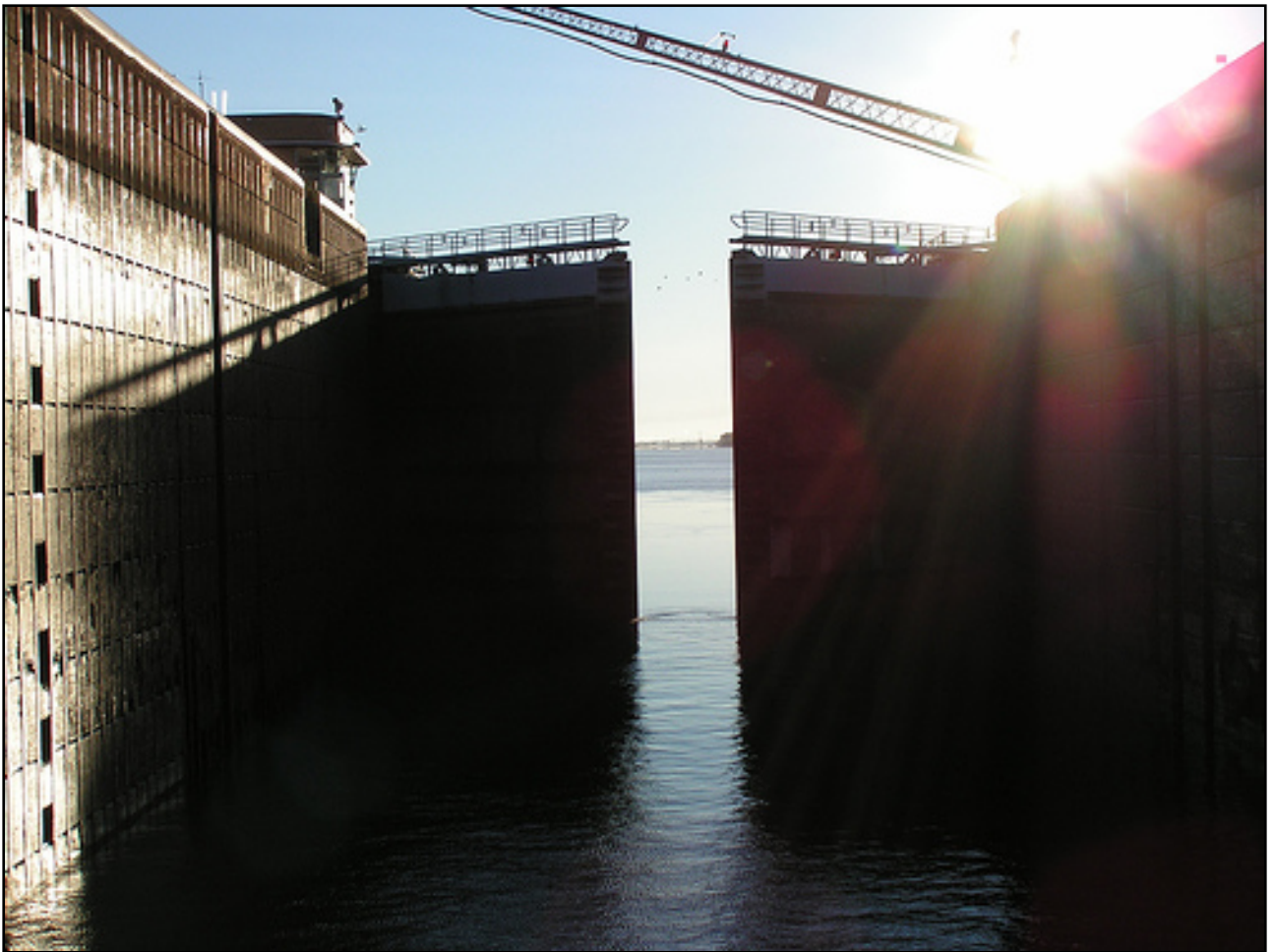




Saint Lawrence Seaway Development Corporation

Seaway Asset Renewal Program (ARP) Semiannual Report to Congress



September 30, 2009

SUMMARY

As directed in the Conference Statement of H.R. 1105 (Fiscal Year (FY) 2009 Omnibus Appropriations Act), Division I (Transportation, Housing and Urban Development, and Related Agencies), the Saint Lawrence Seaway Development Corporation (SLSDC) is providing a semiannual report to the House and Senate Appropriations Committees on the status of its Asset Renewal Program (ARP). Semiannual status reports will be sent to the two Committees over the life of the program. In addition, Committee staff will be updated throughout the year, as needed, on any significant changes to the plan's schedule, estimates, or execution.

On March 11, 2009, the President signed the "Omnibus Appropriations Act, 2009", which included \$17.5 million for FY 2009 to complete Year One projects as part of the SLSDC's 10-year ARP. The ARP was developed by the SLSDC to rehabilitate the U.S. Seaway's navigation infrastructure, the Seaway International Bridge, and Corporation facilities in Massena, N.Y. The ARP represents the first time in the SLSDC's 50-year history that a comprehensive effort has been undertaken to reinvest and modernize the U.S. Seaway infrastructure. Without such significant reinvestment in these perpetual transportation assets, it would become increasingly difficult to maintain the future availability and reliability of the Seaway (currently at greater than 99 percent). An economic analysis concluded that the economic impact of a shutdown of either of the two U.S. locks would result in a loss to those dependent on this mode of transportation of \$1.3-\$2.3 million per day, depending on the length of the delay.

Although Year One (FY 2009) ARP funding was not made available until the end of March, the SLSDC obligated \$17.6 million for 21 Year One projects prior to September 30. Year One projects obligated in FY 2009 included: maintenance dredging in the U.S. portion of the navigation channel (\$4.3 million); lock culvert valve machinery upgrade to hydraulic operation (\$4.1 million); structural rehabilitation and corrosion prevention work on the Seaway International Bridge (\$3.1 million), which the SLSDC co-owns with the Federal Bridge Corporation of Canada; and upstream miter gate rehabilitation at Eisenhower Lock (\$2.2 million), as well as various other structural and equipment repairs and/or replacement. None of the ARP projects will result in increases to the authorized depth or width of the navigation channel or to the size of the lock facilities.

Also in FY 2009, the Government Accountability Office (GAO) initiated a review of the ARP and the SLSDC's methodology used to develop the plan's baseline estimates. A final report on GAO's findings and recommendations is expected in the spring of 2010.

On February 26, 2009, the SLSDC announced that the President's FY 2010 Budget Request to the Congress included \$16.3 million to fund projects included in Year Two of the ARP. The request level was enacted with the passage of the FY 2010 Consolidated Appropriations Act on December 16, 2009 (P.L. 111-117).

