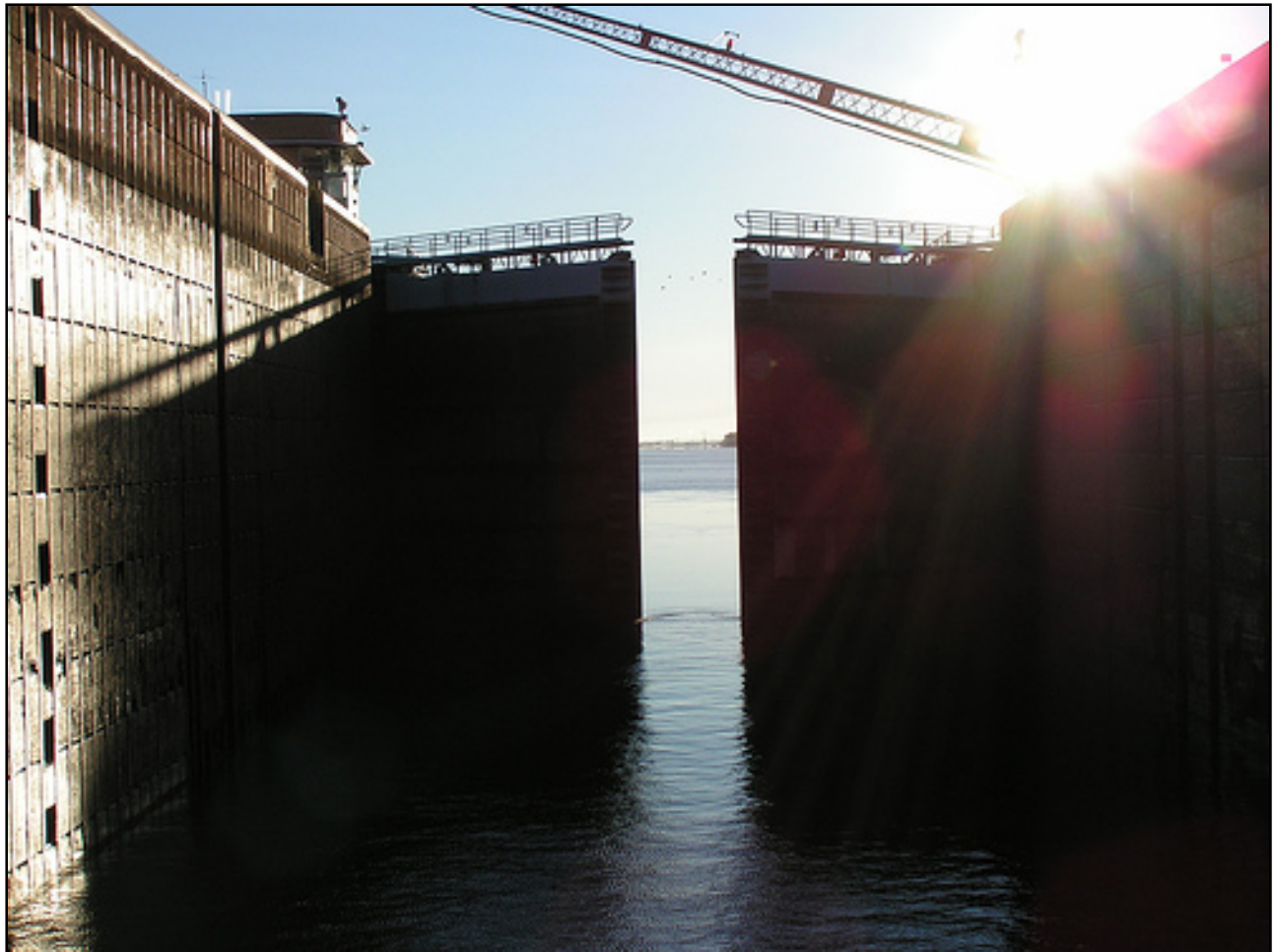




Saint Lawrence Seaway Development Corporation

Seaway Asset Renewal Program (ARP) Annual Report to Congress



September 30, 2011

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Background and Summary

As directed in the Senate Report of S. 1596 (Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2012), the Saint Lawrence Seaway Development Corporation (SLSDC) is providing an annual report to the House and Senate Appropriations Committees on the status of its multi-year capital Asset Renewal Program (ARP). Annual reports are expected to be sent to the Committees over the life of the program. In addition, Committee staff will be updated throughout the year, as needed and upon request, on any significant changes to the plan's schedule, estimates, or execution.

The start of the ARP in 2009 represented the first time in the SLSDC's 50-year history that a comprehensive effort had been undertaken to reinvest and modernize the Seaway infrastructure, including rehabilitation of and improvements to the U.S.-operated locks, the navigation channels, the Seaway International Bridge, and other Corporation facilities in Upstate New York. None of the ARP projects increases the authorized depth or width of the navigation channel or the size of the lock facilities.

In the first three years of ARP funding (FYs 2009-2011), the SLSDC obligated \$49.7 million for 39 separate ARP projects (*see page 35*). In FY 2011, ARP obligations totaled \$15.8 million for 31 different projects. ARP projects funded in the first three years included maintenance dredging in the U.S. portion of the navigation channel, lock culvert valve machinery upgrade to hydraulic operation, structural rehabilitation and corrosion prevention work on the Seaway International Bridge, gatelifter upgrades, upstream miter gate rehabilitation, as well as various other structure and equipment repairs and/or replacement. The first large-scale lock-related projects of the ARP, which were funded in both FYs 2009 and 2010, were started during the Seaway's winter non-navigation period, beginning in late December 2010.

Although the majority of ARP work is completed by contractors, the SLSDC federal workforce is directly responsible for completing several of the maintenance-related projects as well as pre-contract work, including preparation of designs, specifications, and drawings, and ongoing contract management. In FY 2011, the SLSDC expended an additional \$783,000 in personnel compensation and benefits from its "Operations and Maintenance" program budget for ARP-related staff time (since the start of the ARP in FY 2009, the total is \$1.8 million).

Unlike many of the other lock-based waterway systems in the world that have twinned locks to ensure continued operations in the event of a lock failure, the St. Lawrence Seaway is a single-lock system. A delay or shutdown at any one of the 15 U.S. or Canadian Seaway locks would cause system-wide delays. An economic analysis completed in 2007 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. In 1985, a lock wall failure at the Canadian Welland Canal caused 53 commercial vessels to be trapped in the Seaway System for 24 days at a cost to the shippers at that time of more than \$24 million (\$50 million in 2011 dollars). The ARP program is vital to ensuring system availability and the flow of goods.

At the onset of the program, the SLSDC created an ARP Internal Working Group that meets regularly (bi-monthly) to review the status of on-going projects and to collectively discuss ways to improve the overall management, execution, and reporting of the program. The Internal Working Group is made up of SLSDC managers and staff in engineering, procurement, financial management, budget, counsel, and policy, to review project plans and milestones, troubleshoot any concerns, and report progress to senior executives.

Each year following the enactment of the annual appropriation, members of the SLSDC Internal Working Group develop a revised internal ARP spending plan to reallocate funding, deferring and accelerating projects as needed. In addition, SLSDC officials are continually making on-going internal budget adjustments throughout the year as needed to ensure that the most current priority projects are funded and the overall enacted ARP budget level is met.

As part of the FY 2011 President's Budget request, the SLSDC had proposed 20 different ARP projects for funding. The 31 projects funded in FY 2011 included 17 projects that were not proposed in the FY 2011 President's Budget request. These projects received funding in FY 2011 either based on immediate or emergency needs and/or as part of the internal spending plan process. In some cases, new ARP projects were developed while in other instances, existing outyear ARP projects were re-prioritized to receive funding. A table summarizing the various decision points in the funding of ARP projects from FY 2009-FY 2012 can be found on pages 36-37.

The SLSDC's multi-year 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 at 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 8 Welland Canal locks that are over 75 years old. The Canadian portion of the St. Lawrence Seaway is managed and operated by the St. Lawrence Seaway Management Corporation (SLSMC).

In order to ensure that the St. Lawrence Seaway opens to navigation as scheduled, the SLSDC includes monetary incentives and penalties for contractors working on lock operating components during the winter months. In addition, the SLSDC reserves the right to place additional personnel and/or equipment necessary to complete the winter work at the expense of the contractor. In FY 2011, the SLSDC awarded one monetary incentive for \$20,000 for the early completion of a winter-work project and assessed one monetary penalty for \$25,000 to recover agency expenses for a project delayed one year.

At the onset of the ARP, 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 more traditional federal contract vehicles. The SLSDC uses architecture/engineering (A/E) contractors to receive design support and expert advice on project plans, specifications, and drawings.

To that end, the SLSDC awarded indefinite delivery contracts in early 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 requests 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.

ARP baseline project estimates developed by the SLSDC used 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. Estimates used in developing the FY 2011 ARP spending plan and out-year estimates also considered final contract totals for similar ARP work awarded during the program's first two years (FYs 2009 and 2010).

This annual report provides the Appropriations Committees with updates on (1) GAO's review of ARP cost estimates; (2) ARP economic impacts to Upstate New York; (3) ARP Capital Investment Plan Summary (FYs 2013-2017); (4) FY 2011 ARP projects; (5) ARP obligations by project for FYs 2009-2011; (6) ARP funding summary for FYs 2009-2012; and (7) the latest five-year estimates for ARP projects in FYs 2013-2017.

GAO Review of ARP Cost Estimates

In May 2010, the Government Accountability Office (GAO) completed its review of the SLSDC's ARP cost estimating process¹. The review was in response to a congressional mandate contained in P.L. 111-8, Omnibus Appropriations Act, 2009, and focused on three areas: (1) how the SLSDC developed and estimated the costs of projects in its ARP; (2) to what extent the ARP covered 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.

GAO found that the SLSDC's ARP adequately addressed capitalization needs, and that the plan supported the efforts underway or planned in Canada, but that agency cost estimating could be improved. GAO recommended that the SLSDC develop a cost-estimating process that follows federal best practices to better ensure that its estimates are comprehensive, well documented, accurate, and credible.

Following the issuance of the GAO report, the SLSDC immediately completed an internal review of the *GAO Cost Estimating and Assessment Guide* to identify "best practices" that could be used by SLSDC cost estimators. The SLSDC instituted several new cost estimating processes in its procedures to further improve the quality and accuracy of ARP cost estimates. Following the implementation of new cost estimating processes, ARP contracts improved, ranging from

¹ *St. Lawrence Seaway: Estimates for the Asset Renewal Program Will Change and Implementing Best Practices May Improve the Estimates' Reliability*, May 2010, www.gao.gov/products/GAO-10-541R.

23 percent less to 40 percent greater than estimates. The importance of the cost estimates has been stressed and cost estimates have included better documentation of the sources and assumptions used, providing more clearly defined estimates. In FY 2011, GAO officials informed the SLSDC that it considers the review “closed-implemented”.

ARP Economic Impacts to Upstate New York

The SLSDC’s ARP is resulting in not only modernized infrastructure and new equipment to ensure the long-term reliability of the St. Lawrence Seaway, but it is also having a positive and significant impact on the Upstate New York economy. In fact, approximately 70 percent of the ARP funds obligated during the program’s first three years (FYs 2009-2011), totaling nearly \$35 million, were awarded to firms within the Upstate New York region.

In addition to these contracts, the ARP is producing approximately \$2.5 million in additional economic benefits to the region each year (e.g., local permanent and temporary hires by contractors, contractor spending locally on supplies and equipment, lodging, meals, etc.).

