Saint Lawrence Seaway Development Corporation

Seaway Asset Renewal Program (ARP) Annual Report to Congress

Fiscal Year 2014

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Background and Summary

As directed in the House Report (H. Rept. 113-464) and the Senate Report (S. Rept. 113-182) of S. 2438 (Transportation and Housing and Urban Development, and Related Agencies Appropriations Bill, 2015), the Saint Lawrence Seaway Development Corporation (SLSDC or Corporation) 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 each 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 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 and assets located in Upstate New York. None of the ARP projects increase the authorized depth or width of the navigation channel or the size of the lock facilities.

The Seaway is comprised of perpetual assets (locks, channels, an international bridge, highway tunnel, vessel traffic control system, and accompanying facilities and equipment), which require capital reinvestment in order to continue to operate safely, reliably, and efficiently. The U.S. portion of the St. Lawrence Seaway was built in the late 1950s at an original cost of approximately $130 million. Prior to the start of the ARP in FY 2009, only $47 million in capital expenditures had been cumulatively invested in the U.S. Seaway locks since they opened in 1959. Without sufficient investment in these perpetual assets, it will become increasingly difficult to maintain the future availability and reliability of the Seaway.

In FY 2014, the SLSDC obligated $14.2 million on 26 ARP projects. Major ARP activities obligated in FY 2014 included: miter gate structural rehabilitation at Snell Lock ($3.7 million); miter gate machinery rehabilitation ($3.7 million); procuring new culvert valves ($1.4 million); and Eisenhower Lock highway tunnel paving, drainage, and lighting upgrades ($1.1 million).

Each year following enactment of the SLSDC's appropriation, Corporation engineering, maintenance, and program officials finalize its ARP internal spending plan to re-allocate funding, deferring and accelerating projects as needed. This spending plan, in many instances, differs from the projects and funding amounts included in the President's Budget request based on a number of factors including the SLSDC's overall enacted appropriation level, recent project activity, and re-prioritized capital needs. In addition, SLSDC officials are continually making on-going internal budget adjustments throughout each fiscal year to ensure that current priority projects are funded and the overall enacted ARP budget level is met. For FY 2014, the SLSDC had requested $15.9 million for ARP projects so the internal spending plan included necessary adjustments in order to meet the enacted funding level. The flexibility to make the appropriate project and/or funding adjustments has been a major factor in the SLSDC's success in managing and implementing the program.

Through the first six years of ARP funding (FYs 2009-2014), the SLSDC has obligated $94 million on 44 separate ARP projects *(see page 25)*. These projects included maintenance dredging in the U.S. portion of the Seaway navigation channel, lock culvert valve machinery upgrade, structural rehabilitation and corrosion prevention work on the Seaway International Bridge, gatelifter upgrades, and miter gate rehabilitation, as well as various other structural and equipment replacements/modernizations.

Although the majority of ARP work is completed by contractors, the SLSDC's federal workforce is directly responsible for completing work for some ARP projects as well as pre-contract work for the ARP, including preparation of designs, specifications, and drawings, as well as ongoing contract management and contractor support during the on-site work. In FY 2014, the SLSDC expended an additional $970,000 in personnel compensation from its "Operations and Maintenance" program budget for ARP-related staff time. Since the start of the program in FY 2009, SLSDC personnel compensation associated with the ARP has totaled $4.1 million.

Unlike many other lock-based waterway systems, the St. Lawrence Seaway is a single-lock system and not a twinned lock system that more readily ensures continued operations in the event of a lock failure. A delay or shutdown at any one of the 15 U.S. or Canadian Seaway locks would cause system-wide delays. An economic analysis concluded that the economic impact of a shutdown of either of the two U.S. locks would result in a loss of approximately $1.3-$2.3 million in productivity per day, depending on cargo and 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 shippers of more than $24 million, an approximate value of $54 million in 2014 dollars. The ARP program is vital to ensuring that the Seaway System and its locks remain available for the flow of goods across North America in the future.

At the onset of the program, the SLSDC created an ARP Internal Working Group that meets regularly 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. The Working Group reviews project plans and milestones, troubleshoots concerns, and reports progress to SLSDC senior executives.

The SLSDC's multi-year ARP supports the engineering considerations highlighted in the 2007 *Great Lakes St. Lawrence Seaway Study* and complements the asset renewal activities currently underway at the Canadian Seaway locks. The Canadian portion of the St. Lawrence Seaway is managed and operated by the St. Lawrence Seaway Management Corporation (SLSMC). Beginning with the passage of the Canada Marine Act in 1998, the Canadian government started to address the asset renewal needs of its 13 Seaway locks, including the eight Welland Canal locks that are over 75 years old.

Together, the SLSDC and SLSMC have spent $350 million over the past five years and have projected asset renewal expenses of nearly $500 million over the next five years. Many of the lock-related ARP improvements at the U.S. locks parallel activities either completed, underway, or planned at the Canadian Seaway locks.

In January 2015, a report was released highlighting public and private investments in the Great Lakes St. Lawrence Seaway navigation system[1]. The report, which was based on a survey of more than 450 U.S. and Canadian public organizations and private companies, found that $6.9 billion is being spent on asset renewal and infrastructure improvements in the Great Lakes St. Lawrence Seaway navigation system by both the public and private sectors. Between 2009-2013 more than $4.7 billion has been invested in ships, ports and terminals, and waterway infrastructure, while an additional $2.2 billion in capital spending has been committed for infrastructure investments in the system by companies and governments.

In order to help ensure that the St. Lawrence Seaway opens each spring for navigation as scheduled, the SLSDC includes monetary incentives and penalties for ARP contractors working on lock operating components during the off-season 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 2014, the SLSDC awarded one monetary incentive for $20,000 to Hohl Industrial Services, Inc., Tonawanda, N.Y., for the downstream miter gate rehabilitation project at Snell Lock (ARP Project No. 2). No performance-related penalties were assessed against any ARP contractor.

Since the ARP's inception, 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. To that end, the SLSDC awarded indefinite delivery contracts (IDCs) in FY 2009 to three architecture/engineering (A/E) firms to support the ARP through January 2014 – Hatch Mott MacDonald, Buffalo, N.Y.; Parsons Brinckerhoff, Inc., Buffalo, N.Y.; and Aubertine and Currier, Watertown, N.Y. The SLSDC used these A/E contractors to receive design support and expert advice on project plans, specifications, and drawings. As support work was needed, the SLSDC requested proposals from the three firms in a streamlined process, with negotiations, as required, limited to only those firms. The SLSDC has maintained its IDC with Aubertine and Currier beyond January 2014 to support an open task order on one of the projects. The policies and procedures for awarding IDCs are contained in Federal Acquisition Regulation (FAR), Subpart 16.5. The SLSDC is expected to re-advertise for these A/E services in FY 2015 for a base year with options for four additional years.

ARP baseline project estimates developed by the SLSDC used one or more of four estimation methods, 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/or (4) utilization of data from RSMeans®, which serves as North America's leading supplier of construction cost information. Estimates also consider final contract totals for similar ARP work awarded during the programs first six years (FYs 2009-2014).

This annual report provides the Appropriations Committees with updates on: (1) ARP economic impacts to Upstate New York; (2) ARP Capital Investment Plan summary (FYs 2016-2020); (3) FY 2014 ARP project updates; (4) ARP obligations by project for FYs 2009-2014; (5) ARP funding summary for FYs 2009-2014; and (6) the latest five-year estimates for ARP projects in FYs 2016-2020.

[1] *Infrastructure Investment of the Great Lakes St. Lawrence Seaway System*, Martin Associates, January 2015.

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, nearly 55 percent of the ARP funds obligated during the program's first six years, totaling approximately $51 million, were awarded within the region.

In addition to these contracts, the ARP is producing approximately $1.5-$2.5 million in additional economic benefits to the region (e.g., local permanent and temporary hires, local spending on supplies and equipment, lodging, meals, etc.) each year.

On a larger scale, maritime commerce on the Great Lakes Seaway System annually sustains more than 225,000 U.S. and Canadian jobs, $35 billion in transportation-related business revenue, and $5 billion in federal, state, provincial, and local taxes. The binational waterway also provides approximately $4 billion in annual transportation cost savings compared to competing rail and highway routes.

ARP Capital Investment Plan Summary (FYs 2016-2020)

As highlighted in the *U.S. St. Lawrence Seaway ARP Capital Investment Plan (CIP), 2016-2020*[2], which was included in the SLSDC's FY 2016 President's Budget request, the SLSDC provided estimates for executing the next five years of the ARP *(see pages 28-29)*.

For the FY 2016-2020 period, the Seaway ARP/CIP includes 45 separate ARP projects and equipment estimated at $98.9 million with total funding for each year of the plan constrained to funding targets for those years as approved by the Secretary and subject to annual appropriations. It is important to note that dollar amounts for ARP projects are "project feasibility" estimates that can vary by an industry-recognized standard of 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.

The SLSDC also proposed, as part of the FY 2016 President's Budget, the extension of the program beyond its originally scheduled completion in FY 2018. This extension would serve two purposes: (1) to ensure the completion of all original ARP projects, several of which were deferred in order to meet lower-than-estimated annual funding levels in recent years; and (2) to allow the SLSDC to address recurring capital needs beyond the timeframe of the original ARP as it transitions to a more structured capital asset management program.

[2] http://www.greatlakes-seaway.com/en/pdf/SLSDC_Asset_Renewal_Plan2016.pdf

FY 2014 ARP Project Updates

The following information provides an update on the 24 ARP projects that were funded in FY 2014 with obligations in excess of $1,500[3]. 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.