The ARP supports the engineering considerations highlighted in the *Great Lakes St. Lawrence Seaway Study* (published in November 2007) and follows the asset renewal activities currently underway on the Canadian Seaway locks. Beginning with the passage of the Canada Marine Act in 1998, the Canadian government started to address the asset renewal needs of its 13 Seaway locks, including the eight Welland Canal locks that are over 75 years old.

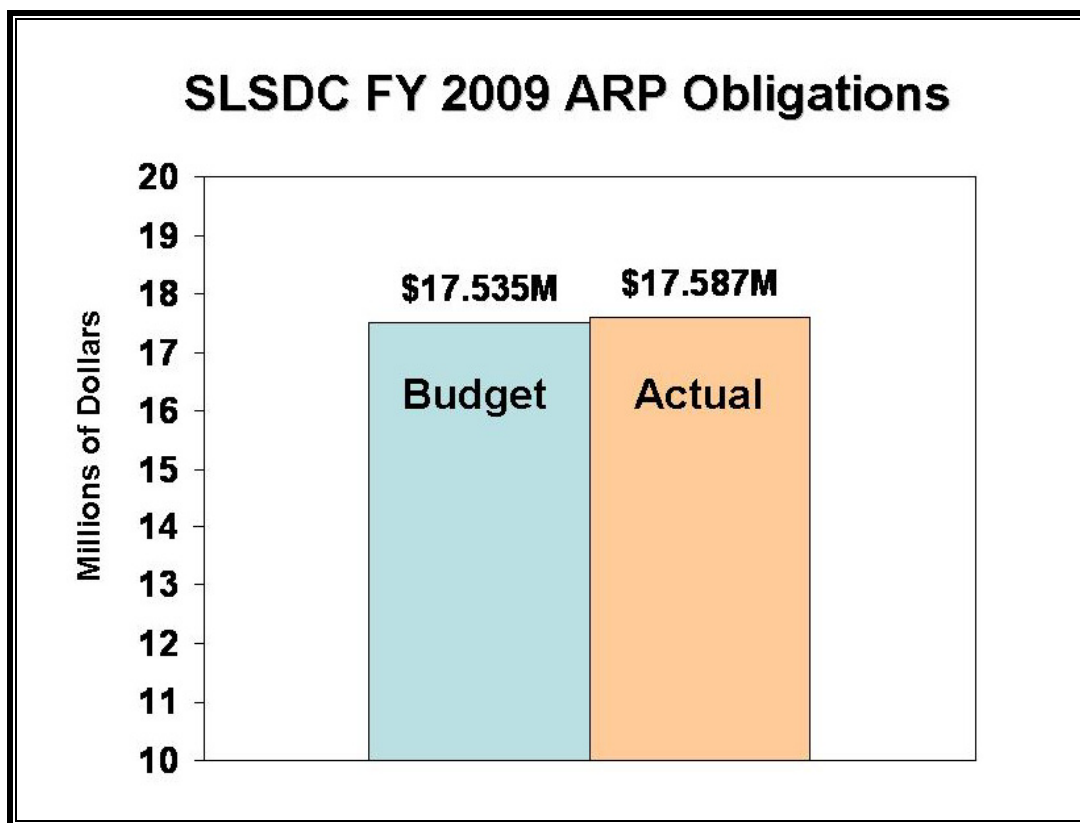
Original ARP baseline project estimates were developed by the SLSDC using four criteria, as applicable: (1) historical costs for similar work completed previously by the SLSDC, (2) consultation with the U.S. Army Corps of Engineers (USACE) for similar work it completed at other U.S. locks, (3) consultation with the SLSMC for similar work it completed at the Canadian Seaway locks, and (4) utilization of data from RSMeans, which serves as North America's leading supplier of construction cost information.

This semiannual report provides the Appropriations Committees with updates on (1) final obligations made in FY 2009 for Year One ARP projects, (2) GAO's review of the program, and (3) the latest five-year estimates for ARP projects in FYs 2010-2014.

PROJECT UPDATES (as of September 30, 2009)

With the passage of the FY 2009 Omnibus Appropriations Act on March 10, 2009 and its signing into law on March 11, 2009, the SLSDC's ARP was officially initiated.

Although Year One (FY 2009) ARP funding was not made available until the end of March, the SLSDC fully obligated the program by September 30, obligating \$17.6 million for 21 Year One projects (*see FY 2009 summary of ARP obligations on page 18*). FY 2009 obligations were made using \$17.535 million from the SLSDC's annual appropriations (Harbor Maintenance Trust Fund) and \$52,000 from the Corporation's non-federal revenues.



An update on each of the FY 2009 funded ARP projects follows:

Project No. 1: Snell Lock – Replace Fendering Downstream Guidewall Extension

General Description: This project is to replace the composite fendering on the downstream guidewall extension at Snell Lock. The existing composite fenders were a trial design installed nearly 20 years ago which have become very difficult/expensive to maintain and are in need of replacement to insure that vessels using this approach wall or the approach wall are not damaged due to the condition of the existing fendering.

Type of Project¹: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Baseline Estimate: \$300,000

FY 2009 Total Obligations²: \$241,600

Update (as of September 30, 2009): In the spring of 2009, the SLSDC completed an internal inspection to determine the quantity of each type of fender required. A solicitation, with various quantity options, was advertised on May 19, 2009 and 11 bids were received. An award was made on July 15, 2009 to Fort Worth Gasket and Supply, Haltom City, Texas, for the base option of \$241,600 for 100 pieces of fendering to be installed at Snell Lock. Installation of the fendering will be completed by in-house staff in 2009 and 2010.

Project Nos. 3/14: Both Locks – Rehabilitate Mooring Buttons, Pins and Concrete along Guidewalls and Guardwalls / Corporation Facilities – Replace Paving and Drainage Infrastructure

General Description: Project No. 3 is a multi-year initiative to rehabilitate the upstream and downstream approach walls at both locks. These are mass concrete monolithic structures with vessel mooring buttons located behind them for transiting vessels to tie to. Since they were constructed, the concrete lifts/blocks have been dislodged and concrete damaged by vessel impact and the mooring buttons have settled such that they collect water/ice, making them difficult to use. The rehabilitation work will include pinning dislodged lifts, repairing damaged

¹ The SLSDC's ARP includes capitalized projects and equipment as well as non-capitalized, maintenance-related projects. Capital projects and equipment are defined as those of a durable nature that may be expected to have a period of service of more than a year without material impairment of its physical conditioning and includes equipment, improvements and modifications to existing structures. Non-capital maintenance projects include those that do not materially add to the value of the property nor appreciably prolong the life of the infrastructure but merely keeps it in an ordinarily efficient operating condition. Expenditures for these maintenance projects are recognized as operating costs.

