



**New York State Thruway Authority
New York State Canal Corporation**



Operations and Accomplishments
Fiscal Year Ending December 31, 2012

The following information is provided pursuant to Public Authorities Law Section 2800(1)(a)(1).

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OPERATIONS

Thruway Authority

The Thruway Authority is a public corporation organized and existing pursuant to Article 2, Title 9 of the New York State Public Authorities Law for the purpose of financing, constructing, reconstructing, improving, developing, maintaining and operating a highway system known as the Governor Thomas E. Dewey Thruway. It is overseen by a seven-member Board appointed by the Governor with the advice and consent of the State Senate.

The New York State Thruway is a 570-mile superhighway system crossing the State. It is one of the longest toll superhighway systems in the United States with an estimated one-third of toll revenues coming from out-of-state drivers. The Thruway from the New York City Line to the Pennsylvania State Line at Ripley is 496 miles long and includes the 426-mile mainline connecting New York City and Buffalo, the State's two largest cities. Other sections of the Thruway make direct connections with the Connecticut and Massachusetts Turnpikes, New Jersey Garden State Parkway and other major expressways that lead to New England, Canada, the Midwest and the South. In all, the Thruway is comprised of 2,822 lane miles of roadway, 809 bridges, more than 300 buildings, 27 travel plazas, 281 toll booths, 18 waste water treatment plants and 21 motor fueling stations for Authority vehicles and equipment. Operationally, the Authority is segmented into four regional divisions – Albany, Buffalo, New York and Syracuse – with the Administrative Headquarters located in Albany.

For additional information, please visit the Authority's website at www.thruway.ny.gov.

Canal Corporation

In 1992, legislation commonly referred to as "Thruway 2000" transferred jurisdiction over the New York State Canal System from the New York State Department of Transportation to the Authority. This legislation also created the Canal Corporation as a subsidiary of the Authority to operate, maintain, construct, reconstruct, improve, develop, finance and promote the Canal System. The 24-member Canal Recreationway Commission (CRC) was established as an advisory body to make recommendations and provide guidance to the Corporation on certain matters pertaining to policy, maintenance and operations of the New York State Canal System. The CRC was also charged with developing the Canal Recreationway Plan, which has largely been implemented.

The Canal System consists of 524 miles of connected, navigable waterways encompassing: the Erie Canal (338 miles, east to west), the Champlain Canal (60 miles, south to north), the Oswego Canal (24 miles south-east to north-west, between Lake Ontario and the Erie Canal), and the Cayuga-Seneca Canal (12 miles, south-west to north-east linking the Erie Canal with Cayuga and Seneca Lakes). There are also 90 miles of navigable channel through Cayuga Lake to Ithaca and Seneca Lake to Watkins Glen, respectively. Comprised of both "canalized" natural rivers and dug channel, the Canal System is part of a larger network of inland navigable waterways in the United States extending south to Florida, north to Canada, and west to the Great Lakes and the western rivers.

For additional information, please visit the Corporation's website at www.canals.ny.gov.

ACCOMPLISHMENTS

While maintaining standard operations of the Thruway and Canal, in 2012 the Authority/ Corporation strived to achieve the following strategic goals: deliver the Capital Program and maintain the infrastructure in good condition; maintain high levels of customer service and safety; and enhance the efficiency and effectiveness of operations. In addition, initiatives aimed at promoting economic development and environmental stewardship were conducted. In alignment with these goals, the following projects were progressed and/or completed in 2012.

I. The New NY Bridge

Over the past twenty years the Authority has spent more than \$750 million to maintain and repair the current Tappan Zee Bridge. Over the past decade, in partnership with the New York State Department of Transportation and the Metropolitan Transportation Authority, the Authority has conducted alternative analysis, public outreach and environmental studies aimed at how to best address the transportation needs at the Tappan Zee Bridge. Engineering and economic analysis has determined that replacement of the bridge is needed to correct structural deficiencies, address longstanding safety concerns and provide sufficient capacity to serve current usage safely and allow for future economic growth.

The existing bridge, which was opened to traffic in 1955, has exceeded its useful life and it is estimated that an additional \$1 billion would be required to maintain it for the next ten years. The bridge was designed to carry 100,000 vehicles on a peak day, but traffic volume has grown to 138,000 vehicles per day. In addition, the geometry and configuration of the bridge, including a 3% grade, lack of shoulders and narrow lanes has led to higher accident rates and difficulty in responding to accidents. These factors combined often cause delays and lengthy traffic back-ups.

In 2011, action was taken to expedite environmental reviews and to advance legislation that would allow the Authority to enter into a design-build contract for the New NY Bridge.

Beginning in January 2012, as part of the National Environmental Policy Act (NEPA) process the Authority published a Draft Environmental Impact Study, held public hearings and addressed over 3,000 comments from the public, regulatory agencies and municipalities. This process culminated with a Record of Decision being issued in September 2012.

Concurrent with the NEPA process, the Authority progressed and completed a design-build procurement to select a firm to build the new bridge. In December 2012, the Authority entered into a \$3.1 billion design-build agreement to construct the New NY Bridge with the Tappan Zee Constructors, a joint venture consisting of Fluor Enterprises, Granite Construction Northeast, Traylor Brothers and American Bridge Company. It is anticipated that the new bridge will take six years to complete at a total estimated cost of \$3.9 billion. The new bridge will have a 100 year design life and consist of eight general purpose lanes, as well as emergency access lanes and dedicated bus service. It will conform to current seismic, safety and geometric requirements; have adequate shoulders to manage traffic incidents and emergencies; accommodate bike and pedestrian use; and be capable of accommodating commuter rail.

Additional information regarding the New NY Bridge is available at www.newnybridge.com.

