

Chapter 342: SIGNIFICANT GROUNDWATER WELLS

SUMMARY: This chapter describes the fee structure for funding contracts with third party environmental professionals who provide supplemental technical review and assessment of monitoring information related to significant groundwater wells. This chapter also addresses public informational meetings, and pre-application and pre-submission meetings. This chapter is a routine technical rule.

1. **Introduction.** This chapter describes the fee structure of the Department of Environmental Protection (department) for funding contracts with third party environmental professionals who provide supplemental technical review and assessment of monitoring information related to significant groundwater wells. This chapter also describes a public information meeting requirement. Rules concerning the fee structure and public information meetings are required by *An Act Concerning the Sustainable Use of and Planning for Water Resources*, PL 2007, ch. 399(14) and (15) (effective September 20, 2007) as amended by *An Act to Clarify the Laws Regarding Significant Groundwater Wells*, PL 2009, ch. 295 (3) and (4) (effective September 12, 2009). This chapter also addresses pre-application and pre-submission meetings.
2. **Applicability.** This chapter applies to a significant groundwater well that requires a permit from the department pursuant to the *Natural Resources Protection Act (NRPA)*, 38 M.R.S.A §§ 480-A–480-GG, or requires approval as part of a development requiring a permit from the department pursuant to the *Site Location of Development (Site Law)*, 38 M.R.S.A. §§ 481–490.
3. **Definitions.** For purposes of this chapter only, the following terms have the following meanings.
 - A. **Department.** “Department” refers to the Maine Department of Environmental Protection.
 - B. **Permit.** “Permit” refers to a permit issued pursuant to the NRPA for a significant groundwater well or a permit issued pursuant to the Site Law for a development containing a significant groundwater well.
 - C. **Permittee.** “Permittee” refers to a person with a permit issued pursuant to the NRPA for a significant groundwater well or a person with a permit issued pursuant to the Site Law for a development containing a significant groundwater well.
 - D. **Significant groundwater well.** “Significant groundwater well” has the same meaning as in 38 M.R.S.A. §480-B(9-A) except that for purposes of this rule a development or part of a development requiring a permit pursuant to the Site Law or a structure or development requiring a permit from the Maine Land Use Regulation Commission is not excluded from the definition of “significant groundwater well.”
4. **Fee**
 - A. **When payment is due.** The permittee shall pay the full annual fee due for the period January to December by the following April 1. The base fee is prorated if the significant groundwater well is permitted by the department during this period.

B. Base fee plus sliding-scale fee. The annual fee includes a base fee plus a sliding-scale fee for each department permit. The base fee is a flat amount applicable to all significant groundwater wells authorized under a single permit. The sliding-scale fee relates to the total gallons of water pumped by a significant groundwater well or wells authorized under a single permit during the previous period (January through December).

- (1) The base fee is \$250. The sliding-scale fee is \$50/million gallons pumped or fraction thereof.
Example: A development permitted pursuant to the Site Law includes 5 significant groundwater wells that pumped a total of 2.7 million gallons from January through December. The annual fee: \$250 base fee plus \$150 sliding-scale fee = \$400.
- (2) The permittee shall submit to the department a certified statement on a form provided by the department indicating total gallons pumped from January 1 through December 31 by a significant groundwater well or wells for each department permit, together with the annual fee, by the following April 1. The department may require a permittee to submit pumping records or other relevant documentation to verify total and per-well amounts.
- (3) In the absence of the receipt of timely, acceptable documentation, the department may determine the total annual gallons pumped and require an annual fee based upon evidence available to the department concerning pumping during the applicable period, such as the following:
 - (a) Volumes reported to the Water Withdrawal Reporting Program;
 - (b) Monitoring information submitted to the department;
 - (c) Pumping limits established by the department; and
 - (d) Any other information available to the department.
- (4) When a well is permanently put out of production and the permit has been modified accordingly as provided in Section 5(B), the annual fee is pro-rated for the period the well was open.

5. Exclusion from the fee requirement. The following are excluded from calculation of the fee requirement in Section 4.

A. Well with minor required monitoring. A well authorized by the department under the NRPA or Site Law for which the department has not required monitoring related to pumping or water levels, other than during the initial pump test and any background and recovery monitoring.

B. Water returned to the same bedrock or surficial aquifer. The volume of groundwater that is withdrawn and returned to the same bedrock or surficial aquifer from which it was withdrawn as determined by the department, such as water withdrawn for geothermal purposes and not discharged.

6. Permit modification when a well is removed from production. If a significant groundwater well permitted pursuant to the Site Law or the NRPA is capped or otherwise permanently removed from production, the permittee may apply to the department for a modification of the permit to reflect any decrease in the permit limit.

7. **Public informational meeting.** A public informational meeting must be held prior to submission of a new application for a significant groundwater well pursuant to the NRPA. The applicant shall meet the public information meeting requirements in Section 13 of *Rules Concerning the Processing of Applications*, 06-096 CMR 2, without regard to whether a pre-application meeting is required in 06-096 CMR 2.
8. **Pre-application and pre-submission meeting.** A pre-application meeting is required prior to submission to the department of a new application for a significant groundwater well pursuant to the NRPA. The applicant must meet the requirements in Section 10 of *Rules Concerning the Processing of Applications*, 06-096 CMR 2. A pre-submission meeting is required unless waived as provided in 06-096 CMR 2(10)(D).

NOTE: See *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2 for requirements applicable to a Site Law development concerning public information meetings, and pre-application and pre-submission meetings.

STATUTORY AUTHORITY: 38 M.R.S.A. §341-D(1-B), PL 2007, ch. 399(14) and (15), and PL 2009, ch. 295(3) and (4)

EFFECTIVE DATE: April 4, 2010 – filing 2010-110

Chapter 371: DEFINITIONS OF TERMS USED IN THE SITE LOCATION OF DEVELOPMENT LAW AND REGULATIONS

SUMMARY: This chapter defines and clarifies the terms used in the Site Location of Development Law (38 M.R.S.A. Sections 481 et. seq. and in the regulations interpreting the Site Location of Development Law.

1. **Definitions.** The following terms, as used in the Site Location of Development Law (38 M.R.S.A. Section 481 et. seq.) and in these regulations (Chapter 371-376) shall have the following meanings, unless the context otherwise indicates:
 - A. **Board.** "Board" means the Board of Environmental Protection.
 - B. **Borrow pit.** "Borrow pit", as used in 38 M.R.S.A. Section 482(2), means an excavation for sand, fill or gravel.
 - (1) Borrow pits in existence before January 1, 1970, which are expanded or intended to be expanded by five acres or more after that date, do not qualify for exemption under 38 M.R.S.A. Section 482(2), unless regulated by the Maine Department of Transportation.
 - C. **Common Scheme of Development.** "Common scheme of development" means a plan or process of development which:
 - (1) Takes place on contiguous or non-contiguous parcels or lots in the same immediate vicinity; and
 - (2) Exhibits characteristics of a unified approach, method, or effect such as:
 - (a) unified ownership, management, or supervision;
 - (b) sharing of common equipment or labor; or
 - (c) common financing.
 - D. **Department.** "Department" means the Department of Environmental Protection.
 - E. **Developer.** "Developer" means a person as defined in 38 M.R.S.A. Section 482(4):
 - (1) Constructing, causing to be constructed or intending to construct a development;
 - (2) Operating, causing to be operated, or intending to operate a development; or
 - (3) In the case of a subdivision, selling or leasing, causing to be sold or leased, offering for sale or lease, or intending to sell or lease lots in a development.
 - F. **Division.** "Division", as used in 38 M.R.S.A. Section 482(5), means some overt act beyond drawing or marking lots on a plot or plan in furtherance of an intent to offer for sale or lease lots falling within the specifications of 38 M.R.S.A. Section 482(5).

NOTE: The required overt act may include, but is not limited to, beginning construction, advertising lots for sale, selling lots, or recording a plot plan with the Registry of Deeds. Exploratory soil test pits for the purpose of detailed soils mapping or for assessing adequacy for on-site sewage disposal would not be considered an overt act under this subsection.

G. Excavating. "Excavating", as used in 38 M.R.S.A. Section 482(2), means the moving, removing or uncovering of natural resources, such as topsoil, clay, peat, rock or other materials, but does not include:

- (1) Borrow pit operations for sand, fill or gravel of less than five acres, or when regulated by the Maine Department of Transportation;
- (2) Normal agricultural practices, excluding the stripping of topsoil; or
- (3) Digging pits or holes by manual labor for activities such as the harvesting of clams or worms.

GG. Hazardous activity exemptions. In accordance with 38 M.R.S.A. Section 482, Sub-section 2-C, activities which consume, generate or handle any of the following substances and/or are non-hazardous expansions to existing developments are exempt from the requirements of 38 M.R.S.A. Section 483, Sub-section 1:

(1) Non-Hazardous Waste

(a) (i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewage system to a publicly-owned treatment works for treatment.

NOTE: "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(b) Industrial wastewater discharges that are point source discharges subject to regulation under Section 402 of the Clean Water Act, as amended.

NOTE: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being handled before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.

(c) Irrigation return flows.

(d) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

(e) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(f) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. "Household waste"

means any waste material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels).

Wastes resulting from agricultural activities, as defined by 38 M.R.S.A. Section 1303, Sub-section 16.

- (h) Mining overburden returned to the mine site.
 - (i) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.
 - (j) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.
- (2) Non-Hazardous Matter
- (a) Substances which are designated as hazardous matter by the Legislature and the Board under Chapter 800, the consumption, generation or handling of which in the following quantities for the specified categories is considered to be non-hazardous for purposes of this regulation:
 - Category X - 1 pound (0.454 kg) or less per month
 - Category A - 10 pound (4.54 kg) or less per month
 - Category B - 100 pounds (45.4 kg) or less per month
 - Category-C - 1000 pounds (454 kg) or less per month
 - Category D - 5000 pounds (2270 kg) or less per month

The above categories are those into which substances are placed according to the EPA regulations promulgated under Section 311 of the Clean Water Act and published in 40 CFR 117 (revised as of July 1, 1980).
 - (b) A substance which is being or has been used in the normal household activity in a quantity which is reasonable for that activity.
- (3) Oil. Any storage of oil, as defined in 38 M.R.S.A. Section 542, in any combination of above ground containers or tanks capable of holding 21,000 gallons (500 barrels) or less, or in any combination of underground containers or tanks capable of holding 21,000 gallons (500 barrels) or less.
 - (4) Road Salt. Any handling of road salt (sodium chloride or calcium chloride) of one ton or less at a municipal, county, state, or private facility.
 - (5) Expansion of an Existing Development. An enlargement of, or addition to an existing development is a non-hazardous expansion for purposes of this regulation if it consumes, generates or handles non-hazardous waste, non-hazardous waste matter, oil or road salt, as defined by this chapter of the regulations, or if it meets all of the following conditions:

- (a) The enlargement or addition must be physically attached to a primary building within the development;
- (b) The enlargement or addition cannot extend across a ground water divide into another primary sand and gravel recharge area;
- (c) The enlargement or addition must be less than one-fourth the size of the primary building to which it is physically attached;
- (d) Any hazardous substance consumed, generated or handled within the enlargement or addition must be a substance which is currently being utilized in the operation of the existing development;
- (e) Any hazardous substance consumed, generated or handled within the enlargement or addition must be utilized in a manner that does not constitute a significant change in the operation of the existing development.

NOTE: "Primary building" refers to a building which houses all, or part of the manufacturing process associated with the development. For example, in a pulp and paper facility, one "primary building" may exist which houses both the pulp and paper manufacturing process. However, it is more likely that the pulp making facilities and the paper making facilities will be located in two separate buildings. If this is the case, both buildings are considered to be "primary".

H. In existence. "In existence", as used in 38 M.R.S.A. Section 488, means utilizing a parcel of land so that the parcel is known in the neighborhood as being used for a given purpose. Mere contemplated or intended use, standing alone, is not sufficient to establish the "existence" of a development.

1. If plans for a development in existence are changed substantially by a developer after January 1, 1970, the development no longer qualifies for the exemption in 38 M.R.S.A. Section 488, and the entire development must be approved by the Board before further construction or operation is undertaken.

I. Lot. "Lot", as used in 38 M.R.S.A. Section 482(5), means a portion of a parcel of land measured and marked out by metes and bounds or by some other approved surveying technique.

J. Natural buffer strip. "Natural buffer strip" means an area or belt of land which:

- (1) Is covered with trees or other vegetation;
- (2) Runs along the border between a development site and an adjacent piece of land, body of water, or other specified area; and
- (3) Serves to protect the piece of land or body of water from adverse effects of the development or preserves same existing quality or use in the area of the development.

K. Offered for sale or lease to the general public. "Offered for sale or lease to the general public", as used in 38 M.R.S.A. Section 482(5), means communicated as available for sale or lease and does not include consideration of who initiated the offer.

- (1) Any transfer of title, right or interest, except those described in Paragraph 2, shall be considered a sale or lease.
- (2) Unless intended to circumvent the Site Location Law, the following transactions shall not be considered offers for sale or lease:
 - (a) Bona fide private transactions such as the offering of lots for sale or lease to an abutting owner or to a spouse, child, parent, grandparent, or sibling of the developer;
 - (b) Bona fide personal, non-profit transactions such as the transfer of lots by gift or devise.

L. Parcel of land. "Parcel of land" means the block or piece of land a developer owns or has sufficient title, right or interest in regardless of size, regardless of whether the block of land is divided into lots, and regardless of whether individual lots within the block are contiguous, as long as the lots treated together are all part of a common scheme of development.

- (1) In calculating the aggregate land area of a parcel of land, the following shall be considered:
 - (a) The acreage of the parcel of land proposed for development;
 - (b) The acreage of all lots within the parcel already offered for sale or lease by the developer within the preceding five years; and
 - (c) The acreage within the parcel which the developer intends to develop within the next five years.
- (2) In determining the area of a parcel of land, property in the intertidal zone shall be included as part of the property of the adjoining shoreland owner, unless specifically excluded by deed.
 - (a) An owner of property located on tidewater owns on all land down to the ordinary low water mark or 1650 feet (100 rods) below the high water mark, whichever is less, unless specifically excluded by deed.
 - (b) The side lines on flats adjoining property located on the tidewater shall be determined as follows:
 - (i) draw a base line between the points where the property lines touch the high water mark.
 - (ii) project lines out from those points at a 90 degree angle from the base line and extend the lines to the ordinary low water mark or for 1650 feet (100 rods), whichever is less.

(iii) where lines of adjacent owners intersect, as in coves, or do not touch, as on points, split the difference between adjacent owners.

- (3) In determining the area of a parcel of land, the following considerations shall be taken into account:
- (a) Riparian owners of property on non-tidal streams own the bed of the stream to the thread of the stream; or to the mid-point of the stream, if no thread is determinable;
 - (b) Owners of property located adjacent to a great pond own all the land down to the natural low water mark;
 - (c) Ownership of roads, ways, or highways, or portions of roads, ways, or highways, by adjacent landowners, should be determined in accordance with 33 M.R.S.A., Section 465.

NOTE: 33 M.R.S.A. Section 465 is the section of the Maine statutes dealing with the ownership of roads, ways, and highways or their parts by persons owning land abutting the roads, ways, and highways.

M. Person

- (1) Each "person", as defined in 38 M.R.S.A., Section 482 (4), shall be regarded as a separate and distinct entity, except that a combination of persons shall be treated as a single person for the purpose of the Site Location Law if:
- (a) Together they- pursue a common scheme of development which is subject to the Site Location Law even though Individual person in the combination own separate parcels which may not be- subject to the Site Location Law if the parcels were, developed separately; or
 - (b) One person engages in a transaction, with another person with the intent to evade the intent and purpose of the Site Location Law.

