

**STATE OF MAINE  
LAND USE REGULATION COMMISSION**

**In the Matter of** )  
**Development Permit DP 4860** )  
**TransCanada Maine Wind Development, Inc.** )  
**Kibby-Sisk Expansion Project** )

**PRE-FILED TESTIMONY OF BERTRAND LAMBERT and NANCY O'TOOLE  
ON BEHALF OF INTERVENOR, FRIENDS OF THE BOUNDARY MOUNTAINS**

**INTRODUCTION**

My name is Bertrand Lambert. I am a Licensed Professional Engineer, Professional Land Surveyor and Forester. My background in civil engineering stems from about 35 years of experience at MDOT as a resident engineer on 37 State highway contracted projects on primary and secondary roads of urban and rural nature. These ranged in location from Adamstown Township on Route 16 in the west to Eustis in the north along the Route 27 corridor on the east and as far south as Falmouth. Most of my career was in the Western mountains of Maine. I am currently a consultant and have appeared as an expert witness at Superior Court cases and before LURC on numerous occasions.

Nancy O'Toole is my associate. Nancy holds a B.S. degree in Environmental Engineering from the Montana Tech School of Mining and Engineering of the University of Montana. She has extensive construction experience on various projects out west and in the Maine area western mountains. Her special interests are in erosion control, vernal pools and permitting and compliance issues with the end result of protecting and preserving the unique beauty and aesthetic value of the Western Maine mountains. She has taken part in, and is a contributor to, this written testimony.

## **Basis of Review**

The following narrative was guided by our review of the TransCanada Maine Wind Development, Inc. (TRC) developer's application including his engineering plans and other available documents, State of Maine documents and laws as pertain to permitting, i.e., LURC and BEP, Army Corp of Engineers (ACE), documents, other state agencies' inputs and comments, TRC responses to submitted comments, informational consultations with other experts in related fields, and field trips to the Kibby-Sisk Mountain sites.

### **State Soil Scientist Dave Rocque's comments (January 29, 2010)**

#### **Dana Valleau TRC's response (April 8, 2010) addressed in Memorandum to Marcia Spencer Famous, LURC Staff**

This TRC Memorandum is ten pages. Dave Rocque comments #1-20 were thought provoking and quite specific. TRC's Dana Valleau responses were, although sometimes vague, cooperative and showed a willingness to make changes and additions and corrections. It was quite specific in its promises.

## **ACID ROCK**

### **Comment 2. Acid Rock Testing and Mitigation Plan**

The areas where blasting will be done have been determined on the plans provided with the application and obviously are known to the applicant and can be located on the ground. Borings on these areas could have and should have been done to determine the acidity of the rock and that information included in DP 4860 along with proper procedures to prevent the possible damage Rocque cites in his comments.

TRC seems to be saying that if they happen to notice acid rock (presumably after blasting), they will test it and invite LURC on the site to tell them what to do if it is not too late. And, if it does not work and damage is still done, they will say, “Well we did what you asked us to do,” and then move on to the next blast area. That is one of the oldest tricks in the construction trade, i.e. to shift responsibility to the enforcing party.

I agree with Rocque’s comments and analysis of the potential problem.

In TRC’s responses was a constant theme to the effect—before we start construction we will make these changes, or to the effect once we have an approval of DP 4860, the changes will be made and incorporated in the field during construction. Putting aside any questioning of the voracity of TRC’s promises, LURC should follow its policy of returning incomplete applications and require TRC to resubmit its current application (DP 4860) with its now admitted deficiencies in the aforementioned memorandum to be included in the permit application. Assuming the promises are real, TRC should be willing to put them in writing within the legal framework of a (people of the State of Maine) LURC permit application.

### **Comment 18**

Rocque has doubts about adequacy of drainage, number of culverts, and the 300 feet random spacing of outlet pipes and rightfully so. TRC’s response about the “total box approach” is not good engineering.

The guiding approach to erosion control is the current DEP, BMP manual<sup>1</sup>, **PLANNING FOR EROSION CONTROL...2) Minimize the area of exposed soil at one time...** Immediately seed and mulch areas for revegetation. ‘Immediately’ means every 24 hours or daily. This intent should be in the permit application. **EROSION AND SEDIMENT**

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<sup>1</sup> Maine Erosion and Sediment Control BMPS, March 2003, Planning for Erosion Control, pg 1 of 6

**CONTROL PLAN...CONSIDERATION...** “stabilization must be accomplished within seven days. ...immediate (within 24 hours...)”<sup>2</sup>

The ‘tool box’ approach can be compared to an ambulance waiting to spring into action. when they arrive on the scene there is chaos, serious damage, and disaster. they do their best to save whom they can and contain the damage but the damage is done and permanent. In proper road construction all possible erosion and environmental provisions should be specifically provided for in the application before permitting, not a cursory, rough guess, and a we will clean up the disaster after it happens attitude. The ‘tool box’ approach as proposed by TRC saves money for the applicant but is not a good engineering practice.

