



U.S. Department of
Transportation

BUDGET ESTIMATES

FISCAL YEAR 2013

SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION

SUBMITTED FOR THE USE OF
THE COMMITTEES ON APPROPRIATIONS

**U.S. DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
FY 2013 BUDGET REQUEST
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Budget Overview

Saint Lawrence Seaway Development Corporation FY 2013 Budget Request Overview

For Fiscal Year (FY) 2013, the Saint Lawrence Seaway Development Corporation (SLSDC) is requesting an appropriation from the Harbor Maintenance Trust Fund (HMTF) of \$33.0 million to fund the daily operations and maintenance of the U.S. portion of the St. Lawrence Seaway (\$17.0 million) as well as projects supporting the Seaway's Asset Renewal Program (ARP) (\$16.0 million).

Under this funding scenario, the SLSDC will be able to perform its core mission of serving the U.S. intermodal and international transportation system while 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 U.S. lock operations and maintenance, vessel traffic control, vessel safety and environmental inspections, trade development, and capital infrastructure replacements and improvements.

Increases in the FY 2013 budget request, compared to the FY 2012 enacted level, include baseline increases of \$191,000 related to: a proposed general schedule pay raise of 0.5 percent; estimated wage grade pay raise of 1.0 percent; one additional compensable day; non-pay inflation; and Washington office rent and DOT Working Capital Fund increases. In addition the SLSDC is proposing net program increases of \$550,000 related to: ARP; operational and environmental programs; and "Promoting Efficient Spending" Executive Order (EO 13589) initiatives.

SLSDC programs and activities, including the ARP, are principally focused on the Department's "Economic Competitiveness" 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.

The St. Lawrence Seaway directly serves an eight-state, two-province region that accounts for 23 percent of the U.S. gross domestic product (GDP), 50 percent of North America's manufacturing and services industries, and is home to nearly one-quarter of the continent's population. In fact, maritime commerce on the Great Lakes Seaway System impacts 128,000 U.S. jobs with associated benefits of \$18.1 billion in annual business revenue from transportation firms and \$9.7 billion in annual wages and salaries¹, and provides approximately \$3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation². Over its history, the St. Lawrence Seaway has handled more than 2.6 billion metric tons of cargo valued in excess of \$375 billion. The SLSDC remains dedicated to promoting the economic and environmental benefits of the marine mode, attracting new cargoes to the Seaway, and leveraging technology to enhance the system's performance.

¹ *The Economic Impacts of the Great Lakes St. Lawrence Seaway System*, Martin Associates, October 2011.

² *Great Lakes Navigation System: Economic Strength to the Nation*, U.S. Army Corps of Engineers, January 2009.

Agency Operations

For FY 2013, the SLSDC is requesting \$17.0 million and 144 full-time equivalents (FTEs) for its Agency Operations program. The request represents an overall increase of \$341,000 compared to the FY 2012 enacted level with no requested change to the FTE total.

At the request level, the SLSDC will: (1) continue operating a safe, secure, and efficient commercial trade route with a reliability rate in the U.S. sector of the system of 99 percent or greater through safe and effective operations of the two U.S. Seaway locks and efficient waterway management; (2) continue close coordination and involvement with the Canadian SLSMC to ensure consistent practices and greater economies of scale; and (3) perform safety inspections and ballast water examinations of all foreign-flag vessels entering the St. Lawrence Seaway in Montreal, Que., prior to entering U.S. waters.

In addition to these activities, the SLSDC continues to advocate strict ballast water management efforts to prevent any new introductions of aquatic invasive species 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. The Great Lakes Aquatic Nonindigenous Species Information System, 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.

Asset Renewal Program

The \$16.0 million request to complete 28 ARP projects in FY 2013 will address various needs for the two U.S. Seaway locks, operational systems and networks, and Corporation facilities and equipment (*see pages 35-41 for ARP projects and descriptions*). Most ARP projects are multi-year projects and the FY 2013 request includes 26 projects that were funded in FYs 2009-2011 or are scheduled for funding in FY 2012.

Major ARP projects to be funded in FY 2013 include the second of three years of funding related to the installation of an ice flushing system at Snell Lock (\$3.0 million), miter gate machinery upgrade at Eisenhower Lock (\$2.6 million), and concrete replacement at Eisenhower Lock (\$2.0 million).

The SLSDC's ARP focuses on improving aging Seaway infrastructure, conducting maintenance dredging, investing in new technologies, purchasing new equipment, and refurbishing aging facilities. The ARP is resulting in not only modernized infrastructure and new equipment to ensure the long-term reliability of the St. Lawrence Seaway, but it is also having a positive and significant impact on the Upstate New York economy. In fact, approximately 70 percent of the ARP funds obligated during the program's first three years, totaling nearly \$35 million, were awarded within the region. In addition to these contracts, the ARP is producing approximately \$2.5 million in additional economic benefits to the region (local permanent and temporary hires, local spending on supplies and equipment, lodging, meals, etc.) each year.

The ARP marks the first time since the Seaway's opening in 1959 that a coordinated effort to repair and modernize the U.S. Seaway infrastructure has taken place. None of the ARP 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.

The SLSDC's ARP closely coordinates with infrastructure renewal work completed or planned by the Canadian SLSMC and supports the engineering considerations highlighted in the November 2007 binational *Great Lakes St. Lawrence Seaway Study*, authored by the U.S. Army Corps of Engineers (USACE). The study, which was completed with the support of the U.S. and Canadian governments, 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. As part of its ARP planning and implementation processes, the SLSDC is working closely with the SLSMC and USACE to leverage their expertise.

Lowering Costs and Producing Better Results

Since its creation in the 1950s, the SLSDC has managed its funding to ensure that expenditures focus on the highest priority operational programs and initiatives. Today, the SLSDC continues to advance its efforts to identify and reduce overhead activities. In response to the EO 13589, the SLSDC has identified the following three initiatives aimed at lowering agency costs and producing better results:

Lowering Administrative Costs – To maximize its funding for operational programs and initiatives, the SLSDC constantly works toward attaining its internal performance measure of managing agency administrative expenses as a percentage of all operating costs at 25 percent or less. In FY 2011, the SLSDC's administrative cost percentage was 22 percent, the eighth consecutive fiscal year that the goal was met. The SLSDC has implemented a number of activities to achieve the administrative cost ratio goal, including reducing costs associated with supplies and materials and administrative contractual services, and investigating new technologies to reduce administrative overhead costs.

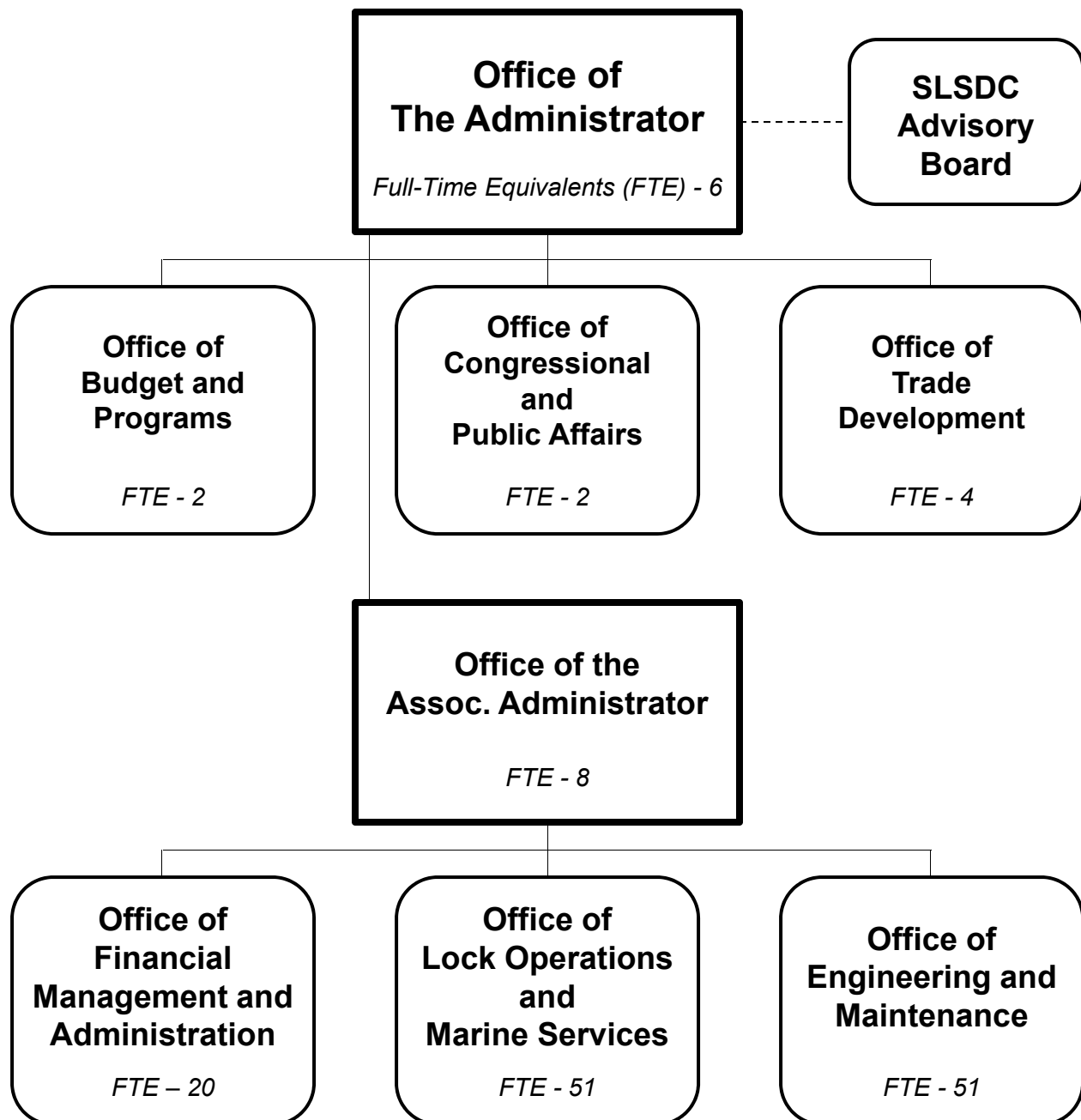
Implementing Succession Planning – The Corporation implemented a succession planning program in 2006 to effectively manage the separation and/or retirement of administrative and management personnel to ensure efficient operations, while seeking to reduce positions wherever possible and to lower costs associated with personnel compensation and benefits. The program has been successful in reducing the SLSDC's staff levels by 8 percent since 2006, while ensuring continuity of Seaway operations and maintaining a 99 percent reliability rate for the U.S. Seaway locks and sectors.

Reducing Non-Operational Budgets – In its continued efforts to identify and restrict non-operational program costs, the SLSDC is proposing a budget reduction of 10 percent (\$100,000) in FY 2013 for its Office of Trade Development, as compared to the FY 2011 level. This level of funding for FY 2013 marks the lowest budget amount for the Office of Trade Development since FY 2006. In addition, the SLSDC is proposing to reduce staff travel, printing, and motor vehicle costs in FY 2013. These reductions are part of an overall 20 percent reduction in agency non-operational costs as compared to FY 2011.

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Exhibit I

Saint Lawrence Seaway Development Corporation Organization Chart FY 2012-13



Budget Summary Tables

EXHIBIT II-1
FY 2013 COMPARATIVE STATEMENT OF NEW BUDGET AUTHORITY
Saint Lawrence Seaway Development Corporation
(\$000)

<u>ACCOUNT NAME</u>	<u>FY 2011 ACTUAL</u>	<u>FY 2012 ENACTED</u>	<u>FY 2013 REQUEST</u>
Operations and Maintenance - HMTF (69-8003)	\$32,259	\$32,259	\$33,000
	-----	-----	-----
TOTAL:	\$32,259	\$32,259	\$33,000

EXHIBIT II-2
FY 2013 TOTAL BUDGETARY RESOURCES BY APPROPRIATIONS ACCOUNT
Saint Lawrence Seaway Development Corporation
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

<u>ACCOUNT NAME</u>	<u>FY 2011 ACTUAL</u>	<u>FY 2012 ENACTED</u>	<u>FY 2013 REQUEST</u>
Operations and Maintenance - HMTF (69-8003)	\$32,259	\$32,259	\$33,000
	-----	-----	-----
TOTAL:	\$32,259	\$32,259	\$33,000

EXHIBIT II-3
FY 2013 BUDGET REQUEST BY DOT STRATEGIC AND ORGANIZATIONAL GOALS
Appropriations, Obligation Limitations, and Exempt Obligations
Saint Lawrence Seaway Development Corporation
(\$000)

Account/Program	DOT STRATEGIC GOALS						
	Safety	Environmental Sustainability	State of Good Repair / Infrastructure	Livable Communities	Economic Competitiveness	Organizational Excellence	Total
Operations and Maintenance-HMTF (69-8003)							
Agency Operations	—	—	—	—	\$17,000	—	\$17,000
Asset Renewal Program	—	—	—	—	\$16,000	—	\$16,000
TOTAL:	—	—	—	—	\$33,000	—	\$33,000
FTE:	—	—	—	—	144	—	144

EXHIBIT II-3a
FY 2013 BUDGET REQUEST BY DOT OUTCOMES
Saint Lawrence Seaway Development Corporation
(\$000)

DOT Outcome	Program	FY 2013 Request
ECONOMIC COMPETITIVENESS		
Maximum economic returns on transportation policies and investments	SLSDC Agency Operations	\$17,000
	SLSDC Asset Renewal Program	\$16,000
	Total - Operations and Maintenance-HMTF (69-8003)	\$33,000

EXHIBIT II-4
FY 2013 BUDGET AUTHORITY
Saint Lawrence Seaway Development Corporation
(\$000)

<u>ACCOUNT NAME</u>	<u>FY 2011 ACTUAL</u>	<u>FY 2012 ENACTED</u>	<u>FY 2013 REQUEST</u>
Operations and Maintenance - HMTF (69-8003)	\$32,259	\$32,259	\$33,000
	-----	-----	-----
TOTAL:	\$32,259	\$32,259	\$33,000
Discretionary	\$32,259	\$32,259	\$33,000
Mandatory	0	0	0

EXHIBIT II-5
FY 2013 OUTLAYS
Saint Lawrence Seaway Development Corporation
(\$000)

<u>ACCOUNT NAME</u>	(A) FY 2011 <u>ACTUAL</u>	(B) FY 2012 <u>ENACTED</u>	(C) FY 2013 <u>REQUEST</u>
SLSDC Fund (69x4089)	\$34,386	\$47,259	\$40,000
	-----	-----	-----
TOTAL:	\$34,386	\$47,259	\$40,000
 [Mandatory] (Operations and Maintenance-HMTF -- 69-8003)	 \$2,127	 \$15,000	 \$7,000
[Discretionary] (SLSDC Fund -- 69x4089)	\$32,259	\$32,259	\$33,000

EXHIBIT II-6
SUMMARY OF REQUESTED FUNDING CHANGES FROM BASE
Saint Lawrence Seaway Development Corporation
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

Operations and Maintenance - HMTF (69-8003)	FY 2012 Enacted	BASELINE CHANGES					FY 2013 Baseline Estimate	Program Increases/ Decreases	FY 2013 Request
		FY 2013 Pay Raises *	One Add'l Compensable Day	Washington Office Rent	Working Capital Fund	Non-Pay Inflation			
PERSONNEL RESOURCES	144								
Direct FTEs	144	-	-	-	-	-	144	-	144
FINANCIAL RESOURCES									
ADMINISTRATIVE EXPENSES									
Salaries and Benefits	\$3,456	\$18	\$14	\$0	\$0	\$0	\$3,488	\$0	\$3,488
Travel	\$58	\$0	\$0	\$0	\$0	\$1	\$59	(\$5)	\$54
Transportation of Things	\$2	\$0	\$0	\$0	\$0	\$0	\$2	\$0	\$2
Washington Office Rent	\$306	\$0	\$0	\$30	\$0	\$0	\$336	\$0	\$336
Communications, Rent & Utilities	\$41	\$0	\$0	\$0	\$0	\$0	\$41	\$0	\$41
Printing	\$15	\$0	\$0	\$0	\$0	\$0	\$15	(\$5)	\$10
Working Capital Fund (WCF)	\$669	\$0	\$0	\$0	\$10	\$0	\$679	\$0	\$679
Supplies	\$31	\$0	\$0	\$0	\$0	\$0	\$31	\$0	\$31
Administrative Subtotal	\$4,578	\$18	\$14	\$30	\$10	\$1	\$4,651	(\$10)	\$4,641
PROGRAMS									
Agency Operations	\$12,081	\$55	\$40	\$0	\$0	\$23	\$12,199	\$160	\$12,359
Asset Renewal Program (ARP)	\$15,600	\$0	\$0	\$0	\$0	\$0	\$15,600	\$400	\$16,000
Programs Subtotal	\$27,681	\$55	\$40	\$0	\$0	\$23	\$27,799	\$560	\$28,359
TOTAL	\$32,259	\$73	\$54	\$30	\$10	\$24	\$32,450	\$550	\$33,000

* "FY 2013 Pay Raises" column includes \$24,000 for three-quarters of the proposed General Schedule (GS) pay increase of 0.5 percent and \$49,000 for a full year of the estimated Wage Grade (WG) pay increase of 1.0 percent.