N. Possession of applicable state or local licenses. "Possession of applicable state and local licenses", as used in 38 M.R.S.A. Section 488, means actual possession by the developer of licenses or written evidence of approval which would have permitted construction or operation of the development to begin lawfully. Mere preliminary conditional approval of a license application, a mere right to approval of a license application, or any other interest short of actual possession of a license or other written evidence of approval are insufficient to satisfy the possession requirement.

O. Road. "Road", as used in 38 M.R.S.A. Section 482(6)(B), means a way or course which is:

- (1) Constructed or formed by substantial recontouring of land;
- (2) Designed to permit passage by most wheeled vehicles;

- (3) Not intended to be abandoned and revegetated within a short period of time; and
- (4) Designed to be permanent or intended to be used for a significant period of time.

NOTE: For example, a passage bulldozed through a stand of trees to permit the movement of a skidder or tracked vehicle, that does not result in substantial recontouring of the land, and that is intended to be abandoned and naturally revegetated within a year or less, is not a road within the meaning of Section 482(6)(B).

- P. Site Location Law.** "Site Location Law" means the Site Location of Development Law, 38 M.R.S.A. Section 481 et. seq..
- Q. Staff.** "Staff" means the staff of the Department of Environmental Protection.
- R. Transmission line.** "Transmission line", as used in 38 M.R.S.A. Sections 484 and 488, means electrical transmission line and does not include a natural gas pipeline, an oil pipeline, a highway, or any other means of conveyance.
- S. Under construction.** "Under construction", as used in 38 M.R.S.A. Section 488, means the developer's having expended a substantial amount of money or effort towards the completion of a development. The test of the substantiality involves an assessment of the amount of money or effort expended in relation to the amount required to complete the development.

AUTHORITY: 38 M.R.S.A.. Section 482 , Sub-section 2-C and Section 343

EFFECTIVE DATE: November 1, 1979

Amended: October 4, 1982

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

Chapter 372: POLICIES AND PROCEDURES UNDER THE SITE LOCATION LAW

SUMMARY: These regulations describe the general policies and procedures under the Site Location Law, including scope of review; nature of terms and conditions; Board jurisdiction; completeness of application; requirement of additional information; advisory rulings; access to the site; approval not contingent upon other approvals; title, right or interest; phased development; association responsible for common facilities; standard conditions of approval; and, severability.

- 1. Scope of Review.** In reviewing applications for approval of proposed developments under the Site Location Law, the Board shall consider the size, location, and nature of the proposed development in relation to:
 - A.** The potential primary, secondary, and cumulative impacts of the development on the character, quality, and uses of the land, air, and water on the development site and on the area likely to be affected by the proposed development; and
 - B.** The potential effects on the protection and preservation of the public's health, safety, and general welfare.

NOTE: The Board considers the primary, secondary, and cumulative impacts of a proposed development in relation to the areas of concern articulated in the criteria for approval of 38 M.R.S.A. Section 484 as interpreted by these regulations. "Cumulative impacts" refer to those impacts that are realized when the incremental effects of individual developments add up to the point where certain thresholds* of tolerance are exceeded.

- 2. Nature of Terms and Conditions.** As specified in Section 483 of the Site Location Law, the Board may place terms and conditions on the approval of a proposed development. However, terms and conditions shall address themselves to specifying particular means of satisfying minor or easily corrected problems, or both, relating to compliance with the Site Location Law and shall not substitute for or reduce the burden of proof of the developer to affirmatively demonstrate to the Board that each of the standards of the Site Location Law has been met.

NOTE: In the case of *In re: Belgrade Shores, Inc.*, 371 A.2d 413, 416 (1977), the Supreme Judicial Court of Maine stated:

"In addition to the express authority to impose conditions conveyed by Section 483, Section 481 mandates a 'flexible and practical' approach to site regulation. A series of disapprovals pending the applicant's correction of deficiencies in its proposal would achieve the same effect as conditional approval. We therefore view the choice between those two methods as a question of semantics and, as such, fully within the Board's discretion under Section 483. Further, we believe this conclusion consistent with the pragmatism espoused in Section 481."

"That the Board found non-compliance with two of the four criteria listed in Section 484 does not, as appellants claim, require disapproval. Such a result would be neither practical nor flexible where the noncompliance is minor, easily corrected, or both."

3. **Board Jurisdiction.** The Board acquires jurisdiction under the Site Location Law when a person makes the first overt act in furtherance of an intent to construct or operate a development as defined in 38 M.R.S.A. Section 482(2).
4. **Completeness of Application.** If in the opinion of the Staff an application for approval of a development under the Site Location Law is incomplete, the application may be returned to the applicant with an indication of the information which needs to be supplied; and, no further processing shall occur until the application is determined to be complete. The statutory time period within which the Board must act on an application under 38 M.R.S.A. Section 483 shall not begin until the application is determined to be complete by the Staff.
5. **Requirement of Additional Information.** In reviewing applications determined to be complete, the Board or Staff may require additional information from the applicant on any aspect of the proposed development relating to compliance with the standards of 38 M.R.S.A. Section 484.
6. **Advisory Rulings.** All requests for advisory rulings on the applicability of the Site Location Law to particular situations or on other matters shall be based on existent facts and not on hypothetical situations. Such requests shall be made in writing and addressed to the Bureau of Watershed Management, Department of Environmental Protection, State House Station 17, Augusta, ME 04333. Issuance of advisory rulings is discretionary with the Department on a case-by-case basis.
7. **Access to the Site.** The filing of an application for approval of a development constitutes the granting of permission by the applicant to allow authorized application reviewers access to the site of the proposed development in order to evaluate whether or not the proposed development will meet the standards as stated in 38 M.R.S.A. Section 484.
8. **Approval Not Contingent Upon Other Approvals.** Approval of applications under the Site Location Law is not contingent upon the applicant having obtained, prior to filing, other appropriate federal, state or municipal approvals, licenses, permits, etc.

NOTE: Standard Conditions of Approval require such permits prior to commencing construction.

9. **Title, Right or Interest.** The Department will consider an application only when an applicant has demonstrated sufficient title, right, or interest in all of the property which is proposed for development or use. An applicant shall demonstrate in writing sufficient title, right, or interest, as follows:
 - A. When the applicant claims ownership of the property, copies of the deeds to the property shall be supplied.
 - B. When the applicant has an option to buy the property, a copy of the option agreement shall be supplied. Option agreements shall contain terms deemed sufficient by the Board to establish future title.
 - C. When the applicant has a lease on the property, a copy of the lease shall be supplied. The lease shall be of sufficient duration, as determined by the Board, to permit construction and reasonable use of the development.

- D. When the applicant has eminent domain power over the property, evidence shall be supplied of the ability and intent to use the eminent domain power to acquire sufficient title, right or interest as determined by the Board.

10. Phased Development. The Board requires that an application for approval include present plans for all phases of a development to be undertaken on a parcel. In the absence of evidence sufficient to approve all phases of the proposed development, the Board may approve one or more phases of the development based on the evidence then available. Approval of phases, however, shall be based on compliance of the entire proposed development with the standards of the Site Location Law.

NOTE: A proper analysis of the potential primary, secondary and cumulative impacts of a proposed development can be made only when all phases of a proposed development are considered. Also, the plans for site modification and pollution mitigation need to be based on the entire extent of a proposed development in order to insure their effectiveness in accomplishing the desired objectives.

11. Association Responsible for Common Facilities or Properties. Applications for developments with common facilities or properties, whose operation or maintenance will require the cooperation of more than one person, other than the developer, to satisfy the standards of 38 M.R.S.A. Section 484 over the life of the development, shall include a detailed description of the nature of the person or association which will be responsible for operating or maintaining the common facilities or properties of the development.

NOTE: Examples of types of developments which may require a person or association to be responsible for operating or maintaining common facilities or properties are residential subdivision with private interior roads, common sewage treatment or water supply facilities, or community-owned open space; condominiums; shopping centers; and multi-family residential developments with commonly maintained facilities.

12. Standard Conditions of Approval. Unless otherwise specifically stated in the approval, all Board (or Staff) approvals shall be subject to the following standard conditions:

- A. Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.
- B. Compliance with All Applicable Laws.** The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. Compliance with All Terms and Conditions of Approval.** The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

- D. Advertising.** Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.
 - E. Transfer of Development.** Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.
 - F. Time frame for approvals.** If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplications for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
 - G. Approval Included in Contract Bids.** A copy of this approval must be included in or attached to all contract bid specifications for the development.
 - H. Approval Shown to Contractors.** Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.
- 13. Severability.** Should any provision of these regulations be declared invalid or ineffective by court decision, the decision shall not invalidate any other provision of these regulations.

AUTHORITY: 38 M.R.S.A. Section 343

EFFECTIVE DATE: November 1, 1979

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Chapter 375:**NO ADVERSE ENVIRONMENTAL EFFECT STANDARDS OF THE
SITE LOCATION OF DEVELOPMENT ACT**

SUMMARY: These regulations describe the scope of review of the Department in determining a developer's compliance with the "no adverse effect on the natural environment" standard of the Site Location Law (38 M.R.S.A. Section 484(3)); the information which shall be submitted, when appropriate, within an application for approval; and, the terms and conditions which the Department may impose on the approval of an application to ensure compliance with the standard.

NOTE: In determining whether the developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, or natural resources in the municipality or in neighboring municipalities, the Department has identified several specific areas of concern which are dealt with in detail below.

1. No Unreasonable Adverse Effect On Air Quality

- A. Preamble.** The Department recognizes that point source emissions from certain types of commercial and industrial developments and solid waste disposal facilities and non-point source emissions deriving from industrial, commercial, and governmental developments can have an unreasonable adverse effect on air quality.
- B. Scope of Review.** In determining whether the proposed development will have an unreasonable adverse effect on ambient air quality, through point or non-point sources of chemical pollutants or particulate matter, the Department shall consider all relevant evidence to that effect, such as evidence that:
- (1) The best practicable treatment of point sources of air pollution will be utilized and that point source emissions meet state ambient air quality standards and state emissions standards.
 - (2) The amount of air pollution produced from either point or non-point sources of air emissions will be consistent with the Board's "Policy on Air Quality Use," adopted March 28, 1979.
- C. Submissions.** Applications for approval of proposed industrial, commercial and governmental developments and solid waste disposal facilities shall include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on air quality, including information such as the following, when appropriate:
- (1) Evidence that an Air Emission License has been or will be obtained.
 - (2) Evidence that increased traffic generated by the development will not significantly effect the ambient air quality. Modeling of the effect of non-point sources of air pollution on ambient air quality may be requested.

D. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will have no unreasonable adverse effect on air quality, such as requiring that:

- (1) Emissions from point sources of pollution be monitored.
- (2) The size of the parking lots be limited in order to limit the amount of non-point source pollutants generated by the development.

2. No Unreasonable Alteration of Climate

A. Preamble. The Department recognizes the potential of large-scale, heavy industrial facilities, such as power generating plants, to affect the climate in the vicinity of their location by causing changes in climatic characteristics such as rainfall, fog, and relative humidity patterns.

B. Scope of Review. In determining whether the proposed development will cause an unreasonable alteration of climate, the Department shall consider all relevant evidence to that effect.

C. Submissions. Applications for approval of large-scale, heavy industrial developments, such as power generating plants, shall include evidence that affirmatively demonstrates that there will be no unreasonable alteration of climate, including information such as the following, when appropriate:

- (1) Evidence that the proposed development will not unreasonably alter the existing cloud cover, fog, or rainfall characteristics of the area.

D. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will not cause an unreasonable alteration of climate.

3. No Unreasonable Alteration of Natural Drainage Ways

A. Scope of Review. In determining whether the proposed development will cause an unreasonable alteration of natural drainage ways, the Department shall consider all relevant evidence to that effect, such as evidence that:

- (1) Where a development site is traversed by a natural water course, drainage way, channel, or stream, a drainage right-of-way will be provided that substantially conforms with the lines of such natural water courses. Such rights-of-way shall be at least thirty feet in width.
- (2) Any grading or other construction activity on the site will cause no unreasonable alteration of natural drainage ways such that drainage, other than that which occurred prior to development, will adversely affect adjacent parcels of land and that drainage ways flowing from adjacent parcels of land to the development site will be impeded.

B. Submissions. Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable alteration of natural drainage ways, including information such as the following, when appropriate.

- (1) A plan showing all existing water courses, drainage ways, channels, or streams to be affected by the development, and the nature, width and location of proposed easements, rights-of-way, culverts, catch basins or other means of channeling surface water within the development and over adjacent parcels of land.
- (2) Deed covenants which establish the easements or rights-of-way and provide for their continued maintenance.

C. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that there will be no unreasonable alteration of natural drainage ways.

4. No Unreasonable Effect on Runoff/Infiltration Relationships

A. Preamble. The Department recognizes that some developments cause unreasonable increases in stormwater runoff by decreasing the infiltrative capacity of the soils on a development site. The Department also recognizes that increases in stormwater runoff cause increased danger of flooding, the pollution of surface water bodies, and the depletion of groundwater resources.

B. Scope of Review. In determining whether the proposed development will have an unreasonable effect on runoff/infiltration relationships, the Department shall consider all relevant evidence to that effect, such as evidence that:

- (1) A stormwater management system will infiltrate, detain, or retain water falling on the site during a storm of an intensity equal to a twenty-five year, twenty-four hour storm such that the rate of flow of stormwater from the development does not exceed the rate of outflow of stormwater from the site prior to the undertaking of the development.
 - (a) Developments which convey stormwater directly into the ocean (excluding estuarine tidewaters) exclusively in manmade piped or open drainage systems are exempt from the requirements of this subsection.
- (2) The physical, biological, and chemical properties of the receiving waters will not be unreasonably degraded by the stormwater runoff from the development site.
- (3) The peak discharge of the receiving waters will not be increased as the result of the stormwater runoff from the development site for storms up to a level of intensity of a twenty-five year, twenty-four hour storm.

C. Submissions. Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable effect on runoff/infiltration relationships, including information such as the following, when appropriate:

- (1) Evidence that the proposed stormwater management system has been designed by a professional engineer or other person duly qualified to undertake the design. The designer of the system will evaluate the effectiveness of various stormwater methods and develop and

make available for review the hydraulic computations based on accepted engineering practices to demonstrate that the standards established under subsection B, above, will be met.

- (2) Evidence that the stormwater management system will take into consideration the upstream runoff which must pass over or through the development site. The system will be designed to pass upstream flows generated by a twenty-five year frequency through the proposed development without overloading the system or flooding areas not specifically planned for such flooding.
- (3) Evidence that the design of piped or open channel systems will be based on a ten year flow frequency without overloading or flooding beyond channel limits. In addition, the areas expected to be flooded by runoff of a twenty-five year frequency will be designated, and no structures will be planned within such area.
- (4) Evidence that, where permanent embankment-type storage or retention basins are planned, the basins will be designed in accordance with good engineering practice, such as outlined in the Soil Conservation Service Engineering Field Manual or other appropriate references.
- (5) Evidence that rights-of-way or easements will be designated for all components of the stormwater management system lying outside of established street lines.
- (6) Evidence that the developer will maintain all components of the stormwater management system until it is formally accepted by the municipality or a quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. The charter of such an association must be acceptable to the Department.
- (7) Evidence that the stormwater management system will be fully coordinated with project site plans, including consideration of street patterns, pedestrian ways, open space, building siting, parking areas, recreational facilities, and other utilities, especially sanitary wastewater disposal facilities.
- (8) When the construction of a development is to occur in phases, the planning of the stormwater management system should encompass the entire site which may ultimately be developed, and not limited to an initial or limited phases of the development.

