



FISCAL 2011 ENERGY AND WATER APPROPRIATIONS REQUESTS

The following is a list of projects that U.S. Senator Bob Casey has submitted to the Senate Subcommittee on Energy and Water Development Appropriations. Each year, this subcommittee develops the bill that annually funds the U.S. Army Corps of Engineers, the U.S. Department of Energy and other related agencies. If awarded, the funding requested would be directed to critical water projects designed to protect against flooding, promote commercial navigation, and bolster tourism and recreational activities. The bill also provides funding for innovative energy research initiatives.

Project Name: Lower Monongahela Improvement Project - Locks & Dams 2, 3 & 4
Name of Potential Recipient: U.S. Army Corps of Engineers, Pittsburgh District
Location: W. Elizabeth in Allegheny Co., and Elizabeth & Charleroi in Westmoreland Co., PA
Amount: \$52,000,000

Purpose: The funding will be used to continue construction of the Charleroi River and guard walls and to award a contract for, and start the construction of, the Charleroi River chamber. This is all part of an on-going project to increase the size of the locks at Charleroi, adjust the pool level and remove the dam at Elizabeth.

The larger locks at Charleroi and the removal of the dam at Elizabeth will result in transportation savings for industry. The regional manufacturing, mining and power generating economy depends upon river transportation, and its system of locks and dams to source and supply the raw materials for making chemicals, metals and electricity and for the export of steel. Additionally, the locks and dams provide a reliable supply of water for recreation, drinking, industrial cooling and waste disposal. It is a valuable use of taxpayer funds because, according to a study by Martin Associates, the river system supports 45,000 direct jobs and 218,000 total jobs, contributing to the well-being of the state as a whole.

Project Name: Lackawanna-Scranton, PA Local Flood Protection
Name of Potential Recipient: U.S. Army Corps of Engineers, Baltimore District
Location: Scranton City, Lackawanna County
Amount: \$3,200,000

Purpose: This project was originally authorized to provide a 100-year level of flood protection for the area known as Albright Avenue. Additional authorizations provided the necessary Federal funds to design and construct a 100-year level of flood protection for two additional communities: Green Ridge and Plot. The non-Federal sponsor for all three projects is the City of Scranton. The Albright Avenue portion of the project was completed and turned over to the City of Scranton in October 2003. The work in Green Ridge and Plot is being completed in three phases. The FY09 funding including Recovery Act funds will be used to complete project construction – including the design and construction of relief wells along the Race Street floodwall in Plot. The relief wells are required under the new Corps levee safety criteria for floodwalls.

Project Name: Emsworth Dam Rehabilitation Project
Name of Potential Recipient: U.S. Army Corps of Engineers, Pittsburgh District
Location: Emsworth, Ben Avon & Kennedy Twp., Allegheny Co., PA
Amount: \$11,500,000

Purpose: This project continues the main channel dam gate replacement & scour protection; continues the back channel dam scour protection; completes the back channel dam service bridge rehab; completes the back channel right abutment stabilization; and begins the main channel dam service bridge rehab. These repairs have been justified under emergency conditions. Completing these emergency repairs now will be less expensive than awaiting a failure and then making the repairs.

Project Name: Wyoming Valley Levee Raising Project
Name of Potential Recipient: U.S. Army Corps of Engineers, Baltimore District
Location: Luzerne, Columbia, Montour, Northumberland and Snyder Counties
Amount: \$8,850,000

Purpose: The project consists of raising the existing flood control project in the Wyoming Valley to provide Agnes level protection (NED plan) and provide mitigation activities for up to 52 adversely impacted communities in five counties. The FY2011 funding will fund the levee certification for the project to comply with FEMA requirements, begin design of the Solomon Creek project, fund mitigation activities and complete property acquisitions required for the levee construction. The project protects more than 30,000 homes and businesses and over 80,000 residents in the Wyoming Valley. If Agnes were to re-occur today, damage estimates would be in excess of \$2 billion. Avoided flood damages, avoided business disruptions, increased property values and reduced flood insurance costs are benefits to the community.