EXHIBIT II-7
WORKING CAPITAL FUND
Saint Lawrence Seaway Development Corporation
(\$000)

<u>ACCOUNT NAME</u>	<u>FY 2012 ENACTED</u>	<u>FY 2013 REQUEST</u>	<u>CHANGE</u>
DIRECT:			
Operations and Maintenance - HMTF (69-8003)	\$669	\$679	\$10
	-----	-----	-----
TOTAL:	\$669	\$679	\$10

EXHIBIT II-8
Saint Lawrence Seaway Development Corporation
PERSONNEL RESOURCE -- SUMMARY
TOTAL FULL-TIME EQUIVALENTS

	<u>FY 2011</u> <u>ACTUAL</u>	<u>FY 2012</u> <u>ENACTED</u>	<u>FY 2013</u> <u>REQUEST</u>
<u>DIRECT FUNDED BY APPROPRIATION</u>			
Operations and Maintenance - HMTF (69-8003)	132	144	144
	-----	-----	-----
TOTAL FTEs:	132	144	144

EXHIBIT II-9
Saint Lawrence Seaway Development Corporation
RESOURCE SUMMARY -- STAFFING
FULL-TIME PERMANENT POSITIONS

	<u>FY 2011</u> <u>ACTUAL</u>	<u>FY 2012</u> <u>ENACTED</u>	<u>FY 2013</u> <u>REQUEST</u>
<u>DIRECT FUNDED BY APPROPRIATION</u>			
Operations and Maintenance - HMTF (69-8003)	132	144	144
	-----	-----	-----
TOTAL POSITIONS:	132	144	144

**Budget Request
by Account**

Operations and Maintenance (69-8003)

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APPROPRIATIONS LANGUAGE

**DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION**

TRUST FUNDS

OPERATIONS AND MAINTENANCE

(Harbor Maintenance Trust Fund)

For necessary expenses for operations, maintenance, and capital asset renewal of those portions of the St. Lawrence Seaway owned, operated, and maintained by the Saint Lawrence Seaway Development Corporation, \$33,000,000, to be derived from the Harbor Maintenance Trust Fund, pursuant to Public Law 99-662.

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EXHIBIT III-1

OPERATIONS AND MAINTENANCE – HMTF (69-8003) SUMMARY BY PROGRAM ACTIVITY Appropriations, Obligation Limitations, and Exempt Obligations (\$000)

<u>Program Activity</u>	<u>FY 2011 ACTUAL</u>	<u>FY 2012 ENACTED</u>	<u>FY 2013 REQUEST</u>	<u>CHANGE FY 2012-13</u>
Agency Operations	\$16,476	\$16,659	\$17,000	\$ 341
Asset Renewal Program	15,783	15,600	16,000	400
	-----	-----	-----	-----
Total	\$32,259	\$32,259	\$33,000	\$ 741
FTEs	132	144	144	0

Program and Performance Statement

The SLSDC's FY 2013 budget request includes \$33.0 million from the Harbor Maintenance Trust Fund (HMTF) to fund general agency operations (\$17.0 million) as well as 28 capital and non-capital maintenance projects included in the fifth year of the SLSDC's multi-year Asset Renewal Program (ARP) (\$16.0 million) (*see pages 35-41 for ARP project estimates and descriptions*).

SLSDC programs and activities, including the ARP, are principally focused on meeting the Department's "Economic Competitiveness" strategic goal and the 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.

EXHIBIT III-1a

OPERATIONS AND MAINTENANCE – HMTF (69-8003)
SUMMARY ANALYSIS OF CHANGE FROM FY 2012 TO FY 2013
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

<u>ITEM</u>	Change from	Change from
	FY 2012 to FY 2013	FY 2012 to FY 2013
	\$000	FTE
FY 2012 BASE	\$32,259	144
ADJUSTMENTS TO BASE:		
One Additional Compensable Day	\$54	0
FY 2013 Wage Grade Pay Increase	\$49	0
Washington Office Rent	\$30	0
FY 2013 General Schedule Pay Increase	\$24	0
Non-Pay Inflation	\$24	0
DOT Working Capital Fund	\$10	0
SUBTOTAL, ADJUSTMENTS TO BASE	\$191	0
PROGRAM CHANGES:		
Year Five Asset Renewal Program (ARP)	\$400	0
Operational and Environmental Programs	\$275	0
Promoting Efficient Spending E.O. – Other	(\$25)	
Promoting Efficient Spending E.O. – Trade Dev.	(\$100)	
SUBTOTAL, PROGRAM CHANGES	\$550	0
INCREASES/DECREASES	\$741	0
FY 2013 REQUEST	\$33,000	144

EXHIBIT III-2

ANNUAL PERFORMANCE RESULTS AND TARGETS SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION

The SLSDC integrates performance results into its budget request to demonstrate alignment with the Department of Transportation's Strategic Plan. The SLSDC tracks the following DOT level performance measure to demonstrate program results:

DOT Goal/Outcome: Economic Competitiveness – Maximum economic returns on transportation policies and investments

Seaway System Availability	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Target:	99.0%	99.0%	99.0%	99.0%	99.0%
Actual:	99.4%	99.8%	99.0%	—	—

Detailed Justification for Agency Operations

What Do I Need to Know before Reading this Justification?

- The St. Lawrence Seaway is a binational waterway and lock system, which connects the Great Lakes to the Atlantic Ocean for commercial waterway trade and is jointly operated by the United States (SLSDC) and Canada (St. Lawrence Seaway Management Corporation – SLSMC).
- Both nations made commitments to each other more than 50 years ago through binding international agreements to operate and maintain their respective portions of the waterway.
- Over its history, the St. Lawrence Seaway has moved more than 2.6 billion metric tons of cargo with an estimated value of more than \$375 billion. Almost 25 percent of this cargo travels to and from overseas ports.
- SLSDC operations impacts 128,000 U.S. jobs with associated benefits of \$18.1 billion in annual business revenue from transportation firms and \$9.7 billion in annual wages and salaries, and provides approximately \$3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation.

What is the Request and What Will We Get for the Funds?

FY 2013 Agency Operations Budget Request
Operations and Maintenance – HMTF (69-8003)
(In thousands of dollars)

Program Activity	FY 2011 Actual	FY 2012 Enacted	FY 2013 Request	Difference from FY 2012 Enacted
Agency Operations	\$16,476	\$16,659	\$17,000	\$341
Total	\$16,476	\$16,659	\$17,000	\$341

For FY 2013, the SLSDC is requesting \$17.0 million and 144 full-time equivalents (FTEs) for its Agency Operations program. The request represents an overall increase of \$341,000 compared to the FY 2012 enacted level with no requested change to the FTE level. Baseline increases of \$191,000 include: one additional compensable day in FY 2013 (\$54,000); proposed 0.5 percent annual pay raise for SLSDC general schedule employees (\$49,000); increased rent for the Washington, D.C. office space (\$30,000); estimated 1.0 percent annual pay raise for SLSDC unionized wage grade employees (\$24,000); 0.5 percent non-pay inflation (\$24,000); and DOT Working Capital Fund (WCF) cost estimates (\$10,000). Net program increases of \$150,000 include: increases associated with agency operational and environmental programs (\$275,000); reductions to the Office of Trade Development (-\$100,000); and reductions to other non-operational costs associated with staff travel, printing, and motor vehicle purchases (-\$25,000).

At the request level, the SLSDC will:

- (1) Continue operating a safe, secure, and efficient commercial trade route with a reliability rate in the U.S. sector of the system of 99 percent or greater through safe and effective operations of the two U.S. Seaway locks and efficient waterway management.
- (2) Continue close coordination and involvement with the Canadian St. Lawrence Seaway Management Corporation (SLSMC) to ensure consistent practices and greater economies of scale.
- (3) Perform safety inspections and ballast water examinations of all foreign-flag vessels entering the St. Lawrence Seaway in Montreal, Que., prior to entering U.S. waters.

The SLSDC's principal performance goal is to provide a safe, secure, reliable, and efficient U.S. portion of the St. Lawrence Seaway to its commercial users. The annual goal is 99 percent availability of the U.S. section of the Seaway, including the two U.S. locks, during the annual navigation season (typically late March to late December each year).

During FY 2011, the SLSDC reported a 99.0 percent system availability, meeting its annual target. This goal measures the percent of days in the shipping season that the U.S. portion of the St. Lawrence Seaway is available. This high mark of success is due primarily to the SLSDC's efficient management and operations of the locks and control of vessel traffic.

SLSDC activities associated with the Agency Operations program directly support its core performance measure of system availability and the Department's "Economic Competitiveness" strategic goal and the Department's outcome measure of maximizing economic results on transportation policies and investments.

Several Agency Operations program activities worth noting include:

Vessel Safety Inspections

In FY 2013, SLSDC will continue to perform inspections of every commercial ocean vessel in Montreal, Que., during their first inbound transit each year. Inspecting each vessel ensures the safety and environmental compliance of both transiting vessels and the Seaway locks themselves as well as ensuring the protection of U.S. and Canadian waters from invasive species. SLSDC marine inspectors complete more than 200 inspections each year. The SLSDC maintains an internal performance metric of inspecting 100 percent of foreign-flag vessels each year and it has met the goal each year since the program began in 1997.

Trade Development

In addition to these core mission areas, the Corporation will also continue to strengthen existing trading partner relations and promote 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 option for shippers looking to avoid highway and railway congestion. In 2010, overall cargo volumes on the Seaway increased by 16 percent

compared with 2009, and included more than 1 million metric tons of new business, including windmill parts and biofuels. Seaway commercial traffic in 2011 was up an additional estimated 3 percent (*final totals are not available until spring 2011*).

Ballast Water Management

The SLSDC continues to advocate strict ballast water management 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 other U.S. and Canadian partners, have enforced ballast water inspections of all vessels to ensure these regulations are carried out. In 2011, 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 are 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. The Great Lakes Aquatic Nonindigenous Species Information System, 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.

The SLSDC also continues to facilitate the Great Lakes Ballast Water Collaborative (BWC), in conjunction with the International Joint Commission (IJC), to bring together industry and state and federal regulators on the issue of ballast water and invasive species in the region. A particular emphasis of the BWC has been to bring state representatives together with marine industry representatives and respected scientists to find workable and effective solutions to the aquatic invasive species challenge as they relate to the Great Lakes Seaway System.

In September 2009, the BWC held its first meeting in Detroit, Mich., as an information-sharing forum on ballast water issues for the Great Lakes Seaway System. Since that first meeting, there have been four additional full BWC meetings — May 2010 in Montreal, Que., July 2010 in Duluth, Minn., January 2011 in Toronto, Ont., and September 2011 in Baltimore, Md.

The BWC has attracted the active participation of more than 100 different U.S. and Canadian senior-level officials and executives, including representatives from state and provincial governments (Illinois, Michigan, Minnesota, New York, Ohio, Wisconsin, and Ontario); U.S. and Canadian regulatory agencies; U.S.-flag laker, Canadian-flag laker, and international fleets; and leading academic ballast water researchers from Canada and the United States.

In addition to these three programs, the SLSDC is proposing reductions of \$125,000 in FY 2013 for non-operational program costs associated with trade promotion, staff travel, printing, and motor vehicle purchases. These reductions are in direct response to the "Promoting Efficient Spending" Executive Order (No. 13589).

The proposed 10 percent reduction for the SLSDC's Office of Trade Development (\$100,000) marks the lowest budget total for the agency division since FY 2006. Over the past several years,

the SLSDC and Canadian SLSMC have successfully established and implemented a joint marketing plan that reduces operational and administrative costs to both agencies. The SLSDC has successfully eliminated duplicative efforts while maintaining the marketing activities needed to identify niche commodities and new markets to further increase Seaway trade. In addition, SLSDC marketing activities over the past 12-18 months have been instrumental in the growth potential for establishing the Seaway System's first container feeder service since the 1980s.

The reductions for staff travel, printing, and motor vehicle purchases are part of an overall 20 percent reduction in agency non-operational costs as compared to FY 2011.

What is this Program?

The SLSDC's Agency Operations program consists of all agency activities, except for the on-going Asset Renewal Program (ARP) for capital infrastructure replacements and improvements. The Corporation is responsible for the operation and maintenance of the U.S. portion of the binational waterway and lock system for commercial users moving goods to and from the Midwest region of North America.

SLSDC activities associated with the Agency Operations program directly support its core performance measure of system availability and the Department's "Economic Competitiveness" strategic goal and the Department's outcome measure of maximizing economic results on transportation policies and investments.

The SLSDC performs a number of activities each year as part of the Agency Operations program:

Lock Operations and Marine Services – Lock Operations and vessel traffic control on the St. Lawrence Seaway are conducted on a 24-hour day, 7-day week basis throughout the shipping season (typically late March to late December each year). Marine operations consist of commissioning and decommissioning aids to navigation, channel dredging and maintenance, tugboat and other floating equipment services, as well as vessel safety inspections and ballast water examinations.

Engineering and Maintenance – The Corporation facilities must be maintained in efficient operating condition. Facilities include: locks and guidewalls; roads; an international bridge; a highway tunnel; channels; public use facilities, such as the Eisenhower Lock Visitors' Center; navigation aids; buildings, grounds, and utilities; and permanent operating equipment. Major maintenance/asset rehabilitation on existing facilities will continue to be performed during the non-navigation winter months as part of the SLSDC's ARP.

Trade Development – The Corporation engages in activities designed to increase public awareness of the Seaway. This includes the costs associated with initiatives aimed at identifying new markets for, and increasing use of, the Great Lakes St. Lawrence Seaway System.

Administrative – Executive management and administration of the Corporation includes legal, civil rights, financial management, procurement, information technology, human resources, budget, performance, public relations, and other related administrative support services.

Approximately 80 percent of the Agency Operations program budget funds employee salaries and benefits. The remaining 20 percent of funds are used for programmatic activities and non-capital maintenance of the locks and facilities, vessel traffic control, equipment, supplies, vessel safety and environmental inspections, and marketing activities.

The Agency Operations program is broken down into two categories — operational and administrative. To maximize its funding for operational programs and initiatives, the SLSDC constantly works toward attaining its internal performance measure of managing agency administrative expenses as a percentage of all operating costs at 25 percent or less. This level of overhead expenses, well below baseline federal and state government levels, was established based on an analysis of private-sector goals for companies of similar size. In FY 2011, the SLSDC's administrative cost percentage was 22 percent, the eighth consecutive fiscal year that the goal was met.

The SLSDC has implemented a number of activities to achieve the administrative cost ratio goal, including reducing costs associated with supplies and materials and administrative contractual services, and investigating new technologies to reduce administrative overhead costs. In addition, the Corporation implemented a succession planning program in 2006 to effectively manage the separation and/or retirement of administrative and management personnel to ensure efficient operations, while seeking to reduce positions wherever possible and to lower costs associated with personnel compensation and benefits. The program has been successful in reducing the SLSDC's staff levels by 8 percent since 2006, while ensuring continuity of Seaway operations and maintaining a 99 percent reliability rate for the U.S. Seaway locks and sectors.

FY 2012 Base: The FY 2012 enacted level (base level) for the SLSDC's Agency Operations program was \$16.7 million.

Anticipated FY 2012 Accomplishments: In FY 2012, the SLSDC will:

- Provide a safe, secure, and efficient commercial trade route with a reliability rate of 99 percent or greater through vessel traffic control operations and infrastructure maintenance.
- Continue close coordination and involvement with the Canadian SLSMC in all aspects of Seaway operations and trade development to ensure consistent practices and greater economies of scale. The two agencies will continue to work cooperatively on the vessel inspection procedures of foreign-flagged vessels, invasive species activities affecting the Great Lakes Seaway System, and binational trade development initiatives including the Highway H₂O program and Short Sea Shipping activities.
- Perform safety inspections and ballast water exams of all foreign-flag vessels entering the St. Lawrence Seaway in Montreal, Que., prior to entering U.S. waters.
- Use and enhance technologies to more efficiently manage vessel traffic control and lock transits, including the Global Positioning System/Automatic Identification System (GPS/AIS) vessel traffic system, of which the St. Lawrence Seaway was the first inland waterway in the western hemisphere to use.

