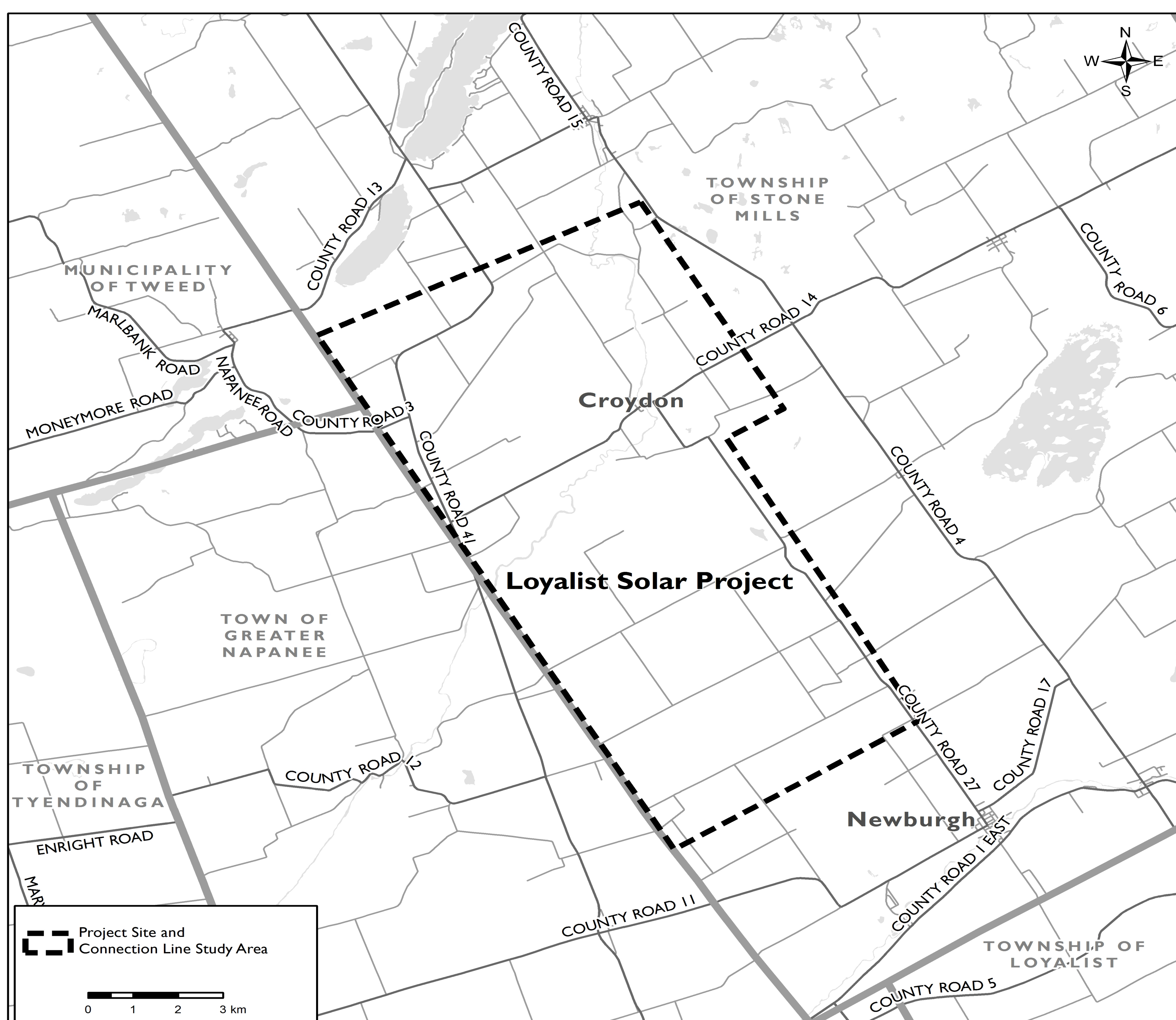


## Project Description

- Up to 54 megawatt (MW<sup>AC</sup>) solar project
- Located in the Township of Stone Mills, County of Lennox & Addington, Ontario
- The Project is being developed by Loyalist Solar LP, a partnership between BluEarth Renewables and the Mohawks of the Bay of Quinte
- The Project Site consists of solar panels, racking, electrical collection system, inverters, facilities and associated infrastructure.
- The Project Connection Line includes overhead and underground electrical circuits, transformer station, communication lines, and related electrical infrastructure required to connect the Site to the existing Hydro One Networks Inc. transmission system
- The Project is being developed in response to being awarded a contract under the Independent Electricity System Operator's Large Renewable Procurement initiative





## Community Benefits

- **Community Vibrancy Agreement.** Loyalist Solar LP has entered into an agreement with the Township of Stone Mills that prescribes development requirements and long-term contributions from the Project
- **Additional long-term tax revenue.** Over the course of the Project's lifespan, it will provide ongoing contributions to the Township's tax base without requiring municipal services such as water and wastewater services
- **Employment.** The jobs that are created during construction include: land surveying, notary services, tree/brush clearing, road construction, set-up of electrical and communication networks, excavation, concrete and aggregates supply and installation, foundations, assembly of solar facility, construction of the transformer station, and material transportation. The Project will also require permanent employees during operations
- **Boosting the local economy.** Construction supplies, components and contractors will be sourced locally to the extent reasonably possible, subject to meeting quality, quantity, availability, and workmanship requirements
- **Renewable energy.** Renewable energy provides clean, sustainable electricity and helps to support climate change policies





## Your questions answered!

### How could the proposed project impact property values?

There is no evidence that solar facilities decrease property values of surrounding properties. Generally speaking, when new infrastructure projects are proposed, potential buyers may be hesitant until the Project construction is complete. With proper visual screening and reasonable setbacks from homes, we believe that the Project will not have any long-term adverse impact for adjacent landowners.

