STATE OF MAINE
DEPARTMENT OF CONSERVATION
MAINE LAND USE REGULATION COMMISSION
22 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0022

JOHN ELIAS BALDACCI
GOVERNOR

PATRICK K. McGOWAN
COMMISSIONER

PERMIT

COMMISSION DECISION
IN THE MATTER OF

Evergreen Wind Power V, LLC
Final Development Plan Permit DP 4788

Findings of Fact and Decision

The Maine Land Use Regulation Commission, at a meeting of the Commission held on January 2, 2008, at Augusta, Maine, after reviewing the application and supporting documents submitted by Evergreen Wind Power V, LLC for Final Development Plan Permit DP 4788, public and Intervenor comments, agency review comments and other related materials on file, pursuant to 12 M.R.S.A. § 681, *et seq*. and the Commission's Standards and Rules, finds the following facts:

1. Applicant: Evergreen Wind Power V, LLC
c/o UPC Wind Management, LLC
85 Wells Avenue, Suite 305
Newton, MA 02459

2. Application Accepted as Complete for Processing: November 21, 2007

3. Location of Proposal: T8 R3 NBPP, Washington County (Part of Map 1, Lot 1)
T8 R4 NBPP, Washington County (Part of Map 1, Lot 1-1)

Stetson Mountain: Latitude 45, 31.522' N; and longitude 67, 58.608' W

4. Current Zoning: (D-PD) Planned Development Subdistrict (zoning effective November 22, 2007) [Previously (M-GN) General Management Subdistrict, (P-WL) Wetland Protection Subdistrict, and (P-SL2) Shoreland Protection Subdistrict]

5. Parcel Size: Approximately 4,800 acres (leased)
Lessor: Lakeville Shores, Inc.

CATHERINE M. CARROLL, DIRECTOR

www.maine.gov/doc/lurc
PHONE: (207) 287-2631
FAX: (207) 287-7439
(TTY): (207) 287-2213

6. Waterbodies located within the watershed or viewshed, but not within the D-PD Subdistrict.

   Upper Hot Brook Lake is a management class 7, resource class 3, accessible, undeveloped lake.

   Lower Hot Brook Lake is a management class 7, resource class 3, inaccessible, undeveloped lake.

   Baskahegan Lake is a management class 7, resource class 1B, accessible, undeveloped lake with significant fisheries, cultural, and physical characteristics; and outstanding wildlife characteristics.

   Meadow Brook, Little Meadow Brook, Baskahegan Stream, Pleasant Brook, West Branch of Hot Brook, Jenkins Brook, and Webster Brook are Class A flowing waters.

Administrative History

7. Development Permit DP 4756 was issued to Evergreen Wind Power V, LLC (hereafter referred to as "the applicant") on December 6, 2006, authorizing three temporary meteorological testing equipment poles located on Stetson Mountain in T8 R3 NBPP, Washington County. The pole at site #2 was granted after-the-fact approval. The poles at sites #1 and #4 were newly installed.

8. *Wind resource.* Since 2003, the applicant has conducted studies of the wind resource at the development area (reference Development Permit DP 4756), determining that it is between Class 4 and Class 5 [approximately 7.5 meters/second (m/s)], which is rated as "Good"/"Excellent" on the Wind Power Classification scale[1]. The prevailing wind is from the northwest. The applicant stated that using current technology, a wind resource Class of 4 or better is necessary for a project to be viable.

9. Zoning Petition ZP 713 was issued to Evergreen Wind Power V, LLC on November 7, 2007, rezoning approximately 4,800 acres on Stetson Mountain in T8 R3 NBPP and T8 R4 NBPP from (M-GN) General Management Subdistrict (approximately 4,323 acres), (P-SL) Shoreland Protection Subdistrict (approximately 172 acres), and (P-WL) Wetland Protection Subdistrict (approximately 258 acres) to (D-PD) Planned Development Subdistrict for the purpose of developing the 57 megawatt (MW) Stetson Wind Project (SWP) consisting of 38 wind turbines. The locations of the boundaries of the D-PD Subdistrict were based on distances needed to create a noise buffer around the facility.

   A. The proposed site was determined to be well-suited for development with a wind power facility. The factors considered when selecting this site for development included:

[1] U.S. Dept. of Energy, National Renewable Energy Laboratory

(1) Good wind resource due to orientation of the ridgeline and flat surrounding topography;
(2) Distance to existing roads and utility line infrastructure, and an existing road network is present within the project area;
(3) Lack of steep slopes;
(4) Compatibility with existing land uses of timber harvesting and recreation;
(5) Low natural resource values, *i.e.* lack of sensitive natural resources, within the development area;
(6) Proximity to the fringe of the jurisdiction; and
(7) Distance to public resource areas.

10. A public hearing on Zoning Petition ZP 713 was held on August 7 and 8, 2007, in Lee, Maine.

A. The Natural Resources Council of Maine (NRCM), Conservation Law Foundation (CLF), Independent Energy Producers of Maine (IEPM), Maine Audubon Society (MAS), Appalachian Mountain Club (AMC), Washington County Commissions (WCC) and landowner Lakeville Shores, Inc. (LS) were granted Intervenor status in the proceedings. MAS and AMC later dropped their Intervenor status, requesting to be treated as Interested Persons. No opposition to the SWP was expressed by these Parties.

B. Opposition to the SWP was expressed by some local residents and one organization, the Woodie Wheaton Land Trust.

C. Various non-Intervening organizations, the Town of Danforth, and some local residents expressed support for the SWP.

D. The hearing record closed on August 27, 2007.

11. The SWP Interconnection System Impact Study conducted for ISO-NE and the Bangor Hydro Electric Company was completed on June 15, 2007. The study concluded that the SWP would not adversely impact the New England grid, and that no additional system upgrades directly related to the SWP interconnection, except those at the Keene Road substation, are needed to bring the SWP on-line.

12. A draft application for Final Development Plan Permit DP 4788 was submitted by the applicant to LURC on November 14, 2007. After review for completeness by staff, the application was accepted for processing on November 21, 2007.

13. Permit applications for the SWP are concurrently, but separately, being reviewed by the U.S. Army Corps of Engineers (ACOE), the Maine Department of Environmental Protection (MDEP), and any organized town the 115 KV line would pass through that requires a permit.

A. ACOE is reviewing the wetland impacts for the entire project, including both the 115 kV transmission line under review by MDEP; and the turbine area, Operation & Maintenance (O & M) building and substation, and the 34.5 kV collection line under review by LURC. The ACOE permit application was filed on December 10, 2007.

B. The proposed 115 kV transmission line (the so-called "Line 56 Transmission Line Project") associated with the SWP is being reviewed by MDEP. The application was filed with MDEP in September, 2007. The line would start at the substation within the D-PD Subdistrict, and continue for 3,380 feet before leaving the D-PD Subdistrict. MDEP has included in its review the line and poles within the D-PD Subdistrict. LURC has included in its permit the clearing for the transmission line corridor, including wetland impacts, and the substation, which would be located within the O & M facility area (see Finding of Fact #28,B; and Findings of Fact #9,B and #27 in Zoning Petition ZP 713).

   A Stormwater General Permit from the MDEP is also required for this project. The Notice of Intent (NOI) to file was submitted to the MDEP by the applicant in mid-December, 2007.

C. The Towns of Mattawamkeag, Woodville, and Chester have been consulted and verbally indicated that no permits from those towns are needed for the portions of the transmission line within each town; however, Evergreen is consulting with each town to confirm that.

Proposed Final Development Plan

14. Evergreen Wind Power V, LLC (hereafter referred to as "the applicant") proposes to construct the 57 MW Stetson Wind Project (SWP), consisting of thirty-eight (38) 1.5 General Electric wind turbines, on Stetson Mountain in T8 R3 NBPP and T8 R4 NBPP, Washington County. Stetson Mountain is an approximately 7 mile long, north-south oriented ridgeline with a maximum elevation of 1,085 feet above mean sea level. The term "parcel" as used herein, refers to the entire rezoned 4,800 acre parcel. The term "development area", as used herein, refers to the actual locations within the parcel to be disturbed for the SWP.

   A. The Final Development Plan for the Stetson Wind Project (D-PD) Planned Development Subdistrict is attached as Appendix A, and incorporated herein by reference.

   B. The relevant review criteria contained within 12 MRSA, Section 685-B(4), the Commission's Comprehensive Land Use Plan, and the Commission's Land Use Districts and Standards, are attached as Appendix B, and incorporated herein by reference.

C. *Project contribution to Maine's energy and environmental policies.* In accordance with Condition #5 of Zoning Petition ZP 713, the applicant proposes to submit a report annually to the Commission for the first two years of the project's operation, describing the project's contribution to Maine's energy and environmental policies. The report will include total megawatt hours of generation during the preceding calendar year and an estimate of the avoided emissions resulting from project operation. Avoided emissions calculations would be based on historical emissions data from the U.S. Environmental Protection Agency and the U.S. Department of Energy's Energy Information Administration data for New England power generation.

15. *Financial capacity and estimated costs.* The applicant is a wholly owned subsidiary of Maine Wind Partners III, LLC, which is in turn a wholly owned subsidiary of UPC Wind Partners, LLC ("UPC Wind"). Evergreen V was formed specifically to develop, build, own, and operate this project. UPC Wind Management, LLC ("UPC Wind Management") would provide consulting services during the development portion of the project, and would manage the funds for the project. UPC Wind would provide financing to the project, as evidenced by a letter dated February 16, 2007 from company President Paul Gaynor stating a commitment to provide funding for the development and operation of the project; and by the *Consulting and Administrative Services Agreement* dated November 1, 2006, signed by UPC Wind Management.

A. *Estimated cost.* The estimated project cost is $100 million. Of this amount, the turbines were estimated to cost $66 million, and the transmission lines would cost $15 million, including the 115 kV transmission line. The applicant stated that UPC Wind's current assets are in excess of $354 million.

B. The SWP would be approximately 35 miles from the existing transmission lines that would transmit the power generated to Maine and New England. The applicant stated that this distance is economically supportable because much of the proposed new or upgraded 115 kV transmission line would be located along an existing right-of-way, which in turn will help to make the project economically feasible (see Findings of Fact #18,B and #27 of Zoning Petition ZP 713).

C. *Decommissioning.* The applicant estimated that $1.36 million, minus salvage value, would be required for decommissioning, if decommissioning were found in the future to be necessary. The applicant stated that the turbines, towers, substation and equipment, transformers, and above-ground wiring have salvage value. The expected life of the turbines is 20 years. The applicant proposed that prior to December 31st of each year, beginning with the first year of operation and concluding with year seven, $76,000 would be reserved for decommissioning and site restoration. At the end of year 15, the amount needed would be reviewed, and the balance updated.

The financing mechanism for the decommissioning plan would be in the form of an Irrevocable Standby Letter of Credit. A template for this document was

submitted by the applicant and reviewed by the Maine Attorney General's office. Finding of Fact #32 provides a summary of the proposed decommissioning plan.

16. *Title, right, or interest.* The rezoned parcel is owned by Lakeville Shores, Inc. (LSI), and leased to the applicant, granting the right to access the site, to develop the proposed SWP, and to improve the existing roads. LSI also owns the majority of the surrounding land, and intends to continue timber management within the parcel, in accordance with the lease agreement. The applicant stated that it does not intend to reduce the size of, sell, sub-lease, or sub-divide the leased parcel

    The parcel that is leased by the applicant for the proposed SWP is located in both T8 R3 NBPP and T8 R4 NBPP. The applicant assessed the ownership of LSI and parent parcel division within each township and determined that subdivision had not occurred by forming the lease lot.

17. *Technical experience.* The applicant submitted a summary of its key personnel and consultants, and supplied resumes for each to provide evidence of technical capacity. Principal members of the design and planning team include: James W. Sewall Company and SGC Engineering, LLC (engineering); Woodlot Alternatives, Inc.[now Stantec Consulting] (environmental); Terrence J. DeWan & Associates (visual impact); Resource System Engineering (sound); Albert Frick Associates, Inc. (soils); TRC/Northeast Cultural Resources, Independent Archeological Consulting and Public Archeology Lab (cultural resources); and Verrill Dana (legal counsel).

    A. In addition, UPC Wind and UPC Wind Management, LLC have experience in developing and siting wind power projects. Specifically, UPC Wind's subsidiaries have operational wind farms in Maui, Hawaii and Mars Hill, Maine.

    B. The applicant would employ two general contractors to construct the SWP: Reed & Reed of Woolwich, Maine, who constructed the Mars Hill wind power project, to construct the roads and install the turbines and collector system; and an affiliate of Maine Public Service to install the substation. Management of both contractors will be handled by UPC Wind Construction, LLC.

18. *Site access and traffic flow.* The primary access to the development area would be from the north via Route 169 to Atlas Road, because of the early delivery and storage of the turbines in Danforth, necessitating the use of this route to deliver equipment to the site. The southern access point from Route 6 using North Road, Tar Ridge Road, and Atlas Road would be used by light vehicles and as an exit for large vehicles such as concrete or gravel trucks during the six month construction period. No turbine delivery vehicles would use the southern access point.

    A. Both Atlas Road and the Public Lot Road are named private land management roads providing access to and within the parcel. Atlas Road runs along the western base of Stetson Mountain and the Public Lot Road runs along the eastern base of the mountain. There are also several existing unnamed land management roads within the parcel.

B. Tar Ridge Road is in part a County road and in part privately owned. North Road is a County road.

C. Access from both the south and north would allow for logistical flexibility during construction, although there are constraints with the use of the southern access via Tar Ridge Road due to the residential nature of the road, adjacent wetlands, and poor road condition. Atlas Road would be improved outside the parcel the north and south ends to provide a 16 foot wide gravel traveled surface. Finding of Fact #24 provides additional detail about proposed improvements to the existing roads, and the new roads to be constructed within the parcel.

D. The sight distances at the intersections of Atlas Road with Route 169 (north) and with Tar Ridge Road (south) would be improved by minor clearing of understory vegetation (approximately 0.1 acre at each intersection).

E. Signage on the leased area would be primarily limited to informational signs associated with site activities. An informational kiosk and sign may be constructed at the Route 169/Atlas Road intersection after the project is operational. If a kiosk would be installed, the applicant would request permit approval. The kiosk and sign would likely be located more than 1,000 feet from the project.

F. During construction, increased traffic at peak activity periods, would consist of approximately 30 worker vehicles per day traveling to the project site. During the six-week period of turbine delivery, approximately 14 trucks per day would be required, resulting in 98 truck trips per week, for a total of 588 round trips to deliver the turbines to the development site. During construction of the turbine foundations, approximately 11 concrete and gravel trucks per day per foundation would be required. Because of the time sensitivity of hauling concrete from Lincoln to the site, the southern access point would be used when constructing the more southerly turbines. In addition, local truckers hauling gravel on-site may need to use the southern access point to exit at the end of the day.

G. *Transportation of turbines to the site.* The Maine Department of Transportation (MDOT) and the Maine Bureau of Motor Vehicles (MBMV) were consulted by the applicant and General Electric (GE) to determine the requirements for getting the oversized loads to the site. Route selection for delivery of components is being managed by GE. Currently, the turbines (blades, towers, and nacelles) have been stored temporarily at a storage area in Danforth. There has been on-going coordination with MDOT and other applicable agencies and town officials for delivery of components to the temporary storage site and development area, and also in regard to possible temporary improvements or modifications to existing roads to accommodate the project.

19. *Existing and continued use of the development area.* The existing and proposed roads within the development area (with the exception of any spur roads leading to some turbines and around the substation and Operations and Maintenance (O&M) building, which would be restricted as needed for site security) would continue to be available for use by the underlying landowner, Lakeville Shores, Inc (LSI) for forest management activities, and by the general public for access across the parcel and recreational activities (*e.g.* hunting, fishing, snowmobiling, and ATV use). While the primary access road is currently gated at both ends of the parcel by LSI, the road is generally open to the public and the gates are only closed when necessary for security reasons. Access to the parcel is controlled by the landowner, LSI.

    Snowmobile Trail ITS 110 crosses the parcel near the north end of the Stetson Mountain ridge, and then follows the Public Lot Road. The use of this trail by the public would be continued, although the trail may be re-routed.

20. *Public services.*

    A. *Fire suppression.* Fire suppression mechanisms are incorporated into the turbine design, and the cleared areas around each turbine would provide a firebreak. Access roads would also act as fire breaks, as well as provide access. The applicant asserted that any additional wildfire protection for the SWP would be minimal, and the appropriate protection services are available. In addition, the applicant has discussed with the Town of Danforth a re-imbursement mechanism if the Town needed to respond to a fire. The project area's Maine Forest Service District Ranger stated that the project would have little impact on public services.

    B. *Solid waste disposal.* A general contractor would handle the solid waste removal during construction.
        (1) The applicant estimated that 40,000 cubic yards of solid waste would be created by clearing. Much of this material would be used on-site (*e.g.* grubbings would be chipped and mixed with erosion control mix to encourage re-vegetation of the shoulders of the road, and stump grindings would be used to make the erosion control mix). Where possible, stumps would be left in place in the filled areas around the turbine pads. Any cleared timber with value would be sold. Any excess organic material would be disposed of at the proposed one acre stump dump, which would be located midway between proposed Turbines #T19 and #T20.
        (2) Waste concrete material would be used for fill in the roads and turbine pads.
        (3) After construction, less than ten cubic yards of solid waste would be generated per month at the O & M building. The applicant submitted a letter from Pine Tree Waste, Inc. confirming the availability of a contractor for waste removal and disposal.

    C. *Road maintenance.* After the facility is constructed, the applicant would be responsible for monitoring and maintenance of the project roads and facilities within the leased area. Logging road maintenance within the leased area would

be the responsibility of landowner LSI. Roads used to access the site owned by the County would continue to be maintained by the County (see Finding of Fact #18,B).

D. *Emergency medical services.* If emergency services are needed, 911 would be called, invoking the services of LifeFlight, a medical helicopter service jointly operated by Eastern Maine Healthcare Systems and the Central Maine Medical Family. LifeFlight has a helicopter based in Bangor, at Eastern Maine Medical Center.

