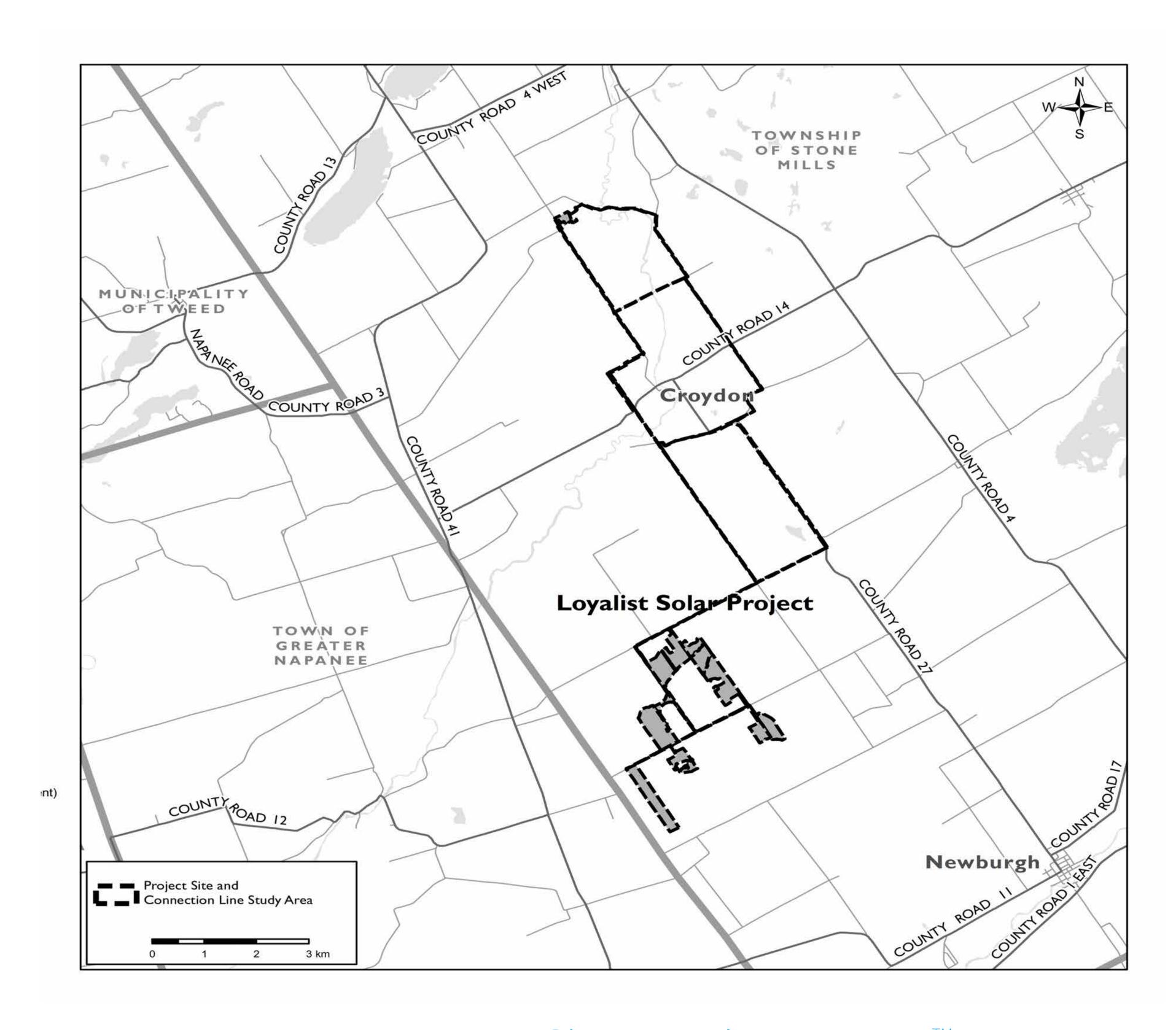


Yaote LS Solar Inc.

Project Description

- Up to 54 megawatt (MW^{AC}) 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 Inc. and Mohawks of the Bay of Quinte (Yaote LS Solar Inc.)
- The Project Site consists of solar panels, racking, internal access roads, cabling, alternating current (AC) electrical collection system, inverters, facilities and associated infrastructure. An Operations and Maintenance building may also be located on site
- The Project Connection Line includes overhead and underground electrical circuits, a transformer substation, communication lines and tower, 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





Yaote LS Solar Inc.

Summary of REA Reports

Under the Ontario Regulation 359/09, proposed Class 3 solar facilities, such as the Loyalist Solar Project, must receive a Renewable Energy Approval (REA) prior to starting construction. The REA application is made up a number of reports which describe the studies undertaken, the design of the project, potential effects and mitigation measures. These reports are listed below.

Report Title Project Description Report (PDR)	Purpose
	The Project Description Report is a summary document for the REA application. It includes a brief description of each of the phases of the project (construction, operations and decommissioning) and the potential negative effects and mitigation measures.
Construction Plan Report (CPR)	The Construction Plan Report describes the activities to be undertaken during the construction phase of the project. This includes an estimation of the type and amount of equipment to be brought to and from the Project Location, the approximate schedule and duration of construction, and details of potential negative effects and mitigation measures to be implemented during construction.
Design and Operations Report (DOR)	The Design and Operations Report provides details on the site plan for the Project, including a description of the components to be used. The DOR also describes maintenance activities that are anticipated once the Project is operational, and provides an outline of how emergencies and communications will be handled.
	The Decommissioning Plan Report describes how the Proponent proposes to decommission the site and restore the Project Location to its anticipated use. This includes information about how components will be uninstalled and how waste will be handled. The DPR is typically updated at least 6 months prior to the start of decommissioning to reflect the standards of the day.
Consultation Report	The Consultation Report documents how consultation activities were undertaken throughout the Project. The Consultation Report also documents comments received from various stakeholders (public, municipalities, agencies, Indigenous Communities) and how the comments were addressed in the project design.



Yaote LS Solar Inc.

Summary of REA Reports (Cont'd)

Report Title	Purpose
Natural Heritage Assessment (NHA)	The Natural Heritage Assessment is a series of four reports that determine the potential significant natural features and wildlife habitats that may be impacted by the Project. The NHA identifies potential negative effects during all phases of the project and recommends mitigation measures to minimize or eliminate those effects.
Water Assessment	The Water Assessment includes a records review and sited investigation for the purpose of identifying and characterizing water bodies or water courses as defined by the Regulation. The Water Assessment identifies potential negative effects that could take place during all phases of the project and recommends mitigation measures to minimize or eliminate those effects.
Archaeological Assessments	The Archaeological Assessments identify areas with the potential to have archaeological resources. These areas are surveyed by licensed archaeologists to determine if any archaeological resources are present. If so, they are documented and possibly more in-depth assessments are required. The Archaeological Assessment Report describes this process and any findings.
Cultural Heritage Assessment	The Cultural Heritage Assessment determines the potential for the Project to impact built heritage features or cultural heritage landscapes and recommends mitigation measures to minimize or eliminate potential negative effects.
Noise Study Report	The Noise Study Report assesses the potential effect on receptors (residences) from noise emitting equipment. The report must demonstrate that the Project is designed in such as way as to ensure the MOECC noise limits' receptors are not exceeded.



Yaote LS Solar Inc.

Project Construction

The construction phase of the project is expected to take between 10 and 12 months, with a breakdown of construction activities shown below:

SCHEDULE:

Estimated Timing	Duration
Q4/2017-Q2/2018	9 months
Q1/2018-Q3/2018	9 months
Q1/2018-Q4/2018	12 months
Q4/2018	3 months
	Q4/2017-Q2/2018 Q1/2018-Q3/2018 Q1/2018-Q4/2018





Yaote LS Solar Inc.

Project Construction

Construction of the project is anticipated to take 12 months and will employ a workforce of approximately 150–200 people. Major activities during the construction phase include:

Construction Activity	Potential Materials	Potential Equipment
Surveying and Staking of Project Location	Survey stakes Flagging Tape	Pick-up Truck
Clearing, ground levelling, compacting and grading	N/A	Motor graders Soil compactors Dump trucks Wheel loaders
Installation of perimeter fence and security lighting	Granular A and B Geotextile	Bulldozer Dump Truck
Construction of foundations for inverter stations, substation components and O&M building	Concrete Rebar and sonotubes for footing construction	Excavators Dump Trucks
Installation of support, racking and PV modules	Racking support	Pile driving equipment Rock drilling equipment equipment Excavator
Construction of O&M building	Lumber or brick	Excavator Dump Truck Backhoe
Installation of wiring, inverter stations, substation, connection to grid and O&M building	Inverter stations Electrical cabling	Excavator Backhoe Pick-up Truck
Installation of connection line and electrical collector system	Electrical poles Guy wires Junction boxes	Hydraulic ram Aerial bucket truck Tension machines
Remediation and clean-up of work areas	N/A	Pick-up truck Hydroseeding device
Site landscaping and vegetation Testing and commissioning	Vegetative seed N/A	Hydroseeding device Service vehicles



Yaote LS Solar Inc.

Project Operation - Components

The facility is anticipated to include the following components:

- 190,000 to 290,000 solar photovoltaic (PV) panels. These are the PV panels that will convert solar energy into electricity
- Racking system. The PV panels will be installed on a racking system mounted on steel posts which are installed into the ground
- Up to 34 inverter stations. The inverter stations include inverters and transformers to convert direct-current electricity from the PV panels into alternating current electricity and step up the voltage to 34.5 kV
- Electrical collection system. This cabling transmits electricity from the inverter stations to the connection line. The collector system is anticipated to be buried when installed within the solar panel area and installed on overhead poles when in the municipal road rights of way
- Connection Line. The connection line will transmit the electricity from the inverter stations and collection lines to the substation transformer. The connection line will follow one of four routes currently being assessed. The final route will be determined prior to construction. The connection line will be mostly mounted overhead on poles except in some instances where it may be installed underground
- Substation transformer. The substation transformer steps up the 34.5kV electricity from the connection line to the 230kV needed to connect to the existing transmission lines
- Internal access roads. Consist of gravel roads inside the perimeter fence used for maintenance vehicles to access inverter stations and other equipment for maintenance and repair purposes. These roads will be in place for the life of the project and removed at the time of decommissioning
- Perimeter fence. Consists of a chain-link security fence approximately 1.8m high to surrounding the panel areas
- Control building and Communication Tower. A control building and communication tower will be installed to provide transfer of operational data to HydroOne Networks Inc. during operations. The control building will be constructed to house electrical controls, protection, and monitoring systems and be located at the substation
- Operations and Maintenance Building. Will house equipment to monitor the facility's operation as well as vehicles, tools and supplies needed for maintenance and repairs. The building will contain staff offices, washrooms, lunch room, warehouse and parking area.



