



Environmental Impact Assessment

The Acadian Wild Blueberry Company Limited

Proposed New Factory Location Bois-Gagnon, NB

September 2014

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1.0 INTRODUCTION

1.1 PROPONENT INFORMATION

The proponent is The Acadian Wild Blueberry Company Limited, hereafter referred to “Acadian Wild”.

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1.2 PROPERTY OWNERSHIP

This Environmental Impact Assessment (EIA) Registration document is being prepared for the proposed Wild Blueberry Processing, Packaging and Cold Storage Facility and its related operations to be located in the community of Bois-Gagnon, Gloucester County, New Brunswick. The proposed undertaking consists of four main areas:

- The Blueberry Processing Plant
- The Well Field
- Waste Water Disposal Area
- Leaf Composting Area

These areas will collectively be referred to as the “Facilities” or “Site” throughout this report. A site location map and aerial photograph showing the site is provided in the Appendix. Additional descriptions of each of the four main areas are also provided below.

1.2.1 Blueberry Processing Plant

The Blueberry Processing Facility and Cold Storage will be located on the land having the PID 20228144 with possible future expansion on PID 20227179. The initial Plant Site is approximately 41 hectares (100 acres) on PID 20228144 and is bordered by Route 160 to the North and Bordage Road to the East, Agricultural Blueberry Land to the South and a wood lot on PID 20227179 to the west. The proposed factory will sit entirely on PID 20228144 and will be set back approximately 120 meters from Route 160 and 100 meters from Bordage Road. Furthermore, the East side of Bordage Road contains a mix of woodland and Agricultural Blueberry Land.

1.2.2 Well Field

The processing of fresh blueberries requires a substantial amount of water for cleaning and conveying the fruit as well as for defrosting IQF Freezing Tunnels, supplying evaporative condensers for the refrigeration plant and general clean-up and wash water typical in any food processing factory. Upwards of 2.25 cubic meters per minute of water may be required for the roughly 30 day fresh blueberry processing season during the month of August into perhaps mid-September. Requirements for the remainder of the year would be under 0.5 cubic meters / minute during normal plant operations. Since the operation of a Fresh Blueberry Processing Plant depends on the availability of a sufficient potable water supply, the location of a suitable and sustainable water reserve is of paramount importance for this project to proceed. There is limited hydro geological information available in this region so water exploration activities need to be undertaken. Fracture Trace analysis was performed on the site to identify the most probable locations for sufficient water to be located and 4 initial test wells are proposed at the locations shown in the Appendix.

The proposed exploration wells are located entirely on the parcel of land having the PID 20228144 approximately 900 meters South of Route 160, 150 meters West of Bordage Road and 300 meters North of the 138 kV New Brunswick Power transmission line intersecting this property on an area covering approximately 2.5 Hectares.

1.2.3 Waste Water Disposal Area

The water used for the fresh processing of Wild Blueberries is typically cascaded through the system and / or recovered and recycled as practical. Typical waste water from a blueberry processing line will go through primary screening to remove solids which mainly consist of leaves, sticks, twigs and other plant matter, sand and grit originating from wild blueberry fields. After primary filtration the water will enter a small holding basin and then be pumped to multiple irrigation nozzles for land application. A holding basin is required to allow for buffering capacity for the variable flow that comes from the processing plant, stoppages or shutdowns for maintenance related activities on the irrigation system or for excessively wet periods when land application of the process water must be curtailed to prevent runoff of water outside of the spray site boundaries.

The exact location and capacity of the spray sites have not yet been identified but it is expected that they will be on approximately 60 hectares at the South End of PIDs 20228144 and 20227179 along with the suitable areas on the approximately 160 hectare parcel identified by PID 20294266 leased from the Department of Natural Resources (DNR) under the File # 415 06 0076 – “Industrial Lease for Acadian Blueberries for Wash Plant Water Disposal”.

1.2.4 Leaf Composting Area

During the harvesting of wild blueberries many leaves, twigs and other plant matter is picked by the harvesters along with the actual blueberry crop. While every effort is made to remove this extraneous plant matter in the field, there is still a significant amount of this plant material mixed with the fresh fruit received at the Facility. One of the first steps in the fresh processing of wild blueberries involves the use of winnowing machines to remove this loose plant matter from the heavier fruit. The proposed Facility will have an area designated to stockpile and compost this plant matter coming from the surrounding blueberry fields. An area of approximately 5 hectares south of the proposed well field on the parcel of Land having PID 20228144 would be designated for this.

2.0 THE UNDERTAKING

2.1 Name of the Undertaking

The undertaking consists of the site development and construction of a Fresh Wild Blueberry Processing, IQF Freezing, Packaging and Cold Storage Facility as well as the associated services and waste handling for the Acadian Wild Blueberry Company Limited, hereafter referred to as “**The Acadian Wild Plant**”.

2.2 Project Overview

The Acadian Wild Plant is a greenfield project that involves the design and construction of a complete Individually Quick Frozen (IQF) Wild Blueberry Processing Facility. The Facility will consist of the following main components:

- Fresh Blueberry Receiving Dock – The fresh dock is typically an open or partially covered receiving dock with a combination of positions to receive both van trailers as well as any combination of smaller ½ ton to 5 ton truck trailer. It is here that fresh blueberries from the fields are received, identified by field, grower and other attributes and most importantly weighed. After being properly identified and weighed the blueberries are then sent to the fresh cleaning line. Cleaned empty boxes are typically reloaded back onto the respective trucks and trailers at the fresh dock to be returned to the fields.
- Fresh Blueberry Cleaning Line – After being identified and weighed the blueberries are transported to the fresh cleaning line by a combination of fork trucks and conveyors to the box dumping stations. Here the boxes are dumped and the empty boxes are cleaned to be returned to the fields for refilling. A combination of dry and wet cleaning equipment is used to remove the field debris from the blueberries which includes mainly leaves, sticks, twigs and other plant matter. Immature, overripe and damaged fruit as well as sand and small stones are also removed on the cleaning line in various processes which utilize water. The cleaned fruit is then conveyed to the IQF tunnels for freezing.
- IQF Freezing Tunnels – The fruit receives a final rinse with potable water before entering the IQF Tunnels for individual quick freezing. The cooling for the tunnels is supplied by a large industrial refrigeration plant which uses ammonia as the refrigerant. Ammonia is a naturally occurring refrigerant with zero GWP (global warming potential) and zero ozone depleting potential

as well as a very high coefficient of performance (COP) compared to any HCFC alternatives.

- Tote Filling Room – The IQF Tunnels discharge into a tote filling room where the frozen fruit is collected on a series of conveyors and transported to filling stations where bulk 1450 lb Gaylord style totes are filled for storage. Additional equipment for sizing and destemming of the fruit may also be employed in the tote fill room prior to bulk tote filling. To maintain the integrity of the frozen product, this area is also often refrigerated with air coils.
- Repackaging Line – Due to the fact that the fresh blueberry season is only approximately 4 weeks in length and blueberries are extremely perishable and degrade very quickly after being harvested, fresh fruit is typically harvested and frozen into bulk totes within 24 hours. For the remainder of the year this bulk fruit is taken from storage and reprocessed to meet customer specification. The repackaging line involves the use of sophisticated digital camera and laser sorting equipment to remove any foreign material, colour, size or shape defects, etc. There is also a combination of destemming, sizing, inspection and packaging equipment used so that the product can be processed to meet exact customer specifications. The processed blueberries at the end of this line are packaged into their final package and palletized for shipment to customers.
- Freezer Storage – The freezer storage, which typically operates at -15 degrees Fahrenheit, is used to store a combination of bulk product as well as finished product awaiting shipment to customers throughout the world. It is typically connected to the process line on one side and has a refrigerated shipping dock on another.
- Offices and Employee Facilities – A number of offices will be located at the plant for the plant manager and other key personnel. There will also be adequate employee facilities which include locker rooms, water closets, break facilities, etc. There is no access to municipal waste water services in the area so all domestic waste water from water closets, employee facilities and QA labs will be collected and disposed of in an on-site sewage disposal system. This subsurface disposal field will likely be located toward the north east corner of the property well away from both the on-site well field as well as any nearby residential wells. A licensed designer and installer will be retained by the proponent after final building design and site layout has been completed. Final location and design of the system will be in accordance with the On-Site Sewage Disposal System Regulation and New Brunswick Technical Guidelines for On-Site Sewage Disposal Systems.
- Engine Room and Mechanical Services – As stated earlier, cooling for the plant will be supplied by a large industrial refrigeration plant utilizing anhydrous

ammonia as the refrigerant. It will have large 500 – 600 horsepower screw compressors and water cooled evaporative condensers located on the roof of the building for heat rejection, as well a number of heat recovery strategies will be employed so that cleanup and defrost water can be heated without the need for a fossil fuel burning industrial boiler. The mechanical room will also contain air compressors for supplying clean dry compressed air to the process, water treatment equipment such as pressure tanks and softeners if required and other auxiliary pumps, valves, tanks, etc.