### How are visual concerns addressed?

The ability to see the solar panels will be reduced due to setbacks from the roadways and by leaving existing vegetation where possible. In some cases additional vegetation can be planted. A Technical Review Committee made up of representatives from the Township of Stone Mills and Loyalist Solar LP will determine reasonable ways to reduce visual concerns by observing setbacks from roadways, leaving existing vegetation in place, and/or installing vegetation screenings.

### How are water resources being protected?

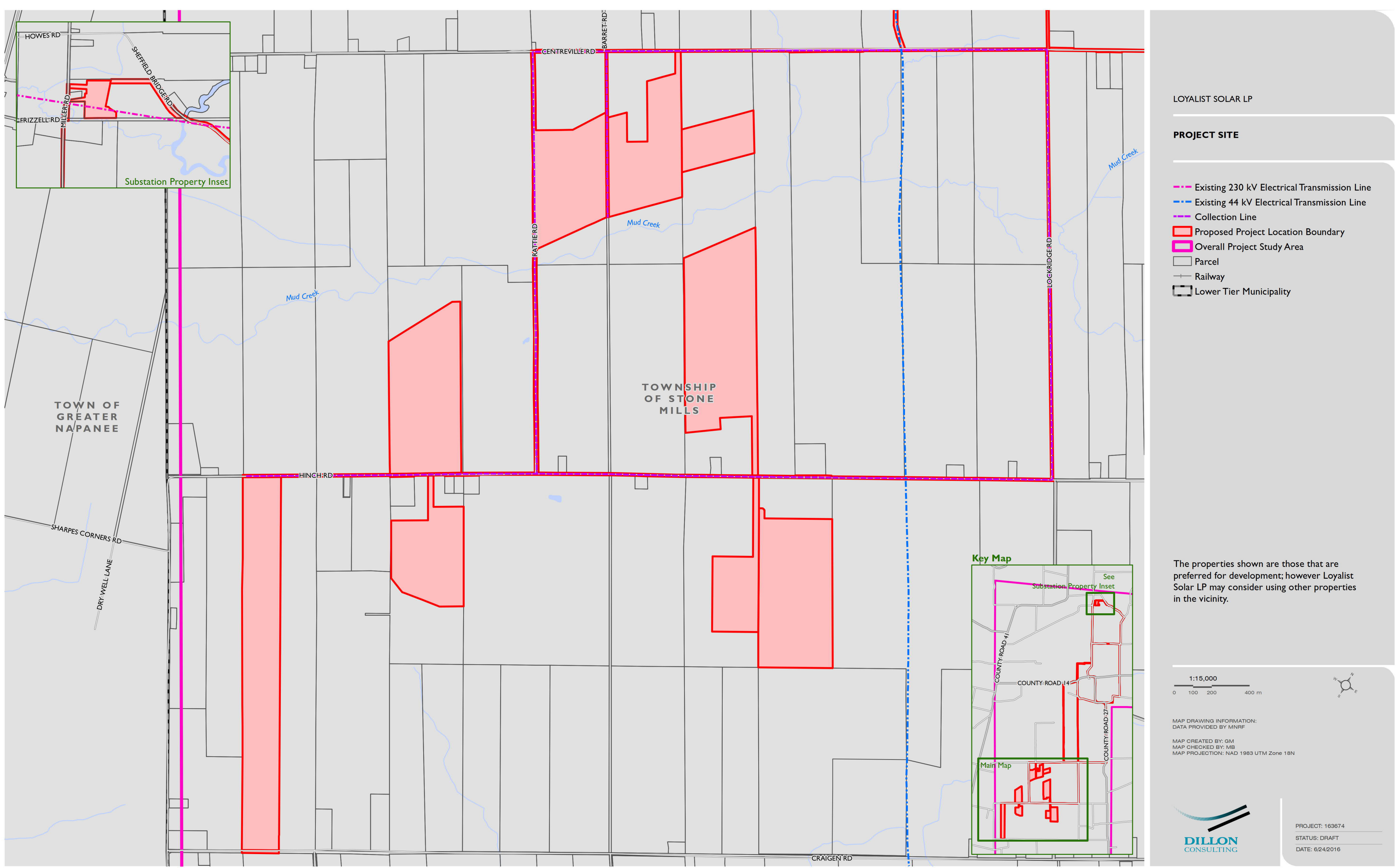
In accordance with Provincial and Township requirements, the Project will be completing a stormwater management and grading plan to ensure proper management of surface water flows during construction and operation. Additionally, the Project has agreed to complete a hydrogeological assessment in accordance with the Community Vibrancy Fund Agreement executed with the Township of Stone Mills. Pre and post-construction well water monitoring will also be undertaken by the Project. During operation, vegetation control is carried out using mechanical means, with herbicide application limited to localized spot-spraying. The rate of herbicide application for spot spraying is a fraction of that customarily used in conventional agricultural production.





