



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

TransCanada Maine Wind Development, Inc.
 Final Development Plan Permit DP 4794
 By Special Exception in Part
 And Water Quality Certification

Findings of Fact and Decision

The Maine Land Use Regulation Commission, at a meeting of the Commission held on July 9, 2008, at Orono, Maine, after reviewing the application and supporting documents submitted by TransCanada Maine Wind Development, Inc. (hereinafter "Applicant") for Final Development Plan Permit DP 4794, 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: TransCanada Maine Wind Development, Inc.
 c/o Verrill Dana, LLP
 One Portland Square
 Portland, ME 04112-0586

2. Application Accepted as Complete for Processing: April 22, 2008

3. Location of Proposal: Kibby Township, Franklin County (rezoned D-PD)
 Skinner Township, Franklin County (rezoned D-PD)
 Chain of Ponds Township, Franklin County (roads and supporting structures)
 Jim Pond Township, Franklin County (transmission line)
 Coplin Plantation, Franklin County (transmission line)
 Wyman Township, Franklin County (transmission line)

- Kibby Mountain: centroid - 70° 31'57.02" W, 45° 23'53.01" N
 Kibby Range: centroid - 70° 34'6.04" W, 45° 20'25.94" N

4. Current Zoning: (D-PD) Planned Development Subdistrict (zoning effective March 20, 2008) [Previously (M-GN) General Management Subdistrict,



(P-MA) Mountain Area Protection, (P-WL) Wetland Protection Subdistrict, and (P-SL2) Shoreland Protection Subdistrict]
(M-GN) General Management Subdistrict
(P-MA) Mountain Area Protection
(P-WL) Wetland Protection Subdistrict
(P-SL2) Shoreland Protection Subdistrict
(P-UA) Unusual Area Protection Subdistrict
(P-RR) Recreation Protection Subdistrict

5. Parcel Size: Series A (Kibby Mountain) 810 acres (Map FR017)
Series B (Kibby Range) 1,557 acres (Map FR013)
6. Waterbodies located within the watershed or viewshed, but not within the D-PD Subdistrict.

Flagstaff Lake is a management class 2, resource class 1A, accessible, undeveloped lake with outstanding fisheries and wildlife values and significant scenic and shore character.

Jim Pond is a management class 2, resource class 1A, accessible, undeveloped lake with outstanding fisheries, wildlife and scenic values and significant shore character.

Hurricane Pond is a management class 7, resource class 2, inaccessible, undeveloped lake with significant wildlife value.

Douglas Pond is a management class 7, resource class 3, inaccessible, undeveloped lake.

Chain of Ponds is a management class 2, resource class 1A, accessible, undeveloped lake with outstanding fisheries, wildlife, scenic and physical values and significant shore and cultural character.

Gold Brook, Kibby Stream, the Northwest Inlet to Jim Pond, and the North Branch of the Dead River are Class A flowing waters. The West Branch of Spencer Stream is a Class AA flowing water.

Administrative History

7. Between 1991 and 1994, staff issued Development Permit DP 4144, Development Permit DP 4186, Development Permit DP 4286, and Development Permit DP 4287 to Kenetech Windpower, Inc. (a subsidiary of U.S. Windpower) for a total of four (4) meteorological instrumentation poles in Kibby Township to collect data for a possible windpower project.
8. On August 17, 1995, the Commission issued Zoning Petition ZP 536 to Kenetech Windpower to rezone 1,297 acres from (P-MA) High Mountain Protection

- Subdistrict, (M-GN) General Management Subdistrict, and (P-SL2) Shoreland Protection Subdistrict to (D-PD) Planned Development Subdistrict to develop a windpower facility in Kibby, Skinner, and Merrill Strip Townships. Zoning Petition ZP 536 also granted Preliminary Development Plan approval. Environmental work completed for this project included, but was not limited to, avian surveys, rare plant searches, and natural habitat assessment.
9. On August 25, 1995, staff issued Utility Line Permit ULP 352 to Kenetech Windpower for a 23 mile long electric utility line associated with the proposed windpower facility approved under Zoning Petition ZP 536. Utility Line Permit ULP 352 was subsequently appealed to the Commission by the Friends of the Boundary Mountains. The appeal was denied in March of 1996, upholding the approval of Utility Line Permit ULP 352.
 10. On February 27, 1997, the Commission denied Kenetech Windpower's request for Amendment A to Zoning Petition ZP 526 for a six month extension to the deadline for the submission of the Final Development Plan permit application as required under the Commission's rules (Section 10.21,G,8,c(3) of the Commission's Land Use Districts and Standards). U.S. Windpower, Kenetech Windpower's parent company, had filed for bankruptcy in 1996, which was the reason for the Commission's denial of the Amendment request.
 11. In 2005, TransCanada Energy, Ltd. became the successor in interest to certain rights on the subject property to pursue possible development of a windpower facility, including the installation of meteorological instrumentation poles.
 12. Development Permit DP 4728 was issued to TransCanada Energy, Ltd. on November 18, 2005, authorizing the installation of eight temporary meteorological testing equipment poles on three ridgelines located in Kibby Township and Skinner Township, Franklin County. Amendment A to Development Permit DP 4728 was issued to TransCanada in August, 2007 which authorized a change in the type of meteorological poles for two of the previously permitted locations.
 13. *Wind resource.* Since 2005 TransCanada has conducted studies of the wind resource at the development area (reference Development Permit DP 4728), determining that it is a Class 6 wind resource averaged across the site, with the long term average wind speed across the turbine locations being 8.5 meters per second (m/s). The site represents an outstanding wind resource that is located in an area otherwise suitable for development of commercial-scale wind power under LURC's environmental and other standards.
 14. Zoning Petition ZP 709 was issued to TransCanada Maine Wind Development, Inc. (hereinafter "the applicant") and co-petitioner Plum Creek Timberlands, Inc. (hereinafter "Plum Creek") on March 5, 2008, rezoning approximately 2,367 acres on Kibby Mountain and Kibby Range in Kibby and Skinner Townships from (M-GN) General Management Subdistrict (approximately 872 acres), (P-MA) Mountain Area

Protection Subdistrict (approximately 1,495 acres), (P-SL) Shoreland Protection Subdistrict (approximately 34 acres), and (P-WL) Wetland Protection Subdistrict (approximately 18 acres) to (D-PD) Planned Development Subdistrict for the purpose of developing the 132 megawatt (MW) Kibby Wind Power Project (KWPP) consisting of 44 wind turbines. The rezoned land is owned by Plum Creek. The locations of the boundaries of the D-PD Subdistrict were based on a portion of the area over which TransCanada holds exclusive wind development rights.

- 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) Superior wind resource;
 - (2) Distance to existing roads and existing infrastructure, and an existing road network is present within the project area;
 - (3) Compatibility with existing land uses of timber harvesting and recreation;
 - (4) Surrounding scenic resources are screened due to the topography of the Project site and the complex surrounding terrain;
 - (5) High elevation resource not impacted, *i.e.* lack of typical high elevation geologic and ecologic resources within the development area;
 - (6) Proximity to developed areas; and
 - (7) Distance to public resource areas.
- B. A public hearing on Zoning Petition ZP 709 was held on October 2 and 3, 2007, at the Sugarloaf Grand Summit Conference Center in Carrabassett Valley, Maine.
- (1) Support or a neutral position for the KWPP was expressed by the following Parties: Intervenor Natural Resources Council of Maine (NRCM), Conservation Law Foundation (CLF), Independent Energy Producers of Maine (IEPM), Maine Audubon Society (MAS), and Appalachian Mountain Club (AMC); Government agencies Local Interests in Support (LIS) and the National Park Service (NPS); and Interested Party American Lung Association of Maine (ALAM). Support was also expressed by local residents and members of the public in general.
 - (2) Opposition to the KWPP was expressed by local residents, members of the public in general, and one Intervenor, the Friends of the Boundary Mountains (FBM).
 - (3) Support for the KWPP was also expressed by various non-Intervenor organizations such as: the Towns of Eustis, Carrabassett Valley, and Kingfield, several State representatives and senators, Franklin County Chamber of Commerce, and the Franklin County Commissioners.
 - (4) The hearing record closed on October 22, 2007.
15. The Interconnection System Impact Study for the Kibby Project was issued by the Independent System Operators of New England (ISO-NE), and the findings are summarized in a letter dated December 21, 2007. The study concluded that the KWPP would not have a significant adverse affect on the stability, reliability or operating characteristics of Central Maine Power Company's transmission facility or

the electrical grid with the modifications and conditions as listed in the letter. The applicant is responsible for funding modifications to the substation required by ISO-NE.

16. An application for Final Development Plan Permit DP 4794 was submitted by the applicant to LURC on April 11, 2008. After review for completeness by staff, the application was accepted for processing on April 22, 2008.
17. The applicant has obtained, or is in the process of obtaining, permits from several other agencies or entities for the KWPP, as follows:
 - A. *U.S. Army Corps of Engineers (ACOE)*. The ACOE has jurisdiction over any proposed placement of fill in waters and wetlands of the United States. The applicant submitted a permit application to ACOE for proposed fill or disturbance of any waters and wetlands associated with all of the KWPP, including the entire transmission line. The ACOE permit application was filed and public notice was issued on March 18, 2008. The ACOE is reviewing the KWPP as a Section 404 individual permit because of the amount of temporary fill due to mats used in wetlands during construction in addition to the amount of permanent fill proposed (see Finding of Fact #46,A). The public comment period ended on April 18, 2008. On June 5, 2008, the applicant provided responses to review comments submitted during that process.

The U.S. Environmental Protection Agency (USEPA) and U.S. Fish and Wildlife Service (USFWS) are not required to issue separate permits for the KWPP, but are participating as review agencies in the ACOE permit process.
 - B. *Maine Department of Environmental Protection (MDEP)*. MDEP has jurisdiction over the segments of the 115 kV transmission line within Eustis and Carrabassett Valley. The applicant received approval for those segments on October 12, 2007 [DEP Permit #L-23811-24-A-N and #L-23811-TH-B-N]. The applicant submitted an application to modify its MDEP permit on June 2, 2008 to reflect a shift of 0.6 miles of the 115 kV transmission line from the organized Town of Eustis to the unorganized Coplin Plantation.

An MDEP Stormwater General Permit is also required for the KWPP. The Notice of Intent (NOI) to file will be submitted to the MDEP prior to the commencement of construction, as required.
 - C. *Federal Aviation Administration (FAA)*. The FAA issues notices to determine whether structures are a hazard to navigation and to specify lighting and marking safety requirements. FAA approval and lighting configuration was obtained for an earlier layout of the KWPP in November of 2006. An updated filing with the FAA was submitted by the applicant on March 13, 2008 for the layout of 44 turbines approved in the Preliminary Development Plan. For the currently proposed turbine layout, FAA review and lighting scheme determination is similar to the lighting configuration in the previously approved layout. The final approval was granted on June 3, 2008, and the plan was forwarded to LURC.

- D. *Maine Department of Transportation (MDOT)*. The applicant expects to file applications for crossings of MDOT right-of-ways for work associated with the 115 kV transmission line. MDOT right-of-ways would be crossed three times: below ground as the line exits the Bigelow Substation, above-ground at mile 7.5, and above-ground at mile 21.5 where it crosses Route 16.
- E. *Towns of Eustis and Carrabassett Valley*. The Carrabassett Valley Planning Board approved the portion of the 115 kV transmission line located within that town during its February 28, 2008 meeting. The Eustis Planning Board approved the portion of the 115 kV transmission line located within that town during its June 9, 2008 meeting.
- F. A Notice of Filing was sent to the Penobscot Indian Nation (PIN) on April 10, 2008. The PIN, Passamaquoddy Tribe, Aroostook Band of the MicMac Indians, and Houlton Band of the Maliseet Indians were contacted in November of 2006 during the review of the Preliminary Development Plan. Only the PIN responded, providing a “no impact” notice, dated December 13, 2006.

Proposed Final Development Plan

- 18. The applicant proposes to construct the 132 MW KWPP, consisting of forty-four (44) Vestas V90 3.0 MW wind turbines, on the ridgeline south of Kibby Mountain and on Kibby Range in Kibby Township and Skinner Township, Franklin County. The turbines would be located on two ridgelines between elevations 2,507 feet and 3,210 feet: the southern portion of Kibby Mountain (highest proposed turbine location would be 3,134 feet), which is referred to as the “A Series”; and the second ridgeline would be along Kibby Range (highest proposed turbine location is 3,210 feet), which is referred to as the “B Series.”
 - A. The Final Development Plan for the KWPP (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 #2,C(1) of Zoning Petition ZP 709, 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 (MWh) of generation by month during the preceding calendar year, and an estimate of the avoided emissions resulting from project operation. Avoided emissions calculations would be based on data published by ISO-NE in its annual report

which uses actual generation data as the basis for their emissions rates calculations.

19. *Financial capacity and estimated costs.* The applicant is a wholly owned subsidiary of TransCanada Corporation. The proposed KWPP would be financed by TransCanada Corporation, as evidenced by a letter (dated April 3, 2007) from Executive Vice President and Chief Financial Officer Gregory A. Lohnes, stating a commitment to advance or fund the development of the KWPP. A copy of TransCanada Corporation's 2006 Annual Report was submitted to substantiate the company's assets of over \$24 billion, its "A3" credit rating by Moody's Investor Service, cash flow of \$2 billion, and net income of \$900 million from continuing operations.
 - A. *Estimated development costs.* The applicant submitted an estimated development cost of \$270 million, of which the turbines would constitute \$166 million, and the 115 kV transmission line would be \$20 million. The remainder would be for the collector line system and substation (\$15 million), the turbine foundations and turbine installation (\$18 million), roads (\$28 million), and other indirect costs (\$23 million).
 - B. *Decommissioning.* The applicant proposes to put in place a Parental Guarantee to fund any necessary decommissioning activities associated with the KWPP. Finding of Fact #39 provides a summary of the proposed decommissioning plan.
 - C. *Tax Increment Financing (TIF).* The applicant entered into a TIF agreement with the Franklin County Commissioners on June 3, 2008, which would provide additional benefits to the local economy. In addition to the jobs to be provided, the community benefits package developed by the applicant for the town of Eustis, new taxable land value, conservation lands, and clean energy production, the TIF would provide for the creation of a \$4 million county fund to support further economic development and infrastructure improvements in Franklin County over the next 10 years. Possible programs to be developed include tourism marketing and planning, business attraction, a revolving loan fund and matching grants for new business development, investments in public safety, and scenic byway improvements for Routes 16 and 27. The TIF would capture 75% of the new tax revenue produced by the KWPP during the first 10 years, and 50% of the revenue for the second ten years. The applicant anticipates that the TIF will help reduce Franklin County's property taxes, and help attract investment to the area leading to job growth that would further reductions to the local tax burden.
20. *Title, right, or interest (TRI).* The applicant has obtained agreements with landowners for all permanent and temporary elements of the proposed work as follows:
 - A. The applicant possesses an option to acquire the exclusive right to develop a wind power facility on the rezoned parcels in Kibby Twp. and Skinner Twp., and would

exercise the option after a permit is granted. Plum Creek Maine Timberlands, LLC owns the land in fee.

- B. *Background.* In 1992, an easement granted to U.S. Windpower, Inc. by S.D. Warren granted the right to develop on its 68,400 acres in Kibby and Skinner Townships (owned in fee) any “activities related to wind energy conversion and collection of electric power”, including construction of wind turbines, transmission lines, substations, and any other activities that are reasonably needed to develop the wind power facility (the “Easement”).
- (1) In 1997, the Easement was assigned to the Enron Wind Development Corporation and shortly thereafter Enron released all but 3,767 acres (including the proposed KWPP area) back to S.D. Warren.
 - (2) In 1998, S.D. Warren transferred the fee interest in the property to an entity subsequently named Plum Creek Maine Timberlands, LLC.
 - (3) In 2002, Enron assigned the Easement to the current holder, G.E. Wind Energy, LLC, who then granted an option to acquire the easement to TransCanada Energy, Ltd.
 - (4) In 2006, TransCanada Energy Ltd. assigned the option to the Applicant.
- C. With respect to activities associated with the proposed KWPP (use of existing roads, construction of new access roads, construction and maintenance of staging areas, batch plant and operations and maintenance building, and construction and operation of a portion of the 115 kV transmission line) that will take place in LURC jurisdiction, but outside the D-PD Subdistrict in Jim Pond Twp., Coplin Plt., Chain of Ponds Twp., and Wyman, Twp., the applicant submitted sufficient documentation of TRI..
- D. The proposed 115 kV transmission line for the KWPP would travel south from the turbine strings through Kibby Township, Jim Pond Township, Eustis, Coplin Plantation, Wyman Township, and Carrabassett Valley. The applicant’s TRI agreements within each town are listed below:
- (1) *Kibby Township.* As noted above, the applicant holds an Option to acquire the Easement, which includes the right to construct the transmission line, from G.E. Wind Energy, LLC for land in Kibby Township.
 - (2) *Jim Pond Township and Coplin Plantation.* The applicant holds a Purchase Agreement for easement rights with landowner Kennebec West Forest, LLC for the transmission line in Jim Pond Township and Coplin Plantation.
 - (3) *Wyman Township.* The applicant has three separate agreements with fee owners in Wyman Township for the transmission line:
 - (a) *Gardiner Land Company.* The applicant holds a Purchase Agreement for easement rights for the transmission line route, and associated road access and construction.
 - (b) *Maine Department of Conservation.* The applicant has obtained a Purchase Agreement for an easement through two tracts of land owned by the State of Maine: one tract runs parallel to the northern side of the existing Boralex transmission line corridor, and the second tract is a 150-

foot wide corridor between the Appalachian Trail and the boundary between Wyman Township and Carrabassett Valley.

- (c) On the north side of the existing Boralex transmission line corridor, just west of Route 27, the transmission line would be installed underground and would traverse the westerly Route 27 road shoulder within the public right-of-way for approximately 0.4 mile (0.14 mile in Carrabassett Valley, and 0.26 mile in Wyman Twp.) before entering the Central Maine Power (CMP) Bigelow Substation. The applicant will be undertaking the process of obtaining the required permits from MDOT for the transmission line where it would cross or be located within a public right-of way (see Finding of Fact # 17,D).

- (4) *Eustis and Carrabassett Valley*. Both towns are organized and are within the jurisdiction of MDEP, which has reviewed and permitted the portions of the transmission line that passes through these towns (see Finding of Fact #17,E).

- 21. *Technical experience*. The applicant is a wholly owned subsidiary of TransCanada Corporation, which is a major developer of energy infrastructure in Canada and New England. Aside from wind energy development, TransCanada Corporation has been involved with two hydropower projects, 11 natural gas power generation projects, fifteen natural gas pipeline projects (including the Alaska Highway Pipeline Project from Prudhoe Bay), a major transmission line in the western U.S., a nuclear power plant, and a coal-fired power plant.
 - A. TransCanada Corporation is managing its eastern assets under TransCanada Power Marketer Limited as an energy provider and marketer to the New England States, with offices in Massachusetts. This office has detailed knowledge of the ISO-NE rules and works closely with the New England Power Pool.
 - B. With respect to wind energy development experience, TransCanada Corporation is the majority owner of Cartier Wind Energy, Inc., which is developing six wind energy projects in Quebec (the first is located at Baie des Sables (109.5 MW), and went into operation in 2006, providing energy to the Hydro-Quebec grid). This project is one of the largest in Canada.
 - C. Specific to the proposed KWPP, the applicant has retained experienced contractors from Maine and New England, including AMEC Earth & Environmental and TRC Environmental to oversee the environmental permitting; Jean Vissering for the visual assessment; Stantec (formerly Woodlot Alternatives) for the avian and bat assessment; Michael Theriault Acoustics for the sound assessment; James W. Sewall Company for topographic surveys; Plisga & Day for land surveys; AMEC, S.W. Cole Engineering, Inc., and White Construction Inc., USA for engineering and construction; Gilman and Briggs for rare plant searches and natural plant community assessment; Farr Consulting for the air emissions displacement analysis; Dr. Charles Colgan for the economic assessment; Barton & Gingold for public relations; and Verrill Dana as legal counsel. The applicant also retained Garrad Hassan, a leading wind energy

consulting firm, to assess the wind resource at the development site. More recently, the applicant has entered a pre-construction services agreement with Reed & Reed. Other companies that may be employed as subcontractors are Sargent Corporation and Maine Drilling and Blasting.