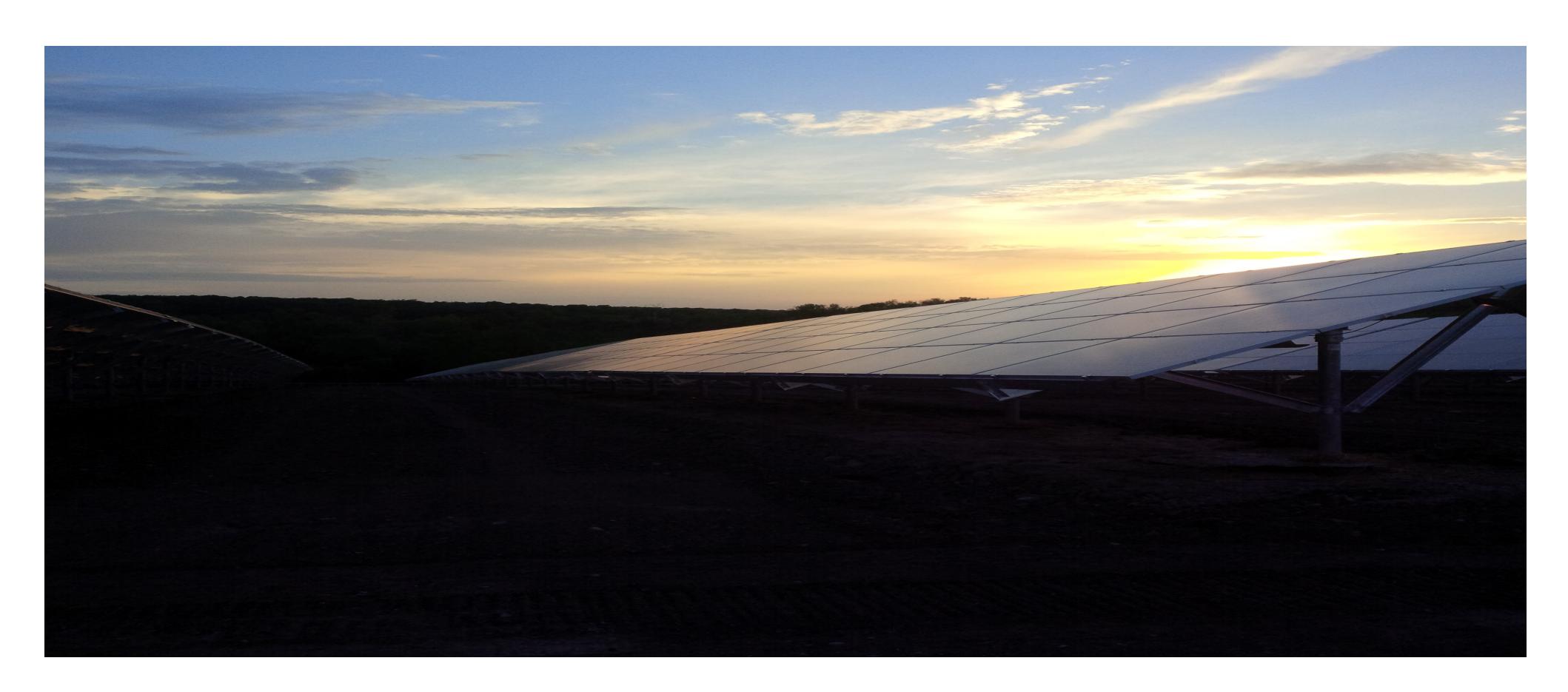
Yaote LS Solar Inc.

Project Operation - Activities

Activities associated with the facility's operation include:

- Monitoring and meter calibration. The facility will be remotely monitored to ensure operation is within required parameters
- Routine maintenance of components and security checks. Regularly scheduled visits to inspect components and ensure proper operation and confirm facility security
- Access road maintenance. Levelling and grading and addition of granular material as needed
- Vegetation control. Regular maintenance to manage weed growth. Herbicides are not typically used; weeds are normally removed using mechanical means
- Cleaning of PV panels. Panels will be cleaned with water and it is not anticipated that chemical detergents will be used. Snow will be removed mechanically (e.g. blowers mounted on maintenance vehicles)
- Substation transformer. Substation spill containment system will be inspected regularly and effluent will be tested to ensure oil level limits are not exceeded
- Drainage and erosion control. Storm water management features such as drainage ditches, culverts and rock check dams will be routinely expected and repairs and sediment removal will be completed as needed

Please refer to the Design and Operations Report for more information regarding the operation of the facility.





Yaote LS Solar Inc.

Decommissioning Phase

During the decommissioning phase and after the Project has been disconnected from the grid, components will be dismantled and removed. Decommissioning is expected to take between 10 to 12 months. Once complete, the land can be used as it was prior to Project's construction. Examples of decommissioning activities are shown below:

Activity	Description
Solar panels and racking	Disconnect all above-ground wirings, cables and interconnections. Remove solar panel modules, racking and support structures and temporarily store on-site in a delineated area before removal by a truck to an appropriate facility.
Access road and other components	Consult with landowners to determine if access roads should be left in place for their continued use. Remove aggregate materials. Compacted areas will be tilled to restore the density and depth. Top soil will be applied as needed. Remove perimeter fencing, anchors and guy wires.
Connection line and collection line	Remove line and poles and fill holes.
Underground cables	Underground electrical lines will either be removed or cut and left in place approximately 1m below ground to allow agricultural practices to resume.
Substation	Removal of all equipment.
Equipment foundations	Foundations will either be completely removed or excavated to a depth of 1m. All materials removed from site and holes backfilled.

After all components are removed, the site will be graded and revegetated where necessary. The site will be restored to so that off-site drainage patterns are maintained to pre-construction conditions. Please refer to the Decommissioning Plan Report for more information regarding the decommissioning activities.



Yaote LS Solar Inc.

Natural Heritage Assessment (NHA)

The NHA is comprised of four reports that systematically assess natural features that may be impacted by the project and identify mitigations to minimize those impacts.

Report	Findings	Conclusions
Investigation (RR and SI).These	Several natural features were identified within 50 m of the Project Location. These included wetlands, woodlands, and wildlife habitat.	The Project Location boundary needed to be refined to avoid sensitive natural features, where possible.
completed to evaluate the significance of natural features. Wildlife and vegetation surveys occurred over a period of 5.5 months in the spring, summer and fall of 2016 (over 475 hours).	Provincially significant wetlands; Assumed provincially significant wetlands; Woodlands; Significant rare vegetation communities; Turtle nesting area; Amphibian breeding habitat;	The features evaluated and treated as significant must be assessed in the Environmental Impact Study and mitigation measures need to be identified to minimize or eliminate potential effects to these features.

Please refer to the NHA Report for more information.



Yaote LS Solar Inc.

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





Yaote LS Solar Inc.

Your questions answered!

What are the next steps in this process?

The reports comprising the REA application are complete and have been available for public review for 60 days before this public meeting. These reports may be updated after the public meeting, based on the results of consultation. Following this, the Consultation Report for the Project will be finalized, then the complete application will be submitted to the Ministry of the Environment and Climate Change (MOECC) in Q1 2017. The MOECC will subsequently undertake a review of the application, and, upon deeming it complete, will post a notice on the Environmental Registry. Following posting on the Environmental Registry, the MOECC will review all reports and evaluate the application. Once the technical review is complete, and comments are considered from the Environmental Registry, the MOECC will make a decision regarding issuance of the Project's REA. This is presently anticipated for Q4 2017. All REA reports are available on our website.

When will the final connection line route be known?

The Project team is currently finalizing right of way surveys and has commenced engineering design work for the connection line. These will determine the placement of the transmission line poles. The Team is currently in the process of finalizing road use agreements with both Lennox and Addington County and the Township of Stone Mills. Both the County and the Township will need to approve the proposed transmission line design before proceeding. BluEarth will provide more detailed information to landowners and stakeholders, and will share the transmission line map once designs are finalized.

How are visual concerns addressed?

The Township of Stone Mills has approved a visual screening plan which incorporates setbacks and vegetation screening to reduce visual impact. The plan includes visual simulations to depict how the project will look from certain vantage points.





Yaote LS Solar Inc.

Connection Line

Consists of above and below ground electrical cabling used to connect the generating components of the Project (PV panels, inverter stations, collection lines) to the existing 230kV transmission line near the intersection of Miller Road and Frizzell Road.

• Four potential routes are being considered:

Preferred Route: Travels east on Centreville Road, then north on County Road 27, east on Marlin Road, north on Edges Road to Murphy Road to Sheffield Bridge Road where it reaches the substation transformer. (**Purple** on plan).

Bid Route: Travels east on Centreville road to the intersection with Lockridge Road where it then turns north over land through an unopened municipal right-of-way to Teskey Road where it crosses County Road 14 and on to Miller Road through private land easements. It continues north on Miller Road until it reaches the substation transformer. (**Orange** on plan)

Alternate 1: Follows the same route as the Preferred Route until the point of reaching Haggerty Road where it travels west on Haggerty Road, crosses the Salmon River to Miller Road, then travels north on Miller Road until it reaches the substation transformer. (**Dark blue** on plan).

