NORTHLAND POWER

McLean's Mountain Wind Farm
Public Information Centre
March 22, 2010

COMMENT SHEET

THANK YOU for attending our Public Information Centre. We are interested in hearing your comments, questions, concerns and suggestions regarding the proposed project. Please take a few minutes and provide us with your thoughts on the information presented here this evening. Comments received will be considered during completion of the study process.

Who is liable for all this stuff you going to do.

North land.

The town.

For the paid for land owners ~~owners~~ —

Mr. Mackenzie.

NORTHLAND POWER

McLean's Mountain Wind Farm
Public Information Centre
March 22, 2010

COMMENT SHEET

THANK YOU for attending our Public Information Centre. We are interested in hearing your comments, questions, concerns and suggestions regarding the proposed project. Please take a few minutes and provide us with your thoughts on the information presented here this evening. Comments received will be considered during completion of the study process.

- For years Manitoulin has stood as a "community" where most people who live here are friends and relatives. Your project has torn apart families and friends who no longer speak or share common interest.

- For a company to state that a hunt camp will not be used as an overnight dwelling CERTAINLY knows nothing about Manitoulin. Hunting season is one of the biggest holidays on the island. How can you possibly think noone stays in them.

I have serious concerns for my health. I have had doctor noted affects from living in amongst turbines in Europe. I had heart palpitations, shortness of breath and migraines. I was unable to do my job and as such was let go and left the country. Currently I CHOSE to live on my family farm on Manitoulin and make my living doing trail rides with horses both on public and private property on Manitoulin especially through the Green Bush area. If I suffer once again from the turbines I will not be able to guide these rides to my private property on perch lake for our overnight rides I will lose over 90% of my income to support my business. I WILL LOSE MY HOME AND FARM. SOLUTION ?? P.S. I am not a nervous person as some rep stated !!

NORTHLAND POWER

McLean's Mountain Wind Farm
Public Information Centre
March 22, 2010

COMMENT SHEET

- are there no negatives to this project.??
I think the public should be made aware of ~~the~~ these.
There is no project that is perfect. Your information is severely lacking.

Please return this completed Comment Sheet to the project team at the Registration Table or you can fax it or mail it to:

Rick Martin, Project Manager
Northland Power Inc. Little Current Office
McLean's Mountain Wind Farm Office
P.O. Box 73
Little Current ON, P0P 1K0
Tel: (705)271-5358 cell, (705)368-0303 Manitoulin Island Office
E-mail: rickmartin@northlandpower.ca

May 18, 2011
Public Information Centre

Sign-In Sheet

NORTHLAND POWER

McLean's Mountain Wind Farm Project
Public Information Centre
May 18, 2011
Sign-in Sheet

	Name (please print)
1	Dan DeBassige
2	Susan Hare
3	Joe Hare
4	Rose Marie Martin
5	Lisa Martin
6	Thomas Hare
7	Jeanine Debassige
8	Nand Debassige
9	Robert Corbiere
10	Terry Pelkey
11	Bud & Pat Wilkins
12	Brad Wilkin
13	Hugh Eshkibok
14	Brian Woods
15	Jack Woods
16	Gerald Bond
17	Christina Jones
18	Ruth M. Bastien
19	Melissa Peters
20	Michael Eshkibok

NORTHLAND POWER

McLean's Mountain Wind Farm Project
Public Information Centre
May 18, 2011
Sign-in Sheet

	Name (please print)	Address	E-mail Address
41			
42			
43	Eleanor Kanasawe		
44	Bella Shigwadja		
45			
46			
47			
48	Glenda Shigwadja		
49			
50	TODD SHOWAN		
51	Pauline Mantha		
52	Mike Mantha		
53	Debby Turner		
54	Pam Jackson		
55	Jason Monitowabi		
56	Montana Monitowabi		
57	Teshina Miguans		
58	Veronika Biinguaan		
59	Patti BondBeaudry		
60			
61	Alison Aguonie		

