

NATURAL HERITAGE ENVIRONMENTAL IMPACT STUDY

PREPARED FOR

East West Exchange Inc.

Development Application for a Retreat Camp

**Part Lot 13, Con. 2EGR geographic Township of Glenelg
Municipality of West Grey
County of Grey**

PREPARED BY

AWS

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1 Introduction

East West Exchange Inc. has proposed to establish a religious retreat camp at Part Lot 13, Concession 2 EGR, geographic Township of Glenelg, Municipality of West Grey, County of Grey. Aquatic and Wildlife Services (AWS) was retained in February 2008 to undertake the required Environmental Impact Study (EIS). Figure number 1 provides the general site location mapping and Figure number 2 provides delineation of the EIS Study Lands and the 120m adjacent review lands.

This Natural Heritage Environmental Impact Study (EIS) has been undertaken to meet the requirements of the Natural Heritage Provincial Policy Statement section 2.1 and related policies of the County of Grey Official Plan and the Zoning for the Municipality of West Grey.

Note: For this EIS report all *Italic writing* text sections are direct quotes from referenced documents and reports.

This report will follow the format requirements as outlined in the Natural Heritage Reference Manuals of February 1997 and June 1999 and Official Plan EIS aspects.

The applicant, East West Exchange Inc., has proposed to establish a religious retreat within Part Lot 13, Con. 2 EGR, with the intent for development in a two-phase approach accommodating up to 500 people. Development facilities include a main hall, kitchen/cafeteria, dormitory, manager's house, vehicle parking area, septic and well services, camping sites and outdoor activities.

A preliminary site plan had the development focused within the 'back farm fields' located centrally to the property, as shown on Figure number 2B. During the 2008 EIS field investigations, the site was walked with the applicant and consulting architect to discuss various on-site environmental issues and potential concerns related to access for heavy machinery and road construction within the wetland/floodplain and cold-water stream environment. In support of the sensitive environment, the applicant shifted the potential development activity to the 'property front field' as delineated on Figure number 2B and referenced within this EIS report as the 'Study Lands' as shown on Figure No. 2.

1.1 Background Review

A literature review and data search was conducted to aid in the identification of Natural Heritage Features and historical occurrence records for Flora and Fauna within and surrounding the subject Study Lands. This background review was utilized to augment field data collection for the EIS process. A full listing of reports / documents cited has been provided within the reference section. Preliminary consultation was undertaken with the following:

- Draft concept site plan by Peter Ferguson, whom also consulted the Municipality
- Draft sewage treatment plans by Gamsby and Mannerow Engineering Ltd.
- Saugeen Valley Conservation Authority staff: Environmental Planner, Jo-Anne Harbinson

1.2 Field Study Methodology

Field investigations and data collection for this EIS reporting covered the spring, summer and fall seasons of 2008. Details of inventory focus works and dates are provided in Table No. 1.

- A two-person team comprised of John Morton and Judith Jones from AWS Environmental Consulting completed 17.5 hours of field survey works over eight site visits within the EIS field Study Lands as delineated on Figure No. 2.

Flora survey fieldwork followed a 'random' search pattern throughout the Study Lands, during the spring and summer growing seasons of 2008. A full listing of flora species with floristic quality scoring has been provided within Appendix II. Vegetation community mapping following the Provincial Ecological Land Classification system is shown on Figure No. 8, covering the Study Lands and the adjacent review lands.

Fauna survey fieldwork followed a similar random approach within all of the Study Lands, and each habitat type. A fauna species listing recorded through sightings, auditory or evidence noted (track, scat) is provided within the Appendix III. Breeding Bird survey works followed field timelines in accordance with Bird Studies Canada Protocols and Herpetofaunal survey works were in accordance to Provincial guidelines.

1.3 Field Survey Dates

AWS field survey works were undertaken on eight dates, covering both the spring and summer growing seasons of 2008 and fall to early winter season of 2008. Survey focus works are outlined on Table No. 1, with coverage hours for each survey date. Though each site visit had a given 'focus' for Natural Heritage features and ecological function identification, field survey works also included all flora/fauna survey sightings, habitat conditions/functions and development assessment works during each site visit.

Table No. 1: Field Survey Dates

Date	Time & (Duration)	Survey Focus
April 17, 2008	1:00 pm to 3:30 pm (2.5 hrs)	Preliminary field assessment and Herpetofaunal
May 26, 2008	10:30 am to 12:00 pm (1.5 hrs)	Herpetofaunal, Surface Water Features, Breeding Birds
June 14, 2008	7:30 am to 8:30 am (1.0 hrs)	Breeding Birds
June 26, 2008	11:00 am to 2:30pm (2 X 3.5 = 7.0hrs)	Flora and Fauna
August 13, 2008	3:00 pm – 4:30 pm (1.5 hrs)	Flora & Fauna, Wetland boundary, Vegetation community mapping
September 12, 2008	2:30 pm to 4:00 pm (1.5 hrs)	Flora & Fauna Base flow conditions
November 12, 2008	9:30 an to 10:30 am (1.0 hrs)	Surface water features and Wintering Habitat conditions
November 20, 2008	11:00 am to 12:30 am (1.5 hrs)	Field review of features and development concept, with applicant and architect

2 Significant Feature Analysis

The following eight Natural Heritage Features as defined by the Provincial Policy Statement 2.1 dated March 1, 2005, have been researched on available reports, data banks, maps etc. currently available through municipal, provincial and federal agencies for this study area. Features that have been identified to occur within the EIS Study Lands or their associated adjacent lands will require further impact assessment as provided within section 3 of the report.

2.1 Habitat of Endangered and Threatened Species

Historical listings of Significant Flora and Fauna species records were reviewed for the subject Study Lands through the Natural Heritage Information Centre (NHIC) web site. Species records maintained by the Ontario Ministry of Natural Resources (OMNR) including the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listings are shown on Figure No.4 for the surrounding landscape. No historically recorded species that has an Endangered or Threatened status have been recorded within the subject Study Lands or adjacent review lands. The EIS field study works of 2008, augmented this historical review, with Flora and Fauna listings provided within Appendix II and III, having no species identified with an Endangered or Threatened Status.

The Provincial Policy Statement (PPS) section 2.1.3 (a) states:

Development and site alteration shall not be permitted in significant habitat of endangered species and threatened species.

With no Endangered or Threatened species recorded or historically noted within the Study Lands, this development proposal will be in compliance with Provincial Policies, Acts and Legislation and similar Official Plan policies. As such, no further Impact Assessment works are deemed necessary for this development proposal in relation to the PPS 2.1.3 (a).

2.2 Significant Wetlands

No significant wetland designations occur within the Study Lands or the adjacent review lands, as shown on the Grey County Official Plan mapping Figure No. 5A and 5B and the Conservation Authority regulatory mapping shown within Appendix IV and confirmed through Ministry of Natural Resources literature review. The Provincially Significant Wetland 'McKechnie Creek' bisects the back portion of Lot 13, however this PSW environment is approximately 600m west of the Study Lands, as has no surface water connection to the Study Lands, and undulating terrain with open field environments between the two locations, as such no negative impacts from the development structures are anticipated.

The Provincial Policy Statement (PPS) section 2.1.3 (b) states:

Development and site alteration shall not be permitted in significant wetlands in Ecoregions 5E, 6E and 7E.

The subject Study Lands are within Ecoregion 6E, however with no designated Significant Wetland within the Study Lands or the 120m adjacent review land, this development proposal will be in compliance with the PPS section 2.1.3 and 2.1.6 (adjacent lands policy for 120m to PSW designations) and similar policies of the Official Plan and Municipal Zoning. As such, no further Impact Assessment works are deemed necessary for this development proposal in relation to the PPS 2.1.3 (b).

2.3 Significant Coastal Wetlands

The subject Study Land does not occur along the Great Lakes coastline, as such this development proposal will have no impact on coastal wetlands.

The Provincial Policy Statement (PPS) section 2.1.3 (c) states:

Development and site alteration shall not be permitted in significant coastal wetlands

With no designated Significant Coastal Wetlands within the Study Lands or its 120m adjacent review land, this development proposal will be in compliance with the PPS section 2.1.3 and 2.1.6 (adjacent lands policy for 120m to PSW designations) and similar policies of the Official Plan and Municipal Zoning. As such, no further Impact Assessment works are deemed necessary for this development proposal in relation to the PPS 2.1.3 (c).

2.4 Significant Areas of Natural and Scientific Interest (A.N.S.I.)

No life science or earth science ANSI designations occur within the Study Lands or its 120m adjacent review lands, as shown on the Grey County Official Plan mapping Figure No. 5A and 5B, and confirmed through Ministry of Natural Resources literature review.

The Provincial Policy Statement (PPS) section 2.1.4 (e) states:

Development and site alteration shall not be permitted in significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

With no ANSI designation occurring within the Study Lands or its 120m adjacent review lands, this proposed development activity is in compliance with the PPS section 2.1.4 (e) and 2.1.6 (adjacent lands policy for 50m) and similar policies of the Official Plan and Municipal Zoning. As such, no further Impact Assessment works are deemed necessary for this development proposal in relation to the PPS 2.1.3 (b).

2.5 Significant Valleylands

Grey County or the City of Owen Sound has not identified potential 'Significant Valleylands' within the Official Plan mapping based on Provincial criteria; as such this EIS has reviewed recommended Provincial criteria as listed in the 1999 Natural Heritage Reference Manual attachment section A.7, for determining said designations.

Figure No. 3, which provides site-contour mapping of the Study Lands, demonstrates that though the surrounding landscape is hilly/undulating there is no incised terrain feature occurring on-site, Similarly there is no identifiable distinctive landform feature or known cultural/socio-economic values associated to the subject lands. Through this analysis, it can be concluded that no Significant Valleyland feature or designation would not occur within the subject Study Lands.

The Provincial Policy Statement (PPS) section 2.1.4 (c) states:

Development and site alteration shall not be permitted in significant valleylands south and east of the Canadian Shield unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

With no Significant Valleyland feature/designation occurring within the Study Lands or its 120m adjacent review lands, this proposed development activity is in compliance with the PPS section 2.1.4 (b) and 2.1.6 (adjacent lands 50m to such features) and similar policies of the Official Plans.

2.6 Fish Habitat

Within the Study Lands, a cold-water stream course bisects the subject property along the western study area boundary, as shown on Figures 2, 3 and 5B. This stream course is a tributary to McKechnie Creek and is considered a permanent system or having year-round flows. The McKechnie Creek system is none to support a native Brook Trout population (OMNR stream files reviewed), with Brook Trout observed on-site within this unnamed tributary during EIS field investigations.

In addition to this permanent flow tributary, a secondary intermittent stream channel was also identified on-site and mapped on Figure No. 9. During field investigations on this intermittent flow channel throughout the spring, summer and fall 2008 seasons, no fish species were observed at any time. This channel had no surface flowing waters after the June 14 site visit, until flows were observed again on the November 12 site visit. Physical features and barriers noted within this channel would not permit fish migration into the channel waters on the subject lands. As such, this intermittent flow channel, would not be deemed Fisheries Habitat under the Fisheries Act, however this intermittent flow channel does provide in-direct contributions to water quality and quantity to the receiving waters of the unnamed permanent tributary that does support Fish Habitat.

The Provincial Policy Statement (PPS) section 2.1.5 states:

Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

With Fish Habitat present within the EIS Study Lands, further assessment of this feature has been undertaken for development impact assessment within section 4.2, with recommended setbacks focused on water quality maintenance.

2.7 Significant Wildlife Habitat

Currently no specific habitat mapping has been undertaken within Grey County to identify all sub-components to Significant Wildlife Habitat, based on Provincial criteria. However, aspects of historical Provincial inventory and assessment works for wildlife habitat have been incorporated into the County Official Plan mapping. County Constraint mapping as shown on Figure No. 5B, identifies no historical features (wintering deer yards) associated with Significant Wildlife Habitat for the Study Lands or its adjacent lands.

For a full environmental analysis review, this EIS shall follow the recommended Provincial criteria listed within the OMNR October 2000, **Significant Wildlife Habitat Technical Guide (SWHTG)** publication for determining potential said designation within the Study Lands and immediate surroundings for the determination of the habitat significance.

This particular Natural Heritage feature component can be subdivided into four distinct categories as outlined in the Natural Heritage Reference Manual (June 1999) and to a greater specific extent, within the Ontario Ministry of Natural Resources Significant Wildlife Habitat Technical Guide of October 2000. It has been recommended within this later technical manual, that within a municipality for the determination of significance, that the greatest emphasis should be placed on; representation, abundance, rare species and multiple benefits.

The four categories for evaluation of Significant Wildlife Habitat and a review of each are provided below.

2.7.1 Seasonal Concentration of Animals

The Significant Wildlife Habitat Technical Guide has identified 14 potential types of seasonal concentration areas:

- *Winter Deer Yards*
 - The Ontario Ministry of Natural Resources has no designated over wintering deeryard habitat within the Study Lands or adjacent review lands, as would be reflected on the County Official Plan constraint mapping. EIS fieldwork analysis confirmed that no wintering deer activity was noted during the early winter season of 2008 within the Study Lands.
- *Moose late winter habitat*
 - Not applicable to Grey County
- *Colonial bird nesting sites*
 - No suitable habitat within the Study Lands

- *Waterfowl stopover and staging areas*
 - No suitable habitat within the Study Lands.
- *Waterfowl nesting habitat*
 - Insufficient suitable habitat within the Study Lands
- *Shorebird migratory stopover sites*
 - No suitable habitat occurs within the Study Lands.
- *Landbird migratory stopover areas*
 - This study area is not known for migratory bird stopover habitat by local birders or environmental agencies. No significant or unique or specialized habitat within the overall immediate review landscape to the Study Lands is identifiable through air photo interpretation.
- *Raptor wintering areas*
 - No documented use, no habitat diversity or features within the subject lands that would support the required over wintering habitat for raptors.
- *Wild Turkey wintering areas*
 - No historically known roosting or over wintering activity known for this site. No observations of wild turkey wintering at the site during the early winter season of 2008. Similarly no evidence of over wintering wild turkey activity was noted during the April 17/08 site visit, that would be present after a long 2007/08 winter season if habitat was utilized.
- *Turkey Vulture summer roosting areas*
 - Site has no tall structures, super canopy trees with open surroundings or cliff faces, no identifiable suitable habitat within the Study Lands.
- *Reptile hibernacula*
 - No known or historical documentation for the Study Lands. Field investigations on April 17/08 were during ideal reptile hibernaculum emergence time period, with no active or significant snake numbers observed within the Study Lands.
- *Bat hibernacula*
 - Site has no significant older building structures (typically having fascia/roof openings, barns etc), large standing hollow trees, heavy deciduous forest canopy or geological features such as caves that could support hibernacula functions, as such no identifiable suitable habitat occurs within the Study Lands.
- *Bullfrog concentration areas*
 - Species was not observed during the 2008 site visits, no historical documentation.

➤ *Migratory butterfly stopover areas*

- Site lacks in cover habitat or significant flowering plant forage, no identifiable suitable habitat within the Study Lands.

In summary for the sub-component section 2.7.1, the subject Study Lands has not been identified to support Seasonal Concentrations of Animals.

2.7.2 Rare Vegetation Communities or Specialized Wildlife Habitat

2.7.2.1 Rare Vegetation Communities

Ecological Land Classification for vegetation community type mapping has been provided on Figure No. 8 and characterized under section 4.4.1 for the field assessment Study Lands. No rare vegetation communities were historically listed or observed during fieldwork completed in support of this environmental assessment. Field investigations and site mapping have not led to the identification of any rare vegetation community types (e.g., no observations of old growth forest, concentrations of rare plant species, savannah habitat etc.). Vegetation communities within the Study Lands have a Provincial ranking of S5 or considered “demonstrably secure in Ontario”. Both the Natural Heritage Training Manual and the Significant Wildlife Habitat Technical Guide (MNR 2000) have recommended that rare vegetation communities are those having Provincial rankings between S1 to S3.

2.7.2.2 Specialized Habitat for Wildlife

The Significant Wildlife Habitat Technical Guide (SWHTG) has identified 12 categories of for the evaluation of specialized habitats for wildlife:

➤ *Sites supporting area-sensitive species*

- Fauna species listing is provided within Appendix III, for the subject Study Lands. Observed bird species have been compared to the Significant Wildlife Habitat Technical Guide, Appendix G-Table G-3 for Area Sensitive status, with no species having an ‘area sensitive’ status observed.

➤ *Forest stands providing a diversity of habitat*

- The forest stands within the subject Study Lands and surrounding adjacent review lands demonstrate a moderate level of wildlife habitat diversity for stand types or upland/wetland communities. Forest stands are relatively uniform in age structure, species composition, height and density to surrounding lands. As such, the subject-forested lands are not considered to be ‘specialized’ for wildlife habitat.

➤ *Old growth or mature forest stands*

- There are no old growth trees within the Study Lands or old growth woodland characteristics present, as defined by the Province for Old Growth Forests Definitions (OMNR, 2003)

➤ *Seeps and springs*

- No groundwater upwelling activity that would be considered as ‘springs’ (large and continuous water volumes with hydraulic head functions) were observed within the Study Lands. However, numerous groundwater discharge features characterized as ‘seeps’ (seasonal trickle flows) were observed throughout vegetation community number 6, the wetland/riparian zone to the permanent unnamed tributary course. As such the seeps within this vegetation community could provide seasonal specialized ecological functions (micro-climates, earlier spring vegetation for forage etc) to support wildlife habitat.

