The State of Maine, Department of Administrative and Financial Services, Bureau of General Services

Response to Comments

The State of Maine, Department of Administrative and Financial Services, Bureau of General Services (BGS) has reviewed the comments submitted by the public regarding the Public Hearing seeking to extend the Juniper Ridge Landfill OSA termination date from February 5, 2034, to February 5, 2040, that was held February 15, 2024 at Jeff's Catering in Brewer, Maine. BGS has issued the below responses to the comments received by the comment deadline of February 26, 2024.

There were 47 written comments that accompanied the 19 in person comments submitted in response to the public hearing held February 15, 2024, for the extension of the OSA between the Bureau of General Services (BGS) and the landfill operator Casella for the state-owned Juniper Ridge Landfill. To eliminate redundancy in the responses, the comments were condensed down to common topics that are listed below. The comments received will be published in addition to this response document on the BGS website. There were three comments that were received after the deadline of 5:00 pm on February 26, 2024. Those comments are not included or responded to in this response to public comments.

Comment

1. **Concerns about out of state (OOS) waste was a common topic in the public comments with twenty-nine respondents touching upon this topic. There were many comments regarding the oversized bulky waste (OBW) that Casella utilizes for stabilizing the sludge that JRL receives daily.**
   a) **Those comments included issues like "Shady Deals" and "Secret Amendments" to the OSA that allowed Casella to import OOS waste for profit. This results in Juniper Ridge Landfill filling up faster than anticipated. Several comments touched on the ban of OOS waste and the loopholes that Casella has used to access waste from outside of Maine. When the "Out of State Loophole" was closed, and after the ban of land application of Wastewater Treatment Plant (WWTP) sludge, Casella claimed that JRL was unstable and began refusing sludge. This sent the state into a "sludge crisis" that increased disposal rates to Maine residents.**
   b) **There were also comments suggesting that the State identify waste generated in state to mix with sludge prior to disposal.**

Response to Comment

The **Operating Services Agreement**[1] (OSA) is the contract between the Bureau of General Services (BGS) and Casella Waste Systems to operate Juniper Ridge Landfill (JRL). It contains the obligations of both parties during the term of the contract.

[1] OSA.signed.pdf (maine.gov)

The OSA and all amendments can be found at the BGS website[2].

From **Section 2.3.2** of the **OSA**:

> Subject in all instances to the terms and conditions hereof and all applicable laws, regulations, licenses and permits, Casella shall be responsible for, and shall have sole authority over, the day-to-day operation of the Landfill, including weighing of waste pursuant to Section 2.4, testing of waste, preparation of waste for disposal, Landfill construction.

From **Section 2.11 (b)** of the **OSA**

> The State reserves the right to direct solid waste to the Landfill, as may be required by changes in State law or in MDEP rules and regulations.

The 2023 Brown and Caldwell Report, **An Evaluation of Biosolids Management in Maine, and Recommendations for the Future**[3] was prepared for the Maine DEP. A few key points related to issues involving disposal of sludge and biosolids are described below:

a. P.L. 2021, Ch. 641 suspended issuances of new septage land application licenses, restricted land application of septage at existing sites based on whether groundwater concentrations exceeded the state's interim drinking water standards for PFAS, and tasked DEP with evaluating alternatives to the land application of septage. Maine DEP submitted the "Report on the Land Application of Septage" to the legislature on January 13, 2023, to provide information on whether it was advisable to enact a similar ban on the land application of septage. [Septage is defined as the residual removed from septic tanks, cesspools, portable toilets, and similar facilities. When septage is managed at POTWs, much of it is converted via treatment to biosolids.]

b. Biosolids are typically mixed with bulking agents when landfilled to ensure slope stability. Much of the bulking agent that was used at JRL originated from a single solid waste processing facility that handled a large amount of waste that originated from out of state.

c. P.L. 2021, Ch. 626 limited the ability of this facility to process out-of-state wastes as it prevented the facility from meeting its mandated recycling goals (which prioritized in-state waste generation over out-of-state waste generation). When the provisions of this law went into effect in February 2023, the operator of JRL claimed this resulted in insufficient availability of bulking agent necessary to manage the increased tonnages of biosolids being brought to the landfill, and JRL stopped accepting some biosolids.

d. During the 131st legislature, P.L. 2023, Ch. 283 (codified at 38 M.R.S. §1310-N(5-A) (B)) delayed the recycling deadlines that the facility needed to meet and also allowed the facility to increase the overall quantity of out-of-state oversized bulky wastes until July 2025. The practical effect of this change provided some temporary relief in that a larger quantity of bulking agents would be able to come from out of state for 2 additional years; however, this change did not address the longer-term availability of bulking agents. From legislative testimony in 2023, it appeared that part of the challenge was not only a lack of bulking agents from out of state, but

[2] Juniper Ridge Landfill | Bureau of General Services (maine.gov)
[3] Department Reports, Maine Department of Environmental Protection

also that construction and demolition debris—the source of much of the bulking agent—is generally at a low generation rate during certain times of year, notably late spring, which coincides with spring runoff and increased precipitation, when bulking agent is needed most at a landfill.

The **2024 Maine Materials Management Plan[4] (MMMP)** from the Maine DEP also discusses the issues regarding sludge and the bulky waste used at JRL.