Project Name: Presque Isle Shoreline Erosion Control Project
Name of Potential Recipient: U.S. Army Corps of Engineers, Buffalo District
Location: Erie County, Pennsylvania
Amount: \$1,500,000

Purpose: The shoreline erosion control project at Presque Isle State Park consists of 55 segmented offshore breakwaters along the lake ward length of the peninsula and initial placement of approximately 560,000 tons of beach sand fill constructed from 1989 to 1992. Each year approximately 55,000 tons of additional beach nourishment is placed on the beaches along with the redistribution of approximately 30,000 cubic yards of sand. Sand accretions behind breakwater structures need to be removed and redistributed along eroded beaches for proper functionality of the breakwater system. Continuation of this federal funding will be used to match Commonwealth of Pennsylvania funding for the annual beach nourishment operations to maintain the Presque Isle Shoreline Erosion Project constructed by the U.S Army Corps of Engineers in 1989-1992 (55 segmented stone break waters).

Presque Isle State Park is a seven mile long peninsula that creates the natural harbor/port of Erie, Pa on the southern shore of Lake Erie. This port city on the Great Lakes plays a major economic role in the stability of the economy within this geographical region. Erosion protection of this natural peninsula is critical for the long-term sustainability of the Port of Erie. Presque Isle State park has been designated as a National Natural Landmark status due to its unique ecological diversity, important resting, nesting and feeding location in the migratory process of waterfowl, shorebirds, and other bird species.

Project Name: Delaware River Main Channel Deepening PA, NJ & DE
Name of Potential Recipient: U.S. Army Corps of Engineers, Philadelphia District
Location: Delaware River (PA, NJ, and DE)
Amount: \$47,862,000

Purpose: The project calls for deepening the existing Delaware River Federal Navigation Channel from 40 to 45 feet from Philadelphia Harbor, Pa., and Beckett Street Terminal, Camden, N.J., to the mouth of the Delaware Bay, appropriate bend widening, and partial deepening of the Marcus Hook anchorage and relocation of and addition of aids to navigation. Dredged material would be placed by hydraulic and hopper dredges in confined upland disposal areas in the Delaware River portion of the project and for beneficial uses in Delaware Bay. This is a deep draft navigation project that benefits the taxpayer by providing a deeper channel for safe, reliable, efficient, effective and environmentally sustainable waterborne transportation.

Project Name: Upper Ohio Navigation Study for Locks & Dams at Emsworth, Dashields and Montgomery
Name of Potential Recipient: U.S. Army Corps of Engineers, Pittsburgh District
Location: Emsworth Lock & Dam, Allegheny Co., PA and Dashields & Montgomery Locks & Dams, Beaver Co. PA
Amount: \$1,200,000

Purpose: The project is to complete the feasibility report for the locks and dams at Emsworth, Dashields & Montgomery. These are the oldest and smallest locks on the Ohio River. In

addition to requiring towboats to have to cut their tows to “double lock,” the situation is increasingly unsafe and unreliable for navigation.

Project Name: Bloomsburg Area Flood Control Project
Name of Potential Recipient: U.S. Army Corps of Engineers, Baltimore District
Location: Town of Bloomsburg, Columbia County
Amount: \$1,400,000

Purpose: The Town of Bloomsburg is a community of approximately 12,000 people, located at the confluence of Fishing Creek and the North Branch of the Susquehanna River in central Columbia County, Pennsylvania. The Susquehanna River forms the southern boundary of the town and is the most prominent drainage feature, draining an area of 10,576 square miles. Fishing Creek forms the northern and western boundary of the town and drains an area of 385 square miles at its mouth. The Town of Bloomsburg is subject to severe flooding from both the Susquehanna River as well as Fishing Creek. The town has been heavily damaged by floods that occurred in 1936, 1972, and 1975, although it has sustained lesser damages from other floods as well—in total, affecting more than 400 residential homes and seven major commercial enterprises. The Chief’s Report for the feasibility study was signed January 25, 2006. OMB completed its review of the Integrated EIS and Feasibility Study and forwarded the Study to Congress on January 9, 2007. FY11 funds would complete the post-authorization decision document, complete the VE study, and continue with design of the selected plan.