ARP Capital Investment Plan Summary (FYs 2013-2017)

As provided in the *U.S. St. Lawrence Seaway ARP Capital Investment Plan (CIP), 2013-2017*², which was included in the FY 2013 budget request, the SLSDC provided estimates for executing the next five years of the ARP (*see pages 38-39*). For the FY 2013-2017 time frame, the Seaway ARP/CIP includes 39 separate ARP projects. This includes projects and equipment estimated at \$94.8 million. Total funding for each year of the plan is constrained to targets for those years as estimated and approved by the Office of Management and Budget (OMB). Dollar amounts for future ARP projects are “project feasibility” estimates that 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 and on a continuing basis throughout the length of the ARP. The SLSDC’s ARP Internal Working Group has successfully worked to ensure that the program’s schedule is maintained and that projects are administered in a timely and cost-effective way.

FY 2011 ARP Project Updates (as of September 30, 2011)

The following information provides a project-by-project update on the 31 ARP projects that were funded in FY 2011 (*not in chronological order of the ARP’s current listing of 58 projects*). The final selection of projects was based on those identified either during the ARP’s initial baseline plan development or during on-going program review throughout the year to reprioritize, as needed, to address projects with an immediate need.

Of the 58 projects currently listed in the SLSDC’s ARP CIP, 10 are complete and require no planned additional funding (“completed”), 33 have been started and have additional out-year funding needs (“on-going”), 13 have not received any funding (“not started”), 1 has been

² http://www.greatlakes-seaway.com/en/pdf/SLSDC_Asset_Renewal_Plan2013.pdf

cancelled (Project No. 30), and 1 has been combined with another similar project (Project No. 36 combined with No. 29) (all through FY 2012). Of the 56 working projects, 10 are single-year funded projects while the remaining 46 projects are multi-year funded (*see pages 36-37 for more details*).

To date, there have been no significant problems, delays, or cost overruns that have impacted the SLSDC's implementation of the ARP. In addition, the SLSDC continues to use contract vehicles that promote small and disadvantaged businesses as well as federal contract programs offered by the General Services Administration (GSA), including e-Buy, AutoChoice, and the Federal Supply Schedule, whenever possible.

(1) Project No. 2: Both Locks – Rehabilitate Downstream Miter Gates

General Description: This project is to completely rehabilitate the miter gates at the easternmost (downstream) end of both Eisenhower and Snell Locks. It includes replacing worn and/or damaged components including the miter and quoin contact blocks, pintles, and diagonals to insure proper functioning of the miter gates. These parts are critical to the safe and efficient operation of the locks. Miter and quoin contact blocks are steel blocks that are approximately 8 inches wide and 2½ inches thick. These blocks are mounted vertically on each end of each miter gate leaf and on each wall. They transfer the load of the water against the gate (which is an arch when closed and supporting the water load) into the massive concrete monoliths/walls. The pintles are steel hemisphere-shaped components that are retained in a cast steel housing set in the concrete below each gate leaf. There is a bushing mounted on the bottom of the gate leaf that turns on the pintle when the lock gates open and close. The diagonals are steel straps that run diagonally from corner to corner on each gate leaf to keep the gate rigid/plumb when being moved through the water during opening and closing.

Type of Project³: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$4,250,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$4,250,000

FY 2011 Obligations (as of September 30, 2011)⁴: \$3,539,935

³ 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 condition 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.

⁴ Contracts and purchases detailed in the update section for each ARP project may not add up to the total obligations listed for the project due to miscellaneous expenses across the ARP for small purchase orders, travel, supplies, etc., that are not detailed in this report.

Total Obligations to Date (FYs 2009-2011): \$3,539,935 (FY 2011)

Update (as of September 30, 2011): In September 2011, the SLSDC awarded a contract to Kubricky Construction (large business), Wilton, N.Y., for \$2,361,600 (sealed bids; lowest price) to complete the downstream miter gate rehabilitation work at Eisenhower Lock starting in January 2013. The SLSDC estimate of \$3,500,000 was based on twice the amount of the FY 2010 award amount for an upstream or westernmost gate (the downstream gates are twice the height of an upstream gate). In FY 2010, Kubricky Construction was awarded a contract for rehabilitation work on the upstream miter gate at Snell Lock starting in January 2012.

A contract was also awarded in August 2011 to Chesapeake Machine Co. (small business), Baltimore, Md., for \$1,126,400 (sealed bids; lowest price) for miter gate components and quoin and miter contact blocks. These parts will be used during the downstream miter gate rehabilitation work at both Eisenhower and Snell Locks. The SLSDC also made an inventory adjustment purchase in FY 2011 of \$51,635 for miter gate parts from Chesapeake Machine Co.

(2) **Project No. 4: Both Locks – Culvert Valve Machinery – Upgrade to Hydraulic Operation**

General Description: This project is for replacing the operating machinery for the culvert valves at both locks, which are utilized for filling and emptying the locks. This machinery is over 50 years old and the open gearing is exhibiting macropitting, a type of fatigue failure where the stresses in the gear teeth cause surface cracks and the detachment of metal fragments. 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 on-hand spare parts would not be possible. The upgrade will include new hydraulic operating machinery to match the upgrades made at some of the Canadian Seaway locks and other similar locks in the United States.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$4,500,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$4,500,000

FY 2011 Obligations (as of September 30, 2011): \$3,965,005

Total Obligations to Date (FYs 2009-2011): \$8,426,970 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In September 2009, the SLSDC awarded a contract to Hohl Industrial Services (small business), Tonawanda, N.Y., for \$4,077,050 to replace the operating machinery for the north side culvert valves at both locks with a hydraulic-based solution. Work was scheduled to begin in January 2011. A decision was made by SLSDC and Hohl Industrial Services officials in early January 2011 to defer the project until January 2012. Bosch Rexroth, manufacturer of the hydraulic cylinders, was unable to provide delivery dates to ensure completion of the project during the limited three-month winter/non-navigation work window. The deferment of this project had no financial or operational implications for the SLSDC.

The SLSDC assessed a penalty to Hohl Industrial Services of \$25,000 for the delay, which covered the costs for the SLSDC performing preventative maintenance on the machinery for an additional year, plus other costs incurred by the Corporation related to this contract. Additionally, the SLSDC issued a no-cost modification on its project management and construction inspection services contract with Lowe, Gravelle & Associates (small business), Massena, N.Y., to extend the contract by one year due to the project's start delay. Throughout FY 2011, the SLSDC worked with Hohl Industrial Services and Bosch Rexroth to ensure that the cylinders were designed and tested satisfactorily.

As a result of this project delay, the SLSDC now includes language in its large-scale winter work ARP contracts specifying that demolition of existing equipment cannot be started until the replacement equipment is on site. Moreover, penalties and charges will be assessed in the event that a project's start is delayed and/or deferred. Prior to making these contract language changes, previous contracts addressed only incentives and penalties for early and late completion of winter work.

In September 2011, the SLSDC issued a modification to the Hohl Industrial Services contract to include an additional \$3,958,583 for the completion of the south side valves at both locks starting in January 2013. The total contract amount to Hohl Industrial Services to complete the valve hydraulic upgrade at both locks is currently \$7,795,893.

(3) Project No. 5: Both Locks – Rehabilitate and Modify Winter Maintenance Lock Covers

General Description: This project is for rehabilitating and modifying the roof cover modules utilized to cover Eisenhower and Snell Locks for major winter maintenance projects. These covers are over 40 years old and require rehabilitation. Modifications to the covers will provide SLSDC personnel and contractors with better access to work areas in the locks. In addition, the modified covers will eliminate the need to temporarily remove the roof sections when larger access is required, thus saving heating costs when temperature-sensitive projects are underway in the lock chambers such as concrete replacement and steel structure painting.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

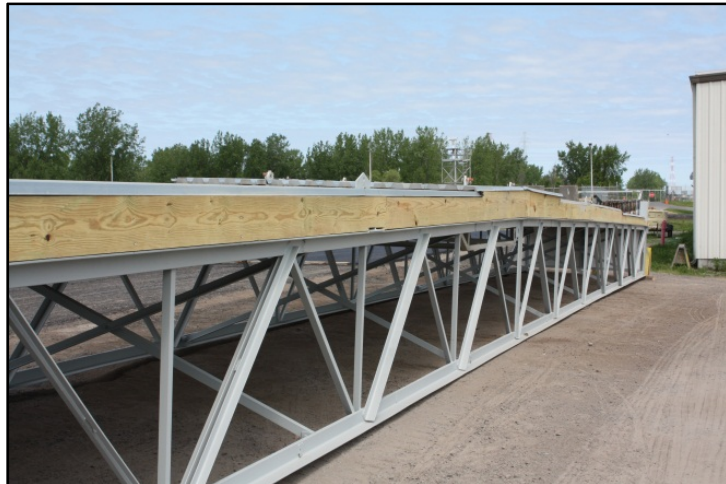
FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$23,781

Total Obligations to Date (FYs 2009-2011): \$77,117 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC awarded a contract for \$11,986 to Decetise Steel Sales (small business), Wynantskill, N.Y., (simplified acquisition; lowest price) for steel and other materials needed for SLSDC staff to modify roof covers. There were additional small purchases and drawdowns on inventory associated with this project totaling \$11,800.



Newly refurbished and modified lock roof covers are prepared for use during the winter non-navigation season when major lock improvements are made. SLSDC staff completed the rehabilitation/modification of two roof cover modules in FY 2011.

SLSDC personnel completed the rehabilitation/ modification of two roof cover modules during FY 2011. This work required totally disassembling two of the roof cover modules used over the miter gates. This effort included modifying the modules as well as adding supplementary and larger lift-out panels that provide better access to work on the miter gates during the winter months.

(4) Project No. 7: Both Locks – Culvert Valves – Replace with Single Skin Valves

General Description: This project is for replacing the double skin culvert valves utilized in filling and emptying the locks with single skin valves. Cracking of major structural members has occurred with the double skin construction and the structural members are not accessible for inspection, blast cleaning, and painting. The culvert valves are more than 50 years old and are corroding from the inside. The new single skin valves will provide access to the structural members for inspection and maintenance. The failure of a culvert valve would cause a delay to shipping while the damaged valve was removed and replaced. Dependant on the type of failure, other lock operating components/ equipment could be damaged causing the lock to be out of service for an extended period of time.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$300,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$300,000

FY 2011 Obligations (as of September 30, 2011): \$65,591

Total Obligations to Date (FYs 2009-2011): \$392,489 (FYs 2010 and 2011)

Update (as of September 30, 2011): The SLSDC continued its work on replacing its aging double-skin culvert valves with modernized single-skin valves. In FY 2010, the SLSDC



One of the new single-skin culvert valves just prior to its installation on the south side of Snell Lock following the 2010 navigation season.

awarded a contract to LMC Power Systems (small business), Danville, N.Y., for the fabrication and delivery of new valves with struts. At that time, the SLSDC ordered two valves for \$294,528. In addition, the SLSDC awarded a contract in May 2010 to Quality Inspection Services, Inc. (small business), Buffalo, N.Y., for \$13,356 to inspect the welds and coatings during valve fabrication

at LMC Power Systems' facilities. Upon delivery, both valves required work to correct fabrication errors, which was completed by SLSDC personnel. The first of the two valves was installed on the south side of Snell Lock following the 2010 navigation season. The second valve strut had flaws in a casting and the SLSDC received a new casting from LMC Power Systems at no cost. In FY 2011, the SLSDC issued several modifications to its contract with LMC Power Systems for \$37,655 for the work on the valves. The SLSDC has deliberately elected not to award the options on the existing contract for additional valves to this contractor.

In addition, the SLSDC awarded a contract in December 2010 to Occupational Safety and Environmental Associates, Inc., Buffalo, N.Y. (small, woman-owned business) for \$30,695 (simplified acquisition; award based on best value using trade-off procedures) to perform safety inspection services for several ARP projects (Project Nos. 7, 18, 19, and 31). The amount obligated for this project in FY 2011 was \$7,674.