- Fire Protection / Sprinkler Rooms – The building classification under the 2010 National Building Code is generally Group F Division 2. The facility will be constructed with automatic sprinkler system throughout as per NFPA 13. There is no Municipal water supply in this area so to satisfy the water delivery requirements for the sprinkler system an on site fire pump and water supply basin will need to be included. Various smaller sprinkler riser rooms will be located around the facility to supply the individual zones and will be fed from the main fire pump via a 12” underground supply line. Hydrants will also be installed off of this main line to allow for connection of hose lines or trucks should the need arise.
- Electrical Sub-Station – The electrical feed for the facility will come from NB Power’s Line 1194. NB Power has already conducted a Feasibility Review on this 138 kV line and there were no issues or obstacles noted for this interconnection. This line does not directly feed any of the local residential load so there will be no impact on any residential customers when large plant loads are brought on line. The complete feasibility review is attached in the Appendix.
- Waste Water Pump House – The water used in the processing of fresh blueberries, wash / cleanup water as well as defrost water from the IQF tunnels will all be collected and transported to a Water Pump House. Here any larger solids are separated from the water and returned to leaf collection area and the water will be pumped to various irrigation stations for land application. A storage tank or holding basin is normally located in the vicinity of the pump house to handle any surges from the facility and not impact the delivery to the irrigation system or to store water if soil or climatic conditions are not conducive for land application of the water.
- Well Field – There is no municipal water supply located in the region so a well field will need to be developed to supply the processing plant with water. To satisfy the current undertaking and allow for future expansion of the facility, a sustainable water supply of approximately 600 GPM needs to be located. Very little hydro geological data exists for this area so exploration will need to be done to determine firstly if there is a suitable supply of water available and to determine the number and size of the wells required. Initial thoughts are the upwards of 3 10 – 12” wells will be required at depths up to 200 meters.

- Water Spray Site – The majority of the water used by the processing plant, less approximately 100 GPM of water that will supply the evaporative condensers will need to be disposed of for the short fresh blueberry processing season. Outside of this fresh season, water is primarily used for cleanup of processing equipment and defrost of IQF tunnels and would typically be in the range of 50 – 100 GPM or less. Various locations will be chosen for land application of the water in the southern portions of PIDs 20228144 and 20227179 as well as the DNR lease land identified by PID 20494266. The locations will be chosen based upon topology, soil drainage characteristics and location. No water will be disposed of near any regulated wetlands.
- Leaf Compost Area – Leaf and plant matter removed from the fresh processing line is generally piled and composed on site. Alternatively it may be returned to the blueberry fields that it originated from.

2.3 Project Rationale

This undertaking is one part of a significant investment, in the order of \$150 million that the Acadian Wild Blueberry Company, hereafter referred to as “The Company”, has committed to in this region. Currently the Oxford Food Group, which includes the Acadian Wild Blueberry Company, actively farms approximately 2500 hectares of wild blueberry land in the region as well as owns and operates the regions only Processing Facility. This facility processes, not only the company’s own fruit, but also purchases and processes the fruit of many local growers in the region. The company also invests heavily in blueberry research and progressive farming to continuously try to improve farm practices, reduce costs and improve field yields to continue to make this a viable industry and actively shares this information and assists local growers to do the same.

The development of approximately 6000 hectares of new wild blueberry land in the area will require additional processing capacity and it is with this in mind that this undertaking is being proposed. This will create over 100 full and part time jobs in the area as well as a significant number of spin-off jobs during construction and subsequent support of this facility and its ongoing operations. Because of the highly perishable nature of fresh wild blueberries, it is desirable to locate processing facilities in reasonable proximity to the fresh fruit. We believe that there is a dedicated and skilled workforce in the region and the proposed location has good access to transportation, power and hopefully an adequate supply of water. The Company has

invested in a significant parcel of land to ensure that the factory operations will not have any significant impact on the surrounding environment or neighbours.

2.4 Project Location

The plant site is approximately 80 hectares in total with an addition 160 hectare parcel to be leased from DNR located in the community of Bois-Gagnon, Gloucester County, New Brunswick. The initial plant site will be on the 40 hectare parcel of land identified by PID 20228144 with possible future expansion onto the parcel identified by PID 20227179. The 160 hectare parcel owned by the Department of Natural Resources identified by PID 20494266 will be utilized for water disposal. The main site properties (PID Nos. 20227179 and 20228144) will provide approximately 850 meters of frontage along Route 160 and 1600 meters along Bordage Road.

There is a small regulated wetland of approximately 2.7 hectares in the south west corner of PID 20227179 and an area of approximately 18 hectares on the DNR property PID 20494266 the runs from the North West corner in a the East / South East direction of the property. There are no other significant bodies of water in the area.

A 1:50,000 topographical map identifying the project site relative to existing communities, roads, residential areas, etc. is presented in the Appendix. A property map and aerial photograph are presented in the Appendix.

2.5 Siting Considerations

The main considerations that we taken into account during the site selection process were:

- Access to land – A parcel of land between 100 – 200 hectares of land with generally flat topography and with minimal significant wetland areas is required for the facility and it's ongoing operations. The industrial lease of the DNR land on PID 20494266 is absolutely necessary to allow construction to proceed on this site.
- Access to Power – There is significant power consumption associated with the IQF freezing process so the site needed access to a reliable source of power. The fact that a 137 kV transmission line intersects the chosen site

and adequate capacity to service the industrial load now and into the future is important.

- Transportation – The receiving of fresh blueberries and the subsequent shipping of frozen product to customers throughout the world requires access to good transportation / shipping routes. Having this facility located directly on Route 160 and close to neighbouring blueberry fields allows for easy access to the plant for both fresh and frozen product.
- Water – A suitable supply of water is of the utmost importance for the operation of a fresh blueberry processing plant. There is no municipal water supply in the area and no significant hydro geological data with respect to high yielding fractured bedrock wells. However, a preliminary assessment by our hydro-geologist using fracture trace analysis suggests that there is a high probability of locating a sufficient supply of water on the site. A similar approach has been used for many of our large irrigation wells in other jurisdictions with very good results. Obviously, until such time that test wells can be drilled and tested there is still some risk associated with water availability.
- Zoning – There are no zoning issues here that would prevent the construction of this facility. The local municipal building inspector for the Provincial and Community Planning Branch of the Government of New Brunswick has been contacted and confirmed that the current zoning on PID 20228144 allows for the construction of an industrial processing plant.

The main building lot, PID 20228144, was previously a commercial software lot and has been completely harvested and replanted within the past 10 years. It does not contain any protected wetlands or any sensitive natural features or land uses.

2.6 Physical Components and Dimensions of the Project

The primary plant construction site and proposed well field is planned to be located on a 41 Hectare parcel of land identified by PID 20228144 with future expansion of the Processing plant planned to both the east on the same parcel and to the west on the 41 Hectare parcel identified by PID 204942147.