Project Name: Upper Ohio River & Tributaries Technology Pilot Program
Name of Potential Recipient: Penn State University
Location: southwestern Pennsylvania, northern West Virginia, eastern Kentucky and southeastern Ohio
Amount: \$2,000,000

Purpose: This project would finance planning and deployment of about 20 hubs to transmit and receive both Automatic Identification System and Wireless Broadband technologies. The cost of each is estimated at \$140,000 plus \$300,000 in planning and site investigations.

Project Name: Delaware River, Philadelphia to the Sea, PA, NJ & DE
Name of Potential Recipient: U.S. Army Corps of Engineers, Philadelphia District
Location: Delaware River and Bay
Amount: \$23,115,000

Purpose: The Delaware River Philadelphia to the Sea Federal navigation channel runs from Allegheny Ave., Philadelphia, PA for 96.5 miles in a southerly direction to deep water in the Delaware Bay, between the states of New Jersey on the east, and Pennsylvania and Delaware on the west. Annual maintenance dredging is performed to provide the authorized depth.

FY11 funds could be used for aggressive management and capacity restoration of federal disposal areas and to maintain dike levels to provide uninterrupted maintenance dredging service (\$2,685,000), as well as funding to perform GIS service within the disposal areas and oversee a contract to install tide and water quality gages (\$410,000).

Project Name: Delaware River, Philadelphia to Trenton, NJ and PA
Name of Potential Recipient: U.S. Army Corps of Engineers, Philadelphia District
Location: Delaware River and Bay
Amount: \$11,710,000

Purpose: The waterway extends from Allegheny Avenue in Philadelphia, PA about 30.5 miles upstream to the Penn Central Railroad Bridge at Trenton, NJ. Maintain 23.5 miles of channel (40' x 400'), 5.5 miles of channel (25' x 300'), and 1.4 miles of channel (12' x 300'), and an auxiliary channel (20' x 200') with a turning basin 450' wide. Maintain and inspect bank protection works at Florence, NJ and Bristol, PA. Ditch and drain upland disposal areas provided by the States of New Jersey and Pennsylvania.

FY11 funds could be used for maintenance dredging of lower reach (\$5,630,000) turning basin (\$1,735,000), to construct three upland disposal sites (\$2,440,000), and for disposal area maintenance & construction and placement of rip-rap material (\$490,000).

Project Name: Schuylkill River, Philadelphia, PA
Name of Potential Recipient: U.S. Army Corps of Engineers, Philadelphia District
Location: Philadelphia, Pennsylvania
Amount: \$11,115,000

Purpose: The Schuylkill River project extends from the confluence of the Delaware River and Schuylkill River upstream, a length of 6.5 miles to the University Avenue Bridge and the Fairmount pool between Fairmount Dam and the Columbia Bridge. A 33', 26' and 22' draft navigation channels. FY11 funding could be used to perform maintenance dredging of the Upper (\$1,650,000), Middle (\$3,645,000) and Lower (\$4,165,000) segments of the channel to remove critical shoaling. Additional funding could also be used to perform maintenance dredging of Boat House Row (\$2,000,000).

Project Name: Monongahela River (PA) Operations & Maintenance
Name of Potential Recipient: U.S. Army Corps of Engineers, Pittsburgh District
Location: Various locations along the Monongahela River in the Port of Pittsburgh district.
Amount: \$22,461,000

Purpose: This project will replace middle wall hydraulic lines at Lock 3; repair sheet pile lock wall at Lock 3; replace floating mooring bitts at Maxwell; replace maintenance crane at

Opekiska; replace in-ground fuel storage tank at Lock 3; and develop a lock rehab design for Braddock. This project is necessary due to the elongation of the schedule to remove these locks and dam, the facility's 100-year age and inadequate maintenance in the last two decades (predicated on its expected removal in 2004). Emergency repairs would be much more expensive than preventive maintenance.