➤ *Turtle nesting habitat*

- No turtle species or were observed within the subject Study Lands.

➤ *Woodlands supporting amphibian breeding ponds*

- No ephemeral (seasonal) ponds were identified within the Study Land woodland environment that would provide woodland ecology functions for amphibian breeding habitat.

➤ *Special woodland feeding habitat*

- This ecological function is associated with large stands of mast producing flora (either soft mast- i.e. raspberry-strawberry patches or hard mast- beech, oak trees), which does not occur within the Study Lands. Neither was such habitat observed within the broader adjacent review lands.

➤ *Osprey & Specialised Raptor nesting habitat*

- Habitat and vegetation community types are not conducive to support Osprey or Specialized Raptor nesting activity.

➤ *Special moose habitats*

- Not applicable within Grey County

➤ *Mink and Otter feeding/denning sites; Marten and Fisher denning sites*

- No suitable habitat occurs within the Study Lands for River Otter
- No Mink were observed with the Study Lands, though potential suitable feeding habitat was identifiable along the unnamed tributary watercourse, an already protected environment.
- Marten is not applicable Grey County and Fisher have not been recorded south of Provincial Highway 21, for Grey County.

- *Areas of high diversity*
 - The Study Lands have seen historical disturbances, land clearing and surrounding residential development. No areas of ‘high’ diversity for wildlife habitat were observed with the Study Lands or review lands in comparison to the surrounding landscape.
- *Cliffs and caves*
 - No geological features of this type are identifiable on the subject lands.

In summary for this sub-component section 2.7.2, the subject Study Lands has been identified to support ‘seeps’.

2.7.3 Habitats of Species of Conservation Concern

The Significant Wildlife Habitat Technical Guide (MNR 2000) provides a guideline for assessment analysis to this sub-component, listed below. In addition it is noted, as required under the PPS, species that have been designated Threatened or Endangered by the OMNR and are protected in regulation are not included within the context of this sub-component. Species that can be considered for conservation concern include:

- *Species identified as nationally endangered or threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) which are **not** protected in regulation under Ontario’s Endangered Species Act*
 - None identified within the subject Study Lands
- *Species identified as provincially vulnerable based on lists of Vulnerable, Threatened, Endangered, Extirpated or Extinct Species of Ontario that are updated periodically by the OMNR*
 - None identified within the subject Study Lands
- *Species that are listed as rare in Ontario based on records kept by the Natural Heritage Information Center in Peterborough (S1 to S3 ranking)*
 - Flora inventory works provided within Appendix II, have not identified any plants with a Provincially Rare Status.
 - Fauna inventory works provided within Appendix III, have not identified any wildlife with a Provincially Rare Status.
- *Species that have a high percentage of their global population in Ontario and are rare or uncommon in the planning area*
 - None identified within the subject Study Lands
- *Species that are rare within the planning area, even though they may not be provincially rare (i.e. Locally Rare or Priority: Species of Conservation Concern)*

- Flora inventory works identified three vascular plant species with a Locally Rare status as provided within Appendix II. Colony location mapping has been provided on Figure No. 9.
- Fauna inventory works for Breeding Birds has identified five priority conservation bird species for Grey County.
- *Species that are subjects of recovery program*
 - None identified within the subject Study Lands
- *Species considered important to the municipality, based on recommendations from the Conservation Advisory Committee.*
 - None identified within the subject Study Lands

In summary for this sub-component section 2.7.3, the subject Study Lands has been identified to support habitat for locally rare Flora and Fauna Species of Conservation Concern.

2.7.4 Wildlife Movement Corridors

Within the Study Lands a wildlife movement corridor for local significance has identified within vegetation community number 6. Several game trails were observed running parallel to the unnamed permanent watercourse within its associated wetland/riparian conifer cover habitat. This vegetated corridor zone provides a north-south linkage to the larger wetland communities of McKenchie Creek located to the south and the mature forested uplands located to the north of the subject Study Lands.

In summary for Significant Wildlife Habitat section 2.7 analysis, it has been determined that the subject Study Lands supports Significant Wildlife Habitat through analysis of the sub-component sections:

- Seeps or seasonal groundwater discharge zones
- Habitat for Locally rare, Species of Conservation Concern
 - Three flora species,
 - Five bird species of priority conservation concern
- Local wildlife corridor functions within vegetation community number 6.

The Natural Heritage Provincial Policy 2.1.4 (d) regarding Significant Wildlife Habitat states:

Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

Natural Heritage Provincial Policy 2.1.6 regarding the adjacent lands for significant wildlife habitat states:

Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.3, 2.1.4 and 2.1.5 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

With portions of the Study Lands identified as supporting Significant Wildlife Habitat, further investigations in accordance to Provincial guidelines and development impact assessment, has been provided within section 4.3.

2.8 Significant Woodlands

The County of Grey is currently reviewing and updating their Official Plan. Part of this process has included the analysis and mapping of Significant Woodlands throughout the County. Figure No. 5C, sourced from the Grey County Official Plan Draft Constraint mapping, has identified Significant Woodlands on the subject property.

Natural Heritage Provincial Policy 2.1.4 (b) regarding Significant Woodlands states:

Development and site alteration shall not be permitted in significant woodlands south and east of the Canadian Shield unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

With a portion of the Study Lands identified as Significant Woodlands, further investigations in accordance to Provincial guidelines and development impact assessment, has been provided within section 4.4.

3 Summary of Natural Heritage Features Analysis

From the eight provincial Natural Heritage features assessed, three have been identified to occur within the subject Study Lands or within the 120m adjacent review lands:

- Fisheries Habitat
 - An unnamed permanent watercourse with a coldwater thermal designation along the western Study Lands boundary
- Significant Wildlife Habitat
 - Subsection Specialized Habitat: Seeps
 - Subsection Species of Conservation Concern: Vascular plants and breeding Birds
 - Subsection Wildlife Corridor: Local corridor linkage
- Significant Woodlands
 - Portions of the forested Study Lands are considered to be significant woodlands through the draft County of Grey Official Plan constraint mapping.

The aforementioned features identified within the Significant Feature Analysis have been assessed in greater detail within the following Impact Assessment component.

4 Development Impact Assessment

4.1 Development Description

The applicant, East West Exchange Inc., has proposed to establish a religious retreat within the identified EIS Study Lands with the intent for development in a two-phase approach with final design plans accommodating up to 500 people. Development facilities include a main hall, kitchen/cafeteria, dormitory, manager's house, vehicle parking area, septic and well services, camping sites and outdoor activities.

A preliminary Servicing Report, prepared by Gamsby and Mannerow Ltd has been reviewed by AWS in conjunction with preparation of this EIS report. This preliminary servicing assessment provided a desktop review/recommendations for well water capacity, septic treatment, storm water management requirements and available design options for each.

4.2 Fish Habitat

4.2.1 Characterization

The cold water stream course along the western Study Lands boundary is an unmade tributary to McKechnie Creek that has a Provincial thermal designation of cold water and supports a native population of Brook Trout. Site investigations of 2008 for this unnamed tributary observed Brook Trout within several stretches within the subject Study Lands of this creek.

Provincial NHRM guidelines and the County Official Plan policy (section 2.8.5.5) state:

No development shall be permitted within 30 metres of the banks of a cold water stream...

As such, no development should occur within a minimum of 30m to this noted cold water stream course banks to demonstrate compliance with County policy.

In addition and specific to this location, numerous groundwater seeps have been identified within vegetation community No. 6, which provide thermal water quality enhancements and water quality contributions to the Fisheries Habitat within the receiving waters of the unnamed permanent flowing tributary.

The identified intermittent (seasonal flowing) stream course shown as a dashed blue line on Figure 9 does not directly support Fish Habitat, however it does indirectly provide water quality and quantity maintenance to the receiving waters of the unnamed permanent flowing cold-water stream and provides habitat to colonies of three locally rare flora species.

4.2.2 Impact Assessment

Without extensive hydrogeological assessment works for potential negative impacts from the development proposal onto the groundwater discharge features, it is recommended that the 30m

setback be established beyond the eastern boundary of vegetation community No. 6. This will maintain a vegetative buffer zone from the wetland habitat (community No. 6) and groundwater discharge features to the land clearing and development construction, demonstrating compliance and a precautionary approach with Provincial guidelines and County policy.

A setback distance of 30m from the sensitive wetland/riparian zone habitat of vegetation community No. 6, for long-term hydrologic functioning, also demonstrates compliance with the Provincial Policy 2.2 for Water, with section 2.2.2 stating:

Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restores.

For the identified intermittent flowing water channel, it is recommended that a 15m development setback be maintained from the banks of this water course, exempted would be the required upgrades to the existing access road and crossing location.

4.3 Significant Wildlife Habitat

4.3.1 Seeps

Within vegetation community No. 6, field study works identified several scattered groundwater discharge features characterized as ‘seeps’ originating within the central zone of vegetation community No. 6 and flowing westward to the permanent unnamed cold-water stream course flowing along the western study area boundary. These groundwater discharge functions were observed to be seasonal in duration, with no discharge or surface flows noted during the summer season period. All observed groundwater discharge features had no definable outlet channel but sheet flowed through the dense White Cedar swamp environment.

Through observations made during the 2008 site visits, it was concluded these seep features do not directly support Fish Habitat, due to their very shallow (never observed to exceed 2cm in depth) and sheet flowing aspect. These seep features however do indirectly provide seasonal water quality and quantify improvements to the receiving watercourse. In addition these seep features provide specialized wildlife habitat micro-habitat, over winter water access, and soil moisture regime maintenance for dense woodland growth and understory cover that supports wildlife corridor functions etc.

4.3.1.1 Impact Assessment

Given the high sensitivity of vegetation community No. 6 and its supporting habitat functioning role to wildlife habitat, fisheries habitat and having a Significant Woodland designation, it is recommended that no development should occur within this vegetation community. In addition, to maintain existing shallow groundwater flow pattern movements immediately adjacent to these upwelling features, overhead shade cover for thermal regulation and to prevent groundwater/surface water quality impairment, it is recommended that a minimum 30m development setback be maintained from the eastern boundary of vegetation community No. 6. In addition to this minimum setback distance, servicing reports for the Septic treatment and Storm Water Management, need to demonstrate no adverse impacts to water quality for these shallow groundwater discharge features.

4.3.2 Species of Conservation Concern

4.3.2.1 Flora

Three locally rare plants have been identified within the Study Lands:

- Pale sedge, mapped as Colony site number 1 on Figure No. 9
- Sundrops, mapped as Colony site number 2 on Figure No. 9
- Bristly Buttercup, mapped as Colony site number 3 on Figure No. 9

The Pale sedge colony was located within vegetation community No. 3, having 70% shade cover under the deciduous forest cover stand. Both the Sundrops and Bristly Buttercup colonies were within vegetation community No. 4, part of the old-field habitat having full sunlight. All three colonies were approximately 2m x 1.5m in area and having 20 to 35 plants within each colony.

4.3.2.1.1 Impact Assessment

The Pale Sedge and Sundrops colonies were both located within the intermittent stream course, while the Bristly Buttercup was located 5m west of the watercourse channel. The EIS reporting section 4.2 has recommended a 15m setback from the intermittent watercourse banks. This development limit will also provide suitable setback distances of 10m to 15m from all three locally rare flora colonies. This setback limit will maintain overhead cover to colony site No. 1 and site alteration (grading, filling etc) to all three colony sites. As such, no further development constraints are required to address the supporting habitat to these flora species of conservation concern.

4.3.2.2 Local Priority Conservation Birds

EIS field survey works have identified 5 priority bird species for conservation that utilize the habitat within the Study Lands. A review is provided in the below table for Provincial Habitat requirements and comparison of available on-site habitat through vegetation community mapping (see Figure number 9).

Table No. 2: Priority Birds for Conservation

Bird Species	Habitat Requirements (Provincial Descriptions)	Primary On-Site Habitat
American Goldfinch	<i>Forest edges; open weedy fields or pastures with scattered trees or woody growth; river bottomlands with serviceberry and hawthorns; immature maples; garden plants in suburbs; open swamps</i>	Vegetation Communities No. 1, 3, 4 and 7
Field Sparrow	<i>Open areas with low shrubs or trees; abandoned pasture, farm fields; overgrown power lines corridors; thickets' forest edge; young conifer plantations</i>	Vegetation Communities No. 1, 2, 3, 4 and 5

Bird Species	Habitat Requirements (Provincial Descriptions)	Primary On-Site Habitat
Black-capped Chickadee	<i>Small-open deciduous or mixed wooded areas (parks, residential areas); edges, thickets; nests in tree cavities of trees with dbh > 10cm; territory is 1-2 ha of woodland</i>	Vegetation Communities No. 2, 3, 5 and 6
Eastern Phoebe	<i>Suburban or agricultural areas; farmland; mature mixed, deciduous, coniferous woodlands; woodland cliffs or ravines, often near stream</i>	Vegetation Communities No. 1, 2, 3, 5 and 6
Ruffed Grouse	<i>Dry, deciduous forests with dense woody overhead cover, herbaceous ground cover; prefers second growth stands of poplar; requires sunny, open areas; uses fallen logs for drumming and cover for nesting</i>	Vegetation Communities No. 2, 3, 5 and 6

Habitat requirement source: Provincial Manual, SWHTG- Appendix G- Table G-3: Habitat / Habitats Description

4.3.2.2.1 Impact Assessment

- American Goldfinch and Field Sparrow (Open Country habitat birds)
 - Some minor loss of habitat through alteration of open weedy fields to development lands. Forest edges will still provide suitable habitat for this species along with part of vegetation No. 1 for septic field (grassed) etc.
 - Surrounding landscape also supports large tracts of old pasture field habitat
 - Anticipate no measurable negative impacts to the breeding population of this species from development within the delineated lands shown on Figure No. 10.
- Black-Capped Chickadee, Eastern Phoebe and Ruffed Grouse (Forest habitat birds)
 - Primary on-site habitat associated with the Significant Woodlands, as shown on Figure No. 9. No development activity proposed within vegetation communities No. 2, 3 or 6 and only minor development incursion into vegetation community No. 5
 - Anticipate no measurable negative impacts to the breeding population of these species, as majority of primary habitat is outside the proposed development lands.

In summary for all identified Priority bird species identified utilizing the habitat within the Study Lands. Site impacts can be mitigated through maintenance of key habitat zones and maintaining woodland linkages for cover habitat and focusing the primary development land clearing activity to vegetation community No. 1 and 4. Overall cumulative impact assessment is considered to be negligible on breeding populations, given the site location, characterization and history of site disturbances.

4.3.3 Wildlife Corridor

For the subject Study Lands, the primary on-site wildlife movement corridor was noted to occur within vegetation community No. 6. Within this wetland/riparian zone cover, numerous game trails were observed providing a north-south corridor function for both daily and seasonal movement activity.

A secondary corridor was identified along the intermittent watercourse, following vegetation community No. 2 and 3, having a similar north-south orientation as to the primary corridor. This secondary corridor however, displayed limited activity due to the narrow vegetation community width and forest edge/open habitat, along one side.

4.3.3.1 Impact Assessment

Given the identified woodland ecological functions provided by vegetation community No. 6 for wildlife habitat, groundwater discharge, significant woodland designation and riparian zone cover, it is recommended that no development activity occur within this vegetation community (in keeping with reporting section 4.3.1). An exception would be for maintenance of the existing road/corridor as an access route to the back portion of the subject property, and activities not requiring municipal building permits i.e. trails, recreational activity, select tree thinning/removal for safety, etc.

Specific to this site, an analysis of noted features and ecological functions for density and maturity of the vegetation layers, surrounding habitat and vegetation types, occurrences/frequency of corridor use and site topography has been undertaken. Based on this site review it is recommended a minimum 30m wide vegetated buffer zone be maintained between vegetation community No. 6 and the proposed structural and servicing construction required for this development proposal. This minimum 30m wide setback limit is deemed to be a sufficient separation distance specific to this site, to maintain the wildlife corridor movements and noted woodland features/functions.

The secondary wildlife corridor functioning within the Study Lands occurs within vegetation community No. 2 and 3, along the intermittent stream course, but it was also noted that this site had limited wildlife use and limited corridor width/functionality due to its size and immediate adjacent habitat types. Within reporting section 4.2, it has been recommended that a minimum setback distance of 15m from the intermittent stream course be maintained. Report Figure No. 5C also shows that vegetation community No. 2 and 3 are part of the Significant Woodland designation for the subject Study Lands. Given the above noted features and limited functionality of the vegetated corridor, it is recommended to mitigate potential negative impacts to these functions that no development activity should occur within vegetation community No. 2 and 3. Due to the limited frequency of wildlife movement activity, existing habitat type and that the primary corridor feature will be maintained, no additional development constraining setbacks are deemed necessary for this specific location, for adjacent land concerns.

4.3.4 Significant Wildlife Habitat Summary

For Significant Wildlife Habitat, the Natural Heritage PPS section 2.1.4 (d) states:

Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

Through this impact assessment it has been recommended that development activity no occur within vegetation communities No. 2, 3 and 6, and constrained within part of vegetation community No. 5. The noted no development zones and minimum setback limits will maintain the features and supporting environment to the Significant Wildlife Habitat, along with corridor functions, portions of the habitat areas for priority birds, sensitive/specialized wildlife habitat/seep areas and previously recommended setback limits that also address potential impacts to the on-site rare flora colonies. Through this detailed assessment, it can be concluded that no anticipated negative impacts to significant wildlife habitat would occur from development within the delineated developable lands as shown on Figure No. 10. Thus this development proposal with mitigating measures noted has demonstrated compliance with the PPS section 2.1.4(d) and 2.1.6 and similar policies of the Grey County Official Plan and Municipality of West Grey zoning by-laws.