The initial plant construction will consist of a fresh blueberry receiving dock, Processing Building, IQF Tunnel Building, Tote Filling Room, Packaging Area, Freezer Storage, Frozen Shipping Dock, Engine Room, Office Space and some additional storage areas. The total building area of the main plant will be between 200,000 – 250,000 sq.ft. and it will be designed and constructed in accordance with the 2010

National Building Code and or the 2015 revision if released in time. It will be of non-combustible construction and fully sprinklered as per NFPA 13. The main plant will be constructed primarily of concrete; FM rated insulated Urethane Wall Panels, structural steel with metal deck. Insulation R-values will typically exceed the current code requirement and an emphasis will be placed upon utilizing the most current energy efficient equipment and process energy recovery / reuse where practical. At this point, it is undecided if additional Leed Certification may be sought for the facility.

A couple of smaller out buildings will also be located on site to house fire protection equipment and waste water equipment. The total area of these buildings is expected to be in the range of approximately 5000 sq.ft.

The processing facility will be set back approximately 100 meters from both Route 160 and Bordage Road to minimize the impact to residences along Route 160. Much of the area in front of the facility will be landscaped with grass, small shrubs and assorted trees when construction is completed.

Lands to the South, East and West of the facility are primarily either wood lots or agricultural wild blueberry land. There is no residential construction along Bordage Road.

The exact location and dimensions of paved entrances, parking area, etc. will not be determined until the final building design and location is set. However, surface water from building roofs and paved areas will be collected and directed to existing drainage ditches located along the edge of the property along both Route 160 and Bordage Road though a combination of proper yard grading, catch basins and underground storm drain line.

Process water will be collected inside the facility and directed to the process water pump house. After primary screening of solids, this water will be pumped though fully welded polyethylene irrigation pipe to either the spray site(s) for land disposal or to a temporary holding pond for short term storage prior to being pumped to the spray site(s)

2.7 Construction Details

Construction on this undertaking will occur over a 3 year period with the completed facility slated for operation in August 2017. The final site verification, which includes, the drilling of test wells and verification of the water resource along with soils analysis and other geotechnical engineering must be complete in the fall of 2014 to enable

final design to proceed and building construction to commence in the spring of 2015. Site Clearing, levelling, access roads are activities that are scheduled between September to November 2014 in conjunction with water exploration and geotechnical work. Completing this work over the fall months, not only enables us to ensure the site is suitable for construction of the facility, having the site properly graded and prepared for concrete work also allows spring construction to begin earlier and mitigates any risk associated with the migratory bird nesting period. *Failure to get approval to complete this work completed prior to the winter freeze may delay the start of construction and subsequent opening of this facility by at least 1 year.*

Freezer storage completion and cool down is currently scheduled for August 2016. At this time the majority of the building construction will be complete, however, the additional time will be required for the installation and commissioning of all the processing related equipment.

Based on this schedule, water will be required for services including evaporative condensers and domestic supply for the employee facilities and some limited cleanup activities in 2015 / 2015. This water usage will likely be limited to less than 50 GPM during this period. The full capacity of the well field and water disposal system should not be required until the following August when the fresh Blueberry Processing Facility begins operation.

The main building site is mainly comprised of small coniferous trees, primarily spruce and fir and will be primarily cleared initially with a Mulching machine followed by grubbing and levelling with a dozer. Any ditching, digging or excavating of areas containing significant amounts of clay and organic matter will be handled with an appropriately sized excavator. A number of quarries within a 10 – 15 km radius of the site will supply any gravel fill or stone currently anticipated for this project. However, until the geotechnical study is completed, the exact quantity of fill required cannot accurately be determined. It is anticipated that any topsoil, clay and other organic material removed to expose the native sandstone on the building site will be used elsewhere on the site for levelling and grading non-building areas.

Because of the location of this construction site relative to surrounding neighbours, the disturbance / nuisance from noise related to earth moving operations should be minimal. Further, these operations will be limited to normal daytime hours of 7:00 AM to 7:00 PM. No pilings, drilling, blasting, etc. is expected as a result of this project.

The proposed test well site is located approximately 1000 meters from Route 160 and there is a treed buffer zone of approximately 600 meters between the proposed drill site and the cleared portion of the building site so it noise related to water exploration is not expected to be a significant factor.

Access to the construction site will be from Bordage Road with an access driveway located approximately 40 meters from the intersection of Bordage Road and Route 160.

2.8 Operation and Maintenance Details

Upon completion of the construction of the facility, the fresh processing of wild blueberries will generally involve the operation of the facility 24 hours / day X 7 days per week for a period of approximately 30 days beginning in August and running into early to mid-September. During this time period the facility may be using from 1.5 to 2.5 cubic meters / minute of water for cleaning and processing blueberries, supplying evaporative condensers, defrosting IQF freezing tunnels and clean-up activities associated with operating a food processing facility. Water conservation is an ongoing mandate for all our operations so generally water is being recovered, recycled and reused to the extent possible on the processing line before its ultimate disposal.

Following the conclusion of the fresh processing season, operations will consist of the packaging, storage and shipment of frozen IQF blueberries to customers around the world. The operating schedule for these operations is dependant on many factors which include timing of customer orders, crop size, various seasonal demands, etc. but generally the facility will operate 12 – 24 hours / day X 4 – 5 days per week. Water requirements during these operations is significantly reduced over fresh production and could range from 0.1 – 0.4 cubic meters / minute of water down to almost 0 on non-production days. Water requirements for evaporative condensers also decrease to 0 as the ambient temperature decreased below 0 degrees Celcius.

Waste process water from the facility will be collected and pumped through continuous heat fused PE irrigation piping to a series of irrigation heads on the various spray sites identified. Each lateral and irrigation head will be fitted with the appropriate valves to enable the spray areas to be used or isolated as required based on soil and atmospheric conditions.

Some storage of wooden pallets and plastic field boxes used for the harvesting of wild blueberries will typically be stored in the yard around the rear of the facility. There are seasonal variations in the outside storage requirements with the maximum storage of cleaned empty boxes taking place in the fall and winter months following fresh production season.

The initial factory will have a fresh processing capacity of between 1 – 1.5 million pounds per day. The factory is being designed for future expansion of an additional 1 – 1.5 million pounds per day. Similarly, the freezer storage is initially being designed for the storage of approximately 40,000 pallet positions with designs to easily expand and double this capacity and available land to expand again beyond this should the need arise.

The facility could employ 100 - 150 people when it becomes operational and will likely be responsible for the creating of additional employment through spin offs associated with ongoing operations.

With the proper building maintenance and upgrading of processing and packaging equipment, the expected useful life of this facility could be greater than 50 years.

2.9 Future Modifications, Extensions, or Abandonment

The processing facility is being designed for the future doubling of processing and freezer storage capacity. All other services are being designed to handle current and future production to begin with because it is necessary to ensure that the services are capable of handling the long term needs of this facility. No significant additional site development is anticipated in the future as a result of expansion of the processing facility.

There are no plans for any future abandonment of the site.

3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT

The proposed Blueberry Processing Facility and undertaking will cover a land area of approximately 240 Hectares in total. All of the initial construction and exploration activities will occur on the 42 Hectare parcel of land identified by PID 20228144. This parcel of land is bordered to the North by Route 160 and to the East by Bordage Road. The property is not coastal or near any major water courses.

The topology of the site is generally flat with slight undulations throughout and it does not lie within any significant flood plain area. Two areas have been identified on the property with Provincially regulated wetlands, however, there is no proposed activity associated with this

project in these areas. A map showing the location of the wetlands is presented in the Appendix.

There are no private or municipal wells, well fields or surface water supplies located within 500 meters of the proposed undertaking.

The primary site is primarily covered with immature coniferous trees and native vegetation while the adjacent properties consist of a mixture of deciduous, coniferous and local vegetation at various stages of majority.

