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Water Resources Development Act (WRDA): Army Corps of Engineers Authorization Issues in the 109th Congress

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SUMMARY

Congress generally authorizes new Army Corps of Engineers (Corps) water resources studies and projects before appropriating funds to them. The 109th Congress is considering authorizing numerous Corps projects through a Water Resources Development Act (WRDA) — H.R. 2864 and S. 728. The House passed H.R. 2864 in July 2005; S. 728 was placed on the Senate calendar in April 2005. Reportedly some Senators are pushing for a floor vote by the July 2006. The last WRDA was enacted in 2000; however, WRDAs had followed a loosely biennial schedule.

Hurricane Katrina increased support for hurricane protection and flood control, and Louisiana and other Gulf Coast projects, while at the same time increasing interest in streamlining federal spending. The pending WRDA bills have not been acted on since before Hurricane Katrina; many observers anticipate WRDA amendments that address water resources projects that have arisen either directly as the result of the hurricane or as the result of policy issues raised by the hurricane.

The Administration has expressed concerns both about the level of authorizations in WRDA bills creating false expectations for federal appropriations, and about WRDA bills not addressing the backlog of authorized Corps projects. The Administration's position has been one factor shaping the debate on the pending bills; authorization of a few controversial projects (e.g., Everglades restoration projects) and possible changes to Corps policies and practices have also been factors.

Project Development Reform. The "reform" provisions in pending WRDA bills receiving the most attention are related to independent review of Corps-developed project proposals, fish and wildlife mitigation of Corps projects, and the Corps' planning process. Other legislation (e.g., S. 2288) proposes more extensive changes to the Corps' planning and review processes than is included in the pending bills.

Coastal Louisiana Restoration and Protection. Prior to Hurricane Katrina, Congress was considering authorizing coastal Louisiana wetlands restoration projects. Provisions in S. 728 and H.R. 2864 draw upon a mid-2005 Corps report recommending $1.1 billion in immediate ecosystem restoration actions, and estimated an additional cost of $0.9 billion for future project authorizations. Following Hurricanes Katrina and Rita, alternate and more extensive proposals with components focused more directly on storm damage reduction are being developed. Additionally, some measures proposed by the Administration to fortify the structural elements of southeast Louisiana's hurricane protection system require congressional authorization and may be included in either WRDA or other legislation (e.g., H.R. 5461).

Upper Mississippi River-Illinois Waterway (UMR-IWW). S. 728 and H.R. 2864 include authorization of UMR-IWW navigation and ecosystem restoration investments. In contrast to the Corps' Chief of Engineers who recommends proceeding with construction of the proposed navigation projects, the Assistant Secretary of the Army (Civil Works) supports the design of navigation locks, but recommends waiting until additional economic data and analysis are available before initiating construction.

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MOST RECENT DEVELOPMENTS

The proposed Water Resources Development Act (WRDA) bills — H.R. 2864 and S. 728 — have not been acted on since before Hurricanes Katrina and Rita. H.R. 2864 passed the House in July 2005; S. 728 was placed on the Senate calendar in April 2005. Reportedly some Senators are pushing for a floor vote by July 2006. Many observers anticipate Senate amendments to address either water resource needs resulting directly from the hurricanes or policy issues raised by them, as well as introduction of amendments related to changing the way Army Corps of Engineers projects are planned, evaluated, and implemented.

The Corps has a prominent role in New Orleans and southeast Louisiana hurricane recovery efforts, including repairing damaged floodwalls and levees and strengthening hurricane resiliency through infrastructure fortification and wetlands restoration. The Corps is repairing and strengthening much of the areas' hurricane protection levees and floodwalls using existing authority and through funding provided in supplemental appropriations legislation. However, some proposed measures to fortify the structural elements of the hurricane protection system require congressional authorization and may be included in a WRDA or other legislation (e.g., H.R. 5461 — Meeting Authorization Requirements for the Coast Act of 2006). Authorization of wetlands restoration actions were included in the pending WRDAs prior to Hurricanes Katrina and Rita. Following those hurricanes, alternate and more extensive proposals with components focused more directly on the role of wetlands and barrier islands in storm surge reduction are being developed. WRDA amendments may address some of the interest raised by the 2005 hurricanes in coastal wetlands' and barrier islands' role in storm surge attenuation.

The impact of the 2005 hurricane season on WRDA passage is uncertain; the disaster increased interest in flood control projects and activities, and Louisiana and other Gulf Coast projects including coastal wetlands restoration activities. At the same time, the disaster increased interest in streamlining federal spending. In recent years, the Administration has expressed strong concerns about WRDA bills that do not address the backlog of Corps projects through changes to project formulation and funding priorities, and that add to the backlog through extensive new authorizations. The 2000 hurricanes' effect on the nation's financial resources and the Corps' workload may amplify the Administration's concerns.

Three provisions in the WRDA bills (often labeled "Corps reform" provisions) that would change independent review of Corps project proposals, agency planning guidance, and fish and wildlife mitigation for Corps projects are the subject of debate; the content of the provisions differs in the two bills and are distinct from other proposed legislation (S. 2288). Introduction of Senate floor amendments to S. 728 on some of these provisions is anticipated by observers. Specific project authorizations in the WRDA bills receiving attention are: a Coastal Louisiana Wetland Restoration program; Upper Mississippi River-Illinois Waterway (UMR-IWW) navigation and ecosystem restoration projects; and two Florida Everglades projects — Indian River Lagoon-South and Picayune Strand ecosystem restoration efforts.