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. 1: Both Locks – Replace Fendering on Approach Walls

General Description: This project is to replace the composite fendering on the downstream guidewall extension at Snell Lock. The existing composite fenders were a trial design installed nearly 25 years ago which have become very difficult and expensive to maintain and are in need of replacement to insure that vessels using this approach wall are not damaged due to the condition of the existing fendering.

Type of Project:[4] Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $0

FY 2014 Obligations:[5] $188,725

Total Obligations *(FYs 2009-2014)*: $438,416 (FYs 2009, 2010, and 2014)

[3] There were two ARP projects with FY 2014 obligations below $1,500 that are not reported in the project update section: Project No. 17: Navigation Channels – Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments ($100); and Project No. 19: Corporation Facilities – Upgrade Electrical Distribution Equipment ($420).

[4] 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 keep it in an ordinarily efficient operating condition. Expenditures for these maintenance projects are recognized as operating costs.

[5] 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.

Project Update *(as of September 30, 2014)*: In FY 2014 the SLSDC awarded two contracts for parts and equipment associated with fendering replacement completed by SLSDC personnel throughout each navigation season. In late September 2014, the SLSDC awarded a contract to Axxon International, LLC, Rock Hill, S.C. (small business; simplified acquisition, award based on lowest price), for $145,000 for 2,200 feet of Ekki timbers. The SLSDC has been using Ekki timber, a hard wood from Cameroon, for its fending for over a decade and has found it to significantly reduce the time between replacements. In addition, a contract was awarded to Garland Manufacturing Co., Saco, Maine (small business; simplified acquisition, award based on lowest price), for $43,725 for ultra-high molecular weight (UHMW) polyethylene used in the fendering installation.

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(2) 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 damaged components including the miter and quoin contact blocks, rubber seals, pintles, and diagonals that insure proper functioning of the miter gates. These parts are critical to the safe and efficient operation of the locks.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $204,000

FY 2014 Obligations: $203,666

Total Obligations *(FYs 2009-2014)*: $6,761,839 (FYs 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: Hohl Industrial Services, Inc., Tonawanda, N.Y. (large business; sealed bidding, award based on lowest price), completed its rehabilitation work on the downstream miter gate at Snell Lock during the winter months of FY 2014. The firm earned a $20,000 incentive payment for completing its work and demobilizing its equipment on time. This project was funded in FY 2013, but an additional $500 (net) was expended in FY 2014 under a contract modification to award the incentive bonus, increase structural steel repair hours, and delete unnecessary concrete work.

The SLSDC also awarded a contract in October 2013 for not-to-exceed $200,000 to C&S Engineers, Inc., Syracuse, N.Y. (large business; negotiated procurement, award based on best value using trade off procedures), for construction inspection services for this project. The final amount for this contract was $185,012.

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

General Description: This project is for rehabilitating the roof and curtain wall modules used to cover Eisenhower and Snell Locks when major winter maintenance projects are planned. These covers are over 45 years old and require rehabilitation. By installing the new access panels, SLSDC staff will no longer be required to remove entire roof cover modules to access work areas. By rehabilitating and modifying the curtain wall modules, the SLSDC staff will be able to install the curtain walls more safely and efficiently.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $20,000

FY 2014 Obligations: $34,254

Total Obligations *(FYs 2009-2014)*: $167,612 (FYs 2009, 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In FY 2014, SLSDC staff commenced work to rebuild the second set of curtain wall modules to be used during winter work in the locks. It is expected that these curtain walls will be used during 2015 winter work. There were also supply purchases associated with this project totaling $34,254.

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(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 used for filling and emptying the locks with single skin valves. Cracking of major structural members has occurred and the structural members are not accessible for inspection, blast cleaning, and painting given the double-skin construction. 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.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $380,000

FY 2014 Obligations: $1,370,028

Total Obligations *(FYs 2009-2014)*: $2,065,147 (FYs 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: The SLSDC awarded a work order in FY 2012 to the U.S. Army Corps of Engineers (USACE) to perform physical modeling to determine how best to address issues with the first new single-skin valve in use at Snell Lock. The SLSDC sought the Corps' expertise prior to purchasing the remainder of valves needed at both locks. Following the USACE review, the SLSDC began work to modify the first single skin culvert valve to resolve its issues and then issued a solicitation to purchase up to six valves with the new design. In late September 2014, the SLSDC awarded a contract to Custom Fabrications and Coatings, Inc., Granite City, Ill. (small business; sealed bidding, award based on lowest price), for $1,368,117 for six valves and associated struts. The valves will be installed at the two U.S. locks during future winter maintenance periods.

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(5) Project No. 8: Floating Navigation Aids – Replace

General Description: This is an ongoing program to replace floating navigational aids/buoys and winter markers that have been damaged over the years and to upgrade the lights on the buoys. The Corporation is responsible for 101 buoys and 59 winter markers (one light per unit) along a 120-mile portion of the St. Lawrence Seaway.

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

Mission Objective: Waterway Management

FY 2014 Request Estimate *(April 2013)*: $65,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $48,000

FY 2014 Obligations: $68,149

Total Obligations *(FYs 2009-2014)*: $215,413 (FYs 2009, 2010, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In August 2014, the SLSDC purchased 12 winter markers through the U.S. Coast Guard's sole source contract with UMS Metal Fabricators, Inc., Mobile, Ala. (small business; Small Business Administration's (SBA) HUBZone[6] acquisition, U.S. Coast Guard sole source vendor), for $28,066. In addition, the SLSDC awarded additional contracts for floating navigation aid lights, lanterns, flashers, and transportation totaling $40,083.

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[6] The SBA's 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.

(6) 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 they become worn out and unserviceable. Heavy and light equipment include such items as a crane, dump truck, snowplow, backhoe, grader, front end loader, air compressor, forklift, and welder. Shop equipment includes such items as a lathe, drill press, vehicle hoist, and milling machine. Equipment and vehicles are inspected regularly and their replacement is prioritized based on the results of those inspections. Motor vehicles will be replaced with alternative fuel vehicles whenever possible.

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

Mission Objective: Lock Operation Upgrade and Maintenance / Waterway Management

FY 2014 Request Estimate *(April 2013)*: $260,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $223,000

FY 2014 Obligations: $227,151

Total Obligations *(FYs 2009-2014)*: $2,609,761 (FYs 2009, 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In FY 2014, the SLSDC awarded three contracts for new work vehicles and to rebuild its existing grader. In August 2014, the SLSDC awarded a contract to Grande Ford Truck Sales, Dripping Springs, Texas (large business; GSA AutoChoice), for $88,044 for two 4x2 propane-fueled full-size pickup trucks. In April 2014, a contract was awarded for $49,607 for two 4x4 sport utility vehicles to Ford Motor Co., Detroit, Mich. (large business; GSA AutoChoice). These new trucks replace work trucks that are no longer serviceable for use by SLSDC maintenance crews and the sport utility vehicles replace vehicles used by SLSDC ship inspectors.

Finally, the SLSDC awarded a contract in September 2014 to Nortrax, Inc., Gouverneur, N.Y. (large business; simplified acquisition, award based on price and past performance), for $89,500 to rebuild its John Deere grader. The rebuild work will take place in FY 2015.

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

General Description: This project is for upgrading the infrastructure that supplies power to Eisenhower and Snell Locks and to the Corporation's Maintenance Facility. The power is furnished directly from the Moses-Saunders Power Dam via infrastructure that

is over 50 years old. The loss of power from the Moses-Saunders Power Dam makes it necessary to use diesel generators, which are expensive to operate, to continue operation of Eisenhower and Snell Locks and the Maintenance Facility. Additionally, the diesel generators will not provide enough power to support all lock and maintenance operations.

Type of Project: Non-Capital Maintenance Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $20,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $40,000

FY 2014 Obligations: $38,320

Total Obligations *(FYs 2009-2014)*: $427,898 (FYs 2009, 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In FY 2014, the New York Power Authority (NYPA) continued its on-going rehabilitation of the infrastructure that supplies power to the SLSDC for operations and maintenance activities. This is a recurring annual ARP project with expenditures dependent on NYPA plans and work completed. In September 2014, the SLSDC paid NYPA $38,320 (sole source) for its work on SLSDC power-related infrastructure rehabilitation.

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

Description: This project is for rehabilitating the 92 fixed navigational aids (one light per unit) in the St. Lawrence Seaway and for upgrading the navigation lights on these structures. Many of the structures are more than 50 years old and are in need of comprehensive repairs. Many of these structures have concrete bases which are partially underwater and have experienced varying degrees of damage from water, ice, and freeze-thaw cycles. Failure of a fixed aid would likely make it necessary to replace it which would cost significantly more than repairing the existing structure.

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

Mission Objective: Waterway Management

FY 2014 Request Estimate *(April 2013)*: $200,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $15,000

FY 2014 Obligations: $14,199

Total Obligations *(FYs 2009-2014)*: $91,672 (FYs 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: The SLSDC awarded a contract in September 2014 for $14,199 to Sealite USA, LLC, Tilton, N.H. (small business; sole source), for the purchase and installation of navigation aid lights.

