

LAKE HURON SOUTHEAST SHORE Newsletter

A CANADIAN EFFORT IN SUPPORT OF THE LAKE HURON BINATIONAL PARTNERSHIP - SUMMER 2010

Southeast Shore Communities Team Up to Improve Water Quality and Conserve Biodiversity

The southeast shoreline and watersheds of Lake Huron run from Tobermory south to Sarnia, and include the watersheds of the Saugeen, Maitland, Bayfield, and Ausable rivers, as well as many smaller tributaries, creeks and gullies. The farmland is among the most productive in Ontario and the ribbon of shoreline has one of the longest continuous stretches of beachfront in the Great Lakes with a long history of recreational use and cottaging.

While issues of poor water quality, including beach postings and algae fouling, persist, a great deal of work has gone in to improve water quality and address problems at their source. Youth, local residents, and volunteers are teaming up with municipalities, conservation authorities and federal and provincial governments in new and creative ways to take on innovative projects in their watersheds. In this newsletter, you'll read about landowners implementing beneficial management practices, volunteers collecting water samples, and youth and teachers being inspired to take action in their local communities. A basin-wide biodiversity strategy has also been developed and this newsletter features articles on how local place-based biodiversity plans are being implemented and tested which will protect and enhance critical habitat that is vital to sustaining populations of plants, animals and fish.

In 2010, work continues to build on the successes of the projects in this newsletter, which will help to restore and protect the ecosystem of the region and ultimately, Lake Huron.



The Southeast Shore area of interest stretches from Sarnia to the Singing Sands near Tobermory. Credit: The Nature Conservancy of Canada.

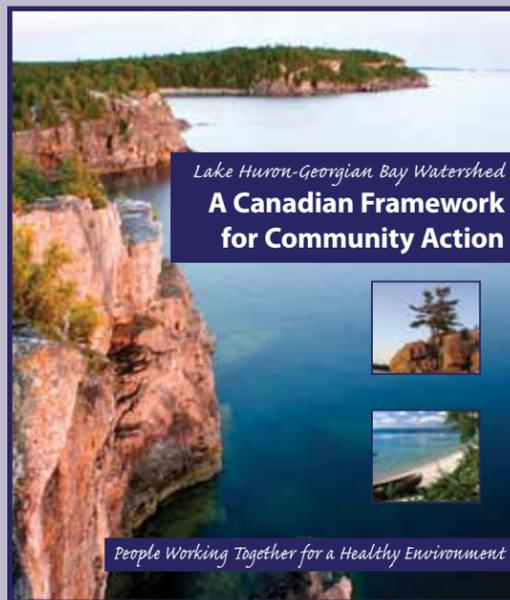
Youth and Teacher Summits Support Community Action

Since 2007, approximately 100 students from around the Canadian Lake Huron basin have participated in Youth Summits in Tobermory, Parry Sound and Bayfield. These Summits have been hosted by local natural resource organizations and supported by federal and provincial agencies working on the Lake Huron-Georgian Bay Framework for Community Action. These Youth Summits have encouraged the students to work with mentors (often mayors, municipal councillors and teachers) in their home communities and organize school events to raise awareness of Lake Huron and to foster opportunities for local and collaborative community activities to address the future of the lake ecosystem.

In 2010, a Teachers Summit will be added and is planned for September in Goderich. The goal of the Teacher Summit is to connect youth with local watershed initiatives: by linking their high-school teachers with local environmental resources, and by providing the teachers with information they need about local biodiversity and environmental issues. Approximately twenty-five teachers from Sarnia to Kincardine have registered for the event. Preparations are also underway for the fourth annual Youth Summit to be held in Midland.



Canadian Framework For Community Action



The Lake Huron Watershed Canadian Framework for Community Action employs an integrated process that is linked to a set of fundamental principles. These principles promote and guide collaborative, science-based approaches that align individuals, communities and government agencies in taking the most effective conservation and protection actions to achieve lasting results. The Framework will facilitate sharing experiences between these various groups in order to enhance a lakewide commitment for a healthy and sustainable Lake Huron watershed. You can download a copy of the framework and sign the charter at www.lakehuroncommunityaction.ca.



