

March 26, 2010

For Pick Up

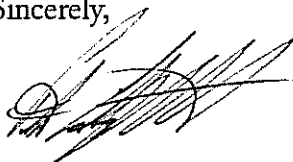
Dear Ms. Martin

RE: Hanlon Creek Business Park 2010 Jefferson Salamander Monitoring Program

In response to your request please find enclosed information about the Hanlon Creek Business Park's 2010 Jefferson Salamander Monitoring Program. This program has been developed through consultation with the Ministry of Natural Resources as well as Dr. Jim Bogart of the University of Guelph. Both will be involved through phases of the program.

In addition to City owned lands, monitoring will also take place on lands owned by Cooper Construction Ltd., and Belmont Equity Group Inc. Any requests for additional information will need to have input from these property owners.

Sincerely,



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NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Hanlon Creek Business Park Protocol for 2010 Salamander Monitoring - Summary

Prepared for City of Guelph Economic Development Department, Belmont Equity and
Guelph Land Holdings

Introduction

Natural Resources Solutions Inc (NRSI) has prepared the 2010 Salamander Monitoring Plan for the Hanlon Creek Business Park (HCBP) on behalf of the City of Guelph, Belmont Equity Partners and Cooper Construction. The focus of the Monitoring Plan will be to determine the presence/direction of any Jefferson salamander (*Ambystoma jeffersonianum*) movements to and from natural areas within the HCBP lands and the presence/absence of suitable breeding habitat. The Monitoring Plan has been developed following extensive discussions involving NRSI, Ministry of Natural Resources, Guelph District (MNR), Dr. Jim Bogart from the University of Guelph and City staff. A summary of the methodology for field monitoring and data analysis for the 2010 Salamander Monitoring Plan are presented herein. The Monitoring Plan has been finalized following review by and input from the MNR, Guelph District.

Results obtained from 2010 monitoring will be consolidated with findings from 2009 surveys (minnow trap surveys, larval surveys, review of habitat characteristics and Laird Road amphibian mortality surveys).

Summary of Methodology for the 2010 Monitoring Plan

Salamander survey locations were chosen based on NRSI's first-hand knowledge of the study area, available mapping, existing literature, and input and guidance from the MNR, Guelph District and Dr. Jim Bogart.

The 2010 Salamander Monitoring Program will consist of minnow trap surveys in conjunction with pitfall trap surveys.

NRSI staff will consult with Dr. Bogart and MNR staff regarding the specific time period for the monitoring program. Minnow traps and pitfall traps will be put out in early spring during peak salamander breeding season when salamanders would emerge from their overwintering sites and migrate to breeding ponds.

All species captured through the two survey methods will be documented and released. Any suspect Jefferson salamanders captured will be photographed, sampled and then released.

Minnow Trap Survey Method

Un-baited minnow traps will be placed in potential breeding locations for Jefferson salamanders as identified by NRSI in consultation with MNR and Dr. Bogart, and their location recorded with a handheld GPS. Traps will be set every day from on-set of the salamander monitoring period to ensure maximum success. The start and end of

monitoring will be established based on discussions with staff of the MNR as well as Dr. Bogart.

As genetically 'pure' Jefferson salamanders are virtually impossible to identify visually, small tail clippings (approximately 5mm) of any suspect Jefferson salamanders encountered during trap surveys will be collected and preserved in 70% ethanol for subsequent DNA extractions and microsatellite examination. The salamanders would then be released at the location they were captured. DNA extraction and analysis will be performed at the University of Guelph by Dr. Jim Bogart.

Pitfall Trap Survey Method

Pitfall traps will be prepared and opened up in early spring to determine direction of salamander movement to and from potential breeding habitats. Pitfall locations were chosen to best represent locations where potential salamander movement may occur.

Pitfall traps will be checked on a daily basis during the monitoring period.

Using the same methodology as outlined under minnow trap surveys, tail clippings of all suspect Jefferson salamanders will be collected and preserved in 70% ethanol for subsequent DNA extractions and microsatellite examination.