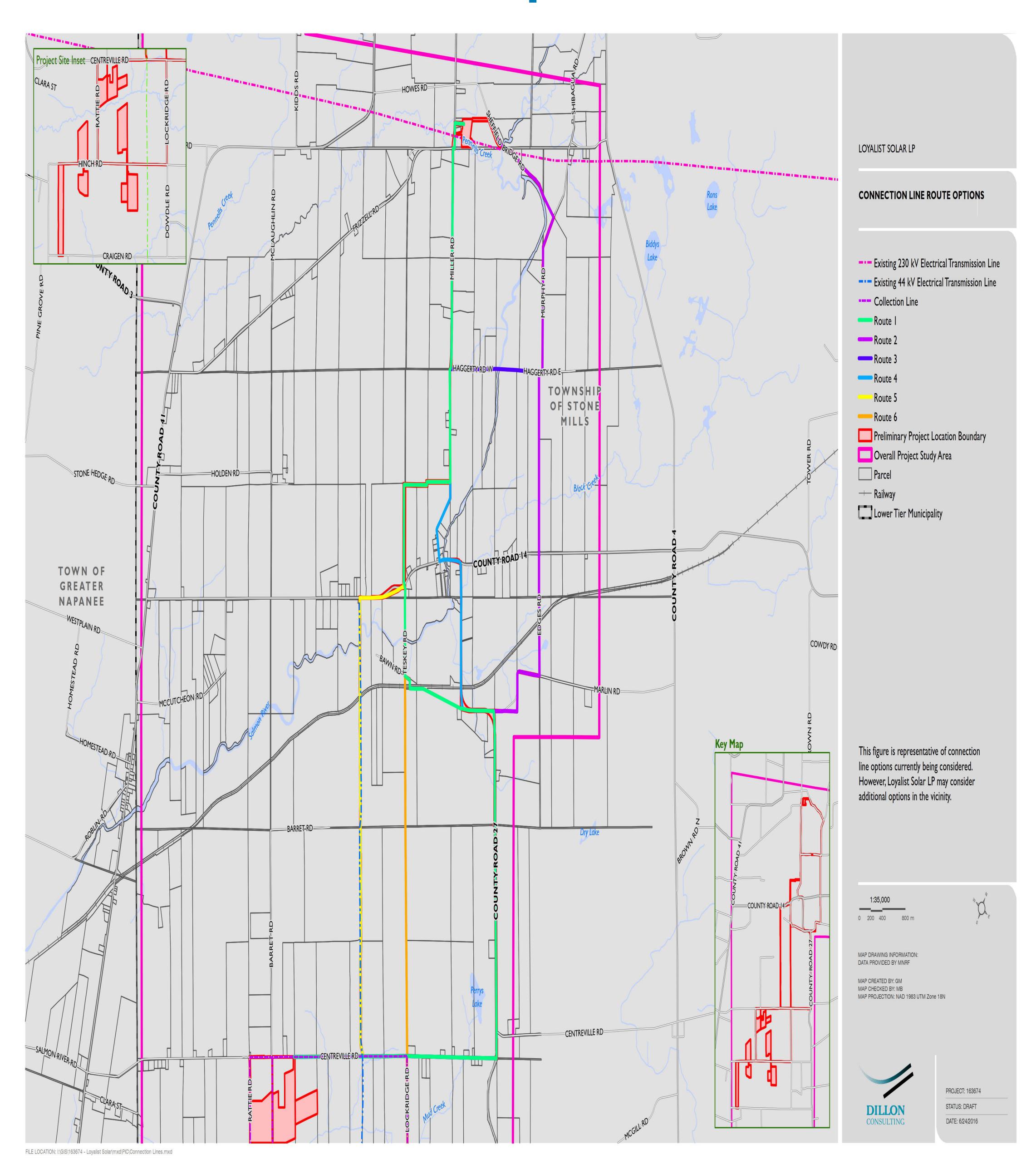
Alternate 2: Follows the same route as the Preferred Route until the point of reaching Teskey Road where it travels west and then north as it crosses County Rd 14 and on to Miller Road through private land easements. It then continues north on Miller Road until it reaches the substation transformer. (**Green** on plan)

- As described above, the Connection Line will be installed in right rights-of-way or on private lands, or a combination of the two
- The connection line will likely consist of three 3–phase circuits mounted either on poles or below ground (where necessary). Poles will be approximately 65 feet high and consist of cross–members, insulators, and ancillary equipment such as communications cables, grounding wires, switchgear, and others as needed. Some poles will require guy wires and anchors. If the poles replace existing utility poles, the height will be approximately 80 feet to accommodate additional circuits from the existing poles.
- If located on private lands, lease agreements have been made with the landowners involved.
- Final route will be determined based on the result of further studies (engineering designs, geotechnical investigations) and the outcomes of consultation with MNRF, the Township of Stone Mills and local stakeholders.



Yaote LS Solar Inc.

Connection Line Map





Yaote LS Solar Inc.

Revisions to REA Reports*

Report Title	Description of Revisions
Project Description	Clarification details were added to describe the four Connection Line options. The final Connection Line
Report	route will be determined through engineering assessments and agency consultation and residents will
	be notified once the final route has been selected. The report was updated to summarize the revisions
	to the other reports, as described below. Changes related to formatting, consistencies between reports
	and re-review of the Project Location boundary has also resulted in other minor edits.
Design and Operations	A section was added to describe a standby generator to be installed at the substation transformer for
Report	maintenance and emergency purposes. If being used for maintenance, the generator will not operate
	for more than 60 hours in a 12-month period and only between the hours of 7am and 7pm. If being used
	in the case of an emergency, it will only be used in situations where there is a serious risk to the health
	and safety of a person, the environment or damage to property. Revisions were made to the potential
	equipment for PV panels and inverters. It is anticipated that the following models (or equivalent) will be
	used: Hanwha Q Cells 340 W PV panel, or SMA Sunny Central SC 2200. Clarification details were added
	related to site maintenance; routine inspections of access roads may indicate the need for the addition
	of granular material and/or minor grading or leveling activities. Stormwater management features such
	as drainage ditches, culverts, rip rap, rock check dams, etc. will be regularly inspected.Changes related
	to formatting, consistencies between reports and re-review of the Project Location boundary has also
	resulted in other minor edits to the DOR.
Water Body Report	No changes.
Water Assessment	No changes.
Report	
Noise Study Report	For clarity, a scale and coordinate system was added to the figures. The frequency spectra shown in the
	octave tables was changed to be linear rather than A-weighted.
Decommissioning Plan	Changes related to formatting, consistencies between reports and re-review of the Project Location
Report	boundary has also resulted in other minor edits to the DPR.
Archaeological	Based on feedback from the MTCS, the archaeological assessments were refined to indicate that sixteen
Assessment	sites containing archaeological materials were identified. Further investigation was recommended for
	seven of the sites prior to development. The MTCS provided their acceptance of the archaeological
	assessments on December 6, 2016.

^{*}Since November 2016 draft.



Yaote LS Solar Inc.

Revisions to REA Reports*

Report Title	Description of Revisions
Construction Plan Report	A section was added to summarize potential effects to groundwater during construction.
(CPR)	Mitigation measures, such as erosion and sediment control, the creation of a spill response
	plan, and spill containment will be implemented to minimize potential effects. A Stormwater
	Management Plan will be developed prior to the start of construction to identify how grading
	and water flow management features will be installed to ensure the Project does not
	result in a net change of water flow to adjacent properties and natural features. Clarification
	details were added related to the installation of supports, racking and PV modules. Racking
	foundation design will vary depending on the depth of overburden (soil above bedrock).
	The foundations will either be a rock socket type anchor (for <1.2 m overburden), a spread
	footing anchor (for >1.2 and <2.2 m overburden) and a helical pile anchor for areas with > 2.2
	m overburden. Construction details were added to describe the installation of the electrical
	collection and Connection Line system. Where cabling will be installed on poles, the poles
	will be placed in excavated holes and set in place with anchors or guy wires as needed. The
	cabling will be installed using a tension machine. Poles will likely be either grey fiberglass or
	wood and approximately 18-21 m tall (with approx. 3 m underground.) A back-up generator
	will be located within the substation area to provide power in the case of periodic maintenance
	and for unexpected loss of electrical service connection. Changes related to formatting,
	consistencies between reports and re-review of the Project Location boundary has also
	resulted in other minor edits to the CPR.
Natural Heritage Assessment	Revision of conservation status for the Giant Swallowtail butterfly. The population is
	considered secure in Ontario and therefore is not a Species of Conservation Concern and
	its habitat is not required to be included as a type of wildlife habitat in the NHA. Addition of
	Terrestrial Waterfowl Stopover and Staging Habitat. Upon consultation with the MNRF, it was
	agreed that this habitat would be treated as significant until surveys could be completed in the
	spring of 2017. Addition of Eastern Wood-Pewee Habitat. This bird is a woodland bird Species
	of Conservation Concern that was identified during the breeding bird surveys for the Project
	and has since been added to the NHA. Changes related to formatting, consistencies between
	reports and re-review of the Project Location has also resulted in minor edits to the NHA
	reports.
Cultural Heritage Assessment	Revisions were made to note which connection lines were no longer being considered.
	Additional mitigations to address potential vibration impacts were described. Other minor
	clarifications to mitigations were added.
*Cinco Movember 2016	

^{*}Since November 2016 draft.



Yaote LS Solar Inc.