Page 10 of the report reads:

> In March 2023, the Department investigated alternative outlets other than in-state landfill disposal for sludge generated from municipal Wastewater Treatment Plants (WWTPs). It became clear that Maine had no other alternatives available within the state for disposal of this waste stream. Operators of Sewage Sludge Incinerators ("SSIs") and landfills in the entire northeast region had no additional capacity to take Maine's sludge. As a result, options remaining were to ship the waste stream to a company in New Brunswick, Canada to use to make sludge derived compost or to ship the waste to landfills as far away as Ohio or South Carolina. Sending to Canada proved to be the most economically viable outcome despite a steep rise in costs to WWTPs.
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> Page 14-15 of the report states:
>
> Several facilities in Maine receive Construction and Demolition Debris (CDD) or other wastes and process them to recover materials such as metal, wood chips, or plastics. After processing, much of the residue or waste that cannot be recovered is then sent to disposal facilities. Some of these processing residues can be used for landfill cover and shaping's, while some materials are not suitable for an alternate use within the landfill and must be managed as waste.
>
> Once processed by a Maine facility, any outgoing material from the facility is considered to be a waste generated within the state. 13 Processing facilities are required to be licensed by the Department. As permitted, these facilities may receive material from both within and outside of Maine as well as send disposal material to facilities within or outside of Maine.

Additionally, in 2021, the State Legislature passed several laws impacting Casella's waste management practices at the Juniper Ridge Landfill including restrictions on the land application of sludge and the use of bulking materials, often in the form of construction and demolition debris, from out of state sources.

2. **The fire that broke out at JRL on May 15th, 2023, generated twelve public comments.**
   a) **There were multiple comments regarding "the smoke and ash that filled the sky and settled on the local communities".**
   b) **There were concerns regarding the existing conditions of the liner system and gas collection system and any effects that the fire may have had on those systems.**
   c) **There were multiple comments questioning the cause of the fire, and lack of notification to the public during emergency situations.**

[4] Department Reports, Maine Department of Environmental Protection

Response to Comments:

There was a report published in May of 2002 for the Federal Emergency Management Agency (FEMA), U.S. Fire Administration (USFA), National Fire Data Center titled "**Landfill Fires Their Magnitude, Characteristics, and Mitigation**"[5]. In that report, there were a few pertinent takeaways:

CAUSES OF LANDFILL FIRES.

Over half of the landfill fires reported to National Fire Incident Reporting System (NFIRS) have no information available as to the primary ignition factor. This makes it particularly difficult to accurately pinpoint the cause of landfill fires. Of those fires with reported ignition factors, nearly 40 percent are of an incendiary or suspicious nature. Another 20 percent are attributed to lit or smoldering materials that have been abandoned or discarded, which include cigarettes, matches, or ashes that were discarded without being properly extinguished. Spontaneous heating accounts for about 5 percent of landfill fires. Other leading factors influencing fire ignition include rekindling from a previous fire and inadequate control of open fires.

Based on extrapolation of the NFIRS data, each year in the United States an average of 8,400 landfill fires are reported to the fire service. This represents less than a half percent of all reported fires. Undoubtedly, some landfill fires go unreported because they burned undetected, or they were on private property and extinguished by the landfill operator. Reported fires are responsible for less than 10 civilian injuries, 30 firefighter injuries, and between $3 and $8 million in property loss each year. 43 Deaths (civilian or fire service) are rare in these fires; since NFIRS represents a sample of data, it may be that fatalities occurred during the study period and were not reported or captured in the data.

OTHER TYPES OF LANDFILLS.

Construction and Demolition. Waste from construction and demolition (C&D) projects, including untreated lumber, drywall, plaster, plumbing materials, etc., is not considered MSW. These wastes can be deposited either in MSW landfills or in specially constructed C&D landfills that are required to meet less stringent regulations than MSW landfills. Based on anecdotal remarks by landfill fire suppression professionals, C&D landfills are at a much higher risk for a significant fire than other types of landfills.

The **OSA** identifies certain situations that could occur at a landfill, such as a fire, that may be outside the operator's control.

From Section 1.21[6]

the definition of *"Force Majure"* states:

shall mean any act, even or condition affecting the landfill or to the extent that it materially and adversely affects the ability of either party to preform or comply with any obligation, duty or agreement required of the party under this Agreement, provided such act, event or condition is

[5] Landfill Fires: Their Magnitude, Characteristics, and Mitigation (sustainable-design.ie)

[6] OSA.signed.pdf (maine.gov)

beyond the reasonable control of the party or its agents relying thereon and is not the result of the willful or negligent act or omission of the party relying thereon. Force Majure includes, without limitation but by way of illustrating the actions, events and conditions constituting a Force Majure hereunder: (a)an act of God, epidemic, landslide, lightning, earthquake, ***fire****, explosion, storm, flood, or similar occurrence;*

The **2023 Juniper Ridge Landfill Operations and Maintenance Manual**[7] discusses the liner systems within the landfill in **Section 5.1 Cell Construction**.

> Originally permitted landfill Cells 1 through 10 are constructed with underdrain systems to relieve upward groundwater pressure as appropriate. The cells have a composite liner system consisting of an 80-mil HDPE flexible membrane liner overlying a geo composite clay liner and 2 feet of low permeability material to achieve a combined hydraulic conductivity of $2.9x10^{-9}$ cm/sec. The cells also contain a leachate collection system consisting of a 12-inch layer of granular material with and average hydraulic conductivity of $1x10^{-2}$cm/sec, a geo composite drainage net, and a piping network consisting of a 6 and 8- inch diameter collection laterals, space approximately 100 to 200 feet on center, that connect to 8-inch and 12- inch diameter collection header pipes.
>
> Landfill Expansion Cells 11 through 17 will also be constructed as secure solid waste landfill cells, but with two liners, a primary and a secondary, a leak detection system, leachate and gas collection and transport systems and intermediate and final cover systems. Under the entire base of the Expansion is an imported soil layer, consisting of one foot of compacted clay, will be installed to provide a uniform, low hydraulic conductive soil layer under the secondary liner.