4.4 Significant Woodland

4.4.1 Vegetation Communities

Site vegetation mapping and coding follows accepted provincial standards as defined by the Ecological Land Classification (ELC) for Southern Ontario, First Approximation. Vegetation communities are classified below and have been delineated on Figure No.9.

Vegetation Community No. 1:

- Dry-Moist Old Field Meadow Type
 - Code CUM1-1, Provincial Status S5
 - Dominated by grasses with scattered low shrubs and trees

Vegetation Community No. 2:

- Fresh-Moist White Cedar-Hardwood Mixed Forest
 - Code FOM7-2, Provincial Status S5
 - Mixed aged stand dominated by White Cedar, Balsam Poplar, and Sugar Maple, patchy understory growth of forbs and herbs.

Vegetation Community No. 3:

- Fresh-Moist Poplar Deciduous Forest Type
 - Code FOD8-1, Provincial Status S5
 - Mixed aged stand of Balsam Poplar and Green Ash

Vegetation Community No. 4:

- Dry-Fresh White Cedar Coniferous Forest Type
 - Code FOC2-2, Provincial Status S5
 - Early successional (immature) White Cedar with scattered White Pine and Scotch Pine throughout the old farm field. Several open pockets and areas where canopy cover is less than 60% (below forest delineation guidelines).

Vegetation Community No. 5:

- Dry-Fresh White Cedar-Poplar Mixed Forest Type
 - Code FOM4-2, Provincial Status S5
 - Mid-maturity aged stand with variable age tree composition of White Cedar, Balsam Poplar, White Spruce and Trembling Aspen, all occurring along the slope land between the old farm fields and the wetland/riparian zone habitat.

Vegetation Community No. 6:

- White Cedar-Conifer Mineral Coniferous Swamp Type
 - Code SWC1-2, Provincial Status S5
 - Mature stand of White Cedar, with scattered Tamarack and Green Ash. Dense pockets of low undergrowth, several groundwater seeps observed scattered throughout stand.

Vegetation Community No. 7:

- Willow/Red-Osier Dogwood Thicket Swamp Type
 - Code SWT3-2, Provincial Status S5
 - Mix of low shrubs, sedges and dead standing conifers along the stream coarse floodplain environment.

Based on the County satellite imagery mapping for Significant Woodlands (Figure No. 5C) and in conjunction with site-specific vegetation community mapping, the Study Lands significant woodlands have been delineated on Figure No. 9. These forested lands are comprised of vegetation community numbers 2, 3, 5 and 6 that meet provincial forest stand designation guidelines.

4.4.2 Characterization: Flora and Floristic Quality

Section 4.4.1 provides a description of vegetation communities found within the Study Lands. The following provides more detail regarding the floristic surveys completed within the Study Lands, for an impact assessment.

Vascular plant species observed were recorded for the EIS Study Lands with a full listing of species identified, significances status and Values to the 'Floristic Quality Assessment for Southern Ontario' provided within Appendix II.

A total plant count of 52 species was recorded, with 42 or 81% considered to be native and 10 or 19% being non-native (introduced) species. Within Southern Ontario, the average non-native composition ranges between 20 to 30%, as noted by M. Oldham of OMNR Natural Heritage Information Center. The Study Lands reflect a non-native percentage consistent within the typical provincial range for botanically disturbances.

Floristic Quality Assessment values are provided within Appendix II for the native flora species. The “coefficient of conservatism” scoring ranks are based on a plants degree of fidelity to a range of synecological parameters. An analysis of the provincial rankings and the number or percentage composition of native species are provided in Table 3 below.

Table No. 3: Native Flora Coefficient of Conservatism Breakdown

Ranking	Description	Study Lands
0 to 3	<i>Plants found in a wide variety of plant communities including disturbed sites</i>	16 or 38 %
4 to 6	<i>Plants typically associated with a specific plant community, but tolerate moderate disturbances</i>	22 or 52 %
7 to 8	<i>Plants associated with a plant community in an advanced successional stage that has undergone minor disturbance</i>	4 or 10 %
9 to 10	<i>Those plants with high degrees of fidelity to a narrow range of synecological parameters</i>	0 or 0%

The above table demonstrates that 90 % of the Study Lands native plant species occupy a wide range of habitat types and can tolerate varying degrees of disturbances and 4% of the native plants can occur within woodlands in an advanced successional stage and tolerating minor disturbances. While no native plants being sensitive to site alteration disturbances were noted. As such, development within the Study Lands is anticipated to have no definable negative impacts to botanical diversity or sensitive species.

4.4.3 Woodland Impact Assessment

The development focus for structures and servicing will be primarily occurring within the open field environment and the early successional/field area of vegetation communities No. 1 and 4, beyond the Significant Woodland habitat.

Vegetation community numbers 2 and 3 function as a forested buffer zone to the noted intermittent stream course and as a minor secondary corridor for wildlife movement. Section 4.2 has recommended a 15m-development setback from the identified intermittent watercourse banks. Portions of this watercourse flow through vegetation community number 3 and immediately adjacent

to vegetation community number 2, both which function as overhead shade cover, soil stabilization, nutrient loading and natural filtration. Given that both of these stands are narrow and running parallel to this intermittent watercourse, it is recommended that no development occur within vegetation community No. 2 or 3.

Vegetation community number 5 is the sloped transitional land between the old farm field habitat of vegetation community No. 4 (now overgrown with early successional conifer trees) and the wetland/riparian zone of vegetation community No. 6. Reporting section 4.3.4 has recommended a 30m-development setback from vegetation community No. 6, which will maintain a vegetated buffer zone for 'no negative impacts' to the identified ecological functions provided within the sensitive lands of vegetation community No. 6. As vegetation community No. 5, runs parallel and is the transitional –sloped lands to vegetation community No. 6, much of community No. 5 occurs within the noted 30m setback zone. Along the northeasterly boundary section of vegetation community No. 5 the topography begins to widen with flat sections and gentle gradient slopes. Within this section of vegetation community No. 5 and outside the 30m- setback to community No. 6, development could be permitted within this portion of the Significant Woodlands, as no sensitive features or woodland ecological have been identified that would be negatively impacted from tree cutting and/or construction of building structures.

The Natural Heritage PPS section 2.1.4 (b) states:

Development and site alteration shall not be permitted in significant woodlands south and east of the Canadian Shield unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

Specific to this development and site location, ecological functions which can be attributed to the Significant Woodland Feature (forest cover) have been identified as:

- Habitat for Flora Species of Conservation Concern –Colony site No. 1
 - Addressed through maintained habitat within the intermittent watercourse 15m setback and recommendation of no site development with vegetation community No. 3
- Habitat for Fauna Species of Conservation Concern –Three priority woodland birds
 - Primary habitat of vegetation community No. 6 and secondary habitat of vegetation community No. 2 and 3 maintained with recommended no development within these vegetation communities.
- Riparian zone habitat with scattered groundwater discharge zones (seeps)
 - Addressed through no site development within vegetation community No. 6 and buffer zone of 30m beyond vegetation community No. 6 to maintain forest cover and shallow groundwater flow patterns and seep functions.
- Wildlife Corridor – local functions for daily and seasonal movements
 - Addressed through no site development within vegetation community No. 6 (primary corridor area) with a buffer zone of 30m beyond vegetation community No. 6 to maintain forest cover and visual barrier. Secondary on-site wildlife corridor is also maintained through no development of vegetation community

No. 2 and 3. Additional impact reduction through the 15m-setback zone to the intermittent stream course, which will provide a vegetated buffer (adjacent lands to wildlife habitat) along the western side (adjacent to buildings) to the forested stands of community No. 2 and 3.

➤ Woodlands indirectly support adjacent Fish Habitat

- Addressed through no site development within vegetation community No. 6 and buffer zone of 30m beyond vegetation community No. 6 to maintain forest cover and shallow groundwater flow patterns and seep functions.
- Addressed through maintaining habitat within the intermittent watercourse 15m setback and recommendation of no site development with vegetation community No. 2 and 3

Through this impact assessment noted above, all of the Significant Woodland features and ecological functions have been identified and addressed through setbacks and delineation of suitable development lands as shown on Figure No. 10. As such it can be concluded that the ecological functions within the Significant Woodlands will incur no measurable negative impacts from the proposed development activity.

In summary for Significant Woodlands, through the associated impact assessments, it has been demonstrated that with proper mitigative measures in place, no short-term or long-term measurable negative impacts are anticipated to the ecological functions, which are identified within this review. Site development will have a minor reduction upon the identified mature forest cover of the Significant Woodland designation area coverage, however the noted 'no development setback zones' also include portions of vegetation community No. 4 which is a forest stand and will become part of the Significant Woodland habitat in the near future as it matures. Thus offsetting this minor reduction of vegetation community No. 5, with no long-term measurable negative impacts anticipated.

It can be concluded through this impact assessment review, that with proper implementation of mitigative measures, this development proposal would be in compliance to the PPS sections 2.1.4 (b) and 2.1.6 (adjacent lands) and similar policies of the, Grey County Official Plan and Municipality of West Grey Zoning.

5 Mitigation

The following mitigative measures should be implemented through Site Plan Control and/or Agency permits/approvals. These measures are recommended to maintain the ecological functioning role and natural heritage features that have been identified within the Study Lands and are in compliance with provincial and municipal environmental policies and guidelines, pertaining to the Study Lands.

- 5.1 No development or site alterations should occur within the identified vegetation communities of numbers 2, 3, 6 and 7.
- 5.2 A development setback limit of 30m is to be established from the eastern boundary of vegetation community No. 6 and a 15m development setback be established from the intermittent stream course. Both noted setback limits have been shown on Figure No. 10. Exemption to the 15m-setback zone will be required upgrades to the existing stream channel-crossing site.
- 5.3 All construction and servicing requirements to the development should be contained within the delineated 'developable lands' as shown on Figure No. 10.
- 5.4 Potential Tree cutting and land clearing within portions of vegetation community No. 5, which are those lands beyond the 30m setback line, should be kept to a minimum.
- 5.5 Final Servicing Reporting shall demonstrate that no adverse impacts to the on-site or adjacent surface water features and groundwater discharge features/functions will not be adversely impacted from the final development design proposal.

6 Conclusions

This EIS report has examined, in detail, the potential for negative effects on natural features and functions both within the Study Lands and the surrounding landscape. Development related potential negative impacts have been identified and addressed with proposed mitigation measures, development constraints and required final servicing assessment.

This report has demonstrated that through proper mitigative measures, Natural Heritage features or associated ecological functions that occur on the Study Lands are anticipated to have no measurable negative impacts from the proposed Concept Development design by Ferguson Ferguson Architect, from long-term use of the lands for seasonal dwelling occupation. Thus this development activity would be in compliance with Natural Heritage aspects of Federal Acts & Regulations, Provincial Natural Heritage Policy Statement and Acts and Legislation and environmental policies of the Grey County Official Plan and the Municipality of West Grey zoning by-laws.

All comments contained within this report pertain to available literature, reports, documents and existing site conditions for this study area. All natural feature locations are estimates based on current maps available, site survey features and field mapping with plotting by hand held GPS units and field air photography/topographical estimation within +/- 5m. The maps contained within this report should not be considered 'a legal survey' but are adequate for this planning/application review process and are based on surveying data sources from Ontario Base Maps.

Respectfully Submitted

A handwritten signature in black ink, appearing to read 'John Morton', with a long horizontal flourish extending to the right.

John Morton
Aquatic and Wildlife Services

7 References

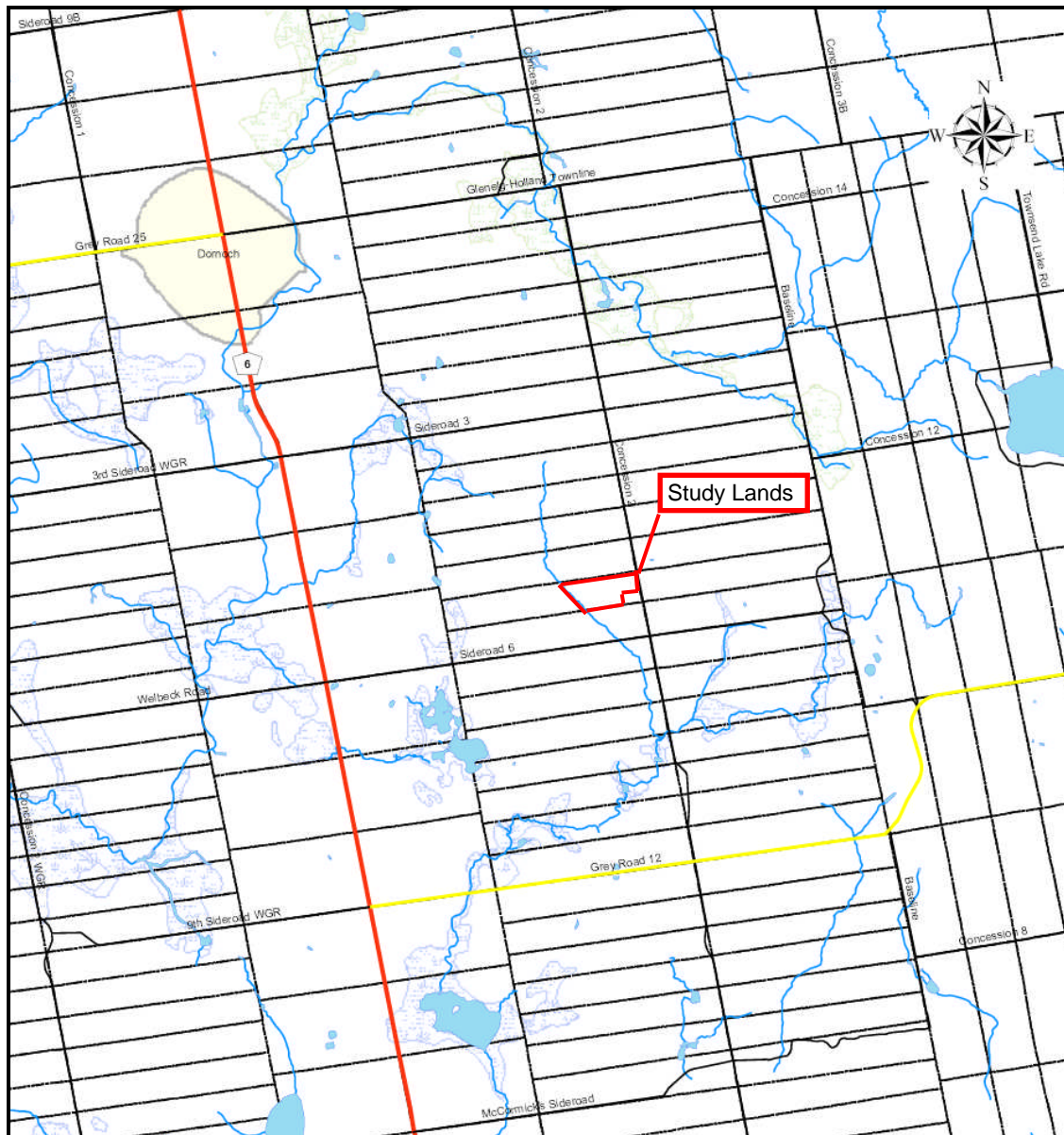
- A Checklist of Vascular Plants for Bruce and Grey Counties Ontario, 1997
Joint publication of OMNR, OSFN, SFN
- County of Grey Official Plan, 2005 and current Plan review revisions and mapping
- Couturier, A. 1999. Conservation Priorities for the Birds of Southern Ontario
In partnership with Bird Studies Canada
- Environment Canada, Federal Committee on the Status of
Endangered Wildlife in Canada (COSEWIC), 2009 www.cosewic.gc.ca
- Gamsby and Mannerow Ltd
Preliminary Servicing Report
- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray
1998. Ecological Land Classification for Southern Ontario: First Approximation and its
Application. Ontario Ministry of Natural Resources, South central Science Section,
Science Development and Transfer Branch. SCSS Field Guide FG-02
- Natural Heritage Information Centre (NHIC), 2009
Provincial status of Plants, Wildlife and Vegetation Communities database
OMNR, Peterborough. http://nhic.mnr.gov.on.ca/nhic_.cfm
- Oldham, M.J., W.D. Bakowsky and D.A. Sutherland, (1995). Floristic Quality Assessment for
Southern Ontario. Ontario Ministry of Natural Resources, Natural Heritage Information Centre
- Ontario Ministry of Natural Resources, 2000
Significant Wildlife Habitat Technical Guide, Fish and Wildlife Branch
- Ontario Ministry of Municipal Affairs and Housing, 2005. Provincial Policy Statement
- Ontario Ministry of Natural Resources 1997 & 1999
Natural Heritage Reference Manual for the Provincial Policy Statement
- Ontario Ministry of Natural Resources, 2009
Committee on the Status of Species at Risk in Ontario (COSSARO)
www.mnr.gov.on.ca/mnr/speciesatrisk
- Ontario Ministry of Natural Resources, Owen Sound District
McKechnie Creek stream file and McKechnie Creek Wetland file
- The Atlas of Breeding Birds of Ontario, 2001-2005
Bird Studies Canada, Environment Canada, OFO, OMNR
- Various Internet web sites researched for identified Flora