BACKGROUND AND ANALYSIS

The Corps is a federal agency in the Department of Defense with military and civilian responsibilities. At the direction of Congress, the Corps plans, builds, operates, and

maintains a wide range of water resources facilities in U.S. states and territories. The agency's traditional civil responsibilities are creating and maintaining navigable channels and controlling floods; in the last two decades, Congress has increased the Corps' responsibilities in ecosystem restoration, municipal water and wastewater infrastructure, disaster relief, and other activities. The agency's regulatory responsibility for navigable water extends to issuing permits for private actions that might affect wetlands and other water of the United States.[1]

Congressional direction comes primarily through authorization and appropriations legislation and oversight activities. This report focuses on WRDA which is the main legislative vehicle for Corps civil works authorizations. After background on WRDA and WRDAs in recent Congresses, this report discusses the current status of WRDA and major issues shaping WRDA consideration in the 109th Congress — changes to Corps project development practices and policies, coastal Louisiana wetlands restoration activities, UMR-IWW investments, and Everglades restoration projects.

WRDAs — Legislation Authorizing Corps Studies and Projects. WRDA legislation provides the Corps with authority to study water resource problems, construct projects, and make major modifications to projects. The provisions and contents of a WRDA are cumulative and new Acts do not supersede or replace previous Acts. A new WRDA adds to the original language and often amend provisions of previous Acts.

Congress generally authorizes Corps water resources studies as part of a typically biennial consideration of a WRDA, or in a survey resolution by an authorizing committee — the House Transportation and Infrastructure Committee or the Senate Environment and Public Works Committee. Authorization to construct projects and changes to the policies guiding the Corps civil works program, such as project cost-share requirements, are also typically in WRDAs. The authorization of Corps projects generally do not expire; however, there is a process to deauthorize projects that have not received appropriations for seven years. Although Congress has historically authorized Corps projects as part of a WRDA, authorizations also have been included in appropriations bills, especially in years when passage of a WRDA has been delayed. Corps authorizing committees generally discourage as standard procedure authorizations in appropriations bills; authorization in appropriations bills may be subject to a point of order.

Authorization establishes a project's essential character, which is seldom substantially modified during appropriations. The appropriations process, however, plays a significant role in the realization of a project; appropriations determine which studies and projects receive federal funds.[2] Many authorized activities never receive appropriations. Fiscal

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[1] Sections 10 and 13 of the Rivers and Harbors Act of 1899 (22 U.S.C. 407) require that a permit be obtained from the Corps for alteration or obstruction of and refuse discharge in navigable water of the United States. The Corps also has regulatory responsibilities under other laws, notably Section 404 of the Clean Water Act (33 U.S.C. 1344). Since the mid-1960s, court decisions and administrative actions have altered the jurisdictional reach of the Corps' regulatory program and the scope of the agency's consideration in issuing permits.

[2] For more information on the Corps' appropriations, see CRS Report RL33346, *Energy and Water Development*: *Appropriations for FY2007*, and CRS Report RL32852, *Energy and Water* (continued...)

priorities and public attitudes in recent decades have resulted in declining federal funding for water resources activities, thus increasing competition for funding among authorized activities.[3] Moreover, during the last 15 years, Congress has authorized not only navigation and flood control projects, but also ecosystem restoration, environmental infrastructure assistance, and other nontraditional activities, exacerbating competition for construction funds. The Corps now has a "backlog" of more than 500 authorized projects that have not consistently received construction appropriations.

WRDAs in Recent Congresses. WRDA 1986 (P.L. 99-662) marked the end of a decade-long stalemate between the Congress and the executive branch regarding authorizations. In addition to authorizing numerous projects, WRDA 1986 resolved long-standing disputes related to cost-sharing, user fees, and environmental requirements. A biennial WRDA cycle has loosely been followed since, with WRDAs enacted in 1988 (P.L. 100-676), 1990 (P.L. 101-640), 1992 (P.L. 102-580), 1996 (P.L. 104-303), 1999 (P.L. 106-53), and 2000 (P.L. 106-541). Many of these WRDAs authorized or modified the authorization of more than a hundred projects. Pressure to authorize new projects, increase authorized funding levels, and modify existing projects is often intense, thus promoting a fairly regular (if not always biennial) consideration of WRDA.

WRDA legislation was considered, but not enacted, during the 108th Congress. On September 24, 2003, the House passed H.R. 2557 (H.Rept. 108-265) — WRDA 2003. The Administration did not support the bill, primarily because it viewed the bill as creating false expectations by authorizing appropriations of more than $4 billion, despite fiscal constraints and the backlog of Corps construction projects. The Senate Environment and Pubic Works Committee reported WRDA 2004 (S. 2773) on April 25, 2005; it was placed on the Senate's legislative calendar.