- Participate in various federal and department-wide activities, including electronic payroll and training, cyber security, disaster management, and automated staffing.

Why Is This Particular Program Necessary?

The SLSDC is responsible for the operations and maintenance of the U.S. portion of the binational St. Lawrence Seaway, including the two U.S. Seaway locks in Massena, N.Y. The mission of the Corporation, which is directly linked to this program, is to serve the U.S. intermodal and international transportation system through the operation and maintenance of a safe, reliable, efficient, and environmentally responsible deep-draft waterway, in cooperation with its Canadian counterpart. The SLSDC also encourages the development of trade through the Great Lakes St. Lawrence Seaway System, which contributes to the comprehensive economic development of the entire Great Lakes region.

On average, 40-50 million metric tons of cargo are transported on the St. Lawrence Seaway annually to and from more than 50 nations. Principal commodities include grain, iron ore, coal, finished iron and steel products, and heavy and over dimensional equipment (project cargoes). The St. Lawrence Seaway directly serves an eight-state, two-province region that accounts for 23 percent of the U.S. gross domestic product (GDP), 50 percent of North America's manufacturing and services industries, and is home to nearly one-quarter of the continent's population. In fact, maritime commerce on the Great Lakes Seaway System impacts 128,000 U.S. jobs with associated benefits of \$18.1 billion in annual business revenue from transportation firms and \$9.7 billion in annual wages and salaries¹, and provides approximately \$3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation². Over its history, the St. Lawrence Seaway has handled more than 2.6 billion metric tons of cargo valued in excess of \$375 billion.

There are no viable alternatives to this program. By law, the SLSDC is required to operate and maintain its portion of the St. Lawrence Seaway with an identical legislative mandate in Canada for the SLSMC. In addition to these legislative authorities, both nations also executed an Exchange of Notes in 1952 and 1954 establishing the terms of constructing, managing, and operating the Seaway jointly. These diplomatic notes, which have the full force and effect of a treaty between the two countries, have remained in effect since their official exchange. The SLSDC remains committed to fulfilling this binding international obligation.

How Do You Know the Program Works?

Since opening in 1959, the SLSDC has consistently maintained a 99 percent reliability rate for its locks and the U.S. sector of the waterway. This high mark of success is due primarily to the SLSDC's efficient management and operations of the locks and control of vessel traffic. Global customers from more than 50 nations return each year to use the Seaway because of the waterway's strong safety record, efficient operations, and near-perfect reliability rate — all program outcomes of the SLSDC's Agency Operations program.

¹ *The Economic Impacts of the Great Lakes St. Lawrence Seaway System*, Martin Associates, October 2011.

² *Great Lakes Navigation System: Economic Strength to the Nation*, U.S. Army Corps of Engineers, January 2009.

In 1998, the SLSDC began the process of measuring the success of its Agency Operations program by certifying its operational business practices through the internationally recognized International Standards Organization (ISO). The ISO recognition is only conferred on those service firms and organizations that meet the highest quality customer service and management standards set by the Geneva, Switzerland-based ISO.

In July 2011, the SLSDC successfully completed a two-day surveillance audit and certificate renewal of its ISO 9001:2008 certified quality management system, conducted by Lloyds Register of Quality Assurance, an independent accrediting agency. The ISO 9001:2008 standard focuses on self assessment, ongoing improvements, and performance metrics. The SLSDC's certification is internationally recognized and complements the agency's marketing and trade development efforts overseas.

Maintaining the ISO certification has kept agency officials focused on finding better ways of operating the waterway and on recognizing how agency initiatives and decisions affect its internal and external customers. Other benefits of the SLSDC's ISO certification include improved communications within the organization, redefined business processes that are clearly understood by employees, and integrated performance measurements and objectives with the agency's mission. As part of its ISO certification, the SLSDC and the Canadian SLSMC actively reach out to the Seaway's commercial user community throughout the year to obtain feedback, discuss new programs, and examine ways of improving operations.

In addition, the program received high marks in the area of financial management. In November 2011, the SLSDC received an unqualified opinion of its financial statements for FY 2011 with no material weaknesses or reportable conditions. The FY 2011 audit marked the 48th consecutive unqualified opinion or clean audit report for the Corporation.

Achievements in the area of financial management, which have been a hallmark for the Corporation historically, are due to strong internal controls and management of financial activities and fiscal policies.

Why Do We Want/Need to Fund the Program at the Requested Level?

The requested level will provide the SLSDC with the financial and personnel resources necessary to perform the operational, maintenance, and administrative functions of the agency, including lock operations, marine services, vessel traffic control, asset maintenance, ballast water management, safety and environmental inspections, and trade development. The Corporation has made a concerted effort in recent years to reduce program expenses while ensuring that program activities are performed at or above performance targets and within budgetary limits.

The SLSDC remains dedicated to promoting the economic and environmental benefits of the marine mode, attracting new cargoes to the Seaway, and leveraging technology to enhance the system's performance.

Detailed Justification for Asset Renewal Program¹

What Do I Need to Know before Reading this Justification?

- The FY 2013 request for ARP is for the fifth year of funding of a scheduled 10-year program.
- The ARP is needed to sustain a safe and reliable transportation route for the movement of commercial goods to and from the Great Lakes region of North America.
- 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.
- The Great Lakes Seaway System provides approximately \$3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation.
- Through the ARP's first three years (FYs 2009-11), the Corporation was able to maintain the original schedule and overall cost estimates. Any reductions from the current estimates will increase the program's overall costs while requiring additional years for the program to be completed.

What is the Request and What Will We Get for the Funds?

FY 2013 Asset Renewal Program Budget Request
Operations and Maintenance – HMTF (69-8003)
(In thousands of dollars)

Program Activity	FY 2011 Actual	FY 2012 Enacted	FY 2013 Request	Difference from FY 2012 Enacted
Asset Renewal Program	\$15,783	\$15,600	\$16,000	\$400
Total	\$15,783	\$15,600	\$16,000	\$400

The \$16.0 million request to complete 28 ARP projects in FY 2013 will address various needs for the two U.S. Seaway locks, operational systems and networks, and Corporation facilities and equipment (*see pages 35-41 for ARP projects and descriptions*). Most ARP projects are multi-year projects and the FY 2013 request includes 26 projects that were funded in FYs 2009-2011 or are scheduled for funding in FY 2012. Although the majority of ARP work is completed by contractors, the SLSDC federal workforce is directly responsible for completing several maintenance-related projects as well as for completing much of the pre-contract work, including preparation of designs, specifications, drawings, and cost estimates.

Major ARP projects to be funded in FY 2013 include the second of three years of funding related to the installation of an ice flushing system at Snell Lock (\$3.0 million), miter gate machinery upgrade at Eisenhower Lock (\$2.6 million), and concrete replacement at Eisenhower Lock (\$2.0 million).

¹ Information on the SLSDC's ARP, including annual capital investment plans and semiannual reports to the Congress, can be found at <http://www.greatlakes-seaway.com/en/management/slscd/asset/index.html>.

Original ARP 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 completed at the Canadian Seaway locks, and (4) utilization of data from RSMeans[®], which serves as a supplier of construction cost information. In several cases, estimates for FY 2013 have been revised based on either actual bids for similar ARP work and/or more complete designs. None of the ARP 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. Seaway locks.

SLSDC ARP activities directly support its core performance measure of system availability and the Department's "Economic Competitiveness" strategic goal and the Department's outcome measure of maximizing economic results on transportation policies and investments.

What is the Program?

With the enactment of the FY 2009 Omnibus Appropriations Act, the SLSDC's ARP was initiated. The program focuses on improving aging Seaway infrastructure, conducting maintenance dredging, investing in new technologies, purchasing new equipment, and refurbishing old facilities. The ARP is the first major effort to rehabilitate and modernize the U.S. Seaway infrastructure in the waterway's history.

The Seaway is comprised of perpetual assets (locks, channels, an international bridge, highway tunnel, vessel traffic control system, and accompanying facilities and equipment), which requires periodic 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.

The goal of the Seaway's ARP is to ensure the long-term structural integrity of the Seaway infrastructure that, in most cases, has reached the end of the original "design" life. In addition to supporting the SLSDC's performance goals, the ARP also advances several key Department priorities, specifically, system performance and reliability, economic competitiveness, and congestion mitigation. The Seaway infrastructure has been a model of performance and reliability — achieving a 99 percent or better reliability rate in four out of the last five navigation seasons. After 50 years of continuous operation in often harsh weather conditions, the Seaway infrastructure needs to be rehabilitated if its exceptional record of performance and reliability is to be maintained for the next half century.

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. Adequate capital reinvestment in the Seaway infrastructure is critical to maintaining its exceptional reliability record.

The SLSDC's ARP focuses on improving aging Seaway infrastructure, conducting maintenance dredging, investing in new technologies, purchasing new equipment, and refurbishing aging facilities. The ARP is resulting in not only modernized infrastructure and new equipment to ensure the long-term reliability of the St. Lawrence Seaway, but it is also having a positive and significant impact on the Upstate New York economy. In fact, approximately 70 percent of the ARP funds obligated during the program's first three years, totaling nearly \$35 million, were awarded within the region. In addition to these contracts, the ARP is producing approximately \$2.5 million in additional economic benefits to the region (local permanent and temporary hires, local spending on supplies and equipment, lodging, meals, etc.) each year.

The completion of ARP projects will extend the life of the U.S. Seaway infrastructure and reduce the risk of system delays to commercial navigation caused by lock equipment malfunction and degradation over time. In addition, several ARP projects will involve the implementation of new and improved technologies for the operation of the Seaway infrastructure, which will result in minimized maintenance needs.

The SLSDC's ARP closely coordinates with infrastructure renewal work completed or planned by the Canadian SLSMC and supports the engineering considerations highlighted in the November 2007 binational *Great Lakes St. Lawrence Seaway Study*. The study, which was completed with the support of the U.S. Army Corps of Engineers (USACE), Transport Canada, Canadian SLSMC, Environment Canada, U.S. Fish and Wildlife Service, and DOT's Office of the Secretary, Maritime Administration, and SLSDC, 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. As part of its ARP planning and implementation processes, the SLSDC is working closely with the SLSMC and USACE to leverage their expertise.

The Canadian Seaway locks along the St. Lawrence River are identical in age and design to those owned by the U.S. SLSDC. Over the past decade, the Canadian Government began addressing its need for capital reinvestment in its Seaway assets. Many of the lock-related ARP improvements at the U.S. locks will parallel activities either completed, underway, or planned at the Canadian Seaway locks.

FY 2012 Base: The FY 2012 enacted level for the SLSDC's ARP is \$15.6 million.

Anticipated FY 2012 Accomplishments: ARP projects scheduled to be funded in FY 2012 are:

- Project No. 2: Snell Lock – Rehabilitate Downstream Miter Gate (\$2,700,000)
- Project No. 3: Both Locks – Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls (\$200,000)
- Project No. 4: Both Locks – Culvert Valve Machinery – Upgrade to Hydraulic Operation (\$180,000)
- Project No. 5: Both Locks – Rehabilitate Winter Maintenance Lock Covers (\$25,000)
- Project No. 7: Both Locks – Culvert Valves – Replace with Single Skin Valves (\$300,000)

- Project No. 8: Floating Navigational Aids – Replace (\$60,000)
- Project No. 9: Corporation Equipment – Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment (\$100,000)
- Project No. 10: Both Locks – Upgrade Power Supply Infrastructure from Moses-Saunders Dam (\$40,000)
- Project No. 11: Fixed Navigational Aids – Rehabilitate (\$100,000)
- Project No. 12: Corporation Equipment – Upgrade/Replace Floating Plant (\$2,335,000)
- Project No. 13: Corporation Facilities – Replace Roofs (\$40,000)
- Project No. 18: Eisenhower Lock – Vertical Lift Gate – Replace Wire Ropes (\$250,000)
- Project No. 19: Corporation Facilities – Upgrade Electrical Distribution Equipment (\$400,000)
- Project No. 21: Both Locks – Compressed Air Systems – Upgrade/Replace (\$15,000)
- Project No. 24: Both Locks – Structural Repair – Grout Leaks in Galleries and Recesses (\$100,000)
- Project No. 27: Corporation Facilities – Replace Windows and Doors and Repair Buildings (\$50,000)
- Project No. 32: Snug Harbor – Rehabilitate Spare Gate Storage and Assembly Area (\$250,000)
- Project No. 33: Both Locks – Upgrade Drainage Infrastructure in Galleries and Recesses (\$100,000)
- Project No. 38: Both Locks – Upgrade/Replace Emergency Generators (\$100,000)
- Project No. 39: Both Locks – Dewatering Pumps – Upgrade Outdated Equipment (\$200,000)
- Project No. 41: Snell Lock – Install Ice Flushing System Technologies (\$6,705,000)
- Project No. 42: Both Locks – Miter Gates – Structural Rehabilitation (\$750,000)
- Project No. 51: Corporation Facilities – Upgrade Physical Security to Meet HSPD-12 Requirements (\$300,000)
- Project No. 57: Corporation Technologies – Upgrade Network Security (\$250,000)
- Project No. 58: Corporation Facilities – Upgrades to Meet Sustainability and Energy Goals (\$50,000)

During FY 2012, the SLSDC's Office of Engineering and Maintenance will complete any engineering specifications and plans, permitting and environmental studies (*if applicable*), and contractual obligations for all proposed FY 2012 ARP projects. The Corporation's Office of Finance and Office of Budget and Programs also support this initiative.

In addition, during the first half of FY 2012, work on several of the larger lock-related ARP projects funded in earlier fiscal years will be completed. This timeframe is due to the significant lead time for delivery and the need to install this machinery during the non-navigation winter months when the Seaway is closed to navigation (typically late December to late March each year). Work is also expected to be completed for those FY 2012 ARP projects that do not require the long lead-times for delivery, installation, and/or construction.

Why Is This Particular Program Necessary?

The goal of the Seaway's ARP is to ensure the long-term structural integrity of the Seaway infrastructure. After more than 50 years of continuous operation in often harsh weather conditions, the Seaway infrastructure needs to be rehabilitated to continue this level of performance and reliability for the next half century.

The infrastructure and engineering recommendations of the *Great Lakes St. Lawrence Seaway Study* were the genesis of the ARP's creation. During its work on the study, the SLSDC measured its infrastructure assets using a USACE-based lock criticality index to better identify and prioritize maintenance and asset renewal needs. The results of the index were used to develop the ARP.

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. An economic analysis concluded that the Great Lakes Seaway System provides approximately \$3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation. In 1985, a lock wall failure at the Canadian Welland Canal caused 53 commercial vessels to be trapped in the Seaway System for 24 days at a cost to the shippers at that time of more than \$24 million (\$50 million in 2011 dollars).

There is a delicate balance between preserving the existing locks, channels, and associated infrastructure, and ensuring their safety and reliability at all times. There is a critical point where regular maintenance and repairs are no longer sufficient and decisions on major rehabilitation or replacement of structures is required. The longer decisions are extended, the higher the risk to the safety of the locks and to other Seaway infrastructure, greatly increasing associated costs. The ARP enables the SLSDC to achieve this balance and to address major rehabilitation and replacement needs in a timely fashion.

In addition to the aging infrastructure needs and economic benefits of this program, the international agreements entered into by the United States and Canada in the 1950s necessitate that the two countries jointly operate and maintain the St. Lawrence Seaway and its physical assets. Over the past decade, the Canadian government has begun 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). The SLSDC's ARP functions as our nation's commitment to the long-standing agreement to jointly operate and maintain the binational waterway for commerce in the years to come.

How Do You Know the Program Works?

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 ARP projects and to collectively discuss ways to improve the overall management, execution, and reporting of the program on an ongoing basis.

