

KETTLE CREEK CONSERVATION AUTHORITY

Annual Report 2011



OUR CONSERVATION AUTHORITY

The Kettle Creek Watershed

Situated entirely within the Carolinian Life Zone, the Kettle Creek watershed drains 520 square kilometres of agricultural, urban, and naturally vegetated lands along the north shore of Lake Erie at Port Stanley. Kettle Creek drops approximately 141 metres over its 80 kilometre length. The steep drop in elevation can cause flash flooding, fluctuating base flows and a high degree of erosion. The watershed is hourglass in shape and is made up of three subwatersheds: Dodd Creek, Upper Kettle Creek and Lower Kettle Creek. The main branch of Kettle Creek originates at Lake Whittaker, an 11 hectare groundwater-fed kettle lake. The physical geography of the Kettle Creek watershed is dominated by clay plain in the north and sand plain in the south. There are seven member municipalities associated with the Kettle Creek watershed: Middlesex Centre, London, Thames Centre, Malahide, Central Elgin, Southwold and St. Thomas.



A Message from the Chair

This Annual Report attempts to document a long list of accomplishments in 2011 – each one made possible through strong partnerships, knowledgeable staff and supportive member municipalities.

Cognizant of the current economic environment, Kettle Creek Conservation Authority (KCCA) continues to maintain its levels of services by being creative and embracing new technologies. Staff enthusiastically pursued government employment grants in the amount of \$43,000. In addition, e-packages were adopted at all Full Authority meetings resulting in a significant decrease in the amount of paper used and a marked reduction in mailing costs.

Further costs savings will be realized in the years to come as a result of a number of capital improvement projects undertaken this year. The Administration Centre was retrofitted with maintenance free siding. In addition, a new barrier free access was added to the front entrance, addressing a safety concern.

In reflecting back on 2011, I am struck by the amount of projects staff has undertaken. KCCA's Open House, which showcased our programs and services to the public, was a great success. Three trees were planted in the Community Forest in commemoration of a number of local citizens. Another 100,000 trees found homes on our local landscape. Over 4,000 students participated in the Carolinian Forest Festival and St. Thomas-Elgin Children's Water Festival. The Authority renewed a long-standing partnership agreement with Peacekeeper Park. These are in addition to our mandated programs of flood forecasting and warning, environmental monitoring and environmental regulations.

As the world continues to go global, I am extremely proud to be part of an organization that focuses on the local community.

A sincere thank you to the staff, my fellow board members and our member municipalities for believing in and investing in our environment, our community and our future.

Charlie Murray,
Chair

OUR FLOOD FORECASTING

The Kettle Creek watershed experienced several high water and/or flood events in 2011, most notably on November 29, 2011. Normally flood events in the watershed are caused by snowmelt, which is exacerbated by ice jams in the lower portions of the watershed. The November 29, 2011 flood event was unique in that it was caused solely due to the sheer volume of rainwater. Over a 24-hour period between 68 and 78 millimetres of rain fell across the watershed. Flood waters surged through the system, peaking at 140 cubic meters per second in Kettle Creek. The creek crested its banks in several areas of the watershed and even required the City of St. Thomas to temporarily close the Bailey Bridge on Dalewood Drive. Through the course of the year, the Authority monitored eight other events.

Overall, 2011 was a wet year, with nine out of the 12 months receiving more than 150 percent to over 200 percent more than the normal precipitation. The extra rain and snow helped to maintain creek base flows leading into and coming out of the summer months. Unfortunately, the watershed still experienced Level 1 Low Water Conditions from July 19 to September 27 which resulted in the Low Water Response Team asking for watershed residents and businesses to reduce their water use by 10 percent.





OUR EDUCATION AND AWARENESS

KCCA coordinated the St. Thomas-Elgin Children's Water Festival in May 2011 at Pinafore Park in St. Thomas. Over 2,400 grade 3 to 5 students attended the Festival and participated in hands-on and interactive activity stations linked to the Ontario Curriculum. The activities taught students about source water protection, stream and wetland critters, groundwater protection, and proper disposal of household hazardous waste. Ultimately, the goal of the Children's Water Festival was to motivate behavioural changes in the students and stress the importance of clean, safe water in their lives and communities.

The Carolinian Forest Festival was held for the fourth year, teaching 1,500 grade 6 and 7 students the importance of our local forest resources. To celebrate the International Year of Forests, a new activity was developed for the 2011 Festival. This activity taught students about the forest regions of Ontario, the rest of Canada and the world and had students create a commemorative painting of a tulip tree leaf.