II. Capital Program Delivery

The Authority delivered its 2005-2011 Capital Program to address critical infrastructure needs, traffic demands and improve customer service along the Thruway, and so the Board approved a new 2012-2015 Capital Program (\$1.2 billion) in December 2011. Both Programs balance rehabilitation, reconstruction and enhancement of the infrastructure with available financial resources. The Capital Program is reviewed continuously to ensure that previous decisions regarding project priorities are still valid and to verify that the needs of the highway are being met. Implementation of the Capital Program, in conjunction with the Authority's ongoing maintenance effort, ensures that the operational and structural integrity of the Authority's facilities are maintained.

The Authority let more than \$1.8 billion in Thruway and Canal projects as part of the 2005-2011 Capital Program, and expects to let over \$850 million in construction contracts during the 2012-2015 Capital Program.

In 2012, the Authority let eleven projects totaling \$28.7 million to maintain highway and bridge conditions that resulted in overall improvements. Upon completion, these projects will resurface 50 lane miles of highway and rehabilitate the South Grand Island (Southbound) Bridge. In addition, ten projects totaling \$34.5 million were let to restore or preserve Canal infrastructure.

Highlights of the 2012 Contracts Program are as follows:

Thruway Projects

The following Thruway projects, significant in terms of contract value, were progressed in 2012. They are organized geographically by the Authority's Divisions.

New York Division

- \$19.7 million contract to resurface I-95 from Port Chester to the Connecticut State Line and rehabilitate the Byram River Bridge was awarded in March 2011. Completion is scheduled for early 2013.
- A \$28.3 million contract to replace four Thruway Bridges over Sloatsburg-Sebago Lake and East Village Roads continued through 2012. Completion is scheduled for August 2013.

Albany Division

- \$99.6 million contract to reconstruct I-87 from I-787 (Interchange 23) to the Northway (Interchange 24) continued in 2012. Completion is scheduled for November 2013.
- A \$600,000 emergency contract to repair the slope (damage from Tropical Storms Irene and Lee) at TWY MP 83.0 to 83.1 (SB) and 83.1 to 83.3 (NB) in Ulster County was awarded in October 2011. Construction was completed in June 2012.
- A \$1.5 million emergency contract to repair the scour protection and slope supporting the Thruway Bridge over the Catskill Creek at MP 113.22 (damage from Irene and Lee). Construction was completed in June 2012.

Syracuse Division

- An \$8.9 million contract to replace the superstructure of the Mainline Bridge over the Mohawk River continued in 2012 and was completed as scheduled in December 2012.

Buffalo Division

- \$13.3 million contract to resurface I-90 from the Williamsville Toll Barrier to west of Williams Street (Interchange 52A), resurface I-190 from north of Church Street (Exit 7) to the Peace Bridge (Exit 9), and install median and ramp gates was awarded in July 2011 and completed in September 2012.
- \$91 million contract to rehabilitate I-90 from Hamburg (Interchange 57) to approximately mid-way between Angola and Silver Creek (Interchanges 57A and 58), rehabilitate four bridges, and paint four bridges. Completion is scheduled for early 2013.
- \$13.7 million contract to rehabilitate the Southbound - South Grand Island Bridge and perform miscellaneous repairs to the Northbound - South Grand Island Bridge was awarded in April 2012 with an expected completion of November 2013.

Canal Projects

In order to help prevent additional damage to the Canal System from Tropical Storms Irene and Lee, the Board approved over \$28 million to quickly re-establish the ability to control water elevations on the Erie Canal. Existing and new Authority, Corporation and the New York State Department of Transportation (NYSDOT) contracts were used to remove debris, complete major structural steel repairs and dredge the Canal channel.

The following Canal projects were progressed in 2012 (with additional storm recovery contracts to be let in 2013):

- A \$1.2 million emergency contract to replace the Grade Control Structures at Locks E-8 and E-9 in Schenectady County was awarded in January 2012. Construction was completed in May 2012.
- A \$7.2 million contract to make upright and lighting repairs to Movable Dams 5, 6 and 7 was awarded in August 2012 with completion scheduled for May 2015.
- Several Canal recovery projects (\$14.5 million total) to replace uprights at seven movable dams were awarded in August 2012 and will be completed in May 2015.
- Bids for a \$9.6 million contract to rehabilitate the Utica Taintor Gate and Dam were opened in 2012. This project is scheduled to be completed in June 2016.
- A \$7.4 million contract to make upright and lighting repairs to Movable Dams 4, 8, 10 and 11 was awarded in July 2012 with completion scheduled for May 2015.

For additional information on the Capital Programs, please visit the Authority's website at www.thruway.ny.gov/projectsandstudies/capitalprogram.

III. Infrastructure Maintenance

Snow and Ice Program

Each fall, the Authority implements an aggressive winter maintenance program which is outlined by the policies and procedures included in the Winter Maintenance Manual. During periods of inclement winter weather, the Authority's goal is to provide customers with a roadway that is safe to drive at reasonable speeds under the given weather conditions, with the ultimate goal of returning to bare pavement as quickly as possible.

The Authority primarily uses rock salt to diminish roadway icing. The Authority maintains covered storage capacity for approximately 129,000 tons of salt in 39 locations placed strategically along the Thruway. Bulk storage tanks located across the Thruway System also provide storage capacity for approximately 100,000 gallons of liquid de-icers.

In some locations, the road is pre-treated with liquid de-icing chemicals in advance of a predicted winter storm event. The Authority's trucks are equipped with automatic spreader control systems that adjust the rate of application of de-icing materials to the speed of the vehicle. In addition, most trucks are equipped with de-icing liquid that can be added to the salt as it is applied to the roadway. This "pre-wetted" salt is more effective under certain weather conditions.