In May 2010, the Government Accountability Office (GAO) completed a review of the SLSDC's ARP cost estimating process.² GAO's recommendation was for the SLSDC to develop a cost-estimating process that follows best practices to better ensure that its estimates are comprehensive, well documented, accurate, and credible. Following the issuance of the GAO report, the SLSDC immediately completed an internal review of the *GAO Cost Estimating and Assessment Guide* to identify "best practices" that could be used by SLSDC cost estimators. Since the GAO review, there has been a marked improvement in the quality and accuracy of the SLSDC's ARP cost estimates. The importance of the cost estimates has been stressed and cost estimates have included better documentation of the sources and assumptions used, providing more clearly defined estimates.

Why Do We Want/Need to Fund the Program at the Requested Level?

Nearly every ARP project is a multi-year initiative; only 8 of the 58 current ARP projects are standalone, single-year projects (all FY 2013 projects are multi-year). Through the program's first three years (FYs 2009-11), the Corporation has been able to maintain the original schedule and overall cost estimates. Any reductions from the current estimates will increase the program's overall costs while requiring additional years for the program to be completed.

² *St. Lawrence Seaway: Estimates for the Asset Renewal Program Will Change and Implementing Best Practices May Improve the Estimates' Reliability*, May 2010, www.gao.gov/products/GAO-10-541R.

FY 2013 U.S. Seaway Asset Renewal Program (ARP) Projects

ARP Project Number	Project Name	FY 2013 Request
2	Both Locks – Rehabilitate Downstream Miter Gates	\$ 230,000
3	Both Locks – Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	100,000
5	Both Locks – Rehabilitate Winter Maintenance Lock Covers	200,000
7	Both Locks – Culvert Valves – Replace with Single Skin Valves	420,000
8	Floating Navigational Aids – Replace	65,000
9	Corporation Equipment – Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	260,000
10	Both Locks – Upgrade Power Supply Infrastructure from Moses- Saunders Dam to Both Locks and Adjacent Facilities	20,000
11	Fixed Navigational Aids – Rehabilitate	200,000
12	Corporation Equipment – Upgrade/Replace Floating Plant	400,000
13	Corporation Facilities – Replace Roofs	300,000
14	Corporation Facilities – Replace Paving and Drainage Infrastructure	900,000
15	Eisenhower Lock – Highway Tunnel – Rehabilitate	750,000
16	Corporation Technologies – Upgrade GPS/AIS/TMS	100,000
22	Both Locks – Install Vessel Self Spotting Equipment	500,000
26	Corporation Facilities – Upgrade Storage for Lock Spare Parts	750,000
29	Eisenhower Lock – Walls, Sills and Culverts – Rehabilitate Concrete	2,000,000
32	Snug Harbor – Rehabilitate Spare Gate Storage and Assembly Area	300,000
33	Both Locks – Upgrade Drainage Infrastructure in Galleries and Recesses	160,000
34	Both Locks – Improve Ice Control	230,000
35	Vessel Mooring Cells – Rehabilitate and Extend	500,000
38	Both Locks – Upgrade/Replace Emergency Generators	500,000
39	Both Locks – Dewatering Pumps – Upgrade Outdated Equipment	200,000
41	Snell Lock – Install Ice Flushing System Technologies	3,000,000
42	Both Locks – Miter Gates – Structural Rehabilitation	765,000
43	Both Locks – Miter Gate Machinery – Upgrade/Replace	2,600,000
51	Corporation Facilities – Upgrade Physical Security to Meet HSPD-12 Requirements	50,000
52	Corporation Facilities – Eisenhower Lock Visitors' Center – Replace	300,000
58	Corporation Facilities – Upgrades to Meet Sustainability and Energy Goals	200,000
ARP Totals (28 projects):		\$16,000,000

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.

It is also important to note that dollar amounts for ARP projects are "project feasibility" estimates and can vary by an industry-recognized 20-30 percent. Funding for each year of the ARP is constrained to funding targets for those years as estimated and approved by the Office of Management and Budget (OMB). Project estimates and schedules may fluctuate at various points in the lifespan of the ARP and will be revised as needed.

ARP Project No. 2: Both Locks – Rehabilitate Downstream Miter Gates (Capital Project) (\$230,000) – This is to provide the inspection/quality control services for the project to completely rehabilitate the miter gate at the downstream end of Snell Lock. 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 gate. The rehabilitation project will be awarded in FY 2012 for completion during the winter 2013 shutdown period due to the lead time for delivery of some of the miter gate components however, the inspection/quality control services for that work will not be awarded until FY 2013. *(Project funds obligated in FY 2011 and additional obligations are planned in FY 2012)*

ARP Project No. 3: Both Locks – Rehabilitate Mooring Buttons, Pins, and Concrete along Guidewalls and Guardwalls (Capital Project) (\$100,000) – This project is to replace worn mooring buttons on the lock walls at both locks. The mooring buttons are used by Corporation Linehandlers to secure transiting vessels while being raised or lowered in the lock. Most of the mooring buttons have been in service for over fifty (50) years and have grooves worn in them which will affect their structural integrity. *(Project funds obligated in FY 2010 and additional obligations are planned in FY 2012)*

ARP Project No. 5: Both Locks – Rehabilitate Winter Maintenance Lock Covers (Capital Project) (\$200,000) – This project is for rehabilitating the roof cover modules and curtain wall modules used to enclose Eisenhower and Snell Locks when major winter maintenance projects are planned. These covers and curtain wall modules are over 40 years old and require rehabilitation. *(Project funds obligated in FY 2009, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 7: Both Locks – Culvert Valves – Replace with Single Skin Valves (Capital Project) (\$420,000) – 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 the structural members are not accessible for inspection, blast cleaning and painting with the current 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. Depending 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 and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 8: Floating Navigational Aids – Upgrade/Replace (Capital Project) (\$65,000) – 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 solely responsible for approximately 100 buoys and 50 winter markers. *(Project funds obligated in FY 2009 and FY 2010, and additional obligations are planned in FY 2012)*

ARP Project No. 9: Corporation Equipment – Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment (Capital Equipment) (\$260,000) – 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 includes items such 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, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 10: Both Locks – Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities (Non-Capital Maintenance Project) (\$20,000) – 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 occasional loss of power from the 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, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 11: Fixed Navigational Aids – Rehabilitate (Capital Project and Non-Capital Maintenance Project) (\$200,000) – 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 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. *(Project funds obligated in FY 2010 and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 12: Corporation Equipment – Upgrade/Replace Floating Plant (Capital Project) (\$400,000) – This is an ongoing program to rehabilitate and/or replace the Corporation's floating plant which is used for maintaining the locks and navigation channels. This multiyear project includes replacing the tug; upgrading the buoy tender barge; purchasing a smaller tug for operations where the capabilities of the larger tug are not efficient and a small scow for transporting dredged spoil from emergency/spot dredging; and rehabilitating the crane barge/gatelifter which would be used if a miter gate was damaged and had to be replaced. *(Project funds obligated in FY 2009, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 13: Corporation Facilities – Replace Roofs (Capital Project) (\$300,000) – 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 and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 14: Corporation Facilities – Replace Paving and Drainage Infrastructure (Capital Project) (\$900,000) – This project is for improving the pavement and drainage along lock approach walls as well as the roadways, public parking, and work areas at all Corporation facilities. In Upstate New York, the damage to pavements caused by winter conditions is significant. 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, FY 2010, and FY 2011)*

ARP Project No. 15: Eisenhower Lock Highway Tunnel – Rehabilitate (Capital Project and Non-Capital Maintenance Project) (\$750,000) – 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, 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, FY 2010, and FY 2011)*

ARP Project No. 16: Seaway System – Upgrade GPS/AIS/TMS Technologies (Capital Project) (\$100,000) – 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. *(Project funds obligated in FY 2009 and FY 2010)*

ARP Project No. 22: Both Locks – Install Vessel Self Spotting Equipment (Capital Project) (\$500,000) – 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 St. Lawrence Seaway Management Corporation (SLSMC) has completed testing and installation of this new technology at their locks. *(FY 2013 is the first year of funding for this project – scheduled three-year project (FY 2013, 2014, and 2015))*

ARP Project No. 26: Corporation Facilities – Upgrade Storage for Lock Spare Parts (Capital Project) (\$750,000) – 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. *(Project funds obligated in FY 2010 and FY 2011)*

ARP Project No. 29: Eisenhower Lock – Walls, Sills and Culverts – Rehabilitate Concrete (Capital Project) (\$2,000,000) – This project is to replace deteriorated/damaged concrete at Eisenhower Lock. 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. This project includes resurfacing the mass concrete that forms the locks walls as well as filling and emptying culverts and the gate sills by replacing concrete to depths ranging between approximately 8 inches and 24 inches. *(Project funds obligated in FY 2010)*

ARP Project No. 32: Snug Harbor – Rehabilitate Spare Gate Storage and Assembly Area (Capital Project) (\$300,000) – 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 as well as blast cleaning and painting of the spare miter gates and gate assembly towers. *(Project funds obligated in FY 2010 and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 33: Both Locks – Upgrade Drainage Infrastructure in Galleries and Recesses (Capital Project) (\$160,000) – This project is to open existing drains and/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 causing flooding of the galleries and machinery recesses. *(Obligations are planned in FY 2012)*

ARP Project No. 34: Both Locks – Improve Ice Control (Capital Project) (\$230,000) – 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. 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 more efficient and would minimize damages to the lock components and transiting vessels in the presence of ice and icy water. *(Project funds obligated in FY 2010 and additional obligations are planned in FY 2012)*

ARP Project No. 35: Vessel Mooring Cells – Rehabilitate and Extend (Capital Project) (\$500,000) – 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 used by vessels with problems during navigation and/or to secure vessels 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. *(FY 2013 is the first year of funding for this project – scheduled three-year project (FY 2013, 2014, and 2017))*

ARP Project No. 38: Both Locks – Upgrade/Replace Emergency Generators (Capital Project) (\$500,000) – This project is for replacing the emergency generators at both Eisenhower and Snell Locks and for installing a previously removed generator at the Maintenance Facility. The generators at the locks will be over 20 years old and cannot carry the total load. Also, installing a unit at the Maintenance Facility with an automatic transfer switch will enable maintenance activities to continue in the event of a power disruption. *(Obligations are planned in FY 2012)*

ARP Project No. 39: Both Locks – Dewatering Pumps – Upgrade Outdated Equipment (Capital Project) (\$200,000) – This project is for replacing or rehabilitating the pumps used for dewatering both Eisenhower and Snell Locks as part of the maintenance of their underwater components. These pumps are over 50 years old and parts for these units are no longer available. *(Obligations are planned in FY 2012)*

ARP Project No. 41: Snell Lock – Install Ice Flushing System Technologies (Capital Project) (\$3,000,000) – This multi-year project will result in the installation of an ice flushing system at Snell Lock similar to the one already in operation at Eisenhower Lock. The project is critical to the safe and efficient operation of Snell Lock during the waterway's opening and closing periods when ice is present. With today's larger ships transiting the Seaway, the lock must be flushed almost completely free of ice before a vessel can be allowed to enter the locks because of the limited space between the vessels and the lock walls. Currently, ice is flushed from the Snell Lock chamber by utilizing the 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. *(Project funds obligated in FY 2011 and additional obligations are planned in FY 2012)*

ARP Project No. 42: Both Locks – Miter Gates – Structural Rehabilitation (Capital Project) (\$765,000) – This project is to blast clean and paint the miter gates at both locks to prevent further corrosion of these structures. They were last cleaned and painted 30 years ago. *(Obligations are planned in FY 2012)*

ARP Project No. 43: Both Locks – Miter Gate Machinery – Upgrade/Replace (Capital Project) (\$2,600,000) – This project is for replacing the operating machinery for the miter gates at both locks. This machinery is more than 50 years old and needs to be upgraded to insure its continued reliability. The upgrade will include new hydraulic operating equipment to match the improvements made at the Canadian Seaway locks at the Welland Canal and at other locks in the United States. *(Project funds obligated in FY 2011)*

ARP Project No. 51: Corporation Facilities – Upgrade Physical Security to Meet HSPD-12 Requirements (Capital Project) (\$50,000) – This project is for procuring the Personal Identity Verification (PIV) cards required by the Department as well as the procurement and installation of necessary PIV card readers and other required infrastructure to meet HSPD-12 requirements. *(Project funds obligated in FY 2010 and FY 2011, and additional obligations are planned in FY 2012)*

ARP Project No. 52: Corporation Facilities – Eisenhower Lock Visitors' Center – Replace (Capital Project) (\$300,000) – This project is for replacing the Visitors' Center at Eisenhower Lock which is over 50 years old, is in a state of disrepair and does not meet current accessibility standards. In FY 2011, the Corporation awarded a contract to an architectural/engineering (A/E) firm to assess the condition of the existing structures and appurtenances, to provide conceptual designs and cost estimates for rehabilitating and for replacing the existing structures and appurtenances and to make a recommendation as to which alternative would be the best for accomplishing the project objectives. Their recommendation was for replacing this facility. In FY 2013, the Corporation will award a contract to an A/E firm to complete designs, specifications, drawings, and cost estimates for the construction of a new Visitors' Center facility on the current site that meets federal accessibility and security standards and adheres to sustainability, energy and water conservation, and LEED® certification requirements. Currently, no timetable has been established for the construction of the new Center. *(Project funds obligated in FY 2011)*

ARP Project No. 58: Corporation Facilities – Upgrades to Meet Sustainability and Energy Goals (Capital Project) (\$200,000) – This project is to implement the results/recommendations of an energy and 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 acts. *(Project funds obligated in FY 2011 and additional obligations are planned in FY 2012)*

**DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
OPERATIONS AND MAINTENANCE
Program and Financing
(\$000)**

Identification code 69-8003-0-7-403		2011 ACTUAL	2012 ENACTED	2013 REQUEST
Obligations by Program Activity:				
0001	Operations and maintenance	32,259	32,259	33,000
0900	Total new obligations (Object Class 25.3)	32,259	32,259	33,000
Budgetary Resources:				
Budget Authority:				
Appropriations, discretionary:				
1101	Appropriation (special or trust fund)	32,259	32,259	33,000
1160	Appropriation, discretionary (total)	32,259	32,259	33,000
1930	Total budgetary resources available	32,259	32,259	33,000
Change in Obligated Balance:				
Obligated Balance, Start of Year (Net):				
3000	Unpaid obligations, brought forward, Oct 1 (gross)	0	0	0
Change in Obligated Balance during the Year:				
3030	Obligations incurred, unexpired accounts	32,259	32,259	33,000
3040	Outlays (gross) (-)	(32,259)	(32,259)	(33,000)
Obligated Balance, End of Year (Net):				
3090	Unpaid obligations, end of year (gross)	0	0	0
3100	Obligated balance, end of year (net)	0	0	0
Budget Authority and Outlays, Net:				
Discretionary:				
Gross Budget Authority and Outlays:				
4000	Budget authority, gross	32,259	32,259	33,000
Outlays, gross:				
4010	Outlays from new discretionary authority	32,259	32,259	33,000
Additional Offsets against Gross Budget Authority only:				
4070	Budget authority, (net) (discretionary)	32,259	32,259	33,000
4080	Outlays, net (discretionary)	32,259	32,259	33,000
Budget Authority and Outlays, Net (total):				
4180	Budget authority, net (total)	32,259	32,259	33,000
4190	Outlays, net (total)	32,259	32,259	33,000

The Water Resources Development Act of 1986 authorizes use of the Harbor Maintenance Trust Fund as the major source of funding for the Corporation's operations, maintenance, and asset renewal activities.

**DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
10-Year History of Appropriations
Operations and Maintenance (69-8003)
(Harbor Maintenance Trust Fund)**

<u>YEAR</u>	<u>REQUEST</u>	<u>YEAR</u>	<u>ENACTED</u>
2004	\$14,400,000	2004	\$14,273,000 /1
2005	\$15,900,000	2005	\$15,707,000 /2
2006	\$ 8,000,000 /3	2006	\$16,121,000 /4
2007	\$ 7,920,000 /5	2007	\$16,223,160 /6
2008	\$17,392,000	2008	\$17,392,000
2009	\$31,842,000	2009	\$31,842,000
2010	\$32,324,000	2010	\$32,324,000
2011	\$32,324,000	2011	\$32,259,000 /7
2012	\$33,996,000	2012	\$32,259,000
2013	\$33,000,000		

1/ Reflects reductions of \$84,960 (0.59%) pursuant to P.L. 108-199 (Division H, Sec. 168(b)) and \$42,006 pursuant to P.L. 108-199 (Division F, Sec. 517).

2/ Reflects reductions of \$127,200 (0.80%) pursuant to P.L. 108-447 (Div. J, Sec. 122(a)) and \$66,000 pursuant to P.L. 108-447 (Division H, Title I, Sec. 197)

3/ Total program request of \$16,284,000 consists of an appropriation of \$8,000,000 from the Harbor Maintenance Trust Fund (69-8003) and \$8,284,000 in proposed U.S. commercial toll receipts.