The theme of KCCA's first ever Open House was Let it Rain! Through a partnership with RainBarrel.ca participants at the event could purchase a rain barrel at a reduced rate. Moreover, ten dollars from each rain barrel sale was donated to KCCA's Stewardship program. The Open House provided the community with a chance to tour some of KCCA's facilities and ask questions directly of staff about various programs and services the Authority offers. Deemed a success by all in attendance, a similar event is planned for 2012.

Sam Barendegt-Brown was awarded the Elgin County/Kettle Creek Agricultural Conservation Scholarship. The \$500 scholarship is awarded each year to a student pursuing agriculturally-related studies with an emphasis on compatibility with the natural environment at a post-secondary institution. KCCA, Elgin County Junior Farmers Alumni and the Elgin Federation of Agriculture continue to fundraise to ensure the scholarship can be awarded in perpetuity.



OUR ENVIRONMENTAL MONITORING

OVERALL WATERSHED GRADE

C+

In 2010, the Kettle Creek watershed grade increased to an overall "C+" average from the 2009 Watershed Report Card Annual Update, based on surface water, groundwater, terrestrial and climate conditions.

KCCA is committed to monitoring the health of the watershed and reporting these results to the community every five years with a comprehensive Watershed Report Card and annually with a Watershed Report Card Annual Update. In 2011, the watershed achieved an overall grade of C+, which suggests a positive trend upwards from the "C-" grade awarded in 2008. However, the trend upwards is attributed to more favourable climate conditions over the last couple of years (fewer hot, smoggy days and less days of drought). There is still significant improvement that needs to be done in the other environmental categories to truly elevate the watershed's overall health. Climate conditions represent only five percent of the final grade. Improvements in surface water and terrestrial conditions are a better indication of overall watershed health and these factors have remained relatively constant over the last three years, with only minor improvements.

The next Watershed Report Card will be released in 2013. Unlike the Watershed Report Card Update which provides only a snapshot of the past year, the full Watershed Report Card will analyze the past five years of data and will be the best indication as to whether the health of the watershed is constant or improving. The accuracy of this trend analysis will improve over time as staff will have a greater data set to analyze.

Today, data collected through the environmental monitoring program assists KCCA in identifying priority areas to target stewardship funds for best results. It is one of the most fundamental tools used in watershed management.

2011 Watershed Report Card Annual Update	Dodd Creek			Upper Kettle Creek			Lower Kettle Creek		
Condition Description	Subwatershed Grade	Health Trend	Overall Subwatershed Grade	Subwatershed Grade	Health Trend	Overall Subwatershed Grade	Subwatershed Grade	Health Trend	Overall Subwatershed Grade
Surface Water Conditions Surface water indicators relate to the quantity and quality of the water throughout the watershed. The surface water environment consists of all watercourses (permanent, seasonal and intermittent) lakes, reservoirs and ponds that drain into Lake Erie at Port Stanley. Surface water is recharged through precipitation, surface runoff, snowmelt and in some cases through groundwater. Several indicators of surface water quantity and quality are studied in the watershed reporting process including: stream flow, nutrient levels (phosphorus), bacteria (<i>E. coli</i>) concentrations and benthic invertebrates.	C-	↔	C ↑	C	↔	C+ ↔	C+	↔	C+ ↔
Groundwater Conditions Groundwater is the water found below the earth's surface in the soil, wells, porous rocks and aquifers. Although groundwater tends to be better protected from the influences of industrial and agricultural land use, there is still the potential for the quality and quantity of groundwater to be compromised. KCCA uses monitoring wells to detect any changes in the levels of bacteria (<i>E. coli</i>), chloride (salts), nutrients, and aquifer water levels within the watershed.	A	↔		A	↔		A	↔	
Terrestrial Conditions Over the last decade, KCCA has planted over 700,000 trees to help combat the constant pressure of urban development and agricultural expansion. KCCA's primary focus in reforestation is enhancing forest interior, connecting woodlots, creating habitat corridors and stream buffers. KCCA is found entirely within the Carolinian Life Zone which makes up less than one percent of all the eco-regions in Canada. It has the highest diversity of species and is the most threatened ecological region in Ontario.	C	↔		C	↔		C	↔	
Climate Conditions Average annual temperatures in Southern Ontario have increased by 0.5°C over the last century and are expected to rise by an additional 3.5 to 4°C over the next 100 years. KCCA collects data on the Air Quality Index (smog advisory days), the number of days with temperatures greater than 30°C (hot days) and the number of drought and extreme precipitation events to monitor the climate conditions within the watershed. Climate change monitoring and reporting is becoming a very important topic of discussion at all levels of government and with local landowners.	B	↑		B	↑		B	↑	
Health Trend Legend ↑ improving ↔ steady ↓ declining									



