

Expansion Overview

JUNIPER RIDGE LANDFILL EXPANSION:

CITY OF OLD TOWN PLANNING BOARD

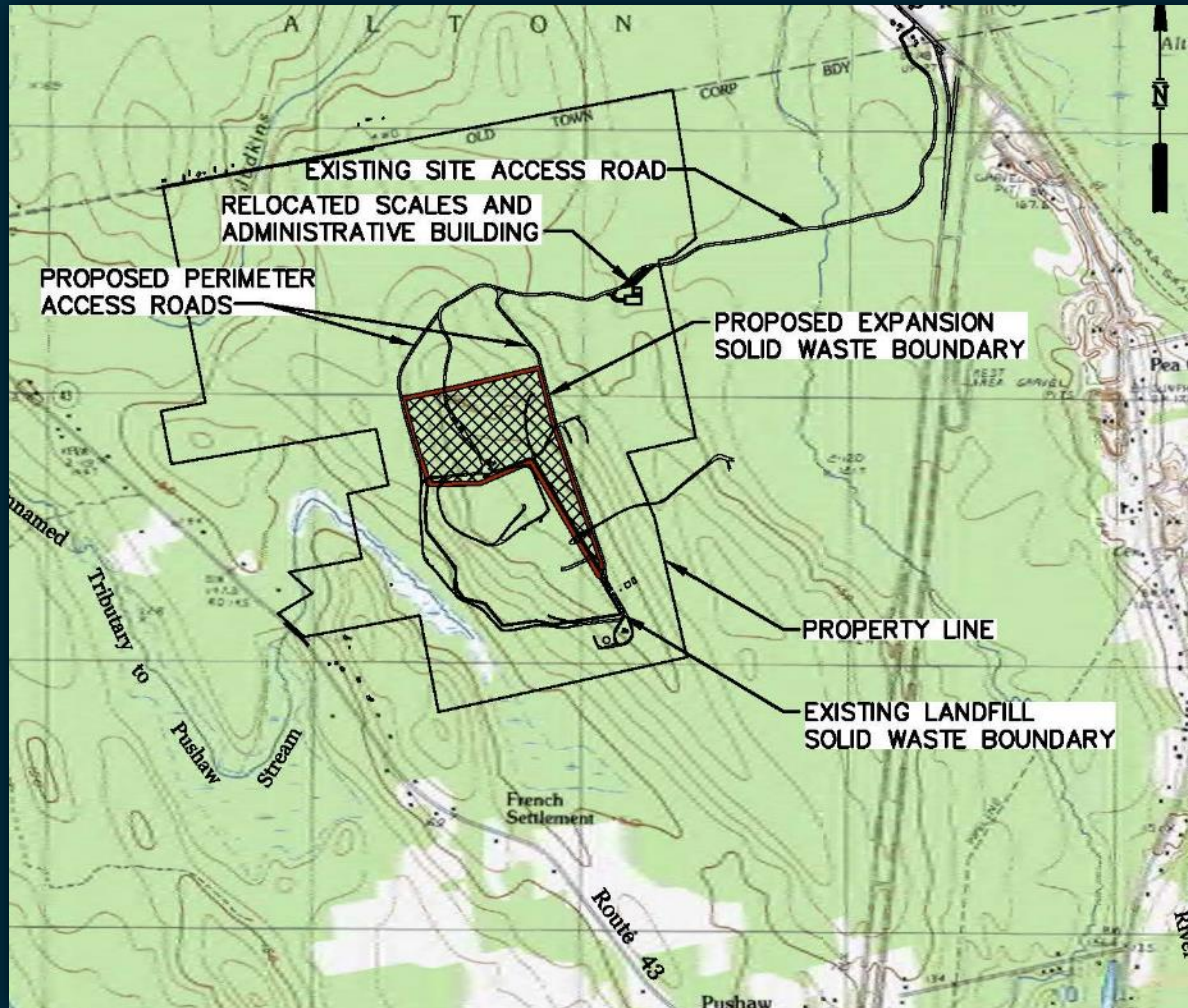
AUGUST 8, 2017

SME

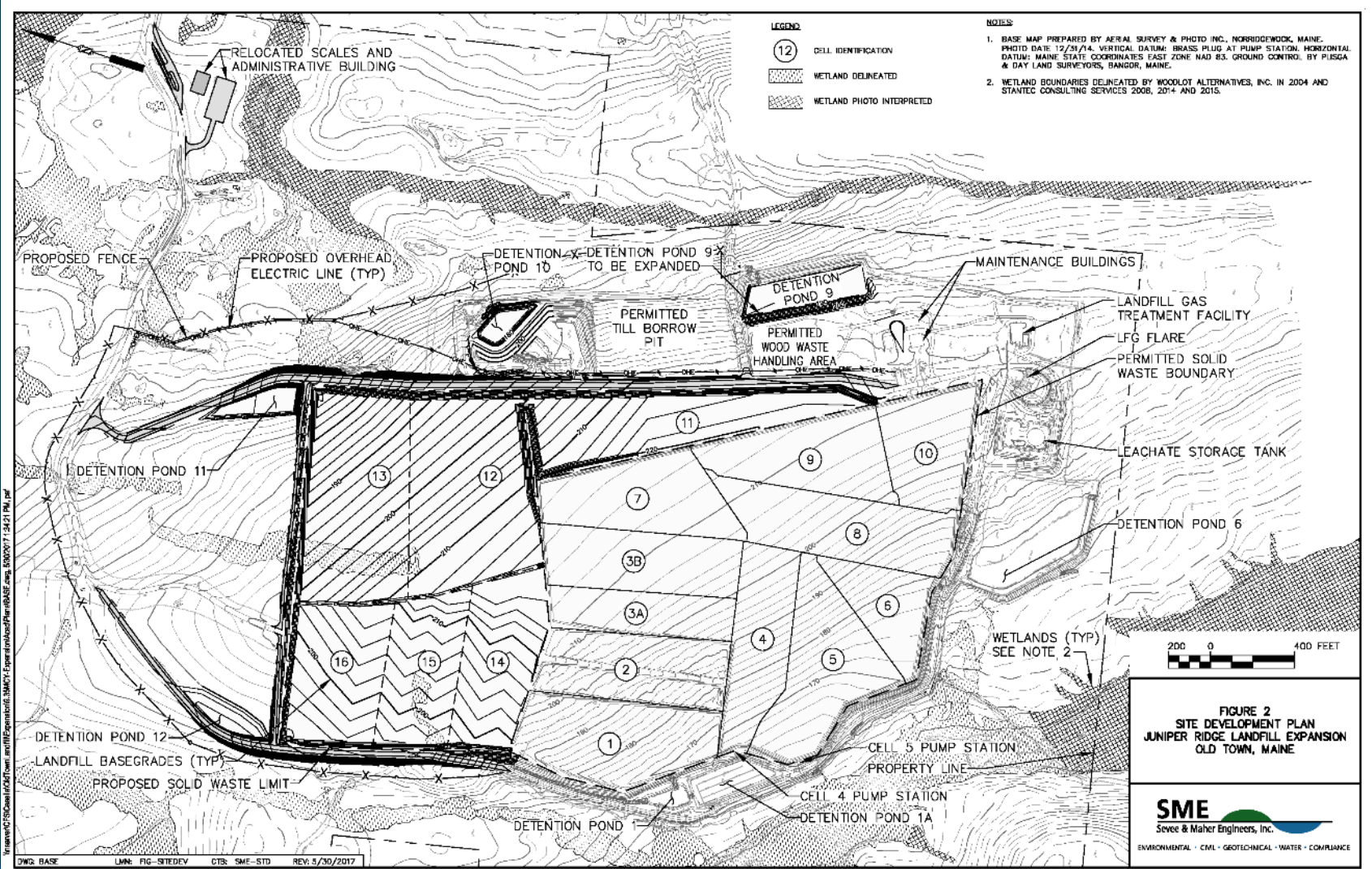
Sevee & Maher Engineers, Inc.



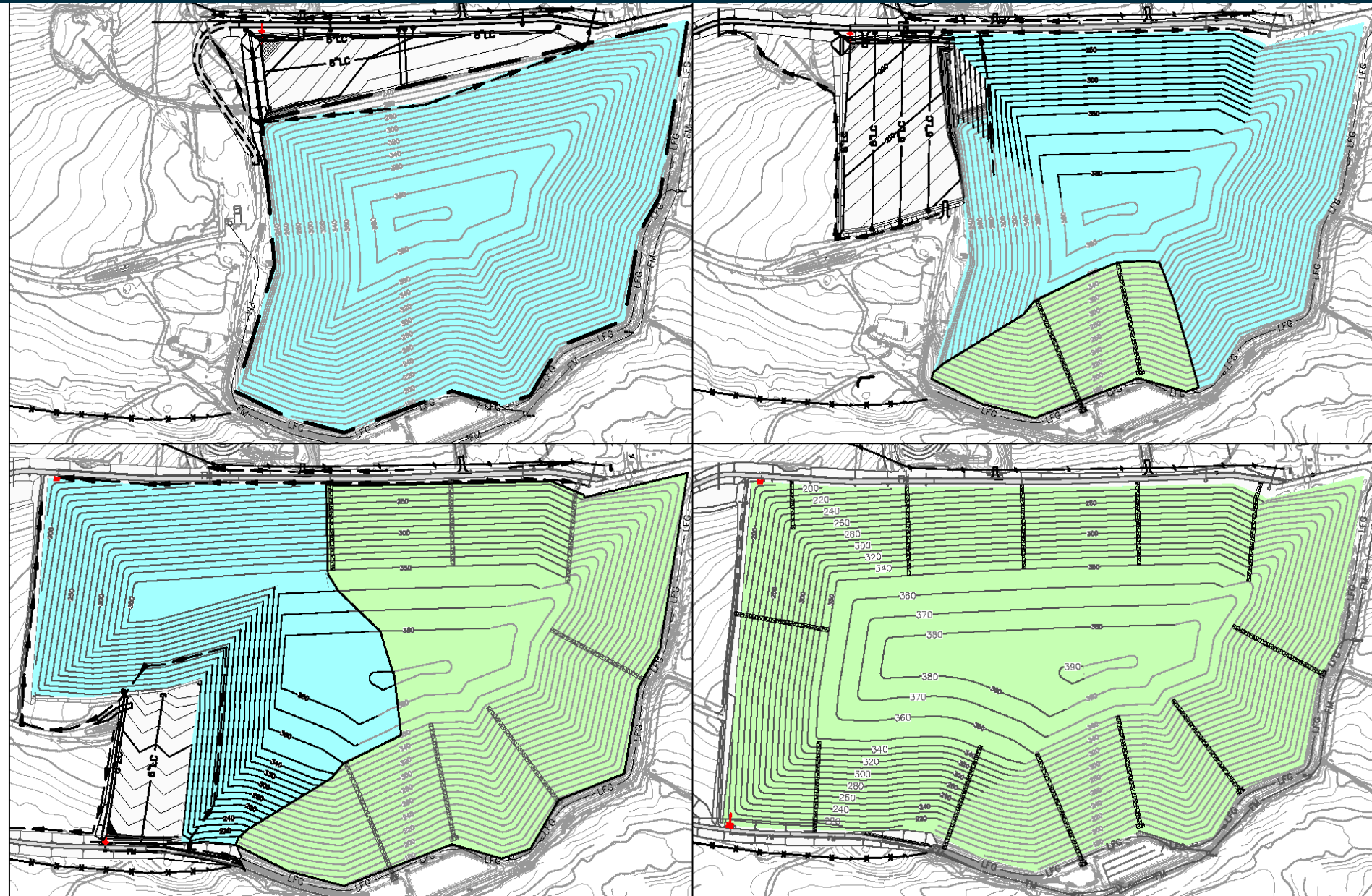
FACILITY LOCATION



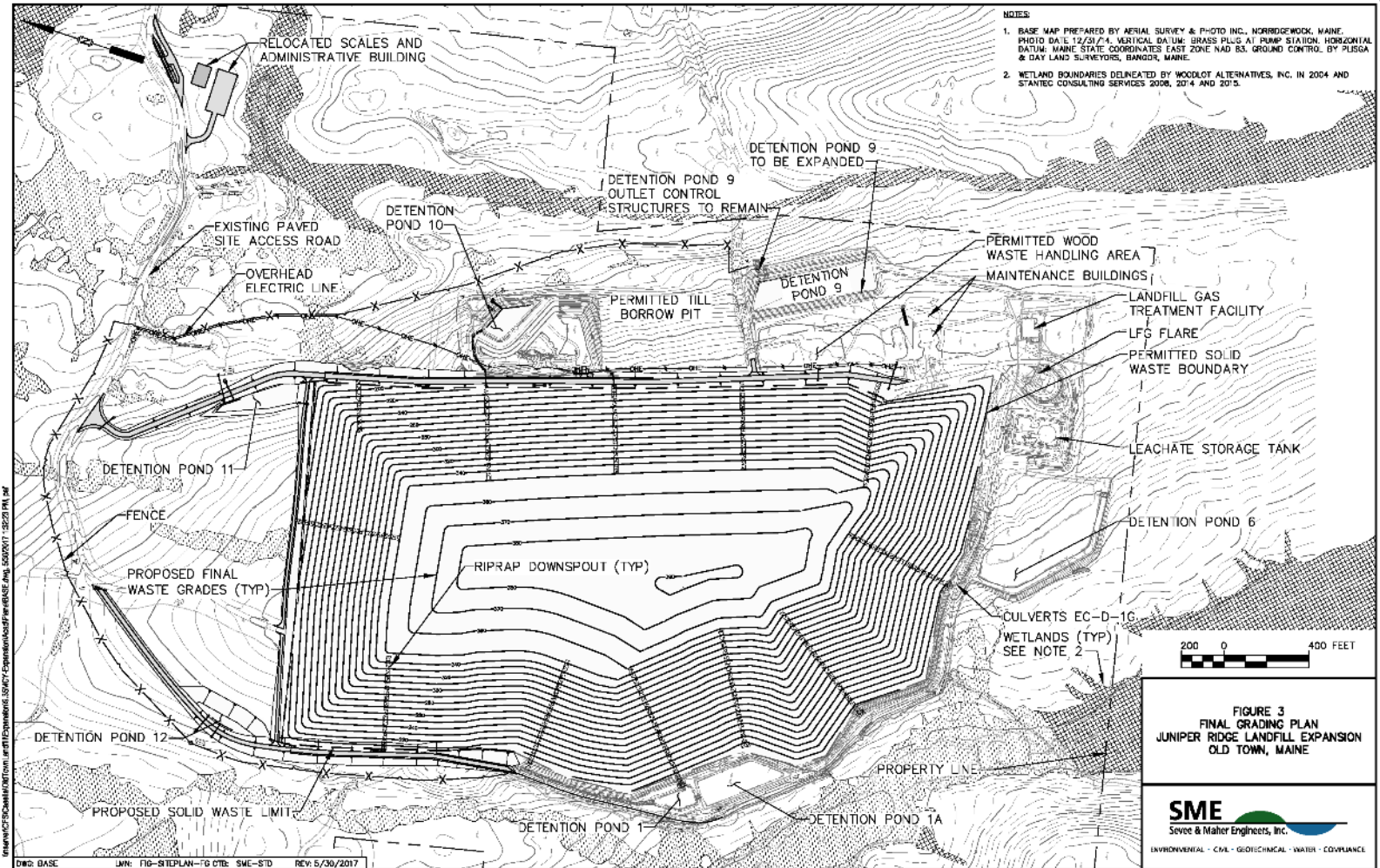
SITE DEVELOPMENT PLAN



Cell Development & Cover Sequence



FINAL GRADING PLAN



WASTE TYPES

- Anticipated to remain the same as currently approved for the existing landfill;
- There are ten major waste categories that are proposed to be accepted in the Expansion;
- The types and tonnage of the waste types will vary based on market conditions;
- Only MEDEP approved non-hazardous, in-state solid wastes.

Waste Types (cont.)

