the Florida Everglades, where a three-decade $7.8 billion restoration program has begun. With the goal of restoring the Everglades, Congress authorized the Corps to implement the Comprehensive Everglades Restoration Plan (CERP) in WRDA 2000 (Title VI, P.L. 106-541). The principal objective of CERP is to redirect and store freshwater currently directed away from the Everglades to the ocean, and use it to restore the natural hydrologic functions of the south Florida ecosystem. Only an initial set of CERP projects was authorized in WRDA 2000. The next set is being prepared for approval by Congress, and it is anticipated that some will be ready for authorization during the 108th Congress. The federal government is paying for half the cost of construction, operation, and maintenance of CERP; the other half is borne by the State of Florida, and to a lesser extent, local tribes and other non-federal sponsors. The Corps is involved with the coordination of the strategies, policies and plans for restoring the Everglades through task forces and other committees.

A set of goals guide restoration efforts in the Everglades while specific solutions are tested and adapted as restoration science and technology develop. This flexible learning-based approach to implementation, called adaptive management, is being used in restoration efforts across the country, including in the Everglades. While adaptive management provides the flexibility to incorporate new information, there are concerns that this flexibility could be used to manipulate restoration efforts. Concerns about manipulation in Everglades

restoration have been raised recently due to a Florida State law that may affect phosphorous mitigation deadlines and goals.[15] Due to the passage of this state law, the Energy and Water Development Appropriations bills (H.R. 2754; S. 1424) and the House-passed Interior and Related Agencies Appropriation (H.R. 2691) bill contain provisions conditioning Everglades funding to compliance with state water quality requirements. (See CRS Report RL31807, *Appropriations for FY2004: Energy and Water Development* and CRS Report RL31806, *Appropriations for FY2004: Interior and Related Agencies*.)

Everglades restoration is seen by many as a groundbreaking, large-scale restoration effort that will provide many lessons for other restoration projects being considered nationally. Consequently, its implementation and related congressional actions are being watched closely. For example, the fate of the Everglades effort and the role of the Corps are being observed by those involved in an effort to restore Coastal Louisiana's wetlands that is in the early stages of planning and is likely to exceed the cost of the Everglades restoration.[16]

Corps responsibilities in ecosystem restoration efforts are diverse. In the case of CERP, the Corps' role is multi-faceted. The Corps is the designated federal sponsor for several aspects of CERP and is responsible for promulgating programmatic regulations for the restoration effort,[17] administering 50% of the cost of restoration (when it is the federal sponsor), constructing several of the restoration projects, and sharing in the responsibility of water management and distribution. In contrast to restoration in the Everglades, the Corps does not have a leadership role in the restoration of the San Francisco Bay - Sacramento/San Joaquin Rivers Delta (Bay-Delta or CALFED) in California. The Corps supports this restoration in the Bay-Delta through flood control and water management projects and technical assistance with levee design and construction. (For more information, see CRS Issue Brief IB10019 *Western Water Issues*.)

The growing role of the Corps in ecosystem restoration raises numerous questions, such as whether the Corps the best agency to manage large-scale restoration projects[18] and, more

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[15] Florida State law (Chapter 2003-12) amends the Florida's Everglades Forever Act of 1994 by authorizing a new plan to mitigate phosphorus pollution in the Everglades. Some critics argue that it extends previously established phosphorus mitigation deadlines for the Everglades, and may compromise efforts to restore the Everglades; whereas proponents argue that the law represents a realistic strategy for curbing phosphorus pollution. The law is available at [http://www.flsenate.gov/data/session/2003/Senate/bills/billtext/pdf/s0626er.pdf], accessed May 21, 2003.

[16] Wetland loss in Louisiana threatens the productivity of its coastal ecosystem, viability of several of its industries, and flood control in its cities. There are several reasons for wetland loss in Coastal Louisiana and several proposed ideas for restoring the ecosystem. The Corps is participating with other federal and state agencies in the development of a comprehensive coastal wetland restoration plan for Louisiana. The Corps expects to submit the Coastal Louisiana study to Congress by 2004.

[17] Programmatic regulations are expected to provide guidelines for project implementation, monitoring, adaptive management, and water allocation for restoration activities provided by CERP. A proposed version of the programmatic regulations was published in the *Federal Register*, vol. 67, page 50540 (August 2, 2002); the final version is expected in 2003.

[18] See *Operational Changes* for a discussion of how the Army is reconsidering the Corps (continued...)

generally, how much is the nation willing to invest in restoration, and at what costs to flood protection and other traditional water uses. Some navigation and flood control interests have raised specific concerns that Corps resources and funding are being spread too thin with the addition of large-scale restoration efforts to its workload. In contrast, some environmental organizations, such as the National Wildlife Federation, argue that the Corps is making a much needed move to incorporate ecosystem restoration into the modern era of water resources management.[19] Further, they welcome Corps involvement in restoration efforts. While continuing to criticize project development procedures at the Corps, they recognize that the Corps has some unique expertise, such as in wetlands creation, and the authority to implement restoration efforts. These environmental organizations stress the importance of balancing the Corps role in restoration with the role of resource agencies, such as the FWS. Other environmental groups, such as the Everglades Coalition, argue that the Corps may lack scientific expertise in all essential aspects of ecosystem restoration and that other federal agencies such as the Department of the Interior should partner with the Corps in some environmental restoration activities.