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(9) Project No. 12: Corporation Equipment – Upgrade/Replace Floating Plant/Tugs

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 tugboats *Robinson Bay* and *Performance*; upgrading the buoy tender barge; purchasing a boat to be used for hydrographic surveying with upgraded 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 SLSDC's crane barge/gatelifter *Grasse River*, which would have to be utilized if a miter gate were 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

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $587,000

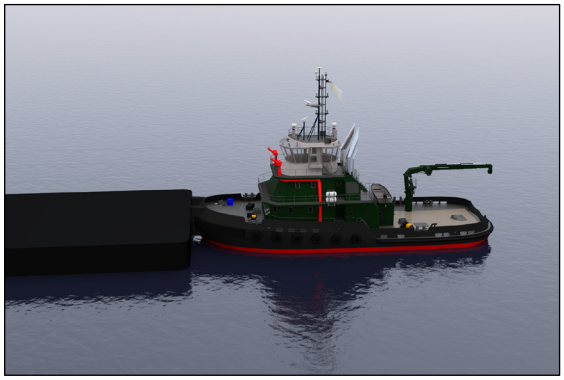
FY 2014 Obligations: $572,622

Total Obligations *(FYs 2009-2014)*: $7,808,437 (FYs 2009, 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In FY 2014, the SLSDC's efforts on this project focused on three activities: (1) correcting issues with work on the SLSDC's buoy barge crane (initial work completed in FY 2013); (2) designing the replacement for the SLSDC's tugboat *Robinson Bay*; and (3) finishing upgrades to the electrical systems onboard the SLSDC's gatelifter, *Grasse River*.

The SLSDC worked with its contractor (Basic Marine, Inc., Escanaba, Mich.) and the crane manufacturer to resolve issues associated with the operations of the buoy barge crane purchased and installed in FY 2013. At the end of FY 2014, the issues remained unresolved but temporary solutions have been identified and will be tested during the 2014 winter buoy run. The SLSDC will continue to work with the involved parties to satisfactorily resolve the outstanding issues. No additional SLSDC expenses are expected.

In April 2014, the SLSDC issued a modification to its existing contract with the marine architect firm Robert Allan Ltd., Vancouver, B.C. to complete conceptual, preliminary and final designs for the new *Robinson Bay* tugboat replacement. The final design is expected in early FY 2015.



Computerized image of the SLSDC tugboat replacement design for the Robinson Bay.

The SLSDC also purchased a 20-foot aluminum landing craft with motors and trailer from Life Tyme Boats, Inc., Jonesville, La. (small business; simplified acquisition, award based on lowest price and technical acceptability), for $71,600 in September 2014. The boat will be used to service and maintain navigational aids.

Finally, Continental Construction, LLC, Gouverneur, N.Y., completed its work in early FY 2014 on the gatelifter operating equipment/systems and electrical distribution upgrades. This work was awarded in FY 2013 and the final award amount was $355,753 (FY 2014 funding amount was $5,068).

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(10) 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, providing the only access to the north sides of both Eisenhower and Snell Locks, to the New York Power Authority's Robert Moses Power Project, and to the New York State Park on Barnhart Island.

This project includes grouting to limit the water leaking into the tunnel, improving the drainage and replacing the roadway surface, upgrading the tunnel lighting, replacing damaged/missing tiles from the walls and ceiling, replacing deteriorated/damaged gratings and railings, stabilizing/repairing wingwalls at the tunnel approaches and clearing tunnel drains which are becoming plugged with concrete leachate products. Due to the fact that this tunnel is the only means of access to the facilities noted above, any problems that would make it necessary to close the tunnel for repair would have very significant impacts.

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

Mission Objective: Tunnel and Bridge Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $1,411,000

FY 2014 Obligations: $1,143,224

Total Obligations *(FYs 2009-2014)*: $1,542,646 (FYs 2009, 2010, 2011, 2012, and 2014)

Project Update *(as of September 30, 2014)*: Throughout FY 2014, the SLSDC continued to work with its A/E contractor (Parsons Brinckerhoff, Inc., Buffalo, N.Y.) on the Eisenhower Lock highway tunnel lighting project. In addition, SLSDC engineers prepared designs, specifications, and drawings for replacing the roadway surface including making improvements to the drainage below the roadway.

In September 2014, the SLSDC awarded four contracts and one contract modification associated with the highway tunnel lighting and roadway improvement projects:

- Contract for tunnel paving and drainage improvements to Nichols, Long & Moore, Lancaster, N.Y. (small business; sealed bidding, service-disabled, veteran-owned small business set-aside), for $519,000.

- Contract for the removal and replacement of the existing tunnel lights to Phoenix Group Contracting, LLC, Queensbury, N.Y. (small business; sealed bidding, small business set-aside), for $347,220.

- Contract for the light-emitting diode (LED) lighting fixtures to Granite City Electric Supply Co., Inc., Andover, Mass. (small business; simplified acquisition, award based on lowest price and technical acceptance), for $150,031.

- Contract for inspection services for tunnel paving and drainage work to Lowe, Gravelle & Associates, Massena, N.Y. (small business; negotiated procurement, award based on best value), for $108,972.

- Contract modification to Parsons Brinckerhoff, Buffalo, N.Y., for additional A/E work on the tunnel lighting project and to extend the completion date to July 1, 2015 (FY 2014 funding of $18,000).

All tunnel lighting and paving/drainage work will be completed in FY 2015.

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(11) 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, much of the equipment at both locks is monitored and controlled by computerized systems through programmable logic controllers (PLCs) with redundant systems installed to replace the hard-wired backup controls. Adding control and status of all critical components will provide the ability to more closely monitor that equipment and, as a result, improve the effectiveness of preventive maintenance activities and increase reliability.

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

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $30,000

FY 2014 Obligations: $32,570

Total Obligations *(FYs 2009-2014)*: $384,711 (FYs 2009, 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In FY 2014, the SLSDC continued to work on infrastructure installation and system programming for its lock control and lock/equipment monitoring system. The SLSDC awarded a task order as part of its FY 2012 contract with Optimation Technology, Inc., Rush, N.Y. (large business; task order) for not-to-exceed $15,000 for lock control enhancements. The final FY 2014 funding for this project was $14,947.

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(12) Project No. 22: Both Locks – Install Vessel Self Spotting Equipment

General Description: This project is for installing equipment at the U.S. Seaway locks such that transiting vessels can spot/locate themselves in the lock. This new technology, once fully implemented, will eliminate the need for Lock Operations personnel to spot vessels in a lock. The Canadian SLSMC has already completed testing and installation of this new technology at their locks.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $300,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $500,000

FY 2014 Obligations: $485,201

Total Obligations *(FYs 2009-2014)*: $485,201 (FY 2014)

Project Update *(as of September 30, 2014)*: In preparation for installing this new self spotting technology at the two U.S. Seaway locks (scheduled for FY 2015 depending on available technology), the SLSDC purchased equipment in FY 2014 including:

- Laser scanners and cables from Gatekeepers Internet Marketing, Inc., Washington, D.C. (small business; simplified acquisition, award based on best value), for $106,100.

- Rotary stages from B&H International, Bakersfield, Calif. (small business; simplified acquisition, award based on best value), for $64,561.

- Control components from TEVET LLC, Greeneville, Tenn. (small service-disabled veteran-owned business; simplified acquisition, award based on best value) for $43,689.

- LED displays from Intelligent Data, Van Nuys, Calif. (small business; simplified acquisition, award based on best value), for $35,225.

In addition, the SLSDC awarded a contract in May 2014 to Averna Test Systems, Inc., Roswell, Ga. (small business; sole source) for not-to-exceed $176,935 for self spotting system equipment fabrication, testing, calibration, and commissioning. A contract modification in July 2014 increased the not-to-exceed total to $186,498.

The SLSDC also contracting with the Canadian SLSMC for technical support for the installation and integration of the self spotting system at the two U.S. locks in an amount not-to-exceed $45,000 (Canadian).

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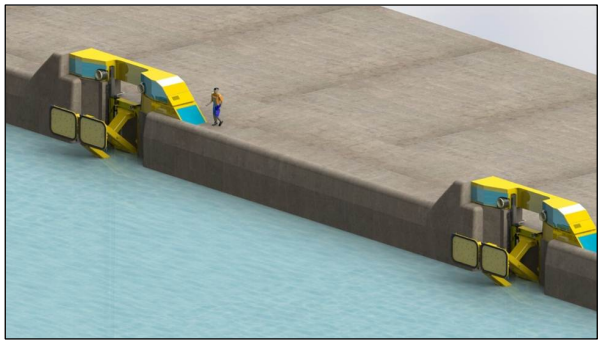
(13) Project No. 23: Both Locks – Install Vessel Vacuum Mooring Systems

General Description: This project is for installing hands-free vacuum mooring equipment at both Eisenhower and Snell Locks to hold vessels in place while they are in the lock instead of using wire ropes deployed by the vessel's crew to tie the vessel to bollards on the lock wall. This new technology, once fully implemented, will reduce the need for SLSDC employees to tie the vessels up while in the lock, thereby reducing the risk of injuries resulting from handling the wire ropes. In addition, vessel operating costs would be reduced to reflect smaller crew sizes and less equipment to meet current transit requirements. The Canadian SLSMC initiated this project and began testing the new technology at their Welland Canal locks in 2007. On-going testing has led to a fourth generation design, which includes three units with two vacuum pads on each unit, mounted in slots in the lock chamber wall. Both the SLSMC and Transport Canada are fully committed to installing this new technology at all 13 of the Canadian Seaway locks by 2018.



Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $2,975,000

FY 2014 Obligations: $686,074

Total Obligations *(FYs 2009-2014)*: $686,074 (FY 2014)

Project Update *(as of September 30, 2014)*: The SLSDC began work in FY 2014 on the vessel hands-free mooring system, including two contract awards. In addition to the contracts, the SLSDC worked closely with the Canadian SLSMC engineers to discuss the projects and lessons learned from the initial system installations at several of the Canadian Seaway locks.