Material Category	Tons	Percent of Total Tonnage
Waste Treatment Plant Sludges and Biosolids	70,000	10
Contaminated Soil	30,000	4.3
Municipal Solid Waste Incinerator Ash	58,000	8.3
Front-End Process Residue	54,000	7.6
Biomass and Fossil Fuel Combustion Ash	35,000	5
Construction and Demolition Debris	195,000	27.6
Construction and Demolition Debris Processing Facility Fines	138,000	19.7
Oversized Bulky Waste	60,000	8.6
Miscellaneous Special Waste	35,000	5
MSW Bypass/Soft Layer Material	25,000	3.6
Total	700,000	100

BASIS OF DESIGN

- Designed to Conform to Qualitative and Quantitative Standards of the Maine Solid Waste Rules and the City of Old Town Chapter 24-12 Permit Standards;
- Design Based on Actual Site Conditions;
- Design Based on the Experience of Professionals Responsible for the Design, and Site Operations.

JUNIPER RIDGE LANDFILL EXPANSION

CITY OF OLD TOWN PLANNING BOARD APPLICATION





ADMINISTRATIVE APPLICATION REQUIREMENTS

- **FINANCIAL AND TECHNICAL ABILITY**
 - **COMPLIANCE RECORD**
 - **LIABILITY INSURANCE**



ADMINISTRATIVE APPLICATION REQUIREMENTS

FINANCIAL AND TECHNICAL ABILITY

City of Old Town Application Requirements [§ 24-8.C.]

- 1. A description of how the Applicant will comply with the MDEP License requirements regarding Financial Capacity.
- 2. A statement of the Applicant's prior experience or appropriate training, or both, relating to the construction and operation of the proposed Solid Waste Facility or Expansion.
- 3. A description of the personnel who will be employed to design, construct, operate and maintain the proposed Solid Waste Facility or Expansion.
- 4. A time line for the permitting, construction, and commencement of operations at the Solid Waste Facility or Expansion and for closure activities at the Solid Waste Facility and Expansion.



ADMINISTRATIVE APPLICATION REQUIREMENTS

FINANCIAL AND TECHNICAL ABILITY

City Approval Criteria [§ 24-12.A.]

A. Financial and Technical Capacity. The Applicant has demonstrated financial and technical capacity to design, construct, operate and close the Solid Waste Facility and Expansion in accordance with the requirements of this Chapter and the MDEP license.

MEBEP License:

“The applicant has provided a sufficient demonstration of financial ability and assurance and technical ability for the permitting, design, construction, operation, closure, and post-closure care of the proposed landfill expansion pursuant to 38 M.R.S. § §1310-N (2-F)(A) and § 1310-Y, and 06-096 C.M.R. ch. 400, § §4(B)(1) and 4(C)(1), provided NEWSME submits the appropriate financial assurance package updates in accordance with the Rules on an annual basis.”



ADMINISTRATIVE APPLICATION REQUIREMENTS

COMPLIANCE RECORD

City of Old Town Application Requirements [§ 24-8.O.]

- 1. The full name, business address, home address, date of birth, and/or Federal Employer Identification Number of the Applicant, and a summary of the Maine DEP Application pertaining to the civil or criminal records of the Applicant (Owner and Operator) or any person having a legal interest in the Application for the Facility and Expansion, as required by §12 Criminal or Civil Records of Chapter 400 of the Code of Maine Rules. All such information shall be supplemented as necessary for the information to be current.
- 2. The full name and business address of any company which collects, transports, treats, stores, or disposes of solid waste or hazardous waste in which the Applicant holds an equity interest of 5% or more.
- 3. A listing and explanation of administrative consent agreements or consent decrees entered into by the Applicant, including the Operator, for violations of environmental laws administered by MDEP, the State of Maine, other New England states, the State of New York, or the United States or another country in the five years immediately preceding the filing of the Application.
- 4. If a Permit is issued, the submittal requirements of this §24-8.O shall be considered an ongoing obligation of the Permit Holder and shall be updated annually.



ADMINISTRATIVE APPLICATION REQUIREMENTS

COMPLIANCE RECORD

City Approval Criteria [§ 24-12.M.]

M. Compliance Record. The Applicant has demonstrated compliance with the requirements of the Maine Solid Waste Management Rules, §12 Criminal or Civil Records, by receipt of an MDEP license for the Facility and compliance with any conditions imposed by the MDEP.

MEBEP License:

“The applicant has provided a civil/criminal disclosure statement demonstrating that the entities are not in violation of environmental or criminal law pursuant to 38 M.R.S. § 1310-N(7) and 06-096 C.M.R. ch. 400, § 4(C)(1)(b) and § 12.”



ADMINISTRATIVE APPLICATION REQUIREMENTS

LIABILITY INSURANCE

City of Old Town Application Requirements [§ 24-8.L.]

- 1. A description of how the Applicant will comply with the MDEP License requirements regarding liability insurance, which except public entities from having to provide proof of liability insurance.
- 2. Liability insurance policies shall provide for endorsements that contain conditions equivalent to the following:
 - (a) The insurer shall furnish the City Manager a signed duplicate original of the policy and all endorsements;
 - (b) Cancellation of the Insurance Policy, including any endorsements, whether by the insurer or the insured, shall be effective only after the expiration of sixty (60) days after a copy of the written notice is received by the City Manager; and
 - (c) Any other termination of the insurance policy, including any endorsements, will be effective only upon written notice and only after the expiration of thirty (30) days after a written copy of the notice has been received by the City Manager.
 - (d) A “claims made” liability insurance policy must include an endorsement providing for a discovery period of at least twelve (12) months beyond the date of expiration or cancellation of the policy and for notice to the City Manager.



ADMINISTRATIVE APPLICATION REQUIREMENTS

LIABILITY INSURANCE

City Approval Criteria [§ 24-12.J.]

- Liability Insurance. The Applicant, except if the Applicant is a public entity, has demonstrated that it has adequate liability insurance for construction, operation, closure and post-closure monitoring and maintenance at the Facility and Expansion by complying with MDEP Permit requirements, the requirements of this Chapter and the following:
 - 1. All liability insurance policies contain the required endorsements.
 - 2. Policies provide that the bankruptcy or insolvency of the insured does not relieve the Insurer of its obligations under the policy.
 - 3. If a liability insurance policy is written as a “claims made” policy, an endorsement provides for a discovery period of at least twelve (12) months beyond the date of expiration or cancellation of the policy. The endorsement also provides that the underwriter will notify the public according to the requirements below:
 - (a) At least sixty (60) days prior to the date upon which the policy will expire or be cancelled, written notification shall be given to all Abutters and to the CEO that insurance for the Solid Waste Facility will expire or be cancelled. The notification shall include the date of expiration or cancellation, the fact that claims against the insured must be filed within twelve (12) months from the date of expiration or cancellation, and shall specify where and how to file claims;
 - (b) During the first, third, sixth and ninth month subsequent to the date of expiration or cancellation, the underwriter shall place in the Bangor Daily News and the Penobscot Times an advertisement designed to attract notice and containing the information specified in Paragraph 3(a), above.



ADMINISTRATIVE APPLICATION REQUIREMENTS

LIABILITY INSURANCE WAIVER

City of Old Town Application Requirements [§ 24-10.]

- Requests for a waiver submitted as part of the Application shall include, but are not limited to:
 - (a) Identifying the specific provisions of this Chapter from which a waiver is sought;
 - (b) A description of the alternative proposed and the reasons why it meets the intent of this Chapter;
 - (c) The reasons for which a waiver is requested, including the environmental, economic and technological justifications; and
 - (d) Any other relevant information or data the Planning Board may request or the Applicant may wish to provide.

Request:

The requirements of Article IV § 24-12-J.3 of the Ordinance concerning the entity (i.e., the underwriter) responsible for notifying abutters, and placing advertisements in the Bangor Daily News. The Applicants request that NEWSME be named in the approval Order as the entity responsible for notifying abutters, and placing the advertisements in the local papers.



ADMINISTRATIVE APPLICATION REQUIREMENTS

LIABILITY INSURANCE

MEBEP License:

“The Department’s rule at 06-096 C.M.R. ch. 400, § 10 requires a solid waste disposal facility, except public entities, to submit proof of liability insurance for the active life and closure of the solid waste disposal facility. The applicant is a public entity and is exempt from the liability insurance requirements of 06-096 C.M.R. ch. 400, § 10. Liability insurance is required by the OSA, Section 21. NEWSME submitted the current certificate of insurance maintained for the facility and NEWSME will provide copies of the updates to the current certificate of insurance in the facility’s Annual Report during operation of the proposed expansion. The Board finds that the applicant is exempt from the liability insurance requirements of 06-096 C.M.R. ch. 400, § 10 of the Rules; however, liability assurance (sic) is being maintained by NEWSME as the current operator of JRL and will be maintained for the expansion.”

To learn more, please visit:

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Protection of Water Quality & Environmental Monitoring Program

JUNIPER RIDGE LANDFILL EXPANSION:

CITY OF OLD TOWN PLANNING BOARD

AUGUST 8, 2017

SME

Sevee & Maher Engineers, Inc.



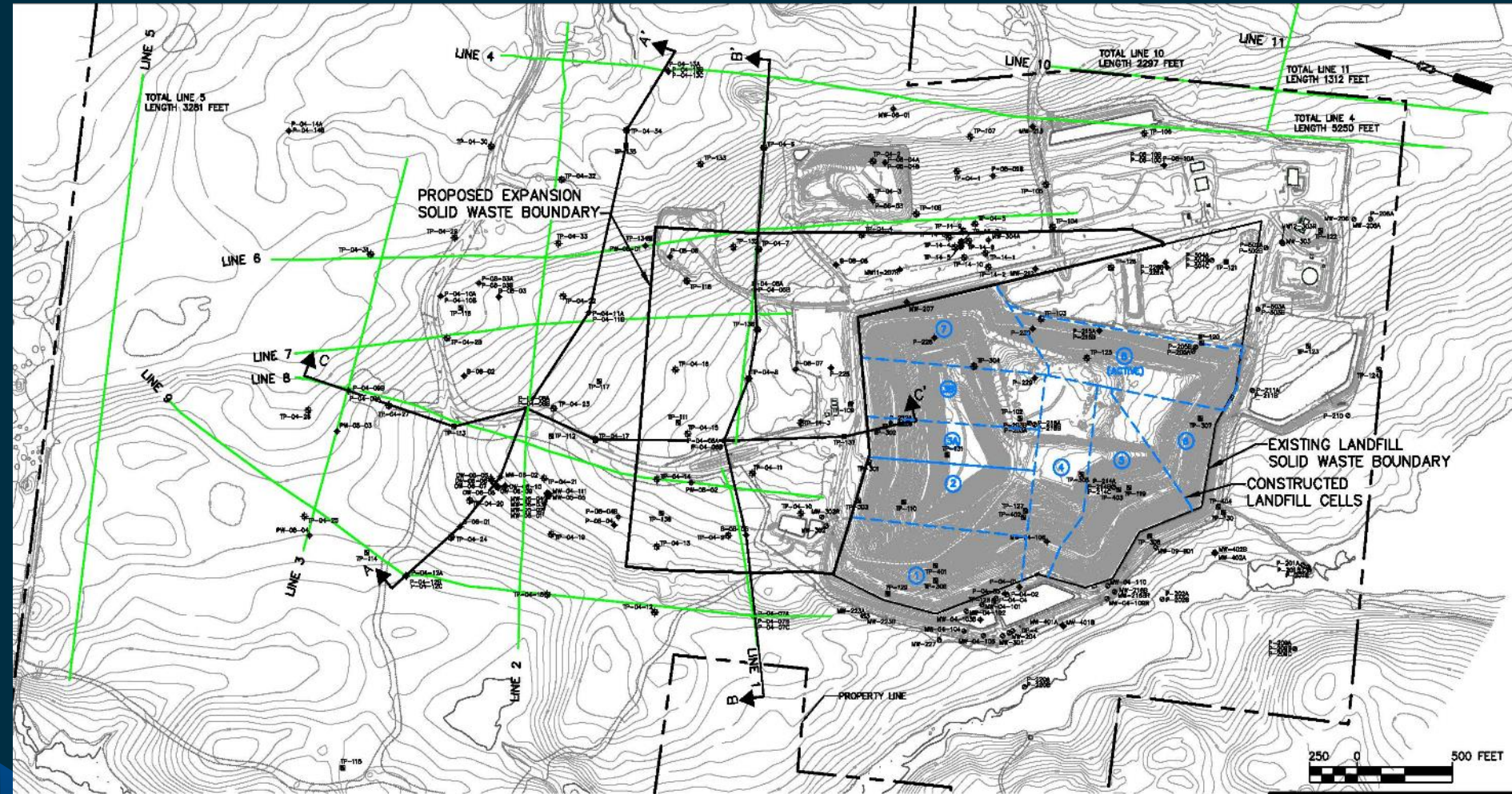
Protection of Water Quality (Section 24-12.L)

- Site Investigations
- Geology
- Groundwater movement
- Liner Design & Construction
- Leachate Management
- Environmental Monitoring Program

Site Investigations

- To Establish Site Suitability
- Emphasis on Groundwater Behavior
- Numerous Explorations and Testing
- Corroborative Approach
- Reporting

Site Explorations and Investigations



Geology

- Dense Clayey Glacial Till Over Bedrock
- Till Stable and Has Relatively Low Permeability
- Till Permeability Meets DEP Siting Criterion
- Bedrock Competent, some shallow weathering
- Two Primary, Near-Vertical Fracture Sets
- Groundwater Movement Through Till and Rock

Groundwater Movement

- Focus of Investigations Relates to Monitoring
- Directions of Groundwater Movement
- Groundwater Velocities
- 3-Dimensional Simulations of Groundwater
- Limited Groundwater Travel Extent
- Recent Studies Focus on Bedrock Fractures
- Demonstrated Ability to Control Groundwater

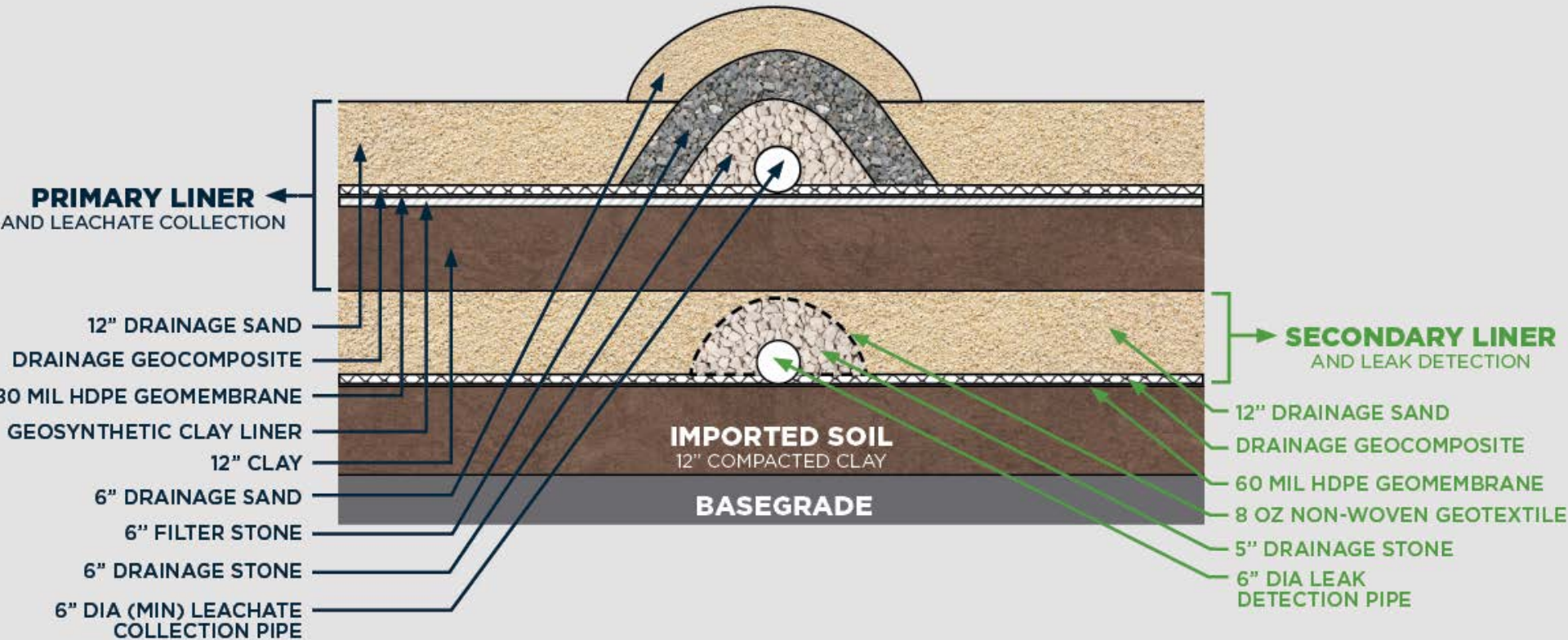
Summary of Hydrogeologic Investigations

- Two-and-a-half Decades of Site Investigations
- Extensive Investigation Coverage and Detail
- Allows Confidence to Understand Groundwater Behavior in Soil and Rock
- Can Effectively Monitor Groundwater
- Investigations Demonstrate Many Favorable Site Characteristics as Described