3. **There were nine comments received regarding the methane gas as well as other odors that are generated from the daily operations of JRL.**

Response to Comments:

Odors are a common issue in landfills. There are a few different documents used in this section to respond to comments regarding odors. The Solid Waste Association of North America (SWANA) Manager of Landfill Operations (MOLO) course manual details how landfills occur at landfills. The **2023 Semiannual and Annual Report at Compliance Certification** submitted to Maine DEP Air Bureau prepared by Sanborn Head discusses Casella's surface monitoring procedure. The Operations and Maintenance Manual for JRL details air monitoring around the landfill.

JRL received approximately 94,271 tons of sludge in 2022 according to the DEP's **2024 Maine Materials Management Plan**[8] (MMMP). The amount of WWTP sludge that is disposed of daily can cause odor issues. Trucks transporting sludge to the landfill for disposal are required to be covered both inbound and outbound to help reduce odors.

The **Solid Waste Association of North America** (SWANA) **Manager of Landfill Operations** (MOLO) course manual discusses LFG production and odor issues in **Lesson 9 Environmental Monitoring:**

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[7] Juniper Ridge Landfill | Bureau of General Services (maine.gov)
Department Reports, Maine Department of Environmental Protection

Landfill gas (LFG) odors do not result from methane or carbon dioxide (the principal components of typical anerobic LFG), but rather from trace components of the waste decomposition process. Hydrogen Sulfide (H_2S) is a compound known to have a very pronounced unappealing odor at low concentrations. This sulfur compound is often associated with the presence of construction and demolition debris (CCD). CDD waste contains gypsum wallboard. The ideal conditions for H_2S production include a source of sulfur and organics under warm, wet, anaerobic conditions with a pH near neutral. These conditions often exist in a landfill. The generation of H_2S can be accelerated if the gypsum is pulverized; creating a much larger surface area such as in the case with Alternate Daily Cover (ADC) derived from CDD waste.

A large percentage of methane gas is released into the atmosphere in even modern landfills with methane capture systems. Wet waste, such as sludge, can result in more gas and/or more rapid gas production. Gas can easily escape an active working landfill face due to the lack of intermediate cover systems designed to hold gas within the landfill to be extracted through the gas collection system.

The **2023 Semiannual and Annual Report at Compliance Certification** submitted to Maine DEP Air Bureau was prepared by Sanborn Head. A section of that report discusses the surface monitoring at JRL and is detailed below.

Section 4.1.2 Landfill Surface Monitoring states:

JRL uses geosynthetic membrane cover over portions of the landfill to increase gas collection efficiency, and JRL performs cover repairs and upgrades over the entire landfill cover system as needed to increase gas collection and reduce odors. During the reporting period JRL performed monthly cover integrity checks and made repairs as needed and as conditions allowed. Landfill surface emissions monitoring (SEM) scans were performed in general accordance with NSPS Subpart XXX and NESHAP Subpart AAAA requirements to measure the concentration of methane near the surface of the landfill on September 22, 2023 (2023-Q3 scan) and on December 12, 2023 (2023-Q4 scan). The surface monitoring protocol requires measuring methane surface concentrations within 5 to 10 centimeters (cm [about 2 to 4 inches]) off the landfill surface while walking at a normal pace around the perimeter of the landfill and along a pattern traversing the landfill at 30-meter (m; approximately 100-foot) intervals. In addition to monitoring along the path, NSPS and NESHAP require surface monitoring in areas with:

- Visible cracks or holes in the landfill cover
- Visible erosion or water on the landfill surface
- Visually observed distressed vegetation
- Where gas extraction components protrude through the landfill cover system (i.e., where the boots connect to the wells and the lateral collection system piping).

During surface monitoring, JRL personnel used a flame ionization detector (FID) or equivalent device that complies with the NSPS and NESHAP requirements and that was calibrated according to procedures outlined in United States Environmental Protection Agency (USEPA) Method 21.

NEWSME LANDFILL OPERATIONS, LLC JUNIPER RIDGE LANDFILL ODOR CONTROL PLAN[9], published in the **2023 OMM** describes **Control of Odors with Incoming Wastes**:

> A variety of methods are utilized to control offsite migration of gases and odors associated with daytime operations. They include the following:
>
> 1. The active placement of incoming waste is confined to the smallest cell area possible. The waste is spread over the active face, compacted, then another lift initiated. If a load of waste arrives that is noticeably odorous, ash, construction and demolition debris (CDD), till, or other effective neutralizing material, will be spread over the waste to limit odor migration. This activity is particularly important on windy days to minimize gas and odor migration.
>
> 2. Additionally, daily cover is applied over the active portion of the landfill at the end of each workday. Cover materials include wood chips, CDD processing fines, bark, ash, soil-type materials, and/or other approved wastes that provide appropriate cover.
>
> 3. When necessary, a dozer mounted odor neutralizer spray system is utilized to control odors from arriving waste as they are offloaded and spread out.
>
> 4. Upon arrival at the landfill during warm weather months, the top of the trailer loads of FEPR, sludge, and bypass MSW pass under a trailer spray system that applies an odor control agent onto the waste to assist in controlling odors during the offloading process. These empty trailers pass through the same spray system to control empty trailer transit odors.
>
> 5. A perimeter odor (misting) neutralization system is employed during the warm weather months to provide additional odor control coverage. The system is sited in strategic locations around the active area of the landfill and is moved to appropriate locations when new cells are opened. A portable system is also utilized at the active face of the landfill.

Also included in the **Odor Control Plan**:

Monitoring for Offsite Migration of Landfill Related Gases and Odors:

> 1. Daily odor surveys are typically performed around the active landfill areas, while periodic surveys will be performed at surrounding residential areas when conditions warrant. The surveys will include monitoring for gas migration and landfill-related odors. Odor intensity will be rated according to the Butanol Odor Intensity Scale. The surveys will also include measurements of airborne concentrations of H2S using a Jerome® 631- X™ Hydrogen Sulfide Analyzer. The results of the surveys will be immediately reported to the landfill supervisor in order to ensure that any potential odor causing conditions are corrected accordingly. 2. As a proactive measure, JRL has installed six Zellweger Analytic Single Point Monitors onsite and offsite, so that facility personnel can review real-time H2S concentration data from the monitors and identify conditions that may require abatement.
>
> Locations of the monitors are as follows:
>
> 1. Adjacent to the perimeter fence line just south of cell #5 (Landfill South Monitor).