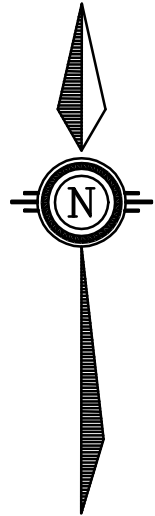
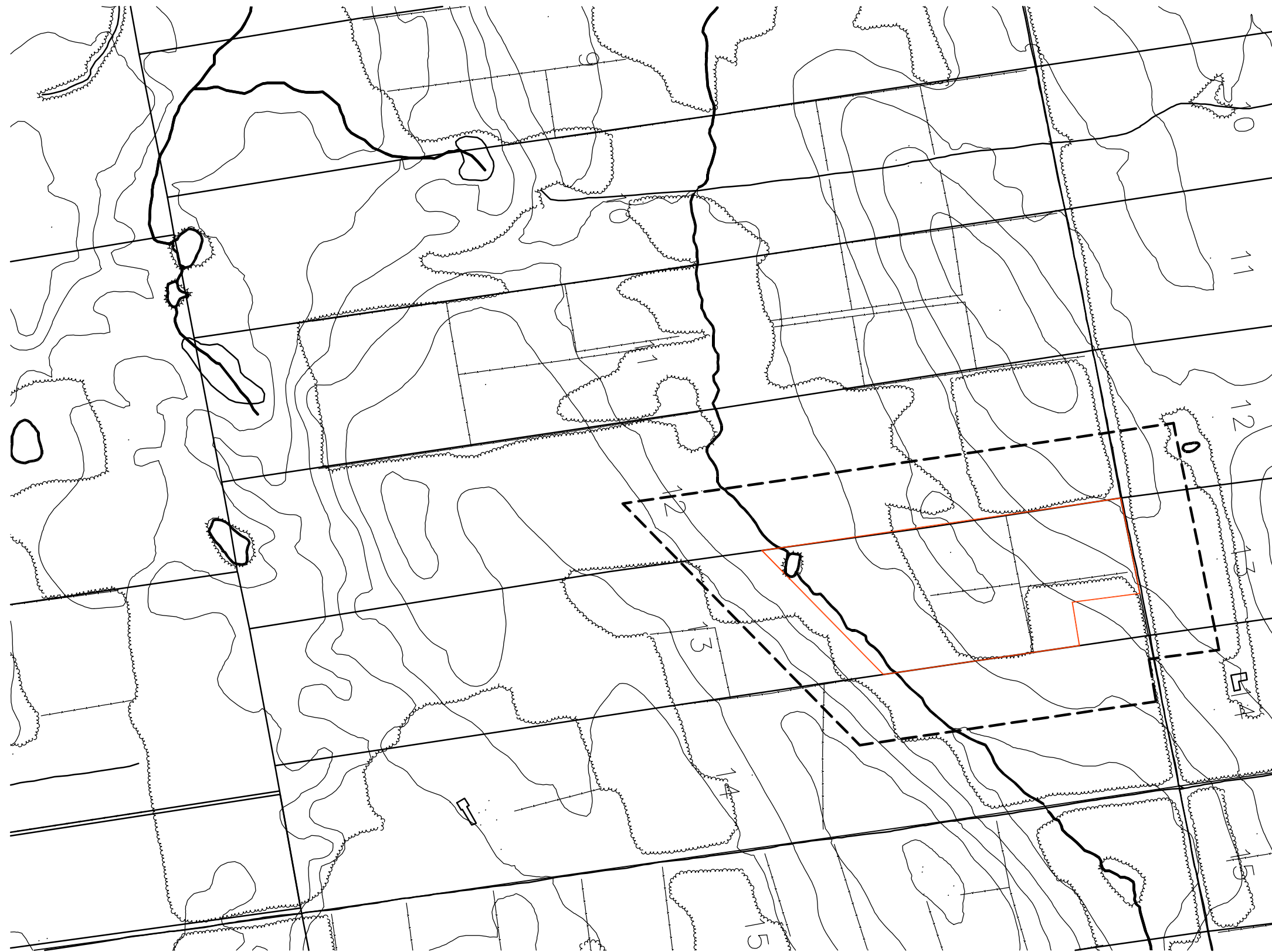
8 Figures

Figure No. 1.....	Site Location
Figure No. 2.....	EIS Study Lands and Adjacent Review Lands
Figure No. 2B.....	Preliminary EIS Review Lands for Lot 13
Figure No. 3.....	Surrounding Landscape and Topography
Figure No. 4.....	NHIC Historical Records for Significant Flora & Fauna
Figure No. 5A.....	County of Grey Official Plan, Landuse Designations
Figure No. 5B.....	County of Grey Official Plan, Constraint Mapping
Figure No. 5C.....	County of Grey Official Plan, Draft Significant Woodland Mapping
Figure No. 6.....	Municipality of West Grey Zoning Schedule 4 Map
Figure No. 7.....	2006 Air Photo of Subject Study Lands with Vegetation Communities
Figure No. 8.....	E.L.C. Vegetation Communities
Figure No. 9.....	Natural Heritage Significant Features
Figure No. 10.....	Natural Heritage Setbacks and Delineation of Developable Lands

Figure No. 1: Site Location

- Proposed East West Exchange Camp: Municipality of West Grey





LEGEND:

- STUDY LANDS
- - - - 120m ADJACENT REVIEW LANDS

SCALE: 1:8000

SOURCE: ONTARIO BASE MAPS



AQUATIC AND WILDLIFE SERVICES
Environmental Consulting & Resource Management
242090, R.R. # 1, Shallow Lake, Ontario, N0H 2K0
Phone: 519-372-2303, Fax: 519-372-1990, Email: aws@nvtolsp.com

FIGURE No. 2: STUDY LANDS

EAST WEST EXCHANGE INC.
PART OF LOT 13, CONCESSION 2 EGR
(Formerly Glenelg Township)
COUNTY OF GREY

Grey County Web Mapping

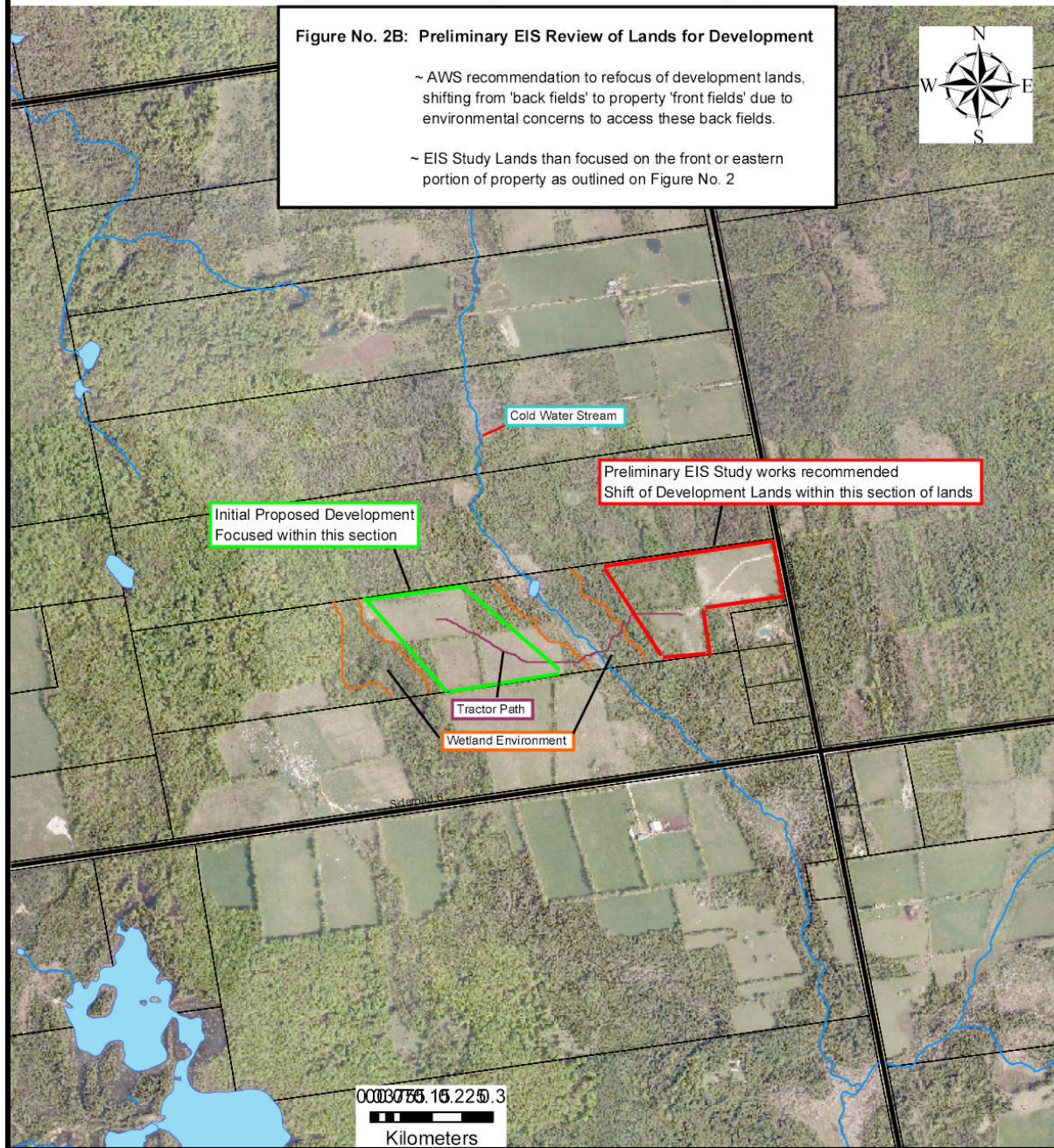
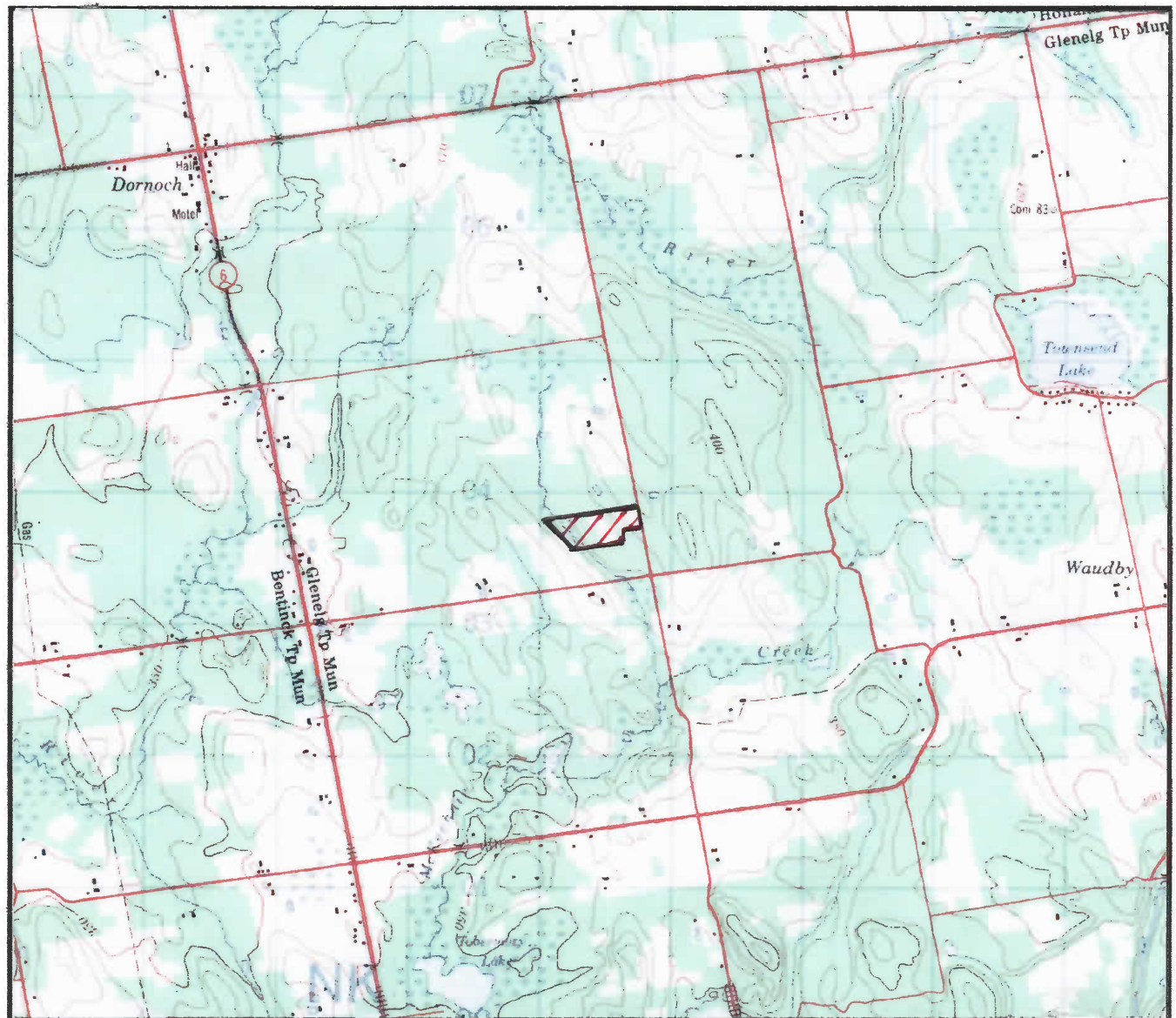


Figure No. 3: Surrounding Topographical Features



LEGEND

-  Subject Study Lands
-  Open Lands
-  Forested Lands
-  Streams & Surface Waters
-  Elevation Contour Lines
-  Roads

For Detailed Legend Features See Federal
Topo. Series Mapping, Energy & Mines

Project : East West Exchange Inc.
Part Lot 13, Conc. 2 EGR, former Glenelg Twp
Municipality of West Grey
County of Grey

Scale:
1 : 50,000



AWS

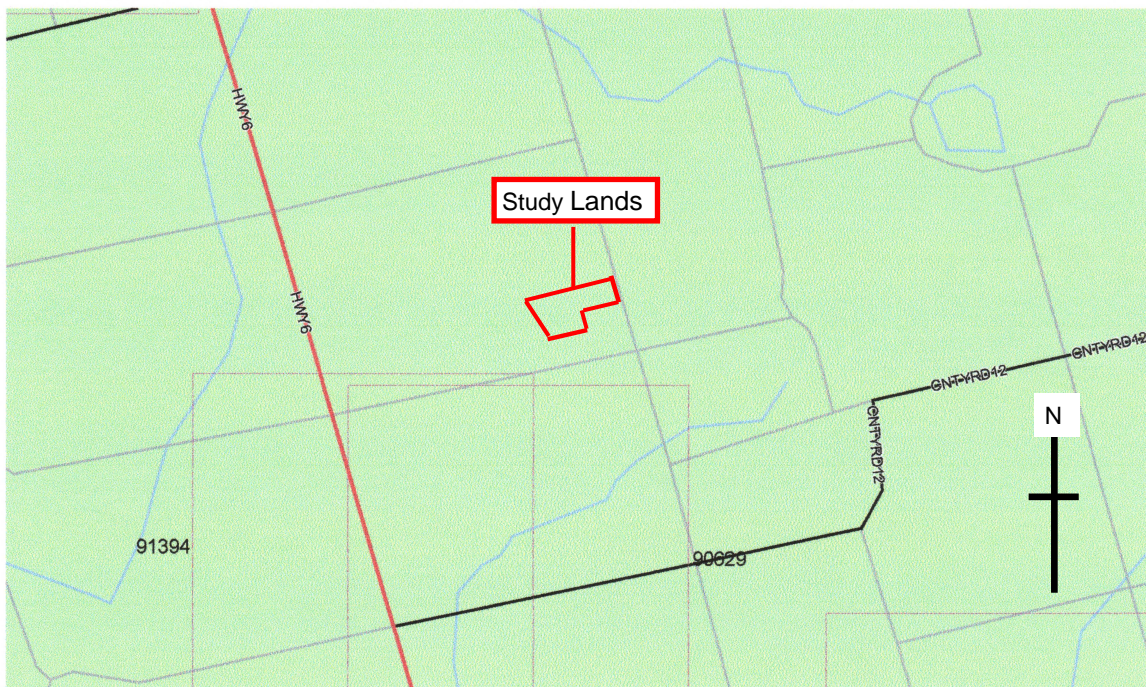
AQUATIC AND WILDLIFE SERVICES
Environmental Consulting & Resource Management

242090, R.R. # 1, Shallow Lake, Ontario, N0H 2K0

Figure No. 4: Historical Significant Flora & Fauna Records

- Ontario Ministry of Natural Resources historical records mapped at 1km square grid blocks, source, Natural Heritage Information Center web site mapping
- No on-site records or records within 120m adjacent review lands identified
- Two records within surrounding landscape, neither observed during the 2008 EIS field work:
 - Eastern Ribbon snakes are commonly associated with wetland or riparian zone habitat, habitat not impacted within this development proposal
 - Milksnakes are commonly associated with Hardwood stands and mixed scrub lands, habitat not impacted within this development proposal