(5) 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, motor vehicles, snow plow, backhoe, grader, front end loader and shop equipment, including a lathe, milling machine, and drill press. Motor vehicles will be replaced with alternative fuel vehicles where possible.

Type of Project: Capital Equipment / Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance / Waterway Management

FY 2011 Request Estimate (February 2010): \$100,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$100,000

FY 2011 Obligations (as of September 30, 2011): \$108,038

Total Obligations to Date (FYs 2009-2011): \$2,163,594 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC awarded six separate contracts for this project:

- (1) GM Suburban 4x4, 8 Passenger Truck for SLSDC Marine Division staff (replaces a 1999 GM Suburban with 110,000 miles)
\$33,295 awarded in August 2011 to GM Government Sales (large business), through GSA AutoChoice
- (2) Ford Hybrid Escape for SLSDC Lock Operations staff (replaces a 1995 Ford Explorer with 157,000 miles)
\$29,110 awarded in August 2011 to Ford Motor Co. (large business), through GSA AutoChoice
- (3) Rehabilitation of the SLSDC's fuel truck
\$15,700 awarded in August 2011 to William Denney's Welding and Machine (small business), Massena, N.Y. (simplified acquisition; lowest price)
- (4/5) Two 48-volt electric vehicles for SLSDC Lock Operations staff
\$14,764 (\$7,382 each) awarded in May and June 2011 to Nordic Services, LLC (small, woman-owned business), Baraboo, Wis., through GSA Advantage (Federal Supply Schedule; lowest price)
- (6) Portable Air Compressor
\$13,378 awarded in August 2011 to Clark Equipment (large business), Statesville, S.C. (Federal Supply Schedule; lowest price)

(6) **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/Marine Base Facility. The power is furnished directly from the Moses-Saunders Power Dam over infrastructure that is over 50 years old. The loss of power from the Moses-Saunders Power Dam makes it necessary to utilize diesel generators to continue operation of Eisenhower and Snell Locks and the Maintenance/Marine Base Facility, at significant expense to the Corporation.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$50,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$50,000

FY 2011 Obligations (as of September 30, 2011): \$93,613

Total Obligations to Date (FYs 2009-2011): \$344,476 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): The New York Power Authority (NYPA) is continuing to rehabilitate the infrastructure that supplies power to SLSDC for operations and maintenance activities. This work has to be coordinated with the SLSDC so that generators can be installed and/or operated while power is interrupted for the work to be completed. This is a recurring annual ARP project with expenditures dependent on NYPA plans and work completed. In September 2011, the SLSDC paid NYPA \$93,479 (sole source) for its work on SLSDC power-related infrastructure rehabilitation.

(7) **Project No. 11: Fixed Navigational Aids – Rehabilitate**

Description: This project is for rehabilitating fixed navigational aids in the Seaway. Many of the structures are over 50 years old and are in need of more than routine repairs. Many of these structures have concrete bases that are eroding and cracking. Failure to rehabilitate fixed aids would likely make it necessary to replace them at a significantly higher cost than repairing the existing structures.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Waterway Management

FY 2011 Request Estimate (February 2010): \$100,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$100,000

FY 2011 Obligations (as of September 30, 2011): \$16,217

Total Obligations to Date (FYs 2009-2011): \$27,215 (FYs 2010 and 2011)

Update (as of September 30, 2011): The SLSDC did not have any significant expenditures for this project in FY 2011. Diver reports in FY 2009 noted that the SLSDC's fixed navigational aids are not in need of significant immediate rehabilitation. In FY 2011, the SLSDC awarded a contract for \$16,217 to Tideland Signal Corp. (small business), Houston, Texas, (Federal Supply Schedule; only one source) for flashers and lenses that are installed by SLSDC personnel on the fixed aids.

(8) 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 that is utilized for maintaining the locks and navigation channels. This multi-year project includes: replacing the SLSDC's tug *Robinson Bay*; upgrading the buoy tender barge; purchasing a smaller tug for more efficient operations where the capabilities of the larger tug are not required; purchasing a boat to be used for hydrographic surveying and upgrading the surveying equipment and software; purchasing a small boat for emergency response; purchasing a spud barge/scow for work on navigational aids and for emergency/spot dredging; and rehabilitating the Corporation's crane barge/gatelifter *Grasse River*, which would have to be utilized if a miter gate was damaged and had to be replaced.

Type of Project: Capital Equipment / Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance / Waterway Management



SLSDC's tug Robinson Bay at Heddle Marine's drydock during the summer of 2011.

FY 2011 Request Estimate (February 2010): \$505,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$505,000

FY 2011 Obligations (as of September 30, 2011): \$1,908,563

Total Obligations to Date (FYs 2009-2011): \$4,215,233 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In FY 2010, the SLSDC awarded a contract to Heddle Marine (large, foreign business), Hamilton, Ont., for \$506,739 to perform drydocking services for the tugboat *Robinson Bay* and gatelifter *Grasse River*. The original contract work included blast cleaning and painting of the vessels' hulls and inspecting and repairing underwater components as required. The two vessels were delivered to Heddle Marine by SLSDC marine personnel in June 2011. Once drydock work began, the SLSDC issued eight modifications to the Heddle Marine contract to address additional work to be performed and to extend the completion date until September 2011. The additional work performed by Heddle Marine totaled \$73,821.

The estimated cost for the drydocking project subjected this procurement to the World Trade Organization Government Procurement Agreement (WTO GPA). Non-nuclear ship repair is not an excluded service under the WTO GPA. According to FAR Subsection 25.403, in acquisitions covered by the WTO GPA, the Federal Government can acquire only U.S. or designated country services, unless offers for such services are either not received or are insufficient to fulfill the requirements. Heddle Marine submitted the only bid received and they are located in a designated country.

Additional obligations and expenditures associated with the drydocking included third-party inspection services for the drydocking work (\$36,192 awarded in May 2011 to Quality Inspection Services, Inc. (small business), Buffalo, N.Y., (simplified acquisition; award based on best value using trade-off procedures) as well as incidental expenses including ultra-low sulfur diesel fuel for delivering and returning the vessels.

In addition to the drydocking improvements, the SLSDC also awarded two contracts in FY 2011 associated with improvements to the gatelifter *Grasse River*. In February 2011, the SLSDC awarded a contract to Marine Services Corp. (small, service-disabled veteran-owned business), Boston, Mass., for \$172,978 (Federal Supply Schedule; award based on best value using trade-off procedures) to prepare designs, specifications, drawings, and cost estimates for improvements. Based on that work, the SLSDC awarded a contract in September 2011 to Continental Construction, LLC (small business), Gouverneur, N.Y., for \$1,540,538 (sealed bids; award based on best value) to make these improvements.

Work commenced in early FY 2012 in Massena at the gatelifter's tie-up location and will include replacement of the deck winches, air compressor, oil furnaces with electric heaters, and ballast and bilge pumps and valves, and an upgrade of the bathroom/sanitary system, below deck egress, and oil containments.

(9) **Project No. 13: Corporation Facilities – Replace Roofs**

General Description: This project is for replacing the roofs on the Corporation's various buildings and facilities in Massena, N.Y., as required. Most of the roofs are currently insulated ethylene propylene diene monomer (EPDM) roofs with a service life of

10-15 years and have reached the end of that time frame. Throughout the ARP, the SLSDC includes funding to addressing roofing projects based on the based on the age and warranty status and is based on annual inspections of the roofs.

Type of Project: Capital Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$130,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$130,000

FY 2011 Obligations (as of September 30, 2011): \$3,348

Total Obligations to Date (FYs 2009-2011): \$147,297 (FYs 2009 and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC incurred minimal expenses related to replacing the Eisenhower Lock Visitors' Center restrooms roof. The work was completed by SLSDC personnel. The original estimate was to fund the replacement of the roof at the compressor building at Eisenhower Lock. This project was deferred as part of the SLSDC's internal budget development.

(10) Project No. 14: Corporation Facilities – Replace Paving and Drainage Infrastructure

General Description: This project is for improving the pavement and drainage along lock approach walls, Corporation roadways and parking and work areas at all Corporation facilities. In Upstate New York, the damage to pavements caused by winter conditions is significant. 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 / Facility/Equipment Upgrade and Maintenance



J.E. Sheehan Contracting replaces severely deteriorated sidewalks and roadways at the front entrance of the SLSDC's Administration Building in the Village of Massena.

FY 2011 Request Estimate (February 2010): \$750,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$750,000

FY 2011 Obligations (as of September 30, 2011): \$85,481

Total Obligations to Date (FYs 2009-2011): \$2,836,939 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In September 2010, the SLSDC awarded a contract to J.E. Sheehan Contracting (small, HUBZone⁵ business), Potsdam, N.Y., for \$1,782,000 for paving and drainage improvements on SLSDC roadways, sidewalks, and parking and work areas.

In FY 2011, the SLSDC issued seven contract modifications to address additional work, completion dates, and increases in the price of liquid asphalt. These modifications totaled \$83,587. Work completed in FY 2011 included improvements to the pavement and drainage at the approaches to the Eisenhower Lock highway tunnel as well as the roadways and parking/work areas at Snell Lock, the Maintenance/ Marine Base Facility, and at the Administration Building.

(11) 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. The tunnel provides 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: a tunnel lighting upgrade; grouting to limit 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. This tunnel is the only means of accessing the facilities noted above and any problems requiring a repair-related tunnel closure would have very significant impacts.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Tunnel and Bridge Maintenance

FY 2011 Request Estimate (February 2010): \$650,000

⁵ The Small Business Administration's (SBA) Historically Underutilized Business Zones (HUBZone) program helps small businesses in urban and rural communities gain preferential access to federal procurement opportunities. These preferences go to small businesses that obtain SBA HUBZone certification in part by employing staff who live in a HUBZone.

FY 2011 Adjusted Internal Spending Plan (April 2011): \$650,000

FY 2011 Obligations (as of September 30, 2011): \$99,459

Total Obligations to Date (FYs 2009-2011): \$397,899 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC awarded a contract to PB Americas, Inc. (large business), Buffalo, N.Y., one of the SLSDC's three A/E indefinite delivery firms, for \$90,291 (architecture and engineering (Brooks Act) solicitation; award made to most highly qualified firm) to (a) study and recommend options with costs and (b) provide final designs, specifications, drawings, and cost estimates for upgrading the lighting in the highway tunnel. The report produced recommendations centered around a light-emitting diode (LED) solution. The SLSDC has decided to defer the full implementation of this project for 2-3 years while the LED technology becomes more advanced and cost effective. Additionally, the Canadian SLSMC has agreed to share project information related to similar lighting upgrades at its tunnel at the Welland Canal, once completed.

In late FY 2011, the SLSDC awarded a contract to Omni-Lite (small business), Burlington, Mass., for \$9,168 (simplified acquisition; lowest price) for the purchase of 12 LED fixtures and adaptor kits to pilot the new technology in the tunnel. The SLSDC installed the LED fixtures in early FY 2012 for testing.