A desktop review was conducted with information provided by the following sources along with associated links:

- Atlantic Canada Conservation Data Center

<http://www.accdc.com/SAR/maritime.html>

- Canadian Wildlife Federation

<http://cwf-fcf.org/en/discover-wildlife/endangered-species/>

- COSEWIC (Committee on the Status of Endangered Wildlife in Canada)

http://www.cosewic.gc.ca/eng/sct0/rpt/csar_e_2013.pdf

- New Brunswick Department of Natural Resources

http://www2.gnb.ca/content/gnb/en/departments/natural_resources/wildlife/content/SpeciesAtRisk.html

- Environment Canada

http://www.sararegistry.gc.ca/default_e.cfm

- CCAE

<http://www.ccea.org/>

- Environment Canada's Migratory Birds Convention Act (MBCA) and Regulations

<http://www.ec.gc.ca/nature/default.asp?lang=En&n=7CEBB77D-1>

A cursory field review of the proposed site was also done in conjunction with the literature search and no known species at risk or any other species of conservation concern were noted on the property.

The main plant construction site was most recently a commercial wood lot which was cut and replanted within the past 10 years while the adjacent property is primarily a private wood lot

generally harvested for hardwood. There are additional wood lots to both the east and west of the site and commercial blueberry land to the south.

4.0 SUMMARY OF ENVIRONMENTAL IMPACTS and MITIGATION

4.1 Environmental Media

No hazardous building materials or chemicals will be used at the site during the construction that would have the potential to negatively impact the environmental quality at the site.

Specific operational and maintenance activities that will be completed throughout the life of the facility may be identified as the design and construction progresses and will be managed accordingly. Anhydrous Ammonia, the industrial refrigerant used for the IQF tunnels and cold storage facilities, may be in sufficient quantity on site when the plant becomes operational. A separate Environmental Emergency Response Plan as per the E2 requirements will be developed and implemented to deal with this specific hazard.

4.2 Surface Water and Sediment Quality

There is always the possibility of soil erosion and siltation with any project that involves large scale land disturbances. However, there is no proposed activity near any protected wetlands on this project. Sedimentation and erosion control measures will be used as required to effectively mitigate silt and soil contaminants from entering any wetlands. Surface water quality discharging from the site will be monitored throughout the construction period.

4.3 Groundwater Quality

This undertaking is contingent on the supply of a sufficient quantity and quality of ground water to operate the facility. Detailed water and well yield information will be made available after initial exploration. When the final production wells are situated, additional monitoring wells will be established to measure groundwater quality and water level.

There are no residential potable water wells located within 1000 meters of the proposed well site. However, residential wells in the vicinity will also be monitored for

quality and level during the initial well testing to ensure the new well field does not impact any existing residential wells.

4.4 Soil Quality

The proposed undertaking is not expected to have any impact on soil or soil quality.

4.5 Air Quality

The implementation of this project is not expected to significantly impact air quality at or adjacent to the plant site compared to existing air quality and therefore mitigation measures are limited to:

- Restrict earth moving and other noise producing construction activities to daylight hours (7 AM to 7 PM) to limit noise nuisance for adjacent residences.
- Maintaining an adequate buffer between the Plant Site and adjacent residential neighbours.
- No excessive idling of construction vehicles
- Use of wet suppression controls as required to minimize dust produced by on-site vehicles and equipment.

4.6 Fish and Fish Habitat

The proposed undertaking is not expected to impact any fish or fish habitat.

4.7 Flora

The anticipated potential impact to flora is the grasses, small shrubs and weed species during re-grading and earthwork activities at the site. The mitigation measures to compensate for the loss of vegetation at the site is the re-vegetation of sloped surfaces. This will help stabilize the exposed soil areas. Although there will be a reduction in the amount of vegetation at the plant site, no significant impact is anticipated.

4.8 Fauna

It is expected that any negative impact of the proposed project with respect to wildlife will be closely linked to the initial site clearing and construction. No critical wildlife habitat has been identified on this site or adjoining properties.

NBDNR will be contacted if animal burrows, dens or other structures are identified to be present in areas of the site scheduled for earth-work activities.

4.9 Species at Risk

A desktop review of available literature and cursory field survey of the proposed site did not identify any species at risk that would be potentially impacted by the proposed project. The main areas of the site that will involve land clearing and levelling were disturbed from previous forestry activities and additional work is not expected to have any significant impact. Site clearing work is planned for the fall of 2014 (October through to November) to minimize any potential risk to migratory bird species.

4.10 Wetlands

A desk-top review of regulated wetlands in the area identified one regulated wetland in the southwest corner of PID 20227179 and one on PID 20494266 that runs from the northwest corner in a south easterly direction known as the Little Tracadie River. Activities associated with the undertaking are not expected to impact these identified wetlands. There will be no construction within the 30 meter buffer areas. Mitigation measures to control erosion and sedimentation will be addressed should any future work take place adjacent to these areas.

Monitoring will be done during the surface land application of any water to ensure that there is no surface runoff impacting the regulated wetlands.

4.11 Migratory Birds

It is unlikely that the activities associated with this undertaking would potentially impact migratory birds in the area. Specific mitigation measures for the protection of migratory birds such as the completion of a migratory bird survey are therefore not included with this project.

4.12 Land Use

Currently most of the land associated with the proposed undertaking is commercial or private wood land. The proposed undertaking is not anticipated to have a significant impact. After initial construction, green areas and buffer zones will be re-established on the property.

4.13 Cultural Resources

The proposed undertaking is not anticipated to impact Aboriginal culture or land as Aboriginal lands and therefore specific mitigation measures related to Native culture and not impacted in this undertaking.

4.14 Socio-Economic

There is generally a positive socio-economic impact associated with the proposed project. During both the construction and eventually the subsequent ongoing operations of the facility there will be an opportunity for employment and additional income for many local residents as direct employees of the facility as well as many local privately owned service providers.

To the extent possible during the course of this project, local private contractors and equipment will be used in the various aspects of the construction and operation of the facility.

5.0 PUBLIC INVOLVEMENT

This undertaking was originally announced at a press conference in October 2013 with members of the Provincial Government, the local Municipal Government, the local business community as well as local community members. A subsequent sod turning event was held in August 2014 at the selected site for the undertaking with representatives from Provincial and Municipal Governments, the local business community and community members.

A prominent sign has been posted on the site that shows the undertaking and is clearly visible from the main road, Route 160. Local residents within approximately a 2 km radius of the proposed undertaking have been contacted and made aware of the plans for this development.

During the potential site identification process prior to the selection of this location, many land owners within approximately 20 km of this location were contacted to discuss the future development. To date, no negative feedback has been received about this undertaking. A

further review of social media channels within the area also failed to uncover any negative feedback related to the proposed location, construction or operation of this facility.

6.0 APPROVAL OF THE UNDERTAKING

The permits, licenses, approvals or authorizations that may be required for the undertaking include:

- Determination from NBDELG under the Environmental Impact Assessment Regulation of the Clean Environment Act
- Approval from NB Department of Transportation for culvert installation and road locations.
- Government of New Brunswick, Office of the Chief Medical Officer of Health (Division) Permit for On Site Sewage Disposal System
- Consultation with Municipal District Planning Commission to determine municipal permit requirements
- Consultation and potential preparation of and Engineered Traffic Management Plan for routing of equipment, materials, wastes and potentially oversized equipment
- Consultation with NBDNR for industrial land lease
- Potential registration with Environment Canada under the Canadian Environmental Protection Act, Environmental Emergency Regulations (E2 Regulations).
- Canadian Food Inspection Agency Approval (CFIA) to open a food processing establishment



7.0 FUNDING

While this undertaking is 100% funded by the proponent, partial financing from Invest NB through a \$37.5 million dollar fully repayable interest bearing loan is being sought. The contact information for Invest NB is given below:

Invest NB
HSBC Place
PO Box 6000
Fredericton, NB E3B 5H1

In addition to this an Industrial Land Lease to provide additional area for wash plant water disposal is being sought for the DNR property identified by PID 20494266.