NORTHLAND POWER

McLean's Mountain Wind Farm Project
Public Information Centre
May 18, 2011
Sign-in Sheet

	Name (please print)	Address	E-mail Address
62			
63	Rosemary Whitegiiq		
64			
65			
66	ALLISON DEMPSTER		
67			
68			
69			
70			
71			
72			
73			
74	Gary Fuhrman		
75			
76			
77	Perry Lwelace		
78			
79			
81	Peggy Simon		
82	GORD BICKELL		

NORTHLAND POWER

McLean's Mountain Wind Farm Project
Public Information Centre
May 18, 2011
Sign-in Sheet

	Name (please print)
21	Joe Lindamaway
22	Raymond Beaudry
23	Emily Weber
24	Bryce Casson
25	Stan Ferguson
26	Chris Beaudry
27	Barbara Jamieson
28	Judy Mackenzie
29	M Waksawic
30	Paul Best
31	Alan M Sanford
32	M Dantouze
33	Henry Panarick
34	Nicolas Hatfield
35	Gaigl Robinson
36	Kay J Jackson
37	Colin Lottery
38	Ron Tupper
39	Cathy Silby
40	

Handout Materials

Welcome to our Public Information Centre

- **The purpose of this information centre is to:**
  - ✓ Provide an update on the project
  - ✓ Present project changes
  - ✓ Present new studies that have been undertaken since last PIC
  - ✓ Listen to you
  - ✓ Respond to your questions

- **We welcome an open and respectful dialogue with you regarding the project.**

Project Overview & Update

- The project has been in the planning stages for over 10 years – the first PIC was held in 2004.
- An Environmental Screening Report was completed (July 2009) and Notice of Completion was published on July 15, 2009.
- The proposed project is subject to Renewable Energy Approval (REA) under the *Green Energy Act.*
- Draft REA package was released for 90 day review in Dec 2009 for the Municipality and 60 day review for the public in January 2010.
- Our last PIC was held in March 2010.
- Changes have been made to the project to be compliant with REA requirements and to respond to your concerns and preferences.
- Final REA package to be submitted to the Ministry of the Environment in June/July 2011.

Partnership with Mnidoo Mnising Power Corporation

NPI has entered into a 50/50 partnership with Mnidoo Mnising Power Corporation to build and operate the McLean's Mountain Wind Farm.

Mnidoo Mnising Power (MMP) is a corporation formed, by the United Chiefs and Councils of Mnidoo Mnising (UCCMM), to engage in renewable energy projects on their traditional lands, in order to protect First Nations' rights, heritage and ensure the future for First Nations' youth.

Membership of MMP includes: M'Chigeeng First Nation; Sheguiandah First Nation; Sheshegwaning First Nation; Aundeck Omni Kaning First Nation; Whitefish River First Nation; and Zhiibaahaasing First Nation.

Partnership with Mnidoo Mnising Power Corporation

“The United Chiefs and Councils of Mnidoo Mnising are committed to the thoughtful and responsible development of our natural resources, where our families’ needs are addressed and that provides a better future for our young people. Our shared ownership with Northland Power is an important model of how First Nations can work closely with the private sector and government on something that both benefits our people and supports the Province of Ontario’s leadership in renewable energy.”

“As First Nations people, we are proud that the Mnidoo Mnising Power project will gather our resources and harness nature to create clean and renewable energy in harmony with Mother Earth as the giver and sustainer of life. With this project we are travelling full circle from our roots to the future.

We will harness our people’s own energy to determine our destiny and bring hope to century old problems. The vision of our people to bring opportunities, protect our rights, preserve our heritage and ensure the future for today’s families and tomorrow’s youth”.

