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Appropriations for FY2003: Energy and Water Development

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Coordinated by Carl Behrens and Marc Humphries
Resources, Science, and Industry Division

Appropriations are one part of a complex federal budget process that includes budget resolutions, appropriations (regular, supplemental, and continuing) bills, rescissions, and budget reconciliation bills. The process begins with the President's budget request and is bounded by the rules of the House and Senate, the Congressional Budget and Impoundment Control Act of 1974 (as amended), the Budget Enforcement Act of 1990, and current program authorizations.

This report is a guide to one of the 13 regular appropriations bills that Congress passes each year. It is designed to supplement the information provided by the House and Senate Appropriations Subcommittees on Energy and Water. It summarizes the current legislative status of the bill, its scope, major issues, funding levels, and related legislative activity. The report lists the key CRS staff relevant to the issues covered and related CRS products.

NOTE: A Web version of this document with active links is available to congressional staff at: [http://www.crs.gov/products/appropriations/apppage.shtml].

Appropriations for FY2003: Energy and Water Development

Summary

The Energy and Water Development appropriations bill includes funding for civil works projects of the Army Corps of Engineers, the Department of the Interior's Bureau of Reclamation (BOR), most of the Department of Energy (DOE), and a number of independent agencies. The Bush Administration requested $25.5 billion for these programs for FY2003 compared with $25.2 billion appropriated in FY2002.

Key issues involving Energy and Water Development appropriations programs include:

- Matching budget request amounts with ongoing Corps construction schedules ("full capability funding") and congressional priorities;
- Funding for major water/ecosystem restoration initiatives such as Florida Everglades and California "Bay-Delta";
- General provisions concerning operation of federal water projects on the Missouri River;
- Proposed higher funding for DOE's civilian nuclear waste management program as the Department prepares a construction permit application for a waste repository under Nevada's Yucca Mountain;
- Proposed $800 million Environmental Management Cleanup Reform account in DOE, focused on radioactive sites where environmental regulators would allow alternative cleanup methods; and
- DOE's "Nuclear Power 2010" initiative, to "identify the technical, institutional and regulatory barriers to the deployment of new nuclear power plants by 2010."

Key Policy Staff

Area of Expertise	Name	CRS Division	Telephone
General	Carl Behrens Carol Glover Marc Humphries	RSI RSI RSI	7-8303 7-7353 7-7264
Corps/Bureau of Reclamation	Betsy Cody Steve Hughes Richard Sachs	RSI RSI RSI	7-7229 7-7268 7-7744
Nuclear Energy	Mark Holt	RSI	7-1704
Solar and Renewable Energy	Fred Sissine	RSI	7-7039
Science Programs	Daniel Morgan	RSI	7-5849
Nonproliferation and Terrorism	Carl Behrens	RSI	7-8303
Nuclear Weapons Stewardship	Jonathan Medalia	FDT	7-7632
PMAs	Rob Bamberger	RSI	7-7240
Report Preparation and Support	Carol Glover	RSI	7-7353

Division abbreviations: RSI = Resources, Science, and Industry; FDT= Foreign Affairs, Defense, and Trade.

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Most Recent Developments

The Administration request for FY2003 for energy and water development programs, forwarded on February 4, 2002, was $25.5 billion, compared with $25.2 billion appropriated in FY2002.

Status

Table 1. Status of Energy and Water Appropriations, FY2003

Subcommittee Markup		House Report	House Passage	Senate Report	Senate Passage	Conf. Report	Conference Report Approval		P.L.
House	Senate						House	Senate	
--	--	--	--	--	--	--	--	--	--

Overview

The Energy and Water Development bill includes funding for civil works projects of the Army Corps of Engineers, the Department of the Interior's Bureau of Reclamation (BOR), most of the Department of Energy (DOE), and a number of independent agencies, including the Nuclear Regulatory Commission (NRC) and the Appalachian Regional Commission (ARC). The Administration's request is $25.5 billion for these programs for FY2003, compared with $25.2 billion appropriated for FY2002.

The Administration's budget request included a legislative proposal to allocate federal retiree costs to agency programs, and the budget figures submitted to the Congress assumed that this proposal would be enacted. In this report the figures given have been recalculated by the House Appropriations Committee to eliminate the effects of that proposal.

For the Corps of Engineers, the Administration is seeking $4.17 billion in FY2003, about $450 million less than the amount appropriated for FY2002. The Administration is seeking $841 million for FY2003 for the Department of the Interior programs included in the Energy and Water bill — the Bureau of Reclamation and the Central Utah Project. This would be a decrease of approximately $61 million from the FY2002 funding level.

The request for DOE programs is $20.53 billion, about $660 million more than the previous year. The major activities in the DOE budget are energy research and development, general science, environmental cleanup, and nuclear weapons programs. (Funding of DOE's programs for fossil fuels, energy efficiency, and energy statistics is included in the Interior and Related Agencies appropriations bill. The FY2003 net appropriations request for these programs is $1.8 billion.)

For the Nuclear Regulatory Commission and other independent agencies funded in Title IV of the Energy and Water bill, the net appropriations request for FY2003 is $195 million, compared to $221 million appropriated for FY2002.

Table 2. Energy and Water Development Appropriations, FY1996 to FY2003

(budget authority in billions of current dollars*)

FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03 (Req.)
19.3	20.0	21.2	21.2	21.2	23.9	25.2	25.5

*These figures represent current dollars, exclude permanent budget authorities, and reflect rescissions.

Table 2 includes budget totals for energy and water appropriations enacted for FY1996 to FY2002 and the Administration's request for FY2003. Tables 3-7 provide budget details for Title I (Corps of Engineers), Title II (Department of the Interior), Title III (Department of Energy) and Title IV (independent agencies) for FY2002 - FY2003.

Title I: Corps of Engineers

The President's budget request for FY2003 includes $4.172 billion for the civil projects of the U.S. Army Corps of Engineers (Corps), a decrease of $450 million from the total enacted level for FY2002. (The Corps received $4.486 billion via the annual Energy and Water appropriations bill for FY2002. An additional $139 million was appropriated for Site Security/Counter Terrorism in the FY2002 Defense and Emergency Supplemental Appropriation bill, P.L. 107-117.)

