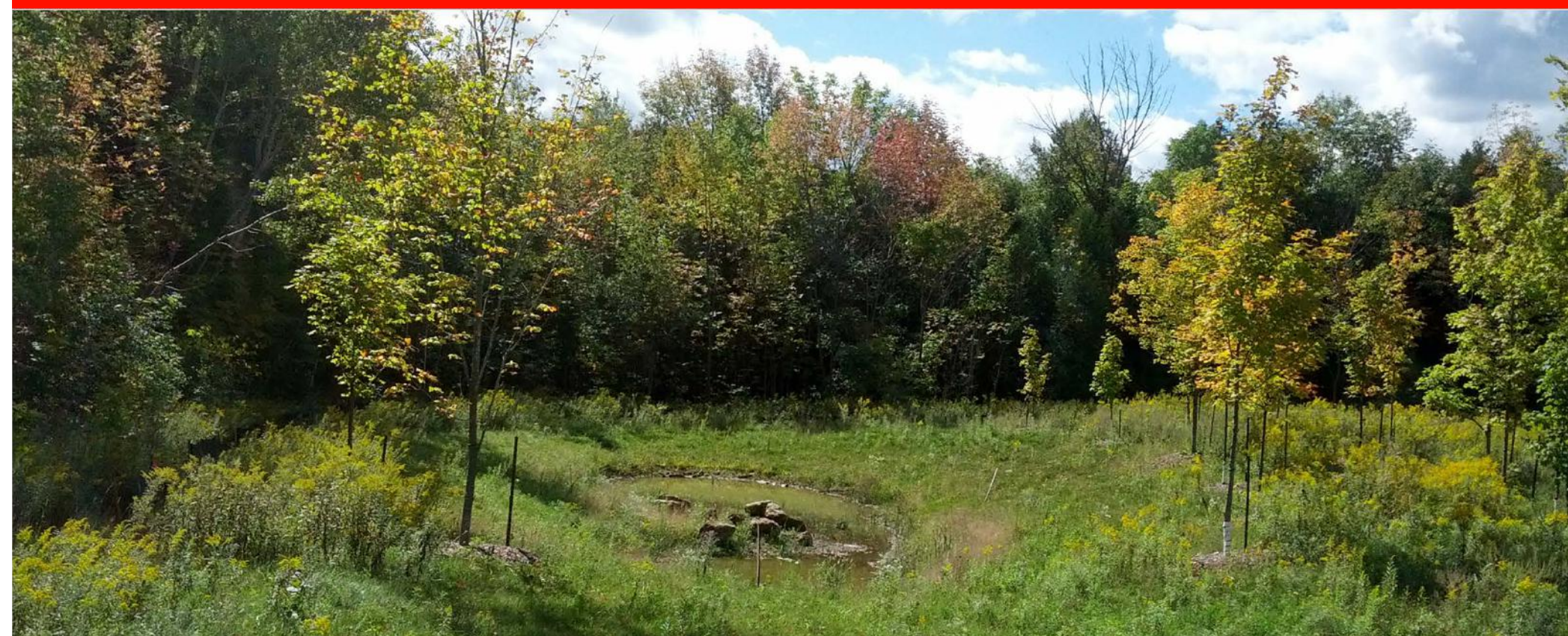




Strength. Performance. Passion.

Holcim Canada's Biodiversity Initiative

DFA Acton CAP Meeting, February 11, 2013



As a resource intensive industry, Holcim is committed to minimizing our ecological footprint.

- Holcim has recognized biodiversity in their long term global strategy and has partnered with the International Union for the Conservation of Nature (IUCN).
- Through this global partnership, an independent expert panel developed a biodiversity management system (BMS).
- BMS main objective: ***to provide the tools to ensure that biodiversity issues are systematically identified and appropriately managed across all the stages of the extraction sites.***
- The BMS will be implemented globally and will be integrated into all Dufferin Aggregate site rehabilitation plans.



Holcim's global commitment is to implement Biodiversity Action Plans (BAPs) at 80% of our sensitive sites by 2013. The BAPs have currently been drafted and will be implemented at the sites starting in 2013.

- In 2011, Dufferin Aggregates (DFA) Acton, Carden, Cayuga, and Milton were deemed sensitive sites.
 - ▶ Sites are located in sensitive areas (i.e. Niagara Escarpment) and/or have sensitive species on-site.
- HCA partnered with Bird Studies Canada and Couchiching Conservancy to monitor biodiversity and help develop BAPs at the 4 sensitive sites.
- Results will be communicated with NABCI.
- Holcim will continue to explore a Tri-National partnership opportunity with NABCI.
- Through the BAP development, Holcim aims to:
 - ▶ Build and develop stakeholder relations;
 - ▶ Demonstrate that rehabilitation can achieve positive environmental contributions; and
 - ▶ Implement best management rehabilitation practices.