² Contracts and purchases detailed in the update section for each ARP project may not add up to the total obligations listed for the project. In FY 2009, there were miscellaneous expenses across the ARP for small purchase orders, travel, supplies, etc., totaling \$85,440 that are not detailed in this report.

concrete and raising mooring buttons that have settled to improve the serviceability of the approach walls. Project No. 14 is for improving the pavement and drainage along lock approach walls, Corporation roadways and public parking and work areas at all Corporation facilities. In Upstate New York, the damage to pavements caused by winter conditions is significant and repairs often require complete replacement of the pavement down to and including the base materials.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Baseline Estimate: \$1.2 million (*combination of \$250,000 for No. 3 and \$950,000 for No. 14*)

FY 2009 Total Obligations: \$921,837

Update (as of September 30, 2009): For FY 2009, the SLSDC decided to combine ARP Projects Nos. 3 and 14 and award to a single contractor. This was done because the majority of the



Paving and mooring button rehabilitation at the upper guidewall at Snell Lock

paving and drainage improvement work was to be completed along the approach walls at both locks and to successfully complete this work, required that the work to raise settled mooring buttons be completed concurrently. The focus of FY 2009 work was replacing pavements and raising mooring buttons along the approach walls at both locks, with some minor paving repair in the parking lot at the Eisenhower Lock Visitors' Center.

Three contracts were awarded under this project in FY 2009:

(1) preparation of designs, specifications and drawings for pavement and mooring button rehabilitation by one of the SLSDC's three architectural/engineering (A/E) firms on contract³, Hatch Mott MacDonald, Buffalo, N.Y. (\$20,600 – lowest of three quotes); (2) Visitors' Center paving by Grass River Asphalt and Paving, Inc., Canton, N.Y. (\$19,408 – lowest of three quotes); and (3) lock approach wall pavement and mooring button rehabilitation by Barrett

³ The SLSDC's procurement division, in working with the agency's engineering team, recognized the need to be able to award ARP-related support contracts quickly without the time constraints of traditional federal contracts. The SLSDC expects to use architecture/engineering (A/E) contractors to receive support and expert advice on project plans, specifications, and drawings throughout the ARP 10-year timeframe. To that end, the SLSDC awarded indefinite delivery contracts in FY 2009 to three A/E firms to support the ARP – Hatch Mott MacDonald, Buffalo, N.Y., Parsons Brinckerhoff (PB) Americas, Inc., Buffalo, N.Y., and Aubertine and Currier, Watertown, N.Y. As support work is needed, the SLSDC will request proposals from the three firms in a streamlined process, with negotiations, if required, limited to only those firms. The policies and procedures for awarding indefinite delivery contracts are contained in Federal Acquisition Regulation (FAR), Subpart 16.5.

Paving Materials, Inc., Watertown, N.Y. (\$877,350 – lowest of four bids). The Visitors' Center paving repairs were completed in the summer of 2009, while the lock approach wall pavement and mooring button rehabilitation work was started by Barrett Paving in September 2009 and is expected to be completed between April and August 2010.

Project No. 4: Both Locks – Culvert Valve Machinery – Upgrade to Hydraulic Operation

General Description: This project is for replacing the operating machinery for the north side culvert valves at both locks, which are utilized for filling and emptying the locks. The second phase in future years will address the south side valves at both locks. This machinery is nearly 50 years old and the open gearing is exhibiting macropitting. This equipment needs to be upgraded to insure its continued reliability. Failure of this equipment will cause delays to shipping while repairs are made. Due to the fact that this machinery was custom made and spare parts are limited, repairs to multiple pieces of machinery using the spare parts that are on-hand would not be possible. The upgrade will include new hydraulic operating machinery to match the upgrades made at the Canadian Seaway locks and other similar locks in the United States.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Baseline Estimate: \$2,000,000

FY 2009 Total Obligations: \$4,117,050

Update (as of September 30, 2009): The SLSDC contracted with the USACE for a final design, specifications, drawings, and cost estimate to be used in soliciting bids for the culvert valve machinery upgrade (\$40,000 in FY 2009; total cost over several years in working with the USACE on this project was \$229,140).

The SLSDC received two bids on the project, with a low bid of \$4,714,736 by Hohl Industrial Services, Inc., Tonawanda, N.Y., more than \$2 million above the USACE's latest cost estimate. The project was awarded to Hohl Industrial Services for \$4,077,050, following an internal review by SLSDC officials of the bid cost breakdown and subsequent reductions to the scope. Savings were found based on using the same contractor on ARP Project No. 31 (\$200,000), reducing the amount of concrete work prescribed (\$351,000), and removing upgraded valve struts from the project's scope (\$88,000). Some of the concrete work included in the original bid will be completed using SLSDC in-house staff beginning in January 2010. There is a 10-12 month lead time for ordering the parts for this project so contractor work is expected to commence following the 2010 navigation season (January 2011).

Following the higher-than-expected bid, the SLSDC consulted with the USACE and learned that they did not account for the tight timeframe, the winter conditions in which the work will be completed, and the penalties that will be assessed if the work is not completed on time⁴⁴. The USACE has also experienced higher than anticipated bids for its similar projects involving fabricated steel parts and machinery over the past six months.

Project No. 5: Both Locks – Rehabilitate and Insulate Winter Maintenance Lock Covers

General Description: This project is for rehabilitating and insulating the roof cover modules utilized to cover Eisenhower and Snell Locks when major winter maintenance projects are planned. These covers are over 40 years old and insulating them would save on funds used to heat work areas when required for such temperature sensitive projects as placing concrete and painting steel structures.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Baseline Estimate: \$250,000

FY 2009 Total Obligations: \$46,698

Update (as of September 30, 2009): In FY 2009, the SLSDC contracted for fabrication and installation of additional roof cover access panels, as well as purchasing steel and other materials for in-house staff to modify roof covers. A total of 23 cover panels were fabricated and installed by B-S Industrial Contractors, Inc., Gouverneur, N.Y. for \$32,200 and an order for steel and other materials was awarded to Jeffords Steel and Engineering Co., Potsdam, N.Y. (\$13,467 – lowest of two quotes). In addition, the SLSDC advertised for a curtain wall to be designed and fabricated for an estimated \$75,000. Unfortunately, no bids were received for the job. The purchase of additional cover materials was deferred due to the increased costs associated with higher priority ARP projects (Nos. 4 and 31).

