# Attachment 1

## Qualifications of Field Personnel

# Robert Aitken, B. Sc. (Hons.)

Terrestrial Ecologist

### Education

Bachelor of Biology & Environmental Resources Sciences (Honours), Trent University 2008

Environmental Technologist Diploma, Fleming College, 2006

Natural Resources Law Enforcement Post Graduate Certificate, Fleming College, 2004

Ecosystem Management Technician Diploma, Fleming College, 2003

### Years of Experience

With AECOM: 1 Year
With other Firms/Agencies: 6 Years

### Professional Affiliations

Field Botanist of Ontario
Ontario Field Ornithologist

Mr. Aitken is an Terrestrial Ecologist with over six years of experience in the environmental field where he has participated in a variety of environmental studies in both terrestrial and aquatic ecosystems including environmental impact studies, environmental assessments, sub-watershed studies, natural heritage studies for renewable energy applications, and tree inventory and management plans. He has completed breeding bird surveys, species at risk surveys, habitat assessments, wildlife tracking, botanical inventories ecological land classifications, wetland delineations and evaluations, tree assessments, electrofishing surveys, aquatic invertebrate surveys, hydraulic stream flow monitoring, water quality monitoring, background research, report writing and GIS mapping.

***Project Experience***

**NextEra Energy Canada, Bluewater, Goshen and Jericho Wind Energy Centres, Grand Bend Ontario.** Assisted with several aspects of the natural assessments for the Bluewater, Goshen and Jericho Wind Energy Centres. Tasks completed as part of these studies included breeding bird surveys, winter raptor surveys, waterfowl surveys species at risk surveys, botanical inventories, classification of vegetation communities using the Ecological Land Classification for Southern Ontario and the evaluation of wetland communities using the Ontario Wetland Evaluation System.

**Highway 11 Nest Survey & Vegetation Inventory. Orillia, Ontario.** Completed surveys for nests and of existing vegetation community's adjacent 2 bridges along the Highway 11 Corridor north of Orillia Ontario as part of Ministry of Transpiration monitoring requirements. Task completed as part of this study included nest surveys and detailed botanical inventories and mapping of representative vegetation communities within the study area.

**Highway 403 Nest Survey & Vegetation Inventory. Hamilton, Ontario.** Completed surveys for nests and of existing vegetation community's adjacent 6 bridges along the 403 in Hamilton Ontario as part of Ministry of Transpiration monitoring requirements. Task completed as part of this study included nest surveys and detailed botanical inventories and mapping of representative vegetation communities within the study area.

**Mill Creek ELC & Breeding Bird Survey, Aberfoyle, Ontario.** Completed a survey of the existing conditions of natural features within the study area for a proposed pit expansion. Tasks completed as part of this study included the completion of detailed botanical inventories and mapping of representative vegetation communities within the study area and breeding bird surveys utilizing the Canadian Wildlife Service Forest Bird Monitoring Protocol.

**GO Transit East Rail Maintenance Facility Nest Surveys, Whitby Ontario.** Completed a survey of all natural features within the study area documenting any active/inactive bird nests and other incidental bird/wildlife observations prior to vegetation removal.
**Peterborough Parkway, Peterborough, Ontario.** Completed a preliminary inventory and assessment of the vegetation communities located within the proposed transit corridor as part of an Environmental

Assessment to identify the most suitable location for the proposed highway. Tasks completed as part of this study included detailed botanical inventories and mapping of representative vegetation communities within the study area and incidental bird and wildlife observations.

**Borden Lake Environmental Baseline Survey, Chapleau, Ontario.** Completed a baseline survey and report documenting the existing conditions of the terrestrial features within the study area. Tasks completed as part of this study included the completion of detailed botanical inventories and mapping of representative vegetation communities within the study area, breeding bird surveys utilizing the Canadian Wildlife Service Forest Bird Monitoring Protocol, wildlife tracking surveys and the evaluation of wetland habitat using the Ontario Wetland Evaluation System.

**Bracebridge Transit Corridor, Bracebridge, Ontario.** Completed a preliminary inventory and assessment of the vegetation communities located within the proposed transit corridor as part of an Environmental Assessment to identify the most suitable location for the proposed highway. Tasks completed as part of this study included detailed botanical inventories and mapping of representative vegetation communities within the study area and incidental bird and wildlife observations.

**Townline Road Wetland Monitoring, Cambridge, Ontario.** Established as wetland monitoring project to evaluate the impacts of adjacent dewatering from ongoing infrastructure improvement program. Tasks completed as part of this study included a detailed inventory of the flora and fauna located within the study area and the weekly monitoring of the biological and structural health of 10 trees located adjacent the construction site to evaluate the impacts of the dewatering program.

***Other Experience***

*Ecologist – Aboud & Associates (2010 – 2012)*
Involved with a variety of environmental projects including Environmental Impact Studies, Environmental Assessments, Sub-watershed Studies, Natural Heritage Studies for Renewable Energy Applications and Tree Inventory and Management Plans. Tasks completed for these projects include species at risk surveys, botanical inventories, breeding bird surveys, ecological land classification, wetland delineation, tree assessments, habitat assessments, background research, report writing and GIS mapping.

*Environmental Scientist - Conestoga Rovers & Associates (2008 – 2010)*
Completed various aspects of environmental projects including surface and ground water level monitoring and sampling, the collection of benthic invertebrates as an indicators of water quality, delineating wetlands, assisting with the preparation of Certificates of Approval, collecting sediment samples and assisting with data entry and interpretation and the writing of technical reports and proposals.