8.0 SIGNATURE

Date

Troy Miller, P.Eng, PMP
Engineering Manager
Oxford Frozen Foods



APPENDIX

Water Supply Source Assessment Initial Application

1.0 Name of Proponent: The Acadian Wild Blueberry Company
Proponent Contact Information: Mr. Troy Miller, P.Eng, PMP
Engineering Manager
Oxford Frozen Foods Ltd.
PO Box 220
4881 Main Street
Oxford, NS, B0M 1P0
Tel: (902) 447-2100 Ext. 2037
Cell: (902) 664-2165
Fax: (902) 447-3245
Email: tmiller@oxfordfrozenfoods.com

2.0 Location of Drill Targets:

The proposed test well drill locations are located on the parcel of land identified by PID 20228144 located in the community of Bois-Gagnon, Gloucester County, New Brunswick. The initial Plant Site is approximately 41 hectares (100 acres) on PID 20228144 and is bordered by Route 160 to the North and Bordage Road to the East, Agricultural Blueberry Land to the South and a wood lot on PID 20227179 to the west.

3.0 Required Water Quantity

For the fresh processing of Wild Blueberries a water supply capable of delivering up to 2.27 cubic meters / minute (600 GPM) will be require for the 30 day fresh production season beginning in August and running into mid-September.

4.0 Alternative Water Supply Sources

There are no alternative water supplies in the area.

5.0 Area Hydrogeology

There is no significant data available related to this area to aid with the location any sort of high capacity production well. The test wells at this site will be drilled into the underlying

bedrock. There does not appear to be any useful glacial sand and gravel sediments in the region. Therefore, only where the bedrock is highly fractured can an adequate water supply be found.

A technique called “Fracture Trace Analysis”, which we have had success with in the past for large irrigation wells in other areas, has been deployed to identify numerous apparently favourable well sites on the property. The area that was identified as the most favourable by our hydro geologist is what is being targeted as the focus of our water exploration.

Because we are looking for larger water bearing fractures, the total depth of the exploration wells is expected to be significantly below any local residential well. If we are successful with the exploration, it is anticipated that we will install casing below the depth of most local residential wells to minimize the potential impact of any interference with these sites on well sites that we are planning on developing for pump tests.

6.0 Hydrogeological Work Schedule

Work will begin immediately to drill the first 6” test wells to determine if there is a potential water resource available. Upon completion of the test wells (approximately 1 week), if a probably water resource has been found then work will begin on a 8 – 10 “ well at one of the test well locations. This well will be equipped with a suitable pump for a 72 hour flow test of the well. Other test wells will serve as monitoring points during this pump test. Water levels and quality issues will be monitored in a couple of the residential wells as well to ensure that the pump test is not negatively impacting any existing wells. Pump test results will then be analyzed to determine the actual sustainable pumping capacity, the size required and ultimately number of wells and feasibility before continuing on with site specific building design.

7.0 Existing Pollution of Contamination Hazards

Previously this land was used for commercial softwood production. No pollution of contamination hazards have been identified within 500 meters of the test site.

8.0 Groundwater Use Issues In the Area

No groundwater use issues have been identified in the area. However, there is also no significant hydrogeological data for the area. There are only a couple of low capacity residential wells within about 1000 meters of the proposed test site and all these wells are relatively shallow, in the range of 30 – 40 meters or less.

9.0 Watercourses in the Vicinity of the Exploration Site

There are no watercourses (streams, brooks, rivers or wetlands) within 500 meters of the proposed test drill site

10.0 Site Supervisory Personnel

The driller selected to carry out this well exploration work is:

Modern Well Drilling (1993) Ltd
140 Chemin Noel
Ste-Rose, NB
E1X 2Y3

The representative from the proponent will be:

Troy Miller, P.Eng, PMP
Engineering Manager
Oxford Frozen Foods

11.0 Aerial Photo Identifying Proposed Drill Sites

A map showing the proposed test well locations as well as a current Aerial photo are included below.

12.0 Land Use / Zoning

The land identified by PID 20228144 is currently zoned a L.S.D. There are no specific zoning issues related to this development