NOTE: The following references may be of assistance to a developer in making the necessary computations and in designing the stormwater management system:

"Urban Hydrology for Small Watersheds", Technical Release No. 55, USDA, Soil Conservation Service, University of Maine, Orono, Maine.

"Water Resources Protection Measures in Land Development - A Handbook", Tourbier and Westmacott, University of Delaware Water Resources Center, Newark, Delaware.

D. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that there will be no unreasonable effect on runoff/infiltration relationships.

5. Erosion and Sedimentation Control

- A. Preamble.** The Department recognizes the importance of controlling erosion and sedimentation to protect water quality and wildlife and fisheries habitat. Additionally, the Department considers topsoil to be a natural resource which should be properly managed. Control of erosion and sedimentation is a concern both during and after construction activities.
- B. Scope of Review.** In determining whether the developer has made adequate provision for controlling erosion and sedimentation, the Department shall consider all relevant evidence to that effect, such as evidence that:
- (1) All earth changes will be designed, constructed, and completed in such a manner so that the exposed area of any disturbed land will be limited to the shortest period of time possible.
 - (2) Sediment caused by accelerated soil erosion will be removed from runoff water before it leaves the development site.
 - (3) Any temporary or permanent facility designed and constructed for the conveyance of water around, through, or from the development site will be designed to limit the water flow to a non-erosive velocity.
 - (4) Permanent soil erosion control measures for all slopes, channels, ditches, or any disturbed land area will be completed within fifteen calendar days after final grading has been completed. When it is not possible or practical to permanently stabilize disturbed land, temporary erosion control measures will be implemented within thirty calendar days of the exposure of soil.
 - (5) When vegetative cover will be established as a temporary or permanent erosion control measure:
 - (a) Plant species to be used and the seeding rates will take into account soil, slope, climate, and duration and use of the vegetative cover.
 - (b) Mulch will be provided at rates appropriate to ensure a minimum of soil and seed loss until an acceptable "catch" of seed is obtained.
 - (c) Reseeding will be done within a reasonable period of time if there is not an acceptable "catch".
 - (6) All development plans will incorporate building designs and street layouts that fit and utilize existing topography and desirable natural surroundings to the fullest extent possible.
- C. Submissions.** Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that adequate provision will be made to control erosion and sedimentation, including information such as the following when appropriate:

- (1) A comprehensive erosion and sedimentation control plan, designed in accordance with the "Maine Environmental Quality Handbook", the U.S.D.A., Soil Conservation Service's "Engineering Field Manual", or another appropriate reference, which includes the following information:
 - (a) A description and location of the limits of all proposed construction activities which result in the disturbance of the land.
 - (b) A description and location of all existing and proposed on-site drainage.
 - (c) The timing and sequence of all proposed land disturbances.
 - (d) A description and location of all proposed temporary and permanent erosion and sedimentation control measures, including the timing and sequence of their completion.
 - (e) A proposed program for the maintenance of all erosion and sedimentation control facilities which will remain after the project is completed, including a designation of the responsible party.

D. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the developer will make adequate provision to control erosion and sedimentation, such as requiring that:

- (1) Erosion control devices be in place before the commencing of other construction activities.
- (2) Construction activity be limited to certain times of the year, particularly when soil type, slope, and the extent of area to be stripped pose serious potential for erosion and sedimentation.

6. No Unreasonable Adverse Effect on Surface Water Quality

A. Preamble. The Department recognizes that developments have the potential to cause the pollution of surface waters through both point and non-point sources of pollution.

B. Scope of Review. In determining whether the proposed development will have an unreasonable adverse effect on surface water quality, the Department shall consider all relevant evidence to that effect, such as evidence that:

- (1) The development or reasonably foreseeable consequences of the development will not discharge any water pollutants which affect the state classification of a surface water body (38 M.R.S.A. Section 363 *et seq.*).
- (2) The best practicable treatment of point sources of water pollutants will be utilized.
- (3) The total phosphorous concentrations in all tributaries to great ponds will not exceed the standard established in Department Regulation 583.1 as the result of the proposed development.

(4) Any effect on surface water temperature will be in compliance with all appropriate standards established in Department Regulations 582.1 - 582.8.

C. Submissions. Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on surface water quality, including information such as the following, when appropriate:

(1) Where sewage disposal is to be handled off-site by a municipal or quasi-municipal sewage treatment facility, a letter from the authorized agent of the facility stating that there is adequate capacity to ensure satisfactory treatment.

(2) Evidence that a waste discharge license, as required by 38 M.R.S.A. Sections 413 *et seq.*, has been or will be obtained.

D. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will have no unreasonable adverse effect on surface water quality.

7. No Unreasonable Adverse Effect on Ground Water Quality

A. Preamble. The Department recognizes the importance of protecting ground water resources in order to promote the future health, safety, and welfare of the citizens of Maine through the maintenance of an adequate supply of safe drinking water.

B. Scope of Review. In determining whether the proposed development will have an unreasonable adverse effect on ground water quality, the Department shall consider all relevant evidence to that effect, such as evidence that:

(1) The development will not result in the existing ground water quality becoming inferior to the physical, biological, chemical, and radiological levels for raw and untreated drinking water supply sources specified in the Maine State Drinking Water Regulations, pursuant to 22 M.R.S.A. Section 601. If the existing ground water quality is inferior to the State Drinking Water Regulations, the developer will not degrade the water quality any further.

C. Rebuttable Presumption Against Disposal of Waste in Certain Areas. The Department operates under the rebuttable presumption that the storage and/or disposal of solid wastes, hazardous wastes, and leachable or liquid wastes, including petroleum products and septage, pose serious threats to public health, safety, and welfare through the potential pollution of the ground water when such storage and/or disposal occurs on or above sand and gravel aquifers or the recharge areas of sand and gravel aquifers.

NOTE: Maps of sand and gravel aquifers and their recharge areas are available for portions of the state from the Bureau of Geology, Department of Conservation, Augusta.

(1) An applicant seeking approval for a development which involves one or more of the activities specified above, must overcome this presumption by persuasive evidence that the development is unique in some way that allows for compliance with the intent of this subsection.

D. Submissions. Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on ground water quality, including information such as the following, when appropriate:

- (1) A comprehensive list, including physical and chemical characteristics and projected quantities of wastes to be disposed of or stored within the proposed development which may potentially contaminate the ground water.
- (2) Methods for preventing ground water pollution as the result of the disposal and/or storage of wastes.
- (3) An evaluation of the geological, hydrologic, and soils conditions of the development site.
- (4) Data establishing background ground water quality.
- (5) Proposed plan of action, and alternatives, to be followed in the event the proposed development results in ground water contamination.

E. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will have no unreasonable adverse effect on ground water quality, such as requiring that:

- (1) A ground water monitoring program be established and reports be filed with the Department at designated intervals.
- (2) Specified wastes not be disposed of or stored within the proposed development.

8. No Unreasonable Adverse Effect on Ground Water Quantity

A. Preamble. The Department recognizes the importance of maintaining an adequate supply of ground water for drinking purposes. The Department also recognizes that the depletion of ground water resources can result in the intrusion of salt water into potable ground water supplies and can affect the hydrologic characteristics of surface water bodies (peak flows, low flows and water levels) resulting in adverse effects on their assimilative capacity and recreational use, as well as on certain wildlife habitats. Additionally, new wells can cause a lowering of the ground water supply to the point where existing wells run dry, particularly during the late summer and early fall.

B. Scope of Review. In determining whether the proposed development will have an unreasonable adverse effect on ground water quantity, the Department shall consider all relevant evidence to that effect, such as evidence that:

- (1) The quantity of water to be taken from ground water sources will not substantially lower the found water table, cause salt water intrusion, cause undesirable changes in ground water flow patterns, or cause unacceptable ground subsidence.

C. Submissions. Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on ground water quantity, including information such as the following, where appropriate:

- (1) Estimates of the quantity of ground water to be used by the proposed development.
- (2) In the areas where salt water intrusion, the lowering of the ground water level, or land subsidence have been or can be reasonably be expected to be a problem, a report by a duly qualified person addressing the potential effects of ground water use by the proposed development.

D. Terms and Conditions. The Department may, as a term or condition of approval establish any reasonable requirement to ensure that there will be no unreasonable adverse effect on ground water quantity, such as requiring that:

- (1) A development obtain its water from a surface water source, public community supply, or utility.
- (2) Wells in the surrounding area be monitored to determine the effect of the development on ground water levels.
- (3) People in the surrounding area, whose wells are adversely affected by the development, be provided with new wells or another source of potable water for their use and consumption.

9. Buffer Strips

A. Preamble. The Department recognizes the importance of natural buffer strips in protecting water quality and wildlife habitat. The Department also recognizes that buffer strips can serve as visual screens which can serve to lessen the visual impact of incompatible or undesirable land uses. The width and nature of buffer strips, if required, shall be determined by the Department on a case-by-case basis.

B. Scope of Review. In determining whether the developer has made adequate provision for buffer strips, when appropriate, the Department shall consider all relevant evidence to that effect, such as evidence that:

- (1) Water bodies within or adjacent to the development will be adequately protected from sedimentation and surface runoff by buffer strips.
- (2) Buffer strips will provide adequate space for movement of wildlife between important habitats.
- (3) Buffer strips will shield adjacent uses from unsightly developments and lighting.

NOTE: The following GUIDELINES should be considered in establishing visual buffer strips.

- (1) Plant materials used in the screen planting will be at least four feet high when planted and be of such evergreen species as will produce ultimately a dense visual screen at least

eight feet high. Alternatively, a six-foot high wooden fence, without openings wider than 1", may be substituted.

- (2) The screen will be maintained permanently, and any plant material which does not live will be replaced within one year.
 - (3) Screen planting will be so placed that at maturity it will be no closer than three feet away from any street or property line.
 - (4) The screen will be broken only at points of vehicular or pedestrian access.
 - (5) Fencing and screening will be so located within the developer's property line to allow access for maintenance on both sides without intruding upon abutting properties.
-

- C. Excavations for Sand, Gravel, Clay, Silt, Topsoil, or Rock** -- Buffer strips associated with an excavation for sand, gravel, clay, silt, topsoil, or rock must meet the buffer strip standards specified in *Performance Standards for Excavations*, 38 M.R.S.A. §490-D, and *Performance Standards for Quarries*, 38 M.R.S.A. §490-Z. These standards apply in lieu of Section 9(B) (1)-(3).

A gravel pit previously licensed under the Site Location of Development Law, 38 M.R.S.A §484, may apply for a modification of the buffer strip requirements in such a permit. The Department may approve such modification if the buffer strip at least meets the minimum standards of §§ 490-D and 490-Z and the proposed excavation will not result in an unreasonable adverse impact on the natural environment.

- D. Submissions.** Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that adequate provision of buffer strips, when appropriate, will be made, including information such as the following:

- (1) The location and width of all natural buffer strips to be retained.
- (2) The nature, location, width, and height of all vegetative buffer strips or architectural screens to be established.
- (3) Legal provisions for the maintenance of all buffer strips and architectural screens.

- E. Terms and Conditions.** The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the developer has made adequate provision for the establishment of buffer strips, such as requiring:

- (1) The maintenance of existing vegetation as a natural buffer strip, which shall remain as a permanent feature of the landscape.
- (2) The incorporation of buffer strip maintenance into deed covenants in projects where deed transfers of property to the general public are contemplated.
- (3) Written permission of the Department of Environmental Protection for activities which may adversely affect a body of water or wildlife habitat protected by a natural buffer strip, such

as: removal of live trees, stump and hot systems, and the displacement of rocks, topsoil and similar activities which would cause or allow increased soil erosion.

- (4) The establishment of particular species of vegetation.
- (5) The use of particular materials, colors, and styles in the construction of architectural screens.

10. Control of Noise

A. Preamble. The Department recognizes that the construction, operation and maintenance of developments may cause excessive noise that could degrade the health and welfare of nearby neighbors. It is the intent of the Department to require adequate provision for the control of excessive environmental noise from developments proposed after the effective date of this regulation.

B. Applicability

- (1) This regulation applies to proposed developments within municipalities without a local quantifiable noise standard and in unorganized areas of the State. When a proposed development is located in a municipality which has duly enacted by ordinance an applicable quantifiable noise standard, which (1) contains limits that are not higher than the sound level limits contained in this regulation by more than 5 dBA, and (2) limits or addresses the various types of noises contained in this regulation or all the types of noises generated by the development, that local standard, rather than this regulation, shall be applied by the Department within that municipality for each of the types of sounds the ordinance regulates. This regulation applies to developments located within one municipality when the noise produced by the development is received in another municipality and, in these cases, the Department will also take into consideration the municipalities' quantifiable noise standards, if any.
- (2) This regulation applies to expansions and modifications of developments when such expansions and modifications are proposed after the effective date of this regulation and subject to site location approval, but only to the noise produced by the proposed expansion or modification of the development, unless (1) the existing development was constructed since 1-1-70 and (2) at the time of construction, the existing development was too small to require site location approval. In situations where conditions (1) and (2) above apply, then this regulation applies to the whole development (both existing facility and proposed expansion or modification). This regulation also applies to expansions and modifications of existing developments when such expansions and modifications require an amendment to the development's Site Law permit, but only to the noise produced by the expansion or modification.
- (3) This regulation does not apply to existing developments or portions of existing developments constructed prior to 1-1-70 or approved under the Site Law prior to the effective date of this regulation. This regulation does not apply to relicensing of existing solid waste facilities previously approved under the Site Law.
- (4) The sound level limits contained in this regulation apply only to areas that are defined as protected locations, and to property lines of the proposed development or contiguous

property owned by the developer, whichever are farther from the proposed development's regulated sound sources.

- (5) The sound level limits contained in this regulation do not apply to noise received within the development boundary.

NOTE: The Department will reconsider the effect and operation of the regulation one year from its effective date.

C. Sound Level Limits

(1) Sound From Routine Operation of Developments

- (a) Except as noted in subsections (b) and (c) below, the hourly sound levels resulting from routine operation of the development and measured in accordance with the measurement procedures described in subsection H shall not exceed the following limits:

- (i) At any property line of the development or contiguous property owned by the developer, whichever is farther from the proposed development's regulated sound sources:

75 dBA at any time of day.

- (ii) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial;

60 dBA between 7:00 a.m. and 7:00 p.m.

(the "daytime hourly limit"), and

50 dBA between 7:00 p.m. and 7:00 a.m.

(the "nighttime hourly limit").

- (iii) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

70 dBA between 7:00 a.m. and 7:00 p.m.

(the "daytime hourly limit"), and

60 dBA between 7:00 p.m. and 7:00 a.m.

(the "nighttime hourly limit").

- (iv) For the purpose of determining whether the use of an unzoned area is predominantly commercial, transportation, or industrial (e.g. non-residential in nature), the Department shall consider the municipality's comprehensive plan, if any. Furthermore, the usage of properties abutting each protected location shall be determined, and the limits applied for that protected location shall be based upon the usage occurring along the greater portion of the perimeter of that parcel; in the event the portions of the perimeter are equal in usage, the limits applied for that protected

location shall be those for a protected location in an area for which the use is not predominantly commercial, transportation, or industrial.

- (v) When a proposed development is to be located in an area where the daytime pre-development ambient hourly sound level at a protected location is equal to or less than 45 dBA and/or the nighttime pre-development ambient hourly sound level at a protected location is equal to or less than 35 dBA, the hourly sound levels resulting from routine operation of the development and measured in accordance with the measurement procedures described in subsection H shall not exceed the following limits at that protected location:

55 dBA between 7:00 a.m. and 7:00 p.m.
 (the "daytime hourly limit"), and
 45 dBA between 7:00 p.m. and 7:00 a.m.
 (the "nighttime hourly limit").