### **Comment 19**

Rocque is correct. Creating waste dumps of excess rocks as close to the excavation site as possible is cheaper and quicker than long hauls to waste dumps. Flattening handy fill slopes is a money-saving measure and results in unnecessarily grossly, enlarging the visible footprint of the roads and crane locations but does more serious damage to the fragile, irreplaceable ecology that will be destroyed—a non-repairable negative.

## **ROCK SANDWICH - TRC Specification Kibby**

### **8.4.1 Description**

It is stated in the description that “groundwater has enough latent heat to prevent a rock sandwich from freezing.” This is not so if road is plowed in winter, frost depth at that latitude and elevation is probably seven feet deep. That means ground water freezes to seven feet deep despite its “latent” heat. As the temperature drops below 32°, frost heaves and ice lenses will build up deeper

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<sup>2</sup> Ibid., Erosion and Sediment Control Plan, pg 1 of 3

and deeper into the water table. Frost heaves and seasonal thawing will in a few years damage the sandwich. If snow is not plowed and/or the wind does not blow it off, frost depth would be minimal.

TRC is right that they are not a replacement for culverts. The inlet end for surface drainage must be wide enough to hold heavy rains and spring runoff without overflowing.

Also, any serious short term erosion or long term minor erosion accumulation would reduce or stop inlet end functions for culvert-like surface water drainage. Ditches on cut sides should still be provided for surface drainage runoff.

A better solution for ground water or water table is underdrain six feet deep, parallel with the center line at the shoulder using sand fill and a six-inch pipe at its base. These would last for years.

Culverts when sized 15-inch smooth bore and up are much less likely to clog at inlet ends than stone voids drain.

From a short term economic standpoint, 'rock sandwich' might work if properly installed. It would bridge a seep or soft spot on the road for the heavy 90 to 100 ton loads. Beyond that, in time it probably would not be there for a return trip of the same load.

## **CHAPTER 10**

**P. Wetland Alterations 1. Procedural Requirements b.(3)** state that when determining the area of wetland alteration or overall land alteration, all components of a proposed activity, including all phases of a multiphase project, are treated together as constituting one single and complete project.<sup>3</sup>

**2. General Land Use Standards for applications requiring Tier 3 review list the following:**

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<sup>3</sup> Land Use District and Standards, Chapter 10, page 180

**f. (1) (i)** In determining if an activity will have an unreasonable impact, the commission shall consider: (i) The area of wetland that will be affected by the alteration and the degree to which the wetland is altered, including wetlands beyond the physical boundaries of the project; (ii) The functions and values provided by the wetland; (iii) Any proposed compensation and the level of uncertainty regarding it; and (iv) **Cumulative effect of frequent minor alterations on the wetland.**<sup>4</sup>

The studies and reviews required from TransCanada for the Kibby Expansion are incomplete. The Army Corps of Engineers (ACE) performed an Environmental Assessment (EA) on the first phase of the Kibby project. Significant impacts on wetlands and streams have already occurred during the first phase of this project.<sup>5</sup>

As part of the second phase of this operation to be built on Sisk Mountain, a total of 0.35 acres of recognized wetlands will be permanently filled; 7.9 acres will sustain temporary impacts with unknown long term consequences; and 35.5 acres of forested wetland will be permanently converted to scrub-shrub type of wetland. In Kibby Phase Two, a total of 90 wetland areas have been identified, 21 of which are connected to streams and are considered freshwater wetlands of special significance. In the path of the collector line (35 kVolt running from turbine to turbine to main collector station) there are 11 Paulstrine Scrub-shrub wetlands that will be impacted to some degree.<sup>6</sup>

It is recommended that the commissioners regard this as one large complex and sum up all phases and parts of the Kibby project for a total number of impacted areas and species of concern. The first phase, Kibby Series A, may result in only minimal impact but add Kibby Series B and

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<sup>4</sup> Ibid., page 183

<sup>5</sup> ACE, application number NAE 2005-03 179

<sup>6</sup> DP 4860,B.15-43

include phase two, Sisk Mountain, to the total, and you have significant cumulative impact that needs to be addressed.

**General Land Use Standards, f. No Unreasonable Impact (1) (c), "Harm to Habitats; fisheries.** The activity will unreasonably harm any significant wildlife habitat, fresh water wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater or marine fisheries or other aquatic life".<sup>7</sup>

The permit application reports 11 occurrences of *Pyrola minor* (lesser wintergreen), and 205 occurrences of *Galium Kamtschaticum* (boreal straw) on the slopes of Sisk Mountain, both listed as a S2-ranked state species of special concern.<sup>8</sup> Both plant species have already been impacted by Kibby Phase One.