(12) **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 as part of the SLSDC's effort to remove sediments and to maintain the design grade for the channel bottom. The Corporation does not have the expertise to complete dredging activities with its own personnel; therefore, dredging must be completed by contractors. Project costs are significant because of the requirement for environmental dredging and for the disposal of contaminated sediments. If the navigation channel bottom is not maintained to the design grade, the maximum permissible draft in the Seaway would have to be reduced. Draft reductions would make it necessary for vessels to carry less cargo thereby impacting the competitiveness of the Seaway System. Each inch of Seaway draft equates to approximately 100 additional metric tons of cargo that can be carried by commercial vessels.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Waterway Management

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$770,000

FY 2011 Obligations (as of September 30, 2011): \$3,662,267

Total Obligations to Date (FYs 2009-2011): \$7,941,823 (FYs 2009 and 2011)

Update (as of September 30, 2011): In FY 2009, the SLSDC awarded a maintenance dredging contract to White Lake Dock and Dredge, Inc. (small business), Montague, Mich., for \$3,690,700, to perform maintenance dredging for both the intermediate pool (between Eisenhower and Snell Locks) and the international tangent section (east of Snell Lock). The contract was based on an estimate of 115,000 cubic yards in the intermediate pool and 3,200 cubic yards at the international tangent.



White Lake Dock and Dredge, Inc. dredges a portion of the intermediate pool between the Eisenhower and Snell Locks.

White Lake Dock and Dredge performed the maintenance dredging in FYs 2010 and 2011. Pre and post-dredge surveys were completed by PB Americas, Inc. (large business), Buffalo, N.Y., (indefinite delivery contract) to determine the amount of material removed from the navigation channel. In addition, PB Americas performed inspection services to ensure conformance with project permits and

specifications. PB Americas was awarded a \$541,829 contract to complete these services in FY 2009.

The post-dredge surveys found both a significant amount of material dredged from both areas in FYs 2010 and 2011 above the estimated levels. The need to dredge additional material in both areas was also strongly recommended in the survey. In FY 2011, the SLSDC issued four modifications to its contract with White Lake Dock and Dredge to address the additional cubic yardage, both amounts already dredged and amounts to be dredged, and to settle a claim by the contractor for excess quantities dredged at the international tangent. These modifications totaled \$3,104,867 in FY 2011 obligations. White Lake Dock and Dredge commenced dredging the materials remaining above grade in the intermediate pool in October 2011 and shut down dredging operations in December. In addition, the SLSDC issued three modifications to its contract with PB Americas totaling \$550,000 to extend the project complete date, perform additional surveys, and cover inspection services.

(13) **Project No. 18: Eisenhower Lock – Vertical Lift Gate – Replace Wire Ropes**



B.S. Industrial Contractors, Inc., workers reinstall the vertical lift gate rope wire sheaves at the Eisenhower Lock.

General Description: This project is for replacing the wire rope cables and rehabilitating the sheaves and embedded steel components that serve to raise and lower the vertical lift gate at Eisenhower Lock. These cables were last replaced in 1979 and are exhibiting some strand breakage and corrosion. The vertical lift gate is an emergency closure designed to hold back the strong northeasterly flow of water

in that portion of the St. Lawrence River in the event a miter gate is compromised.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$109,490

Total Obligations to Date (FYs 2009-2011): \$597,240 (FYs 2010 and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC continued the work it began in FY 2010 to replace the wire cable ropes for the vertical lift gate. Following the 2010 navigation season, B.S. Industrial Contractors, Inc. (small, woman-owned business), Gouverneur, N.Y., performed its work and found and corrected some unanticipated corrosion issues. To address these issues, the SLSDC issued three modifications to its contract with B.S. Industrial in FY 2011 for \$97,204 to extend the completion date of the contract, to install new compression beam struts, and to repair corroded anchor bolts and gate-end sheave support frames. This work was completed prior to the opening of the 2011 navigation season.

C&S Companies, Inc. (large business), Syracuse, N.Y., performed construction inspection services for both the Eisenhower Lock upstream miter gate rehabilitation (ARP project No. 31) and the vertical lift gate wire rope replacement. The contract, awarded in FY 2010, included \$46,900 is applied to this project.

The SLSDC also contracted part-time security guard services for the three major winter work projects that were completed in FY 2011 (Project Nos. 18, 19, and 31). Each project was charged \$4,403.

In addition, the SLSDC awarded a contract in December 2010 to Occupational Safety and Environmental Associates, Inc. (small, woman-owned business), Buffalo, N.Y., for \$30,695 (simplified acquisition; award based on best value using trade-off procedures) to perform safety inspection services for several ARP projects (Project Nos. 7, 18, 19, and 31). The amount obligated for this project in FY 2011 was \$7,674.

(14) Project No. 19: Corporation Facilities – Upgrade Electrical Distribution Equipment

General Description: This project is for upgrading electrical distribution equipment at Eisenhower Lock, Snell Lock, and at the Maintenance/Marine Base Facility to insure continued reliability. The majority of this equipment is more than 50 years old.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance / Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$150,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$306,847

Total Obligations to Date (FYs 2009-2011): \$1,060,247 (FYs 2010 and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC continued to work on upgrading its electric distribution equipment at the two U.S. locks. S&L Electric, Inc. (small, HUBZone business), Colton, N.Y., was awarded a contract in FY 2010 for \$753,400 to perform the upgrade. When work began in early FY 2011, items in need of replacement were identified, funded, and completed. The SLSDC issued three modifications to its S&L Electric contract in FY 2011 for \$72,974 to install two new sections of the switchgear, reconfigure the automatic transfer switches, and install additional breakers.

The SLSDC also awarded a second contract to S&L Electric in November 2010 to replace transformers at both locks (sealed bid; lowest bidder). This was due to the failure of a critical transformer at Eisenhower Lock, which also prompted the replacement of the transformer at Snell Lock that was of the same vintage. FY 2011 funding for this replacement was \$205,389.

In addition, the SLSDC also contracted part-time security guard services for the three major winter work projects that were completed in FY 2011 (Project Nos. 18, 19, and 31). Each project was charged \$4,403. The SLSDC also awarded a contract in December 2010 to Occupational Safety and Environmental Associates, Inc. (small, woman-owned business), Buffalo, N.Y., for \$30,695 (simplified acquisition; award based on best value using trade-off procedures) to perform safety inspection services for several ARP projects (Project Nos. 7, 18, 19, and 31). The amount obligated for this project in FY 2011 was \$7,674.

On June 2, 2011, the U.S. Court of Federal Claims granted the government's February 11, 2011 Cross-Motion for Judgment on the Administrative Record (AR) in Dow Electric, Inc. v. United States.⁶ This case arose from a sealed bid procurement in which the solicitation required specific or equivalent materials. Although Dow Electric was the low bidder, the materials submitted to the SLSDC in its bid were not deemed equivalent, and its bid was thus nonresponsive.

The court found that the AR did not contain sufficient evidence that Dow Electric offered to substitute the specified materials at any time. Moreover, the AR further held, given any assumption that such evidence was present, the claim would still fail given that the SLSDC is required to evaluate bids without discussions in a sealed bid solicitation. Therefore, the SLSDC was not obligated to participate in any discussions with Dow Electric once the bid was submitted or to allow Dow Electric to submit a modified bid once the SLSDC determined that the initial bid was nonresponsive.

(15) Project No. 20: Both Locks – Upgrade Lock Status/Controls

General Description: This project is for upgrading the lock/equipment status systems and 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 all critical components will lead to more in-depth status monitoring and, as a result, the improved effectiveness of preventive maintenance activities and increased reliability. It is also necessary to upgrade the lock control graphics software as support for the existing software is being discontinued.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance / Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$75,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$75,000

⁶ <http://www.wifcon.com/cofc/10-883c.pdf>

FY 2011 Obligations (as of September 30, 2011): \$89,507

Total Obligations to Date (FYs 2009-2011): \$237,870 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In its continued efforts on this multi-year project, the SLSDC awarded a contract in FY 2011 for \$37,200 to Optimization Technology, Inc. (large business), Rush, N.Y., (sole source) to upgrade the hardware and software required to operate the vertical lift gate and to upgrade the lock status and control graphics software to meet HSPD-12/security-related requirements. Optimization is the firm that assisted the SLSDC in the development of the lock status and control program.

In addition, the SLSDC awarded a contract at the end of FY 2011 to Allied Modular Building Systems (small business), Orange, Calif., for \$38,395 (Federal Supply Schedule; lowest price) to furnish two climate-controlled buildings/enclosures that will house the lock controls at both Eisenhower and Snell Locks. These enclosures will more effectively protect the new computerized-systems used to operate the locks.

(16) Project No. 21: Both Locks – Compressed Air Systems – Upgrade/Replace

General Description: This project is for replacing the compressors and corroded piping at Eisenhower and Snell Locks. Compressed air is used for various systems at the locks, for maintenance work, and for air curtains and bubblers utilized to control ice in and around the locks. The compressed air systems are of particular importance 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 increasingly problematic.



Newly-installed compressor system at Snell Lock. A similar system was also installed at Eisenhower Lock. The compressors are used for maintenance work, and for controlling ice in and around the locks, as needed.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$3,381

Total Obligations to Date (FYs 2009-2011): \$810,808 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011): In FY 2010, the SLSDC awarded a contract to Erie Mechanical Contractors (small business), Syracuse, N.Y., for \$766,000 to replace the compressors and associated equipment at both locks. Work was completed in FY 2011, and the SLSDC issued four modifications to the contract totaling \$3,381 for additional work identified during the replacement process.

(17) **Project No. 25: Corporation Facilities – Upgrade/Repair 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/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$4,007

Total Obligations to Date (FYs 2009-2011): \$8,155 (FYs 2009 and 2011)

Update (as of September 30, 2011): This project commenced in FY 2009 due to problems with the antiquated fire alarm systems at Corporation facilities. SLSDC personnel continue to make improvements to these systems with additional supplies and equipment ordered on an as-needed basis.

(18) Project No. 26: Corporation Facilities – Upgrade Storage for Lock Spare Parts



Completed 70'x100' equipment storage building, located at the SLSDC's Maintenance/Marine Base Facility.

General Description: This project is for constructing and/or upgrading storage shelters, which are instrumental in housing and preventing corrosion on lock spare parts and equipment. Many of these items are currently not stored under cover and/or are stored in old storage sheds that are in need of repair or replacement.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance / Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$12,144

Total Obligations to Date (FYs 2009-2011): \$430,144 (FYs 2010 and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC purchased additional supplies related to the new equipment storage building constructed at the beginning of FY 2011. Rand & Jones Enterprises Co., Inc. (small, woman-owned, HUBZone business), Buffalo, N.Y., was awarded the construction contract in FY 2010 for \$418,000 to furnish and erect the 70-foot by 100-foot pre-engineered metal storage building at the SLSDC's Maintenance/Marine Base Facility. The building was completed in January 2011.

(19) Project No. 27: Corporation Facilities – Replace Windows and Doors and Repair Building Facades

General Description: This project is for replacing corroded/worn windows and doors at SLSDC buildings and facilities in Upstate New York with more energy efficient units and for repairing the brick and stone facades that are in need of repair.

Type of Project: Capital Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$5,537

Total Obligations to Date (FYs 2009-2011): \$39,313 (FYs 2010 and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC incurred minimal expenses related to replacing three badly deteriorated doors. The work was completed by SLSDC personnel.

(20) **Project No. 31: Both Locks – Rehabilitate Upstream Miter Gates**



Workers assess the condition of the Eisenhower Lock upstream miter gate prior to removing the gate for rehabilitation work.

General Description:

This project is to completely rehabilitate the miter gates at the westernmost (upstream) end of both Eisenhower and Snell Locks. It includes replacing worn and/or damaged components including the miter and quoin contact blocks, pintles, and diagonals to insure proper functioning of the miter gates. These parts are critical to the safe and efficient operation of the locks.