Project description (see Appendix A, attached)

21. The proposed 57 MW Stetson Wind Project (SWP) would consist of 38 turbines, each located within a turbine pad; two temporary crane assembly pads; above and below-ground 34.5 kV electrical transmission ("collector line") and communication lines; access roads and a ridgeline road with spur roads; two permanent meteorological towers; and an Operation & Maintenance (O & M) facility with a substation. Temporary activities associated with the construction of the SWP would include: office trailers with parking and storage areas; lay-down areas; a stump dump; and two temporary meteorological towers

22. A large percentage of the 4,800 acre parcel would not be disturbed by the proposed SWP. Of the rezoned 4,800 acre parcel, the total area to be cleared during construction would be 182.6 acres. Of this, 161.6 acres would be temporary alteration. After construction, the area to remain permanently cleared would be 21 acres. The amount of area to be disturbed has been reduced from the amount estimated in the Preliminary Development Plan by (a) moving turbines closer to the roads, and moving turbines in from the north end of the project, eliminating several spur roads; and (b) the size of the average cleared area for turbine pads was reduced by up to 40 percent (%) by taking advantage of natural topography and from experience gained during the construction of the Mars Hill project.

A. The project described in the Final Development Plan differs from the project described in the Preliminary Plan in the following ways:
   (1) The O & M building would be 7,000 sf, increased from 5,000 sf.
   (2) The total area of wetland affected by all types of alterations would be 24,552 sf, increased from 14,000 sf.
   (3) The total area to remain permanently cleared would be 21 acres, decreased from 32.5 acres.
   (4) The total amount of new roads would be 5.9 miles, decreased from 9.74 miles.

B. *400 foot setback from D-PD Subdistrict boundary.* With the exception of the access roads and the 115 kV transmission line corridor, all permanent and temporary structures, including the turbines, 34.5 kV transmission lines, O&M building, substation, and meteorological towers, would be set back more than 400 feet from the boundary of the D-PD Subdistrict. The closest structures to the D-

PD Subdistrict boundary would be the southernmost turbine #T1, the O & M building, and the substation at approximately 922 feet. The access roads and 115 kV transmission line would not be subject to the setback requirement because they are infrastructure that must extend beyond the D-PD Subdistrict boundary.

23. *Turbines*. A total of 38 turbine sites (#T1 to #T38) have been proposed for development. All 38 sites are in areas that were zoned as (M-GN) General Management Subdistrict prior to the rezoning to D-PD Subdistrict. The elevations at the proposed turbine sites range from 600 feet to 1,085 feet above mean sea level.

A. The applicant would install 1.5 MW SLE General Electric wind turbines, which operate between wind speeds from 3.5 m/s up to 25 m/s. The turbines have a hub height of 262 feet and rotor diameter of 253 feet. At the extended tip of the blade, each turbine would be 389 feet high. The base of each turbine would be 14.5 feet in diameter. The rotor swept area would be 253 feet in diameter, and the turbines would operate at variable speeds from 11 to 20.4 revolutions per minute.

B. *Lighting*. The Federal Aviation Administration (FAA) requires that the turbines at each end of the turbine string be lit, and at no more than 2,500 foot intervals in between[2]. Eleven of the 38 proposed turbines would be lit, subject to final approval by FAA, which is expected in February, 2008. The lighting would consist of a single slow-pulsing red light mounted on the nacelle of the turbine. No daytime lighting or strobes are proposed, because daytime visibility to aircraft is afforded by the turbines' white color. FAA approved lenses would be used to concentrate light in a horizontal cone outward from the source, minimizing the light intensity downward.

C. *Foundations*. A geotechnical investigation at the site revealed that most of the project is underlain by shallow bedrock. The final foundation design proposal is the rock anchor foundation system which requires the least excavation and blasting. The rock anchor foundation would be constructed of concrete, 24 feet in diameter, and would have 2.5 inch metal rod anchors secured up to 40 feet deep into the underlying bedrock (at turbine sites #T4 and #T33, a depth of 50 feet was recommended). The concrete for the foundations would be brought to the site by a local supplier in Lincoln.
   (1) The geotechnical borings revealed that 22 of the proposed turbine sites would require blasting of sulfidic bedrock, which has the potential to produce acidic runoff if the tailings are not properly handled (see Findings of Fact #39 and #41,B).
   (2) A final blasting plan, prepared by Maine Drilling and Blasting, was submitted for the project, specifying procedures to be followed for all blasting operations. The plan also details provisions for security, warning signals, explosive types, required personnel qualifications, Material Safety Data

[2] U.S. Dept. of Transportation/Federal Aviation Administration; Federal Aviation Technical Note Development of Obstruction Lighting Standards for Wind Farms (2005); and "Obstruction Marking and Lighting" Advisory Circular AC 70/7460-1K, Chapter 13 (February 2, 2007)

Sheets, and emergency procedures. The blasting plan was reviewed by MDEP (see Finding of Fact #41).

D. *Turbine pads.* Each turbine pad would be located in a 1.13 acre cleared circle (250 foot diameter, with an additional 0.28 acre allowed for cut and fill). Each pad would be re-vegetated after construction except for 0.17 acre (a 100 foot by 70 foot permanent crane pad plus the 24-foot diameter foundation) around each turbine. The turbine pads would be located in areas that are flat or gently sloping, minimizing the amount of cut and fill required. The pads must be level, with no more than a five percent (5%) cross-slope. The total area disturbed would be a maximum of 53.6 acres. Of this, 6.5 acres would remain unvegetated.

E. *Crane assembly pads.* The total area to be cleared, graded, and filled for two temporary additional crane assembly pads to be used during construction would be 0.56 acre. After construction, both crane assembly pads would be entirely revegetated.

24. *Roads.* A total of 9.27 miles of road would be constructed or improved. Approximately 4.84 miles of new ridgeline road, 0.31 miles of new access road and 0.75 miles of new spur roads to access turbine sites would be constructed. Approximately 1.18 miles of Atlas Road and 2.19 miles of the existing ridgeline road would be improved.

A. *Access, ridgeline, and spur road widths.* During construction, the traveled surface of the proposed 7.03 mile long ridgeline road and the spur roads would be 32 feet wide to accommodate the assembly crane. Both would be narrowed to 16 feet wide after construction, and the shoulders revegetated. Atlas Road would be improved to have a 16 foot wide traveled surface where it does not already meet that specification.

B. *Areas of steep slope.* Very short, moderately to steeply sloping areas along the ridgeline road would be straightened. To accommodate the transport vehicles, on average the access road would require a maximum 1.5 foot change in grade per 100 feet of road, or a maximum finished grade of 14%.

C. *Clearing.* The total area to be cleared for the new roads and for existing road improvements during construction would be 77.4 acres, reduced to 11.5 acres after construction.

(1) *Ridgeline road.* A 90 foot wide corridor would be cleared for the ridgeline road during construction. An additional 50 feet would be temporarily cleared along 2.2 miles of the ridgeline road, for a width of 140 feet in those areas. A total of 66.1 acres would be temporarily cleared for the ridgeline road (this includes the 50 feet additional width cleared along 2.2 miles), of which 9.4 acres would remain permanently cleared.

(2) *Spur roads.* A 90 foot wide corridor would be cleared for the spur roads during construction, totaling of 8.2 acres. Of this, 1.5 acres would remain permanently cleared.
(3) *Access roads.* An additional 10 feet of width would be cleared along 1.18 miles of the existing Atlas Road, for a total of 3.1 acres of clearing, of which 0.6 acres would remain permanently cleared. The clearing is for improvements and ditching. After construction, cleared areas that are not a part or the road would be allowed to become re-vegetated.

D. *Crossings.* The road construction would involve four stream crossings and five wetland crossings. The road has been designed to utilized and upgrade existing stream and wetland crossings to the extent possible. Where new wetland crossings are needed, the rock sandwich method of construction recommended by the State Soil Scientist would be utilized to maintain existing hydrology. The wetland impacts as a result of roads and crossings are also discussed in Finding of Fact # 38,A.
(1) The stream crossings would utilize 24 inch diameter culverts, and would affect a total of 789 square feet (sf) of stream channel. Stream crossing D would be a relocation of 52 feet of a stream channel that is presently in a stormwater ditch.
(2) The wetland crossings would utilize the rock sandwich method of construction. The total permanent wetland alteration due to road construction would be 977 sf. The temporary wetland alteration due to clearing for road construction would be 1,288 sf.

25. *34.5 kV transmission line*: An above and below-ground 34.5 kV transmission line (*i.e.* "collector line") and communication lines interconnecting the turbines would generally follow the ridgeline and spur roads, and would connect the turbine string to the new substation near the O & M building (described below).

A. The cleared corridor for the above-ground line would be 60 feet wide and would remain permanently shrub-dominated with vegetation up to 4 feet in height.

B. The below-ground lines would be buried along the shoulders of the spur roads at a depth of at least 3 feet.

26. *Operations & Maintenance (O & M) building and substation.* A 7,000 square foot O & M single-story building and substation would be located within the development area at the south end of the turbine string. Approximately 3 acres would be permanently cleared and graded for this facility, with approximately 0.73 acre for the building and substation and 2.27 acres cleared around the building for safety purposes. The O & M building would be served by an on-site well, a subsurface wastewater disposal system, would be powered by the adjacent substation, and would have external lighting that would be motion sensitive or manually controlled. The building would accommodate two to three permanent staff, and would be used as both

a warehouse and office. Approximately 2/3 of the building would be for equipment storage and maintenance (see Finding of Fact #27).

A. The subsurface waste disposal system to be installed at the O & M building would consist of a regular concrete 1,000 gallon treatment tank and a 1,500 square foot leach field. An HHE-200 Form was submitted with the application and has been reviewed by DHHS/DHE (see Finding of Fact #46). There would be no floor drains in the garage.

B. The new substation would connect the collector line to the 115 kV transmission line, and would include circuit breakers, a power transformer, and metering and protective equipment. The substation would be placed within a 225 foot by 110 foot fenced-in area, and would have pole-mounted floodlights that would only be lit during nighttime work at the substation.

C. Once operational, the SWP would be monitored remotely, as well as inspected and monitored on-site. All site and inspection and monitoring records, including erosion control inspection, would be kept at the O & M building for a period of three years.

D. A 100 foot tall communications tower would be located next to the O & M building. The tower would be self-supporting on a spread foundation, and would not require guy wires for support.

27. The applicant submitted a SPCC Plan for the construction activities describing the actions to be undertaken to prevent and control any spills which may occur. A Spill Prevention, Control and Countermeasure Plan (SPCC) for the O & M building, turbines and substation would be completed and submitted to LURC upon completion of construction. The applicant would store and use various lubricants, solvents, and other similar materials necessary for the upkeep of equipment at the O & M building.

28. *115 kV transmission line.* Approximately 3,380 feet of above-ground 115 kV transmission line would be located within the development site. However, pursuant to 12 M.R.S.A., §685-B,1-A, the entire 115 kV line, including the areas within both the organized towns and the unorganized townships, is being reviewed by the Maine Department of Environmental Protection (MDEP) under Title 38: the Site Development Law and the Natural Resources Protection Act (pending MDEP permit numbers #L-23774-24-A-N and #L-23774-TH-B-N).

A. The 115 kV transmission line would connect to the New England grid at the existing Chester substation near Lincoln, Maine.

B. *Clearing.* Within the D-PD Subdistrict, a 3,380 foot long by 150 foot wide corridor would be cleared for the 115kV line starting at the substation, for a total of 11.6 acres, including a portion of a P-WL3 forested wetland (see Finding of Fact #38,A). The corridor width in the area of the wetland would be 135 feet.

Within the corridor, shrub vegetation up to 4 feet high would be maintained, except within access ways.

29. *Temporary activities.* Several temporary activities are proposed during construction.

A. Gravel or crushed rock needed for the project is approximately 63,300 cubic yards for the road improvements, turbine pad construction and crane assembly pad construction. The sources for this gravel would be existing gravel pits and crushed and screened bedrock removed from construction areas. All three existing pits are presently less than 5 acres in size. These three gravel pits would supply approximately two-thirds of the required gravel for this project.

B. Three existing gravel pits would be used for this project. Two are owned and operated by LSI, and located adjacent to but outside of the parcel at the north end (the so-called "T8R4 Pit" and "T8R3 Pit"), in an M-GN Subdistrict. The third gravel pit is within the southern portion of the parcel (the so-called "Borrow & Ledge Pit"), and is approximately 35 feet from the nearest existing logging road; 1,400 feet from the nearest proposed project road; 1,550 feet from the nearest stream; and 330 feet from the nearest wetland.

C. The remaining one-third of the required material would be supplied from areas where bedrock has been removed for site construction activities (see Finding of Fact #39). The removed bedrock would be crushed near the site of removal by a mobile crusher and transported to areas where it is needed. The mobile crusher can be moved using a flat-bed truck, and is approximately 70 feet long. The crusher would be located more than 100 feet from streams, wetlands, and drainage ways. Containment of secondary spills during refueling would be provided by the use of spill pads or other protective measures.

D. Concrete for the turbine foundations would be delivered to the development area by a local supplier in Lincoln. No concrete batching would be performed on-site, and as such, no wells for water to produce the concrete would be needed. Water from the wash-down of concrete trucks would be contained and not allowed to flow into waterbodies. Concrete trucks would provide their own wash-down water, and wash-down would occur with each turbine pad, which would then be backfilled.

E. Nine (9) lay-down areas for storage of equipment and parking during construction would be cleared, for a total of 15.2 acres. These areas would be re-vegetated after construction.

F. The applicant stated that the amount of water needed for dust abatement on gravel roads during construction would not be significant. Water for dust abatement would be supplied from the on-site well drilled for the O&M building.

G. Temporary office trailers would be located either within the area allocated for the O&M building or the lay-down area closest to Turbine #T1. The trailers would be set back at least 50 feet from the roads and 100 feet from streams.

H. Parking areas for workers' vehicles and portable sanitary facilities are proposed within the lay-down areas during construction. Portable sanitary facilities would be provided and serviced regularly by a commercial vendor. All porta-potties would be located at least 100 feet from streams.

30. *Meteorological towers.* Two permanent, 262 foot tall, lattice-type (18 inches on a side) meteorological towers supported by guy wires would be erected. One permanent tower would be located near turbine #T1, and the other permanent tower would be located between turbines #T18 and #T19. The total cleared area for the permanent towers would be 2.26 acres.

In addition, two temporary (approximately four months) 262 foot tall towers would be installed for site calibration. These temporary towers would be guyed lattice structures approximately 18 inches across. These towers would be located in areas that would already be cleared, thus no additional clearing would be needed for the temporary towers.

31. *Construction schedule.* Total construction time is estimated to approximately 6 months.

A. To optimize when favorable conditions occur, some nighttime construction and lighting is proposed during the installation of the turbines. The turbine blade installation is dependant on favorable wind conditions, and construction around the clock provides the greatest opportunity to take advantage of these conditions. The proposed lights would be three trailer-mounted portable flood lights per turbine location. Blade installation for no more than two turbines would occur at any one time. Lighting would be limited to the construction area, and nuisance lighting of adjacent areas would be minimized.

B. The O&M building and substation would be constructed, followed by installation of transformers, and the initial activation of turbines. Commissioning and testing the turbine generators and electrical interconnections would then occur, followed by commercial operation.

C. Permanent re-vegetation of all temporary clearings would be initiated after the facility is brought on-line.

D. Winter construction is planned for this project. For winter construction (November 1 to April 15), specialized construction erosion control plans would include, but not be limited to: doubling the rate of mulch application; stabilizing disturbed areas near structures under construction with stone; allowing no more than one acre of the site to be without stabilization at any one time; exposed areas would be limited to those areas in which work is to occur in the next 15 days and

can be mulched in one day; stabilizing mulched areas with erosion control mesh; and keeping drainage structures free of snow and ice dams. The final winter construction plan has been reviewed by State Soil Scientist (see Finding of Fact #40)

32. *Decommissioning plan.* If, after the 20 year expected life of the turbines, they are not replaced and it becomes necessary to decommission the facility, the applicant proposes to remove all above-ground structures on Stetson Mountain (including above ground poles and wires) to two feet below grade, and to grade and mulch to allow for natural re-vegetation. During decommissioning, the roads would be widened to allow for passage of heavy equipment. After removal of structures, a road 16 feet wide would be left to allow for use of the area for timber harvesting. A detailed description of the steps to be undertaken was submitted on June 22, 2007 in response to staff review comments during the review of Zoning Petition ZP 713.

    The applicant further proposed to submit a final detailed decommissioning plan and schedule no later than: (a) 60 days after the date the project ceases to generate electricity as set forth in a written notice to LURC by the applicant; or (b) if no such notice has been provided and the project has not generated electricity for six consecutive months, 60 days after the applicant receives a written request from LURC to decommission the project, unless the applicant can demonstrate to the Commission's satisfaction a plan to recommence generation of electricity.

33. *Soils.* The applicant conducted a Class C Medium Intensity soils survey throughout most the development area, except that at the proposed O & M building site, a Class B High Intensity soil survey was conducted. Slopes throughout the development area ranged from 0% to 35%. The soils in the development area consist of glacial till derived soils. Sulfidic bedrock was found to underlie the site at several locations by the geotechnical investigations (see Finding of Fact #39).

    A. Deep to very deep, moderately to excessively well drained soils included Chesuncook, Elliotsville, Monson, and Dixfield. Somewhat poorly drained soils included Colonel and Telos, both of which are very deep to bedrock. In wetland areas, poorly and very poorly drained soils included Brayton, Monarda, Burnham, and Wonsqueak.

    B. The applicant determined that the soils in the project area are appropriate for the proposed development, but noted that various erosion control and engineering design measures will be employed to accommodate site limitations including, but not limited to short distances of steep slope, seepage areas, wetlands, and drainage swales. The applicant stated that to the extent possible, the project has been designed to avoid or minimize impacts to all such areas.

34. *Phosphorous loading.* The proposed project would be located within the watersheds of the Baskahegan Lake to the east, both Hot Brook Lakes to the north, and Mattawamkeag Stream. To the west, runoff flows to a wetland that drains to Meadow Brook, then to Mattawamkeag Stream, and finally to the Penobscot River. Upper and

Lower Hot Brook Lakes are located approximately 4 miles north of the site, and Baskahegan Lake is located five miles east of the site. Meadow Brook, Little Meadow Brook, Baskahegan Stream, Pleasant Brook, the West Branch of Hot Brook, Jenkins Brook, and Webster Brook are within the watershed of the development site, but not on the parcel. Intermittent and perennial streams that flow into these streams are present within the parcel.