## Project Site

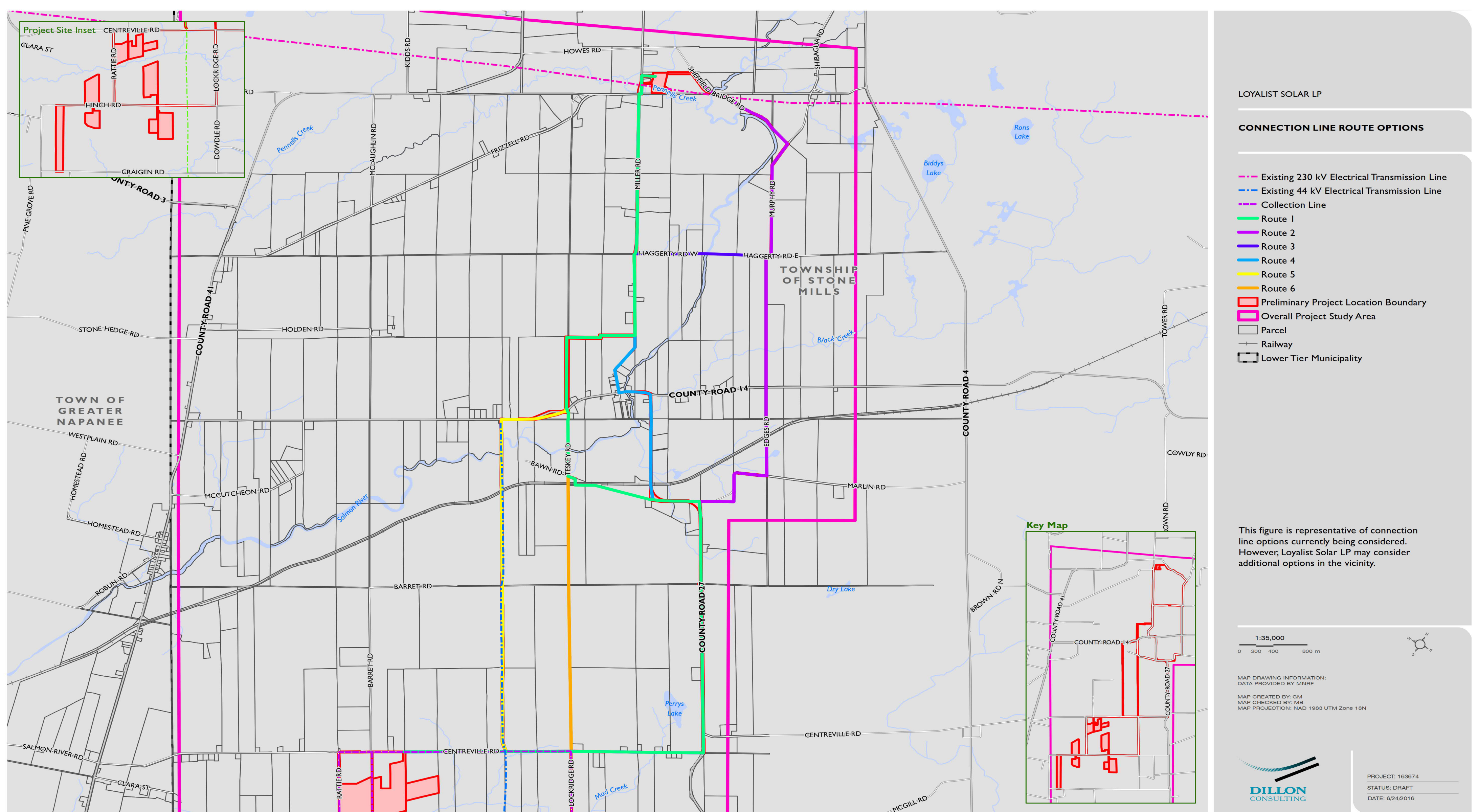
- Consists of the lands on which the generating facility is proposed to be located, and includes solar panel arrays, electrical collection system, inverters, operations and maintenance building, and ancillary equipment
- Lands have been identified that are anticipated to be sufficient for the Project, however, other lands within the Project Site Study Area may be added if needed
- Studies and stakeholder consultation will determine the final lands to be used within the Project Site Study Area
- Studies will include geotechnical and engineering assessments, archaeological and natural heritage assessments, sound studies, grading and drainage assessments, visual screening assessments, among others
- Consultation and engagement will include parties, such as the Township of Stone Mills, Lennox and Addington County, local residents, Aboriginal communities, Quinte Conservation, Ministry of Natural Resources and Forestry, Ministry of Environment and Climate Change, and other stakeholder groups





## Connection Line

- Consists of above and below ground electrical cabling used to connect the Project site to the existing 230kV transmission line near the intersection of Miller Rd and Frizzell Rd
- Potential routes have been identified, however, the final route will be determined through additional studies, consultation and engagement
- Studies will include geotechnical and engineering assessments, archaeological and natural heritage assessments, among others
- Consultation will include engagement with Township of Stone Mills, Lennox and Addington County, local residents, First Nations, Quinte Conservation, Hydro One Networks Inc., Ministry of Natural Resources and Forestry, Ministry of Environment and Climate Change, and other stakeholder groups
- Final route will be within the Connection Line Study Area shown, however, not necessarily one of the potential routes shown
- May be installed in road rights-of-way or on private lands or a combination of the two
- If on private lands, this will be done through agreements with the landowners involved





## Why here?

- Strong solar resource
- Compatible with land use requirements (e.g., not on lands designated as Prime Agricultural)
- Close to existing electrical transmission circuit with sufficient capacity for 54 MW<sup>AC</sup> of generation
- Landowners willing to host the Project
- Support through the Community Vibrancy Agreement with the Township of Stone Mills





## Why now?

- Project is being developed in response to the Independent Electricity System Operator's (IESO) Large Renewable Procurement (LRP) initiative
- Ministry of Energy directed IESO to implement the LRP to procure up to 565 MW of large renewable energy projects, 140 MW of which were awarded to solar projects
- Loyalist Solar LP was selected as a Qualified Applicant under the LRP I RFP because of considerable experience in developing and operating large renewable energy projects
- Loyalist Solar LP was awarded a contract based on bidding a highly competitive price for power, achieving a municipal resolution of support, an agreement with the Township of Stone Mills, having support of the Mohawks of the Bay of Quinte and many adjacent landowners. To meet the requirements set out in the contract, the Project is anticipated to be constructed and operating by late 2018.