⁴⁴ In order to ensure that the St. Lawrence Seaway opens to navigation as scheduled, the SLSDC included several incentives and penalties for contractors working in the lock chamber on ARP projects during the winter months. For example, Project Nos. 4 and 31 included incentives of \$20,000 and \$10,000 for work completed and equipment removed by March 9 and 10, 2011, respectively. Conversely, daily penalties of \$25,000 (March 11), \$50,000 (March 12 and 13), and \$100,000 (March 15 and beyond) were also included. In addition, the SLSDC reserved the right to place additional personnel and/or equipment necessary to complete the work at the expense of the contractor.

Project No. 6: Seaway International Bridge – Perform Structural Rehabilitation and Corrosion Prevention

General Description: This project is for rehabilitation of the structural components of the south span bridge between Roosevelttown, N.Y., and Cornwall Island, which crosses the Seaway navigation channel. The bridge, which annually accommodates more than 2.5 million vehicles, was opened to traffic in 1962 and is in need for significant rehabilitation. This project, scheduled for completion after four years of work, is designed to stop the corrosion currently experienced on many portions of the bridge structure and prevent the need for large-scale structural or even bridge replacement in the future. The SLSDC owns 68 percent of the south span bridge and the budget request reflects the U.S. prorated amount for the project. The Canadian Federal Bridge Corporation (FBC) owns the remaining 32 percent of the bridge and will fund its share.

Type of Project: Capital Project

Mission Objective: Tunnel and Bridge Maintenance

FY 2009 Baseline Estimate: \$2,000,000

FY 2009 Total Obligations: \$3,102,878

Update (as of September 30, 2009): The Canadian Seaway International Bridge Corporation (SIBC), which operates and maintains the Seaway International Bridge for the two owners (SLSDC and FBC), opened bids for the three-year project on August 28, 2009, and made an award to Abhe and Svoboda, Inc., Prior Lake, Minn., for the first two phases. SLSDC officials and engineering staff worked closely with the SIBC in the bid development and awarding phases. The SLSDC obligated \$3.1 million to the SIBC for its portion to complete Phases I and II. Phase I will focus on the U.S. side span and tower, while Phase II will concentrate on the U.S. viaduct. Planning and design work for the suspended platforms required to work under the bridge deck has commenced and on site work may commence in late fall 2009 or early spring 2010. The SLSDC and SIBC entered into a Memorandum of Understanding (MOU) for the multi-year project, which details the estimates for the project and the process for the SLSDC to obligate funds to the SIBC for the project.

Project No. 8: Floating Navigational Aids – Upgrade/Replace

General Description: This is an ongoing program to replace floating navigational aids/buoys and winter markers that have been damaged over the years, on an as required basis. The Corporation is responsible for approximately 100 buoys and 50 winter markers.

Type of Project: Capital Project

Mission Objective: Waterway Management

FY 2009 Baseline Estimate: \$60,000

FY 2009 Total Obligations: \$61,254

Update (as of September 30, 2009): In FY 2009, the SLSDC purchased 30 green and 30 red flashers to be installed by in-house staff on floating navigational aids. The new flashers/lanterns are specially designed to increase beam divergence while consuming less power. The purchase was made through Tideland Signal of Lafayette, La., for \$61,254, using the General Service Administration's (GSA) Federal Supply Schedule.

Project No. 9: Corporation Equipment – Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment

General Description: This is an ongoing program to replace heavy and light equipment, vehicles and shop equipment as it becomes worn out and unserviceable. Heavy and light equipment includes such items as a crane, dump truck, snow plow, backhoe, grader, front end loader and shop equipment such as a lathe, milling machine and drill press.

Type of Project: Capital Equipment

Mission Objective: Lock Operation Upgrade and Maintenance / Waterway Management

FY 2009 Baseline Estimate: \$1,750,000

FY 2009 Total Obligations: \$1,574,504

Update (as of September 30, 2009): In FY 2009, the SLSDC purchased seven items under this project, including a 170-ton capacity all terrain crane for \$1,358,888 from Empire Crane Co, North Syracuse, N.Y. (best value selection of the eight bids received). In order to transport the crane's counterweights, the SLSDC also purchased a used container trailer (\$11,550 from Fleet Equipment Center, Inc., Bolingbrook, Ill. – one bid) and a used truck (\$30,500 from Lapine Truck Sales and Equipment, Co., Cleveland, Ohio – lowest of five bids). In addition to the crane, truck, and trailer, the SLSDC also purchased a zero-turn mower (\$12,216 from G&G Sales, Inc., Moundridge, Kan. – lowest of three quotes on the GSA Federal Supply Schedule), rotary cutter (\$11,096 from EKA (Cushman) Inc., Stone Mountain, Ga. – lowest of three quotes on the GSA Federal Supply Schedule), and a snowplow (cab/chassis and plow) (two purchases totaling \$140,412 from Navistar International Corp., Albany, N.Y.).



SLSDC's new 170-ton capacity all terrain crane

Project No. 10: Both Locks – Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities

General Description: This project is for upgrading the infrastructure that supplies power to Eisenhower and Snell Locks and to the Corporation's Maintenance Facility. The power is furnished directly from the Moses-Saunders Power Dam over infrastructure that is nearly 50 years old. The loss of power from the Moses-Saunders Power Dam makes it necessary to utilize diesel generators, which are expensive to operate, to continue operation of Eisenhower and Snell Locks and the Maintenance Facility.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Baseline Estimate: \$75,000

FY 2009 Total Obligations: \$19,594

Update (as of September 30, 2009): In FY 2009, the SLSDC paid the New York Power Authority (NYPA) \$19,594 for its work throughout the year on Corporation power-related infrastructure rehabilitation. This is a recurring annual ARP project with expenditures dependent on NYPA plans and work completed. The SLSDC met with NYPA officials late in FY 2009 to discuss future power infrastructure work and more significant work is expected to take place over the next several years.

Project No. 12: Corporation Equipment – Upgrade/Replace Floating Plant

General Description: This is an ongoing program to rehabilitate and/or replace the Corporation's floating plant which is utilized for maintaining the locks and navigation channels. This multiyear project includes plans to replace the tug and buoy tender barge; purchase a smaller tug for more efficient operations where the capabilities of the larger tug are not required, as well as a small boat for emergency response and a small scow for transporting dredged spoil for emergency/spot dredging; and rehabilitate the Corporation's crane barge/gatelifter, which would have to be utilized if a miter gate was damaged and had to be replaced.

Type of Project: Capital and Non-Capital Maintenance Projects

Mission Objective: Lock Operation Upgrade and Maintenance / Waterway Management

FY 2009 Baseline Estimate: \$2,000,000

FY 2009 Total Obligations: \$678,745

Update (as of September 30, 2009): The SLSDC made several purchases under this project for new marine-related equipment and made repairs and improvements to its buoy tending barge, used at the start and end of each navigation season, while at drydock. The Corporation delivered

its buoy barge to a Canadian drydock (Heddle Marine Services, Inc., Hamilton, Ont. – only bid received.) for inspection and repair of the vessel’s hull and components located below the waterline. The contractor blast cleaned and painted the hull, replaced damaged fendering, installed a new fathometer, and inspected the bow thruster propellers and fuel tanks. The final amount awarded to Heddle Marine for the project was \$259,189.