Table 3. Energy and Water Development Appropriations
Title I: Corps of Engineers
(in millions of dollars)

Program	FY2002	FY2003 Request	House	Senate	Conf.
Investigations & Planning	154.3	102.5	--	--	--
Construction	1,716.0	1,415.6	--	--	--
Flood Control, Mississippi River	346.0	280.7	--	--	--
Operation and Maintenance	1,874.8	1,913.8	--	--	--
Regulatory	127.0	144.3	--	--	--
General Expenses	153.0	155.7	--	--	--
FUSRAP	140.0	140.3	--	--	--
Flood/Coastal Emergencies	--	20.2	--	--	--
Total	**4,625.0**	**4,173.0**	**--**	**--**	**--**

Source: House Appropriations Committee

Key Policy Issues — Corps of Engineers

Funding for the Corps' civil works program has often been a contentious issue between the Administration and Congress, with final appropriations typically providing more funding than requested by the Administration, regardless of which political party controls the White House and Congress. For FY2001, for example, Congress added $480 million (12%) to the $4.08 billion requested by the Clinton Administration. Similarly, the FY2002 House bill funded the Corps at almost 15% more than requested by the Bush Administration, and the final act appropriated slightly more than that.

The FY2003 budget request may be beginning the same pattern. The request as presented in February 27 testimony in the House recommends a cut from current spending: approximately 4% overall, but 30% less for investigation/studies, and 16%

less for construction – with virtually no "new starts" in these two accounts during fiscal year 2003. Further budget request priorities include continuing only projects with Administration support – not congressionally-added projects from FY2002 that lack favorable executive branch review (such as water supply assistance). The request has received considerable media attention in the wake of the recent resignation of the Assistant Secretary of the Army for Civil Works, (who sets policy for the Corps' civil activities) reportedly over a rift with the White House on the budget proposal.

The FY2003 request also contains legislative proposals 1) that federal (regional) Power Marketing Administrations (PMAs) directly fund operation and maintenance of hydropower facilities at Corps projects ($149 million); and 2) that recreation area fees increase about $5 million per year.

Proposed Corps Reforms. The Corps has come under increasing criticism over the way it evaluates and undertakes its projects. Some have called for major agency "reforms"; others have called for review of Corps programs and policies. The 106th Congress, in passing the Water Resources Development Act of 2000 (WRDA, P.L. 106-541, Section 216), directed the Corps to contract with the National Academy of Sciences to study the feasibility of establishing an independent review panel for Corps project studies; Academy recommendations may not be completed until well into calendar year 2003. Further legislation proposing changes to the project development and authorization process was introduced in the 107th Congress (see H.R. 1310 and S. 1987), while internally, the Corps initiated during FY2002 an additional staff review for project justifications within the office of the Assistant Secretary of the Army for Civil Works.

In reporting the FY2002 Energy and Water Development Appropriations bill, the House Appropriations Committee acknowledged the ongoing criticisms in its report accompanying H.R. 2311, and noted its belief that a study of navigation improvements on the Upper Mississippi River and Illinois Waterway was "poorly managed by the Corps...." The House Appropriations Committee also commented on the accusations that Corps officials were improperly trying to expand the civil works program; the report states "[t]he Committee finds this criticism to be somewhat absurd." The Senate Appropriations Committee also acknowledged recent criticisms of the Corps and stated it "is satisfied that the Corps has responded professionally to the issues raised...." Both Committees note that the Corps has a backlog of approximately $40 billion in projects. (For more information, see CRS Report RL30928, *Army Corps of Engineers: Reform Issues for the 107th Congress.*)

Missouri River Water Flows. After extended debate in both the House and the Senate, Section 116 of the final bill for FY2002 included Senate language that prohibits the use of funds "to accelerate the schedule to finalize the Record of Decision for the revision of the Missouri River Master Water Control Manual and any associated changes to the Missouri River Annual Operating Plan." The provision was a temporary compromise of an ongoing issue that had led President Clinton to veto the previous year's Energy and Water Development appropriations bill.

The central issue behind the revision of the manual is how to operate dams along the Missouri River. Their operation determines the timing of water releases, which affect competing uses of the river such as barge traffic, threatened and endangered

species protection, and upstream recreation. In November 2000, the U.S. Fish and Wildlife Service (FWS) issued a biological opinion pursuant to the Endangered Species Act that recommended altering dam operations to provide higher springtime water releases to benefit the pallid sturgeon. This change is also believed by some to benefit other threatened and endangered species affected by current dam operations. The Corps has issued a draft implementation plan and is currently evaluating the effects of the proposed spring rise on other Missouri River water users. The Corps is scheduled to release the new Master Manual no earlier than 2003.

The House-passed version of the FY2002 appropriation had prohibited using funds to "revise" the manual "if such revision provides for an increase in the springtime water release program during the spring heavy rainfall and snow melt period in the States that have rivers draining into the Missouri River below the Gavins Point Dam." Opponents of the House provision claimed it threatened to stop all work on the manual; the Senate version contained a milder prohibition against "accelerating" the process. During Senate floor debate both sides agreed to an amendment to allow the Corps to consider alternatives for species recovery other than the much debated "spring rise" recommended in the FWS biological opinion. The amended provision also directed the Corps to consider the views of other federal and non-federal agencies and individuals "to ensure that other congressionally authorized purposes are maintained." This language was included in Section 116 of the final bill. However, the issue is likely to be revived during the FY2003 appropriations cycle.

Everglades. Implementation of a Comprehensive Everglades Restoration Plan (CERP) was authorized in WRDA, Title VI. Funding for CERP activities, as well as other ecosystem restoration projects in Central and Southern Florida is included for the Corps in the annual Energy and Water Development Appropriations bill, and for DOI agencies such as the National Park Service and Fish and Wildlife Service in the annual Department of the Interior and Related Agencies Appropriations bill. The Energy and Water bill now typically includes funding for other restoration projects done by the Corps in the Everglades and South and Central Florida. The President's request for FY2003 includes a total of $151 million for construction projects in Southern Florida. For existing Central and Southern project construction, Kissimmee River restoration, and Everglades and South Florida ecosystem restoration, $108 million, $23.7 million, and $19.5 million respectively have been requested for FY2003. For CERP, $37 million has been requested for FY2003. For FY2002, the Energy and Water Appropriations bill included a total of $141 million for funding projects in the Everglades and Central and Southern Florida. $28 million was appropriated for CERP, and approximately $95 million, $26 million, and $20 million was appropriated for Central and Southern Florida projects, Kissimmee River restoration, and Everglades and South Florida ecosystem restoration respectively. Note that funding for CERP activities has been typically included within funds appropriated for the Central and Southern Florida construction line item in the Corps budget.