With offices in Calgary, AB and Guelph ON Canada, BluEarth is a private company focused on commercial scale renewable energy development. As an independent renewable power producer, our goal is to sustainably build, own, and operate wind, run-of-river hydroelectric, and solar generation projects across North America. BluEarth currently has nearly 170 MW of wind, hydro and solar facilities in operation. BluEarth also owns and interest eight hydroelectric facilities in Ontario and one in the USA through H2O Power Limited Partnership.

BluEarth strives for timely and meaningful consultation with all stakeholders and First Nation communities. As one of the most experienced renewable energy teams in Canada, we fully appreciate the importance of communication with those that live near our projects. BluEarth is committed to consulting with and involving stakeholders in the decision-making process for our proposed and existing facilities. We believe that trust is the foundation for long-term successful relationships, and we know that trust is only earned over time by working together with honest and transparent communications.



BluEarth currently operates five solar facilities in Ontario.

For more information, visit [bluearth.ca](http://bluearth.ca).





# Loyalist Solar Project



For more information  
on BluEarth and the  
Loyalist Solar Project,  
visit:

[bluearth.ca/loyalist](http://bluearth.ca/loyalist)  
[projects@bluearth.ca](mailto:projects@bluearth.ca)  
1.844.214.2578



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## Community Vibrancy Agreement

- The Township of Stone Mills Council has passed a Council Resolution of Support and executed a Community Vibrancy Fund Agreement for the Loyalist Solar Project
- Through the Vibrancy Fund Agreement, the Township of Stone Mills has set out several requirements for how the Project will be developed, including:
  - ◇ Visual screening and setbacks
  - ◇ Stormwater management and grading design review
  - ◇ Hydrogeological study requirements
  - ◇ Establishment of a Technical Review Committee
  - ◇ Community Vibrancy Fund contributions to be used for community initiatives at the discretion of the Township, including:
    - Land stewardship
    - Recreation
    - Community & protective services
    - Roads & public infrastructure
    - Community improvement projects
  - ◇ Preference for qualified local labour and supplies
  - ◇ Financial security requirements for Project decommissioning
  - ◇ Reimbursement for reasonable Township expenses associated with review of Project permits



# Other Permits, Approvals and Agreements (board 1 of 3)

Other authorizations may be required for the project from the following:

Authority, Agency or Governing Body	Requirement	
Department of Fisheries and Oceans (DFO)	<ul style="list-style-type: none"><li>▪ Fisheries Act authorization for watercourse crossings (or Letter of Advice)</li></ul>	
Electrical Safety Authority (ESA)	<ul style="list-style-type: none"><li>▪ Connection Authorization</li><li>▪ Safety Inspection</li></ul>	
Hydro One Networks Inc. (HONI)	<ul style="list-style-type: none"><li>▪ Customer Impact Assessment</li><li>▪ Connection Cost Recovery Agreement</li></ul>	
Independent Electricity System Operator (IESO)	<ul style="list-style-type: none"><li>▪ Authorization as market participant</li><li>▪ Registration of facility and registration of metering service</li><li>▪ System Impact Assessment (SIA) &amp; Connection Assessment Approval (CAA)</li></ul>	<ul style="list-style-type: none"><li>▪ Notice to Proceed</li><li>▪ Security deposits, financing plan, metering plan, etc.</li></ul>



# Other Permits, Approvals and Agreements (board 2 of 3)

Other authorizations may be required for the project from the following:

Authority, Agency or Governing Body	Requirement
Landowners	<ul style="list-style-type: none"><li>▪ Lease Agreements</li></ul>
Ministry of Natural Resources and Forestry (MNR)	<ul style="list-style-type: none"><li>▪ Water Crossing Work</li><li>▪ Species at Risk Permit if listed species and/or habitats are impacted</li><li>▪ Confirmation Letter for the Natural Heritage Assessment</li></ul>
Ministry of Tourism, Culture and Sport (MTC)	<ul style="list-style-type: none"><li>▪ Comment Letter for the Stage 1 and 2 Archaeological Assessments and the Cultural Heritage Assessment.</li></ul>
Ministry of Transportation (MTO)	<ul style="list-style-type: none"><li>▪ Compliance with Road User Safety Policy and Corridor Management Permits</li><li>▪ Highway Entrance Permit(s) &amp; Transportation Permits</li></ul>



# Other Permits, Approvals and Agreements (board 3 of 3)

Other authorizations may be required for the project from the following:

Authority, Agency or Governing Body	Requirement	
Quinte Conservation	<ul style="list-style-type: none"><li>▪ Permit under Regulation 319/09 of the Conservation Authorities Act, if required.</li></ul>	
Ontario Energy Board (OEB)	<ul style="list-style-type: none"><li>▪ Generator License</li></ul>	
Township of Stone Mills and/or County of Lennox and Addington	<ul style="list-style-type: none"><li>▪ Building Permit(s)</li><li>▪ Transportation and public safety permits</li><li>▪ Road Use Agreement</li></ul>	<ul style="list-style-type: none"><li>▪ Authorization for construction of collector/ connection lines on public streets</li></ul>
Industry Canada	<ul style="list-style-type: none"><li>▪ Communication Frequency License</li></ul>	



## Site-Specific REA Studies

A number of studies are required and are currently ongoing. These include:

### Water Assessment

Identifies water bodies at or near the proposed project location through a background desktop review of relevant information, followed by site investigations

If water bodies are identified a Water Body Report is prepared that characterizes the existing conditions of the water bodies and identifies potential impacts and any mitigation measures required to minimize or avoid these effects

