Natershed Noments







Looking for a change?





We help more than 3,500 clients increase productivity simply by engaging technology - the right technology. After examining your requirements we'll recommend the hardware

and software that you'll need to get the job done. You focus on growing your business and we'll take care of the rest. Your satisfaction is the measure of our success.

As the leading technology supplier in Central & Eastern Ontario, OT Group is happy to have one of our experts help you. Jump in, the water is just fine!



175 Lahr Drive, Belleville, Ontario Tel: 613-966-6315, Fax: 613-966-9731 info@thinkot.ca www.thinkot.ca

Copiers Networks Computers Document Management Custom Software IT & Managed Services Industry Leading Service

Celebrating 70 years of conservation

1947 - The Moira River Conservation Authority (MRCA) forms on July 31, 1947. The Napanee Region Conservation Authority (NRCA) forms November 20, 1947.

1951 - The MRCA purchases six properties in Hungerford Township, at a cost of \$ 4.07 per acre.

1958 - The NRCA opens the Second Depot Lake Dam and Reservoir.

1965 - The Prince Edward Region Conservation Authority (PERCA) forms December 9, 1965. At this time it encompasses over 1, 000 square kilometers.

1972 - An agreement between the Hastings County School Board and the MRCA creates the H.R. Frink Outdoor Education and Natural Science School.

1977 - Floodplain mapping for the entire Napanee River from Verona downstream to the mouth is completed; also including water frontage in Deseronto.

1979 - The McLeod Dam, the first of Belleville's ice control dams, is built to prevent flooding in the downtown.

1987 - The Arthur Holgate Dam is built in Belleville on the Moira River.

1988 - The Yardmen Dam is built in Belleville on the Moira River.

1989 - The Harry Mulhall Dam is built on the Moira River in Belleville.

1990 - The George and Lois Wishart Dam is built in Belleville on the Moira River.

1992 - The three Conservation Authorities (that now make up Quinte Conservation) and the Lower Trent Region Conservation Authority team up to assist developers with stormwater management. It was a first in the province and avoided duplication of services, saved taxpayers money, and resulted in better environmental protection.

1996 - The MRCA, NRCA, and PERCA come together to create Quinte Conservation.

1997 - Quinte Conservation celebrates 50 years of conservation in the Moira and Napanee River watersheds. Quinte Conservation launches its website.

2000 - Quinte Conservation adopts new logo, an oval surrounding trees, water, and a canoe.

2002 - Quinte Conservation begins to explore the possibility of retro-fitting four of its dams to generate hydro-electric power.2006 - The Clean Water Act is passed by the Ontario Government.

Conservation Authorities will help to facilitate the process of

developing plans to protect sources of municipal drinking water.

2007 - Quinte Conservation begins construction on the Green

Energy project at the McLeod Dam in Belleville to retrofit this dam
to produce power. Benefits will include enough energy to power
the equivalent of 400 homes each year and \$500,000 revenue per
year to go towards local conservation initiatives.

2008 - The 2008 flood was the first big spring freshet since the 1980s. Many communities and residents were underprepared. On the Moira River, floods of this magnitude have a 10% chance of occurring each year. Quinte Conservation staff collected information on how high the water reached, which is used today to provide more accurate advice to residents during high water each spring.

2009 - Quinte Conservation encouraged local residents to show off their talents as well as their favourite local conservation area by participating in Conservation Ontario's photo contest.

2010 - Policies to protect sources of municipal drinking water from pollution and overuse were being developed by the Quinte Region Source Water Protection Committee. The policies developed during the following 18 months formed the basis of the Source Water Protection Plan.

2011 - A new logo was launched as part of the new strategic plan for Quinte Conservation's 65th anniversary.

2012 - A collaborative project, led by the Friends of East Lake (FOEL), was awarded a \$69,100 grant to help create a stewardship plan for East Lake and its watershed.

2013 - The Big Island Marsh rehabilitation project starts.

2014 - The 2014 flood was the fourth highest flood on the Moira River in Foxboro in the past 100 years. During this event, staff developed new tools and models to forecast floods more accurately, and Quinte Conservation secured municipal and federal funding to evaluate flood mitigation options for Foxboro.
2015 - The Parrott Foundation generously donated to fund the completion of an accessible trail at Potter's Creek Conservation Area.