22. *Site access, signage, and traffic flow.*

- A. *Site access.* The primary access to the KWPP site would be from Route 27, via an extensive network of existing logging roads on Plum Creek property. Although private land, these logging roads are used not only by Plum Creek for its land management activities, but also by other forest management companies and land owners (e.g., Domtar, the Passamaquoddy Nation, State of Maine, and the general public), and the general public to access points to the north. The existing logging road network includes: Gold Brook Road, Wahl Road, Spencer Bale Road, Hurricane Road, and several unnamed roads.
- B. *Traffic flow.* Traffic flow during the period of construction would be toward the Gold Brook Road in the morning and toward Eustis in the afternoon. There would be approximately 50 worker vehicles per day traveling to the project site. During construction of the turbine foundations, a maximum of 80 concrete trucks per day per foundation would be required (or less, depending on the type of foundation used). The total estimated average number of vehicles travelling to the site per day is 177, including both passenger and large vehicles (turbine delivery, cement trucks, construction equipment, etc.). The amount of construction traffic would vary throughout the proposed three-year construction schedule, with peak traffic during the summer when many different construction activities would occur concurrently.
- (1) Oversize load permits would be acquired from the Maine Bureau of Motor Vehicles, as appropriate. The applicant would continue working with MDOT, the Maine State Police, and other agencies to obtain all necessary permits, ensure appropriate safety precautions are taken, and minimize impacts to roads and other users.
 - (2) The majority of on-site construction traffic would occur on Gold Brook Road, Wahl Road, Spencer Bale Road, and other access roads within the project area. Construction worker vehicle parking would be at the construction control center, to be located at the intersection of Gold Brook Road and Route 27. The KWPP may include its own temporary concrete batch plant at this location during construction, in which case concrete trucks would not need to travel along Route 27 (see Finding of Fact #34,D).
- C. *Transportation of turbines to the site.* The wind turbine generator components would be transported from the nearest seaport, either in Quebec or Maine, and delivered to the KWPP site. The turbine components would travel either from the North through Quebec and along Route 27, or from the South along Route 27 to the Gold Brook Road. Turbine components would be individually trucked to the site, with an average of 10 truck trips per day. The applicant estimates that 440 of these heavy-haul loads would travel to the site via Route 27 (220 heavy haul

loads, 132 over-sized loads, and 88 regular tractor trailer sized loads). A preliminary assessment has confirmed these routes have no overhead obstructions and are suitable for the delivery vehicles.

The applicant's primary contractor will be responsible for the transportation of equipment from Searsport, Maine or from Quebec, Canada to the site, with the exception of the substation transformer, which would be the direct responsibility of the applicant.

- D. *Signage.* Signage for the KWPP would be limited to informational signs associated with site activities and roadway closures, to be developed with Plum Creek for shared roads and facilities where necessary. A primary sign which would include project name and ownership, construction contractor, and contact information would be located at the construction control center (site of the future O&M building). This sign would remain after construction is complete (revised to reflect post-construction information). Permanent signs would also be posted near each turbine prohibiting climbing or other access to structures. Signs associated with the KWPP construction and operations would be consistent with Section 10.27,J of the Commission's Land Use Districts and Standards.

23. *Existing and continued use of the development area.* The existing and proposed roads within the development area would continue to be used by Plum Creek for forest management activities, and by the general public for access across the parcel and recreational activities, as allowed by the landowner. After construction, public access to the development site would not be restricted by the applicant, with the exception of the new Kibby Substation for safety reasons. The operation of the KWPP is not anticipated to interfere with the existing forestry activities, or public access.

24. *Public services.* The applicant states that the KWPP would be relatively self-sufficient and that adequate public services exist in the project area, as follows:

A. *Fire suppression.* The Eustis/Stratton Fire Department has one fire station, a volunteer fire chief, and 15 volunteer firefighters. The Maine Forest Service also provides response to forest fires in the project area. The Franklin County Commissioners stated that "[a]ny need for police or fire protection services is expected to be minimal and consistent with the services currently provided in this region." The Eustis Fire Chief stated that his crews are also responsible for fires and rescues in the project area, and he did not anticipate the project would increase their workload.

B. *Solid waste disposal.* The solid waste disposal for this project would be similar to methods employed for construction of access roads and other construction sites in the area. Construction wastes would be disposed of at existing permitted landfills that have the ability to handle the anticipated waste, as confirmed by Waste Management, Inc. in August of 2006. No on-site landfill areas are planned. Portable refuse containers would be used within the construction area for collection of solid waste material; the containers would be monitored and emptied

periodically by project personnel. Wood waste due to clearing would be either chipped or ground, and used on-site for sediment control berms or spread to stabilize cleared areas. Stumps would be cut to ground level and left in place except in areas of heavy loading (e.g., turbines and roads). Excess stumps would be incorporated into the fill areas located along the ridgeline

- C. *Police.* The Franklin County Sheriff's Department stated that it and the Maine State Police would respond to incidents within the project area. The town of Eustis/Stratton is served by both the Franklin County Sheriff's Department and the Maine State Police at all times. Duties are regionally divided among the two departments, on an alternate weekly basis: one department serves the northern half of the county and the other, the southern half.
- D. *Emergency medical services.* The closest hospital to Eustis/Stratton is Franklin Memorial Hospital in Farmington, approximately 45 miles away. Ambulance service for the area is provided by Franklin Memorial Hospital. The Franklin County Emergency Management Agency confirmed that the KWPP would not require resources more than those already in place. The Agency also noted that road upgrades resulting from the KWPP would improve access for first responders called to other incidents.
- E. *Road maintenance.* After the facility is constructed, Plum Creek would continue to own and be responsible for maintaining the existing logging roads that would be improved: Gold Brook Road, Wahl Road, Spencer Bale Road, and unnamed existing roads. The applicant would be responsible for maintenance of new project access roads (see Finding of Fact #29).

Project Description (see Appendix A, attached)

- 25. The KWPP would consist of 44 turbines, each located within a turbine pad; above- and below-ground 34.5 kV electrical transmission ("collector") and communication lines; access roads and ridgeline roads with spur roads; four permanent meteorological towers; a 115 kV transmission line connecting to the existing Bigelow Substation; an Operation & Maintenance (O&M) facility with septic system and well; and the new Kibby Substation. Temporary activities associated with the construction of the project would include: a Construction Control Center (CCC) with office trailers, parking, porta-potties, and storage areas; trailers for personnel on-site (with no utilities); three lay-down areas; three rock crushers with storage areas; and a concrete batch plant. All activities proposed represent the maximum area or amount determined to be needed. The applicant expects the actual areas to be disturbed or amounts of materials needed to be equal to or less than those proposed.
- 26. *Cleared area.* The total area to be cleared for construction, excluding the 115 kV transmission line, would be 423.6 acres. Of this, 293.6 acres would be allowed to re-vegetate after construction, and 130 acres would remain permanently cleared. The tree layer would be permanently cleared from 310 acres for the 115 kV transmission

line corridor within LURC jurisdiction: the shrub and herbaceous layers would remain within the corridor, except where access ways exist.

- A. The amount of clearing for the project proposed in the Final Development Plan differs from the amount approved in the Preliminary Plan due to minor shifts in turbine pad and access road locations, more detailed design plans, and small shifts in transmission line location. Several of these adjustments were made to minimize wetland impacts.
- (1) Excluding the 115 kV transmission line corridor, the total area of disturbance would decrease from 434.7 acres to 423.6 acres. The total area to be cleared above 2,700 feet in elevation would decrease from 218.4 acres to 203.4 acres. The total area to be cleared below 2,700 feet in elevation would increase from 216.3 acres to 220.2 acres.
 - (2) The total area to be cleared for the 115 kV transmission line corridor in LURC jurisdiction would increase from 290.25 acres to 310 acres.
 - (3) The total area of wetland affected by fill would be 15,003 square feet, decreased from 1.45 acres.
- B. *400 foot setback from D-PD Subdistrict boundary.* Except as noted below, the turbines (measured from the extended tip of the rotor blade) would be set back at least 400 feet from the boundary of the D-PD Subdistrict. Thirteen of the 44 turbines (B-7, B-2, B-3, B-17, A-5, A-1, A-20, B-1, B-26, B-12, B-20, A-2, and B-25) would be located less than 400 feet from the D-PD Subdistrict boundary. Turbines B-2, B-3, and B-7 would be less than 100 feet from the D-PD Subdistrict boundary. Turbines A-5 and A-20 would be from 100 to 200 feet; turbines B-17, A-1, B-1, B-26, B-12, and B-20 would be from 200 to 300 feet, and turbines A-2 and B-25 would be from 300 to 400 feet. Plum Creek, the abutting land owner, stated in a letter dated September 27, 2007 that it does not object to the turbines that would be located less than 400 feet from the D-PD Subdistrict boundary.
- C. *Development outside the D-PD Subdistrict boundary.* Some of the project elements are proposed for locations outside of the D-PD Subdistrict. A portion of the collector lines, two of the met towers, and access roads would be located outside the D-PD Subdistrict, but within the adjacent P-MA Subdistrict. Portions of the collectors lines, new access roads, the substation, the 115 kV transmission line, the O&M facility, upgrades to existing roads, and several temporary activities during construction (construction control center, storage and lay-down areas, concrete batch plant, and excess fill disposal areas) would be located in an M-GN Subdistrict. Wetlands and streams (P-WL and P-SL Subdistricts) would be affected by road construction and crossings. Protection subdistricts crossed by the 115 kV line, but not otherwise affected include P-SL, P-WL, P-UA, and P-RR Subdistricts.
27. *Turbines.* A total of forty-four (44) of the original 46 turbine sites (A-1 through A-5, A-8 through A-19, B-1 through B-5 and B-7 through B-28) have been proposed for development. All of the turbines would be located within the D-PD Subdistrict:

thirty-two (32) would be above 2,700 feet in elevation, and twelve (12) would be below 2,700 feet. Seventeen (17) of the turbines would be located on Kibby Mountain in Kibby Township and Skinner Township (Series A), and twenty-seven (27) of the turbines would be located on Kibby Range in Kibby Township (Series B). The turbines would be located from 2,507 feet to 3,210 feet in elevation.

- A. The turbines would be 3.0 MW Vestas V90 turbines, and would operate at wind speeds between 9 mph and 56 mph. The base of each turbine would be 13.5 feet in diameter. At the upward extended tip of the blade, the turbine would be 410 feet high, with a hub height of 263 feet, and a blade length of 144 feet. The rotor swept area would be 295 feet in diameter, turning at 8.6 to 18.4 revolutions per minute. The spacing between the turbines would be the equivalent of the height of two (2) to four (4) turbines. There are no guy wires or external ladders associated with the wind turbines.
- B. *Turbine and crane pads.* Each turbine site would require clearing of approximately one acre next to the turbine access road. A small portion of that land would be leveled, compacted and prepared for the turbine foundation and a permanent crane pad. The cleared area would be used for staging the turbine components and crane boom during assembly. Once construction is complete, the disturbed area would be stabilized in accordance with the Erosion and Sedimentation Control Plan (see Finding of Fact #42) and allowed to re-vegetate. In areas where the crane can travel between sites, the cleared area for crane boom assembly may not be required. Turn around areas for transport vehicles have been provided at the terminus of each access road.
- C. *Foundations.* Depending on the type used, the diameter of the foundation would range from 18 feet to 65 feet wide. Three possible types of foundation could be used, depending on site-specific conditions: gravity, socket, and rock-anchored. The rock-anchored type of foundation would require the least excavation or blasting, and the gravity type would require the most. The current proposal assumes the use of gravity foundations to represent the largest possible area to be disturbed. Preliminary site work has suggested that the most likely foundation would be the socket type, which would result in impacts the same or less than those proposed. The final foundation type for each turbine would be chosen after conducting the geotechnical borings, and would be shown on the final design drawings issued for construction (see Finding of Fact #47).
- D. *Lighting.* The FAA requires wind turbine farms that contain more than three turbines of heights over 200 feet high to have aircraft warning lights. Turbines at the end of each string should be lit, and there should be no more than 2,640 foot intervals in between turbines¹. For the KWPP, lights would be mounted on the nacelles and spaced approximately one-half mile apart around the perimeter of the

¹ 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)

site. The lights would be a slow pulsing red light. The review of the KWPP by FAA, and a final determination of the lighting scheme were approved on June 3, 2008.

During construction, there would be safety lighting on the cranes, as required by FAA. Nighttime construction is not anticipated, but any security or safety lighting in addition to the FAA lighting will be at ground level, and directed downward.

28. *Blasting.* Blasting may be necessary to remove rock for the turbine foundations and for road construction. The applicant submitted a blasting plan prepared by Maine Drilling and Blasting, specifying procedures to be followed for all blasting operations, and detailing provisions for security, warning signals, explosive types, required personnel qualifications, Material Safety Data Sheets, and emergency procedures. The blasting plan was reviewed by MDEP (see Finding of Fact #49,B), who raised concerns about fly-rock control, blast vibration, and air overpressure. In response, the applicant provided an addendum to its blasting plan to address these concerns.
29. *Roads.* A total of 17.4 miles of new gravel roads would be constructed. Of this, 14 miles would be within the D-PD Subdistrict: 11.1 miles above 2,700 feet in elevation and 2.9 miles below 2,700 feet in elevation. Outside the D-PD Subdistrict, 3.4 miles of new roads would be constructed: 2.7 miles above 2,700 feet in elevation and 0.7 miles below 2,700 feet in elevation. The roads would avoid excessive steep areas, and would generally have a maximum slope of no more than 10%, with short distances of 14% slope in exceptional circumstances. Specific design measures for project roads would be used, as recommended by the State Soil Scientist.
- A. *New ridgeline and access roads.* During construction, the ridgeline roads for access between turbine pads would be 34 feet wide, narrowed to 20 feet wide after construction. Roads built to gain access to the project ridgelines would be 20 to 25 feet wide gravel roads with pull-off areas. The locations of the new access roads have been adjusted to avoid wetland impacts to the greatest extent possible. During construction, the total area to be disturbed for the turbine pads and new roads would be 281 acres. Of these, 201 acres would be temporary alteration, leaving 80 acres permanently altered.
- B. *Existing roads.* Gold Brook Road, Wahl Road, and Spencer Bale Road would be widened to 25 feet; 250 foot long by 20 foot wide pull-off areas would be added approximately every ½ mile, and stream crossings would be upgraded as needed. Some slopes and curves would be straightened. The total area to be disturbed to improve the existing access roads would be 30 acres, with 2 of those acres being temporary disturbance. All of the improvements to existing roads would occur in areas below 2,700 feet in elevation that are M-GN Subdistrict.

- C. *Stream crossings.* Two (2) perennial and three intermittent stream channels within the B Series construction area would be crossed by the new roads. Each crossing location has been selected to minimize the area of potential impact to the stream (see Finding of Fact #46,A) During construction, several perennial and intermittent streams would be crossed using mats or temporary bridges. The collector and transmission lines would span, but not otherwise impact, approximately 60 perennial and intermittent streams.
 - D. *“Toolbox” approach.* The road design plan incorporates a range of design measures, referred to as a “toolbox”, to be selected as appropriate to respond to anticipated site conditions. The techniques included have been developed through a series of site visits, meetings and discussions with regulatory agencies (LURC, MDEP, and Maine State Soil Scientist), and are described more fully in the applicant’s Erosion and Sedimentation Control Plan (see Finding of Fact #42).
 - E. After construction, Gold Brook Road, Spencer Bale Road, and Wahl Road would continue to be maintained by Plum Creek. All new roads providing access to the turbines would be maintained by the applicant.
30. *34.5 kV “collector” line.* The electrical collection system that would connect the individual turbines to the 115 kV transmission line consists of two corridors, one each connecting the A Series and B series turbines to the Kibby Substation. In total, the collector systems would be approximately 3.9 miles long and would be primarily above-ground lines running adjacent to the ridgeline roads to connect the turbines. A below-ground line would be run a short distance from each turbine. Where not adjacent to a road the collector lines would be located in an approximately 60-foot wide corridor. The system would consist of two three-phase 34.5 kV cable systems on 60-foot tall poles. Fiber optic communication cable for system monitoring and communication would be strung on the same poles.
- A. *Clearing.* The corridor cleared for the 34.5 kV line would be 60 feet wide during construction, and maintained at 20 feet wide with low-growing species as detailed in the Vegetation Management Plan (see Finding of Fact #42,C). The total area to be disturbed for the collector lines would be 28 acres, of which 19 acres would be temporary and 9 acres would be permanent. Once construction is completed, all but 20 feet of the corridor would be allowed to re-vegetate.
31. *Operations & Maintenance (O&M) facility.* The O&M facility would be located in an M-GN Subdistrict near the intersection of Route 27 and Gold Brook Road. The O&M facility would be located on a 1-acre lot, and would include a 50 foot by 70 foot (approximately 3,500 square feet) one-story building, a parking area to accommodate up to 15 vehicles, and a storage area. The building would be used as an office and workspace for approximately 15 workers; and for storage and/or maintenance of tools, equipment, a company vehicle, and spare parts. Communications equipment would be located at this location, as well as a potable groundwater well and septic system. A soils report documenting the presence of

suitable soils for the proposed septic system was submitted with the Final Development Plan.

- A. *Wastewater disposal system.* The subsurface wastewater disposal system to be installed at the O&M building would consist of a 1,000 gallon concrete treatment tank, and a 20 foot by 50 foot stone bed disposal area. An HHE-200 form was submitted with the application and has been reviewed by DHHS/DEH (see Finding of Fact #52).
 - B. *Water use.* The applicant submitted estimates of the amounts of water needed for both the construction phase and the operational stage of the project. During construction, an estimated 30,475 gallons per day (gpd) would be required, including water for sanitary, drinking, and construction purposes such as dust control and concrete production (see Finding of Fact #34,D). Of this amount, a maximum of 28,000 gpd would be used for concrete production. During project operation, an estimated 225 gpd would be required for sanitation and drinking purposes. The applicant submitted a Water Resource Evaluation Report prepared by S. W. Cole which states installation of a bedrock well in this area would likely supply adequate potable water for construction and operation demands. If a larger volume of water were needed a second well would be installed in the sand and gravel aquifer which underlies a portion of the proposed O&M facility.
 - C. *Access and parking.* Access to the O&M facility would be from the Gold Brook Road. Parking would be in a gravel area near the building and provide 50 parking spaces during project operation. Sight distance was evaluated, and found to be adequate for both the turn onto Gold Brook Road, and at the intersection of Gold Brook Road and Route 27.
 - D. *Lighting.* Perimeter, emergency, and building lighting are included in the proposed O&M facility plan. All pole-mounted lighting would be no higher than 20 feet tall, and all lighting would be directed downward (shielded). Exterior lighting would be motion sensitive or manually controlled.
 - E. *Setbacks and visual buffers.* The O&M building and parking area would be set back at least 75 feet from Gold Brook Road and Route 27, and at least 100 feet from any waterbody. The applicant would landscape the access road and the building entryway, and the existing vegetation in the 75 foot wide setback area would be left intact to provide a visual buffer.
32. *Kibby Substation.* The proposed KWPP would include construction of the Kibby Substation on Wahl Road. The substation would house the 34.5 kV to 115 kV step-up transformers, grounding systems, and connection points for the incoming and outgoing power lines. The substation would be placed within a 110 foot by 220 foot fenced-in area (0.56 acre). Also inside the fenced area there would be a 24 foot by 70 foot building containing switchgear, station service, system monitoring equipment, protection, and communication equipment. A parking area for up to 3 vehicles would

be provided. The building would be heated and have ventilation and air conditioning, as required for operation of the equipment contained in the building. A total of 3 acres would be disturbed to construct the substation, of which approximately 0.56 acre would remain open and unvegetated.