The first contract was awarded in August 2014 to Cavotec Canada Inc., Markham, Ontario (large business; sole source), for $325,000 for the new system rail sets for Eisenhower Lock. Cavotec is the world's only manufacturer of this technology and the SLSDC and SLSMC jointly negotiated on the system equipment for all 15 U.S. and Canadian locks to reduce the per-lock costs.

The second contract was awarded in September 2014 to Bergmann Associates, Rochester, N.Y. (large business; A/E (Brooks Act) solicitation, award based on best value), for engineering services to support the structural design of the hands free mooring slots and rails installation in the lock chambers for an amount not-to-exceed $361,070.

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

General Description: This project is for constructing shelters/buildings for storage of lock spare parts and equipment to prevent them from corroding. 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

One of two pre-engineered metal storage buildings constructed in 2014 at the SLSDC's Marine Base/ Maintenance facility to store lock parts and equipment.

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

FY 2014 Request Estimate *(April 2013)*: $200,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $15,000

FY 2014 Obligations: $18,572

Total Obligations *(FYs 2009-2014)*: $1,563,982 (FYs 2010, 2011, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In late FY 2013, the SLSDC awarded a contract for $1.1 million to Diverse Construction Group, LLC, Plessis, N.Y., to furnish and erect pre-engineered metal storage buildings at the SLSDC's Marine Base/ Maintenance facility. In FY 2014, the SLSDC issued two contract modifications to extend the project completion date to August 2014 and for additional work to the pavement surfaces (FY 2014 funding of $13,178). Construction of the two buildings was completed in late summer 2014.

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(15) 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 spare gate assembly and storage infrastructure as well as cleaning and painting of the spare miter gates and gate assembly towers.

Type of Project: Capital Project

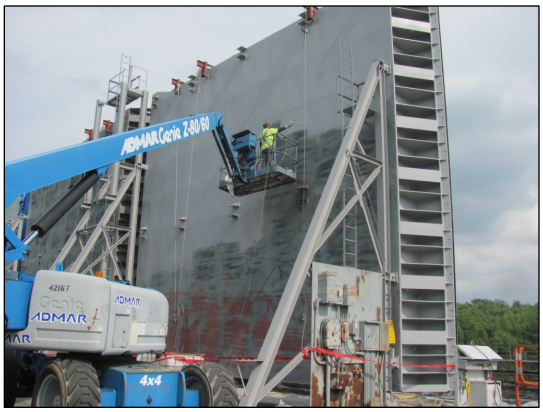
Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $35,000

FY 2014 Obligations: $42,445

Total Obligations *(FYs 2009-2014)*: $2,501,713 (FYs 2010, 2011, 2013, and 2014)



Tower Maintenance Corp. crews paint the SLSDC's spare miter gates at the gate storage and assembly area at Snug Harbor.

Project Update *(as of September 30, 2014)*: In late FY 2013, the SLSDC awarded two contracts for the cleaning and painting the spare gates and towers (Tower Maintenance Corp., Sea Cliff, N.Y.) and for inspection services for the work (Lowe, Gravelle & Associates, Massena, N.Y). The contractor began work in early FY 2014 and was scheduled to complete the project in early FY 2015. The rehabilitation work included removing and reinstalling the contact blocks from the spare gate sections and repairing, cleaning and painting the spare gate sections, storage trusses and assembly towers. In FY 2014, the SLSDC issued seven contract modifications to Tower Maintenance Corp. totaling $39,126 for additional necessary work. The total amount of the contract award was $1,927,126.

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(16) Project No. 33: Both Locks – Upgrade Drainage Infrastructure in Galleries and Recesses

General Description: This project is to open existing drains or to drill new drains in the galleries and machinery recesses at both Eisenhower and Snell Locks. The drains are being filled up with concrete leachate products which slow and/or stop the drains and cause flooding of the galleries and machinery recesses.

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

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $150,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $300,000

FY 2014 Obligations: $301,737

Total Obligations *(FYs 2009-2014)*: $308,675 (FYs 2013 and 2014)

Project Update *(as of September 30, 2014)*: In November 2013, the SLSDC awarded a contract not-to-exceed $181,737 to Dyna Mole, Rochester, N.Y. (small business; simplified acquisition, award based on best value), to clean nine drains at both locks. Due to unanticipated conditions and the addition of other plugged drains, the SLSDC issued contract modifications that increased FY 2014 funding to $301,737. Work was completed in late fall 2013 and spring/summer 2014.

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(17) Project No. 38: Both Locks – Upgrade/Replace Emergency Generators

General Description: This project is for replacing the emergency generators at both Eisenhower and Snell Locks. The generators at the locks are over 25 years old and cannot carry the total load required to operate the locks.

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

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $343,000

FY 2014 Obligations: $344,313

Total Obligations *(FYs 2009-2014)*: $2,108,321 (FYs 2013 and 2014)

Project Update *(as of September 30, 2014)*: In FY 2013, the SLSDC awarded a contract to Collins-Hammond Electrical Contractors, Ogdensburg, N.Y., for $1.8 million to replace the emergency generators and transformers at both U.S. Seaway locks. Work began in early FY 2014 and continued throughout the entire fiscal year. Six contract modifications totaling $337,710 were issued in FY 2014 for unanticipated conditions which were discovered during the work. Project work is scheduled to be completed in early FY 2015.

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(18) Project No. 39: Both Locks – Dewatering Pumps – Upgrade Outdated Equipment

General Description: This project replaces the pumps used for dewatering both the U.S. Seaway locks when maintenance of their underwater components is required. These pumps are over 50 years old and in need of rehabilitation.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $24,000

FY 2014 Obligations: $23,568

Total Obligations *(FYs 2009-2014)*: $239,052 (FYs 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In FY 2012, the SLSDC completed a replacement vs. rebuild analysis for the dewatering pumps at the U.S. Seaway locks and concluded it is more cost effective to rebuild the larger pumps and replace the smaller ones. That year, the SLSDC awarded a contract to Rolfe Industries, Inc., Clifton Park, N.Y., for the rehabilitation/rebuild of four large dewatering pumps. Two pumps were rebuilt in FY 2013 and the two remaining pumps were rebuilt in FY 2014. A contract modification was required in FY 2014 for additional work to rebuild the motor on the fourth pump. The smaller pumps will be replaced in future years as opposed to rebuilding them.

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(19) 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 somewhat 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 typically present. Due to the very limited space between the vessel and lock walls and miter gates, each lock must be flushed free of ice before a vessel can be allowed to enter. 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 2014 Request Estimate *(April 2013)*: $0

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $95,000

FY 2014 Obligations: $90,045

Total Obligations *(FYs 2009-2014)*: $13,416,610 (FYs 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: As reported in last year's report, the SLSDC experienced problems with the ice flushing system installed at Snell Lock in the winter of 2013. During the testing and commissioning of the new system in 2013, several complications were observed, including system vibrations, pipes flexing and issues with the valves not closing properly. The SLSDC concluded that it was not prudent to operate the new system until the issues were resolved. In FY 2014, the SLSDC continued to work with the contractors and the design engineers involved with this project to resolve the system issues. There were three contract modifications issued in FY 2014 totaling $90,017 for computer modelling to find solutions to the existing system problems.

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(20) Project No. 42: Both Locks – Miter Gates – Structural Rehabilitation

General Description: This project is to blast clean, repair, and paint the miter gates at both U.S. Seaway locks to prevent further corrosion of these structures. They were last cleaned and painted 30 years ago.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

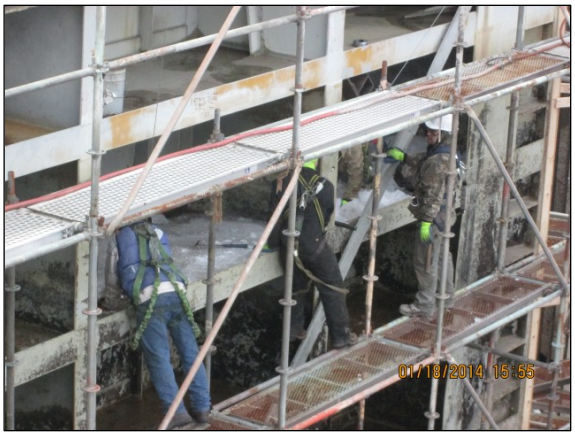
FY 2014 Request Estimate *(April 2013)*: $1,295,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $3,715,000

FY 2014 Obligations: $3,740,613

Total Obligations *(FYs 2009-2014)*: $6,639,642 (FYs 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In FY 2013, the SLSDC awarded a contract to Abhe & Svoboda, Inc., Prior Lake, Minn., for $2.9 million to blast clean and paint the upstream and downstream miter gates at Eisenhower Lock. The work was completed on schedule during the winter work period following the 2013 navigation season.



Workers from Abhe & Svoboda perform rehabilitation work on the upstream miter gate at Eisenhower Lock as part of the blast cleaning and painting project in January 2014.

In September 2014, the SLSDC awarded a contract to Abhe & Svoboda (large business; sealed bidding, award based on lowest price) for $3,383,740 to blast clean and paint both sets of miter gates at Snell Lock during the winter work period in FY 2015. A contract was also awarded for $170,959 to Quality Control Services, Cleveland, Ohio (small business; sole source, 8-A firm), for inspection and testing services for the Snell Lock work.

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(21) Project No. 43: Both Locks – Miter Gate Machinery

General Description: This project is for rehabilitating and 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.