Several wetlands have been identified that provides habitat for the bog lemming, state listed as 'threatened.' Sisk Mountain, with its flat ridge and exposing bedrock, collects water and creates streams and pools that are perfect habitat for rock voles and rock shrew, both listed as state species of special concern. The Roaring Brook Mayfly, a state endangered species, and the Spring Salamander, a species of special concern, have been discovered in Gold Brook, which flows between the Kibby Range and Sisk Mountain. The Mayfly provides food for a wide range of bats, brook trout and other species.

The final consideration is found in the end of General Land Use Standards, (3)<sup>9</sup> where we read, "When considering whether a single activity is reasonable in relation to the direct and

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<sup>7</sup> Land Use District and Standards, Chapter 10, page 182

<sup>8</sup> DP4860, TranCanada, ExhibitB15\_16, page B.15-21

<sup>9</sup> Land Use Regulation Commission Chapter 10, page 183

cumulative impacts on the resource, the commission shall consider factors such as the degree of harm or benefit to the resource; the frequency of similar impacts; the duration of the activity and ability of the resource to recover; the proximity of the activity to protected or highly developed areas; traditional uses; the ability of the activity to perform as intended; public health or safety concerns addressed by the activity; and the type and degree of benefit from the activity (public, commercial or personal)..."

### **Vernal Pools**

**DP 4860, B.15.6.** In the application a list of vernal pools and ‘potential vernal pools’ is given. Vernal Pools assessments were carried out between July and October of 2009.<sup>10</sup> The identification period, the optimum time to count egg masses and perform other critical assessment procedures, is just after peak breeding time of March and May.

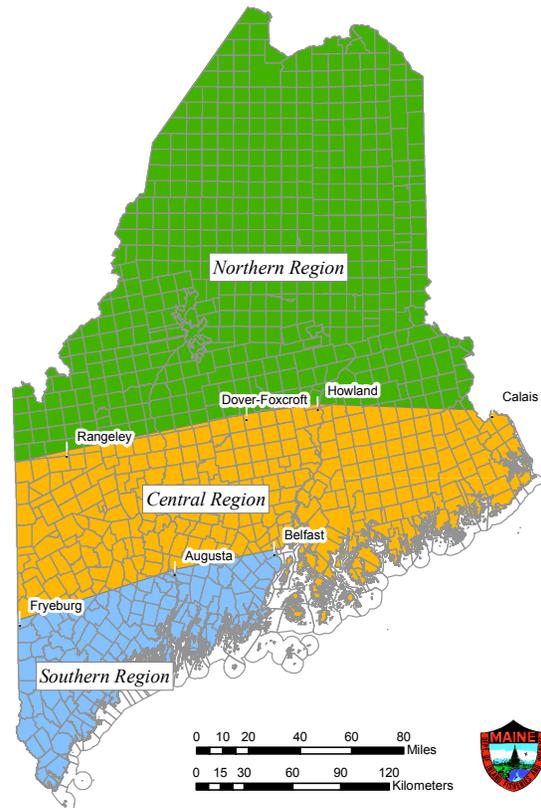
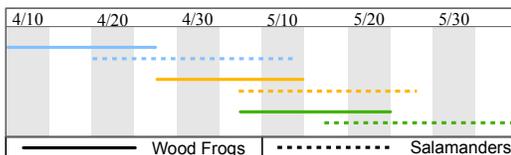
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<sup>10</sup> DP4860,ExhibitB15\_16, page B15-62

## Recommended Periods for Vernal Pool Egg Mass Survey by Geographic Region

Optimal times for counting egg masses of pool-breeding amphibians vary according to geography, elevation and weather. Egg mass counts are generally best conducted just past the peak breeding period. For wood frogs, this occurs approximately 1 to 2 weeks after full chorus. Salamanders have a more extended breeding period and their eggs do not hatch as quickly as wood frogs. Therefore, surveys to count salamander eggs should be conducted slightly later in the breeding season, generally 2-3 weeks following wood frog egg counts. **These recommendations are only guidelines and conditions may vary annually and locally thus requiring best professional judgment for the optimal timing of egg mass surveys.**

Region	Wood Frogs	Salamanders
 Southern	April 10 - April 25	April 20 - May 10
 Central	April 25 - May 10	May 5 - May 25
 Northern	May 5 - May 20	May 15 - June 5



Discovery of fairy shrimp and/or wood frogs, pool breeding amphibians, is used to determine whether a given pool is to be listed as a ‘significant’ vernal pool. These creatures are not found in what is left of vernal pools during the months the applicant carried out its investigations. It is noted that making an accurate assessment of the inhabitants of a given ecosystem when these creatures are elsewhere is pretty much impossible. You must identify and count the critters when they are in the puddle, not when they are scattered across or under the face of the earth.