Project Name: Raystown Lake, Hesston, Huntingdon County, PA
Name of Potential Recipient: U.S. Army Corps of Engineers, Baltimore District
Location: Hesston, Huntingdon County, PA
Amount: \$3,752,000

Purpose: The purpose of this project is to manage the risk of flooding, encourage recreation and environmental stewardship, and generate hydropower. This project prevented over \$256,239,000 in flood damage through calendar year 2008. The recreation program is the economic engine for Huntingdon County and the project recorded over 7 million visitor hours in 2008.

Project Name: Southeastern PA Floodplain Management Services
Name of Potential Recipient: U.S. Army Corps of Engineers, Philadelphia District
Location: Bucks, Chester, Delaware, Montgomery and Philadelphia Counties, PA
Amount: \$250,000

Purpose: This study evaluates recent flooding events in Southeastern Pennsylvania that caused substantial damage and altered channel alignments over the last several years. The efforts of this project will further update FEMA Flood Insurance Rate Maps where applicable. Flood vulnerability analysis and flood inundation mapping products will also be developed where applicable. FY 2011 funds will allow for the continuation of the study evaluating recent flooding as a result of numerous storm events in the last several years. This project benefits taxpayers by evaluating flood damages, assessing problems and possible future actions, as well as better defining and communicating flood inundation through mapping tools for local governments to better plan and ensure safety of residents.

Project Name: Western Pennsylvania Flood Damage Reduction
Name of Potential Recipient: U.S. Army Corps of Engineers, Pittsburgh District
Location: All of western Pennsylvania within the Mahoning, Allegheny, and Upper Ohio River basins.
Amount: \$50,000

Purpose: Request will be used to finalize a reconnaissance report to prioritize known areas of chronic flood risk; prepare a Project Management Plan for a subsequent 50%/50% cost shared feasibility study; and execute Feasibility Cost Sharing Agreement(s) with non-Federal sponsor(s).

Project Name: Fairless Hills Turning Basin, Falls Twp, Bucks County, PA
Name of Potential Recipient: U.S. Army Corps of Engineers, Philadelphia District
Location: Fairless Hills, Bucks County, Pennsylvania
Amount: \$1,115,000

Purpose: The project site is situated along the Delaware River in Bucks County approximately 21 miles north of Philadelphia, near Bristol, PA. Funding would allow the initiation and completion of construction to deepen the Fairless Hills Turning Basin from 35 to 40 feet. The project will promote commercial navigation and in turn foster economic growth and job creation.

Project Name: Philadelphia Navy Yard Seawall Rehabilitation County, PA
Name of Potential Recipient: U.S. Army Corps of Engineers, Philadelphia District
Location: Philadelphia Navy Yard, Philadelphia, PA
Amount: \$1,000,000

Purpose: Funding will be used to repair a one-mile long portion of the seawall. The seawall protects adjacent buildings and associated infrastructure, including the U.S. Navy's billion-dollar power research facility.

Project Name: Lackawanna River at Olyphant, PA
Name of Potential Recipient: U.S. Army Corps of Engineers, Baltimore District
Location: Olyphant/Dickson City, Lackawanna County
Amount: \$1,000,000

Purpose: Funding is needed to identify solutions and costs to raise the Olyphant levee and to assess the impact of raising the levee on communities outside the line of protection: Dickson City, Blakely, and Throop. Funding is also needed to complete the decision document for Dickson City, which is authorized to have the same level of protection as Olyphant. The goal of the project is to provide 100-year level of flood protection to communities in Lackawanna County, including Olyphant and potentially Dickson City, Throop and Blakely.

