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GOVERNOR

STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY  
LAND USE PLANNING COMMISSION  
106 HOGAN ROAD, SUITE 8  
BANGOR, MAINE 04401

WALTER E. WHITCOMB  
COMMISSIONER

NICHOLAS D. LIVESAY  
EXECUTIVE DIRECTOR

# PERMIT

## BUILDING PERMIT BP 15306

The staff of the Maine Land Use Planning Commission (LUPC or Commission), after reviewing the application and supporting documents submitted by Kevin and Wendy L. McGowan (Applicants or Permittees) for Building Permit BP 15306, finds the following facts:

- Applicants:* Kevin McGowan  
Wendy L. McGowan (a.k.a. Wendy L. Lyons)  
330 Russell Road  
Skowhegan, Maine 04976
- Date of Completed Application:* October 15, 2014
- Location:* Carrying Place Town Township (T2 R3 BKP WKR), Somerset County, Maine  
Maine Revenue Service Map SO003, Plan 02, Lot 18.1 - 2.29 acres  
Maine Revenue Service Map SO003, Plan 01, Part of Lot 10.1 - 1.84 acres  
Somerset County Registry of Deeds: Book 4191, Page 284 and Book 4728, Page 203
- Zoning:* Residential Development Subdistrict (D-RS)  
General Management Subdistrict (M-GN)  
Shoreland Protection Subdistrict (P-SL2)
- Lot Size:* 4.13 Acres (owned)
- Principal Structure(s):* Proposed Single Family Residential Dwelling (28 ft. by 32 ft. by 30 ft.) with  
Proposed Attached Enclosed Porch (8 ft. by 26 ft. by 30 ft.) and  
Proposed Attached Deck (8 ft. by 18 ft. by 30 ft.)
- Accessory Structure(s):* Proposed Shed (16 ft. by 16 ft. by 30 ft.)
- Sewage Disposal:* Proposed Complete Non-engineered System
- Soil Profile/Condition:* 3/C per Maine Subsurface Wastewater Disposal Rules
- Affected Waterbody:* West Carry Pond, Two Unnamed Tributaries to West Carry Pond

The Commission has identified West Carry Pond as a management class 4, resource class 1A, accessible, developed lake with the following resource ratings: outstanding fisheries resources, outstanding cultural resources.

## PROPOSAL

11. The applicants propose to construct a 28 foot by 32 foot single family residential dwelling with an 8 foot by 26 foot porch and an 8 foot by 18 foot deck, a 16 foot by 16 foot storage shed, a subsurface wastewater disposal system, a parking area, and a residential driveway.

## SUMMARY OF KEY STANDARDS

12. Single family residential dwellings may be allowed within D-RS, M-GN, and P-SL2 subdistricts upon issuance of a permit from the Commission pursuant to 12 M.R.S. § 685-B, and subject to the applicable requirements set forth in Sub-Chapter III (*Ch. 10.21,J,3,c,(14)*, *Ch. 10.22,A,3,c,(14)*, and *Ch. 10.23,L,3,c,(14)*).
13. Driveways associated with residential uses which are not in conformance with the standards of 10.27,H may be allowed within D-RS, M-GN, and P-SL2 subdistricts upon issuance of a permit from the Commission pursuant to 12 M.R.S. § 685-B, and subject to the applicable requirements set forth in Sub-Chapter III (*Ch. 10.21,J,3,c,(7)*, *Ch. 10.21,A,3,c,(4)*, and *Ch. 10.23,L,3,c,(6)*).
14. The applicable dimensional requirements for residential uses include a minimum lot size of 40,000 square feet, a minimum road frontage of 100 feet, and the minimum setbacks for structures and parking areas include 75 feet from the normal high water mark of a flowing water draining less than 50 square miles, 50 feet from the traveled portion of all roadways, and 15 feet from other property boundary lines. Structures within 500 feet of the normal high water mark of a body of standing water 10 acres or greater or tidal water shall be no higher than 30 feet (*Ch. 10.26*).
15. *Driveways Associated with Residential Structures and Uses.* The minimum water body setback for a driveway which accesses an undeveloped lot or a lot having residential structures is 50 feet from the upland edge of a minor flowing water (*Ch. 10.27,H,2,a,(2)*). The driveway must not have a sustained slope of more than 8% (*Ch. 10.27,H,8*). The driveway must be located, designed and constructed so that (1) it will not erode or create any undue restriction or disruption of existing surface water drainage ways; and (2) it will divert runoff to a vegetated buffer strip so as to prevent it from directly entering a waterbody, mapped P-WL1 wetland, or roadway (*Ch. 10.27,H,9,a*).
16. Driveways not in conformance with the standards of this section may be allowed upon issuance of a permit from the Commission provided that such types of activities are allowed in the subdistrict involved. An applicant for such permit shall show by a preponderance of the evidence that the proposed activity, which is not in conformance with the standards of this section, shall be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area (*Ch. 10.27,H*).
17. A vegetative buffer strip shall be retained within 75 feet of the normal high water mark of any body of standing water less than 10 acres in size, or any tidal water or flowing water draining less than 50 square miles (*Ch. 10.27,B,1,b*).
18. Vegetation clearing activities not in conformance with the standards of this section may be allowed upon issuance of a permit from the Commission provided that such types of activities are allowed in

the subdistrict involved. An applicant for such permit shall show by a preponderance of the evidence that the proposed activity, which is not in conformance with the standards of this section, shall be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area (*Ch. 10.27,B*).