Title II: Department of the Interior

For the Department of the Interior, the Energy and Water Development bill provides funding for the Bureau of Reclamation (BOR) and the Central Utah Project Completion Account. For FY2003 the President has requested $36 million for the Central Utah Project Completion Account and $805.4 million for BOR (net current authority). The total Title II request for FY2003 is $880.9 million. The total appropriation for these programs in FY2002 was $902.4 million: $863.4 million for BOR (net current authority), and $39 million for the Central Utah Project Completion Account.

Table 4. Energy and Water Development Appropriations
Title II: Central Utah Project Completion Account

(in millions of dollars)

Program	FY2002	FY2003 Request	House	Senate	Conf.
Central Utah project construction and oversight	25.0	25.0	--	--	--
Mitigation and conservation activities*	14.0	11.0	--	--	--
Total, Central Utah Project	**39.0**	**36.0**	--	--	--

* Includes funds available for Utah Reclamation Mitigation and Conservation Commission activities and $5 million for the contribution authorized by §402(b)(2) of the Central Utah Project Completion Act (P.L. 102-575). Totals do not reflect permanent appropriations of approximately $1.2 million.

Table 5. Energy and Water Development Appropriations
Title II: Bureau of Reclamation
(in millions of dollars)
(Without CSRS/FEHB Legislative Proposal)

Program	FY2002	FY2003 Request	House	Senate	Conf.
Water and Related Resources	792.8*	726.1	--	--	--
Loan Program Account	7.5	0.0	--	--	--
Policy & Admin.	53.0	54.9	--	--	--
Central Valley Project (CVP) Restoration Fund	55.0	48.9	--	--	--
California Bay-Delta (CALFED)	0.0	15.0	--	--	--
Gross Current Authority	**908.3**	**844.9**	**--**	**--**	**--**
CVP Restoration Fund Offset**	44.9	39.6	--	--	--
Net Current Authority	**863.4**	**805.4**	**--**	**--**	**--**

*Includes $30.3 million from Site Security/Counter Terrorism appropriated in the FY2002 Defense and Emergency Supplemental Appropriation Act, P.L. 107-117.
** In presenting its budget justifications, the Bureau includes an "offset" of approximately $39.6 million for the CVP restoration fund, resulting in Net Current Authority of $805.4 million. (Figures may not total due to rounding.)

Background on Reclamation Policy

Most of the large dams and water diversion structures in the West were built by, or with the assistance of the Bureau of Reclamation (BOR). Whereas the Corps built hundreds of flood control and navigation projects, BOR's mission was to develop water supplies and to reclaim arid lands in the West, primarily for irrigation. Today, BOR manages more than 600 dams in 17 western states, providing water to approximately 10 million acres of farmland and 31 million people. BOR is the largest supplier of water in the 17 western states and the second largest hydroelectric power producer in the Nation. BOR facilities also provide substantial flood control, recreation, and fish and wildlife benefits.

Bureau of Reclamation Budget In Brief

For FY2003, BOR is requesting a total of $805.4 in net current authority. This request is $58 million, or 6.72 percent less than BOR's appropriated funding of $863.4 million for FY2002. The FY2003 request as presented includes a $39 million "offset" for the Central Valley Project (CVP) Restoration Fund. The figures displayed above do not include $24.9 million for the government-wide legislative proposal to shift to agencies the full cost of the Civil Service Retirement System pension and the Federal Employees Health Benefits Program for current employees.

BOR's single largest account, Water and Related Resources, encompasses the agency's traditional programs and projects, including operations and maintenance, the Dam Safety Program, Water and Energy Management Development, and Fish and Wildlife Management and Development, among others. For this account in FY2003, BOR is requesting $726.1 million, $66.7 million less than appropriated in the regular annual appropriations Act for FY2002. (BOR FY2002 funding for this account eventually included $30.3 million for site security and counterterrorism appropriated in the FY2002 Defense and Emergency Supplemental Appropriations Act, P.L. 107-117).

Key Policy Issues – Breau of Reclamation

CALFED. No funds were appropriated for FY2001 for the California Bay-Delta Restoration Program (Bay-Delta, or CALFED) or any of its projects. For FY2002, Congress included $30 million in the Water and Related Resources account for projects supporting the goals of CALFED; however, it did not fund the CALFED program, per se. The Conference Committee report (H. Rpt.107-258) while keeping language similar to the Senate Appropriations bill (S.1171), directed funding toward several specific CALFED-related projects, including planning for the Sites Reservoir ($0.75 million) and an assessment of raising Shasta Dam ($1.9 million). For FY2003, the BOR budget requests $15 million for the Environmental Water Account and for costs associated with administrative support of the CALFED program. At a February 28, 2002, hearing of the House Energy and Water Development Appropriations Subcommittee, committee members warned that appropriations for CALFED may not be forthcoming until Congress authorizes the program, itself, in public law. In the past, FY2002 for example, Congress has funded discrete projects within the CALFED program, but, lacking an authorizing statute, has provided no appropriations for the overall program.

Other Issues. BOR is requesting $28.4 million for continued heightened safety and security efforts at BOR facilities. This request includes $26.6 million specifically for counterterrorism measures including guards and surveillance and equipment to provide increased security for the general public, BOR employees and facilities, and information technology security. (For more information on terrorism and security issues involving the water infrastructure sector, see *RS1026: Terrorism and Security Issues Facing the Water Infrastructure Sector*, CRS Report by Claudia Copeland and Betsy A. Cody, updated February 7, 2002; also, see the CRS Terrorism Electronic Briefing Book, updated regularly, accessed at http://www.congress.gov/brbk/html/ebter1.shtml).

For the Klamath River Basin Project in California and Oregon, BOR is requesting $25.2 million. The funds are requested for studies and initiatives related to improving water supply and quality to meet agricultural, tribal, wildlife refuge, and environmental needs in the Klamath River Basin and for improvements in fish passage and habitat. This project is controversial for its long-running debate on the use of Klamath River water. (For more information on Klamath River Basin issues, see *CRS Report RL31098; Klamath River Basin Issues: An Overview of Water Use Conflicts*, CRS Report by Betsy A. Cody, et al..; also, CRS Issue Brief *IB10072; Endangered Species: Difficult Choices*, CRS Issue Brief by Eugene Buck, *et al.*, updated regularly).

