

ATTACHMENT 2
PROJECT PURPOSE AND CAPACITY NEED

**JUNIPER RIDGE LANDFILL EXPANSION
PUBLIC BENEFIT DETERMINATION
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2.0 PROJECT PURPOSE AND NEEDS

2.1 Project Purpose

The purposes of the Expansion Project are to: (i) meet the immediate, short-term, or long-term solid waste disposal needs of the State of Maine, consistent with the State's Waste Management and Recycling Plan; and (ii) comply with the provisions of the OSA. The immediate, short-term, and long-term disposal needs of the State and the State's current and projected landfill capacity to meet those needs are discussed below in Subsection 2.2.

2.2 Maine Solid Waste Disposal Capacity and Needs

In 1989, the State of Maine imposed a ban on new commercial landfills and began closing existing unlined municipal landfills throughout the State, thereby limiting the State's ability to create future, long-term landfill capacity. There are 12 landfills currently operating in the State that accept Maine's solid waste,²⁴ and four waste-to-energy incineration facilities that accept municipal solid waste but generate ash and other residues requiring landfill disposal:

- Eight landfills are municipally-owned and are used primarily for disposal of solid waste (i.e., unprocessed MSW and CDD) generated within a specific community or region: Bath, Brunswick, Augusta (Hatch Hill), Greenville, Presque Isle, and Fort Fairfield (TriCommunity), Midcoast SWC, and Rockland. The estimated remaining capacity of these facilities as of 2009 is 4,920,282 cubic yards,²⁵

²⁴ Capacity Report, pages 21-24. Note this list excludes generator-owned landfills, which by definition support the disposal of waste generated by the owner of the landfill (i.e., pulp and paper landfills). However, if any of those landfills were to close prematurely and the owner were to continue to generate solid waste, the need for additional State-wide disposal capacity would accelerate.

²⁵ Capacity Report, page 24.

- Two landfills are either municipally-owned or owned and operated by regional entities and are used primarily for the disposal of residue from two waste-to-energy plants. The Lewiston Landfill accepts primarily residue from the Mid-Maine Waste Action Corporation (MMWAC) waste-to-energy incinerator, while the residue from the ecomaine waste-to-energy facility in Portland is sent to its own landfill in Scarborough. The remaining capacity of these two facilities as of 2009 is 1,279,397 cubic yards;²⁶
- One commercial landfill is privately-owned by a solid waste management company: Waste Management, Inc. owns and operates the Crossroads Landfill, located in Norridgewock, which has a remaining capacity as of 2009 of 4,254,517 cubic yards;²⁷ and
- One landfill, Juniper Ridge, is owned by the State of Maine, which has a remaining capacity as of 2009 of 7,114,614 cubic yards.²⁸ The State owns another landfill site outside of Lincoln (a.k.a. the Carpenter Ridge Landfill), but that site remains undeveloped and is licensed for approximately two million cubic yards of capacity.

These landfills accept various waste streams and are licensed by the MEDEP. In addition to these landfills, there are approximately 20 other publicly-owned disposal facilities in Maine that accept brush, wood, inert debris, and construction/demolition (CDD) wastes. These municipal and quasi-municipal landfills serve limited geographic areas and are not licensed or equipped to serve State-wide needs. The remaining capacity at individual CDD facilities varies (another 10 to 12 years as of 2009).²⁹ A number of these facilities will be full prior to 2020 creating "pockets" where CDD disposal options will need to be reconsidered. Finding alternatives to land disposal for CDD continues to pose problems in Maine's rural areas. These materials cannot be recycled or reused without investment in equipment, labor, and sufficient land area to aggregate

²⁶ Capacity Report, page 24.

²⁷ Capacity Report, page 23.

²⁸ Capacity Report, page 21.

²⁹ Capacity Report, page 25.

and process them. Markets for processed CDD do exist, but given the often small scale that most Maine towns operate on, with low volume and widely dispersed facilities, rural operations do not often produce the economics needed for sustainable processing and recycling efforts. Disposal of CDD at JRL may be the only option for many municipalities in Maine once these other CDD facilities reach capacity, considering the availability and costs of technologies and services, transportation and handling logistics, and overall costs that may be associated with recycling and reuse.

The only operating commercial landfill in the State, Crossroads (owned by Waste Management Inc.), is reported by the SPO to have approximately 12 to 14 years of remaining capacity, as of the end of 2009, based upon 2009 fill rates. As noted, the establishment of new or expanded commercial solid waste disposal facilities is prohibited by Maine statute (38 M.R.S.A. § 1310-X).³⁰

2.2.1 Immediate/Short-Term Need. Based upon the recent Capacity Report, JRL provided for 54 percent (2008) and 45 percent (2009) of the total MSW State of Maine landfill disposal needs. These figures clearly demonstrate the important role the JRL facility plays in meeting the State's immediate and short-term landfill disposal needs.