### Archaeological Assessments

Identify any areas of archaeological significance at or near the proposed project location

Assessment involves records reviews, field surveys and if necessary, specific excavations

Ensures areas of archaeological significance will not be adversely affected through implementation of the project

Completed by licensed archaeologist with First Nation participation

### Cultural Heritage Assessment

Identifies resources of cultural heritage value or significance such as historic buildings, structures, landscape features, or other property features

Should the assessment identify resources of value, mitigation measures will be developed and implemented to preserve and/or document the cultural heritage features



## Site-Specific REA Studies (cont.)

### Noise Assessment Report

- A Noise Assessment Report must be completed in accordance with regulations to demonstrate compliance with MOECC noise requirements
- Project noise sources such as inverters and transformers must be located so as to not create night time sound greater than 40 dBA at nearby residences

### Hydrogeological Studies\*

- Assessment involves the study of surface and sub-surface water to determine flow patterns
- Assessment utilizes data from piezometers, flow gauges, rain gauges and topographical studies, among others
- This informs the site grading and drainage plan to ensure water flows from site do not cause adverse effects to adjacent properties and wildlife habitats

### Groundwater Monitoring\*

- Well water monitoring will take place at residences adjacent to the project to confirm that the project construction has not affected local wells
- Pre- and post-construction well water samples will be analyzed at a third-party laboratory to check for any out-of-compliance results

\*These studies are typically done after the REA application submission



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## NHA Process

A Natural Heritage Assessment (NHA) will be completed for natural features that are located within the project location or within 50 m. Natural features are defined as woodlands, wetlands, wildlife habitat and areas of natural and scientific interest. The NHA is comprised of four distinct reports:

**1. Records Review (RR)** – a review of background information sources to document what is known about natural features and wildlife habitats in proximity to the Project location. A variety of resources are consulted to complete this report, including historical records and reports, wildlife atlases, and consultation with stakeholders such as the MNRF, Quinte Conservation, local environmental stewardship organizations and the general public.

**2. Site Investigation (SI)** – following the compilation of known records for natural features, site investigations are completed to confirm and/or amend results of the RR. Field work for this report typically includes Ecological Land Classification, wetland delineation according to the provincial protocol, species-specific surveys, and the identification and assessment of wildlife habitat features.

**3. Evaluation of Significance (EoS)** – once a natural feature is confirmed through the SI that it is within the proposed project location or surrounding 50m, the feature is then evaluated for significance/provincial significance using criteria provided by MNRF. Where field studies to determine the significance of wildlife habitats are not practical due to seasonal requirements (ex. breeding bird surveys, amphibian surveys, etc.), these features are treated as significant and protected and mitigated as such, and focused studies are required to be completed prior to construction.

**4. Environmental Impact Study (EIS)** – for those natural features evaluated as significant, provincially significant or being treated as significant, an EIS is completed to identify potential negative environmental effects to these features and outline the recommended mitigation measures to demonstrate that impacts can be avoided or minimized.

The NHA package is required to be submitted to the MNRF for review and confirmation (approval) prior to the submission of the REA application to the MOECC.



## Field Surveys

To support the completion of the NHA, as well as other potential permitting requirements, the following field studies are being completed as part of the project:

- Ecological Land Classification
- Wetland Delineation
- Wildlife Habitat Surveys
- Alvar Surveys
- Bat Cavity/Snag Density Survey
- Breeding Bird Surveys
- Diurnal, crepuscular and nocturnal species
- Amphibian Surveys
- Turtle Basking Surveys
- Botanical Surveys
- Rare Plant Surveys
- Water body Surveys, including surveys for seasonal features
- Species at Risk surveys according to MNRF protocols



If you have information or observations the Project should be aware of, please submit your comments!



# Wildlife in Project Vicinity



Adult Loggerhead Shrike



Juvenile Loggerhead Shrike



Adult Loggerhead Shrike



Adult Loggerhead Shrike



Northern Mockingbird – note the lack of a black face and hooked beak

## Loggerhead Shrike

*Lanius ludovicianus*

Provincial Status: **Endangered**

National Status: **Endangered**

Colour	<ul style="list-style-type: none"><li>• White underparts</li><li>• Black wings</li><li>• Long black tail</li><li>• Grey back</li></ul>
Distinctive Features	Black face mask with wings that have a large white patch. The bill is black and has a distinctive hook
Typical Size	Typically 15 to 20 cm in height (6" to 8")
Other	Kill their prey by impaling on thorns, spines or barbed wire. If impaled insects, birds, small mammals, reptiles, frogs are present then Loggerhead Shrike is likely in the area. Nickname is the "Butcher Bird"

### Habitat

- Prefers pasture or other grasslands with scattered low trees, shrubs and short grasses.
- Fields or alvars (areas of exposed bedrock) with short grass make it easier to spot prey.
- Nests in small trees or shrubs.
- Requires a source to impale prey such as Hawthorn shrubs or barbwire fencing.