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Health Trend Legend  improving  steady  declining									

OUR FORESTRY AND STEWARDSHIP

KCCA planted 100,000 trees throughout the watershed in 2011 as part of a contract with Ontario Power Generation. Over 70 landowners participated in the program helping to establish new forest blocks, windbreaks and stream buffers throughout the watershed. The Authority remains on track to plant the one millionth tree in the watershed in 2013 under this long-term relationship.

KCCA participated in Trees Ontario's 50 Million Tree Program, planting 13,000 trees under this program. KCCA also partnered with its member municipalities to plant trees on municipal land. Helping the City of London to reach their one million trees planted goal, KCCA planted over 16,000 trees on municipal and private land in the Forest City in 2011.

In 2011, the Greening Central Elgin program was initiated. This program will be rolled out in 2012 and will provide the opportunity for landowners in Central Elgin to "green" their property through the planting of native trees at an affordable rate. This program specifically targets those landowners who do not have enough area to plant trees through KCCA's reforestation program but still wish to improve environmental conditions on their property.

In partnership with the Middlesex Stewardship Council, a one acre wetland was created in the Dodd Creek subwatershed, helping to keep surface water on the land longer in the dry summer months and improving both aquatic and terrestrial habitat.

KCCA will launch a watershed-wide Stewardship Program in 2012. KCCA will have funding available for landowners to implement environmental projects on their properties such as well decommissioning, erosion control, and wetland creation.



OUR CONSERVATION AREAS

KCCA's two campgrounds continue to be an attraction of choice. Combined, Lake Whittaker Conservation Area and Dalewood Conservation Area now offer 395 camping sites of which 84 are premium treed 30-amp sites. Infrastructure improvements continue at both areas. Lake Whittaker Conservation Area now offers 15-amp group camping sites and is expected to increase its 30-amp sites by 2012.

However, the most significant improvement to the conservation areas' operations was the introduction of a new on-line camping reservation system. This user-friendly website allows campers to book specific reservations for individual and multiple campsites from the comfort of their own home, twenty-four hours a day. In 2012, staff expect to continue to enhance this experience by adding pictures of each campsite. Prospective campers will soon be able to compare campsites and see for themselves how flat, treed or grassed the site is before they even arrive at the campground.

The profile of the Authority was also increased throughout the community as the Authority began to retrofit vehicles with campground advertisements. This marketing scheme makes Authority vehicles more visible to conservation area users and promotes the campgrounds at the same time. It has proven to be an effective use of marketing funds.

The Authority continues to build upon the public/private partnership with Peacekeeper Park. Peacekeeper Park honours Canadian Peacekeepers by providing subsidized outdoor education facilities and programs for youth on Lake Whittaker Conservation Area lands. In 2012, a new baseball diamond and soccer field are expected to be completed for both Lake Whittaker Conservation Area and Peacekeeper Park users to enjoy.



OUR PLANNING AND REGULATIONS

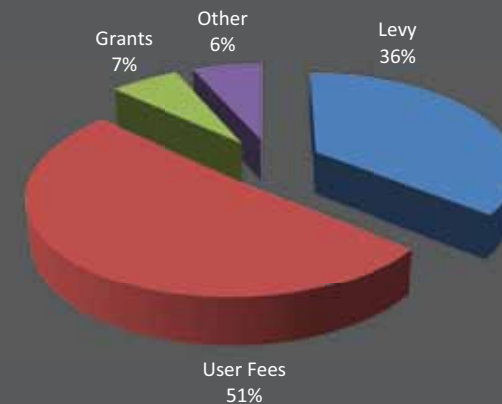
In 2011, Kettle Creek Conservation Authority (KCCA) adhered to amendments to Section 8 – Administrative Procedures, of its policy document entitled “Policies and Procedures for the Administration of Section 28 Regulations.” The amendments provide an opportunity to streamline the permitting process and allow Authority staff to be more efficient in review of Section 28 applications. Permits are issued at a staff level which results in quicker turnaround time.

Regulation and development reviews continued to provide substantial input into land use, planning and development. Twenty-three permits were issued under “Ontario Regulation 181/06 (O.Reg.97/04)”, showing a 50% decrease in Section 28 applications from past years.