Lake Huron Binational Partnership

Lakewide environmental management, restoration and protection activities in the Lake Huron basin are coordinated through the Lake Huron Binational Partnership. The United States Environmental Protection Agency, Environment Canada, Michigan Department of Environmental Quality, and Ontario's Ministries of the Environment and Natural Resources form the core of the Partnership by providing leadership and coordination. A flexible membership on an issue-by-issue basis, is inclusive of other agencies and levels of government, Tribes/First Nations, non-government organizations and the public. To learn more, visit www.binational.net.

Lake Huron Southeast Shore Working Group

The Southeast Shore Working Group, established in 2002, is a collaborative effort of federal and provincial agencies, health units, conservation authorities, and non-government organizations such as the Lake Huron Centre for Coastal Conservation and Environmental Defence. The mandate of the Working Group is to promote a collaborative, science-based approach to address problems such as bacterial and algal fouling along the shore. Research, source identification and the recommendation of remedial measures are all part of the Group's activities.

For more information on the Southeast Shore Working Group and the projects in this newsletter, go to www.lakehuroncommunityaction.ca and follow the link at the bottom of the page.

Southeast Shore Working Group member organizations are: Environment Canada; Ontario Ministry of the Environment; Ontario Ministry of Natural Resources; Ontario Ministry of Agriculture, Food and Rural Affairs; Ausable Bayfield Conservation Authority, Maitland Valley Conservation Authority, Saugeen Valley Conservation Authority and St. Clair Region Conservation Authority; Huron County Health Unit; Grey Bruce Health Unit; Environmental Defense; Lake Huron Centre for Coastal Conservation; and Bruce Power.



Visitors soak in the view at Southampton Beach on Lake Huron. Credit: Matt Shelter.

Penetangore Watershed Study Benefits from Provincial Funding

The Saugeen Valley Conservation Authority (SVCA) has received \$19,900 for a one-year study of the relationship between land use and ecosystem health in the Penetangore watershed. The award was provided by the Ontario Ministry of the Environment's Ontario Community Environmental Fund, which directs monies obtained through Environmental Penalties into projects located in the watersheds where the violations occurred. Along with the SVCA, private landowners and other groups such as the Pine River Watershed Initiative Network are participating in the project.

Located in the Pentagore watershed, Pine River and Clark Creek are small low-flow streams that drain into Lake Huron near Kincardine. These streams have elevated levels of nutrients and contaminants, and local residents are concerned about poor water quality and algal blooms.

The study began in May 2010 and focuses on 24 sites along the Pine River (21 sites) and Clark Creek

(3 sites) in the Township of Huron-Kinloss. For each sampling location, the study will collect biological community and water chemistry data, and fisheries assessments will be conducted.

This study will identify changes and patterns in water quality and biological communities, including algal blooms, and measure the vulnerability of each stream section to land use and other stressors. Maps of land-use, land-cover, and measures of agricultural intensity will also be created. The new information will help to determine priority restoration sites and projects for the future.

For more information about the Pentagore watershed project, please contact SVCA's Martha Nicol at 519-364-1255 Ext. 39, or Jo-Anne Harbinson at 519-364-1255 Ext. 35. For more information about the Ontario Community Environmental Fund, including eligible locations and criteria, visit <http://www.ene.gov.on.ca/en/about/penalties/ocef/>.



Collecting benthic (bug) samples is a key component of the Penetangore watershed study. Credit: Saugeen Valley Conservation Authority.

Pine River Watershed Initiative Network Takes Action to Address Water Quality

The Pine River Watershed Initiative Network (PRWIN) began in 2000 as a group of local landowners concerned about declining water quality in the Pine River watershed near Kincardine. Their first project was to address threats to water quality from a large-scale factory farm. This process took several years, but was successful. The focus of the group has now shifted to other ways of improving water quality in the Pine River, especially the restoration of riparian buffer strips on cash crop and livestock farms.