19. Where filled or graded areas are in the vicinity of water bodies or wetlands such filled or graded areas shall not extend closer to the normal high water mark of a flowing water, a body of standing water, tidal water, or upland edge of wetlands identified as P-WL1 subdistrict than the distance indicated in the table: [In this instance 100 feet] (*Ch. 10.27,F,5*).
20. Filling and grading activities not in conformance with the standards of this section may be allowed upon issuance of a permit from the Commission provided that such types of activities are allowed in the subdistrict involved. An applicant for such permit shall show by a preponderance of the evidence that the proposed activity, which is not in conformance with the standards of this section, shall be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area (*Ch. 10.27,F*).
21. “The [C]ommission may not approve an application, unless: “The proposal will not cause unreasonable soil erosion or reduction in the capacity of the land to absorb and hold water and suitable soils are available for a sewage disposal system if sewage is to be disposed on-site” (*12 M.R.S. § 685-B(4)(D), which is incorporated into Ch. 10.24,D*).
22. In approving applications submitted to it pursuant to 12 M.R.S. §685-A(10) and §685-B, the Commission may impose such reasonable terms and conditions as the Commission may consider appropriate in order to satisfy the criteria of approval and purpose set forth in these statutes, rules and the Comprehensive Land Use Plan (*Ch. 10.24*).

## **SUMMARY OF PROPOSAL INFORMATION**

23. The applicants’ lot is currently undeveloped; it has more than 100 feet of road frontage on the local access road (Shore Road) and has no water frontage on West Carry Pond.
24. *Single Family Residential Dwelling, Storage Shed and Parking Area.* The Applicants propose to construct a 28 foot by 32 foot dwelling unit with an 8 foot by 26 foot porch and an 8 foot by 18 foot deck, a 16 foot by 16 foot storage shed, and an 18 foot by 18 foot parking area. The dwelling unit, including the porch and the deck, the storage shed, and the parking area would be set back at least 75 feet from both minor flowing waters, at least 50 feet from the edge of the local access road, and 15 feet from other property boundary lines. Vegetation cutting for the dwelling unit, including the porch and the deck, the storage shed, and the parking area would be set back 75 feet from both minor flowing waters. Filling and grading for the dwelling unit, including the porch and the deck, the storage shed and the parking area would be set back 75 feet from both minor flowing waters but there would be filling and grading within the 100 foot filling and grading buffer strip.
25. *Septic System.* The Applicants also propose to install a subsurface wastewater disposal system to serve the dwelling unit. The disposal field, including toe of fill, would require an approximately 40 foot by 35 foot cleared, filled and graded area. The average slope of land between the exposed

mineral soil of the proposed septic system location and the normal high water mark of the northerly minor flowing water is less than 10 percent. Approximately half of the disposal field would be located within the 75 foot vegetative clearing buffer strip and the entire disposal field would be located within the 100 foot filling and grading buffer strip of the northerly minor flowing water. The cleared, filled and graded area would be no closer than 50 feet from the normal high water mark of the northerly minor flowing water.

26. *Residential Driveway.* The Applicants further propose to construct a 325 foot long residential driveway; the driveway surface width would be 12 feet wide; the total disturbed area width would be approximately 20 feet wide; the average road profile slope would be approximately 20 percent. The driveway, including the limit of disturbance, would be set back at least 25 feet at its closest point from the northerly minor flowing water and 46 feet at its closest point from the southerly minor flowing water. The road would include a 25 foot long stabilized entrance with rip rapped aprons, two 15-inch culverts with rip rapped plunge pool spreaders, uphill rip rapped cut sections and sedimentation berms. The driveway and erosion control devices shall be installed and maintained as proposed and as detailed on the final plans labeled C1, C2, and C3 - McGowan Driveway, revised October 13, 2014.
27. *Site Visits.* On September 24, 2013, LUPC staff completed a site visit with the Applicants. On October 03, 2014, at the request of a review agency, LUPC staff, Maine Department of Transportation (MDOT) staff, Maine Department of Inland Fisheries and Wildlife (MDIFW) staff, the Applicants, the Applicants Driveway Contractor, and the Applicants' Professional Engineer/Certified Professional in Erosion and Sediment Control (PE/CPESC) completed a site visit to discuss potential concerns on the driveway design and construction method.

## **SUMMARY OF AGENCY COMMENTS**

28. Staff of the MDOT reviewed the proposed residential driveway location, discussed the potential use of 'rock sandwiches' versus outlet spreaders with staff of the Maine Department of Environmental Protection (MDEP) and recommended the use of cross culverts with plunge pools/quasi-level spreaders at the outlets. MDOT states that the issues are the grade of the natural out-slopes and the ability of any structures to adequately spread flows. The MDOT further state that flow spread can be accomplished with the cross culverts with plunge pools/quasi-level spreaders at the outlets but that the structures need to be designed as the road is constructed to take into account on-site conditions. The MDOT further states that a third party inspector should be a condition of any permit (*summarized*).
29. The MDIFW reviewed the application and consideration of the proposal's probable effect on the environment, and on the agencies programs and responsibilities, and provided the following comments (*summarized*):

Two small perennial streams exist on the Applicants' property. The more southerly originates on the Applicants' property. The consistent source for channel water in both streams is groundwater and despite that there had been little precipitation prior to the site visit, both had pockets of water present and saturated soils in the channels. There is no vegetative growth in either channel, indicating that

sufficient flow velocity exists at certain times of the year in enough volume to preclude plant growth.