Ecosystem restoration has the potential to be applied in many places across the country, including in the Missouri River. Many observers are watching the current restoration efforts to see among other things: how federal financial involvement proceeds, how restoration science and supporting technologies develop, how well adaptive management works, and ultimately how effective and costly is restoration.

LEGISLATION

Appropriations and Budget Request

P.L. 108-7, H.J.Res. 2

Title I of Division D of the Consolidated Appropriations Resolution for FY2003 encompassed many controversial Corps issues. Section 109 included language that prohibits the use of funds to study or implement any "plans privatizing, divesting or transferring of any Civil Works missions, functions, or responsibilities" without specific direction by Congress. Provisions on notably controversial projects included: $5 million for construction of an emergency outlet from Devils Lake (ND) and $10 million for the Yazoo (MS) Basin's Backwater Plant. Introduced January 7, 2003; signed into law February 20, 2003.

H.R. 2754 (Hobson)

Title I of The Energy and Water Development Appropriations for FY2004 provides $4.4 billion for the Corps' civil works mission. Introduced July 16, 2003; Received in the Senate on July 21, 2003.

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[18] (...continued)
involvement in water resources generally.

[19] Paula Tracy, "Wildlife Groups Push to Change Corps of Engineers," *The Union Leader*, (July 11, 2002), Sec. B, p. 3.

S. 1424 (Domenici)

Title I of The Energy and Water Development Appropriations for FY 2004 provides $4.4 billion for the Corps' civil works mission. Under Title I, §109 prohibits the use of funds for the divesting or transferring of civil works responsibilities without the direction of Congress. §109 deauthorizes 19 inactive projects. Introduced July 17, 2003; ordered to be reported an original measure by the Committee on Appropriations measure on July 17, 2003.

Authorizations and WRDA

H.R. 2557 (Young)

The Water Resources Development Act of 2003 contains approximately 250 provisions authorizing projects or changes to projects and 28 general provisions that alter various aspects of Corps operations and policies. Introduced June 23, 2003; referred to the House Committee on Transportation and Infrastructure.

H.R. 2558 (McIntyre)

This bill extends from 15 to 50 years the period during which the Corps could provide beach nourishment for a water resources development project. Introduced June 23, 2002; referred to the Committee on Transportation and Infrastructure.

Project Development Reform

H.R. 2566 (Kind)

The Army Corps of Engineers Reform Act of 2003 establishes economic development and environmental protection and restoration as co-equal goals for the Corps. The bill establishes stakeholder advisory committees, independent project review, and requirements for public access to project analyses. The bill refines the Corps economic evaluation of environmental impacts and establishes stricter mitigation and tracking requirements. Introduced June 23, 2003; referred to Committee on Transportation and Infrastructure.

River Management

H.R. 1097 (McDermott)

The Salmon Planning Act authorizes the Corps to partially remove four Lower Snake river dams if their removal is found favorable by the Secretaries of Commerce and the Interior and the Administrator of the Environmental Protection Agency. It also requires the agency to perform the preliminary engineering, design, and construction for partial removal. The bill also requires a National Academy of Sciences analysis of the federal salmon recovery efforts and a General Accounting Office study of the effects of partial removal os the four Lower Snake dams. Introduced March 5, 2003; referred to the Resources Subcommittee on Fisheries Conservation, Wildlife, and Oceans(which has requested executive comment from the Department of the Interior) and the Transportation and Infrastructure Subcommittee on Water Resources and the Environment.

S. 531 (Dorgan)

The Missouri River Enhancement and Monitoring Act of 2003 establishes the Missouri River Basin Stakeholder Committee and the Missouri River Monitoring and Research Program. The stakeholder committee would consist of representatives of the states, tribes, and interested groups; the committee would be tasked with making recommendations to the federal agencies with jurisdiction over the river on means of restoring its ecosystem. The research program would be operated by the United States Geological Survey (USGS) and would be charged with conducting scientific analysis of the current conditions of the river's

ecosystems, assisting with the monitoring and recovery of threatened and endangered species, and identifying means of restoring the ecosystem of the river. This research program aims to develop information on the affected species that would lead to a better understanding of how to manage the river for their protection. Introduced March 5, 2003; referred to Committee on Environment and Public Works.

S. 1378 (Dorgan)

Transfers authority to revise the Missouri River Master Manual and to operate the Missouri River mainstem dams from the Secretary of the Army to the Secretary of the Interior. Introduced July 8, 2003; referred to Committee on Environment and Public Works.

FOR ADDITIONAL READING

Background

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CRS Report RS20569, *Water Resource Issues in the 108th Congress,* by Betsy A. Cody and H. Steven Hughes.

Budget and Appropriations

CRS Report RL31807, *Appropriations for FY2004: Energy and Water Development*, Coordinated by Carl Behrens and Marc Humphries.

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CRS Report RS20702, *South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan*, by Nicole T. Carter

CRS Report RS21331, *Everglades Restoration: Modified Water Deliveries Project*, by Pervaze A. Sheikh.

CRS Report RL31621, *Florida Everglades Restoration: Background on Implementation and Early Lessons*, by Pervaze Sheikh.

CRS Report RL31975, *CALFED Bay-Delta Program: Overview of Institutional and Water use Issues*, by Pervaze A. Sheikh and Betsy A. Cody.

CRS Issue Brief IB10019, *Western Water Resources Issues*, by Betsy A. Cody and Pervaze A. Sheikh.