Landfill Components

- Liner
- Leachate and Leachate Detection Collection and Pump Stations
- Landfill Gas infrastructure
- Surface Water Management and Erosion Control

Liner Systems



Imported Soil and Compacted Clay



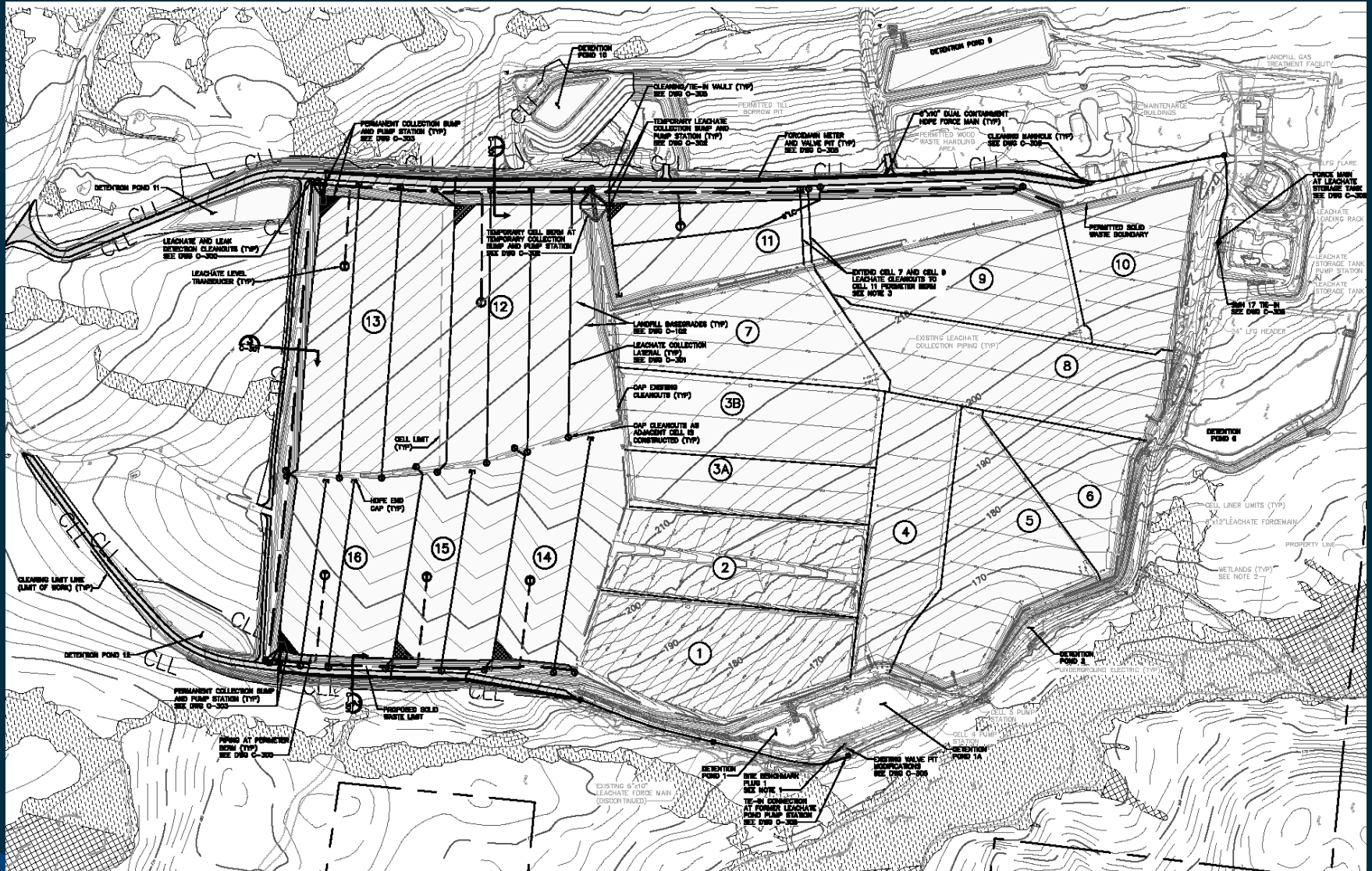
Geosynthetic Liner Components



Leachate

- **Leachate consists of:**
 - **Water falling on the exposed waste in the active waste placement area**
 - **Water present in the waste**
 - **Water generated by waste decomposition**
- **The leachate system is designed to handle leachate from storm events.**
- **Agreements with MFGR LLC (former Old Town Mill), and the City of Brewer WWTPs to accept the leachate.**
- **The MFGR facility license was issued on September 6, 2016 and is included in Appendix D-10.**

Leachate Collection & Pump Stations



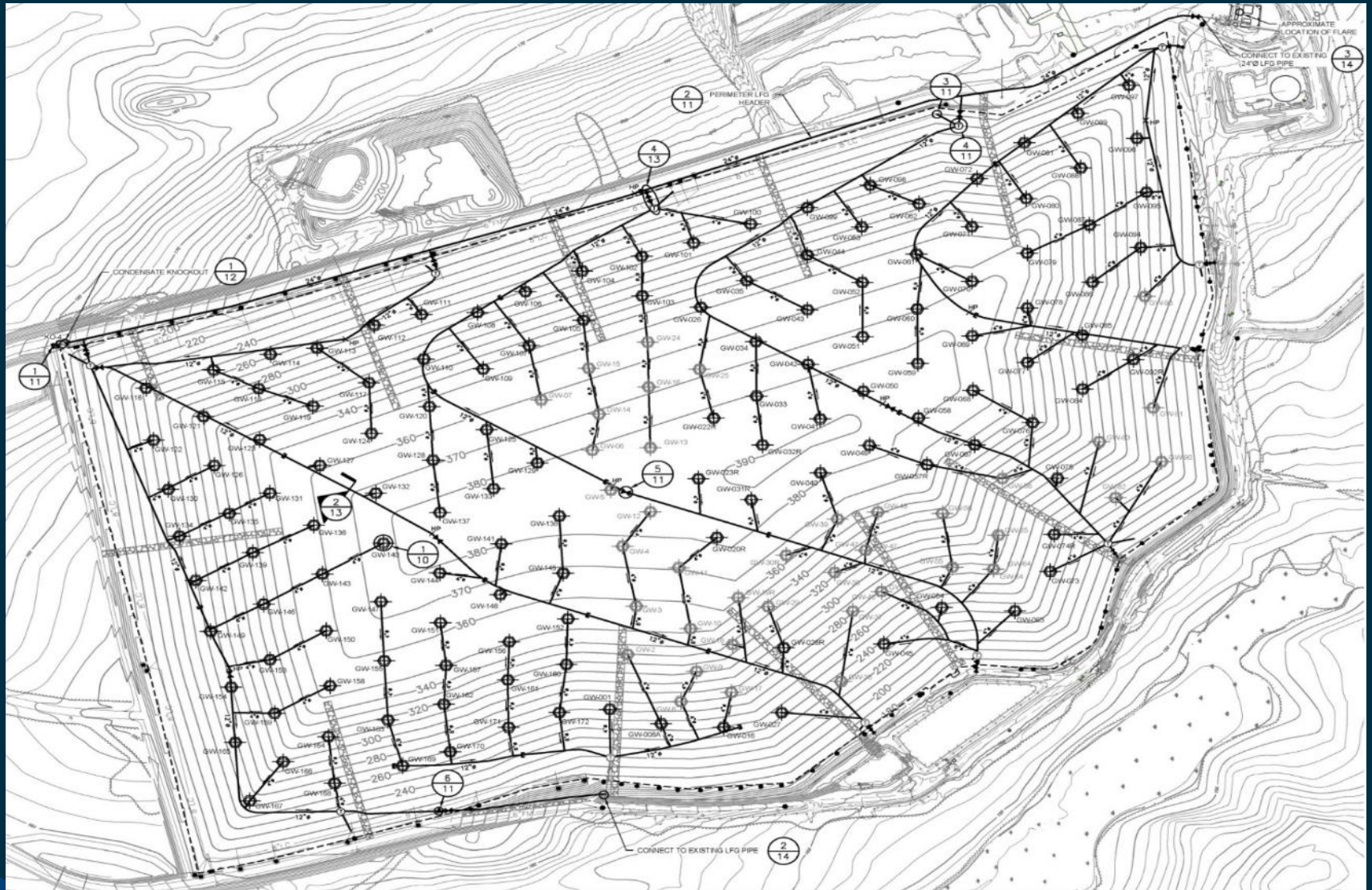
Pump Stations



Leachate Collection



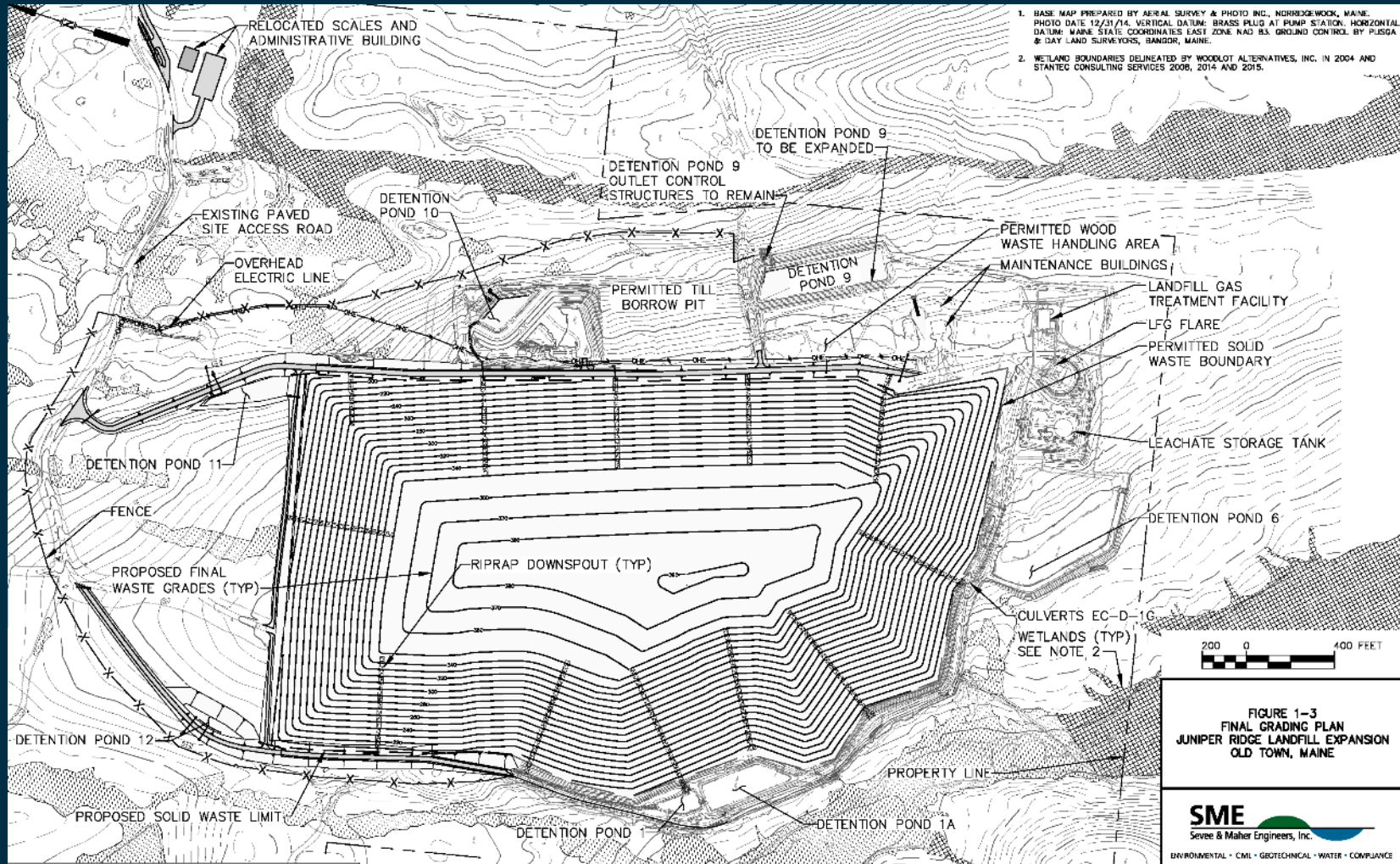
Landfill Gas Collection



Landfill Gas Infrastructure



Storm Water Management & Erosion Control



Expansion Construction

- Expansion cells progressively constructed over the life of the facility.
- Prior to construction of each cell detailed design plans and specifications submitted to the MEDEP.
- Construction quality assurance personnel onsite during construction to observe construction and document material properties use for the landfill construction.
- All required Quality Assurance/Quality Control Testing is submitted to MEDEP for review and approval prior to the cell being used.

Conclusion

The Expansion Meets the Approval Criteria of Section 24-12.L (Water Quality) of the Ordinance. (two criteria)

Section 24-12.L Water Quality Approval Criteria

The Expansion “will not cause an unreasonable adverse effect on surface water quality and will pose no unreasonable risk that a discharge to a significant groundwater aquifer will occur.”

- The Expansion meets the Siting, Design, and Operational Requirements Contained in Chapter 400 and 401 of the Maine Solid Waste Management Rules.
- It is designed as a secure landfill that collects water coming in contact with the waste and that water is treated at a licensed wastewater treatment facility

Section 24-12.L Water Quality Approval Criteria (continue)

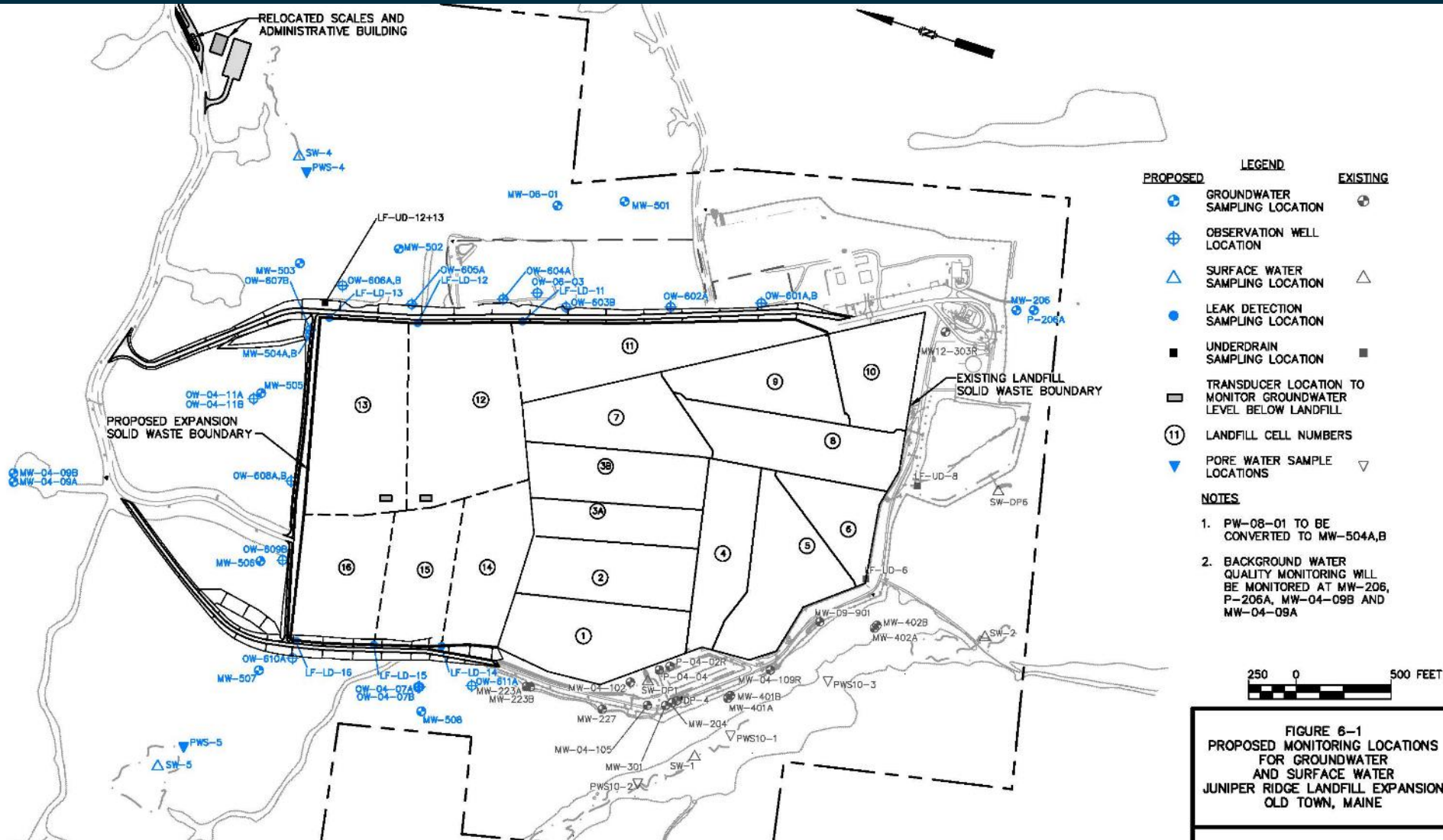
The Applicant has demonstrated that it will comply with State and Federal permit requirements governing groundwater and surface water quality.”

