WRITTEN TESTIMONY FOR THE RECORD
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SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
U.S. HOUSE OF REPRESENTATIVES

"AGENCY BUDGETS AND PRIORITIES FOR FY 2011"
MARCH 4, 2010

The U.S. Saint Lawrence Seaway Development Corporation (SLSDC), a wholly owned government corporation and an operating administration of the U.S. Department of Transportation (DOT), is responsible for the operations and maintenance of the U.S. portion of the St. Lawrence Seaway between Montreal and Lake Erie. This responsibility includes maintaining navigation channels and aids, managing vessel traffic control in areas of the St. Lawrence River and Lake Ontario, and maintaining and operating the two U.S. Seaway locks located in Massena, N.Y.

The SLSDC coordinates activities with its Canadian counterpart, the St. Lawrence Seaway Management Corporation (SLSMC), particularly its rules and regulations, overall day-to-day operations, traffic management, navigation aids, safety, environmental programs, security, operating dates, and business development programs. The unique binational nature of the Seaway System requires 24-hour, year-round coordination between the two Seaway entities.

In 2009, the U.S./Canadian binational St. Lawrence Seaway celebrated its 50th year of serving global commerce with a safe, secure, efficient, reliable, and cost competitive transportation route connecting the five Great Lakes to the world. Over those first 50 years, more than 2.5 billion metric tons of cargo, valued at more than $375 billion, has moved through the 15-lock waterway.

The St. Lawrence Seaway directly serves an eight-state, two-province region that accounts for 29 percent of the U.S. gross domestic product (GDP), 60 percent of Canada's GDP, 55 percent of North America's manufacturing and services industries, and is home to one-quarter of the continent's population. In fact, a 2001 economic impact study found that maritime commerce on the Great Lakes Seaway System impacts 150,000 U.S. jobs, $12 million per day in wages, $9 million per day in business revenues, and provides approximately $3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation.

FISCAL YEAR (FY) 2011 BUDGET ESTIMATE

For Fiscal Year (FY) 2011, the Saint Lawrence Seaway Development Corporation (SLSDC) is requesting an appropriation from the Harbor Maintenance Trust Fund (HMTF) of $32.3 million to fund the daily operations and maintenance of the U.S. portion of the St. Lawrence Seaway as well as 20 Year Three projects of the Seaway's on-going Asset Renewal Program (ARP).

The SLSDC's program budget for FY 2011 also includes the use of $900,000 in agency estimated non-federal revenues for a total spending plan of $33.2 million. The spending plan includes approximately $17.5 million for agency operations and $15.7 million for ARP projects.

FY 2011 BUDGET REQUEST BY APPROPRIATION ACCOUNT
Saint Lawrence Seaway Development Corporation
Appropriations
(In thousands of dollars)

ACCOUNT NAME	FY 2009 ACTUAL	FY 2010 ENACTED	FY 2011 REQUEST
Appropriations Request			
Operations and Maintenance - HMTF (69-8003)	$31,842	$32,324	$32,324
Non Federal Revenues/Reserve Drawdown	$1,900	$900	$900
Total SLSDC Funding:	**$33,742**	**$33,224**	**$33,224**
Total Program Budget			
SLSDC Fund (69x4089) [1]			
Agency Operations	$16,207	$16,907	$17,524
Asset Renewal Program	$17,535	$16,317	$15,700
Totals:	**$33,742**	**$33,224**	**$33,224**

[1] The SLSDC Fund (69x4089) for FY 2011 is proposed to include $32,324,000 in an appropriation from the Harbor Maintenance Trust Fund (69-8003) and $900,000 in estimated SLSDC non-federal revenues. Each year, the SLSDC, as a government corporation, generates non-federal income from such sources as interest on investments, rental payments, pleasure craft tolls, tug services, and duty free store revenues.

Under this funding scenario, the SLSDC will be able to perform its core mission of serving the U.S. intermodal and international transportation system and providing a safe, reliable, efficient, and environmentally responsible deep-draft waterway, in cooperation with its Canadian counterpart, the St. Lawrence Seaway Management Corporation (SLSMC). Primary agency activities include lock operations and maintenance, vessel traffic control, vessel safety and environmental inspections, trade development, and capital infrastructure replacements and improvements.