2016 - Quinte Conservation and the Low Water Response Team declared a Level 1 Low Water Condition in June, which was raised to a Level 3 Low Water Condition in August, due to the lack of rainfall and low flows in local rivers and streams. Residents were asked to reduce water usage by 50%. Many residents in rural areas had dry wells for a significant period of time. The Level 3 Low Water Condition was lifted in December 2016.



Volunteer Celebrates 20 Years with Quinte Conservation



Randy Vincent, Quinte Conservation Volunteer.
Randy Vincent has been a dedicated volunteer at Quinte Conservation for 20 years.

He is passionate about giving back to his community. Among his volunteer experiences with us, Randy has been a part of the team that helped run the Prince Edward Conservation Dinners, which raised thousands of dollars to support conservation efforts in the Moira, Napanee, Salmon River, and Prince Edward watersheds.

He has assisted with popular outdoor programs, such as hikes and other events, serving as the vital rearguard to ensure that no participants were ever lost or left behind.

In the office, Randy's meticulous attention to detail has kept our publication supplies in perfect order for many years. Randy is always looking for new ways to assist us and his

Education Programs

Quinte Conservation reached over 4,000 children and their family members through education programs in 2016. School education programs included Watershed on Wheels presentations, Stream of Dreams, and watershed education science to art programs. Outdoor programs were offered at the Frink Centre and Potter's Creek Conservation Area. A new partnership with Family Space for preschoolers saw an increase of participants. Summer Education Programs reached over 2,500 people and included Conservation Camp, Wild About Wildlife, and Family Nature Days. In addition, staff attended community environmental watershed information events for partnering agencies, the woodlot conference, and the Skootamatta Lake Festival.

A demonstration natural shoreline was planted in Tweed Park by local students. This initiative was made possible through the Stoco Lake Stewardship Plan in partnership with the Friends of Stoco Lake group and the Municipality of Tweed.

Plants from the Shrubs for Shorelines program provided 2,500 native shrub and tree seedlings to waterfront property owners across the Quinte region to aid in improving shoreline and water health, and enhancing the habitat for a richer biodiversity. Staff and community volunteers planted over 1,500 of the seedlings provided through this program.

pleasant disposition and kind humour brightens everyone's day. We are forever thankful and appreciative of his dedication to our organization. It is because of the commitment of volunteers like Randy, that we are able to continue with our goal of creating a healthy watershed.

Volunteers ensure the success of our organization and the protection of our local watersheds. Those interested in volunteering with Quinte Conservation can conatact 613-968-3434 or visit quinteconservation.ca



Randy with Quinte Conservation staff member, Lynette Lambert, during a Conservation Dinner fundraising event in 2005.



Low Water and Quinte Conservation



Water Resources Manager, Christine McClure (L), monitors the James Lazier Dam on the Salmon River during low water events in 2016.

In 2016, low water conditions impacted the Quinte watersheds. Quinte Conservation follows the Ontario Low Water Response Program to assess low water conditions based on precipitation and stream flows. A level 1 low water condition is the least severe and a level 3 low water condition is the most severe.

A level 1 low water condition was declared on June 2, followed by Level 2 on July 12 and level 3 on August 4. Below average rainfall was experienced in April and continued into late summer. Without regular rainfall events, stream flows and groundwater levels declined as there wasn't enough water to replenish the supply. Many residents and businesses were impacted by stressed lawns and gardens, and dry wells. In August a few

613-966-4482

rain events caused the vegetation to green up, however, the stream flows and groundwater levels were still below normal. September and the beginning of October were also dry.

October rains and the onset of fall helped the watersheds to slowly recover. By December 15 the watershed was starting to recover as indicated by a move to level 2 low water condition and by early January 2017 most watercourses had returned to normal conditions.

The summer season was less humid. Lakes and reservoirs dropped as a result of more evaporation and in some cases water control structures were operated to provide low flow augmentation.

Quinte Conservation received calls from the public regarding water levels and provided resources on water conservation. A residential well information night was filled to capacity and Quinte Conservation, the Hastings Prince Edward Health Unit and the Ministry of the Environment and Climate Change addressed the Ontario Low Water Response Program, groundwater conditions in the Quinte watersheds, and how to test and properly maintain residential wells.

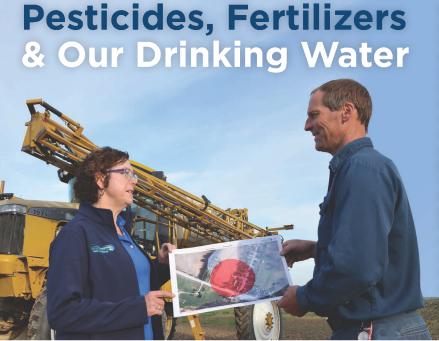
Quinte Conservation also kept municipal and provincial governments informed about the impacts of low water on the community.





