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Memorandum

To: Marcia Spencer-Famous

From: Dana Valleau, TRC

Subject: DP 4860 Kibby Expansion, Response to MNAP Comment, as Transmitted via E-mail February 24, 2010

Date: April 8, 2010

CC:

This memo provides a response to comments provide to LURC by Maine Natural Areas Program (MNAP) on TransCanada's proposed Kibby Expansion Project.

MNAP Comment: According to our current information, there is a natural community of statewide ecological importance, a Fir – Heart-leaved Birch Sub-alpine Forest, located within the project site on Sisk Mountain. The Fir – Heart-leaved Birch Sub-alpine Forest natural community is ranked S3 in Maine which means that it is considered a rare community type with between 20 – 100 occurrences documented in the state. Fir – Heart-leaved Birch Sub-alpine Forest should, therefore, not be considered common anywhere in Maine. Currently 18 sites statewide have been documented as supporting this natural community type. The total acreage known for this type (~40,000 acres) is less than 1/5 of 1 percent of Maine's land area. The Fir- Heart-leaved Birch Subalpine Forest community at Sisk Mountain covers 358 acres and is considered a good quality example of the type with an element occurrence rank of B. The element occurrence rank is derived from a system used to rank the overall quality (i.e. condition, landscape context and size) of a natural community or rare plant occurrence. The table below provides information on the unique natural community in terms of state rank and element occurrence rank (see attached explanation of ranks).

Scientific Name	Common Name	State Rank	Element Occurrence Rank
Fir-heart-leaved birch subalpine forest	Subalpine Fir Forest	S3	BC- Good to Fair

Based on the project shape provided by the applicant, it is estimated that 42 acres within the Fir – Heart-leaved Birch Sub-alpine Forest will be cleared. The clearing for the project will fragment portions of the northern half of the natural community effectively isolating some areas so that their natural value as Fir – Heart-leaved Birch Sub-alpine Forest will be lost. Clearing will also create

unnatural edges within the natural community that will alter the habitat immediately adjacent. Expected impacts to the edge of the natural community include increased light and wind, and will likely change the habitat by removing moisture and damaging trees. To account for the impacts along the edges that will be created within the natural community, MNAP added a 50' buffer to the proposed clearing. In sum, MNAP estimates that the total impact to the Fir – Heartleaved Birch Sub-alpine Forest from site clearing, impacts caused by creating edges, and from fragmentation will be approximately 80 acres. Due to the rarity of this forest type, the Maine Natural Areas Program recommends that every effort be made to minimize impacts to this system. Therefore, we respectfully request that the LURC Commissioners include in their consideration the removal of Turbine 11.

As currently designed, Turbine 11 effectively fragments the remaining core of the northern portion of the Fir – Heart-leaved Birch Sub-alpine Forest into two smaller areas. Removal of Turbine 11 would considerably decrease impacts to the Fir – Heart-leaved Birch Sub-alpine Forest and result in a northern core of approximately 62 contiguous acres. The removal of Turbine 11 reduces the impact from 80 to 75 acres but considerably reduces fragmentation of the remaining northern portion of the natural community. If a wind powered electric generation facility is approved for construction on this site the project plan should specifically demonstrate how the facility has been designed to cause the least impact to sensitive plant and animal habitat, and the development plan should address each of the following considerations in the design, construction, and management of the facility:

1. Disturbance Minimization: Inadvertent impacts to soil and vegetation should be avoided because high elevation habitats are extremely slow to recover to a natural condition after soil and vegetation disturbances. This will be best accomplished by setting out strict no disturbance zones adjacent to the construction zones. These should be clearly marked.

TransCanada Response: To clarify, the subalpine natural community found on Sisk Mountain was not mapped until TransCanada began field studies on the ridge and identified the presence of the forest in the summer of 2009. MNAP was notified and mapping of the community was done in consultation with MNAP.

