

**Full Authority**  
**19 April 2018**  
**Agenda Item: 10**

**Watershed Report Card**

*Background*

Conservation Authorities have been collecting and analyzing environmental data and using this information to assist with the development of local natural resource programs and plans since the inception of Authorities in the 1940's. The Crowe Valley Conservation Authority has also collected data from the time when it was first established in 1958.

Public demand for information about the state of our watersheds and a need to demonstrate accountability led Conservation Authorities to conduct a 2003 pilot project to establish guidelines for Conservation Authorities to develop watershed report cards. The report card is a vital tool to relay information about local watershed conditions to a wider audience, including local residents, agencies and government partners. This would give the necessary information to those who would be involved to make informed decisions leading to enhanced local protection and remediation actions.

Since 2003, many Conservation Authorities have prepared watershed report cards using the 2003 guidelines. However, in 2009, Conservation Ontario had reviewed the watershed report cards and determined there were too many inconsistencies in the collection, analysis and reporting of the local data. This compromised the broader application of this important information. As a result, all Conservation Authorities agreed a better, standardized set of indicators and evaluation was needed to be adopted by all 36 CAs.

Under the leadership of Conservation Ontario and staff from Conservation Authorities, and with input from provincial and federal agencies, a guide to developing watershed report cards was produced and made available to all CAs in 2011.

The focus of the report cards would be surface water quality, forest conditions and groundwater quality. Each category would be measured by using two or three primary indicators. As an example, surface water quality indicators include the analysis of benthic macroinvertebrates and results of the CVCA's participation in the Provincial Water Quality Monitoring Network.

The development of consistent watershed report cards provides a successful means of delivering technical information in an understandable format for public consumption. In addition, the standardized format is particularly beneficial to municipalities that cross two or more watershed boundaries.

## *2018 CVCA Watershed Report Card*

The CVCA produced its first watershed report card using the standardized format in 2013. It is the intent of Conservation Authorities to compile five years of data and produce an updated watershed report card. The second CVCA watershed report card will be completed using data collected from the years 2012 to 2016.

The report card is currently in the final stages of production and will be sent to Conservation Ontario to be assembled in the templates used by all CAs. The work could not have been finalized without CVCA staff and summer students first collecting surface and groundwater data and benthic invertebrate samples from around the watershed. Cheryl Reyes was contracted to finish identifying the CVCA's benthic samples, ensure all of the data was complete and ready to submit it to Conservation Ontario for the final grading and editing. Each component of the report card, a) surface water, b) groundwater and c) forest cover are graded from A (Excellent) to F (Very Poor).

### *Surface Water*

Surface water is graded by looking at phosphorus and benthic invertebrates. The grade for benthics is determined using the Hilsenhoff Biotic Index (HBI). This is an index that measures the overall tolerance of a benthic community in a sampled area weighted by the relative abundance of each taxonomic group. The CVCA's grade in 2013 was graded A.

### *Groundwater*

The CVCA has 8 groundwater wells, but unfortunately, only 4 have consistent data. The data presented in the WRC will be from the 4 consistent ones. Nitrite, Nitrate and chloride data are needed to obtain a groundwater rating. There was insufficient data collected for the 2013 groundwater to be graded. CVCA staff are optimistic a grading will be applied to the 2018 groundwater component.

### *Forest*

Forest cover is easily measured due to the watershed being primarily a forested watershed. The two indicators used are Percent Forest Cover and Percent Forest Interior. The Percent Forest Cover is simply the percentage of the watershed that is forested or wooded and is a key indicator because the amount of forest cover in a landscape determines its ability to support wildlife species.

Percent Forest Interior is that portion of the forest or woodlot that is more than 100 m from the edge. The amount of forest interior is a measure of habitat quality and size. Generally, larger forest interior areas will support more species because the edge effects are minimized.

The CVCA's forest component in 2013 scored an A because of the significantly high percentage of forested or wooded areas within the watershed.

CVCA staff are anticipating good grades for each of these components in the 2018 Watershed Report Card. Once the WRC is completed, it will be posted on the CVCA website. Cheryl has also compiled a CVCA watershed report card manual to aid staff with future editions of the report card.