In May 2012, HCA began implementing the biodiversity monitoring program with Bird Studies Canada and Couchiching Conservancy.

- Bird and amphibian monitoring was completed at Acton, Cayuga and Milton. Bird and vegetation monitoring was completed at Carden.
- Four (4) monitoring events were completed at each site consisting of site visits and deploying SongMetres.
- A priority ranking system within the BAP was developed focusing on establishing objectives and targets to address key species/habitats.
- Biodiversity objectives and targets will be incorporated into the BAP.
- The monitoring program will continue to be implemented to track the level of success of the action items that are put in place.



At the DFA Acton Quarry, biodiversity monitoring was completed in the rehabilitated areas of Phase 1 including the rehabilitated side-slope and island and adjacent water habitats.

Phase 1

- **61** different species of birds were identified including Bank Swallow, Barn Swallow, Osprey, Wood Thrush and Mute Swan (Invasive).
- Amphibians including American Toad, Gray Tree Frog, Green Frog, Northern Leopard Frog were also observed.
- Invasive species such as Phragmites was identified on the rehabilitated side-slope and the island.



At the DFA Acton Quarry, biodiversity monitoring was completed in Phase 2 including the all of the rehabilitated area and adjacent water habitats.

Phase 2

- **73** different species of birds were identified including Bank Swallow, Barn Swallow, Bobolink, Vesper Sparrow, and Virginia Rail.
- Amphibians including Gray Tree Frog and Green Frog were also observed.
- Invasive species such as Phragmites was identified throughout most of the rehabilitated area, especially in low-lying areas.



Dufferin has constructed a demonstration amphibian pool on our lands in Acton, in cooperation with the Ministry of Natural Resources and Conservation Halton.

- Construction of Amphibian Demonstration Pool 'G' commenced in Oct. 2011.
- 17 Sugar Maples planted (varying sizes) and grass seeding implemented.
- Pool planned and designed to suit local conditions and intended functions, including amphibian breeding.



- Tadpoles were visible in spring 2012.
- Water level has fluctuated seasonally (as anticipated).
- In less than 1 year pool and surrounding habitat thriving.
- Created pool satisfies classification of "Suitable Pond" for breeding of Jefferson Salamanders.

Every Earth Week, DFA partners with Scouts Canada to plant trees at the Acton quarry. In Oct. 2012, DFA also partnered with the Bruce Trail Association to help clean-up the trail and plant 500 trees.



The biodiversity monitoring completed in 2012 has resulted in the identification of more than **153** different bird species on Holcim's sensitive sites including **93** at DFA Acton.



HCA is currently working with these ENGOs and other groups/agencies to develop biodiversity objectives to support the BAPs.

What key objectives have been identified and discussed so far?

- Rehabilitation and Habitat Creation
 - ▶ Establishing and maintaining grassland habitats;
 - ▶ Bird boxes, bird feeders, nesting areas (i.e. Bank Swallows); and
 - ▶ Greater vegetation diversity.
- Land Management
 - ▶ Reduce the amount of manicured landscaping within the site; and
 - ▶ Modify agricultural practices (hay cutting, increased buffers around wetlands).
- Invasive Species
 - ▶ Implement controls to prevent the spread of invasive species; and
 - ▶ Research soil management and rehabilitation techniques to reduce the potential for invasive species to become established.
- Monitoring
 - ▶ Expand the scope of the program to other taxa and to other sites/areas to address data gaps and track progress.

In 2012, HCA supported a Bank Swallow project led by the Ministry of Natural Resources and Environment Canada specifically for the aggregate industry.

- Bank Swallows are protected under the Migratory Birds Conservation Act.
- Like to nest in active sand faces and in stockpiles.
- Nesting season: April – August.
- DFA Blair, DFA Mosport and DFA Simcoe were selected for the project with more than 300 active nests observed at some of these sites.
- 166 Bank Swallows were observed by Bird Studies Canada at DFA Acton.
- By April 2013, HCA will develop Best Management Plans (BMPs) for DFA sites to help them properly manage Bank Swallows and their habitat.



HCA is also supporting Earth Rangers through a multi-year partnership to support a migratory songbird project.

- In October 2012, Earth Rangers, Nature Conservancy Canada (NCC) and Holcim launched the “Bring Back the Wild Program” for the Wood Thrush.
 - ▶ Wood Thrush is a migratory songbird that is listed as ‘Endangered’ under the Federal Endangered Species Act.
- Help NCC purchase 25 acres of mature deciduous forest in Quebec to protect Wood Thrush habitat; and
- Purchase 60 geolocators to be placed on Wood Thrush to study and track their migration and learn about their breeding and wintering areas.





Dufferin Aggregates

A division of Holcim (Canada) Inc.