- UCCMM Tribal Chair Chief Shining Turtle

Project Description

- **Construction of 24 - 2.5 MW GE 2.5xl wind turbines.**
- **Total generation capacity of 60 MW of electricity.**
- **Wind farm infrastructure to include:**
  - A115 kV electrical transmission line to connect the project to the provincial grid at Goat Island (with a submarine crossing of the North Channel);
  - A transformer will be used to increase the electrical voltage from 34 kV to 115 kV;
  - Wind turbine site access roads;
  - Electrical collection system – underground wherever possible, overhead in sensitive areas;
  - Wind turbine site that will allow assembly and erection of the wind turbines;
  - Meteorological towers (4) already installed and operating; and
  - On-site Operations and Maintenance building.

How has the Project Changed?

- **Reduction in the number of turbines**
  - All turbines are now south of Morphet's Side Road.
  - 43 turbines in 2009
  - 33 turbines in 2010
  - 24 turbines in 2011
  - NPI received a Feed-In Tariff (FIT) Contract for 60MW in 2010.
  - Based on public comments and feedback NPI further reduced the number of wind turbines in order to:
    - Reduce the visual impact. Northland Power removed the highest performing turbines (turbines #1, #2, #4).
    - Removed some turbines along Honora Bay to address concerns.
    - Reducing the number of wind turbines to 24 decreases the amount of land clearing, site preparation and access road construction to preserve more of the natural environment.
  - Removal of some turbines to avoid direct impact to wetlands. We have considered all types of wetlands: provincially significant, MNR noted wetlands and new identified wetlands through the environmental review process.

How has the Project Changed?

- **Increasing the generator size and tower height of the wind turbines allows more energy to be produced with fewer turbines.**
  - Tower heights were increased from 80 m to 100 m.
  - Generator size increased from 1.8 MW to 2.5 MW.
  - Public wanted NPI to increase the effectiveness of wind power while reducing the footprint of the project.
- **Thirty (30) wind turbines sites are being permitted. Twenty-four (24) sites will be built. These are indicated on the following maps. The remaining six (6) turbines will only be looked at on a one-by one basis if a major flaw is anticipated with an original site.**
  - Each of the 30 sites have been investigated thoroughly to meet all REA regulatory requirements.
- **Refinement of transmission line route on Goat Island.**

Your comments were the drivers of these changes!