WRDA in the 109th Congress. Consideration of the two WRDA bills — H.R. 2864 and S. 728 — has been shaped by many issues similar to those of the 108th Congress: authorized spending (e.g., the amount of authorizations in the bill, and the bill's potential budgetary impact), change to Corps policies and practices (see "Project Development Reform," below), and authorization of a few controversial projects (see project-specific sections of this CRS Issue Brief). Hurricane Katrina's impact on WRDA passage is uncertain; the disaster increased interest in flood control projects and activities, and Louisiana projects (including coastal wetlands restoration activities). At the same time, the disaster increased interest in streamlining federal spending generally. Other issues, of course, may arise during the course of congressional consideration.[4]

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[2] (...continued)
Development: FY2006 Appropriations, coordinated by Carl Behrens.

[3] For example, the civil works budget has experienced a substantial decline in *real dollar* amounts; the annual funding for the Corps' construction account fell from an average of $4 billion (in 2000 dollars) in the 1960s and 1970s to less than $2 billion recently.

[4] For example, §2001 of S. 728 would allow in-kind construction work by nonfederal project sponsors to be credited against local cost-share responsibilities for Corps projects; this may raise the issue of the responsibility of these nonfederal sponsors to pay prevailing wages under the 1931 Davis-Bacon Act (40 U.S.C. §§276a-276a-5). The application of prevailing wages to activities of (continued...)

The Congressional Budget Office (CBO) estimated the cost to the federal government of S. 728 at $4.1 billion from 2006 to 2010 and an additional $7.6 billion from 2011 to 2020. The agency estimated the cost of H.R. 2864 at $4.1 billion from 2006 to 2010 and an additional $5.9 billion from 2011 to 2020.

The Administration, in its Statement of Administration Policy for H.R. 2864 released July 2005, expressed concern with the authorization level because it would "create expectation for future appropriations that cannot be met." The Administration instead recommended new authorizations only for priority projects in the agency's core mission areas of navigation, flood control, and ecosystem restoration.

Project authorizations in the WRDA bills receiving attention and causing debate include:

- Coastal Louisiana Wetland Restoration: more than $1 billion for immediate actions to restore coastal wetlands in Louisiana over the next decade.[5]
- Upper Mississippi River-Illinois Waterway (UMR-IWW): $2.0 billion for navigation improvements and $1.58 billion for ecosystem restoration.
- Everglades: $1.21 billion for Indian River Lagoon-South project for wetlands and estuarine restoration and $0.35 billion for Picayune Strand ecosystem restoration project.

The aforementioned issues and concerns make it unclear whether WRDA will gather enough congressional and Administration support for enactment. However, there appears to be considerable support for moving a WRDA bill because of the number of projects awaiting authorization, and the length of time since Congress enacted the last WRDA in 2000.

Regulatory Changes. One issue shaping S. 728 consideration in the Senate (that was not an active part of the WRDA debate in the 108th Congress) is a proposed reduction of the application of the Corps' regulatory responsibilities. An amendment adopted during the markup of S. 728 by the Senate Environment and Public Works Committee would limit the Corps' regulatory responsibilities for navigable waters under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 407). The language added would exclude from the Corps' regulatory authority those activities or structures on private property that do not pose a safety threat to maritime traffic. Interpretations of the impact of the language and the need to reduce the Corps' application of the regulatory requirement (i.e., defining a smaller universe of activities and structures as requiring a permit) remain topics of debate. For example, S.Rept. 109-61 for S. 728 includes additional views of seven committee members on what they perceive to be "extremely broad language" with "extensive unintended consequences."

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[4] (...continued)
nonfederal sponsors was an issue that delayed a WRDA bill's consideration in 2000. For more information on the Davis-Bacon Act, see CRS Report 94-908, *Davis-Bacon: The Act and the Literature*, by William G. Whittaker.

[5] An authorization amount for coastal Louisiana is not specified in S. 728 (except for $10 million for one subsection); instead, reference is made to the report by the Corps' Chief of Engineers (known as the Chief's report) that recommended $1.1 billion in immediate actions and estimated an additional cost of $0.9 billion. H.R. 2864 would authorize $1.2 billion.

There is no similar provision in H.R. 2864; an amendment to include a similar provision in the bill was ruled nongermane.

Project Development Reform. Support for changing the Corps' practices gained momentum in 2000 in the wake of a series of critical articles in the *Washington Post*, whistleblower allegations, and ensuing investigations. Many of the supporters of these changes, primarily environmental groups, sought to modify Corps project planning (e.g., by changing the cost-benefit analysis and consideration of environmental impacts and benefits) to require additional review of Corps projects (e.g., through external review of Corps feasibility reports), and to strengthen environmental protection (e.g., through modifications to fish and wildlife mitigation requirements); these kinds of changes often were referred to as "Corps reform." Although Corps reforms were discussed in the 106th, 107th, and 108th Congresses, no significant changes were enacted. Some Members of Congress, along with agriculture and navigation interests, were satisfied with existing practices.