The two streams are perennial to West Carry Pond which contains high quality native populations of brook trout and lake trout supported entirely by natural reproduction. In this area, the brook trout are sustained by shore-spawning because the pond's tributary system is limited. The outlets of these two streams are located adjacent to an important brook trout shore-spawning site. Further, because the lake trout population is one of the original native stocks established after the most recent glacial event, it receives special consideration under MDIFW's Administrative Policy Regarding Native Salmonid Management. The goal of the Policy is to provide maximum protection to the genetic integrity and habitat of waters that support native salmonids.

On the site visit, the Applicants PE/CPESC described how the driveway footprint had been minimized in regards to earlier impact concerns. The PE/CPESC further described the driveway design and route. Although in places, the driveway slope would approach 20%, design features have been incorporated such that the driveway would remain stable after construction. The Applicants indicated that they would not be plowing the driveway in winter and that they would not use the driveway until it dried out after snow melt. While the driveway is being constructed, tree removal would be minimized and bark mulch berms would be used to contain materials from moving out of the construction area. Staff of MDOT suggested the potential use of 'rock sandwiches', essentially a rock layer constructed within the lower layers of soil lifts. The PE/CPESC indicated that he would run 25 year storm runoff quantities through a hydrological design. The Applicants indicated the location of all of the proposed structures. All would meet the required setbacks.

Subsequently, the PE/CPESC completed a HYDROCAD assessment tracking discharge quantities from several storms intensities and staff of MDOT contacted engineers at the MDEP concerning rock sandwich design. They informed MDOT that there were no design standards for rock sandwiches and that they would prefer to see the use of culverts with sediment basins and level-lipped outlet spreaders. The PE/CPESC calculations reflected the storm runoffs for 12" and 15" culverts. At a storm of 25-year return period and 24-hour intensity, the maximum runoff was 0.49cfs<sup>1</sup>. This is approximately 30 cfm<sup>2</sup>, raising questions on basins size verses water treatment over a 24-hour period. The MDIFW states that since the probability of flow volumes associated with such an intense storm are only calculated values, the Applicants should be required to monitor the performance of the basins to protect their investment. They should be requested to maintain the basin depth by removing accumulated materials and repairing any areas of erosion. If the basins fail at any storm intensity, they should be required to have larger, more adequate basins designed and installed.

Additionally, a qualified third party inspector-not an employee of the Applicants-should be employed to oversee construction and stabilization efforts during the construction of the driveway.

MDIFW further recommends that any permit be conditioned so that the site would be inspected one year post-construction to ensure that the area is stable and not impacting the tributaries.

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<sup>1</sup> cfs = cubic feet per second

<sup>2</sup> cfm = cubic feet per minute

Finally, as MDIFW staff makes ongoing spawning assessments at the West Carry Pond shoal, should any future impacts to the shoal resulting from the project (i.e. erosion and sedimentation from the driveway) be observed affecting the shoal, remedial actions should be required to be undertaken immediately as a condition of any permit.

30. The facts are otherwise as represented in Building Permit application BP 15306 and supporting documents.

## ANALYSIS AND CONCLUSIONS

### **Based upon the above Findings and the following analysis, the Commission Concludes:**

1. The single family residential dwelling is an allowed use within the subdistricts in which it is proposed. (*Ch. 10.21,J,3,c,(14), Ch. 10.22,A,3,c,(14), and Ch. 10.23,L,3,c,(14)*).
2. The driveway associated with the residential structure is set back less than 50 feet from the upland edge of two minor flowing waters and has a sustained slope of more than 8%. Therefore, the driveway is only an allowed use within the subdistricts in which it is proposed if: it is located, designed and constructed so that it will not erode or create any undue restriction or disruption of the existing surface water drainage ways; it will divert runoff to a vegetated buffer strip so as to prevent water from directly entering either of the two minor flowing waters, West Carry Pond, or the local access road; and the Applicants show by a preponderance of the evidence that the driveway shall be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area. (*Ch. 10.27,H,2,a,(2), Ch. 10.27,H,8, Ch. 10.21,J,3,c,(7), Ch. 10.21,A,3,c,(4), Ch. 10.23,L,3,c,(6), Ch. 10.27,H,9,a, and Ch. 10.27,H*).

The Applicants and their representatives, along with the review agencies and LUPC, assessed the lot to inventory any appropriate alternative locations and designs for the residential driveway; the lot has no alternative location for the driveway which would meet the LUPC standards to a greater extent. The slope of the chosen driveway location is steep; however, the Applicants have designed and propose to construct the driveway with two cross culverts with plunge pools/level spreaders, uphill rip rap cut sections and other appropriately placed rip rap and berms, subsequently, cross drainage will be maintained and any runoff will be diverted into a vegetative buffer strip.

Further, if installed as proposed and maintained, the driveway is designed to cause no sedimentation to the two minor flowing waters and subsequently to the spawning habitat of West Carry Pond. In approving applications, the Commission may impose reasonable terms and conditions as the Commission may consider appropriate in order to satisfy the criteria of approval (*Ch. 10.24*). Since the proposed residential driveway is only allowed if the Applicants do not adversely impact the spawning habitat, it is reasonable that the LUPC require a qualified third party inspection during the driveway construction to insure proper construction and soil stabilization. LUPC staff have spoken with staff from the Somerset County Soil and Water Conservation District, and they are willing to send an inspector to monitor the driveway installation. Further, it is reasonable that the LUPC require that the Applicants maintain the driveway erosion control devices and should they prove ineffectual, require that the applicants apply for a permit amendment to remedy the problem.