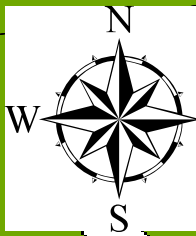
ID.	Scientific Name	Common Name	UTM Grid Block	Provincial Rank & Status			Year
90629	Thamnophis sauritus	Eastern Ribbonsnake	17 514000 4902000	S3	SC	SC	1990-08-10
91394	Lampropeltis triangulum	Milksnake	17 513000 4902000	S3	SC	SC	1977-07-18



Grey County Web Mapping

Figure No. 5A : County Official Plan Landuse Designation

~ Rural and Hazard Designations Identified



East West Exchange Inc.
EIS Study Lands

0 0.5 1 1.5 2 2.5 3
Kilometers

Official Plan - Landuse

- Wetlands
- Inland Lakes & Shoreline
- Agricultural
- Hamlet
- Escarpment Recreation Area
- Niagara Escarpment Plan Area
- Hazard Lands
- Special Agricultural
- Urban Fringe
- Urban
- Space Extensive Commercial
- Space Extensive Industrial
- Mineral Resources Extraction
- Rural

Official Plan - Constraints

- Known Abandoned Land Fill Site
- Existing Land Fill Site
- Cold Water Stream
- Cool/Warm Water Stream
- Warm Water Stream
- Cold Water Lake
- Cool/Warm Water Lake
- Warm Water Lake
- Evaluated Wetlands
- Special Policy (Karst)
- Earth ANSI
- Earth Life ANSI
- Life ANSI
- Primary Aggregate

Legend

- City of Owen Sound
- Municipality of Grey Highlands
- Municipality of Meaford
- Municipality of West Grey
- Town of Hanover
- Town of The Blue Mountains
- Township of Chatsworth
- Township of Georgian Bluffs
- Township of Southgate
- Settlements
- Parcels
- Lots & Concessions
- Building Footprints
- Blue Highlands Wind Study Area
- Pits & Quarries (MNR)
- Deer Wintering Area
- County Properties
- County Forest Trails

County Facilities

- Administration
- Housing and Long Term Care
- Social Services
- Transportation and Public Safety

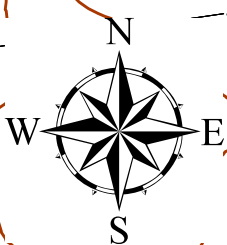
Sand and Gravel Deposits (AIMP)

- Primary
- Secondary
- Tertiary
- Highways
- Regional Roads
- Local Roads
- Open Road Allowance
- Unopend Road Allowance
- County Forest Stands
- Wooded Areas

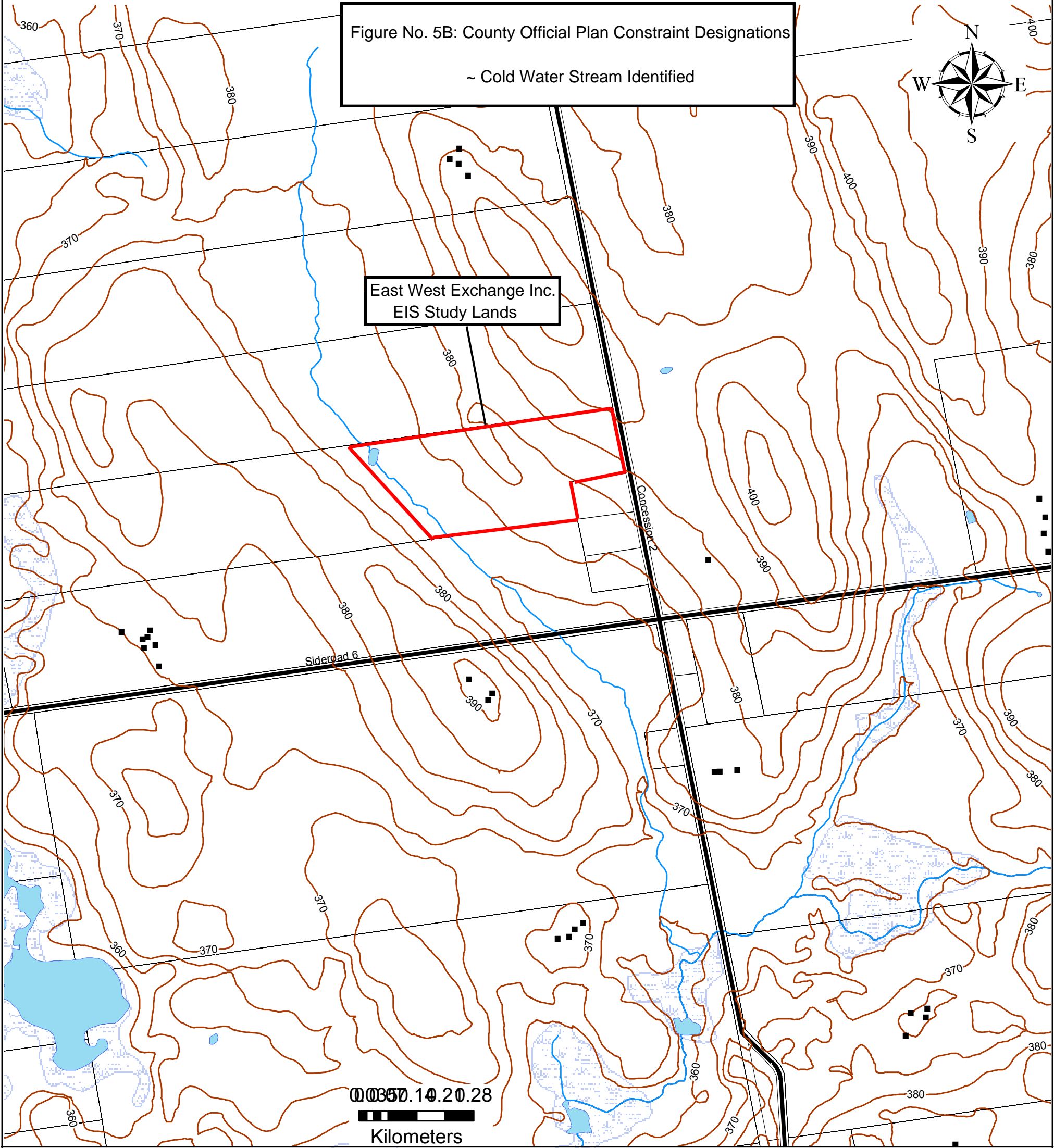
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Grey County Web Mapping

Figure No. 5B: County Official Plan Constraint Designations
~ Cold Water Stream Identified



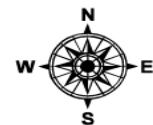
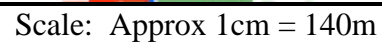
East West Exchange Inc.
EIS Study Lands



Legend			
Official Plan - Landuse	Official Plan - Constraints	City of Owen Sound	
		Municipality of Grey Highlands	
		Municipality of Meaford	
		Municipality of West Grey	
		Town of Hanover	
		Town of The Blue Mountains	
		Township of Chatsworth	
		Township of Georgian Bluffs	
		Township of Southgate	
		Settlements	
		Parcels	
		Lots & Concessions	
		Building Footprints	
		Blue Highlands Wind Study Area	
		Pits & Quarries (MNR)	
County Facilities	Sand and Gravel Deposits (AIMP)	Deer Wintering Area	
		County Properties	
		County Forest Trails	
		Administration	
		Housing and Long Term Care	
		Social Services	
		Transportation and Public Safety	
		Primary	
		Secondary	
		Tertiary	
		Highways	
		Regional Roads	
		Local Roads	
		Open Road Allowance	
		Unopend Road Allowance	
		County Forest Stands	
		Wooded Areas	

This map is for illustrative purposes only. Do not rely on this map as being a precise indicator of routes, location of features, nor as a guide to navigation. It has not been designated or certified for planning or surveying purposes. This map may contain cartographical errors or omissions.

- Source: Draft County of Grey Official Plan, Appendix B Constraint Mapping No. 3

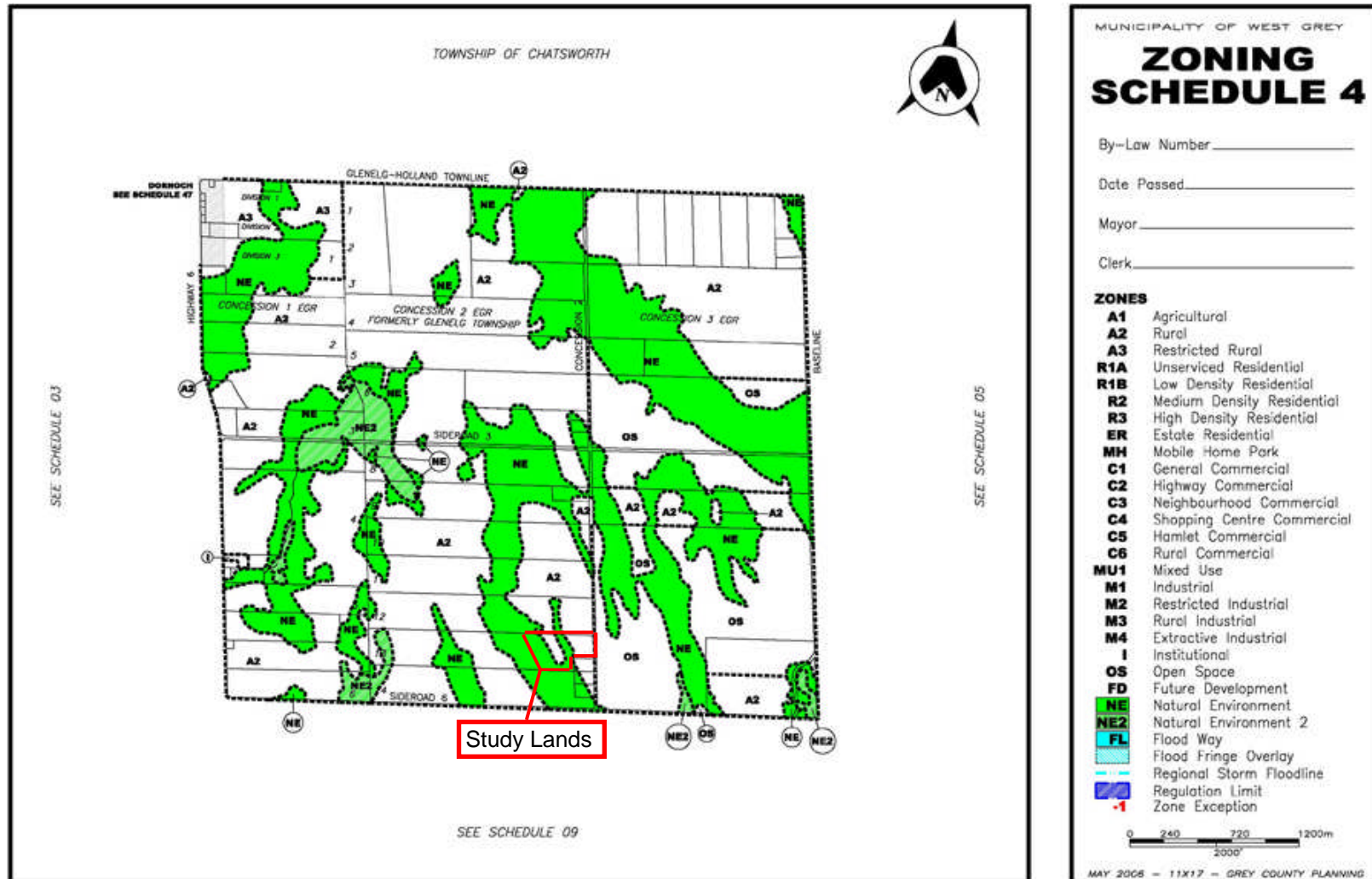


- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Stream / River

 Other Wetlands
 Lakes
 Earth & Life ANSI
 Earth ANSI
 Life ANSI

 Significant Woodlands

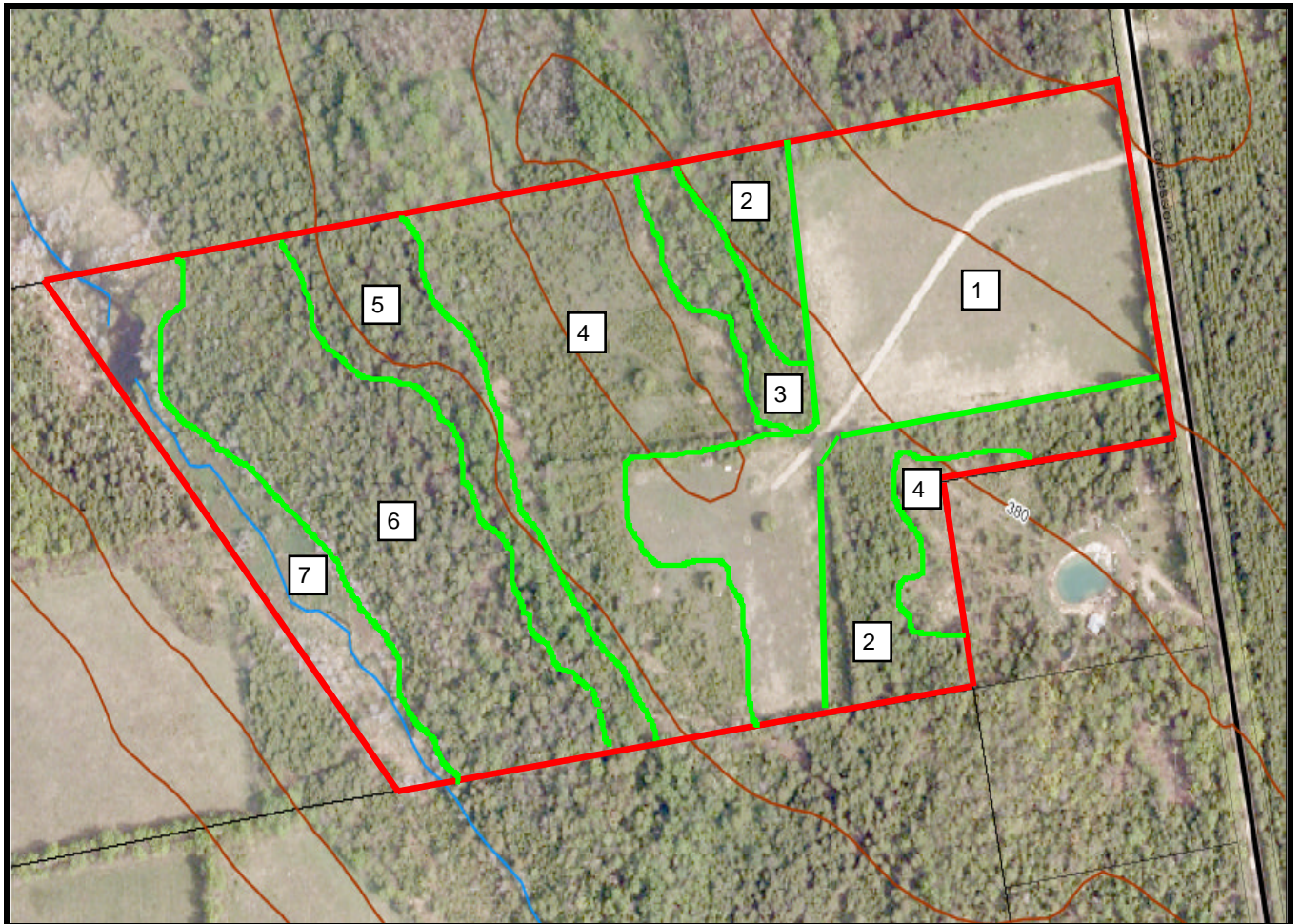
Figure No. 6: Municipal Zoning Map








East West Exchange Inc.: May 2009 EIS
 Part Lot 13, Conc. 2 EGR, former Glenelg Twp.