The $15.7 million request to complete 20 ARP projects, 15 of which are multi-year projects that were funded in FY 2009 and/or requested in FY 2010, will address various needs for the two U.S. Seaway locks, the Seaway International Bridge connecting Ontario and New York, operational systems and networks, and Corporation facilities and equipment. Major ARP projects scheduled for funding in FY 2011 include hydraulic upgrades at the Seaway locks ($4.5 million), rehabilitation of the downstream miter gate at Eisenhower Lock ($4.3 million), and the completion of a three-year structural rehabilitation project at the Seaway International Bridge ($3.5 million) *(see appendix for complete list of FY 2011 proposed ARP project costs and descriptions).*

SLSDC programs and activities, including the ARP, are principally focused on meeting the Department's Global Connectivity performance measure of meeting the 99 percent or better goal for U.S. Seaway sector availability. The SLSDC is directly responsible for ensuring the safe, efficient, and secure passage of commercial vessels through the binational St. Lawrence Seaway and it has consistently maintained a 99 percent availability rate throughout the waterway's history, beginning in 1959. In addition, the SLSDC's FY 2011 budget request also supports the Departmental strategic goals of Security, Preparedness and Response, and Organizational Excellence.

In FY 2011, the SLSDC will also continue to strengthen existing trading partner relations and develop new markets through its trade development initiatives, in an effort to increase Seaway commerce. The Seaway is positioned for significant growth in new business as the waterway has become a viable alternative for shippers looking to avoid highway and railway congestion. In 2009, 1.6 million metric tons of new cargo transited the system, including windmill parts and biofuels, due to binational efforts to market the waterway and reduce user costs. In FY 2011, the SLSDC will continue to identify niche commodities and new markets to further increase Seaway trade. The St. Lawrence Seaway is expected to become an even more important commercial transportation route over the next decade as the U.S. and Canadian governments seek to ease other modal congestion, especially along North America's East Coast and Midwest region.

The SLSDC, Canadian SLSMC, and other U.S. and Canadian federal partners, continue to make notable progress in ballast water management and efforts to prevent any new introductions of aquatic invasive species (AIS) via commercial vessels entering Seaway waters. In 2008, the SLSDC implemented regulations requiring all ships with no ballast in their tanks to conduct saltwater flushing of their empty ballast water tanks before arriving in the Seaway.

In addition, the SLSDC, along with the other U.S. and Canadian partners, have enforced ballast water inspections of all vessels to ensure the regulations are carried out. In 2009, 100 percent of cargo vessels bound for Great Lakes Seaway System ports received a ballast water or ballast tank exam. Ships that failed to properly manage their ballast tanks were required to either retain the ballast water and residuals on board, treat the ballast water in an environmentally sound and approved manner, or return to sea to conduct a ballast water exchange. Vessels given letters of retention were boarded and checked on their outbound transit at the SLSDC's U.S. Eisenhower Lock in Massena, N.Y. for compliance. As of January 2010, the Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS), maintained by the National Oceanic and Atmospheric Administration (NOAA), documents that the last time a new non-native species was determined to have been established in the Great Lakes was 2006.

SEAWAY ASSET RENEWAL PROGRAM

Background

Starting in 2009, the SLSDC initiated its multi-year U.S. Seaway Asset Renewal Program (ARP) for its navigation infrastructure and facilities. The ARP projects and equipment included in the ARP Capital Investment Plan (CIP) address various needs for the two U.S. Seaway locks, the Seaway International Bridge, maintenance dredging, operational systems, and Corporation facilities and equipment. None of these investments will result in increases to the authorized depth or width of the navigation channel or to the size of the two existing U.S. locks.

Original ARP baseline project estimates were developed by the SLSDC using four criteria, as applicable: (1) historical costs for similar work completed previously by the SLSDC, (2) consultation with the U.S. Army Corps of Engineers for similar work it completed at other U.S. locks, (3) consultation with the Canadian St. Lawrence Seaway Management Corporation (SLSMC) for similar work it completed at the Canadian Seaway locks, and (4) utilization of data from RSMeans, which serves as North America's leading supplier of construction cost information. In several cases, estimates for FYs 2011-2015 have been revised for the latest five-year plan based on either actual bids for similar ARP work and/or more complete designs.

Although the majority of ARP work will be completed by contractors, the SLSDC will utilize its own workforce for several of the maintenance-related projects as well as for completing much of the pre-contract work, including preparation of designs, specifications, and drawings.

As part of its policy priority of “System Reliability and Availability”, the SLSDC developed its ARP to address the long-term asset renewal needs of the U.S. Seaway infrastructure. A perpetual infrastructure asset, such as a lock, needs a capital investment equivalent to its original cost over its design life, which is typically 50 years, in order to sustain itself. The U.S. portion of the St. Lawrence Seaway was built in the late 1950s at an original cost of $130 million. Prior to the start of the ARP in FY 2009, only $47 million in capital expenditures had been invested in the U.S. Seaway locks since they opened in 1959.

Without sufficient investment in the SLSDC’s perpetual assets, the future availability and reliability of the U.S. section of the St. Lawrence Seaway would be in jeopardy. The Seaway has enjoyed a 99 percent reliability rate over its history, but similar results in the future are uncertain with an aging infrastructure quickly approaching the end of its original design life. Adequate capital reinvestment in the Seaway infrastructure is critical to maintaining its exceptional reliability record.