[9] https://www.maine.gov/dafs/bgs/maines-state-owned-landfills/juniper-ridge-landfil

2. Located at 2824 Bennoch Road, off Route 16 northeast of the landfill (Route 16 Monitor).

3. Located approximately 1-mile north of the landfill on the access road (Access Road Monitor).

4. Located at 4 West Coiley Road, off Route 43 southeast of the landfill (West Coiley Road Monitor).

5. Located at 552 W. Old Town Road off Route 43 southwest of the landfill (552 W. Old Town Road Monitor).

6. Located off the Old Stagecoach Road northwest of the landfill (Stagecoach Road Monitor).

All six of the H_2S monitors have direct communication with the landfill's monitoring system through telemetry. Real-time information can be obtained at the scale house, as well as on the office computer. If any of the H_2S monitors detects a concentration of 15 ppb, the scale house is alerted by telephone with an automated message reporting the condition. The scale house operators and security personnel are instructed to immediately report any such condition to the supervisory staff, so that they can follow up by investigating onsite conditions as necessary. If an odor complaint is received at the facility, the scale house staff can report the real-time H_2S data (along with the wind direction from the onsite weather station) to response personnel to assist them with their follow-up investigation.

CDD is used at JRL to stabilize sludge for placement in the landfill, but it is also used for shaping and grading side slopes of the landfill in preparation for intermediate or final cover.

According to the **2022 Annual Report**[10], approximately 52 % of the waste received was some form of CDD and 10 % of the waste received was sludge meaning that over 60% of the waste disposed of at JRL when combined, can cause issues with odors caused by H_2S.

4. **There were thirty-eight comments received regarding how the material being disposed of at JRL has changed over the years of operation.**
   a) **The types and tonnages of waste that is currently being disposed of at JRL are not what was originally agreed to by the local communities.**
   b) **There were comments recommending amending the Host Community Agreement (HCA)**
   c) **There were also comments requesting Casella disclose terms of all contracts with third parties.**

Response to Comments:

[10] Juniper Ridge Landfill | Bureau of General Services (maine.gov)

The **2024 Maine Materials Management Plan**[11] describes **Juniper Ridge Landfill's Role in Maine's Waste Disposal** Arena on page 36 of the report:

> **P.L. 1989, Ch. 585***, An Act to Promote Reduction, Recycling and Integrated Management of Solid Waste and Sound Environmental Regulation* established a comprehensive framework for solid waste management in Maine.
>
> Since the enactment of this law, the State has established ownership of three licensed landfills: the yet-to-be-developed Carpenter Ridge Landfill with a design capacity of 1.8 million cubic yards, the inactive Dolby Landfill in East Millinocket, which is in the process of final closure, and JRL in Old Town. When obtained by the State, the licenses for each of these landfills were focused on providing disposal capacity for special wastes associated with the paper mills that operated them at the time. In April 2004, the State, acting through the State Planning Office, received a license amendment (Department License #S-020700-WD-N-A) that provided for the acceptance of additional waste types at JRL , including: front-end process residue ("FEPR") from the then-owned PERC and the Maine Energy Recovery Company ("MERC") waste-to-energy incinerator in Biddeford (now closed); oversized bulky wastes ("OBW"); MSW bypass from any waste-to-energy incinerator located in Maine; CDD; ash from any waste-to-energy incinerator located in Maine; and water/wastewater treatment sludge.
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> Finding of Fact 13 in that license states that "[t]he yearly quantity of solid waste to be accepted at the landfill is not expected to exceed 540,000 tons per year." This amount is inclusive of up to 50,000 tons per year of mill waste from the Old Town papermill, 120,000 tons of FEPR and 70,000 tons of ash from two waste-to-energy incinerators (then operating PERC and MERC), and 190,000 tons of CDD. In December 2013, WOTL (now known as JRL) was licensed (Department License #S-020700-WD-BC-A) to accept up to 81,800 tons of non-bypass MSW generated in Maine into its existing permitted landfill area.
>
> This amendment was sought to provide a temporary alternative (through March 31, 2018) for disposal of MSW generated in municipalities that had been sending their MSW to the MERC facility in Biddeford prior to it ceasing operations in December 2012. In June 2017, the State, acting through BGS received approval for a 9.35-million-cubic-yard expansion. In 2018, the approval to accept up to 81,000 tons of non-bypass, in-state MSW was extended through March 31, 2020, to account for the near-term uncertainty in disposal capacity due to operational adjustments at the Orrington waste-to-energy facility and the delay of operations of the MSW waste processing facility in Hampden.
>
> The data show significant changes in the types of waste being landfilled at JRL in 2022 compared with 2012. There has been a substantial drop in FEPR and MSW incinerator ash due to the closure of the MERC facility and the curtailing of operation at the Orrington Waste-to-Energy facility, as well as industrial WWTP sludges and papermill wastes due to the closure of the papermills in Old Town and Lincoln. However, the fill rate at JRL has climbed due to significant increases in the disposal of MSW and more recently municipal WWTP sludge. For example, MSW increased from 729 tons in 2012 to 283,683 tons in 2022 and CDD increased from 369,069 tons in 2012 to 485,298 tons in 2022. Likewise, the disposal of municipal WWTP sludge from 53,023 tons in 2018 to 94,271 tons in 2022 has also increased the fill rate at JRL. Although waste

[11] Department Reports, Maine Department of Environmental Protection

volumes fluctuate year-by-year, the overall trend is a marked increase in material accepted for disposal.