4/ Reflects reductions of \$162,840 (1.00%) pursuant to P.L. 109-148 (Sec. 3801).

5/ Total request of \$17,345,000 consists of an appropriation of \$7,920,000 from the Harbor Maintenance Trust Fund (69-8003) and \$9,425,000 in proposed U.S. commercial toll receipts.

6/ Reflects reductions of \$1,121,840, pursuant to P.L. 110-5 (Division B, Title I, Sec. 101(a) and Sec. 111(a)(1)).

7/ Reflects rescission of \$65,000 (0.2%) pursuant to P.L. 112-10 (Division B, Title I, Section 1119).

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SLSDC Fund

(69x4089)

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APPROPRIATIONS LANGUAGE

**DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION**

FEDERAL FUNDS

Public enterprise funds:

Saint Lawrence Seaway Development Corporation

The Saint Lawrence Seaway Development Corporation is hereby authorized to make such expenditures, within the limits of funds and borrowing authority available to the Corporation, and in accord with law, and to make such contracts and commitments without regard to fiscal year limitations as provided by section 104 of the Government Corporation Control Act, as amended, as may be necessary in carrying out the programs set forth in the Corporation's budget for the current fiscal year.

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EXHIBIT III-1

SLSDC FUND (69x4089) SUMMARY BY PROGRAM ACTIVITY Appropriations, Obligation Limitations, and Exempt Obligations (\$000)

<u>Program Activity</u>	<u>FY 2011 ACTUAL</u>	<u>FY 2012 ENACTED</u>	<u>FY 2013 REQUEST</u>	<u>CHANGE FY 2012-13</u>
Agency Operations	\$17,226	\$17,559	\$17,900	\$ 341
Asset Renewal Program	15,783	15,600	16,000	400
	-----	-----	-----	-----
Total	\$33,009	\$33,159	\$33,900	\$ 741
FTEs	132	144	144	0

Program and Performance Statement

The SLSDC's FY 2013 budget request includes \$33.9 million from the Harbor Maintenance Trust Fund (HMTF) to fund general agency operations (\$17.9 million) as well as 28 capital and non-capital maintenance projects included in the fifth year of the SLSDC's multi-year Asset Renewal Program (ARP) (\$16.0 million) (*see pages 35-41 for ARP project estimates and descriptions*).

SLSDC programs and activities, including the ARP, are principally focused on meeting the Department's "Economic Competitiveness" strategic goal and the 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.

EXHIBIT III-1a

SLSDC FUND (69x4089)
SUMMARY ANALYSIS OF CHANGE FROM FY 2012 TO FY 2013
Appropriations, Obligation Limitations, and Exempt Obligations
(\$000)

<u>ITEM</u>	Change from FY 2012 to FY 2013 \$000	Change from FY 2012 to FY 2013 FTE
FY 2012 BASE	\$33,159	144
ADJUSTMENTS TO BASE:		
One Additional Compensable Day	54	0
FY 2013 Wage Grade Pay Increase	49	0
Washington Office Rent	30	0
FY 2013 General Schedule Pay Increase	24	0
Non-Pay Inflation	24	0
DOT Working Capital Fund	10	0
SUBTOTAL, ADJUSTMENTS TO BASE	\$191	0
PROGRAM CHANGES:		
Year Five Asset Renewal Program (ARP)	400	0
Operational and Environmental Programs	275	0
Promoting Efficient Spending E.O. – Other	(25)	
Promoting Efficient Spending E.O. – Trade Dev.	(100)	
SUBTOTAL, PROGRAM CHANGES	\$550	0
INCREASES/DECREASES	\$741	0
FY 2013 REQUEST	\$33,900	144

EXHIBIT III-2

ANNUAL PERFORMANCE RESULTS AND TARGETS SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION

The SLSDC integrates performance results into its budget request to demonstrate alignment with the Department of Transportation's Strategic Plan. The SLSDC tracks the following DOT level performance measure to demonstrate program results:

DOT Goal/Outcome: Economic Competitiveness – Maximum economic returns on transportation policies and investments

Seaway System Availability	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Target:	99.0%	99.0%	99.0%	99.0%	99.0%
Actual:	99.4%	99.8%	99.0%	—	—

DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
SLSDC FUND
Program and Financing
(\$000)

Identification code 69-4089-0-3-403		2011 ACTUAL	2012 ENACTED	2013 REQUEST
Obligations by Program Activity:				
Reimbursable programs:				
0801	Operations and maintenance	20,531	17,799	18,120
0802	Replacements and improvements	12,478	15,360	15,780
0900	Total new obligations	33,009	33,159	33,900
Budgetary Resources:				
Unobligated Balance:				
Authority to borrow		3,200	3,200	3,200
Fund balance		11,890	12,193	12,193
1000	Unobligated balance brought forward, Oct 1	15,090	15,393	15,393
Nonexpenditure Transfers:				
1011	Unobligated balance transferred from other accounts	5	0	0
Adjustments:				
1021	Recoveries of prior year unpaid obligations	126	0	0
1050	Unobligated balance (total)	15,221	15,393	15,393
Budget Authority:				
Spending Authority from Offsetting Collections, Mandatory:				
1800	Collected	32,783	33,159	33,900
1801	Change in uncollected payments, Federal sources (+ or -)	399	0	0
1850	Spending authority from offsetting collections, mandatory (total)	33,182	33,159	33,900
1900	Budget authority (total)	33,182	33,159	33,900
1930	Total budgetary resources available	48,402	48,552	49,293
Memorandum (Non-Add) Entries:				
Authority to borrow		3,200	3,200	3,200
Fund balance		12,193	12,193	12,193
1941	Unexpired unobligated balance, end of year	15,393	15,393	15,393
Change in Obligated Balance:				
Obligated Balance, Start of Year (Net):				
3000	Unpaid obligations, brought forward, Oct 1 (gross)	25,319	23,292	8,291
3010	Uncollected payments, Fed sources, brought forward, Oct 1 (-)	(87)	(485)	0
3020	Obligated balance, start of year (net)	25,232	22,807	8,291
Change in Obligated Balance during the Year:				
3030	Obligations incurred, unexpired accounts	33,009	33,159	33,900
3040	Outlays (gross) (-)	(34,910)	(48,159)	(40,900)
3050	Change in uncollected payments, Fed sources, unexpired accounts (+ or -)	(399)	485	0
3080	Recoveries of unpaid prior year obligations, unexpired accounts (-)	(126)	0	0
Obligated Balance, End of Year (Net):				
3090	Unpaid obligations, end of year (gross)	23,292	8,291	1,291
3091	Uncollected payments, Fed sources, end of year, (-)	(485)	0	0
3100	Obligated balance, end of year (net)	22,806	8,291	1,291
Budget Authority and Outlays, Net:				
Mandatory:				
Gross Budget Authority and Outlays:				
4090	Budget authority, gross	33,182	33,159	33,900
Outlays, gross:				
4100	Outlays from new mandatory authority	32,970	33,159	33,900
4101	Outlays from mandatory balances	1,940	15,000	7,000
4110	Outlays, gross (total)	34,910	48,159	40,900
Offsets against Gross Budget Authority and Outlays:				
Offsetting collections (collected) from:				
4120	Federal sources (-)	(32,259)	(32,259)	(33,000)
4123	Non-Federal sources (-)	(524)	(900)	(900)
4130	Offsets against gross budget authority and outlays, (total) (-)	(32,783)	(33,159)	(33,900)
Additional Offsets against Gross Budget Authority only:				
4140	Change in uncollected payments, Fed sources, unexpired accounts (+ or -)	(399)	0	0
4150	Additional offsets against budget authority only (total)	(399)	0	0
4160	Budget authority, net (mandatory)	0	0	0
4170	Outlays, net (mandatory)	2,127	15,000	7,000
Budget Authority and Outlays, Net (total):				
4180	Budget authority, net (total)	0	0	0
4190	Outlays, net (total)	2,127	15,000	7,000

DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
SLSDC FUND
Object Classification
(\$000)

Identification code 69-4089-0-3-403		2011 ACTUAL	2012 ENACTED	2013 REQUEST
Personnel compensation:				
11.1	Full-time permanent	9,246	9,523	9,650
11.3	Other than full-time permanent	291	300	300
11.5	Other personnel compensation	746	768	768
11.9	Total personnel compensation	10,283	10,591	10,718
12.1	Civilian personnel benefits	3,541	3,541	3,541
	Personnel compensation and benefits	13,824	14,132	14,259
21.0	Travel and transportation of persons	233	234	220
22.0	Transportation of things	6	6	6
23.1	Rental payments to GSA	306	-	-
23.2	Rental payments to others	7	7	7
23.3	Communications, utilities, and miscellaneous	158	158	159
23.0	Total rent, communications, and utilities	471	165	166
24.0	Printing and reproduction	15	15	9
25.1	Advisory and assistance services	423	61	61
25.2	Other services	1,236	865	1,021
25.3	Purchases of goods/services from Government accounts	888	1,051	1,098
25.4	Operation and maintenance of facilities (includes ARP)	4,053	240	220
25.6	Medical care	6	6	6
25.7	Operation and maintenance of equipment	1,851	224	248
25.0	Total other contractual services	8,456	2,447	2,654
26.0	Supplies and materials	2,369	800	806
31.0	Equipment (includes ARP)	316	2,435	660
32.0	Land and structures (includes ARP)	7,319	12,925	15,120
	Total other-than-personnel	19,185	19,027	19,641
99.9	Total obligations	33,009	33,159	33,900

DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
SLSDC FUND
Personnel Summary

Identification code 69-4089-0-3-403	2011 ACTUAL	2012 ENACTED	2013 REQUEST
Total compensable work years:			
5001 Full-time equivalent employment	132	144	144
5005 Full-time equivalent of overtime and holiday hours	3	6	6

DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
SLSDC FUND
Balance Sheet
(\$000)

Identification code 69-4089-0-3-403	2010 ACTUAL	2011 ACTUAL
Assets:		
Federal assets:		
1101 Fund balance with Treasury	25,815	24,131
1106 Receivables, net	...	...
1107 Advances and prepayments	...	...
Non-Federal assets:		
1201 Investments in non-Federal securities	7	7
1206 Receivables, net	86	459
1207 Advances and prepayments	...	...
Other Federal assets:		
1801 Cash and other monetary assets	12,166	11,648
1803 Property, plant and equipment, net	75,687	84,784
1901 Other assets	3,547	4,270
1999 Total assets	117,308	125,299
Liabilities:		
Federal liabilities:		
2101 Accounts payable	...	...
Non-Federal liabilities:		
2201 Accounts payable	3,824	6,903
2206 Pension and other actuarial liabilities	3,546	4,242
2207 Other	...	...
2999 Total liabilities	7,370	11,145
Net Position:		
3200 Invested capital	90,819	99,921
3300 Cumulative results of operations	19,119	14,233
3999 Total net position	109,938	114,154
4999 Total liabilities and net position	117,308	125,299

**DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
SLSDC FUND
Summary of Expenses by Activity
(\$000)**

Identification code 69-4089-0-3-403	2011 ACTUAL	2012 ENACTED	2013 REQUEST
Operations and Maintenance:			
1. Lock and Marine Operations	3,529	3,564	3,625
2. Maintenance and Engineering	7,915	5,057	5,161
3. General and Development	5,251	5,304	5,394
4. Administrative	3,836	3,874	3,940
Total Operations and Maintenance	20,531	17,799	18,120
Replacements and Improvements:			
1. Equipment	91	2,435	660
2. Capital Projects	12,387	12,925	15,120
Total Replacements and Improvements	12,478	15,360	15,780
Total Obligations	33,009	33,159	33,900
Authorized Positions by Activity:			
1. Lock and Marine Operations	51	51	51
2. Maintenance and Engineering	51	51	51
3. General and Development	15	15	15
4. Administrative	27	27	27
Total Authorized Positions	144	144	144

**DEPARTMENT OF TRANSPORTATION
SAINT LAWRENCE SEAWAY DEVELOPMENT CORPORATION
SLSDC FUND
Summary of Travel and Transportation of Persons
(\$000)**

Identification code 69-4089-0-3-403	2011 ACTUAL	2012 ENACTED	2013 REQUEST
Field Offices:			
Business travel			
Operations	31	32	32
Administrative	0	5	5
Travel associated with training	9	18	12
Travel to and from Washington, D.C.	8	8	8
Travel to and from Massena, N.Y.	0	0	0
Foreign travel	0	0	0
Canadian travel	18	20	21
Subtotal	66	83	78
DC Office:			
Business travel			
Operations	17	18	18
Administrative	33	34	34
Travel associated with training	2	4	2
Travel to and from Washington, D.C.	6	7	7
Travel to and from Massena, N.Y.	6	7	7
Foreign travel	22	20	12
Canadian travel	38	40	40
Subtotal	124	130	120
Asset Renewal Program	43	21	22
Grand Total	233	234	220

U.S. St. Lawrence Seaway Asset Renewal Program Capital Investment Plan *FYs 2013-2017*



**Saint Lawrence Seaway
Development Corporation**



The U.S. Saint Lawrence Seaway Development Corporation (SLSDC), a wholly owned government corporation and an Operating Administration of 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 its activities with its Canadian counterpart, the St. Lawrence Seaway Management Corporation, to ensure that the U.S. portion of the St. Lawrence Seaway, including the two U.S. locks, are available for commercial transit during the navigation season (usually late March to late December of each year). Additionally, the SLSDC performs trade development activities designed to enhance the utilization of the Great Lakes St. Lawrence Seaway System.

For more information on the SLSDC, visit <http://www.greatlakes-seaway.com>.



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**Saint Lawrence Seaway Development Corporation
U.S. Seaway Asset Renewal Program
Capital Investment Plan
FY 2013-2017**

Background

Operated and maintained by the U.S. Saint Lawrence Seaway Development Corporation (SLSDC) and the Canadian St. Lawrence Seaway Management Corporation (SLSMC), the St. Lawrence Seaway is a unique binational transportation asset, which directly serves an eight-state, two-province region that accounts for 23 percent of the U.S. gross domestic product (GDP), 50 percent of North America's manufacturing and services industries, and is home to nearly one-quarter of the continent's population.

Since the St. Lawrence Seaway's opening in 1959, more than 2.6 billion metric tons of cargo have moved through the 15-lock waterway valued at more than \$375 billion. Additionally, maritime commerce on the Great Lakes Seaway System provides shippers with approximately \$3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation. The waterway also produces significant economic benefits to the Great Lakes region. In fact, maritime commerce on the Great Lakes Seaway System impacts 128,000 U.S. jobs with associated benefits of \$18.1 billion in annual business revenue from transportation firms and \$9.7 billion in annual wages and salaries.

To continue providing these economic benefits to both nations, the binational St. Lawrence Seaway must remain available, efficient, and competitive for commercial transportation. To achieve these goals, the Seaway's infrastructure, which has reached the end of its original "design" life, must be renewed through reinvestment on both sides of the border.



Aerial View of SLSDC's U.S. Eisenhower Lock in Massena, N.Y.

Summary

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. The start of the program marked the first time in the Seaway's 50-year history that a coordinated effort to repair and modernize the U.S. Seaway infrastructure had taken place. As a repair and modernization program, the Seaway depth and width remains unchanged.

In the first three years of ARP funding (FYs 2009-2011), the SLSDC obligated \$49.7 million on 39 separate ARP projects (*see page 17*). These projects included maintenance dredging in the U.S. portion of the navigation channel, lock culvert valve machinery upgrade to hydraulic operation, structural rehabilitation and corrosion prevention work on the Seaway International Bridge, gatelifter upgrades, and upstream miter gate rehabilitation, as well as various other structural and equipment repairs and/or replacement. FY 2012 ARP obligations are estimated at \$15.6 million.

The first large-scale lock-related projects of the ARP, which were funded in both FYs 2009 and 2010, were started during the Seaway's winter non-navigation period, beginning in late December 2010.

For the FY 2013-2017 time frame, the Seaway ARP/CIP includes 39 separate ARP projects and equipment estimated at \$94.8 million with total funding for each year of the plan constrained to funding targets for those years as estimated and approved by the Office of Management and Budget (OMB). Projects and estimates included in the current ARP five-year plan are detailed on pages 7-15 and 18-19. It is important to note that dollar amounts for ARP projects are "project feasibility" estimates that can vary by an industry-recognized 20-30 percent. Project estimates and schedules may fluctuate at various points in the lifespan of the ARP and will be revised as needed and on a continuing basis throughout the length of the ARP.