Unlike many of the other lock-based waterway systems in the world, which have twinned locks to ensure continued operations in the event of a lock failure, the St. Lawrence Seaway is a single-lock system. A delay or shutdown at any one of the 15 U.S. or Canadian Seaway locks would cause system-wide delays. In 1985, a lock failure at the Canadian Welland Canal caused 53 commercial vessels to be trapped in the Seaway System for 24 days at a cost to the shippers of more than $24 million.

The Seaway ARP supports the engineering considerations highlighted in the November 2007 binational *Great Lakes St. Lawrence Seaway Study*. The study evaluated the infrastructure needs of the U.S. and Canadian Great Lakes Seaway System and assessed the economic, environmental, and engineering implications of those needs pertaining to commercial navigation. During its work on the study, the SLSDC measured its infrastructure assets using a Corps-based lock criticality index to better identify and prioritize maintenance and replacement needs. The results of the initial index were used to develop the ARP.

Over the past decade, the Canadian government has started to address the asset renewal needs of its 13 Seaway locks, eight of which are more than 75 years old (located at the Welland Canal). Many of the lock-related ARP improvements will parallel activities underway at the Canadian Seaway locks.

Seaway ARP Internal Working Group

In 2008, the SLSDC created the Seaway ARP Internal Working Group, made up of senior managers in engineering, procurement, financial management, budget, counsel, and policy, to ensure that the multi-year program is executed properly and efficiently and to identify any possible concerns early in the process. The group convenes every two weeks to review the status of on-going projects and to collectively discuss ways to improve the overall management, execution, and reporting of the program.

Indefinite Delivery Contracts

The SLSDC's Procurement Division, in working with the agency's engineering team, recognized the need to be able to award ARP-related support contracts quickly without the time constraints of traditional federal contracts.

To that end, the SLSDC awarded indefinite delivery contracts in FY 2009 to three architectural/engineering (A/E) firms to support the ARP on project plans, specifications, and drawings. As support work is needed, the SLSDC will request proposals from the three firms in a streamlined process, with negotiations, if required, limited to only those firms. The policies and procedures for awarding indefinite delivery contracts are contained in Federal Acquisition Regulation (FAR), Subpart 16.5.

GAO Review

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

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

Since the start of the review, the SLSDC has responded to numerous requests for information; participated in meetings, conference calls, and interviews; and hosted a GAO team at its operational facilities in Massena, N.Y., for a site visit and file review. A final report is expected to be issued in the spring of 2010.

FY 2009 (ARP Year 1)

In FY 2009, the SLSDC obligated $17.6 million for 21 Year One ARP projects. These projects included: maintenance dredging in the U.S. portion of the navigation channel ($4.3 million); lock culvert valve machinery upgrade to hydraulic operation ($4.1 million); structural rehabilitation and corrosion prevention work on the Seaway International Bridge ($3.1 million); and upstream miter gate rehabilitation at Eisenhower Lock ($2.2 million), as well as various other structural and equipment repairs and/or replacement.

FY 2010 (ARP Year 2)

The FY 2010 enacted level of $16.3 million for the SLSDC's ARP will allow the Corporation to fund 20 capital and maintenance infrastructure projects including in Year Two of the plan. Major ARP projects expected to be funded in FY 2010 include the continued structural rehabilitation and corrosion prevention of the Seaway International Bridge ($5.8 million), major concrete rehabilitation at Eisenhower Lock ($2 million), rehabilitation of the upstream miter gate at Snell Lock ($2.5 million), paving and drainage improvements at Corporation facilities ($1.5 million), and improvements to the compressed air systems at both locks to control ice in and around the locks during the opening and closing of the navigation seasons ($1.5 million).

The SLSDC expects to obligate the $16.3 million enacted for ARP projects in FY 2010 prior to September 30, 2010. Major ARP lock projects obligated in FY 2010, including culvert valve and miter gate upgrades, will be completed following the 2011 and/or 2012 navigation seasons due to long lead times for ordering parts and equipment.

FY 2011-15 (ARP Years 3-7)

The SLSDC's FY 2011 budget request included the *U.S. St. Lawrence Seaway Asset Renewal Program Capital Investment Plan (CIP) – FYs 2011-2015*. The ARP/CIP highlighted 41 projects and equipment estimated at $97.2 million for the five-year period with total funding for each year of the plan constrained to funding targets for those years as estimated and approved by the Office of Management and Budget (OMB) *(see appendix for five-year schedule, cost estimates, and project descriptions)*. It is important to note that dollar amounts for ARP projects are "project feasibility" estimates and can vary by an industry-recognized 20-30 percent. Currently, the overall ARP remains on schedule to be completed within the original 10-year schedule. However, project estimates and schedules may fluctuate at various points in the lifespan of the ARP and will be revised as needed.