- A. *Lighting.* Perimeter lighting and equipment lighting would be provided at the substation, but normally would be shut off. Lighting would be turned on manually or by motion sensors to allow for inspection and repairs. Portable generators and lights would be used as needed.
 - B. *Drainage.* Stormwater would be managed by vegetated drainage swales and directing sheet flow into an undisturbed upland buffer area.
 - C. *Visual buffers.* The substation would be screened from view by surrounding tree cover, as well as by additional native evergreen plantings to provide visual aesthetics, safety and security. The area between the substation and Wahl Road will remain forested.
 - D. *Setbacks.* The substation will be set back at least 100 feet from all wetlands and 350 feet from Wahl Road.
 - E. *Access and parking.* The substation would have a 20 foot wide by 350 foot long access road for maintenance vehicles and equipment installation and removal. A parking area for 2 to 3 vehicles will be provided, although typically only one vehicle will be at the site at anyone time.
33. *115 kV transmission line.* A total of 27.6 miles of 115 kV transmission line would be installed to connect the proposed wind farm with the existing Bigelow substation in Wyman Township: 17.8 miles of the transmission line would be located within LURC jurisdiction, and 9.8 miles of the line would be within MDEP jurisdiction. The line would start at the new Kibby Substation in Kibby Twp., extending through Jim Pond Twp., Eustis, Coplin Plt., Wyman Twp, and ending in Carrabassett Valley at the Bigelow Substation. Major components of the transmission line would include a cleared corridor (right-of-way), pole structures, conductor (wire), insulators, guy wires and anchors, and a short underground segment of line in Wyman Township. TRI for the 115 kV transmission line corridor is described above in Finding of Fact #20. Wetland impacts associated with the line are described in Finding of Fact #46,A.
- A. *Clearing.* The total area to be cleared for the 115 kV transmission line within LURC's jurisdiction would be 310 acres. Vegetation in the corridor would be maintained as per the applicant's Vegetation Management Plan (see Finding of Fact #42,C).
 - B. *Pole installation.* The applicant proposes to access the corridor to construct the transmission line under frozen conditions to the extent practicable. Typically, the

poles would be a wooden H-frame type, except at turns where a wooden angled type structure would be used. Taller single wooden poles would be used along a portion of the right-of-way where the line is adjacent to the Boralex right-of-way. The poles would range in height from 55 to 95 feet tall.

- C. *Corridor width.* The transmission line corridor would be 150 feet wide from its origin at the Kibby Substation to mile 21.75 in Coplin Plantation. From mile 21.75 to the furthest extent within LURC jurisdiction (mile 26.5) the corridor would be adjacent to the existing Boralex right-of-way, and would be 125 feet wide. From mile 26.5 to Route 27, where the line would go underground, the work area would be 50 feet wide.
 - D. *Access roads.* Access to the 115 kV line corridor during construction, and later for maintenance, would be by existing roads specifically identified by the applicant for this purpose. Other existing roads may be used at the option of the contractor. The roads to be used will not require substantial upgrades or changes.
34. *Temporary activities.* During construction, several activities requiring structures, soil disturbance and clearing are proposed. All would be located outside the D-PD Subdistrict and within the M-GN Subdistrict.
- A. *Gravel.* Gravel needed for road and turbine and crane pad construction is expected to be derived from material excavated on-site and processed at one of three temporary rock-crushing plants (see Section E, below).
 - B. *Lay-down and storage areas.* Two lay-down areas totaling 18 acres (8 acres for Series A, and 10 acres for Series B) would be cleared during construction for storage of equipment and supplies, and to locate additional trailers if needed. No utilities would be provided to trailers placed temporarily in these areas (or in the turbine pad areas). The lay-down areas would be set back at least 75 feet from Wahl Road. A smaller lay-down area would also be located at the substation site. The areas selected are relatively flat, and as such would not require grading or filling. At the conclusion of construction, these areas would be allowed to naturally re-vegetate. Any areas of disturbed soils would be stabilized in accordance with the proposed E/S Plan.
 - C. *Construction Control Center.* A temporary Construction Control Center (CCC) would be located at the junction of Route 27 and Gold Brook Road at the same location as the permanent O&M facility. This location was recently used as a lay-down area by MDOT during its Route 27 widening project. Access to this area would be from the Gold Brook Road. The area would include construction trailers, parking area with space for 150 vehicles, a potable water well or truck in prior the well being installed, portable toilets, and temporary communication system. Power would be supplied by generators. The CCC would be set back at least 75 feet from Route 27 and Gold Brook Road, and 100 feet from any waterbodies or wetlands, as noted above for the permanent O&M facility in Finding of Fact #31. The CCC area

would be up to 4 acres in size to allow for the concrete batch plant (if needed), and storage /lay-down areas.

The main project staging area would be co-located with the CCC for storage area of project equipment and supplies. Silt fencing would be used along the down-slope edge of the site as an erosion control measure during construction activities. After construction is complete, the staging area would be restored to the same condition as existed prior to construction.

D. *Concrete batch plant.* In the event that a concrete batch plant is required for foundation installation, it would require an area of 1.5 acres in size, and would be located adjacent to the CCC area on Route 27.

(1) The decision to install the batch plant is contingent upon the results of additional geotechnical investigations, which will indicate the final foundation types needed, and consequently the amount of concrete that will be necessary. Alternatively, the applicant would purchase concrete from a local contractor, and it would be shipped most likely from Farmington or North Anson along Route 27.

(2) Concrete work associated with the project is anticipated to require 28,000 gallons of water per day to be drawn from a well installed at the CCC area (see Finding of Fact #31,B). A water storage tank mounted on a truck would be used so that demand on the well could be regulated. Within 30 days of completing the geotechnical investigations, the applicant would provide the location of the well, and the determination of whether a batch plant will be needed. After construction, this area would be restored to its original condition.

(3) Trucks would be washed down on-site, and wash water collected and disposed of by allowing sediment to settle and the water to evaporate, or be removed in an otherwise approved manner. Aggregate would be hauled to the site and stored. Additives would be stored on-site in enclosed containers.

E. *Rock crushers/material storage areas.* Three temporary rock crusher areas are proposed, encompassing a total area of 29 acres. One of the rock crusher areas would be co-located with the concrete batch plant (see Section D, above). Each area would be allowed to re-vegetate after construction is completed. As an alternative or in addition to the larger rock crushing stations, the applicant may use smaller, mobile rock crushing units. If used, mobile units would be located within turbine pads and would not require additional clearing.

35. *Meteorological towers.* Four 50 to 60 meter permanent meteorological (“met”) towers to be located above 2,700 feet in elevation are proposed for the project. The met towers would be similar to the lattice type towers that are currently erected at the site (reference Development Permit DP 4728), and would be installed for on-going monitoring and management of the wind resource. The applicant submitted possible locations for the towers, however final locations would be selected based on on-going wind assessments and would be positioned as close to the existing disturbed areas as

possible. The existing met towers would be removed, or would be used as a portion of the four proposed permanent met towers.

- A. The cleared area for each tower would be 100 feet by 100 feet, and the actual area of disturbed soil would be 22 sf for each tower. The foundations would consist of a 30 inch by 30 inch metal plate anchored to the ground. The towers would be supported by 3 sets of guy wires (four per set, or 12 wires per tower), anchored by pinning to bedrock, by a rock drill and anchors, or by plate or dead-man anchors.
- B. Because bird mortality was found to be low for the existing met towers, the applicant has not proposed bird diverters on these met towers.
- C. Continued access to each met tower site would be provided using the all-terrain vehicle trail installed during installation of the each tower.

36. *Site planning, design, and implementation.* Planning and site design measures have been implemented to minimize impacts on the environment. Specifically, the project design incorporates erosion and sedimentation control and temporary and permanent storm water management measures (see Finding of Facts #42 and #43); road construction techniques to maintain proper hydrology and soil conditions and address soil limitations, developed in consultation with the Maine State Soil Scientist (see Finding of Fact #40); and minimization of impacts to scenic resources due to careful site selection and design (see Finding of Fact #46,F).

- A. *Cut and fill.* The cleared and graded areas proposed for the roads and turbine pads are the maximum size and amounts that would require alteration. The specific calculated estimates did not include bulking factors, but this was taken into account more generally and would potentially reduce the amount of fill required from off-site. Further refinement as construction progresses would only minimize the amounts.
 - (1) For the turbine pads, 400,430 cubic yards (cy) of material would be generated, and 131,135 cy of fill would be needed, for a net surplus of 269,295 cy.
 - (2) For the access roads and collector system, 522,390 cy of cut would be generated, and 1,209,375 cy of fill would be needed, for a net deficit of 686,985 cy.
 - (3) The excess fill generated by the construction of the turbine pads would be used toward the deficit for the roads. The net deficit for the project would be 417,690 cy, to be obtained off-site. The fill required would be obtained by using as much suitable soil and rock material excavated on-site as possible. If needed, additional fill material would be supplied from off-site locations by six possible suppliers that have been identified within 100 miles of the site.
 - (4) If excess materials are produced over and above that needed for the project, they would be stabilized and permanently stored at the designated disposal areas. Excess materials and stockpiles would be stored and stabilized in accordance with LURC's standards for Filling and Grading, Section 10.27,F. Organic material removed during construction would be stockpiled and re-

used in preparing erosion control material. Stockpiles located within 250 feet from any water body would be no larger than 5,000 square feet in size, and would be temporary in nature.

- B. *Disposal areas.* The applicant has identified a total of 20.6 acres in four separate areas for disposal of inert fill (soil and rock material) that is unsuitable for re-use, should it become necessary. The applicant proposes to dispose of the excess rock and inert fill in accordance with the Commission's Filling and Grading Standards in Chapter 10. The areas proposed would not be prepared or used unless necessary.
- C. *Spill Prevention, Control, and Countermeasures (SPCC) Plan.*
- (1) *During construction.* The applicant submitted a draft SPCC Plan for the construction activities describing the actions to be undertaken to prevent and control any spills which may occur. A final construction SPCC Plan incorporating recommendations made by LURC and other agencies during review will be submitted to LURC prior to construction. Large equipment will be fueled on-site during construction, but no large bulk storage tanks will be located on site. Maximum 500 gallon, double-walled tanks with locked electric off-load pumps will be used on-site. These tanks will be protected with barriers, and located way from streams, ponds, or other natural resources. Re-fueling will occur at least 100 feet away from waterbodies or wetlands. Spill containment kits will be located in the cranes and other vehicles on-site.
 - (2) *After construction.* A final SPCC Plan for the O&M facility, turbines, and substation would be submitted to LURC prior to storage of petroleum products at this facility. The applicant would store and use various lubricants, solvents, greases and other products necessary for the upkeep of project equipment at the O&M building. Up to 500 gallons of petroleum products would be stored at the site in ventilated and enclosed, or outdoor containment areas. The main power transformer in the switch yard will contain oil, which will be stored in a concrete containment basin sized to contain spills. The emergency generator will require up to a 500 gallon diesel fuel tank that will be either double-walled or placed within secondary containment. All equipment will be inspected regularly for leaks, and any spilled oils will be removed by a licensed hauler. All storage of petroleum products will be done in accordance with MDEP's rules.
 - (3) MDEP reviewed the applicant's SPCC Plan (see Finding of Fact #49,B) in regard to the Chapter 378 rules, and recommended several changes. The applicant is making those changes and will submit the revised construction SPCC Plan to LURC and MDEP staff for review and approval prior to construction. The applicant would also provide an operational SPCC Plan prior to product storage at the O&M facility.

37. *Construction schedule.* Project construction would begin during the summer of 2008 and would be implemented in stages. The Series A turbines would be erected and

operational first, then the turbines in Series B. Full operation of the KWPP is expected by the fall of 2010.

- A. Activities during 2008 would include surveying, clearing, grading, geotechnical work, roadway improvements and construction, and Series A turbine site preparation. Spring of 2009 would be the peak construction period, with the Series A turbines being erected; and Series B road construction, turbine site preparation and foundation installation occurring. The installation of the Series A collector system and the Kibby Substation would occur in the summer or fall of 2009. Erection of the B Series turbines would occur in the spring of 2010 to allow for a final project in-service date in the summer/fall of 2010.
 - B. Quarterly reports would be provided to LURC summarizing construction progress. More frequent communication would occur in the event of any change or issue requiring LURC notification or approval (see Finding of Fact #45).
 - C. An estimated post-construction schedule for site restoration was submitted. A scheduling tool for implementation of post-construction monitoring will be developed prior to implementation in consultation with LURC and MDIFW staff.
38. *Winter construction.* During the winter months, clearing of the 115 kV transmission line and other project locations under frozen conditions would avoid unnecessary impacts to wetlands. Limited winter construction may occur at the higher elevation areas to ensure that stabilization would be completed in advance of the spring thaw. In response to concerns raised by the State Soil Scientist, the applicant developed the following winter construction measures:
- A. No new construction would occur in higher elevation areas during winter, only completion of work already underway prior to ground freeze, where testing to identify surface and subsurface water flow has been previously completed.
 - B. Hydrologic features would be mapped during summer months and appropriate design measures from the “tool box” would be determined by a site engineer in consultation with a qualified soil scientist prior to onset of frozen conditions.
 - C. Winter excavation and earthwork would be limited to the maximum extent possible, with exposed areas restricted to where work is anticipated to occur within 15 days, or that can be stabilized in one day prior to any snow event.
 - D. Proper stabilization, maintenance and stockpiling measures would be undertaken to protect natural resources and to prevent runoff and sedimentation. The final winter construction plan has been reviewed by State Soil Scientist (see Finding of Fact #48).
39. *Decommissioning plan.* The applicant stated that the KWPP is expected to produce low cost zero-emission power for the duration of its anticipated 25 year life, and that

the project would be re-powered at the end of the initial 25-year time period, thus extending its operating life for at least an additional 25 years.

- A. In the event the project should become economically unfeasible and require decommissioning, the applicant proposes to take all appropriate steps and cover costs associated with dismantlement, removal, and disposal of the nacelles, blades and towers; the above-ground collector system; the substation and the portion of the 115 kV transmission line between the project and the Bigelow Substation not used by other projects. The foundations would be removed to two feet below grade, and these areas covered with soil, which would then be stabilized and allowed to re-vegetate.
 - B. To provide financial assurance, the applicant proposes to put in place a Parental Guarantee to fund the decommissioning activities. To further secure the guaranty, the applicant would provide an Irrevocable Standby Letter of Credit from a financial institution of investment grade standing if the TransCanada Corporation credit rating falls below investment grade. As proposed, the amount of the Letter of Credit would be based on the net cost (minus the value of the turbines or parts) of decommissioning, and would be assessed by a qualified third-party engineering firm that is mutually agreeable to the applicant and the Commission. The applicant submitted drafts of the Parental Guarantee and Irrevocable Standby Letter of Credit with the Final Development Plan.
 - C. Additionally, the applicant proposes to submit a detailed decommissioning plan and schedule no later than:
 - (1) Sixty (60) days after the date the KWPP ceases to generate electricity, as set forth in a written notice from the applicant to LURC staff; or
 - (2) If no such notice has been provided and the KWPP has not generated electricity for six consecutive months for reasons outside the control of the applicant, 60 days after the date the applicant receives a written request from LURC staff to decommission the project unless the applicant can demonstrate to LURC staff's satisfaction a plan to recommence generation of electricity.
40. *Soils*. The applicant conducted a Class C Medium Intensity Soil Survey ("Class C") for the KWPP, for the proposed road, lay-down, turbine construction, and other areas where significant soil disturbances may occur. The applicant determined that the soils in the project area are appropriate for the proposed development, but incorporated into its plans various erosion control and engineering design measures to accommodate site limitations such as, for example, steep slopes, seepage areas, wetlands, and drainage swales. The applicant stated that the KWPP has been designed to avoid or minimize impacts to all such areas. In addition, the applicant proposed to hire, as recommended by the State Soil Scientist, a third-party field engineer with local knowledge of soil conditions as part of a geotechnical team to determine specific construction techniques (see Finding of Fact #44).

The applicant consulted with the State Soil Scientist in regard to the intensity and scope of soil surveys necessary for the project (see Finding of Fact #48).

41. *Phosphorous (P) loading.* Ridgelines associated with the KWPP are located within the watersheds of two great ponds: Jim Pond and Flagstaff Lake. The total project construction area represents 0.84 percent of the Jim Pond watershed, and 0.04 percent of the Flagstaff lake watershed. The applicant stated that although the KWPP would not contribute significantly to flows within these watersheds, P control through the use of vegetated buffers has been incorporated into the project design. The applicant states that the proposed vegetated buffers would be effective for P removal and were designed in accordance with the MDEP's Best Management Practices (BMP) manual. The applicant proposes to work with landowner Plum Creek to ensure that vegetative buffer areas located beyond project boundaries are maintained.

The applicant calculated the net increase in P export that would result from the KWPP. The computed final export rates would be 17.05 pounds/year for Jim Pond, and 14.11 pounds/year for Flagstaff Lake. The corresponding allowable export rates for this project are 30.1 pounds/year for Jim Pond and 14.43 pounds/year for Flagstaff Lake. The project would not exceed the allowed P export for these watersheds.

42. *Erosion and sedimentation control plan (E/S Plan).* Temporary and permanent erosion control measures would be used during construction to treat runoff before it leaves the site, and to prevent erosion. Temporary measures would include sediment barriers, sediment traps, and temporary diversion berms. Permanent measures would include level spreaders, culvert outlet protection, and diversion channels. An on-site engineer would make field observations during construction, and adjust specific techniques, as needed.

The applicant's Final E/S Plan was reviewed by the Maine State Soil Scientist for adequacy and completeness (see Finding of Fact #48).

- A. *Inspection.* 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 inch, erosion control measures would be inspected by a general contractor certified in MDEP's erosion and control practices, periodically by construction inspection personnel and the applicant's environmental inspectors, and by a third party inspector. All site inspectors would be fully trained in LURC and MDEP erosion and sedimentation control standards. Further details of the inspection plan are contained in Finding of Fact #44 of this document.
- B. *Site restoration after construction.* All soil that is excavated, mounded, or deposited during construction would be re-graded to approximate existing grades. Construction mats used to cross or work in wetlands would be removed and surface damage repaired. All areas of disturbed soils, excluding roads, portions of the turbine pads, or other areas not to be re-vegetated, would be stabilized by seeding, or with Erosion Control Mix during the project's operational life. If seeded areas become eroded or damaged, the affected areas would be reseeded as necessary to achieve ninety (90) percent cover. When final stabilization is

achieved, temporary erosion and sediment control measures would be removed and inspections may cease.

- C. *Vegetation management plan.* The applicant submitted a plan documenting all clearing and maintenance requirements along the 115 kV transmission line right-of-way and other development areas. A distance of 15 feet would be maintained between vegetation and conductors to ensure safety and reliability. Clearing practices to protect natural resources such as wetlands and streams, and to minimize overall ground disturbance are specified. The maintenance practices are designed to encourage growth of dense, low ground cover that would provide cover and browse for small mammals and birds, prevent erosion, and maintain the stormwater management function of the vegetative buffers. Herbicide use would be minimized to the extent practicable, and only those products with low toxicity to non-targeted plants and animals, and registered and approved by the USEPA would be used.