For the purpose of determining whether a protected location has a daytime or nighttime pre-development ambient hourly sound level equal to or less than 45 dBA or 35 dBA, respectively, the developer may make sound level measurements in accordance with the procedures in subsection H or may estimate the sound-level based upon the population density and proximity to local highways. If the resident population within a circle of 3,000 feet radius around a protected location is greater than 300 persons, or the hourly sound level from highway traffic at a protected location is predicted to be greater than 45 dBA in the daytime or 35 dBA at night (as appropriate for the anticipated operating schedule of the development), then the developer may estimate the daytime or nighttime pre-development ambient hourly sound level to be greater than 45 dBA or 35 dBA, respectively.

NOTE: Highway traffic noise can be predicted using the nomograph method of FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978.

- (vi) Notwithstanding the above, the developer need not measure or estimate the pre-development ambient hourly sound levels at a protected location if he demonstrates, by estimate or example, that the hourly sound levels resulting from routine operation of the development will not exceed 50 dBA in the daytime or 40 dBA at night.
- (b) If the developer chooses to demonstrate by measurement that the daytime and/or nighttime pre-development ambient sound environment at any protected location near the development site exceeds the daytime and/or nighttime limits in subsection 1(a)(ii) or 1(a)(iii) by at least 5 dBA, then the daytime and/or nighttime limits shall be 5 dBA less than the measured daytime and/or nighttime pre-development ambient hourly sound level at the location of the measurement for the corresponding time period.
- (c) For any protected location near an existing development, the hourly sound level limit for routine operation of the existing development and all future expansions of that development shall be the applicable hourly sound level limit of 1(a) or 1(b) above, or, at

the developer's election, the existing hourly sound level from routine operation of the existing development plus 3 dBA.

- (d) For the purposes of determining compliance with the above sound level limits, 5 dBA shall be added to the observed levels of any tonal sounds that result from routine operation of the development.
- (e) When routine operation of a development produces short duration repetitive sound, the following limits shall apply:
 - (i) For short duration repetitive sounds, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the development for the purposes of determining compliance with the above sound level limits.
 - (ii) For short duration repetitive sounds resulting from scrap metal, drop forge and metal fabrication operations or developments which the Department determines, due to their character and/or duration, are particularly annoying or pose a threat to the health and welfare of nearby neighbors, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the development for the purposes of determining compliance with the above sound level limits, and the maximum sound level of the short duration repetitive sounds shall not exceed the following limits:
 - (a) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial:

65 dBA between 7:00 a.m. and 7:00 p.m., and
55 dBA between 7:00 p.m. and 7:00 a.m.
 - (b) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

75 dBA between 7:00 a.m. and 7:00 p.m., and
65 dBA between 7:00 p.m. and 7:00 a.m.
- (c) The methodology described in subsection 1(a)(iv) shall be used to determine whether the use of an unzoned area is predominantly commercial, transportation, or industrial.
- (d) If the developer chooses to demonstrate by measurement that the pre-development ambient hourly sound level at any protected location near the development site exceeds 60 dBA between 7:00 a.m. and 7:00 p.m., and/or 50 dBA between 7:00 p.m. and 7:00 a.m., then the maximum sound level limit for short duration repetitive sound shall be 5 dBA greater than the measured pre-development ambient hourly sound level at the location of the measurement for the corresponding time period.

- (e) For any protected location near an existing development, the maximum sound level limit for short duration repetitive sound resulting from routine operation of the existing development and all future expansions and modifications of that development shall be the applicable maximum sound level limit of (e)(ii)(a) or (e)(ii)(b) above, or, at the developer's election, the existing maximum sound level of the short duration repetitive sound resulting from routine operation of the existing development plus 3 dBA.

NOTE: The maximum sound level of the short duration repetitive sound shall be measured using the fast response [L_{AFmax}]. See the definition of maximum sound level.

(2) Sound From Construction of Developments

- (a) The sound from construction activities between 7:00 p.m. and 7:00 a.m. is subject to the following limits:
- (i) Sound from nighttime construction activities shall be subject to the nighttime routine operation sound level limits contained in subsections 1(a) and 1(b).
 - (ii) If construction activities are conducted concurrently with routine operation, then the combined total of construction and routine operation sound shall be subject to the nighttime routine operation sound level limits contained in subsections 1(a) and 1(b).
 - (iii) Higher levels of nighttime construction sound are permitted when a duly issued permit authorizing nighttime construction sound in excess of these limits has been granted by:
 1. the local municipality when the duration of the nighttime construction activity is less than or equal to 90 days,
 2. the local municipality and the Department when the duration of the nighttime construction activity is greater than 90 days.
- (b) Sound from construction activities between 7:00 a.m. and 7:00 p.m. shall not exceed the following limits at any protected location:

| Duration of Activity | Hourly Sound Level Limit |
|-----------------------------|---------------------------------|
| 12 hours | 87 dBA |
| 8 hours | 90 dBA |
| 6 hours | 92 dBA |
| 4 hours | 95 dBA |
| 3 hours | 97 dBA |
| 2 hours | 100 dBA |
| 1 hour or less | 105 dBA |

- (c) All equipment used in construction on development sites shall comply with applicable federal noise regulations and shall include environmental noise control devices in proper working condition, as originally provided with the equipment by its manufacturer.

(3) Sound From Maintenance Activities

- (a) Sound from routine, ongoing maintenance activities shall be considered part of the routine operation of the development and the combined total of the routine maintenance and operation sound shall be subject to the routine operation sound level limits contained in subsection 1.
- (b) Sound from occasional, major, scheduled overhaul activities shall be subject to the construction sound level limits contained in subsection 2. If overhaul activities are conducted concurrently with routine operation and/or construction activities, the combined total of the overhaul, routine operation and construction sound shall be subject to the construction sound level limits contained in subsection 2.

(4) Sound From Production Blasting

Sound exceeding the limits of subsection 1 and resulting from production blasting at a mine or quarry shall be limited as follows:

- (a) Blasting shall not occur in the period between sundown and sunrise the following day or in the period between the hours of 7:00 p.m. and 7:00 a.m., whichever is greater. In addition, no routine production blasting shall be allowed in the daytime on Sundays.
- (b) Blasting shall not occur more frequently than four times per day.
- (c) Sound from blasting shall not exceed the following limits at any protected location:

| Number of Blasts Per Day | Sound Level Limit |
|---------------------------------|--------------------------|
| 1 | 129 dBL |
| 2 | 126 dBL |
| 3 | 124 dBL |
| 4 | 123 dBL. |

Blast sound shall be measured in peak linear sound level (dBL) with a linear response down to 5 Hz.

NOTE: See Bureau of Mines Report of Investigations 8485 for information on airblast sound levels and pertinent scaled distances.

(5) Exemptions

Sound associated with the following shall be exempt from regulation by the Department:

- (a) Railroad equipment which is subject to federal noise regulations.
- (b) Aircraft operations which are subject to federal noise regulations.
- (c) Registered and inspected vehicles:

- (i) while operating on public ways, or
- (ii) which enter the development to make a delivery or pickup and which are moving, starting or stopping, but not when they are parked for over 60 minutes in the development.
- (d) Watercraft while underway.
- (e) Residential developments, except during construction of such developments.
- (f) Bells, chimes and carillons.
- (g) occasional sporting, cultural, religious or public events allowed by the local municipality where the only affected protected locations are contained within that municipality.
- (h) The unamplified human voice and other sounds of natural origin.
- (i) Firing, fishing and aquacultural activity.
- (j) Forest management, harvesting and transportation activities.
- (k) Making, maintaining and grooming snow where the only affected protected locations are contained within the general boundaries of a ski area development.
- (l) Snow removal, landscaping and street sweeping activities.
- (m) Emergency maintenance and repairs.
- (n) Warning signals and alarms.
- (o) Safety and protective devices installed in accordance with code requirements.
- (p) Test operations of emergency equipment occurring in the daytime and no more frequently than once per week.
- (q) Boiler start-up, testing and maintenance operations occurring no more frequently than once per month.
- (r) Major concrete pours that must extend after 7:00 p.m., when started before 3:00 p.m.
- (s) Sounds from a regulated development received at a protected location when the generator of the sound has been conveyed a noise easement for that location. This exemption shall only be for the specific noise, land and term covered by the easement.
- (t) A force majeure event and other causes not reasonably within the control of the owners or operators of the development.

(6) Noise Abatement Structures

Noise abatement structures of a non-permanent nature in any one location for a duration of less than one year and erected for the sole purpose of noise control shall not be considered structures as defined in 38 M.R.S.A. subsection 482(6).

D. Submissions**(1) Developments with Minor Sound Impact**

An applicant for a proposed development with minor sound impact may choose to file as part of the site location application a statement attesting to the minor nature of the anticipated sound impact of their development. An applicant proposing an expansion or modification of an existing development with minor sound impact may follow the same procedure as described above. For the purpose of this regulation, a development or an expansion or modification of an existing development with minor sound impact means a development where the developer demonstrates, by estimate or example, that the regulated sound from routine operation of the development will not exceed 5 dBA less than the applicable limits established under subsection C. It is the intent of this subsection that an applicant need not conduct sound level measurements to demonstrate that the development or an expansion or modification of an existing development will have a minor sound impact.

NOTE: Examples include subdivisions without structures, office buildings, storage buildings which will not normally be accessed at night, and golf courses.

(2) Other Developments

Technical information shall be submitted describing the applicant's plan and intent to make adequate provision for the control of sound. The applicant's plan shall contain information such as the following, when appropriate:

- (a) Maps and descriptions of the land uses, local zoning and comprehensive plans for the area potentially affected by sounds from the development.
- (b) A description of major sound sources, including tonal sound sources and sources of short duration repetitive sounds, associated with the construction, operation and maintenance of the proposed development, including their locations within the proposed development.
- (c) A description of the daytime and nighttime hourly sound levels and, for short duration repetitive sounds, the maximum sound levels expected to be produced by these sound sources at protected locations near the proposed development.
- (d) A description of the protected locations near the proposed development.
- (e) A description of proposed major sound control measures, including their locations and expected performance.

- (f) A comparison of the expected sound levels from the proposed development with the sound level limits of this regulation.
- (g) A comparison of the expected sound levels from the proposed development with any quantifiable noise standards of the municipality in which the proposed development will be located and of any municipality which may be affected by the noise.

E. Terms and Conditions

The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the developer has made adequate provision for the control of noise from the development and to reduce the impact of noise on protected locations. Such conditions may include, but are not limited to, enclosing equipment or operations, imposing limits on hours of operation, or requiring the employment of specific design technologies, site design, modes of operation, or traffic patterns.

The sound level limits prescribed in this regulation shall not preclude the Department under Chapter 375.15 from requiring a developer to demonstrate that sound levels from a development will not unreasonably disturb wildlife or adversely affect wildlife populations. In addition, the sound level limits shall not preclude the Department, as a term or condition of approval, from requiring that lower sound level limits be met to ensure that the developer has made adequate provision for the protection of wildlife.

F. Variance From Sound Level Limits

The Department recognizes that there are certain developments or activities associated with development for which noise control measures are not reasonably available. Therefore, the Department may grant a variance from any of the sound level limits contained in this rule upon (1) a showing by the applicant that he or she has made a comprehensive assessment of the available technologies for the development and that the sound level limits cannot practicably be met with any of these available technologies, and (2) a finding by the Department that the proposed development will not have an unreasonable impact on protected locations. In addition, a variance may be granted by the Department if (1) a development is deemed necessary in the interest of national defense or public safety and the applicant has shown that the sound level limits cannot practicably be met without unduly limiting the development's intended function, and (2) a finding is made by the Department that the proposed development will not have an unreasonable impact on protected locations. The Department shall consider the request for a variance as part of the review of a completed Site Location of Development Law application. In granting a variance, the Department may, as a condition of approval, impose terms and conditions to ensure that no unreasonable sound impacts will occur.

G. Definitions

Terms used herein are defined below for the purpose of this noise regulation.

- (1) **AMBIENT SOUND:** At a specified time, the all-encompassing sound associated with a given environment, being usually a composite of sounds from many sources at many directions, near and far, including the specific development of interest.

- (2) **CONSTRUCTION:** Activity and operations associated with the development or expansion of a project or its site.
- (3) **EMERGENCY:** An unforeseen combination of circumstances which calls for immediate action.
- (4) **EMERGENCY MAINTENANCE AND REPAIRS:** Work done in response to an emergency.
- (5) **ENERGY SUM OF A SERIES OF LEVELS:** Ten times the logarithm of the arithmetic sum of the antilogarithms of one-tenth of the levels. [Note: See Section H(4.2).]
- (6) **EXISTING DEVELOPMENT:** A development constructed before 1-1-70 or a development approved under the Site Law prior to the effective date of this regulation or a proposed development for which the site location application is complete for processing on or before the effective date of this regulation. Any development with a site location approval which has been remanded to the Department by a court of competent jurisdiction for further proceedings relating to noise limits or noise levels prior to the effective date of these regulations shall not be deemed an existing development and these regulations shall apply to the existing noise sources at that development.
- (7) **EXISTING HOURLY SOUND LEVEL:** The hourly sound level resulting from routine operation of an existing development prior to the first expansion that is subject to this regulation.
- (8) **EQUIVALENT SOUND LEVEL:** The level of the mean-square A-weighted sound pressure during a stated time period, or equivalently the level of the sound exposure during a stated time period divided by the duration of the period.

NOTE: For convenience, a one hour equivalent sound level should begin approximately on the hour.

- (9) **HISTORIC AREAS:** Historic sites administered by the Bureau of Parks and Recreation of the Maine Department of Conservation, with the exception of the Arnold Trail.
- (10) **HOURLY SOUND LEVEL:** The equivalent sound level for one hour measured or computed in accordance with this regulation.
- (11) **LOCALLY-DESIGNATED PASSIVE RECREATION AREA:** Any site or area designated by a municipality for passive recreation that is open and maintained for public use and which:
- (a) has fixed boundaries,
 - (b) is owned in fee simple by a municipality or is accessible by virtue of public easement,
 - (c) is identified and described in a local comprehensive plan, and

- (d) has been identified and designated at least nine months prior to the filing of the applicant's Site Location of Development application.
- (12) **MAXIMUM SOUND LEVEL:** Ten times the common logarithm of the square of the ratio of the maximum sound to the reference sound of 20 micropascals. Symbol: L_{AFmax} .
- (13) **MAXIMUM SOUND:** Largest A-weighted and fast exponential-time-weighted sound during a specified time interval. Unit: pascal (Pa).
- (14) **RESIDENCE:** A building or structure, including manufactured housing, maintained for permanent or seasonal residential occupancy providing living, cooking and sleeping facilities and having permanent indoor or outdoor sanitary facilities, excluding recreational vehicles, tents and watercraft.
- (15) **PRE-DEVELOPMENT AMBIENT:** The ambient sound at a specified location in the vicinity of a development site prior to the construction and operation of the proposed development or expansion.
- (16) **PROTECTED LOCATION:** Any location, accessible by foot, on a parcel of land containing a residence or planned residence or approved residential subdivision, house of worship, academic school, college, library, duly licensed hospital or nursing home near the development site at the time a Site Location of Development application is submitted; or any location within a State Park, Baxter State Park, National Park, Historic Area, a nature preserve owned by the Maine or National Audubon Society or the Maine Chapter of the Nature Conservancy, The Appalachian Trail, the Moosehorn National Wildlife Refuge, federally-designated wilderness area, state wilderness area designated by statute (such as the Allagash Wilderness Waterway), or locally-designated passive recreation area; or any location within consolidated public reserve lands designated by rule by the Bureau of Public Lands as a protected location.