Beaver Meadow during drought

Triple 'A' 2016 Source Water Protection Program



operator or renter, your loca Conservation Authority has maps that show areas around exceeds certain volumes

risk to the local drinking water source.

With support provided by





Implementation of the Quinte Region Source Protection Plan, which sets out how our municipal drinking water sources will be protected, continued during 2016. Action, amendments and attrition sum up the water protection zone maps. year.

Actions included working with people engaged in significant threat activities to establish risk management plans and providing education and outreach about significant threat activities. Amendments to the Source Protection Plan were proposed when maps of the drinking water protection zones in the City of Belleville and the Town of Picton required updating to include recently urbanized areas. Attrition at Quinte Conservation resulted in program staffing changes.

Actions

Quinte Conservation provides the risk management services for municipalities with significant drinking water threats and/or drinking water systems in the Quinte Region.

Applications made under the Planning Act or for the construction or the change of use of a building within the vulnerable areas surrounding a municipal drinking water source are screened to check than 10 years. She is also a Risk Management Official and GIS for compliance with the Source Protection Plan.

30 site visits were conducted to assess if a risk management plan is required to safely manage activities that can pose a significant threat source water protection communications duties. to drinking water sources.

25 risk management plans were completed for applications of agricultural source material and livestock grazing applications of pesticide and commercial fertilizer.

About two dozen Drinking Water Protection Zone road signs were erected where busy municipal roads cross into zones where an accidental spill of contaminants could quickly reach the municipal water source. Local emergency responders received fact sheets explaining the newly installed Drinking Water Protection Zone road signs, and local well and bore hole drillers received information explaining how policies in the Source Protection Plan, designed to protect groundwater resources, could affect their work. Two initiatives targeted proper handling, use and disposal of

Find the Source Water Protection Map at ontario.ca/ page/source-protection

Informative postcards were mailed to over 900 households in the most vulnerable zones surrounding drinking water sources. Implementation actions to address significant drinking water threats were funded through Ontario's Source Protection Municipal Implementation Fund. Jack Alexander joined the Quinte Region Source Protection Committee during 2016. He will represent small business and small industry.

chemical products around the home to protect drinking water sources. An

products was purchased in Quinte

Recycling's household hazardous

distributed to 58,000 homes.

household chemical

waste calendar

ad encouraging the proper disposal of

Amendments

Amendments were required to the Source Protection Plan and the Assessment Report as a result of

updates proposed to the City of Belleville and Town of Picton drinking

Public Consultation on the proposed changes was held from November 17-December 23, 2016.

180 affected landowners received informative personal letters explaining the amendments and how to provide comments. Details about the amendments were available at

QuinteSourceWater.ca, at Quinte Conservation and at the municipal offices in Belleville and Picton.

The proposed amendments and the summary of consultation activities will be submitted to the Ministry of the Environment and Climate Change in the Spring of 2017.

Attrition

Keith Taylor, Project Manager and Lucille Fragomeni, Communications Coordinator, retired during 2016, while Hydrogeologist, Mark Boone resigned in December 2016. The new Project Coordinator is Amy Dickens who has worked on the source water protection program at Quinte Conservation for more Specialist.

Communication Manager, Jennifer May-Anderson assumed the

More Information

- QuinteSourceWater.ca
- Contact the Project Coordinator, Amy Dickens, at Quinte Conservation.
- email: adickens@quinteconservation.ca, phone: 613-968-3434 or 613-354-3312, extension 132.

Construction on 3rd Depot Lake Dam

The Third Depot Lake Dam is located at the outlet of Third Depot Lake in the Township of Central Frontenac. It is approximately 16 kilometres northwest of Verona.

The dam was constructed in 1975 to provide additional low flow augmentation and flood control to that provided by Second Depot Lake Dam and reservoir. The dam is an earth-filled structure that is controlled by a valve. It was designed to be operated in conjunction with Second Depot Lake Dam.

Recent studies determined that the dam was required to be raised and stabilized on the downstream side. In 2016, Quinte Conservation undertook the first phase of a two phase rehabilitation project on the dam. The first phase involved adding rock to the downstream side of the structure to reduce erosion of the structure and to provide a base for the dam heightening work. It is anticipated that the second phase of the project will be completed before 2020.