Therefore, as long as an onsite inspection is completed during construction of the driveway, and as long as the driveway's erosion control devices are properly maintained, the Applicants have shown by a preponderance of the evidence that the residential driveway will be conducted in a manner which will produce no undue adverse impact upon the resources and uses in the area and that the proposal meets the requirements of Ch. 10.27,H.

3. The lot size, lot road frontage, and the residential dwelling, shed, and parking area setbacks and heights comply with the dimensional requirements in Ch. 10.26.
4. An area within the 75 foot vegetation clearing buffer strip of the northerly minor flowing water will be cleared for the installation of the septic system. An area within the 75 foot vegetation clearing buffer strips of the both minor flowing water will be cleared for the installation of the residential driveway. Vegetation clearing in such instances is only allowed if the Applicants show by a preponderance of the evidence that the vegetation clearing within the buffer strip will be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area (*Ch. 10.27,B,1,b, and Ch. 10.27,B*).

The septic system has been designed, and will be installed, in the most appropriate location, with a minimal amount of vegetation clearing in the 75 foot buffer zone, and with appropriate erosion control devices. Further, the residential driveway has been designed with the least amount of vegetation clearing possible while still completing the proposal, and with appropriate erosion control devices to protect the two minor flowing waters. Further, the Applicants stated on the site visit that wherever possible tree roots will be left in place along the driveway fringe to hold soil. Therefore, the Applicants have shown by a preponderance of the evidence that the vegetation clearing within the 75 foot buffer strips will be conducted in a manner which will produce no undue adverse impact upon the resources and uses in the area and that the proposal will meet the requirements of Ch. 10.27,B.

5. An area within the 100 foot filling and grading buffer strip of the two minor flowing waters will be filled and graded to construct the proposed structures, parking area, septic system and driveway. Filling and grading activities in such instances are only allowed if the Applicants show by a preponderance of the evidence that the filling and grading within the buffer strip will be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area. Further, the Applicants must demonstrate that the proposal will not cause unreasonable soil erosion or reduction in the capacity of the land to absorb and hold water and suitable soils are available for a sewage disposal system. (*Ch. 10.27,F,5, Ch. 10.27,F, and 12 M.R.S. § 685-B(4)(D), which is incorporated into Ch. 10.24,D*).

Because of the slope of the land, the location of the minor flowing waters, and the size of the lot, there are no alternative locations for the proposed structures, parking area, septic system and driveway which would meet the LUPC standards to a greater extent. The Applicants have identified a suitable location for each portion of the proposed development within a small building envelope. The Applicants have designed the proposal to limit the amount of filling and grading to that which is needed to reasonably complete the residential use and with appropriate erosion control devices so as not to cause unreasonable soil erosion or decreased soil water absorption capacity. Therefore, the Applicants have shown by a preponderance of the evidence that the filling and grading within the

100 foot buffer strips of the two minor flowing waters will be conducted in a manner which will produce no undue adverse impact upon the resources and uses in the area and that the proposal will meet the requirements of Ch. 10.27,F.

6. If carried out in compliance with the CONDITIONS below, the proposal will meet the Criteria for Approval, 12 M.R.S. § 685-B(4) of the Commission's Statutes.

**Therefore, the staff APPROVES the application of Kevin and Wendy L. McGowan with the following CONDITIONS:**

1. The enclosed permit certificate must be posted in a visible location on your property immediately after receipt and during development of the site and construction of the structures and activities approved by this permit.
2. Construction activities authorized in this permit must be substantially started within 2 years of the effective date of this permit and substantially completed within 5 years of the effective date of this permit. If such construction activities are not started and completed within this time limitation, this permit shall lapse and no activities shall then occur unless and until a new permit has been granted by the Commission.
3. Clearing and construction activities, except those necessary to establish sedimentation control devices, shall not begin until all erosion and sedimentation control devices (including, but not limited to, ditches, culverts, sediment traps, settling basins, hay bales, silt fences, etc.) have been installed and stabilized. Once in place, such devices shall be maintained to ensure proper functioning. All temporary sedimentation and erosion control devices shall be removed after construction activity has ceased and a cover of healthy vegetation has established itself or other appropriate permanent control measures have been effectively implemented.
4. Permanent soil stabilization shall be completed within one week of inactivity or completion of construction in compliance with the *Guidelines for Vegetative Stabilization*, Appendix B of the Commission's *Land Use Districts and Standards*, revised September 01, 2013, a copy of which is attached.
5. A third-party inspector appointed by or provide by the Somerset County Soil and Water Conservation District shall be present on site during construction of the residential driveway. The Permittees shall contact the Land Use Planning Commission staff at least five (5) business days prior to starting construction on the residential driveway to allow for scheduling of the inspector.
6. Should any erosion or sedimentation impacting either minor flowing water (stream) occur during or after construction, the Permittees shall contact the Land Use Planning Commission staff immediately, or as soon as possible if the event occurs outside of regular business hours, notifying staff of the problem and describing all proposed corrective measures.
7. The Permittees shall monitor and maintain the driveways erosion control devises and should they prove ineffectual, the Permittees shall contact the Land Use Planning Commission staff immediately,



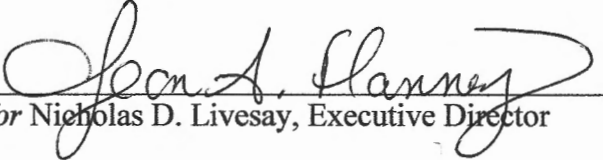
or as soon as possible if the event occurs outside of regular business hours, to apply to the LUPC for a permit amendment to remedy the problem.