At protected locations more than 500 feet from living and sleeping quarters within the above noted buildings or areas, the daytime hourly sound level limits shall apply regardless of the time of day.

Houses of worship, academic schools, libraries, State and National Parks without camping areas, Historic Areas, nature preserves, the Moosehorn National Wildlife Refuge, federally-designated wilderness areas without camping areas, state wilderness areas designated by statute without camping areas, and locally-designated passive recreation areas without camping areas are considered protected locations only during their regular hours of operation and the daytime hourly sound level limits shall apply regardless of the time of day.

Transient living accommodations are generally not considered protected locations; however, in certain special situations where it is determined by the Department that the health and welfare of the guests and/or the economic viability of the establishment will be unreasonably impacted, the Department may designate certain hotels, motels, campsites and duly licensed campgrounds as protected locations.

This term does not include buildings and structures located on leased camp lots, owned by the applicant, used for seasonal purposes.

For purposes of this definition, (1) a residence is considered planned when the owner of the parcel of land on which the residence is to be located has received all applicable building and land use permits and the time for beginning construction under such permits has not expired, and (2) a residential subdivision is considered approved when the developer has received all applicable land use permits for the subdivision and the time for beginning construction under such permits has not expired.

- (17) **QUANTIFIABLE NOISE STANDARD:** A numerical limit governing noise from developments that has been duly enacted by ordinance by a local municipality.
- (18) **ROUTINE OPERATION:** Regular and recurrent operation of regulated sound sources associated with the purpose of the development and operating on the development site.
- (19) **SHORT DURATION REPETITIVE SOUNDS:** A sequence of repetitive sounds which occur more than once within an hour, each clearly discernible as an event and causing an increase in the sound level of at least 6 dBA on the fast meter response above the sound level observed immediately before and after the event, each typically less than ten seconds in duration, and which are inherent to the process or operation of the development and are foreseeable.
- (20) **SOUND COMPONENT:** The measurable sound from an audibly identifiable source or group of sources.
- (21) **SOUND LEVEL:** Ten times the common logarithm of the square of the ratio of the frequency-weighted and time-exponentially averaged sound pressure to the reference sound of 20 micropascals. For the purpose of this regulation, sound level measurements are obtained using the A-weighted frequency response and fast dynamic response of the measuring system, unless otherwise noted.
- (22) **SOUND PRESSURE:** Root-mean-square of the instantaneous sound pressures in a stated frequency band and during a specified time interval. Unit: pascal (Pa).
- (23) **SOUND PRESSURE LEVEL:** Ten times the common logarithm of the square of the ratio of the sound pressure to the reference sound pressure of 20 micropascals.
- (24) **TONAL SOUND:** for the purpose of this regulation, a tonal sound exists if, at a protected location, the one-third octave band sound pressure level in the band containing the tonal sound exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies at or between 500 Hz and 10,000 Hz, by 8 dB for center frequencies at or between 160 and 400 Hz, and by 15 dB for center frequencies at or between 25 Hz and 125 Hz.

Additional acoustical terms used in work associated with this regulation shall be used in accordance with the following American National Standards Institute (ANSI) standards:

ANSI S12.9-1988 - American National Standard Quantities and Procedures for Description and Measurements of Environmental Sound, Part 1;

ANSI S3.20-1973 - American National Standard Psychoacoustical Terminology;

ANSI S1.1-1960 - American National Standard Acoustical Terminology.

H. Measurement Procedures

- (1) **Scope.** These procedures specify measurement criteria and methodology for use, with applications, compliance testing and enforcement. They provide methods for measuring the ambient sound and the sound from routine operation of the development, and define the information to be reported. The same methods shall be used for measuring the sound of construction, maintenance and production blasting activities. For measurement of the sound of production blasting activities for comparison with the limits of subsection C(4)(c), these same methods shall be used with the substitution of the linear sound level for the A-weighted sound level.

- (2) **Measurement Criteria**

- 2.1 **Measurement Personnel**

Measurements shall be supervised by personnel who are well qualified by training and experience in measurement and evaluation of environmental sound, or by personnel trained to operate under a specific measurement plan approved by the Department.

- 2.2 **Measurement Instrumentation**

- (a) A sound level meter or alternative sound level measurement system used shall meet all of the Type 1 or 2 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4-1983.
 - (b) An integrating sound level meter (or measurement system) shall also meet the Type 1 or 2 performance requirements for integrating/averaging in the International Electrotechnical Commission Standard on Integrating-Averaging Sound Level Meters, IEC Publication 804 (1985).
 - (c) A filter for determining the existence of tonal sounds shall meet all the requirements of American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11-1986 for Order 3, Type 3-D performance.
 - (d) An acoustical calibrator shall be used of a type recommended by the manufacturer of the sound level meter and that meets the requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40-1984.

- (e) A microphone windscreen shall be used of a type recommended by the manufacturer of the sound level meter.

2.3 Calibration

- (a) The sound level meter shall have been calibrated by a laboratory within 12 months of the measurement, and the microphone's response shall be traceable to the National Bureau of Standards.
- (b) Field calibrations shall be recorded before and after each measurement period and at shorter intervals if recommended by the manufacturer.

2.4 Measurement Location, Configuration and Environment

- (a) Except as noted in subsection (b) below, measurement locations shall be at nearby protected locations that are most likely affected by the sound from routine operation of the development.
- (b) For determining compliance with the 75 dBA property line hourly sound level limit described in subsection C(1)(a)(i), measurement locations shall be selected at the property lines of the proposed development or contiguous property owned by the developer, as appropriate.
- (c) The microphone shall be positioned at a height of approximately 4 to 5 feet above the ground, and oriented in accordance with the manufacturer's recommendations.
- (d) Measurement locations should be selected so that no vertical reflective surface exceeding the microphone height is located within 30 feet. When this is not possible, the measurement location may be closer than 30 feet to the reflective surface, but under no circumstances shall it be closer than 6 feet.
- (e) When possible, measurement locations should be at least 50 feet from any regulated sound source on the development.
- (f) Measurement periods shall be avoided when the local wind speed exceeds 12 mph and/or precipitation would affect the measurement results.

- 2.5 **Measurement Plans.** Plans for measurement of pre-development ambient sound or post-development sound may be discussed with the Department staff.

(3) Measurement of Ambient Sound

3.1 Pre-Development Ambient Sound

Measurements of the pre-development ambient sound are required only when the developer elects to establish the sound level limit in accordance with subsections C(1)(b) and C(1)(e)(ii)(d) for a development in an area with high ambient sound

levels, such as near highways, airports, or pre-existing developments; or when the developer elects to establish that the daytime and nighttime ambient hourly sound levels at representative protected locations exceed 45 dBA and 35 dBA, respectively.

- (a) Measurements shall be made at representative protected locations for periods of time sufficient to adequately characterize the ambient sound. At a minimum, measurements shall be made on three different weekdays (Monday through Friday) during all hours that the development will operate. If the proposed development will operate on Saturdays and/or Sundays, measurements shall also be made during all hours that the development will operate.
- (b) Measurement periods with particularly high ambient sounds, such as during holiday traffic activity, significant insect activity or high coastline waves, should generally be avoided.
- (c) At any measurement location the daytime and nighttime ambient hourly sound level shall be computed by arithmetically averaging the daytime and nighttime values of the measured one hour equivalent sound levels. Multiple values, if they exist, for any specific hour on any specific day shall first be averaged before the computation described above.

3.2 Post-Development Ambient Sound

- (a) Measurements of the post-development ambient one hour equivalent sound levels and, if short duration repetitive sounds are produced by the development, the maximum sound levels made at nearby protected locations and during representative routine operation of the development that are not greater than the applicable limits of subsection C clearly indicate compliance with those limits.
- (b) Compliance with the limits of subsection C(1)(b) may also be demonstrated by showing that the post-development ambient hourly sound level, measured in accordance with the procedures of subsection 3.1 above during routine operation of the development, does not exceed the pre-development ambient hourly sound level by more than one decibel, and that the sound from routine operation of the development is not characterized by either tonal sounds or short duration repetitive sounds.
- (c) Compliance with the limits of subsection C(1)(e)(ii)(d) may also be demonstrated by showing that the post development maximum sound level of any short duration repetitive sound, measured in accordance with the procedures of subsection 3.1 above, during routine operation of the development, does not exceed the pre-development ambient hourly sound level by more than five decibels.
- (d) If any of the conditions in (a), (b) or (c) above are not met, compliance with respect to the applicable limits must be determined by measuring the sound from routine operation of the development in accordance with the procedures described in subsection 4.

(4) Measurement of the Sound from Routine Operation of Developments.**4.1 General**

- (a) Measurements of the sound from routine operation of developments are generally necessary only for specific compliance testing purposes in the event that community complaints result from operation of the development, for validation of an applicant's calculated sound levels when requested by the Department, for determination of existing hourly sound levels for an existing development or for enforcement by the Department.
- (b) Measurements shall be obtained during representative weather conditions when the development sound is most clearly noticeable. Preferable weather conditions for sound measurements at distances greater than about 500 feet from the sound source include overcast days when the measurement location is downwind of the development and inversion periods (which most commonly occur at night).
- (c) Measurements of the development sound shall be made so as to exclude the contribution of sound from development equipment that is exempt from this regulation.

4.2 Measurement of the Sound Levels Resulting from Routine Operation of the Development

- (a) When the ambient sound levels are greater than the sound level limits, additional measurements can be used to determine the hourly sound level that results from routine operation of the development. These additional measurements may include diagnostic measurements such as measurements made close to the development and extrapolated to the protected location, special checkmark measurement techniques that include the separate identification of audible sound sources, or the use of sound level meters with pause capabilities that allow the operator to exclude non-development sounds.
- (b) For the purposes of computing the hourly sound level resulting from routine operation of the development, sample diagnostic measurements may be made to obtain the one hour equivalent sound levels for each sound component.
- (c) Identification of tonal sounds produced by the routine operation of a development for the purpose of adding the 5 dBA penalty in accordance with subsection C(1)(d) requires aural perception by the measurer, followed by use of one-third octave band spectrum analysis instrumentation. If one or more of the sounds of routine operation of the development are found to be tonal sounds, the hourly sound level component for tonal sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds.
- (d) Identification of short duration repetitive sounds produced by routine operation of a development requires careful observations. For the sound to be classified as

short duration repetitive sound, the source(s) must be inherent to the process or operation of the development and not the result of an unforeseeable occurrence. If one or more of the sounds of routine operation of the development are found to be short duration repetitive sounds, the hourly sound level component for short duration repetitive sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds. If required, the maximum sound levels of short duration repetitive sounds shall be measured using the fast response [L_{AFmax}]. The duration and the frequency of occurrence of the events shall also be measured. In some cases, the sound exposure levels of the events may be measured. The one hour equivalent sound level of a short duration repetitive sound may be determined from measurements of the maximum sound level during the events, the duration and frequency of occurrence of the events, and their sound exposure levels.

- (e) The daytime or nighttime hourly sound level resulting from routine operation of a development is the energy sum of the hourly sound level components from the development, including appropriate penalties, (see (c) and (d) above). If the energy sum does not exceed the appropriate daytime or nighttime sound level limit, then the development is in compliance with that sound level limit at that protected location.
- (5) **Reporting Sound Measurement Data.** The sound measurement data report should include the following:
- (a) The dates, days of the week and hours of the day when measurements were made.
 - (b) The wind direction and speed, temperature, humidity and sky condition.
 - (c) Identification of all measurement equipment by make, model and serial number.
 - (d) The most recent dates of laboratory calibration of sound level measuring equipment.
 - (e) The dates, times and results of all field calibrations during the measurements.
 - (f) The applicable sound level limits, together with the appropriate hourly sound levels and the measurement data from which they were computed, including data relevant to either tonal or short duration repetitive sounds.
 - (g) A sketch of the site, not necessarily to scale, orienting the development, the measurement locations, topographic features and relevant distances, and containing sufficient information for another investigator to repeat the measurements under similar conditions.
 - (h) A description of the sound from the development and the existing environment by character and location.

I. Sound Level Standards for Wind Energy Developments

(1) Applicability

This subsection applies to grid-scale wind energy developments as defined by 35-A M.R.S.A. §3451(6) and small-scale wind energy developments governed by 35-A M.R.S.A. §3456, hereinafter referred to as "wind energy developments." The provisions in Section 10(C)(1), 10(D)(2), 10(F), and 10(H) of this rule do not apply to wind energy developments.

(2) Sound Level Limits for Routine Operation of Wind Energy Developments

The sound levels resulting from routine operation of a wind energy development measured in accordance with the measurement procedures described in subsection I(8) shall not exceed the following limits:

- (a) 75 dBA at any time of day at any property line of the wind energy development or contiguous property owned or controlled by the wind energy developer, whichever is farther from the proposed wind energy development's regulated sound sources; and
- (b) 55 dBA between 7:00 a.m. and 7:00 p.m. (the "daytime limit"), and 42 dBA between 7:00 p.m. and 7:00 a.m. (the "nighttime limit") at any protected location.

(3) Tonal Sounds

For the purposes of this subsection, a tonal sound exists if, at a protected location, the 10 minute equivalent average one-third octave band sound pressure level in the band containing the tonal sound exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies at or between 500 Hz and 10,000 Hz, by 8 dB for center frequencies at or between 160 and 400 Hz, and by 15 dB for center frequencies at or between 25 Hz and 125 Hz. 5 dBA shall be added to any average 10 minute sound level ($Leq_{A 10\text{-min}}$) for which a tonal sound occurs that results from routine operation of the wind energy development.

(4) Short Duration Repetitive Sounds ("SDRS")

For the purposes of this subsection SDRS is defined as a sequence of repetitive sounds that occur within a 10-minute measurement interval, each clearly discernible as an event resulting from the development and causing an increase in the sound level of 5 dBA or greater on the fast meter response above the sound level observed immediately before and after the event, each typically ± 1 second in duration, and which are inherent to the process or operation of the development.

- (a) When routine operation of a wind energy development produces short duration repetitive sound, a 5 dBA penalty shall be arithmetically added to each average 10-minute sound level ($Leq_{A 10\text{-min}}$) measurement interval in which greater than 5 SDRS events are present.

(5) Compliance with the Sound Level Limits

A wind energy development shall determine compliance with the sound level limits as set forth in subsection I(2) of this rule in accordance with the following:

- (a) Sound level data shall be aggregated in 10-minute measurement intervals within a given compliance measurement period (daytime: 7:00 am to 7:00 pm or nighttime: 7:00 pm to 7:00 am) under the conditions set forth in subsection I(8) of this rule.
- (b) Compliance will be demonstrated when the arithmetic average of the sound level of, at a minimum, twelve, 10-minute measurement intervals in a given compliance measurement period is less than or equal to the sound level limit set forth in subsection I(2).
- (c) Alternatively, if a given compliance measurement period does not produce a minimum of twelve, 10-minute measurement intervals under the atmospheric and site conditions set forth in subsection I(8) of this rule, the wind energy development may combine six or more contiguous 10-minute measurement intervals from one 12 hour (7:00 am to 7:00 pm daytime or 7:00 pm to 7:00 am nighttime) compliance measurement period with six or more contiguous 10-minute intervals from another compliance measurement period. Compliance will be demonstrated when the arithmetic average of the combined 10-minute measurement intervals is less than or equal to the sound level limit set forth in subsection I(2).

(6) Variance from Sound Level Limits

A variance may be granted by the Department if: (1) a development is deemed necessary in the interest of national defense or public safety and the applicant has shown that the sound level limits cannot practicably be met without unduly limiting the development's intended function, and (2) a finding is made by the Department that the proposed development will not have an unreasonable impact on protected locations. The Department shall consider the request for a variance as part of the review of a completed Site Location of Development Law application or a request for certification for a small-scale wind energy development. In granting a variance, the Department may, as a condition of approval, impose terms and conditions to ensure that no unreasonable sound impacts will occur.