Weather forecasting information is obtained from many sources, including the National Weather Service (NWS) and many others available on the internet. The Authority has established a contact network with the NWS offices in the various regions of the state. All NWS weather advisories are provided to Authority maintenance staff, the Thruway Statewide Operations Center, and emergency managers. Field personnel also use local resources to fine tune weather forecasts and responses. In addition, there are more than 40 locations Thruway-wide where sensors provide pavement and air temperature data to maintenance supervisors and managers to assist them in monitoring weather conditions and trends on the roadway. This data is used in conjunction with weather forecast information to more accurately manage snow and ice control operations.

Overall, the 2011-2012 snow and ice season (November 2011 - April 2012) was generally milder than average. During this period, the Authority's 21 maintenance sections responded to an average of 30 winter events each. These events ranged from localized squalls to significant snow events. More than 600 dedicated winter maintenance personnel performed snow and ice control activities utilizing over 70,000 tons of salt and approximately 800 pieces of equipment.

Each spring, the Authority reviews overall performance during the previous season. While the 2011-2012 season saw fewer storm events and less than normal precipitation totals, the Authority was able to implement its revised storm management protocol on several occasions. This protocol requires continuous staffing of a Division and Headquarters Emergency Operations Center when a significant winter weather forecast is confirmed.

The 2011-2012 winter season was a successful one for the Authority's snow and ice program on two fronts: there were no significant disruptions to service; and savings were realized in salt, overtime and fuel expenditures.

Maintenance Activities

In 2012, crews performed a wide variety of preventative, corrective and demand maintenance activities including: repairs to pavement and bridges; facilities and equipment upkeep; preservation and repair of the toll and intelligent transportation systems; and routine operations such as mowing and right-of-way cleanup. In addition, maintenance crews routinely responded to incidents and accidents, and provided traffic control and emergency repairs to guiderail where warranted. Maintenance forces were also instrumental in completing safety and condition inspections of key infrastructure components.

The Authority's equipment technicians completed in-depth preventative maintenance on all key snow and ice control equipment, and required maintenance on the remainder of the fleet. In addition, toll equipment mechanics kept the toll collection system functioning at a high level of reliability.

The Authority's maintenance crews completed the following types of projects in 2012: overlay or replacement of pavement; bridge substructure repair and replacement; bridge joint replacement; toll lane reconstruction; and the implementation of new toll ticket machines. Facilities expansion and modifications were also performed including installation of energy efficient equipment, and additional upgrades of highway and toll plaza lighting to more energy efficient LED lights.

The Authority's Central Sign Shop, responsible for producing nearly all of the signs along the Thruway, manufactured nearly 50,000 square feet of signage in 2012. The types of signs produced included directional signs (interchanges, attractions, etc.), roadway regulatory signs, warning signs and traffic control signs. In addition, the Sign Shop produced specialty signs and graphics for the Authority, Corporation and State Police.

Tappan Zee Bridge

In 2012, the Authority worked both to maintain the current Tappan Zee Bridge structure and plan for the span of the future.

- **Partial Deck Replacement Project**

Replacement of the Tappan Zee Bridge deck continued in 2012. Approximately 64 percent of the original deck was replaced under the first contract, which began in September 2007 and concluded in December 2009. A second contract was awarded in May 2010 to complete the project that consists of replacing approximately 407,400 square feet of deck (which equates to 28% of the total existing deck and brings the total amount of existing bridge deck replaced up to 92%). Work began in June 2010 and is

scheduled to be completed in April 2013. Other work completed includes roadway paving, structural steel repairs, painting of Main Span Structural Steel and the replacement of the movable barrier. This is one of the largest projects that the Authority has let, and illustrates the Authority's commitment to properly maintain and operate the bridge by continuing to make the necessary investments to ensure safe and efficient travel for the thousands of motorists that cross the bridge daily.

For additional information on this project, please visit the Authority's website at www.thruway.ny.gov/projectsandstudies/projects/tzbdeck/index.html.

Syracuse Reconstruction Project

The \$128 million, 15-mile pavement reconstruction project between Interchanges 39 (Syracuse, Fulton, I-690) and 40 (Weedsport, Auburn, Route 34) was awarded in September 2008 and completed in November of 2011 with remaining landscaping activities completed in 2012. Over the course of three years: the travel lanes in both directions were completely reconstructed; four bridges were rehabilitated; safety improvements were made to the ramps at Interchanges 39 and 40 and at the Warners Travel Plaza; closed circuit television traffic monitoring cameras, in-pavement vehicle count stations and weigh-in-motion stations were installed; and utilities were relocated. Environmental protection was integrated into the project as well, and as a result, approximately 11 acres of wetlands were created offsite, and soil and erosion control measures were implemented throughout the 15-mile corridor.

Customers traveling the 15 miles between Syracuse and Weedsport are benefiting from a smoother ride resulting from the new and fully reconstructed highway.

Interchange 23 to 24 Reconstruction Project

Reconstruction of approximately seven miles of the Thruway began in March 2011. The project is located between Interchanges 23 and 24 in the Towns of Guiderland and Bethlehem, and in the City of Albany. Work includes adding a third lane in each direction, replacing the existing pavement with concrete, replacing the highway drainage system, repainting three bridges that cross over the Thruway, and installing approximately two miles of noise barriers.

In 2012, the southbound travel lanes were constructed, as well as the southbound highway drainage. Additionally, three noise barriers were installed, the southbound sides of the bridges were painted and the southbound overhead sign structures and a Variable Message Sign were installed.

Remaining work consists of northbound pavement reconstruction, bridge painting and the installation of one noise barrier.

Upon completion in November 2013, customers traveling in this commuter corridor will benefit from improved mobility.

For additional information, please visit the Authority's website at www.thruway.ny.gov/projectsandstudies/projects/i23-i24/index.html.