8. The authorized 28 foot by 32 foot dwelling unit with the 8 foot by 26 foot porch and the 8 foot by 18 foot deck, the 16 foot by 16 foot storage shed, and the 18 foot by 18 foot parking area must be set back a minimum of 75 feet from the normal high water mark of the two minor flowing waters, at least 50 feet from the edge of the local access road, and 15 feet from other property boundary lines.
9. The permitted structures must not exceed 30 feet in height as measured as the vertical distance between the mean original (prior to construction) grade at the downhill side of the structure and the highest point of the structure, excluding chimneys, steeples, antennas, and similar appurtenances that have no floor area.
10. Vegetation cutting for the septic system shall be set back at least 50 feet from the normal high water mark of the northerly minor flowing water and 75 feet from the southerly minor flowing water. Vegetation cutting for the residential driveway shall be within the limit of disturbance as detailed on the final plans labeled C1, C2, and C3 - McGowan Driveway, revised October 13, 2014.
11. Except as provided for in Condition #10 of this permit for the septic system and the residential driveway, all other vegetation clearing, including but not limited to, any vegetation clearing within 75 feet of the normal high water mark of the two minor flowing waters, must be in compliance with the *Vegetation Clearing Standards* of Section 10.27,B, revised September 01, 2013, a copy of which is attached.
12. Filling and grading for the septic system shall be set back at least 50 feet from the normal high water mark of the northerly minor flowing water and 90 feet from the southerly minor flowing water. Filling and grading for the residential driveway shall be within the limit of disturbance as detailed on the final plans labeled C1, C2, and C3 - McGowan Driveway, revised October 13, 2014. Filling and grading for the dwelling unit, porch, deck, storage shed and parking area shall be within the building envelope outlined on the final plan labeled C1 - McGowan Driveway, revised October 13, 2014 and shall be set back at least 75 feet from the normal high water mark of the two minor flowing waters.
13. Except as provided for in Condition #12 of this permit, all other filling and grading, must be in compliance with the *Filling and Grading Standards* of Section 10.27,F, revised September 01, 2013, a copy of which is attached.
14. Once construction is complete, the permittee(s) shall submit a self-certification form, notifying the Commission that all conditions of approval of this permit have been met. The permittee shall submit all information requested by the Commission demonstrating compliance with the terms of this permit.
15. All exterior lighting must be located and installed so as to illuminate only the target area to the extent possible. Exterior lighting must not produce a strong, dazzling light or reflection beyond lot lines onto neighboring properties, water bodies, or roadway so as to impair driver vision or to create nuisance conditions. All exterior lights shall be in conformance with the *Standards for Lighting*, Section 10.25,F,2, revised September 01, 2013, a copy of which is attached.

16. To protect the scenic quality of West Carry Pond, all authorized structures must not be sited on a ridge or knoll such that they are visible above the tree-line from the lake. All authorized structures must be located, designed and landscaped to reasonably minimize their visual impact on the surrounding area, particularly when viewed from existing roadways or shorelines.
17. The scenic character and healthful condition of the area covered under this permit must be maintained. The area must be kept free of litter, trash, junk cars and other vehicles, and any other materials that may constitute a hazardous or nuisance condition.

This permit is approved upon the proposal as set forth in the application and supporting documents, except as modified in the above stated conditions, and remains valid only if the permittees comply with all of these conditions. Any variation from the application or the conditions of approval is subject to prior Commission review and approval. Any variation undertaken without Commission approval constitutes a violation of Land Use Planning Commission law. In addition, any person aggrieved by this decision of the staff may, within 30 days, request that the Commission review the decision.

DONE AND DATED AT BANGOR, MAINE, THIS 6<sup>TH</sup> DAY OF NOVEMBER, 2014.

By:   
for Nicholas D. Livesay, Executive Director

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## APPENDIX B GUIDELINES FOR VEGETATIVE STABILIZATION

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Areas of disturbed soil, including but not limited to areas that are filled, graded or otherwise disturbed during construction projects, should be stabilized according to the following guidelines. These guidelines do not apply to forest management activities and are not strict regulations, and therefore alternative methods of stabilizing soil may be used. However, whenever soil stabilization or stabilization of disturbed areas is required by regulation or by the terms of individual permits, individuals must assure that either these guidelines, or measures equally effective in stabilizing disturbed areas of soil are employed.

The goals to be achieved by proper stabilization are the avoidance of accelerated soil erosion and the avoidance of sedimentation or pollution of water bodies. All stabilization measures must be maintained so that grass or other vegetation remains intact and healthy, otherwise these measures will be ineffective.

In general:

1. Sterile soils such as sands and gravels should be covered with 2 to 4 inches of soil medium that will support vegetative growth.
2. Disturbed soil areas should be graded such that runoff water is either minimized or eliminated from running over the site.
3. Disturbed areas which can be seeded between May 1 and September 15 should be prepared and seeded during that period.
4. Disturbed areas which cannot be seeded between May 1 and September 15 should be mulched with hay, straw or some other suitable material to keep them as stable as possible over the winter, and particularly during spring runoff the following year. For over-wintering, mulch must be tacked down, as it is easily blown around on frozen ground, leaving areas of soil exposed. Mulch hay should be applied at a depth of 4 inches, or between 150 to 200 lbs. per 1,000 square feet, over the disturbed site. Mulched over-wintered areas should be prepared and seeded the following spring as soon as conditions allow.