The applicant's Vegetation Management Plan was reviewed by the Maine State Soil Scientist for adequacy and completeness (see Finding of Fact #48). In response to review comments regarding herbicide use along the 115 kV transmission line corridor, the applicant stated it would identify drinking water sources along that route during the pre-construction walk-thorough, and would modify or avoid herbicide use in any identified areas. The applicant also clarified that erosion control mix and allowing re-vegetation by native species would be the protocol for high elevation areas, as opposed to spreading loam and seeding with conservation mix grasses.

43. *Storm water management and control plan.* During construction, the applicant proposes to meet the Basic Standard of MDEP's Chapter 500 Stormwater Management Rules by using temporary control measures such as mulch filter berms, silt fencing, sediment traps and stabilization. For post construction, the applicant proposes to meet MDEP's Chapter 500 General Standard by directing on-site runoff through vegetated buffers via sheet flow. In areas where concentrated flow is unavoidable, level spreaders in conjunction with vegetative buffers would be used with the shortest practical spacing. In cases where short spacing is not possible, flow splitters/overflow weirs would be used to distribute the concentrated flow before release to level spreaders.

During construction, regular inspections would be conducted to ensure stormwater management systems are functioning as intended. After construction, the applicant would conduct periodic inspections of roads and stormwater management systems to determine the need for maintenance or improvements. The applicant's Final Stormwater Management Plan has been reviewed by the Maine State Soil Scientist (see Finding of Fact #48), and an NOI will be sent to MDEP prior to construction, in compliance with Maine's Stormwater General Permit rules.

44. *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 achieved. 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 inspector selected would be subject to review and approval by LURC staff.

- A. 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 KWPP, or otherwise employed by TransCanada on the KWPP. The applicant would identify the names of at least two inspector candidates, and provide them to LURC staff at least 30 days prior to any construction activity on the site for review and approval.
- B. The third-party inspector's duties and responsibilities would include, but not be limited to: (1) become familiar with LURC's terms, conditions and restrictions for the protection of natural resources within the project area; (2) monitor installation and maintenance of erosion control measures; (3) monitor construction of storm water management system; (4) monitor installation of any stream or wetland crossings; and (5) monitor final stabilization of project site. During construction, the inspector would inspect the project site at least once a week, and after any significant rain event (greater than 0.5 inch), 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.

45. *Reporting and change documentation.* The applicant proposes to submit the following reports to keep LURC staff apprised of the status of the construction, of issues as they develop, for efficiency of review, and for project scheduling (see Finding of Fact #37).

- A. *Routine reports.* The applicant would provide a quarterly summary of project activities, construction highlights, and an updated project schedule. Occasional milestone reports would also be submitted when construction events are completed that may require material changes to the information in the Final Development Plan, such as once the geotechnical investigation is complete, to enable LURC staff to monitor the progress of the construction. The applicant proposed road re-alignments up to the 300 foot threshold to be consistent with the Commission's definition of a Level B Road Project.
- B. *Material change reports.* In addition to quarterly and milestone reports, the applicant proposes to submit reports on material changes that are determined to be necessary as they occur. This also would allow LURC to discuss and come to agreement with the applicant about how those changes should be addressed.
- C. *As-built reports.* The applicant proposes to submit as-built drawings and summary reports at the completion of particular phases of construction to LURC

staff for the permit file and to provide the framework for the post-construction monitoring.

46. *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 709, Findings of Fact #44 to #48). A summary of work done, as well as additional information and updated assessments conducted by the applicant, are presented in Sections A to F of this Finding. Final review agencies comments regarding the environmental assessments are contained in Findings of Fact #48 to #50 and #54 of this document.

A. *Wetland and stream impacts.* The applicant identified and delineated wetlands, streams, and vernal pools in the project area, and designed the project to minimize and avoid impacts to those areas. A total of 15,003 square feet (sf) [0.35 acres] of wetland would be permanently altered by fill for the project, the majority of which would be associated with construction of the new access roads. Of this amount, 3,346 sf would be P-WL1 wetland (largely for stream crossings); 6,828 sf would be P-WL2 wetland; and 4,829 sf would be P-LW3 wetland.

(1) *Series A turbines.* A total of 2,595 sf of wetland (758 sf of P-WL1 wetland and 1,837 sf of P-WL3 wetland) would be permanently impacted by widening of an existing access road, and construction of the proposed new access roads. The P-WL1 wetland is a palustrine scrub-shrub (PSS) wetland, classified as P-WL1 due to its association with a stream within 25 feet of a stream. The impact would be only the temporary widening of an existing crossing, not a permanent further encroachment in the streamside wetland. No stream crossings impacts are associated with Series A turbines.

(2) *Series B turbines.* A total of 11,268 sf of wetland (2,588 sf of P-WL1 wetland, 5,688 sf of P-WL2 wetland, and 2,992 sf of P-WL3 wetland) would be permanently impacted by widening of an existing access road, and construction of the proposed new access roads. Two perennial streams and three intermittent streams would be impacted by placement of culverts for construction of the new access roads. Each crossing location was selected to minimize the area of impact to the stream and associated wetland resources, and would follow crossing standards as set forth in the Commission's Land Use Districts and Standards Section 10.27, D. The crossings would be done within the in-stream work window, or if work outside that period becomes necessary, the applicant would seek MDIFW's approval prior to implementation.

(3) *Collector lines.* No permanent fill or clearing would be associated with the collector line associated with either the A Series or the B Series, or extending to the proposed Kibby Substation. Temporary impacts would include equipment mat crossings associated with non-wetland clearing and construction. After completion of construction, the mats would be removed and any necessary stabilization would be performed in accordance with the Erosion and Sedimentation Control Plan (see Finding of Fact #42).

- (4) *115 kV transmission line.* A total of 1,140 sf of P-WL2 wetland would be permanently impacted by filling for installation of the 115 kV transmission line. Thirty-seven (37) acres of palustrine forested wetland (PFO) would be converted to palustrine scrub-shrub (PSS) or palustrine emergent (PEM) wetland for the transmission line corridor. Up to 7.54 acres of P-WL2/3 wetlands may be temporarily impacted during construction by equipment mats. There would be no permanent impacts to streams, however small streams may be crossed using equipment mats. The applicant would do clearing and other activities that are best done under frozen conditions during winter months to avoid and minimize the need for temporary crossing impacts to streams and wetlands.
- (5) *Impact assessments.* An assessment of the functions and values provided by wetlands in the project area to be impacted was performed in accordance with the USACE Highway Methodology. No significant impacts to the functions and values of the wetlands are expected to result from the construction of the KWPP. Most of the wetland impacts are a relatively small portion of the overall wetland being impacted. Most of the wetland impacts would occur on the edge of the impacted wetlands rather than bisecting the wetland. A 100 foot wide vegetated buffer is proposed along all perennial streams, except where breached by roads at stream crossings. Shrub layer vegetation would be maintained in the stream buffer area along the transmission line corridor.
- (6) *Mitigation.* Given the small area of permanent wetland fill associated with the project (15,003 square feet, of which 3,346 sf would be P-WL1 wetland, largely for stream crossings), the nature of the activities affecting the wetlands (for example, crossings and clearing of the tree canopy), the applicant did not propose compensatory mitigation for wetland impacts.
- (7) *Vernal pools.* Vernal pool field surveys were conducted in the spring of 2005 and 2006. Two significant vernal pools were identified in the proposed transmission line right-of-way. The KWPP would not directly impact either vernal pool, and the applicant is proposing to utilize mitigation measures developed by Calhoun and de Maynadier (2004) as published by the Maine Forest Service, MDIFW, University of Maine, Maine Audubon, and Wildlife Conservation Society to ensure that these pools continue to function and provide significant breeding habitat for vernal pool species.

B. *Ecological assessment.* The applicant conducted a full range of environmental studies to identify and assess habitat, and develop appropriate measures for minimizing impacts to sensitive resources, in consultation with MDIFW, USFWS, and other agencies and stakeholder groups. The results were reported to the Commission and the results evaluated in the Preliminary Development Plan (reference Finding of Fact #44; Zoning Petition ZP 709).

- (1) *Site description.* The proposed KWPP would be located in an area consisting primarily of mixed softwood and northern hardwood forest in the valleys, and spruce-fir forest on the higher elevations. All of the natural plant communities found in the project area occur within the Spruce-Fir-Northern Hardwoods

Forest Ecosystem, a common and widespread ecosystem throughout Northern Maine (Gawler and Cutko 2004).

- (2) *Habitat fragmentation.* The KWPP would not fragment habitat beyond that which already exists, is occurring, or is impending in the vicinity of the project due to active timber harvesting. The landscape below 2,700 feet in elevation is constantly changing due to forest management activities, with mature forest stands being actively cut and in the process of regeneration. Forests above 2,700 feet in elevation, while typically in later stages of regeneration and in some cases at or approaching maturity, have been altered by land management activities in the past century. The elements of the proposed project are generally narrow and linear in configuration, representing narrow breaks in the forest vegetation, and would not result in the separation or isolation of the surrounding forest habitat.
- (3) *Wildlife resources.* The proposed KWPP has been designed to reduce the potential for adverse impact to wildlife. The potential for adverse impacts to wildlife was evaluated in respect to habitat loss and conversion, disturbance effects, and collision-related fatalities during the review of the Preliminary Development Plan (reference Finding of Fact #44,B, Zoning Petition ZP 709).
 - (a) *Avian and bat monitoring.* Surveys conducted included nighttime, morning and daytime bird migration surveys; raptor nest surveys; breeding bird surveys (with a particular focus on detecting Bicknell's thrush); and acoustical bat surveys.
 - (i) *Migration survey results* - The studies concluded that migration does occur through the project area, although not at levels identifying it as a major migratory corridor. Passage rates observed were low to moderate, and generally well within the range observed at similar studies throughout the Northeast.
 - (ii) *Avian survey results* - The avian studies conducted by the applicants concluded that federally or State-listed species of special interest do not nest in the project area, and that the site does not contain habitats well suited for such use. No federally listed or Maine state-listed species were found within the project area during the breeding bird survey. The applicants conducted an additional helicopter survey on May 2, 2008, verifying that bald eagle and golden eagle nests are not located along the 115 kV transmission line corridor. The results have been shared with MDIFW and USFWS.
 - (iii) *Inland waterfowl and wading bird habitat [IWWH]* (defined by LURC as Significant Wildlife Habitat) – One IWWH was located near an existing access road, and several IWWHs would be crossed by the proposed transmission corridor. MDIFW assessed these areas and determined them to be low value habitat, and that no concern exists with regard to the potential impact due to the proposed project.
 - (iv) *Bat survey results* - The bat studies concluded that State-listed species of special interest do not nest in the project area. Species of bats known to occur in the project vicinity were detected, though in relatively low numbers.

- (v) *Impact assessment* – Reviews of literature on avian and bat impacts at operating wind energy facilities were conducted: fatality rates ranging from 0 to 4.5 fatalities/turbine/year, with most rates being less than 2 fatalities/turbine/year, were reported in the literature. Based on the avian surveys conducted for this project, no characteristics of the project area would suggest a unique or unusual risk to avian species is likely.
- (vi) *Post-construction monitoring* – The applicant has developed and would implement post-construction monitoring protocols, as determined by MDIFW and in consultation with the USFWS. Post-construction monitoring would be initiated at year two of operation. The applicant submitted detailed monitoring and assessment protocols to identify study areas, and for search methodology, searcher efficiency trials, carcass removal trials, radar surveys, and reporting. The applicant also proposes to establish appropriate response measures in the event of a high mortality incident, including conducting a root-cause analysis. In the event of an incident, the applicant would work with MDIFW to understand the causes, and identify and implement an appropriate response action. MDIFW has reviewed the applicant's proposed post-construction monitoring protocols (see Finding of Fact# 54).
- (b) *Mammals* - MDIFW and USFWS identified Canada lynx, Northern bog lemming, yellow-nosed vole, and rock shrew as species of interest that may occur in the project area. Potential habitat for the Northern bog lemming was identified, but this habitat and a buffer protecting the watershed around it would be protected. Canada lynx tracking surveys in the vicinity of the project were conducted in 2006 to 2007 in cooperation with MDIFW and USFWS, but no evidence of Canada lynx was observed.
 - (i) *Impact assessment* - The KWPP would result in a net loss of some areas of forested upland, and the conversion of other areas of forest to earlier successional habitats. Much of the clearing associated with the wind turbine portion of the project would be temporary in nature. Conversion of forest to shrub-dominated habitat would occur along the 115 kV transmission line and collector line corridors. However, because the corridors would remain vegetated, an undue adverse impact to habitat or wildlife is not expected because the habitat conversion that would occur is similar to that which already exists due to forest management activities. Correspondence from MDIFW and USFWS indicates concurrence that no significant impact to wildlife is anticipated due to construction and operation of the KWPP.
 - (ii) *Mitigation* - To avoid the potential for impacts to the identified Northern bog lemming habitat, all project elements were relocated to outside of a 250-foot buffer zone around the identified wetland complex, through consultation with MDIFW and USFWS. The 26 acre watershed of combined wetland and upland surrounding this area has also been avoided to protect the habitat and ensure that the

hydrology associated with the potential habitat is not altered. The applicant proposed on-going monitoring and documentation to detect any possible species activity in this area. The applicant proposes to be in regular contact with MDIFW throughout this process, and would submit a final field memo to LURC and MDIFW summarizing findings and indicating if future monitoring or other measures are needed.

- (iii) *Canada lynx* – Tracking surveys in 2006 to 2007 for Canada lynx did not identify their presence, however, possible lynx tracks were noted while the applicant's personnel were visiting the project area during the winter of 2008. Through consultation with MDIFW and USFWS, the applicant has completed a habitat suitability assessment in Kibby Township as part of Endangered Species Act Section 7 review as well as additional tracking survey information from 2008. Agency review is on-going at this time. The applicant anticipates that USFWS will issue a Section 7 finding that there would be no impact to lynx associated with the project. The applicant would notify LURC staff of the USFWS finding once it is issued.
- (c) *Amphibians and reptiles*. Studies to identify reptiles and amphibians were completed for the Kenetech project in the 1990's (reference Zoning Petition ZP 526). Observations of reptiles and amphibians were specifically included in vernal pool surveys conducted in the field in 2005 and 2006. No particular species of concern were identified, or the need for formal surveys, were indicated by MDIFW or USFWS.
 - (i) *Surveys* - Eleven amphibian species and three reptile species were observed during the surveys. These findings are consistent with those from the Kenetech project. The most common species observed were the American toad, red-backed salamander, wood frog, and garter snake. No federal or state-listed rare, threatened, or endangered species used as indicators of significant vernal pools were observed.
 - (ii) *Impact assessment* – No significant impacts to reptiles or amphibians are expected to result from the Project. Wetlands and vernal pools would be substantially avoided. Project correspondence with MDIFW and USFWS did not identify specific concerns with respect to reptile or amphibian species.
 - (iii) *Mitigation* - Beyond avoidance of wetlands and vernal pools to the maximum extent practicable, no specific mitigation measures have been proposed by the applicant, or requested by MDIFW, USFWS, or ACOE.

C. *Rare plants*. The applicant identified several State-listed plant species in the project area and designed the proposed KWPP to minimize impacts.

- (1) *Surveys*. The applicant consulted with Maine Natural Areas Program (MNAP), MDIFW, and USFWS to identify potential plant species and natural plant communities of interest. A rare plant survey was conducted and three S2 state-listed species were found in the project area: auricled twayblade

(none on the windpower site, two locations along the transmission line corridor); lesser wintergreen (one location within the windpower site, one along the transmission corridor); and boreal bedstraw (23 sites within the windpower site, none along the transmission corridor; the two in wetland C-191 would be impacted).

- (2) *Impact assessment.* Since all three species are located near waterbodies or in wetlands, and avoidance of such areas is a project priority, potential impacts to these species would be limited. MNAP stated they concur no significant impact would occur to these State-listed plant species in a letter dated September 27, 2006.
- (3) *Mitigation.* The applicant developed mitigation measures, detailed in the Vegetation Management Plan (see Finding of Fact# 42,C) to avoid or minimize impact to listed plants, including the following: flag the areas where these species occur within 50 feet of proposed project activities; mark the sites with appropriate signage during construction; add proper notation of avoidance areas on site plans and long-term vegetation management plans; and conduct post-construction monitoring of the areas.

D. *Noise assessment.* The applicant conducted an analysis demonstrating that during operation, noise levels at the nearest receptor (a residence approximately 1.2 miles from nearest turbine) during favorable conditions would be expected to be approximately 35 A-weighted decibels (dBA), or less. The analysis also demonstrated that projected noise levels during operation would exceed 55 dBA in only a limited number of locations at the edge of the D-PD Subdistrict, on land owned by Plum Creek used for timber harvesting activities that would not be adversely impacted by noise from the turbines. Construction noise levels would be at, or below, current ambient noise levels in the surrounding area due to timber harvesting. Project construction would occur mostly during daylight hours, and the distance from noise-sensitive areas would act as a buffer to ensure that there would be no significant adverse noise impacts resulting from construction.

E. *Historic and archeological assessment.* The proposed KWPP site was reviewed in the early 1990s by the Maine Historic Preservation Commission (MHPC), the Penobscot Nation, the Passamaquoddy Tribe, the Aroostook Band of Micmac Indians, and the Houlton Band of Maliseet Indians in conjunction with the Kenetech Project. No correspondence identifying issues of concern was received from the native groups. In 1993, a survey for pre-contact period archaeological sites was conducted in the area, and a re-examination was conducted in 2005. The applicant also completed an additional survey for three locations along the proposed 115kV transmission line, as requested by MHPC. All studies found an absence of archaeological sites, with low archaeological sensitivity for pre-contact period sites. MHPC agreed that no further archaeological survey work is necessary (see Finding of Fact #50).

The applicant further proposes that if archaeological or historical resources are encountered during excavation, construction-related work in the vicinity would cease, MHPC would be notified, and an assessment would be conducted by a

professional archaeologist. If significant resources are confirmed, measures would be identified to avoid or minimize impacts to those resources. The applicant would consult with MHPC throughout the investigation, and LURC staff would be informed of the status and results of the investigations.

F. *Scenic and recreational assessments.* For the Preliminary Development Plan, the applicant conducted a scenic impact assessment for the project. Photographic simulations and terrain modeling programs to determine visibility in areas of complex terrain were prepared. The viewshed evaluated is a fifteen-mile radius around the project. Scenic impacts by the project to specific resources identified in the CLUP, and to scenic character pursuant to Section 10.25,E of the Commission's Land Use Standards, were assessed. The KWPP's impacts under the criteria set forth in Chapter 315 of the MDEP's regulations were also assessed (see Finding of Fact #46, Zoning Petition ZP 709).

(1) *Scenic impact assessment results.* The scenic impact assessment included the following specific locations: Bigelow Preserve, Bigelow Range, Jim Pond, Cathedral Pines and Flagstaff Lake, Crosby Pond, Tim Pond, Eustis Ridge, Kibby Mountain, Kibby Range, Kibby Mountain fire tower, and various regional hiking trails, including the Appalachian Trail. Results indicated that many of these areas would have limited or no view of the KWPP, while locations such as Jim Pond and Eustis Ridge would have moderate views. The most significant views would be from the Kibby Mountain fire tower and from Kibby Mountain and Kibby Range themselves. However, this area has relatively low use by the public, and these mountains have not been designated as having regionally scenic significance.

Although the KWPP would have some impact on scenic resources within the project viewshed, the applicant asserted that the impacts would not be unduly adverse. Throughout the viewshed, the system of surrounding mountains limits visibility from most viewpoints, and as a result, the KWPP would most often be seen intermittently; its general prominence from sensitive viewing areas would be relatively low. It was determined by the Commission during the review of Zoning Petition ZP 709 that there would not be an undue adverse effect on the scenic character of the land within the viewshed of the KWPP.