(7) Submissions

Technical information shall be submitted describing the wind energy developer's plan and intent to make adequate provision for the control of sound. The wind energy developer's plan shall contain the following:

- (a) A map depicting the location of all proposed sound sources associated with the wind energy development, property boundaries for the proposed wind energy development, property boundaries of all adjacent properties within one mile of the

proposed wind energy development, and the location of all protected locations located within one mile of the proposed wind energy development;

- (b) A description of the major sound sources, including tonal sound sources and sources of short duration repetitive sounds, associated with the construction, operation and maintenance of the proposed wind energy development;
- (c) A description of the equivalent noise levels expected to be produced by the sound sources at protected locations located within one mile of the proposed wind energy development. The description shall include a full-page isopleths map depicting the modeled decay rate of the predicted sound pressure levels expected to be produced by the wind energy development at each clearly identified protected location within one mile of the proposed wind energy development. The predictive model used to generate the equivalent noise levels expected to be produced by the sound sources shall be designed to represent the "predictable worst case" impact on adjacent properties and shall include, at a minimum, the following:
 - 1. The maximum rated sound power output (IEC 61400-11) of the sound sources operating during nighttime stable atmospheric conditions with high wind shear above the boundary layer and consideration of other conditions that may affect in-flow airstream turbulence;
 - 2. Attenuation due to geometric spreading, assuming that each turbine is modeled as a point source at hub height;
 - 3. Attenuation due to air absorption;
 - 4. Attenuation due to ground absorption/reflection;
 - 5. Attenuation due to three dimensional terrain;
 - 6. Attenuation due to forestation;
 - 7. Attenuation due to meteorological factors such as but not limited to relative wind speed and direction (wind rose data), temperature/vertical profiles and relative humidity, sky conditions, and atmospheric profiles;
 - 8. Inclusion of an "uncertainty factor" adjustment to the maximum rated output of the sound sources based on the manufacturer's recommendation; and
 - 9. Inclusion, at the discretion of the Department, of an addition to the maximum rated output of the sound sources to account for uncertainties in the modeling of sound propagation for wind energy developments. This discretionary uncertainty factor of up to 3 dBA may be required by the Department based on the following conditions: inland or coastal location, the extent and specificity of credible evidence of meteorological operating conditions, and the extent of evaluation and/or prior specific experience for the proposed wind turbines. Subject to the Department's discretion based on the information available, there is a rebuttable

presumption of an uncertainty factor of 2 to 3 dBA for coastal developments and of 0 to 2 dBA for inland developments.

- (d) A description of the protected locations near the proposed wind energy development.
- (e) A description of proposed major sound control measures, including their locations and expected performance.
- (f) A comparison of the expected sound levels from the proposed development with the sound level limits of this regulation.
- (g) A comparison of the expected sound levels from the proposed development with any quantifiable noise standards of the municipality in which the proposed development will be located and of any municipality which may be affected by the noise.
- (h) A description and map identifying one or more compliance testing locations on or near the proposed wind energy development site. The identified compliance testing locations shall be selected to take advantage of prevailing downwind conditions and be able to meet the site selection criteria outlined in subsection I(8)(d)(2).
- (i) A description of the compliance measurement protocol as required by subsection 8 below.
- (j) A description of the complaint response protocol proposed for the wind energy development. The complaint response protocol shall adequately provide for, at a minimum:
 - 1. A 24-hour contact for complaints;
 - 2. A complaint log accessible by the Department;
 - 3. For those complaints that include sufficient information to warrant an investigation, the protocol must provide for an analysis as set forth in (a) through (c) below. Sufficient information includes, at a minimum: the name and address of the complainant; the date, time and duration of the sound event; a description of the sound event, indoor or outdoor, specific location and a description of any audible sounds from other sources outside or inside the dwelling of the complainant. Analysis of the complaint by the licensee must include:
 - (a) documentation of the location of the nearest turbines to the complaint location and ground conditions in the area of the complaint location;
 - (b) weather conditions at the time of the complaint and surface and hub height wind speed and direction;

- (c) power output and direction of nearest turbines; and
 - (d) notification of complaint findings to the Department and the complainant;
4. A plotting of complaint locations and key information on a project area map to evaluate complaints for a consistent pattern of site, operating and weather conditions; and
 5. A comparison of these patterns to the compliance protocol to determine whether testing under additional site and operating conditions is necessary and, if so, a testing plan that addresses the locations and the conditions under which a pattern of complaints had occurred.

(8) Measurement Procedures

These procedures specify measurement criteria and methodology for use with wind energy development applications, compliance and complaint response. They provide methods for measuring the sound from operation of the wind energy development and set forth the information to be reported.

(a) Measurement Criteria

1. Measurement Personnel

Measurements shall be supervised by personnel who are well qualified by training and experience in measurement and evaluation of environmental sound, or by personnel trained to operate under a specific measurement plan approved by the Department.

(b) Measurement Instrumentation

1. A sound level meter or alternative sound level measurement system used shall meet all of the Type 0 or 1 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4.
2. An integrating sound level meter (or measurement system) shall also meet the Type 0 or 1 performance requirements for integrating/averaging in the International Electrotechnical Commission Standard on Integrating-Averaging Sound Level Meters, IEC Publication 61672-1 and ANSI 1.43.
3. A filter for determining the existence of tonal sounds shall meet all the requirements of the American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11 and IEC 61260, Type 3-D performance.

4. The acoustical calibrator used shall be of a type recommended by the manufacturer of the sound level meter and one that meets the requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40.
5. The microphone windscreen used shall be of a type recommended by the manufacturer of the sound level meter.
6. Anemometer(s) used for surface (10 meter (m)) (32.8 feet) wind speeds shall have a minimum manufacturer specified accuracy of ± 1 mph providing data in one second integrations and 10 min. average/maximum values for the evaluation of atmospheric stability.
7. Audio recording devices shall be time stamped (hh:mm:ss) and at a minimum 16 bit digital, recording the sound signal output from the measurement microphone at a minimum sampling rate of 24 thousand (k) samples per second to be used for identifying events. Audio recording and compliance data collection shall occur through the same microphone/sound meter and bear the same time stamp.

(c) Equipment Calibration

1. The sound level meter shall have been calibrated by a laboratory within 12 months of the measurement, and the microphone's response shall be traceable to the National Institute of Standards and Technology.
3. Field calibrations shall be recorded before and after each measurement period and at shorter intervals if recommended by the manufacturer.
4. Anemometer(s) and vane(s) shall be calibrated annually by the manufacturer to maintain stated specification.

(d) Compliance Measurement Location, Configuration, and Environment

1. Compliance measurement locations shall be at nearby protected locations that are most likely affected by the sound from routine operation of the wind energy development subject to permission from the respective property owner(s).
2. To the greatest extent possible, compliance measurement locations shall be at the center of unobstructed areas that are maintained free of vegetation and other structures or material that is greater than 2 feet in height for a 75-foot radius around the sound and audio monitoring equipment.
3. To the greatest extent possible, meteorological measurement locations shall be at the center of open flat terrain, inclusive of grass and a few isolated obstacles less than 6 feet in height for a 250-foot radius around the anemometer location. The meteorological data measurement location need not be coincident with the sound and audio measurement location provided there is no greater than a 5 mile separation between the data collection points

and the measurement locations have similar characterization, i.e. same side of the mountain ridge, etc.

4. Meteorological measurements of wind speed and direction shall be collected using anemometers at a 10-meter height (32.8 feet) above the ground. Results shall be reported, based on 1-second integration intervals, and shall be reported synchronously with hub level and sound level measurements at 10-minute measurement intervals. The wind speed average and maximum shall be reported.
5. The sound microphone shall be positioned at a height of approximately 4 to 5 feet above the ground, and oriented in accordance with the manufacturer's recommendations.
6. When possible, measurement locations should be at least 50 feet from any sound source other than the wind energy development's power generating sources.

(e) Compliance Data Collection, Measurement and Retention Procedures

1. Measurements of operational, sound, audio and meteorological data shall occur as set forth in subsection I(8)(e)(7 through 10).
2. All operational, sound and meteorological data collected shall be retained by the wind energy development for a period of 1 year from the date of collection and is subject to inspection by the Department and submission to the Department upon request.
3. All audio data collected shall be retained by the wind energy development for a period of four weeks from the date of collection unless subject to a complaint filed in accordance with the complaint protocol approved by the Department and is subject to inspection by the Department and submission to the Department upon request. Specific audio data collected that coincides with a complaint filed in accordance with the approved complaint protocol shall be retained by the wind energy developer for a period of 1 year from the date of collection and is subject to inspection by the Department and submission to the Department upon request.
4. Written notification of the intent to collect compliance data must be received by the Department prior to the collection of any sound level data for compliance purposes. The notification shall state the date and time of the compliance measurement period.

Note: Notice received via electronic mail is sufficient regardless of whether it is received during business hours.

5. Compliance data from the operation of a wind energy development shall be submitted to the Department, at a minimum:

- (a) Once during the first year of facility operation;
 - (b) Once during each successive fifth year thereafter until the facility is decommissioned;
 - (c) In response to a complaint regarding operation of the wind energy development as set forth in subsection I(7)(j) of the rule and any subsequent enforcement by the Department; and
 - (d) For validation of an applicant's calculated sound levels when requested by the Department.
6. All sound level, audio and meteorological data collected during a compliance measurement period for which the Department has been notified that meets or exceeds the specified wind speed parameters shall be submitted to the Department for review and approval. All data submittals shall be submitted to the Department within 30 days of notification of intent to collect compliance data.
7. Measurement shall be obtained during weather conditions when the wind turbine sound is most clearly noticeable, generally when the measurement location is downwind of the wind energy development and maximum surface wind speeds < 6 miles per hour (mph) with concurrent turbine hub-elevation wind speeds sufficient to generate the maximum continuous rated sound power from the nearest wind turbines to the measurement location. A downwind location is defined as within 45° of the direction between a specific measurement location and the acoustic center of the five nearest wind turbines.

[Note: These conditions typically occur during inversion periods usually between 11 pm and 5 am.]

8. In some circumstances, it may not be feasible to meet the wind speed and operations criteria due to terrain features or limited elevation change between the wind turbines and monitoring locations. In these cases, measurement periods are acceptable if the following conditions are met:
- (a) The difference between the L_{A90} and L_{A10} during any 10-minute period is less than 5 dBA; and
 - (b) The surface wind speed (10 meter height) (32.8 feet) is 6 mph or less for 80% of the measurement period and does not exceed 10 mph at any time, or the turbines are shut down during the monitoring period and the difference in the observed L_{A50} after shut down is equal to or greater than 6 dBA; and
 - (c) Observer logs or recorded sound files clearly indicate the dominance of wind turbine(s).

9. Measurement intervals affected by increased biological activities, leaf rustling, traffic, high water flow, aircraft flyovers or other extraneous ambient noise sources that affect the ability to demonstrate compliance shall be excluded from all compliance report data. The intent is to obtain 10-minute measurement intervals that entirely meet the specific criteria.
10. Measurements of the wind energy development sound shall be made so as to exclude the contribution of sound from other development equipment that is exempt from this regulation.

(f) Reporting of Compliance Measurement Data

Compliance Reports shall be submitted to the Department within 30 days of notification of intent to collect compliance data or upon request by the Department and shall include, at a minimum, the following:

1. A narrative description of the sound from the wind energy development for the compliance measurement period result;
2. The dates, days of the week and hours of the day when measurements were made;
3. The wind direction and speed, temperature, humidity and sky condition;
4. Identification of all measurement equipment by make, model and serial number;
5. All meteorological, sound, windscreen and audio instrumentation specifications and calibrations;
6. All A-weighted equivalent sound levels for each 10-minute measurement interval;
7. All L_{A10} and L_{A90} percentile levels;
8. All 10 minute 1/3 octave band linear equivalent sound levels (dB);
9. All short duration repetitive events characterized by event amplitude. Amplitude is defined as the peak event amplitude minus the average minima sound level immediately before and after the event, as measured at an interval of 50 milliseconds (“ms”) or less, A-weighted and fast time response, i.e. 125 ms. For each 10-minute measurement interval short duration repetitive sound events shall be reported by number for each observed amplitude integer above 5 dBA.
10. Audio recording devices shall be time stamped (hh:mm:ss) and at a minimum 16 bit digital, recording the sound signal output from the

measurement microphone at a minimum sampling rate of 24 thousand (k) samples per second to be used for identifying events. Audio recording and compliance data collection shall occur through the same microphone/sound meter and bear the same time stamp. Should any sound data collection be observed by a trained attendant, the attendant's notes and observations may be substituted for the audio files during the compliance measurement period;

11. All concurrent time stamped turbine operational data including the date, time and duration of any noise reduction operation or other interruptions in operations if present; and
12. All other information determined necessary by the Department.

11. Preservation of Historic Sites

- A. **Preamble.** The Department recognizes the value to society of preserving sites of historic significance.
- B. **Definition.** As used in this section, "historic site" means any site, structure, district or archaeological site which has been officially included on the National Register of Historic Places and/or on the Maine Historic Resource Inventory, or which is established by qualified testimony as being of historic significance.
- C. **Scope of Review.** In determining whether a proposed development will have an adverse effect on the preservation of historic sites either on or near the development site, the Department shall consider all relevant evidence to that effect.
- D. **Terms and Conditions.** The Department, may as a term or condition of approval, establish any reasonable requirement to ensure that a proposed development will not adversely affect preservation of any historic site.

12. Preservation of Unusual Natural Areas

- A. **Preamble.** The Department recognizes the importance of preserving unusual natural areas for educational and scientific purposes.
- B. **Definition.** As used in this section, "unusual natural area" means any land or water area, usually only a few acres in size, which is undeveloped and which contains natural features of unusual geological, botanical, zoological, ecological, hydrological, other scientific, educational, scenic, or recreational significance. By way of illustration, and not limitation, such are, as may include: rare or exemplary plant communities; individual plant species of unusual interest because of size, species or other reasons; unusual or exemplary bogs; unusually important wildlife habitats, particularly those of rare or endangered species; unusual land forms; fossils and other deposits of importance to geologists; outstanding scenic areas; and others of similar character.
- C. **Scope of Review.** In determining whether a proposed development will have an adverse effect on the preservation of unusual natural areas either on or near the development site, the Department shall consider all relevant evidence to that effect.

- D. Terms and Conditions.** The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that a proposed development will not adversely affect the preservation of natural areas.

13. Access to Direct Sunlight

- A. Preamble.** The Department recognizes that some existing structures utilize active or passive solar energy systems for purposes such as heating air or water, and that, in these instances, it may be an unreasonable effect on existing uses to deny access to direct sunlight.
- B. Scope of Review.** In determining whether a proposed development will have an adverse effect on access to direct sunlight, the Department shall consider all relevant evidence to that effect, such as evidence that:
- (1) Structures within the proposed development will not block access to direct sunlight to structures utilizing solar energy through active or passive systems.
- C. Terms and Conditions.** The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that a proposed development will not block access to direct sunlight.

14. No Unreasonable Effect on Scenic Character

- A. Preamble.** The Department considers scenic character to be one of Maine's most important assets. The Department also feels that visual surroundings strongly influence people's behavior.
- B. Scope of Review.** In determining whether the proposed development will have an unreasonable adverse effect on the scenic character of the surrounding area, the Department shall consider all relevant evidence to that effect, such as evidence that:
- (1) The design of the proposed development takes into account the scenic character of the surrounding area.
 - (2) A development which is not in keeping with the surrounding scenic character will be located, designed and landscaped to minimize its visual impact to the fullest extent possible.
 - (3) Structures will be designed and landscaped to minimize their visual impact on the surrounding area.