In addition, the SLSDC purchased a new hydrographic survey system and boat, motor, and trailer totaling \$337,121 to provide a portable platform from which to perform hydrographic surveys (*see purchase details below*).

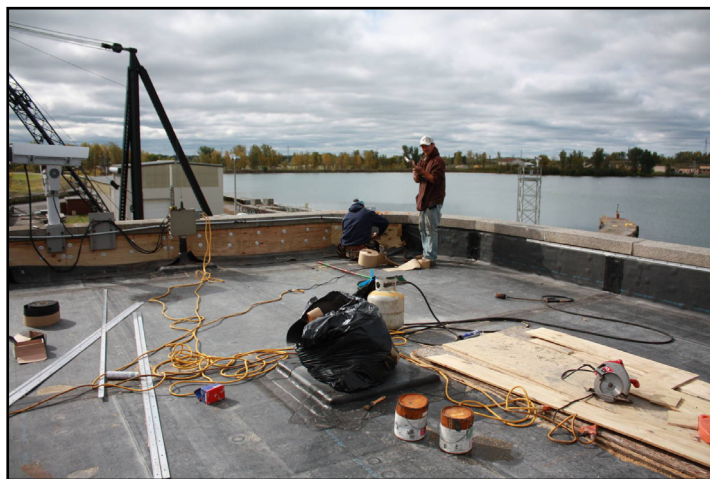
- 27-foot hydrographic survey vessel with trailer (\$262,355)
SeaArk Marine, Inc, Monticello, Ark. (lowest of four bids using GSA’s e-Buy program)
- Echo sounder (\$10,890)
Reson, Inc., Goleta, Calif. (sole source)
- Hydrographic survey software (\$11,030)
HYPACK, Inc., Middletown, Conn. (sole source)
- Soundbar digital bar checker (\$7,700)
Ocean Marine, Chesapeake, Va. (two quotes received; awarded to U.S. woman-owned firm, other quote was from a Canadian firm)
- Software subscription and training (\$6,750)
Caris USA, Alexandria, Va. (sole source)
- Dual frequency sonar equipment and communications (\$38,396)
L3 Communications/Klein Associates, Inc., Salem, N.H. (best value selection of the two quotes on the GSA Federal Supply Schedule)

As of September 30, many of the hydrographic survey system components have been received and fabrication of the boat has begun. Delivery of the boat is expected January 1, 2010. The SLSDC also purchased a Boston Whaler boat from Brunswick Commercial and Government Products, Edgewater, Fla., for \$30,766 (lowest quote on the GSA Federal Supply Schedule). The Whaler will be used by the Marine Services Division to perform maintenance on fixed and floating navigational aids in the river, transport personnel during vessel groundings, and deploy oil boom.

The SLSDC also completed the solicitation process for two additional items under this project: (1) an emergency response boat (low offer of \$93,227); and (2) a sectional spud barge (low bid of \$846,756). Due to the increased costs associated with higher priority projects (Nos. 4 and 31), these two purchases were deferred until FY 2010.

Project No. 13: Corporation Facilities – Replace Roofs

General Description: This project is for replacing the roofs on the Corporation's various buildings in Massena, N.Y., as required. Most of the roofs are currently insulated ethylene



propylene diene monomer (EPDM) roofs with service lives and warranties of 15-20 years and are reaching the end of those timeframes.

Type of Project: Capital Project

Mission Objective: Facility Upgrade and Maintenance

FY 2009 Baseline Estimate: \$50,000

FY 2009 Total Obligations: \$143,949

Roofing work at one of the Snell Lock control houses

Update (as of September 30, 2009): In

FY 2009, the SLSDC awarded a contract to Premier Roof Systems, Harrisville, N.Y. for \$143,949 to replace the roofs on both the upstream and downstream control house at Snell Lock. Work was started in July 2009 and completed in mid-October. Final costs were above the estimate due to additional work required to repair unexpected deterioration of the brick parapet behind the existing roof membrane. The photo above shows the roofing work at one of the Snell Lock control houses.

Project No. 15: Eisenhower Lock Highway Tunnel – Rehabilitate

General Description: This is an ongoing project to maintain the highway tunnel which goes through the upper sill area of Eisenhower Lock to provide the only access to the north sides of both Eisenhower and Snell Locks, to NYPA's Robert Moses Power Project and to the New York State Park on Barnhart Island. This project includes tunnel lighting upgrade, grouting to limit the water leaking into the tunnel, replacing damaged/missing tiles from the walls and ceiling, replacing deteriorated/damaged gratings and railings, stabilizing/ repairing wingwalls at the tunnel approaches and clearing tunnel drains which are becoming plugged with concrete leachate products. Due to the fact that this tunnel is the only means of access to the facilities noted above, any problems that would make it necessary to close the tunnel for repair would have very significant impacts.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Tunnel and Bridge Maintenance

FY 2009 Baseline Estimate: \$250,000

FY 2009 Total Obligations: \$26,636

Update (as of September 30, 2009): The SLSDC's plan for FY 2009 was to begin improvements to the tunnel's lighting and address the on-going leakage problems with a significant grouting contract. The SLSDC awarded a \$26,636 contract to PB Americas, Inc., Buffalo, N.Y., to provide an expert analysis and report on options for upgrading the lighting and for limiting the water leaking into the tunnel. The lighting upgrade was deferred until FY 2011 and a solicitation was issued for sealing the joints under the roadway. The work was awarded to Fiacco and Riley Construction, Inc., Norwood, N.Y., for \$312,730. Instead of making the award in FY 2009, the SLSDC deferred the project until early FY 2010 in order to fund the higher priority lock-related projects that were above the estimates.

Project No. 16: Seaway System – Upgrade GPS/AIS/TMS Technologies

General Description: This project is to expand the use of the Seaway's Global Positioning System (GPS)/ Automatic Identification System (AIS) navigation technologies, which are incorporated into the Seaway's binational Traffic Management System (TMS). Future upgrades will further improve the safety for vessels transiting the Seaway. Plans are to use these technologies to enable vessels to better identify hazards at times of limited visibility.