A. The applicant consulted with MDEP concerning the phosphorous loading to the three watersheds that would receive runoff from the project. Given the distance from the lakes and the stream, and the small area of proposed disturbance relative to the size of the watershed, MDEP did not calculate allowable phosphorus allocations for the waterbodies, concluding that instead phosphorous loading regulations could be met through the use of vegetated buffers along 75% of the project roads. The applicant proposed to include a vegetated buffer along all project roads.

B. The applicant performed phosphorous export calculations for the two watersheds that would receive the majority of the runoff (Baskahegan Lake and Hot Brook Lake). Hot Brook Lake would receive 7.9 pounds of phosphorous per year and Baskahegan Lake would receive 8.6 pounds of phosphorous per year.

35. *Erosion and sedimentation control plan (E/S Plan).* As a part of their Preliminary Development Plan, the applicant developed a draft E/S Plan that identified Best Management Practices (BMPs) to minimize soil erosion, including but not limited to, silt fencing, erosion control mix, and rock sandwich road construction. The Final Development Plan includes a detailed E/S Plan with specifications for BMPs for various soil and environmental conditions, explains the basis for their use, and provides details for their installation. The Final E/S Plan has been reviewed by the Maine State Soil Scientist for adequacy and completeness (see Finding of Fact #40).

A. In compliance with Section 10.25,M,4,c of the Commission's Land Use Districts and Standards, at least weekly and after any rainstorm greater than 0.5 inches, erosion control measures would be inspected by a general contractor certified in erosion and control practices by the MDEP. These measures would also be periodically inspected by James W. Sewall Company construction inspection personnel under the direct supervision of a licensed Professional Engineer. Further details of the inspection plan are contained in Findings of Fact #37 of this document.

B. *Revegetation.* Following construction, the outer 8 feet of both sides of the 32-foot wide ridgeline roads, lay-down areas, and most of the turbine pads would be revegetated until an 85% cover is established. Topsoil previously removed from development areas and stockpiles would be spread on areas to be revegetated and

seeded with a suitable mix of non-invasive species[3]. Alternatively, some areas would be covered with erosion control mix to prevent erosion, and allowed to re-vegetate naturally.

After completion of re-vegetation activities, the re-vegetating areas would be inspected at one, three, and six-month intervals after seeding. If eroded or poorly vegetated areas are noted during the inspections, the areas would be stabilized and reseeded. Reseeded areas would be inspected and re-seeded until an 85% vegetative cover is established.

36. *Storm water management and control plan.* At a minimum, the applicant proposes to leave a 250 foot wide stormwater buffer along the access and ridge roads, and around all turbine clearings. The shoulders of the roads would be dressed with loam, mulched, and allowed to re-vegetate naturally. Areas outside the 100 foot by 70 foot crane pads and outside the 24 foot diameter turbine foundation would be re-vegetated by spreading loam, seeding and mulching.

Impacts to site hydrology would be minimized by using storm water management BMPs such as culverts with riprap outlet protection and level spreaders. The applicant's proposal also incorporates the use of a "rock sandwich" road design that would allow surface water and ground water presently flowing or seeping from uphill areas to continue flowing under the road through a layer of coarse gravel. Rock sandwich construction would be used as appropriate in areas where there are groundwater seeps or other hydrologic conditions that warrant its application. This design is included as recommended by the Maine State Soil Scientist (reference Zoning Petition ZP 713; Hearing Exhibit #2.e.1, *"Responses to Agency Comments"*, dated June 22, 2007). The locations for the storm water control measures are shown on Exhibit #1 of the Final Development Plan application.

37. *Third-party inspection program.* The applicant would retain the services of a qualified third-party inspector to monitor compliance with the LURC permit conditions in regard to erosion and stormwater control measures during construction and until final site stabilization has been completed. The inspector would be certified in erosion and control practices by the MDEP in accordance with Section 10.25,M,4,a (1) of the Commission's Land Use Districts and Standards. The erosion and stormwater control measures would also be periodically inspected by James W. Sewall Co. construction inspection personnel under the direct supervision of a licensed Professional Engineer. The inspector would also have knowledge of erosion control practices; a degree in civil engineering or environmental science; experience in management on large construction projects; and may not be an employee, partner, or contracted consultant involved with the permitting of the project. The selection of the candidate would be subject to Commission review and approval.

The inspector's duties and responsibilities would include but not be limited to: (a) become familiar with LURC's terms, conditions and restrictions for the protection of natural resources within the project area; (b) monitor installation and maintenance

[3] MDOT's standard "Roadside Mix #2" includes Creeping Red Fescue (*Festuca rubra*), Sheep Fescue (F. ovine), Red Top (*Agrostis gigantea*), White Clover (*Trifolium repens*), and Annual Rye (*Lolium multiflorum*).

of erosion control measures; (c) monitor construction of storm water management resources; (d) monitor installation of any stream or wetland crossings; and (e) monitor final stabilization of project site. During construction, the inspector would inspect the project site at least once per week and before and after any significant rain event (greater than 0.5 inches) in compliance with Section 10.25,M,4,c of the Commission's Land Use Districts and Standards. Weekly inspection reports would be prepared and submitted to LURC staff.

38. *Environmental assessment.* Scenic, wildlife habitat, wetlands, sound, and historic resources assessments were conducted by the applicant and reviewed by the Commission for the rezoning and Preliminary Development Plan (reference Zoning Petition ZP 713, Findings of Fact #37 to #40). A summary of work done, as well as additional information and updated assessments conducted by the applicant, are presented in Sections A to E of this Finding. Final comments by reviewing agencies pursuant to the environmental assessment are contained in Findings of Fact #40 to #46 of this document.

A. *Wetland and stream impact assessment.* A total of 24,552 sf of wetland would be altered for the project, of which 1,766 square feet (sf) of P-WL3 forested wetlands and stream channels (*i.e.* P-WL1 wetlands by definition) would be permanently filled to widen existing roads and replace culverts. Approximately 18,000 square feet of P-WL3 wetland would be cleared for the 115 KV transmission line corridor within the D-PD Subdistrict, and 4,786 sf would be cleared for the road and collector line corridors. Cleared wetlands along the roads, but not within the transmission line corridors, would be re-vegetated after construction. The forested wetlands within transmission line corridors would be permanently converted from forested wetland to shrub-dominated wetland maintained to a height of up to 4 feet. The applicant would restore 1,892 square feet of wetland by removing fill from an existing land management road crossing.

(1) Impacts to areas within the D-PD Subdistrict meeting the descriptions of LURC Protection Subdistricts (*i.e.* streams and wetlands) would be minimized or avoided. Water crossings and wetland impacts would be within areas delineated on the ground by the applicant, not within areas previously mapped by LURC as P-WL or P-SL Subdistricts, or would be due to clearing for transmission line corridors (see Findings of Fact #13,B and #28).

(2) With the exception of crossings, the applicant proposed that all development would, at a minimum, meet LURC's stream setback standards, and Sections 10.27,B (Clearing) and 10.25,K (Surface Water Quality) of the Commission's Land Use Districts and Standards. A 75 foot vegetated buffer is proposed along streams, except where breached at stream crossings. Timber bridges would be used from upland to upland to avoid or minimize wetland and stream impacts.

(3) Wetlands in the development area were delineated in the fall and early winter of 2006. The development area is predominantly hardwood forested upland, with very few wetlands. Small intermittent and perennial streams were present within the wetlands.

Part of a P-WL1 Subdistrict that is a peatland classified by MNAP as Eccentric Bog (a State-listed S-3 natural plant community) is located in the southwest portion of the proposed D-PD Subdistrict. The applicant stated there would be no disturbance or activity within 500 feet of any wetlands shown on LURC's zoning map before the rezoning of the parcel to a D-PD Subdistrict, including the Eccentric Bog, and that most of the development would be more than 1,000 feet from these LURC mapped wetland areas.

(4) *Vernal Pools.* In the fall 2006, the development area was searched for potential vernal pool habitats, and 22 potential vernal pools, mostly imbedded within forested wetlands, were identified within 750 feet of the development area. In the spring of 2007, these pools were surveyed, and seven were found to contain egg masses. Only one (vernal pool #3, in wetland 7, located near the north end of Atlas Road) was identified as a significant vernal pool. This pool would be located at least 750 feet from any structure and 150 feet from the closest road disturbance caused by the project, and would not be impacted. Re-routing the road to expand the buffer would result in other wetlands being impacted.

B. *Ecological assessment.* The applicant conducted ecological studies and an impact assessment of the development area in 2006 and 2007, and reported the results to the Commission in the Preliminary Development Plan (reference Findings of Fact #37,B to #37,D, Zoning Petition ZP 713).

(1) *Ecological site description.* The proposed SWP would be located in the Eastern Lowlands Biophysical Region of Maine (McMahon 1990), which is characterized by mild summers and cool winters. The elevation of high points in the region range from 625 to 1,127 feet. The proposed turbines would be located between elevations 600 feet and 1,085 feet on Stetson Mountain.

(a) The region is predominantly coniferous forest, with deciduous-coniferous mixed forest on the higher upland ridgelines and hilltops, and an abundance of peatlands, marshes, swamps, and bogs in the lowlands. A large network of brooks, stream, and wetlands extend from the surrounding rivers and lakes to the foot of Stetson Mountain.

(b) The rezoned parcel, in particular the development area, is largely upland hardwood and early succession forest typical of the Spruce-Fir-Northern Hardwoods Forest Ecosystem, which is common and widespread throughout northern Maine (Gawler & Cutki 2005). Beech-Birch-Maple Forest (rated as secure (S5) in Maine by MNAP) is the dominant upland natural plant community on Stetson Mountain. The timber on Stetson Mountain has been harvested frequently.

(2) *Special natural areas, and state or federally listed species.*

(a) The development area was surveyed for state or federally listed plants and natural communities (rated by MNAP as S1, S2, or S3), but none were found at the site. The development area does not contain habitat likely to support the State-listed White Adder's Mouth (S1, last seen in 1988 at a location four miles from Stetson Mountain).

(b) State- or federally-listed wildlife species and habitat (as designated by MDIFW) observed in the vicinity of the project included:

(i) Bald eagles (federally and state-listed as threatened) were identified in the vicinity of Stetson Mountain. However, the development site does not contain suitable nesting or hunting habitat for bald eagle, and no nest sites have historically occurred there. MDIFW has designated essential breeding habitat for the bald eagle at sites along the Penobscot River, and other water bodies closer to Stetson Mountain. Within ten miles of the project there are eleven known nesting locations, with the closest on an island in Upper Hot Brook Lake, approximately four miles north of Stetson Mountain.

(ii) Two golden eagles and two peregrine falcons (both state-listed as endangered) were observed as migrants in the vicinity of Stetson Mountain. However, the parcel is outside these species' breeding range, and does not contain suitable habitat for nesting or hunting.

(iii) A significant amount of land in the region is classified by MDIFW as Significant Wading Bird and Waterfowl Habitat (WWH). The closest WWH to the project area is one mile northeast of the foot of the mountain.

(3) *Wildlife resources.* The project has been sited and designed to reduce the potential for adverse effects on wildlife. The potential for adverse impacts to wildlife as a result of the SWP were evaluated in respect to habitat loss, habitat conversion, disturbance effects, habitat fragmentation, and collision-related fatalities.

(a) *Disturbance and habitat conversion.* The SWP would result in a net loss of forested upland, and the conversion of some areas to herbaceous and shrub-dominated habitat (*e.g.* turbine pads, transmission line corridors), but the loss of habitat is not expected to be unduly adverse to the wildlife populations using the area. The Beech-Birch-Maple Forest in the development area has been periodically impacted in a similar way by timber harvesting and land management road construction. Long-term disturbances to wildlife may include avoidance of, or displacement from, the development area. However, the local abundance of similar habitat is likely to support the displaced species. In addition, the species that occur within the parcel, and in particular the development area, are common in Maine.

(b) *Avian and bat monitoring.* Nocturnal radar migration and morning stop-over surveys, diurnal raptor surveys, and acoustic bat surveys were conducted.

(i) *Avian migration survey results.* Songbirds migrating through the project area in the spring and fall would be largely forest species, based on the habitats available. Mean passage rates ranged from 147 (+/- 30) targets per km per hour (t/km/hr) to 476 (+/- 86) t/km/hr. Migrants flying over the site below the turbine height ranged from 13% to 22%.

(ii) *Raptor survey results.* The passage rate for raptors within the project area was low relative to other sites in the northeast. The project area is not a known raptor migration corridor. However, 63% to 74% of the raptors using the area occurred within the rotor-swept zone. The overall risk of raptor impacts due to the SWP was determined to be low because of the low overall passage rates occurring near the development area (also see Bald and Golden Eagle discussions in Section B(2)(b), above).

(iii) Bat survey results. Bat surveys documented several species in the area of the project, with the majority being from the big brown bat guild or from the genus *Myotis* (most likely little brown bat), and to a lesser extent in the red bat/eastern pipistrelle group. The latter group more often utilized habitats not near the ridgeline, such as wetlands and low elevation edges.

(c) *Avian and bat impact assessment.* Based on the average avian mortality rate due to impacts with wind turbines in the United States ranging from 0 to 1.83 fatalities per turbine per year (excluding California data), the potential avian mortality due to the SWP would be approximately 70 birds per year, which was considered to be low. The site is not a "migratory bottleneck", and other wind power facilities sited in similar habitats have had low mortality rates.

(i) Bat surveys conducted at the SWP site indicated that while some species are at risk for collision, the overall use of the area is low. It was determined that the risk of collision at this site is lower than at more southerly sites, and that any collisions that occur would most likely be common and locally abundant species.

(ii) During the public hearing MDIFW testified the data do not suggest that significant concerns for birds or bats exist, and they are comfortable moving ahead with the project, but that the applicant should consult with MDIFW regarding the design of the post-construction monitoring.

(d) *Avian and bat mortality studies.* During year one of operation, the following post-construction studies would be conducted to document injuries or fatalities at the SWP:

(i) Standardized searches during peak activity periods,
(ii) Searcher efficiency trials,
(iii) Carcass removal trials, and
(iv) Any fatalities outside the search areas will be documented.

Follow-up monitoring during years three and five would be conducted. The scope and timing of the monitoring would be based on assessments made by MDIFW of the results of the year one monitoring. A report would be provided annually to the Commission summarizing the methods used and the results of the monitoring.

(e) *Amphibians and reptiles.* Vernal pool habitats were surveyed (see Section A, above). The site was assessed based on habitat type present and

species expected to occur within these habitats, not on systematic searches. Non-breeding habitat (*e.g.* upland hardwood forest) for amphibians is common in the region (*e.g.* northern red-back salamander, American toad, gray tree frog, and wood frog). Other amphibian species may occur in the development area, but are less likely due to the distance from breeding pools, water bodies, or streams. Reptiles using the project area are expected to be predominantly snakes common to the region. Turtles are unlikely to occur in most of the project area.

(f) *Mammals*. The site was assessed for use by large and small mammals based on the types of habitat present and the species known to occur in the region associated with these habitats, as well as incidental observations made during other field surveys, but not on systematic searches (see Finding of Fact #37,B(3), Zoning Petition ZP 713).

C. *Sound assessment.*

(1) The applicant conducted a sound analysis for the Preliminary Development Plan (see Finding of Fact #40; Zoning Petition ZP 713), determined the expected sound levels from routine operation of the SWP and compared them with LURC's noise standards, in particular LURC's daytime limit of 55 decibels (dBA) for an M-GN Subdistrict. The assessment was based on the dBA predicted at receiver points along the boundary of the rezoned parcel. The analysis included all sound sources to be associated with the SWP, and the turbines operating at their maximum predicted sound levels (*i.e.* 95% of rated power).[4] Receiver points were at locations closest to multiple turbines, with receiver point #6 at the closest dwelling to the project (a seasonal camp located 2,635 feet from the southernmost wind turbine).

The sound levels at full operation of the SWP at the D-PD Subdistrict boundary would be between 44 dBA and 52 dBA[5]. At the nearest dwelling, the predicted sound level would be 44 dBA. At four of the next closest residences (at distances of 3,308 feet to 5,572 feet) the sound level would be less than 45 dBA.

(2) The Commission's standards do not specify noise level limits for construction between 7 am and 7 pm (Section 10.25, F,1,b(1)of the Commission's Land Use Districts and Standards). For the SWP, most construction would occur between 7 am and 7 pm, except during periods of rotor installation when nighttime work may be necessary (see Finding of Fact #31,A). Any construction activities taking place outside of that period would be limited to minor earth moving or installation of rotor assemblies under low wind conditions. Estimated sound levels due to nighttime construction would be 54 dBA at the nearest property boundary location to the areas where nighttime construction would occur. Construction noise would be mitigated by compliance with federal regulations limiting noise from trucks and portable

[4] This occurs with a wind speed of ten (10) meters per second (22.4 miles per hour).

[5] For reference, sound produced by song birds is typically 45 to 50 dBA, a car or light truck 100 feet away or a conversation 5 feet away is 65 dBA.

compressors, and by ensuring that equipment and sound muffling devices are kept in good working condition.

(3) In accordance with Condition #2,C(16) of Zoning Petition ZP 713, the applicant proposed to conduct pre- and post-construction sound level monitoring at the most sensitive receptors at the southern end of the project within one year of commercial operation commencing. The results of the monitoring would be submitted to LURC within 30 days of completion of the field work. Protocols for the pre- and post-construction sound monitoring were submitted with the Final Development Plan application.

D. *Historic and archaeological resources.*

(1) *Historic resources*

(a) *Background.* The applicant's *Historic Resources Report* [6] submitted with the Preliminary Development Plan identified five architectural properties within ten miles of the project that are either on the National Register of Historic Places (as designated by the National Park Service) or eligible for listing:

- Kingman House, Main Street, Kingman, 10 miles (National Register listed)
- Springfield Congressional Church, Route 6 in Springfield, 10 miles
- Union Hall, Danforth, more than 7 miles
- Railroad Station, Danforth, more than 7 miles
- Trackside Warehouse, Danforth, more than 7 miles

(i) The report concluded there would be no direct impacts to historical architectural resources as a result of the SWP, but recommended that further evaluation be done to determine if there are indirect impacts to the one National Historic Register listed property and four potentially eligible properties as a result of the transmission line, as the report reviewed by The Maine Historic Preservation Commission (MHPC) only addressed the rezoned parcel. The applicant stated in its visual assessment that none of these structures will have a view of the SWP (see Finding of Fact #39; Zoning Petition ZP 713).