The dam at 3rd Depot Lake after phase 1 maintenance work was complete.

Low Water and Quinte Conservation's Role

Often during times of drought or flooding, it can be confusing as to what role role Quinte Conservation plays. Staff monitor conditions and provide scientific input and data to municipalities, and inform the public and media of changing conditions. Quinte Conservation is there to guide communities and answer questions.

Quinte Conservation follows the Ontario Low Water Response Program when assessing low water conditions. Quinte Conservation's role is to:

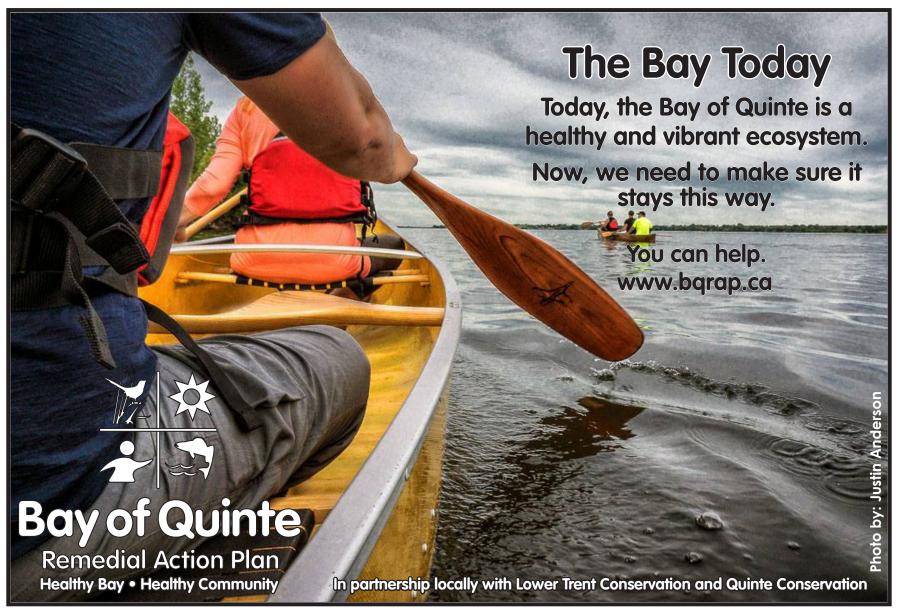
- Coordinate with the local Water Response Team
- Confirm or declare Level 1, 2 and 3 low water conditions through the Water Response Team
- Maintain detailed water monitoring networks which will enhance provincial networks and better describe drought variations
- Maintain strong links with local community groups, media, and government to facilitate coordination of water conservation messages
- Verify Ministry of Natural Resources and Forestry data and low water conditions in the field
- Operate Conservation Authority owned dams and reservoirs for low flow augmentation within the scope of the dam operations plan
- Monitor local stream health and water quality

Low water conditions are managed through existing programs with the Conservation Authority, municipalities and other key provincial agencies with leadership and direction provided by the Water Response Team.

Municipalities have specific responsibilities under the Emergency Management and Civil Protection Act and are responsible for:

- Monitoring and control of public water supplies
- By-laws concerning the "economic, social and environmental well-being of the municipality" and "health, safety and well-being of persons."
- Promoting strong water conservation messages
- Maintaining communication links with large, local, commercial/ industrial water consumers





Looking Forward

Today, the Bay of Quinte is a healthy and vibrant ecosystem. Now, we must focus on keeping it that way. Everyone has a role to play in keeping the Bay healthy.

In 1985, the International Joint Commission (a Canadian – American Great Lakes watchdog), under the Great Lakes Water Quality Agreement, identified the Bay of Quinte as one of 43 Great Lakes Areas of Concern (AOC). An AOC is an area where environmental quality has been significantly degraded by human activities. In each AOC, a Remedial Action Plan (RAP) must be developed and implemented.

The Bay of Quinte Remedial Action Plan identified and implements actions to rehabilitate 11 impaired environmental challenges. Each challenge has a series of scientific criteria it must meet before it can be declared unimpaired.

In 2016, two environmental challenges completed the process to change their status to unimpaired. As of the end of February 2017, one has received formal approval of its unimpaired status from the federal and provincial governments and the other is expected to receive formal approval shortly.

In 2017, another three environmental challenges are ready to start the process of changing their status to unimpaired.