Type of Project: Capital Project

Mission Objective: Lock Operation Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $1,750,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $2,360,000

FY 2014 Obligations: $3,740,933

Total Obligations *(FYs 2009-2014)*: $3,876,009 (FYs 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: Throughout FY 2014, the SLSDC conducted an assessment and cost-benefit analysis of hydraulic upgrade versus rebuild options for the miter gate machinery at both U.S. Seaway locks. The SLSDC decided to rebuild the existing electro-mechanical operating machinery with only a few minor upgrades as opposed to purchasing new hydraulic equipment.

In September 2014, the SLSDC awarded three contracts related to the rebuild of the miter gate machinery:

- Contract for the removal and reinstallation of gearboxes to Timken Gears and Service (doing business as Philadelphia Gear), King of Prussia, Pa. (large business; sole source, negotiated), for $2,221,610.

- Contract for the rebuild of the Philadelphia Gear gearboxes to Timken Gears and Service (large business; sole source, negotiated), for $1,401,119.

- Contract for bushings, plates, and pins to 3T Federal Solutions, LLC, Austin, Texas (small business; simplified acquisition, award based on lowest price), for $107,600.

There were also steel supply purchases associated with this project totaling $6,911. The rebuild and reinstallation work at Eisenhower Lock is expected to be completed during the winter work period following the 2014 navigation season and at Snell Lock during the winter work period following the 2015 navigation season.

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(22) 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 U.S. Department of Transportation as well as 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 2014 Request Estimate *(April 2013)*: $100,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $5,000

FY 2014 Obligations: $5,985

Total Obligations *(FYs 2009-2014)*: $423,755 (FYs 2010, 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In early FY 2014, the SLSDC launched a new physical security access system for access to buildings, gates, and doors at its various locations in Massena, N.Y. The SLSDC awarded a series of contracts for this new system in FY 2012. There were several minor issues that had to be resolved following the system launch with the contractors (Collins-Hammond Electrical Contractors, Inc., Ogdensburg, N.Y. and Combs & Shearer, Inc., Huntsville, Ala.).

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

General Description: Each year, the 50-year-old Dwight D. Eisenhower Lock Visitors' Center is visited by more than 50,000 people and is an important attraction for Upstate New York tourism. The 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. A new facility will address many of the shortcomings of the current one, including security, operational safety (current center location limits crane accessibility on the south side of the lock), and accessibility for the disabled.

Type of Project: Capital Project

Mission Objective: Facility-Equipment Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $500,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $795,000

FY 2014 Obligations: $794,473

Total Obligations *(FYs 2009-2014)*: $1,105,906 (FYs 2011, 2013, and 2014)

Project Update *(as of September 30, 2014)*: As the first phase of the Visitors' Center modernization project, the SLSDC awarded a contract in November 2013 to Continental Construction, LLC, Gouverneur, N.Y. (small business; sealed bidding, award based on lowest price) for $770,700 to construct a new security and restroom facility. The facility was constructed during the summer of 2014 and will be operational for the start of the 2015 summer season. The SLSDC issued two contract modifications totaling $2,531. The new building will replace the temporary trailer that has been used by the Visitors' Center security personnel for the past decade as well as the 50-year-old restroom building that was in need of replacement.

The new SLSDC Eisenhower Lock Visitors' Center security and restroom facility was constructed in 2014 and will be operational beginning in May 2015.

As part of its work to prepare for replacing the Visitors' Center and observation area, the SLSDC continued its work that began in FY 2013 with Aubertine and Currier, Watertown, N.Y., on designs and specifications for a new center. The new center design will complement the new security/restroom building and address many of the shortcomings of the current facility, including operational safety (current center location limits crane accessibility on the south side of the lock) and accessibility to the disabled. The center designs and specifications are expected to be completed in FY 2015.

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

General Description: This project is to implement the recommendations of an energy/water conservation audit and a retro-commissioning study both of which were conducted by consultants. These upgrades will be made to meet the sustainability requirements of the various executive orders and federal laws.

Type of Project: Capital Project

Mission Objective: Facility-Equipment Upgrade and Maintenance

FY 2014 Request Estimate *(April 2013)*: $100,000

FY 2014 Adjusted Internal Spending Plan *(March 2014)*: $30,000

FY 2014 Obligations: $22,140

Total Obligations *(FYs 2009-2014)*: $134,867 (FYs 2011, 2012, 2013, and 2014)

Project Update *(as of September 30, 2014)*: In September 2014, the SLSDC awarded a contract to Superior Energy Systems, Columbia Station, Ohio (small business; simplified acquisition, award based on price and technical acceptability), for a skid mount propane dispensing system. This new on-site propane fueling station will be used by SLSDC personnel for the Corporation's new propane-fueled vehicles *(see Project No. 9)* and other equipment, reducing the agency's traditional fuel consumption. In addition, the SLSDC continued to make progress as part of its multi-year retro-commissioning project for its Administration Building in Massena, N.Y.

SLSDC ARP Obligations (FYs 2009-2014)

ARP #	ARP Project Description	ARP FY 2009 Obligations (Year 1)	ARP FY 2010 Obligations (Year 2)	ARP FY 2011 Obligations (Year 3)	ARP FY 2012 Obligations (Year 4)	ARP FY 2013 Obligations (Year 5)	ARP FY 2014 Obligations (Year 6)	Six-Year Obligation Totals
1	Both Locks - Replace Fendering on Approach Walls	$241,600	$8,091	$0	$0	$0	$188,725	$438,416
2	Both Locks - Rehabilitate Downstream Miter Gates	$0	$0	$3,539,935	$8,384	$3,009,854	$203,666	$6,761,839
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	(Comb. w/ No. 14)	$35,422	$0	$0	$0	$0	$35,422
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	$4,117,050	$344,915	$3,965,005	$539,889	$203,678	$0	$9,170,537
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	$46,698	$6,638	$23,781	$28,335	$27,906	$34,254	$167,612
6	Seaway International Bridge – Perform Structural Rehabilitation and Corrosion Prevention	$3,102,878	$5,680,707	$0	$0	$0	$0	$8,783,585
7	Both Locks - Culvert Valves - Replace With Single Skin Valves	$0	$326,898	$65,591	$302,468	$162	$1,370,028	$2,065,147
8	Floating Navigational Aids - Replace	$61,254	$54,576	$0	$0	$31,434	$68,149	$215,413
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles, and Shop Equipment	$1,574,504	$481,052	$108,038	$81,623	$137,393	$227,151	$2,609,761
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	$19,594	$231,269	$93,613	$28,003	$17,099	$38,320	$427,898
11	Fixed Navigational Aids - Rehabilitate	$0	$10,998	$16,217	$21,048	$29,210	$14,199	$91,672
12	Corporation Equipment - Upgrade/Replace Floating Plant	$678,745	$1,627,925	$1,908,563	$2,160,169	$860,413	$572,622	$7,808,437
13	Corporation Facilities - Replace Roofs	$143,949	$0	$3,348	$89,024	$17,820	$0	$254,141
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	$921,837	$1,829,621	$85,481	$0	$0	$0	$2,836,939
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	$26,636	$271,804	$99,459	$1,523	$0	$1,143,224	$1,542,646
16	Corporation Technologies - Upgrade GPS/AIS/TMS	$100,997	$76,451	($3,328)	$10,000	$6,350	$0	$190,470
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	$4,279,556	$0	$3,662,267	$99,714	$100	$100	$8,041,737
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	$0	$487,750	$109,490	$268,549	$0	$0	$865,789
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	$0	$753,400	$306,847	$41,304	$1,465	$420	$1,103,436
20	Both Locks - Upgrade Lock Status/Controls	$8,558	$139,805	$89,507	$37,549	$76,722	$32,570	$384,711
21	Both Locks - Compressed Air Systems - Upgrade/Replace	$19,878	$787,549	$3,381	$986	$0	$0	$811,794
22	Both Locks - Install Vessel Self Spotting Equipment	$0	$0	$0	$0	$0	$485,201	$485,201
23	Both Locks - Install Vessel Vacuum Mooring Systems	$0	$0	$0	$0	$0	$686,074	$686,074
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	$37,561	$0	$0	$0	$0	$0	$37,561
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	$4,148	$0	$4,007	$0	$0	$0	$8,155
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	$0	$418,000	$12,144	$0	$1,115,266	$18,572	$1,563,982
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	$0	$33,776	$5,537	$8,070	$167	$0	$47,550
29	Eisenhower Lock - Walls, Sills, and Culverts - Rehabilitate Concrete	$0	$209,395	$0	$0	$0	$0	$209,395
31	Both Locks - Rehabilitate Upstream Miter Gates	$2,201,585	$2,478,896	$347,662	$14,961	($750)	$0	$5,042,354
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	$0	$12,734	$346,600	$0	$2,099,934	$42,445	$2,501,713
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	$0	$0	$0	$0	$6,938	$301,737	$308,675
34	Both Locks - Improve Ice Control	$0	$7,462	$0	$0	$0	$0	$7,462
38	Both Locks - Upgrade/Replace Emergency Generators	$0	$0	$0	$0	$1,764,008	$344,313	$2,108,321
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	$0	$0	$0	$189,763	$25,721	$23,568	$239,052
41	Snell Lock - Install Ice Flushing System Technologies	$0	$0	$272,000	$11,477,293	$1,577,272	$90,045	$13,416,610
42	Both Locks - Miter Gates - Structural Rehabilitation	$0	$0	$0	$210	$2,898,819	$3,740,613	$6,639,642
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	$0	$0	$133,364	$1,207	$505	$3,740,933	$3,876,009
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	$0	$24,183	$21,097	$352,347	$20,143	$5,985	$423,755
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace	$0	$0	$13,042	$0	$298,391	$794,473	$1,105,906
54	Corporation Facilities - Administration Building - Replace Elevator	$0	$0	$140,346	$0	$0	$0	$140,346
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	$0	$0	$189,350	$2,350	$0	$0	$191,700
56	Corporation Facilities - Duty Free Store Property - Upgrade Security	$0	$0	$13,025	$0	$0	$0	$13,025
57	Corporation Technologies - Upgrade Network Security	$0	$0	$158,536	$16,998	$8,687	$0	$184,221
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	$0	$0	$47,511	$57,036	$8,180	$22,140	$134,867
--	Miscellaneous Expenses	$0	$443	$1,700	$0	$0	$0	$2,143
	Asset Renewal Program Total	**$17,587,028**	**$16,339,760**	**$15,783,116**	**$15,838,803**	**$14,242,887**	**$14,189,527**	**$93,981,121**

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, $783,000, $672,000, $674,000, and $970,000 in personnel compensation for staff time associated with ARP work in FYs 2009, 2010, 2011, 2012, 2013, and 2014, respectively.