(ii) MHPC commented on the applicant's Architectural Survey for the rezoned parcel, concurring with most of the findings, but requesting further information regarding the indirect visual effect of the SWP on the four properties potentially eligible for the National Historic Register:

- House, Lee Road, Springfield, Survey Map No. 108
- Springfield Fair buildings, Springfield, Survey Map No. 117
- House and Barn, 166 North Road, Carroll Plantation, Survey Map No. 143
- Corner Stone Inn, 7 Depot Street, Danforth, Survey Map No. 250

[6] The Historic Resources Report was conducted in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800).

(b) In response, the applicant completed a *Historic Architectural Effect Assessment* report examining those four properties, and submitted it for review to MHPC on October 31, 2007. The report assessed whether the four properties would have indirect visual impacts from the SWP. The report concluded that none of the listed properties would have a view of the SWP, and there would be no impact. MHPC concurred with the applicant's conclusions.

(2) *Archeological Survey.*

(a) *Background.* For the Preliminary Development Plan, the applicant evaluated the development area to determine if quarrying activity for stone tools had occurred, even though they had concluded it had low sensitivity for a Pre-contact camp site. The Euro-American archeological survey revealed two 20th century logging camps[7] within the 1943 U.S. Geological Survey quadrangle where the SWP would be located, but neither location would be disturbed by the project. MHPC reviewed the scope of work and conclusions and found them to be acceptable (see letter, dated October 19, 2007).

(b) As a follow-up to the archeological report of the turbine area that was submitted with the Preliminary Development Plan, the applicant is in the process of completing a survey of the transmission line, which potentially has high sensitivity for stone tool quarry sources, in particular where the line would cross over rivers or streams. The applicant is coordinating with the MHPC in the design and scope of the study. The study will be submitted to MHPC for review upon completion.

E. *Visual assessment.* For the Preliminary Development Plan, the applicant conducted a visual assessment of the proposed project. In addition to the Commission's standards in Section 10.25,E,1 on scenic character, the applicant used Chapter 315 of the MDEP's regulations and the Foundations for Visual Project Analysis (Smardon, Palmer and Felleman, 1986) to select factors for evaluating scenic quality and the visual impact. The evaluated viewshed was a ten-mile radius around the project. The elements of the landscape, including waterbodies, scenic and public resources, and man-made changes within that radius were identified. Photo-simulations were created to illustrate the anticipated change to the landscape, as seen from the identified public viewpoints (see Finding of Fact #38, Zoning Petition ZP 713).

(1) The majority of the land surrounding the parcel is privately owned and managed for timber. Although only about 500 feet above the surrounding terrain, at seven miles long the Stetson Mountain Ridge is the most pronounced local landform. The project would be visible, but partially blocked, from Baskahegan Lake, Upper and Lower Hot Brook Lake, Mud Pond, and Baskahegan Stream. Small towns and villages, as well as scattered residential dwellings, meeting houses, churches, and communication and meteorological towers, and six public properties are located within the project viewshed. The closest National Natural Landmarks (as designated by the

[7] Hobbs and Muncey

National Park Service) are Orono Bog and Passadumkeag Marsh, 33 or more miles from the site.

(2) The project would be visible from the closest residence, a private seasonal camp in Prentiss Township 0.5 mile from the project; ten residential dwellings on Tar Ridge Road in Prentiss Township (up to 3 miles); and two dwellings on Tolman Hill, in Carroll Plantation (4 miles). The remaining 35 residential dwellings within the survey area are greater than 4 miles away (often defined as the background[8]).

(3) The viewshed area experiences light to moderate recreational use. Within the project viewshed, Baskahegan Lake, Crooked Brook Flowage, and East Musquash Lake are rated as Significant for fisheries resources. As such, fishermen may have views from lakes, ponds, and rivers throughout the study area. Hunters using the area may be able to see the SWP. On Baskahegan Lake, boaters would have views from a privately owned boat ramp at a distance of nine miles, and from most of the lake. Campers on Round (Bud) Island and Bear Island would have views of the project. Intermittent views would occur from Lindsay Brook Stream on the Baskahegan Stream Trip at a distance of five miles.

There are no designated hiking trails noted within the project viewshed. Users of snowmobile and ATV trails following the east side of Stetson Mountain and crossing over the parcel would have views of the SWP during the winter, as well as when crossing the lakes. Motorists driving the Million Dollar View Scenic Byway (Route 1) [designated by the Maine Department of Transportation in 1971] would be able to see the SWP intermittently from the Byway, but not from the scenic overlooks.

(4) While the SWP would have some visual impacts on scenic and recreational resources within the project viewshed, the impacts would not be unduly adverse. Throughout the viewshed, most of the views are partially or completely blocked by topography or forest cover, there and would not be an unreasonable interference with existing scenic or aesthetic uses of the area. It was determined by the Commission during the review of Zoning Petition ZP 713 that there would not be an undue adverse effect on the scenic character of the land within the viewshed of the wind project as a result of the proposed SWP.

39. *Geotechnical investigation.* A geotechnical investigation using data from 10 test pits and 42 test borings was performed by S.W. Cole Engineering, Inc. described subsurface conditions along proposed roadways and at turbine sites.

A. The test pits showed 0.2 to 1 foot of organic topsoil/forest duff overlying native silty, sandy gravel with varying amounts of cobbles or weathered rock, with some silty sand. The depth to bedrock ranged from 1.7 feet to 8.5 feet. Groundwater was not encountered in the test pits.

---

[8] TJD&A's report, Section 3M of the petition, defines, uses, and cites distance zones, and refers back to Landscape Aesthetics: A Handbook for Scenery and Management, USDA Forest Service, Agricultural Handbook Number 701, December 1995.

B. Rock cores showed sulfidic rock, described as black sulfidic mudstone, at potential as many as 22 of the 40 geotechnical boring sites. Sulfidic mudstone, if crushed and re-used as fill, has the potential to create acidic runoff. Upon detection of this situation, the applicant met with MDEP and agreed to a management and mitigation plan, as documented in a letter to LURC dated December 13, 2007. The plan, which was approved by the State Soil Scientist and MDEP, includes: geologic mapping to identify areas of this type of bedrock, including further consultation with MDEP; conducting Acid/Base test sampling; identification of isolation/encapsulation areas to stockpile the tailings; and baseline sampling of wetlands, seeps, and streams in the development area to analyze existing and future water quality. The applicant presented tables showing examples of predicted water quality relative to bedrock acidity in surface mining operations, and the test results for rock samples for the site. Only one of the 22 boring sites was found to contain bedrock likely to be a net producer of acidic runoff.
   (1) Standard mitigation measures used to handle acid runoff from sulfidic rock were proposed by the applicant, including: encapsulation or capping, aggregate blending, stormwater containment and treatment, natural treatment associated with vegetation and runoff controls. The amounts and types of treatments to be used at any particular location on this site will depend on the acid generation potential (AP) and the tonnage of material exposed to weathering.
   (2) The proposed mitigation would include on-going monitoring during and after construction, including monitoring stormwater basins and drainages during construction, and monitoring drainages during site operations after landscaping is completed.

C. On-site glacial till soils and rock borrow generated from excavation and blasting could be used as embankment fill, but the suitability of this material would be highly dependent on weather conditions and soil moisture content at time of use because sulfidic rock has the potential to produce acid runoff. The plan outlined above would be used to assess whether the bedrock blasted at a particular site can be re-used, and if so how it would be handled and any runoff controlled.

D. The geotechnical report also advised that the soils are sensitive to moisture and frost, and may lose strength and require drying and/or thawing before construction activities continue. Construction activity during wet and cold weather should be undertaken in a manner that considers the construction schedule relative to frozen soils; and if foundation construction takes place during freezing conditions, sub-grades must be protected from freezing. Finally, the report recommended that either filling be limited during times of frost or alternative materials having better drainage characteristics and that are non-frost susceptible be used. The applicant has developed its construction plans based on these recommendations in the geotechnical report.

Review Comments

40. *Maine State Soil Scientist.* The Maine State Soil Scientist reviewed the application and had no objections to the project as proposed in the latest revision (dated December 13, 2007). The State Soil Scientist further found the management plan for the handling of acidic bedrock (dated January 2, 2008) to be acceptable, and stated that the plan and subsequent reporting should be required as a condition of the permit.

41. *Maine Department of Environmental Protection (MDEP).*

A. In respect to phosphorus loading, the MDEP Division of Watershed Management commented during the review of the Preliminary Development Plan that because the applicant does not own the land and does not have development rights outside of their lease agreement, rather than attempt to calculate the phosphorous allocation, it would be simpler to require that the MDEP's Chapter 500 Stormwater Rules General Standard apply. MDEP also recommended a vegetated buffer along 75% of the road; and if the road is super-elevated then any permit should be conditioned to prevent the road being graded with a crown in the future.

B. The MDEP Division of Land and Water Quality Mining Coordinator reviewed the blasting plan and the geotechnical report. The blasting plan was found to be acceptable. In respect to the geotechnical investigation, MDEP commented that because the rock underlying portions of the development area contains sulfides, acid rock drainage is an issue that the applicant must address prior to construction activity. Acid rock drainage is caused by the natural oxidation of sulfide minerals contained in the rock that are exposed to air and water. MDEP's recommendations included:

(1) The rock should be tested to determine whether it will generate acid drainage by using an Acid-Base Accounting test conducted on samples from each boring location. Depending on the spacing of the borings, additional borings may need to be drilled to determine continuity and extent of the sulfidic rock unit. In lieu of additional drilling, a geophysical survey may be used to determine sulfide minerals.

(2) Based on the test results, the applicant should determine the amount of rock that may be reactive and develop a management plan that contains mitigation and control measures to prevent the generation of acid drainage at the site.

(3) The applicant should establish a baseline for surface water quality for streams that may be susceptible to drainage impacts from construction activity. Groundwater seeps in the vicinity of the proposed construction site should also be tested.

(4) The ledge source in the gravel pit identified as "Borrow & Ledge Pit", located directly south of the proposed project should be tested to determine if it is reactive and an acid producer due to its proximity to the sulfidic rock.

(5) As a general rule, reactive rock should not be re-used at the site for fill, road construction, riprap or lay-down areas. Crushing reactive rock increases the

amount of surface area available for oxidation, which in turn exacerbates the acid drainage issue.

MDEP subsequently reviewed the applicant's draft acidic rock management plan (dated January 2, 2008) and test results, and approved of the plan as proposed.

42. *Maine Historic Preservation Commission (MHPC).*

A. MHPC concurred with most of the findings of the Architectural Survey submitted by the applicant for the Preliminary Development Plan, but requested further information on the effect of four potentially eligible properties. For the Final Development Plan, the applicant completed a *Historic Architectural Effect Assessment* report examining those four properties, and submitted it for review to MHPC on October 31, 2007. MHPC completed its review and concurred with the applicant that there would be no direct or indirect impacts on the four subject properties.

B. For the Final Development Plan, the applicant submitted an archaeological sensitivity analysis report, which included a "walkover" archaeological survey of the rezoned parcel, which stated that no archaeological locations would be disturbed by the proposed project. MHPC reviewed the scope of work and conclusions, and found them to be acceptable (see letter, dated October 19, 2007).

43. *Maine Department of Transportation (MDOT).* MDOT reviewed the application and had no comments other than to generally state that the applicant must obtain all required transportation permits, for example for oversize loads, road postings, and entrance permits.

44. *Maine Department of Health and Human Services/Division of Health Engineering (DHHS/DHE).* DHE found that the proposed on-site sewage disposal system design meets or exceeds the requirements of the Subsurface Wastewater Disposal Rules, CMR 241.

45. One letter from a member of the public was received, commenting in respect to LURC's noise standards.

Conclusions

Based on the above Findings, the Commission concludes:

1. The proposal meets the provisions of 12 M.R.S.A., Section 685,B(4), the criteria for approval of development. Adequate provision has been made for:

A. Financial and technical capacity;

B. Loading, parking, and circulation of traffic in, on, and from the site, and the project will not will not cause congestion or unsafe conditions on existing or proposed transportation arteries or methods; and

C. Fitting the proposal harmoniously into the existing natural environment to assure there will be no undue adverse effect on existing uses, scenic character, and natural and historic resources in the area likely to be affected by the proposal.

In addition, 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."

The proposal is "otherwise in conformance with [12 M.R.S.A. chapter 206-A], and the regulations, standards, and plans adopted pursuant thereto." In reaching these conclusions, the Commission has also considered evidence provided by the applicant in regard to "the economic benefits of the proposal as well as the impact of the proposal on energy resources." The supporting details are presented in Conclusions #3 through #7, below.

2. The proposal meets the provisions of Section 10.21,G,10 of the Commission's Land Use Districts and Standards for a Final Development Plan. Specifically:

A. A Final Development Plan with all required exhibits was filed within 18 months of the D-PD Subdistrict designation on November 22, 2007.

B. The project is proposed to be constructed in one development phase, with construction planned to start within 24 months of the date of the approval of this permit.

C. Setbacks to the D-PD boundary would be more than 400 feet (reference Section 10.21,G,2).

D. The Final Development Plan generally conforms with the approved Preliminary Development Plan, with the following changes:
(1) A 23% reduction in the amount of temporary clearing proposed;
(2) A 35% reduction in the amount of permanent clearing proposed;
(3) An increase of 1,766 square feet the wetland and stream impacts associated with road improvements and crossings, and an increase in the amount of clearing in wetlands;
(4) A 38% reduction in the amount of road mileage proposed; and
(5) An increase in the size of the O&M building.

The Commission incorporates its findings and conclusions contained within the approved Preliminary Development Plan, except to the extent they are inconsistent with the findings and conclusions contained herein.

3. The proposal meets the standards of the relevant sections of Section 10.25 of the Commission's Land Use Districts and Standards. Specifically:

   A. *Section 10.25,C - Financial and technical capacity.*
      (1) The applicant demonstrated adequate financial capacity to construct and operate the proposed SWP by submitting evidence of a commitment to fund the project from UPC Wind in the form of a letter from the company president stating that funding would be provided for the development and operation of the project. The applicant also submitted the *Consulting and Administrative Services Agreement* for this project, dated November 1, 2006, which is signed by UPC Wind Management. Finally, the applicant submitted a proposed template for an irrevocable standby letter of credit to be used as the financing mechanism for decommissioning (see Condition #13, below).
      (2) The applicant demonstrated adequate technical capacity to construct and operate the proposed SWP by supplying summaries and resumes for its key personnel and consultants that show the appropriate background and experience. In addition, the parent companies, UPC Wind and UPC Wind Management, LLC, have experience in developing and siting three other wind power projects in North America, one of which is in Maine. Finally, the general contractors selected for this project have had previous experience constructing a wind power project in Maine and electrical infrastructure.

   B. *Section 10.25,D – Vehicle circulation, access, and parking.* The proposed parking, access routes and circulation of traffic associated with site development meet the provisions for avoiding congestion and safeguarding against hazards along existing roadways and within the project area, provided the applicant obtains all necessary permits from the Maine Department of Transportation, such as road entrance permits, and abides by the terms of those permits.
      (1) The applicant is responsible to assure that there is adequate site distance for construction vehicles leaving or entering the site onto public roads or private roads used by the public, and that the heavy equipment coming to and leaving the site does not cause an unsafe traffic condition or congestion. Safe conditions should be ensured by the use of informational signs, clearing to ensure site distance, and limitations on the use of the southern access point from Tar Ridge Road.
      (2) To assure compatibility with residential character of Tar Ridge Road, the Commission finds that heavy equipment entering and leaving the development area to deliver the turbines and during construction should use the north route from Route 169 to Atlas Road as the primary access point. The southern access point should be used only for light vehicle traffic, and only for concrete trucks servicing the southern end of the turbine string during construction or infrequently for heavy equipment leaving the site (see Finding of Fact #18).

   C. *Section 10.25,E – Scenic character, natural and historic features.* The proposed development would not have undue adverse impacts on scenic, natural or historic features.

(1) For the Preliminary Development Plan, the applicant conducted a visual assessment of the proposed SWP with respect to Section 10.25,E,1 of the Commission's Land Use Districts and Standards; Chapter 315 of the MDEP's regulations; and the *Foundations for Visual Project Analysis* (Smardon, Palmer and Felleman, 1986) to select factors for evaluating scenic quality and the visual impact. No additional evaluation of the potential for scenic impacts by the SWP was conducted for the Final Development Plan. It was concluded by the Commission during the review of Zoning Petition ZP 713 that the proposed SWP would not have an undue adverse effect on the scenic character of the land within the viewshed of the project.

(2) During the review of the Preliminary Development Plan, the Commission also concluded that there would not be an undue adverse impact to natural features as a result of the proposed SWP. The habitat and species present at the development area are common in Maine, and any impacts to habitat that would occur as a result of the SWP would not be undue.

(a) The applicant and the MNAP found that there were no state or federally listed S1 or S2 plants or natural communities within the development area, or other significant natural resources of concern that would be directly impacted, with the exception of wetland and stream impacts (see Conclusion #3,J, below, for discussion of wetlands, streams, and vernal pools).

(b) While several state-listed birds were observed flying over the site, the development area does not contain habitat likely to support state or federally listed species. The pre-construction avian and bat monitoring established that the operation of the SWP at this site has a low potential to cause an undue level of mortality. However, as recommended by MDIFW, the applicant has proposed to monitor the site for avian and bat mortality, and to report to the Commission and MDFIW the results of such monitoring annually for review (see Conclusion #6, below).

(c) Because the development area has already been fragmented by land management roads and impacted by on-going timber harvesting, the project would not constitute a significantly increased level of long-term disturbance.

(3) The archaeological and historic architectural reports submitted by the applicant for the parcel showed that no resources would be disturbed by the project. MHPC reviewed the reports and concurred that no disturbance would take place and that none of the resources would be impacted. However, after review of the applicant's initial historic report, MHPC requested further information regarding the indirect visual effect of the SWP on four properties potentially eligible for the National Historic Register. In response, the applicant completed a *Historic Architectural Effect Assessment* report concluding that because none of the four listed properties would have a view of the SWP, there would be no impact. MHPC reviewed the report and concurred with the applicant.

Based on the survey work completed by the applicant and the review by MHPC, the Commission concludes that the proposed SWP will not have an undue adverse impact on historic or archaeological resources.