The ARP is resulting in not only modernized infrastructure and new equipment to ensure the long-term reliability of the St. Lawrence Seaway, but it is also having a positive and significant impact on the Upstate New York economy. In fact, approximately 70 percent of the ARP funds obligated during the program's first three years, totaling nearly \$35 million, were awarded within the region. In addition to these contracts, the ARP is producing approximately \$2.5 million in additional economic benefits to the region (local permanent and temporary hires, local spending on supplies and equipment, lodging, meals, etc.) each year.

ARP baseline project estimates were developed by the SLSDC using four criteria, as applicable: (1) historical costs for similar work completed previously by the SLSDC; (2) consultation with the U.S. Army Corps of Engineers (USACE) for similar work it completed at other U.S. locks; (3) consultation with the SLSMC for similar work it completed at the Canadian Seaway locks; and (4) utilization of data from RSMeans®, which serves as North America's leading supplier of construction cost information. In several cases, estimates for FYs 2013-2017 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 is completed by contractors, the SLSDC federal workforce is directly responsible for completing several of the maintenance-related projects as well as pre-contract work, including preparation of designs, specifications, and drawings.

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 wall failure at the Canadian Welland Canal caused 53 commercial vessels to be trapped in the Seaway System for 24 days at a cost to the shippers at that time of more than \$24 million (\$50 million in 2011 dollars). The ARP program is vital to ensuring system availability and the flow of goods.

The Seaway ARP supports the engineering considerations highlighted in the November 2007 binational *Great Lakes St. Lawrence Seaway Study*. The study (*see page 5 for background*) 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 USACE-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 throughout the process. The group convenes every two weeks to review the status of ARP projects and to collectively discuss ways to improve the overall management, execution, and reporting of the program on an ongoing basis.

GAO Program Review

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

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

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

Following the issuance of the GAO report, the SLSDC immediately completed an internal review of the *GAO Cost Estimating and Assessment Guide* to identify "best practices" that could be used by SLSDC cost estimators. Since the GAO review, there has been a marked improvement in the quality and accuracy of the SLSDC's ARP cost estimates. In FY 2009, ARP award amounts ranged from 74 percent less to 171 percent greater than original estimates. Following the implementation of new cost-estimating processes, ARP contracts ranged from 23 percent less to 40 percent greater than estimates. The importance of the cost estimates has been stressed and cost estimates have included better documentation of the sources and assumptions used, providing more clearly defined estimates.

SLSDC Strategic and Performance Goals

The projects included in the SLSDC's ARP/CIP specifically target the Corporation's core strategic goals related to "Safety, Security and the Environment" and "Reliability and Availability" as well as the U.S. Department of Transportation's strategic goal of "Economic Competitiveness".

The SLSDC's principal performance measure of U.S. St. Lawrence Seaway System Availability is highlighted in the U.S. Department of Transportation's annual Performance and Accountability Report. The annual goal for providing availability of the U.S. portion of the St. Lawrence Seaway, including the two U.S. Seaway locks, to its commercial users is 99 percent.

In measuring system downtime, the SLSDC includes minutes/hours of delay for weather, including visibility; vessel incidents; insufficient water levels or high velocities; and lock equipment malfunction.

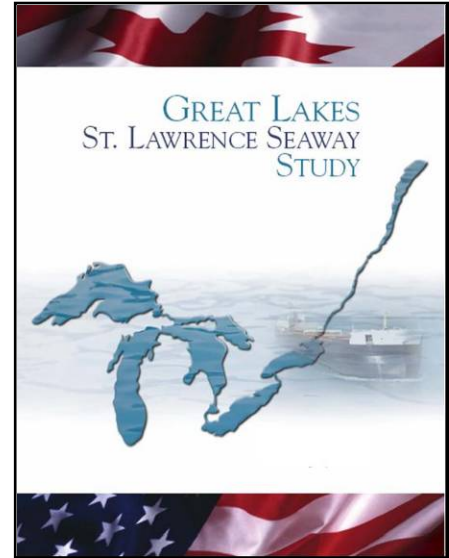
During the 2011 navigation season, the availability of the U.S. sectors of the Seaway, including the two U.S. locks maintained and operated by the SLSDC, was 99.4 percent. The primary causes for delays were weather and vessel incidents (35 hours, 7 minutes). Of the remaining factors that cause system non-availability, the SLSDC has the most control over the proper functioning of its lock equipment. Lock-related delays to commercial shipping in 2011 totaled 2 hours, 29 minutes.

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 at risk. Although the SLSDC has maintained a 99 percent reliability rate over its history, an adequate ARP is necessary to accomplish this level now and in the future.

Binational Great Lakes St. Lawrence Seaway Study Background Information

On November 26, 2007, the U.S. and Canadian governments released its binational Great Lakes St. Lawrence Seaway Study (Study) – a joint project to assess the ongoing maintenance and long-term capital requirements of the commercial maritime navigation infrastructure of the Great Lakes St. Lawrence Seaway System. In particular, this infrastructure includes the 15 U.S. and Canadian-operated locks of the St. Lawrence Seaway as well as the Soo locks operated and maintained by the U.S. Army Corps of Engineers.

The U.S. Department of Transportation partnered with the Corps for the seven-year duration of the Study project and with Transport Canada for the last five years. The Study is available to the public electronically on the Study's website (<http://www.lre.usace.army.mil/greatlakes/greatlakes&st-lawrenceseawaystudy/>).



Seven Canadian and U.S. departments and agencies were involved in the multi-year study: Transport Canada, U.S. Department of Transportation, U.S. Army Corps of Engineers, SLSMC, SLSDC, Environment Canada, and the U.S. Fish and Wildlife Service. Their representatives formed a Steering Committee responsible for the Study's overall strategic direction. Study tasks and analyses were overseen by a Management Team consisting of one representative from Transport Canada and one from the Corps.

The three objectives of the Study were to:

- Evaluate the condition and reliability of the Great Lakes Seaway System, including the relative benefits and costs of continuing to maintain the existing transportation infrastructure on which it depends;
- Assess the engineering, economic, and environmental factors associated with current and future needs of the Great Lakes St. Lawrence Seaway System; and
- Identify factors and trends affecting the domestic and international marine transportation industries using the System, including evolving intermodal linkages and transportation technologies.

The final report included a detailed engineering analysis of the System's current infrastructure. This infrastructure is divided into four groups: the USACE's Soo locks in Sault Ste. Marie, Mich.; the eight Canadian locks at the Welland Canal that allow marine circumvention of Niagara Falls; the five Canadian locks in the St. Lawrence River; and the two U.S. St. Lawrence River locks owned and operated by the SLSDC.

The Study also includes an economic analysis of the costs and benefits associated with maintaining the System's infrastructure at its current state of reliability. The final report identifies factors and trends affecting the domestic and international marine transportation industries using the System. In addition, with the active participation and the endorsement of Environment Canada and the U.S. Fish and Wildlife Service, the Study is a unique commercial navigation assessment in that it incorporates an environmental analysis.

Among the Study's important findings are:

- The Great Lakes St. Lawrence Seaway System continues to play a decisive role in the economic life of North America. An economic analysis concluded that the Great Lakes Seaway System provides approximately \$3.6 billion in annual transportation cost savings compared to the next least expensive mode of transportation. These savings are especially felt in strategic sectors such as steelmaking and energy, the competitiveness of which is vital to the health of the North American economy.
- The System also offers shippers considerable spare capacity. This is becoming increasingly significant as highways and rail lines in the region experience growing congestion. The Great Lakes Seaway System can play an important role in relieving some of these pressures by offering complementary transportation routes through less busy ports and by moving goods directly across lakes rather than around them.
- The commercial maritime lock infrastructure of the System has reached or exceeded its original design life and will require capital investment in order for the System to remain reliable and competitive.

The Study provided specific considerations and conclusions:

- The System has the potential to alleviate congestion on the road and rail transportation networks as well as at border crossings in the Great Lakes basin and St. Lawrence River region.
- A stronger focus on short sea shipping would allow the System to be more closely integrated with the road and rail transportation systems, while providing shippers with a cost-effective, timely and reliable means to transport goods.
- The existing infrastructure of the Great Lakes St. Lawrence Seaway System must be maintained in good operating condition in order to ensure the continued safety, efficiency, reliability and competitiveness of the system.
- The long-term health and success of the System will depend in part on its sustainability, including the further reduction of negative ecological impacts caused by commercial navigation.

SUMMARY OF ARP CAPITAL AND MAINTENANCE PROJECTS FYs 2013-2017

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.

Dollar amounts for ARP projects are "project feasibility" estimates that can vary by an industry-recognized 20-30 percent. Funding for each year of the ARP is constrained to annual funding targets as estimated and approved by the Office of Management and Budget (OMB). Project estimates and schedules may fluctuate at various points in the lifespan of the ARP and will be revised as needed throughout the length of the ARP. Many of the projects listed below have additional ARP-related project costs beyond this five-year plan.

- (1) **Project No. 2: Both Locks – Rehabilitate Downstream Miter Gates (Capital Project) (FY 2013 – \$230,000)** – This project is to completely rehabilitate the miter gate at the downstream end of Snell Lock. 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. FY 2013 funds are for the inspection/quality control of the rehabilitation work. *(Project funds obligated in FY 2011 and additional obligations are planned in FY 2012)*
- (2) **Project No. 3: Both Locks – Rehabilitate Mooring Buttons, Pins, and Concrete along Guidewalls and Guardwalls (Capital Project) (FY 2013 – \$100,000)** – This project is to replace worn mooring buttons on the lock walls at both locks. The mooring buttons are used by Corporation Linehandlers to secure transiting vessels while being raised or lowered in the lock. Most of the mooring buttons have been in service for over fifty (50) years and have grooves worn in them which will affect their structural integrity. *(Project funds obligated in FY 2010 and additional obligations are planned in FY 2012)*
- (3) **Project No. 5: Both Locks – Rehabilitate Winter Maintenance Lock Covers (Capital Project) (FY 2013 – \$200,000)** – This project is for rehabilitating the roof modules used to cover Eisenhower and Snell Locks when major winter maintenance projects are planned. These covers are over 40 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. *(Project funds obligated in FY 2009, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*

- (4) **Project No. 7: Both Locks – Culvert Valves – Replace with Single Skin Valves (Capital Project) (FY 2013 – \$420,000)** – 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. 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 and FY 2011, and additional obligations are planned in FY 2012)*
- (5) **Project No. 8: Floating Navigational Aids – Upgrade/Replace (Capital Project) (FYs 2013, 2014, 2015, 2016, and 2017 – \$313,000)** – 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 FY 2010, and additional obligations are planned in FY 2012)*
- (6) **Project No. 9: Corporation Equipment – Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment (Capital Project, Capital Equipment, and Non-Capital Maintenance Equipment) (FYs 2013, 2014, 2015, 2016, and 2017 – \$1,293,000)** – 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 and assorted shop equipment. Equipment and vehicles are inspected regularly and their replacement is prioritized based on the results of those inspections. *(Project funds obligated in FY 2009, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*
- (7) **Project No. 10: Both Locks – Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities (Non-Capital Maintenance Project) (FYs 2013, 2014, 2015, 2016, and 2017 – \$104,000)** – 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 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. *(Project funds obligated in FY 2009, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*

- (8) **Project No. 11: Fixed Navigational Aids – Rehabilitate (Capital Project and Non-Capital Maintenance Project) (FYs 2013, 2014, 2015, 2016, and 2017 – \$1,026,000)** – 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 completed by divers. Any repairs to the foundations will also require divers as well as the use of a tug and barge with crane to complete. Failure of a fixed aid would likely make replacement necessary at a cost significantly higher than repairing the existing structure. *(Project funds obligated in FY 2010 and FY 2011, and additional obligations are planned in FY 2012)*
- (9) **Project No. 12: Corporation Equipment – Upgrade/Replace Floating Plant (Capital Project, Capital Equipment, and Non-Capital Maintenance Project) (FYs 2013, 2014, and 2016 – \$29,210,000)** – This is an ongoing program to rehabilitate and/or replace the Corporation's floating plant which is used for maintaining the locks and navigation channels. This multiyear project includes replacing the tug; upgrading the buoy tender barge; purchasing a smaller tug for operations where the capabilities of the larger tug are not efficient and a small scow for transporting dredged spoil from emergency/spot dredging; and rehabilitating the crane barge/gatelifter which would be used if a miter gate were damaged and had to be replaced. *(Project funds obligated in FY 2009, FY 2010, and FY 2011, and additional obligations are planned in FY 2012)*
- (10) **Project No. 13: Corporation Facilities – Replace Roofs (Capital Project) (FYs 2013, 2014, 2015, and 2017 – \$1,342,000)** – This project is for replacing the roofs on the Corporation's various buildings and facilities in Massena, New York, 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 and FY 2011, and additional obligations are planned in FY 2012)*
- (11) **Project No. 14: Corporation Facilities – Replace Paving and Drainage Infrastructure (Capital Project) (FYs 2013 and 2015 – \$2,446,000)** – This project is for improving the pavement and drainage along lock approach walls as well as the roadways, public parking, and work areas at all Corporation facilities. In Upstate New York, the damage to pavements caused by winter conditions is significant. 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 (combined with ARP Project No. 3), FY 2010, and FY 2011)*
- (12) **Project No. 15: Eisenhower Lock Highway Tunnel – Rehabilitate (Capital Project and Non-Capital Maintenance Project) (FYs 2013, 2015, and 2017 – \$1,268,000)** – 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, 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, FY 2010, and FY 2011)*

- (13) **Project No. 16: Seaway System – Upgrade GPS/AIS/TMS Technologies (Capital Project and Capital Equipment) (FYs 2013, 2015, and 2017 – \$307,000)** – 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 and FY 2010)*
- (14) **Project No. 17: Navigation Channels – Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments (Non-Capital Maintenance Project) (FYs 2015 and 2017 – \$10,357,000)** – This project is for dredging of the navigation channel to remove sediment and 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 dredging in the intermediate pool is essentially complete; however, some high spots comprised of very hard material remain, which will require removal in the future. For FYs 2015 and 2017, the Corporation will focus on other sections of the St. Lawrence River under U.S. jurisdiction that require maintenance dredging. *(Project funds obligated in FY 2009 and FY 2011)*
- (15) **Project No. 22: Both Locks – Install Vessel Self Spotting Equipment (Capital Project) (FYs 2013, 2014, and 2015 – \$1,079,000)** – 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 times for locking vessels. The Canadian St. Lawrence Seaway Management Corporation (SLSMC) has completed testing this new technology and has installed it at their locks.
- (16) **Project No. 23: Both Locks – Install Vessel Vacuum Mooring Systems (Capital Project) (FYs 2016 and 2017 – \$9,971,000)** – This project is for installing vessel vacuum mooring equipment at both Eisenhower and Snell Locks to hold vessels in place while they are in the lock. This new technology, once fully implemented, will reduce labor costs for locking vessels. The Canadian SLSMC is continuing to develop and test this technology at its locks.