Type of Project: Capital Project

Mission Objective: Waterway Management

FY 2009 Baseline Estimate: \$100,000

FY 2009 Total Obligations: \$100,997

Update (as of September 30, 2009): Projects in FY 2009 included the purchase of two portable weather data tracking stations to be used upriver with the Seaway's AIS system. The systems, which will provide SLSDC vessel traffic controllers with real-time weather/visibility conditions along the St. Lawrence River, were purchased from Vaisala, Woburn, Mass. (\$52,690 under sole source purchases). The first unit was tested and installed at the Thousand Islands Bridge. Testing of the second unit was completed and will be installed in early FY 2010 at the U.S. Coast Guard station at Alexandria Bay, N.Y., after additional communications work is completed. The SLSDC also purchased a radar beacon (SeaBeacon racon) for one of its lighted buoys for \$32,389 from Tideland Signal Corp., Lafayette, La. (purchased on GSA's Federal Supply Schedule), and an enclosure for installation of a wind monitor at Snell Lock from K&K Systems, Inc., Verona, Miss., for \$5,460 (lowest of three quotes).

Project No. 17: Navigation Channels – Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments

General Description: This project is for dredging of the navigation channel to remove sediments to maintain the design grade for the channel bottom. The Corporation does not possess the



Dredging operations in the intermediate pool between the Eisenhower and Snell Locks began in October 2009

resources in-house to complete major dredging operations; therefore, dredging activity of this magnitude must be completed by contractors. The New York State Department of Environmental Conservation required that the dredged spoils from one of the areas be taken to an off-site disposal facility. This significantly increases the costs because of the requirement for hauling and disposal of the dredged sediments. If the navigation channel bottom is not maintained at the design grade, the maximum permissible draft in the Seaway would have to be reduced making it necessary for vessels to carry less cargo thereby impacting the competitiveness of the Seaway System.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Waterway Management

FY 2009 Baseline Estimate: \$5,000,000

FY 2009 Total Obligations: \$4,279,556

Update (as of September 30, 2009): The SLSDC successfully awarded a contract to complete maintenance dredging for both the intermediate pool (between Eisenhower and Snell Locks) and the international tangent section to the east of Snell Lock. All required permits were received during the year and an award was made to White Lake Dock and Dredge, Inc., Montague, Mich., to dredge both sections (115,000 cubic yards in the intermediate pool and 3,200 cubic yards at the international tangent). The final award made to White Lake was for \$3,690,700, based on the fact that there was no requirement to dispose of any dredged spoils as hazardous waste. The original low bid of \$4,180,700 was the only bid received for the project.

White Lake began dredging the intermediate pool in early October 2009 and expected to complete the project between September 1 and December 31, 2010. Dredged material from the intermediate pool is being deposited at an upland spoil site north of the upstream guidewall at Snell Lock. Dredging of the international tangent is not expected to begin this navigation season. Dredged materials from the international tangent will be transported to and disposed of at a permitted solid waste facility.

A contract was also awarded to PB Americas, Inc., Buffalo, N.Y., for \$541,829 to perform the pre- and post-dredge surveys for determining the amount of material removed from the navigation channel for payment purposes and to perform the inspection services to insure conformance with the project permits and specifications. In addition, sediment sampling and testing services were provided by Aqua Survey, Inc., Flemington, N.J., for \$46,918 (lowest of two bids). The test results indicated that the dredged spoils from the international tangent could be disposed of as a non-hazardous solid waste.

Project No. 31: Both Locks – Rehabilitate Upstream Miter Gates

General Description: This project is to completely rehabilitate the miter gates at the upstream end of both Eisenhower and Snell Locks. This includes replacing worn and/or damaged components including the miter and quoin contact blocks, pintles and bushings, and diagonals to insure proper functioning of the miter gates.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Baseline Estimate: \$1,500,000

FY 2009 Total Obligations: \$2,201,585

Update (as of September 30, 2009): Much like ARP Project No. 4, the SLSDC received higher-than-expected bids for this major lock-related capital project. On September 16, the SLSDC reviewed the two bids received, with the lowest bid from Hohl Industrial Services, Inc., Tonawanda, N.Y., for \$3,143,500, more than double the estimated amount of \$1.5 million. The project was awarded to Hohl Industrial Services for \$2,201,585, following an internal review by SLSDC officials of the bid cost breakdown and subsequent reductions to the scope. Significant savings are anticipated based on a plan to purchase materials for the project and provide them as Corporation-furnished items. These materials will be purchased in FY 2010. There is a 10-12 month lead time for ordering the parts for this project so contractor work is expected to commence following the 2010 navigation season (January 2011). The SLSDC believes there were several factors associated with the higher-than-expected bids: (1) the estimate did not include one-time costs for designing and fabricating equipment to lift, move and stabilize the gate because the cost for a similar Canadian Seaway project was utilized in preparing the estimate which did not include those one-time costs (i.e., it was not the first year for this type of project as it is for the SLSDC); (2) the SLSDC included penalties in its solicitation to insure that the project is completed prior to a set opening date for the Seaway (*see footnote 4 on page 6*), and (3) based on information received from the USACE, their recent experience with bids received for steel fabrications found they were consistently exceeding their estimates.

In addition to the 17 planned ARP projects, there were four additional out-year projects, not proposed or budgeted in the FY 2009 ARP baseline plan, that were partially funded in FY 2009:

Project No. 20: Both Locks – Upgrade Lock Status/Control

General Description: This project is for upgrading the lock/equipment status systems and the lock operating controls at both Eisenhower and Snell Locks. At present only the most critical components are monitored and controlled by the new computerized system. Adding control of some of the less critical components and more in depth monitoring of the status of all components will improve the effectiveness of preventive maintenance activities and result in increased reliability.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Total Obligations: \$8,558

Update (as of September 30, 2009): The SLSDC purchased differential gauges from Invesys Systems, Fairport N.Y. (\$6,195) and materials required for their installation. The gauges will be installed by SLSDC personnel to monitor the water differentials at the miter gates to prevent damage to a miter gate by opening or closing it against a head of water. It was important to begin this project in FY 2009 to ensure that any new gauges are installed properly in conjunction with other ARP projects.

Project No. 21: Snell Lock – Compressed Air Systems – Upgrade/Replace

General Description: This project is for replacing the compressors and corroded piping at the Snell Lock which provide compressed air for various systems at the locks, for maintenance work and for air curtains and bubblers utilized to control ice in and around the locks during the opening and closing of the navigation seasons. The ability of the existing compressed air systems to provide the required volumes and/or pressures reliably is becoming a problem.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Total Obligations: \$19,878

Update (as of September 30, 2009): A task order was awarded to Aubertine and Currier, Watertown, N.Y., to evaluate the existing compressed air systems at both locks and to provide a report with recommendations for upgrading these systems including preliminary cost estimates. This evaluation was funded in FY 2009 immediately following an air compressor failure in Snell Lock. The evaluation and recommendations had to be completed prior to making a decision with regards to repairing or replacing the failed compressor.