NOTE: The following are GUIDELINES for the landscaping of parking lots, which are structures pursuant to 38 M.R.S.A. Section 482(6) (B).

- (a) Lighting will be shielded from adjacent highways and residential areas.
- (b) Curbed planting strips will be utilized in parking areas of 2 acres or more. Planting strips will be a minimum of ten (10) feet wide and spaced between every second double bay parking aisle or 200 feet, whichever is less.

- (c) When the parking lots are adjacent to a residential use, landscaping and/or architectural screens will be utilized to provide an effective perimeter separation area between property lines and the edge of the pavement and/or structures. There will be a minimum setback of fifteen (15) feet from the property line. The Department may require a similar provision when the parking lot is adjacent to other land uses.
 - (d) Planting and maintenance program specifications will be developed to provide the earliest establishment of landscape materials and their maintenance.
 - (e) **Planting specifications**
 - (i) Shrubs will be planted with a 24" minimum size for those specified by spread.
 - (ii) Shrubs will be planted with a 36" minimum size for those specified by height.
 - (iii) Shade trees will be highcrowned species with ascending or lateral branching habit indigenous to the area, tolerant to existing soils and urbanized conditions, two-inch minimum caliper measured six inches up from the base, and planted a maximum of 30' on center.
 - (iv) Flowering and evergreen trees will be a minimum of 7' tall and planted a maximum of 20' on center.
 - (v) Selections for ground cover will reflect the project's function, expected foot traffic, exposure, and maintenance program.
 - (f) Provisions will be made to supply water to planted islands and other vegetated areas.
- (4) The plans for the proposed development provide for the preservation of existing elements of the development site which contribute to the maintenance of scenic character.
- C. Submissions.** Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on the scenic character of the surrounding area, including information such as the following, when appropriate:
- (1) Sketches of the proposed development indicating how the development fits into the scenic character of the area.
 - (2) Landscaping plans for minimizing the visual impact of the parking lots, mining operations and other types of developments.
- D. Terms and Conditions.** The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will have no unreasonable adverse effect on scenic character, such as requiring that:
- (1) Illumination of the development be limited.

- (2) Vegetative or architectural screens be established.

15. Protection of Wildlife and Fisheries

A. Preamble. The Department recognizes the need to protect wildlife and fisheries by maintaining suitable and sufficient habitat and the susceptibility of certain species to disruption and interference of lifecycles by construction activities.

B. Scope of Review. In determining whether the developer has made adequate provision for the protection of wildlife and fisheries, the Department shall consider all relevant evidence to that effect, such as evidence that:

- (1) A buffer strip of sufficient area will be established to provide wildlife with travel lanes between areas of available habitat.
- (2) Proposed alterations and activities will not adversely affect wildlife and fisheries lifecycles.
- (3) There will be no unreasonable disturbance to:
 - (a) High and moderate value deer wintering areas.
 - (b) Habitat of any species declared threatened or endangered by the Commissioner, Maine Department of Inland Fisheries and Wildlife or the Director of the U.S. Fish and Wildlife Service.
 - (c) Seabird nesting islands;
 - (d) Significant vernal pools;
 - (e) High and moderate value waterfowl and wading bird habitat; and
 - (f) Shorebird nesting, feeding, and staging areas.

C. Submissions. Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that the developer has made adequate provision for the protection of wildlife and fisheries, including information such as the following, when appropriate:

- (1) The location of natural buffer strips and adequate provision for their maintenance.
- (2) Plans to mitigate adverse effects on wildlife and fisheries through means that at a minimum include, but are not limited to, design considerations, pollution-abatement practices, the timing of construction activities, and on-site or off-site habitat improvements or preservation.

D. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that a developer has made adequate provision for the protection of wildlife and fisheries.

16. Adequate Provision for Solid Waste Disposal

A. Standard. The applicant shall make adequate provision for solid waste disposal. All solid waste will be disposed of in a manner which ensures that:

- (1) No unreasonable adverse effects on the natural environment will result;
- (2) Public health, safety, and welfare will not be adversely affected; and
- (3) The wastes will not combine with other wastes, water, or other natural or man-made substances to create additional harmful effects to the natural environment or the public health, safety, and welfare.

B. Submissions. The application for approval of a proposed development must include evidence that affirmatively demonstrates the applicant has made adequate provision for solid waste disposal, including, but not limited to, the following information:

- (1) The types and estimated quantities of solid waste to be generated by the development and the proposed method of disposal. Types of solid waste may include, but are not limited to, stumps/grubbings, construction debris, demolition debris, household solid waste, industrial solid wastes, special wastes and hazardous wastes.
- (2) A letter from the operator of a solid waste management facility or a municipality stating that adequate capacity exists for solid waste generated by the development and that the development may utilize the solid waste management facility. The applicant must identify the method of collection (e.g. private, municipal or commercial) and the location of the solid waste management facility for each waste listed. If waste from the site is taken to a transfer station, the application must identify the facility or facilities at which the waste is would ultimately be managed.
- (3) If any stumps, grubbings, or other wood waste or land clearing debris is are to be disposed of on-site, the applicant must comply with 38 M.R.S. §1301 *et seq.* and all applicable sections of the Department's Solid Waste Management Rules. There are provisions within the Solid Waste Management Rules to exempt the processing of certain land clearing debris as described in 06-096 CMR 409(1)(B)(3). The applicant must delineate the disposal area on the site plan. For subdivisions, if waste is proposed for on-site burial on a particular lot, that lot must be conveyed with a deed restriction identifying the disposal area.
- (4) If wood wastes are to be burned on-site, the burn area must be shown on the site plan and exclusion plans provided for materials prohibited from being burned (including chemically treated wood, plastics, vinyl, asphalt shingles, etc). On-site burning cannot create a nuisance condition, and evidence of all applicable fire permits must be submitted. Provide plans for handling both unburned wood waste and woodash, including the name of the licensed or exempt solid waste facility that will accept or receive or manage the ash and unburned materials and the name of the licensed or exempt transporter who will transport the materials to the proposed solid waste facility. If applicable, include evidence of capacity to accept the waste from an approved solid waste facility or a plan outlining the usage of these materials in landscaping and reclamation of the site. Include information on ash/topsoil mixing ratios and

application rates. Any proposed open burning must comply with the *Rules for Open Burning*, 06-096 CMR 102.

- (5) When the proposed development is or includes the establishment of a solid waste disposal facility, the applicant shall supply evidence of compliance with the *Solid Waste Management Act* (38 M.R.S. Section 1301 *et seq.*).

C. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the applicant has made adequate provision for solid waste disposal, such as the following:

- (1) a groundwater quality monitoring program;
- (2) on-site construction supervision or engineering inspection by a certified engineer or geologist; and/or
- (3) operational inspections and reports by an independent consultant.

17. Adequate Provisions for the Control of Odors

A. Standard. The applicant shall make adequate provision for controlling odors.

B. Submissions. The application for approval of any development likely to be the source of offensive odors shall include evidence that affirmatively demonstrates that the applicant has made adequate provision for the control of odors, including, but not limited to, the following information:

- (1) the identification of any sources of odors from the development;
- (2) an estimation of the area which would be affected by the odor, based on experience in dealing with the material or process used in the development, or similar materials or processes; or
- (3) proposed systems for enclosure of odor-producing materials and processes, and proposed uses of technology to control, reduce or eliminate odors.

C. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure that the applicant has made adequate provision for the control of odors.

18. Adequate Provision for Securing and Maintaining Sufficient and Healthful Water Supplies

A. Standard. The applicant shall make adequate provision for securing and maintaining a sufficient and healthful water supply for the proposed development.

B. Submissions. The application for approval of a proposed developments shall include evidence that affirmatively demonstrates that the applicant has made adequate provision for securing and maintaining a sufficient and healthful water supply, including, but not limited to, the following information:

- (1) A letter from the appropriate utility or water district that a sufficient- and healthful water supply exists and may be utilized by the development.
- (2) If water is to be supplied on-site, a letter from a geologist or well driller knowledgeable about the area where the development is proposed to be located that a sufficient and healthful water supply is likely to be available.
 - (a) If there is reasonable doubt that a sufficient and healthful water supply can be provided by means of on-site wells, the following may be required:
 - (i) water from wells located in close proximity to the development site be tested for potability; and/or
 - (ii) a test well be dug or drilled on the development site and a report prepared indicating the volume and potability of water obtained from the well.
- (3) If water supply and sewage disposal are to be handled on-site, and if lots are less than 2 acres in size, identification of the location of wells and on-site sewage disposal systems for each lot. The separation distance between wells and on-site sewage disposal areas shall be at least the minimum distance established in the *Subsurface Wastewater Disposal Rules*, 10-144 CMR 241.
- (4) If water is to be provided by a common source:
 - (a) evidence that there will be sufficient water to serve the development;
 - (b) evidence that the common water supply system will be constructed in conformance with the *Maine Drinking Water Regulations*, authorized by 22 M.R.S. Chapter 601; and
 - (b) evidence that adequate provision has been made for the establishment of a mechanism to ensure proper operation and maintenance of the water supply system.
- (5) Indicate the total anticipated water usage (daily or annual) by the proposed development, including the amount of non-potable water to be used for dust control during construction.

C. Terms and Conditions. The Department may, as a term or condition of approval, establish any reasonable requirement to ensure the adequate provision of a sufficient and healthful water supply, such as requirements that:

- (1) One or more central wells be installed with adequate water for the development.
- (2) An applicant arrange for adequate water service with a local utility or water district, or provide an adequate off-site common well, in cases where the Department determines that on-site water supplies may not be adequate.
- (3) The location of wells and on-site sewage disposal areas be established by deed conditions.

STATUTORY AUTHORITY: 38 M.R.S.A. Section 343

EFFECTIVE DATE:

November 1, 1979, filing 79-507

AMENDED:

November 21, 1989 – Section 10, filing 89-500

June 12, 1991 - Section 9, filing 91-211

EFFECTIVE DATE (ELECTRONIC CONVERSION):

May 4, 1996

AMENDED:

September 22, 2001 - Section 9, filing 2001-402

January 18, 2006 - Section 15, filing 2006-12

June 10, 2012 – Section 10, filing 2012-147 (Final adoption, major substantive)

June 2, 2016 – filing 2016-077 (Final adoption, major substantive)

Chapter 376: SOIL TYPES STANDARD OF THE SITE LOCATION LAW

SUMMARY: These regulations describe the scope of review of the Board in determining a developer's compliance with the "soil types" standard of the Site Location Law (38 M.R.S.A. §484(4)); the information which shall be submitted, when appropriate, within an application for approval; and, the terms and conditions which the Board may impose on the approval of an application to ensure compliance with the standard.

1. Soil Types Suitable For the Development

A. Scope of Review. In determining whether the proposed development will be located on soils suitable for the nature of the development, the Board shall consider all relevant evidence to that effect, such as evidence that:

- (1) All major limitations to the proposed development presented by soil characteristics will be overcome by proper engineering techniques.
- (2) The developer will comply with the "Maine Guidelines For Septic Tank Sludge Disposal On Land", the "Maine Guidelines For Manure and Manure Sludge Disposal On Land", and all other appropriate regulations and guidelines.
- (3) When a single family, residential development is proposed to be served by individual, on-lot subsurface sewage disposal systems and individual, on-lot wells, the lots will be at least the minimum area established in Table A according to the soil characteristics of each lot as determined by a licensed site evaluator.
 - (a) Lots smaller than the minimum area specified in Table A may be allowed if a developer can present evidence that, because of unique characteristics of the site, or because of an innovative and acceptable method of on-lot sewage disposal, the minimum lot size requirement should not apply.

NOTE: The Board recognizes the advantage of clustered development and encourages the use of this approach to development design. The establishment of minimum lot sizes in subsection 3 is not intended to discourage the use of a clustered approach to development.

B. Submissions. Applications for approval of proposed developments shall include evidence that affirmatively demonstrates that the development will be built on suitable soils, including information such as the following, when appropriate:

- (1) A map indicating soil types or general characteristics of the soils. Soil boundaries are to be observed throughout their length and air photos may be used to aid boundary delineations. The maximum size of any included dissimilar soils will be one-half acre. The soils are to be mapped at the same scale as the map showing the layout of the proposed development. The soils map should include such features as: lot lines; location of structures, roads, and other improvements; the location of natural buffer strips, easements, and dedicated open space; natural features; and, the location of test pits and/or borings.

- (a) A soils map of less detail may be acceptable if it is determined by the Staff that the level of detail required in subsection C(1), above, is not necessary to ensure a proper evaluation of the development proposal to ensure compliance with this standard.
- (2) When on-site sewage disposal is to be utilized, an organized compilation of all test pit and/or boring investigations, including but not limited to the following information: soil series or soil profile and condition; depth of pit or boring; depth to seasonal high water; depth to bedrock and/or other impervious strata; and, soil texture as related to soil profile.
- (3) A report identifying all major limitations to the proposed development presented by soil characteristics of the site and the techniques which will be used to overcome the limitations. The report will be prepared by a duly qualified person.
- C. Terms and Conditions.** The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that the development will be built on soil types which are suitable for the nature of the undertaking, such as requiring:
- (1) The combination of lots when the lots, as proposed, are not suitable for the nature of the development proposed.
- (2) The use of specific on-site, sewage disposal techniques in order to overcome soils limitations.
- (3) The establishment of a common sewage disposal system when on-lot disposal is determined to be undesirable.

After public notice and public hearings held on June 14 and 15, 1979, the above regulations are hereby adopted this 8th day of August, 1979.

AUTHORITY: 38 M.R.S.A. §343

EFFECTIVE DATE: November 1, 1979

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

BASIS STATEMENT

These regulations are intended to explain and clarify the meaning of the Soil Types Standard of the Site Location Law (38 M.R.S.A. §484(4)) and to set out the duties, power, responsibilities, and limitations of the Board and of applicants for approval of proposed developments under that standard.