In response to MNAP and MDIFW comments, TransCanada has moved Turbine 11 to the west and downslope from the originally proposed site reducing both impact and fragmentation to the Subalpine Fir Forest. See the attached layout map. In general, this project has been designed to reduce overall footprint to the minimum needed to support the proposed project. The LURC application describes the planning and design work in Exhibit B.13. Road width has been reduced to the amount minimally necessary for equipment used during construction to 34 feet on the ridges and 20 feet on access roads. Materials for road and crane pad construction for this project will come from the project site, and will not require additional clearing or removal of other materials from other than areas within the project disturbed area. Cut/fill for the project is also close to a balance, which means minimal materials will be required from outside of the project footprint. In other words, for the most part only the area and those earthen materials that need to be used for construction of the project will be disturbed. During operation, ridge road widths will be effectively reduced to 20 feet by applying erosion control mulch that has been manufactured on site from native materials to the edges of the roads as well as to the majority of the area of turbine pads used during construction but which are not

necessary during operation. The construction of this project is planned so most clearing and disturbance only occurs in areas that will be permanent project elements (i.e., are permanent impacts). As part of pre-construction preparations, TransCanada will establish clearing limits which will be well marked with surveyors tape or flagging in order to limit clearing to only those areas that will be used in project development and operation. Clearing is performed to leave the flagging in place, and that marked limit is then used as a guide for disturbance limits. All wetlands, streams, rare plant locations, rare animal habitats and rare natural community areas will also be clearly marked where the elements intersect the clearing limits and anywhere these rare features are found within 50 feet of the clearing limits.

2. Erosion Control: Erosion is a chronic problem on steeply sloped mountain roads. An erosion control plan addressing long term prevention of erosion on roads and cleared areas should be required.

TransCanada Response: The project erosion control plan and stormwater design have been developed with the purpose to minimize erosion from the site not only during construction but also during the operation of the project. These are described in detail in the LURC application Exhibit B.14. These plans and designs have been developed in consultation with the State Soil Scientist and have incorporated lessons learned by TransCanada, the contractors, and the State Soil Scientist during the construction and early operations of the Kibby Project. The plans and designs also meet state standards and guidelines. The roads designed and constructed for this project will largely be constructed of native rock materials blasted and ripped from with the project footprint, processed as necessary within the project footprint with portable rock crushers, and will be utilized to make a minimally erodible and stable road from the base to travel surface. Road side ditches will also be minimized, with natural drainage patterns maintained to the extent possible~~,~~ as dispersed flows, further reducing the potential for chronic erosion problems to emerge after construction is complete.

3. Off-site Disposal: Construction debris and cleared vegetation should be disposed of off site.

TransCanada Response: Construction debris that originates off site will be removed and disposed of properly off site. Construction debris that originates on-site such as tree stumps, organic soils not suitable for bearing strength in construction activities, and other woody debris will remain on site. These materials generated on-site will be used to manufacture erosion control mix that will be used for erosion control berms and to stabilize and restore areas along roads and turbine pads. This technique was developed in consultation with the State Soil Scientist for the Kibby Project and has been used successfully. Other woody debris not used for erosion control mix will likely be distributed on rock fill slopes to provide some visual screening and also provide organic matter to encourage the establishment of vegetation.

4. Access Plan: A plan to prevent access to the site by unauthorized motorized vehicles such as ATV's and four-wheel drive trucks should be required and implemented. The irresponsible use of off-road vehicles in sensitive habitats such as high elevation terrain can lead to long lasting environmental damage. As part of this plan gates should be erected on access roads

from the outset of the project and any temporary roads needed for construction should be reclaimed as soon as they are no longer needed.

TransCanada Response: While the landowner on the accessible eastern side of the project area does have an open lands policy and does not recommend or encourage the use of gates on it's lands by lessees, they do not allow the use of ATV's on their property. The landower also discourages the use of four wheel drive trucks off of establish road-ways, as they view this activity as an act of vandalism which is harmful to their lands. Further, the high elevation roads proposed for this project will be under the control and supervision of TransCanada, and will likely include limited access during most of the week when crews are performing operation and maintenance tasks on site.

Gates are a possible project feature that has been discussed with the land owner as they relate to employee and public safety on the Kibby Project site, and may be part of the Expansion Project plans.

5. Invasive Plant Control: A plan to prevent the introduction of invasive plants to the site should be required and implemented. The plan should address preventing construction vehicles and heavy equipment from introducing invasive plants. It should include monitoring for the presence of invasive species over a period of three years after construction is finished.

