Welcome
to the Second
Public Meeting for the

Crooks’ Hollow Dam Removal and Restoration of Spencer Creek

Wednesday, May 18, 2011
6:00 pm to 9:30 pm
Presentation at 7:30 pm
Purpose of this Open House

Following completion of a Class Environmental Assessment, Hamilton Conservation Authority (HCA) is moving forward with the removal of the Crooks' Hollow Dam and restoration of the upstream section of Spencer Creek.

As part of the detailed design process, HCA is looking for feedback and ideas on the restoration of the Crooks’ Hollow reach of Spencer Creek. The consultation will take place through a series of public information sessions during the design process.

HCA has awarded Hatch Ltd. the contract to conduct detailed design for the removal of the Crooks’ Hollow Dam and the restoration of Spencer Creek. This will involve the decommissioning and removal of the existing dam and related structures, restoration of the dam site and waterway including stabilization of the shoreline areas that are susceptible to erosion, sediment management, and the enhancement of fish habitat. A steel foot bridge will be provided to maintain the traditional access across Spencer Creek.

Removal of the dam will:
- eliminate the structural stability problem and associated environmental and public safety issues
- restore water levels back to natural ‘pre-dam’ levels
- eliminate a barrier to fish movement
- improve water quality and environmental conditions within the former reservoir area
Existing Site Conditions & Environmental Setting

Existing natural and socio-economic environmental features within the study area are depicted in the figure below.

The study area lies within the “Christie Stream Valley” Life Science Site and City of Hamilton Environmentally Significant Area. Significant features of the overall 7.5-km long segment of Spencer Creek that has attained this designation include:
- significant earth science feature
- numerous rare and at-risk species
- significant educational and research value of public land

Natural features in the study area include:
- A fish community comprised of 11 species including largemouth bass, pumpkinseed, white sucker and common carp within the Crooks’ Hollow Reservoir.
- A variety of wetland and terrestrial vegetation communities including:
  - sugar maple – black cherry forest
  - sugar maple – oak forest
  - black walnut – white ash forest
  - marsh
  - raspberry thicket
- Residence, foraging, breeding and movement habitat for a variety of bird, mammal, amphibian, reptile and insect species

Socio-economic features in the study area include:
- Crooks’ Hollow Conservation Area – used for hiking, fishing, nature observation
- Crooks’ Hollow educational historical trail
- Local recreational trail network
- Christie Lake Conservation Area
- Residences and private lands adjacent to riparian lands.

Legend
- Reservoir Boundary at Normal Summer Level (el 216.28m)
- Wetlands
- Conservation Lands
- Local Trails
- Crooks Hollow Historic Trail
  Note: Aerial photograph shows reservoir at drawn down fall/winter level (~ el 215.06m).
Crooks' Hollow Dam Removal and Restoration of Spencer Creek

Dam Removal & Sediment Management Process

Rendering of a Restored Spencer Creek Following Dam Removal

Spencer Creek Before Dam Removal

Sediment Area with Earth Berm

Natural revegetation or replaced disturbed floodplain areas combined with selective planting and seeding with native plant species.

Dredging and disposal of ~3,000 m³ of sediment.

Concrete Confinement and removal.
Bridge Replacement

Existing Dam Site

Location of Bridge Placement Options

Conceptual Rendering of Possible Bridge Placement and Design
Stream Restoration

The stream restoration work is following an iterative process. Using field data and a hydraulic model, a conceptual design is produced. This initial design offers a range of options which will be refined based on:

- sediment management / water quality
- fisheries / habitat / passage
- riparian functions / wetlands
- cultural heritage
- physical constraints (eg., bedrock; upstream and downstream connections)

Channel Option 1
Conceptual Cross Section
- Narrow
- Shallow
- Steeper Grade
- Faster Flow

Channel Option 2
Conceptual Cross Section
- Wide
- Deep
- Flatter Grade
- Resembles Pond

Long Profile of Crooks’ Hollow

Range of Design Variability
Cultural Heritage Study

Preliminary Mitigation Strategies

- Development of a Conservation and Interpretation Plan
- Mill Ruins Conservation Plan
- Landscaping
- Interpretation
- New Bridge
- Construction monitoring
- Active documentation

Identified Heritage Attributes

The cast iron conduit downstream of Crooks’ Hollow Dam

Crooks’ Hollow Dam showing various crests of spillways and buttresses which historically contained stoplog slots

The silting upstream of the Crooks’ Hollow Dam

Morden Mill Dam showing earthwork dam and stone spillway

The Cockburn Mill weir abutment
Next Steps

All comments will be reviewed and considered for the detailed design process.

Our next Public Open House will be advertised in the local newspaper and information will be sent to all those on the project mailing list.

If you would like to be included on the project mailing list, please include your name and email or mailing address on the sign in sheet.

Please fill out a Work Book and Thank you for attending this second Public Open House.

Additional information or questions can be directed to

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Additional resources are also available at
www.conservationhamilton.ca/area-information/conservation-areas/crooks-hollow