Figure No. 7: Air Photo for ELC Vegetation Community Boundaries

- East West Exchange Camp Proposal
- Air photo enlargement, distorted scale

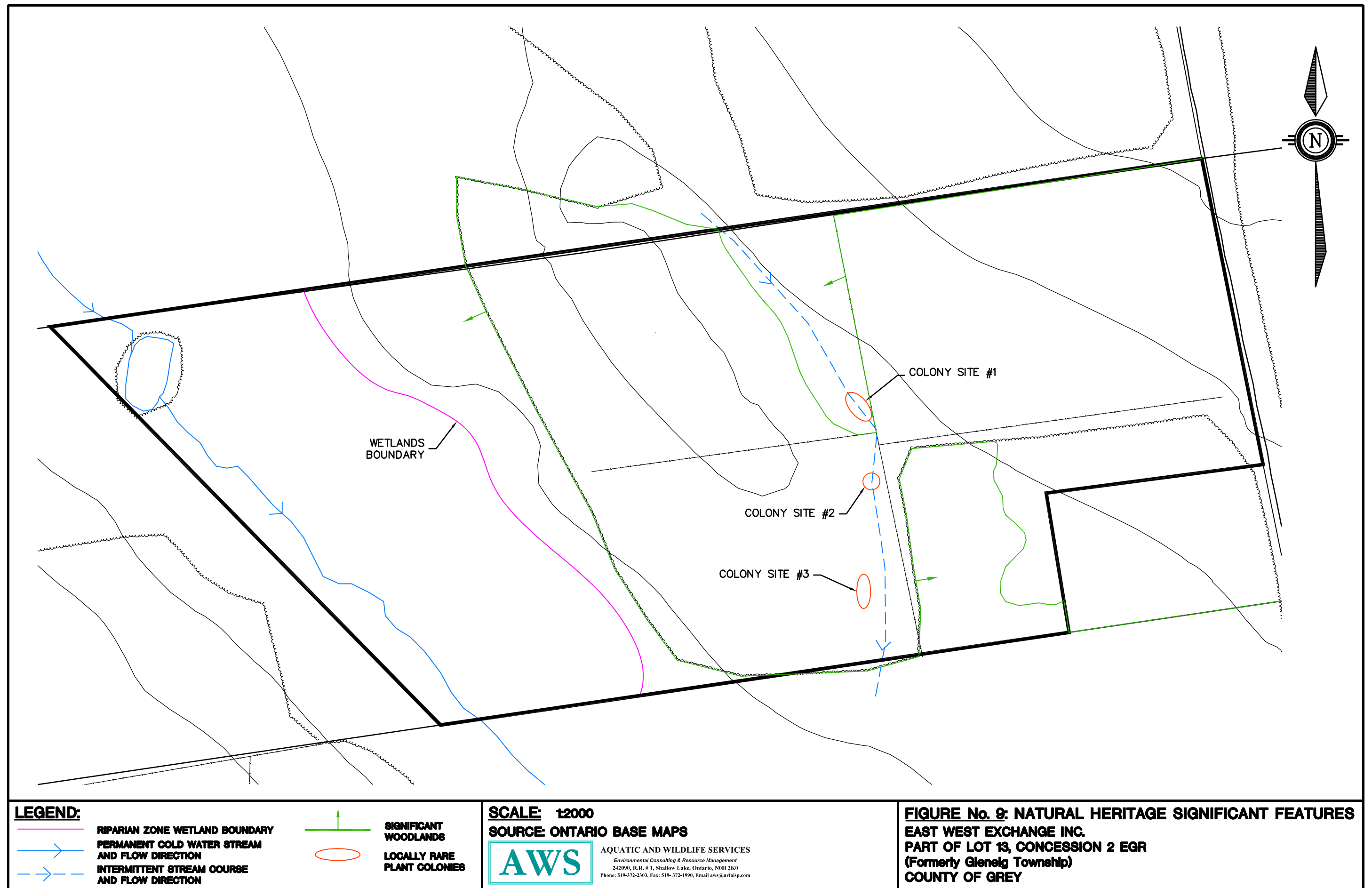


LEGEND

-  EIS Study Lands
-  Ecological Land Classification: Vegetation Community Boundaries
-  Vegetation Community Number
-  Cold Water Stream - Year Round Flowing Water Course
-  Elevation Contour Lines based on OBM data



<p>LEGEND:</p> <p>— ELC VEGETATION COMMUNITY BOUNDARY</p> <p>① VEGETATION COMMUNITY NUMBER</p>	<p>SCALE: 1:2000</p> <p>SOURCE: ONTARIO BASE MAPS</p> <p>AWS AQUATIC AND WILDLIFE SERVICES</p> <p><small>Environmental Consulting & Resource Management 242090, R.R. # 1, Shallow Lake, Ontario, N0H 2K0 Phone: 519-372-2303, Fax: 519-372-1990, Email: aws@nvtolp.com</small></p>	<p>FIGURE No. 8: ELC VEGETATION COMMUNITIES</p> <p>EAST WEST EXCHANGE INC.</p> <p>PART OF LOT 13, CONCESSION 2 EGR</p> <p>(Formerly Glenelg Township)</p> <p>COUNTY OF GREY</p>
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<p>LEGEND:</p> <p>30m SETBACK FROM RIPARIAN ZONE/WETLAND HABITAT (VEGETATION COMMUNITY No. 6)</p> <p>15m SETBACK FROM INTERMITTENT STREAM COURSE (LESS EXISTING LANEWAY ENTRANCE CROSSING AREA)</p> <p>DELINEATION OF DEVELOPMENT LANDS</p>	<p>SCALE: 1:2000</p> <p>SOURCE: ONTARIO BASE MAPS</p> <p>AWS</p> <p>AQUATIC AND WILDLIFE SERVICES Environmental Consulting & Resource Management 242090, R.R. # 1, Shallow Lake, Ontario, N0H 2K0 Phone: 519-372-2303, Fax: 519-372-1990, Email: aws@nvtolsp.com</p>	<p>FIGURE No. 10: NATURAL HERITAGE SETBACKS</p> <p>EAST WEST EXCHANGE INC.</p> <p>PART OF LOT 13, CONCESSION 2 EGR</p> <p>(Formerly Glenelg Township)</p> <p>COUNTY OF GREY</p>
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APPENDIX I

➤ Site Photos



Photo No. 1: Eastern field, looking west from entrance off Conc. 2 Sideroad, Vegetation Community No. 1

Photo No. 2: Southwestern field area, storage shed on-site, proposed development area





Photo No. 3: Culvert crossing between Eastern and Southwest fields, showing dry channel, June 2008

Photo No. 4: Southwest field area looking west from culvert crossing point





Photo No. 5: Vegetation community No. 5, part of intermittent stream riparian zone habitat

Photo No. 6: Vegetation community No. 2, dense immature White Cedar throughout Northwest old field





Photo No. 7: Western study area boundary, wetland habitat having a mix of White Cedar stands, low shrub marsh and standing dead conifer swamp

Photo No. 8: Stream course flowing along Western boundary of Study Lands





Photo No. 9: Southwest field area eastern edge, habitat are for rare flora colony sites No. 1 (foreground) and No. 2 (background), both within seasonally wet field environment beyond tree line

Photo No. 10: Vegetation community No. 4 transition edge from field environments.



APPENDIX II

➤ Flora Survey Listing & Floristic Quality Scoring

East West Exchange Inc: Flora Inventory for 2008 Spring & Summer season coverage

Part Lot 13, Conc. 2 EGR, former Glenelg Township

Note: Inventory works did not include the main wetland habitat along the western boundary (vegetation community No. 6) but did include the intermittent stream wetland/riparian habitat within the central area of the Study Lands

Latin Name	Common Name	Provincial Status	Local Status	Native or Introduced	Floristic Quality Scoring		
					Coefficient of Conservatism	Weediness Index	Wetness Index
Acer saccharum	Sugar Maple	S5		N	4	3	FACU
Acinos arvensis	Wild Basil			I	*	5	UPL
Anemone canadensis	Canada Anemone	S5		N	3	-3	FACW
Aster puniceus	Purple-stemmed Aster	S5		N	6	-5	OBL
Carex castanea	Chestnut Sedge	S5		N	7	-4	FACW+
Carex eburnea	Ebony Sedge	S5		N	6	4	FACU-
Carex flava	Yellowish Sedge	S5		N	5	-5	OBL
Carex gracillima	Graceful Sedge	S5		N	4	3	FACU
Carex pallescens	Pale Sedge	S5	Rare	N	5	3	FACU
Circaea luteana	Enchanter's Nightshade	S5		N	3	3	FACU
Cirsium vulgare	Bull thistle			I	*	4	FACU-
Cornus stolonifera	Red Osier Dogwood	S5		N	2	-3	FACW
Cornus alternifolia	Pagoda tree	S5		N	6	5	UPL
Daucus carota	Wild carrot			I	*	5	UPL
Dryopteris carthusiana	Spinulose Woodfern	S5		N	5	-2	FACW-
Fraxinus pensylvanica	Green Ash	S5		N	3	-3	FACW
Geum canadense	White Avens	S5		N	3	0	FAC
Geum rivale	Purple Avens	S5		N	7	-5	OBL
Glyceria striata	Fowl Manna Grass	S5		N	3	-5	OBL
Hieracium piloselloides	Yellow Hawkweed			I	*	5	UPL
Iris versicolor	Blue Flag	S5		N	5	-5	OBL
Juncus dudleyi	Dudley's Rush	S5		N	1	0	FAC
Larix laricina	Tamarack	S5		N	7	-3	FACW
Lycopus americanus	Water Horehound	S5		N	4	-5	OBL
Oenothera perennis	Sundrops	S5	Rare	N	6	0	FAC
Ostrya virginiana	Ironwood	S5		N	4	4	FACU-
Parthenocissus inserta	Virginia Creeper	S5		N	3	3	FACU
Phalaris arundinacea	Reed Canary Grass	S5		N	0	-4	FACW+

Picea glauca	White Spruce	S5	Rare	N	6	3	FACU
Pinus strobus	White Pine	S5		N	4	3	FACU
Pinus sylvestris	Scotch Pine			I	*	5	UPL
Populus balsamifera	Balsam Poplar	S5		N	4	-3	FACW
Populus tremuloides	Trembling Aspen	S5		N	2	0	FAC
Potentilla anserina	Silver and Gold	S5		N	5	-4	FACW+
Ranunculus acris	Common Buttercup			I	*	-2	FACW-
Ranunculus pensylvanicus	Bristly Buttercup	S5		N	3	-5	OBL
Rhamnus alnifolia	Alder-leaved Buckthorn	S5		N	7	-5	OBL
Rhamnus cathartica	Common Buckthorn			I	*	3	FACU
Ribes americana	Wild Black Currant	S5		N	4	-3	FACW
Rubus strigosus	Wild Red Raspberry	S5		N	0	-2	FACW-
Salix discolor	Pussy Willow	S5		N	3	-3	FACW
Salix petiolaris	Meadow Willow	S5		N	3	-4	FACW+
Sisyrinchium montanum	Blue-eyed Grass	S5		N	4	-1	FAC+
Solanum dulcamara	Black Nightshade			I	*	0	FAC
Solidago canadensis	Canada Goldenrod	S5		N	1	3	FACU
Solidago rugosa	Rough Goldenrod	S5		N	4	-1	FAC+
Spiraea alba	Meadowsweet	S5		N	3	-4	FACW+
Taraxacum officinale	Dandelion			I	*	3	FACU
Thuja occidentalis	White Cedar	S5	N	4	-3	FACW	
Ulmus rubra	Red Elm	S5	N	6	0	FAC	
Viburnum lentago	Nannyberry	S5	N	4	-1	FAC+	
Vicia cracca	Common Vetch		I	*	5	UPL	
AVERAGE VALUES					4	0	

Total Number of Native Species : 42 or 81 %

Total Number of Non-Native Species: 10 or 19 %

Three species of Local Conservation Concern, Rare in Grey County:

Pale Sedge, Colony mapping site No. 1, within seasonally wet field environment

Sundrops, Colony mapping site No. 2, within seasonally wet field environment

Bristly Buttercup, Colony mapping site No. 3, within intermittent stream course riparin/wetland habitat

Colony mapping sites noted above are provided on Figure No. 9

APPENDIX III

➤ **Fauna Listing & Status**

East West Exchange Inc: Fauna Inventory

Part Lot 13, Conc.2 EGR former Glenelg Township
2008 Spring and Summer season coverage

	Common Name	Scientific Name	Provincial Status	Grey County Status
<u>Mammals</u>	White-Tailed Deer	Odocoileus virginianus	S5	Common
	Raccoon	Procyon lotor	S5	Common
	Snowshoe Hare	Lepus americanus	S5	Common
	Woodchuck	Marmota monax	S5	Common
	Red Squirrel	Tamiasciurus hudsonicus	S5	Common
	Eastern Chipmunk	Tamias striatus	S5	Common
<u>Amphibians</u>	Northern Leopard Frog	Rana pipiens	S5	Common
	Gray Treefrog	Hyla versicolor	S5	Common
	Green Frog	Rana clamitans	S5	Common
<u>Reptiles</u>	Eastern Garter Snake	Thamnophis sirtalis	S5	Common
<u>Birds</u>	Northern Cardinal	Cardinalis cardinalis	S5	No Concern
	Downy Woodpecker	Picoides pubescens	S5	No Concern
	American Goldfinch	Carduelis tristis	S5	Open Country - III
	Eastern Wood-Pewee	Contopus virens	S5	No Concern
	Blue Jay	Cyanocitta cristata	S5	No Concern
	American Robin	Turdus migratorius	S5	No Concern
	Chipping Sparrow	Spizella passerina	S5	No Concern
	Red-Winged Blackbird	Agelaius phoeniceus	S5	No Concern
	Field Sparrow	Spizella pusilla	S5	Open Country - III
	Wild Turkey	Meleagris gallopavo	S4	No Concern
	Ruffed Grouse	Bonasa umbellus	S5	Forest - III
	Red-tailed Hawk	Buteo jamaicensis	S5	No Concern
	Killdeer	Charadrius vociferus	S5	No Concern
	Mourning Dove	Zenaidura macroura	S5	No Concern
	Eastern Screech Owl	Otus asio	S5	No Concern
	Eastern Phoebe	Sayornis phoebe	S5	Forest- III
	Tree Swallow	Tachyneta bicolor	S5	No Concern
	Black-Capped Chickadee	Poecile atricapillus	S5	Forest IV
	Cedar Waxwing	Bombycilla cedrorum	S5	No Concern

Provincial Status: Current Listings with Natural Heritage Information Centre (NHIC)

S5 defined as: Very Common and demonstrably secure in Ontario

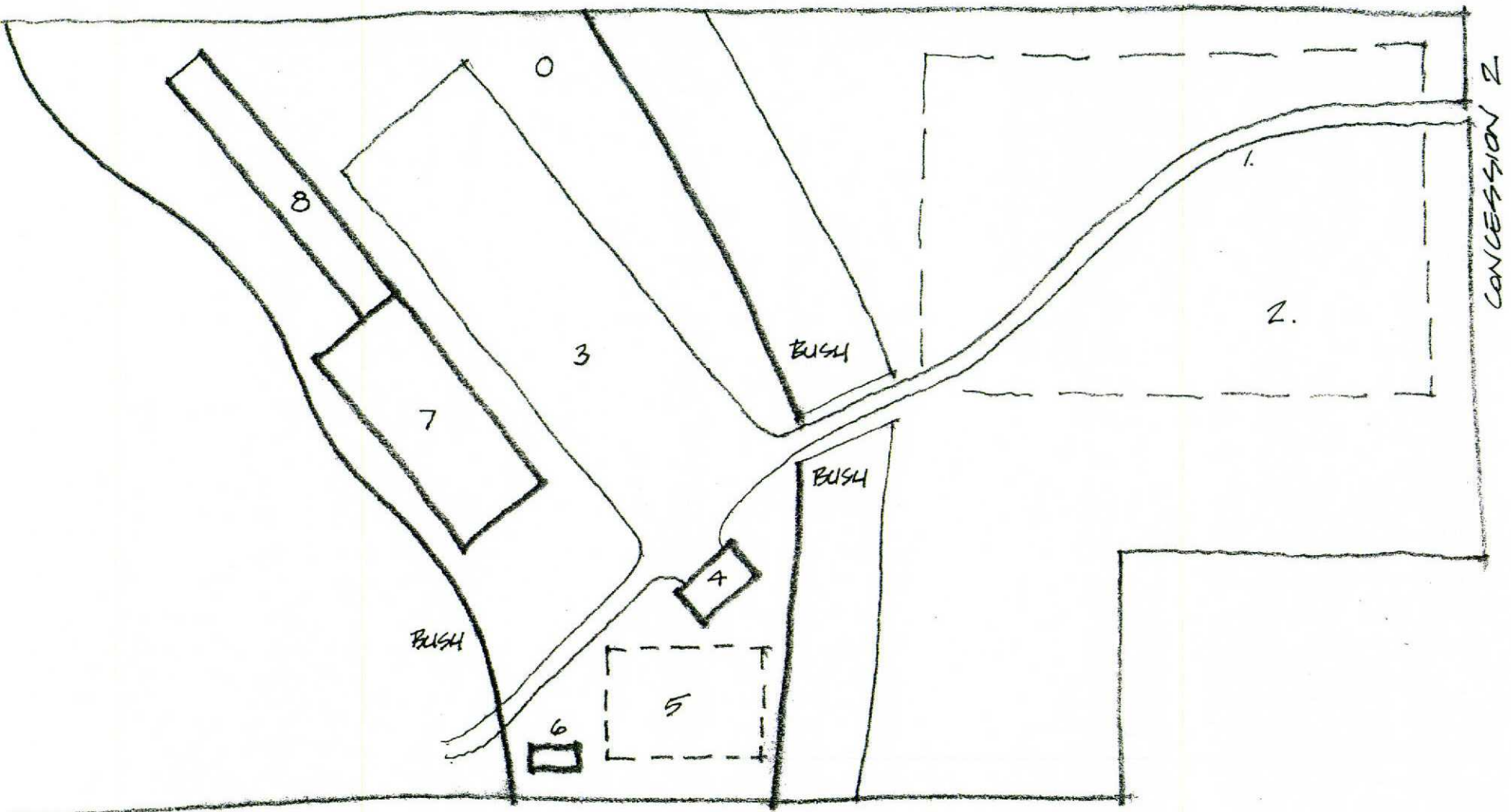
S4 defined as: Common and apparently secure in Ontario

Local Status: Bird Listing as per 'Conservation Priorities for the Birds of Southern Ontario'

Priority species rankings for Grey County, **5 Species of Conservation Concern** Identified

APPENDIX IV

- Ferguson Ferguson Architect draft Design Concept



- | | | | |
|----|---|----|---|
| 1. | Access laneway
6m wide, 400m long | 5. | Storm water pond
36 x 48 1,700 m ² |
| 2. | Sewage treatment field
180 x 280m 50,000 m ² | 6. | Manager's residence
7.5 x 15 m 110 m ² |
| 3. | Parking, 200 spaces
55 x 150m 8,250 m ² | 7. | Centre, 1-2 floors
37 x 80 m 3,000 m ² |
| 4. | Utility building
12 x 24m 290 m ² | 8. | Dormitory, 2-3 floors
15 x 100 1,500 m ² |

SITE PLAN CONCEPT
TO CENTRE nts SPC2

APPENDIX V

- SVCA Regulatory Lands Map

AWS Information Request
 East-West Exchange Camp
 Part Lot 13, Concession 2 EGR
 Former Township of Glenelg
 Municipality of West Grey

Figure No. 8: Saugeen Valley Conservation Authority Preliminary Review
 ~ Potential Regulated land mapping, no site visit

Approximate Location
 of EIS Study Area

Approximate Location of EIS Study Area

SVCA Interpretation of Lands that
 should be zoned Natural Environment
 in the Municipality of West Grey Zoning
 By-Law No. 37-2006

Approximate Location of SVCA Regulated
 Area. 'Screening area' includes the NE
 zone plus a 50 metre distance beyond
 the zone boundary.