Figure 1 Proposed Plant and Well Location Map



Figure 2 Preliminary Plant Rendering

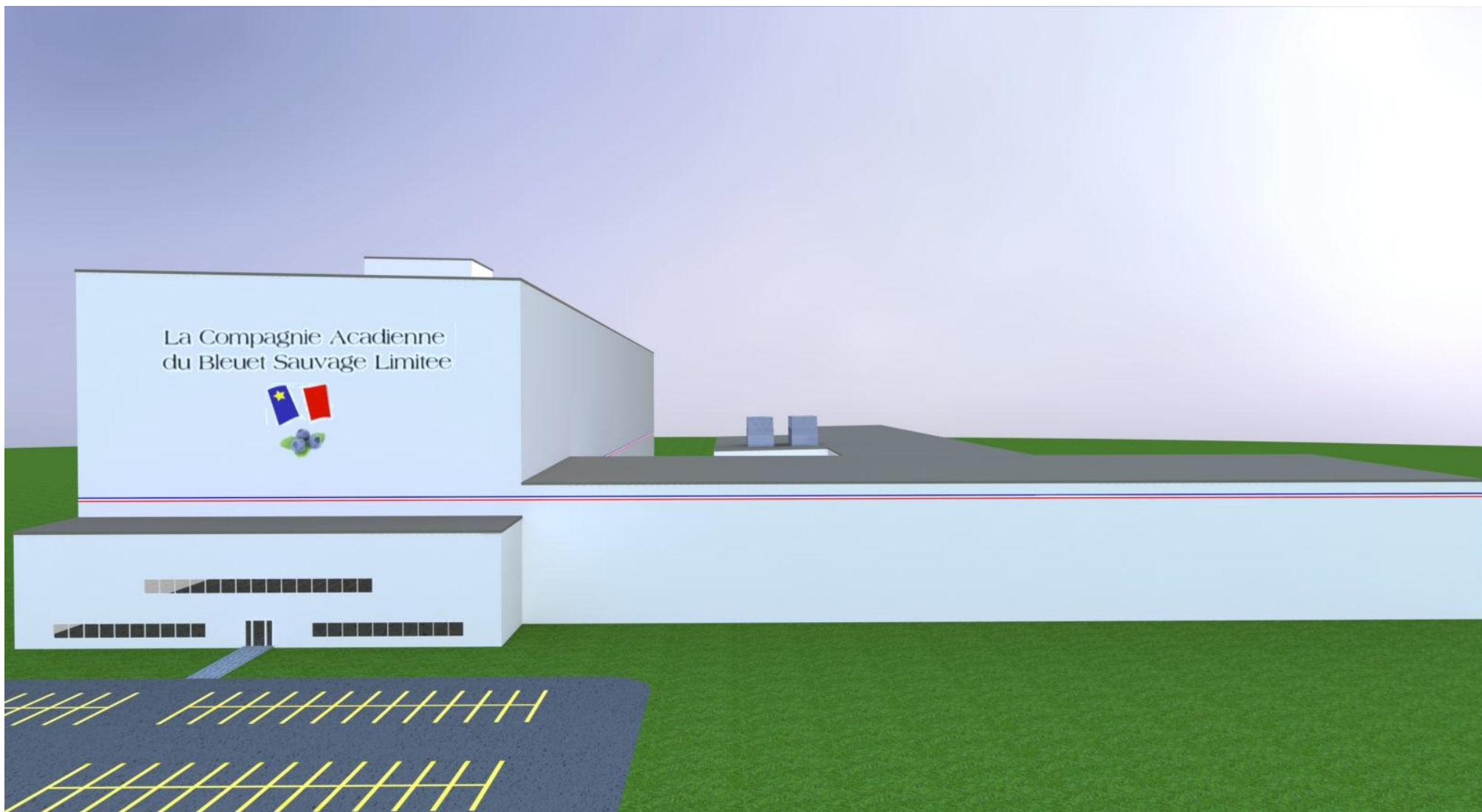


Figure 3 General Plant Layout

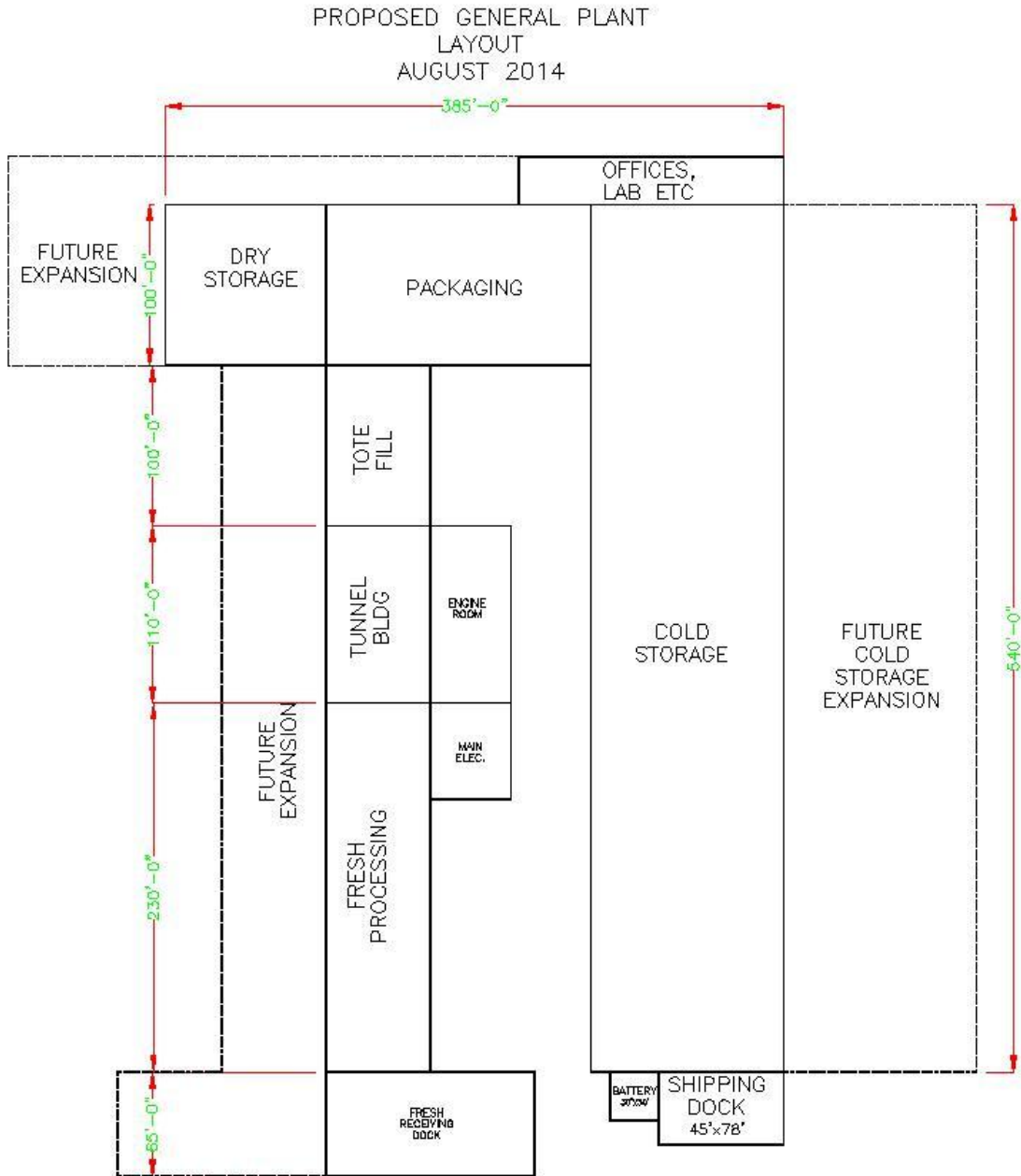


Figure 4 Site Map

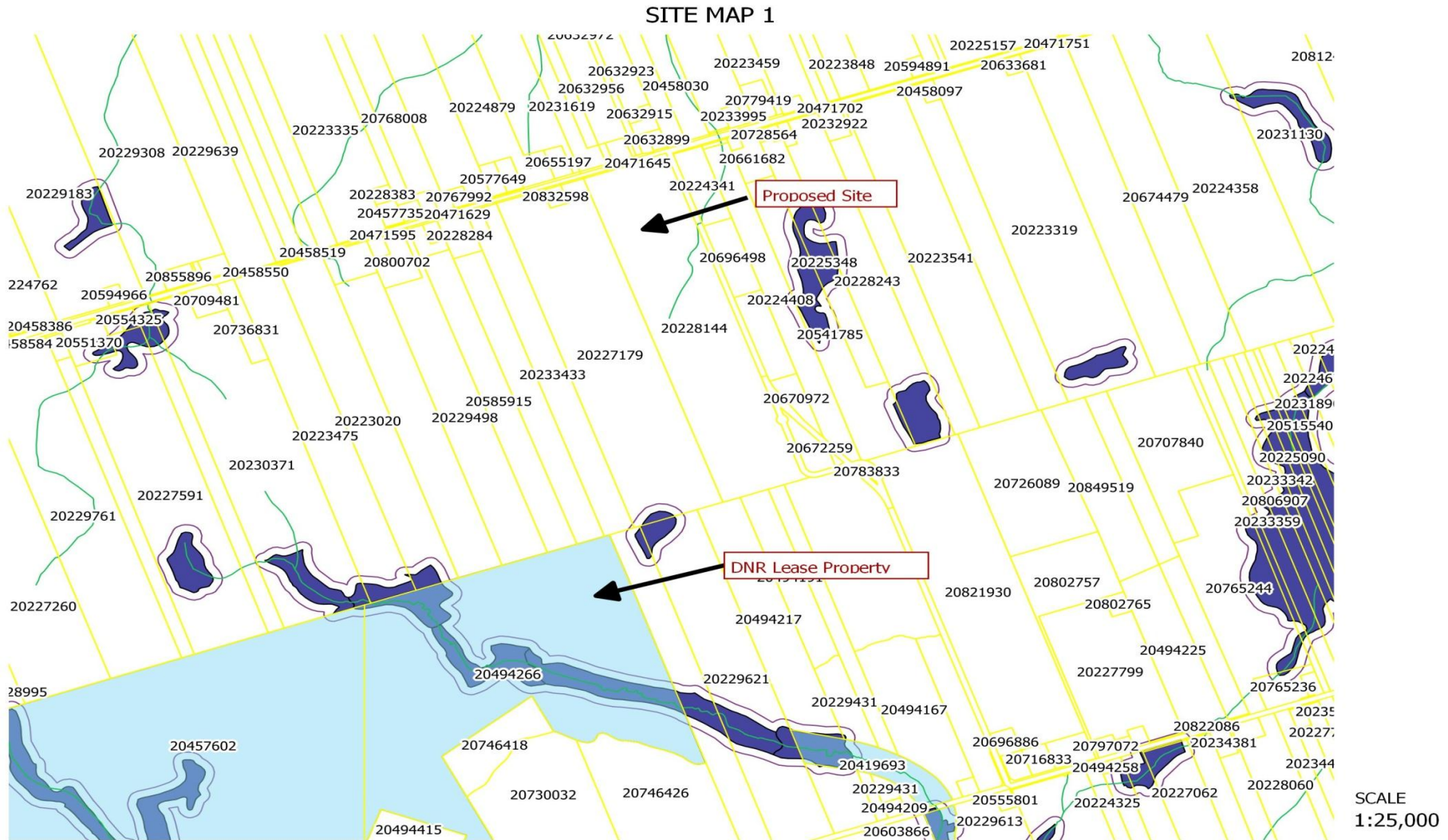


Figure 5 Proposed Test Well Locations

Proposed Test Well Locations



Figure 6 Site Aerial Photo

SITE AERIAL

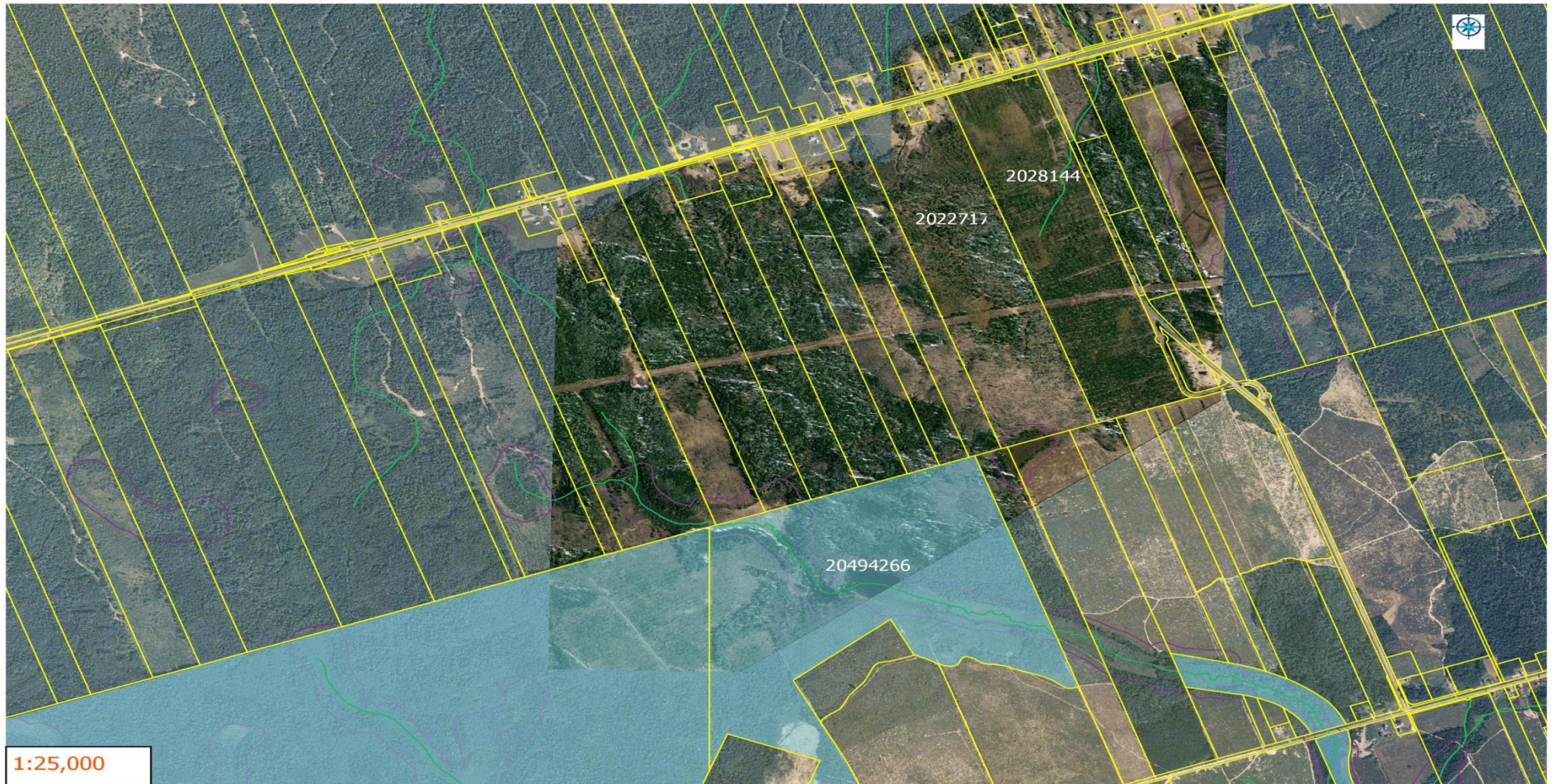
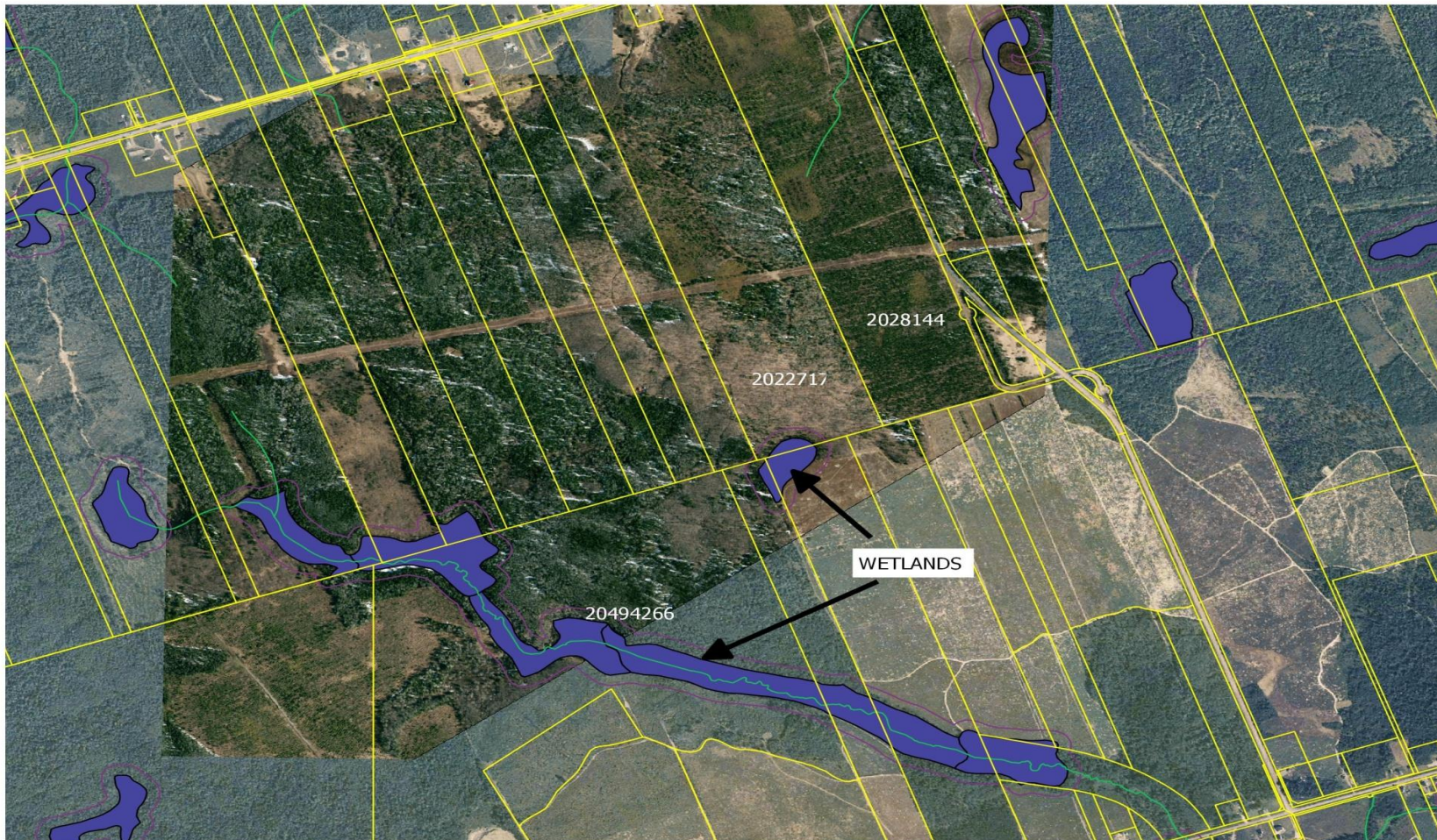


Figure 7 Provincially Regulated Wetlands

Provincially Regulated Wetlands



SCALE
1:20,000



NB POWER INTERCONNECTION FEASIBILITY REVIEW



Énergie NB Power

Transport Transmission

*Interconnection
Of
Up to 18 MVA of Load
Near
Bois-Gagnon, NB
By
Oxford Frozen Foods*

Feasibility Review

April 22, 2014

Transmission Technical Services

New Brunswick Power Transmission Corporation

PO Box 2030, 515 King St. Fredericton, NB

Canada

E3B 5G4

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Feasibility Review

Background NB Power Transmission has been requested to perform a Feasibility Review of the following project to determine:

- if a System Impact Study (SIS) is required and, if so
- the scope and estimated cost of the SIS.