Since 2006, PRWIN has planted over 120,000 trees on riparian buffer strips in partnership with local landowners, the Saugeen Valley Conservation Authority, Maitland Valley Conservation Authority, municipal, provincial and federal agencies, and local industry and volunteer groups.



Volunteer tree planters from the Ripley 4H Club, Rotary Club and PRWIN members get ready to plant. Credit: Adrienne Mason.

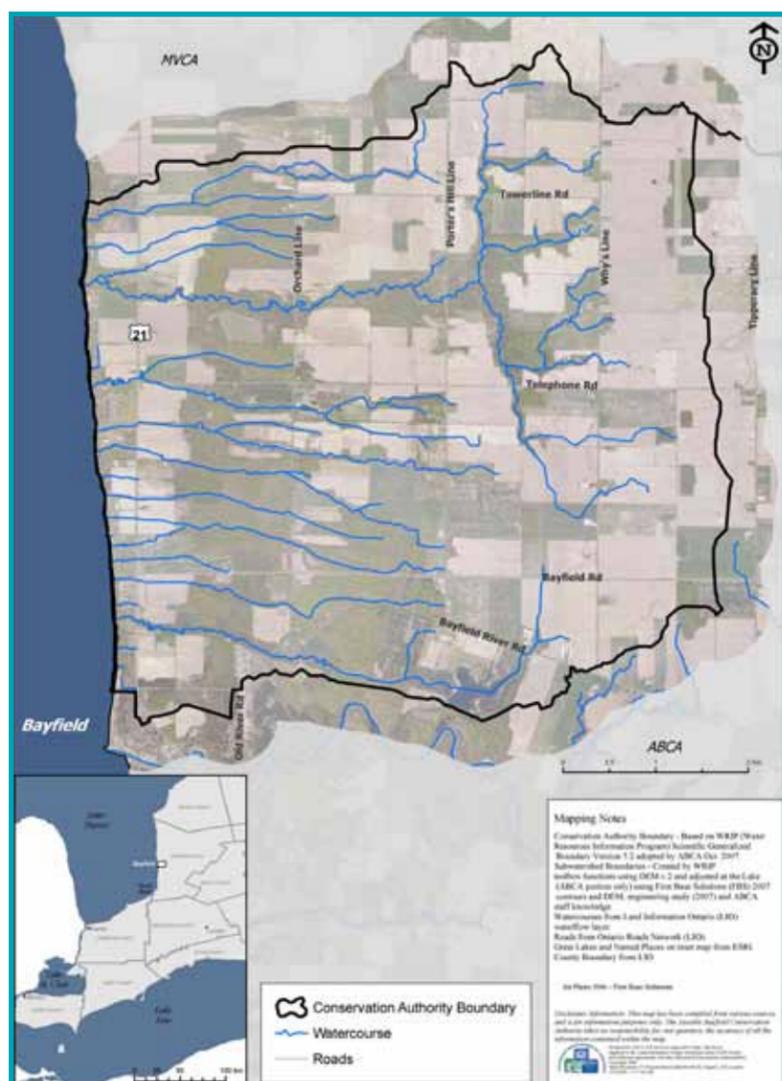
In addition, PRWIN has taken on other initiatives to improve water quality in the Pine River. They have worked with University of Waterloo to install 4 nitrate filters in the watershed. This pilot project will determine if the filters effectively remove

nitrate from the water, to improve water quality and decrease algal blooms. Other projects include the construction of 5 kilometres of cattle exclusion fencing, 5 alternative water sources for livestock and providing local students with a hands-on introduction to restoration ecology at a local native plant nursery.

All of the projects PRWIN has initiated and completed would not have been possible without the support of local, municipal, provincial and federal governments and an environmentally conscious and co-operative community. With these partners, PRWIN will continue to improve water quality in the Pine River watershed.