Although the 106th Congress did not enact Corps changes, it asked the National Academy of Sciences to review Corps planning in §216 of WRDA 2000. In April 2004, the Academy's National Research Council (NRC) published four reports from this review. Each report recommended changes in Corps practices and the larger federal water resources management and organizational context. The Corps argues that it has transformed itself by changes it has implemented since 2000; these include refinements in planning, peer review (with the possibility of external review), and internal review.[6]

The debate over changing the Corps has evolved since 2000. As shown by S. 2288 (Water Resources Planning and Modernization Act of 2006), some continue to support the Corps reform proposals that largely grew out of the exposure the Corps received in 2000. Others argue that any changes should move the agency in a different direction than the original measures pursued after the 2000 events. These stakeholders, like many nonfederal sponsors of Corps projects, want to increase the predictability of the Corps planning process, by making changes such as standardizing planning procedures, models, and data; limiting the length of studies; and requiring tracking of the agency's construction backlog. Another perspective is that the primary changes needed are those that address the Corps' backlog of projects through project formulation and funding priorities. In other words, there are many, sometimes competing, views of how to change the Corps that derive from fundamentally divergent perspectives of what, if anything, is wrong with Corps' practices.

One view is that Corps projects could be improved by increasing environmental considerations in project planning, implementing external review, and enacting more stringent requirements for fish and wildlife mitigation. Another view supports refinements to Corps planning, review, and mitigation that are aimed at limiting the length and increasing the predictability of the project development process, while not increasing costs. Consequently, the S. 728 and H.R. 2864 provisions that would change Corps planning,

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[6] The Corps released five new policy documents in 2005 to be tested as guidance for the agency's planning activities. One was on collaborative planning of Corps projects that is an update to Corps planning guidance. Another set out processes for the peer review of scientific, engineering and economic information and assessments used to inform decision-making. Another established a Civil Works Review Board that approves the final planning reports before submitting them to the Chief of Engineers.

review, and fish and wildlife mitigation are the subject of some debate. The provisions in H.R. 2864 are largely the same as in the WRDA 2003 (H.R. 2557) bill that passed the House. Although these provisions increase environmental considerations and review of Corps projects, some environmental advocates argue that the measures are insufficient; supporters of streamlining the Corps practices have argued that the provisions are unnecessary and add only delay, cost, and uncertainty to an already lengthy project development and constructions process.

Although some elements of S. 728 are similar to provisions negotiated during Senate WRDA considerations in the 108th Congress, many elements of S. 728 are either new or significantly modified. As a result, there are key differences between the provisions in the House and Senate bills. For example, the independent review provisions in the two bills differ on what would be reviewed, and by whom. For a more detailed analysis of the provisions, see CRS Report RS22129, "*Corps of Engineers Reform" in WRDA 2005* (archived, can be requested by contacting the author), and CRS General Distribution Memo, *Side-by-Side Comparison of S. 2288 and Related Provisions of S. 728*, by Nicole T. Carter.

The planning, review, and mitigation provisions are not the only provisions in S. 728 and H.R. 2864 changing Corps practices and policies. Other provisions of the two bills could be analyzed in the context of Corps reform; these include §2005 of S. 728, requiring a Corps fiscal transparency report; §2015 of S. 728, requiring cost-sharing for monitoring of ecosystem restoration projects; and §2025 of H.R. 2864, streamlining environmental review of Corps projects.

The Statement of Administration Policy for H.R. 2864 generally was critical of the bill's provisions regarding formulation and selection of projects. It criticized both the project planning provisions and the environmental streamlining provisions; however, it was supportive of the intent (but not the specifics) of the independent review provision. The Corps guidance released in 2005 comply with the Administration's policy on independent review.

Coastal Louisiana Wetlands Restoration and Protection.[7] Coastal wetlands in Louisiana have been disappearing at a high rate, and those losses are forecast to continue if no actions are taken to reverse current trends. Federal agencies, led by the Corps and in coordination with the state, developed several versions of plans to slow the rate of loss and restore some of these wetlands. The current Corps feasibility report was released in November 2004; it received a favorable recommendation in a Chief's report in January 2005. The recommended measures in the feasibility report totaled an estimated $1.997 billion. The Chief's report subdivided this total into three parts; it recommended that projects and programs totaling $1.123 billion be authorized immediately, an additional $145 million be spent on already authorized investigations of "large-scale concepts," and future authorization be pursued for ten features totaling $728 million.

The Corps' feasibility report proposed activities to divert water from the Mississippi River to convey sediments into nearby wetlands, and to help stabilize the coastline. The

[7] Prepared by Jeff Zinn, Specialist in Natural Resources Policy, Resources, Science, and Industry Division.

federal government would pay about 64% of the total estimated cost. In the diversions, wetlands would gradually reestablish themselves on newly deposited sediments. For more information on the status of wetlands in coastal Louisiana and the evolution of the restoration plans, see CRS Report RL32673, *Coastal Louisiana: Attempting to Restore an Ecosystem*, by Jeffrey Zinn, and on the Corps' recommended actions, see CRS Report RS22110, *Coastal Louisiana Ecosystem Restoration: The Recommended Corps Plan*, by Jeffrey Zinn. For information on the impacts of Hurricanes Katrina and Rita on the wetlands, see CRS Report RS22276 *Hurricanes Katrina and Rita and the Coastal Louisiana Ecosystem Restoration*, by Jeffrey Zinn.