Transportation Studies

The Authority participates in feasibility and corridor studies with various agencies, such as the Canal Corporation, NYSDOT, the Federal Highway Administration (FHWA) and local Metropolitan Planning Organizations, to evaluate multimodal transportation in the State and to address congestion, operational, structural and safety needs where necessary. Such studies may also assess the reasonableness of providing new or expanded facilities.

- **Mohawk-Erie Multimodal Transportation Corridor Study**

The Authority and NYSDOT, in cooperation with the Canal Corporation, are conducting a multimodal transportation planning initiative in the Mohawk-Erie corridor to ensure the future sustainability of the regional transportation system. Extending from the Massachusetts State Line to the Pennsylvania State Line generally following I-90 and the Erie Canal, the Mohawk-Erie corridor is a critical trade route within the Northeast. The purpose of this study is to create a stakeholder-driven vision for the future of this corridor and to develop transportation investment plans that can help achieve that vision. Stakeholder involvement and public participation have been, and continue to be solicited throughout the assessment process and in the development of a corridor master plan.

Initial meetings involving the Corridor-Wide Project Advisory Committee and the Regional Project Advisory Committee were held in late 2010. The purpose of the meetings was to acquaint key stakeholders with the study process, determine their transportation needs, initiate the dialogue on how transportation can support economic development goals, and obtain comments on modal profile maps displayed at the meetings. A second round of PAC meetings was conducted in June 2011. Stakeholders were briefed on the overall study direction and framework that will be used to develop a corridor action plan, and were afforded an opportunity to provide feedback on the key issues and problems that exist along the study corridor. A third round of PAC meetings was held in November and December of 2011. Attendees were apprised of the study vision and approach, which included an overview of an assessment tool that will help evaluate and prioritize transportation projects along the corridor. These meetings also included public open houses and briefings to elected officials, at which attendees were informed of the study process and afforded the opportunity for comments.

The next phase of the study will be to finalize the project evaluation tool that will help prioritize projects that would best achieve the study goals of economic competitiveness, quality of life and environmental stewardship. The end product of the study will be an action plan that will identify the best transportation investments while helping to balance the many interests of those who live, work and travel within the corridor.

For additional information on this study, please visit the Authority's website at www.dot.ny.gov/mohawk-erie-study.

- Buffalo Corridor Study

In December 2002, the Authority initiated a study of the Buffalo Corridor, the segment of the Thruway between Interchanges 49 (Transit Road) and 53 (I-190), and the Youngmann Memorial Highway (I-290) between I-90 and Interchange 7 (Main Street). The purpose was to develop a plan to address capacity, structural, safety and operational needs for this section of the Interstate Highway System over the next 30 years.

The study was postponed in October 2006 following the elimination of tolls at the Black Rock and City Line toll barriers on I-190 in Buffalo. (This action caused regional changes to traffic patterns resulting in the need to revise the traffic analysis prepared for the project.) The study resumed in November 2010, at which time the Greater Buffalo-Niagara Regional Transportation Council began developing a new Regional Traffic Model that will be used to evaluate the study's project alternatives. The Authority expects to begin its alternative analysis in the spring of 2013. At the expected completion of the study in late 2013, project alternatives will be identified that will help improve mobility and congestion for the region.

For additional information on this study, please visit the Authority's website at www.thruway.ny.gov/projectsandstudies/studies/buffalo/index.html.

Canal Maintenance

The following major Canal maintenance rehabilitation projects were completed in 2012:

- Ridgeway: Culvert 94 Maintenance Rehabilitation
- Macedon: Lock E-30 Maintenance Rehabilitation
- Phoenix: Lock O-1 Maintenance Rehabilitation
- Jacksonburg: Lock E-18 Maintenance Rehabilitation

Dredging

In 2012, 177,219 cubic yards of sediment was dredged from the system. This is considerably less than the 334,732 cubic yards dredged in 2011 and can be attributed to three of the four hydraulic dredges not working the entire season. The most productive dredge, the HD6 (16") had a major breakdown and retrofit, and the HD5 (15") and HD1 (12") were swapped to locations better suited to their intake sizes (in regard to dredge material particle size), which severely restricted their availability for dredging. It is now expected that quantities for 2013 hydraulic dredging will return to more recent norms.

The Canal Corporation has introduced the use of hydraulic off-loaders in recent years to replace the practice of "wet-dumping" at hydraulic dredging sites. The use of hydraulic off-loaders for mechanical dredging has proved imperfect however, the Canal Corporation has improved in this area and, in 2012 showed a 35% increase in mechanical dredging. While certainly encouraging, it is expected that the numbers will not continue to increase at such a rate because the process is still very labor intensive, and is now hitting other limiting factors, namely the transport by barge from the dredge site to the disposal site.

In the last few years, the Canal Corporation has been trying to increase mechanical dry dredging (where possible) because it is the least energy intensive and has the least effect on water quality. Dry dredging increased from 560 cubic yards in 2011 to 5,105 in 2012 – *but more can be done*. To help ensure that this remains the cleanest method of dredging, we intend to send our entire field engineering staff to NYSDEC’s stream restoration training which, while intended for post-flood emergency intervention, still has relevance to non-emergency maintenance, particularly in regard to preserving stream stability.

In 2012, the Canal Corporation introduced a new web application that gives mariners up-to-date information about dimensional constraints (depths, overhead clearances, and channel widths) – all by canal mileage. Within about a day of taking depth soundings, updated information gets posted on the web. In instances where depths cannot be simply described numerically, full color bathymetric mapping is posted as well. In addition to dimensional data, all NOAA charts are posted by mileage, along with links to amenities, weather, wind, stream flow data, water quality, and tides (where applicable).