At its February 28 hearing, members of the House Energy and Water Development Appropriations Subcommittee also expressed interest in funding projects that would restore the Salton Sea, a highly saline lake located in southeastern California. BOR's FY2003 funding request is for $1 million for its continuing Salton Sea Research Project. The project's objectives are to identify and evaluate alternatives to improve water quality conditions and maintain quality habitat for migratory birds and endangered species. Congress did not appropriate funds for the project in FY2002. (For more information on these issues, see CRS Issue Brief IB10019, *Western Water Issues.*)

Title III: Department of Energy

The Energy and Water Development bill includes funding for most of DOE's programs. Major DOE activities in the bill include research and development on renewable energy and nuclear power, general science, environmental cleanup, and nuclear weapons programs. The Administration's FY2003 request for DOE programs in the Energy and Water bill is $20.5 billion, about $650 million more than the amount appropriated for FY2002. The FY2003 appropriation request for DOE's programs for fossil fuels, energy efficiency, the Strategic Petroleum Reserve, and energy statistics, included in the Interior and Related Agencies appropriations bill, is $1.8 billion.

Table 6. Energy and Water Development Appropriations Title III: Department of Energy

(in millions of dollars)

Program	FY2002	FY2003 Request	House	Senate	Conf.
Energy Supply R&D					
Solar and Renewable	396.0	407.0	--	--	--
Nuclear Energy	250.5	249.8	--	--	--
Other	38.3	37.1	--	--	--
Adjustments	(18.1)		--	--	--
Total, Energy Supply	666.7	693.9	--	--	--
Uranium Enrichment					
Maint. & Remediation	418.4	382.2	--	--	--
General Science					
High Energy Physics	716.1	725.0	--	--	--
Nuclear Physics	380.5	382.4	--	--	--
Basic Energy Sciences	1,003.7	1,019.6	--	--	--
Bio. & Env. R&D	527.4	504.2	--	--	--
Fusion	248.5	257.3	--	--	--
Adv. Scientific Computing	158.1	169.6	--	--	--
Other	216.5	225.7	--	--	--
Adjustments	(17.7)	(4.3)	--	--	--
Total, General Science	3,233.1	3,279.5	--	--	--
Non-Defense Environmental Management	236.4	166.0	--	--	--

Program	FY2002	FY2003 Request	House	Senate	Conf.
National Nuclear Security Administration (NNSA)					
Weapons	5,560.2	5,867.0	--	--	--
Nuclear Nonproliferation	1,029.6	1,113.6	--	--	--
Naval Reactors	688.0	706.8	--	--	--
Office of Administrator	312.6	335.9	--	--	--
Total, NNSA	7,590.5	8,023.3	--	--	--
Defense Activities **Defense Environmental Management**					
Environ. Restoration	5,242.8	4,554.1	--	--	--
Environ. Mgmt. Cleanup Reform		800.0	--	--	--
Defense Facilities Closure Projects	1,092.9	1,091.3	--	--	--
Environ. Restoration Privatization	153.5	158.4	--	--	--
Total, Defense Env. Man.	6,489.2	6,593.8	--	--	--
Other Defense Activities	547.5	468.7	--	--	--
Defense Nuclear Waste	280.0	315.0	--	--	--
Total, Defense Activities	14,907.2	15,400.9	--	--	--
Departmental Admin. (net)	73.0	161.7	--	--	--
Office of Inspector General	32.4	37.7	--	--	--
Power Marketing Administrations (PMA's)					
Southeastern	4.9	4.5	--	--	--
Southwestern	28.0	27.4	--	--	--
Western	171.9	162.8	--	--	--
Falcon & Armistad O&M	2.7	2.7	--	--	--
Total, PMA's	207.5	197.4	--	--	--
FERC (revenues)	184.1 (184.1)	192.0 (192.0)	--	--	--
Civilian Nuclear Waste	95.0	209.7	--	--	--
Total, Title III	**19,869.8**	**20,528.9**	**--**	**--**	**--**

Source: House Appropriations Committee

Key Policy Issues — Department of Energy

Renewable Energy. The FY2003 request for DOE's Renewable Energy Program seeks "to meet the growing need for clean and affordable energy," according to the Appendix to the U.S. Government's FY2003 Budget (p. 397). In accordance with this policy, DOE proposes to increase solar and renewables funding under DOE's Office of Energy Efficiency and Renewable Energy (EERE) from $396.0 million in FY2002 to $407.0 million in FY2003 (excluding funding for programs under the Office of Science).

Overall, this is a relatively flat budget request. However, some programs would get either a significant increase or decrease. The major cuts in proposed spending include decreases of $15.7 million for Distributed Energy Resources (DER), $11.3 million for Concentrated Solar, $6.2 million for Biopower, and $2.6 million for Program Direction.

According to DOE, the cut for Distributed Energy has two major parts. First, it states that two one-time Transmission Reliability projects funded in FY2002 for a total of $14.0 million do not need further funding in FY2003. However, the cut would be partially offset by a $3.4 million increase for reliability compliance, real time monitoring, and load research. Second, $6.3 million in FY2002 funding for DER Systems Integration was not carried into FY2003. However, this cut would be partially offset by a $2.7 million increase to develop a national standard for DER grid interconnection.

DOE says the 85% cut for Concentrating Solar includes a $3.3 million cut for Distributed Power System Development. Also, it would terminate four subprograms, including cuts of $3.7 million for Dispatchable Systems, $3.4 million for Advanced Components, $0.5 million for the Southwest Resource Opportunity (technical study and assistance), and $0.4 million for the Navajo Electrification Project.

Under Biomass Systems Development, DOE proposes to cut Biopower for Rural Development by $8.4 million, primarily by not extending a variety of earmark projects funded in FY2002. This would be partially offset by a $1 million increase for Small Modular Biopower and a $2 million increase for Gasification R&D. Also, the Regional Biomass Energy Program would be terminated by cutting $0.8 million.

Offsetting the above net reductions, the primary increases for other programs are $15.5 million for Superconductivity, $8.9 million for Hydrogen, $7.3 for Solar Buildings, $5.3 million for Renewable American Indian Resources, $3.0 million for Wind, and $3.5 million for International Renewables.

Nuclear Energy. For nuclear energy programs — including reactor research and development, spent fuel processing, and closing of surplus facilities — the Bush Administration is requesting $249.8 million for FY2003. The Administration's National Energy Policy, issued in May 2001, calls for "the expansion of nuclear energy in the United States." The FY2003 nuclear energy request reflects that policy with a funding initiative to encourage construction of new commercial reactors by 2010 and additional funding for advanced reactor designs. However, total funding for nuclear energy supply programs would remain about the same as in FY2002.