Section 1003 of S. 728, as ordered reported with amendments, would authorize the Louisiana Coastal Area program "substantially in accordance with" the Chief's report. The legislative language does not specify any dollar amounts, or federal and nonfederal shares of the total, so it appears the estimates in the Chief's report would be the authorized amounts. Provisions in §1003 state that of the projects identified in the Chief's report, priority is to be given to critical restoration features, to Mississippi River diversion projects that protect specified population centers and provide coastal environmental benefits, and to coastal barrier projects that are related to diversion projects and protect population centers. It also authorizes non-governmental organizations to pay the nonfederal portion of project costs.

Title VII of H.R. 2864, as introduced, by contrast, does specify dollar amounts, and would authorize a total of $1.218 billion for many of the same activities that are recommended in the Corps report. It would provide a total of $828.3 million for five projects that the Corps is ready to initiate. The amounts specified for each project are the same as in the Chief's report. It also would authorize funding levels requested in the Chief's report for demonstration projects and beneficial uses of dredged materials. It also would authorize $130 million for feasibility studies "substantially in accordance with the Plan."

The Statement of Administration Policy for H.R. 2864 from July 2005 recommended a cost-share closer to 50% federal-50% nonfederal be used, and that the authorization of federal appropriations be limited to $500 million, which "would cover the Federal share of roughly half of the costs of the near-term plan." The statement also recommended other changes to the Coastal Louisiana authorization, while generally being supportive of the effort.

Section 1003 of S. 728 also contains additional provisions. It calls on the Secretary, in coordination with the state, to develop a comprehensive plan for protection, preservation, and restoration within one year, to be updated every five years, and specifies that it include discussions of three topics, and consider incorporating related projects into the program laid out in the Chief's report. It would create a federal-state task force to make recommendations to the Secretary on many specified aspects of the coastal Louisiana effort, including the comprehensive plan. The only specific project included in these provisions is the Mississippi River Gulf Outlet (MRGO). The Corps would be required to develop a plan to modify MRGO in ways that would address six listed topics (e.g., hurricane storm surges and salt water intrusion) within a year of enactment. Because of claims that the MRGO may have funneled storm surge into New Orleans during Hurricane Katrina, thus increasing the city's vulnerability, the debate over the future of this waterway as a deep-draft short cut from the Gulf to the Port of New Orleans has increased since this provision was included in S. 728..

Section 1003 of S. 728 also would create a new science and technology program to develop better information about baseline conditions in coastal Louisiana. An amendment adopted during committee markup adds language describing the content of a National Academy of Sciences study, to be initiated within 180 days of enactment, on the causes and sources of degradation caused by any activities approved by the Secretary. The language in this subsection also would require the Corps to submit a feasibility report on the ten features identified in the Chief's report that are estimated to cost a total of $728 million, for which the agency anticipates seeking future authorization; §1003 would authorize $10 million for this report.

Title VII of H.R. 2864 also contains additional provisions, many of which are similar to those in §1003. In addition to having nearly identical requirements for a report on MRGO, it would also require the Corps to submit to Congress reports on the Barataria-Terrebonne Estuary and the Chenier Plain by July 1, 2006. It would require that a comprehensive plan be completed within five years of enactment. Like the House bill, it would create a federal-state task force to make recommendations to the Secretary on many specified aspects of the coastal Louisiana effort, including the comprehensive plan. However, the membership would be slightly different, with two additional federal agencies added to the roster, and the three state positions being specified. Also, this bill would require a biennial report to Congress, rather than a report every five years. Title VII would also allow credit for certain prior non-federal contributions to projects, and also allow them to be transferred to any other project authorized in this title.

Hurricanes Katrina and Rita altered the debate over restoration proposals and the cost-share for restoration investments. Many restoration proponents are calling for a more extensive effort than the efforts in the WRDA bills; generally, they are supporting a $14 billion proposal developed in the *Coast 2050 Plan* from 1998. The decisions for Congress will include whether to authorization any coastal Louisiana restoration effort and how extensive should the authorized effort be; these decisions may take place in the context of WRDA or other legislation (e.g., S. 1765 or S. 1766). For more information on how the hurricanes might influence consideration of restoration legislation, see CRS Report RS22276, *Hurricanes Katrina and Rita and the Coastal Louisiana Ecosystem Restoration*, by Jeffrey Zinn.

Upper Mississippi River-Illinois Waterway.[8] The Upper Mississippi River and Illinois Waterway (UMR-IWW) is at the center of a debate over the future of inland navigation, the restoration of rivers used for multiple purposes, and the reliability and completeness of the Corps analyses justifying investments. Consequently, authorization of investments in navigation and ecosystem restoration of the UMR-IWW is playing a role in WRDA debates in the 109th Congress; topics being debated include the urgency, necessity, and national benefit of expanded UMR-IWW navigation capacity and ecosystem restoration.

The UMR-IWW is a 1,200-mile, 9-foot-deep navigation channel created by 37 lock-and-dam sites and thousands of channel structures. The UMR-IWW makes commercial navigation possible between Minneapolis and St. Louis on the Mississippi River, and along

[8] Prepared by Nicole Carter, Analyst in Environmental Policy, Resources, Science, and Industry Division.

the Illinois Waterway from Chicago to the Mississippi River. It permits upper midwestern states to benefit from low-cost barge transport. Since the 1980s the system has experienced increasing traffic delays, purportedly reducing competitiveness of U.S. products in some global markets. The river is also losing the habitat diversity that allows it to support an unusually large number of species for a temperate river. This loss is partially attributable to changes in the distribution and movement of river water caused by navigation structures and operation of the 9-foot navigation channel.