Transmission Line

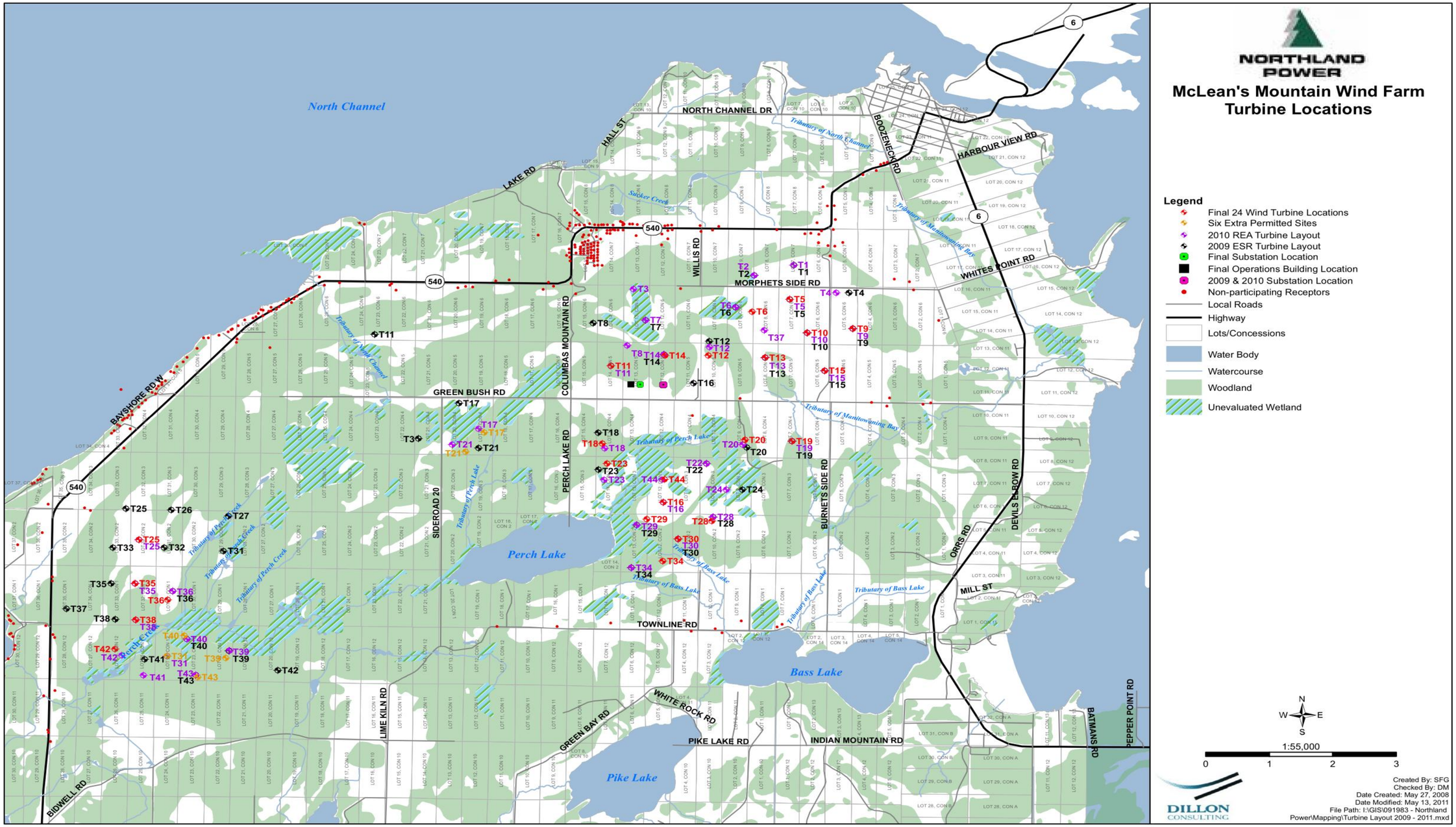
To avoid natural drainage and sensitive habitat on Goat Island NPI routed the transmission line to have the least amount of environment impact possible. This portion of the transmission line will be buried.