Miter and quoin contact blocks are steel blocks that are approximately 8 inches wide and 2½ inches thick. These blocks are mounted vertically on each end of each miter gate leaf and on each wall. They transfer the load of the water against the gate (which is an arch when closed and supporting the water load) into the massive concrete monoliths/walls. The pintles are steel hemisphere-shaped components that are retained in a cast steel housing set in the concrete below each gate leaf. There is a bushing mounted on the bottom of the gate leaf that turns on the pintle when the lock gates open and close. The diagonals are steel straps that run diagonally from corner to corner on each gate leaf to keep the gate rigid/plumb when being moved through the water during opening and closing.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$347,662

Total Obligations to Date (FYs 2009-2011): \$5,028,143 (FYs 2009, 2010, and 2011)

Update (as of September 30, 2011):

In FYs 2009 and 2010, the SLSDC awarded its upstream miter gate rehabilitation contracts for Eisenhower and Snell Locks, respectively. Hohl Industrial Services, Inc., Tonawanda, N.Y. (small business) began its rehabilitation work on the upstream miter gate at Eisenhower Lock in January 2011 and successfully completed its work early and received a performance incentive of \$20,000.



Hohl Industrial Services, Inc. installs new diagonals on the Eisenhower Lock upstream miter gate as part of the project.

In FY 2011, the SLSDC awarded a contract to C&S Companies, Inc. (large business), Syracuse, N.Y., for \$208,650 (negotiated procurement; award based on best value using trade-off procedures) to perform construction inspection services for the Snell Lock upstream miter gate rehabilitation work (following the 2011 navigation season). The SLSDC also made an inventory adjustment purchase in FY 2011 of \$73,865 for miter gate parts from Chesapeake Machine Co. (small business), Baltimore, Md.

The SLSDC also contracted part-time security guard services for the three major winter work projects that were completed in FY 2011 (Project Nos. 18, 19, and 31). Each project was charged \$4,403.

In addition, the SLSDC awarded a contract in December 2010 to Occupational Safety and Environmental Associates, Inc. (small, woman-owned business), Buffalo, N.Y., for \$30,695 (simplified acquisition; award based on best value using trade-off procedures) to perform safety inspection services for several ARP projects (Project Nos. 7, 18, 19, and 31). The amount obligated for this project in FY 2011 was \$7,674.

(21) Project No. 32: Snug Harbor – Rehabilitate Spare Gate Storage and Assembly Area

General Description: This project is for rehabilitating the spare miter gate storage and assembly area at Snug Harbor. The work will include repair of the sheetpile walls and the spare gate assembly pads and their supporting piles as well as blast cleaning and painting of the spare miter gates and gate assembly towers.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$253,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$253,000

FY 2011 Obligations (as of September 30, 2011): \$346,600

Total Obligations to Date (FYs 2009-2011): \$359,334 (FYs 2010 and 2011)

Update (as of September 30, 2011): In FY 2010, the SLSDC funded some preliminary work for this project to include a diving inspection and condition survey of the underwater structures at the spare gate storage facility area. The results of the inspection and survey confirmed the extent of repairs to the sheetpile wall required. In September 2011, the SLSDC awarded a contract to Tioga Construction Co. (small business), Herkimer, N.Y., for \$346,600 (sealed bids; lowest price) to repair the damaged wall. This repair work is expected to take place in 2012 and requires federal and New York State permits prior to starting.

(22) Project No. 41: Snell Lock – Install Ice Flushing System Technologies

General Description: This multi-year project will result in the installation of an ice flushing system at Snell Lock similar to the one already in operation at Eisenhower Lock. The project is critical to the safe and efficient operation of Snell Lock during the waterway's opening and closing periods when ice is present. With today's larger ships transiting the Seaway, the lock must be flushed almost completely free of ice before a vessel can be allowed to enter the locks. This is due to the incredibly limited space between the vessels and the lock walls. Currently, ice is flushed from the Snell Lock chamber by utilizing lock-filling valves, exposing them to very high water flow/velocity for long periods of time. This causes the valves to vibrate and, in some instances, incur damage.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$400,000

FY 2011 Obligations (as of September 30, 2011): \$272,000

Total Obligations to Date (FYs 2009-2011): \$272,000 (FY 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC awarded a contract to PB Americas, Inc. (large business), Boston, Mass., (architecture and engineering (Brooks Act) solicitation; award made to most highly qualified firm) for \$272,000 to prepare a preliminary design, final design, specifications, drawings, and cost estimates for the ice flushing system at Snell Lock. The preliminary design was completed in FY 2011 and the final design work will be completed in FY 2012.

(23) Project No. 43: Both Locks – Miter Gate Machinery – Upgrade/Replace

General Description: This project is for replacing the operating machinery for the miter gates at both locks. This machinery is more than 50 years old and needs to be upgraded to insure its continued reliability. The upgrade will include new hydraulic operating equipment to match the improvements made at some of the Canadian Seaway locks and other locks in the United States.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$133,364

Total Obligations to Date (FYs 2009-2011): \$133,364 (FY 2011)

Update (as of September 30, 2011): In late FY 2011, the SLSDC entered into an Inter-Agency Agreement with the U.S. Army Corps of Engineers' (USACE), Buffalo, N.Y. District, for \$133,364 (sole source) to complete designs, specifications, drawings, and cost estimates for upgrading the miter gate operating machinery to hydraulics. This design work is scheduled to be completed in June 2012.

(24) Project No. 51: Corporation Facilities – Upgrade Physical Security to Meet HSPD-12 Requirements

General Description: This project is for procuring the Personal Identity Verification (PIV) cards issued by the Department as well as for procuring and installing the necessary card readers and other required infrastructure to meet Homeland Security Presidential Directive (HSPD)-12 requirements.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$100,000

FY 2011 Adjusted Internal Spending Plan (April 2011): \$100,000

FY 2011 Obligations (as of September 30, 2011): \$21,097

Total Obligations to Date (FYs 2009-2011): \$45,280 (FYs 2010 and 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC expended \$21,097 for its part in the Department's efforts to implement federal HSPD-12 requirements for physical and logical access. All SLSDC employees have been issued PIV cards and full provisioning of the cards is expected by mid-2012. At least 55 percent of all SLSDC employees are expected to be using PIV cards as a requirement for multi-factor network authentication and accessibility by September 30, 2012.

(25) Project No. 52: Corporation Facilities – Eisenhower Lock Visitors' Center – Replace

General Description: This project is for replacing the Visitors' Center at Eisenhower Lock. Each year, the facility is visited by more than 50,000 people and is an important attraction for Upstate New York tourism. Yet, the Visitors' Center is over 50 years old, is in a state of disrepair, and does not meet current accessibility standards. Each year, the Visitors' Center provides historical displays on the St. Lawrence Seaway and U.S. President Eisenhower and also includes observation decks for tourists to watch vessels transiting the lock. Due to more critical maintenance needs, only a minimal amount of maintenance has been performed over the years by the SLSDC on the facility. A new Visitors' Center facility on the current site would meet federal accessibility and security standards and would adhere to sustainability, energy and water conservation, and LEED® certification requirements. Currently, no timetable has been established for the construction of a new Visitors' Center.

Type of Project: Capital Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$13,042

Total Obligations to Date (FYs 2009-2011): \$13,042 (FY 2011)

Update (as of September 30, 2011): In July 2011, the SLSDC awarded a contract to Aubertine and Currier Architects (small, HUBZone business), Engineers and Land Surveyors, Watertown, N.Y., for \$20,000 (indefinite delivery; sole source) to assess the condition of the existing Eisenhower Lock Visitors' Center structures and appurtenances. The assessment included alternate conceptual designs and cost estimates for rehabilitating and for replacing the existing structures. Additionally, the assessment made a recommendation as to which alternative would be best for accomplishing the project objectives in a most cost effective manner. The recommendation was to replace the facility in totality due to its age, archaic design, and state of disrepair. The work was completed during the year and a modification was issued to de-obligate \$6,958 to reflect actual work accomplished (final contract amount – \$13,042).

(26) **Project No. 53: Corporation Technologies – Financial Management System – Upgrade/Replace**

General Description: This project is to replace the SLSDC's independent Financial Management System (FMS). The current SLSDC FMS is nearly 30 years old and the software used to run the system is no longer supported by the vendor. The new system will meet all contemporary federal financial and information technology regulations and standards.

Type of Project: Capital Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$1,699

Total Obligations to Date (FYs 2009-2011): \$1,699 (FY 2011)

Update (as of September 30, 2011): The SLSDC did not have any significant expenditures for this project in FY 2011.

(27) **Project No. 54: Corporation Facilities – Administration Building – Upgrade Elevator**

General Description: The late 1950s vintage electro-mechanical traction-type passenger elevator at the SLSDC's Administration Building in Massena, N.Y. is in need of upgrade. The modernization/upgrade of the elevator is necessary for compliance with the current ANSI/ASME A17.1 Safety Code for Elevators and Escalators, Americans with Disabilities Act (ADA), and other applicable federal, state, and local codes and standards.

Type of Project: Capital Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$140,000

FY 2011 Obligations (as of September 30, 2011): \$140,346

Total Obligations to Date (FYs 2009-2011): \$140,346 (FY 2011)

Update (as of September 30, 2011): In November 2010, the SLSDC awarded a contract to ThyssenKrupp Elevator Co. (large business), East Syracuse, N.Y., for \$135,784 (negotiated procurement; award



ThyssenKrupp Elevator Co. worker prepares cabling for elevator modernization in the SLSDC's Administration Building.

based on best value using trade-off procedures) to upgrade the Administration Building's elevator. Two contract modifications were issued totaling \$3,729 (final contract total – \$139,513) for the installation of elevator ceiling lighting and for additional electrical work. The modernized elevator meets all federal accessibility standards and included a one-year warranty. A five-year maintenance agreement will begin on April 1, 2012.

(28) **Project No. 55: Corporation Facilities – Maintenance Building – Replace Fuel Tanks**

General Description: This project is to replace one underground diesel fuel storage tank and one underground gasoline storage tank with above ground tanks of smaller capacities. These tanks are used to dispense fuel for use in SLSDC vehicles, light and

heavy equipment, and boats that contribute to the maintenance of the locks, navigation channels, and other SLSDC facilities.

Type of Project: Capital Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$189,350

Total Obligations to Date (FYs 2009-2011): \$189,350 (FY 2011)

Update (as of September 30, 2011): In September 2011, the SLSDC awarded a contract to T.R. Weniger (small, women-owned business), Green Brook, N.J., for \$189,350 (sealed bids; lowest price) to remove the old below-ground tanks and to construct a new building to house the tanks at the SLSDC's Maintenance/Marine Base Facility. Work is expected to be completed in FY 2012.

(29) **Project No. 56: Corporation Facilities – Duty Free Store Property – Security Upgrades**



New security fencing surrounding the SLSDC's property near the Seaway International Bridge.

Maintenance

FY 2011 Request Estimate (February 2010): \$0

General Description:

This project includes new fencing and lighting improvements to the SLSDC's property near the Seaway International Bridge. The property is currently leased from the SLSDC by a duty-free store operator.

Type of Project: Capital Project

Mission Objective:
Facility/Equipment Upgrade and

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$13,025

Total Obligations to Date (FYs 2009-2011): \$13,025 (FY 2011)

Update (as of September 30, 2011): In FY 2011, the SLSDC funded new fencing and lighting around its property located at the Seaway International Bridge. The SLSDC worked with the U.S. Customs and Border Protection, Duty Free Americas and the Seaway International Bridge Corporation on the project. The SLSDC property houses a third-party duty-free store, and the property's old fencing was not considered sufficient by U.S. Customs and Border Protection. A contract was awarded to Brady Fence Co. (small, woman-owned business), Cold Brook, N.Y., for \$12,170 (simplified acquisition; lowest price) to complete the fencing upgrades. All work was completed in FY 2011.

(30) Project No. 57: Corporation Technologies – Upgrade Network Security

General Description: This project is to enhance and improve the SLSDC's IT network infrastructure and security. The growth of more technology-based ARP improvements is resulting in an increased need to expand and refine the SLSDC's network environment. The SLSDC is working closely with Department's Office of the Chief Information Officer and network contractors to coordinate and make these improvements.