D. *Section 10.25,F - Noise and Lighting.* The applicant has made adequate provisions for noise and lighting.

(1) *Noise.* For the Preliminary Development Plan, the applicant conducted a sound analysis, which determined the expected sound levels from routine operation of the SWP, and compared them with LURC's noise standards, specifically LURC's daytime limit of 55 dBA for an M-GN Subdistrict. The predicted sound level at full operation of the SWP at the D-PD Subdistrict boundary was estimated to be between 44 dBA and 52 dBA. At the nearest dwelling (approximately 0.5 mile), the predicted sound level is 44 dBA. At four of the next closest residences (at distances of 3,308 feet to 5,572 feet) the predicted sound level is less than 45 dBA.

(a) No additional sound analysis was conducted by the applicant for the Final Development Plan. In accordance with Condition #2(C)16 of Zoning Petition ZP 713, the applicant proposed to monitor pre-construction ambient sounds and to monitor and report sound produced during operation at the most sensitive receptors at the southern end of the project.

(b) The Commission's standards do not specify noise level limits for construction between 7 am and 7 pm (reference Section 10.25, F,1,b(1)of the Commission's Land Use Districts and Standards). For the SWP, most construction would occur between 7 am and 7 pm, except during periods of rotor installation when nighttime work may be necessary (see Finding of Fact #31,A). Any construction activities taking place outside of that period would be limited to minor earth moving or installation of rotor assemblies under low wind conditions.

(c) The Commission concludes that the applicant's proposal for pre- and post-construction sound monitoring and reporting is appropriate. The results of the sound monitoring must be reported to the Commission quarterly for the first year of operation, after which time the results will be reviewed by the Commission to determine if any mitigation of noise is necessary, and whether the monitoring must be continued.

The Commission also concludes that during operation, at the D-PD Subdistrict boundaries the sound level must not exceed 55 dBA. If the sound level at the D-PD Subdistrict boundaries during operation exceeds 55 dBA, the applicant must propose remedial measures to the Commission for review and approval. During construction, from 7 am to 7 pm sound levels may be as needed to complete the construction. From 7 pm to 7 am (nighttime) during construction, sound levels must not exceed 55 dBA at the parcel boundary, except as needed for safety signals, warning devices, emergency pressure relief values, other emergency activities, and traffic on roadways.

(2) *Lighting.* The applicant submitted a revised lighting plan based on their updated turbine location plan for review and approval by the FAA. The

Commission concludes that the FAA required lighting plan is necessary for aviation safety, that the plan takes into account the lessening of potential for avian impacts, and that the amount of lighting to be used has been minimized to the extent possible. Therefore, the turbine lighting as proposed will not cause an undue adverse impact. All recommendations made by FAA must be followed.

(a) The applicant proposes external lighting on the O & M building that would be motion sensitive or manually controlled. Lighting that is activated by motion sensors is exempt from the lighting standards under Section 10.25, F,2,a through d. However, if the applicant installs manually controlled exterior lighting, it must be full cut-off, be designed, located, installed and directed so as to illuminate only the target area, and be turned off after business hours.

(b) Some nighttime construction and lighting is proposed since the tower erection phase is dependant on favorable wind conditions, and construction around the clock provides the greatest opportunity to take advantage of these conditions. The proposed lights for nighttime work would be three trailer-mounted portable flood lights per turbine location, no more than two turbines would be erected at any one time, and lighting would be limited to the construction area so that nuisance lighting of adjacent areas would be minimized.

The Commission concludes that nighttime lighting may be necessary to construct the turbines, but that the periods of nighttime lighting must be no longer than necessary to take advantage of favorable weather conditions.

E. *Section 10.25,G - Soil suitability.* The applicant conducted a Class C Medium Intensity soils survey throughout most the development area, except that at the proposed O & M building site, a Class B High Intensity soil survey was conducted. Based on these surveys, the applicant determined that the soils in the development area are appropriate for the proposed development, and noted that various erosion control and engineering design measures will be employed to accommodate site limitations. For example, the "rock sandwich" road design, as recommended by the Maine State Soil Scientist, would be used to minimize the impacts to the subsurface hydrology at the site in areas where there are groundwater seeps or other hydrologic conditions that warrant its application. The final development plan was submitted to the State Soil Scientist for review (see Finding of Fact #40).

The Commission concludes that to the extent possible, the project has been designed to avoid or minimize impacts to sensitive areas and resources. If carried out according to the specifications and adjustments as prescribed by the State Soil Scientist's review of the Final Plan, the proposed project would meet the Commission's provisions for soil suitability.

F. *Section 10.25,H - Solid waste disposal.* The applicant has made adequate provision for disposal for site-generated construction debris and solid wastes. The

general contractor will handle the solid waste removal during construction. Waste concrete material would be used for fill for the road and turbine pads, and concrete truck wash-down would be contained within each turbine pad and not allowed to flow into waterbodies. The solid waste (*i.e.* stumps) created by clearing would be ground and used on-site in erosion control mix, buried in place within roads or turbine pads, or disposed of at the proposed one acre stump dump. After construction, the small amount of solid waste generated at the O&M building would be disposed of using the services of Pine Tree Waste, Inc.

G. *Section 10.25, I - Subsurface waste water disposal.* The applicant has made adequate provision for subsurface waste water disposal. A subsurface waste disposal system consisting of a regular concrete 1,000 gallon treatment tank and a 1,500 square foot leach field would be installed at the O&M building. The system was designed by a licensed site evaluator in compliance with Maine's Subsurface Wastewater Disposal Rules, and the HHE-200 Form submitted with the application was reviewed and approved by DHHS/DHE.

H. *Section 10.25, K – Phosphorus control.* The applicant consulted with MDEP concerning the allowable phosphorous loading to the three watersheds that could receive runoff from the project. Given the distance from the lakes and the stream, and the small area of the proposed disturbance relative to the size of the watersheds, MDEP concluded during the review of Zoning Petition ZP 713 that phosphorous loading regulations could be met through the use of vegetated buffers along 75% of the project roads. The applicant proposed to include a 250-foot wide vegetated buffer along all project roads.

In addition, the applicant performed phosphorous export calculations for the two watersheds that would receive the majority of the runoff (Baskahegan Lake and Hot Brook Lake). Hot Brook Lake would receive 7.9 pounds of phosphorous per year and Baskahegan Lake would receive 8.6 pounds of phosphorous per year. The Final Plan application was sent to the MDEP for review, but no concerns were expressed. The comments made by the MDEP in the review of the Preliminary Plan are the agency comments of record regarding phosphorus loading and mitigation for this project. The 250 foot buffer, used in conjunction with the Best Management Practices (BMPs) for MDEP's Storm Water General Permit, will adequately control phosphorus runoff from this site.

I. *Section 10.25,M – Erosion and sedimentation (E/S) control plan.* The applicant has made adequate provision for erosion and sedimentation control. As a part of the Preliminary Plan, the applicant developed a draft E/S Plan which identified BMPs to minimize soil erosion, including but not limited to silt fencing, erosion control mix, and rock sandwich road construction. The Final Development Plan includes the detailed plans for these measures, with specifications identifying appropriate BMPs for various soil and environmental conditions, explains the basis for their use, and provides details for their installation.

(1) The applicant consulted with the Maine State Soil Scientist in developing the final E/S plan. Specifications and adjustments recommended by the State Soil

Scientist were made to the engineered plans for the project. The final E/S Plan meets the Commission's standards for erosion and sedimentation control plans.

(2) The applicant has made adequate provision to monitor and mitigate any acidic runoff from the use of the crushed sulfidic rock by conducting testing of the bedrock before using as fill, testing the water quality of receiving streams and wetlands, using non-acidic material to the extent possible, and providing for measures to be employed that would adequate control the runoff (see Findings of Fact #39 and #41,B).

(3) *Third-party inspection.* In accordance with Section 10.25,M,4,a of the Commission's Land Use Districts and Standards, third party on-site inspections of erosion and storm water control measures, and any remedial measures taken, must be implemented when the ground is frozen, saturated, or the area disturbed by the project would be one acre or more. The applicant submitted a proposed third-party inspection plan that meets the requirements of the Commission under Section 10.25,M,4 (see Finding of Fact #37). The name of the individual or firm selected by the applicant for third-party inspection must be submitted to the Commission for review and approval.

J. *Section 10.25,P – Wetland alterations.* The applicant worked with LURC staff, MDEP, and the ACOE in regard to the wetland impacts that would result from the two sections of the project. As a result of discussions with ACOE and MDEP regarding the 115 kV transmission line, the wetland alterations proposed in the Final Plan have increased from the amounts proposed in the Preliminary Plan. LURC's wetland impact assessment is limited to the wetland impacts within the D-PD Subdistrict. The wetland impacts proposed by the applicant within the development area constitute a Tier 2 wetland review because the amount of alteration would exceed 15,000 sf, but would be less than 43,560 sf (the P-WL3 wetland alteration would exceed 15,000 square feet (sf), and 789 sf P-WL1 wetland impact would be for road crossings). The applicant has provided evidence that all wetland impacts proposed within the D-PD Subdistrict have been avoided or minimized to the greatest extent possible. The proposed wetland impacts would not require a functional assessment or compensation.

(1) The total amount of all temporary and permanent wetland impacts proposed within the rezoned parcel to construct the SWP would be 24,552 sf, of which 789 sf would be stream channel impacts (P-WL1) and 23,763 sf would be P-WL3 wetland alterations: 977 sf would be P-WL3 fill for roads; and 22,786 sf would be temporary clearing or permanent clearing of vegetation taller than 4 feet within the transmission line corridors, except as needed for access ways. The applicant has also proposed to restore 1,892 sf of stream channel previously altered by the land management road.

(a) The Commission's Land Use Districts and Standards provide that water crossings by roads conducted according to standards may be allowed without a permit in the zones (M-GN, P-SL2 and P-WL) that were present at this site before the parcel was rezoned. In addition, Section I,C,1,c of the Commission's *Wetland Compensation Guidelines* clarifies that road

and utility line crossings are exempt from any requirement for compensation.

(b) Section 10.25,P of the Commission's Land Use Districts and Standards specifies that for P-WL2 or P-WL3 wetland impacts of 20,000 sf or larger, compensation may be required. The proposed P-WL3 wetland impacts would be more than 20,000 sf, but only 977 sf of this amount would be a loss of wetland by fill. The reminder of the alteration would be from converting portions of forested wetland to shrub-dominated, but most of these wetlands' functions would not be lost. While the amount of wetland alteration exceeds LURC's threshold of 20,000 sf of P-WL3 wetland alteration that triggers the requirement for compensation, the minimal loss of wetland function because of the nature of the alteration precludes the need for compensation. Section 10.25,P,2,e(2) of the Commission's Land Use Districts and Standards provides that the requirement for a functional assessment or compensation may be waived if the impact to wetland functions will be insignificant. It should also be noted that the applicant has proposed to restore 1,892 sf of P-WL1 wetland.

(c) Any access ways located in the cleared P-WL3 wetlands within the transmission line corridors should be limited to only what is necessary to allow maintenance of the line, but should not involve permanent fill, and should not provide access across the wetland by recreational users.

(2) Except as provided for within this Final Development Plan Permit, no additional impacts to wetlands located with the D-PD Subdistrict are allowed, except as may be provided for in Section 10.21,G,10,c of the Commission's Land Use Districts and Standards.

Although altering up to 4,300 sf of P-WL2 or P-WL3 wetland is allowed without a permit in LURC's Chapter 10, in this case, all additional wetland impacts would not be reviewed as separate impacts, but would be reviewed cumulatively with the proposed alterations as a single and complete project. Any additional wetland impacts must meet the wetland alteration standards in Section 10.25,P.

4. The proposal meets the minimum dimensional requirements of Section 10.26 of the Commission's Land Use Districts and Standards, except as noted below:

A. *Section 10.26,D – Minimum setbacks.* For development within a D-PD Subdistrict, except for good cause shown, all structures must be set back 400 feet from the property boundary lines. Minimum setbacks within the D-PD Subdistrict may be as determined by the Commission, except that all structures and activities must meet the minimum set back requirements from standing and flowing bodies of water in Section 10.26,D,1 (at least 100 from the normal high water mark (nhwm) of a minor flowing water, a standing body of water less than 10 acres in size, and the upland edge of a P-WL1 wetland; or at least 150 feet from the nhwm of a major flowing water and a standing body of water 10 acres or more in size).

(1) The proposed temporary trailers, parking areas, and lay-down areas may be allowed within the D-PD Subdistrict because they would be located within the construction area, and are a necessary part of the construction process. Locating these activities as close to the road would minimize the total amount of clearing required for the project and would not cause an undue adverse impact (reference Sections 10.26,G,2 and 11 of the Commission' s Land Use Districts and Standards). The setback from the ridgeline road of the temporary trailers and parking areas during construction may be adjusted as needed on-site, except that these should not be located and utilized in a manner that will pose a threat to traffic flow within the site, and should be set back from the traveled road surfaces at least 50 feet.

(2) Other than crossings for roads and transmission lines, all temporary and permanent activities must be set back, at a minimum, 100 feet from stream channels. The 100 foot stream and P-WL1 wetland setback must be maintained to assure vegetated buffers are not compromised, except as needed to meet legal requirements for the transmission line corridors.

B. *Section 10.26,F - Dimensional requirements, maximum building height.* The proposed turbines have a hub height of 262 feet and rotor diameter of 253 feet. At the extended tip of the blade, each turbine would be 389 feet high, which exceeds the maximum building height of 100 feet as provided for commercial or industrial buildings in Section 10.26,F,1,b. However, although the base is 13.5 feet across due to the overall size of the structure, the turbines are essentially structures which contain no floor area (such as chimneys, towers, ventilators and spires). The Commission may allow such structures which exceed the height limit of 100 feet with a permit. Additionally, the Commission concluded in Zoning Petition ZP 713 that the proposed SWP would not have an undue adverse effect on the scenic character of the land within the viewshed of the project (see Conclusion #3,C (1), above).

5. The proposal will meet the provisions of the relevant sections of Section 10.27 of the Commission's Land Use Districts and Standards. These activities as proposed may be allowed within the D-PD Subdistrict because they will not cause an undue adverse impact. Specifically:

A. *Section 10.27,B – Clearing.* The clearing proposed would meet the provisions of Section 10.27,B of the Commission's Land Use Districts and Standards. A 75 foot wide vegetated buffer is proposed along streams, except where breached by timber bridges from upland to upland used for crossings to avoid or minimize wetland and stream impacts. In addition, all structures and filling and grading would be set back at least 100 feet from streams. Finally, the majority of the area to be temporarily cleared for construction would be re-vegetated, with only 21 acres of the 4,800 acre parcel remaining permanently cleared.

B. *Section 10.27,C - Mineral extraction.* The applicant stated that three existing gravel pits would be used for this project. Over the amount of fill that would be

obtained by crushing bedrock material cut from other areas of the project, the additional gravel needed would be approximately 63,300 cubic yards for the roads, turbine construction, and crane assembly pad construction.

(1) The two gravel pits that are owned and operated by LSI, and located adjacent to the project site, but outside the north end of the rezoned area (the so-called "T8R4 Pit" and "T8R3 Pit") are less than 5 acres in size and located in a M-GN Subdistrict. If the use of each pit for this project would cause it to exceed 5 acres, its use must be permitted by LURC. Additionally, these gravel pits must be in conformance with the provisions of Section 10.27,C of the Commission's Land Use Districts and Standards.

(2) The third gravel pit is within the southern portion of the rezoned area, approximately 35 feet from the nearest existing logging road; 1,400 feet from the nearest proposed road; 1,550 feet from the nearest stream; and 330 feet from the nearest wetland. This gravel pit is included in the Final Development Plan and must meet the provisions of Section 10.27,C,2 for mineral extraction operations. In addition, any increase in acreage due to the use of this pit for this project should be reported to the Commission. After construction, if this pit is to continue to be used by the applicant and LSI for road maintenance, then no more than 15 acres may be in open and in un-reclaimed condition at any one time.

(3) MDEP reviewed the application and noted that the gravel from the on-site gravel pit ("Borrow & Ledge Pit") should be tested to determine if it is sulfidic material (see Finding of Fact #41,B), and if so, alternative sources should be considered.

C. *Section 10.27,D – Roads and water crossings.* The proposed roads to remain permanently at the site would meet the provisions of Section 10.27,D for design, including setbacks from water bodies, road banks, drainage ditches, and crossings. The applicant has consulted with the State Soil Scientist on road design and water crossings for this project. For the Final Development Plan, the applicant reduced the mileage of new roads to be built and existing roads to be improved by 3.84 and 1.81 miles, respectively.

(1) Four existing culverts would be replaced, and wetland crossings would employ the rock sandwich design to maintain hydrology. All crossings would meet or exceed the provisions of Section 10.27,D of the Commission's Land Use Districts and Standards. Water crossings by roads conducted according to standards may be allowed without a permit in the zones (M-GN Subdistrict, P-SL2 Subdistrict, and P-WL Subdistrict) that were present at this site before the parcel was rezoned.

(2) During construction, the traveled surface of the proposed ridgeline and spur roads would be 32 feet wide to accommodate the assembly crane, but narrowed to 16 feet wide after construction, and the sides revegetated. Atlas Road would be improved to have a 16 foot wide traveled surface where it does not already meet that specification. On average, the roads would have a maximum finished grade of 14%.

D. *Section 10.27,F – Filling and grading.* The primary areas the applicant has proposed to grade of the ridgeline of Stetson Mountain to construct SWP are the turbine pads; access, ridgeline and spur roads; temporary crane assembly pads, lay-down areas, and the site for the O&M building and substation. The proposed filling and grading would be set back at least 100 feet from all waterbodies, except where needed for road crossings. The proposed filling and grading would meet the provisions of Section 10.27,F of the Commission's Land Use Districts and Standards.

E. *Section 10.27,J – Signs.* The proposed signage would be in compliance with Section 10.27,J of the Commission's Land Use Districts and Standards, and would not have undue adverse impacts upon resources and uses in the area. All proposed signage would be located within the development area and would be limited to informational signs associated with site activities, such as traffic control or directional signs. Section 10.27,J,1(e) of the Commission's Land Use Districts and Standards provides that information signs on a site do not require a permit. Any informational sign remaining on-site after construction not visible from a public road must be no more than 12 square feet in size, except that directional signs visible from a public road must not exceed 4 square feet in size. The Commission concludes that the signage proposed by the applicant would conform with Section 10.27,J,2 of the Commission's Land Use Districts and Standards.