DOE's "Nuclear Power 2010" initiative would receive $38.5 million in FY2003, an increase of $30.5 million over FY2002. According to the DOE budget justification, the program builds on efforts begun in FY2001 to "identify the technical, institutional and regulatory barriers to the deployment of new nuclear power plants by 2010." The program seeks to deploy both a water-cooled reactor (similar to most existing commercial plants) and a gas-cooled reactor. The current phase of the initiative would include site approval, reactor design certification, license applications, detailed design work, and development of improved construction techniques. DOE announced it would seek proposals for joint DOE/industry teams in which DOE would pay up to half the cost of these activities.

DOE is requesting $8.0 million in FY2003 – double the FY2002 level – for advanced reactor technologies that could be ready for deployment after 2010. A variety of concepts are under consideration, according to the budget justification, including reactors fueled by plutonium recovered through reprocessing of spent nuclear fuel. The Administration's *National Energy Policy* report contends that plutonium recovery could reduce the long-term environmental impact of nuclear waste disposal and increase domestic energy supplies. However, opponents contend that the separation of plutonium from spent fuel poses unacceptable environmental risks and undermines U.S. policy on nuclear weapons proliferation.

DOE is requesting $18 million to study pyroprocessing technology and for electrometallurgical treatment of spent fuel from the Experimental Breeder Reactor II in Idaho. No funding is requested for waste transmutation, which involves bombarding nuclear waste with neutrons from a fast reactor or particle accelerator to convert long-lived radioactive isotopes into radioisotopes with shorter half-lives.

A DOE program to support innovative nuclear energy research projects, the "nuclear energy research initiative" (NERI), would receive $25 million under the FY2003 request, a $7 million reduction from FY2002. No funding is requested for "nuclear energy plant optimization" (NEPO), a research program to improve the economic competitiveness of existing nuclear power plants.

"Nuclear energy is the only expandable, large-scale electricity source that avoids air emissions and meets the energy demands of a growing, modern economy," according to the DOE FY2003 budget justification. However, opponents have criticized DOE's nuclear research program as providing wasteful subsidies to an industry that they believe should be phased out as unacceptably hazardous.

Science. The DOE Office of Science conducts basic research in six program areas: basic energy sciences, high-energy physics, biological and environmental research, nuclear physics, fusion energy sciences, and advanced scientific computing research. Through these programs, DOE is the third largest federal supporter of basic research and the largest federal supporter of research in the physical sciences.

For FY2003, DOE requested $3.279 billion for Science, compared with $3.233 billion appropriated in FY2002. Within this nearly flat overall funding, five of the six programs would receive increases, while one, biological and environmental research, would receive less.

Funding for the largest program, basic energy sciences, would receive $1.020 billion, compared to $1.004 billion in FY02. This request includes $211 million for continued construction of the Spallation Neutron Source, a large facility at Oak Ridge National Laboratory for research in physics, materials science, and other fields. Funding for the Spallation Neutron Source in FY2002 was $276 million; the reduction in FY2003 reflects the planned construction schedule, not a delay or scaling back of the project.

The largest percentage increase would be for the smallest program, advanced scientific computing research, which would increase almost 8% to $170 million.

The only program to be reduced in the request is biological and environmental research, which would receive $504 million, compared to $527 million the previous year. The proposed reduction results mainly from the completion of 74 medical applications projects that were funded at congressional direction in FY2002. Funding for the Genomes to Life project, which was a new initiative in FY2002, would increase to $36.7 million.

Nuclear Weapons Stockpile Stewardship. Congress established the Stockpile Stewardship Program (SSP) in the FY1994 National Defense Authorization Act (P.L. 103-160) "to ensure the preservation of the core intellectual and technical competencies of the United States in nuclear weapons." The program is operated by the National Nuclear Security Administration (NNSA), a semiautonomous agency established by Congress in the FY2000 National Defense Authorization Act (P.L. 106-65, Title XXXII) within DOE. It seeks to maintain the safety and reliability of the U.S. nuclear stockpile.

A key issue is whether this task can and should continue to be done without nuclear testing. While SSP has sought to maintain warheads without testing, recent statements may imply a reduced commitment to that approach. Secretary of Defense Donald Rumsfeld said that nations with nuclear weapons have "a responsibility to see that they are safe and reliable. To the extent that can be done without testing, clearly that is the preference. And that is why the President has concluded that, thus far, that is the case." J.D. Crouch, Assistant Secretary of Defense for International Security Policy, stated that there is "no change in the Administration's policy at this point on nuclear testing. We continue to oppose CTBT [Comprehensive Test Ban Treaty] ratification. We also continue to adhere to a testing moratorium." The Administration requests $15 million to begin to improve "nuclear test readiness" – to reduce the time between a decision to test and the conduct of the test – pending completion of a study and policy on optimum test readiness time. Given the context just noted, this request may prove contentious.

Stockpile stewardship consists of all activities in NNSA's Weapons Activities account, for which the FY2003 request is $5.8670 billion. Comparable appropriations were $4.9087 billion for FY2001 and $5.5602 billion for FY2002. The three main elements of stockpile stewardship, described below, are Directed Stockpile Work, $1.0458 billion for FY2002 and $1.2345 billion requested for 2003; Campaigns, $2.1671 billion for FY2002 and $2.0678 billion for FY2003; and Readiness in Technical Base and Facilities, $1.5531 billion for FY2002 and $1.6882 billion for FY2003.

NNSA manages two major programs in addition to Weapons Activities: Defense Nuclear Nonproliferation ($1,113.6 million requested; see below) and Naval Reactors ($708.0 million requested). The total FY2003 request for NNSA, including the foregoing elements and several smaller ones, is $8.0234 billion, compared with $7.5905 billion appropriated for FY2002.

Most stewardship activities take place at the nuclear weapons complex, which consists of three laboratories (Los Alamos National Laboratory, NM; Lawrence Livermore National Laboratory, CA; and Sandia National Laboratories, NM and CA), four production sites (Kansas City Plant, MO; Pantex Plant, TX; Savannah River Site, SC; and Y-12 Plant, TN), and the Nevada Test Site. NNSA manages and sets policy for the complex; contractors to NNSA operate the eight sites.