- (17) **Project No. 26: Corporation Facilities – Upgrade Storage for Lock Spare Parts (Capital Project) (FYs 2013 and 2014 – \$955,000)** – 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. *(Project funds obligated in FY 2010 and FY 2011)*
- (18) **Project No. 27: Corporation Facilities – Replace Windows and Doors and Repair Building Facades (Capital Project) (FYs 2014 and 2016 – \$412,000)** – 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 obligated in FY 2010 and FY 2011, and additional obligations are planned in FY 2012)*
- (19) **Project No. 28: Snell Lock – Walls, Sills and Culverts – Rehabilitate Concrete (Capital Project) (FY 2016 – \$2,075,000)** – 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 as well as filling and emptying culverts and the gate sills by replacing deteriorated/damaged concrete.
- (20) **Project No. 29: Eisenhower Lock – Walls, Sills and Culverts – Rehabilitate Concrete (Capital Project) (FYs 2013, 2015, and 2017 – \$8,213,000)** – 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. This project includes resurfacing the mass concrete that forms the locks walls as well as filling and emptying culverts and the gate sills by replacing concrete to depths ranging between approximately 8 inches and 24 inches. *(Project funds obligated in FY 2010)*
- (21) **Project No. 32: Snug Harbor – Rehabilitate Spare Gate Storage and Assembly Area (Capital Project) (FY 2013 – \$300,000)** – 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, repairs to failing sheetpile bulkheads, and painting of the spare miter gates and gate assembly towers. *(Project funds obligated in FY 2010 and FY 2011, and additional obligations are planned in FY 2012)*
- (22) **Project No. 33: Both Locks – Upgrade Drainage Infrastructure in Galleries and Recesses (Capital Project) (FYs 2013, 2014, and 2015 – \$469,000)** – 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. *(Obligations are planned in FY 2012)*

- (23) **Project No. 34: Both Locks – Improve Ice Control (Capital Project) (FYs 2013, 2014, and 2015 – \$693,000)** – This project is to improve the methods/equipment used to control ice in and around Eisenhower and Snell Locks during the opening and closing of each navigation season. Air curtains and bubblers are currently used to minimize the ice entering a lock chamber and to move it away from the miter gates. Backhoes are used for removing ice from the lock walls, which reduces the width available for transiting vessels. Improvements to existing systems/equipment and utilizing new technologies would make operations during icy conditions more efficient and would minimize damages to the lock components and transiting vessels. *(Project funds obligated in FY 2010 and additional obligations are planned in FY 2012)*
- (24) **Project No. 35: Vessel Mooring Cells – Rehabilitate and Extend (Capital Project) (FYs 2013, 2014, and 2017 – \$2,566,000)** – 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.
- (25) **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 both the cost of transporting vessels to a drydock typically located in the Great Lakes and the daily rate costs associated with drydocking a vessel.
- (26) **Project No. 38: Both Locks – Upgrade/Replace Emergency Generators (Capital Project) (FY 2013 – \$500,000)** – This project is for replacing the emergency generators at both Eisenhower and Snell Locks and for installing a generator removed from the locks at the Maintenance Facility. The generators at the locks are over 20 years old and cannot carry the total load. Also, installing one of these units at the Maintenance Facility with an automatic transfer switch will enable maintenance activities to continue and will insure that water lines will not freeze and break in the event of a power outage. *(Obligations are planned in FY 2012)*
- (27) **Project No. 39: Both Locks – Dewatering Pumps – Upgrade Outdated Equipment (Capital Project) (FY 2013 – \$200,000)** – This project is for rebuilding or replacing the pumps used for dewatering both Eisenhower and Snell Locks for maintenance of their underwater components. These pumps are over 50 years old and are not operating at maximum efficiency. *(Obligations are planned in FY 2012)*
- (28) **Project No. 40: Both Locks – Extend Guidewalls in Pool (Capital Project) (FY 2015 – \$1,546,000)** – 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.

- (29) **Project No. 41: Snell Lock – Install Ice Flushing System Technologies (Capital Project) (FYs 2013 and 2014 – \$5,819,000)** – This multi-year project will result in the installation of an ice flushing system at Snell Lock similar to the one already in operation at Eisenhower Lock. The project is critical to the safe and efficient operation of Snell Lock during the waterway's opening and closing periods when ice is present. With today's larger ships transiting the Seaway, the lock must be flushed almost completely free of ice before a vessel can be allowed to enter the locks because of the limited space between the vessels and the lock walls. Currently, ice is flushed from the Snell Lock chamber by utilizing the 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. *(Funds obligated in FY 2011 and additional obligations are planned in FY 2012)*
- (30) **Project No. 42: Both Locks – Miter Gates – Structural Rehabilitation (Capital Project) (FYs 2013, 2014, and 2015 – \$2,307,000)** – This project is to blast clean 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. *(Obligations are planned in FY 2012)*
- (31) **Project No. 43: Both Locks – Miter Gate Machinery – Upgrade/ Replace (Capital Project) (FYs 2013 and 2015 – \$4,249,000)** – This project is for replacing the operating machinery for the miter gates at both locks. This machinery is more than 50 years old and needs to be upgraded to insure its continued reliability. The upgrade will include new hydraulic operating equipment to match the improvements made at the Canadian Seaway locks and the other locks in the United States. *(Funds obligated in FY 2011)*
- (32) **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 should a vessel malfunction, making it unable to stop. This operating machinery is more than 50 years old and needs to be upgraded to insure continued reliability.
- (33) **Project No. 45: Flow Control Dikes – Rehabilitate (Capital 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 are moved by the forces of the water and ice. Work needs to be done to restore the dikes to their as-constructed condition.

- (34) **Project No. 46: Both Locks – Guidewall Extensions – Rehabilitate (Capital Project) (FYs 2015 and 2016 – \$1,033,000)** – 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 erected after original construction of the locks to lengthen the approach walls, which are used 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 mass concrete guidewalls. They have been damaged by vessel impacts over the years and require rehabilitation to maintain their serviceability.
- (35) **Project No. 47: Eisenhower Lock – Vertical Lift Gate – Structural Rehabilitation (Capital Project) (FY 2016 – \$725,000)** – This project is for blast cleaning and painting the vertical lift gate at Eisenhower Lock to prevent further corrosion. The vertical lift gate is an emergency closure designed to be raised in the event of a miter gate failure to prevent loss of the power pool. This gate has not been cleaned and painted in over 25 years.
- (36) **Project No. 48: Both Locks – Stiffleg Derricks – Replace (Capital Project) (FY 2017 – \$416,000)** – This project is for replacing the structural components of the stiffleg derricks at both Eisenhower and Snell Locks. There is a stiffleg derrick located at each end of each lock. These are hoisting devices utilized to place the stoplogs which are the temporary closure structures required for dewatering a lock for inspection and/or repair of the underwater components. These units are of riveted construction, are over 50 years old and are experiencing crevice corrosion.
- (37) **Project No. 51: Corporation Facilities – Upgrade Physical Security to Meet HSPD-12 Requirements (Capital Project and Non-Capital Maintenance Project) (FY 2013 – \$50,000)** – This project is for procuring the Personal Identity Verification (PIV) cards required by the Department as well as the procurement and installation of necessary PIV card readers and other required infrastructure to meet HSPD-12 requirements. *(Project funds obligated in FY 2010 and FY 2011 and additional obligations are planned in FY 2012)*
- (38) **Project No. 52: Corporation Facilities – Eisenhower Lock Visitors' Center – Replace (Capital Project) (FY 2013 – \$300,000)** – This project is for replacing the Visitors' Center at Eisenhower Lock which is over 50 years old, is in a state of disrepair and does not meet current accessibility standards. Each year, the facility 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. Due to more critical maintenance needs, only a minimal amount of maintenance has been performed over the years by the SLSDC on the facility. In FY 2011, the Corporation awarded a contract to an architectural/engineering (A/E) firm to assess the condition of the existing structures and appurtenances, to provide conceptual designs and cost estimates for rehabilitating and for replacing the existing structures and to make a recommendation as to which alternative would be the best for accomplishing the project objectives. Their recommendation was for replacing this facility. In FY 2013, the

Corporation will award a contract to an A/E firm to complete designs, specifications, drawings, and cost estimates for the construction of a new Visitors' Center facility on the current site that meets federal accessibility and security standards and adheres to sustainability, energy and water conservation, and LEED[®] certification requirements. Currently, no timetable has been established for the construction of the new Center. *(Project funds obligated in FY 2011)*

- (39) **Project No. 58: Corporation Facilities – Upgrades to Meet Sustainability and Energy Goals (Capital Project) (FY 2013 – \$200,000)** – 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 acts. *(Project funds obligated in FY 2011 and additional obligations are planned in FY 2012)*

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Saint Lawrence Seaway Development Corporation (SLSDC)
Asset Renewal Program (ARP) Obligations (Fiscal Years 2009-2010-2011) and Budget (Fiscal Year 2012)
(In Whole Dollars)

ARP #	ARP Project Description	ARP FY 2009 Obligations (Year 1)	ARP FY 2010 Obligations (Year 2)	ARP FY 2011 Obligations (Year 3)	Three Year Obligation Totals	ARP FY 2012 Budget (Year 4)
1	Snell Lock - Replace Fendering Downstream Guidewall Extension	\$241,600	\$8,091	\$0	\$249,691	\$0
2	Both Locks - Rehabilitate Downstream Miter Gates (FY 2011 at Eisenhower Lock)	\$0	\$0	\$3,539,935	\$3,539,935	\$2,700,000
3	Both Locks - Rehabilitate Mooring Buttrons, Piers, and Concrete Along Guidewalls and Guardwalls	(Comb. w/ No. 14)	\$35,422	\$0	\$35,422	\$200,000
4	Both Locks - Culvert Valve Machinery - Upgrade to Hydraulic Operation	\$4,117,050	\$344,915	\$3,965,005	\$8,426,970	\$180,000
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	\$46,698	\$6,638	\$23,781	\$77,117	\$25,000
6	Seaway International Bridge - Perform Structural Rehabilitation and Corrosion Prevention	\$3,102,878	\$5,680,707	\$0	\$8,783,585	\$0
7	Both Locks - Culvert Valves - Replace With Single Skin Valves	\$0	\$326,898	\$65,591	\$392,489	\$300,000
8	Floating Navigational Aids - Replace	\$61,254	\$54,576	\$0	\$115,830	\$60,000
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles, and Shop Equipment	\$1,574,504	\$481,052	\$108,038	\$2,163,594	\$100,000
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	\$19,594	\$231,269	\$93,613	\$344,476	\$40,000
11	Fixed Navigational Aids - Rehabilitate	\$0	\$10,998	\$16,217	\$27,215	\$100,000
12	Corporation Equipment - Upgrade/Replace Floating Plant	\$678,745	\$1,627,925	\$1,908,563	\$4,215,233	\$2,335,000
13	Corporation Facilities - Replace Roofs	\$143,949	\$0	\$3,348	\$147,297	\$40,000
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	\$921,837	\$1,829,621	\$85,481	\$2,836,939	\$0
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	\$26,636	\$271,804	\$99,459	\$397,899	\$0
16	System System - Upgrade GPS/AIS/TMS Technologies	\$100,997	\$76,451	(\$3,328)	\$174,120	\$0
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	\$4,279,556	\$0	\$3,662,267	\$7,941,823	\$0
18	Eisenhower Lock - Vertical Lift Gate - Replace Wire Ropes	\$0	\$487,750	\$109,490	\$597,240	\$250,000
19	Corporation Facilities - Upgrade Electrical Distribution Equipment	\$0	\$753,400	\$306,847	\$1,060,247	\$400,000
20	Both Locks - Upgrade Lock Status/Controls	\$8,558	\$139,805	\$89,507	\$237,870	\$0
21	Both Locks - Compressed Air Systems - Upgrade/Replace	\$19,878	\$787,549	\$3,381	\$810,808	\$15,000
24	Both Locks - Structural Repair - Grout Leaks in Galleries and Recesses	\$37,561	\$0	\$0	\$37,561	\$100,000
25	Corporation Facilities - Upgrade/Replace Fire Alarm/Protection Systems	\$4,148	\$0	\$4,007	\$8,155	\$0
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	\$0	\$418,000	\$12,144	\$430,144	\$0
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	\$0	\$33,776	\$5,537	\$39,313	\$50,000
29	Eisenhower Lock - Walls, Sills, and Culverts - Rehabilitate Concrete	\$0	\$209,395	\$0	\$209,395	\$0
31	Both Locks - Rehabilitate Upstream Miter Gates (FY 2009 at Eisenhower Lock / FY 2010 at Snell Lock)	\$2,201,595	\$2,478,896	\$347,662	\$5,028,143	\$0
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	\$0	\$12,734	\$346,600	\$359,334	\$250,000
34	Both Locks - Improve Ice Control	\$0	\$7,462	\$0	\$7,462	\$100,000
38	Both Locks - Upgrade/Replace Emergency Generators	\$0	\$0	\$0	\$0	\$100,000
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	\$0	\$0	\$0	\$0	\$200,000
41	Snell Lock - Install Ice Flushing System Technologies	\$0	\$0	\$272,000	\$272,000	\$6,705,000
42	Both Locks - Miter Gates - Structural Rehabilitation	\$0	\$0	\$0	\$0	\$750,000
43	Both Locks - Miter Gate Machinery - Upgrade/Replace	\$0	\$0	\$133,364	\$133,364	\$0
51	Corporation Facilities - Upgrade Physical Security to Meet HSPD-12 Requirements	\$0	\$24,183	\$21,097	\$45,280	\$300,000
52	Corporation Facilities - Eisenhower Lock Visitors' Center - Replace	\$0	\$0	\$13,042	\$13,042	\$0
53	Corporation Technologies - Financial Management System - Replace	\$0	\$0	\$1,699	\$1,699	\$0
54	Corporation Facilities - Administration Building - Replace Elevator	\$0	\$0	\$140,346	\$140,346	\$0
55	Corporation Facilities - Maintenance Building - Replace Fuel Tanks	\$0	\$0	\$189,350	\$189,350	\$0
56	Corporation Facilities - Duth Free Store Property - Upgrade Security	\$0	\$0	\$13,025	\$13,025	\$0
57	Corporation Facilities - Upgrade Network Security	\$0	\$0	\$158,536	\$158,536	\$250,000
58	Corporation Facilities - Upgrades to Meet Sustainability and Energy Goals	\$0	\$0	\$47,511	\$47,511	\$50,000
--	Miscellaneous Expenses	\$0	\$443	\$0	\$443	\$0
Asset Renewal Program Total		\$17,587,028	\$16,339,760	\$15,783,116	\$49,709,903	\$15,600,000

NOTES:

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

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

(In Whole Dollars)

ARP #	ARP Project Description	Type of Project (1)	Completed By (2)	Mission Objective (3)	Number of Funded Years	FY 2013 Request	FY 2014 Estimate	FY 2015 Estimate	FY 2016 Estimate	FY 2017 Estimate	Five-Year Total
2	Both Locks - Rehabilitate Downstream Miter Gates	CP	C	L	5	\$230,000	---	---	---	---	\$230,000
3	Both Locks - Rehabilitate Mooring Buttons, Pins, and Concrete Along Guidewalls and Guardwalls	CP	C	L	4	\$100,000	---	---	---	---	\$100,000
5	Both Locks - Rehabilitate Winter Maintenance Lock Covers	CP	C/I	L	4	\$200,000	---	---	---	---	\$200,000
7	Both Locks - Culvert Valves - Replace with Single Skin Valves	CP	C/I	L	4	\$420,000	---	---	---	---	\$420,000
8	Floating Navigational Aids - Replace	CP	N/A	W	9	\$65,000	\$62,000	\$62,000	\$62,000	\$62,000	\$313,000
9	Corporation Equipment - Replace Heavy and Light Equipment, Maintenance Vehicles and Shop Equipment	CE/CP/MP	N/A	L, W	10	\$260,000	\$256,000	\$258,000	\$259,000	\$260,000	\$1,293,000
10	Both Locks - Upgrade Power Supply Infrastructure from Moses-Saunders Dam to Both Locks and Adjacent Facilities	MP	C	L	10	\$20,000	\$21,000	\$21,000	\$21,000	\$21,000	\$104,000
11	Fixed Navigational Aids - Rehabilitate	CP/MP	C	W	9	\$200,000	\$205,000	\$206,000	\$207,000	\$208,000	\$1,026,000
12	Corporation Equipment - Upgrade/Replace Floating Plant	CE/CP/MP	C/I	L, W	7	\$400,000	\$18,455,000	---	\$10,355,000	---	\$29,210,000
13	Corporation Facilities - Replace Roofs	CP	C	F	8	\$300,000	\$500,000	\$500,000	---	\$42,000	\$1,342,000
14	Corporation Facilities - Replace Paving and Drainage Infrastructure	CP	C	L, F	5	\$900,000	---	\$1,546,000	---	---	\$2,446,000
15	Eisenhower Lock - Highway Tunnel - Rehabilitate	CP/MP	C/I	T/B	6	\$750,000	---	\$258,000	---	\$260,000	\$1,288,000
16	Corporation Technologies - Upgrade GPS/AIS/TMS Technologies	CE/CP	C/I	W	5	\$100,000	---	\$103,000	---	\$104,000	\$307,000
17	Navigation Channels - Dredge U.S. Sectors to Maintain Design Grade and Dispose of Sediments	MP	C	W	4	---	---	\$5,152,000	---	\$5,205,000	\$10,357,000
22	Both Locks - Install Vessel Self Spotting Equipment	CP	C	L	3	\$500,000	\$288,000	\$291,000	---	---	\$1,079,000
23	Both Locks - Install Vessel Vacuum Mooring Systems	CP	C	L	2	---	---	---	\$4,971,000	\$5,000,000	\$9,971,000
26	Corporation Facilities - Upgrade Storage for Lock Spare Parts	CP	C/I	L, F	4	\$750,000	\$205,000	---	---	---	\$955,000
27	Corporation Facilities - Replace Windows and Doors and Repair Building Facades	CP	C/I	F	6	---	\$205,000	---	\$207,000	---	\$412,000
28	Snell Lock - Walls, Sills and Culverts - Rehabilitate Concrete	CP	C/I	L	2	---	---	---	\$2,075,000	---	\$2,075,000
29	Eisenhower Lock - Walls, Sills and Culverts - Rehabilitate Concrete	CP	C/I	L	4	\$2,000,000	---	\$3,091,000	---	\$3,122,000	\$8,213,000
32	Snug Harbor - Rehabilitate Spare Gate Storage and Assembly Area	CP	C	L	4	\$300,000	---	---	---	---	\$300,000
33	Both Locks - Upgrade Drainage Infrastructure in Galleries and Recesses	CP	C/I	L	4	\$160,000	\$164,000	\$155,000	---	---	\$469,000
34	Both Locks - Improve Ice Control	CP	C	L	4	\$230,000	\$231,000	\$232,000	---	---	\$693,000
35	Vessel Mooring Cells - Rehabilitate and Extend	CP	C/I	W	3	\$500,000	\$1,025,000	---	---	\$1,041,000	\$2,566,000
37	Eisenhower Lock - Construct Drydock for Vessel Maintenance	CP	C	L, W	1	---	---	\$800,000	---	---	\$800,000
38	Both Locks - Upgrade/Replace Emergency Generators	CP	C/I	L	2	\$500,000	---	---	---	---	\$500,000
39	Both Locks - Dewatering Pumps - Upgrade Outdated Equipment	CP	C	L	2	\$200,000	---	---	---	---	\$200,000
40	Both Locks - Extend Guidewalls in Pool	CP	C	L	1	---	---	\$1,546,000	---	---	\$1,546,000
41	Snell Lock - Install Ice Flushing System Technologies	CP	C	L	4	\$3,000,000	\$2,819,000	---	---	---	\$5,819,000