The priority for early 2013 will be to concentrate on restoring full navigation depth between Waterford and Oswego in anticipation of a large increase in the shipping of agricultural produce.

Bank Stabilization

Annually, the Corporation stabilizes the Canal inboard bank through stone reclamation, where the existing stone which has sloughed down the inboard bank is put back into place. The Corporation also reconstructs segments of the Canal embankment where necessary. In 2012, approximately 85,000 linear feet of embankment was addressed.

IV. Customer Service

The Authority upheld its mission to provide high levels of service in 2012, and customers are benefiting from communication advancements and improved amenities made during the year.

Advanced Traffic Management System

The Thruway Statewide Operations Center, housed at the Authority’s Administrative Headquarters in Albany, is the central location for the coordination of all traffic incident response, emergency management, and the dissemination of traveler information along the entire Thruway. To increase the functionality of this unit, the Authority is implementing an Advanced Traffic Management System to integrate and control all current and future intelligent transportation systems devices and systems. Devices include Variable Message Signs, Closed Circuit Television Cameras, Highway Advisory Radio, and TRANSMIT¹ vehicle detectors. Many of these components and integration protocols have been implemented, all in real-time.

¹ TRANSMIT is a system for managing traffic that uses the region's E-ZPass electronic toll collection tags as aggregate, anonymous traffic probes. The system identifies traffic delays and translates the data into travel times between two locations, providing real-time information. This information is relayed to motorists via the ATMS so they can make informed travel choices. The TRANSMIT system maintains customer anonymity and confidentiality.

The Authority currently exchanges traffic and ITS data with NYSDOT through the Regional Traffic Operation Centers and the State's 511ny.org system (a website and interactive phone system that provide statewide traveler information). Event data is posted on the website including road construction, accidents, incidents, etc. The system coordinates and disseminates information via TRANSalert for direct email notifications and Variable Message Signs (future) to improve incident management and traveler notification, and reduce delays. The HAR messages are automated using text to speech, allowing incident and emergency event information to be updated in real-time to the Authority's 13 HAR stations and to the Regional Audio Messages that are available on the Authority's website. The integration of the TRANSMIT system now enables travel time information to be relayed to customers as they travel the Thruway.

For additional information about TRANSalerts, please visit the Authority's website at www.nysthruway.gov/tas/index.html. For additional information about the 5-1-1 system, please visit www.511ny.org.

E-ZPass

The Authority pioneered E-ZPass and is a member of the E-ZPass Interagency Group, formed in 1990 to develop an interoperable electronic toll collection system in New York, New Jersey and Pennsylvania. The group has now grown to include 25 toll agencies/authorities in 15 states. In 2012, the Authority established more than 100,000 E-ZPass accounts and issued more than 340,000 E-ZPass tags. As of December 2012, the Authority had more than 3,000,000 active E-ZPass tags issued to Authority accounts. E-ZPass is now used by more than 21 million motorists throughout the country.

Additionally in 2012, there were over 168 million trips using E-ZPass which accounted for over 69 percent of the total number of trips on the Thruway System.

Introduced in 2004, the *E-ZPass On-the-Go* program has made obtaining an E-ZPass tag more convenient for Thruway motorists. *E-ZPass On-the-Go* is a program where pre-packaged E-ZPass tags are purchased by qualified retailers at a discounted rate and sold to customers over the counter. Customers receive a pre-paid E-ZPass tag worth \$25 that is activated upon purchase. In 2012, more than 590 retailers statewide participated in this program. (*On-the-Go* tags are currently not available for commercial vehicles.)

For additional E-ZPass information, including a list of current *E-ZPass On-the-Go* retailers, please visit www.e-zpassny.com or www.nysthruway.gov/ezpass/index.html.

V. Safety

The 2012 fatality rate on the Thruway, measured as deaths per 100 million vehicle miles traveled, was .20. The typical national rate is approximately 1.1. 2012 was the safest year in Thruway history. There were 15 fatal accidents with 17 total fatalities, the lowest since 1954.

For additional information on highway safety, please visit www.nhtsa.gov.

New York State Police

Troop T, the New York State Police unit assigned exclusively to patrol the Thruway, conducted numerous safety initiatives throughout 2012.

Thruway safety programs led by Troop T included: “Operation Work Brake” aimed at curbing aggressive driving, especially through work zones; “Buckle Up New York” a 14-day statewide seatbelt enforcement initiative; “Operation Spring Brake” and “Operation Summer Brake” which targeted the prevention of aggressive driving, speeding and DWI; safety break demonstrations aimed at educating motorists about safely sharing the road with trucks; and “Pumpkin Patrol” intended to prevent dangerous Halloween pranks. Also, in May and October Troop T conducted two “Operation Hang Up” enforcement periods which focused on motorists using cell phones while driving, a violation of New York State Law. Troop T issued more than 850 tickets for cell phone violations during the two enforcement periods.

In 2012, Troop T’s efforts to reduce speeding and DWI resulted in over 151,000 tickets issued, more than 70,000 of which were for speeding violations, 890 were arrests for DWI.

Moreover in 2012, the Commercial Vehicle Enforcement Unit inspected thousands of commercial vehicles to ensure that those with faulty equipment were removed from service.

For additional information, please visit www.troopers.ny.gov.

Traffic Management

Staff assigned to the Thruway Statewide Operations Center provided assistance with incident response and traffic monitoring along the Thruway System. This unit is staffed around-the-clock, 365 days a year by Authority and Troop T staff.