It is not recommended that disturbed areas be seeded after September 15th (“dormant seeding”) for a number of reasons. Among the reasons, seeding rates are doubled, which is more expensive; timing is critical to ensure that germination does not occur before the following spring; there is an increased risk of sedimentation because sites are generally wetter in the fall; the thicker mulch must be removed in the spring in order to allow the germinating seed to survive; and the application of fertilizer during this time increases the risk of leaching or runoff loss of nutrients into water bodies.

5. Seeding preparation, in addition to providing a soil medium that will support vegetative growth if the site is sterile, includes the application of lime and fertilizer, which should be lightly raked prior to seeding. After the area is seeded, it should be lightly watered and then mulched with 70 to 90 lbs. (2 standard bales) per 1,000 square feet of weed free hay or straw to protect the seed. Keep the site stable and moist, and allow the seed to germinate and grow.
6. For accurate liming as well as fertilization, it is recommended that you have the soil analyzed to determine the specific nutrient requirements of your site.

Lime should be applied at a rate of approximately 140 pounds to 1,000 square feet of area. This rate may vary depending on the natural conditions of the soil on the site. 10-5-20 fertilizer should be applied at a rate of 18.5 lbs. per 1,000 square feet of area. Following the establishment of vegetation, non-phosphorous fertilizer should be used in accordance with the Department of Environmental Protection’s recommendations.

7. In shoreland areas in particular, fertilizers should be of the "quick release" low phosphorus type, such as 12-4-8 mixtures applied at a rate of 8 pounds per 1,000 square feet of area. If you are near water bodies, it is important not to apply more than approximately this amount of fertilizer, as excess may be washed into streams or lakes and contribute to lowering water quality and such things as algae blooms in lakes.

Following the establishment of vegetation, non-phosphorous fertilizer should be used in accordance with the Department of Environmental Protection's recommendations.

Fertilizers should never be applied right before thunder storms or before spring runoff, because the great amounts of water running over the land will wash the fertilizer, particularly phosphorus, into water bodies. However, a light watering after the fertilizer is applied will help bind the phosphorus to the soil.

8. There are many combinations of grasses that can be used. One combination particularly good for providing soil stability, generally referred to as the Soil Conservation Mixture, consists of:  
(Proportions, by weight)

Creeping Red Fescue	35%	Kentucky Bluegrass	25%
Annual Rye Grass	15%	Perennial Rye Grass	10%
Red Top	10%	White Dutch Clover	5%
* Oats - See Below			

This seed would be applied at a rate of 1 pound per 1,000 square feet. These particular grasses do best if mowed no closer than 2-1/2 to 3 inches from the ground. Of course, other seed mixtures are available.

It is important, in choosing a mixture, to choose one suitable for the site being stabilized. There are many different types of seeding mixtures designed for particular site conditions such as shade, sun, and drainage. Any mix should contain some seed which germinates rapidly to provide the quickest stabilization possible while awaiting the germination of the remaining types.

- (\*) For quick germination, oats are very good. They germinate in 7 to 10 days. They should be planted at a rate of approximately 1 to 1-1/2 bushels per acre, in addition to the basic grass mixture. Oats should be mowed when they reach knee height to allow the germinating grasses to receive sunlight.

Alternatives:

As indicated above, other stabilization programs may be used, provided they are equivalently effective in stabilizing disturbed areas and preventing accelerated soil erosion and sedimentation of water bodies. Further assistance may be obtained, including in some cases site-specific recommendations, as follows:

- Local Soil and Water Conservation Districts
- The USDA Natural Resource Conservation Service
- Maine Department of Environmental Protection, Lakes Program
- Landscaping Professionals
- Reputable Lawn and Garden Supply Dealers

The following documents may provide valuable assistance to those developing a soil stabilization plan:

*Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices* (Cumberland County Soil & Water Conservation District and Maine Department of Environmental Protection, 1991)

*Strategy for Managing Nonpoint Source Pollution From Agricultural Sources and Best Management Guidelines* (NPS Agricultural Task Force, 1991)

*Erosion and Sediment Control Handbook for Maine Timber Harvesting Operations, Best Management Practices* (Maine Forest Service, 1991)

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## B. VEGETATION CLEARING

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Vegetation clearing activities not in conformance with the standards of this section may be allowed upon issuance of a permit from the Commission provided that such types of activities are allowed in the subdistrict involved. An applicant for such permit shall show by a preponderance of the evidence that the proposed activity, which is not in conformance with the standards of this section, shall be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area.

The following requirements shall apply to vegetation clearing activities for any purpose other than road construction, road reconstruction and maintenance, wildlife or fishery management, forest management, agricultural management, public trailered ramps or hand-carry launches:

1. A vegetative buffer strip shall be retained within:
  - a. 50 feet of the right-of-way or similar boundary of any public roadway,
  - b. 75 feet of the normal high water mark of any body of standing water less than 10 acres in size, or any tidal water or flowing water draining less than 50 square miles, and
  - c. 100 feet of the normal high water mark of a body of standing water 10 acres or greater in size or flowing water draining 50 square miles or more.
2. Within this buffer strip, vegetation shall be maintained as follows:
  - a. There shall be no cleared opening greater than 250 square feet in the forest canopy as measured from the outer limits of the tree crown. However, a footpath is permitted, provided it does not exceed six (6) feet in width as measured between tree trunks, and, has at least one bend in its path to divert channelized runoff.
  - b. Selective cutting of trees within the buffer strip is permitted provided that a well-distributed stand of trees and other natural vegetation is maintained.