*Conservation Intern - Nature Conservancy of Canada (2007)*
Assisted with conservation projects by performing botanical inventories and classifying communities using the Ecological Land Classification System. Other tasks included attending public open houses and festivals, working and interacting with other conservation groups, completing restoration and monitoring projects and writing monitoring and management reports.

*Field Technician - Watershed Science Center (2006)*
Participated in a long term study monitoring the effects of hydroelectric

dams on rivers by monitoring river velocities, levels and temperature, and collecting and analyzing suspended sediment samples. Other tasks included the training of other field staff, planning and implementation of field work, and liaising with other government organizations.

*Environmental Greening Co-op Student – York Region (2005)*
Assisted with the implementation of the York Regional Greening Strategy by attending meetings and public events, interacting with other conservation agencies, creating maps of conservation lands using Arcview GIS and assisting with forest rehabilitation projects and invasive species removal.

*Environmental Technician - Conservation Halton (2004)*
Assisted with several aspects of the ecology program. Major tasks included assisting with the writing and editing of the North Shore Watershed Study Report, collecting and identifying fish and benthic invertebrates, conducting hydraulic surveys, monitoring aquatic restoration projects and assisting with the classification of ecological communities.

*Environmental Technician - St. Clair Conservation Authority (2003)*
Responsible for the yearly maintenance of flood control structures. Other tasks included recording water levels, collecting and identifying aquatic invertebrates and surveying sites with eroding stream banks.

*Resource Management Technician - Pinery Provincial Park (2001)*
Implemented the resource management program for the park for the summer. Major tasks included management of the lupine reintroduction project, dune planting projects, preparation for the prescribed burn program, assisting with guided hikes, and invasive species removal.

**Publications**

Miller, Brian M., Robert J. Aitken, Michael J. Oldham, and Anton A. Reznicek. 2011. Slender False Brome (*Brachypodium sylvaticum*, Poaceae), an invasive grass new to Ontario, Canada. Canadian Field-Naturalist 125(3): 235–240.

**Professional Development**

Animal Tracking Workshop
University of Guelph Arboretum, 2013
Owl Identification Workshop
University of Guelph Arboretum, 2013
Natural Heritage information Centre Data Sensitivity Training, Ontario Ministry of Natural Resources, 2011
Ontario Stream Assessment Protocol Certificate, Ontario Ministry of Natural Resources, 2011
Class 2 Backpack Electrofishing Certificate, Toronto and Region Conservation Authority, 2011
Ministry of Transportation Environmental Guide for Fish and Fish Habitat Workshop, 2011
Asters and Goldenrods Workshop, Royal Botanical Gardens, 2011
Ecological Land Classification for Southern Ontario Certificate, Ontario Ministry of Natural Resources, 2010
Ontario Wetland Evaluation System Certificate, Ontario Ministry of Natural Resources, 2009
Ontario Stream Assessment Protocol Level 1 Fish Identification, Toronto and Region Conservation Authority, 2009

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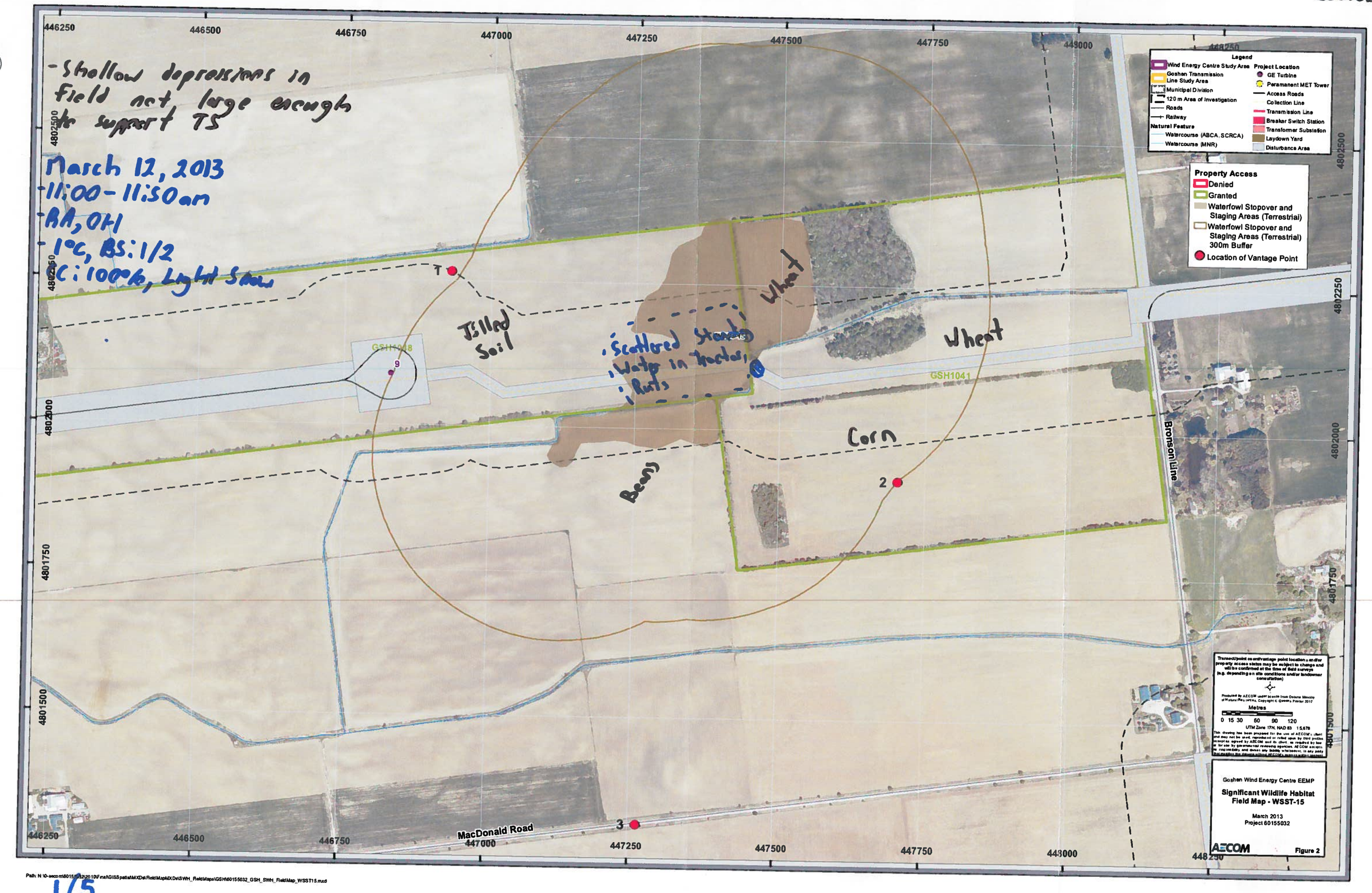
# Attachment 2