- The BEP Permit found that “The applicant has sufficiently demonstrated that the proposed expansion will not unreasonably adversely affect water quality or cause an unreasonable threat to the quality of a classified body.....” (Board License, p. 100)

Environmental Monitoring Program

- Liner Leak Detection System = immediate action
- Groundwater monitoring wells act as backup
- Monitoring wells will be effective based on investigations
- Monitoring wells around perimeter of Landfill
- Surface water locations will be monitored around the perimeter of the landfill
- Landfill emission and gas monitoring

Environmental Monitoring Locations



Conclusion

The Expansion Meets the Approval Criterion of Section 24-12.N (Environmental Monitoring Program) of the Ordinance.

Section 24-12.N Criterion

“The Applicant has demonstrated that the proposed environmental monitoring program for the Expansion will Comply with applicable state and federal permit requirements governing monitoring requirements.”

- The applicant has submitted an Operations Manual that meeting the operating requirements of the Rules. The Environmental Monitoring Program is part of the Operations Manual. (Board License, p. 102)

TRAFFIC

- Gorrill Palmer was retained to complete the traffic assessment for the Maine Department of Environmental Protection (MEDEP) application submitted in 2015
- Updated information in the recent City application
- Updates did not change conclusions of the original report
- MaineDOT reviewed traffic information submitted to MEDEP and did not “see any negative impacts to traffic with the expansion”
- The site is ideally located to meet approval criteria for transportation since it is located adjacent to I-95, which now accommodates trucks up to 100,000 lbs



TRIP GENERATION

- Trip generation based on manual turning movement count from September 2014
- 1 trip end = 1 trip into or out of the site, round trip = 2 trip ends
- Existing Facility Trip Generation:
 - 28 trip ends during the AM peak hour (20 truck, 8 non-truck)
 - 25 trip ends during the PM peak hour (16 truck, 9 non-truck)
- Expanded Facility Forecast Trip Generation:
 - 31 trip ends during the AM peak hour (22 truck, 9 non-truck)
 - 28 trip ends during the PM peak hour (18 truck, 10 non-truck)
- Trucks have typical varying gross vehicle weights from 70,000 lbs to 100,000 lbs



MAINEDOT INVENTORY AND CRASH REPORTS

- Crash history from 2013-2015 from MaineDOT
- No High Crash Locations (HCLs) within the study area based on MaineDOT criteria

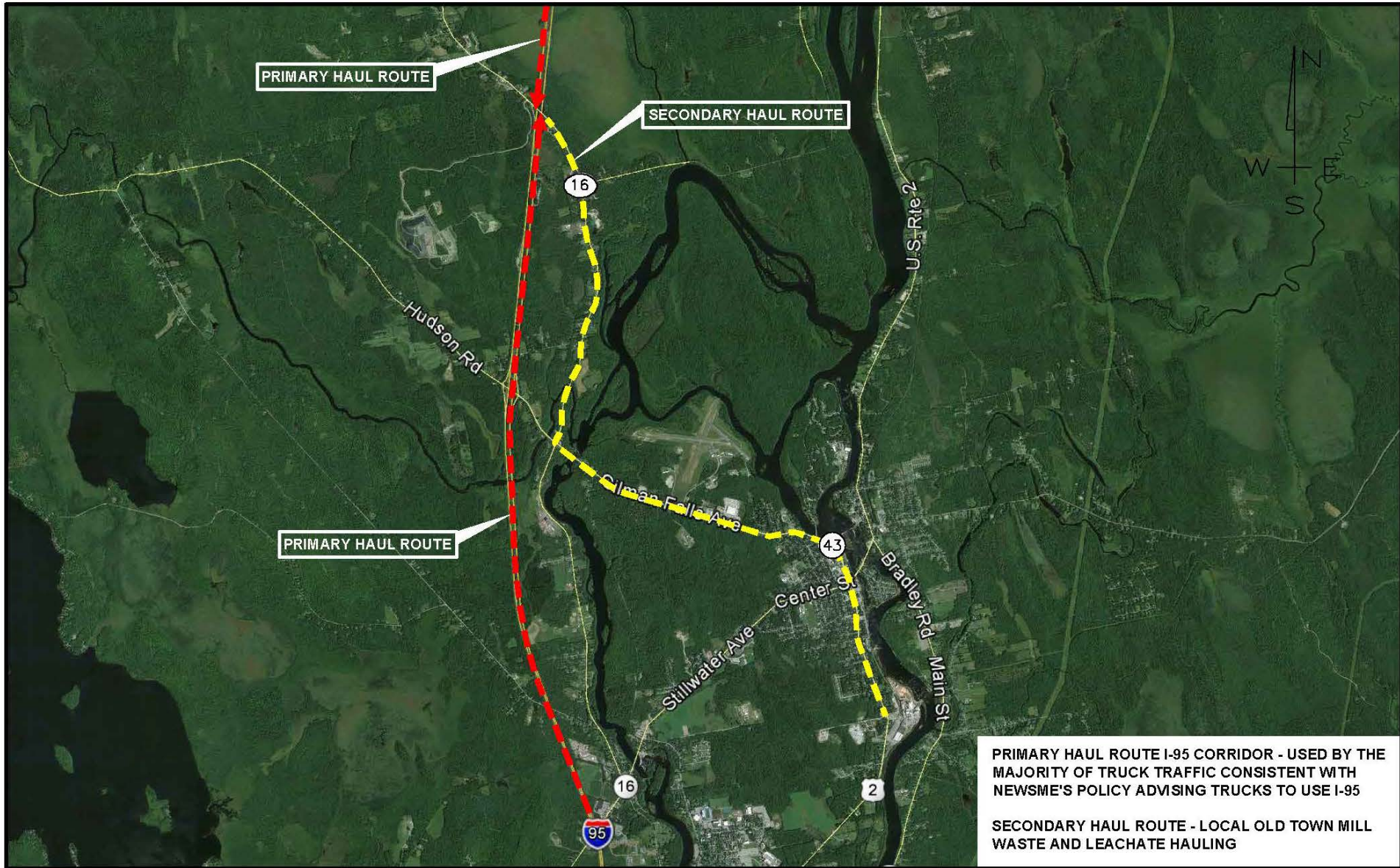


TRAFFIC ROUTES

- Primary access is approximately 0.1 mile west of I-95 off Route 16
- Previously I-95 was restricted to 80,000 lbs, which required vehicles to use state and local roadways with a limit of 100,000 lbs
- In 2011 the weight limit on I-95 was raised to 100,000 lbs
- Proposed haul routes have been updated to include I-95 as the primary route
- Legal weight limits on the primary and secondary haul routes are 100,000 lbs
- There are no winter road closures or seasonal weight limits
- **This information shows the haul routes will safely accommodate the number, weight, and types of vehicles transporting waste to and from the facility and expansion.**



Waste Haul Routes



BENNOCH ROAD (ROUTE 16), OLD TOWN, MAINE

OVERWEIGHT VEHICLES

- Trucks are weighed upon entering and exiting the site to monitor compliance with weight restrictions
- **NEWSME has developed a plan meeting the requirements of §24-8.D. regarding overweight vehicles and has agreed to implement that plan**



NEWSME'S TRUCK POLICY

- The plan meeting the requirements of §24-8.D includes additional safety and operational measures
- The use of Jake brakes is discouraged
- Trucks must come to a full stop before exiting the access road
- Two signs on the access road encourage trucks to use I-95





SIGHT DISTANCE AT ENTRANCE

- Speed limit on Route 16 of 40 mph requires a MaineDOT sight distance of 360 feet for a standard vehicle and 540 feet for a larger vehicle
- Sight lines exceed 1,000 feet looking both left and right from the site driveway
- **The entrance and exit design for the facility and expansion will provide safe sight distances in all directions and provide for safe turning in accordance with §24-12.B.3**



CONGESTED LOCATIONS & HAUL WEIGHT

- MaineDOT concurred with the findings and study area in the Traffic Assessment completed by Gorrill Palmer
- The intersection of Main Street with Center Street was a City concern, but analysis completed by JW Sewall indicated that the intersection is forecast to operate at a level of service B and C in the AM and PM peak hours respectively
- Main Street / Center Street traffic is anticipated to decrease due to the increased weight limit on I-95
- All roads and bridges within the primary and secondary haul areas are rated to accommodate 100,000 lbs
- **This information shows that no improvements to roads or intersections are necessary in accordance with §24-12.B.4**



TRAFFIC STUDY

- The need for a Traffic Study was discussed with the Old Town Code Enforcement Officer, Mr. Russell
- MaineDOT has accepted the traffic assessment completed to date
- Mr. Russell discussed with the Planning Board the need for a Traffic Study
- It was determined that a Traffic Study would not be required for the expansion
- **The traffic assessment completed to date shows that the major facility and expansion roadways will allow continuous and uninterrupted traffic movement without causing traffic to back up onto City Streets and will provide safe access to City public safety personnel and vehicles in accordance with §24-12.B.5**



LITTER AND NUISANCE ODOR

- Trucks will be required to be covered when transporting material to and from the facility
- **NEWSME has developed a plan to minimize litter and nuisance odor from trucks and vehicles used to transport waste to or from the facility and expansion**



CONCLUSIONS

- The BEP found that “the applicant has demonstrated that the roads and intersections in the vicinity of the JRL have the ability to safely and appropriately handle all of the traffic attributable to the proposed expansion into, out of, and within the facility pursuant to State Law and Rule requirements. The Board further finds that the applicant will continue its policy of encouraging trucks to utilize I-95.”
- MaineDOT reviewed traffic information submitted to MEDEP and did not “see any negative impacts to traffic with the expansion”
- **The proposed Juniper Ridge Landfill expansion has met all approval criteria in §24-12.B**



Existing Uses and Scenic Character

JUNIPER RIDGE LANDFILL EXPANSION:

CITY OF OLD TOWN PLANNING BOARD

AUGUST 8, 2017

SME

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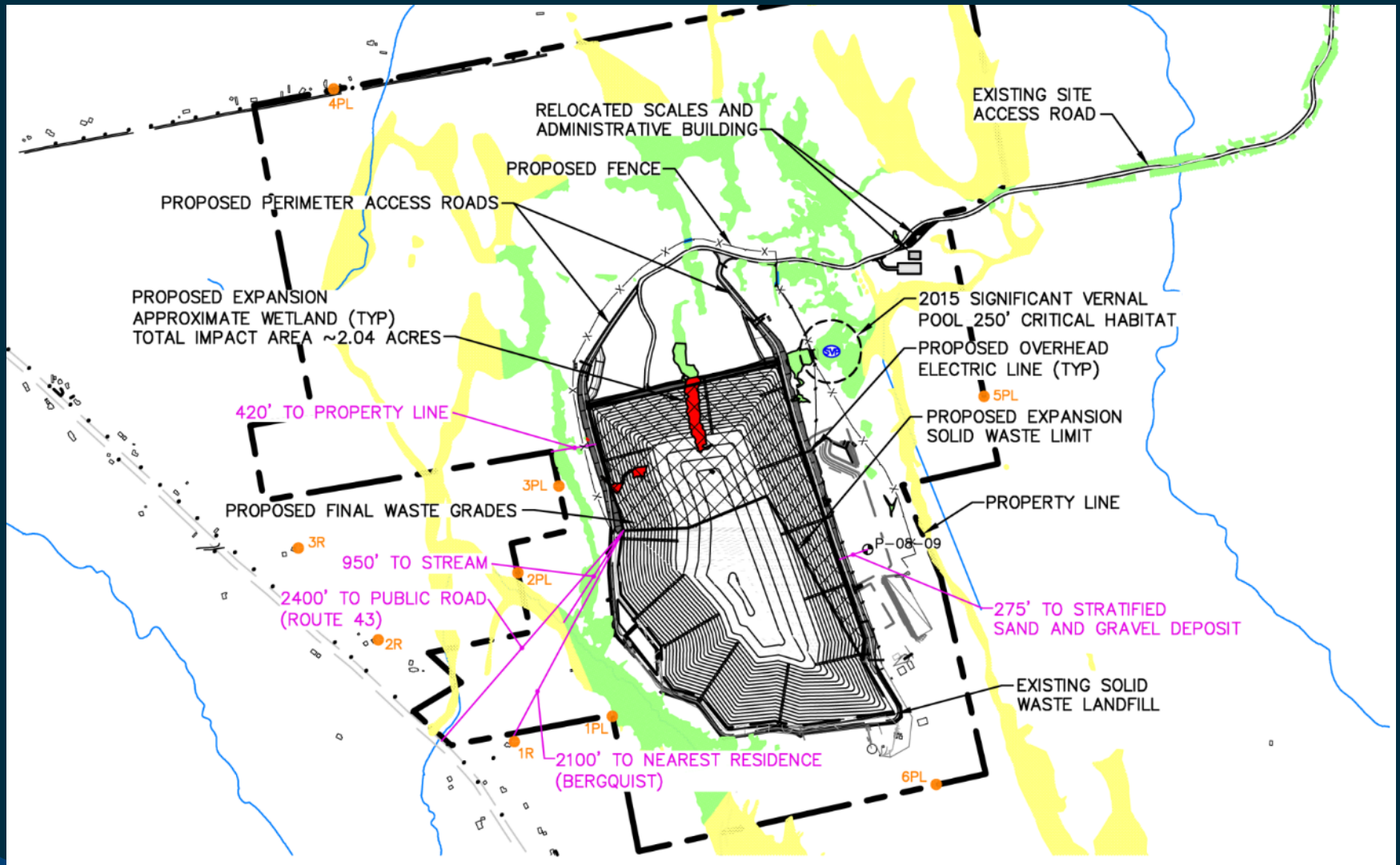
EXISTING USES AND SCENIC CHARACTER SECTION 24-12K CRITERIA

- Will Not Present a Bird Hazard to Aircraft
- Will Not Have an Unreasonable Adverse Effect on the Preservation of Historical Sites
- Will Not Unreasonably Interfere with Views from Established Public Viewing Areas
- Will Not Generate Excessive Noise at the Property Boundary or at an Protected Location
- Will Not Unreasonably Adversely Affect Existing Uses of Property Neighboring Proposed Expansion