NOTE: Lands within the Approximate Regulated
 Area may be subject to SVCA Regulations
 (Ontario Regulation 169/06)

APPENDIX VI

➤ AWS Environmental Consulting Qualifications & Experience



AQUATIC AND WILDLIFE SERVICES

Environmental Consulting & Resource Management

242090, R.R. # 1, Shallow Lake, Ontario, N0H 2K0

Phone: 519-372-2303, Fax: 519-372-1990, Email: aws@nvloisp.com

Proprietor: JOHN D. MORTON, C.V. SUMMARY

Education

Graduate of Sault College
1985: Forestry Technician
1986: Fish & Wildlife Technologist

Education Experience: Summary

1997 to Present: Sole Proprietorship
of Aquatic and Wildlife Services (AWS)

1986 to 1997: Ontario Ministry of Natural
Resources Fish & Wildlife Technologist;
Responsibilities included review of Development
Proposals, Fish and Wildlife Surveys and Habitat
Enhancement Projects. District Coordination of
Wetlands and CFWIP Programs.
Fisheries Research Technician for MNR Lake
Huron Management Unit and Fish Culture Technician
at Chatsworth Provincial Fish Hatchery

1982 to 1986: Fisheries Technician, Wetland
Technician for OMNR and Conservation Authorities

Project Experiences: Summary

- * Fish & Wildlife population / habitat surveys
- * Benthic Macroinvertebrate Sampling
- * Stream and Lake Surveys
- * Provincial Wetland Evaluations, Book 2
and upgrades to Book 3 standards
- * Discharge water monitoring: Environmental
Impacts on Flora and Fauna
- * Radio Telemetry study work on
Bruce Peninsula Black Bears
- * Private Land Wetland Creation
- * Stream Bank Restoration
- * Private Pond Designs
- * Recreational Trail Designs
- * Stormwater Impact Assessments
- * Significant Species Studies for Flora
and Fauna with Habitat Mapping
- * Vegetation Community Mapping
- * Wetland Boundary Delineation
- * MOE BioMAP sampling
- * Tree Marking, sawlog/fuelwood harvesting
- * Tree seedling production & retail sales

**Since 1997, AWS Environmental Consulting has completed over 250 Environmental Impact
Study Reports for Residential Severances, Plan of Subdivisions, Commercial Properties,
Water Taking and Aggregate Applications throughout Southwestern and Central Ontario**

Certification & Training Courses

- * Provincially Approved Southern Ontario
Wetland Evaluator to book 2 & 3 standards
- * Provincial Class 1 Electrofishing
- * Provincial workshop training for Natural
Heritage Environmental Impact Assessment
- * Provincial workshop training for Natural
Hazard Development Impact studies
- * Provincial workshop training for
Non-Renewable (Aggregates) Resources
Development Impact Assessment
- * Level 1 OMNR Law Enforcement
- * Fish Habitat Protection-OMNR
- * Advanced Fish Habitat Training-DFO
- * Fluvial Geomorphology Workshop
- * Stream Bioengineering Restoration
- * Cyprinidae ID Workshop-ROM
- * Wetland Restoration Techniques
- * Ontario Stream Assessment Protocol
- * Wildlife Population Inventory/Monitoring
- * Managed Forest Tax Plan Approver
- * Advanced Fish Culture Course
- * Expert Witness/Evidence Collection
- * Ecological Land Classification for S.Ont
- * Eastern Massasauga Rattlesnake
Habitat Training: Bruce Peninsula
- * Ontario Municipal Board, Expert Witness
for Natural Heritage Features
- * **Recipient of Provincial Fisheries Award**

JUDITH JONES: Winter Spider Eco-Consulting, CV Summary

Education

B.S. Botany, University of Michigan, Ann Arbor 1980
M.Sc. Cell Biology, University of Illinois, Chicago 1983
Ontario Provincial Wetland Evaluator, certified 1999
Canadian Environmental Assessment Screenings training 2007

Areas of Expertise

- Plant identification and classification
- Vegetation identification (Ecological Land Classification; other classifications)
- Identification of Species at Risk and their habitats
- Life science inventories
- Field mapping of species, vegetation, habitats, etc.
- Helping the public understand science (through teaching, leading field trips, designing nature trails, writing for the popular press, etc.)

Judith Jones has been an independent consulting biologist since 1994. She has worked for AWS since 2005.

Summary of Recent Projects

BOTANICAL SURVEYS FOR EIS

(Subdivisions, Aggregates, etc.)

- Aquatic and Wildlife Services since 2005
- M.K. Ince and Associates (2006)
- CEAA screenings, Beausoleil First Nation

LIFE SCIENCE INVENTORIES

- Carden Alvar ANSI
- 4 provincial parks on Manitoulin Island
- 4 conservation reserves on the Georgian Bay Coast
- Survey and mapping of alvars of Manitoulin Island (1995-present)
- Survey and mapping of alvars on the North Channel islands
- Manitoulin Island Escarpment ecosystem
- Field work for NCC's Ecological Survey of the Georgian Bay Coast.
- Field work on Manitoulin candidate ANSI sites

SPECIES AT RISK SURVEYS

- Mapping of critical habitat of Pitcher's Thistle in Pukaskwa National Park
- SAR mapping, Wikwemikong First Nation
- SAR survey on Christian Island, Beausoleil First Nation.
- Trent-Severn Waterway (Parks Canada)
- Fort St. Joseph National Historic Site
- Sault Canal National Historic Site
- Survey and mapping of 12 SAR in the Manitoulin Region
- Survey and mapping of Pitcher's Thistle and dune grasslands on Lake Huron
- Survey of 30 beaches and dunes on the North Shore of Lake Huron

RECOVERY STRATEGIES (RS) FOR SAR

- Author of RS for Alvar Ecosystems of the Bruce Peninsula and Manitoulin Regions (Gattinger's Agalinis, Lakeside Daisy, Houghton's Goldenrod)
- Author of RS for Forked Three-awned Grass (*Aristida basiramea*)
- Author of RS for Hill's Thistle (*Cirsium hillii*)
- Advisor to Pitcher's Thistle-Dune Grasslands Recovery Team.

RESEARCH

- Sustainable harvest levels for Canada Yew (*Taxus canadensis*)
- Fire history of Oak Savannah vegetation
- Fire history of Manitoulin alvars
- Invasiveness of mossy stonecrop (*Sedum acre*) on alvar
- Field collection protocol for genetic studies of Pitcher's Thistle
- Analysis of data on exotic plant species present on alvars

OUTREACH AND TEACHING

- Coordinator of a SAR monitoring program by landowners on Manitoulin Island
- Workshops about SAR for school kids and general community, Christian Island
- Co-author of a website about Pitcher's Thistle (endangered)
- Spring flora courses for non-biologists (1989-2003)
- Layout and construction of nature trails and ski trails (Misery Bay Provincial Park; other locations)
- Nature and environment columnist for the Manitoulin Expositor (1992-2004)



AQUATIC AND WILDLIFE SERVICES

Environmental Consulting & Resource Management

242090, R.R. # 1, Shallow Lake, Ontario, N0H 2K0

Phone: 519-372-2303, Fax: 519-372-1990, Email : aws@nvloisp.com

John D. Morton: Environmental Reports for Development Proposals

Mannerow Estates Subdivision (2009) City of Owen Sound	<i>85 Lot Subdivision. Impact concerns with Endangered species, Rare flora, Niagara Escarpment and Significant Woodlands</i>
Arran Landfill Expansion (2009) Township of Arran-Elderslie	<i>20ha expansion of an existing landfill operation. Impact concerns with Threatened species, Fish Habitat, Significant Wildlife and Woodlands</i>
Thom Severances (2009) City of Owen Sound	<i>4-Lot severance for Residential Dwellings. Impact concerns with Significant Wildlife, Significant Woodlands and Endangered Species</i>
Home Hardware Building Center (2009) Sauble Beach	<i>Commercial Development proposal. Natural Heritage issues for Significant Wetlands, Fish Habitat and Wildlife Habitat</i>
Elliott Severances, Rd Bay (2009) Town of South Bruce Peninsula	<i>5-Lot severance for Residential Dwellings. Impact concerns with rare Flora, Massasauga Rattlesnake, Woodlands and Significant Wetlands</i>
Lahman Rezoning and Comm Dev. (2009) Municipality of Grey Highlands	<i>Comm & Res. Building envelope delineation and Septic Sytem concerns for Significant Wetlands, Woodlands, Fish Habitat, Endngered Species</i>
Wingham Forcemain (2008) Municipality of North Huron	<i>Constructiohn of a 1km long foremain extension for swaeege treatment Impact concerns with Fish Habitat and Significant Wildlife Habitat</i>
Maitland River Subdivision (2008) Municipality of North Perth	<i>86 Lot Plan of Subdivision: Impact concerns with: Wildlife Surface water quality, Significant Fauna, Wildlife Corridors, Woodlands</i>
10th Street Extension (2008) City of Owen Sound	<i>Proposed road extension requiring Flora and Fauna investigations and development impact assessment</i>
Calhouan Drain Survey (2008) Municipality of Arran-Elderslie	<i>Proposed replacement of a concrete bridge crossing requiring Fish Habitat and Fish community assessment</i>
SWMP Outlet Monitoring (2008) Interwest Resort Corp. Collingwood	<i>Fisheries and Benthic Invertebrate Monitoring for Water Quality, Flows for MOE Certificate of Approval for Discharge waters</i>
Grey-Bruce County Line Reconstruction 2008 Phase III Works	<i>Road upgrades with extensive stream crossings: Impact concerns with Fisheries, Erosion, Sedimentation, Stream realignment and Monitoring</i>
Greir Creek Bridge Replacement (2008) Grey County Highways-Collingwood Twp	<i>Replacement of a Single Span Bridge with road upgrade: Impact concerns with Fish Habitat, Riparian Zone and Channel Realignment</i>
Residential & Sewage Upgrade (2008) Township of Chatsworth	<i>Building envelope expansion and Septic Sytem concerns for Lake Frontage and Wetlands</i>
Black Subdivision (2008) Town of Saugeen Shorres	<i>Proposed urban environment Subdivision requiring survey works for significant Flora and Fauna</i>
Grier Creek Crossing (2008) County of Grey Highways Dept.	<i>Replacement of a Single Span Bridge with road upgrade: Impact concerns with Fish Habitat, Riparian Zone and Erosion</i>

Water Quality Monitoring (2008) Interwest Corp.- Collingwood Township	<i>Multi-year monitoring program of Fisheries Habitat and aquatic organisms for MOE water taking/discharge certificate</i>
DiFrancesco Building Lot (2007) Township of Georgian Bluffs	<i>Building envelope delineation and Septic Sytem concerns for Niagara Esarpment, Woodlands, Rare Plants, Karst Topograpghy</i>
Farenhorst Building Lot (2007) Township of Georgian Bluffs	<i>Building envelope delineation and Septic Sytem concerns for Niagara Esarpment, Woodlands, Rare Plants, Karst Topograpghy</i>
Biesinger Lot Severance (2007) Municipality of West grey	<i>Severance application for creation of a new residential Lot, Impact Issues for Significant Wetland & Rare Flora</i>
Royal Homes Ltd. (2007) Municipality of Kincardine	<i>Tree rention plan for 3-Lot residential dwellings within a Significant Woodland designation</i>
A. Love Building Lot (2007) Municipality of Grey Highlands	<i>Building envelope delineation and Septic Sytem concerns for Significant Wetland and Fisheries Habitat</i>
Braun Severances (2007) Municipality of West Grey, Ont.	<i>Multiple severance application for creation of 2 new residential Lots: Impact concerns for Significant Wetland & Woodlands</i>
Legge Building Lot (2007) Georgian Bluffs	<i>Building envelope delineation and Septic Sytem concerns for Significant Wetland and Wildlife Corridor</i>
Wilcox Building Lot (2007) Georgian Bluffs, Ont.	<i>Building envelope delineation and Septic Sytem concerns for Karst Topograpghy, Significant Wetland & Stream Course</i>
North Saugeen, McClure's Bridge (2007) Chesley, Ontario	<i>Replacement of a Single Span Bridge with road upgrade: Impact concerns with Fish Habitat, Riparian Zone and Erosion</i>
Wilbert Severances (2007) Clearview Township, Ont.	<i>Multiple severance application for creation of 2 new residential Lots: Impact concerns for ANSI, Fisheries Habitat & Endangered Species</i>
HSC Ltd. Severances (2007) Clavering, Ontario	<i>Multiple severance application for creation of 3 new residential Lots: Impact concerns for Fisheries and Significant Wetlands</i>
M.K. Ince & Assoc. (2007) Robitaille Wind Farm, Cedar Point, Ont.	<i>Wind energy proposal for 3 Turbines within a forested environment: Impact cuncerns with Flora & Fauna, ANSI and Terresrial Linkages</i>
K. Holmes Building Lot (2007) Owen Sound, Ont	<i>Building envelope delineation and Septic Sytem concerns for Karst Topograpghy</i>
Ferguson Point Severances (2007) Stokes Bay, Ont	<i>Multiple severance application for creation of 7 new residential waterfront Lots: Impact concerns for Fisheries, Massassagua Rattlsnake, Rare habitat types and Wildlife Habitat</i>
Silver Creek Crossings (2007) Town of Walkerton, Ontario	<i>Upgrading of Three Bridge crossings: Impact concerns with Fisheries and Sedimentation impacts</i>
Brock Aggregates, Sunderland Pit (2006) Sunderland, Ontario	<i>Surface Water taking application for Aggregate Operations: Impact concerns on Beaver River with: Wetland, Fisheries and ecological threshold limits</i>
Grey-Bruce County Line Reconstruction 2006 Phase II Works	<i>Road upgrades with extensive stream crossings: Impact concerns with Fisheries, Erosion, Sedimentation, Stream realignment and Monitoring</i>
Alvanley Cement Plant (2006) Alvanley, Ontario	<i>Industrial development for cement production and loading: Impact concerns with : Wetland and surface water quality</i>

Georgian Shores Subdivision (2006) Owen Sound, Ontario	<i>90 Lot Plan of Subdivision: Impact concerns with: Wildlife Surface water quality, Significant Flora, Wildlife Corridors, Woodlands</i>
L.Brulotte, Lot Severance (2006) Municipality of Grey Highlands	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands and Woodlands</i>
R.Bowman, Lot Development (2006) Township of Melancthon	<i>Delineation of commercial manufacturing lands: Impact concerns with Wetlands, ANSI, Fisheries and Wildlife habitat</i>
H.Philpp, Lot Severances (2006) Town of the Blue Mountains	<i>Establishment of 5 new lots for single residential dwelling: Impact concerns with Woodlands and Rare Flora</i>
L.Sheppard, Lot Severance (2006) Town of the Blue Mountains	<i>Establishment of a new waterfront lot for single residential dwelling: Impact concerns with Fisheries and Great Lakes Shoreline</i>
Sutacriti Park Phase III (2006) Township of Georgian Bluffs	<i>24 Lot Plan of Subdivision: Impact concerns with Fisheries, Woodlands Wildlife corridors and Breeding Birds</i>
K. Priest, Lot Severance (2006) Melancthon Township	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Woodlands, ANSI, Fisheries and Niagara Escarpment</i>
Saugeen Beach Development (2006) Town of Saugeen Shores	<i>Property site development for Canadian Auto Workers for multiple waterfront lots and inland residential dwelling lots: Impact concerns with Wetlands, Woodlands, Rare Flora, Wildlife and Fisheries Habitat</i>
Mystic Cove Subdivision (2006) Municipality of Kincardine	<i>Waterfront Plan of Subdivision: Impact concerns with Woodlands, Rare Flora, Fisheries and Wildlife corridors</i>
Tenth Line Storm Drain (2006) Town of Saugeen Shores	<i>Construction of new storm sewer and upgrades to existing drain: Impact concerns with Fisheries, Wetlands and Great Lakes Shoreline</i>
Mary Rose Subdivision (2006) Town of Saugeen Shores	<i>Plan of Subdivision: Impact concerns with Fisheries, Woodlands Wildlife corridors, and Breeding Birds</i>
M. Siekierski, Lot Development (2006) Municipality of Northern Bruce Peninsula	<i>Niagara Escarpment Development Permit for dwelling upgrades: Impact concerns with Fisheries, Massasauga Rattlesnake, Rare Flora</i>
M. Pfaff, Lot Development (2006) Municipality of Grey Highlands	<i>Niagara Escarpment Development Permit for dwelling upgrades: Impact concerns with Woodlands, Rare Flora, Stream courses</i>
Y.Wilmer, Lot Severances (2006) Township of West Grey	<i>Establishment of a 2 new lots for single residential dwelling: Impact concerns with Woodlands, ANSI and Rare Flora</i>
Cemetery Creek Realignment (2005) Town of Meaford, Municipality of Meaford	<i>Maple Meadow subdivision requiring realignment of a natural stream course: Impact concerns with Fisheries, water quality capacity</i>
G.Doherty, Lot Development (2005) Municipality of Meaford	<i>Niagara Escarpment Development Permit for new dwelling: Impact concerns with Woodlands and Karst Topography</i>
Effluent Biological Monitoring (2006) Town of Blue Mountains	<i>Benthic Macroinvertebrates sampling and ongoing monitoring report for MOE review, discharge of sewage outflow waters to Beaver River</i>
R.Murray, Lot Severance (2005) Municipality of Kincardine	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Woodlands, Fisheries and Rare Flora</i>