Potential Effects and Mitigation Measures

Potential Effect	Project Phase	Examples of Recommended Mitigation
Disruption or destruction of archaeological or cultural materials	Construction	Archaeological sites have been identified and either avoided, or the materials documented and removed. Cultural Heritage effects will be managed by avoidance and altered construction practices.
Increased water flow and sedimentation to adjacent properties and natural features	Construction & Operations	During construction, erosion and sediment control measures will be implemented. Cleared lands will be re-vegetated as soon as practical, following construction activities. During operations, storm water management controls will be in place to avoid significant changes to water flow to adjacent areas.
Impacts to wildlife and vegetation species	Construction & Operations	Protocols will be developed for specific measures when wildlife is encountered. Fencing will be installed to deter wildlife from entering the construction site. Construction vehicle speeds will be reduced in areas adjacent to applicable wildlife features. Construction activities will occur outside of sensitive wildlife breeding windows. Access roads designed to deter wildlife nesting.
Loss of significant natural features including woodlands and wildlife habitat	Construction	The Project has been designed to avoid significant areas. Where required, habitat compensation measures have been proposed. These measures include, but are not limited to, species transplantation, construction of habitat features, removal of invasive species, etc.
Crossing of water bodies and wetlands by the Connection Line	Construction	Crossing methods designed to minimize impacts to features and implement mitigation measures developed by Fisheries and Oceans Canada. Poles supporting overhead connection lines to avoid significant wetland areas.
Removal of land from agricultural production	Construction & Operations	Lands will be restored to their pre-construction condition, or a similar state at the time of decommissioning.



Yaote LS Solar Inc.

Potential Effects and Mitigation Measures

Potential Effect	Project Phase	Examples of Recommended Mitigation
Impacts to the groundwater table	Construction & Operations	Spill containment installed for substation transformer. A spill
as a result of accidental fuel		response plan will be in place prior to the start of construction.
spillage/releases from equipment,		Erosion and sediment control measures (e.g., silt fencing) will be
stormwater runoff, and minor waste		installed. A foundation type for the PV racking will be selected
generation		that considers the local groundwater regime.
Increased noise disturbance due to	Construction & Operations	During construction, noise levels and hours of work will be in
on-site activities.		compliance with local noise bylaws. During operations, a noise
		audit will be conducted to ensure compliance with MOECC noise
		limit requirements.
Visual impact	Construction & Operations	Visual impacts during construction will be temporary in nature.
		A visual screening plan has been designed and approved by the
		Township of Stone Mills. The plan will minimize visual impacts
		from the solar panel area through setbacks and vegetation
		screenings.
Periodic traffic disruption	Construction	A Traffic Management Plan will be prepared in consultation with
		the Township and County.
Damage to local roads	Construction	A Road Use Agreement with the Township and County will
		prescribe how roads will be repaired if damaged by the Project.
Fires (electrical, wildfire, etc.) at the	Construction & Operations	Smoking will be prohibited except in designated areas. Fire
Project Location		safety equipment (including fire extinguishers) will be available
		on site and stored in construction vehicles and site trailers as
		appropriate. The local fire department will be involved in the
		development of an emergency response and communications
		plan.
Electrocution or other injury from	Operations	The Project Location will be fenced as per Electrical Safety
operating components.		Authority ("ESA") requirements to prevent unauthorized access.
		Warning signs will be placed at locations with high-voltage
		equipment as per safety code requirements.

For more information, see the Environmental Effects Management Plan sections of the Natural Heritage Assessment, Construction Plan Report and Design and Operations Report.



Yaote LS Solar Inc.

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^{AC} of generation
- Landowners willing to host the Project
- Support through the Community Vibrancy Agreement with the Township of Stone Mills





Yaote LS Solar Inc.

Why now?

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, and 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 H20 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 decisionmaking 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.









Yaote LS Solar Inc.

Next Steps

A Consultation Report will be prepared, which will document the consultation activities undertaken to date for the Project, including any questions or concerns received at this Public Meeting. The Consultation Report will also document how public input was considered in the design and development of the Project.

Please provide any additional comments to the Project team by **February 3, 2017** via a comment form available here at this meeting or via telephone or email at the coordinates below.

For more information on BluEarth and the Loyalist Solar Project, or to provide comments, visit:

bluearth.ca/loyalist

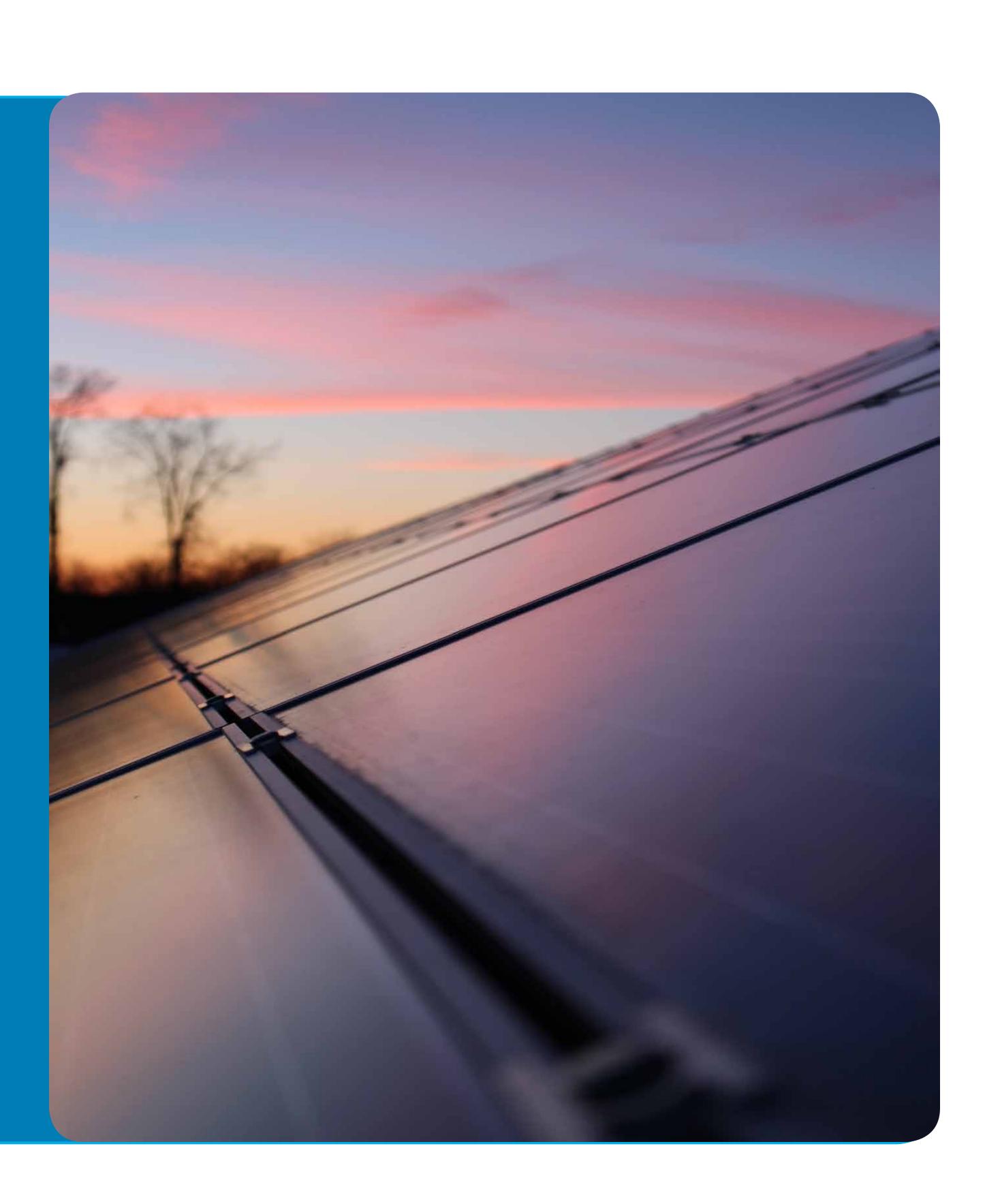
projects@bluearth.ca

1.844.214.2578

Or contact Mike Jablonicky, Senior Project Specialist, at:

mike@bluearth.ca

226.567.1246





Yaote LS Solar Inc.

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 descretion of the Township, including:
 - Land stewardship
 - Recreation
 - Community & protective services
 - · Roads & public infrastructure
 - Community inprovement 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





Yaote LS Solar Inc.

Site-Specific REA Studies

A number of required studies are now complete. These include:

Water Assessment

- Identified water bodies at or near the proposed project location through a background desktop review of relevant information, followed by site investigations
- Identified water bodies were documented in a Water Body Report that characterized the existing conditions of the water bodies and identified potential impacts and any mitigation measures required to minimize or avoid these effects

Archaeological Assessments

- Identified any areas of archaeological significance at or near the project location
- Assessment involved records reviews, field surveys and when necessary, specific excavations
- Study ensured 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

- Identified resources of cultural heritage value or significance such as historic buildings, structures, landscape features, or other property features
- Mitigation measures will be developed and implemented to preserve and/or document the cultural heritage features

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



Yaote LS Solar Inc.

Hydrogeology & Groundwater Studies

Hydrogeological Studies

- Assessment involves the study of surface and sub-surface water to determine flow patterns
- Utilizes data from piezometers, flow gauges, rain gauges and topographical studies, among others
- Informs the site grading and drainage plan to ensure water flows from site do not cause adverse effects to adjacent properties and wildlife habitats
- Results indicate that the Project will not affect water quality or water quantity in any residential well and not affect water quality or water quantity discharging to Mud Creek or Hinch Swamp