2.2.2 Long-Term Need. The Capacity Report's estimate of existing permitted landfill disposal capacity in Maine is approximately 17.6 million cubic yards as of the beginning of 2010.³¹ The Capacity Report also predicts that an estimated 24.4 million cubic yards of landfill capacity will be required over the next 20 years. These estimates were based upon the following assumptions:

- the State maintains a constant recycling rate of 38 percent,

³⁰ LD 879 proposes to lift the commercial landfill ban for an expansion of the Crossroads facility onto contiguous property of a landfill of unknown size. LD 879 has been carried over for consideration in the 2012 legislative session. But even if it were enacted, there are several conditions that would need to be satisfied before any such capacity could be developed: e.g., land acquisition, a Preliminary Information Report, Determination of Environmental Feasibility, a positive Public Benefit Determination, and full licensing.

³¹ Capacity Report, page 30.

- exported wastes continue to decline,
- continued operation of and reliance on the four waste-to-energy facilities at the existing mix of tonnages (out-of-state waste, processing residues, etc.),
- no significant change in municipally-operated landfills, and
- zero waste growth for calendar years 2010 and 2011 and 2.8 percent annual growth thereafter.

Table 2-1 summarizes SPO's projected landfill disposal needs and capacity for the State between 2009 and 2029 as presented in the Capacity Report.

TABLE 2-1
PROJECTED DISPOSAL CAPACITY AVAILABLE VS. CAPACITY NEEDED AT 2.8% GROWTH 2009-2029
 (SOURCE SPO, 2011 CAPACITY REPORT, pg. 30)

Landfill Capacity Available (2009) (cubic yards)		Capacity Needed (2009-2029) (tons)	
Municipal Landfills	4,920,282	Total Waste Generated	44,419,614
Municipal Ash – "Landfills"	1,279,397		
Municipal CDD Landfills	Incomplete data	Imported Waste	4,000,000
Commercial	4,254,517	Recycled	(17,190,391)
Juniper Ridge	7,114,614 ¹	Exported	(1,066,071)
		Combusted at WTE	(9,194,860)
Total Landfill Capacity Currently Permitted:	17,568,820	Total Landfill Capacity² Needed: tons to cubic yards	24,381,735
Notes:			
1. The JRL Operating Services Agreement requires a reserve annual capacity for 56,000 tons of wastes from Old Town Fuel and Fiber and Lincoln Pulp and Paper, or 1,120,000 tons, or about 1,302,000 cubic yards ² over 20 years.			
2. Converting tons to cubic yards using 0.86 tons per cubic yard.			

As outlined in the Capacity Report,³² the Plan estimates Maine's 20 year land disposal capacity needs at 34 million cubic yards predicated on a 4 percent annual growth rate in MSW based on historical trends prior to 2008. The difference between the capacity need as presented in the Capacity Report and the need presented in the Plan demonstrates the potential variation in waste disposal capacity needs of the State as conditions shift within the State economy. Both

³² Capacity Report, page 14.

the Capacity Report and the Plan highlight the relationship between the economy and waste generation in the State.

The following excerpt is from the Capacity Report:³³

Based on the projection in Table A (i.e., Table 2-1), we can see that Maine has sufficient disposal capacity for 10 years through 2020, but it currently cannot meet projected statewide needs for a 20-year outlook. Maine needs to plan for developing new disposal capacity beyond 2020 in order to meet the waste management needs of the State's municipalities and businesses.

The largest single source of Maine's disposal capacity is the state-owned Juniper Ridge Landfill, which has capacity through 2017-2018. To avoid a shortfall in landfill capacity, the State needs to begin the application process for additional, state-owned, landfill capacity at that landfill in 2011. This timeframe takes into account the current economic slowdown, and the anticipated duration of the complete development process, from the initial preparation of the application for public benefit determination, the permitting process, through construction of new capacity licensed and preparation to receive waste.

Title 38, chapter 24, section 2156-A outlines the Office's responsibility to notify the Legislature of the need to develop more solid waste disposal capacity when there is six (6) years or less of licensed and available disposal capacity for MSW or special waste in the State.

Based on the analysis of remaining landfill disposal capacity at the state-owned Juniper Ridge Landfill and the commercial Crossroads Landfill, the Office believes it will make that finding in 2011.

³³ Capacity Report, page 31.

For the reasons stated above, JRL serves both the immediate and short-term waste disposal needs of the State of Maine, and the capacity proposed in the Expansion Project, and the timely processing of the application beginning with this Public Benefit Application, are necessary to meet the long-term solid waste disposal needs of the State consistent with the State's Waste Management and Recycling Plan.³⁴ A projected permit and development schedule for the JRL Expansion project is presented on Figure 2-1.

³⁴ As noted earlier, the 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. §2123-A(4).

Figure 2-1
 PROJECTED JUNIPER RIDGE LANDFILL EXPANSION
 PERMITTING AND DEVELOPMENT SCHEDULE