Project Name: Home Energy Efficiency Research and Development Initiative
Name of Potential Recipient: Marywood University
Location: Scranton, Lackawanna County
Amount: \$552,000

Purpose: Marywood University intends to initiate a research and development project that will determine the viability of manufacturing in northeastern Pennsylvania net-zero energy homes – residential structures that produce as much energy from renewable sources as they consume. The project partners will design, manufacture, and test the use of renewable energy and energy-efficient technologies in a net-zero energy home (“N-ZEH”), a 1,000 square foot, residential,

high performance, green building prototype. We anticipate that upon completion of testing, the N-ZEH model could be replicated within the region. Marywood's new School of Architecture will be actively involved in the design and monitoring and after it is built in Scranton's Keystone Industrial Park, it will be transported to Marywood for ongoing data collection and analysis as part of the funded project. The proposed initiative and its related research goals are important components of the federal research and development agenda for net-zero energy, high performance green buildings.

Project Name: Mid-Atlantic River Basin Commissions Initiative
Name of Potential Recipient: Mid-Atlantic River Basin Commissions (Susquehanna River Basin Commission; Delaware River Basin Commission; Potomac River Basin Commission)
Location: Pennsylvania, New York, New Jersey, Delaware, Maryland, Virginia, West Virginia, and the District of Columbia.
Amount: \$2,365,000.00 (allocated as follows: SRBC: \$1,000,000; DRBC: \$715,000; ICPRB: \$650,000)

Purpose: Program funding will be used to meet the Federal Government's equitable funding requirements pursuant to the compacts that created the DRBC, SRBC and ICPRB and in accordance with the Water Resources Development Act of 2007 (P.L. 110-114, Section 5019). The commissions undertake important water resources management functions in their respective basins.

Congress recognized that the water resources of these basins were assets not only to the member states, but were also regional and national assets that require comprehensive management. It also recognized the joint responsibility of the federal government and the states to support the commissions, and provided funding for several decades. As demand for water grows, the federal government should recognize its joint responsibility and re-establish funding for the commissions.

Project Name: Marcellus Shale Research Initiative
Name of Potential Recipient: Bucknell University
Location: Lewisburg, Union County
Amount: \$1,250,000

Purpose: Bucknell University is seeking funds for the "Bucknell University Marcellus Shale Research Initiative." This critical initiative will provide interdisciplinary energy research and regional outreach efforts in response to the emergence of the current massive effort to tap the reserves of natural gas found within the Marcellus Shale formation. The primary objective of this request would be to support Bucknell faculty and regional partners in the analysis of the scientific, economic, and social impact of natural gas drilling within the Marcellus Shale region. This balanced science based research and outreach project will be focused on environmental watershed impact analysis, potential positive and negative impacts of drilling on rural

communities, mineral rights issues, and the potential need for environmental remediation of water resources.

Project Name: Novel Approaches to Carbon Capture for Sequestration
Name of Potential Recipient: Penn State University
Location: University Park, Centre County
Amount: \$2,000,000

Purpose: This project focuses on the development of a novel system for the capture of the greenhouse gas carbon dioxide (CO₂) for sequestration. The major task is to develop an advanced CO₂ sorbent and a new process for more efficient and environmentally friendly capture and separation of CO₂ from flue gases of power plants, which is a critically important step for carbon sequestration. Specifically, the proposed project will develop a novel and robust “molecular basket” sorbent based on nano-structured materials containing immobilized functional polymers that will have a high capacity for CO₂ capture, and a rapid-cycle process for CO₂ capture and separation from flue gas of power plants.

Capture and sequestration of carbon dioxide (CO₂), a greenhouse gas, is important for sustainable development of energy and economy without negative impact on the environment. The prospect of global climate change due to rapid rise of CO₂ concentration in the atmosphere has become a serious concern of the public in the U.S. and the world. CO₂ capture and sequestration are important options for the control and mitigation of CO₂ emissions into the atmosphere. One source of CO₂ emissions is due to fossil fuel utilization at sources such as fossil fuel-based power plants for electricity generation.