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U.S. Seaway Asset Renewal Program Capital Investment Plan FY 2011-2015

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

U.S. Seaway Asset Renewal Program Capital Investment Plan FY 2011-2015

Project No.	Project Title	Type of Project (1)	Mission Objective (2)	Time Work Completed (3)	FY 2011 Request	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Five Year Total
34	Both Locks - Improve Ice Control	CP	L	Winter	$100,000	$228,000	$230,000	$231,000	$232,000	**$1,021,000**
35	Vessel Mooring Cells - Rehabilitate and Extend	CP	W	Other	$100,000		$1,020,000	$1,025,000		**$2,145,000**
36	Eisenhower Lock - Diffusers - Replace	MP	L	Winter		$3,045,000				**$3,045,000**
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	CP	L, W	Winter					$800,000	**$800,000**
38	Both Locks - Upgrade/Replace Emergency Generators	CP	L	Winter		$508,000	$510,000			**$1,018,000**
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	CP	L	Other		$203,000	$204,000			**$407,000**
40	Both Locks - Extend Guidewalls in Pool	CP	L	Other			$1,530,000		$1,546,000	**$3,076,000**
41	Snell Lock - Install Ice Flushing System Technologies	CP	L	Winter		$5,075,000	$5,103,000			**$10,178,000**
42	Both Locks - Miter Gates - Structural Rehabilitation	MP	L	Winter		$761,000	$765,000	$513,000	$515,000	**$2,554,000**
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	CP	L	Winter			$1,632,000		$1,649,000	**$3,281,000**
44	Both Locks - Ship Arrestor Machinery - Upgrade/Replace	CP	L	Winter				$410,000	$415,000	**$825,000**
45	Flow Control Dikes - Rehabilitate	MP	W	Other					$515,000	**$515,000**
46	Both Locks - Guidewall Extensions - Rehabilitate	MP	L	Other					$515,000	**$515,000**
51	Corporation Facilities – Upgrade Physical Security to Meet HSPD-12 Requirements	CP	F	Other	$100,000	$50,000	$50,000			**$200,000**
52	Eisenhower Lock Visitors' Center - Replace	CP	F	Other			$5,000,000			**$5,000,000**
	Total				**$15,700,000**	**$20,650,000**	**$21,525,000**	**$22,530,000**	**$16,800,000**	**$97,205,000**

(1) CP=Capital Project; CE=Capital Equipment; MP=Non-Capital Maintenance Project

(2) L=Lock Operation Upgrade and Maintenance; W=Waterway Management; T/B=Tunnel and Bridge Maintenance; F=Facility/Equipment Upgrade and Maintenance

(3) Winter=During Non-Navigation Season; Other=Other Than Non-Navigation Season

Notes: (a) Estimates as of January 2010; (b) Dollar amounts for ARP projects are "project feasibility" estimates and can vary have an industry-recognized contingency of 20-30 percent;
(c) FY 2009 Actuals include No. 99 in project totals. Amount shown is a "non-add" total.

U.S. SEAWAY ASSET RENEWAL PROGRAM

PROJECT DESCRIPTIONS

FYs 2011-2015

The SLSDC's ARP includes capitalized projects and equipment as well as non-capitalized, maintenance-related projects.

Capital projects and equipment are defined as those of a durable nature that may be expected to have a period of service of more than a year without material impairment of its physical conditioning and includes equipment, improvements and modifications to existing structures.

Non-capital/maintenance projects include those that do not materially add to the value of the property nor appreciably prolong the life of the infrastructure but merely keeps it in an ordinarily efficient operating condition. Expenditures for these maintenance projects are recognized as operating costs.

(Note: ARP projects listed below are those scheduled for funding in FYs 2011-15. Projects not included in this listing were either funded in FY 2009 or FY 2010 or are scheduled to be funded in FY 2016 and/or beyond).

Project No. 1: Snell Lock – Replace Fendering Downstream Guidewall Extension (Capital Project) (FY 2011 – $10,000) – Funding in FY 2011 will provide for the installation of the fendering purchased with ARP funds in FY 2009. *(Project funds obligated in FY 2009)*

Project No. 2: Both Locks – Rehabilitate Downstream Miter Gates (Non-Capital Maintenance Project) (FYs 2011 and 2012 – $8,630,000) – This project is to completely rehabilitate the miter gate at the downstream end of both Eisenhower and Snell Locks. It includes replacing worn and/or damaged components including the miter and quoin contact blocks, pintles, and diagonals to insure proper functioning of the miter gates. The FY 2011 estimate exceeds original baseline estimates due to actual costs associated with rehabilitating the upstream miter gates in FYs 2009 and 2010.