Project No. 24: Both Locks – Structural Repair – Grout Leaks in Galleries and Recesses

General Description: This project is for grouting cracks/joints in the concrete in the galleries and recesses at both Eisenhower and Snell Locks to reduce the infiltration of water into these areas. Water leaking into these areas accelerates the corrosion of the components/machinery and makes it difficult to perform maintenance on these items.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2009 Total Obligations: \$37,561

Update (as of September 30, 2009): Water leaking into the south side No. 2 fender bracing cylinder recess at Snell Lock had increased significantly and was becoming difficult to manage. Therefore, a contract was awarded to and the work for grouting this leak was completed by DeBrino Caulking Associates, Castleton, N.Y., in early May 2009.

Project No. 25: Corporation Facilities – Upgrade/Replace Fire Alarm/Protection Systems

General Description: This project is for replacing antiquated fire alarm and fire protection systems at Corporation facilities.

Type of Project: Capital Project

Mission Objective: Facility Upgrade and Maintenance

FY 2009 Total Obligations: \$4,148

Update (as of September 30, 2009): This project commenced in FY 2008 due to problems with the antiquated fire alarm systems at Corporation facilities. In FY 2009, SLSDC personnel continued to install new fire alarm systems. The funds were obligated to multiple vendors for materials required for the installation work.

Included in the FY 2009 total obligations was \$608,769 for engineering design and support from the three A/E firms under contract with the SLSDC. These costs are included in the individual projects. In addition to the \$17.6 million obligated in FY 2009 for Year One ARP projects, the SLSDC expended an additional \$474,000 in personnel compensation and benefits from its FY 2009 “Operations and Maintenance” program for staff time associated with ARP work.

Additionally, there were two projects scheduled to begin in FY 2009 that did not get funded – Project No. 7 (Culvert Valve – Replace with Single Skin Valve) (\$600,000) and Project No. 11 (Fixed Navigational Aids – Rehabilitate) (\$100,000).

For the culvert valve project, the solicitation was advertised as a small business set-aside and only one bid was received for \$911,965 for two valves. Due to the excessively high bid from only one bidder, SLSDC officials agreed to not award the contract in FY 2009 and re-advertise it to a wider range of businesses in early FY 2010. The rehabilitation of the SLSDC fixed navigational aids was deemed a low priority following reports by divers that the aids are not in need of immediate rehabilitation. Funding from these two projects was used to offset the higher-than-expected bids for lock-related projects (Nos. 4 and 31).

GAO REVIEW

In July 2009, the SLSDC was notified by the Government Accountability Office (GAO) that its Physical Infrastructure Branch would be conducting a review of the ARP. The review is in response to a congressional mandate contained in P.L. 111-8, Omnibus Appropriations Act, 2009.

The review focuses on three areas: (1) how the SLSDC developed and estimated costs of projects in its ARP; (2) to what extent the ARP covers all current or expected recapitalization needs; and (3) how effectively the SLSDC coordinated with its Canadian counterpart in developing a comprehensive and coordinated asset renewal program for all Seaway facilities.

Since the start of the review, the SLSDC has responded to numerous requests for information; participated in meetings, conference calls, and interviews; and hosted a GAO team at its operational facilities in Massena, N.Y., for a site visit and file review.

As of September 30, GAO's review was still in the discovery phase, with a final report expected to be issued in the spring of 2010.

ARP FIVE-YEAR ESTIMATES

As provided in the *U.S. St. Lawrence Seaway Asset Renewal Program (ARP) Capital Investment Plan (CIP), 2011-2015*, which was included in the FY 2011 budget request, the SLSDC provided estimates for executing the next five years of the ARP (*see pages 19-20*). In addition, the SLSDC's FY 2010 Budget Request to the Congress included \$16.3 million to fund projects included in Year Two of the ARP. This funding will allow for the work begun in FY 2009 to continue as well as to initiate several new rehabilitation projects.

For the FY 2011-2015 time frame, the Seaway ARP/CIP includes 41 projects and equipment estimated at \$97.2 million with total funding for each year of the plan constrained to funding targets for those years as estimated and approved by the Office of Management and Budget (OMB). It is also important to note that dollar amounts for ARP projects are "project feasibility" baseline estimates and can vary by an industry-recognized 20-30 percent. Project estimates and schedules may fluctuate at various points in the lifespan of the ARP and will be revised as needed.

Saint Lawrence Seaway Development Corporation

Fiscal Year 2009 Asset Renewal Program Financial Summary

ARP #	Description	FY 2009 ARP CIP Budget Estimate	Adjusted Internal Budget	FY 2009 Obligations (Actual)	Percent Obligated vs. Estimated
1	Snell Lock Replace Fendering Downstream Guidewall Extension	\$300,000	\$300,000	\$241,600	81%
2	Both Locks - Rehabilitate Downstream Miter Gates	\$1,500,000	\$0	\$0	----
3/14	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls / Replace Paving and Drainage Infrastructure (Combined with ARP No. 14)	\$250,000	\$1,200,000	\$921,837	77%
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	\$2,000,000	\$2,000,000	\$4,117,050	206%
5	Both Locks - Rehabilitate and Insulate Winter Maintenance Lock Covers	\$250,000	\$250,000	\$46,698	19%
6	Seaway International Bridge (SIBC) - Perform Structural Rehabilitation and Corrosion Prevention	\$2,000,000	\$2,000,000	\$3,102,878	155%
7	Both Locks -- Culvert Valves -- Replace With Single Skin Valves	\$600,000	\$600,000	\$0	0%
8	Floating Navigational Aids - Replace	\$60,000	\$60,000	\$61,254	102%
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles, and Shop Equipment	\$1,750,000	\$1,750,000	\$1,574,504	90%
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	\$75,000	\$75,000	\$19,594	26%
11	Fixed Navigational Aids - Rehabilitate	\$100,000	\$100,000	\$0	0%
12	Corporation Equipment - Upgrade/Replace Floating Plant	\$2,000,000	\$2,000,000	\$678,745	34%
13	Corporation Facilities - Replace Roofs	\$50,000	\$50,000	\$143,949	288%
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	\$250,000	\$250,000	\$26,636	11%
16	Seaway System -- Upgrade GPS/AIS/TMS Technologies	\$100,000	\$100,000	\$100,997	101%
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	\$5,000,000	\$5,000,000	\$4,279,556	86%
20	Both Locks - Upgrade Lock Status/Control (Moved from FY 2010 to FY 2009)	\$0	\$0	\$8,558	----
21	Compressed Air Systems (Preliminary Work for FY 2010 Project)	\$0	\$0	\$19,878	----
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses (Scheduled for FY 2010)	\$0	\$0	\$37,561	----
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	\$0	\$0	\$4,148	----
31	Both Locks - Rehabilitate Upstream Miter Gates at Snell (Originally in FY 2009 as No. 2 -- Downstream Gates)	\$0	\$1,500,000	\$2,201,585	147%
99	Engineering Design, Construction, Inspection, and Contracting Support (Administrative and Overhead)	\$300,000	\$300,000	\$608,769	203%
	Asset Renewal Program Total	\$17,535,000	\$17,535,000	\$17,587,028	100%

Note: The \$608,769 shown for Project No. 99 is a "non-add" item. The costs associated with using third-party service providers were included in the individual projects.