## Field Notes

ROUND # 1




Path: N:\0-aecom\60155032\2010\Final\GIS\Spatial\MXDs\FieldMaps\MXDs\SWH_FieldMaps\GSH\60155032_GSH_SWH_FieldMap_WSST15.mxd

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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** Rob Aitken, Olga Hrygiak |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM**<br>Easting: 446503 Northing: 4822421 | Date: March 12, 2013<br>Start Time: 11:00 End Time: 11:15 |
| **Weather Conditions**<br>Temperature (C°): 1° Wind (Dir.): S Wind (B.S.): 1-2<br>Cloud Cover (%): 100 Percipitation: snowing | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | No Tundra Swans observed |
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| Gulls | | | | 2 | flyover |
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**Description of Local Site Conditions and Adjacent Land Use**

little flooding in field (10x10m)

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 22-27 | Photos of habitat and surrounding land use |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Sp: Horned Lark, Blue Jay



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** KM, DM |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 2

| | |
|---|---|
| **Vantage Point UTM**<br>**Easting:** 447610 **Northing:** 4502064 | **Date:** March 12, 2013<br>**Start Time:** 11:35 **End Time:** 11:50 |
| **Weather Conditions**<br>**Temperature (C°):** 1° **Wind (Dir.):** S **Wind (B.S.):** 2-3<br>**Cloud Cover (%):** 100 **Percipitation:** Snowing lightly | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | — No Tundra Swans observed |
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**Description of Local Site Conditions and Adjacent Land Use**

- ploughed wheat field
- no flooding observed.

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 219-224 | |
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Homed Lake



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Species: Horned Lark



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March 19, 2013
AA, OH
10:43-11:30am
1°C, 60%CC, BS:3
No TS/Flooding

Path: N:\ca-aecom\60155032\2010\Final\GIS\Patti\MXD\Field Maps\SWH_FieldMaps\GSH\60155032_GSH_SWH_FieldMap_WSST15.mxd

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Round #2

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** KD, DH |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM** See Round #1<br>**Easting:** **Northing:** | **Date:** March 14, 2013<br>**Start Time:** 10:43 **End Time:** 10:58 |
| **Weather Conditions**<br>**Temperature (C°):** -2 - -1°C **Wind (Dir.):** N **Wind (B.S.):** 3<br>**Cloud Cover (%):** 60 **Percipitation:** n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes. |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N. |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | N. |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N. |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | — No Tundra Swans observed. |
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**Description of Local Site Conditions and Adjacent Land Use**

- Flooded areas delineated during Round #1 are frozen over

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 100 0047-0055 | |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other sp: Horned Lark



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Round #2

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** RA, OH |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:**

| | |
|---|---|
| **Vantage Point UTM** See Round #1<br>**Easting:** **Northing:** | **Date:** March 14, 2013<br>**Start Time:** 11:15 **End Time:** 11:30 |
| **Weather Conditions**<br>**Temperature (C°):** -2 **Wind (Dir.):** N **Wind (B.S.):** 3<br>**Cloud Cover (%):** 45 **Percipitation:** n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | No |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | No |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | No Tundra Swans observed |
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**Description of Local Site Conditions and Adjacent Land Use**

— snow on ground, no flooding

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 100 0056 – 0059 | |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other sp: Horned Lark



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03/19/2013 RA, TS
10:30 - 11:35
-2°C 100% cc BS3 snowing
- NO TS observed

Path: N:\0-aecom\60155032\2010\Final\GIS\ArcMXDs\FieldMapMXDs\SWH_FieldMaps\GSH\60155032_GSH_SWH_FieldMap_WSST15.mxd

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA, TS |
| **Site Location/ Feature ID:** LSST-1S | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM** See Round #1 Notes<br>Easting: Northing: | Date: March 19, 2013<br>Start Time: 10:33 End Time: 10:48 |
| **Weather Conditions**<br>Temperature (C°): -2 Wind (Dir.): SW Wind (B.S.): 3<br>Cloud Cover (%): 100% Percipitation: None | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| – | – | – | – | – | No Tundra Swan Observed |
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**Description of Local Site Conditions and Adjacent Land Use**

Agricultural land with no flooding obseserved

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 87-91 | Surrounding Land Use |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Species: Horned Lark



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA, TS |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 2

| | |
|---|---|
| **Vantage Point UTM** See Round #1 Notes<br>Easting: Northing: | Date: March 19, 2013<br>Start Time: 11:21am End Time: 11:36am |
| **Weather Conditions**<br>Temperature (C°): -2°C Wind (Dir.): SW Wind (B.S.): 3<br>Cloud Cover (%): 100% Percipitation: Snow | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| – | – | – | – | – | No Tundra Swan Observed |
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**Description of Local Site Conditions and Adjacent Land Use**

Agricultural Land with no Flooding

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 95-97 | Surrounding Land Use |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

No other species observed.

