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Water Quality of the Coastal Zone of Lake Ontario- LOCI revisited

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cei sphere

A Publication of the Center for Environmental Information

INSIDE:

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Have you renewed your membership for 2007?

A new year brings new promises and opportunities. It is also a time to think back and reflect on all of CEI's accomplishments in 2006, which would not have been possible without your generous support. In the New Year, we hope that we can continue to depend on your assistance as CEI works to resolve our region's key environmental problems.

Thank you.

Water quality of the coastal zone of Lake Ontario - LOCI revisited

By Joseph C. Makarewicz, Department of Environmental Science and Biology, SUNY Brockport

Over the past four years an unprecedented spatial analysis of the water quality of the coastal zone, embayments and selected streams of Lake Ontario has been conducted as part of the Lake Ontario Coastal Initiative (LOCI). Forty-five sites in New York waters of Lake Ontario ranging from the Niagara River to the Chaumont Bay near the St. Lawrence River were sampled at "swimmable depth". These data provide a current, comprehensive picture of the status of water quality within New York's coastal zone. Water quality was best along the eastern shore of Lake Ontario with pockets of concern at the Oswego River, Sandy Pond and Sackets Harbor.

generally exceeded the NYSDEC Ambient Water Quality Guideline. Unlike the water quality of the offshore of Lake Ontario, which has greatly improved over the past 25 years, the waters of the nearshore along the southwestern portion of the coastline and some of the embayments and rivers of Lake Ontario have not. This problem in the coastal zone appears to extend west of the Niagara River into the "Golden Horseshoe", the area extending from Hamilton through Burlington to Toronto. A recent "white paper" delivered to the International Joint Commission titled "The Lake Ontario Coastal Zone - Status and Assessment"

(Continued on page 2)

For example, levels of microcystin, a toxin produced by some types of algae, occasionally exceeded the World Health Organization Guidelines of 1 µg/L at Sackets Harbor. Of greater concern is the element phosphorus. This nutrient stimulates the growth of algae and was observed at high levels east of the Genesee River at Sodus Bay, Port Bay and Oswego Harbor. The entire coastline from the Niagara River to the Genesee River also had elevated levels of phosphorus, soil suspended in the water, nitrate and organic nitrogen along the shoreline in the zone where people recreate and are in most contact with Lake Ontario. Phosphorus levels



Ted Lewis of SUNY Brockport collecting zooplankton from a Lake Ontario shoreline site at Olcott, NY

How to Sign Up

To apply for the valuable technical assistance, or to register for the April 26th workshop, please contact CEI at cei@ceinfo.org or 585-262-2870. If you have questions about the workshop, please email Sally Howard at showard@solaraconcepts.com, leave a message at CEI, or see www.ceinfo.org/care.php.

Lake Ontario Water Quality (Continued from page 1)

by Todd Howell of the Ontario Ministry of the Environment and Joe Makarewicz identified the problems of the coastal zone of Lake Ontario as international.

As a result, one of the focuses of the Lake Ontario Intensive Year 2008 will be to identify the causes of these coastal problems. It may be that a new phenomenon for the Great Lakes, a process called the phosphorus shunt, may be magnifying the problem. This process may be sequestering phosphorus in the coastal zone and reducing the amount moving into deeper waters where it is diluted out. Some of the causes of these problems are known and are being tackled through funding from the Environmental Protection Agency and the Finger Lakes Lake Ontario Watershed Protection Alliance

(FL-LOWPA). For instance, the Orleans County Soil and Water Conservation District has recently received funding from EPA to implement management practices in Oak Orchard Creek to retain soil and phosphorus in the watershed thus reducing losses to the nearshore of Lake Ontario. As action-oriented remediation projects of this type with a science base are implemented up and down the coastline, we hope that improvements in the coastal zone will be realized. Programs, such as the Lake Ontario Coastal Initiative, provide the regional grass-roots support that focus attention on coastal issues making improvements of water quality a realistic goal for the future.

Neighborhood Toxics Educator (Continued from page 2)

resident, who had made repeated hospital visits for emergency medical treatment, a significant problem with basement moisture and mold was identified.

The Monroe County Health Department Indoor Air Quality inspector was called and made an immediate visit to the home. Working in cooperation with the local housing office and the Department of Social Services, Ted was able to help relocate the family to a safer residence. This example of education, community agency cooperation, and advocacy captures the essence of CARE.

CEI NEWS

Hellos and Goodbyes in 2007

Some changes were ushered in at CEI in January. Cindy M. Stachowski, CEI's Executive Director since June 2005, has moved on to other opportunities. Lee M. Loomis, a former Board Member and VP for Programs at CEI, has been appointed by the Board as CEI's Acting Executive Director. Lee retired from Rochester Gas & Electric Corp. in 2003 as a Senior Acct. Mgr. in the Business Customer Service Dept. His 30+ year career with the utility also included 12 years as a Senior Research Engineer where he developed and managed RD&D projects in energy end-use, energy conservation and alternate energies technologies. He is a graduate of Clarkson University and RIT (MBA), a Past President and a Director of the Rochester Engineering Society, past Chairman of the Monroe County Environmental Management Council and a Regional Vice-Chair of the American Society of Heating, Refrigerating & Air-conditioning Engineers.

We welcome Lee and wish Cindy all the best in her future endeavors!!

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