For the purposes of this section a “well-distributed stand of trees” adjacent to a body of standing water 10 acres or greater in size shall be defined as maintaining a rating score of 24 or more in a 25-foot by 50-foot rectangular area as determined by the following rating system.

Near other water bodies, tributary streams and public roadways a “well-distributed stand of trees” shall be defined as maintaining a rating score of 16 or more per 25-foot by 50-foot (1250 square feet) rectangular area as determined by the following rating system.

<b>Diameter of Tree at 4-1/2 feet Above Ground Level (inches)</b>	<b>Points</b>
2.0 to < 4.0	1
4.0 to < 8.0	2
8.0 to < 12.0	4
12.0 +	8

Table 10.27,B-1. Rating system for a well-distributed stand of trees.

The following shall govern in applying this rating system:

- (1) The 25-foot x 50-foot rectangular plots shall be established where the landowner or lessee proposes clearing within the required buffer;
- (2) Each successive plot shall be adjacent to but not overlap a previous plot;
- (3) Any plot not containing the required points shall have no vegetation removed except as otherwise allowed by these rules;
- (4) Any plot containing the required points may have vegetation removed down to the minimum points required or as otherwise allowed by these rules; and
- (5) Where conditions permit, no more than 50% of the points on any 25-foot by 50-foot rectangular area may consist of trees greater than 12 inches in diameter.

For the purposes of this section, “other natural vegetation” is defined as retaining existing vegetation under 3 feet in height and other ground cover and retaining at least 5 saplings less than 2 inches in diameter at 4½ feet above ground level for each 25-foot by 50-foot rectangular area. If 5 saplings do not exist, the landowner or lessee may not remove any woody stems less than 2 inches in diameter until 5 saplings have been recruited into the plot. In addition, the soil shall not be disturbed, except to provide for a footpath or other permitted use.

- c. In addition to Section 10.27,B,2,b above, no more than 40% of the total basal area of trees 4.0 inches or more in diameter, measured at 4½ feet above ground level, may be removed in any ten (10) year period.
  - d. Pruning of live tree branches is prohibited, except on the bottom 1/3 of the tree provided that tree vitality will not be adversely affected.
  - e. In order to maintain a buffer strip of vegetation, when the removal of storm-damaged, diseased, unsafe, or dead trees results in the creation of cleared openings in excess of 250 square feet, these openings shall be established with native tree species.
3. At distances greater than one hundred (100) feet, horizontal distance, from the normal high water mark of a body of standing water greater than 10 acres, no more than 40% of the total basal area of trees four inches or more in diameter, measured at 4½ feet above ground level, may be removed in any ten (10) year period. In no instance shall cleared openings exceed, in the aggregate, 10,000 square feet, including land previously cleared. These provisions apply to areas within 250 feet of all bodies of standing water greater than ten (10) acres, and to the full depth of the P-AL zone. This requirement does not apply to the development of uses allowed by permit.
  4. Cleared openings legally in existence as of June 7, 1990 may be maintained, but shall not be enlarged except as permitted by these regulations.

In all subdistricts where natural vegetation is removed within the required vegetative buffer strip of a flowing water, body of standing water, tidal water, or public roadway, it shall be replaced by other vegetation (except where the area cleared is built upon) that is effective in preventing erosion and retaining natural beauty.

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**F. FILLING AND GRADING**


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The following requirements for filling and grading shall apply in all subdistricts except as otherwise provided herein.

Filling and grading activities not in conformance with the standards of this section may be allowed upon issuance of a permit from the Commission provided that such types of activities are allowed in the subdistrict involved. An applicant for such permit shall show by a preponderance of the evidence that the proposed activity, which is not in conformance with the standards of this section, shall be conducted in a manner which produces no undue adverse impact upon the resources and uses in the area.

These standards do not apply to filling or grading activities which constitute forest or agricultural management activities, the construction, reconstruction and maintenance of roads, or the construction of public trailered ramps, hand-carry launches, or driveways. Such activities are separately regulated.

1. Within 250 feet of water bodies and wetlands, the maximum size of a filled or graded area, on any single lot or parcel, shall be 5,000 square feet. This shall include all areas of mineral soil disturbed by the filling or grading activity; and
2. Beyond 250 feet from water bodies, the maximum size of filled or graded areas, as described above, shall be 20,000 square feet, except that there shall be no limit to the size of filled or graded areas in M-GN subdistricts which are greater than 250 feet from water bodies and wetlands. In such M-GN subdistrict areas, the provisions of Section 10.27,F,4 and 6 shall apply; and
3. Clearing of areas to be filled or graded is subject to the clearing standards of Section 10.27,B; and
4. Imported fill material to be placed within 250 feet of water bodies shall not contain debris, trash, rubbish or hazardous or toxic materials. All fill, regardless of where placed, shall be free of hazardous or toxic materials; and
5. Where filled or graded areas are in the vicinity of water bodies or wetlands such filled or graded areas shall not extend closer to the normal high water mark of a flowing water, a body of standing water, tidal water, or upland edge of wetlands identified as P-WL1 subdistrict than the distance indicated in the following table:

<b>Average Slope of Land Between Exposed Mineral Soil and Normal High Water Mark or Upland Edge (Percent)</b>	<b>Width of Strip Between Exposed Mineral Soil and Normal High Water Mark or Upland Edge (Feet Along Surface of the Ground)</b>
10 or less	100
20	130
30	170
40	210
50	250
60	290
70	330

Table 10.27,F-1. Unscarified filter strip width requirements for exposed mineral soil created by filling and grading.