Groundwater Monitoring

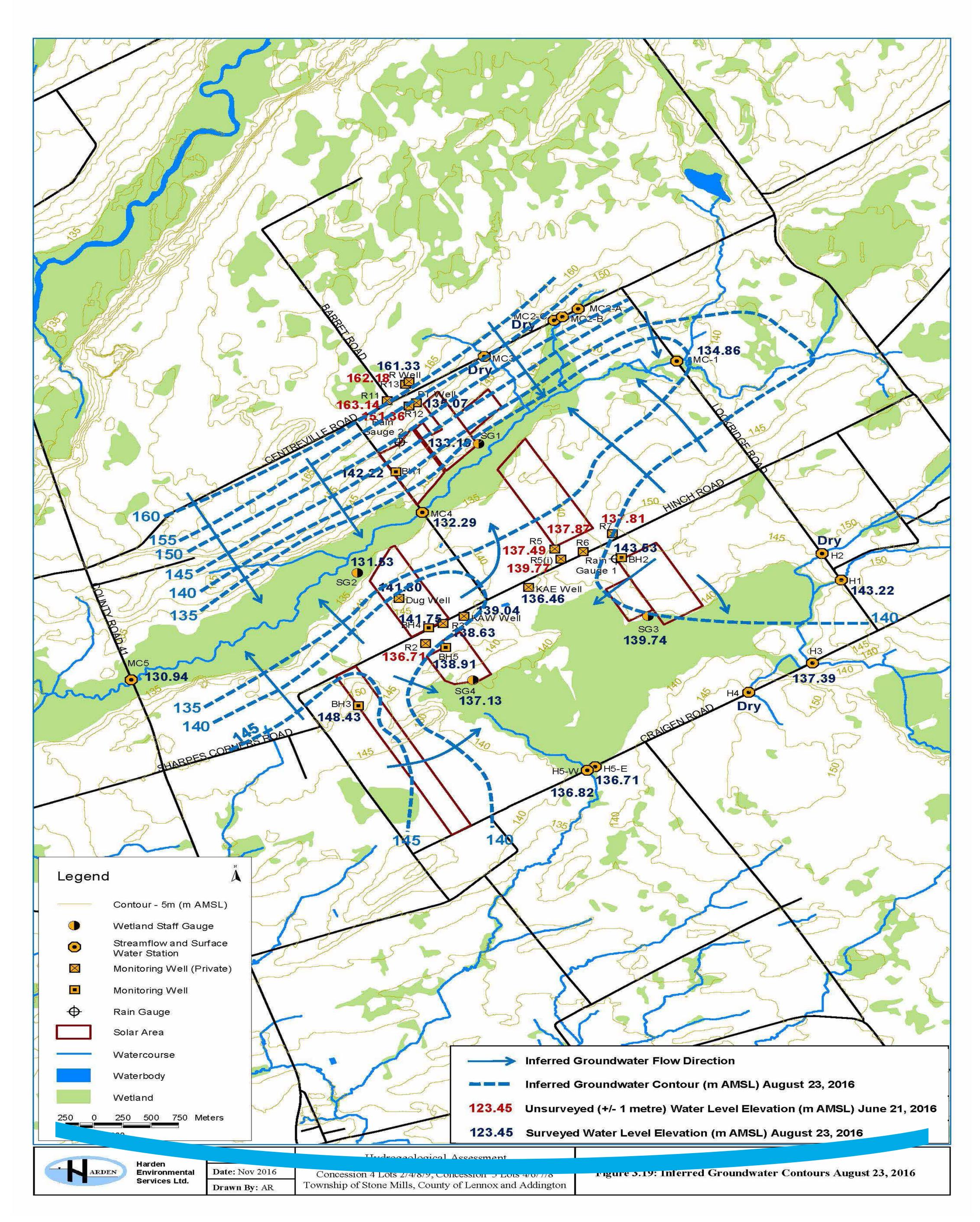
- Well water monitoring will take place at residences adjacent to the project to confirm that the project construction has not affected local wells
- Water wells in the vicinity of the Project were identified and solar panel areas have been setback 60m from drilled wells and 90m from dug wells
- Pre- and post-construction well water samples will be analyzed at a third-party laboratory to check for any out-of-compliance results





Yaote LS Solar Inc.

Groundwater Flow Map





Field Surveys

To support the completion of the NHA, as well as other permitting requirements, the following field studies were 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

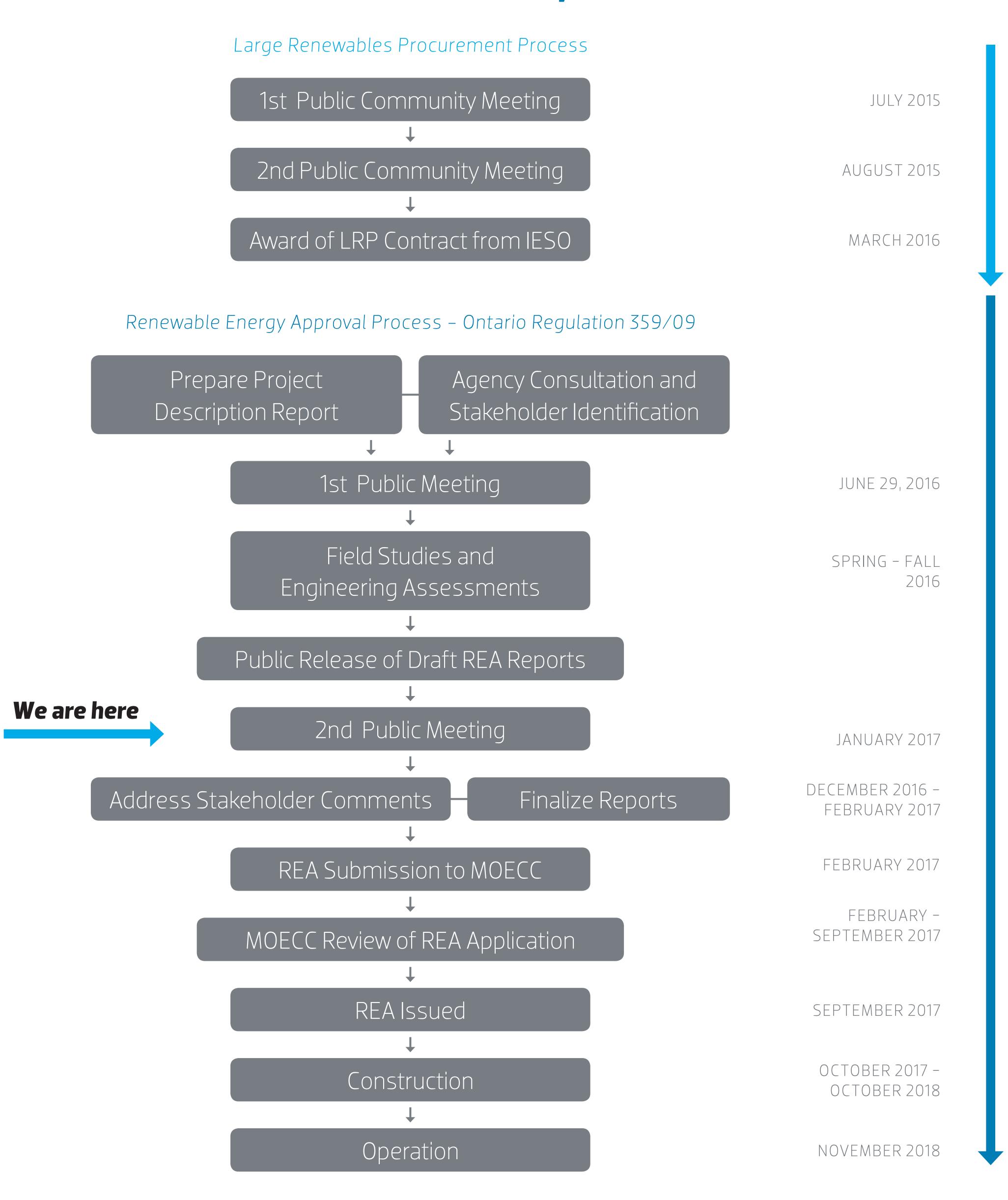


If you have information or observations the Project should be aware of, please submit your comments.



Yaote LS Solar Inc.

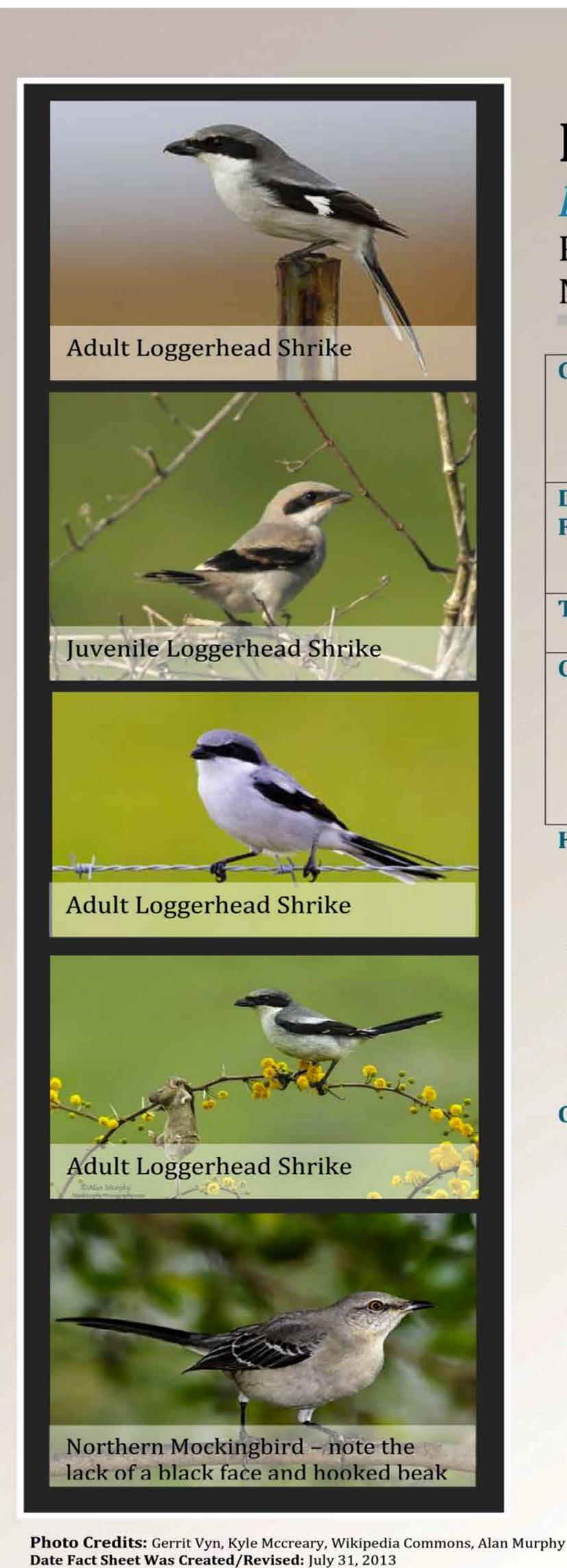
REA Process and Project Schedule





Yaote LS Solar Inc.

