

Appendix 1

Enbridge Line 5 – Sustained Adverse Weather Conditions Procedure

This Appendix is designed to facilitate an effective emergency response to a potential release incident by specifying procedures for a systematic approach by Enbridge to temporarily shut down Line 5 in the Straits of Mackinac during Sustained Adverse Weather Conditions. Enbridge shall maintain a record of its use of the procedure and make it available to the State. If an alternate near-real time data point becomes available following the execution of this agreement, Enbridge shall notify the State in writing of Enbridge’s intent to use alternate data sources and the parties will work cooperatively to revise this Appendix to account for the alternative data source.

Definitions:

Sustained Adverse Weather Conditions: Conditions in which median wave heights in the Straits of Mackinac over a continuous 60-minute period are greater than 8 feet based on “Near-real Time Data,” or in its absence “Modeled Data.”

Near-real Time Data: The wave height data derived from Buoy 45175 (Mackinac Straits West) of the Great Lakes Research Center of Michigan Technological University’s Upper-Great Lakes Observing System (UGLOS).

Modeled Data: Modeled wave height data based on real-time data inputs that is available on the NOAA Great Lakes Coastal Forecasting System (GLCFS) Nowcast model at a representative point in the Straits.

Forecasted Data: Data available on the NOAA Great Lakes Coastal Forecasting System Forecast model at a representative point in the Straits.

Enbridge Line 5 Procedures – Sustained Adverse Weather Conditions

Step #	Action
1	Enbridge or Enbridge Consultant (collectively “Enbridge Monitor”) will continuously monitor Near-real Time Data, or in its absence Modeled Data, to identify Sustained Adverse Weather Conditions at the Straits.
2	When Sustained Adverse Weather Conditions are forecasted based on Forecasted Data, the Enbridge Monitor will inform the Control Center Operations Shift Supervisor, at which point the Control Center Operations will prepare for the potential that an unplanned shut down of Line 5 at the Straits may be required.
3	When Near-real Time Data, or in its absence Modeled Data, indicate that Sustained Adverse Weather Conditions are occurring at the Straits, the Enbridge Monitor will immediately contact the Control Center Operations Shift Supervisor.
4	The Control Center Operations Shift Supervisor will promptly call the Enbridge Great Lakes On-Call Manager to advise them that Sustained Adverse Weather Conditions exist at the Straits.

5	The Enbridge Great Lakes On-Call Manager will request, no later than 15 minutes after being notified in Step #4 above, that the Control Center Operations shutdown Line 5. If real time conditions in the Straits determined by the Enbridge Great Lakes On-Call Manager indicate Sustained Adverse Weather Conditions do not exist, the Great Lakes On-Call Manager will advise the Control Center Operations Shift Supervisor that Line 5 should not be shutdown. In that event, the Enbridge Monitor will continue to monitor conditions as per Step 1 for changes that indicate that Sustained Adverse Weather conditions may be present and the other Steps in this Appendix shall be followed should the Enbridge Monitor determine that such conditions are present.
6	Unless advised otherwise by the Enbridge Great Lakes On-Call Manager as per step 5 above, Control Center Operations will perform a controlled emergency shut down of Line 5 and isolate the segment across the Straits.
7	While shut down, the Enbridge Monitor will continuously monitor Near-real Time Data, or in its absence Modeled Data, to identify the continuance of Sustained Adverse Weather Conditions at the Straits.
8	When Near-real Time Data, or in its absence Modeled Data, indicates the Sustained Adverse Weather Conditions no longer exist at the Straits, the Enbridge Great Lakes On Call Manager and Control Center Operations Admin On Call will authorize the restart of Line 5.
9	Control Center Operations will safely restart Line 5.