Four Tundra Swan observed in wheat field north of Pepper Road between Blackbush Line and Branson Road (See study area map).



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ROUND #4

Oct 21, 2013 10:40 - 11:35 am
RA, TS
- 100% CC, -5°C, BS: 2/3, Snowing
- No Tundra Swan / Flooding observed

Path: N:\0-aecom\60155032\2010\Final\GIS\psts\MXDs\FieldMap\MXDs\SWH_FieldMaps\GSH\60155032_GSH_SWH_FieldMap_WSST15.mxd

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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA-TS |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM** see Round #1 Notes<br>Easting: Northing: | Date: march 21, 2013<br>Start Time: 10:40 am End Time: 10:55am |
| **Weather Conditions**<br>Temperature (C°): -5°C Wind (Dir.): E Wind (B.S.): 3<br>Cloud Cover (%): 100% Percipitation: Snowing | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | No Waterfowl observed |
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**Description of Local Site Conditions and Adjacent Land Use**

- Agricultural land
- No flooding observed

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 203-208 | Surrounding Agricultural land |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

- No species observed
- No Tundra Swans



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA, TS |
| **Site Location/ Feature ID:** WSST- 15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 2

| | |
|---|---|
| **Vantage Point UTM** see Round #1 Notes<br>**Easting:** **Northing:** | **Date:** March 21, 2013<br>**Start Time:** 11:20 am **End Time:** 11:35 |
| **Weather Conditions**<br>**Temperature (C°):** -5°C **Wind (Dir.):** E **Wind (B.S.):** 3<br>**Cloud Cover (%):** 100% **Percipitation:** Snowing | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | No waterfowl observed |
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**Description of Local Site Conditions and Adjacent Land Use**

- Agricultural land
- No flooding observed

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 209-217 | surrounding agricultural land |
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AECOM

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Species: Red-tailed Hawk, Blue Jay, Am. crow, Snow Bunting, horned Lark

- No Tundra Swans observed



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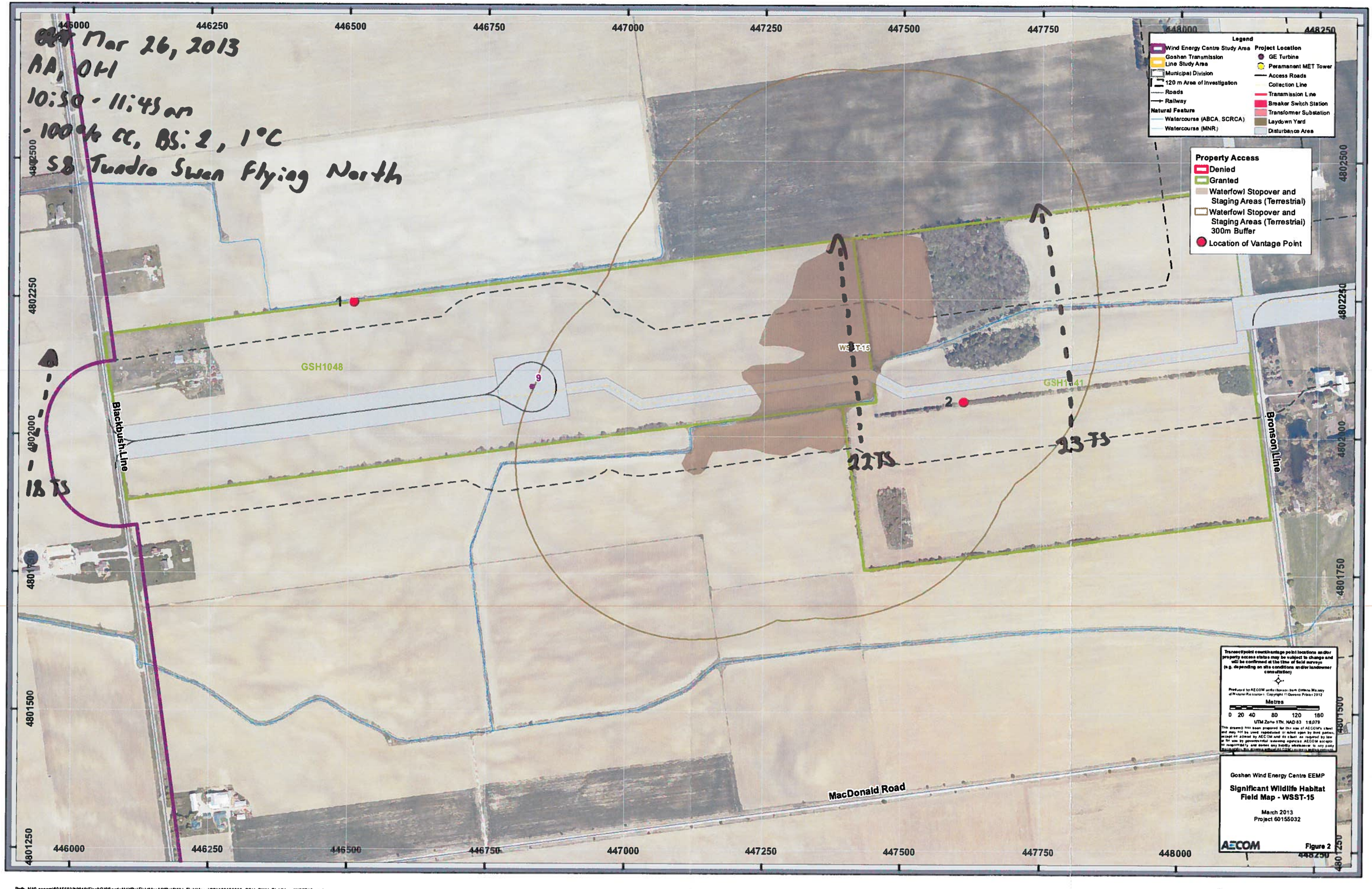
Round #5