Wildlife in Project Vicinity



Loggerhead Shrike

Lanius ludovicianus

Provincial Status: **Endangered**National Status: **Endangered**

Colour	 White underparts Black wings Long black tail Grey back
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

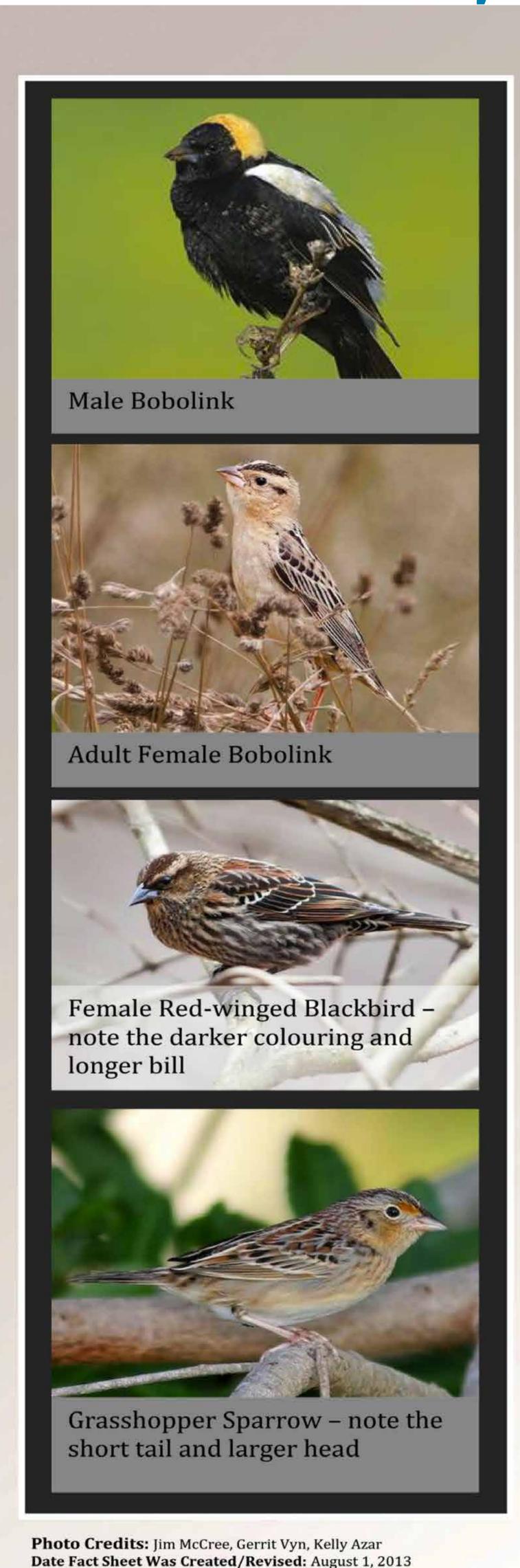
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Yaote LS Solar Inc.

Wildlife in Project Vicinity



Bobolink

Dolichonyx oryzivorus

Provincial Status: **Threatened**National Status: **No Status**

Colour	 Males are black with a white/grey back/rump and a yellow nape Females and non-breeding males are yellowish brown with bold black stripes on the head and back Juveniles are similar in appearance to the female but contain more yellow
Distinctive Features	 Males have a contrasting colour pattern Thick, short bill similar to a finch
Typical Size	Typically 15 to 21 cm long (5" to 5.5")
Other	Males tend to appear unexpectedly, flying over vegetation and singing a bubbly, metallic song

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 darks spots and blotches

Other Information

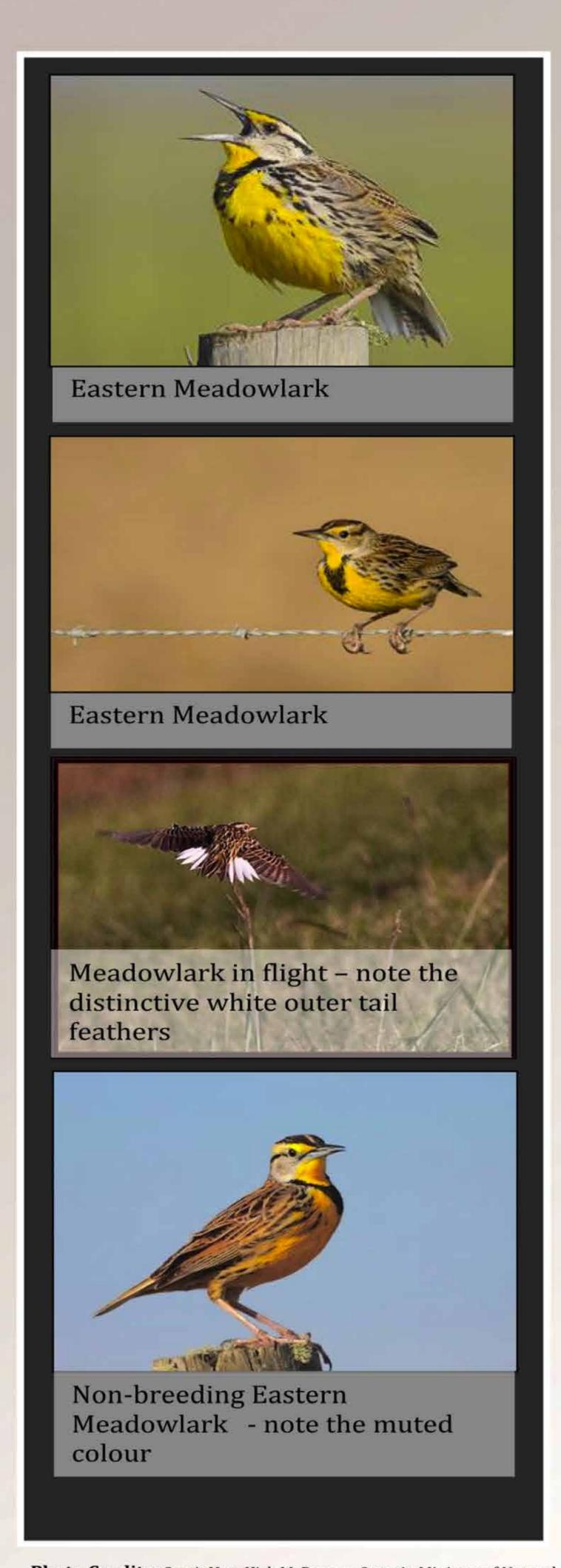
- Males are very distinctive but females, juveniles and non-breeding males can be confused with female Red-winged Blackbird (Agelaius phoeniceus) or Grasshopper Sparrow (Ammodramus savannarum)
- Red-winged Blackbird is darker, more heavily striped on the chest and has a longer bill
- Grasshopper Sparrow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





Yaote LS Solar Inc.

Wildlife in Project Vicinity



Eastern Meadowlark

Sturnella magna

Provincial Status: **Threatened**National Status: **No Status**

Colour	 Pale brown, marked with blackish streaking on the back, wings & tail Bright yellow underparts and a bold black "V" across the breast Males and females have similar colouration
Distinctive Features	 Bright yellow breast Black "V" across the breast Long, slender, spear-shaped bill Outer tail feathers are white and conspicuous during flight
Typical Size	Typically 19-26 cm in length (7.5"-10") Wingspan of 35-40 cm (14"- 16")
Other	 Often perched and singing from a post, pole, wires or tops of shrubs Flutelike descending song which sounds like Spring-of-the-year

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

sin(a-b)



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



Yaote LS Solar Inc.

Wildlife in Project Vicinity



Blanding's Turtle

Emydoidea blandingii

Provincial Status: Threatened National Status: Threatened

Colour	 The upper shell is usually black or dark brown but sometimes grey or a lighter brown Upper shell covered in tan to yellow lines or spots scattered at random Lower shell is a rich yellow Skin is often black or dark brown
Distinctive	Domed shell resembles an army
Features	helmet
	Throat and chin a bright yellow
	Upper jaw is notched and the mouth
	curves upwards, giving the
	impression that the turtle is smiling
Typical Size	Can reach up to 27 cm (10") long
Other	Shells are hinged so some individuals
	can completely close the shell after
	pulling in the head and limbs

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

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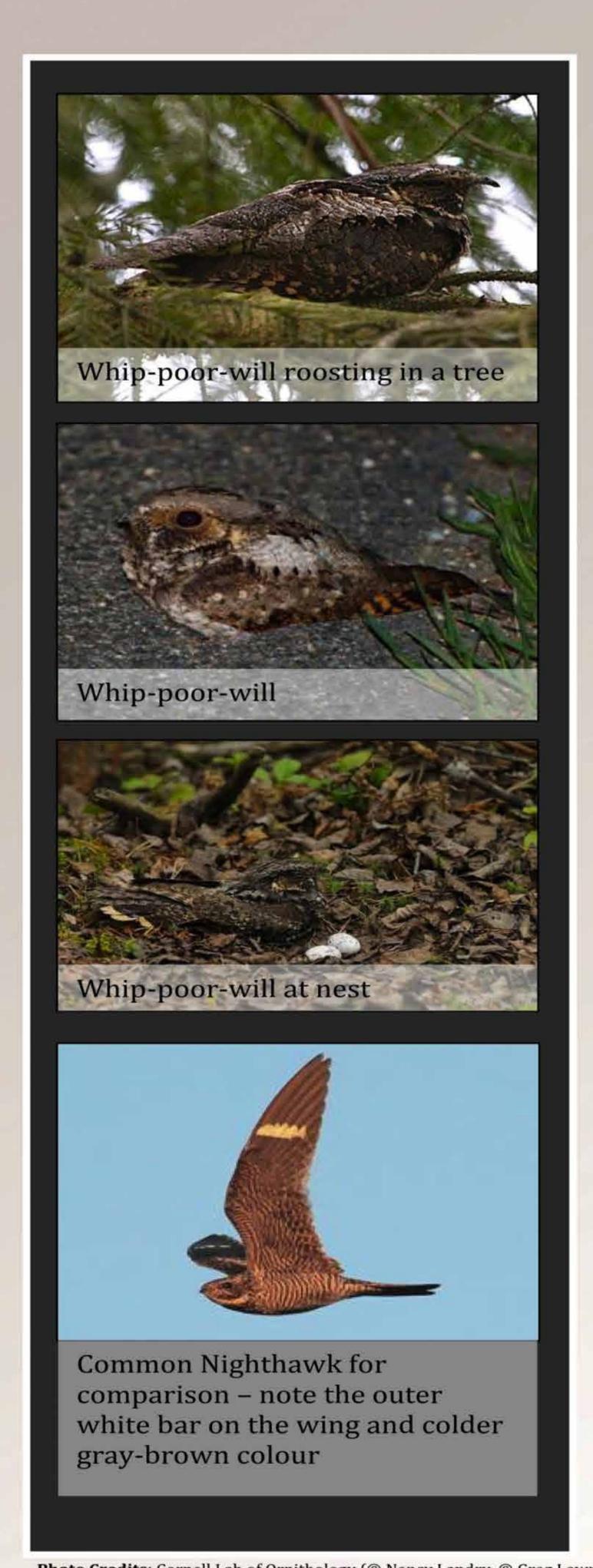


Photo Credits: Joe Crowley, Parks Canada, Ontario Ministry of Natural Resources, Mary Ferguson, Detroit Zoo Date Fact Sheet Was Created/Revised: August 8, 2013



Yaote LS Solar Inc.