Project No. 4: Both Locks – Culvert Valve Machinery – Upgrade to Hydraulic Operation (Capital Project) (FY 2011 – $4,500,000) – This project is for replacing the operating machinery for the Eisenhower and Snell Lock culvert valves, which are utilized for filling and emptying the locks. This machinery is more than 50 years old and the open gearing is exhibiting macropitting. This equipment needs to be upgraded to insure its continued reliability. Failure of this equipment will cause delays to shipping while repairs are made. Due to the fact that this machinery was custom made and spare parts are limited, repairs to multiple pieces of machinery using the spare parts that are on-hand would not be possible. The upgrade will include new hydraulic operating machinery to match the upgrades made at the Canadian Seaway locks and other similar locks in the United States. The FY 2011 estimate exceeds original baseline estimates due to actual costs for the project in FY 2009. *(Project funds obligated in FY 2009)*

Project No. 5: Both Locks – Rehabilitate and Insulate Winter Maintenance Lock Covers (Capital Project) (FY 2012 – $258,000) – This project is for rehabilitating and insulating the roof cover modules utilized to cover Eisenhower and Snell Locks when major winter maintenance projects are planned. These covers are over 40 years old and insulating them would save on funds used to heat work areas when required for such temperature sensitive projects as placing concrete and painting steel structures. (*Project funds obligated in FY 2009)*

Project No. 6: Seaway International Bridge – Perform Structural Rehabilitation and Corrosion Prevention (Non-Capital Maintenance Project) (FY 2011 – $3,446,000) – This project is for rehabilitation of the structural components of the south span of the bridge between Rooseveltown, N.Y., and Cornwall Island, which crosses the Seaway navigation channel. The bridge, which annually accommodates more than 2.5 million vehicles, was opened to traffic in 1962 and is in need for significant rehabilitation. This project is designed to stop the corrosion currently experienced on many portions of the bridge structure and prevent the need for large-scale structural or even bridge replacement in the future. The SLSDC owns 68 percent of the south span of the bridge and the budget request reflects the U.S. prorated amount for the project. The Canadian Federal Bridge Corporation owns the remaining 32 percent of the south span. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 7: Both Locks – Culvert Valves – Replace with Single Skin Valves (Capital Project) (FYs 2011, 2012, and 2013 – $911,000) – This project is for replacing the double skin culvert valves utilized for filling and emptying the locks with single skin valves. Cracking of major structural members has occurred and with the double skin construction, the structural members are not accessible for inspection, blast cleaning and painting. The culvert valves are more than 50 years old and are corroding from the inside. The new single skin valves will provide access to the structural members for inspection and maintenance. The failure of a culvert valve would cause a delay to shipping while the damaged valve was removed and replaced. Dependant on the type of failure, other lock operating components/equipment could be damaged causing the lock to be out of service for a longer time. *(Project funds obligated in FY 2010)*

Project No. 8: Floating Navigational Aids – Upgrade/Replace (Capital Project) (FYs 2011, 2012, 2013, 2014, and 2015 – $307,000) – This is an ongoing program to replace floating navigational aids/buoys and winter markers that have been damaged over the years, on an as required basis. The Corporation is responsible for approximately 100 buoys and 50 winter markers. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 9: Corporation Equipment – Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment (Capital Equipment) (FYs 2011, 2012, 2013, 2014, and 2015 – $1,123,000) – This is an ongoing program to replace heavy and light equipment, vehicles and shop equipment as it becomes worn out and unserviceable. Heavy and light equipment includes such items as a crane, dump truck, snow plow, backhoe, grader, front end loader and shop equipment such as a lathe, milling machine and drill press. Equipment and vehicles are inspected regularly and their replacement is prioritized based on the results of those inspections. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 10: Both Locks – Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities (Non-Capital Maintenance Project) (FYs 2011, 2012, 2013, 2014, and 2015 – $132,000) – This project is for upgrading the infrastructure that supplies power to Eisenhower and Snell Locks and to the Corporation's Maintenance Facility. The power is furnished directly from the Moses-Saunders Power Dam over infrastructure that is nearly 50 years old. The loss of power from the Moses-Saunders Power Dam makes it necessary to utilize diesel generators, which are expensive to operate, to continue operation of Eisenhower and Snell Locks and the Maintenance Facility. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 11: Fixed Navigational Aids – Rehabilitate (Non-Capital Maintenance Project) (FYs 2011, 2012, 2013, 2014, and 2015 – $918,000) – This project is for rehabilitating fixed navigational aids in the Seaway. Many of the structures are more than 50 years old and are in need of more than routine 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. The inspection of these structures has been done by divers and any repairs to the foundations will require divers and the use of a tug and barge with crane to complete. Failure of a fixed aid would likely make it necessary to replace it which would cost significantly more than repairing the existing structure. *(Project funds enacted for FY 2010)*