Path: N:\0-aecom\60155032\2010\Final\GIS\pafaMXDs\FieldMapMXDs\SWH_FieldMaps\GSH\60155032_GSH_SWH_FieldMap_WSST15.mxd

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA, OKI |
| **Site Location/ Feature ID:** WSST-1S | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM** See Round 1 Notes<br>**Easting:** **Northing:** | **Date:** March 26, 2013<br>**Start Time:** 10:50am **End Time:** 11:05am |
| **Weather Conditions**<br>**Temperature (C°):** 1°C **Wind (Dir.):** NE **Wind (B.S.):** 2<br>**Cloud Cover (%):** 100% **Percipitation:** None | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Tundra Swan | ~400-500m | W | Mot | 18 | Flying North |
| | ~1 km | E | Mot | 22 | ↓ |
| | ~1.3 km | E | Mot | 23 | ↓ |
| | | | | | |
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**Description of Local Site Conditions and Adjacent Land Use**

Agricultural land with no Flooding

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 98-103 | Surrounding Land Use |
| | |
| | |
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| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Species: Gull sp. American Crow



AECOM

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA, OH |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 2

| | |
|---|---|
| **Vantage Point UTM** See Round #1<br>**Easting:** **Northing:** | **Date:** March 26, 2013<br>**Start Time:** 11:30am **End Time:** 11:45am |
| **Weather Conditions**<br>**Temperature (C°):** 1°C **Wind (Dir.):** NE **Wind (B.S.):** 2<br>**Cloud Cover (%):** 100% **Percipitation:** None | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Canada Goose | 100m | E | Mot | 12 | Flying south west |
| | | | | | |
| – | – | – | – | – | No Tundra Swan observed |
| | | | | | |
| | | | | | |
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**Description of Local Site Conditions and Adjacent Land Use**

Agricultural land with no flooding

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 104-107 | Surrounding Land Use |
| | |
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| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Species: Gull sp.



AECOM

ROUND #6

March 28, 2013
RA + TS
10:15 - 11:05 am
100% cc 3°c NW BS:2
Observed Tundra Swans Flying over
Near site

11 TS

41 TS

15 TS

12 TS

Legend

Wind Energy Centre Study Area
Goshen Transmission Line Study Area
Municipal Division
120 m Area of Investigation
Roads
Railway
Natural Feature
Watercourse (ABCA, SCRCA)
Watercourse (MNR)
Project Location
GE Turbine
Peramanent MET Tower
Access Roads
Collection Line
Transmission Line
Breaker Switch Station
Transformer Substation
Laydown Yard
Disturbance Area

Property Access
Denied
Granted
Waterfowl Stopover and Staging Areas (Terrestrial)
Waterfowl Stopover and Staging Areas (Terrestrial) 300m Buffer
Location of Vantage Point

GSH1048
WSST-15
GSH1041
Blackbush Line
Bronson Line
MacDonald Road

Transect/point count/vantage point locations and/or property access status may be subject to change and will be confirmed at the time of field surveys (e.g. depending on site conditions and/or landowner consultation)

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Goshen Wind Energy Centre EEMP

**Significant Wildlife Habitat Field Map - WSST-15**

March 2013
Project 60155032

AECOM

Figure 2

Path: N:\0-aecom\60155032\2010\Final\GIS\partial\MXDs\FieldMap\MXDs\SWH_FieldMaps\GSH\60155032_GSH_SWH_FieldMap_WSST15.mxd

1/5

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA, TS |
| **Site Location/ Feature ID:** WSST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 2

| | |
|---|---|
| **Vantage Point UTM** See Round 1 Notes<br>Easting: Northing: | Date: March 28, 2013<br>Start Time: 10:50 am End Time: 11:05 am |
| **Weather Conditions**<br>Temperature (C°): 3 Wind (Dir.): NW Wind (B.S.): 2<br>Cloud Cover (%): 100 Percipitation: None | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Tundra Swan | 20m | N | Mat. | 12 | Flying North West over site |
| | | | | | |
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**Description of Local Site Conditions and Adjacent Land Use**

Agricultural land with no flooding

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 216-219 | Surrounding land use |
| | |
| | |
| | |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Species: Horned Lark, American Crow, American Robin



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** Goshen | **Observers:** RA, TS |
| **Site Location/ Feature ID:** USST-15 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM** See Round 1 Notes<br>**Easting:** **Northing:** | **Date:** March 28, 2013<br>**Start Time:** 10:15am **End Time:** 10:30am |
| **Weather Conditions**<br>**Temperature (C°):** 2 **Wind (Dir.):** NW **Wind (B.S.):** 2<br>**Cloud Cover (%):** 100 **Percipitation:** None | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | N/A |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | N/A |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | N/A |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Tundra Swan | 150m | N | Mat. | 11 | Flying North East over site |
| | | | | | |
| Tundra Swan | 200m | W | Mat | 41 | Flying North East Over Site |
| | | | | | |
| Canada Goose | 200m | S | Mat. | 23 | Flying North East Over Site |
| | | | | | |
| Tundra Swan | 200m | W | Mat. | 15 | Flying North East Over Site |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**Description of Local Site Conditions and Adjacent Land Use**