Directed Stockpile Work (DSW). This program involves work directly on nuclear weapons in the stockpile, such as monitoring the condition of weapons and maintaining them through repairs, refurbishment, life extension, and modifications. It includes R&D to support activities to be undertaken for specific warheads. The FY2003 DSW request would support work on a number of nuclear weapons: full-scale refurbishment of the W87, development engineering for the B61 mods 7/11, an engineering study of the W80 to extend its life and enhance surety, and development engineering to extend the life, refurbish major systems, and add new components to the W76. NNSA plans to begin production engineering for the latter two warheads in FY2003. It also plans to conduct a study, included in the FY2003 request, for the "Robust Nuclear Earth Penetrator." Warheads of this type would penetrate into the earth before detonating in order to destroy underground targets while requiring less explosive yield than would be the case for a surface-burst weapon.

This latter study may prove contentious. Some argue that national security requires such weapons in order to attack buried facilities in nations that sponsor terrorism. These facilities may protect leaders, store nuclear weapons, or house chemical or biological agent production equipment. As a result, it is argued, nuclear earth penetrators would signal U.S. resolve to take any necessary steps to defeat terrorism and could help deter other nations from developing weapons of mass destruction. Others counter that reduced-yield weapons would be more usable, alarming nations around the world that the United States viewed nuclear weapons as just another element of military force and placing at risk the norm against nuclear weapon use that has been in place since August 1945. Critics note that section 3136 of the FY1994 National Defense Authorization Act bars DOE from conducting R&D that could lead to production of nuclear weapons of under 5 kilotons of explosive yield, and fear that a study of earth penetrators could lead to their development, testing, and production.

Campaigns. These are "focused scientific and engineering efforts" that seek to "develop and maintain special capabilities and tools needed for continued certification of the stockpile ... in the absence of underground nuclear testing." For FY2003, there are 16 campaigns. Examples are: Enhanced Surveillance ($77.2 million requested for FY2003 compared to $82.3 million appropriated for FY2002), which seeks to assess lifetimes of weapons components and predict defects resulting from aging; Advanced Design and Production Technologies ($74.1 million for

FY2003, $75.5 million for FY2002), which seeks to improve individual manufacturing processes, integrate product information, and develop the ability to fabricate complex parts in small lots; Advanced Simulation and Computing ($724.9 million for FY2003, $729.9 million for FY2002), which aims to obtain a 100-trillion operations per second computer by 2005 and is developing computer models (e.g., of nuclear weapon performance) needed to certify the stockpile; and Tritium Readiness ($126.3 million requested for FY2003 compared to $123.5 million appropriated for FY2002), which is developing means of using a commercial light water reactor to produce tritium, an isotope of hydrogen that is a key ingredient in nuclear weapons.

The Pit Manufacturing and Certification campaign has attracted much congressional interest. Pits are the fissile cores of nuclear warheads that trigger the thermonuclear secondary stage. The United States has been unable to produce pits for use in stockpiled weapons since 1989, when DOE suspended pit production at the Rocky Flats Plant (CO). As a result, the United States has been unable to make all-new nuclear warheads of existing or advanced new designs. The campaign supports two pit projects: installation of a low-capacity pit production facility, and supporting R&D, at Los Alamos National Laboratory; and planning for a higher-capacity Modern Pit Facility. R&D, procurement, and construction costs for the two projects might total some $5 billion over two decades. The FY2003 request is $194.5 million, compared with $219 million appropriated for FY2002. The request includes $112.5 million for manufacturing the pit for the W88 warhead, one of the two types of warheads used on the Trident II missile, $78.0 million for W88 pit certification, $2.0 million for pit activities not specifically supporting the W88, and $2.0 million for planning for the Modern Pit Facility.

In action on this issue for FY2002, the House Appropriations Committee recommended the requested amount, $128.5 million, but asserted that DOE cannot show "that it has a viable plan to manufacture and certify pits on the schedule dictated by national security needs," criticized the project as "years behind schedule and hundreds of millions of dollars over the original cost estimate," and stated that it will judge NNSA's success on how well the pit project succeeds. The Senate Appropriations Committee recommended increasing funding substantially to "fully fund" all relevant activities, viewing the then-current schedule, which would not certify a pit for use in the stockpile until FY2009, as "unacceptable." In its FY2003 request, NNSA states that it plans to "certify a W88 pit built at [Los Alamos National Laboratory] without underground nuclear testing by FY 2009, with a goal of achieving an earlier date of FY 2007." Further, NNSA plans to defer detailed design of a Modern Pit Facility until FY2004, "with FY 2003 funding used to continue manufacturing concepts."

Readiness in Technical Base and Facilities (RTBF). This program provides infrastructure and operations at the nuclear weapons complex sites. The request includes eight categories. By far the largest is Operations of Facilities ($949.9 million requested for FY2003, $897.8 million appropriated for FY2002). Other large categories include Program Readiness, which supports activities occurring at multiple sites or in multiple programs ($208.1 million requested for FY2003, $192.0 million appropriated for FY2002), Material Recycle and Recovery ($98.8 million requested for FY2003, $90.3 million appropriated for FY2002), and Construction ($270.3 million requested for FY2003, $204.9 million appropriated for FY2002). Of particular

interest is the RTBF element Nuclear Weapons Incident Response, for which $91.0 million is requested for FY2003 compared with $88.9 million appropriated for FY2002. This activity provides funds for an appropriate technical response to any nuclear or radiological emergency within DOE, in the United States, or abroad. In addition, the RTBF element Operations of Facilities includes $10.0 million requested for FY2003, unchanged from FY2002, for the National Center for Counterterrorism.

Nonproliferation and National Security Programs. DOE's nonproliferation and national security programs provide technical capabilities to support U.S. efforts to prevent, detect, and counter the spread of nuclear weapons worldwide. These nonproliferation and national security programs are included in the National Nuclear Security Administration (NNSA).

Funding for these programs in FY2002 was provided both in the regular Energy and Water Development bill, which appropriated $803.6 million, and in the FY2002 Defense and Emergency Supplemental Appropriations Act (P.L. 107-117), which added $223 million, for a total of $1.0266 billion. In FY2001 these programs received $872.3 million. The FY2003 request would maintain an increased level, at $1.1136 billion.

In particular, the Nonproliferation and Verification R&D program, which received a total of $286.5 million for FY2002, would be funded at $283 million. Nonproliferation and International Security programs, formerly called "Arms Control," would receive $132 million, compared with $133 million in FY2002. These programs include international safeguards, export controls, treaties and agreements, and two programs in the former Soviet Union, Initiatives for Proliferation Prevention (IPP) and the Nuclear Cities Initiatives (NCI). (The House Appropriations Committee broke out IPP and NCI into a separate line item called "Russian Transition Initiative" and lists the FY2003 request for them as $39.3 million, compared to $42.0 million appropriated for FY2002.)

