

**BURLINGTON NORTH WASTEWATER
POST JULY 2023 FLOOD
TREATMENT PLANT ASSESSMENT
WASHINGTON COUNTY,
VERMONT**

**NPDES PERMIT NUMBER VT0100226
STATE OF VERMONT PERMIT NUMBER 3-0271**

November 6th, 2023

This report was prepared based on observations made during a July 19, 2023, site visit by Aaron Krymkowski, VT DEC, WSMD, WWMP in conjunction with Army Corps of Engineers and US EPA Region 1 representatives.

REPORT LIMITATIONS

This report was prepared from visual observations and operator conversations during site visits. No testing of equipment or measuring of components was performed.

FACILITY DESCRIPTION

The 24" & 30" wastewater main consists of two inverted siphon river crossings with a wetland crossing between the two. The original pipe is 24" DIP; the upstream crossing was previously replaced with 30" HDPE. The increased diameter is required to maintain comparable inside diameters due to HDPE wall thickness.

OBSERVATIONS

The plant itself was fully operational at the time of our visit. No flood damage to the facility was assessed by the operators. A continuous pump & dump operation of septage trucks was in full swing in response to the river crossing break that occurred during the floods. This operation was intercepting sewer flow before the river crossing and conveying it to the Burlington North facility.

The river crossing pipe could not be visually assessed due to flows. The utility shared a drone video of a dye test demonstrating the point of origin near the riverbank closest to the facility. The upstream pipe had not been assessed at the time of visit. A more comprehensive assessment is planned once river flows have returned to a safe level.

RECOMMENDATIONS

SHORT TERM

- The utility plugged the upstream line and began pumping operations immediately.
- A fused HDPE overland bypass force main was under construction during the visit. This bypass was completed in the interim between the site visit and this report.
- Possible replacement options include a local break repair or new pipe installation via horizontal directional drill.

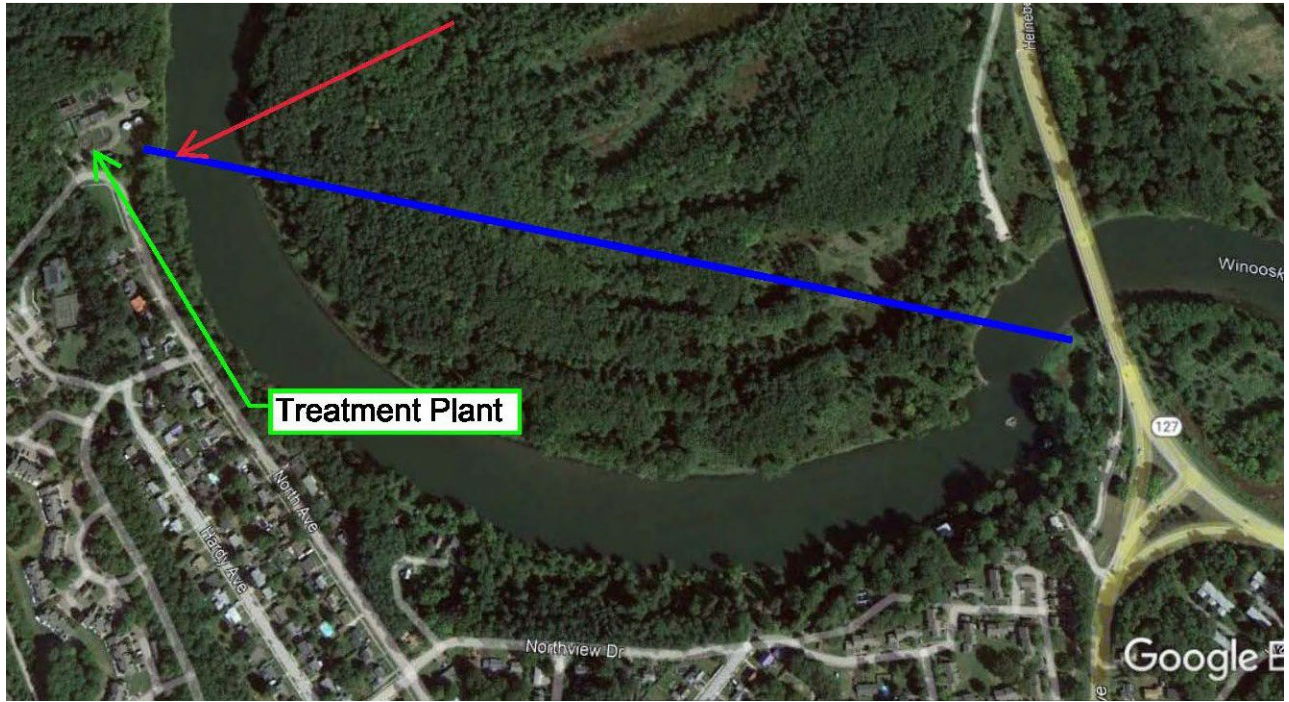
LONG TERM

Long term recommendations to potentially mitigate future flooding impacts include:

- The currently identified point of failure is on the outer, higher velocity, cut bank side of the river bend. Erosion and/or debris is the probable cause of the failure. If a repair is made to the existing line, bank protection (riprap, shot rock, or similar) is advisable.

- Alternately, if horizontal directional drill method is utilized, installation with appreciable cover depth along the riverbanks will inherently provide an additional measure of protection.

PHOTOS



The approximate sewer main location is in blue, approximate leak location is in red.