



For immediate release:

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Statement on May 29, 2020 Main Wastewater Treatment Plant Discharge, Next Steps

At 8:47 pm on Friday, May 29th there was a disinfection failure alarm at Burlington's Main Wastewater Treatment Plant. During about a 50 minute time span there was a lack of disinfection for approximately 1.4 million gallons of wet weather flow (stormwater runoff and treated, but not disinfected wastewater). While we are currently reviewing this event, it appears that the active disinfection tank ran out of sodium hypochlorite faster than it should have based on the dosage setting. Our operator who was on site during the entirety of the storm was able to switch supplies and restore disinfection for the remainder of the storm.

Due to this issue, for about 50 minutes, treated but not fully disinfected wet weather flow was released ½ mile into the Lake past the breakwater. The wet weather treatment process functioned properly by providing maximum separation of solids from the combined wet weather flow in the Vortex system and diverting them into the plant's full treatment and disinfection process. It was the remaining, screened wet weather flow that did not receive full disinfection before being discharged. This may lead to increased bacteria levels in nearby water. Therefore, we advise against swimming at Blanchard Beach, Oakledge Cove, Blodgett Access and Perkins Pier for 48 hours. In accordance with State Law, warning signs have been posted at each of these locations. Additionally, a VT Alert was posted to subscribers at 8:48 am this morning. Sign up for VT Alerts at: <https://www.burlingtonvt.gov/BTV-Alerts>.

Due to our enhanced staffing protocol during storm events, put in place after the plant issues in 2018, we had an operator on site throughout the entire duration of the storm to manage this significant storm event (over 2 inches in 12 hours). **Construction on upgrades to critical disinfection and SCADA equipment at the treatment plants is scheduled for this year, and the bid procurement is actively underway with bids for the disinfection system due back this coming Thursday.** Due to overwhelming support of Burlingtonians in November 2018, the City gained approval for the \$30 million dollar Clean Water Resiliency Plan. At the heart of this Plan was an effort to upgrade long-deferred projects at the wastewater treatment plants. Each of Burlington's WWTPs has a disinfection system that provides chemical treatment to ensure bacteria levels in the plant's effluent remain low. Some of this equipment dates back to the last major overhaul of the treatment plants in 1994 – when nearly 170M gallons of un-disinfected, untreated wastewater was still being emptied annually into Lake Champlain. We have advanced these projects through the State Revolving Fund which added time and extra steps, but kept costs down.

We will continue the progress of the last few years in upgrading aging infrastructure and building green stormwater into our streetscape. Beaches should never be closed in Burlington, but unlike a generation ago they are no longer closed for days, weeks or seasons at a time. We will continue this generation's stewardship and progress in advancing water quality. Projects like the raingardens on St. Paul Street and Mansfield Avenue; and the subsurface system installed on Allen St - all installed in 2019 -- go a long way to reducing storm flows and filtering out pollutants before they reach the Plant. While more intense storms have become the new normal with a changing climate, we will continue building resilient infrastructure and building on the undeniable progress Burlington has made. More information on the Clean Water Resiliency Plan are be found at: <https://www.burlingtonvt.gov/DPW/Water/CWRP>.

FURTHER BACKGROUND ON YESTERDAY'S EVENT

Our full investigation is underway, but it appears that active disinfection tank prematurely ran out of sodium hypochlorite (bleach). While still being investigated, it appears that the disinfection tank was pumping disinfectant at a higher rate than the dosage was set to, leading to the tank being drawn down much faster than it should have been. Even though the back-up disinfection system tank (designed for normal daily, not storm related flows) did activate properly, it was not designed to deliver a sufficient volume of hypochlorite which is needed to activate the fast acting bromine based disinfection of our substantial wet weather flows. As the plant had ample back up chemical disinfectant on hand, once the tank level issue was identified, the operator was able to switch supplies and disinfection was restored for the remainder of the storm.

Our computerized alarm system properly alerted the operator to the low disinfectant condition in our disinfection tank and the operator immediately started troubleshooting the disinfection system. However, the current 25-year-old disinfection system does not have tank level sensors or alarms that could have shortened the time it took to troubleshoot this issue. Based on earlier checks of the tank level and typical tank draw down rates, lack of chemical due to an empty tank was not checked until later in the trouble shooting process after other potential causes had been eliminated. Thus, about 20 minutes passed between the initial low disinfectant alarm in the contact tank and discovering that the cause was the empty tank. Once the operator switched the tank, given normal lag time, it took an additional 15 minutes for disinfection to be fully restored. In total, inadequate disinfection was occurring for about 50 minutes total, which includes the initial lag in the time it took for the disinfection tank to empty and for disinfectant levels to drop to alarm level in the contact tank.

An investigation will continue into what caused the tank to drawn down faster as well as to identify any other improvements which would have mitigated this incident. Many improvements are already included in the final design of the disinfection and SCADA upgrade which are headed for construction this season. Funding for these projects are part of the Clean Water Resiliency Plan, the \$30 M Wastewater and Stormwater Improvement bond approved by the voters in late 2018. These projects are being financed through the low interest Clean Water State Revolving Fund loan program to mitigate impacts to our rate payers. There are numerous additional steps and requirements for this funding, which has added some time to the overall project schedule. However, bids for the project are due this week in support of advancing the project this construction season.

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