For more information about the projects, please contact Adrienne Mason, PRWIN Coordinator at adriennemason@trentu.ca.

Government of Canada Funding Supports Water Quality Enhancements in Bayfield North Watersheds



The Bayfield North Watersheds Area. Credit: Ausable Bayfield Conservation Authority.

The Ausable Bayfield Conservation Foundation has received Government of Canada funding to work with four landowners to enhance water quality within the Bayfield North watersheds. This project is being undertaken with the financial support of the Government of Canada provided through Environment Canada's EcoAction Community Funding Program.

The Conservation Foundation will help the landowners undertake beneficial management practices on their properties, with support from the Ausable Bayfield Conservation Authority. This work is part of the continued efforts of the Bayfield North Watersheds Management Plan which recommends protecting the natural environment and improving water quality while recognizing the need to provide a rural livelihood for local people.

"This project would not be possible without the Government of Canada

or the dedicated commitment of the participating landowners," said Hope Brock, Healthy Watersheds Technician at the Ausable Bayfield Conservation Authority who is assisting with the project.

During the development of the plan, workshops and watershed tours explained the benefit of rural beneficial management practices. Since 2007, over 30 projects such as tree planting and stream bank restoration have been initiated in this 40 square kilometre area, with financial support from the Ontario Ministry of Natural Resources. Over the next 5 to 10 years, local agencies such as the Ausable Bayfield Conservation Authority will continue to support this work and the Watershed Management Plan.

For more information, please contact Hope Brock at the Ausable Bayfield Conservation Authority at (519) 235-2610 or hbrock@abca.on.ca or visit these web sites:

- Environment Canada's EcoAction Community Funding Program <http://www.ec.gc.ca/ecoaction>
- Bayfield North Watersheds Management Plan http://www.abca.on.ca/downloads/BNW_Plan_Version_8_15032010_small.pdf

Volunteers and Agencies Team Up to Monitor Water Quality in Tributaries

Since 2000, dedicated volunteers from the Ashfield-Colborne Lakefront Association (ACLA) have been sampling water in twelve streams from the Maitland River north to Boyd's Creek, just south of Highway



Water sampling in local streams provides valuable information for many different organizations. Credit: Ausable Bayfield Conservation Authority.

86. The project was started in 2000 by the late Geoff Walker, a generous supporter of environmental activities. Since 2001, testing of the water samples has been accomplished by many volunteers working in partnership with the Maitland Valley Conservation Authority (MVCA), with support from the ACLA and the Township of Ashfield-Colborne-Wawanosh.

ACLA is a not-for-profit umbrella organization that represents the lakefront associations from Amberley to Goderich in Ashfield-Colborne-Wawanosh Township, Huron County, Ontario. Their mission is to take action to address common concerns of the lakefront communities. The top three values that membership in ACLA provides to the lakefront communities are:

- improved water quality;
- enhanced environmental stewardship;
- improved communication with local agencies and decision-makers.

Water sampling is simple to do and produces valuable results. Every other Tuesday, volunteer samplers Mike and Allison McElhone take a drive down Highway 21, and at 12 road crossing sites, the duo takes stream water samples in compliance with monitoring protocols. Once the samples have been collected, they are couriered to a laboratory where water quality parameters are analysed.

In addition to the ACLA and MVCA, the results of the tests have been used by the Ontario Ministry of the Environment, the local source water protection committee, Lake Huron Centre for Coastal Conservation, and other organizations.

Results of the water quality testing are collated and reported annually by the MVCA, and are also published on the ACLA website at www.northwesthuron.com under "In the Streams".

Port Albert Erosion Control Study Making Change on a Community Scale

During the winter of 2008-2009 portions of the Maitland, Nine Mile and Eighteen Mile River watersheds experienced high intensity flooding and erosion events. The significant erosion along portions of the Nine Mile River in particular, created concerns in Port Albert for the safety of existing structures, development and residents alike. An Erosion Study was initiated by the Port Albert Cottage Association with assistance from the Maitland Valley Conservation Authority (MVCA) to collect data for an adaptive management plan that could be used to:

- Improve safety by providing an erosion plan for specific areas;
- Minimize environmental impacts on fish and maintain fish habitat where possible.