6. All filled or graded areas shall be promptly stabilized to prevent erosion and sedimentation.

Filled or graded areas, including all areas of disturbed soil, within 250 feet of water bodies and wetlands, shall be stabilized according to the Guidelines for Vegetative Stabilization contained in Appendix B of this chapter.



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**F. NOISE AND LIGHTING**


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**1. Noise.**

- a.** The maximum permissible sound pressure level of any continuous, regular or frequent source of sound produced by any commercial, industrial and other non-residential development shall be as established by the time period and type of land use subdistrict listed below. Sound pressure levels shall be measured at all property boundary lines, at a height of at least 4 feet above the ground surface. The levels specified below may be exceeded by 10 dB(A) for a single period, no longer than 15 minutes per day.

<b>Subdistrict</b>	<b>7:00 AM to 7:00 PM</b>	<b>7:00 PM to 7:00 AM</b>
D-CI, D-MT, and D-ES	70 dB(A)	65 dB(A)
D-GN, and D-GN2	65 dB(A)	55 dB(A)
D-PD	As determined by the Commission.	
All Other Subdistricts	55 dB(A)	45 dB(A)

Table 10.25,F-1. Sound pressure level limits.

- b.** The following activities are exempt from the requirements of Section 10.25,F,1,a:
- (1) Sounds emanating from construction-related activities conducted between 7:00 A.M. and 7:00 P.M.;
  - (2) Sounds emanating from safety signals, warning devices, emergency pressure relief valves, and other emergency activities; and
  - (3) Sounds emanating from traffic on roadways or other transportation facilities;
- c.** Control of noise for a wind energy development as defined in Title 35-A, Section 3451, subsection 11, with a generating capacity greater than 100 kilowatts is not governed by this section and instead is governed solely by the provisions of 12 M.R.S.A. §685-B(4-B)(A).

**2. Lighting standards for exterior light levels, glare reduction, and energy conservation.**

- a.** All residential, commercial and industrial building exterior lighting fixtures will be full cut-off, except for incandescent lights of less than 160 watts, or any other light less than 60 watts. Full cut-off fixtures are those that project no more than 2.5% of light above the horizontal plane of the luminary's lowest part. Figure 10.25,F-1 illustrates a cut-off fixture as defined by the Illuminating Engineering Society of North America (IESNA).

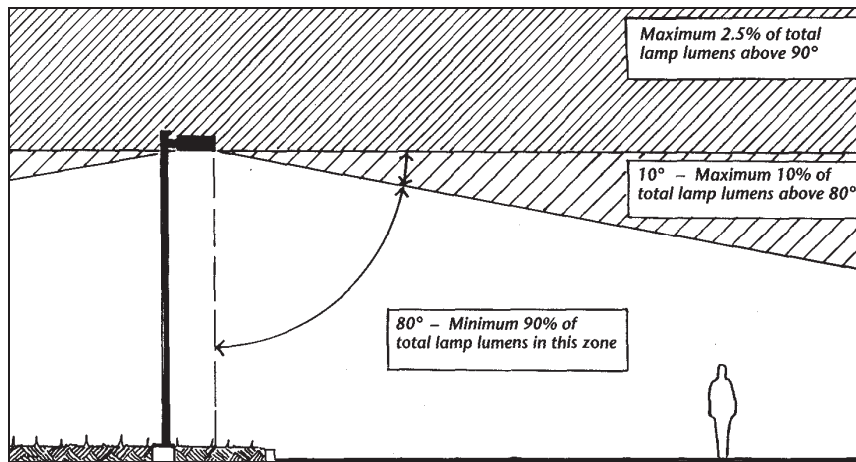


Figure 10.25,F-1. Cut-off fixture as defined by IESNA.

Light fixtures mounted on gasoline station or convenience store canopies shall be recessed so that fixtures are flush with the canopy. Alternatively, canopies may be indirectly lit using light beamed upward and then reflected down from the underside of the canopy. In this case light fixtures must be shielded so that direct illumination is focused exclusively on the underside of the canopy.

- b. All exterior lighting shall be designed, located, installed and directed in such a manner as to illuminate only the target area, to the extent practicable. No activity shall produce a strong, dazzling light or reflection of that light beyond lot lines onto neighboring properties, onto any water bodies with a significant or outstanding scenic resource rating, or onto any roadway so as to impair the vision of the driver of any vehicle upon that roadway or to create nuisance conditions.
- c. For commercial, industrial and other non-residential development, all non-essential lighting shall be turned off after business hours, leaving only the minimal necessary lighting for site security. The term “non-essential” applies, without limitation, to display, aesthetic and parking lighting.
- d. In addition to the lighting standards in Section 10.25,F,2, lighted signs shall also comply with the standards in Section 10.27,J.
- e. The following activities are exempt from the lighting standards of Section 10.25,F,2,a through d:
  - (1) Roadway and airport lighting, and lighting required by the Federal Aviation Administration for air traffic safety;
  - (2) Temporary fair, event, or civic uses;
  - (3) Emergency lighting, provided it is temporary and is discontinued upon termination of the work;
  - (4) Lighting that is activated by motion-sensors; and
  - (5) Lighting that was in place on April 1, 2004.