115 kV Transmission Line

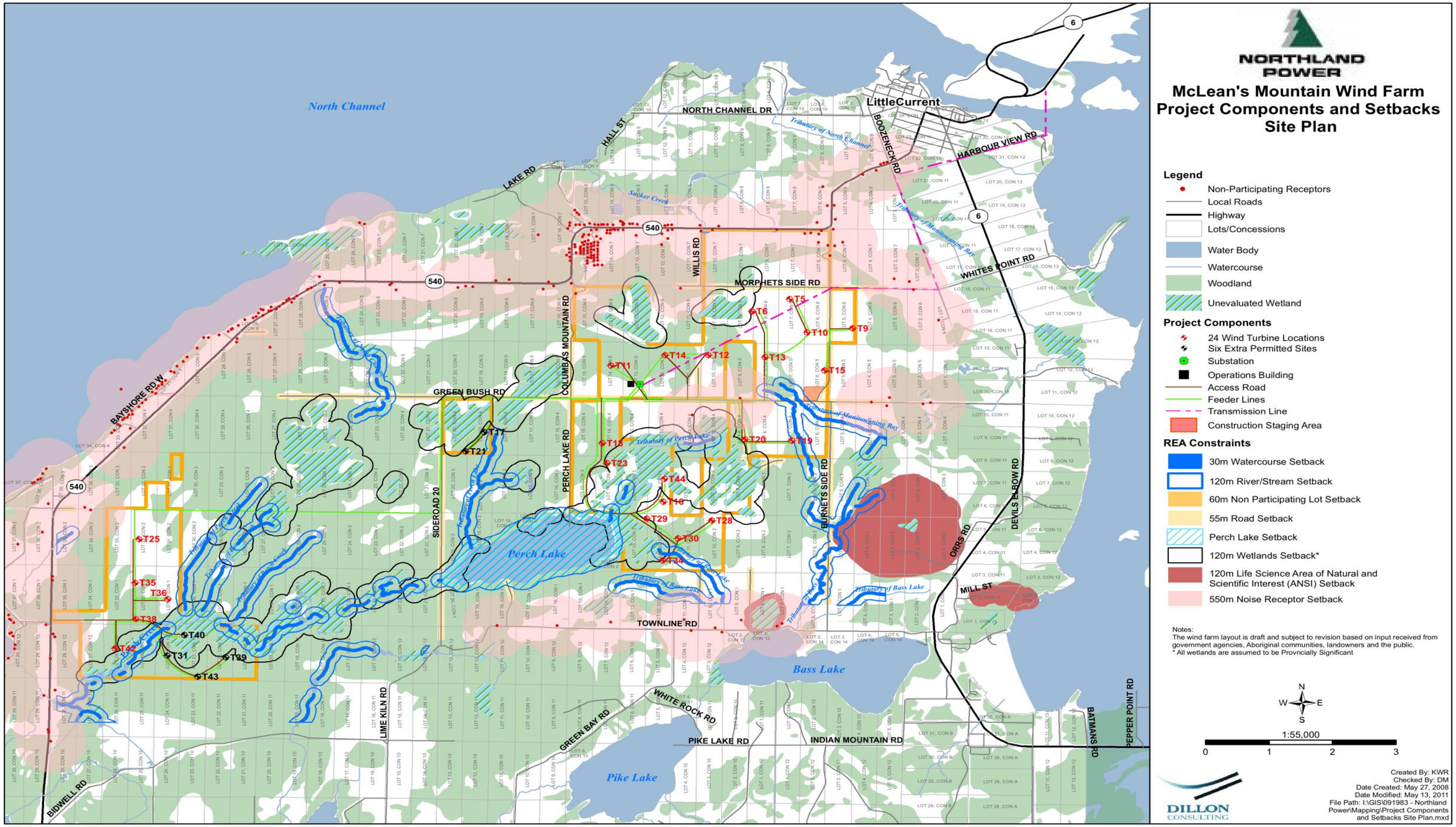
Typical single pole 115kV structure

Map of Project Layout Changes
(2009-2011)

NORTHLAND POWER



Project Layout



NORTHLAND POWER

McLean's Mountain Wind Farm
Project Components and Setbacks
Site Plan

Legend

- Non-Participating Receptors
- Local Roads
- Highway
- Lots/Concessions
- Water Body
- Watercourse
- Woodland
- Unevaluated Wetland

Project Components

- 24 Wind Turbine Locations
- Six Extra Permitted Sites
- Substation
- Operations Building
- Access Road
- Feeder Lines
- Transmission Line
- Construction Staging Area

REA Constraints

- 30m Watercourse Setback
- 120m River/Stream Setback
- 60m Non Participating Lot Setback
- 55m Road Setback
- Perch Lake Setback
- 120m Wetlands Setback*
- 120m Life Science Area of Natural and Scientific Interest (ANSI) Setback
- 550m Noise Receptor Setback

Notes:
The wind farm layout is draft and subject to revision based on input received from government agencies, Aboriginal communities, landowners and the public.
* All wetlands are assumed to be Provncially Significant

N
W E
S

1:55,000

0 1 2 3

DILLON CONSULTING

Created By: KWR
Checked By: DM
Date Created: May 27, 2008
Date Modified: May 13, 2011
File Path: I:\GIS\091983 - Northland Power\Mapping\Project Components and Setbacks Site Plan.mxd

