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Subject: Comments on Appeal of WM Landfill License S-010735-WD-YB-N
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Dear Ruth Ann Burke and Chairman Draper,

I am writing with comments on the merits of the Appeal filed with the BEP by the Conservation Law Foundation, regarding the licensing of Waste Management's 48.6 acre landfill planned for the Crossroads facility in Norridgewock. I am copying these comments as required to the Service list.

PFAS in Leachate

The CLF Appeal requests that the BEP allow consideration of information from the 2019-2020 Surface Water Ambient Toxic Monitoring Program Final Report, regarding PFAS in fish. The SWAT report was not published and available to the Public until June 2021, after the DEP had already issued the License for WM's Phase 14 landfill. The 2019-2020 SWAT report is highly relevant to the licensing decision, and it is important that the BEP allow it to be included as supplemental evidence.

The SWAT report includes data from a study on PFAS levels in fish caught on three Maine rivers.

The highest PFAS levels in the study were found in fish sampled at testing stations located downstream from the two wastewater treatment facilities where Waste Management's landfill leachate is discharged into the Kennebec River.

WM maintains contracts with the Sappi industrial wastewater facility in Hinkley to take up to 400,000 gallons per day of leachate, and with the Anson-Madison Sanitary District facility to take up to 56,000 gallons per day of leachate from its landfills. Both of these facilities discharge the wastewater into the Kennebec, without any requirements to treat the landfill leachate for PFAS.

In addition to leachate from WM's Crossroads facility, the Anson-Madison wastewater treatment facility is used for discharge of large volumes of leachate from WM's Turnkey landfill in Rochester, NH.

In 2018 and 2019, Waste Management sent over 250,000 gallons of PFAS contaminated leachate from its Turnkey landfill in Rochester, NH to the Anson-Madison Sanitary District. Levels of certain PFAS compounds in leachate were found in at least one batch of tests at Turnkey to be between 6,900 and 10,000 PPT.

WM's New Hampshire landfill leachate was sent to Maine after it had been rejected by the Lowell, Massachusetts wastewater facility which had for years discharged the leachate into the Merrimack River. It was reported in late 2019 that the Anson-Madison facility was only taking the imported leachate on a trial basis, and that it would no longer be accepting leachate from WM's New Hampshire landfill. ("Treatment plant discharging into Kennebec River processed runoff possibly laced with forever chemicals," Kevin Miller, Portland Press Herald, Nov. 7, 2019.)

However, the Anson-Madison facility apparently started accepting leachate from WM's NH landfill again, starting in July of 2021.

We know there are significant volumes of PFAS-containing leachate being discharged into the Kennebec already, including wastewater that has been rejected from neighboring states. We know that the Kennebec river and its tributaries are historic habitats for Endangered Species Act-listed Atlantic sturgeon, shortnose sturgeon, and Atlantic Salmon, and is home to the largest river herring (alewife and blueback herring) run in North America.

If the DEP allows discharge of thousands of additional gallons per day of leachate from WM's new Norridgewock landfill, it will add to the pre-existing burden resulting from years of toxic wastewater being dumped into the river, with unknown cumulative impacts on local fisheries and the health of surrounding communities.

During the licensing process, several members of the Public submitted comments and spoke at hearings with concerns about levels of PFAS and other toxins in landfill leachate being discharged into the Kennebec.

On April 30, 2021, Mali Obomsawin, President of Bomazeen Land Trust, sent Public comments to the DEP opposing the "Approval with Conditions" for the Waste Management license application #S-010735-WD-YB-N. Mali's comments specified that risks to Maine Waters from the new landfill would be enormous, especially with limited testing requirements for leachate and no requirements for PFAS treatment. The comments highlighted that since restoration of the Kennebec River is critical to saving Wild Atlantic Salmon from extinction in North America, the DEP needs to do everything in its power to protect this watershed.

Edward Ferreira spoke at the October 1, 2020 Public Hearing, specifying that he was concerned about risks of leachate from special waste being discharged into the Kennebec without adequate testing or treatment for toxins, and that he was opposed to licensing the landfill due to pollution of the Kennebec and Gulf of Maine resulting from discharges of landfill leachate.

I spoke also at the Public Hearing, raising concerns about the lack of testing or treatment for toxins landfill leachate and impacts on the Kennebec. I also submitted written comments on May 24, 2021, further highlighting the risks created by allowing large volumes of untreated leachate to be discharged into the river, and impacts on fish. I stated in my comments:

"The Kennebec River is designated as critical habitat for the endangered Atlantic Salmon. Much of the Kennebec headwaters are excellent habitat for salmon spawning, especially the Sandy River where much investment has been made by the state to rebuild the Atlantic Salmon population. The Madison wastewater facility discharges the landfill leachate into the Kennebec, directly upstream from the confluence with the Sandy River.

Licensing of the proposed new landfill poses a serious threat critical habitat for endangered Atlantic Salmon in the Kennebec River watershed.

Waste Management has not provided adequate data that the proposed landfill would meet licensing criteria that the facility must not unreasonably adversely affect protected natural resources and rare, threatened and endangered plant and animal species."