(2) *Recreation impact assessment.* To assess the level of recreational use at or near the project area, the applicant reviewed information previously gathered for the former Kenetech application, and conducted additional surveys at the development site and in the general project vicinity. In the Kenetech surveys, the project vicinity was considered to have a relatively low level of recreational use compared to other nearby areas. The applicant's more recent surveys showed that the people interviewed were familiar with the recreational uses in the area, and generally characterized the area as being moderately used, particularly in comparison to other areas in the vicinity, such as Sugarloaf. The top five most frequently mentioned uses in the general project area were: hunting (42); snowmobiling (38); fishing (35); hiking (26); and off-road vehicle use (21).

During the applicant's on-site survey, at least 43% of the users surveyed were passing through the project area to other destinations. The most popular summer activities included fishing, camping, and scouting for moose, while the most popular fall activities included moose hunting and bird hunting. The majority of respondents in the on-site survey indicated that a proposed wind power project would either have a positive impact, or no impact on their recreation experience.

47. *Geotechnical investigation.* Geotechnical borings and testing in a P-MA Subdistrict requires a LURC permit. Therefore, although some preliminary geotechnical work has been completed in the M-GN Subdistrict areas, and other related information compiled, the detailed geotechnical investigation would be conducted after the permit is issued and trees are cleared. The investigation is expected to be completed by the end of 2008. The turbine foundation types to be used would be determined after the geotechnical work has been evaluated. The applicant submitted a Preliminary Geotechnical Engineering Evaluation Report outlining the available information and understanding of geological conditions at the project site, the details of which in part provided the basis for the project layout and design. The geotechnical evaluation report and acidic rock management plan were reviewed by MDEP (see Finding of Fact #49).

A. *Preliminary Geotechnical Evaluation Report.* Existing information on geologic and soil conditions at the project site shows the bedrock to be Precambrian gneiss and breccia, and soils generally developed from glacial till and organic deposits. Soil types consist of sandy loam or sandy, gravelly loam with bedrock at depths of less than two feet below land surface (bls) and groundwater at depths generally greater than seven feet bls. General findings for the turbine foundations showed that the foundations are expected to be installation on bedrock, with any weathered bedrock to be removed. Significant amounts of rock excavation are anticipated. Access roadways and crane pads are expected to consist of a compacted sub-grade, a geotextile, a sub-base of crushed rock and an upper layer of crushed rock.

Further geotechnical investigations and testing recommended in the report are as follows: (1) geotechnical inspection of each pad site for fractures and weathering conditions; (2) drilling and coring at each turbine location to obtain bedrock and soil samples; (3) visual classification and laboratory testing of samples to determine design properties; and (4) preparation of detailed recommendations for site preparation, fill placement, foundation type, and quality control testing.

B. *Acidic rock testing and mitigation plan.* In October 2006, six bedrock samples from the project site (three from the Series A ridge and three from the Series B ridge) were obtained and submitted for acid-base accounting tests. Test results indicate that these samples are not considered toxic for either acidity or alkalinity. However, the applicant has developed and submitted an Acidic Rock Testing and Mitigation Plan to obtain further information on the potential for acid rock

drainage. The plan focuses on water quality and bedrock testing, and identifies temporary and permanent mitigation measures that would be employed in the event that acid rock drainage is encountered. MDEP (see Finding of Fact #49) stated that overall the plan is acceptable, but noted the lack of geotechnical data.

- C. In response to MDEP review comments, the applicant provided additional information regarding the geotechnical investigations, and the basis upon which decisions have been made for the design and layout proposed in the Final Development Plan, noting that to conduct geotechnical borings in a P-MA subdistrict, a LURC permit is needed. Prior to a permit being issued, to gain an understanding of the site for design and layout purposes, the applicant gathered geotechnical information in the M-GN Subdistrict areas associated with the project and at the existing met tower locations; conducted an aerial survey to map contours at 5 foot intervals; did field reconnaissance of the development areas to identify rock outcrops or other features shielded by vegetation; and conducted soils mapping. The development plan then proposes the maximum disturbance area within which the project would be developed, but also identifies a mechanism for continuing assessment to assure that changes, if any, identified as a result of the geotechnical data are appropriately reviewed by LURC. The applicant also provided a schedule for collecting the geotechnical data (start in late July 2008, complete by December 2008) and integrating it into the overall construction schedule. The applicant believes it has conducted adequate site work to date to avoid and minimize resource impacts.

Review Comments

48. *Maine State Soil Scientist.* The Maine State Soil Scientist (SSS) stated that the applicant has done an overall excellent job of developing plans for mountaintop construction, and has incorporated most of his suggestions and recommendations. He also highlighted several details as being important to be incorporated into the development plan. The applicant has responded to the SSS's comments, and incorporated the requested changes into the design of the project and the Erosion and Sedimentation Control Plan, even where they are inconsistent with the MDEP's BMPs because the changes make sense in a high mountain area. Regarding the comment below in Section A(3), the applicant responded to the observation made by the SSS, and plans to meet with him on-site to obtain his concurrence regarding the soil type at the O&M facility site.

- A. The SSS found the soils information submitted with the Preliminary Development Plan to be appropriate for the Final Development Plan, with the following exceptions:

- (1) *Temporary activity locations.* Additional information should be submitted to confirm the suitability of soils in the proposed areas for temporary activities (rock crushers, construction control center, lay-down areas and concrete batch plant). Specifically, information on depth to groundwater should be obtained to determine if special measures would be needed to minimize soil disruption. The

applicant proposed to conduct the additional requested field surveys to confirm that soils in the selected areas are suitable. The applicant would submit results of these surveys to LURC and the SSS once completed, along with descriptions of any proposed adjustments indicated from the survey results.

- (2) *Kibby substation and O&M facility.* High intensity soil surveys should be completed for each of these proposed locations to confirm soil suitability and to identify design measures that may be needed. Partial soils suitability testing at the O&M building location has been completed by a Maine licensed site evaluator (see Finding of Fact #31,A), to locate the proposed septic system. The applicant proposed to conduct additional soils mapping as an early element of KWPP construction at these two locations to further refine design details as needed. The applicant would then submit the completed survey information to LURC and the SSS for approval prior to commencing construction of these two structures.
- (3) The applicant's submittal on soil suitability for the septic system at the O&M facility shows an "A" horizon over an "E" horizon. This is very unusual and may indicate a shallower depth to a limiting factor. The SSS requested an opportunity to visit the proposed septic system site to determine if any modifications need to be made to the design.

B. Comments on the applicant's Erosion and Sedimentation and Stormwater Control Plans:

- (1) It is important to have a qualified expert in soil erosion/sediment control, hydrology and stormwater management on site during construction. The SSS requested being present at the proposed meeting between LURC, the applicant and qualified expert(s), once they have been hired.
- (2) Culverts should be installed at a grade higher than the bottom elevation of the rock sandwich when the two are co-located.
- (3) More details should be incorporated into the applicant's plans about how topsoil would be stockpiled and grubbed materials would be used.
- (4) A standard detail for rock-lined ditches and a discussion of where they should be used; and a standard detail for cross-drain pipes out-letting to a stone level spreader should be included in the plans.
- (5) Level lip spreaders should be placed closer to the toe of road fill rather than several hundred feet down-slope, as proposed, since it would minimize disturbance to the mountainside. There is abundant buffer area available.
- (6) Rock check dams are preferred to timber weir flow splitters, and should be used in all cases.
- (7) Wood chips are inappropriate for berms where used in lieu of silt fencing. Erosion control mix should be used;
- (8) There is no need for filter fabric under an erosion control mix berm;
- (9) Hay bales are inappropriate when used in swales where they are below seasonal groundwater table, or in swales that are too long;
- (10) Where hay or straw mulch is used as a temporary control measure, it should be anchored where the site is large and/or subject to wind;

- (11) Erosion control mix is effective, and is the preferred permanent soil stabilization measure for high-mountain or wetland areas instead of loam and seed;
- (12) For winter construction, the use of frozen soil as fill should be prohibited;
- (13) Sites where soils in high elevations are severely rutted during construction, or if the ruts run parallel to the slope, should be stabilized using stone check dams and erosion control mix rather than by loaming and seeding.
- (14) Several locations on the proposed roads were identified that should be closely monitored during construction for the need of cross drainage measures.

49. *Maine Department of Environmental Protection (MDEP)*. MDEP reviewed the application and submitted comments, as follows:

- A. The MDEP Division of Land and Water Quality Mining Coordinator reviewed the blasting plan, acidic rock management plan, and geotechnical report. He stated that the geotechnical report lacks details and that with new geotechnical information, the road layout may change substantially, resulting in additional wetland and stream impacts. He suggests requiring additional geotechnical work be done as a condition of approval and that the work be done prior to any substantial road or turbine pad construction. This additional information should be submitted to LURC for review and approval. Finally, he commented that the acidic rock testing and management protocol submitted is reasonable, and he is comfortable with the proposed approach.
- B. The MDEP Division of Land and Water Quality Senior Geologist commented, as follows:
 - (1) The proposed blasting plan is not clear on how the applicant would prevent fly-rock from leaving the property or entering a protected resource. He recommended using the submitted Figure B-1 as the ground vibration standard, where applicable.
 - (2) In regard to the geotechnical report, he agreed with the comments submitted by the MDEP Mining Coordinator (see Section A, above) and further recommended that a deadline be determined for submittal of the additional geotechnical information needed before construction begins.
 - (3) The applicant should verify that there are no private or public water supplies within or adjacent to the 115 kV transmission line right-of-way. If so, herbicide use should be avoided in those areas. Avoided areas or special measures used should be incorporated in the vegetation management plan. New water sources along the transmission line should be noted during regular line maintenance and inspection.
 - (4) A deadline should be determined for the additional work required for the siting of the proposed water supply wells, and the investigation report should be submitted to LURC for review and approval. The proposed well for the concrete batch plant should be located as far as practical from other wells or resources that may be impacted by high rates of water withdrawal.

- (5) In the submitted SPCC plan, the applicant should specify measures to prevent accumulation of precipitation in containment areas, describe procedures and suitable locations for discharge of any such precipitation, and provide setbacks from natural resources and other sensitive areas for fuel storage and refueling areas. The applicant should refer to Section 5 in MDEP Rules Chapter 378 for guidance and submit a revised plan for review and approval prior to construction.
50. *Maine Historic Preservation Commission (MHPC)*. MHPC reviewed the application and, in comments dated 5/27/08, concluded that the proposed undertaking would not have an adverse effect upon archaeological or architectural resources.
51. *Maine Department of Transportation (MDOT)*. MDOT reviewed the application and noted, in comments dated 5/29/08 and 5/30/08, that the applicant will need permits for work conducted in MDOT's right-of-way. MDOT also asked which access points on Route 27 would be used to move materials to the project area, and noted that any attendant damage to Route 27 as a result of construction will have to be repaired. Finally, improvements to the intersection of the Gold Brook Road and Route 27 will have to be considered if wide loads and overweight vehicles will be used after the KWPP becomes operational.
- The applicant is currently in the process of obtaining the permit for the 115 kV transmission line in MDOT's right-of-way, as discussed in Finding of Fact #17,D.
52. *Maine Department of Health and Human Services/Division of Environmental Health (DHHS/DEH)*. In comments dated 4/25/08, DEH found that the proposed on-site sewage disposal system design meets or exceeds the requirements of the Subsurface Wastewater Disposal Rules, CMR 241.
53. *Maine Geological Survey (MGS)*. MGS has reviewed the application and recommend approval.
54. *Maine Department of Inland Fisheries and Wildlife (MDIFW)*. MDIFW reviewed the application and submitted comments, as follows:
- A. The applicant addressed MDIFW's previous concerns and comments, and communicated with MDIFW during the review process. MDIFW requested a spring migration radar survey, in addition to the fall survey, be incorporated into the post-construction monitoring plan. The duration, design, and effort should be similar for both surveys. MDIFW contacted the applicant, who agreed to incorporate the spring radar study as recommended.
- B. The applicant incorporated most of MDIFW's fisheries recommendations submitted during review of Zoning Petition ZP 709. However, three specific recommendations remain to be addressed: (1) culverts should be 1.2X the width of a stream crossing. MDIFW could not find in the application where this standard was adopted; (2) the in-stream work window is expanded to from June

15 to September 15; and (3) MDIFW will need to identify the most important intermittent streams and follow through with the applicant on buffers required on a case-by-case basis, as proposed by the applicant.

55. *Friends of the Boundary Mountains (FBM)*. FBM reviewed the application and submitted the following comments:

A. Comments:

- (1) The KWPP would impact endangered species such as Atlantic salmon, Northern bog lemming and Canada lynx; as well as State listed plants ranked S2, such as Boreal Bedstraw, Swarthy Sedge, Auricled Twayblade, Giant Rattlesnake plantain and Wintergreen.
- (2) There is not sufficient detail in the application about the concrete batch plant;
- (3) The application does not state the impact of haul trucks on local roads for bringing in extra gravel fill.
- (4) Temporary fill areas should be considered permanent if not restored to original vegetation and topography.
- (5) All disturbed areas should be combined to evaluate the real impact to the area.
- (6) Heavy concrete trucks driving up steep slopes are a concern, as they may tip over
- (7) How will the Collector System poles be placed in areas with ledge? Will blasting occur?
- (8) Winter construction above 2,700 feet in elevation is a great concern, and the proposed engineering controls need to be looked at more closely.
- (9) Soil stockpiles should not be located within 250 feet of a natural resource.
- (10) The proposed over-winter stabilization provisions are inadequate.
- (11) The proposed change during construction process is unacceptable.
- (12) An independent third party inspector should be hired.
- (13) Bird kill impacts from the 115 kV transmission line should be evaluated.
- (14) Pollution monitoring should be done at the rock crusher areas.
- (15) The scale of the impacts due to stream crossings was not addressed during the public hearing, or by LURC review. The impact to streams and wetlands has not been fully addressed in the application.
- (16) An independent and comprehensive review of the proposed KWPP should be conducted by an outside, objective party.

B. The applicant responded to FBM's comments, summarized as follows (stream crossings are addressed in Finding of Fact #46,A):

- (1) The ACOE permit review included consideration of Essential Fish Habitat for Atlantic salmon. No rivers or streams in the project area provide habitat for this species.
- (2) Habitat for the Northern bog lemming present in the project area will be protected, in accordance with MDIFW and USFWS recommendations.
- (3) Measures needed to provide protection for Canada lynx, if any, will be addressed as a part of the ACOE permitting process, in accordance with USFWS recommendations.

- (4) In consultation with MNAP, measures have been put in place to protect the State listed plant species in the development area.
- (5) The temporary concrete batch plant proposed will not require settling ponds.
- (6) The bulking factor was taken into consideration when evaluating cuts and fills; and disposal areas or the need for additional materials for this project.
- (7) Pull-off areas were included in the evaluation of total roads to be constructed.
- (8) The proposed road widths and maximum slopes meet the specification of the equipment suppliers.
- (9) No new road construction will be initiated in the winter.
- (10) All activities that are substantially different than those proposed herein will be reviewed by LURC.
- (11) Bird kills on transmission lines are avoided by wire spacing.
- (12) Fire hazard due to transmission lines has not been an issue in Maine, and occurs largely due to tree strikes. The applicant will assure that the vegetation is kept properly cleared within the transmission line corridor.
- (13) At the rock crushing locations, noise levels would be temporary and transient, and dust levels will be controlled by wetting.

56. *Citizens Enterprises Corporation (CEC)*. CEC is a joint venture between CEC and the Penobscot Indian Nation Enterprises (PINE), an economic development entity. CEC submitted comments on 6/2/08 in regard to the 115 kV transmission line proposed by the applicant, suggesting that LURC consider the implications of allowing the applicant to have an exclusive easement and right-of-way through the transmission line area, with no allowances for future projects to share this easement or co-locate transmission facilities. CEC referenced the CLUP and Chapter 10, Section 10.21G (10)(a)(2) of the Commission's Land Use Districts and Standards as providing LURC with the authority to plan for multiple use of the proposed transmission corridor. CEC asserted that a patchwork approach to transmission line development for future wind projects in that area of Maine should be avoided, and that the applicant's transmission line corridor should be open to future developers to minimize environmental impacts and encourage new wind sites in the area surrounding the KWPP, where the connection to the grid would be at the Bigelow Substation.

In their response dated 6/11/08, the applicant agreed with CEC that sharing of a transmission line corridor is an option that should be explored, and is environmentally preferable, but asserted the Commission does not have the regulatory or other basis to require such sharing. The applicant noted CEC relies on the CLUP as the basis of its position, but that the CLUP is a policy document, not statute or rule. The applicant also noted that CEC does not consider the consent of the underlying landowners would have to be obtained, and that the Commission cannot exert such authority over these entities. Also, CEC made no mention of how the companies' financial considerations would be addressed by the Commission. Finally, the applicant noted that this is the first it has heard of CEC's interest in sharing a corridor, and asserted that CEC should have come forward during the Preliminary Development Plan review process if it had this interest. The applicant alternatively suggested CEC enter

into negotiations with the relevant parties to discuss sharing the corridor, as other companies have done previously.

57. *Appalachian National Scenic Trail*. The Appalachian National Scenic Trail has reviewed the application and noted on 5/28/08 they have no further comments.
58. *Conservation Law Foundation (CLF)*. CLF has reviewed the application and noted on 5/27/08 they have no further comments.

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. The supporting details are presented in Conclusions #2 through #10, below.
 - A. Adequate provision has been made for:
 - (1) Financial and technical capacity;
 - (2) 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
 - (3) 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.
 - B. 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.”
 - C. 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.”
 - D. *An Act to Implement Recommendations of the Governor’s Task Force on Wind Power Development* was signed into law on April 18, 2008. The proposed KWPP is located within the area now designated as the expedited permitting area pursuant to that Act. See 35-A M.R.S. § 3451(3). The rezoning and Preliminary Development Plan (reference Zoning Petition ZP 709) was reviewed and approved by the Commission prior to adoption of that law; the application for this development permit was accepted for processing after the date of signing. Assuming without deciding that the Act applies to this application, the

Commission finds that this proposal satisfies the requirements of the Act. Specifically:

- (1) A scenic evaluation was completed and reviewed for this project for the Preliminary Development Plan, and the Commission found that any adverse impact to scenic resources would not be undue. The partial view and distance of the KWPP from these viewpoints, coupled with the relative significance of each, were among the factors considered when deciding that there would not be an undue adverse impact to the scenic character of the area (also see Conclusion #5,C).
 - (a) Within 3 miles of the KWPP, viewpoints evaluated included the Kibby Mountain Fire Tower; the Sarampus Falls Picnic Area; some areas of Chain of Ponds; Arnold Trail, which is on the National Register of Historic Places and generally follows Route 27; the Natanis Pond Overlook; and the North Branch of the Dead River, Kibby Stream, and Spencer Stream. The only point where there would be a complete view of the project would be the Kibby Mountain Fire Tower, but this location is not known to be a scenic resource of state significance. The views from all other points would be partial and blocked by topography. Chain of Ponds is rated in LURC's Wildland Lakes Assessment as having outstanding scenic resources.
 - (b) Between 3 and 8 miles from the KWPP, there would be partial views of the KWPP from Jim Pond (from most of the pond), Spectacle Pond, King and Bartlett Lake, and Rock Pond. Of these ponds, Jim Pond is rated in LURC's Wildland Lakes Assessment as having outstanding scenic resources.
 - (2) The project would be located more than 1 mile from any residence (with most being considerably farther), effectively eliminating the potential for shadow flicker effects.
 - (3) Noise levels during operation at the closest residence would be 35 dBA, and would meet the MDEP's rules regarding noise levels.
 - (4) The applicant has proposed a decommissioning plan (see Conclusion #9).
 - (5) The applicant provided evidence during the review of the Preliminary Development Plan regarding tangible benefits to be realized by the people of Maine due to this project.
 - (6) The applicant has conducted avian and bat monitoring in accordance with the protocol recommended by MDIFW, and has proposed a post-construction monitoring plan prepared in consultation with MDIFW.
2. The proposal meets the provisions of Section 10.21,G of the Commission's Land Use Districts and Standards for a Final Development Plan. Specifically:
- A. *Section 10.21,G,2.* Of the 44 proposed turbines, 31 would be set back more than 400 feet from the D-PD Subdistrict boundary, and 13 would be within 400 feet. The proposed siting of these turbines has been done with consideration to optimizing the wind resource, while avoiding wetlands and other natural resources. In addition, the abutting landowner and co-petitioner for the rezoning,

Plum Creek, has stated that it does not object to these turbines being less than 400 feet from the D-PD Subdistrict boundary. Finally, the uses of the land surrounding the D-PD Subdistrict is primarily land management. Therefore, good cause has been shown as to why the thirteen turbines may be set back less than 400 feet from the D-PD Subdistrict boundary.