(4) The miscellaneous expenses of $443 in FY 2010 and $1,700 in FY 2011 were for ARP-related travel costs by SLSDC personnel that could not be linked to a specific ARP project.

ARP Funding Summary (FYs 2009-2014)

ARP Project No.	ARP Project Title	Project Costs Through FY14 *(Actual)*	FY 2009 ARP/CIP Estimate *(02-04-08)*	FY 2009 Congressional Request *(02-04-08)*	FY 2009 Internal Spending Plan *(04-10-09)*	FY 2009 Obligations (Actual) *(09-30-09)*	FY 2010 ARP/CIP Estimate *(02-04-08)*	FY 2010 Congressional Request *(05-07-09)*	FY 2010 Internal Spending Plan *(03-15-10)*	FY 2010 Obligations (Actual) *(09-30-10)*	FY 2011 ARP/CIP Estimate *(05-07-09)*	FY 2011 Congressional Request *(02-01-10)*	FY 2011 Internal Spending Plan *(04-22-11)*	FY 2011 Obligations (Actual) *(09-30-11)*
			FY 2009				**FY 2010**				**FY 2011**			
1	Both Locks - Replace Fendering on Approach Walls	**$438,416**	$300,000	$300,000	$300,000	**$241,600**	---	---	$10,000	**$8,091**	---	$10,000	---	---
2	Both Locks - Rehabilitate Downstream Miter Gates	**$6,761,839**	$1,500,000	$1,500,000	---	---	$1,500,000	$1,508,000	---	---	$1,515,000	$4,250,000	$4,250,000	**$3,539,935**
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	**$35,422**	$250,000	$250,000	*(Comb. w/No. 14)*	***(Comb. w/ No. 14)***	$250,000	$251,000	---	**$35,422**	$253,000	---	---	---
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	**$9,170,537**	$2,000,000	$2,000,000	$2,000,000	**$4,117,050**	---	---	$325,000	**$344,915**	$2,020,000	$4,500,000	$4,500,000	**$3,965,005**
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	**$167,612**	$250,000	$250,000	$250,000	**$46,698**	---	---	$5,000	**$6,638**	$253,000	---	---	**$23,781**
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	**$8,783,585**	$2,000,000	$2,000,000	$2,000,000	**$3,102,878**	$5,600,000	$5,773,000	$4,500,000	**$5,680,707**	$4,666,000	$3,466,000	$3,066,000	---
7	Both Locks - Culvert Valves - Replace with Single Skin Valves	**$2,065,147**	$600,000	$600,000	$600,000	---	$600,000	$603,000	$297,000	**$326,898**	$606,000	$300,000	$300,000	**$65,591**
8	Floating Navigational Aids - Replace	**$215,413**	$60,000	$60,000	$60,000	**$61,254**	$60,000	$60,000	$60,000	**$54,576**	$61,000	$61,000	$61,000	---
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	**$2,609,761**	$1,750,000	$1,750,000	$1,750,000	**$1,574,504**	$250,000	$251,000	$235,000	**$481,052**	$253,000	$100,000	$100,000	**$108,038**
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	**$427,898**	$75,000	$75,000	$75,000	**$19,594**	$75,000	$75,000	$100,000	**$231,269**	$76,000	$50,000	$50,000	**$93,613**
11	Fixed Navigational Aids - Rehabilitate	**$91,672**	$100,000	$100,000	$100,000	---	$200,000	$201,000	$10,000	**$10,998**	$202,000	$100,000	$100,000	**$16,217**
12	Corporation Equipment - Upgrade/Replace Floating Plant/Tugs	**$7,808,437**	$2,000,000	$2,000,000	$2,000,000	**$678,745**	$500,000	$503,000	$1,845,000	**$1,627,925**	$505,000	$505,000	$505,000	**$1,908,563**
13	Corporation Facilities - Replace Roofs	**$254,141**	$50,000	$50,000	$50,000	**$143,949**	---	---	---	---	$91,000	$130,000	$130,000	**$3,348**
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	**$2,836,939**	$950,000	$950,000	$1,200,000	**$921,837**	---	$1,508,000	$1,000,000	**$1,829,621**	$1,515,000	$750,000	---	**$85,481**
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	**$1,542,646**	$250,000	$250,000	$250,000	**$26,636**	---	---	$275,000	**$271,804**	$253,000	$650,000	$650,000	**$99,459**
16	Corporation Technologies - Upgrade GPS/AIS/TMS	**$190,470**	$100,000	$100,000	$100,000	**$100,997**	---	---	---	**$76,451**	$101,000	$50,000	$50,000	**-$3,328**
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	**$8,041,737**	$5,000,000	$5,000,000	$5,000,000	**$4,279,556**	---	---	---	---	---	---	$770,000	**$3,662,267**
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	**$865,789**	---	---	---	---	$500,000	$503,000	$500,000	**$487,750**	---	---	---	**$109,490**
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	**$1,103,436**	---	---	---	---	$150,000	$151,000	$150,000	**$753,400**	$152,000	$150,000	---	**$306,847**
20	Both Locks - Upgrade Lock Status/Controls	**$384,711**	---	---	---	**$8,558**	$150,000	$151,000	$200,000	**$139,805**	$152,000	$75,000	$75,000	**$89,507**
21	Both Locks - Compressed Air Systems - Upgrade/Replace	**$811,794**	---	---	---	**$19,878**	$1,500,000	$1,508,000	$1,500,000	**$787,549**	$1,515,000	---	---	**$3,381**
22	Both Locks - Install Vessel Self Spotting Equipment	**$485,201**	---	---	---	---	$250,000	$251,000	---	---	$253,000	---	---	---
23	Both Locks - Install Vessel Vacuum Mooring Systems	**$686,074**	---	---	---	---	$1,650,000	---	---	---	---	---	---	---
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	**$37,561**	---	---	---	**$37,561**	$200,000	$201,000	---	---	---	---	---	---
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	**$8,155**	---	---	---	**$4,148**	$100,000	$101,000	$5,000	---	---	---	---	**$4,007**
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	**$1,563,982**	---	---	---	---	$200,000	$201,000	$200,000	**$418,000**	---	---	---	**$12,144**
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	**$47,550**	---	---	---	---	$200,000	$201,000	$200,000	**$33,776**	---	---	---	**$5,537**
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	**$0**	---	---	---	---	---	---	---	---	$2,020,000	---	---	---
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	**$209,395**	---	---	---	---	$2,000,000	$2,010,000	$2,000,000	**$209,395**	---	---	---	---
30	Eisenhower Lock - Ice Flushing System - Upgrade	**$0**	---	---	---	---	---	---	---	---	$202,000	---	---	---
31	Both Locks - Rehabilitate Upstream Miter Gates	**$5,042,354**	---	---	$1,500,000	**$2,201,585**	---	---	$2,800,000	**$2,478,896**	---	---	---	**$347,662**
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	**$2,501,713**	---	---	---	---	---	---	---	**$12,734**	$253,000	$253,000	$253,000	**$346,600**
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	**$308,675**	---	---	---	---	---	---	---	---	$152,000	---	---	---
34	Both Locks - Improve Ice Control	**$7,462**	---	---	---	---	---	---	---	**$7,462**	$101,000	$100,000	$100,000	---
35	Vessel Mooring Cells - Rehabilitate and Extend	**$0**	---	---	---	---	---	---	---	---	$1,010,000	$100,000	$100,000	---
36	Eisenhower Lock - Diffusers - Replace	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
38	Both Locks - Upgrade/Replace Emergency Generators	**$2,108,321**	---	---	---	---	---	---	---	---	---	---	---	---
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	**$239,052**	---	---	---	---	---	---	---	---	---	---	---	---
40	Both Locks - Extend Guidewalls in Pool	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
41	Snell Lock - Install Ice Flushing System Technologies	**$13,416,610**	---	---	---	---	---	---	$100,000	---	---	---	$400,000	**$272,000**
42	Both Locks - Miter Gates - Structural Rehabilitation	**$6,639,642**	---	---	---	---	---	---	---	---	---	---	---	---
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	**$3,876,009**	---	---	---	---	---	---	---	---	---	---	---	**$133,364**
44	Both Locks - Ship Arrestor Machinery - Upgrade/Replace	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
45	Flow Control Dikes - Rehabilitate	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
46	Both Locks - Guidewall Extensions - Rehabilitate	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
47	Eisenhower Lock - Vertical Lift Gate - Structural Rehabilitation	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
48	Both Locks - Stiffleg Derricks - Replace	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
49	Seaway International Bridge - Replace Deck	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
50	Snell Lock - Diffusers - Replace	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	**$423,755**	---	---	---	---	---	---	---	**$24,183**	---	$100,000	$100,000	**$21,097**
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace	**$1,105,906**	---	---	---	---	---	---	---	---	---	---	---	**$13,042**
53	Corporation Technologies - Financial Management System - Upgrade/Replace	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
54	Corporation Facilities - Administration Building - Replace Elevator	**$140,346**	---	---	---	---	---	---	---	---	---	---	$140,000	**$140,346**
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	**$191,700**	---	---	---	---	---	---	---	---	---	---	---	**$189,350**
56	Corporation Facilities - Duty Free Store Property - Security Upgrades	**$13,025**	---	---	---	---	---	---	---	---	---	---	---	**$13,025**
57	Corporation Technologies - Upgrade Network Security	**$184,221**	---	---	---	---	---	---	---	---	---	---	---	**$158,536**
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	**$134,867**	---	---	---	---	---	---	---	---	---	---	---	**$47,511**
59	Corporation Facilities - Communications Improvements	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
60	Both Locks - Improve Access to and Rehabilitate Machinery in Crossovers and Recesses	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
61	Both Locks - Replace Recess Covers on Lock Walls	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
62	Both Locks - Install/Upgrade Air Curtains	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
63	Both Locks - Install Electric Pleasure Craft Toll Collection Facility	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
64	Corporation Facilities - Upgrade Lock Structures Maintenance Building	**$0**	---	---	---	---	---	---	---	---	---	---	---	---
---	Miscellaneous Expenses	**$2,143**	---	---	---	---	---	---	---	**$443**	---	---	---	**$1,700**
---	Engineering Design, Construction Inspection, Contracting Support, and Project Management (non-add)	---	*$300,000*	*$300,000*	*$300,000*	***$608,769***	*$300,000*	*$306,000*	---	---	*$312,000*	---	---	---
---	Personnel-Related Expenses (non-add)	*$4,108,000*	---	---	---	***$474,000***	---	---	---	***$535,000***	---	---	---	***$783,000***
	Total	**$98,089,121**	$17,535,000	$17,535,000	$17,535,000	**$17,587,028**	$16,235,000	$16,317,000	$16,317,000	**$16,340,203**	$18,492,000	$15,700,000	$15,700,000	**$15,784,816**