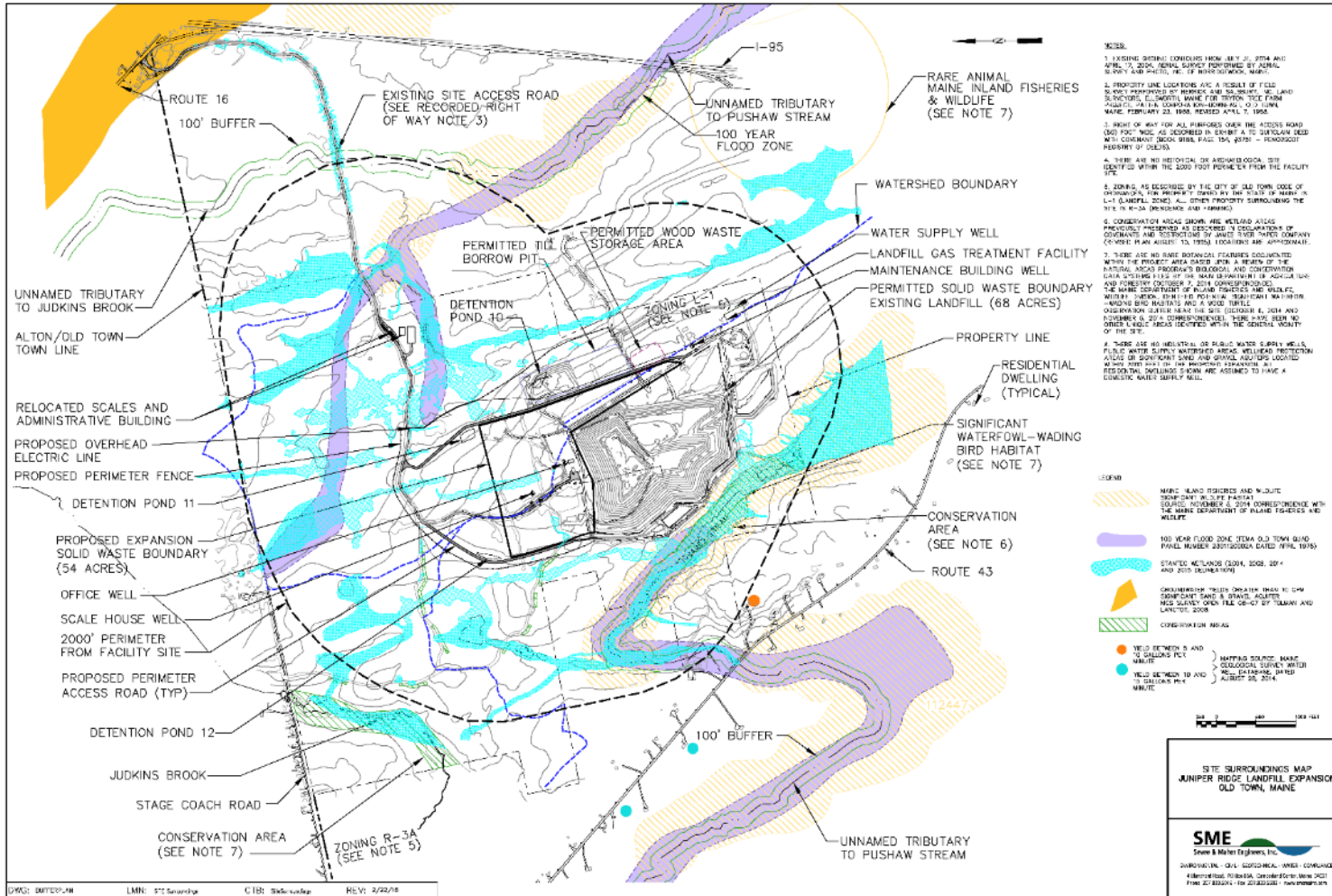
Will Not Unreasonably Adversely Affect Existing Uses of Property Neighboring Proposed Expansion

Setbacks to	MEDEP Rules	Actual Proposed
Airport	10,000 feet	13,000 feet
Nearest Public Road	300 feet	2,400 feet
Nearest Residence	1,000 feet	2,100 feet
Classified Surface Water Body	100 feet	950 feet
Water Supply Spring or Well	1,000 feet	2,100 feet

SETBACK FIGURE



SITE SURROUNDING MAP



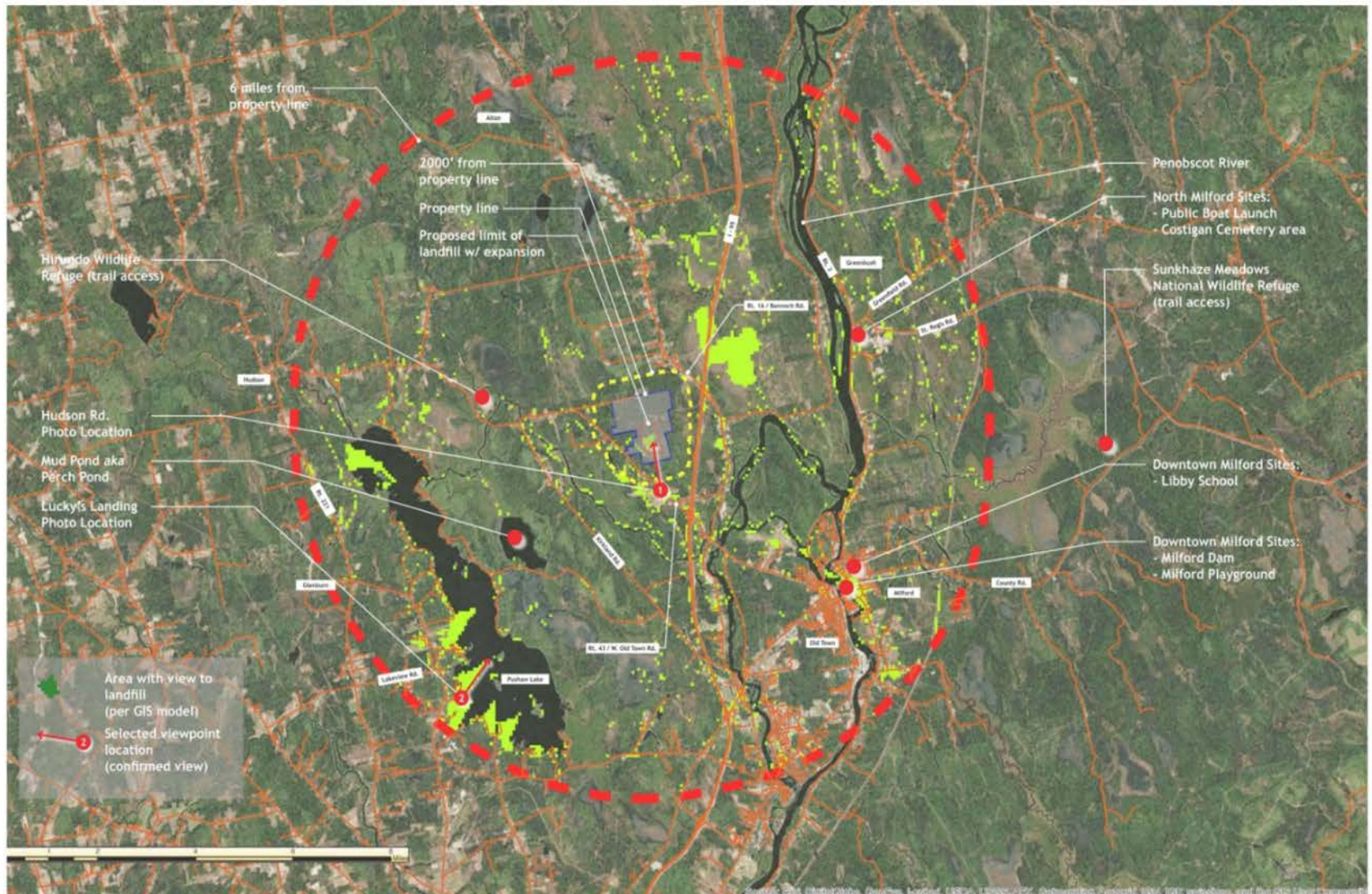
Will not Unreasonably Interfere with Views from Established Public Viewing Areas

Visual Impact Assessment

- Computer Model of Landfill
- GIS Simulation of Landscape
- Stakeholder Engagement
- Physical Simulations (balloons)
- Photographic Documentation
- Photographic Simulations
- Assessment

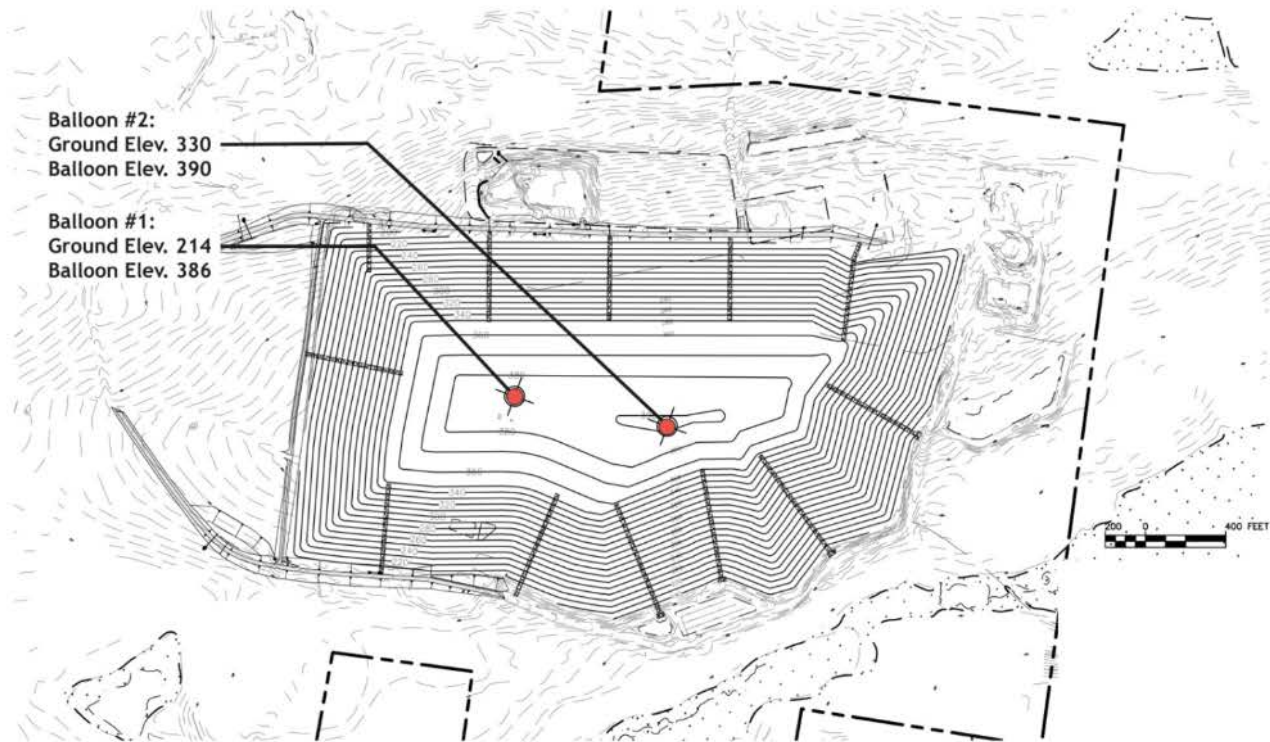
Public Viewing Area means “an area designated for the public to view scenic areas, historic sites, unusual natural features or public monuments.” Chapter 400.1 of the Solid Waste Rules

Visual Impact Assessment: Viewshed Plan



VISUAL ANALYSIS
FIGURE 2: VIEWSHED PLAN

Visual Impact Assessment: Physical Simulation (balloon placement)



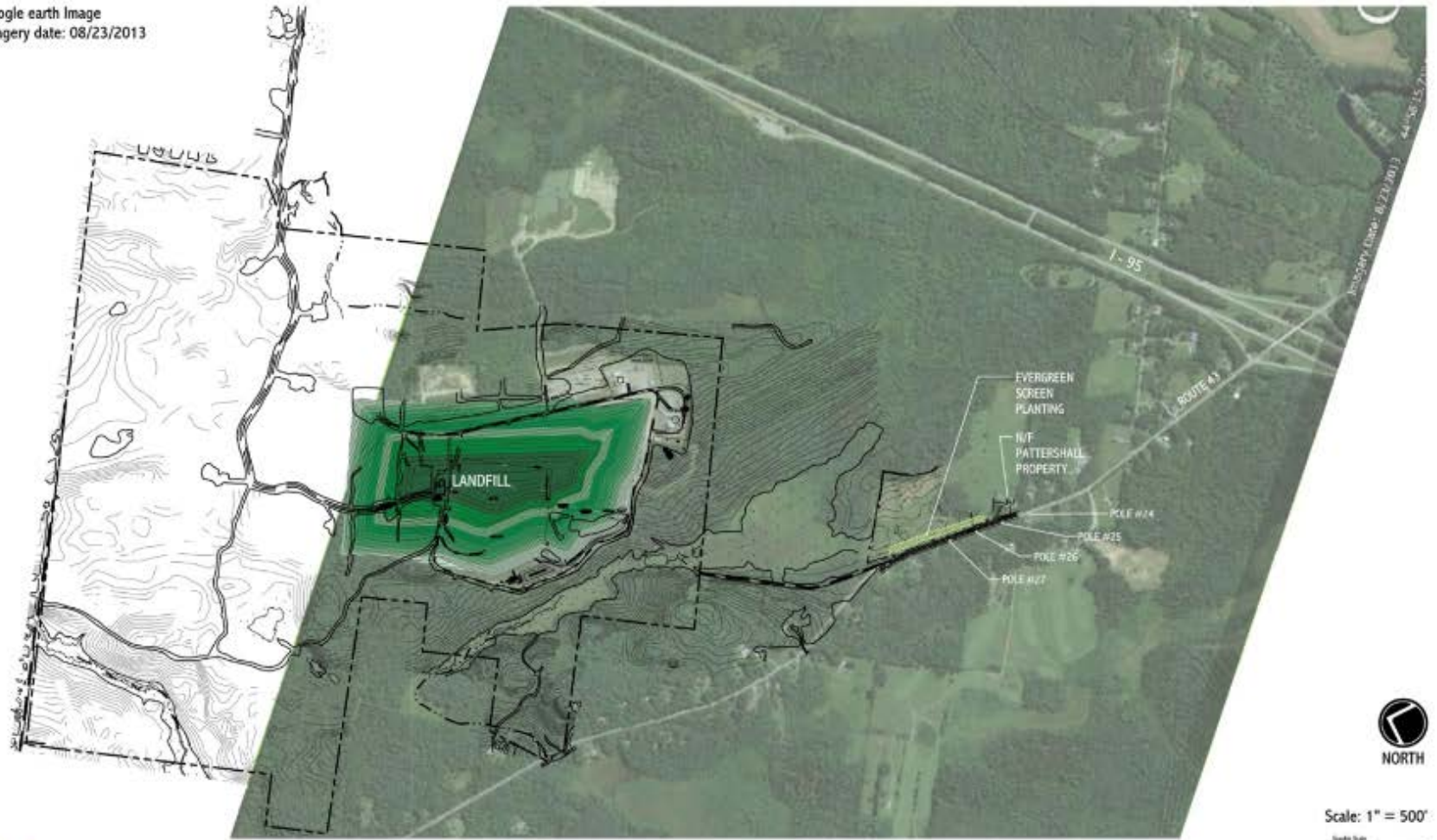
 NEWSME Landfill Operations, LLC
Juniper Ridge Landfill Expansion

VISUAL ANALYSIS
FIGURE 3: BALLOON LOCATION PLAN

NTS
14145
JULY 2015

Visual Impact Assessment: Rt. 43 Photo-location Plan

Google earth Image
Imagery date: 08/23/2013



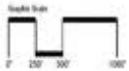
NEWSME Landfill Operations, LLC
Juniper Ridge Landfill Expansion

VISUAL ANALYSIS
FIGURE 4: RT. 43 PHOTO CONTEXT PLAN



NORTH

Scale: 1" = 500'



Project No. 14145

JULY 2014

Visual Impact Assessment: Photo Simulations



Camera Height ("eye level") = 4'-6"



NEWSME Landfill Operations, LLC
Juniper Ridge Landfill Expansion

VISUAL ANALYSIS
View @ Rt. 43 (Pole 25-26): Post-Closure

NTS
14145
JULY 2015



Camera Height ("eye level") = 5'-8"

NEWSME Landfill Operations, LLC
Juniper Ridge Landfill Expansion

VISUAL ANALYSIS
Telephoto View @ Lucky's Landing: Current

Will Not Unreasonably Interfere with Views from Established Public Viewing Areas

- There are no Public View Areas within 2000 feet of the property boundary.
- The Visual Assessment determined that defined or potential scenic resources within this area either did not have views to the landfill or are at such distance (“background” as defined by the U.S. Forest Service (USFS)) that the views to the landfill have no unreasonable impacts. Views of the facility from area roadways within six miles include those from Route 16 (intermittent and infrequent), from 1-95 southbound (broken by roadside vegetation and distance), and from Route 43 (effectively screened by plantings that were previously installed as visual buffer by NEWSME), and are not defined public viewing areas, scenic resources, or scenic byways.