The Host Community Agreement Between Casella and the city of Old Town describes monetary transactions between the landfill operator (Casella) and the municipality that the landfill is located in (Old Town). Details of this agreement consist of amounts paid by Casella to the city of Old Town based on types and tonnages of waste that JRL receives annually.

There are a few different sections of the current **OSA**[12] and amendments that address the operational records and contracts with Casella.

From Section 2.6 Inspection.

The State shall have the right to inspect the Landfill during reasonable business hours to confirm compliance with the provisions of this Agreement, that policies are in place to provide that only Acceptable Waste will be received at the Landfill, and that the Landfill is being operated in conformity with state and federal environmental laws and regulations and other applicable laws.

From Section 3.1 Contracts with Third Parties

(a) During the Term hereof, but after the issuance of the License Amendment Casella shall, subject to the terms and conditions hereof, have the exclusive right and authority to negotiate and enter into various contracts regarding the Landfill. These contracts may include, among others,

(i) long-term contracts for the disposal of waste at the Landfill,

(ii) a long-term contract for the disposal of Leachate generated at the Landfill,

(iii) long-term contracts for the disposal of local municipal solid waste at the Landfill, and

(iv) long-term host community agreement with the City of Old Town, all on terms and conditions reasonably acceptable to Casella.

From Section 10.1 Annual Report; Inspection Rights.

In addition to other reports that Casella may be required to maintain under applicable law, Casella shall prepare and provide to the State an annual report summarizing in reasonable detail the business and technical operation of the Landfill during the preceding calendar year or portion thereof and such other records and information as the State may reasonably require, including certifications regarding the as built and available disposal capacity reserved for FJ (or its successor or assign). Casella shall maintain accurate records, books, and data with respect to the amount of all Acceptable Waste disposed of at the Landfill during any period that Casella is the operator of the Landfill. The State shall have the right at reasonable times and upon not less than three (3) business days prior notice to inspect and examine Casella's books and records related to the operation of the Landfill to confirm Casella's compliance with this Agreement and applicable permits and environmental laws and regulations.

Additionally, in 2021, the State Legislature passed several laws impacting Casella's waste management practices at the Juniper Ridge Landfill including restrictions on the land application

[12] OSA.signed.pdf (maine.gov)

of sludge and the use of bulking materials, often in the form of construction and demolition debris, from out of state sources.

This topic may be addressed further in pending legislation.

5. **There were six requests for a Public Benefit Determination to be submitted to and approved by the DEP prior to any contract extension or agreement between BGS and Casella.**

Response to Comments:

This topic may be addressed further in pending legislation. **L.D.2135** is drafted and currently being discussed in the Maine Legislature. If passed as written, it would require the submission and completion of a Public Benefits Determination from the Maine DEP prior to entering into an amendment or extension of the OSA for JRL.

It was noted in the **2023 Brown and Caldwell Report**[13]:

The last time JRL was expanded It took nearly 6 years between submittal of the Public Benefit Determination and final approval, with additional time then needed to construct the new area.

6. **Landfill leachate was another topic that was focused on in the public comments. There were forty-two comments that included concern for PFAS chemicals in the leachate that is being introduced into the Penobscot River. There were forty-nine comments regarding the PFAS contamination of the landfill leachate and require treatment before it is disposed of at the Nine Dragons wastewater treatment facility.**

Response to Comments:

There are sections in the **OSA** that discuss liabilities associated with environmental impacts caused by the operation of JRL.

Section 7 Compliance with Law

> Except as otherwise provided in this Agreement, and subject to Section 8 hereof, Casella shall be responsible for all costs and expenses related to Landfill regulatory compliance. Notwithstanding the foregoing, Casella shall have the right, at its own cost and expense, to contest or review by legal or administrative proceedings the validity or legality of any law, order, ordinance, rule, regulation, direction, or certificate of occupancy, and, to the extent permitted by law, during such contest Casella may refrain from complying therewith, subject, however, to the terms and conditions hereof.

Section 8.1 Indemnification

[13] Department Reports, Maine Department of Environmental Protection

(a) Casella will indemnify, defend, and hold the State and FJ, their respective Affiliates and their respective officers, directors, employees, agents and Affiliates harmless from and against any and all Damages that arise from or related to any past, current or future design, construction, improvement, ownership or operation of the Landfill or any other activities associated therewith, or any breach of Casella's obligations under this Agreement, including without limiting the generality of the foregoing, any and all Damages resulting from:

1. groundwater or surface water contamination caused by the Landfill, whether or not such liability results from operation of the Landfill by FJ or any third parties;

2. on-Premises or off-Premises contamination;

3. violation of any Environmental Law at or in connection with the Landfill or Premises;
4. any fine, penalty, judgment, award, or settlement of any legal or administrative proceeding relating in any way to Environmental Matters relating to the Landfill or the Premises;
5. any compliance, corrective or remedial measure required under
6. any Environmental Law or other requirement including any clean-up, removal, containment or other remediation or response actions associated with the Landfill or the Premises; and
7. any and all Environmental Matters.

There was a **2024 DEP Report on the Testing of Landfill Leachate for Perfluoroalkyl and Polyfluoroalkyl Substance Contamination**[14] submitted to the Committee on the Environment and Natural Resources (ENR).

Section V subsection A, Bureau of General Services Study and Report states:

Resolve 2021, Ch. 172, Resolve, *To Address Perfluoroalkyl and Polyfluoroalkyl Substances Pollution at State-owned Solid Waste Landfills,* required the Maine Department of Administrative and Financial Services' Bureau of General Services (BGS) to conduct a study of methods to treat PFAS in leachate collected from two State-owned landfills - the Dolby Landfill in East Millinocket and the Juniper Ridge Landfill in Old Town. Specifically, the study was to Maine Department of Environmental Protection Testing of Landfill Leachate for Perfluoroalkyl and Polyfluoroalkyl Substance Contamination identify readily available methods to reduce the concentration of the Sum of 6 PFAS to no more than 20 ng/L, which is the current Maine Interim Drinking Water Standard for PFAS. The study was completed and the report, titled "Study to Assess Treatment Alternatives for Reducing PFAS in Leachate from State-Owned Landfills" was submitted to the Joint Standing Committee on Environment and Natural Resources in January 2023.