- Maintain the river's natural flow, course and shape.

Community-based leadership of the Port Albert Cottage Owners Association saves time and money and once completed, the Adaptive Management Plan will guide future planning to minimize or resolve erosion in years to come.

The Port Albert Erosion Control Study presents both rewards and challenges for the local community, the Nine Mile River and ultimately Lake Huron. Continued community ownership of the project will be a key to its future achievements.

For more information, please contact the MVCA at maitland@mvca.on.ca or phone (519) 335-3557.



The Nine Mile River drains into Lake Huron at Port Albert, just north of Goderich. Credit: Maitland Valley Conservation Authority.

Implementing Best Management in the Maitland and Bayfield Watersheds

Landowners in Huron and Perth counties have been busy implementing beneficial management practices throughout the Maitland and Bayfield rivers to help, enhance water flows, improve water quality and restore fish habitat.



Streamside buffers help to reduce erosion, increase bank stability, cool water temperatures and provide wildlife corridors. Credit: Ausable Bayfield Conservation Authority.

The Ontario Ministry of Natural Resources and the Huron County Stewardship Council are working with project partners the Ausable Bayfield and Maitland Valley Conservation Authorities and private landowners to gradually reverse a history of clearing forests, draining wetlands, and loss of fish and wildlife habitat.

Through this project more than 30 restoration projects have been completed with 70,000 trees and shrubs being planted to establish more than 20 kilometres of vegetative buffer strips along waterways. Some of the other benefits of these projects include: creating approximately 62 hectares of wetland and upland habitat for birds and other wildlife, and shading of coldwater streams important for fish species such as trout and salmon. A further 15 kilometres of fencing to keep livestock out of waterways has also been installed.

For more information, contact: Steve Bowers, Huron County Stewardship Coordinator, Ontario Ministry of Natural Resources, Clinton (519) 482-3661; or Andy McKee, Lake Huron COA Basin Coordinator, Upper Great Lakes Management Unit – Lake Huron, Ontario Ministry of Natural Resources, Owen Sound (519) 371-5449.



Fencing of livestock from streams will reduce the inputs of bacteria and nutrients in streams. Credit: Daniel Holmes.

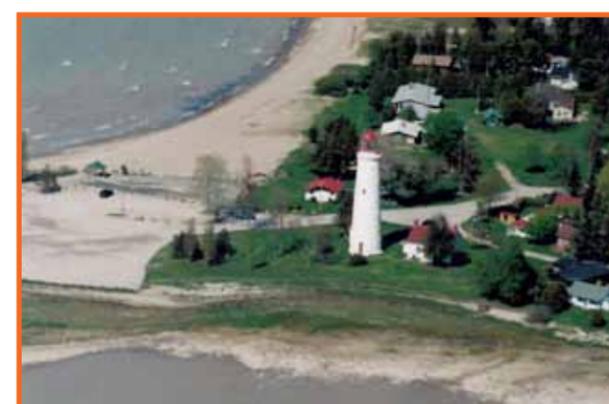
Water Quality Study Underway at Point Clark and Inverhuron Bay

Algal fouling of beaches has been a long-term source of frustration for residents and tourists alike. A water quality study by the Ontario Ministry of the Environment in collaboration with researchers at the University of Waterloo is underway at Point Clark and Inverhuron Bay.

The study is gathering a diverse range of scientific data on the nearshore conditions of the lake, in part, to better understand the many factors which contribute to the algae problem. Water quality surveys will be used to assess nutrient discharges to the lake and the mixing patterns of nutrients in the water column and provide basic information to

describe the habitat and growth conditions for algae. Aquatic invasive species such as the zebra mussel and round goby have the potential to change the amount of nutrients in the water column, or growth rate of algal blooms, so this study is also examining the effects that recent changes in the aquatic food web could be having on nutrient cycling in the lake.