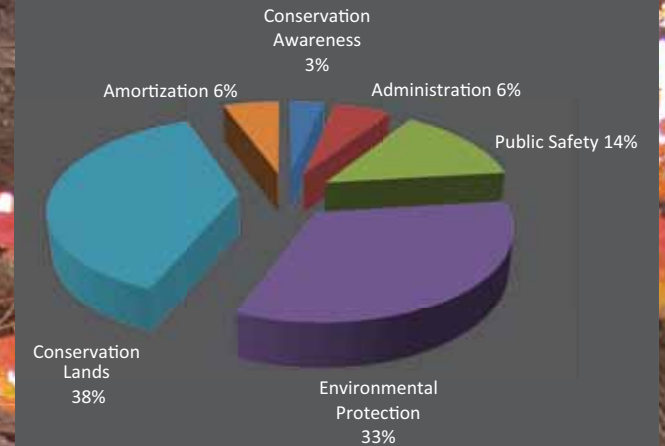
Staff continue to work collaboratively with municipal counterparts and developers to make the planning and regulations process better. KCCA participated in the Technical Review Committee for the first County of Elgin Official Plan.

With the receipt of new digital aerial photography under the South Western Ontario Orthophotography Project (SWOOP 2010), KCCA began a shoreline comparison assessment along the Lake Erie shoreline to evaluate bluff erosion activity over the past 10 years. Lands susceptible to natural hazards, such as flooding or erosion, must be identified and avoided through appropriate assessments to ensure that the protection of life and property is maintained.

TOTAL REVENUES



TOTAL EXPENDITURES



Full financial statements are available at www.kettlecreekconservation.on.ca

2011 FINANCIAL STATEMENTS

2011 Board of Directors

Charlie Murray, Chair
Municipality of Thames Centre

Bud Polhill, Vice-Chair
City of London

Heather Jackson-Chapman
City of St. Thomas

Bill Mackie
City of London

Jim McIntyre
Southwold Township

Max Moore
Malahide Township

Bill Walters
Municipality of Central Elgin

Dave Warden
City of St. Thomas

Ralph Winfield
City of London

Rudy Zuyderhoff
Municipality of Middlesex Centre

2011 Staff

Elizabeth VanHooren
General Manager/Secretary Treasurer

Mike Buis
Jennifer Dow

Emily Fenn

Joe Gordon

Jeff Lawrence

Betsy McClure

Luiza Moczarski

Scott Pinnell

Kathleen Sebestyen-Scott

Barry Skinn

Brian Watson

Bryan Widner

Our Partners/Donors List

Thank you to the following for their financial and in-kind donations to Kettle Creek Conservation Authority in 2011:

Catfish Creek CA • CAW Local 1520 • City of London • City of St. Thomas • Conservation Ontario • County of Elgin • Don and Hazel Williams Charitable Foundation • Elgin Area Primary Water Supply System • Elgin County Junior Farmers Alumni • Elgin County Soil & Crop Improvement Association • Elgin Federation of Agriculture • Elgin Hiking Trail Club • Elgin-St. Thomas Public Health • Elgin Stewardship Council • Fisheries & Oceans Canada • Friends of Pittock • General Dynamics Land Systems – Canada • Graham Scott Enns LLP • Grand River CA • Green Lane Community Trust • Huron Tractor, St. Thomas • Joan Winfield Enterprises • Johnson's Sanitation • Kettle Valley Pioneers • Lake Erie Source Water Protection Region • Long Point Region CA • Lower Thames Valley CA • Mark's Work Wearhouse • Middlesex Stewardship Council • Ministry of the Environment • MNR Community Fisheries and Wildlife Involvement Program • MNR Species at Risk Stewardship Fund • Municipality of Central Elgin • Municipality of Middlesex Centre • Municipality of Thames Centre • Northern Casket (1976) Ltd. • Ontario Ministry of Agriculture, Food and Rural Affairs • Ontario Power Generation • Optimist Club of St. Thomas • Peacekeeper Park • RBC Blue Water Project • Riggs Engineering Ltd. • Robin Foster • St. Thomas Field Naturalist Club Inc. • Spectrum Communications • Stewardship Oxford • Real Canadian Superstore, St. Thomas • TD Friends of the Environment (St. Thomas, Tillsonburg, Woodstock, London Chapters) • Thames Valley District School Board • Township of Dutton-Dunwich • Township of Malahide • Township of Southwold • Trees Ontario • Trojan Technologies • Upper Thames River CA

(please notify our office of any errors or omissions)



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