Wildlife in Project Vicinity



Whip-poor-will

Caprimulgus vociferus

Provincial Status: Threatened National Status: Threatened

Colour	 Mottled brown and grey feathers Feather pattern blends with grey-brown leaf litter and tree bark Pale, silvery shoulder patches Throat is black and bordered at the bottom by a white bib
Distinctive Features	 Camouflaged grey-brown body with white bib at bottom of throat "Front-heavy" look with large, rounded head and stout chest, which tapers to a long, thin tail Sings loud "whip-poor will" song at nighttime
Typical Size	 Both sexes: 22 to 26 cm (7"-10") long and wingspan of 45-48 cm (18"-19")
Other	Most vocal during bright, moonlit nights

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).
- Nighhawks have an obvious white-bar on the outer part of the wings.

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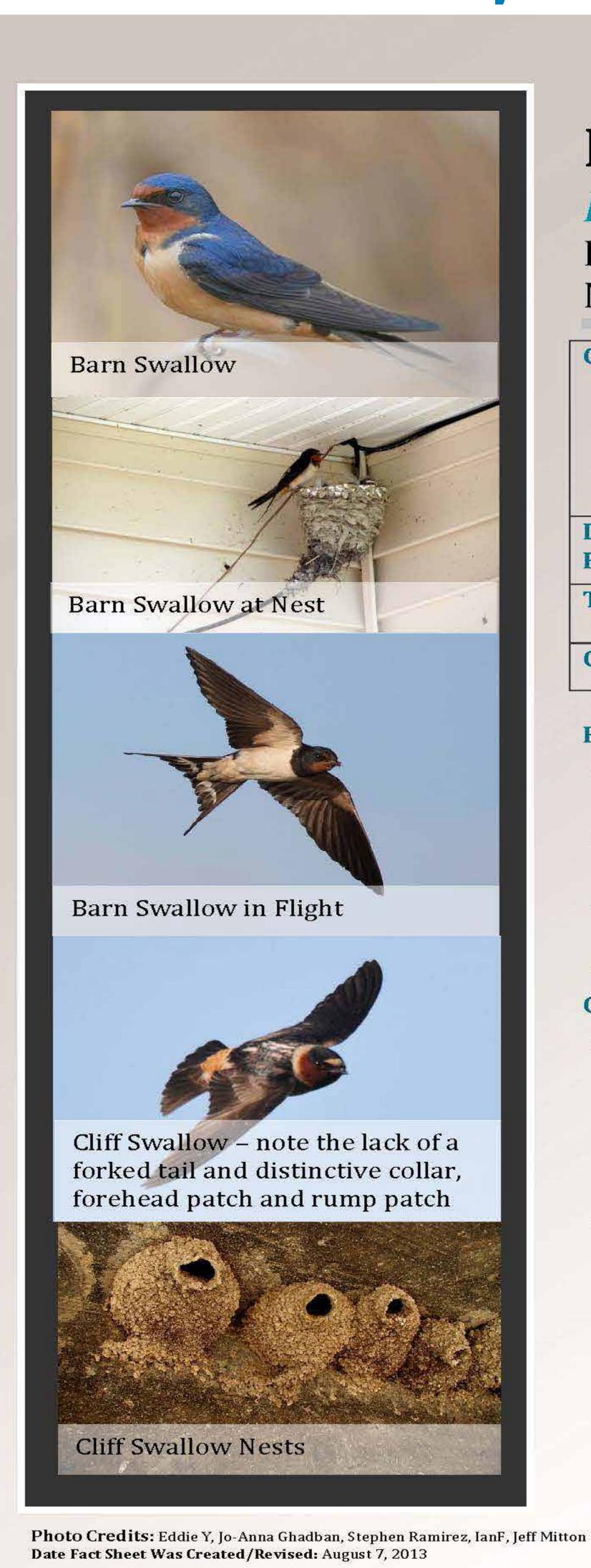


Photo Credits: Cornell Lab of Ornithology (© Nancy Landry, © Greg Lawrence), Mike McEvoy, Philip Simmons Date Fact Sheet Was Created/Revised: July 31, 2013



Yaote LS Solar Inc.

Wildlife in Project Vicinity



Barn Swallow

Hirundo rustica

Provincial Status: **Threatened**National Status: **No Status**

Colour	Glossly, steel-blue back and upper wings
	 Rusty –red forehead and throat Beige coloured belly
	Juveniles are more dusky blue-gray
	and have a pale yellow bill
Distinctive	Pointed wings
Features	Deeply-forked tail
Typical Size	Typically 15 to 18 cm long (6" to 7")
Other	Diet consists of flying insects

Habitat

- Prefers open habitats such as meadows, pastures and farmland during the breeding season
- Often uses man-made structures (e.g. bridges, culverts, barns) for nesting
- Nests are typically made of mud and grass and attached to the side of a structure or on a flat edge.
- Nests are cup-shaped.

Other Information

- Cliff Swallow (Petrochelidon pyrrhonot) has similar colouration but lacks the forked tail and has a distinctive pale rump patch, collar and forehead patch. Also builds mud nests in similar areas but nests are almost enclosed with a small entry/exit hole.
- Tree Swallow (*Tachycineta bicolor*) are a bright white from below with glossy bluegreen upperparts and only a slightly forked tail.

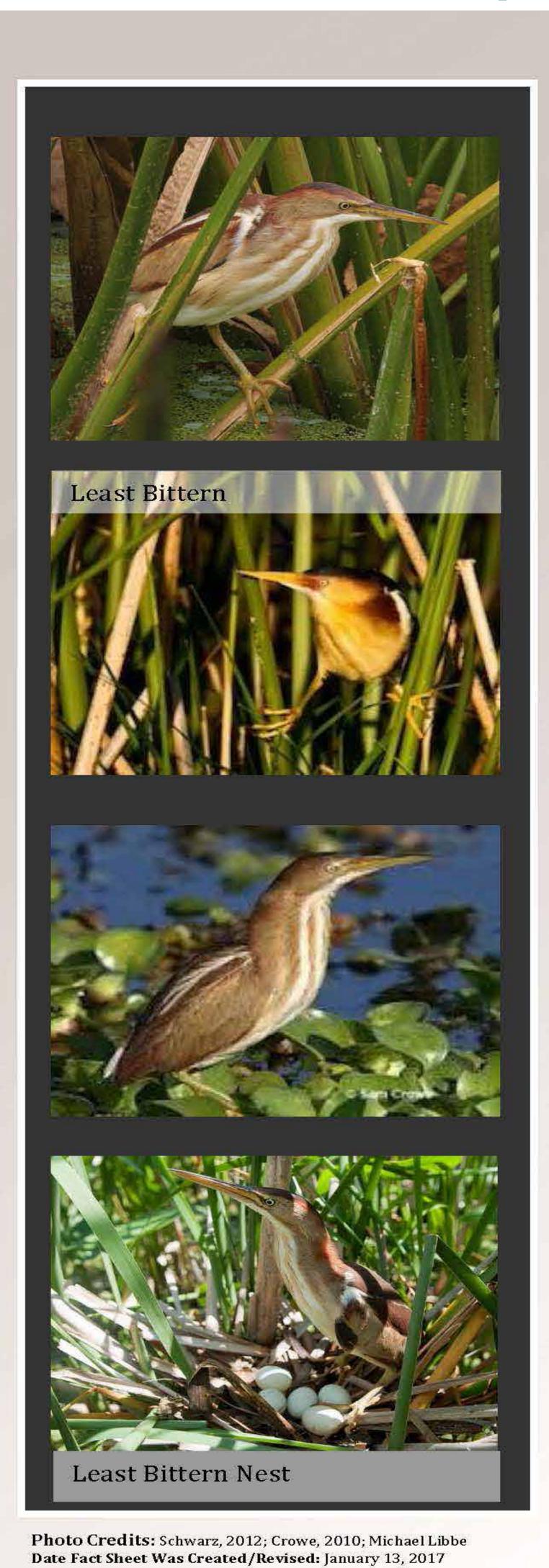
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Yaote LS Solar Inc.

Wildlife in Project Vicinity



Least Bittern

Ixobrychus exilis

Provincial Status: Threatened National Status: Threatened

Colour	Large chestnut patches on its wings
	Brown and beige plumage
	Crown and back of males is black;
	lighter in females and juveniles
	Throat is light tan with white streaks
	White belly
	Legs and bill bright yellow
Distinctive	Long neck and bill
Features	Crown and back black/dark in colour
	Front of neck and chest striped
	orange and white
Typical Size	Typically 28 to 36 cm long
	(11" to 14")
Other	Diet consists of small fish and insects

Habitat

- Can be found in a variety of wetland habitat.
- Prefers cattail marsh habitats with tall emergent vegetation.
- Nests are typically placed in dense, tall stands of vegetation on the ground on a platform made of marsh vegetation.

