St. Lawrence River: High-Tech Trend Setter

Written by Kara Dunn posted on September 13, 2012 07:43

The St. Lawrence River has served as an avenue of exploration, a battleground for national freedom fighters, a platform for engineering ingenuity, and a sparkling playground. Its latest role is as a testing ground for high-tech navigation and safety innovation.

In July, New York Sea Grant announced the debut of the new St. Lawrence River Boaters' Forecast, a real-time application of the Great Lakes Observing System for recreational boaters. Boaters, marina operators, and anyone with a computer or smart phone can access the easy-to-use Web site.

(L to r) U.S. Power Squadron St. Lawrence River District Commander Charlie Gray, New York Sea Grant Coastal Recreation and Tourism Specialist Dave White, and Great Lakes Seaway Trail President and CEO Mike Bristol announced the availability of the St. Lawrence River Boaters' Forecast resources in Clayton in July. Photo: Kara Lynn Dunn

The St. Lawrence River's telemetric buoys feed data into the Great Lakes Observing System that is an intricate network connecting the many government agencies, academic institutions, science-based organizations and others collecting data on the physical, chemical and biological characteristics of the Great Lakes system. Aggregated data is used to help scientists and citizens better understand the Great Lakes system, predict its future conditions, and offer information for resource managers working with diverse stakeholder groups.

One of the many data collection buoys that feed information into the Great Lakes Observing System. Photo: www.glos.us

Through the new St. Lawrence River Boaters Forecast, the bi-national observing system provides current-time and forecasted water current and water depth data for points all along the River. Users can simply click on their desired locations to see the readings now and 12 hours into the future, and yes, conditions can change that fast.

"Weather events, pooling, ponding, and drawdowns in the system can dramatically change conditions in a short period of time on the St. Lawrence River," says New York Sea Grant Coastal Recreation and Tourism Specialist Dave White. "This new technology applied to the St. Lawrence River now will help boaters plan and adjust their travel based on real-time and immediate future forecasting.

"This is another tool that boaters and divers can use in addition to charts and weather forecasts about atmospheric conditions. The high-tech access adds what's happening in and

This map shows expected 12-hour-ahead water depths and surface current speeds. The map is part of the Great Lakes Observing System's new high-tech forecasting tool that will be adapted for use by boaters, including kayakers and canoeists, throughout the Great Lakes Basin. Photo: www.glos.us

under the water. It provides information on two critical pieces of information – the water current and water depth for boaters and for divers," White says.

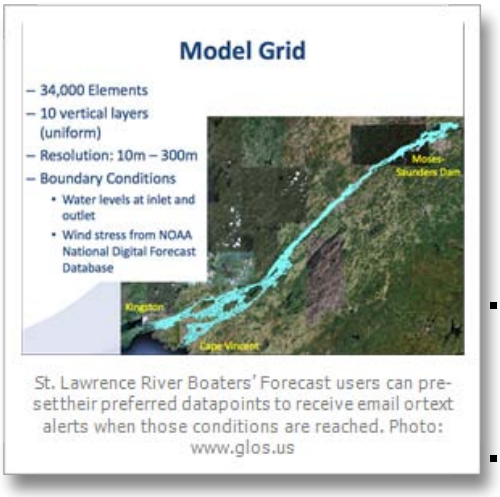
He goes on, "Water depth, for example, is critical to boaters who want to know if their vessel's keel can access the harbor where they want to go and that the depth will be sufficient in their home port six, eight, or twelve hours later when they want to return."

"For divers, knowing the water current velocity where they will be diving and any expected changes for the time they will be in the water enhances their safety," he adds.

The Great Lakes Observing System incorporates multiple data sources for its St. Lawrence River Boaters' Forecast. Photo: www.glos.us

Users can pre-set their own safety datapoints, e.g., a specific water depth or water current speed, and the Boaters Forecast will send an email or text alert when that point is reached. Knowing this information helps boaters realize when they should head back to homeport or seek a safe haven.

Global Partnership Developed New Tool



St. Lawrence River Boaters' Forecast users can pre-set their preferred datapoints to receive email or text alerts when those conditions are reached. Photo: www.glos.us

This new technology was developed by a partnership of the Great Lakes Observing System (GLOS), the National Oceanic and Atmospheric Administration (NOAA) Great Lakes Environmental Research Lab (GLERL), and New York Sea Grant. Data sources include the river buoys and Environment Canada.

Four public meetings held along the River in Alexandria Bay and Ogdensburg provided developers with actual boater input used to enhance the hydrodynamic modeling initiated by researchers at the Cooperative Institute for Limnology and Ecosystem Research at the University of Michigan and with GLERL.