Agricultural Land with no flooding observed

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 208-213 | Surrounding land use + geese |
| | |
| | |
| | |
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| | |
| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Species: Mourning Dove, American Crow, Turkey Vulture



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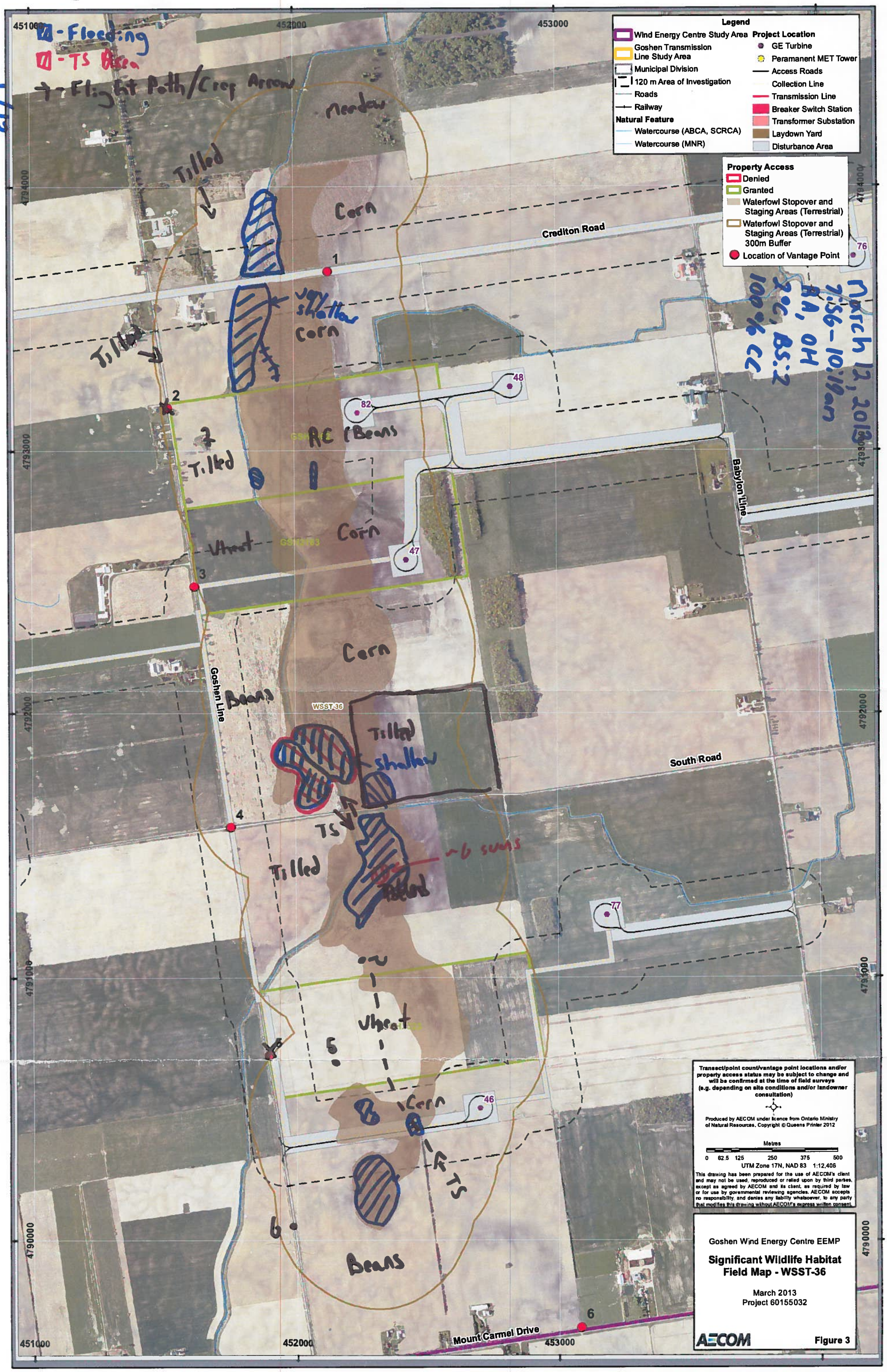
Legend
Wind Energy Centre Study Area
Goshen Transmission Line Study Area
Municipal Division
120 m Area of Investigation
Roads
Railway
Natural Feature
Watercourse (ABCA, SCRCA)
Watercourse (MNR)
Project Location
GE Turbine
Peramanent MET Tower
Access Roads
Collection Line
Transmission Line
Breaker Switch Station
Transformer Substation
Laydown Yard
Disturbance Area
Property Access
Denied
Granted
Waterfowl Stopover and Staging Areas (Terrestrial)
Waterfowl Stopover and Staging Areas (Terrestrial) 300m Buffer
Location of Vantage Point
Crediton Road
Babylon Line
Goshen Line
South Road
Mount Carmel Drive
WSST-36
Transect/point count/vantage point locations and/or property access status may be subject to change and will be confirmed at the time of field surveys (e.g. depending on site conditions and/or landowner consultation)
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Goshen Wind Energy Centre EEMP
Significant Wildlife Habitat Field Map - WSST-36
March 2013
Project 60155032
AECOM
Figure 3

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** Rob Aitken, Olga Hropach |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM**<br>Easting: 451929 Northing: 4793654 | Date: March 12. 2013<br>Start Time: 7:56 End Time: 8:11 |
| **Weather Conditions**<br>Temperature (C°): 2°C Wind (Dir.): S Wind (B.S.): 2<br>Cloud Cover (%): 100 Percipitation: n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| N/a | — | — | — | — | No Tundra Swans observed |
| | | | | | |
| | | | | | |
| | | | | | |
| Canadian Geese | | | Mat | 2 | observed foraging in flooded field north of Crediton Road. |
| | | | | | |
| | | | | | |
| Mallard Duck | | | Mat | 4 | observed foraging in flooded field north of Crediton Road |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**Description of Local Site Conditions and Adjacent Land Use**