The informational kiosk the applicant stated it may request in the future at the Route 169/Atlas Road intersection after the project is operational would require a permit amendment, pursuant to Section 10.21,G,10,c, and meet any relevant provisions of Section 10.27,J.

6. *Post-construction monitoring and reporting.*

A. The Commission concludes that the applicant's proposed submittal for reporting on the project's contribution to the State's environmental and energy policies, as required by Condition #5 of Zoning Petition ZP 713, is acceptable. The applicant must submit annual reports for the first two years of the project's operation which will include the total megawatt hours of generation during the year and calculation of avoided emissions resulting from operation of the project.

B. *Re-vegetation monitoring.* On-site inspections of re-vegetation and remedial measures taken must be recorded and reported to the Commission bi-annually for the first year of operation, and annually thereafter until all disturbed areas have achieved 85% vegetation cover, with the exception of roads, parking areas, walkways, and open portions of the turbine pads. Any substantial changes to the re-vegetation plans as proposed in the Final Plan must be submitted to the Commission for review and approval pursuant to Section 10.21,G,10,c of the Commission's Land Use Districts and Standards.

C. *Avian and bat mortality monitoring.* The applicant's proposal for post-construction avian and bat post-construction monitoring and reporting was

reviewed by the MDIFW as a part of the Preliminary Development Plan. MDIFW did not submit further review comments during the review of the Final Plan. The Commission previously concluded that the proposed plan was acceptable, and that the applicant should continue to coordinate with MDIFW regarding the avian and bat mortality monitoring. Annual reports must be submitted to the Commission for review. However, the applicant should consult more often than annually with MDIFW and LURC staff on the avian and bat impacts to determine if remedial measures are needed. After the first three years of post-construction monitoring, the Commission and MDIFW may review the cumulative results to determine if changes in the level of monitoring are necessary.

D. All monitoring of post-construction erosion/sedimentation and storm water control measures, and subsequent reporting to the Commission, are the responsibility of the applicant. All monitoring and inspection reports must be kept on-site for a three year period after the facility becomes operational. Once the areas of exposed soils at the site are 85% re-vegetated, excluding roads and other areas that have been identified to remain unvegetated, the applicant must re-assess the project to assure that additional monitoring and reporting are not necessary, and report its determinations to the Commission.

7. *Miscellaneous.*

A. The Commission concludes that the Spill Prevention, Control and Countermeasure Plan (SPCC) plan submitted by the applicant for construction activities is acceptable, but that the applicant must also submit the final, detailed SPCC plan associated with the O&M building and substation to the Commission for review and approval upon completion of construction.

B. The engineered plans submitted by the applicant dated December 13, 2007 are the approved plans. The as-built engineered plans must be submitted to the Commission upon completion of construction. In addition to the third-party inspection and reporting proposed by the applicant, opportunity must be provided for site inspections by LURC staff at least twice during construction to assure compliance with conditions.

C. The provisions proposed by the applicant for decommissioning and the financial mechanism to be used are appropriate, given the uncertainty of whether decommissioning will eventually be necessary, and if so, the 15 to 20 year period until such decisions would need to be made (see Condition #13, below).

D. The parcel is owned by Lakeville Shores, Inc. (LSI), and leased to the applicant, granting the right to access the site, to develop the SWP, and to improve the existing roads. Project roads within the parcel will be maintained by the applicant. Under the terms of the lease agreement, land management activities, including logging road construction and maintenance within the parcel, will be the

responsibility of LSI. Roads outside the parcel (*i.e.* Tar Ridge Road) will be maintained under existing agreements for those roads among LSI and others (both the County and private owners). The applicant is not a party to those agreements, but has the right to access and maintain the roads under the terms of its lease from LSI.

LSI controls access to parcel, including snowmobile access. The applicant has stated it may place a security fence at the entrance to installed facilities, such as turbine bases or the substation for safety.

E. The MDEP reviewed the Blasting Plan and determined that it conforms to Maine's laws for such plans. Therefore, the Commission concludes that the blasting plan submitted by the applicant for construction activities is acceptable.

Conditions

Therefore, the Commission **APPROVES** the Final Development Plan Permit DP 4788 submitted by Evergreen Wind Power V, LLC for a 38 turbine wind farm located within the Stetson Wind Project (D-PD) Planned Development Subdistrict, subject to the findings of fact contained herein and the following conditions:

1. Only those uses and structures approved in this Final Development Plan may be allowed in the D-PD Subdistrict. Such uses and structures are detailed in Appendix A of this permit. Any amendments to the Final Development Plan are subject to review and approval by the Commission or the LURC Director, as applicable, in accordance with Section 10.21,G,10(c) of the Commission's Land Use Districts and Standards.

   A. All uses previously allowed without a permit, or allowed with out a permit subject to standards, in a (M-GN) General Management Subdistrict, (P-WL) Wetland Protection Subdistrict, or (P-SL) Shoreland Protection Subdistrict shall continue to be allowed within those portions of the (D-PD) Planned Development Subdistrict that met the description of such M-GN, P-WL or P-SL Subdistricts on the effective date of this decision.

   B. In accordance with Section 10.06, A of the Commission's Land Use Districts and Standards, "the description of permitted uses herein does not authorize any person to unlawfully trespass, infringe upon or injure the property of another, and does not relieve any person of the necessity of complying with other applicable laws and regulations."

   C. Unless otherwise granted permit approval, all approved activities and uses proposed in this Final Development Plan permit must meet the standards of Sections 10.25 to 10.27 of the Commission's Land Use Districts and Standards (as may be amended from time to time).

2. The permittee is responsible for all activities in the Final Development Plan that were proposed as a result of consultation with state and federal agencies any recommendations agreed to, as reflected in the record, including, but not limited to, the Maine State Soil Scientist, Maine Department of Environmental Protection, and Maine Department of Inland Fisheries and Wildlife.

3. The permittee shall submit to the Commission annually for the first two years of operation a report detailing the project's contribution to the State's environmental and energy policy objectives. The report must include total megawatt hours generated and an estimate of avoided pollution by project operation.

4. Setbacks

   All temporary and permanent structures, including parking areas, must be set back at least 50 feet from the traveled surface of all roads and 100feet from all streams and P-WL1 wetlands. With the exception of the roads and 115 kV transmission line, all structures within the D-PD Subdistrict must be set back at least 400 feet from the D-PD Subdistrict boundary.

5. Traffic flow

   A. The permittee shall provide for safe traffic condition and prevent congestion for heavy equipment and construction vehicles leaving or entering the site onto public roads, or onto private roads used by the public, by making provisions for adequate site distances, the use of informational signs, and limiting the use of the southern access point from Tar Ridge Road.

   B. The permittee shall use the southern access point at Tar Ridge Road only for light vehicle traffic, for concrete trucks servicing the southern portion of the development area during turbine construction, and for gravel trucks exiting the site. All heavy equipment delivering the turbines to the site must only use the northern access point.

6. Noise

   A. The noise level at the D-PD Subdistrict boundary must not exceed 55 dBA during operation of the wind power facility. During construction, the sound produced as a result of construction activities from 7 pm to 7 am must not exceed 55 dBA at the D-PD Subdistrict boundaries, except for sound produced by safety signals, warning devices, emergency pressure relief valves, other emergency activities, and traffic on roadways.

   B. The permittee shall monitor the ambient sound and the sound produced when the facility is in operation along the southwestern D-PD Subdistrict boundary at the proposed receiver points.

C. The permittee shall report the results of the sound monitoring to the Commission quarterly for the first year of operation, after which time the results will be reviewed by the Commission to determine if any mitigation of noise is necessary, and whether the monitoring must be continued. If the results of the sound monitoring show that the levels during operation exceed 55 dBA at the D-PD Subdistrict boundaries, remedial measures must be proposed.

7. Lighting

A. The permittee shall submit to LURC for the project file a copy of the final FAA approved turbine lighting plan as soon as it becomes available.

B. If the permittee installs manually controlled exterior lighting on the Operations & Maintenance building and substation, such lighting must be full cut-off; be designed, located, installed and directed so as to illuminate only the target area; and be turned off after business hours, in accordance with Section 10.25,F,2 of the Commission's Land Use Districts and Standards.

C. Lights used for nighttime work must be limited to three trailer-mounted portable flood lights per turbine location, with no more than two turbine construction areas being illuminated at any one time. Nighttime lighting must be limited to the construction area and lighting of adjacent areas must be minimized.

8. Erosion/sedimentation and stormwater control

A. All roads must have, at a minimum, a 250 foot wide forested buffer.

B. Third party on-site inspections of erosion and storm water control measures, and any remedial measures taken, must be implemented when the ground is frozen, saturated, or the area disturbed by the project would be one acre or more. The name of the individual or firm selected by the permittee for third-party inspection must be submitted to the Commission for review and approval. In addition to the third-party inspection and reporting, site inspections by LURC staff must be initiated by the permittee at least twice during construction to assure compliance with conditions.

C. The rock sandwich road design recommended by the State Soil Scientist must be employed as proposed to maintain subsurface and surface hydrology where seepages and wetlands occur. Existing stream crossings and drainage swales may continue to be culverted.

D. Construction under frozen of saturated conditions must be conducted as proposed in the erosion/sedimentation control plan, as recommended in the geotechnical investigation and by the State Soil Scientist.

E. The permittee shall submit to LURC staff the completed version of the approved management plan (dated January 2, 2008) for handling acidic bedrock with all tables and attachments referenced in the plan, implement the provisions of the plan during construction of the wind power facility, and conduct post-construction monitoring as proposed. The permittee shall report to LURC staff upon completion of construction the locations where the management measures were employed and why. All inspection reports shall be kept on-site, and be made available for submittal to LURC staff upon request.

9. Solid waste disposal

A. All stumps produced during construction must be buried in place, ground and incorporated into erosion control mix to be used for erosion control on-site, or disposed of at the on-site stump dump. The stump dump must not exceed one acre in size, must be located at the site designated on the site plans, and must be covered and the surface soil stabilized once construction is complete.

B. Wash-down of concrete trucks must be done on-site such that the runoff water is contained within the turbine pads and covered when the pads are back-filled. Water for the truck wash-down must be brought to the site by the concrete supplier.

10. Mineral excavation

A. The permittee shall monitor the size of the two off-site mineral excavation sites (*i.e.* gravel pits) to be used for this project. If either site would be expanded to larger than five acres in size, the permittee shall notify the Commission and the owner of the pit, Lakeville Shores, so that the appropriate permit review can be conducted.

B. The permittee shall notify the Commission if the on-site mineral excavation site would continue to be used for road maintenance after construction. The site must have no more than 15 acres not in reclamation at any one time, and must not exceed 30 acres in size overall. The site must meet the relevant provisions of Section 10.27,C of the Commission's Land Use Districts and Standards.

11. Wetlands

A. The total area of P-WL2 or P-WL3 wetland impact as a result of the project must be less than 25,000 square feet.

B. All P-WL1 wetland impacts must be associated with road crossings or road improvements.

C. All subsequent wetland impacts must be submitted to the Commission for review and approval, in accordance with Section 10.21 G 10 c and Section 10.25,P of the

Commission's Land Use Districts and Standards, and will be treated cumulatively with the wetland alterations approved herein.

D. A minimum of a 250 foot wide undisturbed buffer must be maintained around the significant vernal pool, except that the ridgeline road may be located within the buffer area but must be no closer than 150 feet from the pool.

12. Post-construction environmental monitoring

A. The permittee shall submit on-site inspection reports of re-vegetation and remedial measures taken bi-annually for the first year of operation, and annually thereafter until all disturbed areas have an 85% vegetation cover with the exception of roads, parking areas, walkways, and open portions of the turbine pads. Once the site is 85% re-vegetated, the project must be assessed to assure that no additional measures need to be taken and that no additional monitoring and reporting will be necessary. Any substantial changes to the re-vegetation plans as proposed in the Final Plan must be submitted to the Commission for review and approval, pursuant to Section 10.21,G,10,c of the Commission's Land Use Districts and Standards.

B. The permittee shall submit annual reports for post-construction avian and bat monitoring to the Commission and MDIFW for review, and shall consult with LURC staff and MDIFW quarterly and upon request on the avian and bat impacts to determine if remedial measures are to be taken. After the first three years of post-construction monitoring, the Commission may review the cumulative results to determine if changes in the level of monitoring are necessary.

C. All erosion and stormwater control monitoring and inspection reports must be kept on-site for a three year period after the facility becomes operational.

13. Decommissioning

A. If it becomes necessary for the SWP to be decommissioned, the permittee shall decommission, or provide for the decommissioning of, the SWP. The permittee shall submit a final detailed decommissioning plan and schedule no later than: (a) 60 days after the date the project ceases to generate electricity as set forth in a written notice to LURC; or (b) if no such notice has been provided and the project has not generated electricity for six consecutive months, 60 days after the permittee receives a written request from LURC to decommission the project, unless the permittee can demonstrate to the Commission's satisfaction a plan to recommence generation of electricity.

B. In accordance with the paragraph above, the permittee shall submit to the Commission for review and approval a detailed decommission plan in substantial compliance with the decommissioning process and site restoration process descriptions contained in the June 2007 plan reviewed under the Preliminary

Development Plan. The June 2007 plan anticipates an estimated cost of decommissioning of $1,366,550 (minus salvage value).

C. On or before December 31st of the first year of operation the permittee shall secure an irrevocable standby letter of credit in favor of the State of Maine Land Use Regulation Commission. The proposed letter of credit and the drawing certificate shall be submitted 30 days prior to December 31st for Commission review and approval.

D. The permittee shall initially secure the letter of credit as described above in an amount no less than $76,000. The amount of the letter shall increase each year thereafter by at least an additional $76,000 until the end of year seven, at which time the amount shall be no less than $650,000.

E. Prior to December 31st of year 15, the permittee shall secure the letter of credit in the full amount of the estimated cost of decommissioning, such amount to be submitted at a reasonable time prior to December 31st for Commission review and approval.

14. Miscellaneous

A. The approved sewage disposal system must be installed in the location and according to the design specified in the report prepared by the permittee's site evaluator, Albert Frick, dated January 12, 2007. This installation will include a concrete 1,000 gallon treatment tank and an 18 foot by 43 foot leach field. This system must not be installed until a Plumbing Permit has been obtained from the Local Plumbing Inspector.

B. The permittee must obtain a Certificate of Inspection for the sewage disposal system at the time of installation from the Local Plumbing Inspector. A copy of this certificate must be submitted to the Commission.

C. The permittee shall submit a final detailed Spill Prevention Control and Countermeasures Plan for the Operations & Maintenance building, turbines and substation upon completion of construction.

D. Any information or directional signs remaining on-site after construction not visible from a public road must be no more than 12 square feet in size. Information or directional signs visible from a public road must not exceed 4 square feet in size.

E. The final, as-built engineered plans must be submitted to the Commission upon completion of construction.

F. The permittee shall submit copies of all ACOE, MDEP, MDOT, and local permits obtained for this project for the file.

In accordance with 5 M.R.S.A. section 11002 and Maine Rules of Civil Procedure 80C, this decision by the Commission may be appealed to Superior Court within 30 days after receipt of notice of the decision by a party to this proceeding, or within 40 days from the date of the decision by any other aggrieved person.

DONE AND DATED AT AUGUSTA, MAINE THIS 2nd DAY OF JANUARY, 2008.

By: Catherine M. Carroll
Catherine M. Carroll, Director

APPENDIX A

APPROVED FINAL DEVELOPMENT PLAN
January 2, 2008

Land Uses Allowed Within the Stetson Wind Project (D-PD) Planned Development Subdistrict

On November 7, 2007 the Commission approved, with conditions, the Preliminary Development Plan ("Plan") and Zoning Petition ZP 713 for the Stetson Wind Project in T8 R3 NBPP and T8 R4 NBPP, Washington County. The (D-PD) Planned Development Subdistrict became effective on November 22, 2007.

The Commission, under the provisions of Section 10.21,G of its Land Use Districts and Standards, may designate an area as a (D-PD) Planned Development Subdistrict to provide for large-scale, well planned developments, which are, or may be separate from existing developed areas, provided they can be shown to be of high quality and not detrimental to other values established in the Commission's Comprehensive Land Use Plan, and provided they depend on a particular natural feature or location which is available at the proposed site.

In accordance with Section 10.06.A, uses listed herein in Section 3,A through C that are allowed without a permit, without a permit according to standards, and requiring a permit "[do] not authorize any person to unlawfully trespass, infringe upon t or injure the property of another, and [do] not relieve any person of the necessity of complying with other applicable laws and regulations."

1. Purpose

The purpose of the Stetson Wind Project (D-PD) Planned Development Subdistrict is to establish and implement a comprehensive program for a wind power facility that provides for a well-planned development and the management and protection of the natural resources of the area. The D-PD Subdistrict shall not provide the basis for subsequent redistricting of the area to another development subdistrict, nor shall it serve to satisfy those requirements for redistricting surrounding areas to other development subdistricts.

2. Description

This Preliminary Development Plan applies to the Stetson Wind Project (D-PD) Planned Development Subdistrict, which encompasses approximately 4,800 acres located in one parcel on Stetson Mountain in Washington County, of which approximately 20.1 acres would be permanently developed for a 57 MW wind power facility consisting of 38 turbines and supporting structures. The wind power facility is being developed by Evergreen Wind Power V, LLC under a lease agreement with the underlying landowner

Lakeville Shores, Inc (LSI). The remainder of the parcel would remain in active forest management by LSI.

3. Land Uses

Sections A and B specify the activities that are allowed in the Stetson Wind Project D-PD Subdistrict without a permit, or without a permit subject to Sections 10.25 to 10.27 of the Commission's Land Use Districts and Standards. Section C specifies the land uses and structures allowed in the Stetson Wind Project (D-PD) Planned Development Subdistrict that required Final Development Plan Permit approval.

All uses allowed by permit require approval under a Final Development Plan in accordance with 12 MRSA, § 685,B(4); Subchapter III of the Commission's Land Use Districts and Standards (as applicable); and Section 10.21,G,10 of the Commission's Land Use Districts and Standards. Only those uses and structures listed in the following Final Development Plan may be allowed in the D-PD Subdistrict. All other uses and structures must be reviewed and approved by the staff or Commission, as appropriate, as a permit amendment.

A. Uses allowed without a permit within the Stetson Wind Project (D-PD) Planned Development Subdistrict

(1) Emergency operations for wind farm personnel and contractors during construction, operation, and maintenance of the SWP; and emergency operations conducted for public health, safety or general welfare.