The Corps' Chief of Engineers approved the agency's completed feasibility report on UMR-IWW improvements in December 2004.[9] The Corps' feasibility report failed to significantly reduce the debate over the urgency, necessity, and national benefit of expanded navigation capacity. (For an analysis of the navigation expansion decisions, see CRS Report RL32470, *Upper Mississippi River-Illinois Waterway Navigation Expansion: An Agricultural, Transportation, and Environmental Context*, coordinated by Randy Schnepf.) The Corps' ecosystem restoration plan has been less controversial than the navigation plan. There is general agreement that the ecosystem is declining and support for the 15-year increment of the Corps' 50-year ecosystem restoration plan. Debate over the restoration proposal focuses primarily on implementation strategies, including linkages between the ecosystem restoration and navigation investments, and the federal-nonfederal cost-share for restoration activities. For more information, see CRS Report RL32630, *Upper Mississippi River System: Proposals to Restore an Inland Waterway's Ecosystem*, by Kyna Powers and Nicole T. Carter.

The Corps' UMR-IWW feasibility report has been reviewed for compliance with Administration policy by the Assistant Secretary of the Army (Civil Works), and is being reviewed by OMB. In contrast to the Corps' Chief of Engineers, who has signed off on the proposed project, the Assistant Secretary of the Army (Civil Works) reportedly chose to support proceeding with design, and recommends waiting until additional economic data and analysis are available before initiating construction. Although OMB's position on the proposed project is not yet known, OMB's Statement of Administration Policy for H.R. 2864 was critical of the bill's estimated 91% federal-9% nonfederal cost-share for ecosystem restoration for the Upper Mississippi River Basin. The Administration recommended a cost-share like the 50%-50% cost-share used for Florida Everglades restoration.

UMR-IWW Navigation and Ecosystem Restoration Investments. The authorizations of navigation ecosystem restoration investments for the UMR-IWW in S. 728 and H.R. 2864 are largely similar.[10] Section 1002 of S. 728 and §8003 of H.R. 2864 would authorize $2.03 billion for the initial set of navigation improvements — seven new locks, small-scale and non-structural measures, and related environmental mitigation, in general

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[9] U.S. Army Corps of Engineers, *Final Integrated Feasibility Report and Programmatic Environmental Impact Statement for the UMR-IWW System Navigation Feasibility Study* (Rock Island District, St. Louis District, St. Paul District, Sept. 24, 2004), pp. 230 and 490. Hereafter referred to as UMR-IWW Final Feasibility Report. Available at [http://www2.mvr.usace.army.mil/umr-iwwsns/documents/FINAL_FES_EIS_Report_Cover(2004).pdf], visited on June 9, 2006.

[10] One of the differences is that S. 728 directs that the investments are to be implemented in "general conformance" with Corps documents, while H.R. 2864 directs that implementation be "substantially in accordance with the [Corps documents] and subject to the conditions described therein."

conformance with the feasibility report. The bills, however, do not explicitly mention the adaptive implementation process recommended by the Corps nor many of the monitoring and study recommendations.[11]

A House floor amendment to H.R. 2864 related to UMR-IWW failed; the amendment would have required that construction of UMR-IWW navigation locks proceed only if tonnage, reporting, and other requirements were met. An amendment requiring annual reports on comparable progress of UMR-IWW navigation and ecosystem restoration was adopted.

Section 1002 of S. 728 and §8004 of H.R. 2864 would authorize $1.58 billion for ecosystem restoration for the Upper Mississippi River Basin in accordance with the general framework outlined in the Corps feasibility report. However, neither bill mentions the Corps' proposal for an adaptive management approach, nor do they explicitly authorize dual-purpose management of the river for ecosystem restoration and navigation. S. 728 and H.R. 2864 appear to link ecosystem restoration and navigation improvements through a comparable progress provision. For a comparison of the ecosystem restoration and navigation authorization language and the Corps' recommendations, see CRS Report RL32915, *Upper Mississippi River-Illinois Waterway Investments: Legislation in the 109th Congress*, by Nicole T. Carter and Kyna Powers.

Everglades Restoration.[12] To date, the Corps' largest authorization for an ecosystem restoration effort has been in the Florida Everglades, with a three-decade, $10.9 billion restoration program.[13] Congress approved the Corps' implementation of the Comprehensive Everglades Restoration Plan (CERP) as a framework for Everglades restoration in WRDA 2000. For more information on Everglades restoration and implementation issues, see CRS Report RS22048, *Everglades Restoration: The Federal Role in Funding*, by Pervaze A. Sheikh and Nicole T. Carter.

The principal objective of CERP is to redirect and store freshwater currently diverted away from the Everglades to the ocean, and use the retained water to restore the natural hydrologic functions of the south Florida ecosystem. WRDA 2000 authorized an initial set of CERP restoration projects, as well as $700 million in federal funds to implement them, and established a process for additional projects contemplated in the 1999 CERP plan to be developed and authorized.[14] Authorization language for two of these additional projects —

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[11] The feasibility report was the result of a controversial feasibility study process that began in 1993. The final feasibility report stated that sufficient analysis had been completed to support an initial investment decision to be implemented using an adaptive approach that minimizes risk by controlling the magnitude of investment decisions; the report recommended that additional monitoring and study be performed in order to support decisions made under the adaptive implementation approach.