These challenges have met all the scientific criteria outlined in the Remedial Action Plan and, now, need to undergo a public consultation. The public will have the chance to have input into the future health of the Bay by voicing their opinions about whether they think the challenges have met or not met their criteria. The challenges are: degradation of fish and wildlife populations, loss of fish and wildlife habitat, and degradation of benthos (underwater bugs). Another 4 challenges: restrictions on drinking water or taste and odour problems, beach closures, degradation of aesthetics, and restrictions on fish consumption have met or are close to meeting the scientific criteria necessary to start the process of having final reports compiled and will be ready for public input within the next 18 months. That leaves only 2 environmental challenges that are having their criteria reviewed and verified. The criteria for eutrophication or undesirable algae is undergoing some additional research and modelling, along with the development of a phosphorus management strategy. Degradation of phytoplankton and zooplankton populations is undergoing additional research and analysis at this time.

So, what does all this mean? That depends on your perspective. It's a bonus for the tourism industry. Thanks to the work accomplished under the Remedial Action Plan (RAP) the Bay is healthy with diverse fish population, great boating, and beautiful trails. Numerous RAP partner agencies, who receive funding because the Bay is an Area of Concern, conduct a variety of research projects every summer that help answer questions about the health of the Bay. As well, funding has been available

to help local landowners and other stakeholders implement numerous water quality improvement projects. Once the Bay's status is changed, the funding for these types of projects will be gone. There will be some funding for monitoring, but at a greatly reduced level. Once the Bay is removed from the Areas of Concern list, who is going to ensure it doesn't backslide to conditions that required a RAP in the first place? Communities are going to need to take on a larger role in advocating for the Bay.

The public can help by becoming citizen scientists for the Bay and participating in volunteer monitoring programs like the Marsh Monitoring Program. Currently, the RAP facilitates this program locally. In several years, when the RAP is completed, this program will need an advocate to ensure it keeps running. Also, the public can be involved in water quality issues. For example, by reporting blue-green algae blooms to the Ministry of the Environment and Climate Change (MOECC) Spills Action Centre Hotline at 1-800-268-6060. The MOECC staff will then determine whether or not it's a toxic bloom. Local communities will need to explore options to cover the costs of keeping the Bay a healthy

and vibrant ecosystem. It's a huge economic driver for the area and the source of drinking water for thousands of area residents. Today, the Bay is considered a jewel in Lake Ontario. As the RAP starts to wind down, we must start the process of ensuring the environmental quality, so many people have worked so hard to achieve, does not backslide.

Everyone has a role to play in maintaining the Bay's water quality. Whether it's becoming an advocate for water quality issues, volunteering as a citizen scientist, or talking to your local politicians and municipalities about actions to keep the Bay a healthy and vibrant ecosystem. Maintaining water quality is everyone's responsibility.

Sign up for the BQRAP monthly newsletter to receive updates about the RAP.

Visit the BQRAP website www.bqrap.ca to find more information and view the videos on the environmental challenges.

Remember, Healthy Bay • Healthy Community

Adopt an Acre - Huge Success in 2016

2016 marked a special year for the Adopt an Acre program at Quinte Conservation. Not only was just over \$6,000 raised, the 2016 fundraising goal of \$4,500 was surpassed. A total of 318 acres were symbolically adopted by caring community members. A new plush friend was welcomed into the Adopt an Acre family, Fern the Fox turned out to be so successful that other animal characters are being considered for future campaigns.

The success of the Adopt an Acre campaign determines the amount of educational and interpretative signage we are able to post throughout our different conservation areas. It is important that Quinte Conservation share information about the natural heritage of valuable local green and wilderness spaces, including trail maps and information about invasive species.

Acres can be adopted all year long for \$25 an acre. Every acre comes with a certificate and a car sticker. Adopt two acres to take home an Adopt an Acre plush friend toy. Donations can be made online at quinteconservation.ca, by calling us at 613-968-3434, or by visiting the Quinte Conservation head office at Potter's Creek.





Adopt an Acre makes a great gift for special occassions and birthdays.



Deerock Lake Clean Up

Deerock Lake and Elzevir Peatlands Conservation Reserve recently underwent a campsite designation process to maintain camping opportunities and reduce environmental concerns regarding garbage and human waste. The designated campsites have moved camping opportunities away from sensitive islands that cannot sustain unregulated camping. Campsite designation was completed in early 2016.