Additionally, as part of its safety program, the Authority enlists the services of NYSDOT’s Highway Emergency Local Patrol to provide Thruway customers with free roadside assistance in the Albany area and the Tappan Zee Bridge corridor. Members of this service patrol are trained to respond to incidents on limited access roadways thereby minimizing delays and improving highway operations. Services are limited to fuel, tire changes, and minor mechanical repairs. For towing services, the Authority employs authorized garages that are familiar with Thruway incident response policies and adhere to Authority guidelines regarding standards of performance, required equipment, and designated rates for services. As a commitment to

customer service, the Authority strives to provide assistance within 30 minutes of incident notification. In 2012, there were nearly 42,565 calls for towing and roadside assistance along the Thruway System. Of these, 73 percent met the standard of assistance arriving within 30 minutes.

Drowsy Driving Awareness Campaign

The Authority, in conjunction with the Department of Motor Vehicles, NYSDOT, the Governor's Traffic Safety Committee, the Department of Health Division of Injury Prevention, the New York State Motor Truck Association and the New York State Police comprise the New York State Partnership Against Drowsy Driving. Consistent with the coalition's mission to increase public awareness of the effects of driving while drowsy, the Authority promoted the campaign by issuing collaborative press releases in March and November. The releases, which warned of the dangers of drowsy driving and offered preventative measures, corresponded with the daylight savings time changes.

Reflective Pavement Marking

The Thruway Authority is currently implementing one of the nation's safest pavement striping programs. The new pavement marking system, known in the industry as "Recess Triple Drop," was engineered by Authority staff and developed with the cooperation of manufacturers, material suppliers and pavement marking contractors. This new material is more visible at night and during inclement weather.

The Thruway was the first roadway in the State system to implement this new technology. To date, this type of marking has been installed on 240 miles throughout the Thruway System and the Authority plans to install an additional 80 miles during the 2013 construction season.

VI. Efficiency and Effectiveness of Operations

All Electronic Toll Collection

In 2012, HNTB, the Authority's consultant for All-Electronic Toll Collection (AETC), developed a Detailed Feasibility Study to pilot AETC at the Yonkers and Harriman Toll Plazas. HNTB is now developing an implementation plan to install AETC at these facilities and the Tappan Zee Bridge during construction. The implementation of AETC will improve mobility and safety for motorists; reduce emissions and provide the Authority operational savings.

Maintenance Management Systems

Enhancements to the Authority's information systems were made in 2010 in conjunction with business process changes to improve efficiency and transparency. In 2006, the Authority initiated a \$10 million upgrade to its computerized financial systems, involving the consolidation of multiple systems into a single supported application. The system went live in April 2008 and included a new Enterprise Asset Management System (eAM). The Equipment, Facilities, and Intelligent Transportation Systems (ITS) Maintenance areas have been successfully integrated into the eAM System. There was also significant progress towards completing the integration of

the remaining program areas, Bridge and Highway. The integration of the Bridge and Highway Maintenance program areas is expected to be complete by the summer of 2013. At that time, all five Maintenance program areas will have a common, integrated maintenance management system. The entire Maintenance program will realize greater functionality, fully integrated financials, superior reporting, and substantially reduced data entry.

Toll Equipment

In 2012, the Authority deployed new toll equipment on the entire system. The new toll ticket equipment, based on current toll industry standards, replaced equipment that was more than 15 years old and experiencing component failures, deterioration and parts obsolescence. The new equipment utilizes a new toll ticket which is smaller in size and displays only the Class 2L (passenger vehicles) cash toll fares. The new equipment has performed well, is more convenient for our customers and has improved operational efficiency.

Customer Satisfaction Survey

Customer service has always been a hallmark of the Authority/Corporation's delivery of products and services to the citizens of and visitors to the State of New York. The organization conducts biennial customer satisfaction surveys as a means of assessing its performance. Since 1998, patrons have provided their opinions of Thruway and Canal infrastructure conditions, fee collection, travelers' services and customer information.

The seventh satisfaction survey was conducted in 2011. Survey administration began in August at the New York State Fair, select Thruway Travel Plazas and via the Authority/Corporation's websites. Data collection efforts continued through December. The survey was offered in three languages: English, French and Spanish. Approximately 3,300 people responded. Results indicated that the Authority/Corporation is fulfilling its missions to deliver high levels of safety and service. All areas were ranked favorably, with safety, ride quality, maintenance, roadside appearance and Travel Plaza restrooms receiving significantly high approval ratings. The highest dissatisfaction rate was with Travel Plaza restaurants.

Geographic Information Systems

In 2012, the GIS Team completed the development and successful rollout of the Authority/Corporation's internal web-based GIS interface, using ArcGIS Server and Microsoft Silverlight technologies. This marks a substantial improvement over the previous applications in speed, usability, and overall design. It has been very well received within the organization. The Team also put a much stronger emphasis on "cloud services" in 2012, and now uses many data sets (base maps, aerial photography, weather services, street view data, address geocoding, etc.) directly from their primary sources. This greatly reduces on-site maintenance and storage requirements and eliminates redundancy. 2012 also saw the rollout of "ArcGIS for Desktop 10.0", which was paired with the larger deployment of the Windows 7 operating system. Once released, we were able to hold long-awaited training classes to assist people to make better use of the desktop GIS tool set. Finally, a new suite of accident tools for desktop GIS is now available to aid with spatial display and analysis of the Authority's accident data.

Canal Infrastructure Management System

The Canal Corporation is undergoing an intensive effort to manage and analyze infrastructure assets. A comprehensive asset management system, the Canal Infrastructure Management System (CIMS), is being developed in phases to ultimately allow managers the ability to program capital and maintenance work in order to more efficiently allocate available funding. The initial phases of development concentrated on inventory and inspection functions, while the remaining phases will concentrate on analysis and decision making tools.

Flood Recovery

Corporation staff and contractors continued to perform Irene/Lee flood recovery and mitigation work in 2012. Recovery work is expected to be completed in 2014.

VII. Promoting Economic Development

In 2012, Canal customers benefited from various partnership activities and enhancement projects designed to revitalize Canal communities.