Project Communications & Consultation

- **Northland Power has conducted communications and consultation activities with:**
  - ✓ Provincial agencies
  - ✓ Local landowners
  - ✓ NEMI
  - ✓ Local interest groups
- **Northland Power has engaged in communications and conversations with aboriginal communities and individuals that have an interest in the project.**
- **Northland Power maintains a project office in the local village that is permanently staffed and through a weekly newspaper column addresses key controversial issues regarding wind power generation and the McLean's Mountain project and extends an open invitation for community consultation. Copies of these columns are on display at this meeting.**
- **Northland Power is committed to continuing its consultation activities as the project moves from the planning stage to implementation.**
- **There will be additional public review and comment opportunities during the MOE REA review and approval process.**

MANITOULIN WIND NEWS
COLUMN ARCHIVES

In December 2010, a regular column started to appear in the Expositor, written and paid for by the McLean's Mountain Wind Farm project to be sure residents had access to facts, references and expert sources, verified by an existing project team. We have had many positive comments about the quality and readability of the information. If you have missed any of these columns or would like copies of past columns, an archive has been prepared. We can email them to you or you can come to the project office and pick up copies for yourself. Feel free to make suggestions for further topic areas. Let's keep communications open.

Rick Martin
PROJECT MANAGER

December 15, 2010
WIND ENERGY IS CLEAN ENERGY
Why wind energy is coming to Manitoulin Island.

December 22, 2010
TURBINES ON MANITOULIN LANDSCAPE
Why and how wind turbines will bring green energy to Ontario and to Manitoulin Island.

January 12, 2011
WIND SOUNDS
Facts about wind turbine sounds.

January 19, 2011
WIND & WILDLIFE
Proactive approach to wind and wildlife impact on Manitoulin Island.

January 26, 2011
PROPONENT RESPONSIBILITIES
Three levels of government requirements and monitoring.

February 2, 2011
IMPACT ON ADJACENT LANDS
Green Energy Act guidelines, setbacks and MPAC studies.

February 9, 2011
TURBINE LOCATIONS
Turbine location process and use of Wind Rose.

February 16, 2011
THE RENEWABLE ENERGY ACT
Renewable Energy Approvals process and requirements charted.

February 23, 2011
FIRST NATIONS PARTNERSHIP
50-50 Partnership with Mnidoo Mnising Power, McLean's Mountain Wind Farm and other energy ventures explained.

March 2, 2011
WE'VE HEARD YOU: NEW LOOK
Impact of community input on five turbine removals.

March 9, 2011
LOCAL IMPACT DURING CONSTRUCTION
Survey team begins road routes for construction using GPS and LiDAR.

March 16, 2011
COMMUNITY INVOLVEMENT
Positive role of engaged farmers and landowners.

March 23, 2011
TRUE COST OF RENEWABLE ENERGY
Addressing myths related to expense of renewables.

March 30, 2011
ECONOMICS OF WIND
Wind energy proving competitive when factoring in benefits and long-term needs.

April 6, 2011
CHANGING WIND TECHNOLOGY
History of wind energy and technological advances in blades and towers.

April 13, 2011
WIND FARM PROJECT UP DATE
Status report on development plans.

April 20, 2011
ROLE OF PUBLIC MEETINGS
Influence you can bring to a project.

April 27, 2011
EFFECT OF TALLER TURBINES
Reducing number of turbines and wind sound.

May 3, 2011
AGRICULTURAL LAND & TURBINES
Wind is compatible with agricultural land use.

McLean's Mountain Wind Farm
PROJECT OFFICE
13 Worthington Street
Little Current
Call us at 705-368-0303

NORTHLAND POWER

Key Comments from Previous PIC

- **The Public expressed concerns regarding:**
  - Impacts to Tourism;
  - Impacts to Natural Environment and Wildlife;
  - Turbines in north portion of study area Turbine proximity to homes and seasonal dwellings, such as hunt camps;
  - Geotechnical concerns including soft rock and gas pockets;
  - First Nations consultation;
  - Health effects; and
  - Sound Impacts.