Table A

| SOIL PROFILES | Soil Conditions | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| | A. Bedrock encountered at depths of 0 to 100 cm (38") | B. Free of drainage mottling to depth of 100 cm (38") or greater | C. Generally bright colors in the top 60 cm. (24" of the soil with drainage mottling at depths 38-100 cm. (15"-39") |
| | sq. ft | sq. ft. | sq. ft. |
| <p>PROFILE 1 SILTY GLACIAL TILL SOILS Silt loam soilssq. ft.sq. ft.sq. ft. to a depth of 100 cm (39") or more, or until bedrock. These soils tend to become more compact with depth. Stones may be present throughout the profile. May or may not have an impervious layer. Generally finer textured (silty) tills.</p> | 40,000 | 25,000 | 33,000 |
| <p>PROFILE 2: LOAMY GLACIAL TILL SOILS Loam to sandy loam soils to a depth of 100 cm (39") or more, or until bedrock. Stones may be present throughout the profile.</p> <p>Glacial till</p> | 30,000 | 21,000 | 29,000 |
| <p>PROFILE 3: LOAMY GLACIAL TILL SOILS WITH PAN - Loam to sandy loam soils to a depth of 100 cm (39") or more, or until bedrock. These soils become firm to very firm at depths of 30-75 cm. (12" - 30") Stones may be present through the profile. This till is a firm basal or lodgement till.</p> | 30,000 | 29,000 | 29,000 |
| <p>PROFILE 4: SANDY GLACIAL TILL SOILS Sandy loam to loamy sand soils to a depth of 100 cm (39") or more, or until bedrock. Stones may be present throughout the profile. This till is a coarse textured ablation till.</p> | 26,000 | 20,000 | 25,000 |

PROFILE 5: LOAMY OUTWASH SOILS

Loam to sandy loam soils underlain by stratified sands and gravels at depths less than 100 cm. (39"). Stones or cobbles may be present in the lower portion of the profile. Proglacial and ice-contact stratified drift - medium to fine sands.

| | | |
|--------|--------|--------|
| 80,000 | 40,000 | 80,000 |
|--------|--------|--------|

PROFILE 6: SANDY OUTWASH SOILS

Loamy sands and gravelly sandy soils underlain by stratified sands and gravels at depths less than 100 cm. (39") Stones or cobbles may be present throughout the profile. Proglacial and ice-contact stratified drift - coarse sand and gravels.

| | | |
|--------|--------|--------|
| 80,000 | 40,000 | 80,000 |
|--------|--------|--------|

PROFILE 7: SANDY MIXED ORIGIN SOILS

Sandy loam to loamy sand soils underlain by very firm silts to silty clays at depths less than 100 cm. (39") Stones are usually absent in the profile. Stratified drift over marine and lacustrine sediments.

| | | |
|--------|--------|--------|
| 30,000 | 29,000 | 29,000 |
|--------|--------|--------|

PROFILE 8: SANDY MIXED ORIGIN SOILS

Silt loam to fine sandy soils underlain by dense or firm stratified silts and lenses of very fine sands at depths less than 100 cm. (39") Stones are usually absent in the profile. Stratified deposits, primarily marine or lacustrine.

| | | |
|--------|--------|--------|
| 34,000 | 33,000 | 33,000 |
|--------|--------|--------|

PROFILE 9: SILTY MARINE SOILS

Silt loam soils underlain by very firm silt loams to clays at depths less than 100 cm. (39"). Stones are usually absent in the profile. Marine or lacustrine deposits.

| | | |
|--------|--------|--------|
| 39,000 | 38,000 | 38,000 |
|--------|--------|--------|

Chapter 377:**REVIEW OF ROADS UNDER THE SITE LOCATION OF DEVELOPMENT LAW**

SUMMARY: These regulations describe the Board's jurisdiction in reviewing roads under the Site Location of Development Law (38 M.R.S.A. §§ 481 et seq.); define and clarify terms used in the Site Location of Development Law and Regulations; describe the procedure to be used in reviewing proposed roads; establish standards which must be met in order to qualify for exemption from the law; and, describe the terms and conditions which the Board may impose on the approval of an application in order to ensure compliance with the law.

1. Board Jurisdiction

- A.** The Board of Environmental Protection shall exercise its jurisdiction in reviewing proposed roads which "are to be stripped or graded and not to be revegetated which causes a total project, including any buildings to occupy a ground area in excess of 3 acres", as defined in 38 M.R.S.A. § 482(6)(B).

NOTE: The following table may be used as a guide in determining whether a proposed road exceeds the three acre threshold.

| width of road, not including the portion of the right-of-way to be revegetated | length of road beyond which the 3 acre threshold is exceeded |
|--------------------------------------------------------------------------------|--------------------------------------------------------------|
| 12 feet | 2.06 miles |
| 14 feet | 1.77 miles |
| 16 feet | 1.55 miles |
| 18 feet | 1.38 miles |
| 20 feet | 1.24 miles |
| 22 feet | 1.13 miles |
| 24 feet | 1.03 miles |
| 26 feet | .95 miles |
| 28 feet | .88 miles |
| 30 feet | .83 miles |
| 32 feet | .77 miles |
| 34 feet | .73 miles |
| 36 feet | .69 miles |
| 38 feet | .65 miles |
| 40 feet | .62 miles |

- (1) Pursuant to 38 M.R.S.A. § 488, developments which consist only of a municipal or private road or way are exempt from the Board's jurisdiction under the Site Location Law provided they are located, constructed, and maintained in accordance with the following provisions:

- (a) The Maine Land Use Regulation Commission's (LURC) rules and regulations when a road is to be located in a development or protection district, as established by LURC.
- (b) LURC's "Erosion Control on Logging Jobs" guidelines when roads are to be located in LURC's management districts; and
- (c) The Board's road standards found in Sections 4 and 5 of these regulations when roads are to be located outside of LURC's jurisdiction.

2. Definitions. The following terms, as used in the Site Location Law (38 M.R.S.A. § 481 et seq.) and in these regulations (Chapter 377), shall have the following meanings, unless the context otherwise indicates:

A. Private way. "Private way" means a road, as used in 38 M.R.S.A. § 482 (6)(B) and as defined in Department of Environmental Protection Regulations, Chapter 371 (1)(O), that has a primary purpose other than providing access to the general public and which is not intended or likely to be maintained through the use of public funds. Private ways include, but are not limited to, land management roads, private roads, and private driveways.

- (1) Roads that are constructed and maintained through the use of public funds by public agencies for administrative purposes, and are not intended to be used by the general public shall be considered private ways.

B. Public way. "Public way" means a road, as used in 38 M.R.S.A. § 482(6)(B) and as defined in Department of Environmental Protection Regulations, Chapter 371(1)(O), which is intended to be used by the general public and which is intended or likely to be maintained through the use of public funds. Public ways include but are not limited to, public roads which are not specifically exempt under 38 M.R.S.A. § 482(2) and roads which are part of a subdivision or other form of development, even if the overall development, exclusive of roads, is not subject to review under the Site Location Law.

 NOTE: "Road", as defined in Department Regulations, Chapter 371(1)(O), means: "a way or course which is:

- 1. Constructed or formed by substantial recontouring of the land;
 - 2. Designed to permit passage of most wheeled vehicles;
 - 3. Not intended to be abandoned and revegetated within a short period of time; and
 - 4. Designed to be permanent or intended to be used for a significant period of time."
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C. Road

- (1) In calculating whether the three acre threshold of the law has been exceeded:

- (a) The area of continuous road to be constructed after the effective date of these regulations, exclusive of banks, ditches and portions of the right-of-way which are to be revegetated within two growing seasons from the time construction commences.
 - (b) The area of roads constructed prior to the effective date of these regulations shall not be included, unless otherwise specified.
 - (c) The reconstruction of an existing road, including widening and straightening, to be undertaken after the effective date of these regulations shall be included.
 - (d) Normal maintenance of an existing road, including gravel resurfacing, grading, re-ditching, reshaping, culvert maintenance and replacement, and the clearing of brush, shall not be included.
- (2) Once a continuous stretch of road has exceeded the three acre threshold, all additions to that road are subject to review under the law.
- D. Substantial recontouring of land.** "Substantial recontouring of land", as used in Department Regulations, Chapter 371(1)(O)(1), means the removal of vegetation and the movement of soil such that the natural configuration of the land is altered.
- E. Designed to permit passage of most wheeled vehicles.** "Designed to permit passage of most wheeled vehicles", as used in Department Regulations, Chapter 371(1)(O)(2), means that the road is designed such that it will be passable by most four-wheel drive vehicles, exclusive of skidders and tracked vehicles.
- F. To be abandoned and revegetated within a short period of time.** "To be abandoned and revegetated within a short period of time", as used in Department Regulations, Chapter 371(1)(O)(3), means that the road ceases to be used for the purpose for which it was constructed and is revegetated, either naturally or artificially, such that vegetation is present and is effectively stabilizing exposed mineral soil within two growing seasons from the time construction commences.
- G. Designed to be permanent or intended to be used for a significant period of time.** "Designed to be permanent or intended to be used for a significant period of time"; as used in Department Regulations, Chapter 371(1)(O)(4), means that the road is designed and intended to be used for a period of time exceeding two years from the time construction commences.

3. Procedure

- A.** Roads which qualify for exemption from the Site Location Law (see 38 M.R.S.A. § 488 or Section 1(A)(1) of these regulations) may be developed without prior notification submitted to the Board.
- B.** Roads which are subject to the Site Location Law and which do not qualify for exemption under the law shall be approved by the Board prior to commencing construction.

- 4. Standards For the Construction of Private Ways.** In order to qualify for the exemption provided for under 38 M.R.S.A. § 488, private ways to be located in areas not subject to the jurisdiction of the Maine Land Use Regulation Commission shall be located, constructed, and maintained in accordance with the following standards:
- A.** Private ways shall not be constructed in the following areas, except as provided by Section 3(B) of these regulations.
- (1) A historic site, as defined in Department Regulations, Chapter 375(11)(B);
 - (2) A site of an unusual natural area, as defined in Department Regulations, Chapter 375(12)(B);
 - (3) An area of particular importance to fish and wildlife, including, but not limited to:
 - (a) Important deer wintering areas;
 - (b) Habitat of any species declared threatened or endangered by the Commissioner, Maine Department of Inland Fisheries and Wildlife, or the Director of the U.S. Fish and Wildlife Service;
 - (c) Nesting areas for bird colonies; or
 - (d) Important freshwater wetlands.
 - (4) An area over 2,700 feet in elevation above sea level; or
 - (5) An area where the soil type or types may not be suitable for the nature of the undertaking, such as muck or peat soils.
- B.** Proper measures will be taken during the construction of the private way to insure that unreasonable sedimentation and erosion of exposed mineral soil and fill will not take place.
- C.** Long, steady grades will be avoided and occasional breaks in grade will be made to facilitate natural drainage; unless water runoff is properly managed through the use of drainage structures.
- D.** Road grades will be kept below ten percent except for short distances where the grade may exceed ten percent. Where a road grade exceeds ten percent, culverts, water bars, turnouts, and/or ditching will be installed to properly manage water runoff.
- E.** Roads will be designed and constructed to facilitate natural drainage by outsloping, insloping, or crowning, as appropriate.
- F.** Cut and fill banks will be stabilized to avoid unreasonable slumping, washing, or the erosion of such banks.
- G.** Drainage ditches will be provided where appropriate to effectively control water entering the road area.

- (1) Ditches will be properly stabilized such that the potential for unreasonable erosion does not exist.
- (2) Ditches will not drain directly into natural water bodies, including lakes, ponds, rivers, and streams.
- (3) Ditches along roads approaching water crossings will be designed to empty onto a filter strip of undisturbed, vegetated land. The width of the filter strip will be dependent on the slope of the land between the outflow point of the ditch and the normal high water mark of the surface water body and will be at least the width indicated below:

| average slope of land between the ditch outflow point and the normal high water mark (percent) | width of filter strip between the end of the ditch and the normal high water mark (feet along surface of the ground) |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 0 | 25 |
| 10 | 45 |
| 20 | 65 |
| 30 | 85 |
| 40 | 105 |
| 50 | 125 |

- (a) Where a filter strip of the appropriate width indicated is impractical, an appropriate technique will be used to reasonably prevent sediment from directly entering the water body, such as sump holes or settling basins sized to accommodate maximum, anticipated flow in the ditches.
- H.** When a road is not approaching a water crossing, unless impractical because of the topography of the land, a filter strip of undisturbed, vegetated land will be left between the exposed mineral soil of the road and the normal high water mark of any natural water body. The width of the filter strip will be at least as wide as is indicated in the table set forth under subsection G.
 - I.** For a length of fifty feet of roadway on both sides of a water crossing, the width of the disturbed right-of-way will be no greater than the width of the roadway, ditches, and embankments (fill) plus ten feet on both sides of the road.
 - J.** Water crossings will be kept to a minimum and will cross water bodies at right angles to the fullest extent possible.
 - (1) Bridges will cross streams where streams are straight and narrow and the stream banks are high and straight, to the fullest extent practicable.
 - K.** Bridges and culverts at stream and swale crossings will be designed, installed, and maintained to allow the passage of maximum anticipated stream flow and, where relevant, the passage of fish.
 - (1) Culverts used at water crossings will be installed such that:

- (a) The culvert inlet is placed at or below, but not above, the grade of the stream bed.
- (b) Filling under the culvert to bring the culvert up to grade is avoided.
- (c) The culvert is set on firm ground and earth is compacted at least halfway up the side of the culvert to prevent water from leaking around the culvert.
- (d) The culvert is covered with at least one foot of soil and the cover is compacted to prevent settling in the road.
- (e) A headwall at the upstream end of the culvert is protected from eroding by means appropriate for the situation.

(2) Bridges will be built such that exposed soil is properly stabilized to reasonably avoid erosion and sedimentation.

L. Ditch relief or cross drainage culverts, open top culverts, and drainage dips will be placed where appropriate to move water across the road before the flow in drainage ditches gains sufficient volume or head to erode the ditches or roadway.

- (1) On slopes greater than 10%, ditch relief or cross drainage culverts and open top culverts will be placed across the road at approximately a 30 degree angle downslope from a line perpendicular to the centerline of the road.
- (2) Drainage dips may be used in place of ditch relief culverts only where the road grade is 10 percent or less.
- (3) Ditch relief culverts, cross drainage culverts, open top culverts and drainage dips will direct drainage onto a filter strip of natural undisturbed land, and their outlets will be stabilized with appropriate materials.

 NOTE: The following table should be used as a guide in spacing ditch relief culverts and drainage dips along a road.

| Road Grade (percent) | Spacing (feet) |
|-------------------------|-------------------|
| 1-2 | 500-300 |
| 3-5 | 250-180 |
| 6-10 | 167-140 |
| 11-15 | 136-127 |
| 16-20 | 125-120 |

M. Water crossings and drainage systems will be maintained throughout the time when a road is being used such that they are effective in accomplishing their intended purpose.

N. Upon discontinuation or suspension of the use of road for more than three years:

- (1) Water bars will be constructed at intervals which allow the water bars to accomplish their intended function.

NOTE: The following table should be used as a guide in determining the spacing of water bars:

| Road Grade (percent) | Spacing (feet) |
|-------------------------|-------------------|
| 1-2 | 250 |
| 3-5 | 200-135 |
| 6-10 | 100-80 |
| 11-15 | 80-60 |
| 16-20 | 60-45 |
| 21+ | 40 |

(a) Water bars will be constructed at approximately a 30 degree angle downslope from a line perpendicular to the centerline of the road and should drain at a slight outslope onto undisturbed, vegetated land.

(b) Water bars will be constructed so as to effectively prevent surface water from flowing over or under the water bar and will extend a sufficient distance beyond the roadway so that water will not reenter the road surface.

(2) All bridges and culverts, which will not be maintained, will be removed and all areas of exposed mineral soil will be permanently stabilized.

(a) The removal of bridges and culverts will be done in a manner and during the appropriate season such that unreasonable erosion and sedimentation will not occur.

5. Standards for the Construction of Public Ways. In order to qualify for the exemption provided for under 38 M.R.S.A. § 488, public ways to be located in areas not subject to the jurisdiction of the Maine Land Use Regulation Commission shall be located, constructed, and maintained in accordance with the following standards:

A. Public ways shall not be constructed in the areas identified under section 4(A) of these regulations, except as provided by Section 3(B) of these regulations.

B. Public ways will have a travel way of at least a minimum width of eighteen feet, unless the Maine Department of Transportation indicates that a lesser width is satisfactory.

C. Public ways will be constructed and maintained in accordance with the road standards of the municipality within which they are located.

6. Terms and Conditions. The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that a proposed road, not qualifying for exemption from the law, is in compliance with all provisions of the Site Location Law and Regulations.

After public notice and public hearing on June 26, 1980, the above regulations are hereby adopted this 13th day of August, 1980.

AUTHORITY: 38 M.R.S.A. Sec. 481-489

EFFECTIVE DATE: September 14, 1980

EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996

BASIS STATEMENT

These regulations are adopted to explain and clarify the review of proposed roads under the Site Location Law and to establish standards for road construction which, if met, result in the exemption of a proposed road from the jurisdiction of the law.