



11 February 2019  
Project Number: 180629

Nation Rise Wind Farm Ltd.  
219 Dufferin Street,  
Unit 217C  
Toronto, ON M6K 3J1

**Re: Nation Rise Wind Farm  
Renewable Energy Approval No. 0871-AV3TFM  
Conditions H-10 and H-17 – Turbidity Sampling Program**

Nation Rise Wind Farm Limited Partnership (the “Proponent”) is proposing to develop the Nation Rise Wind Farm (the “Project”) which is subject to Ontario Regulation (O. Reg.) 359/09 (Renewable Energy Approvals (REA) under Part V.0.1 of the Ontario Environmental Protection Act (EPA)), as amended. The Proponent was awarded a contract for this Project in March 2016 from the Independent Electricity System Operator (IESO) under the Large Renewable Procurement (LRP), and has received its Renewable Energy Approval (REA) No. 0871-AV3TFM from the Ontario Ministry of the Environment, Conservation and Parks (MECP, formerly the Ontario Ministry of Environment and Climate Change) on 4 May 2018. The Project is situated in the Municipality of North Stormont within the United Counties of Stormont, Dundas and Glengarry, and construction is anticipated to begin in early 2019. The Project will be owned and operated by Nation Rise Wind Farm Limited Partnership, a wholly-owned subsidiary of EDP Renewables Canada Ltd. (EDPR).

The following sampling program serves to satisfy the conditions pertaining to turbidity monitoring, namely conditions H-10 and H-17 of the Project REA. The following Turbidity Sampling Program is to be implemented in conjunction with the Stormwater Management Plan (January 30, 2019) and the Erosion and Sediment Control Plan (ESC) (February 4, 2019), both prepared by TULLOCH Engineering for the Project.



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## DEFINITIONS

REA No. 0871-AV3TFM provides the following definitions of direct relevance to the Turbidity Sampling Program:

- *“In-water Works” means any construction related works or activity that takes place below the high water mark during flowing conditions and/or when water is present;*
- *“Facility” means the renewable energy generation facility, including the Equipment, as described in this Approval and as further described in the Application, to the extent approved by this Approval;*
- *“Equipment” means the thirty three (33) wind turbine generators and one (1) transformer substation, identified in this Approval and as further described in the Application, to the extent approved by this Approval;*
- *“Qualified Inspector” means a person with training and/or experience in erosion and sediment control, stormwater management, and surface water monitoring not representing the Company who was not involved in preparing the stormwater management and erosion and sediment control plans;*
- *“Significant Storm Event” means 10 millimetres of rain in any 24 hour period as measured at the closest Environment Canada weather station.*

## TURBIDITY MONITORING

The following sections outline the frequency, location and duration of the turbidity monitoring, protocols in the event of exceedances in measured turbidity, and requirements for record-keeping of turbidity monitoring activities.

- For all In-Water Works, turbidity readings will be taken daily and within the water body, both upstream and downstream of each In-Water Work;
- For all project components/construction located within 30 m of the high water mark of a waterbody, the Qualified Inspector will monitor in-field turbidity levels on a daily basis upstream and downstream of the construction activity during Significant Storm Events and the spring freshet;
- Turbidity monitoring at each In-Water Work will continue until:
  - The In-Water Work in question is complete; or
  - Until such time as the Qualified Inspector determines that the erosion and sediment control measures are no longer required, and/or that the risk of surface water/environmental impacts are negligible;
- Turbidity monitoring for project components/construction located within 30 m of the high water mark of a waterbody will continue for the duration of construction during Significant Storm Events and the spring freshet.

## TURBIDITY EXCEEDANCES

Limits for turbidity, as prescribed in the Project REA, are based on the recommendations of the Canadian Council of Ministers of the Environment Water Quality Guidelines (CCME-CWQG) for the Protection of Aquatic Life. The CCME-CWQG recommends the following limits for turbidity in freshwater:

- In clear flow: Maximum increase of 8 Nephelometric Turbidity Units (NTUs) from background levels for a short-term exposure (e.g., 24-hour period). Maximum average increase of 2 NTUs from background levels for a longer term exposure (e.g., 30-day period).
- In High Flow or Turbid Waters: Maximum increase of 8 NTUs from background levels at any one time when background levels are between 8 and 80 NTUs. Should not increase more than 10% of background levels when background is >80 NTUs.

### For Turbidity Monitoring of In-Water Works:

- In the event that the turbidity downstream of the erosion and control works is greater than 8 NTU compared to the upstream monitoring location, the Proponent shall:
  - Notify the District Manager of the Ottawa district office of the Ministry of the Environment, Conservation and Parks (MECP):  
Tara M. MacDonald, Manager (Acting)  
613-521-3450 ext. 225  
[tara.m.macdonald@ontario.ca](mailto:tara.m.macdonald@ontario.ca)
  - Immediately implement additional erosion and sediment control measures to reduce or mitigate the sediment-related impacts.

### For all Turbidity Monitoring:

- If the average (arithmetic mean) daily turbidity level downstream of the In-Water Works and construction activity exceed the CCME-CWQG for the Protection of Aquatic Life for short-term or long-term exposure (defined above), the Proponent shall:
  - Notify the Spills Action Centre (1-800-268-6060) within 24 hours; and
  - Implement the response plan to prevent further migration of turbid water into the watercourse(s).

## TOTAL SUSPENDED SOLIDS MONITORING

- In addition to the turbidity monitoring outlined above, the Proponent will collect water samples from a location immediately upstream and a location immediately downstream of each In-Water Work, to be analyzed for total suspended solids (TSS);
- The TSS sampling will take place at least once daily during In-Water Works-related construction, unless directed otherwise by the MECP.

## DOCUMENTATION

- Per Condition H15 of REA No. 0871-AV3TFM, the Proponent shall maintain records of all inspections, monitoring and sampling data, and maintenance carried out pursuant to Conditions H1 to H14 and H17, including turbidity monitoring;
- The records shall be made available to the MECP upon request; and
- The records shall include the name of the Qualified Inspector, the date and timing of inspections, and all remedial actions taken.

Regards,

**BluMetric Environmental Inc.**



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Senior Hydrogeologist



Muriel Kim-Brisson, M.Sc.  
Environmental Scientist

*Ref: 180629 Nation Rise Wind Farm Turbidity Sampling Program - FINAL 20190211*