Section V, subsection D, Considerations for Managing and Treating Leachates states:

Landfill facilities do not actively use or produce PFAS as part of their operations, rather they accept and manage waste streams that contain PFAS – materials such as sludge, MSW, industrial

[14] Department Reports, Maine Department of Environmental Protection

wastes, and construction and demolition debris. As PFAS are eliminated from consumer goods and products, they will become less prevalent and persistent in our waste stream. Additionally, it is important to recognize that landfill leachate is one waste stream among many with the potential to contribute PFAS to the environment. Recognizing that most landfill leachate is impacted with PFAS is important but understanding that a holistic approach to managing PFAS in waste is vital to successfully keeping PFAS out of the environment and protecting public health.

This topic may be addressed further in pending legislation.

7. **Environmental Justice and environmental impacts were two topics that were mentioned one hundred and thirty two times in the public comments.**

a) **The odors from sludge and methane gas that travel through the air.**
b) **The leachate that is being discharged into the Penobscot River.**
c) **The fire produced toxic smoke and ash that fell on the Penobscot Nation Reservation.**
d) **The animals (Bald Eagles) that are feeding on trash at JRL.**
e) **All of these have had long term lasting effects on the Penobscot Nation and their traditional way of life. Their sustenance lifestyle creates an intimate relationship with their land, which is greatly impacted by the Juniper Ridge Landfill. The local fish are not safe to consume because of the toxins that they carry.**
f) **There were concerns regarding JRL sitting on top of an aquifer and the impact that the landfill would have on the water underneath the facility.**
g) **Casella has a bad environmental track record with violations in other New England states.**

Response to Comments:

Odors were discussed in Comment Number 3 of this document**.**

Section 1.1 Site History and **Section 5.1 Cell Construction** in the **2023 Operations Manual**[15] for JRL describes the liner system for the landfill along with the leachate collection and disposal process**.** Those sections are detailed below**.**

From Section 1.1 Site History:

> The landfill has been designed and constructed as a secure waste disposal facility in that the groundwater beneath and adjacent to the site is protected by a composite liner and a leachate collection system for the originally permitted JRL cells and a double liner system with a leak detection system for the Expansion cells. Leachate generated at the site is collected, stored, and transported to the ND OTM LLC (ND Paper) wastewater treatment plant located in Old Town for treatment. Additionally, JRL utilizes Anson-Madison Sanitary District as a backup disposal site, as needed.

[15] Juniper Ridge Landfill | Bureau of General Services (maine.gov)

From Section 5.1 Cell Construction:

> Originally permitted landfill Cells 1 through 10 are constructed with underdrain systems to relieve upward groundwater pressure as appropriate. The cells have a composite liner system consisting of an 80-mil HDPE flexible membrane liner overlying a geocomposite clay liner and 2 feet of low permeability material to achieve a combined hydraulic conductivity of $2.9x10^{-9}$ cm/sec. The cells also contain a leachate collection system consisting of a 12-inch layer of granular material with an average hydraulic conductivity of $1x10^{-2}$ cm/sec, a geocomposite drainage net, and a piping network consisting of 6- and 8-inch diameter collection laterals, spaced at approximately 100 to 200 feet on center, that connect to 8-inch and 12-inch diameter collection header pipes. Landfill Expansion Cells 11 through 17 will also be constructed as secure solid waste landfill cells but with two liners, a primary and a secondary, a leak detection system, leachate and gas collection and transport systems, and intermediate and final cover systems. Under the entire base of the Expansion an imported soil layer, consisting of one foot of compacted clay, will be installed to provide a uniform, low hydraulic conductive soil layer under the secondary liner. A granular underdrain collection system will be installed under 12.7 acres of the Expansion where the landfill base is located below the site's phreatic surface (water table). Leachate generated within the JRL cells is handled by leachate sumps which are designed and constructed to handle the leachate flow from one or a series of cells. Pump stations are designed and constructed at each sump to accommodate the predicted volume of leachate from the collection area. Each pump station transfers the leachate to a 921,000-gallon aboveground storage tank for temporary storage prior to trucking the leachate off-site for treatment.

There is also a section in the **OMM** that discusses the vector control plan for JRL that is detailed below.:

From Section 7.22 Vector Control:

> Vectors are controlled at JRL by assuring that all waste materials within the active portions of the landfill are appropriately covered each workday. Additionally, NEWSME maintains a contract with Modern Pest Control to supply vector control services on an ongoing basis. Birds are controlled by regularly deploying lethal depredation methods, as well as non-lethal methods to scare birds off of the site.

JRL is a "secure Landfill" with modern leachate and Landfill Gas (LFG) collection systems compliant with Maine Air Quality and Maine Water Quality licensing withing the Maine DEP. Casella has not received a Notice of Violation (NOV) from the Maine DEP for their operation of JRL.

This topic may be addressed further in pending legislation.