ARP Funding Summary (FYs 2009-2014)

			FY 2012				FY 2013				FY 2014			
ARP Project No.	ARP Project Title	Project Costs Through FY14 *(Actual)*	FY 2012 ARP/CIP Estimate *(02-01-10)*	FY 2012 Congressional Request *(02-14-11)*	FY 2012 Internal Spending Plan *(12-30-11)*	FY 2012 Obligations (Actual) *(09-30-12)*	FY 2013 ARP/CIP Estimate *(02-14-11)*	FY 2013 Congressional Request *(02-13-12)*	FY 2013 Internal Spending Plan *(04-01-13)*	FY 2013 Obligations (Actual) *(09-30-13)*	FY 2014 ARP/CIP Estimate *(02-13-12)*	FY 2014 Congressional Request *(04-08-13)*	FY 2014 Internal Spending Plan *(03-01-14)*	FY 2014 Obligations (Actual) *(09-30-14)*
1	Both Locks - Replace Fendering on Approach Walls	**$438,416**	---	---	---	**---**	---	---	---	**---**	---	---	---	**$188,725**
2	Both Locks - Rehabilitate Downstream Miter Gates	**$6,761,839**	$4,380,000	$4,380,000	$2,700,000	**$8,384**	---	$230,000	$3,032,500	**$3,009,854**	---	---	$204,000	**$203,666**
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	**$35,422**	---	---	$200,000	**---**	---	$100,000	$100,000	**---**	---	---	---	**---**
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	**$9,170,537**	---	---	$180,000	**$539,889**	---	---	$207,000	**$203,678**	---	---	---	**---**
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	**$167,612**	$258,000	$258,000	$25,000	**$28,335**	---	$200,000	$150,000	**$27,906**	---	---	$20,000	**$34,254**
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	**$8,783,585**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
7	Both Locks - Culvert Valves - Replace with Single Skin Valves	**$2,065,147**	$305,000	$405,000	$300,000	**$302,468**	$406,000	$420,000	$350,000	**$162**	---	---	$380,000	**$1,370,028**
8	Floating Navigational Aids - Replace	**$215,413**	$61,000	$61,000	$60,000	**---**	$61,000	$65,000	$30,000	**$31,434**	$62,000	$65,000	$48,000	**$68,149**
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	**$2,609,761**	$254,000	$255,000	$100,000	**$81,623**	$255,000	$260,000	$492,000	**$137,393**	$256,000	$260,000	$223,000	**$227,151**
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	**$427,898**	$20,000	$20,000	$40,000	**$28,003**	$20,000	$20,000	$20,000	**$17,099**	$21,000	$20,000	$40,000	**$38,320**
11	Fixed Navigational Aids - Rehabilitate	**$91,672**	$203,000	$100,000	$100,000	**$21,048**	$204,000	$200,000	$35,000	**$29,210**	$205,000	$200,000	$15,000	**$14,199**
12	Corporation Equipment - Upgrade/Replace Floating Plant/Tugs	**$7,808,437**	$1,524,000	$1,524,000	$2,335,000	**$2,160,169**	---	$400,000	$575,000	**$860,413**	$18,455,000	---	$587,000	**$572,622**
13	Corporation Facilities - Replace Roofs	**$254,141**	$230,000	$230,000	$40,000	**$89,024**	$300,000	$300,000	$555,000	**$17,820**	$500,000	$500,000	---	**---**
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	**$2,836,939**	---	---	---	**---**	$1,530,000	$900,000	$323,600	**---**	---	$1,300,000	---	**---**
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	**$1,542,646**	---	---	---	**$1,523**	$255,000	$750,000	---	**---**	---	---	$1,411,000	**$1,143,224**
16	Corporation Technologies - Upgrade GPS/AIS/TMS	**$190,470**	---	---	---	**$10,000**	$102,000	$100,000	$6,500	**$6,350**	---	---	---	**---**
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	**$8,041,737**	---	---	---	**$99,714**	---	---	$50,000	**$100**	---	$5,150,000	---	**$100**
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	**$865,789**	---	---	$250,000	**$268,549**	---	---	---	**---**	---	---	---	**---**
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	**$1,103,436**	$500,000	$400,000	$400,000	**$41,304**	---	---	$1,500	**$1,465**	---	---	---	**$420**
20	Both Locks - Upgrade Lock Status/Controls	**$384,711**	---	---	---	**$37,549**	---	---	$85,000	**$76,722**	---	---	$30,000	**$32,570**
21	Both Locks - Compressed Air Systems - Upgrade/Replace	**$811,794**	---	---	$15,000	**$986**	---	---	$15,000	**---**	---	---	---	**---**
22	Both Locks - Install Vessel Self Spotting Equipment	**$485,201**	---	---	---	**---**	---	$500,000	$400,000	**---**	$288,000	$300,000	$500,000	**$485,201**
23	Both Locks - Install Vessel Vacuum Mooring Systems	**$686,074**	---	---	---	**---**	---	---	---	**---**	---	---	$2,975,000	**$686,074**
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	**$37,561**	$203,000	$203,000	$100,000	**---**	---	---	$100,000	**---**	---	---	---	**---**
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	**$8,155**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	**$1,563,982**	$203,000	$203,000	---	**---**	---	$750,000	$450,000	**$1,115,266**	$205,000	$200,000	$15,000	**$18,572**
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	**$47,550**	$203,000	$203,000	$50,000	**$8,070**	---	---	---	**$167**	$205,000	$200,000	---	**---**
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	**$0**	---	---	---	**---**	$2,040,000	---	---	**---**	---	---	---	**---**
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	**$209,395**	$2,030,000	---	---	**---**	---	$2,000,000	$1,700,000	**---**	---	$1,500,000	---	**---**
30	Eisenhower Lock - Ice Flushing System - Upgrade	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
31	Both Locks - Rehabilitate Upstream Miter Gates	**$5,042,354**	---	---	---	**$14,961**	---	---	---	**-$750**	---	---	---	**---**
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	**$2,501,713**	$254,000	$254,000	$250,000	**---**	$255,000	$300,000	$1,000,000	**$2,099,934**	---	---	$35,000	**$42,445**
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	**$308,675**	$152,000	$152,000	$100,000	**---**	$153,000	$160,000	$150,000	**$6,938**	$154,000	$150,000	$300,000	**$301,737**
34	Both Locks - Improve Ice Control	**$7,462**	$228,000	$228,000	---	**---**	$230,000	$230,000	---	**---**	$231,000	$230,000	---	**---**
35	Vessel Mooring Cells - Rehabilitate and Extend	**$0**	---	---	---	**---**	$1,020,000	$500,000	$200,000	**---**	$1,025,000	$1,020,000	---	**---**
36	Eisenhower Lock - Diffusers - Replace	**$0**	$3,045,000	$3,045,000	---	**---**	---	---	---	**---**	---	---	---	**---**
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
38	Both Locks - Upgrade/Replace Emergency Generators	**$2,108,321**	$508,000	$508,000	$100,000	**---**	$510,000	$500,000	$500,000	**$1,764,008**	---	---	$343,000	**$344,313**
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	**$239,052**	$203,000	$203,000	$200,000	**$189,763**	$204,000	$200,000	$5,000	**$25,721**	---	---	$24,000	**$23,568**
40	Both Locks - Extend Guidewalls in Pool	**$0**	---	---	---	**---**	$1,530,000	---	---	**---**	---	---	---	**---**
41	Snell Lock - Install Ice Flushing System Technologies	**$13,416,610**	$5,075,000	$2,000,000	$6,705,000	**$11,477,293**	$5,103,000	$3,000,000	$1,100,000	**$1,577,272**	$2,819,000	---	$95,000	**$90,045**
42	Both Locks - Miter Gates - Structural Rehabilitation	**$6,639,642**	$761,000	$761,000	$750,000	**$210**	$765,000	$765,000	$2,000,000	**$2,898,819**	$769,000	$1,295,000	$3,715,000	**$3,740,613**
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	**$3,876,009**	---	$1,632,000	---	**$1,207**	---	$2,600,000	---	**$505**	---	$1,750,000	$2,360,000	**$3,740,933**
44	Both Locks - Ship Arrestor Machinery - Upgrade/Replace	**$0**	---	---	---	**---**	---	---	---	**---**	$410,000	$410,000	---	**---**
45	Flow Control Dikes - Rehabilitate	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
46	Both Locks - Guidewall Extensions - Rehabilitate	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
47	Eisenhower Lock - Vertical Lift Gate - Structural Rehabilitation	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
48	Both Locks - Stiffleg Derricks - Replace	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
49	Seaway International Bridge - Replace Deck	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
50	Snell Lock - Diffusers - Replace	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	**$423,755**	$50,000	$50,000	$300,000	**$352,347**	$50,000	$50,000	$25,000	**$20,143**	---	$100,000	$5,000	**$5,985**
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace	**$1,105,906**	---	---	---	**---**	$5,000,000	$300,000	$280,000	**$298,391**	---	$500,000	$795,000	**$794,473**
53	Corporation Technologies - Financial Management System - Upgrade/Replace	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
54	Corporation Facilities - Administration Building - Replace Elevator	**$140,346**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	**$191,700**	---	---	---	**$2,350**	---	---	---	**---**	---	---	---	**---**
56	Corporation Facilities - Duty Free Store Property - Security Upgrades	**$13,025**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
57	Corporation Technologies - Upgrade Network Security	**$184,221**	---	---	$250,000	**$16,998**	---	---	$8,500	**$8,687**	---	---	---	**---**
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	**$134,867**	---	---	$50,000	**$57,036**	---	$200,000	$53,400	**$8,180**	---	$100,000	$30,000	**$22,140**
59	Corporation Facilities - Communications Improvements	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
60	Both Locks - Improve Access to and Rehabilitate Machinery in Crossovers and Recesses	**$0**	---	---	---	**---**	---	---	---	**---**	---	$500,000	---	**---**
61	Both Locks - Replace Recess Covers on Lock Walls	**$0**	---	---	---	**---**	---	---	---	**---**	---	$100,000	---	**---**
62	Both Locks - Install/Upgrade Air Curtains	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
63	Both Locks - Install Electric Pleasure Craft Toll Collection Facility	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
64	Corporation Facilities - Upgrade Lock Structures Maintenance Building	**$0**	---	---	---	**---**	---	---	---	**---**	---	---	---	**---**
---	Miscellaneous Expenses	**$2,143**	---	---	---	---	---	---	---	**---**	---	---	---	**---**
---	Engineering Design, Construction Inspection, Contracting Support, and Project Management (non-add)	**---**	---	---	---	**---**	---	---	---	***$674,000***	---	---	---	***$970,000***
---	Personnel-Related Expenses (non-add)	*$4,108,000*	---	---	---	***$672,000***	---	---	---	**---**	---	---	---	**---**
	Total	**$98,089,121**	$20,650,000	$17,075,000	$15,600,000	**$15,838,803**	$19,993,000	$16,000,000	$14,000,000	**$14,242,887**	$25,605,000	$15,850,000	$14,150,000	**$14,189,527**