### Other Information

- Only present in Ontario from April until September.
- Northern Shrike (*Lanius excubitor*) is similar in appearance but only occurs in Southern Ontario during the winter
- Northern Mockingbird (*Mimus polyglottos*) is another similar species but has lighter wings, smaller head, lacks the black face mask and hooked beak

Photo Credits: Gerrit Vyn, Kyle McCreary, Wikipedia Commons, Alan Murphy  
Date Fact Sheet Was Created/Revised: July 31, 2013

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# Wildlife in Project Vicinity



Male Bobolink



Adult Female Bobolink



Female Red-winged Blackbird – note the darker colouring and longer bill



Grasshopper Sparrow – note the short tail and larger head

Photo Credits: Jim McCree, Gerrit Vyn, Kelly Azar  
Date Fact Sheet Was Created/Revised: August 1, 2013

## Bobolink

*Dolichonyx oryzivorus*

Provincial Status: **Threatened**

National Status: **No Status**

Colour	<ul style="list-style-type: none"><li>• Males are black with a white/grey back/rump and a yellow nape</li><li>• Females and non-breeding males are yellowish brown with bold black stripes on the head and back</li><li>• Juveniles are similar in appearance to the female but contain more yellow</li></ul>
Distinctive Features	<ul style="list-style-type: none"><li>• Males have a contrasting colour pattern</li><li>• Thick, short bill similar to a finch</li></ul>
Typical Size	Typically 15 to 21 cm long (5" to 5.5")
Other	<ul style="list-style-type: none"><li>• Males tend to appear unexpectedly, flying over vegetation and singing a bubbly, metallic song</li></ul>

### Habitat

- Ground-nesting species that spend majority of time foraging on the ground in grassland, open meadow, perennial cover crop, and/or pasture
- Nest is comprised of dead grasses with a central lining of fine grass or sedges. The nest may have a canopy of dead grass hanging over the top
- Nests are well camouflaged and contain eggs are a bluish gray or pale reddish brown with irregular dark spots and blotches

### Other Information

- Males are very distinctive but females, juveniles and non-breeding males can be confused with female Red-winged Blackbird (*Agelaius phoeniceus*) or Grasshopper Sparrow (*Ammodramus savannarum*)
- Red-winged Blackbird is darker, more heavily striped on the chest and has a longer bill
- Grasshopper Sparrow has similar colouring and dark striped head with pale central crown but is much smaller with proportionally larger head and shorter tail

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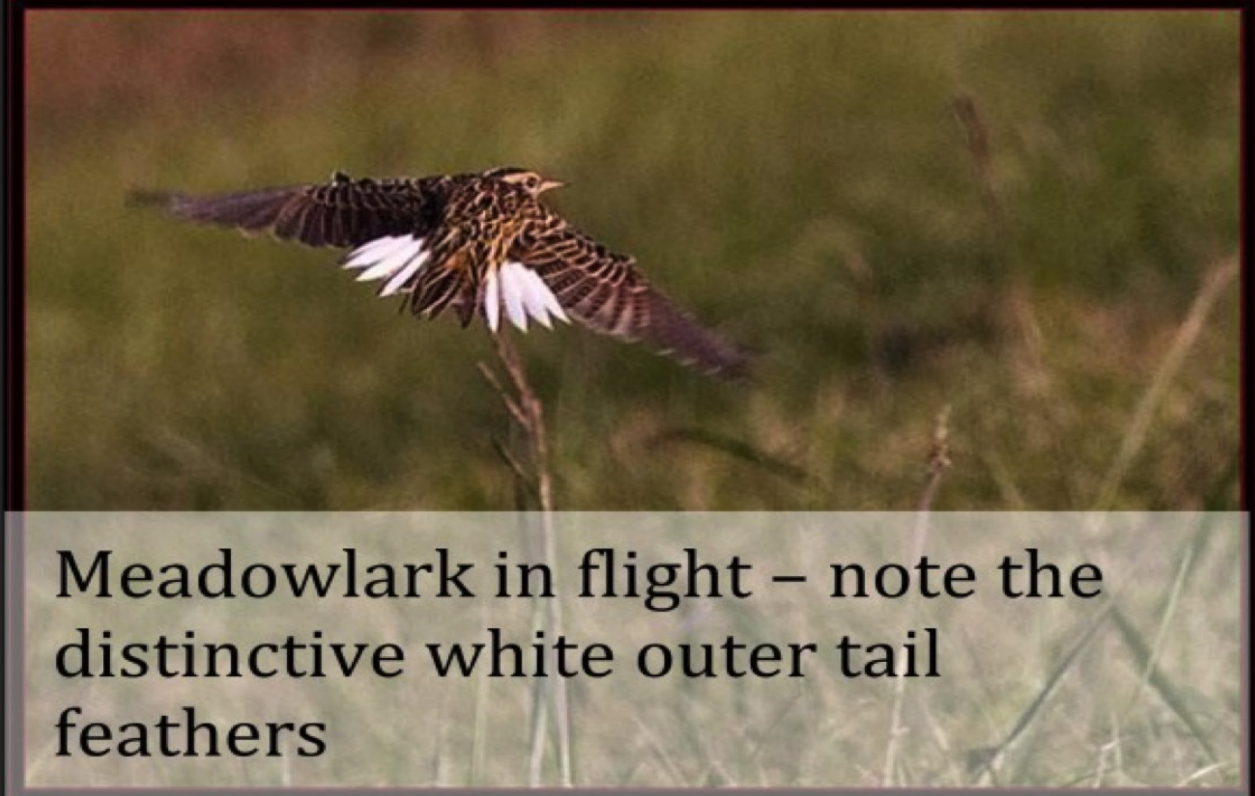
# Wildlife in Project Vicinity



Eastern Meadowlark



Eastern Meadowlark



Meadowlark in flight – note the distinctive white outer tail feathers



Non-breeding Eastern Meadowlark - note the muted colour

## Eastern Meadowlark

*Sturnella magna*

Provincial Status: **Threatened**

National Status: **No Status**

Colour	<ul style="list-style-type: none"><li>• Pale brown, marked with blackish streaking on the back, wings &amp; tail</li><li>• Bright yellow underparts and a bold black “V” across the breast</li><li>• Males and females have similar colouration</li></ul>
Distinctive Features	<ul style="list-style-type: none"><li>• Bright yellow breast</li><li>• Black “V” across the breast</li><li>• Long, slender, spear-shaped bill</li><li>• Outer tail feathers are white and conspicuous during flight</li></ul>
Typical Size	Typically 19-26 cm in length (7.5”-10”) Wingspan of 35-40 cm (14”- 16”)
Other	<ul style="list-style-type: none"><li>• Often perched and singing from a post, pole, wires or tops of shrubs</li><li>• Flutelike descending song which sounds like <i>Spring-of-the-year</i></li></ul>