Canalway Grant Program

In 2012, as part of Governor Cuomo's statewide Consolidated Funding Application, the Corporation solicited grant applications for capital projects intended to enhance and promote tourism, recreation and historic interpretation along the New York State Canal System. Grants totaling \$1.3 million were awarded by the Canal Corporation in conjunction with the Governors Regional Economic Development Councils to 13 recipients.

Erie Canalway Trail

2012 was a year of many accomplishments in efforts to close the remaining 84 miles of gaps in the 361-mile trail that extends from Buffalo to Albany and to develop other Canalway Trail segments.

Construction began on three new Erie Canalway Trail segments in 2012. The Town of Arcadia in Wayne County began work on a 5-mile trail segment between Newark and Lyons. The Canal Corporation began work on a one-mile trail segment in Lyons and a 1.5-mile segment in Little Falls. The three projects are planned to be completed in 2013.

The 8 mile Amherst to Lockport project is being designed by the Canal Corporation and is scheduled to go out to bid in late 2013. The project will close one of the six key gaps in the Erie Canalway Trail system. When combined with the work underway between Newark and Lyons in Wayne County, the project will create more than 134 continuous miles of trail between the City of Buffalo in Erie County and the Village of Lyons in Wayne County.

Design continued on another Canalway Trail segment, located on the Champlain Canal, that will link the Town of Kingsbury and the Village of Fort Ann. Construction is expected in 2014.

Annual Community Outreach Events

- Canal Splash

The 7th Annual Canal Splash ran from August 10 through 12, 2012 and featured many attractions, events and activities along the 524 miles of the New York Canal System. The event, co-sponsored by the Canal Corporation, Erie Canalway National Heritage Corridor and Park & Trails New York (PTNY) included nature walks, bike rides, educational exhibits, boating events, musical performances and tours.

- Canal Clean Sweep

The Canal Corporation, in partnership with PTNY and the Environmental Facilities Corporation, worked with numerous municipalities and community groups throughout New York's Canal System to "spring clean" the canalway corridor in preparation for the 2012 Opening of the Canal System and the Canalway Trail. Canal Clean Sweep was held April 20 – 22, 2012 in conjunction with Earth Day, April 22.

- Cycling the Erie Canal

A group of riders dubbed "Team New York" – comprised of members of Governor Cuomo's Cabinet and Executive Staff and led by Canal Corporation Director Brian U. Stratton – cycled the Erie Canalway Trail from Buffalo to Albany as part of PTNY 14th annual eight-day *Cycling the Erie Canal* event to demonstrate the administration's commitment to the Erie Canal and Canalway Trail as economic engines for upstate New York.

Tug Urger and Canal Schooner Lois McClure Educational Programs

The 2012 Tug Urger Program was a resounding success. The Urger and its crew logged over 2275 miles throughout the NY Canal System this past season. 3591 school age students participated in the educational program where they were presented with a perspective of what life on the Canal was like. They learned of the Canal's significance in shaping the history of not only New York State, but of the nation. Students also learned about the importance of clean water and preventive actions to protect water quality. Also during the 2012 season, the Urger hosted approximately 5850 visitors during its many public appearances as she visited numerous communities from Buffalo to New York City and Seneca Falls to Whitehall.

The 2012 Tour of the Canal Schooner Lois McClure commemorated the Bicentennial of the War of 1812. The Lois McClure had the opportunity to visit Canada and explore this important Chapter in world and regional history. Many of the ports on the 2012 Tour were significant fortifications during the War of 1812 including Kingston, Ontario, Sackets Harbor, NY and Oswego, NY. The Lois McClure traveled the Oswego, Erie and Champlain Canals in the United States and traveled the Rideau Canal in Canada on her voyage in 2012. She visited 40 communities along her way throughout Canada, New York and Vermont.

VIII. Environmental Stewardship

The importance of environmental stewardship drives the Authority/Corporation to integrate elements of environmental preservation and energy conservation into their operations to every extent practicable. Consistent with this objective, the Authority/Corporation has accomplished, and continues to pursue, initiatives that benefit the environment and reduce their carbon footprints.

Travel Plaza Remediation

In 2012, the Authority worked diligently and proactively to carry out remedial compliance responsibilities for open spills at Authority-owned Travel Plazas and a handful of maintenance facilities. The New York State Department of Environmental Conservation is requiring the Authority, as owner of the facilities, to provide an expedited program to remediate these sites. The work is quite complex, as it involves cleaning up petroleum contamination that has been present in subsurface soil and groundwater for as long as 20 to 40 years to DEC standards. These remedial activities are being coordinated by the Authority in consultation with the Authority's fueling station vendors (currently Sunoco Inc., [R&M] and Lehigh Oil Company), and will likely take at least ten years to complete.

Spill Prevention Control and Countermeasure Plans

The Thruway Authority continues to use best management practices for oil storage and handling that incorporate spill prevention and controls to prevent releases and protect the waters of the United States. In November, the federal regulations (40 CFR Part 112) required additional spill prevention control and countermeasure considerations to be given to oil products that are contained in above ground 55 gallon or greater containers at each facility with greater than 1,320 gallons of stored oil products. As the Authority and Canal Corporation has over 40 facilities that meet these thresholds, the Authority engaged consultants to inspect and revise the respective Spill Prevention Control and Countermeasure plan for each facility. The development of these plans includes recommendations for additional controls and procedures to prevent releases to the environment. Implementation schedules are currently being developed to bring the Authority into conformance with the federal requirements.

Noise Barriers

Highway agencies are required to comply with federal regulations and State policies pertaining to highway traffic and construction noise. In accordance with these requirements, on the Interchange 23 to 24 Reconstruction Project, the Authority constructed four noise barriers totaling 3,400 feet in length. An additional six will be installed by the end of the construction project.