None of these concerns regarding risks of leachate discharge in the Kennebec raised by Mali, Edward, or myself were effectively addressed in the DEP's approval of WM's license application. It is important that the BEP allow consideration of relevant information regarding impact of toxins on Kennebec communities and fisheries, especially since the new SWAT study showing elevated levels of PFAS in fish downstream from the landfill leachate discharge sites was not published at the time the licensing approval was granted.

Drought and Water Impacts

The Appeal specifies that, based on the evidence provided in the WM landfill license application, the Department cannot conclude that the project meets the solid waste disposal facility licensing criteria which requires that the facility will not pose an unreasonable threat to the quality of a significant sand and gravel aquifer, and will not pose an unreasonable risk of discharge to a significant ground water aquifer.

Multiple comments at the Public Benefit Determination hearing, at the Public Hearing, and comments submitted through the licensing process from neighbors to the current landfill have included concerns about impacts of the landfill on Mill Stream, the area watershed, and levels and safety of nearby wells.

The Appeal references the Hydrogeologic Assessment conducted by Golder Associates of Manchester, New Hampshire for Waste Management, which states that, "There is no hydraulic connection between groundwater in the Phase 14 area and the significant sand and gravel aquifers because groundwater flow in all hydrostratigraphic units in the Phase 14 area is primarily to the south-southwest, away from the aquifers."

Golder Associates' assertion that there is no connection between groundwater below the planned new landfill site and surrounding sand and gravel aquifers lacks adequate data to back up the claim.

Pumping tests at the site of the new landfill performed in July 2020 revealed a hydraulic connection at least 1,500 feet from the bedrock well, in bedrock, till and clay. According to the Appeal, the test results indicate a deeply integrated hydrogeologic regime that is sensitive to small system changes.

WM's assessments of hydrogeology were conducted in 2017 and 2019, with limited testing again in 2020, all periods of extended drought in Kennebec County. Tests done during this abnormally dry time cannot provide a clear picture of groundwater impacts and hydraulic connectivity that would be present during normal or high water table conditions.

There is not adequate data to back up claims from the Golder assessments that the groundwater flow in the area below the new landfill would only flow away from significant sand and gravel aquifers.

There appears to be a clear connection between groundwater and surface water at the site in Norridgewock. The landfill would include at least one stream crossing beneath it, with another stream along the edge. The presumed downgradient receptor to groundwater from the new landfill area is Mill Stream and other unnamed streams that flow around the landfill and

meander in many directions through extensive wetlands prior to discharging to the Kennebec River and the surrounding watershed, including the Belgrade Lakes region.

Wetland and natural resource assessments of the landfill site were conducted by Normandeau Associates of Bedford, New Hampshire for Waste Management. I submitted comments on May 4, 2021 regarding the DEP Draft Decision of Approval with Conditions, raising concerns that the Normandeau assessment only measured water levels and reviewed stream locations at the proposed landfill site between 2017 and 2019, during periods of significant drought in the region.

The Department received comments stating concern for the water quality of Mill Stream, a Class B waterbody, which flows through the site. The DEP licensing decision mentions a DEP review memorandum dated August 6, 2019 which noted exceedances of certain contaminants in Mill Stream. The decision includes the assumption that because the concentrations of contaminants did not increase downgradient, the exceedances were probably not the result of the landfill. However, no data was shown to support the assumption that the current landfill, which abuts the stream, had no impact on degradation of Mill Stream water quality.

The results of the Golder and Normandeau assessments are not accurate reflections of surface water and groundwater movement and hydraulic connections that could occur during periods of heavy precipitation, flooding, and high-water tables.

It is important that the BEP permit further discussion of impacts of drought conditions on the accuracy of WM's hydrogeologic and surface water assessments, and allow inclusion of data referenced in the Appeal, produced by the National Drought Mitigation Center, National Oceanic and Atmospheric Association, and U.S. Department of Agriculture, showing that Kennebec County experienced significant levels of drought between 2017 and early 2021.

The State of Maine is preparing for increasing water levels and flooding events, and those considerations should be applied to determinations of the potential effects of landfill operations on surface and ground water. Lack of accurate information on surface and groundwater movement jeopardizes the ability of the project to meet the licensing requirements that the landfill will not pollute any water of the state and will not unreasonably adversely affect surface water quality or cause an unreasonable threat to the quality of a classified body of surface water.

If upon further study, more extensive hydraulic connections are found between surface water and groundwater in the new landfill area and nearby aquifers, the risks to the Public drinking water supply in Norridgewock, residential wells, farm wells, and to the Kennebec watershed are significant.

Appeal and Hearing

I support the BEP holding a Public hearing on the Appeal and examining all issues raised in the Appeal, including lack of adequate liner and leak detection systems, lack of adequate fire safety protections, incompatibility with the Maine Solid Waste Hierarchy, risks to groundwater and surface water quality, damage to fisheries and critical habitat, and creation of health hazards for people in the local community.

Thank you for taking the time to review these Public comments.

Sincerely,

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