### Habitat

- Ground-nesting species most commonly found in pasture, perennial cover crop, grassland and savannah
- Can be found in a wide variety of other habitats including weedy meadow, young orchard, golf courses, restored grassland, and herbaceous fencerows

### Other Information

- The female Red-winged Blackbird (*Agelaius phoeniceus*), female Bobolink (*Dolichonyx oryzivorus*) and Savannah Sparrow (*Passerculus sandwichensis*) can be confused with this species but all three are much smaller but lack the bright yellow underparts, long bill and white outer tail feathers
- Can nest from early May to mid-August in well camouflaged nests comprised of grasses on the ground

Photo Credits: Gerrit Vyn, Kirk M. Rogers, Ontario Ministry of Natural Resources, Phillip Simmons  
Date Fact Sheet Was Created/Revised: August 1, 2013

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# Wildlife in Project Vicinity



Blanding's Turtle



Hinged Shells of the Blanding's



Blanding's Turtle – spots on shell



Blanding's Turtle – note the bright yellow throat and chin



Spotted Turtle – note the vivid yellow spots

**Photo Credits:** Joe Crowley, Parks Canada, Ontario Ministry of Natural Resources, Mary Ferguson, Detroit Zoo  
**Date Fact Sheet Was Created/Revised:** August 8, 2013

## Blanding's Turtle

*Emydoidea blandingii*

Provincial Status: **Threatened**

National Status: **Threatened**

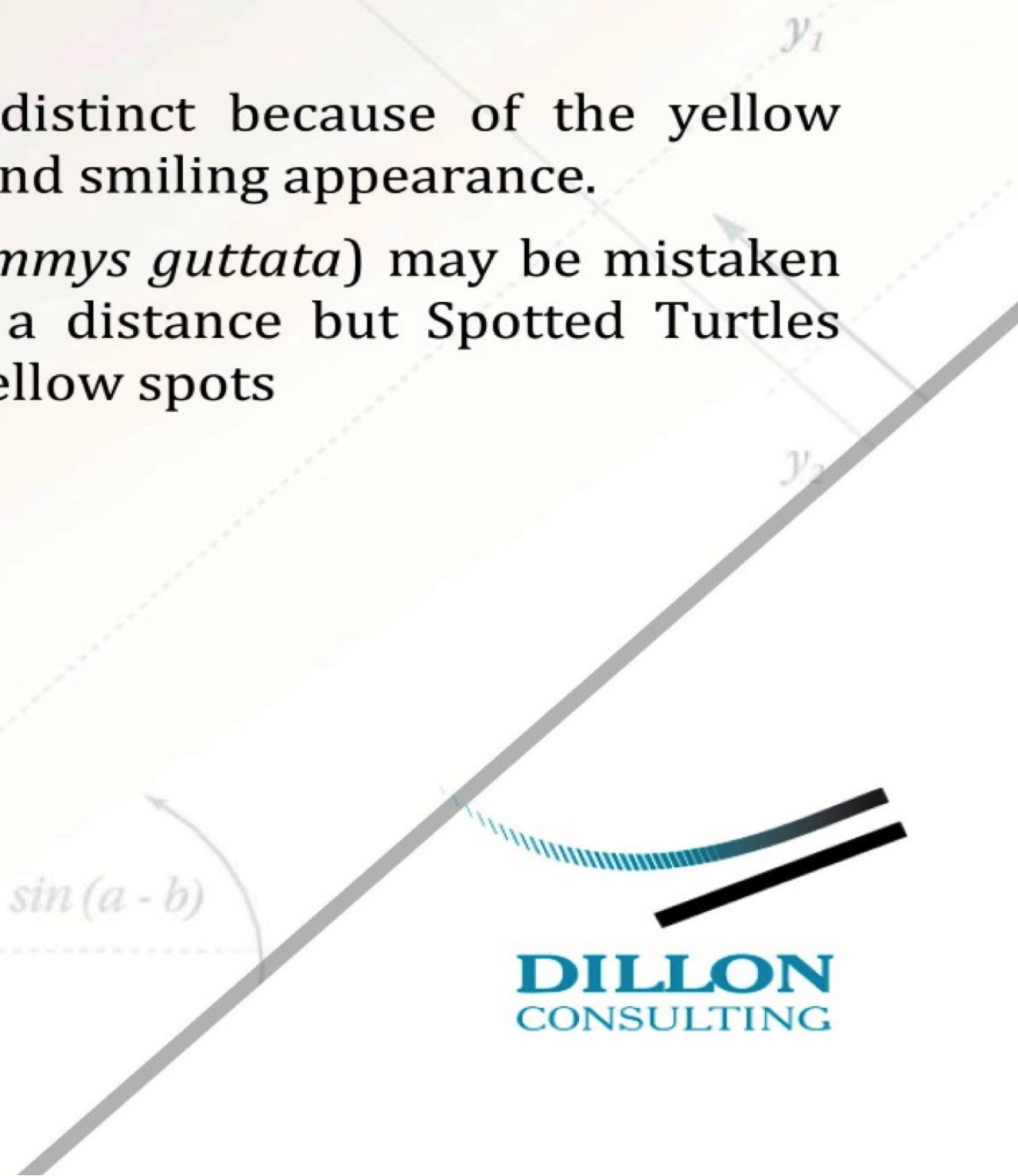
<b>Colour</b>	<ul style="list-style-type: none"><li>• The upper shell is usually black or dark brown but sometimes grey or a lighter brown</li><li>• Upper shell covered in tan to yellow lines or spots scattered at random</li><li>• Lower shell is a rich yellow</li><li>• Skin is often black or dark brown</li></ul>
<b>Distinctive Features</b>	<ul style="list-style-type: none"><li>• Domed shell resembles an army helmet</li><li>• Throat and chin a bright yellow</li><li>• Upper jaw is notched and the mouth curves upwards, giving the impression that the turtle is smiling</li></ul>
<b>Typical Size</b>	Can reach up to 27 cm (10") long
<b>Other</b>	<ul style="list-style-type: none"><li>• Shells are hinged so some individuals can completely close the shell after pulling in the head and limbs</li></ul>