G. Menaul, Lot Severance (2005) Township of Southgate	<i>Establishment of a new waterfront lot for single residential dwelling: Impact concerns with Woodlands, Fisheries and Rare Flora</i>
H. McNabb, Lot Development (2005) Township of Georgian Bluffs	<i>Niagara Escarpment Development Permit for a new dwelling : Impact concerns with Woodlands, Rare Flora, Escarpment Features</i>
P. Kraemer, Lot Rezoning (2005) Municipality of Huron East	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Woodlands, Wetlands and Wildlife habitat</i>
M. Toombs, Lot Development (2005) Township of Georgian Bluffs	<i>Niagara Escarpment Development Permit for a new waterfront dwelling : Impact concerns with Escarpment Features, groundwater quality</i>
A. McGowan, Property Review (2005) Town of the Blue Mountains	<i>Property boundary review with concerns over Mill Creek stream channel changes and morphology patterns</i>
Lake Huron Escape Subdivision (2005) Municipality of Kincardine	<i>30-Lot Plan of Subdivision: Impact concerns with Fisheries, Woodlands Wildlife corridors, Wetlands, Rare Flora and Tree Retention</i>
D. Lobban, Lot Severance (2005) Township of Georgian Bluffs	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Waterfront, Rare Fauna and Shallow Soils</i>
B. Wattie, Lot Development (2005) Township of Georgian Bluffs	<i>Delineation of building envelope for single residential dwelling: Impact concerns with Wetlands, Rare Flora, Fisheries, Woodlands</i>
R. MacKenzie, Property Review (2005) Town of Saugeen Shores	<i>Preparation for future Plan of Subdivision on 50 acre parcel: Impact concerns with Wetlands, Fisheries, Wildlife Corridors and Rare Flora</i>
Harkins Harbour Development (2005) Municipality of Northern Bruce Peninsula	<i>Established 12 Lots requiring building envelope delineation. Impact concerns with Massasauga Rattlesnake, Rare plants, ANSI, Wetlands</i>
P. Walker, Building Lots (2004) Town of Southampton	<i>Delineation of building envelope for 4 residential dwellings: Impact concerns with Wetlands, Woodlands, Flooding</i>
Alliance Homes Lot Creation (2004) Township of Clearview	<i>Delineation of building envelope for 2 residential dwellings: Impact concerns with Woodlands, Flooding, Stream courses</i>
P. Davies, Lot Severance (2004) Municipality of Grey Highlands	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Waterfront Lake Water Quality, Fisheries</i>
H. Stewart, Lot Severance (2004) Township of Chatsworth	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Waterfront Lake Water Quality, Fisheries, Wetlands</i>
Debrincat Subdivision (2004) Township of West Grey	<i>Plan of Subdivision: Impact concerns with Fisheries, Woodlands Wildlife corridors, Wetlands and Rare Flora</i>
T. Hughes, Lot Development (2004) Municipality of Grey Highlands	<i>Niagara Escarpment Development Permit for a new dwelling : Impact concerns with Escarpment Features, Rare Flora, Woodlot</i>
D. Wilson, Lot Development (2004) Township of Georgian Bluffs	<i>Niagara Escarpment Development Permit for a new waterfront dwelling : Impact concerns with Escarpment Features, groundwater quality</i>
J. Smith, Lot Severance (2004) Township of Chatsworth	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands and Stream courses</i>
Pegasus Trails Subdivision (2004) Town of Saugeen Shores	<i>Plan of Subdivision: Impact concerns with Fisheries, Woodlands Wildlife corridors, Wetlands and Rare Flora</i>

Mad River Tributary Realignment (2004) Township of Clearview	<i>Stretch of stream realignment within Devil's Glen Country Club Impact concerns with Fisheries and erosion and Water Taking</i>
Cedar Highlands Ski Club (2003) Town of Mono	<i>Proposed Downhill Ski expansion: Impact concerns with Woodlands, Rare Flora, Wildlife Corridors, Erosion, Stream Courses, Wildlife Habitat</i>
Lorne Creek Shores Subdivision (2003) Municipality of Kincardine	<i>Plan of Subdivision: Impact concerns with Fisheries, Woodlands Wildlife corridors, Wetlands and Rare Flora</i>
H. Currie, Lot Severance (2003) Township of Georgian Bluffs	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands and Wildlife Habitat</i>
H. Janssen, Lot Development (2003) Municipality of Northern Bruce Peninsula	<i>Delineation of building envelope for a new residential dwelling: Impact concerns with ANSI, Woodlands, Rare Flora, Rare Landscape types</i>
L. Vollett, Lot Development (2003) Township of Soutgate	<i>Delineation of building envelope for a new waterfront residential dwelling: Impact concerns with Shoreline, Slopes, Fisheries and Woodlands</i>
R. Robinson, Lot Severance (2003) Town of Blue Mountains	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands, ANSI and Wildlife Habitat</i>
Canadian Auto Works Property (2003) Town of Saugeen Shores	<i>Preparation for future Plan of Subdivision on 100 acre parcel: Impact concerns with Wetlands, Fisheries, Wildlife and Rare Flora</i>
R. Taylor, Lot Development (2003) Township of Georgian Bluffs	<i>Delineation of residential dwelling expansion lands: Impact concerns with Wetlands</i>
D. Lowe, Lot Development (2003) Township of Georgian Bluffs	<i>Delineation of new residential dwelling lands: Impact concerns with Wetlands and Shallow Soils</i>
Devil's Glen Club House Expansion (2003) Township of Clearview	<i>Delineation of developable expansion lands: Impact concerns with Stream Course and Fisheries</i>
Morrison Marina (2002) Township of Georgian Bluffs	<i>Design of a 60 Boat Slip Marina on Owen Sound Bay with multi- year monitoring program: Impact concerns with Fisheries, Erosion & Waves</i>
K.Knight, Lot Development (2002) Municipality of Meaford	<i>Niagara Escarpment Development Permit for new dwelling: Impact concerns with Woodlands and Karst Topography</i>
Stream Realignment Works (2002) Township of Southgate	<i>Stream realignment design with mitigative and compensation measures and multi-year monitoring with application assistance: Impact concerns with Fisheries and downstream riparian rights/ponds</i>
Monterra Plateau-Craigleith (2002) Town of the Blue Mountains	<i>Proposed stream realignment for road works and preparation of Subdivision expansion: Impact concerns with Fisheries and Stream Morphology, Sedimentation/Erosion issues</i>
M. Donovan, Lot Development (2002) Municipality of Meaford	<i>Delineation of new residential dwelling lands: Impact concerns with Stream course and Shallow Soils</i>
H. Lupia, Lot Severance (2002) Municipality of Grey Highlands	<i>Proposed creation of two new residential waterfront lots: Impact concerns with Lake Carrying Capacity, Shoreline alterations, Fisheries, Wetlands</i>
G. Zeggil, Lot Severances (2002) Municipality of Grey Highlands	<i>Establishment of a three new lots for single residential dwelling: Impact concerns with Wetlands, Woodlands and Wildlife Habitat</i>
M. Thorn, Lot Severances (2002) Municipality of Kincardine	<i>Establishment of a four new lots for single residential dwelling: Impact concerns with Wetlands, Woodlands and Wildlife Habitat</i>

W.McNeil, Lot Development (2002) Township of Georgian Bluffs	<i>Niagara Escarpment Development Permit for new dwelling: Impact concerns with Woodlands and Karst Topography</i>
K. Byers, Lot Development (2002) Township of Georgian Bluffs	<i>Niagara Escarpment Development Permit for new dwelling: Impact concerns with Woodlands and Karst Topography</i>
B.Gilmour, Lot Development (2002) Township of Georgian Bluffs	<i>Niagara Escarpment Development Permit for new dwelling: Impact concerns with Woodlands, Waterfront and Karst Topography</i>
R.Martindill, Lot Severance (2002) Township of Chatsworth	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands and Wildlife Habitat</i>
Peach, Lot Severance (2001) Municipality of Grey Highlands	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands and Fisheries Habitat</i>
Mill Creek Crossing (2001) Town of the Blue Mountains	<i>Large arch culvert stream crossing: Impact concerns with Fisheries and Stream Velocity impacts to migratory fish, multi-year monitoring</i>
M.Ryan, Lot Severance (2001) Municipality of West Grey	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands and Fisheries Habitat</i>
Dippel Drainage Works (2001) Municipality of West Grey	<i>Drainage clean out, extension and contour changes: Impact concerns with Fisheries, stream thermal conditions and erosion</i>
C.Kramer, Lot Development (2001) Town of South Bruce Peninsula	<i>Delineation of new residential dwelling lands: Impact concerns with Lakefront, Fisheries and Shallow Soils</i>
A.Martin, Lot Development (2001) Municipality of Grey Highlands	<i>Delineation of new residential dwelling lands: Impact concerns with Wetlands and Wildlife</i>
Black Ash Creek, (2001) Town of the Blue Mountains	<i>Benthic macroinvertebrates monitoring to assess impacts from accidental effluent discharge from manufacturing plant</i>
R. Wells Trucking (2001) Municipality of South Bruce	<i>Design and impact assessment for proposed livestock truck wash facility: Impact concerns with Wetlands and Fisheries</i>
J. Martin, Lot Development (2001) Municipality of Grey Highlands	<i>Delineation of developable lands for commercial sawmill operation: Impact concerns with Wetlands and Woodlands</i>
R. Black, Shoreline Works (2001) Town of Blue Mountains	<i>Impact assessment review of proposed shoreline works for OMNR work permit</i>
D. Shrek, Lot Development (2000) Municipality of Grey Highlands	<i>Delineation of commercial manufacturing lands: Impact concerns with Wetlands and Wildlife habitat</i>
R. James, Lot Severance (2000) Municipality of West Grey	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands and Fisheries Habitat</i>
I.Maxwell, Lot Severance (2000) Municipality of Grey Highlands	<i>Establishment of 3 new lots for single residential dwelling: Impact concerns with Wetlands, Woodlands and Rare Flora</i>
C. Harris, Lot Severance (2000) Municipality of Grey Highlands	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands and Fisheries Habitat</i>
R.Martin, Lot Development (2000) Municipality of Grey Highlands	<i>Delineation of commercial manufacturing lands: Impact concerns with Wetlands and Wildlife habitat</i>

K. Smith, Lot Severances (2000) Municipality of Northern Bruce Peninsula	<i>Establishment of 4 new waterfront lots for single residential dwellings: Impact concerns with Fisheries, Woodlands and Rare Flora</i>
Devil's Glen Ski Hills (2000) Township of Clearview	<i>Biological inventory works and impact assessment for new downhill ski clearings: Impact concerns with Niagara Escarpment features, ANSI, Fisheries, Rare Flora, Woodlands and Wildlife corridors</i>
H.Philipp, Lot Severance (2000) Town of the Blue Mountains	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands, Rare Flora and ANSI</i>
Traverston Creek Realignment (2000) Township of West Grey	<i>Biological survey and stream realignment design for County road work upgrades: Impact concerns with Fisheries Habitat</i>
W.Bauman, Lot Development (2000) Municipality of Grey Highlands	<i>Delineation of commercial manufacturing lands: Impact concerns with Wetlands and Wildlife habitat</i>
D.Elliott, Lot Severance (2000) Municipality of South Bruce Peninsula	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands, Rare Flora and Wildlife</i>
D.Berg, Lot Severance (2000) Township of West Grey	<i>Establishment of a new lot for single residential dwelling: Impact concerns with ANSI, Woodlands, Rare Flora and Wildlife</i>
D.Shrek, Lot Development (2000) Municipality of Grey Highlands	<i>Delineation of commercial manufacturing lands: Impact concerns with Wetlands and Wildlife habitat</i>
J.Yoder, Lot Severance (2000) Township of Chatsworth	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands, Rare Flora and Wildlife</i>
N.Hollingshead, Lot Severance (2000) Township of Chatsworth	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Wetlands, Woodlands, Rare Flora and Wildlife</i>
Ferraro Subdivision (1999) Township of Chatsworth	<i>Plan of waterfront Subdivision on an Inland Lake: Impact concerns with Fisheries, Woodlands, Wildlife corridors, Wetlands and Rare Flora Ontario Municipal Board representation for environmental issues</i>
Rocky Park Family Campground (1999) Township of West Grey	<i>Biological survey and impact assessment for a campground expansion Impact concerns with ANSI, Fisheries, Woodlands, Rare Flora</i>
N. O'Conner, Lot Severances (1999) Municipality of Kincardine	<i>Establishment of a 4 new waterfront lots for single residential dwellings: Impact concerns with Woodlands, Wetlands and Beach Dynamics</i>
R.McKay, Lot Development (1999) Municipality of Meaford	<i>Niagara Escarpment Development Permit for new dwelling: Impact concerns with Woodlands, Rare Flora and Karst Topography</i>
L.Molner, Lot Severance (1999) Municipality of Grey Highlands	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Woodlands, Wetlands and Wildlife</i>
L.Detzier, Lot Severances (1999) Township of Chatsworth	<i>Establishment of 3 new lots for single residential dwellings: Impact concerns with Woodlands, Wetlands and Wildlife</i>
B.Baragar, Lot Development (1999) Municipality of Grey Highlands	<i>Delineation of residential expansion lands: Impact concerns with Wetlands, Fisheries and Lake Shoreline</i>
H.Tengler, Lot Severance (1999) Municipality of Grey Highlands	<i>Establishment of a new lot for single residential dwelling: Impact concerns with Woodlands, Wetlands, Fisheries and Wildlife</i>
Intrawest Corporation Development (1999) Town of the Blue Mountains	<i>Stream survey and impact assessment for Stormwater design: Impact concerns with Fisheries</i>

Sobiski property, Shoreline Works (1999) Municipality of Meaford	<i>Impact assessment review of proposed shoreline works for OMNR work permit</i>
Presnail property, Shoreline Works (1999) Municipality of Meaford	<i>Impact assessment review of proposed shoreline works for OMNR work permit</i>
D. Carmicheal, Pond Clean out (1999) Municipality of Grey Highlands	<i>Impact assessment review of proposed in-line pond cleanout and rehabilitation works for OMNR work permit</i>
L.Irwin, Lot Development (1998) Municipality of Grey Highlands	<i>Delineation of residential expansion lands: Impact concerns with Wetlands, Fisheries and Woodlands</i>
Chesley Lake Cottagers Assoc. (1998) Town of South Bruce Peninsula	<i>Impact assessment review and design of proposed shoreline dredging and access to Lots for OMNR work permit</i>
D. Miller, Shoreline Works (1998) Town of South Bruce Peninsula	<i>Impact assessment review and design of proposed shoreline dredging and access to Lot for OMNR work permit</i>
J. Hood, Shoreline Works (1998) Town of South Bruce Peninsula	<i>Impact assessment review and design of proposed shoreline dredging and access to Lot for OMNR work permit</i>
M. Valent, Building Lot (1998) Municipality of Grey Highlands	<i>Delineation of residential building envelopes: Impact concerns with Wetlands, Fisheries, Threatened Species and Rare Flora</i>
D.McLay, Lot Development (1998) Municipality of Northern Bruce Peninsula	<i>Delineation of residential building envelopes: Impact concerns with Wetlands, Fisheries, Threatened Species and Rare Flora</i>
T. Overton, Pond Design (1998) Township of Chatsworth	<i>Impact assessment review and design of proposed by-pass pond and stream restoration for OMNR work permit</i>
E. Weber, Building Lot (1998) Township of Minto	<i>Delineation of residential building envelopes: Impact concerns with Wetlands, Woodlands and Rare Flora</i>
L. Smith, Commercial Lot Expan.(1998) Municipality of Brockton	<i>Delineation of building envelopes storage yard: Impact concerns with Wetlands, Fisheries, Threatened Species and Rare Flora</i>
Sauble River-County Line Bridge (1997) Township of Chatsworth	<i>Stream survey and impact assessment on possible stream realignment proposal: Impact concerns with Fisheries, Rare species and Stream Channel morphology</i>