Type of Project: Capital Project / Non-Capital Maintenance Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$158,536

Total Obligations to Date (FYs 2009-2011): \$158,536 (FY 2011)

Update (as of September 30, 2011): In an effort to upgrade its network switches and to better adhere to federal and departmental standards, the SLSDC made two awards related to upgrading its network switches to a Juniper Networks®-based solution. The first award for hardware and support was made to Technica Corp. (small business), Dulles, Va., for \$78,987 (simplified acquisition; lowest price). The second award for programming and installation was made to MacSource Communications (large business), Cohoes, N.Y., for \$22,967 (sole source). Total FY 2011 funding for this upgrade was \$101,954.

In September 2011, the SLSDC awarded a separate sole source contract to MacSource Communications for \$54,150 for a network assessment and security services. MacSource Communications has been instrumental in the development and implementation of

network security upgrades to the SLSDC's mission-critical systems over the past several years.

(31) **Project No. 58: Corporation Facilities – Upgrades to Meet Sustainability and Energy Goals**

General Description: This project is to implement the recommendations of two consultant-led initiatives – an energy/water conservation audit and a retro-commissioning study. These upgrades will be made to meet the sustainability requirements of various federal executive orders and laws.

Type of Project: Capital Project

Mission Objective: Facility/Equipment Upgrade and Maintenance

FY 2011 Request Estimate (February 2010): \$0

FY 2011 Adjusted Internal Spending Plan (April 2011): \$0

FY 2011 Obligations (as of September 30, 2011): \$47,511

Total Obligations to Date (FYs 2009-2011): \$47,511 (FY 2011)

Update (as of September 30, 2011): In September 2011, the SLSDC awarded a contract for \$29,729 to Cooper Electric Supply (large business), Tinton Falls, N.J., (Federal Supply Schedule; lowest price), for energy-efficient fluorescent lighting in the compressor buildings at both locks and in various machinery recesses and galleries at both locks. The lighting installation will be completed in-house in FY 2012.

In addition, the SLSDC developed internal plans in FY 2011 to address the retro-commissioning of its Administration Building. This project is scheduled to be started in FY 2012 (\$200,000) as a multi-year project.

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Saint Lawrence Seaway Development Corporation (SLSDC)
Asset Renewal Program (ARP) Obligations (Fiscal Years 2009-2010-2011)
(In Whole Dollars)

ARP #	ARP Project Description	ARP FY 2009 Obligations (Year 1)	ARP FY 2010 Obligations (Year 2)	ARP FY 2011 Obligations (Year 3)	Three Year Obligation Totals
1	Snell Lock - Replace Fendering Downstream Guidewall Extension	\$241,600	\$8,091	\$0	\$249,691
2	Both Locks - Rehabilitate Downstream Miter Gates (FY 2011 at Eisenhower Lock)	\$0	\$0	\$3,539,935	\$3,539,935
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	(Comb. w/ No. 14)	\$35,422	\$0	\$35,422
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	\$4,117,050	\$344,915	\$3,965,005	\$8,426,970
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	\$46,698	\$6,638	\$23,781	\$77,117
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	\$3,102,878	\$5,680,707	\$0	\$8,783,585
7	Both Locks - Culvert Valves - Replace With Single Skin Valves	\$0	\$326,898	\$65,591	\$392,489
8	Floating Navigational Aids - Replace	\$61,254	\$54,576	\$0	\$115,830
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles, and Shop Equipment	\$1,574,504	\$481,052	\$108,038	\$2,163,594
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	\$19,594	\$231,269	\$93,613	\$344,476
11	Fixed Navigational Aids - Rehabilitate	\$0	\$10,998	\$16,217	\$27,215
12	Corporation Equipment - Upgrade/Replace Floating Plant	\$678,745	\$1,627,925	\$1,908,563	\$4,215,233
13	Corporation Facilities - Replace Roofs	\$143,949	\$0	\$3,348	\$147,297
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	\$921,837	\$1,829,621	\$85,481	\$2,836,939
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	\$26,636	\$271,804	\$99,459	\$397,899
16	System System - Upgrade GPS/AIS/TMS Technologies	\$100,997	\$76,451	(\$3,328)	\$174,120
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	\$4,279,556	\$0	\$3,662,267	\$7,941,823
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	\$0	\$487,750	\$109,490	\$597,240
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	\$0	\$753,400	\$306,847	\$1,060,247
20	Both Locks - Upgrade Lock Status/Controls	\$8,558	\$139,805	\$89,507	\$237,870
21	Both Locks - Compressed Air Systems - Upgrade/Replace	\$19,878	\$787,549	\$3,381	\$810,808
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	\$37,561	\$0	\$0	\$37,561
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	\$4,148	\$0	\$4,007	\$8,155
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	\$0	\$418,000	\$12,144	\$430,144
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	\$0	\$33,776	\$5,537	\$39,313
29	Eisenhower Lock - Walls, Sills, and Culverts - Rehabilitate Concrete	\$0	\$209,395	\$0	\$209,395
31	Both Locks - Rehabilitate Upstream Miter Gates (FY 2009 at Eisenhower Lock / FY 2010 at Snell Lock)	\$2,201,585	\$2,478,896	\$347,662	\$5,028,143
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	\$0	\$12,734	\$346,600	\$359,334
34	Both Locks - Improve Ice Control	\$0	\$7,462	\$0	\$7,462
41	Snell Lock - Install Ice Flushing System Technologies	\$0	\$0	\$272,000	\$272,000
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	\$0	\$0	\$133,364	\$133,364
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	\$0	\$24,183	\$21,097	\$45,280
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace	\$0	\$0	\$13,042	\$13,042
53	Corporation Technologies - Financial Management System - Replace	\$0	\$0	\$1,699	\$1,699
54	Corporation Facilities - Administration Building - Replace Elevator	\$0	\$0	\$140,346	\$140,346
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	\$0	\$0	\$189,350	\$189,350
56	Corporation Facilities - Duth Free Store Property - Upgrade Security	\$0	\$0	\$13,025	\$13,025
57	Corporation Facilities - Upgrade Network Security	\$0	\$0	\$158,536	\$158,536
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	\$0	\$0	\$47,511	\$47,511
--	Miscellaneous Expenses	\$0	\$443	\$0	\$443
Asset Renewal Program Total		\$17,587,028	\$16,339,760	\$15,783,116	\$49,709,903

NOTES:

- (1) Rounding may affect the addition of rows and columns in the table.
- (2) In FY 2009, ARP Project Nos. 3 and 14 were contractually combined.
- (3) The SLSDC expended an additional \$474,000, \$535,000, and \$783,000 in personnel compensation and benefits from its "Agency Operations" program for staff time associated with ARP work in FY 2009, 2010, and 2011, respectively.
- (4) The miscellaneous expenses of \$443 in FY 2010 were for ARP-related travel costs by SLSDC personnel that could not be linked to a specific ARP project.

SLSDC Asset Renewal Program (ARP) Funding Summary (FY 2009-2012)