8. **There were thirty-four comments suggesting the state should focus on zero waste solutions or other waste handling practices that are more in line with the state's recycling goals. Comments included forcing better recycling within the state and forcing companies to make better products.**

The Maine Department of Environmental Protection is charged with managing solid waste within the state The **2024 Maine Materials Management Plan**[16] was prepared in accordance **with 38 M.R.S. § 2122**, which states:

> "The department shall prepare an analysis of, and a plan for, the management, reduction and recycling of solid waste for the State." **38 M.R.S. § 2123-A** requires that, "[t]he State Plan [to] include the following elements:
>
> 1. Waste characterization. The state plan must be based on a comprehensive analysis of solid waste generated, recycled, and disposed of in the State. Data collected must include, but not be limited to, the source, type, and amount of waste currently generated; and the costs and types of waste management employed including recycling, composting, land spreading, incineration, or landfilling.
>
> 2. Waste reduction and recycling assessment. The state plan must include an assessment of the extent to which waste generation could be reduced at the source and the extent to which recycling can be increased.
>
> 3. Determination of existing and potential disposal capacity. The state plan must identify existing solid waste disposal and management capacity within the State and the potential for expansion of that capacity.
>
> 4. Projected demand for capacity. The state plan must identify the need in the State for current and future solid waste disposal capacity by type of solid waste, including identification of need over the next 5-year, 10-year and 20-year periods."
>
> **38 M.R.S. § 2122** also requires that each plan update must be based on the priorities and recycling goals established in **38 M.R.S. §§ 2101** and **2132** and must provide guidance and direction to municipalities in planning and implementing waste management and recycling programs at the state, regional and local levels.
>
> Maine's population is growing but the per capita data suggests that the increase in disposal tonnage is not simply a factor of increased population. Maine's disposal tonnage is trending upward faster than the population is growing, while tracked diversion activities remains flat. Subsequently, additional waste disposal capacity will be needed in the long term, unless there is additional infrastructure in place as well as robust implementation of statewide diversion programs to recover recyclables and organics, and other materials that could be diverted from waste disposal. Systemic changes and infrastructure investments will be necessary to reverse this trend.
>
> The Department currently lacks in-depth knowledge about precisely what is in Maine's municipal solid waste stream, which makes it challenging to come up with an effective and comprehensive plan to divert waste materials by type. The statewide WC Study and FLWG Study will provide a

[16] Department Reports, Maine Department of Environmental Protection

great level of detail regarding what materials are being managed as waste, which will in turn allow the Department to prioritize materials for diversion.

9. **Eight comments were received asking, Is the state representing the interests of Maine residents?**

Response to Comments:

BGS and DEP are both State agencies but have different roles in solid waste management. BGS is charged with operational oversight of State-owned landfills. The DEP is responsible for regulation and enforcement of Maine's solid waste laws as they relate to all landfills located within the state of Maine.

M.R.S.A 38 chapter 24: §2152-A. State-owned solid waste disposal facilities; purpose, management, and operation; disposal of municipal solid waste states;

1. **Purpose of State-owned solid waste disposal facilities.**

The Legislature finds that the purpose of State-owned solid waste disposal facilities is to ensure that adequate disposal capacity is available for the disposal of solid waste generated within the State through the development of new disposal capacity for anticipated state disposal capacity needs and the operation of existing facilities to address current state disposal capacity needs.

2. **Consistency with solid waste management hierarchy**

The Legislature intends that all aspects of the management and operation of State -owned solid waste disposal facilities be conducted in a manner that maximizes alignment with the solid waste management hierarchy under section 2101.

The bureau, the operators of State-owned solid waste disposal facilities and the department shall ensure that the acceptance of waste at State-owned solid waste disposal facilities is consistent with the hierarchy and that options for the management of such waste that represent a higher priority on the hierarchy are not otherwise reasonably available.

3. **Disposal of municipal solid waste at State-owned solid waste disposal facilities; department authorization criteria; department limitation of disposal.**

The Legislature intends that the State prioritize the disposal at State-owned solid waste disposal facilities of special wastes for which there are limited disposal options in the State and minimize the disposal at State-owned solid waste disposal facilities of non-bypass, unprocessed municipal solid waste. In accordance with this intent and with the provisions of this chapter and chapter 13, the department may**.**

A. Authorize the land disposal of non-bypass, unprocessed municipal solid waste at a State-owned solid waste disposal facility only when**:**
   1. A specific need for the disposal has been identified by the bureau and the operator of the facility.
   2. The disposal is consistent with the solid waste management hierarchy under section 2101, as determined by the department, and
   3. Options for the management of the waste that represent a higher priority on the hierarchy are not otherwise reasonably available, as determined by the department, and

B. Limit the volume of municipal solid waste disposed of at a State-owned solid waste disposal facility and the duration of such disposal through the imposition of such limitations under the facility's license.

The Maine DEP published the **Maine Materials Management Plan 2024**[17]. The key takeaways from this Plan include the following:

• Maine is currently grappling with a shortage of waste disposal options for the Eastern Maine Region.

• The expansion of Juniper Ridge Landfill ("JRL") in Old Town will be necessary to ensure there is adequate capacity for the entire State of Maine over the next 10 years.

• Assuming an expansion of JRL takes place, Maine has between 15-20 years of capacity left for its statewide waste disposal (with the exception of Aroostook County which has about 40 years capacity remaining).

• To best manage the waste disposal capacity concerns the Department will plan for enhanced waste reduction and diversion programs as well as evaluate key infrastructure needs for waste disposal.

• Increases in waste disposal capacity for Maine will likely need to include expanding landfill space, full operation of incineration and waste processing facilities, and/or implementing new technologies to treat waste streams to either reduce volume or prevent the need for landfilling.

Since 2018, the total amount of waste landfilled, including the minimal amount of waste shipped to out-of-state landfills, has grown even more significantly by 34.28%. When comparing 2018 to 2022, the rate of increase was 7.8% annually. This is most likely due to several factors including: the idling of the waste-to-energy facility in Orrington; the idling of the Hampden waste processing facility, and the resultant shift of waste and recycling from those communities; the increase in WWTP sludge being landfilled due to the sludge land application ban; and the increase in CDD and other similar wastes being generated.