[12] Prepared by Pervaze A. Sheikh, Analyst in Environmental and Natural Resources Policy, Resources, Science, and Industry Division.

[13] This amount represents the estimated cost in Oct. 2004 dollars according to the U.S. Army Corps of Engineers, *Comprehensive Everglades Restoration Plan, 2005 Report to Congress* (Washington, DC: Dec. 2005).

[14] U.S. Army Corps of Engineers, *Central and Southern Florida Project Comprehensive Review* (continued...)

Indian River Lagoon-South (IRL-S) wetlands and estuarine restoration and the Picayune Strand ecosystem restoration (also known as Southern Golden Gates Estates ecosystem restoration) — is included in S. 728 and H.R. 2864. These two projects are the first projects to be developed under the process established in WRDA 2000; consequently, some view their fate as a test case of the CERP framework. Further, both bills would include the Hillsboro and Okeechobee Aquifer project as a part of CERP, and H.R. 2864 would increase the authorization of that project by $12.2 million to $39.2 million. This would place the project within the framework of CERP and the requirements of WRDA 2000.

With regard to modified water deliveries to the Everglades, H.R. 2864 states that the Secretary of the Army shall not raise Tamiami Trail until the project is authorized by law; and that the Secretary shall submit to Congress reports requesting authorization for changes in the projects to improve water deliveries to Everglades National Park, raise Tamiami Trail, and modify the C-111 canal. The Statement of Administration Policy for H.R. 2864 was critical of the Tamiami Trail language.

Indian River Lagoon. S. 728 and H.R. 2864 would authorize an IRL-S project estimated at $1.2 billion (50% federal), as recommended by the Corps. The Corps recommended that Congress authorize this project to restore the IRL-S wetlands and estuary.[15] The Indian River Lagoon is a 156-mile long estuary, located at the mouth of the St. Lucie River in eastern Florida. The IRL-S has been altered by unnaturally large and poorly timed freshwater discharges arriving from the St. Lucie Canal and other elements of the Central and Southern Florida drainage project. These discharges have altered water quality, and may have contributed to depleted water supplies in the Everglades ecosystem. The significance of these ecosystem problems is exacerbated by the high biodiversity found in the IRL-S.[16]

The Corps' report on the feasibility and implementation of the IRL-S has been reviewed for compliance with Administration policy by the Assistant Secretary of the Army (Civil Works), and is being reviewed by OMB. The recommended plan would divert some of the current flow to planned storage reservoirs as well as to disperse water throughout the IRL-S ecosystem. Four artificial reservoirs would store excess freshwater for agricultural uses in the area. Natural storage areas would be restored by acquiring nearly 93,000 acres of land. These storage areas would also improve native habitat (which is a goal of the larger Everglades restoration plan) and reduce phosphorus and nitrogen loads into the IRL-S. Further, the plan calls for removing an estimated 7.7 million cubic yards of "muck" and disposing it elsewhere. The recommended project has evolved since the activities proposed

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[14] (...continued)
Study: Final Integrated Feasibility Report and Programmatic Environmental Impact Statement for the Indian River Lagoon-South (Jacksonville, FL, April 1999). Hereafter referred to as Corps, *CERP Plan*. Available at [http://www.evergladesplan.org/pub/restudy_eis.cfm#mainreport], visited on June 9, 2006.

[15] U.S. Army Corps of Engineers, *Final Integrated Project Implementation Report and Environmental Impact Statement for the Indian River Lagoon-South* (Jacksonville, FL: March 2004). Hereafter known as Corps, *IRL-S Final PIR*. Available at [http://www.evergladesplan.org/pm/studies/irl_south_pir.cfm], visited on June 9, 2006.

[16] Corps, *IRL-S Final PIR*.

in CERP; in that document, the estimated cost for the activities that now make up the recommended IRL-S project was less than $1 billion and consisted primarily of artificial storage reservoirs.[17]

Some supporters of the Indian River Lagoon restoration project argue that the project will improve the seabed floor and revive bottom-dwelling communities.[18] In the *IRL-S Final PIR*, the Corps states that IRL-S restoration will result in clean water transferred to Lake Okeechobee, thus improving the quality of water that moves through the ecosystem from the lake.[19] Others, however, suggest that even though the project will help the estuarine ecosystem, it will not completely attenuate freshwater flows from Lake Okeechobee, a problem that may have to be dealt with separately. Further, some believe that IRL-S restoration is localized and will have little impact on the Greater Everglades ecosystem. Another concern that has been raised is the increase in project cost.