ARP Project No.	ARP Project Title	Project Funding Status (Based on Project Obligations through FY 2012)	Number of Funding Years	Total Project Cost (Actuals Estimated)	FY 2009					FY 2010				
					FY 2009 ARP Estimate (02-04-08)	FY 2009 Congressional Request (02-04-08)	FY 2009 Enacted (05-11-09)	FY 2009 Spending Plan (04-10-09)	FY 2009 Obligations (05-30-09)	FY 2010 ARP Estimate (02-04-08)	FY 2010 Congressional Request (05-07-09)	FY 2010 Enacted (12-16-09)	FY 2010 Spending Plan (03-15-10)	FY 2010 Obligations (09-30-10)
1	Snell Lock - Replace Fendering Downstream Guidewall Extension	Completed	2	\$249,691	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$0	\$0	\$0	\$10,000	\$8,091
2	Both Locks - Rehabilitate Downstream Miter Gates	On-Going	3	\$6,469,935	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,508,000	\$1,508,000	\$0	\$0
3	Both Locks - Rehabilitate Mooring Buttrons, Piers, and Concrete Along Guidewalls and Guardwalls	On-Going	3	\$335,422	\$250,000	\$250,000	\$250,000	(Comb. w/ No. 14)	\$0	\$250,000	\$251,000	\$251,000	\$0	\$35,422
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	Completed	4	\$8,008,970	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$4,117,850	\$0	\$0	\$0	\$325,000	\$344,915
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	On-Going	5	\$302,117	\$250,000	\$250,000	\$250,000	\$250,000	\$0	\$5,600,000	\$5,773,000	\$5,773,000	\$4,500,000	\$6,638
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	Completed	2	\$8,783,565	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$3,102,878	\$800,000	\$603,000	\$603,000	\$297,000	\$5,684,707
7	Both Locks - Culvert Valves - Replace with Single Skin Valves	On-Going	4	\$1,112,489	\$600,000	\$600,000	\$600,000	\$600,000	\$0	\$60,000	\$60,000	\$60,000	\$0	\$325,898
8	Floating Navigational Aids - Replace	On-Going	9	\$3,839,830	\$60,000	\$60,000	\$60,000	\$60,000	\$61,254	\$0	\$0	\$0	\$60,000	\$4,576
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	On-Going	10	\$3,817,594	\$1,750,000	\$1,750,000	\$1,750,000	\$1,750,000	\$1,874,504	\$250,000	\$251,000	\$251,000	\$235,000	\$481,052
10	Both Locks - Upgrade Power Supply Infrastructure from Moses Standers Dam to Both Locks and Adjacent Facilities	On-Going	10	\$509,476	\$75,000	\$75,000	\$75,000	\$75,000	\$19,594	\$75,000	\$75,000	\$75,000	\$10,000	\$231,269
11	Fixed Navigational Aids - Rehabilitate	On-Going	9	\$1,342,215	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$200,000	\$201,000	\$201,000	\$10,000	\$10,998
12	Corporation Equipment - Upgrade/Replace Floating Plant	On-Going	7	\$35,760,233	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$678,745	\$500,000	\$503,000	\$503,000	\$1,846,000	\$1,827,925
13	Corporation Facilities - Replace Boats	On-Going	8	\$1,171,297	\$50,000	\$50,000	\$50,000	\$50,000	\$143,949	---	---	---	---	---
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	On-Going	5	\$5,282,939	\$950,000	\$950,000	\$950,000	\$950,000	\$921,837	\$0	\$1,508,000	\$1,508,000	\$1,000,000	\$1,828,621
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	On-Going	6	\$1,665,889	\$250,000	\$250,000	\$250,000	\$250,000	\$26,636	\$0	\$0	\$0	\$275,000	\$271,804
16	Corporation Technologies - Upgrade GPS/AISTMS	On-Going	5	\$481,120	\$100,000	\$100,000	\$100,000	\$100,000	\$100,897	\$0	\$0	\$0	\$0	\$74,451
17	Navigation Channels - Design U.S. Sections to Maintain Design Grade and Dispose of Sediments	On-Going	4	\$18,298,823	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$4,279,566	---	---	---	---	---
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	Completed	3	\$547,240	---	---	---	---	---	\$500,000	\$503,000	\$503,000	\$500,000	\$487,750
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	On-Going	3	\$1,460,247	---	---	---	---	---	\$150,000	\$151,000	\$151,000	\$150,000	\$753,400
20	Both Locks - Upgrade Lock State Controls	On-Going	4	\$237,970	\$0	\$0	\$0	\$0	\$8,258	\$150,000	\$151,000	\$151,000	\$200,000	\$138,805
21	Both Locks - Compressed Air Systems - Upgrade/Replace	On-Going	5	\$625,008	\$0	\$0	\$0	\$0	\$19,878	\$1,500,000	\$1,508,000	\$1,508,000	\$1,500,000	\$787,549
22	Both Locks - Install Vessel Self Spotting Equipment	Not Started	3	\$1,079,000	---	---	---	---	---	\$250,000	\$251,000	\$251,000	\$0	\$0
23	Both Locks - Install Vessel Vacuum Mooring Systems	Not Started	2	\$9,371,000	---	---	---	---	---	\$1,650,000	\$0	\$0	\$0	\$0
24	Both Locks - Structural Repair - Groun Leaks in Galleries and Reentries	On-Going	3	\$137,561	\$0	\$0	\$0	\$0	\$37,561	\$200,000	\$201,000	\$201,000	\$5,000	\$0
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	Completed	2	\$81,155	\$0	\$0	\$0	\$0	\$4,148	\$100,000	\$101,000	\$101,000	\$200,000	\$416,000
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	On-Going	4	\$1,385,144	---	---	---	---	---	\$200,000	\$201,000	\$201,000	\$200,000	\$333,776
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	On-Going	6	\$710,313	---	---	---	---	---	---	---	---	---	---
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	Not Started	2	\$41,67,000	---	---	---	---	---	---	---	---	---	---
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	On-Going	4	\$8,422,395	---	---	---	---	---	\$2,010,000	\$2,010,000	\$2,010,000	\$2,000,000	\$209,395
30	Eisenhower Lock - Ice Flushing System - Upgrade	Completed	0	\$0	---	---	---	---	---	---	---	---	---	---
31	Both Locks - Rehabilitate Upstream Miter Gates	On-Going	3	\$5,028,143	\$0	\$0	\$0	\$1,500,000	\$2,201,585	\$0	\$0	\$0	\$2,800,000	\$2,478,896
32	Snag Harbor - Rehabilitate Spare Gate Storage and Assembly Area	On-Going	4	\$909,334	---	---	---	---	---	\$0	\$0	\$0	\$0	\$117,734
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Reentries	On-Going	4	\$669,000	---	---	---	---	---	---	---	---	---	---
34	Both Locks - Improve Ice Control	On-Going	4	\$700,462	---	---	---	---	---	\$0	\$0	\$0	\$0	\$7,462
35	Vessel Mooring Cells - Rehabilitate and Extend	Not Started	2	\$2,566,000	---	---	---	---	---	---	---	---	---	---
36	Eisenhower Lock - Diffusers - Replace	Combined with No. 29	0	\$0	---	---	---	---	---	---	---	---	---	---
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	Not Started	1	\$800,000	---	---	---	---	---	---	---	---	---	---
38	Both Locks - Upgrade/Replace Emergency Generators	On-Going	2	\$600,000	---	---	---	---	---	---	---	---	---	---
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	On-Going	2	\$400,000	---	---	---	---	---	---	---	---	---	---
40	Both Locks - Extend Guidewalls in Pool	Not Started	1	\$1,546,000	---	---	---	---	---	---	---	---	---	---
41	Snell Lock - Install Ice Flushing System Technologies	On-Going	4	\$12,796,000	---	---	---	---	---	\$0	\$0	\$0	\$100,000	\$0
42	Both Locks - Miter Gates - Structural Rehabilitation	On-Going	4	\$3,057,000	---	---	---	---	---	---	---	---	---	---
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	On-Going	3	\$4,382,364	---	---	---	---	---	---	---	---	---	---
44	Both Locks - Ship Arranger Machinery - Upgrade/Replace	Not Started	2	\$925,000	---	---	---	---	---	---	---	---	---	---
45	Flow Control Dikes - Rehabilitate	Not Started	1	\$915,000	---	---	---	---	---	---	---	---	---	---
46	Both Locks - Guidewall Extensions - Rehabilitate	Not Started	2	\$1,033,000	---	---	---	---	---	---	---	---	---	---
47	Eisenhower Lock - Vertical Lift Gate - Structural Rehabilitation	Not Started	1	\$725,000	---	---	---	---	---	---	---	---	---	---
48	Both Locks - Shifting Derricks - Replace	Not Started	2	\$834,000	---	---	---	---	---	---	---	---	---	---
49	Seaway International Bridge - Replace Deck	Not Started	1	\$14,225,000	---	---	---	---	---	---	---	---	---	---
50	Snell Lock - Diffusers - Replace	Not Started	1	\$31,40,000	---	---	---	---	---	---	---	---	---	---
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	On-Going	4	\$395,280	---	---	---	---	---	\$0	\$0	\$0	\$0	\$24,183
52	Corporation Facilities - Eisenhower Lock Visitors Center - Replace	On-Going	2	\$313,042	---	---	---	---	---	---	---	---	---	---
53	Corporation Technologies - Financial Management System - Upgrade/Replace	On-Going	1	\$1,699	---	---	---	---	---	---	---	---	---	---
54	Corporation Facilities - Administration Building - Replace Elevator	Completed	1	\$140,346	---	---	---	---	---	---	---	---	---	---
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	Completed	1	\$189,350	---	---	---	---	---	---	---	---	---	---
56	Corporation Facilities - Duty Free Store Property - Security Upgrades	Completed	1	\$13,025	---	---	---	---	---	---	---	---	---	---
57	Corporation Technologies - Upgrade Network Security	On-Going	2	\$408,536	---	---	---	---	---	---	---	---	---	---
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	On-Going	3	\$297,511	---	---	---	---	---	---	---	---	---	---
---	Engineering Design, Construction Inspection, Contracting Support, and Project Management	---	---	---	\$300,000	\$300,000	\$300,000	\$300,000	(\$608,769)	\$300,000	\$306,000	\$306,000	\$0	\$0
---	Miscellaneous Expenses	---	---	\$443	---	---	---	---	---	\$16,255,000	\$16,317,000	\$16,317,000	\$16,317,000	\$16,338,760
Total				\$180,023,900	\$17,535,000	\$17,535,000	\$17,535,000	\$17,535,000	\$17,587,028	---	---	---	---	---

SLSDC Asset Renewal Program (ARP) Funding Summary (FY 2009-2012)

ARP Project No.	ARP Project Title	Project Funding Status (Based on Project Obligations and/or planned obligations through FY 2012)	Number of Funding Years	Total Project Cost (Actual or Estimated)	FY 2011				FY 2012				
					FY 2011 ARPC/P Estimate (05-07-09)	FY 2011 Congressional Request (02-01-10)	FY 2011 Enacted (04-15-11)	FY 2011 Spending Plan (04-22-11)	FY 2011 Obligations (Actual) (09-30-11)	FY 2012 Congressional Request (02-14-11)	FY 2012 Enacted (11-18-11)	FY 2012 Spending Plan (12-23-11)	
1	Snell Lock - Replace Existing Downstream Guidewall Extension	Completed	2	\$249,691	\$0	\$10,000	\$10,000	\$0	\$0	---	---	---	---
2	Both Locks - Rehabilitate Downstream Miter Gates	On-Going	3	\$6,469,935	\$1,515,000	\$4,250,000	\$4,250,000	\$3,939,935	\$4,380,000	\$4,380,000	\$4,380,000	\$270,000	\$270,000
3	Both Locks - Rehabilitate Mooring Buttress, Pins, and Concrete Along Guidewalls and Guardwalls	On-Going	3	\$335,422	\$253,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	Completed	4	\$8,008,970	\$2,020,000	\$4,500,000	\$4,500,000	\$3,965,005	\$0	\$0	\$0	\$0	\$180,000
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	On-Going	5	\$302,117	\$253,000	\$0	\$0	\$0	\$0	\$258,000	\$258,000	\$25,000	\$25,000
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	Completed	2	\$8,783,565	\$4,666,000	\$3,466,000	\$3,066,000	\$0	\$0	---	---	---	---
7	Both Locks - Culvert Valves - Replace with Single Spin Valves	On-Going	4	\$1,112,489	\$666,000	\$300,000	\$300,000	\$65,591	\$305,000	\$405,000	\$405,000	\$300,000	\$300,000
8	Floating Navigational Aids - Replace	On-Going	9	\$551,830	\$61,000	\$61,000	\$61,000	\$0	\$61,000	\$61,000	\$61,000	\$60,000	\$60,000
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	On-Going	10	\$3,817,594	\$253,000	\$100,000	\$100,000	\$108,038	\$254,000	\$255,000	\$255,000	\$100,000	\$100,000
10	Both Locks - Upgrade Power Supply Infrastructure from Moses Saunders Dam to Both Locks and Adjacent Facilities	On-Going	10	\$509,476	\$76,000	\$50,000	\$50,000	\$93,613	\$20,000	\$20,000	\$20,000	\$40,000	\$40,000
11	Fixed Navigational Aids - Rehabilitate	On-Going	9	\$1,362,215	\$202,000	\$100,000	\$100,000	\$16,217	\$203,000	\$100,000	\$100,000	\$100,000	\$100,000
12	Corporation Equipment - Upgrade/Replace Floating Plant	On-Going	7	\$35,760,233	\$505,000	\$505,000	\$505,000	\$99,459	\$1,524,000	\$1,524,000	\$1,524,000	\$2,335,000	\$2,335,000
13	Corporation Facilities - Replace Roofs	On-Going	8	\$1,571,297	\$91,000	\$130,000	\$130,000	\$3,348	\$230,000	\$230,000	\$230,000	\$230,000	\$40,000
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	On-Going	5	\$5,282,939	\$1,515,000	\$750,000	\$750,000	\$0	\$0	---	---	---	---
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	On-Going	6	\$1,665,899	\$253,000	\$650,000	\$650,000	\$99,459	---	---	---	---	---
16	Corporation Technologies - Upgrade GPS/AIS/STMS	On-Going	5	\$481,120	\$101,000	\$50,000	\$50,000	\$3,328	---	---	---	---	---
17	Navigation Channels - Dredge U.S. Sections to Mainstem Design Grade and Dispose of Sediments	On-Going	4	\$18,298,825	\$0	\$0	\$0	\$3,882,267	---	---	---	---	---
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	Completed	3	\$647,240	\$0	\$0	\$0	\$109,480	\$0	\$0	\$0	\$250,000	\$250,000
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	On-Going	3	\$1,460,247	\$152,000	\$150,000	\$150,000	\$96,847	\$500,000	\$400,000	\$400,000	\$400,000	\$400,000
20	Both Locks - Upgrade Lock Status Controls	On-Going	4	\$237,870	\$152,000	\$75,000	\$75,000	\$89,507	---	---	---	---	---
21	Both Locks - Compressed Air Systems - Upgrade/Replace	On-Going	5	\$625,008	\$1,515,000	\$0	\$0	\$3,381	\$0	\$0	\$0	\$15,000	\$15,000
22	Both Locks - Install Vessel Self Spotting Equipment	Not Started	3	\$1,079,000	\$253,000	\$0	\$0	\$0	---	---	---	---	---
23	Both Locks - Install Vessel Vacuum Mooring Systems	Not Started	2	\$9,371,000	---	---	---	---	---	---	---	---	---
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Reentries	On-Going	3	\$137,561	\$0	\$0	\$0	\$4,007	\$203,000	\$203,000	\$203,000	\$100,000	\$100,000
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	Completed	2	\$8,155	\$0	\$0	\$0	\$12,144	\$203,000	\$203,000	\$203,000	\$0	\$0
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	On-Going	4	\$1,385,144	\$0	\$0	\$0	\$0	\$203,000	\$203,000	\$203,000	\$203,000	\$50,000
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	On-Going	6	\$710,313	\$0	\$0	\$0	\$5,337	\$203,000	\$203,000	\$203,000	\$203,000	\$50,000
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	Not Started	2	\$4,167,000	\$2,020,000	\$0	\$0	\$0	---	---	---	---	---
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	On-Going	4	\$8,422,395	---	---	---	---	\$2,000,000	\$0	\$0	\$0	\$0
30	Eisenhower Lock - Ice Flushing System - Upgrade	Completed	0	\$0	\$202,000	\$0	\$0	\$0	---	---	---	---	---
31	Both Locks - Rehabilitate Upstream Miter Gates	On-Going	3	\$5,028,143	\$0	\$0	\$0	\$347,662	---	---	---	---	---
32	Snag Harbor - Rehabilitate Spare Gate Storage and Assembly Area	On-Going	4	\$909,334	\$253,000	\$253,000	\$253,000	\$346,600	\$254,000	\$254,000	\$254,000	\$250,000	\$250,000
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Reentries	On-Going	4	\$669,000	\$152,000	\$0	\$0	\$0	\$152,000	\$152,000	\$152,000	\$100,000	\$100,000
34	Both Locks - Improve Ice Control	On-Going	4	\$700,462	\$101,000	\$100,000	\$100,000	\$0	\$228,000	\$228,000	\$228,000	\$0	\$0
35	Vessel Mooring Cells - Rehabilitate and Extend	Not Started	2	\$2,566,000	\$1,010,000	\$100,000	\$100,000	\$0	---	---	---	---	---
36	Eisenhower Lock - Diffusers - Replace	Combined with No. 29	0	\$0	---	---	---	---	\$3,045,000	\$3,045,000	\$3,045,000	\$0	\$0
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	Not Started	1	\$800,000	---	---	---	---	---	---	---	---	---
38	Both Locks - Upgrade/Replace Emergency Generators	On-Going	2	\$600,000	---	---	---	---	\$508,000	\$508,000	\$508,000	\$100,000	\$100,000
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	On-Going	2	\$400,000	---	---	---	---	\$203,000	\$203,000	\$203,000	\$200,000	\$200,000
40	Both Locks - Extend Guidewalls in Pool	Not Started	1	\$1,546,000	---	---	---	---	---	---	---	---	---
41	Snell Lock - Install Ice Flushing System Technologies	On-Going	4	\$12,796,000	\$0	\$0	\$0	\$272,000	\$5,075,000	\$2,000,000	\$2,000,000	\$6,705,000	\$6,705,000
42	Both Locks - Miter Gates - Structural Rehabilitation	On-Going	4	\$3,057,000	---	---	---	---	\$761,000	\$761,000	\$761,000	\$750,000	\$750,000
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	On-Going	3	\$4,382,364	\$0	\$0	\$0	\$133,364	\$0	\$1,632,000	\$1,632,000	\$0	\$0
44	Both Locks - Ship Arrestor Machinery - Upgrade/Replace	Not Started	2	\$925,000	---	---	---	---	---	---	---	---	---
45	Flow Control Dikes - Rehabilitate	Not Started	1	\$515,000	---	---	---	---	---	---	---	---	---
46	Both Locks - Guidewall Extensions - Rehabilitate	Not Started	2	\$1,033,000	---	---	---	---	---	---	---	---	---
47	Eisenhower Lock - Vertical Lift Gate - Structural Rehabilitation	Not Started	1	\$725,000	---	---	---	---	---	---	---	---	---
48	Both Locks - Stiffing Devices - Replace	Not Started	2	\$834,000	---	---	---	---	---	---	---	---	---
49	Seaway International Bridge - Replace Deck	Not Started	1	\$14,225,000	---	---	---	---	---	---	---	---	---
50	Snell Lock - Diffusers - Replace	Not Started	1	\$3,140,000	---	---	---	---	---	---	---	---	---
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	On-Going	4	\$395,280	\$0	\$100,000	\$100,000	\$21,097	\$50,000	\$50,000	\$50,000	\$300,000	\$300,000
52	Corporation Facilities - Eisenhower Lock Visitors Center - Replace	On-Going	2	\$313,042	---	---	---	\$13,042	---	---	---	---	---
53	Corporation Technologies - Financial Management System - Upgrade/Replace	On-Going	1	\$1,699	---	---	---	\$1,699	---	---	---	---	---
54	Corporation Facilities - Administration Building - Replace Elevator	Completed	1	\$140,346	\$0	\$0	\$0	\$140,346	---	---	---	---	---
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	Completed	1	\$189,350	\$0	\$0	\$0	\$189,350	---	---	---	---	---
56	Corporation Facilities - Duty Free Store Property - Security Upgrades	Completed	1	\$13,025	\$0	\$0	\$0	\$13,025	\$0	\$0	\$0	\$0	\$0
57	Corporation Technologies - Upgrade Network Security	On-Going	2	\$408,536	\$0	\$0	\$0	\$158,536	\$0	\$0	\$0	\$250,000	\$250,000
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	On-Going	3	\$297,511	---	---	---	\$47,511	\$0	\$0	\$0	\$0	\$50,000
---	Engineering Design, Construction Inspection, Contracting Support, and Project Management	---	---	---	\$312,000	\$0	\$0	\$0	---	---	---	---	---
---	Miscellaneous Expenses	---	---	\$443	---	---	---	---	---	---	---	---	---
Total				\$180,823,903	\$18,482,000	\$15,700,000	\$15,700,000	\$15,783,116	\$20,650,000	\$17,075,000	\$17,075,000	\$15,600,000	\$15,600,000