Project No. 12: Corporation Equipment – Upgrade/Replace Floating Plant (Capital Project) (FYs 2011, 2012, and 2014 – $20,484,000) – This is an ongoing program to rehabilitate and/or replace the Corporation's floating plant which is utilized for maintaining the locks and navigation channels. This multiyear project also includes replacing the tug; upgrading the buoy tender barge; purchasing a smaller tug which would be more efficient for many operations where the capabilities of the larger tug are not required, a small boat for emergency response and a small scow for transporting dredged spoil from emergency/spot dredging; and for rehabilitating the crane barge/gatelifter which would have to be utilized if a miter gate was damaged and had to be replaced. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 13: Corporation Facilities – Replace Roofs (Capital Project) (FYs 2011, 2012, 2013, 2014, and 2015 – $1,660,000) – This project is for replacing the roofs on the Corporation's various buildings and facilities in Massena, N.Y., as required. Most of the roofs are currently insulated ethylene propylene diene monomer (EPDM) roofs with a service life of 10-15 years and have reached the end of that time frame. *(Project funds obligated in FY 2009)*

Project No. 14: Corporation Facilities – Replace Paving and Drainage Infrastructure (Capital Project) (FYs 2011, 2013, and 2015 – $3,826,000) – This project is for improving the pavement and drainage along lock approach walls, Corporation roadways and public parking and work areas at all Corporation facilities. In Upstate New York, the damage to pavements caused by winter conditions is significant and if repairs are not made before the damage is too severe, complete replacement of the pavement down to and often including the base materials is required at a much higher cost. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 15: Eisenhower Lock Highway Tunnel – Rehabilitate (Non-Capital Maintenance Project) (FYs 2011, 2013, and 2015 – $1,163,000) – This is an ongoing project to maintain the highway tunnel which goes through the upper sill area of Eisenhower Lock to provide the only access to the north sides of both Eisenhower and Snell Locks, to 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, 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. *(Project funds obligated in FY 2009)*

Project No. 16: Seaway System – Upgrade GPS/AIS/TMS Technologies (Capital Project) (FYs 2011, 2013, and 2015 – $255,000) – This project is to expand the use of the Seaway's Global Positioning System (GPS)/ Automatic Identification System (AIS) navigation technologies, which are incorporated into the Seaway's binational Traffic Management System (TMS). Future upgrades will further improve the safety for vessels transiting the Seaway. Plans are to use these technologies to enable vessels to better identify hazards at times of limited visibility. *(Project funds obligated in FY 2009)*

Project No. 17: Navigation Channels – Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments (Non-Capital Maintenance Project) (FY 2015 – $5,152,000) – This project is for dredging of the navigation channel to remove sediments to maintain the design grade for the channel bottom. In FY 2009, the SLSDC awarded an ARP contract to complete maintenance dredging for both the intermediate pool (between Eisenhower and Snell Locks) and the international tangent section to the east of Snell Lock. The contractor began dredging the intermediate pool in early October 2009 and expected to complete the project between September 1 and December 31, 2010. For FY 2015, the Corporation will focus on various upriver sections of the St. Lawrence River under U.S. jurisdiction that require maintenance dredging. . *(Project funds obligated in FY 2009)*

Project No. 19: Corporation Facilities – Upgrade Electrical Distribution Equipment (Capital Project) (FYs 2011 and 2012 – $650,000) – This project is for upgrading electrical distribution equipment at both Eisenhower and Snell Locks and at the Maintenance Facility to insure continued reliability. The majority of this equipment is more than 50 years old. *(Project funds enacted for FY 2010)*

Project No. 20: Both Locks – Upgrade Lock Status/Controls (Capital Project) (FY 2011 – $75,000) – This project is for upgrading the lock/equipment status systems and the lock operating controls at both Eisenhower and Snell Locks. At present only the most critical components are monitored and controlled by the new computerized system. Adding control of some of the less critical components and more in depth monitoring of the status of all components will improve the effectiveness of preventive maintenance activities and result in increased reliability. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 22: Both Locks – Install Vessel Self Spotting Equipment (Capital Project) (FYs 2014 and 2015 – $579,000) – This project is for installing equipment at both Eisenhower and Snell Locks such that transiting vessels can spot/locate themselves in the lock. This new technology, once fully implemented, will reduce labor costs for locking vessels. The Canadian Seaway agency has been testing this new technology at their locks.