If JRL is not expanded, the state faces a dire situation for solid waste generally in the state. For biosolids, there is no current or proposed alternative outlet in the state that would be able to accept the tonnage currently handled at JRL. The three landfills currently handling nearly all the biosolids generated in the state are all estimated to close in the next 20 years. In April 2022, the 130th Maine legislature passed Public Law **(P.L.) 2021, Ch. 641**, "*An Act to Prevent the Further Contamination of the Soils and Waters of the State with So-called Forever Chemicals*" (often referred to by the name of the original bill, Legislative Document **(L.D.) 1911**, and codified at **38 M.R.S. § 1306 (7)).** This legislation banned the land application, sales, and distribution of any products made with or mixed with biosolids and commercial and industrial sludges. This legislation drove the little remaining agronomic utilization in the state (via land application and distribution as compost) to landfill disposal. In 2022, nearly all biosolids generated in the state were sent to in-state landfills, primarily the state-owned Juniper Ridge Landfill (JRL). With the closure of the Maine Energy Recovery company (MERC) in December 2012, JRL was licensed to accept non-bypass MSW to help manage the waste going to MERC. Municipal Waste Solutions, LLC ("MWS") and the Municipal Review Committee, Inc. ("MRC") own an MSW processing facility in Hampden which is designed to process 650 tons per day of MSW from 115 municipalities that are part of the MRC. However, due to financial and technical issues that developed during construction and start-up, the facility only operated for a short period of time and has been idle since May of 2020, requiring the waste to be bypassed. Until April 2018, MSW

[17] Department Reports, Maine Department of Environmental Protection

from the MRC municipalities was disposed of at the waste-to-energy incinerator in Orrington. When construction of the waste processing facility was not completed by April 2018, MRC redirected the MSW from its member communities to the privately-owned Crossroads Landfill. MRC had negotiated an exclusive contract with Crossroads Landfill for the disposal of "bridge capacity" and bypass waste during construction, start-up, and initial operation of the facility, as applicable. Through a waste swap agreement that addressed logistical waste handling constraints to minimize waste transportation distances, some waste from the MRC communities was also diverted to JRL.

10. There were eighteen comments that called for either the evaluation of Casella's performance at JRL or for the termination of the contract with Casella.

Response to Comments:

BGS actively oversees Casella's operation of the landfill. BGS receives and reviews five reports monthly which include a status report, a waste activity report, an overweight truck report, a complaints report, and a report on host benefits. BGS staff meet with Casella regularly for a briefing on operations and activities taking place at the landfill. BGS staff participate in meetings on site related to landfill construction activities and environmental licensing meetings.

There are certain criteria that must be met in accordance with the **OSA** to allow for termination of the contract between the State of Maine (BGS) and Casella.

From Section 15 Termination:

15.1 Events This Agreement may be terminated at any time:

(a) By mutual written agreement of the parties;

(b) By either party if, prior to the Effective Date, litigation is filed or threatened, or any governmental authority institutes an action or investigation, intended to prohibit, or prevent consummation of any of the transactions contemplated hereby or by the Acquisition Agreement, or any governmental authority does anything by the Effective Date which in a party's reasonable commercial judgment renders such consummation imprudent.

(c) By Casella if:

i. Casella exercises its right to terminate under Section 5.3, subject to the limitations and qualifications set forth in said Section 5.3.

ii. an Expansion Permit has not issued as a result of a Capacity Limiting Event and the licensed and permitted capacity of the Landfill (in excess of the capacity reserved for FJ Waste pursuant to Section 2.8) has

been exhausted, provided that Casella cannot exercise its right to terminate under this clause (i) until on or after the fifteenth (15th) anniversary hereof.

iii. An Event of Default by the State occurs as set forth in Section 16, which default remains uncured beyond any applicable period for cure thereof;

Without in any respect limiting the foregoing or affecting other terms and provisions hereof, and solely for purposes of illustration, Casella shall not have the right to terminate this Agreement in the event:

A. The application for the Expansion Permit is denied under State law in effect as of the date of this Agreement;
B. The construction, engineering, design, permitting, licensing, operation, maintenance, management, and administration of the Landfill is more expensive under the terms of the Expansion Permit as granted than as anticipated by Casella.
C. The application for the Expansion Permit is granted but restricted such that the new capacity, when added to the then permitted capacity, is insufficient to allow Casella to dispose of 500,000 tons of waste a year for a period of twenty (20) years
D. Casella is unable or fails to comply with the terms and conditions under which the Landfill is permitted and licensed;

E. There is a change in Federal or State law after the Effective Date of this Agreement *that* increases the cost of the construction, engineering, design, permitting, licensing, operation, maintenance, management, and administration of the Landfill; or

F. The Expansion Permit is revoked or modified.

(d) By the State if:

(i) an Event of Default by Casella occurs as defined in Section 16.1, which default remains uncured beyond any applicable period for cure thereof; or
(ii) any of the conditions to closing in the Acquisition Agreement for either the State's or FJ's benefit shall not have been satisfied or waived and such Agreement shall have been terminated in accordance with terms thereof; or
(iii) any representation or warranty made by Casella hereunder is not true, accurate and complete in any material respect when made or becomes untrue, inaccurate, or incomplete in any material respect during Term; or
(iv) FJ exercises its right of reverter under Article IO of the Acquisition Agreement and the underlying breach is not cured within the applicable cure period or Casella breaches its obligations under the C&D Fuel Agreement and the underlying breach is not cured within the applicable cure period; or
(v) if the State reasonably determines that the issuer of the payment and performance bond attached hereto as Exhibit C is not financially sound or reputable, notifies Casella of the same and Casella fails to secure an alternative bond in form and content reasonably satisfactory to the State issued by a financially sound and reputable surety reasonably acceptable to the State and licensed to issue surety bonds and/or insurance policies within ninety (90) days.