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

(In Whole Dollars)

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

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

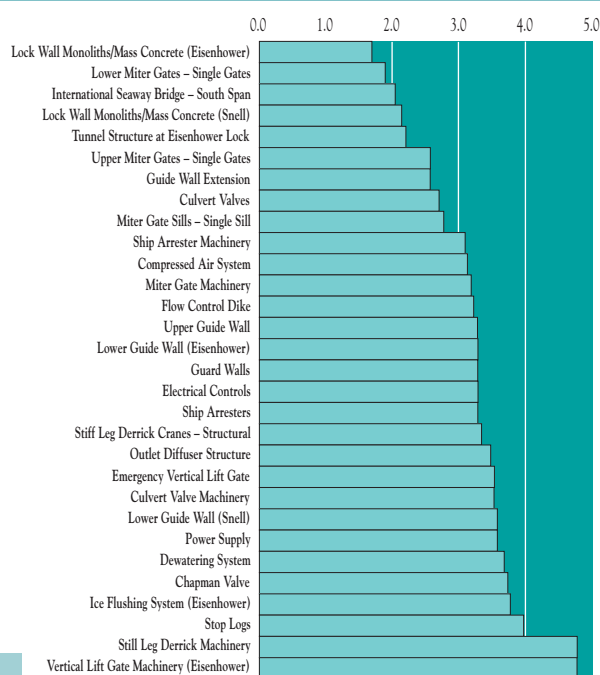
Notes: (a) Estimates as of February 2012 and (b) dollar amounts for ARP projects are "project feasibility" estimates that can vary by an industry-recognized contingency of 20-30 percent.

MLO SECTION – U.S. COMPONENTS

The U.S. portion of the St. Lawrence Seaway consists of the Snell and Eisenhower Locks, which are virtually identical in design but which manifest significant differences in their condition. The Eisenhower Lock suffers from poor concrete quality, which has led to advanced concrete degradation of the lock walls and seepage around a road tunnel that provides access to the Moses-Saunders hydroelectric dam.

Mass concrete	While concrete at the Snell Lock is in relatively good shape, the concrete at the Eisenhower Lock has deteriorated significantly. Up to 1.2 m (4 ft) of concrete has to be removed to get to sound underlying concrete. The service tunnel through the lock sill has experienced cracking, leakage, and ice build-up in winter. Grouting has been used repeatedly but the problem continues to worsen.
Approach walls	The approach walls and guide walls at both the Snell and Eisenhower Locks have suffered considerable wear and tear from ship impacts. They maintain their integrity, though regular maintenance is required.
Gates	The upper miter gates are in good operating condition at both locks. The pintles, quoin blocks and miter blocks are subject to significant wear and are replaced on a 'fix-as-fails' basis. The lower gates at both Snell and Eisenhower show considerable cracking. Cracking in the Snell gates is about three times as extensive as in the Eisenhower gates and is a major cause for concern.
Stoplogs	The Snell and Eisenhower locks have complete sets of stoplogs for dewatering. They are installed using stiff-leg derrick cranes. The Eisenhower Lock also has an emergency vertical lift gate that protects the upstream pool level in the event of a catastrophic failure of the miter gates.
Ship arrestors	The ship arrestors at the Eisenhower and Snell Locks date from the original construction and are in need of modernization.

Machinery & controls Programmable logic controllers are used to control both the Snell and Eisenhower Locks. The latter houses the control room for SLSDC's new vessel tracking system, which monitors ship movements throughout the Seaway. The SLSDC will need new ship positioning, hydraulics and ship mooring technology to harmonize lock operations with the SLSMC.

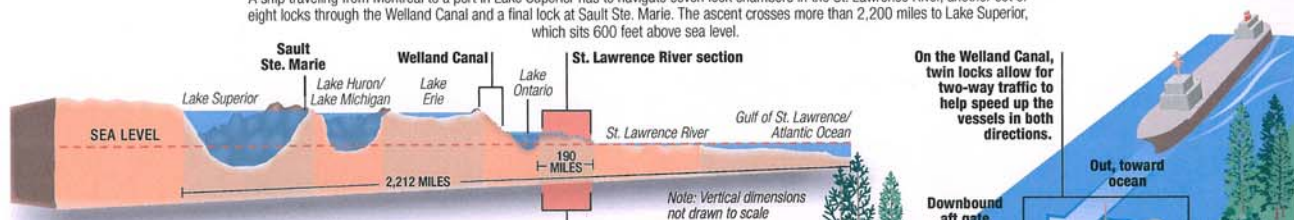


Components with the lowest values in this ranking system were considered the most critical.

At the SLSDC facilities on the St. Lawrence River, the most critical areas are associated with concrete quality at the Eisenhower Lock, the condition of the lower miter gates at both locks, the south span of the Seaway International Bridge, and the Eisenhower Lock highway tunnel.

SEAWAY LOCKS: A 600-FOOT CLIMB IN 16 STEPS

A ship traveling from Montreal to a port in Lake Superior has to navigate seven lock chambers in the St. Lawrence River, another set of eight locks through the Welland Canal and a final lock at Sault Ste. Marie. The ascent crosses more than 2,200 miles to Lake Superior, which sits 600 feet above sea level.

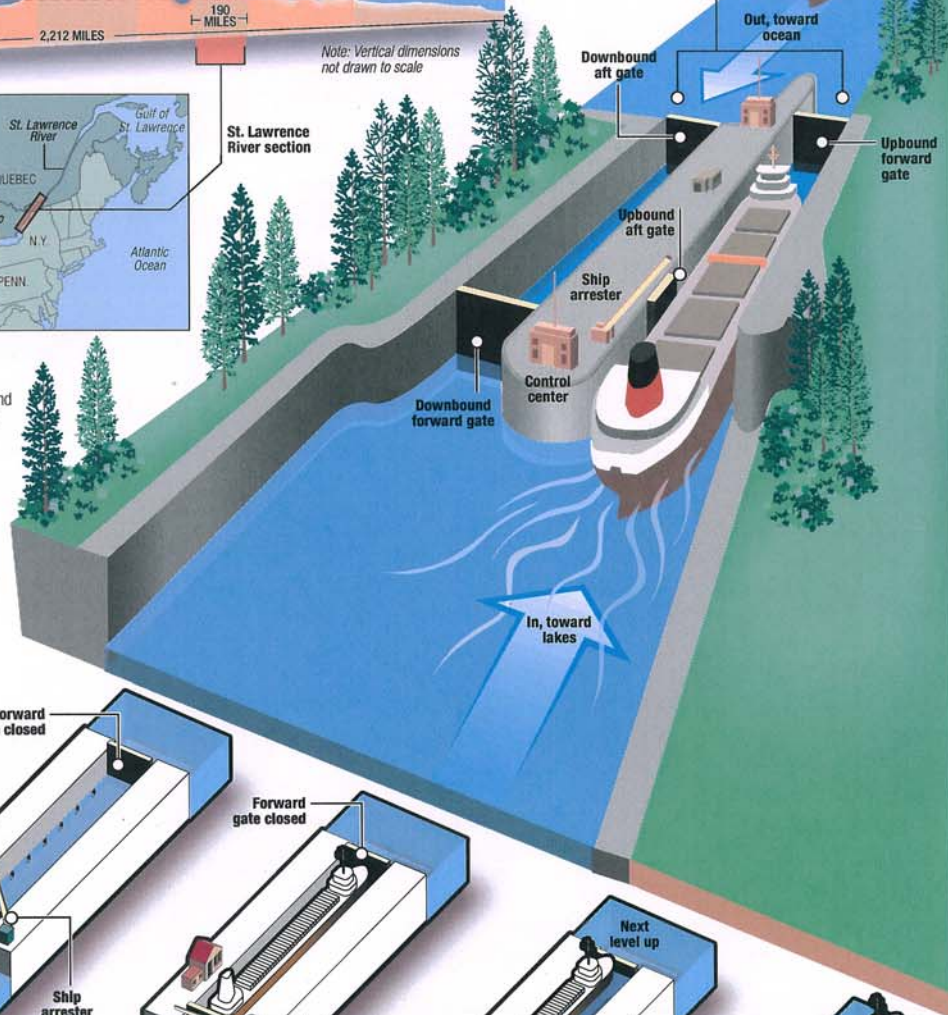


SEAWAY FACTS

- **Opened in 1959.** The Seaway was considered crucial to the Great Lakes because it is the region's only outlet to the East Coast.
- **INFRASTRUCTURE:** Dams and dikes, locks, channels and bridges.
- **ELEVATION:** A ship in the St. Lawrence River has to go up seven locks – or 225 feet – to get to Lake Ontario.
- Every commercial ship sailing the Seaway carries a transponder that sends out its name, location coordinates and speed to the traffic control center and to other ships nearby.
- Seaway communications use radio signals linked to Differential Global Positioning System satellite technology.
- Computers onboard ships and at the control center display information on a virtual Seaway map.



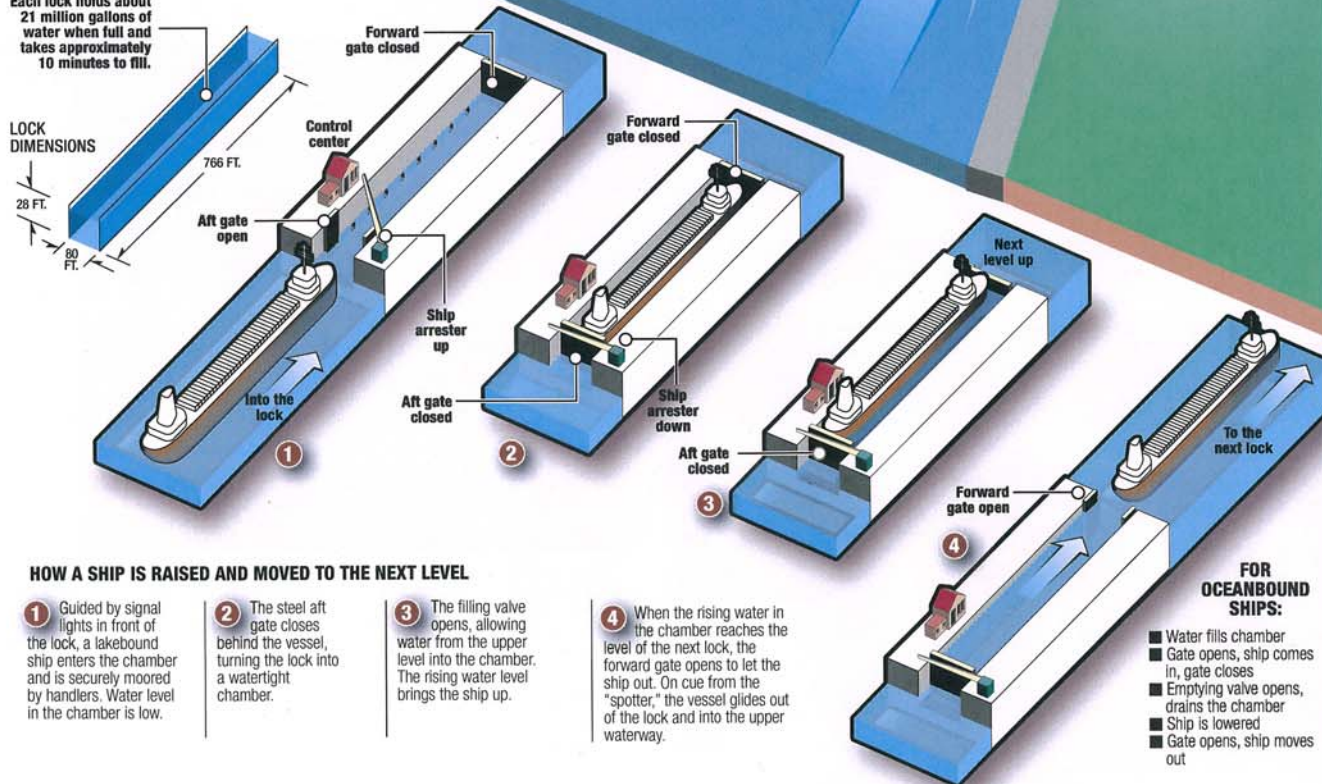
St. Lawrence River section



THE LOCK CHAMBER

The watertight chamber has gates at both ends. It allows a vessel in, then raises or lowers the ship from one level of the waterway to another. Each chamber is filled and emptied using the law of gravity – water flowing naturally from a higher elevation to a lower one.

Each lock holds about 21 million gallons of water when full and takes approximately 10 minutes to fill.

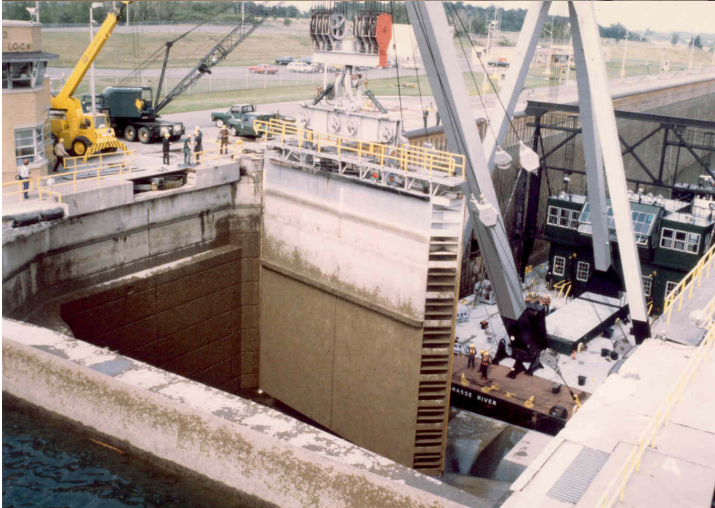


HOW A SHIP IS RAISED AND MOVED TO THE NEXT LEVEL

- 1 Guided by signal lights in front of the lock, a lakebound ship enters the chamber and is securely moored by handlers. Water level in the chamber is low.
- 2 The steel aft gate closes behind the vessel, turning the lock into a watertight chamber.
- 3 The filling valve opens, allowing water from the upper level into the chamber. The rising water level brings the ship up.
- 4 When the rising water in the chamber reaches the level of the next lock, the forward gate opens to let the ship out. On cue from the "spotter," the vessel glides out of the lock and into the upper waterway.

FOR OCEANBOUND SHIPS:

- Water fills chamber
- Gate opens, ship comes in, gate closes
- Emptying valve opens, drains the chamber
- Ship is lowered
- Gate opens, ship moves out



U.S. Saint Lawrence Seaway Development Corporation
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