Results of this study may provide local residents, conservation authorities, and resource management agencies with important information that they can use to reduce algal blooms, improve water quality and prevent algal fouling of beaches in the future.



The beaches and lighthouse at Point Clark. Credit: Gordon Strathdee.

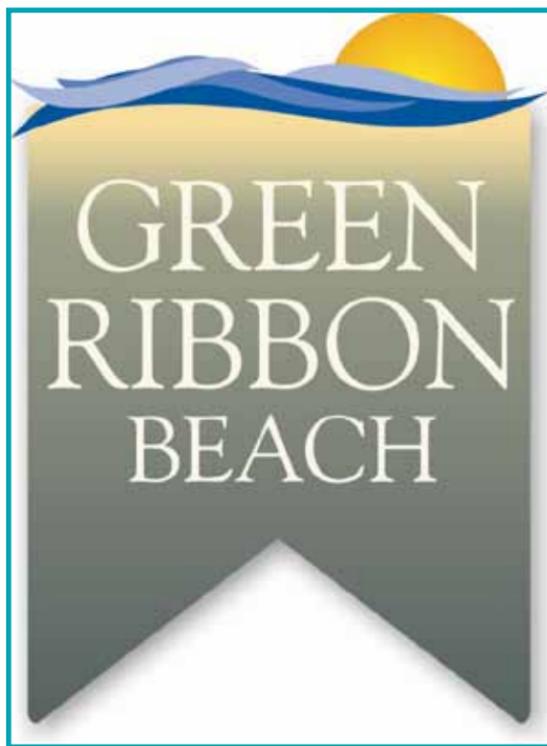
Blue and Green are the Colours of Success

The Blue Flag is an internationally respected and recognized symbol for exceptionally clean beaches and marinas. Within the Lake Huron Southeast Shore area beaches in Grand Bend, Bayfield, Kincardine and Sauble Beach as well marinas in Port Franks, Grand Bend and Bayfield are all flying the Blue Flag. For Kincardine's Station Beach it is the fourth year in a row it has been awarded a Blue Flag.

Blue Flag beaches and marinas must meet 32 different criteria with respect to water quality, environmental management, environmental education, and safety and services. Independent juries of experts in Canada and internationally review each Blue Flag application and determine whether a beach or marina meets the standards for certification.

Meanwhile private beach communities that are doing exceptional work to care for their coastline can work to receive a Green Ribbon through a program being initiated this year through the Lake Huron Centre for Coastal Conservation

Designed to complement the Blue Flag program, the Green Ribbon Program will acknowledge rural beaches that are prized for their high quality, where



The Green Ribbon logo is awarded to rural beaches that are prized for their high quality and natural environments. Credit: Lake Huron Centre for Coastal Conservation.

care is taken to preserve their natural, unspoiled environment; or where their natural values have been restored. Green Ribbon applications are judged on a set of ecosystem-based criteria that rate conservation measures that protect beaches and their biodiversity, water quality and resiliency to climate change, including beach preservation, native vegetation enhancement and community outreach and education efforts

Applications will be reviewed by a panel from local agencies and organizations. Beaches that receive a Green Ribbon will receive certificates and a sign for posting that identifies the beach as having met or exceeded the identified criteria for environmental stewardship.

Environmental Defence is the Canadian Operator of the Blue Flag Program. For more information about the Blue Flag Program, email coordinator@blueflag.ca, or phone (416) 323-9521. For additional information on the Green Ribbon program or to apply, contact the Lake Huron Centre for Coastal Conservation by email at coastalcentre@lakehuron.on.ca or phone (519) 523-4478.

Scott Drain Restoration Demonstrates Benefits to Ecology and Agriculture

The Scott Drain flows through Murray and Wilma Scott's farm in Huron County, northeast of Goderich. It has become an excellent example of approaches to managing agricultural runoff in a way that improves ecological function of municipal drains.