- B. *Section 10.21, G, 8, c(3)*. A Final Development Plan with all required exhibits was accepted for processing on April 22, 2008, which was within 18 months of the D-PD Subdistrict designation on March 20, 2008.
- C. *Section 10.21, G, 10, d*. The KWPP 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.
- D. *Section 10.21, G, 10, a*. The Final Development Plan meets the conditions of the approved Preliminary Development Plan, and generally conforms with that Plan, with the following changes:
 - (1) The cumulative area of disturbance (excluding the 115 kV transmission line) would be 423.6 acres, decreased from 434.7 acres.
 - (2) The total area to be cleared above 2,700 feet in elevation would be 203.4 acres, decreased from 218.4 acres.
 - (3) The total area to be cleared below 2,700 feet would be 220.2 acres, increased from 216.3 acres.
 - (4) The total area to be cleared for the 115 kV line corridor in LURC jurisdiction would be 310 acres, increased from 290.25 acres.
 - (5) The total area of wetland area of permanent fill for all types of wetlands would be 15,003 square feet, decreased from 1.42 acres.

While there have been several adjustments to the area to be disturbed, the acreage to be disturbed above 2,700 feet in elevation has been decreased. The other adjustments for areas below 2,700 feet have resulted in only a minor change to the total acreage to be disturbed. In addition, the extent of wetland alteration has been reduced. No additional activities have been proposed that would substantially alter the project; and the elimination of certain temporary activities from the plan is allowed if those activities are found to be unnecessary.

- 3. *Structures and activities proposed outside of the D-PD Subdistrict*. During the review of the Preliminary Development Plan, the Commission concluded that certain project elements may be allowed in the M-GN Subdistrict, noting that it is preferable to locate those elements at lower elevation areas to minimize impacts to the more sensitive areas within the D-PD Subdistrict (reference Conclusion #1 of Zoning Permit ZP 709). The permanent elements to be located in the existing M-GN Subdistrict would be: a portion of the collector lines, the 115 kV transmission line, a substation, the O&M facility, new roads, upgrades to existing roads, and areas for disposal of excess inert fill materials. The temporary activities to occur in the M-GN Subdistrict include the Construction Control Center (trailers and parking, lay-down

area for equipment, concrete batch plant, storage area for materials); and other lay-down and storage areas. Activities proposed outside the D-PD Subdistrict would be primarily located within the M-GN Subdistrict, with the exception of the meteorological towers in the P-MA subdistrict, and where roads and utility lines cross the various protection subdistricts (see Finding of Fact #4, and Sections B to D, below). The Commission concludes that the activities proposed within the M-GN, P-SL, P-WL Subdistricts may be allowed by permit. The activities proposed to be located in P-MA, P-UA, and P-RR Subdistricts may be allowed either by permit or by special exception.

- A. The O&M facility would be comprised of a maintenance building to provide space for project staff to operate the KWPP remotely, and for storage and maintenance of equipment. The O&M facility would not interfere with the surrounding uses of the land (primarily forestry, and to a lesser extent recreational uses such as hunting or fishing). There would be adequate site distance for any vehicles related to the project entering or leaving the site, and traffic generated during operation of the KWPP would generally be minimal, except when major repairs are required. The proposed O&M facility would be consistent with the purposes of the M-GN Subdistrict and of the CLUP, and would not be detrimental to the resources and uses protected by this subdistrict. This facility may be allowed by permit, in accordance with Section 10.22,A,3,c(30) of the Commission's Land Use Districts and Standards.
- B. Roads and utilities lines (including substations) are uses allowed with a permit within M-GN and P-SL Subdistricts (reference Sections 10.22,A,3,c(11) and (27); and 10.23,L,3,c(9) and (19); of the Commission's Land Use Districts and Standards).
- C. The applicant has proposed to locate roads in P-MA and P-WL Subdistricts; and utility lines in P-MA, P-UA, P-RR, and P-WL Subdistricts. Both roads and utility lines are uses allowed by special exception in the P-MA, P-RR, P-UA, and P-WL Subdistricts where they are proposed (reference Sections 10.23,G,3,d(3) and (5); 10.23,I,3,d(5); 10.23,M,3,d(6), and 10.23,N,3,d(3) and(6), respectively, of the Commission's Land Use Districts and Standards). The applicant has met the special exception criteria that "there is no alternative site which is both suitable to the proposed use and reasonably available to the applicant; and the use can be buffered from those other uses and resources within this subdistrict with which it is incompatible" for the proposed activities within these subdistricts.
 - (1) The 115 kV above-ground line would pass over the linear P-UA Subdistrict associated with the North Branch of the Dead River. In addition to other considerations, in order to connect to the Bigelow Substation but also minimize impacts to protected resources, the applicant proposed to cross Route 27 and this river perpendicularly. An alternative route not crossing the river would have greater potential to adversely affect wetland, stream, and recreational resources. As proposed, there would be a small visual impact at

- the point of crossing, but thereafter the corridor would be minimally visible from view points generally used by the public.
- (2) The 115 kV line would only affect the P-RR Subdistrict associated with the Appalachian Trail where it is buried along the ROW of Route 27. The National Park Service did not object to this location for the utility line.
 - (3) The roads and utility lines to be located in the P-MA and P-WL Subdistricts are needed for access to the turbine areas, and to connect the turbines to the 115 kV transmission line. These aspects of the KWPP have been designed to minimize impacts to high elevation areas and wetlands.
- D. Meteorological towers are a use allowed with a permit in a P-MA Subdistrict, as “other structures, uses, or services that are essential for exercise of uses listed in Section 10.23,G,3,a through c” of the Commission’s Land Use Districts and Standards (reference Section 10.23,G,3,a(5), “surveying and other resource analysis”).
- E. Temporary activities such as the lay-down and storage areas, concrete batch plant, or rock crushers are similar to the activities associated with gravel pits and road construction (*i.e.* asphalt batch plants, rock crushers, temporary office and storage trailers, equipment storage areas), both of which are uses allowed with a permit in an M-GN Subdistrict (reference Sections 10,22,A,3,c(11),(14), (18), and (30) of the Commission’s Land Use Districts and Standards).
- F. Disposal of excess inert fill materials would be within the M-GN Subdistrict, and this activity has been proposed to be conducted in accordance with LURC’s Standards for Filing and Grading, Section 10.27, F. Sections 10.22,A,3,b(6) and c(6) of the Commission’s Land Use Districts and Standards provide for filling and grading as a use allowed without a permit subject to standards in an M-GN Subdistrict, and if conducted in excess of standards to be allowed by permit.
4. The applicant’s proposal to report to LURC staff changes to the layout or design of the project that may occur during construction that would result in less than the amount of impact approved in this Final Development Plan, including the engineered plans accepted for processing on April 22, 2008, is generally reasonable, given the extent of evaluation of the site done to date; the circumstances affecting the ability to collect geotechnical data over the entire site; and that the proposed Final Development Plan incorporates the maximum impact likely, providing that changes to the layout or design during construction would result in less than the amount of impact proposed. However, changes not within the limits of the activities approved herein may not be accomplished by after-the fact notification or reporting of as-built conditions. In accordance with Section 10.21,G,10,c of the Commission’s Land Use Districts and Standards, changes to the activities allowed in the D-PD Subdistrict may require permit review and approval, either by the Commission, or by LURC staff for minor changes not causing a material change or an addition of land to the D-PD Subdistrict. Additionally, for activities located outside the D-PD Subdistrict, changes must be reviewed not only in the context of the Final Development Plan, but also in

accordance with the rules for the subdistrict in which the activity is proposed (see Appendix A). After reviewing the activities proposed in the final application, the potential for changes during construction, and the proposal for reporting, the Commission concludes that:

- A. Activities during construction that would require LURC review on a case-by-case basis prior to implementation, in accordance with Section 10.21,G,10,c of the Commission's Land Use Districts and Standards to determine if permit approval is required and if the change would be material, include but are not limited to, changes to:
 - (1) The locations of the new roads (up to 300 feet from the proposed centerline, *i.e.* a Level B road construction);
 - (2) Met tower locations;
 - (3) Lay-down and storage area locations;
 - (4) Locations of the pull-off areas on existing roads;
 - (5) Alterations to the layout and design of the project based on acidic rock sampling and geotechnical investigations (for example, substantial changes to the extent of cuts and fills, and subsequently materials to either be stored, disposed of, or brought to the site from outside sources; the locations and number of stream or wetland crossings; or the extent of wetlands to be impacted); and
 - (6) The frequency of third-party inspections.

- B. Changes that will result in less than the amount of impact authorized in the Final Development Plan, including the engineered plans accepted for processing on April 22, 2008, or would not otherwise trigger the need for LURC permit review (see Appendix A), and therefore would not require prior LURC notification or approval, but should be included in the quarterly reports or in the "as-built" conditions, include, but may not necessarily be limited to:
 - (1) The exact location of a structure within the identified footprint area;
 - (2) The type of foundation to be used for each turbine;
 - (3) Adjustments to erosion control measures to be used at a particular site based on the approved "toolbox";
 - (4) The use of mobile rock crushers as opposed to the stationary rock crushers;
 - (5) The use of an outside contractor for concrete production or as a source of additional fill material;
 - (6) A change of the location of the proposed septic system within the 1 acre O&M facility lot; and
 - (7) The location of the well on the O&M facility lot.

5. 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 KWPP by submitting evidence of a commitment to fund

the project from TransCanada Corporation (“TransCanada”) in the form of a letter from the company Executive Vice President and Chief Financial Officer stating that funding would be provided for the development of the project. The applicant is a wholly owned subsidiary of TransCanada. The applicant also submitted TransCanada’s 2006 Annual Report to substantiate the company’s assets of over \$24 billion and an “A3” credit rating by Moody’s Investor Service (also see Conclusion #9).

- (2) The applicant demonstrated adequate technical capacity to construct and operate the proposed KWPP by supplying summaries and resumes for its key personnel and consultants that show the appropriate background and experience. In addition, the parent company, TransCanada, has experience in developing and siting wind power projects in North America. Finally, the general contractor selected for this project has had previous experience constructing wind power projects in Maine, as well as 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. The applicant must obtain all necessary permits from the Maine Bureau of Motor Vehicles and the Maine Department of Transportation. The applicant is responsible to provide for 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 and clearing to ensure site distance.

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 KWPP with respect to Section 10.25,E,1 of the Commission’s Land Use Districts and Standards. The methods prescribed in Chapter 315 of MDEP’s regulations were used to select factors for evaluating scenic quality and the visual impact. It was concluded by the Commission during the review of Zoning Petition ZP 709 that the proposed KWPP would not have an undue adverse effect on the scenic character of the land within the viewshed of the project (reference Conclusion #5,D, Zoning Petition ZP 709). No additional evaluation of scenic impacts by the KWPP was conducted for the Final Development Plan. The KWPP project would be consistent with Section 10.25,E,1 in that the impact to roadways and shorelines in the surrounding area is minimized due to the project location; and any views from traveled ways, waterbodies, and public areas would not be blocked (also see Conclusion #1,D).
- (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 KWPP. The habitat and species present at the development area at the lower elevations are generally common in Maine, and any impacts to habitat that would occur as a result of the KWPP would not be undue. At the higher elevations, the habitat type is less common, but is not a particularly good example of a higher elevation forest due to past timber harvesting practices. Provisions have been made to protect the State-listed plant species found at or near the development area. See Section J, below, for the discussion of wetlands and streams.

- (a) The applicant and the MNAP found three S2-ranked state-listed species in the project area (Auricled Twayblade, Lesser Wintergreen, and Boreal Bedstraw), all located near waterbodies or in wetlands which would be avoided during development of the KWPP. MNAP determined that any impacts that would occur to the S2 species in the development area would not be significant.
 - (b) The pre-construction avian and bat monitoring conducted by the applicant established that the operation of the KWPP would have a low potential to cause an undue level of avian or bat mortality. However, as recommended by MDIFW, the applicant has proposed to monitor the site for avian and bat mortality during operation, and report to the Commission and MDIFW the results of such monitoring annually for review.
 - (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 significant increase in the level of disturbance over the long-term.
 - (d) The potential for adverse impact to wildlife populations has been evaluated with respect to habitat loss or conversion, and disturbance effects. No undue adverse impacts are expected to occur.
- (3) The archaeological reports submitted by the applicant for the proposed development area showed that no resources would be disturbed by the project. MHPC reviewed the reports produced by the applicant, and agreed that no historic or archaeological resources would be impacted. Further, the applicant proposes that if archaeological or historical resources are encountered during excavation, construction work would cease, MHPC would be notified, and a full assessment would be made before continuing. Based on the survey work completed by the applicant, and review by MHPC, the Commission concludes that the proposed KWPP would not have an undue adverse impact on historic or archaeological resources.

D. *Section 10.25,F - Noise and Lighting.* The applicant appropriately evaluated the potential for adverse effects due to sound produced by the KWPP, and has made adequate provisions for lighting.

- (1) *Noise.* For the Preliminary Development Plan, the applicant conducted a sound level analysis demonstrating sound levels at the nearest receptor (a residence approximately 1.2 miles from nearest turbine) during favorable sound propagation conditions would be approximately 35 decibels (dBA), or less. This level is well within LURC noise standards for a D-GN Subdistrict (65 dBA

daytime and 55 dBA nighttime), and is less than the allowable noise levels for an M-GN Subdistrict (55 dBA daytime and 45 dBA nighttime). The sound level analysis also demonstrated that projected noise levels would exceed 55 dBA in only a limited number of locations at the edge of the D-PD Subdistrict on land owned by Plum Creek primarily used for commercial harvesting activities that would not be adversely impacted by sound produced by the turbines during operation. In addition, sound produced during construction between the hours of 7 am and 7 pm is exempt from the Commission's noise standards, and the applicant has not proposed nighttime construction (also see Conclusion #1,D).

- (2) *Lighting*. The applicant submitted a revised lighting plan based on their updated turbine location plan that has been reviewed and approved by FAA. The Commission concludes that 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 and type of lighting to be used has been minimized and mitigated to the extent possible. Therefore, the turbine lighting as proposed will not cause an undue adverse impact.

The applicant proposes external lighting on the O&M building and Kibby Substation 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.

- E. *Section 10.25,G - Soil suitability*. The applicant conducted a Class C Soil Survey for the KWPP in areas where significant soil disturbances associated with construction of the proposed facilities and access roads would occur. The soils in the project area are generally appropriate for the proposed development, but various erosion control and engineering design measures are needed to accommodate site limitations such as steep slopes, high elevation soils, seepages, and wetlands. The applicant consulted with the State Soil Scientist regarding the intensity and scope of soil surveys needed, and responded to the State Soil Scientist's requests as follows:

- (1) *Temporary activity locations*. Additional field surveys will be conducted at the storage and disposal areas, and results submitted to LURC and the State Soil Scientist, along with descriptions of adjustments, if any are found to be necessary.
- (2) *Kibby Substation and O&M facility*. Additional soils mapping will be conducted at these two locations, and the mapping information will be submitted to LURC and the State Soil Scientist. The applicant will accommodate the State Soil Scientist's request to visit the proposed septic system site to determine if any modifications are needed, and also responded to the technical question raised by the State Soil scientist about interpretation of soil horizons at this site (see Section G, below).

The Commission concludes that the KWPP has been designed, and adequate provisions have been made, to avoid or minimize impacts to sensitive areas and resources. If carried out as proposed, the proposed KWPP would meet the Commission's provisions for soil suitability (also see Section G, below).

- F. *Section 10.25, H - Solid waste disposal.* The applicant has made adequate provision for disposal for construction debris and solid wastes. Wood waste produced by clearing would be either ground and used on-site for sediment control berms, or chipped/ground and broadcast on-site within cleared areas. Stumps would be cut to ground level and left in place; excess stumps would be incorporated into the larger fill areas located along the ridgeline. The applicant determined that construction waste could be disposed of at existing permitted landfills. Portable refuse containers would be used within the construction area for collection of solid waste material; the containers would be monitored and emptied periodically by project personnel.
- G. *Section 10.25, I - Subsurface waste water disposal.* The applicant has made adequate provision for subsurface waste water disposal. The system to be installed at the O&M facility 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/DEH. The applicant has further agreed to and will conduct a site visit with the State Soil Scientist to discuss soil horizons at the site prior to installation to assure that the disposal field is situated in the proper location.
- H. *Section 10.25, K - Phosphorus control.* The applicant consulted with MDEP concerning the allowable phosphorous loading to the two watersheds that would receive runoff from the project. Given the small area of the proposed disturbance relative to the size of the watersheds, that the access roads would be super-elevated, and that ditch turnouts and level spreaders would be used to distribute runoff, MDEP concluded during the review of Zoning Petition ZP 709 that it was likely phosphorous loading regulations could be met. The comments made by the MDEP in the review of the Preliminary Plan Development are the agency comments of record regarding phosphorus loading and mitigation for this project.
- In addition, for the Final Development Plan the applicant conducted a phosphorous export evaluation for the two watersheds that would receive runoff (Flagstaff Lake and Jim Pond). Flagstaff Lake would receive 13.4 pounds of phosphorous per year and Jim Pond would receive 21.8 pounds of phosphorous per year. Both values are less than the phosphorous export allocation for this project for these watersheds. The forested buffers, used in conjunction with the Best Management Practices (BMPs) for MDEP's Storm Water General Permit, will adequately control phosphorus export from this site.
- I. *Section 10.25, M - Erosion and sedimentation (E/S) control plan.* The applicant has made adequate provision for control of erosion and sedimentation. Erosion control measures to be used during construction include sediment barriers and

traps, temporary diversion berm, level spreaders, culvert outlet protection and diversion channels. An on-site engineer would make field observations through the construction effort and adjust specific techniques, as appropriate, to respond to field observations. The Final Development Plan includes detailed plans for the E/S measures specifies 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 State Soil Scientist to develop 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 made adequate provision to monitor for sulfidic bedrock, and if encountered to mitigate any acidic runoff from the use of the crushed sulfidic rock, by testing the bedrock before using it as fill, testing the water quality of receiving streams and wetlands, using non-acidic material to the extent possible, and providing for measures that would adequately control the runoff (see Finding of Fact #47,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 Section 10.25,M,4 (see Finding of Fact #44). The names of the individuals or firms 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 has identified and delineated wetlands, streams and vernal pools in the project area, and has designed the KWPP to minimize and avoid impacts to those areas. A total of 15,003 square feet (sf) of wetland would be permanently filled for the project. Thirty-seven (37) acres of P-WL3 forested wetland would be converted to P-WL2 scrub-shrub or palustrine emergent wetland for the transmission line. Approximately 7.54 acres of P-WL3 forested wetland, and streams at crossings, would be temporarily affected by the placement of mats during construction. The permanent wetland impacts proposed by the applicant constitute a Tier 2 wetland review. Pursuant to Section 10.25,P,2, all wetland alteration standards have been met, including that there would be no violation of State water quality law.