(2) Forest management activities, except for timber harvesting and land management roads.

(3) Land management roads in P-WL3 wetlands;

(4) Motorized vehicular traffic on roads and trails, and snowmobiling.

(5) Primitive recreational uses.

(6) Surveying and other resource analysis, including wind resource studies.

(7) Trails, provided they are constructed and maintained so as to reasonable avoid sedimentation of waterbodies.

(8) Wildlife and fisheries management activities authorized by the landowner or the permittee, or conducted by state and federal wildlife resource agencies.

B. Uses allowed without a permit subject to standards within the Stetson Wind Project (D-PD) Planned Development Subdistrict

The following uses and structures shall be allowed without a permit, subject to the applicable standards set forth in Sections 10.25 to 10.27 of the Commission's Land Use Districts and Standards, except as specified herein.

(1) Filling or grading conducted in accordance with Section 10.27,F of the Commission's Land Use Districts and Standards.

(2) Level A mineral exploration activities, including geotechnical borings and access ways, conducted in conformance with the standards of Section 10.27,C of the Commission's Land Use Districts and Standards.

(3) Level A and B road projects: Specifically, upgrading existing roads, and maintaining access and ridgeline roads after construction of the wind power facility.

(4) Mineral extraction operations less than 5 acres in size conducted in accordance with Section 10.27,C of the Commission's Land Use Districts and Standards.

(5) Signs, as listed in Section 10.27,J,1 of the Commission's Land Use Districts and Standards: Signs along the access and ridgeline road to direct construction crews, maintenance and operations personnel, and emergency personnel; signs to warn of potential icing events; signs to warn of truck traffic entering and leaving the site; and other informational signs as needed;

(6) Timber harvesting, and land management roads constructed in accordance with Chapter 15 of the Commission's rules that would alter less than one acre of a P-WL2 or P-WL3 Subdistrict, during or after construction of the wind power facility.

(7) The operation of machinery and the erection of buildings used for forest management activities.

(8) Water crossings of minor flowing waters, conducted in accordance with Section 10.27,D of the Commission's Land Use Districts and Standards.

C. Uses requiring a permit within the (D-PD) Planned Development Subdistrict

The following uses and structures are granted Final Development Plan approval, and are allowed within the Stetson Wind Project (D-PD) Planned Development Subdistrict, pursuant to Section 10.21,G,10 of the Commission's Land Use Districts and Standards. Such uses and structures shall be subject to the applicable requirements set forth in Sections 10.25 to 10.27 of the Commission's Land Use Districts and Standards, except as specified herein. The engineered plans dated December 13, 2007 are the plans granted permit approval; the "as-built" plans must be submitted for the file after construction.

(1) Alteration of up to 25,000 square feet of P-WL2 and P-WL3 wetlands, and alteration of P-WL1 wetlands for road and transmission line crossings. [Note: Additional wetland alterations not reviewed and approved in this permit must be reviewed and approved by staff or the Commission, as appropriate, and shall be assessed cumulatively with the wetland alterations approved within this permit].

(2) Extraction of water from the on-site well drilled for the O&M building for dust control during construction and operation.

(3) Blasting in accordance with the approved Blasting Plan for turbine foundations, roads, transmission lines, and other structures.

(4) **Clearing**

(a) The average width of the corridors cleared during construction for the ridgeline and spur roads would be 90 feet. Additional temporarily cleared areas along a total of 2.2 miles of the ridgeline road, resulting in a total cleared width of up to 140 feet. These areas must be re-vegetated after construction, except to accommodate a 16 foot wide traveled surface.

(b) An additional 10 feet of width cleared temporarily along the existing access roads, for an average cleared width of 45 feet. These areas must be re-vegetated after construction, except to accommodate a 16 foot wide traveled surface.

(c) Permanently cleared 60 foot wide corridor, except where additional width is needed at turns, for the above ground 34.5 kV collector line following the ridgeline road. Vegetation 3 to 4 feet high must be retained, except as needed for access ways.

(d) Permanently cleared 150 foot wide by 3,380 foot long corridor for the 115 kV transmission line, except for within theP-WL3 wetland where the corridor width is 135 feet. Vegetation 3 to 4 feet high must be retained, except as needed for access ways.

(e) During construction, the clearing for each turbine pad (for the foundation and a crane pad) must be no more than 250 feet in diameter, plus 0.28 acre to accommodate cut and fill. The turbine pads must be re-vegetated after construction except for 0.17 acre for each foundation and crane pad.

(f) 0.56 acres for two temporary crane assembly pads, which must be entirely re-vegetated after construction.

(g) The total area cleared to install the permanent and temporary meteorological towers must be no more than 2.26 acres. The clearing must not remove the shrub or herbaceous layer except as needed for the tower base, access, and guy wires. After installation, the vegetation must be allowed to regenerate except for immediately around the tower. After the two temporary towers are removed, each area must be re-vegetated.

(h) The area permanently cleared for the O&M building and substation must not exceed 3 acres.

(i) The temporary lay-down areas must be no more than 15.2 acres in total, and must be re-vegetated after construction.

(j) If the on-site gravel pit would be actively used for road maintenance after construction by the permittee or the landowner, up to 15 acres may remain open and un-reclaimed at any one time (also see #9, below).

(5) **Filling and grading**
- (a) Thirty-eight (38) turbine/crane pads: Each turbine pad would be located in a 1.13 acre cleared circle (250 foot diameter, with an additional 0.28 acre allowed for cut and fill);
- (b) Two (2) temporary crane assembly pads (0.56 acres total);
- (c) As needed for roads, above-ground and under-ground transmission and collector lines and access ways; the O&M building and substation; meteorological towers; and 15.2 acres of lay-down areas.

(6) **Lighting**
- (a) Single, slow pulsing red lights on eleven of the turbines and on the meteorological reference towers, in accordance with the plan approved by the Federal Aeronautics Administration, with lenses to minimize downward light; and
- (b) Lighting with outside motion sensors and/or switch operated lighting for the O&M building and substation area.

(7) **Meteorological reference towers**
- (a) Two 262 foot tall (80 meters) permanent wind measurement reference towers; and
- (b) Two 262 foot tall (80 meters) temporary wind measurement reference towers to be removed after calibration of the wind power facility.
- (c) The towers would hold anemometers and wind vanes to measure wind speeds and direction, would be supported by guy wires, and bird-diverters would be mounted on the guy wires as recommend by MDIFW.

(8) **Mineral extraction operations**
- (a) Affecting an area between 5 acres and 30 acres, provided the un- reclaimed area is less than 15 acres;
- (b) Portable mineral processing equipment.

(9) **Operation & Maintenance (O&M) facility**
- (a) A 70 foot by 100 foot (7,000 square feet), one-story maintenance building to serve as an office and equipment storage and maintenance area;
- (b) Parking area;
- (c) Combine subsurface wastewater disposal system;
- (d) Well for potable water;
- (e) 100-foot tall communications tower; and
- (f) Substation within a 110 foot by 225 foot fenced-in area, to which the115 kV transmission line would be connected.

(10) **Roads**

(a) Level B road projects (see definition in Section 10.02(89) of the Commission's Land Use Districts and Standards) for repair and maintenance of turbines where the 16 foot wide post-construction roads would be temporarily expanded to allow access by heavy equipment.
(b) Level A and B road projects for construction of 3.37 miles of the proposed ridgeline road.
(c) Level C road projects:
  (i) 5.9 miles of new ridgeline, access and spur roads on Stetson Mountain to access the turbine sites;
  (ii) During construction, the traveled surface of the ridgeline and spur roads would temporarily be 32 feet wide plus shoulders; and
  (iii) After construction, the traveled surface of the road must be no wider than 16 feet, except as needed for a turning radius, unless otherwise approved by the Commission.
(d) The maximum average road grade must not exceed 14%.
(e) The maximum road shoulder slope must be no more than 2 horizontal to 1 vertical.
(f) If the road is super-elevated, then the road should not be graded with a crown in the future.
(g) In the event that the post-construction access roads would need to be temporarily expanded, prior to undertaking the work, the permittee shall submit a proposal to LURC for review and approval.

(11) Structures devoted to the storage of sand and salt.

(12) Stump disposal area less than 1 acre in size, which must be covered and stabilized upon completion of construction.

(13) Temporary office and storage trailers, and porta-potties, which must be removed from the site after construction. All temporary parking areas must be re-vegetated after construction.

(14) **Transmission lines and communication system**
(a) Above-ground and underground 34.5 kV electrical transmission collector and communication lines within or adjacent to the ridgeline roads or buried within the road shoulder;
(b) 3,380 foot long by 150 foot wide cleared corridor for the 115 kV transmission line (also see #3,C(4)(d), above, and Findings of Fact #13,B and #28).

(15) **Turbines**
Thirty-eight (38) wind turbines with 24 foot diameter concrete foundations. Each turbine tower would be 80 meters (262 feet) tall, with 253 foot diameter rotor blades. The total height would be 389 feet when the rotor blade is extended directly upward.

APPENDIX B
Review Criteria

Statute

1. Pursuant to Section 685,B(4) of the Commission's statute, the Commission shall approve no application, unless:

   A. Adequate technical and financial provision has been made for complying with the requirements of the State's air and water pollution control and other environmental laws, and those standards and regulations adopted with respect thereto, including without limitation the minimum lot size laws, sections 4807 to 4807-G, the site location of development laws, Title 38, sections 481 to 490, and the natural resource protection laws, Title 38, sections 480-A to 480-Z, and adequate provision has been made for solid waste and sewage disposal, for controlling of offensive odors and for the securing and maintenance of sufficient healthful water supplies;

   B. Adequate provision has been made for loading, parking and circulation of land, air and water traffic, in, on and from the site, and for assurance that the proposal will not cause congestion or unsafe conditions with respect to existing or proposed transportation arteries or methods;

   C. Adequate provision has been made for fitting the proposal harmoniously into the existing natural environment in order to assure there will be no undue adverse effect on existing uses, scenic character and natural and historic resources in the area likely to be affected by the proposal. In making a determination under this paragraph regarding development to facilitate withdrawal of groundwater, the Commission shall consider the effects of the proposed withdrawal on waters of the State, as defined by Title 38, section 361-A, subsection 7; water-related natural resources; and existing uses, including, but not limited to, public or private wells, within the anticipated zone of contribution to the withdrawal. In making findings under this paragraph, the Commission shall consider both the direct effects of the proposed withdrawal and its effects in combination with existing water withdrawals;

   D. 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; and

   E. The proposal is otherwise in conformance with this chapter and the regulations, standards and plans adopted pursuant thereto.

The burden is upon the applicant to demonstrate by substantial evidence that the criteria for approval are satisfied, and that the public's health, safety and general

welfare will be adequately protected. The Commission shall permit the applicant to provide evidence on the economic benefits of the proposal as well as the impact of the proposal on energy resources.

The Commission's Land Use Districts and Standards

2. Pursuant to Section 10.06 of the Commission's Land Use Districts and Standards, the following shall apply to all uses in all subdistricts, except as otherwise provided: The description of permitted uses herein does not authorize any person to unlawfully trespass, infringe upon or injure the property of another, and does not relieve any person of the necessity of complying with other applicable laws and regulations.

3. Pursuant to Section 10.21,G of the Commission's Land Use Districts and Standards,

   A. *Section 10.21,G,2: Description of a D-PD Subdistrict.*
   Areas separated from existing development patterns, proposed for residential, recreational, commercial or industrial use or some combination of those uses, for which a comprehensive development plan (which treats the entire parcel as an entity) has been submitted to, and reviewed and approved by the Commission.

      1. A D-PD Subdistrict proposed for predominantly commercial and/or industrial land uses shall include at least 50 contiguous acres and, except wind energy generation facilities, shall contain a minimum of 30,000 square feet of gross building floor area.

   In any of the above cases, no development, other than access roads and utility lines shall be less than 400 feet from any property line. (This dimension may be increased or decreased, at the Commission's discretion, provided good cause can be shown.) Furthermore, the project shall be reasonably self-contained and self-sufficient and to the extent practicable provide for its own water and sewage services, road maintenance, fire protection, solid waste disposal and police security.

   B. *Section 10.21,G,3: Permitted Uses.*
   All uses approved in the Final Development Plan shall be permitted. For metallic mineral mining activities and Level C mineral exploration activities, all uses within the D-PD subdistrict require a permit in accordance with this chapter and Chapter 13 of Commission's rules. No other use shall be permitted except where the Commission determines that such additional use is consistent with such Plan and with the purposes hereof.

   C. *Section 10.21,G,3: Procedures.*
   The procedures set forth below and those set forth in Section 10.21,G,7 through 10 apply to all developments except those related to metallic mineral mining and Level C mineral exploration activities. Those activities are governed by the procedures set forth in Chapters 12 and 13 of the Commission's rules.

The Planned Development review procedure shall consist of three stages:

1. Pre-application Conference;
2. Submission of Preliminary Development Plan; and
3. Submission of Final Development Plan.

The Pre-application Conference serves to inform the prospective applicant, prior to formal application, of the proposed plan's filing requirements. Formal application is made by submitting a Preliminary Development Plan that meets the requirements specified herein. No decision thereon can be made until a Public Hearing is held. Thereafter, the Commission may approve or deny the petition. An approval will permit a subdistrict amendment to a D-PD Subdistrict and will include a preliminary development permit that specifies under what conditions, if any, the Commission will accept the Preliminary Development Plan proposal as the standard against which the Final Development Plan is judged. No development will be allowed until a Final Development Plan is submitted and approved.

D. *Section 10.21,G,8,c(3).* Within a maximum of 18 months following a Commission decision to designate an area as a D-PD Subdistrict, the applicant shall file a Final Development Plan containing in detailed form the information required in Section 10.21,G,10 below. At its discretion, and for good cause shown, the Commission may extend the deadline for filing of the Final Development Plan.

E. *Section 10.21,G,10,a.*
The Final Development Plan shall include statements, drawings, specifications, covenants and conditions sufficient to fully detail the nature and scope of the proposed development. Without limitation of the foregoing, the Final Development Plan submission shall include:

1. Drawings that include all the information required on the site plan under the Preliminary Development Plan pursuant to Section 10.21,G,8,a,(11), plus the dimensions and heights, foundation design, material specifications, and elevations and colors of all buildings and structures. If the plan proposes any subdivision, all boundaries of easements and lots are to be surveyed and plotted.
2. Drawings that illustrate all roads, parking service and traffic circulation areas. The dimensions of curve radii, grades and number of parking spaces are to be specified. Any structures (such as bridges) related to the street system should be shown as scaled engineering plans and sections. Detailed traffic volume estimates and traffic studies may be required, at the discretion of the Commission.
3. If individual sewage disposal systems are proposed, an on-site soil report for each proposed lot is required from the applicant. The reports are to be on Department of Human Services form HHE-200 or any amended or

replacement version thereof. Where a central sewage collection and/or treatment system or central or public water supply system or fire hydrant system is proposed, reasonably full engineering drawings shall be required to conform with all applicable governmental requirements.

4. Drawings that indicate all surface water runoff and storm drainage systems, soil stabilization procedures, and landscape plans for planting, screening, revegetation and erosion control and lighting of outdoor spaces.
5. To the extent reasonably available, copies of the restrictions, covenants, conditions, and/or contractual agreements that will be imposed upon persons buying, leasing, using, maintaining, or operating land or facilities within the Planned Development.

The items submitted as part of the Final Development Plan shall comply with the conditions of approval of the Preliminary Development Plan and shall conform with applicable state regulations, including 12 M.R.S.A. §685-B(4). In addition, the Final Development Plan shall conform with progressive site planning standards which permit flexibility and imagination in the layout of different building types.

A public hearing shall not be held on a Final Development Plan application provided it is in substantial compliance with the Preliminary Development Plan. The burden shall, nevertheless, be on the applicant to show good cause for any variation between the Preliminary Development Plan and the Final Plan submitted for final approval.

E. *Section 10.21,G,10,b.* Approval or Denial of Final Development Plan.
Upon accepting a Final Development Plan, the Commission shall issue a permit pursuant to 12 M.R.S.A. §685-B, for the Final Development Plan. Such permit may contain reasonable conditions as the Commission may deem appropriate.

F. *Section 10.21,G,10,c.* Amendments to the Final Development Plan.
Minor changes in the location, siting, height, or character of buildings and structures may be authorized by the Director of the Commission if required by engineering or other circumstances not foreseen at the time of Final Development Plan approval. No change shall be so authorized which may cause any of the following:

1. The addition of a land use not previously approved in the Preliminary Development Plan;
2. A material change in the site, scope or nature of the project;
3. A material increase in traffic volume;
4. A material reduction in open space, landscaping, or parking; or
5. A material change giving rise to adverse environmental impact.

All other amendments to the Final Development Plan proposed by the applicant shall require submission to and the approval of the Commission after consultation with the staff and due consideration of the standards set forth in Section 10.21,G,8,b.

G. *Section 10.21,G,10,d. Time for Construction.*
If no substantial development has occurred pursuant to the Final Development Plan by the later of: (a) 24 months after the date of approval or (b) expiration of any extension of time for starting development granted by the Commission, the approved plan shall become null and void and the D-PD Subdistrict designation shall be deemed to be revoked and the original Subdistrict(s) shall again apply.

4. Section 10.25 of the Commission's Land Use Districts and Standards

A. *Section 10.25,C: Technical and Financial Capacity.* The standards set forth below must be met for all subdivisions and commercial, industrial, and other non-residential development.
(1) The applicant shall retain qualified consultants, contractors and staff to design and construct proposed improvements, structures, and facilities in accordance with approved plans. In determining the applicant's technical ability, the Commission shall consider the size and scope of the proposed development, the applicant's previous experience, the experience and training of the applicant's consultants and contractors, and the existence of violations or previous approvals granted to the applicant.
(2) The applicant shall have adequate financial resources to construct the proposed improvements, structures, and facilities and meet the criteria of all state and federal laws and the standards of these rules. In determining the applicant's financial capacity, the Commission shall consider the cost of the proposed subdivision or development, the amount and strength of commitment by the financing entity, and, when appropriate, evidence of sufficient resources available directly from the applicant to finance the subdivision or development.