Project No. 24: Both Locks – Structural Repair – Grout Leaks in Galleries and Recesses (Non-Capital Maintenance Project) (FY 2012 – $203,000) – This project is for grouting cracks/joints in the concrete in the galleries and recesses at both Eisenhower and Snell Locks to reduce the infiltration of water into these areas. Water leaking into these areas accelerates the corrosion of the components/ machinery and makes it difficult to perform maintenance on these items. *(Project funds obligated in FY 2009 and enacted for FY 2010)*

Project No. 26: Corporation Facilities – Upgrade Storage for Lock Spare Parts (Capital Project) (FYs 2012 and 2014 – $408,000) – This project is for constructing shelters for storage of lock spare parts to prevent them from corroding prior to their use. Many of these items are not stored under cover and/or are stored in old storage sheds that are in need of repair or replacement. *(Project funds enacted for FY 2010)*

Project No. 27: Corporation Facilities – Replace Windows and Doors and Repair Building Facades (Non-Capital Maintenance Project) (FYs 2012 and 2014 – $408,000) – This project is for replacing corroded/worn windows and doors with more energy efficient units and for repairing the brick and stone facades which are in need of repair. *(Project funds enacted for FY 2010)*

Project No. 28: Snell Lock – Walls, Sills and Culverts – Rehabilitate Concrete (Non-Capital Maintenance Project) (FY 2013 – $2,040,000) – This project is to replace deteriorated/ damaged concrete at Snell Lock in all areas except the diffusers. This includes concrete that has been damaged by freeze-thaw cycles and by vessel impacts. It is resurfacing the mass concrete that forms the locks walls, filling and emptying culverts and the gate sills by replacing deteriorated/damaged concrete.

Project No. 29: Eisenhower Lock – Walls, Sills and Culverts – Rehabilitate Concrete (Non-Capital Maintenance Project) (FYs 2012 and 2015 – $4,091,000) – This project is to replace deteriorated/damaged concrete at Eisenhower Lock in all areas except the diffusers. This includes concrete that was of poor quality when placed during original construction and concrete that has been damaged by freeze-thaw cycles and by vessel impacts. It is resurfacing the mass concrete that forms the locks walls, filling and emptying culverts and the gate sills by replacing concrete to depths ranging between approximately 8 inches and 24 inches. *(Project funds enacted for FY 2010)*

Project No. 32: Snug Harbor – Rehabilitate Spare Gate Storage and Assembly Area (Non-Capital Maintenance Project) (FYs 2011, 2012, and 2013 – $762,000) – 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 pads and their supporting piles and blast cleaning and painting of the spare miter gates and gate assembly towers.

Project No. 33: Both Locks – Upgrade Drainage Infrastructure in Galleries and Recesses (Capital Project) (FYs 2012, 2013, 2014, and 2015 – $614,000) – This project is to open existing drains or to drill new ones 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 causing flooding of the galleries and machinery recesses.

Project No. 34: Both Locks – Improve Ice Control (Capital Project) (FYs 2011, 2012, 2013, 2014, and 2015 – $1,021,000) – This project is to improve the methods/equipment utilized to control ice in and around Eisenhower and Snell Locks during the opening and closing of each navigation season. Currently air curtains and bubblers are utilized to minimize the ice entering a lock chamber and to move it away from the miter gates and backhoes are used for removing ice from the lock walls, which reduces the width available for transiting vessels. Improvements to existing systems/equipment as well as utilizing new technologies would make operations during times when there is ice in the water more efficient and would minimize damages to the lock components and transiting vessels.

Project No. 35: Vessel Mooring Cells – Rehabilitate and Extend (Capital Project) (FYs 2011, 2013, and 2014 – $2,145,000) – This project is for rehabilitating and extending the vessel mooring cells upstream of Eisenhower Lock and in the Intermediate Pool between the locks. These mooring cells are available for vessels with problems to tie to until the problems can be corrected and/or for vessels to tie to for inspections. The existing cells are more than 50 years old, are in a state of disrepair and are too short for current Seaway length vessels.

Project No. 36: Eisenhower Lock – Diffusers – Replace (Non-Capital Maintenance Project) (FY 2012 – $3,045,000) – This project is to replace deteriorated/damaged concrete in the diffusers at Eisenhower Lock. This includes concrete that was of poor quality when placed during original construction and concrete that was damaged by freeze-thaw cycles. The diffusers are the outlet structures used to dampen the flow of water when the lock is emptied and this project would be for removal and replacement of these structures.

Project No. 37: Eisenhower Lock – Construct Drydock for Vessel Maintenance (Capital Project) (FY 2015 – $800,000) – This project is for constructing a drydock in Eisenhower Lock so that repairs to the Corporation's floating plant can be made on site. Because a lock is dewatered in the winter, it could serve as a drydock by installing a floor and some pedestals/ blocking in a section of the lock to accommodate the Corporation's vessels. This would save the cost of transporting vessels to a drydock typically located in the Great Lakes and the daily rate for having a vessel in that drydock.

Project No. 38: Both Locks – Upgrade/Replace Emergency Generators (Capital Project) (FYs 2012 and 2013 – $1,018,000) – This project is for replacing the emergency generators at both Eisenhower and Snell Locks and for installing one of those removed from the locks at the Maintenance Facility. The generators at the locks are over 20 years old and will not carry the total load. It is sometimes necessary to eliminate some of the load to insure that the generators will run. Also, installing one of these units at the Maintenance Facility with an automatic transfer switch will insure that if the power goes out, water lines will not freeze and break and it will enable maintenance activities to continue.