International Materials Protection, Control and Accounting (MPC&A), which is concerned with reducing the threat posed by unsecured Russian weapons and weapons-usable material, received a big increase in FY2002 to $293 million, compared with $174 million in FY2001. The request for FY2003 is $233 million.

Requested funding for the Fissile Materials Disposition program for FY2003 is $448.0 million, compared with $302.4 million in FY2002. In a potentially controversial decision, the Administration proposes to abandon plans to vitrify and immobilize a portion of surplus plutonium from dismantled U.S. nuclear weapons and instead dispose of almost all of it as fuel for commercial power reactors. Some of the increased funding would go toward construction of a facility to convert the plutonium to reactor fuel at Savannah River, SC. FY2003 funding for the project would be $93.0 million, compared to $65.9 million for FY2002. Money for Russian surplus materials disposition would also increase, from $61.0 million in FY2002 to $98.0 million in FY2003.

(For details on these programs, see CRS Issue Brief IB10091, *Nuclear Nonproliferation Issues*.

Environmental Management. DOE's Environmental Management Program (EM) is responsible for cleaning up environmental contamination and disposing of radioactive waste at DOE nuclear sites. The Bush Administration is requesting $6.5939 billion for the program for FY2003, compared with $6.4892 billion in FY2002. However, $800 million of the request would be set aside in a new Environmental Management Cleanup Reform account, which would be focused on sites where environmental regulators would allow alternative cleanup methods.

According to DOE's FY2003 budget justification, cleaning up contaminated nuclear sites under the existing regulatory system "is projected to cost in the range of $220 billion and take 70 years to complete. Costs continue to increase annually while schedules slip." A review ordered by Energy Secretary Abraham "indicates that the EM program has failed to significantly reduce the risk presented to the public and the environment by the Cold War's nuclear legacy," according to the justification.

Federal environmental laws make DOE sites subject to state and federal environmental regulation, including the imposition of fines and penalties. DOE has signed numerous legally binding compliance agreements with environmental regulators that establish specific cleanup deadlines and other requirements. However, DOE contends that many of those environmental requirements are overly costly, ineffective, and unnecessarily time-consuming.

The $800 million Environmental Management Cleanup Reform account "will provide the stimulus necessary to reach agreement with States and regulators on new, more effective cleanup approaches and ensure that constant or greater funding levels are available to those States whose cooperative efforts lead to greater and faster risk reduction," according to the budget justification. However, critics contend that the Bush Administration's budget request is insufficient to meet existing regulatory requirements and cleanup milestones, and that the proposed $800 million fund is designed to entice regulators to weaken cleanup standards.

In the first major action involving the Bush Administration's EM reform proposal, DOE signed a letter of intent March 7, 2002, with the State of Washington to accelerate the cleanup of the huge Hanford nuclear production site. According to a DOE press release, the FY2003 funding request for Hanford cleanup activities will be boosted by $433 million – to more than $2 billion – and "the parties will work to complete cleanup operations at Hanford 35 to 45 years sooner than the current estimated completion date of 2070." The Hanford compliance agreement between DOE and environmental regulators is to be modified to accommodate the expedited cleanup, but details of those changes have yet to be announced.

Officials from other states with major EM cleanup sites expressed concern that Hanford was taking more than half of the proposed Environmental Management Cleanup Reform account; the DOE press release said that more money would be sought for the account if necessary.

Civilian Nuclear Waste. The Bush Administration is seeking $526.7 million for the DOE civilian waste disposal program for FY2003, a 40% boost over FY2002. The increased budget is intended primarily to pay for preparing a construction permit application for a national nuclear waste repository at Yucca Mountain, Nevada. DOE

expects to submit the 10,000-page application to NRC in 2004 – a one-year delay from the previous schedule. The additional funds are also needed for detailed repository design work, repository performance studies, and transportation planning, according to DOE. Despite the delay in submitting a construction application, DOE contends that it can still begin receiving waste at the site by 2010 as previously scheduled.

The Nuclear Waste Policy Act of 1982 (NWPA, P.L. 97-425) as amended, names Yucca Mountain as the sole candidate site for a national geologic repository. Following the recommendation of Energy Secretary Abraham, President Bush on February 15, 2002, recommended to Congress that DOE submit an application to NRC to construct the Yucca Mountain repository. Under NWPA, the State of Nevada has 60 days after the President's recommendation to submit a "notice of disapproval" (or "state veto") to Congress. Nevada Governor Guinn announced on the day of the President's recommendation that he would veto the site. The state veto would block repository construction at Yucca Mountain unless a congressional resolution were approved by majority vote within 90 days and signed into law. (For details about congressional procedures in response to a state veto, see CRS Report RL31135, *Nuclear Waste Repository Siting: Expedited Procedures for Congressional Approval*.)

Funding for the nuclear waste program comes from two sources. Under the FY2003 budget request, $212 million is to be provided from the Nuclear Waste Fund, which consists of fees paid by nuclear utilities, and $315 million from the defense nuclear waste disposal account, which pays for disposing of high-level waste from the nuclear weapons program in the planned civilian repository.

The 2010 target for opening a permanent repository is 12 years later than the Nuclear Waste Policy Act deadline of January 31, 1998, for DOE to begin taking waste from nuclear plant sites. Nuclear utilities and state utility regulators, upset over DOE's failure to meet the 1998 disposal deadline, have won two federal court decisions upholding the Department's obligation to meet the deadline and to compensate utilities for any resulting damages. Utilities have also won several cases in the U.S. Court of Federal Claims, although specific damages have not yet been determined.

Power Marketing Administrations. DOE's four Power Marketing Administrations (PMAs) developed out of the construction of dams and multi-purpose water projects during the 1930s that are operated by the Bureau of Reclamation and the Army Corps of Engineers. The original intention behind many of these projects was conservation and management of water resources, including irrigation, flood control, recreation and other objectives. However, many of these facilities generated electricity for project needs. The PMAs were established to market the excess power; they are the Bonneville Power Administration (BPA), Southeastern Power Administration (SEPA), Southwestern Power Administration (SWPA), and Western Area Power Administration (WAPA).

The power is sold at wholesale to electric utilities and federal agencies "at the lowest possible rates ... consistent with sound business practice," and priority on PMA power is extended to "preference customers," which include municipal utilities, co-ops

and other "public" bodies. The PMAs do not own the generating facilities, but they generally do own transmission facilities, except for Southeastern. The PMAs are responsible for covering their expenses and repaying debt and the federal investment in the generating facilities.