- (1) The total amount of permanent wetland fill impacts proposed to construct the Kibby Project would be 15,003 sf, of which 3,346 sf would be P-WL1 impacts, 6,828 sf would be P-WL2 impacts and 4,829 sf would be P-WL3 wetland alterations. All of the permanent fill impacts are due to access and ridgeline road construction, with the exception of 1,140 sf of P-WL2 impact which is due to the 115 kV transmission line. Thirty-seven (37) acres of P-WL3 forested wetland within the transmission line corridor would be cleared of vegetation taller than 8 feet, and maintained with a minimum 15 foot

separation between the vegetation and conductors. Up to 7.54 acres of wetlands may be temporarily impacted during construction by equipment mats if winter construction is not possible.

- (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 M-GN, P-SL2, and P-WL Subdistricts. In a P-MA subdistrict, water crossings are a use requiring a permit; however, none of the proposed water crossings are located in an area currently or previously designated as a P-MA Subdistrict. In addition, Section I,C,1,c of the Commission's Wetland Compensation Guidelines provides that road and utility line crossings are exempt from the 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, or for P-WL1 wetland impacts 500 sf or larger, compensation may be required. The proposed permanent P-WL2 and P-WL3 wetland impacts would be less than 20,000 sf, and the P-WL1 wetland impacts are primarily associated with upgrades to existing roads or crossings. The remainder of the wetland alteration would be conversion of portions of forested wetland to shrub-dominated wetlands, or would be temporary in nature. The applicant conducted a functional assessment as per ACOE guidelines, which indicated there would be no significant adverse impacts to the functions and values of the affected wetlands. The minimal loss of wetland function because of the nature of the alterations, as well as the applicant's avoidance and minimization of permanent impacts, precludes any need for compensation.
 - (c) No access ways have been proposed in the cleared P-WL2 and P-WL3 wetlands within the transmission line corridors because the applicant has proposed to conduct this activity during the winter under frozen conditions. This should effectively limit any additional access across wetlands in the corridor by recreational ATV users.
- (2) Except as provided for within this Final Development Plan Permit, any additional impacts to wetlands require review and approval. Although Section 10.23,N,b(4) of the Commission's Land Use Districts and Standards allows alteration of up to 4,300 sf of P-WL2 or P-WL3 wetland without a permit, subject to standards, in this case, all additional wetland impacts would not be reviewed as separate impacts, and would be reviewed cumulatively with the proposed alterations as one single and complete project. Any additional wetland impacts must meet the wetland alteration standards in Section 10.25,P,2.
6. Except for shoreline setbacks, minimum dimensional requirements for activities located within a D-PD Subdistrict may be established by the Commission pursuant to Section 10.21,G, (reference Section 10.26,G,2). However, all structures associated with the project to be located outside the D-PD Subdistrict must meet the minimum dimensional requirements. The proposed KWPP meets or exceeds the minimum

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

- A. *Section 10.26,D – Minimum setbacks.* Other than crossings for roads and transmission lines, all temporary and permanent structures must be set back, at a minimum, 100 feet from stream channels. The vegetated buffers within 100 feet of streams and P-WL1 wetlands must be maintained, except as needed for road crossings and to meet legal requirements in the transmission line corridors (also see Conclusion #7,A).
 - B. *Section 10.26,F - Maximum building height.* The proposed turbines, all of which would be located within the D-PD Subdistrict, have a hub height of 263 feet and at the upward extended tip of the blade each turbine would be 410 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, the turbines are structures which contain essentially 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.
 - C. Of the four proposed permanent met towers, at least two would be located outside the D-PD Subdistrict, within the P-MA Subdistrict. The met towers would exceed 100 feet in height, but meet the structure type provisions discussed in Section B, above, and may be allowed with a permit in a P-MA Subdistrict (reference Development Permit DP 4728).
7. The standards in Section 10.27 of the Commission's Land Use Districts and Standards may be exceeded with a permit. However, the KWPP has been proposed to be conducted in a manner that will meet the provisions of the relevant sections of Section 10.27. In particular:
- 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 100 foot wide vegetated buffer is proposed along streams, except where breached by crossings. No clearing would be done within 250 feet of a great pond. All roadways proximate to the project are private land management roads, except for Route 27. The applicant has proposed to maintain at a minimum the appropriate vegetated buffer between the O&M facility and Route 27, and the Kibby substation and Wahl Road.
 - B. *Section 10.27,D – Roads and water crossings.* The permanent roads and water crossings proposed would meet or exceed the provisions of Section 10.27,D, including setbacks from water bodies, road banks, drainage ditches, and crossings, except as noted below in Section (3).
 - (1) Two (2) perennial and several intermittent stream channels within the B Series construction area would be permanently crossed. Water crossings by roads conducted according to standards may be allowed without a permit in

the M-GN Subdistrict, P-SL2 Subdistrict, and P-WL Subdistricts. Water crossings may be allowed with a permit in a P-MA Subdistrict.

- (2) During construction, the traveled surface of the proposed ridgeline roads would be 34 feet wide to accommodate the assembly crane, but narrowed to 20 feet wide after construction, and the sides revegetated. Access roads would be 20 to 25 feet wide gravel roads with pull-off areas. Gold Brook Road, Wahl Road, and Spencer Bale Road would be widened to 25 feet, pull-off areas would be added, and crossings would be upgraded as needed. The roads would have a maximum finished grade of 10%, with short distances having a maximum slope up to 14% in exceptional circumstances.
- (3) All proposed new roads would meet the provisions of Section 10.27,D for setbacks to flowing waters. Gold Brook Road, an existing land management road owned by Plum Creek, has been at its present location proximate to Gold Brook for many years, and may be located less than the distance required in Section 10.27,D,1,d from Gold Brook. The applicant has not proposed to cause Gold Brook Road to be any closer to Gold Brook than it currently is due to the road upgrades.
- (4) The in-stream work window of June 15 to September 15, and alternatively consultation with MDIFW for work to be done outside that period on a case-by-case basis, must be incorporated in the work plan. Culverts must be at least 1.2X the width of a stream crossing, as recommended by MDIFW.

C. *Section 10.27,F – Filling and grading.* The areas proposed to be graded and filled on the ridgelines of Kibby Mountain and Kibby Range to construct the KWPP would be the turbine pads, access roads, and ridgeline roads. Other areas to be graded and filled are the rock crusher areas, the O&M building site and concrete batch plant location, and the substation site. The proposed filling and grading would be set back at least 100 feet from all waterbodies, except for water crossings. The proposed filling and grading would meet the provisions of Section 10.27,F of the Commission's Land Use Districts and Standards.

D. *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. All proposed signage would be located within the vicinity of the development area, and would be limited to informational signs associated with site activities and roadway closures. Section 10.27,J,1(e) of the Commission's Land Use Districts and Standards provides that such information signs 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 sf in size, except that directional signs visible from a public road must not exceed 4 sf in size. The Commission concludes that the signage proposed would conform with Section 10.27,J,2 of the Commission's Land Use Districts and Standards.

8. *Post-construction monitoring and reporting.*

- A. *Project benefits report.* The Commission concludes that the applicant's proposal for reporting on the project's contribution to the State's environmental and energy policies, as required by Condition #2,C,1 of Zoning Petition ZP 709, is acceptable. The applicant must submit annual reports for the first two years of the project's operation. The annual report must include, at a minimum, the total megawatt hours of generation during the year, and a calculation of emissions reduced or displaced as a result of operating the KWPP. Other tangible benefits realized as a result of operating the project may also be included in the report.
- B. *Re-vegetation monitoring.* On-site inspections of re-vegetation and remedial measures 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 90% vegetation cover or are otherwise stabilized with erosion control mix, with the exception of roads, parking areas, walkways, and open portions of the turbine pads. Any substantial changes to the re-vegetation plans proposed in the Final Plan must be submitted to LURC staff for review, and consideration of whether it would constitute a change requiring additional permit 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 MDIFW as a part of the Preliminary Development Plan. The spring migration radar survey requested by MDIFW was incorporated into the post-construction monitoring plan. During the review of the Preliminary Development Plan, the Commission concluded that the proposal to monitor avian and bat mortality was appropriate, and that the applicant should continue to coordinate with MDIFW. An annual report must be submitted to LURC staff and MDIFW for review after each proposed full year of monitoring (years two and five after installation of turbines). The applicant should consult more frequently than annually with MDIFW and LURC staff on the avian and bat impacts, and if any are found to determine if remedial measures are needed. After the first year of post-construction monitoring, LURC staff and MDIFW may review the cumulative results to determine if changes in the level or frequency of monitoring are necessary.
- D. *Monitoring of post-construction erosion/sedimentation, storm water control measures, and acidic rock testing.* All monitoring of post-construction erosion/sedimentation and storm water control measures, and acidic rock testing; 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 90% 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.

9. *Decommissioning.* 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.
 - A. *Financing.* The applicant's proposal for a Parental Guarantee from the parent company, TransCanada Corporation, further secured by an Irrevocable Standby Letter of Credit if TransCanada's credit rating falls below investment grade, to assure funds will be available if decommissioning is needed is acceptable. The net cost of decommissioning will be assessed by a qualified third-party engineering firm that is mutually agreeable to the applicant and the Commission. The proposed notification schedule in the event that the project ceases to generate electricity is also acceptable, all as modified and set forth in the conditions section below.
 - B. The plan to dismantle, remove, and dispose of the nacelles, blades and towers, the above-ground collector system, and the substation is appropriate. Further, in view of the current situation regarding transmission capacity in Maine and the State's goals regarding renewable energy development, it is appropriate to remove the 115 kV transmission line between the project and the Bigelow substation if it is not otherwise being used by another project. Further, it is likely appropriate to remove the foundations to two feet below grade with the intent of assuring protection of natural resources in high elevation areas, and it is appropriate to allow to naturally re-vegetate all portions of the project associated with the turbine strings, including the collector lines and the substation. In areas above 2,700 feet in elevation, all areas from which structures are removed should additionally be monitored to assure the soils are stabilized and natural vegetation is becoming re-established.

10. *Miscellaneous.*

- A. *Title, right, or interest (TRI).* The parcel is owned by Plum Creek and the applicant possesses an option to acquire an easement granting the exclusive right to develop a wind power facility on the rezoned parcels in Kibby Twp. and Skinner Twp. The applicant has also obtained the appropriate TRI and/or agreements with landowners for all permanent and temporary elements of the proposed work, including road construction and road improvements.
- B. *Engineered plans.* The engineered plans submitted by the applicant that were accepted for processing on April 22, 2008 are the approved plans. The as-built engineered plans must be submitted to LURC staff upon completion of construction, and as needed if changes are proposed.
- C. *Road maintenance.* After the facility is constructed, Plum Creek would continue to own and be responsible for maintaining the existing logging roads that would

be improved for the construction of the KWPP, such as Gold Brook Road, Wahl Road and Spencer Bale Road. The applicant would be responsible for on-going maintenance of new access roads.

- D. *Spill Prevention, Control and Countermeasure Plan (SPCC) Plan.* The Commission concludes that the applicant must incorporate any provisions recommended by MDEP into the construction SPCC plan, and submit the revised version to LURC staff. The applicant must also submit the final SPCC Plan associated with the O&M building and substation to LURC staff, and to MDEP for review and approval prior to storage of any petroleum products.
- E. *Blasting Plan.* MDEP reviewed the applicant's Blasting Plan and requested several additional details that should be specified. The applicant incorporated those details as an addendum to the Blasting Plan. Therefore, the Commission concludes that the Blasting Plan submitted by the applicant for construction activities is acceptable, and meets the applicable State laws governing such plans.

Conditions

Therefore, the Commission **APPROVES** the Final Development Plan Permit DP 4794 submitted by TransCanada Maine Wind Development, Inc. for a 44 turbine wind farm located within the Kibby Wind Power Project (D-PD) Planned Development Subdistrict, and for support facilities located outside the D-PD Subdistrict, subject to the findings of fact and conclusions contained herein and the following conditions:

1. The Standard Conditions (ver. 10/90), attached.
2. Notwithstanding Condition #3 of the Standard Conditions, construction of the KWPP must be substantially started within 24 months of the date of issuance of this permit.
3. Only those uses and structures approved in this Final Development Plan may be allowed. 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-MA) Mountain Area Protection 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 those subdistricts prior to the effective date of the rezoning on March 20, 2008.
 - 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).
4. The permittee is responsible for all activities in the Final Development Plan that were proposed as a result of consultation with State agencies, any recommendations agreed to, as reflected in the record, including, but not limited to, the State Soil Scientist, MDEP, and MDIFW.
 5. *Project benefits report.* The permittees 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. At a minimum, the report must include total megawatt hours generated and an estimate of pollution reduced or displaced by project operation.
 6. *Setbacks.* All temporary and permanent structures located outside the D-PD Subdistrict, including parking areas, must be set back at least 75 feet from the traveled surface of all roads and 100 feet from all streams and P-WL1 wetlands, except that the traveled surface of Gold Brook Road must be located no closer to Gold Brook than its present location. With the exception of access roads, the collector line, the thirteen identified turbines (see Conclusion #2,A), and the met towers, all structures located within the D-PD Subdistrict must be set back at least 400 feet from the D-PD Subdistrict boundary. The thirteen turbines identified as being within 400 feet of the D-PD Subdistrict boundary must be no closer than the distances identified in the Final Development Plan (see Appendix A, Section C).
 7. *Traffic flow.* The permittee shall provide for safe traffic flow throughout the development area. The permittee shall prevent congestion due to 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 and by the use of informational signs.
 8. *Noise.* The noise level at the D-PD Subdistrict boundary must not exceed 55 dBA during operation of the wind power facility, except at the locations identified in the noise assessment. The permittee shall monitor these locations to assure that no receptors other than those conducting forest management activities become permanently present at these locations. In the event that a residence is located at these locations, the permittee shall be responsible for informing the new resident(s) of the level of sound produced by the KWPP. During construction, the sound produced as a result of construction activities from 7 pm to 7 am must not exceed 55 dBA,

except for sound produced by safety signals, warning devices, emergency pressure relief valves, other emergency activities, and traffic on roadways.

9. *Lighting.* Lighting on the outside of the O&M building and the Kibby Substation must be motion sensitive or manually controlled. If the permittee installs manually controlled exterior lighting on the Operations & Maintenance building and the Kibby 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.

10. *Erosion/sedimentation and stormwater control; and soils.*

- A. The permittee shall implement the inspection and monitoring programs as proposed, incorporating recommendations made by the State Soil Scientist and MDEP (see Findings of Fact #42 to #44, #48, and #49).
- A. The permittee shall submit copies of any additional soils mapping done for the project, including for the O&M facility and the Kibby Substation. Any changes to either of these facilities must be reviewed by LURC staff to determine if additional permit approval is required.
- B. Third party on-site inspections of erosion and storm water control measures during construction must, at a minimum, 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. If inspections reveal that such measures are not functioning properly, remedial measures must be taken immediately. Inspections of erosion and stormwater control measures must also be conducted by the permittee's on-site staff and its primary contractor's personnel (see Finding of Fact #42 and #44)
- C. The rock sandwich road design recommended by the State Soil Scientist, or other measures described in the "toolbox" of erosion/sedimentation and stormwater control measures for this project, must be employed as proposed to maintain subsurface and surface hydrology where seepages and wetlands occur and to control runoff from all project areas. Existing stream crossings and drainage swales employing culverts may continue to be culverted.
- D. Construction under frozen or saturated conditions must be conducted as proposed in the erosion/sedimentation control plan and winter construction schedule (see Findings of Fact #38 and #42).
- E. The permittee shall conduct testing, analysis, and handling of bedrock during construction as proposed in the Geotechnical Evaluation Report and the Acidic Rock Testing and Mitigation Plan (see Finding of Fact #47). The permittee shall

report to LURC staff upon completion of construction the locations where any management measures were employed, and why. All inspection reports must be kept on-site, and be made available to LURC staff upon request (see Finding of Fact #47).

- F. With the exception of road crossings, all areas to be filled and graded must be no closer than 100 feet from streams, and 250 feet from bodies of standing water.

11. *Solid waste disposal and concrete production.*

- 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 in accordance with Maine's Solid Waste Disposal rules, and Sections 10.22,A and 10.25,H of the Commission's Land Use Districts and Standards.
- B. Wash-down of concrete trucks and equipment must be done on-site such that the runoff water is contained within the turbine pads, and covered when the pads are back-filled.
- C. After collecting and evaluating the geotechnical data, the permittee shall report to LURC staff for review and assessment of whether permit approval is necessary, any changes to the concrete batch plant, including the amounts of water needed. The permittee shall submit the detailed, operational plan for production and handling of concrete prior to production on-site.
- D. All solid waste produced during construction and all waste produced during operation of the KWPP must be disposed of in accordance with Maine's Solid Waste Disposal Rules.

12. *Wetlands and habitat.*

- A. The total area of permanent wetland impact as a result of the project must be no more than 15,003 sf, and must be limited to the areas proposed (see Finding of Fact #46,A). Any additional wetland impacts must be submitted to the Commission for review and assessment of whether permit approval is needed, in accordance with Section 10.21,G,10,c and Section 10.25,P of the Commission's Land Use Districts and Standards. All additional wetland impacts will be evaluated cumulatively with the wetland alterations approved herein.
- B. To prevent any impacts to the area of Northern bog lemming habitat identified within the development area, no work may be conducted within this forested wetland habitat and the 26 acre upland and wetland watershed surrounding it. A minimum 250 foot wide forested buffer must be maintained around the wetland area (see Finding of Fact #46,B,(3)(b)(ii)). The permittee shall include in its bi-annual environmental report to LURC and MDIFW the status of the protected area (see Condition #13).

- C. The permittee shall limit opportunities for inadvertent access through wetlands by recreational vehicles created as a result of construction of the 115 kV transmission line.
- D. The permittee shall incorporate into its construction plan an in-stream work window from June 15 to September 15, or if work outside that period is required, consultation with MDIFW on a case-by-case basis.

13. *Post-construction environmental restoration, maintenance, monitoring and reporting.*

- 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 90% vegetation cover with the exception of roads, parking areas, walkways, and open portions of the turbine pads. Once the site is 90% 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, at a minimum, conduct post-construction avian and bat mortality monitoring during years two and five of operation, and shall submit annual reports to LURC staff and MDIFW for review. The permittee shall consult with LURC staff and MDIFW annually, quarterly, and upon request on the results of the avian and bat mortality monitoring to determine if adjustments to the level or frequency of the monitoring or any remedial measures are needed. Should the monitoring reveal that significant impacts have occurred, the permittee shall consult with LURC staff and MDIFW to determine what remedial measures, if any, are necessary.
- C. All erosion and stormwater control monitoring and inspection reports, and acidic rock testing records must be kept on-site for a three year period after the facility becomes operational.
- D. The permittee shall be responsible for the maintenance of the new access roads constructed to provide access to the turbine strings, both during and after construction.