- The New York State Office of Parks, Recreation and Historic Preservation, 1000 Islands International Tourism Council and other local organizations provided information for the online directories of marinas and boat launches from north of Massena to Mud Bay south of Cape Vincent.
- The Gulf of Maine Research Institute, Portland, ME, developed the boater-friendly Web Site with boaters helping to fine tune the new data resource. In early feedback, St. Lawrence River boater John Cannon told GLOS officials, "This tool will be very helpful to anticipate changes in river conditions."

Kelli Paige, GLOS Program Coordinator, Ann Arbor, MI, says, "This web-based tool was customized to address information needs specific to boaters on the St. Lawrence River, including information on marina and boat launch locations. In anticipation of the 2013 boating season, we are now extending the scope of the new tool that provides the information needed for better and safer boating days across the entire Great Lakes Basin."

Paige is asking recreational boaters to participate in a one-hour webinar on the Boaters' Forecast tool and to offer feedback on how to enhance the tool for a basin-wide application. Webinars will be held at 6pm Eastern Time on **Tuesday, September 18 and at 2pm ET on Thursday, September 27; register respectively at https://www1.gotomeeting.com/register/476515648 or https://www1.gotomeeting.com/register/896617801.**

New York Sea Grant, a cooperative program of Cornell University and the State University of New York under the National Sea Grant College Program of NOAA, promotes coastal vitality, environmental stability, and citizen awareness about the State's Great Lakes and marine resources and can be accessed via www.nyseagrant.org with Facebook, Twitter, YouTube and RSS links.

Web Offers Blue Byway Resources for Those Who Love the Water

New York's 1000 Islands region, with a bit of inspiration from Canada's Heritage Highway, is the birthplace of the idea that has become the Great Lakes Seaway Trail National Scenic Byway, a 518-mile leisure driving, boating, bicycling and touring route that

parallels the St. Lawrence River, Lake Ontario, the Niagara River and Lake Erie in New York and Pennsylvania.

Clayton restaurateur and tourism promoter the late Dr. Vincent J. Dee, Sr. and his protégé the late Seaway Trail, Inc. President and CEO Teresa Mitchell, also of Clayton, guided the development of diverse theme-based travel opportunities for the "blue byway." For example, boaters interested in recreational port hopping now have an online resource showing 24 major harbors along the byway from the air. The photos by John Griebsch offer a bird's eye expansive view of harbors form Ogdensburg on the St. Lawrence River to Erie, PA's Bayfront.

Diver Phil Church explores the wreck of The Islander, one of the shipwrecks marked by a Great Lakes Seaway Trail "Outdoor Storyteller" interpretive panel. The sidewheel steamer burned and sank in Alexandria Bay in 1909. Photo: Phillip R. Church

This Great Lakes Seaway Trail interpretive panel for the wreck of The Islander at Alexandria Bay is one of more than 100 "Outdoor Storytellers" sharing the maritime and cultural heritage of the "blue byway" that stretches out along the St. Lawrence River, Lake Ontario, Niagara River and Lake Erie shorelines. Photo: Seaway Trail, Inc.

The online resource at www.seawaytrail.com/boating indicates which of 14 different services (transient and seasonal docking, launch facilities, fuel, repairs, pumpouts, etc.) is available at the individual ports.

Scuba divers are increasingly drawn to the clear freshwaters of the Great Lakes Seaway Trail. Among their destinations are five fascinating underwater sites featuring shipwrecks and shoals, drift and deep diving opportunities found in the Diver's Guide at www.seawaytrail.com/dive.

Twenty-nine historic and replica lighthouses await those who enjoy the maritime "land"-scape. A Take the Blueway itinerary at www.seawaytrail.com/roadtrips suggests a day of diving in the 1000 islands, a day kayaking or bicycling at Irondequoit Creek or Buffalo, and a day paddling at Erie, PA's Presque Isle State Park on a seven-mile peninsula that extends into Lake Erie.

By Kara Lynn Dunn

Kara Lynn Dunn is the publicist for the New York Sea Grant Great Lakes Program and the Great Lakes Seaway Trail. She lives in Mannsville, NY, with her husband and photographer, Brian Whattam, who grew up in Three Mile Bay, NY. She earned a journalism degree at the University of Pittsburgh; is a freelance writer, publicist, and designer; and has authored two books on North Country natural and historic sites. Kara vividly recalls childhood camping adventures along the St. Lawrence River with the Village of Mannsville Summer Recreation Program.

We thank Kara for keeping TI Life up-to-date with the many activities for both the NY Sea Grant and Great Lakes Seaway Trail. This is another fine example of why living in the North Country is special.

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