Other Information

- Part of the heron family.
- Similar species include the Green Heron, American Bittern and rails. Both the Green Heron and American Bittern are much larger in size. The Green Heron has completely dark wings and a dark bill; the American Bittern is entirely coloured with muted browns. Rails lack bright wing patches and have shorter necks.

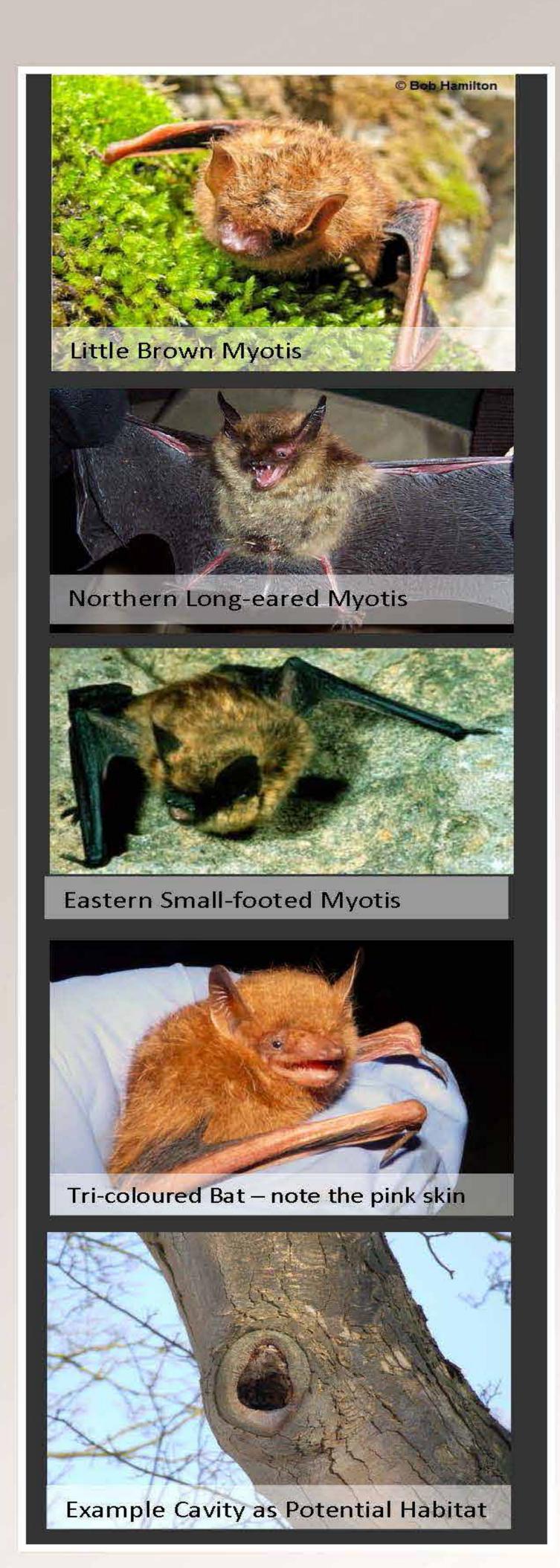
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Yaote LS Solar Inc.

Wildlife in Project Vicinity



Little Brown Myotis

Myotis lucifugus

Northern Long-eared Myotis

Myotis septentrionalis

Eastern Small-footed Myotis

Myotis leibii

Tri-coloured Bat

Pipistrellus subflavus

Provincial Status: **Endangered**National Status: **Endangered**

Colour	 Myotis species are similar in appearance. Have fur that is a pale tan to reddish or dark brown with a slightly paler belly Ears and wings are dark brown to black
Distinctive Features	 Northern Long-eared has much longer ears than other Myotis species Eastern Small-footed has a black mask Tri-coloured has tri-coloured hairs
Typical Size	Little Brown - wingspan 25 to 27 cm Long-eared — wingspan 23 to 26 cm Eastern Small-footed - wingspan 21-25 cm Tri-coloured — wingspan 20-26 cm
Other	 Active during the night Hard to distinguish from other bats without specialized equipment

Habitat

- Myotis species can be found roosting in hollow trees, caves, mine shafts, crevices or man-made structures (e.g. attics, barns)
- When roosting in natural habitats, preference is to loose bark and cavities in larger mature trees (>25 cm diameter)
- Northern species is more likely to roots in natural habitats
- Myotis hibernate in mines or caves

Other Information

- If bats are observed at dusk or during the night, the best way to identify to species is using equipment that can detect bat calls and separate out species.
- If species are observed during the day, smaller Myotis species may be confused with other bat species such as the Big Brown Bat which are physically, much larger.

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Photo Credits: Bob Hamilton, Annemieke Watkins, Roger Barbour, Hall Ecology, Wild Things Wildlife Control Date Fact Sheet Was Created/Revised: August 13, 2013; Rev. January 13, 2017

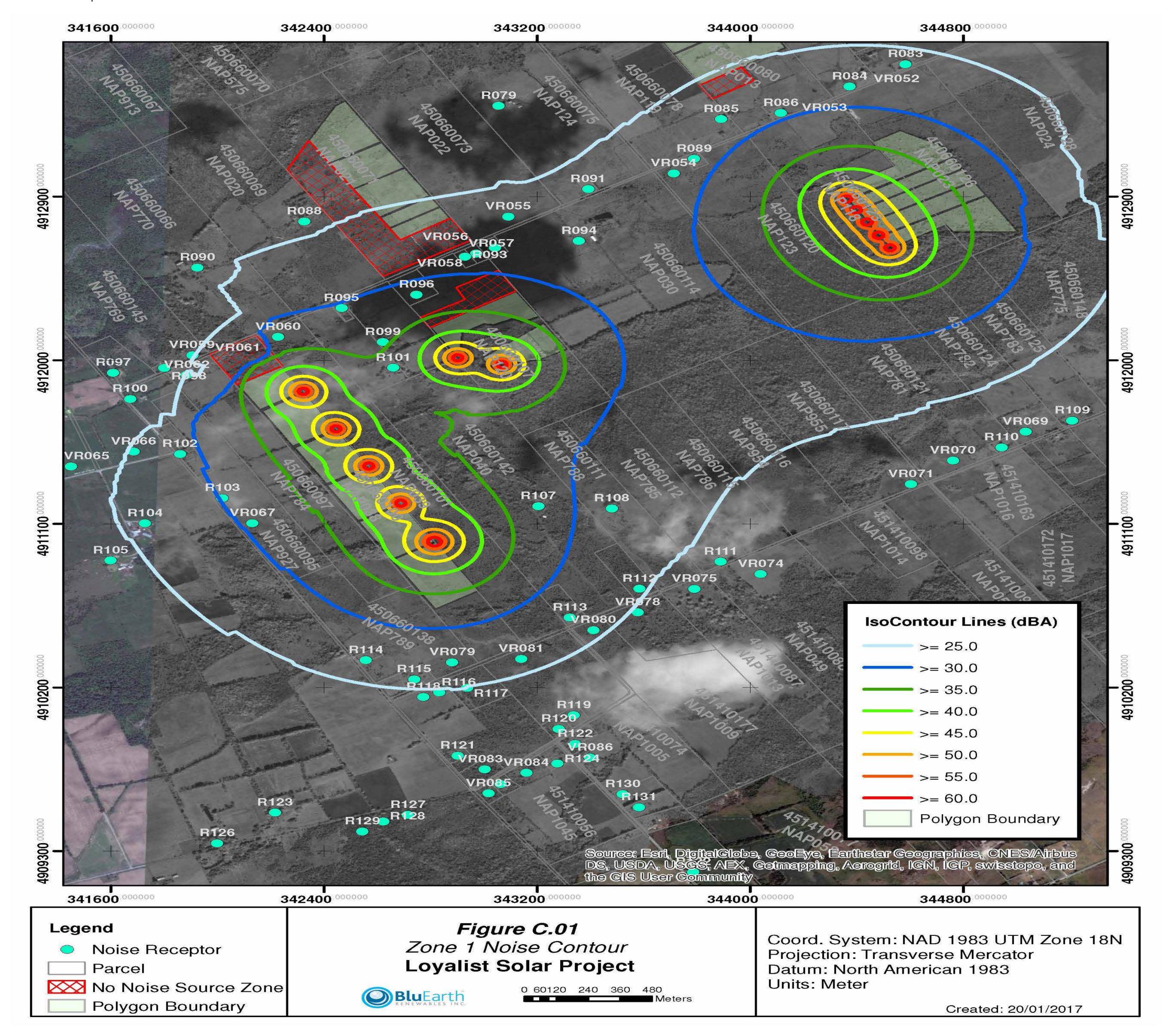


Yaote LS Solar Inc.

Noise Study Report

The Environmental Noise Impact Assessment (Noise Study Report) was completed by a third-party acoustical engineering consultant to demonstrate that the predicted sound levels at receptors will not exceed allowable noise limits.

- Points of reception within 1.5 km of the Project were identified and assessed to predict noise level exposure
 - Points of reception are defined as a dwelling, education facility, day nursery health care facility or place of worship
- The Project noise sources consist of the substation transformer and the 34 inverter stations (inverters and transformers)
- The noise sources were assessed in zones which allow them to be placed within a defined area while still ensuring the Project noise levels do not exceed allowable limits at points of reception
- Once operational, the facility will only produce noise during daylight hours
- The overall conclusion of the study is that The Project will be in compliance with the MOECC noise limit of 40 dBA at all Noise Receptors
- A post-construction noise audit will be conducted to ensure noise limits are not exceeded





Yaote LS Solar Inc.

Visual Screening Plan

A Visual Screening Plan was developed and approved by the Township of Stone Mills.

- The plan prescribes setback distances for the solar panels from municipal roads and requires that vegetation screening be in place
- Visual simulations were created to show how the solar panel areas may look from certain vantage points in the Project vicinity