The Scott Drain used to have the typical problems shared by most municipal drains in agricultural areas: erosion, accumulated sediment clogging the channel, and excess nutrients degrading water quality.

The Scotts took action to improve the ecological health of their drain system. With the help of the Maitland Valley Conservation Authority and other partners, several strategies were used to reduce erosion, improve water quality and fish habitat within the drain:

- Five wetlands were constructed to retain and filter water after rain events and release it into the drain slowly.
- Grass waterways and earthen berms were constructed to divert surface runoff towards protected outlets or constructed wetlands.

- The drain itself was rebuilt using a natural channel design to make it free-flowing and reduce the need for costly maintenance.
- Nitrate filters were installed to improve the quality of water received directly from tile drains.

It is too early in the monitoring process to draw conclusions about the project's performance but initial results are encouraging. Brook trout that were not present in 2005 are now using the system. Water quality monitoring is underway.

The Drain is now setting an example for others in Northern Huron County. The Scotts and the Maitland Valley Conservation Authority have agreed to use the farm as a demonstration site. They will provide tours to anyone from school groups to politicians, and farmers who visit the project will leave with knowledge of new approaches they could apply on their own land to combat similar problems.

The Scotts have shown tremendous commitment to the project from its onset and are quite happy with the results. Their drive to improve their own drain is

having a larger impact than they may realize. As the project evolves and more visitors tour the farm, the impacts of the Scott project will stretch well beyond its watershed boundaries.

To learn more about the project or book a visit, please contact the Maitland Valley Conservation Authority at maitland@mvca.on.ca or phone (519) 335-3557.



One of five wetlands established as part of the Scott Drain project. Credit: Maitland Valley Conservation Authority.

Biodiversity is a Priority for Worldwide, Lakewide and Local Action

The United Nations has declared 2010 the International Year of Biodiversity and invites the world to take action to celebrate and safeguard the variety of life on Earth. Biodiversity supports ecosystem services that are crucial to human well-being such as global food security, climate control, provision of clean air, water, and raw natural materials, as well as recreational enjoyment and spiritual inspiration.

Over the past two years, Canadian and U.S. governments, Aboriginal groups, environmental organizations, and universities have worked together to draft the Lake Huron Biodiversity Conservation Strategy. The strategy used a collaborative, science-based, conservation action planning process to identify important biodiversity features and their critical threats. It recommends strategies to restore and conserve a functioning Lake Huron ecosystem and will lead to greater awareness and collaboration among the Lake Huron conservation community. The strategy also provides a foundation for areas with a recognized need for small-scale, placed-based conservation strategies.

Effective biodiversity conservation involves the participation of the public during its planning and implementation process. That is why the Ausable Bayfield Conservation Authority is leading the Port Franks Biodiversity Conservation Plan, with support from Environment Canada, Fisheries and Oceans Canada, and the Ontario Ministry of Natural Resources. Port Franks is located between Grand Bend and Ipperwash Beach in the Municipality of Lambton Shores. It was selected because it contains critical habitat for a variety of species that are threatened by many of the same environmental



Diverse communities of plants and animals are essential to ecosystem health. Credit: Provided by Environment Canada.

stressors confronting the Lake Huron basin: declining water quality, invasive species, and need for protection. As part of the Plan, the Conservation Authority continues to review reports and encourages community participation in discussions about specific local concerns and issues.

The Plan complements the Lake Huron Biodiversity Conservation Strategy and has already influenced local conservation and protection actions. The Municipality of Lambton Shores revised their proposed planning documents to direct development away from sensitive habitat. The Port Franks community participates in turtle monitoring and is developing a water quality monitoring program. Future actions will address non-native invasive species through native species gardening programs.

For more information about the Lake Huron Biodiversity Conservation Strategy, please contact Janette Anderson at janette.anderson@ec.gc.ca. For more information about the Port Franks Biodiversity Conservation Plan, contact Mari Veliz at mveliz@abca.on.ca.