TransCanada Response: Part of TransCanada's erosion control plan addresses the introduction of invasive plants, as it restricts the use of hay mulch to only those areas below 2,700 feet. In areas above 2,700 feet, only erosion control mulch that is manufactured of native materials from on site or erosion control blankets that do not contain any plant seeds or propagules can be used as mulch. The current proposal does not address preventing the spread of plant materials from construction vehicles or heavy equipment, and does not include a monitoring plan. TransCanada will however, commit to further consultation with MNAP to develop a plan that suits both the project and MNAP concerns.

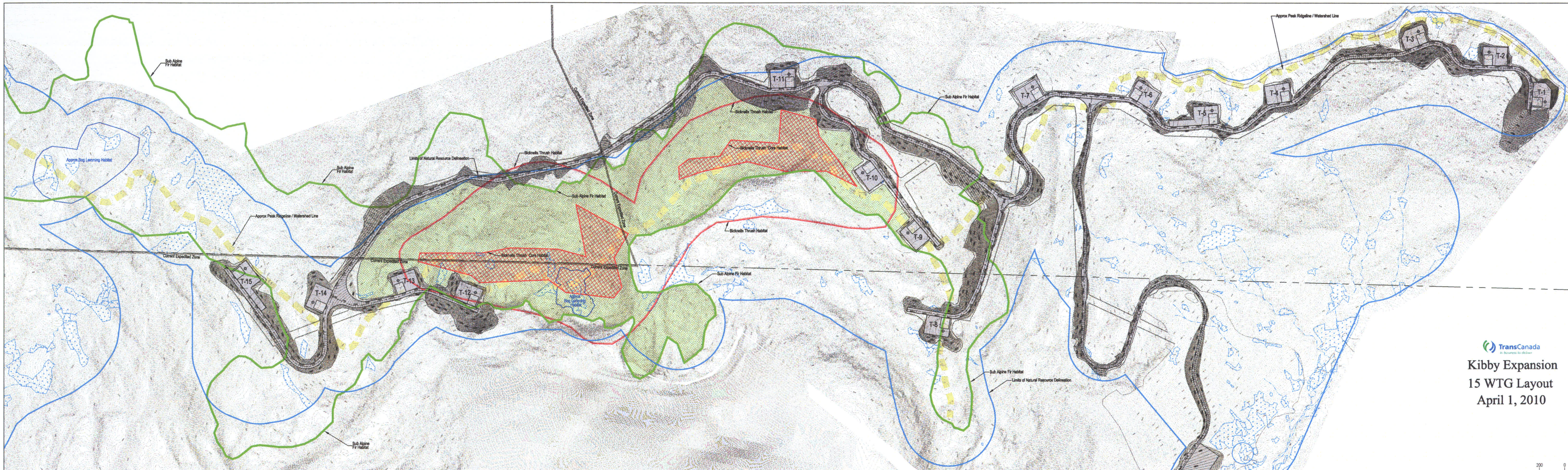
6. Restoration Plan: A restoration plan should be required and implemented that addresses how the site will be rehabilitated at the time the facility is decommissioned or if the project is terminated before completion. The restoration plan should address all areas within the zone supporting the Fir – Heart-leaved Birch Sub-alpine Forest that have been cleared for any part of the project including roads, structures, power lines, and storage areas. All materials brought into the subalpine zone should be removed as part of the restoration. Ideally a fund should be set up in advance to cover the cost of restoration. To ensure that protecting the natural integrity of this site is a priority during construction, we recommend there be frequent site inspections as well as the opportunity for the Maine Natural Areas Program staff to participate in one or more of the inspections.

TransCanada Response: LURC requires a decommissioning plan as part of permitting which addresses rehabilitation of the site. The plan can be found in LURC Exhibit A.7. TransCanada will commit to additional consultation with MNAP to ensure that their concerns regarding rehabilitation and restoration in the subalpine fir forest area are addressed. TransCanada will

also include MNAP as an interested party to the third party inspection reporting, and recommend that the MNAP site inspections be integrated into these same inspections.

7. The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We welcome the contribution of any information collected if a site survey is performed.

TransCanada Response: TransCanada has been pleased to work with MNAP on both the Kibby Project and the Expansion Project on revising and establishing natural community boundaries, including the newly mapped subalpine fir forest as found on Sisk Mountain. TransCanada welcomes the opportunity to work with MNAP in the future.



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Kibby Expansion
15 WTG Layout
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