The next step in this process was a much needed garbage clean up around the lake. Through a joint effort, many local community organizations and groups met on Wednesday, April 20 to collect garbage around the Deerock Lake area. Partners included the Ministry of Natural Resources and Forestry, Quinte Conservation, Township of Addington Highlands, the Conservationists of Frontenac Addington (COFA), Frontenac Addington Trappers' Council, North Addington Education Centre, and Milestone Funeral Centre Northbrook.

In a huge volunteer effort, over seventy-five people picked up enough garbage and recycling to fill a one-ton truck with scrap metal, one dump truck with garbage and one dumpster with recyclable items.

Students from the North Addington Education Centre helped to build privy boxes that were installed on the designated campsites. Material for the privies was donated by Carol and Coleman Boomhour and Smart's Marina.



Over seventy five volunteers helped pick up trash and recyclables during the Deerock Lake Clean Up back in April. Enough scrap metal was collected to fill a one-ton truck.

New signage including campsite numbers, rules and other information have been posted around the lake. Information and rules about the recreational use of the area will be available for users at the Quinte Conservation managed boat launch.



GIS

Geographic Information Systems (GIS) at Quinte Conservation provide a solid foundation for the distribution of authoritative geospatial data sets within the Authority. GIS applications are relied on each day to assist the public services offered through Quinte Conservation programs.

2016 delivered big changes to the GIS department's core applications, allowing staff to access Planning, Regulations and, Source Water Protection datasets through a common map-based interface. Through the upgrade of these GIS technologies, Quinte Conservation is well positioned to remain current with ever-changing technology trends.

A GIS student was hired to develop a model for automated land use classification. The project reflects current landscape level conditions, assists with forest management practices, and watershed health characterization.

About Quinte Conservation

Quinte Conservation is one of Ontario's 36 conservation authorities. We are a community based environmental protection agency. Located in eastern Ontario, Quinte Conservation provides cost-effective environmental expertise and leadership that develops and delivers programs to ensure the healthy coexistence between the community, environment, and economy.

Our 6,000 square kilometre area includes the drainage basins of the Moira, Napanee and Salmon Rivers and all of Prince Edward County and is home to over 117,000 people living in 18 municipalities. Quinte Conservation owns over 30,000 acres of land ranging from small parcels at some of our 39 water control structures, to large tracts of over 1,000 acres, many with significant natural features.

Our mission is to create a sustainable ecosystem where people and nature live in harmony. Our vision is to be the premier ecologically sustainable watershed. Our success is based on: local initiative, watershed jurisdiction and partnerships in resource management. We are a member of Conservation Ontario.





Subscribe to our Family Nature Network e-Newsletter, to find out more about our 2017





2016 Financial Report

2016 was a very productive year for Quinte Conservation. Staff have worked hard on many successful projects. We continued our efforts on our core programs and also added some new projects in our local municipalities.

Operations Budget - \$2,660,081

Where do our revenues come from?

Authority Generated Revenue	19 %
Ontario Ministry of Natural Resources	12 %
Municipal Levies	49 %
Special Municipal Levies	2 %
Other Government Grants	18 %

Where do our expenditures go?

Watershed Science and Monitoring	54 %
Planning Advisory and Regulations	10 %
Conservation Land Management	10 %
Stewardship Services	6 %
Corporate Services	20 %

Capital Budget - \$1,031,092

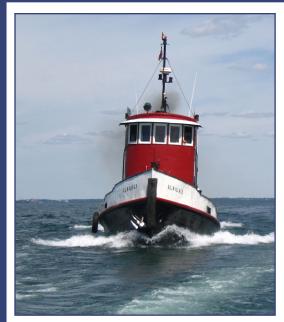
Bay of Quinte Remedial Action Plan	19 %
Quinte Conservation Capital Projects	26 %
Partnering Projects	55 %
Projects through Fundraising	0 %

Unaudited summary of 2016 revenues and expenditures at Quinte Conservation.

Step Into Nature at QuinteConservation.ca



DREW HARRISON HAULAGE LTD.



- **✓ Dredging and Shore Protection**
- **✓ Barge and Tug Rental**
- **✓ Excavator, Dozer and Backhoe Rentals**
- ▼ SEPTIC SYSTEMS (Registered with Ministry of Municipal Affairs and Housing)
- WELLS (Licensed by Ministry of the Environment)
- ✓ Land Clearing and Road Building
- ✓ Sand, Gravel and Topsoil

PHONE: (613) 476-7448

CELL: (613) 813-1410

FAX: (613) 476-5513

EMAIL: drewharrison@kos.net