Saint Lawrence Seaway Development Corporation (SLSDC)
Asset Renewal Program Five-Year Plan (FYs 2013-2017)

(In Whole Dollars)

ARP #	ARP Project Description	Type of Project (1)	Completed By (2)	Mission Objective (3)	Number of Funded Years	FY 2013 Request	FY 2014 Estimate	FY 2015 Estimate	FY 2016 Estimate	FY 2017 Estimate	Five-Year Total
2	Both Locks - Rehabilitate Downstream Miter Gates	CP	C	L	5	\$230,000	---	---	---	---	\$230,000
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	CP	C	L	4	\$100,000	---	---	---	---	\$100,000
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	CP	C/I	L	4	\$200,000	---	---	---	---	\$200,000
7	Both Locks - Culvert Valves - Replace with Single Skin Valves	CP	C/I	L	4	\$420,000	---	---	---	---	\$420,000
8	Floating Navigational Aids - Replace	CP	N/A	W	9	\$65,000	\$62,000	\$62,000	\$62,000	\$62,000	\$313,000
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	CE/CP/MP	N/A	L, W	10	\$260,000	\$256,000	\$258,000	\$259,000	\$260,000	\$1,283,000
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	MP	C	L	10	\$20,000	\$21,000	\$21,000	\$21,000	\$21,000	\$104,000
11	Fixed Navigational Aids - Rehabilitate	CP/MP	C	W	9	\$200,000	\$205,000	\$206,000	\$207,000	\$208,000	\$1,026,000
12	Corporation Equipment - Upgrade/Replace Floating Plant	CE/CP/MP	C/I	L, W	7	\$400,000	\$18,455,000	---	\$10,355,000	---	\$29,210,000
13	Corporation Facilities - Replace Roofs	CP	C	F	8	\$300,000	\$500,000	\$500,000	---	\$42,000	\$1,342,000
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	CP	C	L, F	5	\$900,000	---	\$1,546,000	---	---	\$2,446,000
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	CP/MP	C/I	T/B	6	\$750,000	---	\$258,000	---	\$260,000	\$1,268,000
16	Corporation Technologies - Upgrade GPS/AIS/TMS Technologies	CE/CP	C/I	W	5	\$100,000	---	\$103,000	---	\$104,000	\$307,000
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	MP	C	W	4	---	---	\$5,152,000	---	\$5,205,000	\$10,357,000
22	Both Locks - Install Vessel Self Spotting Equipment	CP	C	L	3	\$500,000	\$288,000	\$291,000	---	---	\$1,079,000
23	Both Locks - Install Vessel Vacuum Mooring Systems	CP	C	L	2	---	---	---	\$4,871,000	\$5,000,000	\$9,871,000
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	CP	C/I	L, F	4	\$750,000	\$205,000	---	---	---	\$955,000
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	CP	C/I	F	6	---	\$205,000	---	\$207,000	---	\$412,000
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	CP	C/I	L	2	---	---	---	\$2,075,000	---	\$2,075,000
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	CP	C/I	L	4	\$2,000,000	---	\$3,091,000	---	\$3,122,000	\$8,213,000
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	CP	C	L	4	\$300,000	---	---	---	---	\$300,000
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	CP	C/I	L	4	\$160,000	\$154,000	\$155,000	---	---	\$469,000
34	Both Locks - Improve Ice Control	CP	C	L	4	\$230,000	\$231,000	\$232,000	---	---	\$693,000
35	Vessel Mooring Cells - Rehabilitate and Extend	CP	C/I	W	3	\$500,000	\$1,025,000	---	---	\$1,041,000	\$2,566,000
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	CP	C	L, W	1	---	---	\$800,000	---	---	\$800,000
38	Both Locks - Upgrade/Replace Emergency Generators	CP	C/I	L	2	\$500,000	---	---	---	---	\$500,000
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	CP	C	L	2	\$200,000	---	---	---	---	\$200,000
40	Both Locks - Extend Guidewalls in Pool	CP	C	L	1	---	---	\$1,546,000	---	---	\$1,546,000
41	Snell Lock - Install Ice Flushing System Technologies	CP	C	L	4	\$3,000,000	\$2,819,000	---	---	---	\$5,819,000

Saint Lawrence Seaway Development Corporation (SLSDC)
Asset Renewal Program Five-Year Plan (FYs 2013-2017)

(In Whole Dollars)

ARP #	ARP Project Description	Type of Project (1)	Completed By (2)	Mission Objective (3)	Number of Funded Years	FY 2013 Request	FY 2014 Estimate	FY 2015 Estimate	FY 2016 Estimate	FY 2017 Estimate	Five-Year Total
42	Both Locks - Miter Gates - Structural Rehabilitation	CP	C	L	4	\$765,000	\$769,000	\$773,000	---	---	\$2,307,000
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	CP	C	L	3	\$2,600,000	---	\$1,649,000	---	---	\$4,249,000
44	Both Locks - Ship Arrestor Machinery - Upgrade/Replace	CP	C	L	2	---	\$410,000	\$415,000	---	---	\$825,000
45	Flow Control Dikes - Rehabilitate	CP	C	W	1	---	---	\$515,000	---	---	\$515,000
46	Both Locks - Guidewall Extensions - Rehabilitate	CP	C	L	2	---	---	\$515,000	\$518,000	---	\$1,033,000
47	Eisenhower Lock - Vertical Lift Gate - Structural Rehabilitation	CP	C	L	1	---	---	---	\$725,000	---	\$725,000
48	Both Locks - Stiffleg Derricks - Replace	CP	C	L	2	---	---	---	---	\$416,000	\$416,000
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	CP/MP	C/I	F	4	\$50,000	---	---	---	---	\$50,000
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace	CP	C	F	2	\$300,000	---	---	---	---	\$300,000
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	CP	C/I	F	3	\$200,000	---	---	---	---	\$200,000
	Total					\$16,000,000	\$25,605,000	\$18,088,000	\$19,400,000	\$15,741,000	\$94,834,000

(1) CP=Capital Project; CE=Capital Equipment; MP=Non-Capital Maintenance Project
(2) C=Contractor; C/I=Contractor and/or In-House Corporation Personnel
(3) L=Lock Operation Upgrade and Maintenance; W=Waterway Management; T/B=Tunnel and Bridge Maintenance; F=Facility/Equipment Upgrade and Maintenance

Notes: (a) Estimates as of February 2012 and (b) dollar amounts for ARP projects are "project feasibility" estimates that can vary by an industry-recognized contingency of 20-30 percent.