SLSDC Asset Renewal Program (ARP) / Post-ARP Capital Plan

FY 2016 Request / FY 2017-2020 Estimates

PROJECT NO.	PROJECT TITLE	FY 2016 REQUEST	FY 2017 ESTIMATE	FY 2018 ESTIMATE	FY 2019 ESTIMATE	FY 2020 ESTIMATE	FIVE-YEAR TOTALS
1	Both Locks -- Replace Fending on Approach Walls	---	---	$300,000	$300,000	$300,000	**$900,000**
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	---	$25,000	---	$25,000	---	**$50,000**
8	Floating Navigational Aids - Replace	---	$100,000	$150,000	$200,000	$250,000	**$700,000**
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	---	$200,000	$250,000	$300,000	$300,000	**$1,050,000**
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	$50,000	$50,000	$50,000	$50,000	$50,000	**$250,000**
11	Fixed Navigational Aids - Rehabilitate	$50,000	$50,000	$100,000	$100,000	$100,000	**$400,000**
12	Corporation Equipment - Floating Plant/Tugs - Replace	$10,000,000	$10,000,000	$4,000,000	---	---	**$24,000,000**
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	---	---	$750,000	$1,000,000	$750,000	**$2,500,000**
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	---	---	$400,000	---	---	**$400,000**
16	Corporation Technologies - Upgrade GPS/AIS/TMS	---	---	$100,000	---	$150,000	**$250,000**
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	---	$4,000,000	---	---	$5,000,000	**$9,000,000**
20	Both Locks - Upgrade Lock Status/Controls	---	$50,000	$50,000	$50,000	$50,000	**$200,000**
21	Both Locks - Compressed Air Systems - Upgrade/Replace	---	---	---	$200,000	---	**$200,000**
22	Both Locks - Install Vessel Self Spotting Equipment	---	---	$500,000	$500,000	---	**$1,000,000**
23	Both Locks - Install Vessel Vacuum Mooring Systems	$8,000,000	---	---	---	---	**$8,000,000**
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	---	---	$200,000	---	$200,000	**$400,000**
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	---	$100,000	---	$100,000	---	**$200,000**
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts and Equipment	---	---	$200,000	$500,000	$200,000	**$900,000**
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	---	---	$125,000	---	$150,000	**$275,000**
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	---	---	$2,000,000	---	$2,000,000	**$4,000,000**
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	---	$2,000,000	---	$2,000,000	---	**$4,000,000**
30	Eisenhower Lock - Ice Flushing System - Upgrade	---	$500,000	---	---	---	**$500,000**
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	---	$200,000	---	---	$250,000	**$450,000**
34	Both Locks - Improve Ice Control	---	$100,000	---	---	$150,000	**$250,000**
35	Vessel Mooring Cells - Rehabilitate and Extend	---	---	---	$1,000,000	$1,000,000	**$2,000,000**
36	Eisenhower Lock - Diffusers - Replace	---	---	$2,500,000	---	---	**$2,500,000**
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	---	---	---	---	$2,000,000	**$2,000,000**
38	Both Locks - Upgrade/Replace Emergency Generators	---	---	$500,000	---	---	**$500,000**
40	Both Locks - Extend Guidewalls in Pool	---	---	---	$5,000,000	$4,000,000	**$9,000,000**
44	Both Locks - Ship Arrestor Machinery - Upgrade/Replace	---	---	$800,000	$800,000	---	**$1,600,000**
45	Flow Control Dikes - Rehabilitate	---	---	$500,000	$800,000	---	**$1,300,000**
46	Both Locks - Guidewall Extensions - Rehabilitate	---	---	$500,000	$500,000	---	**$1,000,000**
47	Eisenhower Lock - Vertical Lift Gate - Structural Rehabilitation	---	---	---	$2,000,000	---	**$2,000,000**
48	Both Locks - Stiffleg Derricks - Replace	---	---	$2,000,000	$2,000,000	---	**$4,000,000**

SLSDC Asset Renewal Program (ARP) / Post-ARP Capital Plan

FY 2016 Request / FY 2017-2020 Estimates

PROJECT NO.	PROJECT TITLE	FY 2016 REQUEST	FY 2017 ESTIMATE	FY 2018 ESTIMATE	FY 2019 ESTIMATE	FY 2020 ESTIMATE	FIVE-YEAR TOTALS
50	Snell Lock - Diffusers - Replace	---	---	$2,500,000	---	---	**$2,500,000**
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	$50,000	---	$50,000	---	$50,000	**$150,000**
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace	---	$4,000,000	$800,000	---	---	**$4,800,000**
57	Corporation Technologies - Upgrade Network Security	---	$50,000	$50,000	$100,000	$100,000	**$300,000**
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	---	$50,000	$100,000	$100,000	$100,000	**$350,000**
59	Corporation Facilities - Communications Improvements	---	---	$200,000	$200,000	---	**$400,000**
60	Both Locks - Improve Access to and Rehabilitate Machinery in Crossovers and Recesses	---	$250,000	$250,000	$300,000	$300,000	**$1,100,000**
61	Both Locks - Replace Recess Covers on Lock Walls	---	---	$200,000	$200,000	$200,000	**$600,000**
62	Both Locks - Install/Upgrade Air Curtains	---	---	---	$1,000,000	$1,500,000	**$2,500,000**
63	Both Locks - Install Electronic Pleasure Craft Toll Collection Facility	---	---	---	---	$200,000	**$200,000**
64	Corporation Facilities - Upgrade Lock Structures Maintenance Building Per OSHA	---	$200,000	---	---	---	**$200,000**
	TOTAL	**$18,150,000**	**$21,925,000**	**$20,125,000**	**$19,325,000**	**$19,350,000**	**$98,875,000**

Highlighted projects are those capital plan projects and expenses necessary beyond the original scope and schedule of the ARP