



# Clean beach, happy swimmers

## Vaisala at the Presque Isle State Park

The new Tom Ridge Environmental Center (TREC) is located at the entrance to Presque Isle State Park in Erie, Pennsylvania. TREC is open year-round, offering visitors an insight to what they can expect to experience at Presque Isle State Park and the surrounding Great Lakes Region.

TREC also serves as a center for research, contributing to conservation efforts and promoting environmental awareness, helping to preserve the unparalleled beauty of Presque Isle, the site of Pennsylvania's only lakeshore.

The Regional Science Consortium is one of the many educational and research organizations establishing residence in the Tom Ridge Environmental

Center at Presque Isle. The Consortium is a collaborative, non-profit organization that focuses on and coordinates educational and research projects for Lake Erie and the upper Ohio River Basin.

The Consortium's objective is to have all branches of science working collaboratively in order to share expertise, equipment and ideas while sharing researchers and students as well. One of the Consortium's most recent educational and research tools is a Vaisala Weather Transmitter WXT510 network with NexSens Technology real-time radio telemetry. Systems are installed on the TREC Tower and near the Lake Erie shores at Presque Isle State Park.

### The monitoring system

Two site locations were selected within the Presque Isle State Park to monitor weather. The first weather station location was selected near Presque Isle's Lake Erie shoreline, while a second weather station location was selected on top of the TREC's 75-foot tall glass tower.

Researchers at the Consortium selected the Vaisala equipment to measure six important weather parameters at two locations in Presque Isle State Park. The WXT510 simultaneously measures wind speed and direction, liquid precipitation, barometric pressure, temperature, and relative humidity. Complementing the Vaisala weather sensor is a global solar radiation sensor.

### Safe swimming

The weather data collected by the WXT510 is used to augment a Predictive

Model for the determination of E. coli contamination on the beaches of Presque Isle. It is part of a complex system that provides information for making decisions regarding beach advisories and/or restrictions to swimming.

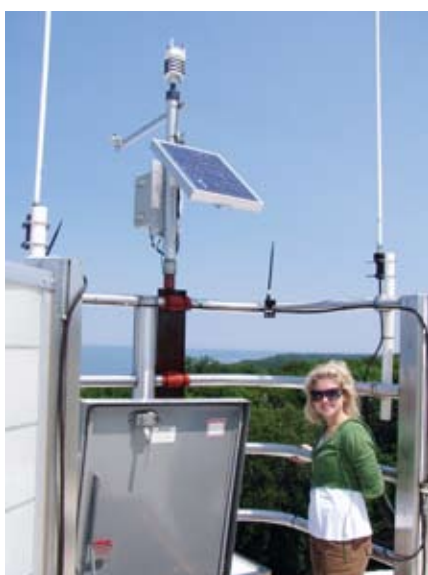
Both the Vaisala Weather Transmitter WXT510 and the pyranometer feature a plug-and-play interface to NexSens' real-time data logging systems. Furthermore, the complete data logging and sensor system package is conveniently mounted to a 2" mast.

At user-specified intervals throughout the day, weather data is logged into the NexSens 4100-iSIC data loggers and sent via radio telemetry to a radio base station within the Center. There, iChart software collects the weather data and automatically posts it to NexSens' web datacenter. This allows virtually unlimited access to the weather data for Consortium members throughout the United States to use the data in their research or to remotely determine weather conditions for planning sampling trips at Presque Isle.

### Increasing the amount of real-time data

Looking ahead, the Regional Science Consortium is considering adding other real-time environmental monitoring venues that will complement the weather data logging system, including buoy-based water quality monitoring devices on Lake Erie. ■

**Further information:**  
[www.RegSciConsort.com](http://www.RegSciConsort.com)



*Nicole Phinney, an intern at the Regional Science Consortium, pictured at one of the weather station sites.*