The SLSDC expended an additional \$474,000 in personnel compensation and benefits from its "Operations and Maintenance" program in FY 2009 for staff time associated with ARP work

U.S. Seaway Asset Renewal Program Capital Investment Plan FY 2011-2015										
Project No.	Project Title	Type of Project (1)	Mission Objective (2)	Time Work Completed (3)	FY 2011 Request	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Five Year Total
1	Snell Lock - Replace Fendering Downstream Guidewall Extension	CP	L	Other	\$10,000					\$10,000
2	Both Locks - Rehabilitate Downstream Miter Gates	MP	L	Winter	\$4,250,000	\$4,380,000				\$8,630,000
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	CP	L	Winter	\$4,500,000					\$4,500,000
5	Both Locks - Rehabilitate and Insulate Winter Maintenance Lock Covers	CP	L	Other		\$258,000				\$258,000
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	MP	T/B	Other	\$3,466,000					\$3,466,000
7	Both Locks - Culvert Valves - Replace with Single Skin Valves	CP	L	Other	\$300,000	\$305,000	\$306,000			\$911,000
8	Floating Navigational Aids - Replace	CP	W	Other	\$61,000	\$61,000	\$61,000	\$62,000	\$62,000	\$307,000
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	CE	L, W	Other	\$100,000	\$254,000	\$255,000	\$256,000	\$258,000	\$1,123,000
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	MP	L	Other	\$50,000	\$20,000	\$20,000	\$21,000	\$21,000	\$132,000
11	Fixed Navigational Aids - Rehabilitate	MP	W	Other	\$100,000	\$203,000	\$204,000	\$205,000	\$206,000	\$918,000
12	Corporation Equipment - Upgrade/Replace Floating Plant	CP	L, W	Other	\$505,000	\$1,524,000		\$18,455,000		\$20,484,000
13	Corporation Facilities - Replace Roofs	CP	F	Other	\$130,000	\$230,000	\$300,000	\$500,000	\$500,000	\$1,660,000
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	CP	L, F	Other	\$750,000		\$1,530,000		\$1,546,000	\$3,826,000
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	MP	T/B	Other	\$650,000		\$255,000		\$258,000	\$1,163,000
16	Corporation Technologies - Upgrade GPS/AIS/TMS	CP	W	Other	\$50,000		\$102,000		\$103,000	\$255,000
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	MP	W	Other					\$5,152,000	\$5,152,000
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	CP	L, F	Other	\$150,000	\$500,000				\$650,000
20	Both Locks - Upgrade Lock Status/Controls	CP	L	Other	\$75,000					\$75,000
22	Both Locks - Install Vessel Self Spotting Equipment	CP	L	Other				\$288,000	\$291,000	\$579,000
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	MP	L	Other		\$203,000				\$203,000
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	CP	L, F	Other		\$203,000		\$205,000		\$408,000
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	MP	F	Other		\$203,000		\$205,000		\$408,000
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	MP	L	Winter			\$2,040,000			\$2,040,000
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	MP	L	Winter		\$2,030,000			\$2,061,000	\$4,091,000
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	MP	L	Other	\$253,000	\$254,000	\$255,000			\$762,000
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	CP	L	Other		\$152,000	\$153,000	\$154,000	\$155,000	\$614,000

U.S. Seaway Asset Renewal Program Capital Investment Plan FY 2011-2015										
Project No.	Project Title	Type of Project (1)	Mission Objective (2)	Time Work Completed (3)	FY 2011 Request	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Five Year Total
34	Both Locks - Improve Ice Control	CP	L	Winter	\$100,000	\$228,000	\$230,000	\$231,000	\$232,000	\$1,021,000
35	Vessel Mooring Cells - Rehabilitate and Extend	CP	W	Other	\$100,000		\$1,020,000	\$1,025,000		\$2,145,000
36	Eisenhower Lock - Diffusers - Replace	MP	L	Winter		\$3,045,000				\$3,045,000
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	CP	L, W	Winter					\$800,000	\$800,000
38	Both Locks - Upgrade/Replace Emergency Generators	CP	L	Winter		\$508,000	\$510,000			\$1,018,000
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	CP	L	Other		\$203,000	\$204,000			\$407,000
40	Both Locks - Extend Guidewalls in Pool	CP	L	Other			\$1,530,000		\$1,546,000	\$3,076,000
41	Snell Lock - Install Ice Flushing System Technologies	CP	L	Winter		\$5,075,000	\$5,103,000			\$10,178,000
42	Both Locks - Miter Gates - Structural Rehabilitation	MP	L	Winter		\$761,000	\$765,000	\$513,000	\$515,000	\$2,554,000
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	CP	L	Winter			\$1,632,000		\$1,649,000	\$3,281,000
44	Both Locks - Ship Arrestor Machinery - Upgrade/Replace	CP	L	Winter				\$410,000	\$415,000	\$825,000
45	Flow Control Dikes - Rehabilitate	MP	W	Other					\$515,000	\$515,000
46	Both Locks - Guidewall Extensions - Rehabilitate	MP	L	Other					\$515,000	\$515,000
51	Corporation Facilities -- Upgrade Physical Security to Meet HSPD-12 Requirements	CP	F	Other	\$100,000	\$50,000	\$50,000			\$200,000
52	Eisenhower Lock Visitors' Center - Replace	CP	F	Other			\$5,000,000			\$5,000,000
	Total				\$15,700,000	\$20,650,000	\$21,525,000	\$22,530,000	\$16,800,000	\$97,205,000
(1) CP=Capital Project; CE=Capital Equipment; MP=Non-Capital Maintenance Project (2) L=Lock Operation Upgrade and Maintenance; W=Waterway Management; T/B=Tunnel and Bridge Maintenance; F=Facility/Equipment Upgrade and Maintenance (3) Winter=During Non-Navigation Season; Other=Other Than Non-Navigation Season Notes: (a) Estimates as of January 2010; (b) Dollar amounts for ARP projects are "project feasibility" estimates and can vary have an industry-recognized contingency of 20-30 percent; (c) FY 2009 Actuals include No. 99 in project totals. Amount shown is a "non-add" total.										