The 104th Congress debated sale of the PMAs and did, in 1995, authorize divestiture of one PMA, the Alaska Power Administration. There has been no press to dispose of the remaining PMAs, and none seems likely given the broader uncertainties governing electric utility restructuring.

The Administration's request for SEPA, SWPA, and WAPA for FY2003 is $197.4 million, a reduction from the FY2002 appropriation of $207.3 million.

BPA receives no annual appropriation, but funds some of its activities from a permanent borrowing authority, currently $3.75 billion. For FY2002 BPA plans to borrow $630.8 million, to be used for transmission system construction, system replacement, energy resources, fish and wildlife, and capital equipment programs. BPA had also requested for FY2002 an additional $2 billion in permanent borrowing authority “to address critical infrastructure needs,” but the final bill did not approve it. The Administration’s budget request indicates BPA’s intention to borrow $700 million in FY2003. (For details on BPA’s funding procedure see CRS Report RL31215, *Bonneville Power Administration’s Authority to Borrow from the U.S. Treasury*.)

Title IV: Independent Agencies

Independent agencies that receive funding from the Energy and Water Development bill include the Nuclear Regulatory Commission (NRC), the Appalachian Regional Commission (ARC), and the Denali Commission.

Table 7. Energy and Water Development Appropriations
Title IV: Independent Agencies
(in millions of dollars)

Program	FY2002	FY2003 Request	House	Senate	Conf.
Appalachian Regional Commission	71.3	66.3	--	--	--
Nuclear Regulatory Commission	578.5	585.0			
(Revenues)	(479.5)	(518.3)			
Net NRC	99.0	66.7	--	--	--
Defense Nuclear Facilities Safety Board	18.5	19.0	--	--	--
Nuclear Waste Technical Review Board	3.1	3.1	--	--	--
Denali Commission	38.0	29.9	--	--	--
Delta Regional Authority	10.0	10.0	--	--	--
Total	**220.5**	**195.1**	--	--	--

Source: House Appropriations Committee

Key Policy Issues — Independent Agencies

Nuclear Regulatory Commission. The Nuclear Regulatory Commission (NRC) is requesting a total budget of $585.0 million for FY2003, including $7.2 million for the NRC inspector general's office. The funding request would provide an increase of $6.5 million from FY2002. Major activities conducted by NRC include safety regulation and licensing of commercial nuclear reactors, licensing of nuclear waste facilities, and oversight of nuclear materials users.

In the wake of the September 11 terrorist attacks against the United States, NRC has focused additional attention to the security of nuclear power plants and other users of radioactive material. NRC's FY2003 budget request includes $29.3 million for activities related to homeland security, about $6 million below the $36 million provided in the FY2002 Emergency Supplemental Appropriations bill. According to the NRC budget justification, the funding is being used for:

- Re-analyzing the threat of radiological sabotage and the theft of nuclear material;

- Re-analyzing the adequacy of physical protection requirements for nuclear facilities and transportation of radioactive materials;
- Re-analyzing procedures for authorizing access to nuclear facilities;
- Strengthening NRC emergency preparedness and response capabilities;
- Better integrating NRC security and emergency preparedness planning; and
- Strengthening NRC infrastructure and communications capabilities.

(For more information on protecting licensed nuclear facilities, see CRS Report RS21131, *Nuclear Powerplants: Vulnerability to Terrorist Attack*.)

NRC proposes to more than double its spending on licensing of new commercial reactors, which are being seriously considered for the first time in at least 20 years. The FY2003 request includes $24.8 million for new reactor licensing, up from $10 million provided in FY2002. According to the NRC budget justification, the funding will be used for early site permits (sites approved for future reactors), reactor pre-licensing and licensing reviews, and updating the nuclear licensing infrastructure. The NRC licensing program dovetails with DOE's program to encourage construction of two new nuclear power plants by 2010.

For the decade before FY2001, NRC's budget was offset 100% by fees on nuclear power plants and payments by other licensed activities, such as the DOE nuclear waste program. The nuclear power industry had long contended that the fee structure required nuclear reactor owners to pay for a number of NRC programs, such as foreign nuclear safety efforts, from which they did not directly benefit. To account for that concern, the FY2001 Energy and Water Appropriations Bill included an NRC proposal to phase down the agency's fee recovery to 90% during the subsequent 5 years – two percentage points per year. As a result, 94% of the FY2003 NRC appropriation – minus $24.9 million transferred from the Nuclear Waste Fund to pay for waste repository licensing and $29.3 million for homeland security – is to be offset by fees on licensees.

For Additional Reading

CRS Issue Briefs

CRS Issue Brief IB88090. Nuclear Energy Policy

CRS Issue Brief IB92059. Civilian Nuclear Waste Disposal.

CRS Issue Brief IB10041. Renewable Energy: Tax Credit, Budget, and Electricity Production Issues

CRS Issue Brief IB10019. Western Water Resource Issues.

CRS Issue Brief IB10072. Endangered Species: Difficult Choices.

CRS Issue Brief IB10091. Nuclear Nonproliferation Issues.

CRS Reports

CRS Report RL30941. Department of Energy Research and Development Budget for FY2002: Description and Analysis.

CRS Report RS20702. South Florida Ecosystem Restoration and the Comprehensive Everglades Restoration Plan.

CRS Report RL30928. Army Corps of Engineers: Reform Issues for the 107th Congress.

CRS Report RS20569. Water Resource Issues in the 107th Congress.

CRS Report RS20866. The Civil Works Program of the Army Corps of Engineers: A Primer.

CRS Report RL31116. Water Infrastructure Funding: Review and Analysis of Current Issues.

CRS Report RL31044. Renewable Energy Legislation in the 107th Congress.

CRS Report RL31215. Bonneville Power Administration's Authority to Borrow from the U.S. Treasury.

CRS Report RL30478. Federally Supported Water Supply and Wastewater Treatment Programs.

CRS Report RL31006. Appropriations for FY2003: Interior and Related Agencies.

CRS Report RS21026. Terrorism and Security Issues Facing the Water Infrastructure Sector.

CRS Report RS21131. Nuclear Powerplants: Vulnerability to Terrorist Attack.

CRS Report RL31098. Klamath River Basin Issues: An Overview of Water Use Conflicts.

CRS Report RL31135. Nuclear Waste Repository Siting: Expedited Procedures for Congressional Approval.