Project **Proponent:** Acadian Wild Blueberry Company

Description **Location:** Bois-Gagnon, NB

Type: Load

Size: 18 MVA

Connection Voltage: 138 kV

Delivery Point: Network service in NB

In Service Date: July 01, 2016

Application Date: October 01, 2013

Connection to Transmission Line 1194 is a tap line that connects line 1106 and Tracadie terminal. Line 1106 is a 138 kV line interconnecting Newcastle terminal and Bathurst terminal.

The proposed load could be connected to the transmission grid at the following point(s).

Line # or Terminal	Connection Voltage	Distance from Project	Connection Map #
Line 1194 (27 km from tap)	138 kV	<1 km	Map 1

Continued on next page

Feasibility Review, Continued

Size Limitation The maximum size of the load that can be connected to a transmission element is a function of

- the summer thermal rating of the transmission elements

The table below lists the summer and winter thermal ratings at the possible point(s) of connection.

Connection Point	Summer Thermal Rating (MVA)	Winter Thermal Rating (MVA)
Line 1194	175	210

Line Outage History Between January 1st, 2010 and December 31st, 2013, there have been the following outages:

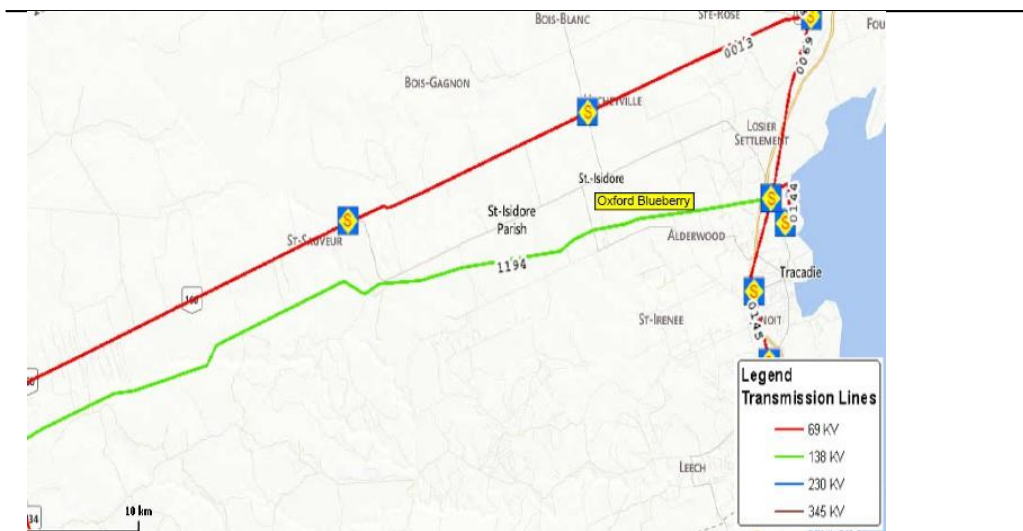
Transmission Line	<10 sec	>=10 sec <1 hr	>=1 hr <5 hr	>=5 hr <10 hr	>=10 hr
1194	1	2	0	0	0

Continued on next page

Feasibility Review, Continued

Connection

Map 1



Power Quality Issues & Requirements

Voltage Dip & Flicker

Active and reactive power fluctuations at the load centers can cause corresponding voltage fluctuations on the transmission system.

The physical causes of the power fluctuations include but are not limited to:

- Motor starting
- Simultaneous motor starts

These power fluctuations on the transmission line result in voltage fluctuations that may be perceived as a flicker in lighting circuits. This flicker becomes objectionable and unacceptable when the magnitude of the voltage drop and the frequency of occurrence exceed a certain threshold. The NB Power flicker standards follow the recommendations of IEEE Standard 1453-2004.

Upon request; NB Power will provide the short circuit value for the proposed connection point.

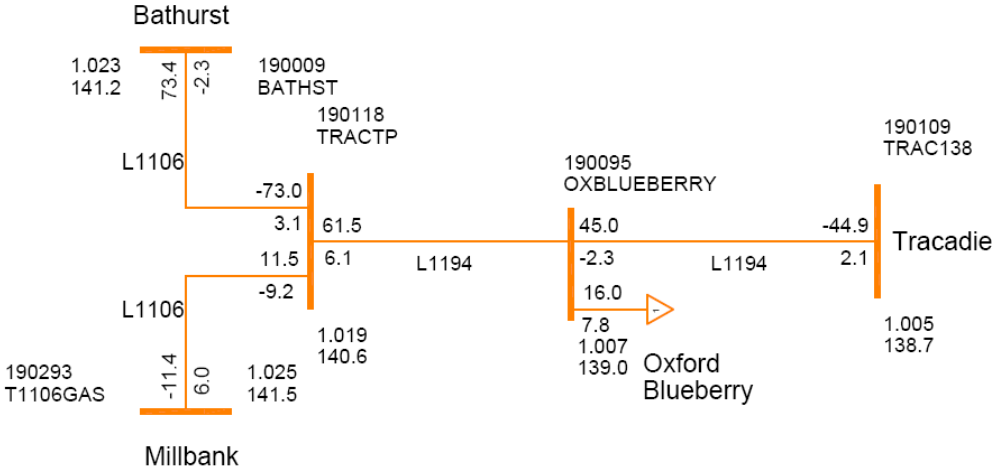
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Feasibility Review, Continued

Loadflow Analysis Preliminary loadflow analysis shows that the Line 1194 is able to provide the proposed load under normal operating conditions.

Note: It is assumed that the motor starting will be controlled such that the transmission system will not be adversely affected.

Winter Peak Load Case, L1194, normal conditions.

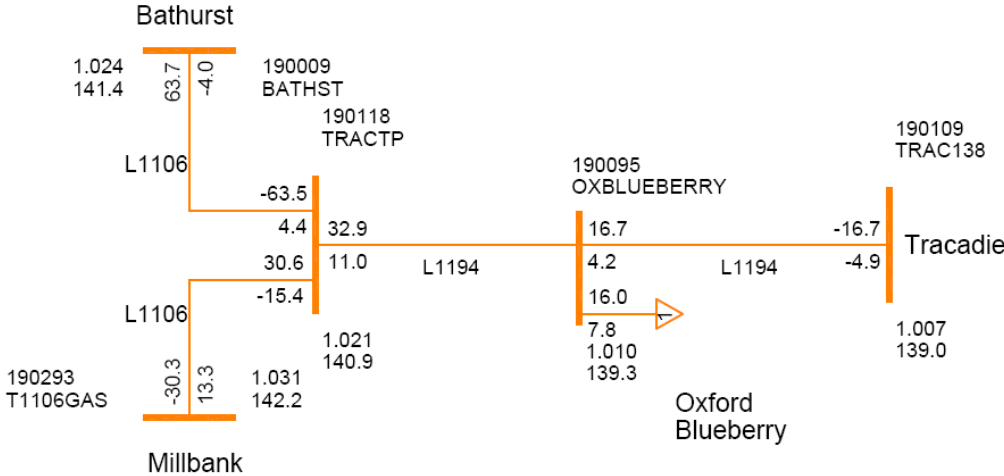


Issue(s): None

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Feasibility Review, Continued

Loadflow Analysis Summer Load Case, L1194, normal conditions.
(continued)



Issue(s): None

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Feasibility Review, Continued

Further

Analysis Further analysis;

- Facilities study (NB Power)
 - to determine system connection requirements and costs.
- Motor starting analysis (Proponent), Short Circuit Value(NB Power)

Conclusion This Feasibility Review did not find any serious issues or obstacles for this interconnection proposal. Proponent is required to ensure that any load cycling, i.e. motor starting, does not adversely affect the transmission system as per IEEE Standard 1453-2004.

A System Impact Study is not required to further determine the system impacts of the proposed project.

Review

Prepared By Patrick Masterson, P.Eng.
Transmission Planning and Reliability Engineer