### Habitat

- Inhabits shallow lakes, ponds and wetlands with clean water and mucky bottoms.
- Can travel several kilometres between summer, nesting and overwintering habitats.
- Hibernates in the soft bottoms or water bodies.

### Other Information

- This turtle is very distinct because of the yellow throat, domed shell and smiling appearance.
- Spotted Turtles (*Clemmys guttata*) may be mistaken for Blanding's from a distance but Spotted Turtles have distinct, vivid yellow spots





# Wildlife in Project Vicinity



Whip-poor-will roosting in a tree



Whip-poor-will



Whip-poor-will at nest



Common Nighthawk for comparison – note the outer white bar on the wing and colder gray-brown colour

Photo Credits: Cornell Lab of Ornithology (© Nancy Landry, © Greg Lawrence), Mike McEvoy, Philip Simmons  
Date Fact Sheet Was Created/Revised: July 31, 2013

## Whip-poor-will

*Caprimulgus vociferus*

Provincial Status: **Threatened**

National Status: **Threatened**

Colour	<ul style="list-style-type: none"><li>• Mottled brown and grey feathers</li><li>• Feather pattern blends with grey-brown leaf litter and tree bark</li><li>• Pale, silvery shoulder patches</li><li>• Throat is black and bordered at the bottom by a white bib</li></ul>
Distinctive Features	<ul style="list-style-type: none"><li>• Camouflaged grey-brown body with white bib at bottom of throat</li><li>• “Front-heavy” look with large, rounded head and stout chest, which tapers to a long, thin tail</li><li>• Sings loud “whip-poor will” song at nighttime</li></ul>
Typical Size	<ul style="list-style-type: none"><li>• Both sexes: 22 to 26 cm (7”-10”) long and wingspan of 45-48 cm (18”-19”)</li></ul>
Other	<ul style="list-style-type: none"><li>• Most vocal during bright, moonlit nights</li></ul>

### Habitat

- Usually found in areas with a mix of open and forested areas
- Forages in open areas and uses forested areas for roosting and nesting
- Prefer forested areas with little or no underbrush and will avoid large tracts of uninterrupted forest with dense canopy
- Eggs are laid directly on the forest floor without a nest

### Other

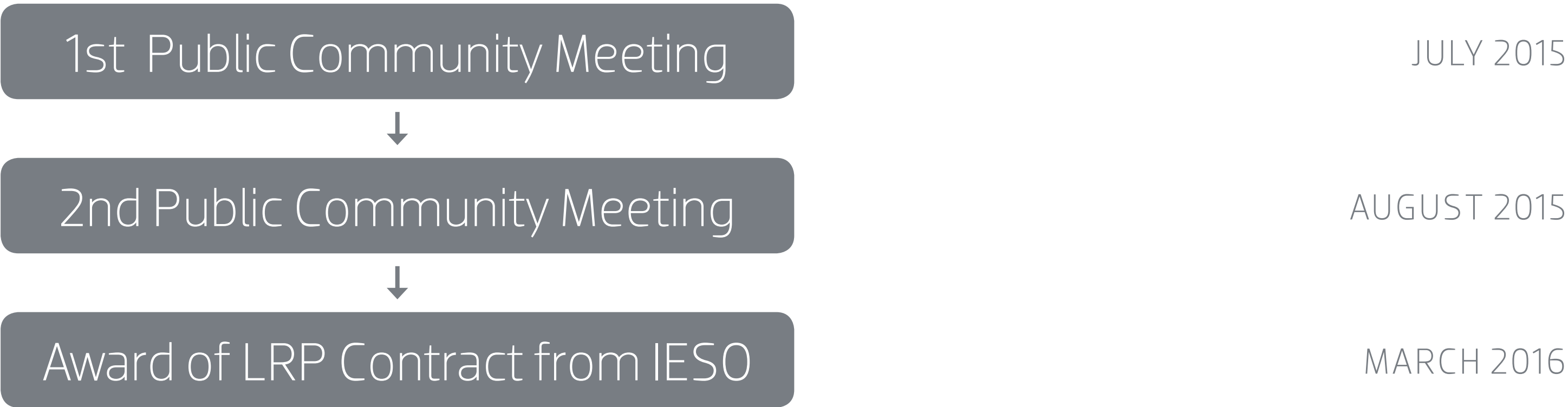
- Common Nighthawk (*Chordeiles minor*) is similar in appearance but is a colder gray-brown overall
- Nighthawks are more likely to be seen in the daylight or crepuscular hours (dusk/dawn).
- Nighthawks have an obvious white-bar on the outer part of the wings.

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# REA Process and Project Schedule

Large Renewables Procurement Process



Renewable Energy Approval Process – Ontario Regulation 359/09