Picayune Strand Restoration. The Picayune Strand restoration project (also known as the Southern Golden Gates Estates project) is expected to cost $349 million, of which the federal share would be $175 million. S. 728 and H.R. 2864 would authorize the Picayune Strand restoration project. The Corps prepared a final Project Implementation Report and Environmental Impact Statement for Picayune Strand and solicited comments through December 19, 2004. After responding to comments and finalizing the report, the Chief of Engineers approved the final report on September 15, 2005; it is being reviewed for Administration policy compliance by the Assistant Secretary of the Army (Civil Works); OMB will perform a subsequent review. The proposal is to remove roads, canals, and other infrastructure, and is expected to increase freshwater flows to natural areas, lower freshwater surges to the ocean, and improve water quality.[20] The non-federal sponsor (the state of Florida) has spent nearly $100 million of its share on land acquisition; most of the remaining project expenses are for design and construction of the project.[21]

The Picayune Strand project encompasses 86 square miles (approximately 55,000 acres) in Collier County, FL, and includes several federal and state lands, such as the Florida Panther National Wildlife Refuge, 10,000 Islands National Wildlife Refuge, and others. Residential development in the region has altered the landscape, changing the ecosystem. Some alterations include a lower watertable, which has diminished cypress-dominated

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[17] Corps, *CERP Plan.*

[18] For example, testimony of Eric Draper, Director of Policy, Audubon of Florida, before the U.S. Senate, Committee on Environment and Public Works, *U.S. Army Corps of Engineers and Water Resource Programs*, Hearing, 108th Cong., 2nd Sess., June 18, 2002 (Washington, DC: U.S. GPO).

[19] Corps, *IRL-S Final PIR.*

[20] Ibid.

[21] U.S. Army Corps of Engineers, *Southern Golden Gate Estates Hydraulic Restoration Project, Picayune Stand Restoration* (Washington, DC: June 2004), at [http://www.evergladesplan.org/docs/fs_sgge_061504_english.pdf], visited on June 9, 2006.

wetlands and has led to colonization by invasive species.[22] Other ecosystem alterations are degraded water quality and an increase in the severity and frequency of wildfires.

Some are concerned that unwilling sellers may delay or stall Picayune Strand restoration activities that depend on land acquisition. Nearly 98% of the land needed for restoring Picayune Strand is in public ownership and over 1,800 parcels (representing almost 1,500 landowners) have been acquired through eminent domain.[23] The accessibility of the Picayune Strand for recreation is another controversial issue for local residents. Some are concerned over the potential loss of recreational opportunities due to restoration; the state has responded that it will provide areas for off-road vehicles and other recreational activities.

LEGISLATION

WRDA Bills in the 109th Congress

H.R. 2864 (Young)
Water Resources Development Act of 2005. Received by the Senate on July 18, 2004.

S. 728 (Bond)
Water Resources Development Act of 2005. Placed on the Senate Calendar on April 26, 2005.

Selected Corps Authorization and Policy Bills in the 109th Congress

H.R. 5461 (Melancon)
Meeting Authorization Requirements for the Coast Act of 2006. Introduced May 23, 2006; and referred to the Committee on Transportation and Infrastructure.

S. 753 (Feingold)
Corps of Engineers Modernization and Improvement Act of 2005. Introduced on April 11, 2005; and referred to the Committee on Environment and Public Works.

S. 2288 (Feingold)
Water Resources Planning and Modernization Act of 2006. Introduced on February 15, 2006; and referred to the Committee on Environment and Public Works.

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[22] U.S. Army Corps of Engineers, *Picayune Stand Restoration Final Integrated Project Implementation Report and Environmental Impact Statement* (Washington, DC: Sept. 2004), at [http://www.evergladesplan.org/pm/projects/docs_30_sgge_pir_final.cfm#pir], visited on June 9, 2006.

[23] Florida Dept. of Environmental Protection, *Statement by Florida Department of Environmental Protection Secretary Colleen M. Castille Regarding the Restoration of America's Everglades* (Tallahassee, FL: May 24, 2004); available at [http://www.dep.state.fl.us/secretary/news/2004/may/0525_hardy.htm], visited on June 9, 2006.

FOR ADDITIONAL READING

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CRS Report RL32064, *Army Corps of Engineers Water Resources Activities: Authorization and Appropriations*, by Nicole T. Carter and H. Steven Hughes.

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CRS Report RS22110, *Coastal Louisiana Ecosystem Restoration: The Recommended Corps Plan*, by Jeffrey Zinn.

CRS Report RL32673, *Coastal Louisiana: Attempting to Restore an Ecosystem*, by Jeffrey Zinn.

CRS Report RS22276, *Hurricanes Katrina and Rita and the Coastal Louisiana Ecosystem Restoration*, by Jeffrey Zinn.

CRS Report RL33188, *Protecting New Orleans: From Hurricane Barriers to Floodwalls*, by Nicole T. Carter.

Upper Mississippi River-Illinois Waterway

CRS Report RL32470, *Upper Mississippi River-Illinois Waterway Navigation Expansion: An Agricultural Transportation and Environmental Context*, Coordinated by Randy Schnepf.

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CRS Report RL32915, *Upper Mississippi River-Illinois Waterway Investments: Legislation in the 109th Congress*, by Nicole T. Carter.

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Everglades Restoration

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

CRS Report RS22048, *Everglades Restoration: The Federal Role in Funding*, by Pervaze A. Sheikh and Nicole T. Carter.

CRS Report RL32131, *Phosphorus Mitigation in the Everglades*, by Pervaze Sheikh and Barbara Johnson.