- ploughed corn north and south of Crediton Road
- tilled land on west side of creek

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 167 - 169 | North side of Crediton |
| 170 - 172 | South side of Crediton |
| | |
| | |
| | |
| | |
| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Sp: Horned Lark, American Robin, Red-winged Blackbird, American Crow, Mourning Dove, Killdeer, European Starling



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** Rob Aitken, Olga Hoogach |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 2

| | |
|---|---|
| **Vantage Point UTM**<br>Easting: 451664 Northing: 4793043 | Date: March 12, 2013<br>Start Time: 8:26 End Time: 8:41 |
| **Weather Conditions**<br>Temperature (C°): 3 Wind (Dir.): 9 Wind (B.S.): 1<br>Cloud Cover (%): 100 Percipitation: n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Canadian Geese | | | | 4 | fly over |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**Description of Local Site Conditions and Adjacent Land Use**

- Tilled land
- Low to hardly any flooding visible in field except for a thin linear flooded area North East of vantage point (delineated on map)

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 173-179 | East of Goshen line, on property. |
| | |
| | |
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| | |
| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

other Sp: European Starling, Morning Dove, American Crows
Red Winged Blackbirds, Gulls, American Robin

* Vantage point location on property is on top of bank, therefore visibility of fields east and below top of bank are hard to see *



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** Rob Aitken, Olga Hropach |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 3

| | |
|---|---|
| **Vantage Point UTM**<br>Easting: 451619 Northing: 4792497 | Date: March 12, 2013<br>Start Time: 8:50 End Time: 9:05 |
| **Weather Conditions**<br>Temperature (C°): 8°C Wind (Dir.): S Wind (B.S.): 2-3<br>Cloud Cover (%): 100 Percipitation: n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | No |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour calling |
|---|---|---|---|---|---|
| Tundra Swan | | S | Mat | 3 | heard, farther south of VP3, observed landing in flooded areas closer to VP4 and/or VP5 |
| | | | | | |
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**Description of Local Site Conditions and Adjacent Land Use**

- Winter wheat on north side of Goshen Line

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 180-183 | East side of Goshen Line, roadside |
| | |
| | |
| | |
| | |
| | |
| | |

* Vantage point at roadside on top of rolling hills, limited visibility of fields further down East; however, could see fields from VP 1 and VP2. *



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

AMRO, EUST, KICK, NOCa, AMCR,



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** Rob Ritkin, Olga Kropanin |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 4

| | |
|---|---|
| **Vantage Point UTM**<br>Easting: 451771 Northing: 4791571 | Date: March 12, 2013<br>Start Time: 9:06 End Time: 9:21 |
| **Weather Conditions**<br>Temperature (C°): 1 Wind (Dir.): S Wind (B.S.): 1-2<br>Cloud Cover (%): 100 Percipitation: n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Tundra Swans | | | | ≈13 | observed foraging in flooded field (North of South Road) |
| Tundra Swans | | | | ≈5 | observed foraging in flooded field South of South Road |
| Mallard Ducks | | | | ≈10 | foraging in flooded area (North of South Road |
| Mallard Ducks | | | | ≈16 | foraging in flooded area south of South Road. |
| Northern Pintail | | | | ≈20 | foraging in flooded area (North of South Road |
| | | | | | |
| Canada Geese | | | | ≈80 | foraging in flooded area (North of South Road) |
| | | | | | |
| Gulls | | | | >50 | flying over and foraging S. of South Ro |
| | | | | | |
| | | | | | |

**Description of Local Site Conditions and Adjacent Land Use**

Plowed corn field, flooded area

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 185-188 | North of South Rd, flooded area |
| 189-191 | South of South Rd, flooded area |
| 206-209 | Tundra Swans close-up |
| | |
| | |
| | |
| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

other sp: RODO, RWBB



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** Rob Atton, Olga Hnaporta |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 5

| | |
|---|---|
| **Vantage Point UTM**<br>Easting: 452107 Northing: 4790608 | Date: March 12, 2013<br>Start Time: 9:45 End Time: 10:00 |
| **Weather Conditions**<br>Temperature (C°): 2 Wind (Dir.): S Wind (B.S.): 2<br>Cloud Cover (%): 100 Percipitation: light snow | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Gulls | | | | 2-3 | fly over |
| | | | | | |
| Ducks | | | | 7-8 | in southernmost flooded area in cornfield. |
| | | | | | |
| — | — | — | — | — | No Tundra Swans observed |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |

**Description of Local Site Conditions and Adjacent Land Use**

- Winter wheat
- flooded areas in corn field south of wheat field

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 195-202 | Photos of surrounding land use and habitat |
| | |
| | |
| | |
| | |
| | |
| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

other sp: horned lark, Red Winged Blackbird



AECOM

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** Rob Aitken, Olga Huyck |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 6

| | |
|---|---|
| **Vantage Point UTM**<br>Easting: 451983 Northing: 4790097 | Date: March 12, 2013<br>Start Time: 10:04 End Time: 10:19 |
| **Weather Conditions**<br>Temperature (C°): >1°C Wind (Dir.): S Wind (B.S.): 1-2<br>Cloud Cover (%): 100 Percipitation: light snow | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | Yes |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Tundra Swans | | N | Mat | ≈26 | flyover → heading north to possibly flooded area off VP 4 |
| | | | | | |
| Mallard ducks + | | | | ≈40 | foraging in flooded area |
| American widgeon | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |

**Description of Local Site Conditions and Adjacent Land Use**

- ploughed beans
- flooded area (delineated at VP 5)

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 204-205 | East of Goshen line |
| | |
| | |
| | |
| | |
| | |
| | |



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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

other Sp: Horned Lark, American Crow, Red Winged Blackbird



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March 19, 2013
RA, OH
8:20-10:03 am
-2°C, 60% CC
BS-3

1/13

**Legend**

- Wind Energy Centre Study Area
- Goshen Transmission Line Study Area
- Municipal Division
- 120 m Area of Investigation
- Roads
- Railway

**Natural Feature**

- Watercourse (ABCA, SCRCA)
- Watercourse (MNR)

**Project Location**

- GE Turbine
- Peramanent MET Tower
- Access Roads
- Collection Line
- Transmission Line
- Breaker Switch Station
- Transformer Substation
- Laydown Yard
- Disturbance Area

**Property Access**

- Denied
- Granted
- Waterfowl Stopover and Staging Areas (Terrestrial)
- Waterfowl Stopover and Staging Areas (Terrestrial) 300m Buffer
- Location of Vantage Point

Transect/point count/vantage point locations and/or property access status may be subject to change and will be confirmed at the time of field surveys (e.g. depending on site conditions and/or landowner consultation)

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Goshen Wind Energy Centre EEMP

**Significant Wildlife Habitat Field Map - WSST-36**

March 2013
Project 60155032

AECOM

Figure 3

Round 4

Round #2

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** RA, OH |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 1

| | |
|---|---|
| **Vantage Point UTM** See Round #1<br>Easting: Northing: | Date: March 19, 2013<br>Start Time: 10:05 End Time: 10:20 |
| **Weather Conditions**<br>Temperature (C°): -2 Wind (Dir.): N Wind (B.S.): 3<br>Cloud Cover (%): 60 Percipitation: n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | No |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | No |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | No Tundra Swan observed. |
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**Description of Local Site Conditions and Adjacent Land Use**

- See Round #1 notes, ground flooded over, water levels decreased

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 100 -0040 - 044 | |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other Sp: Hoared Larks (2), RUBB



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Pound #2

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** KA, OH |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 2

| | |
|---|---|
| **Vantage Point UTM** See Pound #1<br>**Easting:** **Northing:** | **Date:** March 14, 2013<br>**Start Time:** 9:47 **End Time:** 10:02 |
| **Weather Conditions**<br>**Temperature (C°):** -2 **Wind (Dir.):** N **Wind (B.S.):** 3<br>**Cloud Cover (%):** 75 **Percipitation:** n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | No |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | No |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | No Tundra Swans observed |
| | | | | | |
| Mallards | | | | 2 | flew into drainage ditch |
| | | | | | |
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**Description of Local Site Conditions and Adjacent Land Use**

- frozen ground,

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 100 — 0031-0039 | |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other sp: horned lark, Red-winged Blackbird, American Crow



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Round #2

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** RA, OM |
| **Site Location/ Feature ID:** USST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 3

| | |
|---|---|
| **Vantage Point UTM** see Round #1<br>**Easting:** **Northing:** | **Date:** March 14, 2013<br>**Start Time:** 9:27 **End Time:** 9:42 |

**Weather Conditions**

**Temperature (C°):** -2 **Wind (Dir.):** N **Wind (B.S.):** 5

**Cloud Cover (%):** 75 **Percipitation:** n/a

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | No |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | No |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| — | — | — | — | — | — No Tundra Swans observed |
| | | | | | |
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**Description of Local Site Conditions and Adjacent Land Use**

— No flooding

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 100 0020-0030 | |
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# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

**Additional Notes**

Other sp: Horned Lark.



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Round # 2

# Waterfowl (Tundra Swan) Stopover and Staging Area Survey Form

| | |
|---|---|
| **Study Area:** GOSHEN | **Observers:** RA, OH |
| **Site Location/ Feature ID:** WSST-36 | |

*Fill in survey form for each vantage point.* **Vantage Point Number:** 4

| | |
|---|---|
| **Vantage Point UTM** See Round # 1<br>**Easting:** **Northing:** | **Date:** March 14, 2013<br>**Start Time:** 9:05 **End Time:** 9:20 |
| **Weather Conditions**<br>**Temperature (C°):** -2 **Wind (Dir.):** N **Wind (B.S.):** 3<br>**Cloud Cover (%):** 10 **Percipitation:** n/a | |

**Check off the following, if completed:**

| | |
|---|---|
| Flooded area clearly delineated on field map? (Yes/No) | Yes |
| Area occupied by Tundra Swans clearly delineated on field map? (Yes/No) | Yes |
| Flight path of Tundra Swans clearly delineated on field map? (Yes/No) | No |
| Local site conditions and adjacent land use within 300 m of habitat recorded on map? (Yes/No) | No |

**Waterfowl Observed**

| Species | Dist. | Dir. | Age | # | Behaviour |
|---|---|---|---|---|---|
| Tundra Swans | | | | >100 | Sleeping in flooded area S. of South Rd |
| | | | | | |
| | | | | | |
| | | | | | |
| Mallards | | N | M | 30-40 | Flyovers from watercourse/drain |
| | | | | | |
| Canada Geese | | | | 12 | in watercourse |
| | | | | | |
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**Description of Local Site Conditions and Adjacent Land Use**

flooded areas North and South of South Road, water levels decreased

>Majority of North flooded area significantly dried up, only shallow areas remain

| Photo ID | Decription (locations, direction, observation, etc.) |
|---|---|
| 100 - 0011 - 0019 | |
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