B. *Section 10.25,D: Vehicle circulation, access and parking.*
(1) General circulation: Provision shall be made for vehicular access to and within the project premises in such a manner as to avoid traffic congestion and safeguard against hazards to traffic and pedestrians along existing roadways and within the project area. Development shall be located and designed so that the roadways and intersections in the vicinity of the development will be able to safely and efficiently handle the traffic attributable to the development in its fully operational stage.

(2) Access management: Access onto any roadway shall comply with all applicable Maine Department of Transportation safety standards. For subdivisions and commercial, industrial and other non-residential development, the following standards also apply:
(a) The number and width of entrances and exits onto any roadway shall be limited to that necessary for safe entering and exiting.
(b) Access shall be designed such that vehicles may exit the premises without backing onto any public roadway or shoulder.

(c) Shared access shall be implemented wherever practicable.
(d) Access between the roadway and the property shall intersect the roadway at an angle as near to 90 degrees as site conditions allow, but in no case less than 60 degrees, and shall have a curb radius of between 10 feet and 15 feet, with a preferred radius of 10 feet.
(e) The Commission may require a traffic impact study of roadways and intersections in the vicinity of the proposed project site if the proposed development has the potential of generating significant amounts of traffic or if traffic safety or capacity deficiencies exist in the vicinity of the project site.

C. *Section 10.25,E: Scenic Character, Natural and Historic Features.*
(1) *Scenic Character.*
(a) The design of proposed development shall take into account the scenic character of the surrounding area. Structures shall be located, designed and landscaped to reasonably minimize their visual impact on the surrounding area, particularly when viewed from existing roadways or shorelines.
(b) To the extent practicable, proposed structures and other visually intrusive development shall be placed in locations least likely to block or interrupt scenic views as seen from traveled ways, water bodies, or public property.
(c) If a site includes a ridge elevated above surrounding areas, the design of the development shall preserve the natural character of the ridgeline.
(2) *Natural Features.*
If any portion of a subdivision or commercial, industrial or other non-residential project site includes critically imperiled (S1) or imperiled (S2) natural communities or plant species, the applicant shall demonstrate that there will be no undue adverse impact on the community and species the site supports and indicate appropriate measures for the preservation of the values that qualify the site for such designation.
(3) *Historic Features.*
"If any portion of a subdivision or commercial, industrial or other non-residential project site includes an archaeologically sensitive area or a structure listed in the National Register of Historic Places, or is considered by the Maine Historic Preservation Commission or other pertinent authority as likely to contain a significant archaeological site or structure, the applicant shall conduct an archaeological surveys or submit information on the structure, as requested by the appropriate authority. If a significant archaeological site or structure is located in the project area, the applicant shall demonstrate that there will be no undue adverse impact to the archaeological site or structure, either by project design, physical or legal protection, or by appropriate archaeological excavation or mitigation."

D. *Section 10.25,F: Noise and Lighting.*
(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.

Subdistrict	7:00 AM to 7:00 PM	7:00 PM to 7:00 AM
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:
  (i) Sounds emanating from construction-related activities conducted between 7:00 A.M. and 7:00 P.M.;
  (ii) Sounds emanating from safety signals, warning devices, emergency pressure relief valves, and other emergency activities; and
  (iii)Sounds emanating from traffic on roadways or other transportation facilities.

(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).

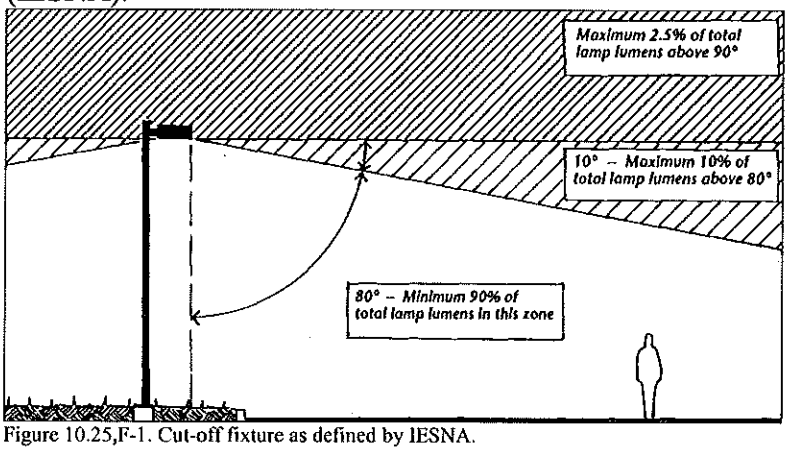

Figure 10.25,F-1. Cut-off fixture as defined by IESNA.

(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.

(e) The following activities are exempt from the lighting standards of Section 10.25,F,2,a through d:

(i) Roadway and airport lighting;

(ii) Temporary fair, event, or civic uses;

(iii) Emergency lighting, provided it is temporary and is discontinued upon termination of the work;

(iv) Lighting that is activated by motion-sensors; and

(1) Lighting that was in place on April 1, 2004.

E. *Section 10.25,G: Soil Suitability.* The standards set forth below must be met for all subdivisions and commercial, industrial and other non-residential development.

(1) Soil types shall be determined by a site-specific soil survey, according to the "Guidelines for Maine Certified Soil Scientists for Soil Identification and Mapping" (Maine Association of Professional Soil Scientists, 2004). The soil survey class shall be determined as follows, unless the Commission finds that a lower or higher intensity soil survey class is needed:

(c) For new commercial, industrial and other non-residential development, a Class A high intensity soil survey shall be used to identify soils within any proposed disturbed area. A Class C soil survey may be used to identify soils elsewhere within the project area.

The Commission may waive one or more of the provisions of a Class A or B high intensity soil survey, including but not limited to the contour mapping requirement, where such provision is considered by the Commission unnecessary for its review.

(2) Determination of soil suitability shall be based on the Natural Resources Conservation Service's soils potential ratings for low density development. Soils with a low or very low development potential rating shall not be developed unless the Commission determines that adequate corrective measures will be used to overcome those limitations that resulted in a low or very low rating.

F. *Section 10.25,H: Solid Waste Disposal.* The standards set forth below must be met for all subdivisions and commercial, industrial and other non-residential development.
   (1) Provision shall be made for the regular collection and disposal of site-generated solid wastes at a state-approved landfill or transfer station.
   (2) Provision shall be made for the legal disposal of all construction debris, stumps, brush, wood wastes, asphalt and pavement products.

G. *Section 10.25,I: Subsurface Waste Water Disposal.*
   (1) No permit will be issued for a project with subsurface waste water disposal unless an acceptable plan to construct the absorption area is prepared. Where waste water is to be disposed on-site by a subsurface waste water system, the system shall be designed by a licensed site evaluator or a Maine Licensed Professional Engineer, in accordance with the Subsurface Waste Water Disposal Rules.

H. *Section 10.25,L: Phosphorous Control.*
   (1) The standards set forth below must be met for:
      (b) Commercial, industrial or other non-residential development that creates a disturbed area of one acre or more within the direct watershed of a body of standing water 10 acres or greater in size.
   (2) General Standards.
      (a) Provision shall be made to limit the export of phosphorus from the site following completion of the development or subdivision so that the project will not exceed the allowable per-acre phosphorus allocation for the water body, determined by the Commission according to "Phosphorus Control in Lake Watersheds: A Technical Guide for Evaluating New Development" (Maine Department of Environmental Protection, 1992), and hereafter cited as the Phosphorus Control Guide.
      (b) The phosphorus impact of a proposed subdivision or development on a water body shall be calculated using the Standard Method for Calculating Phosphorus Export, according to the procedures in the Phosphorus Control Guide.
   (3) Design and Maintenance Standards.
      (a) Phosphorus control measures and their maintenance shall meet the design criteria contained in the Phosphorus Control Guide.

I. *Section 10.25,M: Erosion and Sedimentation (E/S) Control Plan.* The standards set forth below must be met for all development that involves filling, grading, excavation or other similar activities which result in un-stabilized soil conditions.
   (1) General Standards.
      (a) Soil disturbance shall be kept to a practicable minimum. Development shall be accomplished in such a manner that the smallest area of soil is exposed for the shortest amount of time possible. Operations that result in soil disturbance shall be avoided or minimized in sensitive areas such as slopes exceeding 15% and areas that drain directly into water bodies,

drainage systems, water crossings, or wetlands. If soil disturbance is unavoidable, it shall occur only if best management practices or other soil stabilization practices equally effective in overcoming the limitations of the site are implemented.

(b) Whenever sedimentation is caused by stripping of vegetation, re-grading, or other construction-related activities, sediment shall be removed from runoff water before it leaves the site so that sediment does not enter water bodies, drainage systems, water crossings, wetlands, or adjacent properties.

(c) Soil disturbance shall be avoided or minimized when the ground is frozen or saturated. If soil disturbance during such times is unavoidable, additional measures shall be implemented to effectively stabilize disturbed areas, in accordance with an approved erosion and sedimentation control plan.

(2) Design Standards.

(a) Permanent and temporary erosion and sedimentation control measures shall meet the standards and specifications of the "Maine Erosion and Sediment Control BMP Manual" (Department of Environmental Protection, March 2003) or other equally effective practices. Areas of disturbed soil shall be stabilized according to the "Guidelines for Vegetative Stabilization" (Appendix B of this chapter) or by alternative measures that are equally effective in stabilizing disturbed areas.

(b) Clearing and construction activities, except those necessary to establish sedimentation control devices, shall not begin until all sedimentation control devices have been installed and stabilized.

(c) Existing catch basins and culverts on or adjacent to the site shall be protected from sediment by the use of hay bale check dams, silt fences or other effective sedimentation control measures.

(d) If streams will be crossed, special measures shall be undertaken to protect the stream, as set forth in Section 10.27,D.

(e) Topsoil shall not be removed from the site except for that necessary for the construction of roads, parking areas, building excavations and other construction-related activities. Topsoil shall be stockpiled at least 100 feet from any water body.

(f) Effective, temporary stabilization of all disturbed and stockpiled soil shall be completed at the end of each workday.

(g) Permanent soil stabilization shall be completed within one week of inactivity or completion of construction.

(h) All temporary sedimentation and erosion control measures 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 implemented.

(3) Erosion and Sedimentation Control Plan.

(a) For development that occurs when the ground is frozen or saturated or that creates a disturbed area of one acre or more, the applicant must submit an

erosion and sedimentation control plan for Commission approval in accordance with the requirements of Section 10.25,M,3,b,(2).

(b) A Commission approved erosion and sedimentation control plan in conformance with these standards shall be implemented throughout the course of the project, including site preparation, construction, cleanup, and final site stabilization. The erosion and sedimentation control plan shall include the following:

(i) For activities that create a disturbed area of less than one acre:

- A drawing illustrating general land cover, general slope and other important natural features such as drainage ditches and water bodies.
- A sequence of construction of the development site, including clearing, grading, construction, and landscaping.
- A general description of all temporary and permanent control measures.
- Provisions for the continued maintenance of all control devices or measures.

(ii) For activities that create a disturbed area of one acre or more:

- A site plan identifying vegetation type and location, slopes, and other natural features such as streams, gullies, berms, and drainage ditches. Depending on the type of disturbance and the size and location of the disturbed area, the Commission may require a high intensity soil survey covering all or portions of the disturbed area.
- A sequence of construction of the development site, including stripping and clearing; rough grading; construction of utilities, infrastructure, and buildings; and final grading and landscaping. Sequencing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, areas of clearing, installation of temporary erosion and sediment control measures, and establishment of permanent vegetation.
- A detailed description of all temporary and permanent erosion and sedimentation control measures, including, without limitation, seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures.
- Provisions for the continued maintenance and inspection of erosion and sedimentation control devices or measures, including estimates of the cost of maintenance and plans for meeting those expenses, and inspection schedules.

(4) Inspection.

(a) For subdivisions and commercial, industrial or other non-residential development that occurs when the ground is frozen or saturated or that creates a disturbed area of one acre or more, provision shall be made for the inspection of project facilities, in accordance with Section 10.25,M,4,a,(1) or (2) below:

(i) The applicant shall hire a contractor certified in erosion control practices by the Maine Department of Environmental Protection to install all control measures and conduct follow-up inspections; or

(ii) The applicant shall hire a Maine Registered Professional Engineer to conduct follow-up inspections.

(b) The purpose of such inspections shall be to determine the effectiveness of the erosion and sedimentation control plan and the need for additional control measures.

(c) Inspections shall be conducted in accordance with a Commission approved erosion and sedimentation control plan and the following requirements.

(i) Inspections shall be conducted at least once a week and after each rainfall event accumulating more than ½ inch of precipitation, until all permanent control measures have been effectively implemented. Inspections shall also be conducted (a) at the start of construction or land-disturbing activity, (b) during the installation of sedimentation and erosion control measures, and (c) at the completion of final grading or close of the construction season.

(ii) All inspections shall be documented in writing and made available to the Commission upon request. Such documentation shall be retained by the applicant for at least six months after all permanent control measures have been effectively implemented.

(d) Notwithstanding Section 10.25,M,4,a, development may be exempt from inspection if the Commission finds that an alternative, equally effective method will be used to determine the overall effectiveness of the erosion and sedimentation control measures.

J. *Section 10.25,P: Wetland Alterations.* The following requirements apply to wetland alterations for Uses Requiring a Permit and Special Exceptions in Section 10.23,N,3. Except as hereinafter provided, wetland alterations not in conformance with the standards of this section are prohibited.

(1) Procedural Requirements.

(b) Area of Project Alteration.

(i) If a proposed activity requires a permit and will alter 15,000 or more square feet of wetland area, or 1 acre or more of overall land area, the applicant must delineate on the ground and in a site plan all wetlands within the general project area using methods described in the "Corps of Engineers Wetlands Delineation Manual" (1987).

(ii) If a proposed activity requires a permit and will alter 500 or more square feet of a P-WL1 wetland or 20,000 or more square feet of a P-WL2 or P-WL3 wetland, the Commission may require, as a condition of approval, mitigation, including compensation, as provided in the Commission's General Land Use Standards in Section 10.25,P,2.

(iii) In determining the area of wetland alteration or overall land alteration, all components of a proposed activity, including all phases of a multi-phased project, are treated together as constituting one single and complete project.

(c) Level of Permit Review: The level of permit review required depends upon the size of the proposed wetland alteration and the P-WL subdistrict involved. If any part of the overall project requires a higher level of

review, then the whole overall project will be reviewed under that higher tier, unless otherwise authorized by the Commission:

(i) Tier 2 reviews are for projects altering 15,000 up to 43,560 square feet (one acre) of P-WL2 or P-WL3 wetlands not containing critically imperiled (S1) or imperiled (S2) natural communities.

(ii) When wetland delineation is required, the level of permit review required will be determined by the type of wetland indicated through delineation.

(2) General Land Use Standards

(a) Avoidance:

(i) Projects requiring Tier 2 or Tier 3 review must not cause a loss in wetland area, functions and values if there is a practicable alternative to the project that would be less damaging to the environment. Each Tier 2 and Tier 3 application must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

(b) Minimal Alteration: Projects requiring Tier 1, Tier 2 or Tier 3 review must limit the amount of wetland to be altered to the minimum amount necessary to complete the project.

(c) Water Quality: Projects requiring Tier 1, Tier 2 or Tier 3 review must comply with applicable water quality standards; i.e., the activity will not violate any state water quality law, including those governing the classification of the State's waters. Projects that would alter wetland hydrology and could also alter stream flows or other adjacent surface waters must comply with the water quality classification standards contained in 38 M.R.S.A. §465.

(d) Erosion Control. Projects requiring Tier 1 or Tier 2 review must use erosion control measures to prevent sedimentation of surface waters. A 25-foot buffer strip must be maintained between the activity and any surface waters.

(e) Compensation. Compensation is the off-setting of a lost wetland function with a function of equal or greater value. The goal of compensation is to achieve no net loss of wetland functions and values.

(i) For projects requiring Tier 2 or Tier 3 review, the Commission may require compensation when it determines that a wetland alteration will cause a wetland function or functions to be lost or degraded as identified by an assessment of wetland functions and values in accordance with application requirements or by the Commission's evaluation of the project.

(ii) The Commission may waive the requirement for a functional assessment, compensation, or both. The Commission may waive the requirement for a functional assessment if it already possesses the information necessary to determine the functions of the area proposed to be altered. The Commission may waive the requirement for compensation if it determines that any impact to wetland functions and values from the activity will be insignificant.

6. Section 10.26 of the Commission's Land Use Districts and Standards

A. *Section 10.26,D: Minimum Setbacks.*
The minimum setbacks for multi-family dwellings and commercial, industrial, and other non-residential principal and accessory structures are:

(1) 100 feet from the nearest shoreline of a flowing water draining less than 50 square miles, a body of standing water less than 10 acres in size, or a tidal water, and from the upland edge of wetlands designated as P-WL1 subdistricts;

(2) 150 feet from the nearest shoreline of a flowing water draining 50 square miles or more and a body of standing water 10 acres or greater in size;
(3) 75 feet from the traveled portion of the nearest roadway except as provided for in Section 10.26,D,2,d below;

Except as provided for in Section 10.26,D,1 above, these setbacks also apply to all parking areas associated with multi-family dwellings and commercial, industrial, and other non-residential uses, and all other structures within a sporting camp complex, including, but not limited to, a main lodge, dining area, workshop and parking area.

B. *Section 10.26,F: Maximum Building Height.*
(1) Except as provided for in Section 10.26,F,2 and 4 below, the maximum building height shall be:
(b) 100 feet for commercial, industrial, and other non-residential uses involving one or more buildings.
(3) Features of buildings which contain no floor area such as chimneys, towers, ventilators and spires may exceed these maximum heights with the Commission's approval.

C. *Section 10.26,G: Exceptions to Dimensional Requirements.*
(2) The dimensional requirements applicable to D-PD Subdistricts shall be established by the Commission pursuant to the provisions of Section 10.21,G, provided that the shoreline setback requirements hereof shall not be reduced.
(4) Where development would otherwise have an undue adverse impact on existing uses, scenic character or natural and historic resources in the area likely to be affected by the proposal, the Commission may impose additional or more protective standards with respect to clearing, frontage and setback requirements, waste water disposal, and other aspects of the development to reasonably assure that undue adverse impact is avoided.
(11) The Commission may reduce the minimum road setback requirement for subdivisions and commercial, industrial and other non-residential structures and uses, in accordance with Section 10.25,D,3,d,(2).
(13) The Commission may reduce the property line setback where there is no practical alternative and upon prior written agreement of the adjoining property owner.