Will Not Unreasonably Adversely Affect Existing Uses of Property Neighboring Proposed Expansion

- This standard is met because the combination of setbacks distances and density of mature natural vegetative cover provide significant visual and other buffering
- Additionally, each of the Expansion cells filled in a sequential manner with most filling occurring below 340 screened from public view by topography and vegetation in the natural state and the progressive development placement of cover and closure of the facility. The Final cover consistent in terms of color and texture with the surrounding landscape.

EXISTING USES AND SCENIC CHARACTER SECTION 24-12K CRITERIA

- The BEP found “the applicant has sufficiently demonstrated that the proposed expansion will not unreasonably adversely affect existing uses and scenic character, including bird hazard to aircraft, historical sites, established public viewing areas, excessive noise at the property boundary or at any protected location, or existing uses of neighboring property....” (pg. 99 Board License)

Expansion

Before the City of Old Town Planning Board

Juniper Ridge Landfill – City of Old Town Landfill Expansion Application





PRESENTATION SUMMARY

- Operational Procedures for Expansion Developed to:
 - 1) operate the facility to not adversely affect existing uses of neighboring properties or create nuisance conditions
 - 2) comply with the landfill operating requirements of the Maine Solid Waste Management Rules.
- City of Old Town Approval Criteria Covered:
 - **§ 24-12 C – Utilities**
 - **§ 24-12 D – Fugitive Dust and Nuisance Odors**
 - **§ 24-12 E – Litter Control**
 - **§ 24-12 F – Vector and Bird Control**
 - **§ 24-12 G – Waste Characteristics**
 - **§ 24-12 I – Air Quality**
 - **§ 24-12 O – Hours of Operation**



BACKGROUND

- Juniper Ridge Landfill operated by NEWSME since 2004
- Accepts over 600,000 tons/year, more than 50% of State need
- Serves more than 250 Maine cities and towns
- First Cell needs to be constructed in 2018
- Expansion 54 acres, 9.35 million yards³
- 10-12 years of capacity at a projected rate of 700,000 tons/year



AIR QUALITY

- Air Quality (§ 24-12.I)

- Current air license regulates current landfill and Expansion

1. Best Practical treatment
2. Will not violate applicable emission standards
3. Will not violate applicable health protective ambient air quality standards in conjunction with emissions from nearby sources

- Thiopaq H₂S removal system in place

(§ 24-12.I)



PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PATRICIA W. AND
COMMISSIONER

State of Maine and
NEWSME Landfill Operations, LLC
d/b/a Juniper Ridge Landfill
Penobscot County
Old Town, Maine
A-921-70-B-R

Departmental
Findings of Fact and Order
Part 70 Air Emission License
Renewal with Amendment

FINDINGS OF FACT

After review of the Part 70 License renewal and amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	State of Maine and NEWSME Landfill Operations, LLC d/b/a Juniper Ridge Landfill
LICENSE TYPE	Part 70 License Renewal and Part 70 Significant License Modification
NAICS CODES	562212
NATURE OF BUSINESS	Solid Waste Landfill
FACILITY LOCATION	Old Town, Maine

Juniper Ridge Landfill (JRL) is a solid waste disposal facility currently owned by the State of Maine (Bureau of General Services) and operated by NEWSME Landfill Operations, LLC.

JRL has the potential to emit more than 100 tons per year (TPY) of sulfur dioxide (SO₂) and carbon monoxide (CO). Therefore, the source is a major source for criteria pollutants. JRL does not have the potential to emit more than 10 TPY of a single hazardous air pollutant (HAP) or more than 25 TPY of combined HAP. Therefore, the source is an area source for HAP.

AUGUSTA
57 STATE HOUSE STATION
AUGUSTA, MAINE 04223-0017
(207) 287-7000 FAX: (207) 287-7026
RAY BUILDG., HERBERT ST.
web site: www.maine.gov/dep

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-8200 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-5200 FAX: (207) 822-6301

FRESHWATER ISLAND
1235 CONFRAT DRIVE, SKYWAY PARK
FRESHWATER ISLAND, MAINE 04769
(207) 764-0477 FAX: (207) 766-3143



- **City Approval Criteria (§ 24-12.I)**

- Air Quality. The Applicant has made adequate provision to avoid unreasonable adverse impacts on air quality, including unreasonable adverse impacts from Landfill Gases, and for monitoring Landfill Gases and reporting any management activities undertaken. The Applicant has developed adequate methods and/or systems to handle, place and address nuisance odor producing materials and processes, including enclosure of nuisance odor-producing materials and processes, and the use of technology to control, reduce or eliminate odors from the Facility and Expansion.

- **BEP Findings**

“The applicant has sufficiently demonstrated that the proposed expansion will not unreasonably adversely affect air quality pursuant to 38 M.R.S. § 1310-N(2-F)(C) and 06-096 C.M.R. ch. 400, § 4(G)(1)” and that “[t]he applicant has submitted evidence that the proposed expansion will not ...contaminate the ambient air, constitute a hazard to health or welfare, or create a nuisance pursuant to 38 M.R.S. § 1310-N(1)(A) and 06-096 C.M.R. ch. 400, § 3(D).” Board License, pp. 98, 100.

(§ 24-12.I)



ODOR

- Odor (§ 24-12.D & I)
 - 24/7 complaint line
 - Periodic surveys
 - Continuous off-site H₂S monitoring

(§ 24-12.D & I)

COMPLAINT RECORD FORM

JUNIPER RIDGE LANDFILL

-THIS SECTION COMPLETED BY SCALEHOUSE-

Complaint received by the following method: Phone Email Fax In Person

Complaint received at: 394-4376 (JRL 24-hour line) 394-4370 (fax)
 941-4580 (MDEP) michael.t.parker@maine.gov (MDEP)

Date of complaint: _____ Time of call/fax/visit: _____ AM PM

Name of person filing complaint: _____

Address: _____

Telephone number: _____

Nature of complaint: Odor Noise Lights Dust Traffic Other
 Traffic- Name of Company _____ License# _____ Route _____

Direction traveling _____ Truck type tractor trailer straight/dump trailer

No Specific Information

For odor complaints, time odor was detected: _____ AM PM

Is the odor being detected at the caller's residence? Yes No

Telephone call requested? Yes No

Site visit requested? Yes No

Wind direction & speed at time of complaint: From the _____ @ _____ mph

Manager contacted regarding this complaint: _____ Time: _____

Comments and/or Odor Type: Sludge Trash Rotten Eggs (H₂S) Other (Specify) _____

Scalehouse Attendant Taking Call: _____ Time Faxed to Jeremy Labbe: _____

Complaint Log Number: _____

-THIS SECTION COMPLETED BY RESPONSE PERSONNEL-

Wind direction & speed at time of visit: From the _____ @ _____ mph

Telephone called returned by: _____ Date: _____ Time: _____

Site visited by: _____ Date: _____ Time: _____

If odor present: Butanol level: _____ Potential Source: H₂S Sludge FEPR MSW Other

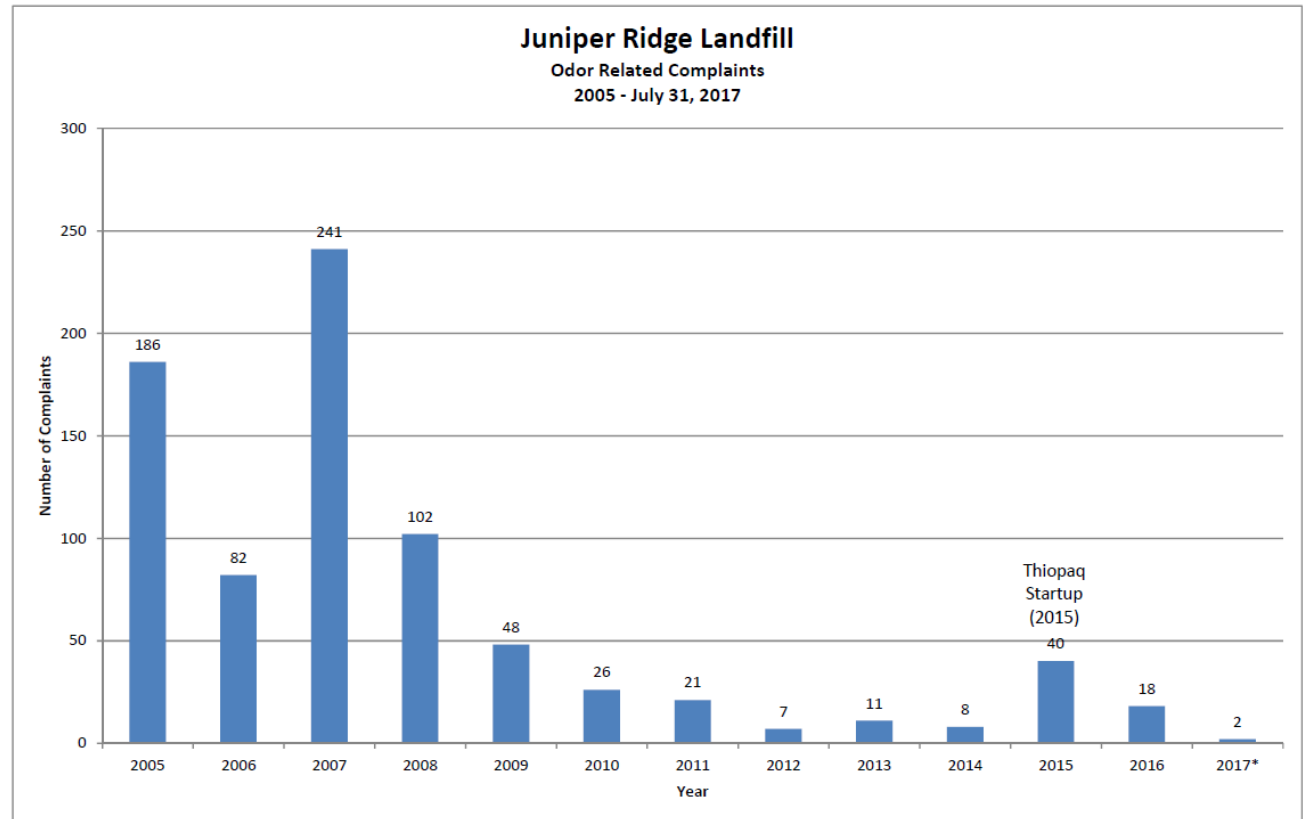
Specific comments pertaining to complaint: _____

Completed Complaint Record Form entered into the Environmental Audit Database: (Date) _____



- Three Types of Odor

1. Wastes
2. Leachate
3. Landfill Gas



* Through July 31, 2017

(§ 24-12.D & I)



- Waste Related Odors
 - Proper truck tarping and deodorizing spray
 - Small working area, waste mixing to reduce odors
 - Empty trucks also use deodorizing spray
 - Proper daily cover utilization
 - Perimeter deodorizing spray system
 - Direct application of deodorizers



(§ 24-12.D & I)



- Leachate Related Odors
 - Closed leachate system, above ground tank (enclosed)
 - Secure tanker hauling to approved facility
 - Constant monitoring and preventative maintenance



(§ 24-12.D & I)



- Landfill Gas Related Odors
 - Robust landfill gas collection and treatment system
 - Individual collector monitoring and adjustment
 - Operates in accordance with EPA's NSPS
 - Real-time monitoring of collection and treatment
 - Extensive cover practices
 - Regular monitoring
 - Real-time H₂S monitoring and proper reporting
 - City notification procedures and reporting



(§ 24-12.D & I)



- **Waiver Request**

- Use of Nasal Ranger and Stationary Monitors in Lieu of ASTM E679-91
- Letter of support for this waiver request from St. Croix Sensory
- Worked cooperatively with City of Old Town to develop reporting procedure

The requirement of Article III § 24-8-F.4 of the Ordinance that provides “ASTM E679-91 Standard Practice for Determination of Odor and Taste Thresholds by Forced Choice Ascending Concentration Series Method of Limits, Current Ed., published October 1991, shall be used for guidance on the detection, measurement and control of nuisance odors and is adopted by reference.” The Applicant requests approval to use the current in-place approaches to detect and measure potential nuisance odors. These approaches are as described in Section D Article III § 24-8-F.4 of this Application and include the use of the Stationary hydrogen sulfide monitors, and/or the hand held portable Nasal Ranger® to quantify odor concentrations at the site.

(§ 24-12.D & I)



- **City Approval Criteria (§ 24-12 D & I)**

- Air Quality. The Applicant has made adequate provision to avoid unreasonable adverse impacts on air quality, including unreasonable adverse impacts from Landfill Gases, and for monitoring Landfill Gases and reporting any management activities undertaken. The Applicant has developed adequate methods and/or systems to handle, place and address nuisance odor producing materials and processes, including enclosure of nuisance odor-producing materials and processes, and the use of technology to control, reduce or eliminate odors from the Facility and Expansion.
- Fugitive Dust and Nuisance Odors. The Applicant has made adequate provisions for the control of fugitive dust and nuisance odors so that the Solid Waste Facility will not unreasonably adversely affect air quality beyond its property boundary.

- **BEP Findings**

“The applicant has sufficiently demonstrated that the proposed expansion will not unreasonably adversely affect air quality pursuant to 38 M.R.S. § 1310-N(2-F)(C) and 06-096 C.M.R. ch. 400, § 4(G)(1).” Board License, p. 100. The Board further concluded that: “The applicant has submitted an Operations Manual that meets the operating requirements of 06-096 C.M.R. ch. 401, § 2(L), provided that the Operations Manual is reviewed annually and updated as necessary with the Annual Report,” and that “the proposed expansion will not pollute any water of the State, contaminate the ambient air, constitute a hazard to health or welfare, or create a nuisance pursuant to 38 M.R.S. § 1310-N(1)(A) and 06-096 C.M.R. ch. 400, § 3(D).” Id, pp. 98, 102.

(§ 24-12.I)



DUST AND LITTER CONTROL

- Dust and Litter Control (§ 24-12.D & E)

- Dust

- Primary access roads are paved
- Water application during dry weather months
- Road sweeping to reduce dirt buildup
- Third party contractors also require to have dust control

- Litter

- Primarily from offloading and waste placement
- Use of daily cover and waste compaction reduces wind blown litter
- Litter control fences installed around active cells
- Third party litter control workers
- Trucks tarped to reduce transportation related litter



(§ 24-12.D & E)



DUST AND LITTER CONTROL

- **City Approval Criteria (§ 24-12 D & E)**

- Fugitive Dust and Nuisance Odors. The Applicant has made adequate provisions for the control of fugitive dust and nuisance odors so that the Solid Waste Facility will not unreasonably adversely affect air quality beyond its property boundary.
- Litter Control. The Applicant has made adequate provision for control of litter, routine maintenance, and general cleanliness of the entire Facility and Expansion site.

- **BEP Findings**

“the proposed expansion will not pollute any water of the State, contaminate the ambient air, constitute a hazard to health or welfare, or create a nuisance pursuant to 38 M.R.S. § 1310-N(1)(A) and 06-096 C.M.R. ch. 400, § 3(D),” that “[t]he applicant has provided sufficient provisions for fitting the proposed landfill expansion harmoniously into the existing natural environment,” and that “[t]he applicant has sufficiently demonstrated that the proposed expansion will not unreasonably adversely affect existing uses.” Board License, pp. 98-99.

(§ 24-12.D & E)



VECTOR AND BIRD CONTROL

- Vector and Bird Control (§ 24-12.F)

"Vector" means an organism such as a rodent, bird, or insect, capable of transporting infectious agents to humans.

- Cover reduces vectors
- Contract with a pest control company
- Active U.S. Fish and Wildlife Depredation Permit



(§ 24-12.F)



VECTOR AND BIRD CONTROL

- **City Approval Criteria (§ 24-12 F)**

- Vector and Bird Control. The Applicant has made adequate provision for minimizing disease vectors on the site and has developed an effective bird control plan to protect human health.

- **BEP Findings**

“the proposed expansion will not pollute any water of the State, contaminate the ambient air, constitute a hazard to health or welfare, or create a nuisance pursuant to 38 M.R.S. § 1310-N(1)(A) and 06-096 C.M.R. ch. 400, § 3(D),” that “[t]he applicant has provided sufficient provisions for fitting the proposed landfill expansion harmoniously into the existing natural environment,” and that “[t]he applicant has sufficiently demonstrated that the proposed expansion will not unreasonably adversely affect existing uses.” Board License, pp. 98-99.