14. *Decommissioning.*

- A. If it becomes necessary for the KWPP to be decommissioned, the permittee shall decommission, or provide for the decommissioning of, the KWPP. The permittee shall fully fund decommissioning regardless of the type or amount of the funding mechanism secured and regardless of whether the funding mechanism has yet

been put in place, as set forth below. The permittee shall submit a final detailed decommissioning plan and schedule no later than: (1) 60 days after the date the project ceases to generate electricity as set forth in a written notice to LURC; or (2) 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 Preliminary and Final Development Plans.
- C. Within 60 days of the date of this permit, the permittee shall submit to the Commission for review and approval the estimated net cost of decommissioning the project in accordance with the plan contained in the Preliminary and Final Development Plans, such estimate to take into account the salvage value of the turbines and other facilities.
- D. On or before December 31st of the first year of operation or partial operation of the project the permittee shall secure a signed parental guarantee from TransCanada Corporation, or an irrevocable standby letter of credit in favor of the State of Maine Land Use Regulation Commission to fund decommissioning of the project. The parental guarantee or the letter of credit and drawing certificate shall be submitted at least 30 days prior to December 31st of the first year for Commission review and approval.
- E. The permittee shall initially secure either the parental guarantee or letter of credit in an amount no less than 50% of the approved estimated decommissioning costs, and by December 31st of the tenth year of operation of the project, the parental guarantee or letter of credit shall be increased to 100% of the estimated decommissioning costs, such amount to be submitted at a reasonable time prior to December 31st for Commission review and approval.
- F. In lieu of securing an irrevocable standby letter of credit, and only to the extent and for the period of time that TransCanada Corporation's credit rating does not fall below investment grade as determined by Moody's Investor Service, Standard & Poor, or other comparable rating service, permittee may provide a parental guarantee for the approved estimated costs of decommissioning.
 - (1) To demonstrate the ongoing creditworthiness of TransCanada Corporation, each year following execution of the parental guarantee and for such period that the parental guarantee remains in place, permittee shall provide to the Commission (a) a copy of TransCanada Corporation's annual audited financial statements within 30 days of when such statements are released publicly, and (b) verification that TransCanada Corporation's credit rating as

determined by Moody's Investor Service, Standard & Poor, or other comparable rating service has not fallen below investment grade.

- (2) The permittee shall notify the Commission within 30 days if TransCanada Corporation's credit rating falls below investment grade as determined by Moody's Investor Service, Standard & Poor, or other comparable rating service.
- (3) If TransCanada Corporation's credit rating falls below investment grade, within 30 days of such determination permittee shall secure an irrevocable letter of credit as described above.
- (4) The permittee shall notify the Commission of the availability on line of quarterly financial statements within 30 days of when such statements are filed with the U.S. Securities and Exchange Commission (SEC). If quarterly financial statements become unavailable on line, permittee shall submit the statements to the Commission in writing within 30 days of when such statements are filed with the SEC.

15. *Miscellaneous.*

- A. *Historic and archaeological resources.* During construction, the permittee shall monitor the development areas for historic and archeological resources. If such resources are encountered construction in the area of the resource must cease, and the permittee shall contact MHPC and LURC staff for assessment prior to continuing.
- B. *Waste water disposal system.* Unless an alternative location is identified and agreed upon by all relevant parties upon on-site consultation with the State Soil Scientist, 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 a 20 foot by 50 foot leach field. This system must not be installed until a Plumbing Permit has been obtained from the Local Plumbing Inspector. The permittee must obtain a Certificate of Inspection from the Local Plumbing Inspector for the sewage disposal system at the time of installation. A copy of this certificate must be submitted to the Commission.
- C. *Spill Prevention Control and Countermeasures Plan (SPCC).* The permittee shall submit the revised construction SPCC Plan in accordance with recommendations made by MMDEP. The permittee shall submit a final detailed SPCC Plan for the O&M building and Kibby Substation upon completion of construction, and prior to storage of any petroleum products at these sites.
- D. *Signs.* The permittee shall comply with the Standards for Signs, as set forth in Section 10.27, J of the Commission's Land Use Districts and Standards, a copy of which is attached. 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 engineered plans accepted for processing on April 22, 2008 are the plans approved for construction. The final, as-built engineered plans must be submitted to LURC staff upon completion of construction. The permittee shall submit quarterly reports summarizing the progress of the construction and milestone reports when major stages of construction have been completed. The permittee shall contact LURC staff if changes to the project design or layout are identified in excess of the maximum disturbance areas identified in the Final Development Plan herein (see Findings of Fact #37 and #45). Notification and reporting of changes must be conducted in accordance with Conclusion #4 of this permit.
- 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 ORONO, MAINE THIS 9th DAY OF JULY, 2008.

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

APPENDIX A

APPROVED FINAL DEVELOPMENT PLAN July 9, 2008

Land Uses Allowed Within the Kibby Wind Power Project (D-PD) Planned Development Subdistrict and Associated Land Uses Granted Permit Approval Located Outside the D-PD Subdistrict

On March 5, 2008 the Commission approved, with conditions, the Preliminary Development Plan ("Plan") and Zoning Petition ZP 709 for the Kibby Wind Power Project in Kibby Township and Skinner Township, Franklin County. The Kibby Wind Power Project (D-PD) Planned Development Subdistrict became effective on March 20, 2008.

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 D 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, 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 Kibby Wind Power Project (KWPP) (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 KWPP (D-PD) Planned Development Subdistrict, which encompasses approximately 2,367 acres located in two parcels on

Kibby Mountain and Kibby Range in Franklin County, of which approximately 130 acres would be permanently developed for a 132 MW wind power facility consisting of 44 turbines and supporting structures. TransCanada Maine Wind Development, Inc. possesses an option to acquire the exclusive right to develop a wind power facility on the rezoned parcels. Plum Creek Maine Timberlands, LLC owns the land in fee and would keep the remainder of the parcels and surrounding land in active forest management.

The Final Development Plan also includes permanent supporting activities to be located outside the D-PD Subdistrict: access roads, 34.5 kV collector lines, a substation, an O&M facility, a 115 kV transmission line, and areas for the disposal of excess inert fill materials (not solid waste). Temporary activities during construction to be located outside the D-PD Subdistrict include a construction control center with office and storage trailers, parking area, lay-down and storage area, and concrete batch plant; and three other lay-down and storage areas. All temporary work areas would either be restored to their condition prior to construction, or other post-construction uses would be coordinated with landowner Plum Creek for the purpose of its land management activities. With the exception of the utility lines, roads, and met towers, all activities outside the D-PD Subdistrict would be located in an M-GN Subdistrict.

3. Land Uses

Sections A and B specify the activities allowed in the KWPP 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 KWPP (D-PD) Planned Development Subdistrict that required Final Development Plan Permit approval. Section D specifies the activities to be located outside the D-PD 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); and Section 10.21,G and the applicable Sections 10.25 to 10.27 (Subchapter III) 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, and as supporting structures and activities for the KWPP. 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 KWPP (D-PD) Planned Development Subdistrict

- (1) Emergency operations for wind farm personnel and contractors during construction, operation, and maintenance of the KWPP; and emergency operations conducted for public health, safety or general welfare.
- (2) Maintenance of turbines, met towers, collector lines, access roads, and ridgeline roads after construction of the KWPP.

- (3) Motorized vehicular traffic on roads and trails, and snowmobiling.
- (4) Primitive recreational uses.
- (5) Surveying and other resource analysis, including wind resource studies.
- (6) Trails, provided they are constructed and maintained so as to reasonable avoid sedimentation of waterbodies.
- (7) 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 KWPP (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) In areas below 2,700 feet in elevation, filling or grading conducted in accordance with Section 10.27,F of the Commission's Land Use Districts and Standards.
- (2) In areas below 2,700 feet in elevation, Level A mineral exploration activities, including geotechnical borings, and associated access ways, conducted in conformance with the standards of Sections 10.02(87) and 10.27,C of the Commission's Land Use Districts and Standards.
- (3) In areas above 2,700 feet in elevation, Level A mineral exploration activities, including geotechnical borings, but excluding associated access ways, conducted in conformance with the standards of Section 10.27,C of the Commission's Land Use Districts and Standards.
- (4) In areas below 2,700 feet in elevation, Level A and B road projects.
- (5) In areas above 2,700 feet in elevation, Level A road projects.
- (6) Signs, as listed in Section 10.27,J,1 of the Commission's Land Use Districts and Standards: Signs along the access and ridgeline roads 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.
- (7) In areas below 2,700 feet in elevation, 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 KWPP, including the operation of machinery used for forest management activities.

- (8) In areas below 2,700 feet in elevation, 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 Final Development Plan Permit approval within the (D-PD) Planned Development Subdistrict

The following uses and structures are granted Final Development Plan approval, and are allowed within the KWPP (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 accepted for processing on April 22, 2008 are the plans granted permit approval for construction; the "as-built" plans must be submitted for the file after construction.

- (1) Level A mineral exploration activities, including geotechnical borings, and associated access ways, conducted in conformance with the standards of Sections 10.02(87) and 10.27,C of the Commission's Land Use Districts and Standards.
- (2) Fill of up to 15,003 square feet of P-WL1, 2 and 3 wetlands as proposed (see Finding of Fact #46,A). This is the total area in combination with the wetland fill located outside the D-PD Subdistrict. [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].
- (3) Blasting in accordance with the approved Blasting Plan for turbine foundations, roads, transmission lines, and other structures.
- (4) Clearing
 - (a) Road corridors during construction: The width of the corridors cleared during construction for the ridgeline and access roads would be variable, but would average 60 feet wide. The roads must be re-vegetated or otherwise stabilized with erosion control mix after construction, except for a 20 foot wide traveled surface.
 - (b) Above-ground 34.5 kV collector line corridors: Temporary clearing of vegetation along a 60 foot wide corridor, except where additional width is needed at turns; maintained at 20 feet wide permanently; with vegetation maintained to assure at least a 15 foot separation from the lines.
 - (c) Turbine/crane pads: During construction, the clearing for each turbine/crane pad (for the foundation and a crane pad) must be no more than 1 acre. The

pads must be re-vegetated after construction except for the area immediately surrounding the turbine, and access.

- (d) Meteorological towers: The total area cleared for each permanent meteorological tower must be no more than 100 feet by 100 feet. The clearing must not remove the shrub or herbaceous layer except as needed for the tower base, access, and guy wires. Access to each meteorological tower must be limited to an ATV trail. After installation, except for within the ATV trail, the vegetation must be allowed to regenerate except for immediately around the tower.
- (5) Filling and grading
 - (a) Forty-four (44) turbine/crane pads: Each turbine pad would be located in an acre no greater than 1 acre in size. The final dimensions of the areas to be graded and filled for each turbine pad, which will be determined after collecting and analyzing geotechnical data, must be submitted.
 - (b) As needed for roads, above-ground and under-ground collector lines, and access ways.
- (6) Lighting: Single, slow-pulsing, red lights on the turbines and meteorological towers, in accordance with the plan approved by the Federal Aeronautics Administration, with lenses to minimize downward light; and
- (7) Meteorological (“met”) towers
 - (a) In combination with met towers located outside the D-PD Subdistrict, up to four 50 to 60 meter tall permanent met towers.
 - (b) The met towers would hold anemometers and wind vanes to measure wind speeds and direction, and would be supported by guy wires.
- (8) Roads
 - (a) Level B road projects (see definition in Section 10.02(91) of the Commission’s Land Use Districts and Standards) for repair and maintenance of the turbines where the 20 foot wide post-construction roads would be temporarily expanded to allow access by heavy equipment. 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.
 - (b) Level C road projects for construction of the access and ridgeline road:
 - (i) 17.4 miles of new ridgeline and access roads to access the turbine sites on Kibby Mountain and Kibby Range;
 - (ii) During construction, the traveled surface of the ridgeline roads would temporarily be 34 feet wide plus shoulders, and the access roads would be 20 to 25 feet wide, plus shoulders; and
 - (iii) After construction, the traveled surface of the ridgeline and access road must be no wider than 20 feet, except as needed for a turning radius.
 - (c) The maximum road grade must not exceed 10%, except for short distances where the slopes must not exceed 14%.

- (d) The maximum road shoulder slope must be no more than 2 horizontal to 1 vertical.
 - (e) If a road is super-elevated, then the road should not be graded with a crown in the future.
 - (f) Water crossings of minor flowing waters, conducted in accordance with Section 10.27,D of the Commission's Land Use Districts and Standards.
- (9) Rock crushers to be used during construction (mobile, temporary)
- (10) Temporary office and storage trailers within the turbine pad areas; must be removed from the site after construction.
- (11) Transmission/collector lines and communication system: Above- and below-ground 34.5 kV electrical collector and communication lines.
- (12) Turbines
- (a) Forty-four (44) wind turbines with foundations. Each turbine tower would be 263 feet tall, with a rotor blade 295 feet in diameter. The total height would be 410 feet when the rotor blade is extended directly upward.
 - (b) Turbine foundations up to 65 feet in diameter.
 - (c) Lighting in accordance with the FAA approved lighting plan.

D. Activities requiring permit approval to be located outside the D-PD Subdistrict

- (1) Alteration of up to 15,003 square feet of P-WL1, 2 and 3 wetlands as proposed (see Finding of Fact #46,A). This is the total area in combination with the wetland alterations located within the D-PD Subdistrict. [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) Blasting in accordance with the approved Blasting Plan for turbine foundations, roads, transmission lines, and other structures.
- (3) Clearing
- (a) Road corridors during construction: The width of the corridor cleared during construction for the access roads would be variable, but would average 60 feet wide. The roads must be re-vegetated or otherwise stabilized with erosion control mix after construction, except to accommodate a 20 foot wide traveled surface.
 - (b) Above-ground 34.5 kV collector line corridors: Temporary clearing of vegetation along a 60 foot wide corridor, except where additional width is needed at turns, for the above-ground 34.5 kV collector lines; maintained at 20 feet wide; with vegetation maintained to assure at least a 15 foot separation from the lines.

- (c) 115 kV transmission line corridor: Permanent clearing of tree layer vegetation (with vegetation maintained to assure at least a 15 foot separation from the lines) along a 150 foot wide corridor for the 115 kV transmission line, except where additional width is needed at turns; for the portion adjacent to the Boralex line, which would be 125 feet wide; and the portion that will be underground from mile 26.5 to Route 27.
 - (d) Meteorological towers: The total area cleared for each permanent meteorological tower must be no more than 100 feet by 100 feet. The clearing must not remove the shrub or herbaceous layer except as needed for the tower base, access, and guy wires. Access to each meteorological tower must be limited to an ATV trail. After installation, except for within the ATV trail, the vegetation must be allowed to regenerate except for immediately around the tower.
 - (e) O&M facility: The area permanently cleared for the O&M facility must not exceed 1 acre.
 - (f) Kibby Substation: The area permanently cleared for the Kibby Substation must not exceed 0.56 acres. The area temporarily cleared during construction must not exceed 3 acres, including the lay-down and storage area
 - (g) Temporary lay-down and storage areas: 18 acres
 - (h) Temporary rock crusher areas: 29 acres
 - (i) Temporary Construction Control Center: 4 acres.
- (4) Construction Control Center (temporary): The CCC must be located at the same location of the permanent O&M facility; office and storage trailers, portable toilets, and parking for up to 150 vehicles; lay-down and storage area; concrete batch plant; encompassing an area approximately 4 acres in size. All temporary structures must be removed from the site after construction, and all areas not used for the O&M facility must be allowed to become re-vegetated after construction.
- (a) Concrete batch plant: For production of concrete, as needed for turbine and structure foundations; use of up to 28,000 gallons of water per day to be supplied by a groundwater well to be installed at the O&M facility site; to be removed after construction.
 - (b) Extraction of groundwater from the on-site well drilled for the O&M building for concrete production and dust control during construction and operation. Additional water withdrawal for concrete production in excess of 28,000 gallons per day must be reviewed and approved by LURC staff to assure consistency with the State's water use rules.
 - (c) Lay-down and storage area (temporary): to be allowed to re-vegetate after construction
- (5) Disposal areas: For disposal of inert fill material (not solid waste); total of 20.6 acres; to be stabilized and re-vegetated after construction.
- (6) Filling and grading: As needed for roads, above-ground and under-ground transmission and collector lines and access ways; the O&M facility, Kibby Substation, and lay-down/storage areas.

- (7) Kibby Substation: A 24 foot by 70 foot building within a 110 foot by 220 foot (0.56 acre) fenced-in area; parking for up to 3 vehicles; 20 foot wide by 350 foot long access road; and temporary lay-down and storage area. Exterior lighting motion sensitive or manually operated, in accordance with Section 10.25,F,2 of the Commission's Land Use Districts and Standards.
- (8) Lay-down/storage areas (2) (temporary): Total of 18 acres; to be allowed to re-vegetate after construction.
- (9) Meteorological towers
 - (a) In combination with the met towers located within the D-PD Subdistrict, up to four 50 to 60 meter tall permanent meteorological towers.
 - (b) The towers would hold anemometers and wind vanes to measure wind speeds and direction, would be supported by guy wires.
- (10) Operation & Maintenance facility
 - (a) A 50 foot by 70 foot, one-story operations and maintenance building to serve as an office and equipment storage and maintenance area;
 - (b) Parking area for up to 15 staff;
 - (c) Exterior lighting on 20 foot poles; motion sensitive or manually operated, in accordance with Section 10.25,F,2 of the Commission's Land Use Districts and Standards.
 - (d) Combine subsurface wastewater disposal system; and
 - (e) Well for potable water.
- (11) Roads and water crossings
 - (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 the turbines where the 20 foot wide post-construction roads would be temporarily expanded to allow access by heavy equipment. 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.
 - (b) Level A and B road projects for upgrades to the existing land management roads to provide access to the development site.
 - (c) Level C road projects: New roads to access the turbine sites on Kibby Mountain and Kibby Range.
 - (d) During construction, the traveled surface of the access roads would temporarily be 20 to 25 feet wide plus shoulders, with 20 foot wide by 250 foot long pull-off areas every ½ mile.
 - (e) After construction, the traveled surface of the access roads must be no wider than 20 feet, except as needed for a turning radius, unless otherwise approved by the Commission.
 - (f) The maximum road grade must not exceed 10%, except for short distances where the slopes must not exceed 14%.

- (g) The maximum road shoulder slope must be no more than 2 horizontal to 1 vertical.
 - (h) If a road is super-elevated, then the road should not be graded with a crown in the future.
 - (i) Water crossings of minor flowing waters, conducted in accordance with Section 10.27,D of the Commission's Land Use Districts and Standards.
- (12) Temporary rock crushers (3) (temporary): Crushers to be removed after construction; total of 29 acres; areas to be allowed to re-vegetate after construction.
- (13) Transmission lines
- (a) 115 kV transmission line: 17.8 miles long (total line length 27.6 miles, of which 9.8 miles is in MDEP jurisdiction).
 - (i) Above-ground - 150 foot wide cleared corridor from mile 0 to mile 21.75, and 125 foot wide corridor from mile 21.75 to mile 26.5.
 - (ii) Below-ground – 50 foot wide work area from mile 26.5 to Route 27.
 - (iii) 55 to 95 foot tall poles; wooden H-frame, angled, and single type poles
 - (b) Collector lines and communication system: Above-ground 34.5 kV electrical collector and communication lines; 60 foot tall poles.

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).

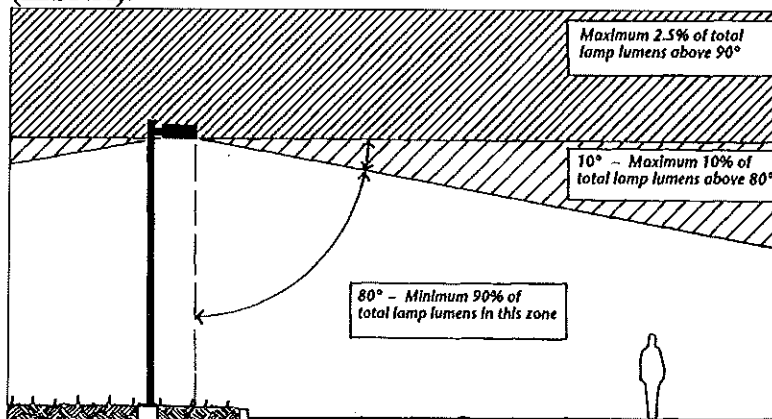


Figure 10.25,F-1. Cut-off fixture as defined by IESNA.

- (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
 - (v) 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:
 - (a) 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:
 - (a) 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.