Project No. 39: Both Locks – Dewatering Pumps – Upgrade Outdated Equipment (Capital Project) (FYs 2012 and 2013 – $407,000) – This project is for replacing the pumps used for dewatering both Eisenhower and Snell Locks for maintenance of their underwater components. These pumps are nearly 50 years old and parts for these units are no longer available.

Project No. 40: Both Locks – Extend Guidewalls in Pool (Capital Project) (FYs 2013 and 2015 – $3,076,000) – This project is for extending the downstream guidewall at Eisenhower Lock and the upstream guidewall at Snell Lock. These approach walls were part of the original construction and are too short for mooring maximum Seaway length vessels.

Project No. 41: Snell Lock – Install Ice Flushing System Technologies (Capital Project) (FYs 2012 and 2013 – $10,178,000) – This project is for installation of an ice flushing system at Snell Lock similar to the one at Eisenhower Lock. An ice flushing system is utilized to remove floating ice from the lock chamber to make room for transiting vessels and to prevent/minimize damage to the vessels and/or lock structures. Without an ice flushing system, it is necessary to flush ice utilizing the filling valves which is less efficient and effective and significantly increases the stresses on these valves and causes damage to them.

Project No. 42: Both Locks – Miter Gates – Structural Rehabilitation (Non-Capital Maintenance Project) (FYs 2012, 2013, 2014, and 2015 – $2,554,000) – This project is to blast clean and treat the upstream and downstream miter gates at both Eisenhower and Snell Locks to prevent further corrosion of these structures. They were last treated over 20 years ago.

Project No. 43: Both Locks – Miter Gate Machinery – Upgrade/ Replace (Capital Project) (FYs 2013 and 2015 – $3,281,000) – This project is for replacing the operating machinery for the miter gates at both Eisenhower and Snell Locks. This machinery is more than 50 years old and needs to be upgraded to insure its continued reliability. The upgrade will include new hydraulic operating equipment to match the upgrades made at the Canadian Seaway locks and the other locks in the United States.

Project No. 44: Both Locks – Ship Arrestor Machinery – Upgrade/Replace (Capital Project) (FYs 2014 and 2015 – $825,000) – This project is for replacing the operating machinery for the ship arrestors at both Eisenhower and Snell Locks. The ship arrestors protect the miter gates from damage that would be caused if a vessel had a malfunction such that it was unable to stop and struck a miter gate. This operating machinery is more than 50 years old and needs to be upgraded to insure its continued reliability.

Project No. 45: Flow Control Dikes – Rehabilitate (Non-Capital Maintenance Project) (FY 2015 – $515,000) – This project is for placing additional stone on the dikes downstream of Snell Lock to return them to their original cross-section. These dikes were constructed to deflect the outflow from the Moses-Saunders Power Dam, which enters the Seaway navigation channel downstream of Snell Lock, so that it doesn't cause problems for vessels transiting that area. Over time, stones from which these dikes were constructed are moved by the forces of the water and ice and work needs to be done to restore the dikes to their as-constructed condition.

Project No. 46: Both Locks – Guidewall Extensions – Rehabilitate (Non-Capital Maintenance Project) (FY 2015 – $515,000) – This project is to repair damage to the guidewall extensions located at the upstream end of Eisenhower Lock and at the downstream end of Snell Lock. These structures were constructed after original construction of the locks to lengthen the approach walls to assist vessels entering the locks. These structures are comprised of sheet pile cells, with bridge spans and are not as stable as the original guidewalls which are mass concrete structures. They have been damaged by vessel impacts over the years and require rehabilitation to maintain their serviceability.

Project No. 51: Corporation Facilities – Upgrade Physical Security to Meet HSPD-12 Requirements (Capital Project) (FY 2011 – $200,000) – This project is for procuring the Personal Identity Verification (PIV) cards issued by the Department and for procuring and installing the necessary ID smart card readers and other required infrastructure to meet HSPD-12 requirements.

Project No. 52: Eisenhower Lock Visitors' Center – Replace (Capital Project) (FY 2013 – $5,000,000) – The Eisenhower Lock Visitors' Center is approaching 50 years of age and is in need of replacement. Each year, the facility is visited by more than 50,000 people annually and is an important attraction for Upstate New York tourism. The Center provides historical displays on the St. Lawrence Seaway and President Eisenhower and includes observation decks for tourists to watch vessels transit the lock. Due to more critical maintenance needs, only a minimal amount of maintenance has been performed over the years by the SLSDC on the facility. A new Visitors' Center is needed to meet federal physical security and handicap accessibility standards. Due to the condition of the facility, replacement would be a more cost effective solution than remodeling.

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