Alternative Fuels

In 2012, the Authority continued to meet or exceed the requirements set forth by the Federal Energy Policy Act of 1992 and New York State Executive Orders 111 and 142. The regulations urge State agencies and authorities to become less dependent on foreign oil and to improve air quality. The Authority's current fleet includes more than 550 active alternative fuel vehicles. The Authority utilizes ultra low sulfur diesel at all of its fleet fueling locations and presently uses bio-diesel in blends of B5 or B20 at ten different locations across the State. In cooperation with its fuel vendors (Sunoco Inc., [R&M] and Lehigh Oil Company), retail sale of E85 to Thruway customers is available at the New Baltimore Travel Plaza (northbound), Sloatsburg Travel Plaza and the Clarence Travel Plaza.

Wind Energy

As the demand for energy increases, the Authority is taking steps to consume less energy and make a “greener” Thruway through clean, sustainable wind energy. The Authority has designed and is now installing wind turbines at various locations along the Erie Section of the Thruway, south of Buffalo. The medium-scale turbines, each expected to produce at least 100 kilowatts of electricity, will be owned and operated by the Authority. The electricity generated by the turbines will be used internally by Authority facilities and any excess power will be fed back into the utility system under the new Net Metering Law.

Once operational, the turbines are expected to: provide an estimated 30-35 percent energy cost savings for the Authority's Buffalo Division; help fulfill the Authority's commitment to a priority goal of environmental stewardship; and assist in the attainment of the State's Renewable Energy Portfolio objectives by promoting environmentally friendly technologies.

Invasive Species

The Authority/Corporation is an active member of the New York State Invasive Species Council (Council). The Council is charged with implementing specific initiatives to protect native species and prevent the spread of invasive plants and animals. For additional information on the Council, please visit: <http://www.dec.ny.gov/animals/6989.html>.

In 2012, the Corporation was a member of the New York State Hydrilla Task Force along with the DEC, New York State Parks, U.S Fish and Wildlife Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency and others local entities. The group was assembled to develop rapid response, eradication, and spread prevention plans for an outbreak of a highly invasive aquatic plant, hydrilla verticillata (known commonly as 'hydrilla'). Hydrilla was found in Cayuga Inlet in August 2011 and in the western portion of the Erie Canal in the town of Tonawanda in September 2012.

Ongoing monitoring and treatment efforts will continue into the future to ensure that the hydrilla outbreak has been addressed. The Corporation has increased its aquatic invasive species outreach and education efforts through the installation of guidance/reminder signs at the Corporation's boat launches to increase the awareness of the necessity of cleaning and drying boating and fishing equipment before using it in another waterbody.

Wetland and Water Protection and Mitigation

The Authority, in collaboration with the U.S. Army Corps of Engineers, is currently creating wetlands along the Thruway between Interchange 23 and 24 in Albany County. This wetland creation project is being undertaken as an environmental mitigation for road reconstruction that will impact federal wetland areas within this highway section. In addition, 11 stormwater ponds are being installed to reduce runoff during reconstruction. Pursuant to the project goals, the roadside landscape will be restored around the established wetlands and stormwater ponds.

Monitoring continued in 2012 at other wetlands that were previously created for the Newburgh, Syracuse, and Buffalo (Evangola Site) reconstruction projects.

Canadaway Creek Mitigation Project

In 2011, the Authority, in collaboration with DEC, accomplished a comprehensive mitigation plan at the DEC Canadaway Creek Conservation Area in Chautauqua County. Phase 1 consisted of the creation of 0.25 acres of wetland within the Conservation Area. Phase 2 resulted in the restoration, stabilization and enhancement of 600 feet of Canadaway Creek. Both wetland and stream mitigation were necessary to obtain project specific environmental permits for the Authority's capital reconstruction of I-90 near the Pennsylvania State Line.

The Authority continues to monitor both phases of the project for the five-year period pursuant to the U. S. Army Corps of Engineers project specific permit. Activities will involve annual technical analysis and report preparation on the status of progression and success of the overall mitigation effort.

Stormwater Management Program

Thruway Travel Plazas serve as venues for community outreach activities as part of a comprehensive Stormwater Management Program. The Program, referred to as "Connecting the Drops," is intended to educate New Yorkers on the importance of water quality and stormwater pollution prevention and remind them that what is released in the environment can reach water bodies and put aquatic life, recreation and even drinking water at risk. The Program targets Authority/Corporation employees, as well as motorists, boaters and others who use the Thruway and Canal Systems. Currently in each Travel Plaza, an educational video plays throughout the day informing patrons of the importance of preventing stormwater pollution. In addition, educational brochures are on-hand that provide information on protecting water quality, as well as information on the Authority/Corporation's Stormwater Management Program. The Authority continues to develop employee training and outreach program materials, and submits an annual status report to DEC.

For additional information about the "Connecting the Drops" program, please visit the Authority's website at www.thruway.ny.gov/environmental/drops/index/html.

General Electric Hudson River Dredging

The Corporation remained involved in the GE PCB dredging project in the Upper Hudson River, working in concert with the DEC, New York State Department of Health, New York State Office of the Attorney General, US Environmental Protection Agency and GE. During 2012, Corporation staff worked at resolving issues related to Hudson River floodplain contamination and potential public health risks; reviewed design modifications for Phase 2 dredging; provided oversight of the project relating to navigation and canal issues; and attended regular meetings with GE, EPA, and DEC to facilitate dredging operations and logistics. Corporation staff also began working with the Office of the Attorney General to prepare for litigation associated with restoration of the navigation channel in the Hudson River. Corporation staff, along with OAG staff, met with representatives of General Electric on two occasions to discuss a potential settlement of the claims related to the contamination of the river.