- **The revised project design responds to these concerns!**

Community Concern: Impacts to Tourism

- No negative effect to tourism expected.
- Wind farms can have positive effects on the local tourism economy.
- Project is well removed from the Lake Huron shoreline. Westernmost turbine (#42) is over 3 km from shoreline; Easternmost turbine (#9) is 1.5 km from shoreline.
- Local tourism associations may use wind turbines to promote “green tourism”.
- Northland Power’s Quebec projects report regular, casual and organized visits. During the summer of 2008, a single project received 3500 visitors.

Community Concern: Impacts to the Natural Environment and Wildlife

- Extensive studies on the natural environment have been conducted for the proposed project, all in consultation with the MOE and MNR.
- The Natural Environment Assessment concluded that the risk to rare, threatened and endangered species in the area is low and minimal significant adverse effects are anticipated. Additional field work was conducted in 2010 as per the MNR direction.
- Some turbines have been removed and some changes were made to the turbine and road locations to avoid wetland areas that now have to be avoided under the REA process.

Community Concern:
Effect on Property Values

- Two recent, Ontario-based studies were presented at the last PIC, both concluded that there has been no measurable effect on property values, as a result of the Prince Wind Farm near Sault Ste. Marie and in Chatham-Kent, where there are multiple wind farms.
- It is also our understanding that since the McLean's Mountain Wind Farm has been in advanced development stages adjacent properties including Farms have been sold at quite appreciated values.
- MPAC uses market and sales analysis to determine property values and has provided an outline of how they assess properties. In 2009, MPAC stated that "To date, MPAC's analysis of sales does not indicate that the presence of wind turbines that are either abutting or in proximity to a property has either a positive or negative impact on its value."

Community Concern: Turbine Proximity to Homes and Seasonal Dwellings

- The Province of Ontario has some of the most stringent regulations in North America regarding wind turbine siting and sounds restrictions and Northland Power intends to meet or exceed these regulations. It is important to note that although wind energy is relatively new to Ontario, it's a very well-established and proven form of electrical generation around the world. For more than thirty (30) years, tens of thousands of people have been living near wind turbines with no ill effects.
- The McLean's Mountain Wind Farm meets all applicable REA setbacks of 550 m to sensitive receptors.
- The MOE has identified in the Green Energy Act what a sensitive receptor is. These definitions were posted at our previous PIC.
- The closest receptor to a turbine is 698 m.
- The average distance between any of the 30 permitted Turbine sites and a receptor is well over 1.3 km.

Community Concern: Geotechnical Impacts

- Geotechnical tests show that the rock near the surface is fractured and permeable and therefore unlikely to contain gas.
- The process of taking core samples at all 30 sites to be permitted is now complete.
- The foundations that will be used for the turbines on this site are the same as the ones used in locations with sandy soil. The large spread foundation disperses the mass of the turbine equally over a significant footprint to enhance its stability.
- Given the shallow depth of the foundations, three (3) m and the fractured and permeable nature of the geology, no measurable effects on ground water flow is expected.
- NPI will be undertaking potable water surveys to ensure no impacts to local residents.

Community Concern: Health Effects

- Infrasound or low frequency noise emissions were characteristics of some of the earlier models of wind turbines. This was attributed to early designs. This phenomenon does not occur with modern upwind turbine technology.
- **The May 2010 report on *The Potential Health Impacts of Wind Turbines*, Chief Medical Officer of Health concludes that:**

  "…low frequency sound and infrasound from current generation upwind model turbines are well below the pressure sound levels at which known health effects occur. Further, there is no scientific evidence to date that vibration from low frequency wind turbine noise causes adverse health effects".

Community Concern: Sound Impacts

- MOE noise restriction limit of 40 dBA will be met for all recognized noise receptors.
- All of the proposed wind turbines are greater than 698 m away from any residence, so there should clearly be no issue.
- The wind turbine layout has been designed to meet MOE noise guidelines, as outlined in the *“Interpretations for Applying MOE NPC Technical Publications to Wind Turbine Generators”.*
- Sound modelling assumes receptors to be downwind of all surrounding turbines.