(§ 24-12.F)



- Utilities (§ 24-12.C)
 - Existing sanitary wastewater disposal systems.
 - Water supply needs for the Expansion will be met by existing facility sources.
 - Leachate generated by JRL and the Expansion will continue to be treated at:
 - Former Old Town mill WWTP (MFGR)
 - Or City of Brewer WWTP
 - Current three-phase, 480-volt-power service will power facility.

(§ 24-12.O)





- **City Approval Criteria (§ 24-12 C)**

- Utilities. The Applicant has made provisions for utilities to furnish service at the required design usage.

- **BEP Findings**

“The applicant has made sufficient provisions for adequate utilities, including adequate water supplies and appropriate sanitary wastewater disposal, and sufficiently demonstrated that the facility will not have an unreasonable adverse effect on existing or proposed utilities in the municipality or area served by those utilities, pursuant to 38 M.R.S. § 1310-N(2-F)(F) and 06-096 C.M.R. ch. 400, § 4(L)(1).” Board License, p. 100.

(§ 24-12.F)



HOURS OF OPERATION

- **Hours of Operation (§ 24-12.0)**
 - Monday through Friday 6am – 6pm
 - Saturday and Sunday 7:30am-2:30pm
 - Posted as required
 - Posted on google
- Some waste streams (e.g. PERC) may deliver 24 hours a day due to nature of operation.
- Facility locked when in event no attendant on site
- All non-authorized persons need clearance from scale attendant

(§ 24-12.0)

The screenshot shows the Google My Business profile for Juniper Ridge Landfill. At the top, there is a profile picture of a landscape, the name 'Juniper Ridge Landfill on Google', and options to 'Edit information', 'Add photos', and 'Do more with Google My Business'. Below this is a photo of the landfill facility and a map showing its location. The main section displays the business name 'Juniper Ridge Landfill' with a star, a 5.0 rating from 4 Google reviews, and buttons for 'Website' and 'Directions'. The address is listed as 2929 Bennoch Rd, Alton, ME 04468. The hours of operation are listed for each day of the week: Wednesday 6AM-6PM, Thursday 6AM-6PM, Friday 6AM-6PM, Saturday 7:30AM-2:30PM, Sunday 7:30AM-2:30PM, Monday 6AM-6PM, and Tuesday 6AM-6PM. There is a 'Suggest an edit' link and a phone number (207) 394-4372. At the bottom, there are buttons for 'Write a review' and 'Add a photo'.

Juniper Ridge Landfill on Google

Edit information

Add photos

Do more with Google My Business

See photos

Juniper Ridge Landfill

Juniper Ridge Landfill ★

5.0 ★★★★★ 4 Google reviews

Waste management service in Old Town, Maine

Website Directions

Address: 2929 Bennoch Rd, Alton, ME 04468

Hours: Wednesday 6AM-6PM
Thursday 6AM-6PM
Friday 6AM-6PM
Saturday 7:30AM-2:30PM
Sunday 7:30AM-2:30PM
Monday 6AM-6PM
Tuesday 6AM-6PM

Suggest an edit

Phone: (207) 394-4372

Edit your business information

Reviews

4 Google reviews

Write a review Add a photo



HOURS OF OPERATION

- **City Approval Criteria (§ 24-12 O)**

- Hours of Operation. The hours of operation of the Solid Waste Facility and Expansion will not unreasonably adversely impact on neighboring properties, especially residential uses.

- **BEP Findings**

“The applicant has sufficiently demonstrated that the proposed expansion will not unreasonably adversely affect existing uses ... or existing uses of neighboring property pursuant to 38 M.R.S. § 1310-N(2-F)(C) and 06-096 C.M.R. ch. 400, § 4(F)(1); provided equipment use is restricted in the operating hour of 6:00 am to 7:00 am to only equipment with a combined sound level of 77 dBA at 50 feet or less if within 60 feet of the western solid waste boundary (approximately 480 feet from the western property line).” Board License, p. 99.

(§ 24-12.O)



WASTE ACCEPTANCE

• Wastes accepted (§ 24-12.G)

- Only MEDEP approved Non-hazardous, in-state solid wastes
- Anticipated to remain the same as currently approved for the existing landfill
- CDD, ash, CDD & MSW process residues, bulky wastes, soils, sludges, other special wastes
- Amounts may vary from year to year

(§ 24-12.G)

TABLE 7

PROPOSED WASTE TYPES TO BE PLACED IN LANDFILL

Material Category	Proposed Waste Types to be Accepted in Expansion	
	Tons	Percent of Total Tonnage
Waste Treatment Plant Sludges and Biosolids	70,000	10
Contaminated Soil	30,000	4.3
Municipal Solid Waste Incinerator Ash	58,000	8.3
Front-End Process Residue	54,000	7.6
Biomass and Fossil Fuel Combustion Ash	35,000	5
Construction and Demolition Debris	195,000	27.9
Construction and Demolition Debris Processing Facility Fines	138,000	19.7
Oversized Bulky Waste ¹	60,000	8.6
Miscellaneous special waste	35,000	5
MSW Bypass/Soft Layer Material	25,000	3.6
TOTAL	700,000	100

Note:

1. The amount of oversized bulky waste received at the site is limited to 65,000 tons per year by the MEDEP License, unless modified by later MEDEP modification orders.




WASTE ACCEPTANCE

• Special Waste Characterization Program

- Detailed approval process
- Non-haz determination
- EPA, MEDEP, facility permit requirements MUST be met

(§ 24-12.G)

[Print Form](#)



Special Waste Characterization Profile

I. REQUESTED DISPOSAL FACILITY

II. GENERATOR INFORMATION

Generator Name _____	Generator Site Description _____
Contact Name _____	Generator Site Address _____
Title _____	STREET _____
Email _____	CITY _____ STATE _____ ZIP _____
Phone _____ Fax _____	

III. CUSTOMER INFORMATION same as above

Customer Name _____	Name _____
Billing Address: _____	Mailing Address: _____
STREET _____	STREET _____
CITY _____ STATE _____ ZIP _____	CITY _____ STATE _____ ZIP _____
Contact Name _____	Contact Name _____
Email _____	Email _____
Phone _____ Fax _____	Phone _____ Fax _____

V. WASTE INFORMATION

Common Waste Name/Description _____

Description of waste generation process/source: _____

Physical consistency _____ Flammable: No Yes

Odor? No Yes (specify) _____

pH Range: _____ to _____ Moisture Content _____ N/A (solid)

Physical constituents (e.g. Soil, wood, ash):

Constituent _____	Approximate % _____
_____	_____
_____	_____
_____	_____

Is the waste classified as a 'listed' or 'characteristic' hazardous waste as defined by the USEPA, State of origin, or State where disposed? No Yes (specify) _____

Describe all hazardous or nuisance properties associated with the waste: _____

Does the waste require any special handling or disposal procedures? No Yes (please explain) _____

VI. ESTIMATED WASTE QUANTITY & DELIVERY FREQUENCY

One Time Recurring

Estimated Annual Amount: _____ tons cubic yards Approximate Density: _____ tons/cubic yard

Delivery Frequency: Daily Weekly Monthly Quarterly Annually Other (specify if known) _____

Delivery Method: Roll-off Packer truck Tractor Trailer Other (specify) _____

Hauler Name _____ Hauler's Address: _____

Permit No. _____ STREET _____

Phone _____ Fax _____ CITY _____ STATE _____ ZIP _____



WASTE ACCEPTANCE

Waste Inspection Plan

- Paperwork and documentation review
- Waste offloading inspection
- Regular training
- Unacceptable materials identified must be properly removed, and disposed by generator

Waste Reporting

- Manifests maintained for each load
- Monthly detailed reports to City, State, LAC

(§ 24-12.G)

JUNIPER RIDGE LANDFILL
OLD TOWN MANE
MONTHLY WASTE ACTIVITY REPORT
MAY 2016

Delivery Date	Manifest Approval #	Waste Description	Quantity Delivered (tons)	Transporter Name	Generator Name	Origin
5/02/2016	285491	BURN PILE ASH AND/OR HOT LOADS ASHA ASH	0.44	FENNER	TOWN OF HAMPTON	PERD
5/02/2016	285491	BURN PILE ASH AND/OR HOT LOADS ASHA ASH	11.31	IRL AND	TOWN OF RICHMOND	PERD
5/11/2016	285650	BURN PILE ASH AND/OR HOT LOADS ASHA ASH	11.36	IRL AND	MALDEN CENTER	PERD
5/02/2016	285111	BYPASS MSH	2671	IRL AND		PERD
5/02/2016	285117	BYPASS MSH	30.44	JD RAYMOND		CLMB
5/02/2016	285112	BYPASS MSH	20.59	WFF		AROC
5/02/2016	285117	BYPASS MSH	22.88	HOPKINS T		CLMB
5/02/2016	285161	BYPASS MSH	28.87	LEON TRAC		CLMB
5/02/2016	285164	BYPASS MSH	25.86	IRL AND		CLMB
5/02/2016	285176	BYPASS MSH	24.59	HOPKINS T		PERD
5/02/2016	285211	BYPASS MSH	21.62	TOWN OF LI		PERD
5/02/2016	285246	BYPASS MSH	26.38	IRL AND		PERD
5/02/2016	285226	BYPASS MSH	28.69	FUTNS		KLXC
5/02/2016	285244	BYPASS MSH	26.25	TOWN OF LY		CLMB
5/02/2016	285250	BYPASS MSH	30.14	JD RAYMOND		CLMB
5/02/2016	285252	BYPASS MSH	6.70	FENNER		PERD
5/02/2016	285262	BYPASS MSH	11.41	IRL AND		PERD
5/02/2016	285264	BYPASS MSH	5.99	MBS		PERD
5/02/2016	285267	BYPASS MSH	27.10	HOPKINS T		CLMB
5/02/2016	285277	BYPASS MSH	21.48	MELL FR WTC		PERD
5/02/2016	285285	BYPASS MSH	25.31	TOWN OF LI		PERD
5/02/2016	285288	BYPASS MSH	22.56	MBS		PERD
5/02/2016	285322	BYPASS MSH	23.87	TRELAND		PERD
5/02/2016	285326	BYPASS MSH	9.26	FENNER		PERD
5/02/2016	285329	BYPASS MSH	8.20	FENNER		PERD
5/02/2016	285330	BYPASS MSH	19.94	IRL AND		HANC
5/02/2016	285331	BYPASS MSH	24.84	TRELAND		PERD
5/02/2016	285337	BYPASS MSH	17.43	FENNER		PERD
5/02/2016	285338	BYPASS MSH	4.96	FENNER		PERD
5/02/2016	285343	BYPASS MSH	19.22	AIRTELAM		KLXC
5/02/2016	285346	BYPASS MSH	27.62	TRELAND		PERD
5/02/2016	285352	BYPASS MSH	30.84	CHAFFEE		KENN
5/02/2016	285360	BYPASS MSH	4.97	FENNER		PERD
5/02/2016	285361	BYPASS MSH	11.50	IRL AND		PERD
5/02/2016	285364	BYPASS MSH	27.22	TOWN OF LI		PERD
5/02/2016	285365	BYPASS MSH	7.61	FENNER		PERD
5/02/2016	285366	BYPASS MSH	11.57	FENNER		PERD
5/02/2016	285367	BYPASS MSH	23.15	FARME		PERD
5/02/2016	285380	BYPASS MSH	7.83	IRL AND		PERD
5/02/2016	285381	BYPASS MSH	7.36	FENNER		PERD
5/02/2016	285386	BYPASS MSH	29.17	TRELAND		CLMB
5/02/2016	285388	BYPASS MSH	6.70	IRL AND		PERD
5/02/2016	285389	BYPASS MSH	4.70	MBS		HANC
5/02/2016	285391	BYPASS MSH	7.84	FENNER		PERD
5/02/2016	285393	BYPASS MSH	14.43	FENNER		PERD
5/02/2016	285401	BYPASS MSH	12.94	FENNER		PERD
5/02/2016	285404	BYPASS MSH	20.44	IRL AND		HANC
5/02/2016	285409	BYPASS MSH	7.50	FENNER		PERD
5/02/2016	285410	BYPASS MSH	19.84	AIRTELAM		CLMB
5/02/2016	285411	BYPASS MSH	10.03	FENNER		KLXC
5/02/2016	285413	BYPASS MSH	30.80	JD RAYMOND		CLMB
5/02/2016	285414	BYPASS MSH	6.70	FENNER		PERD
5/02/2016	285419	BYPASS MSH	12.48	FENNER		PERD
5/02/2016	285420	BYPASS MSH	4.08	FENNER		PERD
5/02/2016	285424	BYPASS MSH	12.55	FENNER		PERD
5/02/2016	285425	BYPASS MSH	14.59	FENNER		PERD
5/02/2016	285429	BYPASS MSH	11.57	FENNER		HANC
5/02/2016	285430	BYPASS MSH	26.86	HOPKINS T		PERD
5/02/2016	285431	BYPASS MSH	5.70	FENNER		HANC
5/02/2016	285433	BYPASS MSH	25.28	HOPKINS T		PERD
5/02/2016	285435	BYPASS MSH	4.42	FENNER		WALD
5/02/2016	285455	BYPASS MSH	5.47	FENNER		PERD
5/02/2016	285459	BYPASS MSH	20.64	MELL FR WTC		PERD
5/02/2016	285463	BYPASS MSH	9.88	CHAFFEE		KENN
5/02/2016	285465	BYPASS MSH	19.48	WFF		PERD
5/02/2016	285473	BYPASS MSH	14.04	FENNER		PERD
5/02/2016	285474	BYPASS MSH	13.69	FENNER		PERD
5/02/2016	285483	BYPASS MSH	12.96	FENNER		HANC
5/02/2016	285486	BYPASS MSH	20.88	TOWN OF LI		PERD
5/02/2016	285489	BYPASS MSH	25.53	WINTRUP		KENN
5/02/2016	285491	BYPASS MSH	18.61	IRL AND		HANC
5/02/2016	285496	BYPASS MSH	22.64	WINDHOLM		LDC
5/02/2016	285500	BYPASS MSH	3.99	FENNER		PERD
5/02/2016	285504	BYPASS MSH	22.87	WFF		PERD
5/02/2016	285506	BYPASS MSH	25.81	FUTNS		KLXC
5/02/2016	285508	BYPASS MSH	10.59	FENNER		HANC
5/02/2016	285517	BYPASS MSH	7.84	FENNER		PERD
5/02/2016	285519	BYPASS MSH	11.62	FENNER		PERD
5/02/2016	285520	BYPASS MSH	11.62	FENNER		PERD
5/02/2016	285521	BYPASS MSH	12.89	IRL AND		PERD
5/02/2016	285526	BYPASS MSH	4.11	FENNER		PERD
5/02/2016	285532	BYPASS MSH	11.47	FENNER		PERD
5/02/2016	285535	BYPASS MSH	9.19	FENNER		PERD
5/02/2016	285546	BYPASS MSH	9.82	FENNER		WALD
5/02/2016	285559	BYPASS MSH	9.93	FENNER		HANC
5/02/2016	285561	BYPASS MSH	30.27	JD RAYMOND		CLMB
5/02/2016	285564	BYPASS MSH	21.49	WFF		PERD
5/02/2016	285565	BYPASS MSH	15.56	FENNER		PERD
5/02/2016	285570	BYPASS MSH	11.26	FENNER		HANC
5/02/2016	285533	BYPASS MSH	7.70	FENNER		PERD
5/02/2016	285537	BYPASS MSH	12.70	FENNER		PERD
5/02/2016	285532	BYPASS MSH	4.43	FENNER		PERD
5/11/2016	285578	BYPASS MSH	7.98	FENNER		AROC
5/11/2016	285579	BYPASS MSH	28.42	FORBULETT		AROC
5/11/2016	285580	BYPASS MSH	24.88	KBI COOP		PERD
5/11/2016	285586	BYPASS MSH	21.59	KBI COOP		PERD



WASTE ACCEPTANCE

- **City Approval Criteria (§ 24-12 G)**

- Waste Characteristics. The Applicant has developed and will implement a Hazardous Waste and Special Waste Handling and Exclusion Plan under the Maine Solid Waste Management Rules to detect, identify, handle, store and transport special and hazardous wastes. The Applicant has demonstrated the ability to comply with MDEP requirements regarding the handling of solid waste and the storage, handling, transportation and disposal of Leachate.

- **BEP Findings**

“The applicant has submitted an

Operations Manual that meets the operating requirements of 06-096 C.M.R. ch. 401, § 2(L), provided that the Operations Manual is reviewed annually and updated as necessary with the Annual Report,” and that “the proposed expansion will not pollute any water of the State, contaminate the ambient air, constitute a hazard to health or welfare, or create a nuisance pursuant to 38 M.R.S. § 1310-N(1)(A) and 06-096 C.M.R. ch. 400, § 3(D),” Board License, pp. 98, 102.

(§ 24-12.G)



CONCLUSION

- Similar Waste Acceptance
- Air License in Place
- Infrastructure and Systems for Odor , Dust, Litter, and Vectors
- Accurate and Robust Waste Acceptance Process
- Approved by MEDEP

Meets City of Old Town Approval Criteria

- **§ 24-12 C – Utilities**
- **§ 24-12 D – Fugitive Dust and Nuisance Odors**
- **§ 24-12 E – Litter Control**
- **§ 24-12 F – Vector and Bird Control**
- **§ 24-12 G – Waste Characteristics**
- **§ 24-12 I – Air Quality**
- **§ 24-12 O – Hours of Operation**



RESOURCE SOLUTIONS

RECYCLING | COLLECTION | ORGANICS | ENERGY | LANDFILLS



JRL Expansion – Noise Study

Prepared for Old Town Planning Board

August 8, 2017

Robert D. O’Neal, CCM, INCE Bd. Cert.

Epsilon Associates, Inc.

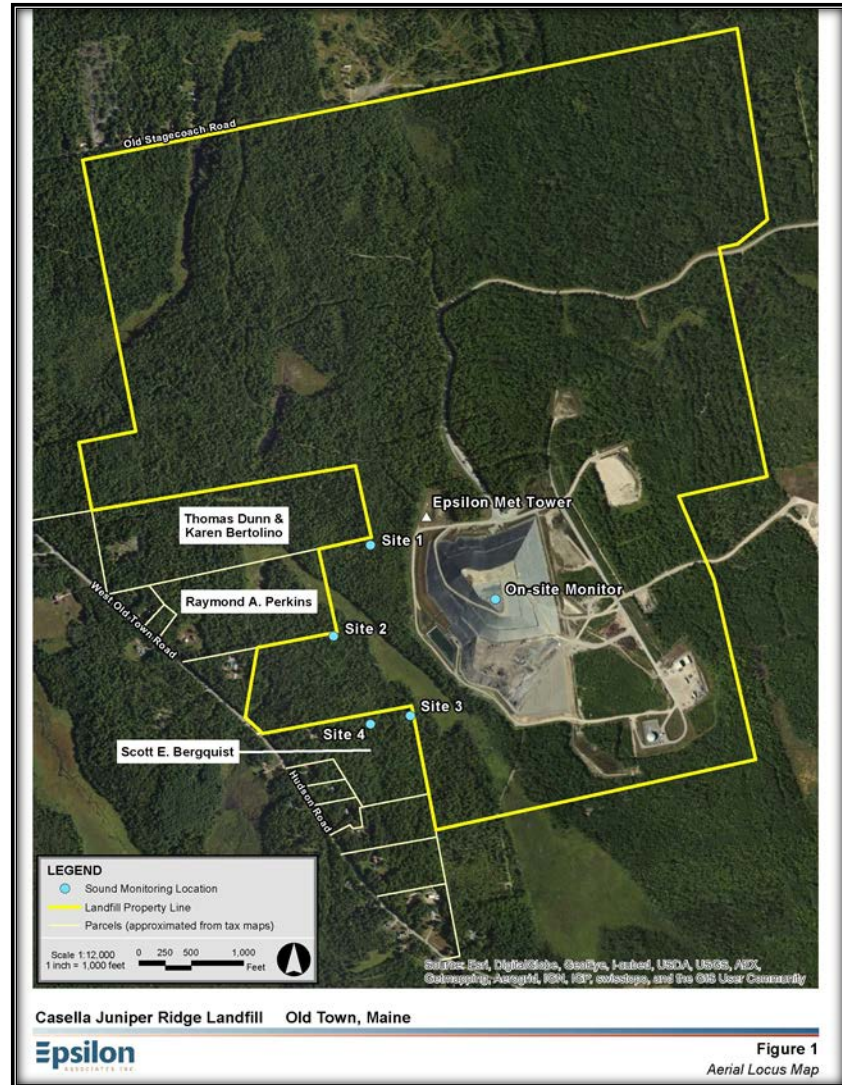
Noise--Permit Application Requirement

City of Old Town Noise Requirement [§ 24-8.J]

J. Noise. A description of the **existing hourly sound levels** at the Facility site and the **anticipated sound levels** both within the Solid Waste Facility site and at the property boundary, and at any Protected Location. The Applicant shall **specify the sources** and types of anticipated sounds, including sound from machinery, equipment and motor vehicles and any environmental **noise control devices** available to reduce anticipated noise levels, both on site and at the property boundaries.

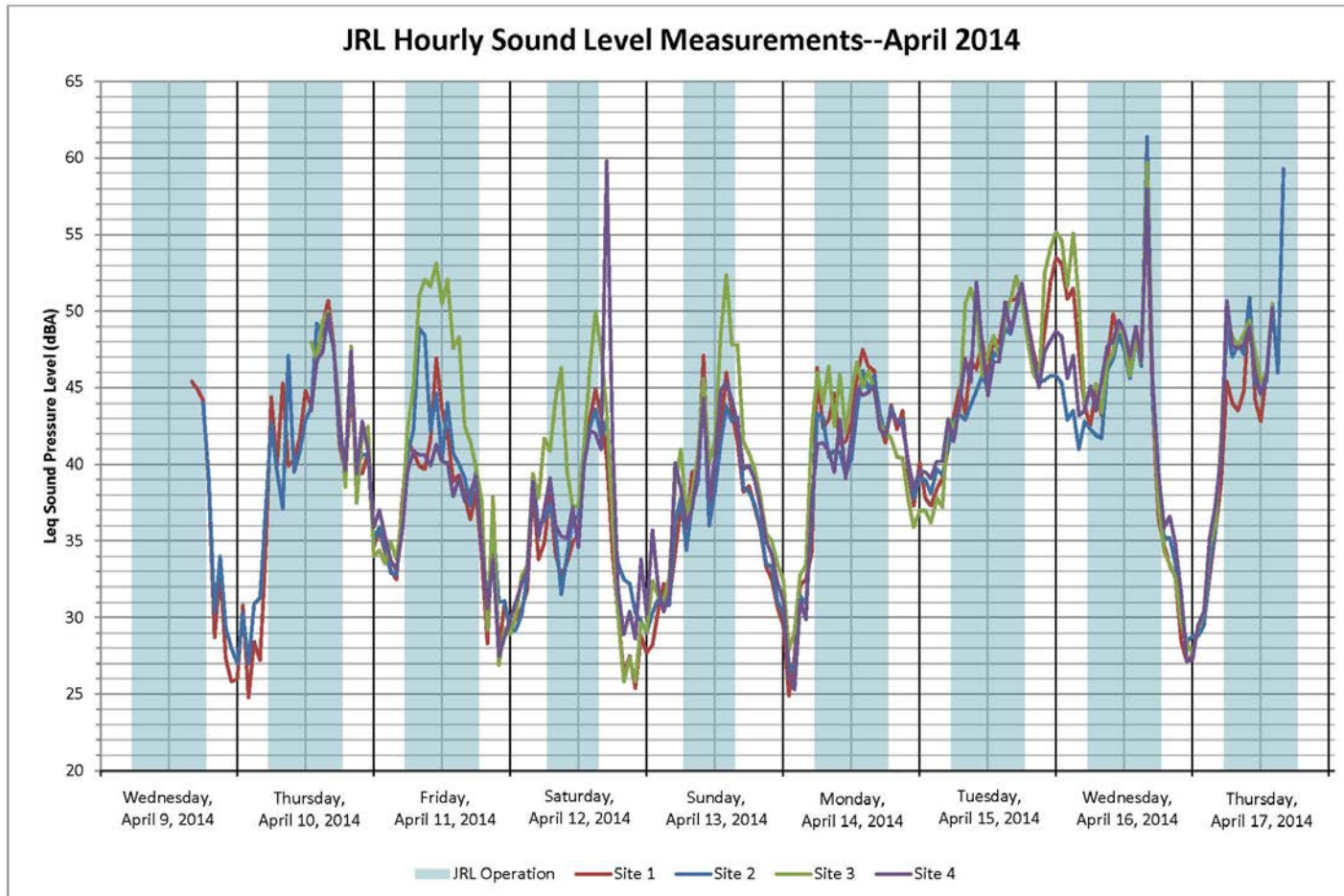
Noise—Existing Sound Levels

Existing Hourly
Sound Levels—
Measured April
2014



Noise—Existing Sound Levels

Existing Hourly Sound Levels—Measured April 2014

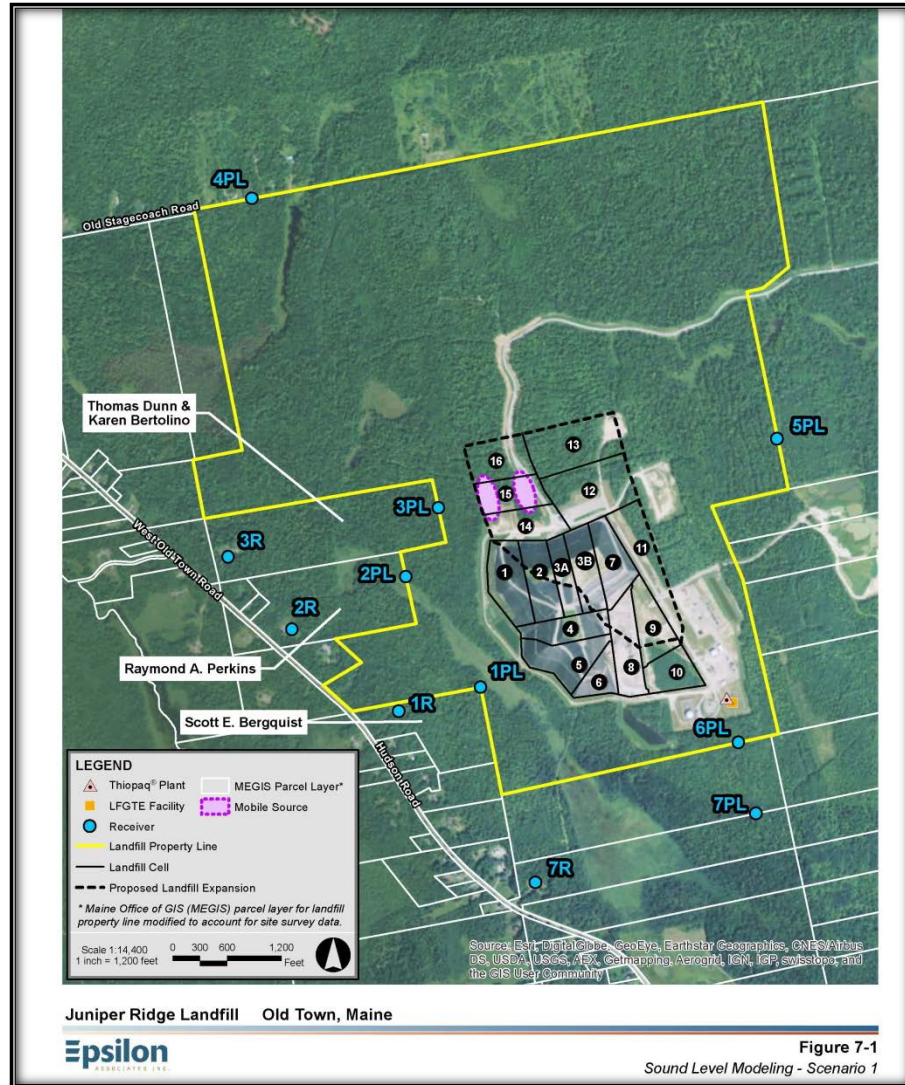


Noise—Permit Standards

City of Old Town Noise Criteria [§ 24-12.H.1]

- H.1. Sound Level Limits. The hourly sound levels from routine operation of a Solid Waste Facility will be less than or equal to:
- (a) 75 dBA for daytime and nighttime hours at the Facility property boundary;
 - (b) 60 dBA for daytime hours and 50 dBA for nighttime hours at any Protected Location in an area for which the zoning, or the existing uses are not predominantly commercial or industrial; or
 - (c) 70 dBA for daytime hours and 60 dBA for nighttime hours in an area for which the zoning or existing uses are predominantly commercial or industrial.

Noise—Anticipated Sound Levels



Noise—Anticipated Sound Levels Daytime

Table 8-1 Evaluation of Daytime Hourly Sound Level Limits – Scenario 1

Modeling ID	Description	Zoning / Existing Use	Project Only Broadband Sound Level (dBA)	Sound Level Limit (dBA)	Evaluation
1PL	Western Property Line – Bergquist Residence	Residential	46	60	Complies
2PL	Western Property Line – Perkins Residence	Residential	51	60	Complies
3PL	Western Property Line – Bertolino Residence	Residential	58	60	Complies
4PL	Northern Property Line – Residential	Residential	38	60	Complies
5PL	Eastern Property Line	Undeveloped	41	75	Complies
6PL	Southern Property Line	Undeveloped	58	75	Complies
7PL	Southern Residential Property Line	Residential	48	60	Complies
1R	Bergquist Residence	Residential	44	60	Complies
2R	Perkins Residence	Residential	43	60	Complies
3R	Bertolino Residence	Residential	42	60	Complies
7R	Southern Residence	Residential	41	60	Complies

Noise—Anticipated Sound Levels Nighttime

Table 8-2 Evaluation of Nighttime Hourly Sound Level Limits – Scenario 2

Modeling ID	Description	Zoning / Existing Use	Project Only Broadband Sound Level (dBA)	Sound Level Limit (dBA)	Evaluation
1PL	Western Property Line – Bergquist Residence	Residential	36	50	Complies
2PL	Western Property Line – Perkins Residence	Residential	39	50	Complies
3PL	Western Property Line – Bertolino Residence	Residential	47	50	Complies
4PL	Northern Property Line – Residential	Residential	27	50	Complies
5PL	Eastern Property Line	Undeveloped	36	75	Complies
6PL	Southern Property Line	Undeveloped	58	75	Complies
7PL	Southern Residential Property Line	Residential	48	50	Complies
1R	Bergquist Residence	Residential	34	50	Complies
2R	Perkins Residence	Residential	33	50	Complies
3R	Bertolino Residence	Residential	31	50	Complies
7R	Southern Residence	Residential	38	50	Complies

Noise—Specific Sound Sources

Large equipment used for cell construction of the Expansion:

- One 27-40 ton excavator
- Three to five 30-35 ton off-road trucks
- Two bulldozers
- One tracked skid steer
- One mini-backhoe
- Pipe fusion equipment
- One water truck
- Pad foot / smooth drum rollers

Large equipment for on-going landfill operation:

- Two compactors – Caterpillar 836G and Caterpillar 826G or similar
- Two bulldozers – John Deere 850J and John Deere 850K or similar
- One front-end loader -- Caterpillar 966G or similar
- One on-site haul truck – John Deere 400D or similar
- One excavator -- John Deere 270 or similar

Noise—Controls

- Large buffer around landfill which reduces sound – 2100 ft to nearest residence
- Exhaust mufflers installed on landfill operation diesel-powered engines
- All on-site mobile equipment back-up alarms were retrofitted with “broadband” (“white noise”) back-up alarms to eliminate tonal sound
- During “nighttime” hours of operation (6:00 – 7:00 AM) equipment use within 60 feet of the western solid waste boundary will be limited to a combined sound level of 77 dBA at 50 feet

Noise—Conclusion

- Noise study prepared in accordance with City of Old Town Noise Requirement [§ 24-8.J]
- Sound levels from JRL Expansion will comply with City of Old Town Noise Criteria [§ 24-12.H.1]
- Details in Appendix D-7 of Solid Waste Facility Application
- On June 1, 2017 the Maine BEP found that: *“The noise study for the proposed expansion indicates that routine operations will not generate excessive noise at the property boundary or at any protected location as defined by the Rules; provided that during the hour of 6:00 am to 7:00 am, only equipment with a combined sound level of 77 dBA at 50 feet or less are utilized if within 60 feet of the western solid waste boundary (approximately 480 feet from the western property line).”*