Since 2007, ‘significant’ vernal pool habitat has been protected by law under the Natural Resources Protection Act (NRPA).

The Advisory Council Meeting Minutes<sup>11</sup> for the Inland Fisheries and Wildlife dated May 22, 2008, informs us that the DEP was working under NEPA and Chapter 533, D.P. 1390- L.D. 1952, an act to streamline the administration of significant vernal pool habitat protection. In these minutes LURC is encouraged to update its own regulations accordingly. LURC is primarily a planning entity for Maine's unorganized towns and has a very broad area of activity. One side effect of this is that it only has deer wintering areas and sea bird nesting islands under a statue of protection. Conversations with DEP were held about moving some of the other significant wildlife habitat types to the list, one being 'Significant Vernal' pools. LURC needs to consider not only the initial impacts to 'significant' vernal pools but the cumulative impacts from the series of Kibby phases. It is also very strongly recommended that LURC require the applicant to perform the studies during optimum time for the best and most accurate results. Only then can LURC make an informed decision based on sound scientific studies.

### **Mitigation- Tangible Benefits**

Having LURC or ACE try to measure or calculate mitigation or compensation for the total unreasonable harm to significant wildlife habitat does not solve the problem.

In the Kibby One phase, money was set aside for permanent conservation of 750 acres in the ecologically important, high elevation habitat and backcountry recreation lands of the Mahoosuc Mountain Range. It is noted that setting aside or protecting land in a mountain range some 60 miles away, in a different county, a different ecological and economic district altogether, does not fit the definition of 'tangible benefits' to the host community at all. Included was the forgoing of

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<sup>11</sup> [http://www.maine.gov/ifw/commissioners\\_office/advisorycouncil/minutes/may08.htm](http://www.maine.gov/ifw/commissioners_office/advisorycouncil/minutes/may08.htm)

development of the Northern portion of Kibby mountain within the A series and all of the C and D series. These ridges, in close proximity to Sisk, were protected saving the higher value sub-alpine fir habitat, Bicknell's Thrush habitat, daytime avian migration routes and areas of substantial raptor crossings.<sup>12</sup> Sisk Mountain and its inhabitants need to be similarly protected from impact. This will enhance the already existing protection described above while preventing serious forest fragmentation and habitat conversion as has already occurred at Kibby series A and B. Bureau of Parks & Lands review comment on the pending application BPL#9 raises the same issue of cumulative impacts on multiple phase projects on scenic value.

TransCanada has been allowed to 'buy' the right to destroy, 'impact' and otherwise disrupt vast sections of remote land by paying for alternative areas that will be set aside and 'protected'. This is known as 'mitigation'. In fact, it amounts to a promise to not expand into or otherwise disturb an area that is not currently of interest. It specifically is not the repair and protection of former wetland zones that had identical characteristics, but have been turned into parking lots, industrial parks or housing projects. It is specifically not a replacement of wet land, acre for lost acre, within the same district and ecological territory. The mitigation areas do not remedy the damage done to rare plant and animal species.

This entire concept is but a huge loophole in the law that allows industry a means to essentially ignore the spirit of most of the protective laws now on the books. Once the damage is done, it is not corrected by saving another currently unprotected stream somewhere else. The end result is a negative in the quantity of these special existing places that will never return.

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<sup>12</sup> ACE, Environmental Assessment, NAE, 2005-03 179

## **Impacts to Streams**

Ecologists are greatly concerned with the cumulative impact of this extension on the streams and water courses below and along its construction zone.

The applicant informs us that there will be no undue impact to perennial or intermittent streams by proposed culvert placements and four new bridges inside the project footprint. It is noted that the Maine Department of Inland Fisheries and Wildlife comments on this project voiced concern over the impact of sedimentation from erodible soil and steep slopes. Altering soil and water temperature and water volume due to disturbance in hydrology can impact the free passage of fish and other organisms. The applicant openly admits the potential for discharge of sediments into streams in the area during construction and to a lesser degree from developed areas following construction.<sup>13</sup>

It is estimated that the turbine and crane access roads, and the collector line corridor will cross perennial or intermittent streams 57 times. There will be thirty-nine poles placed within the 100' buffer zone of these water courses. While this is in itself alarming it hugely understates the impact to the streams affected. Instead of 57 crossings of as many rivers and streams, these roads and power lines run thru or over just a few waterways. The lower turbines and associated roads and buried cables will be above the headwaters of part of Clearwater Brook, a steep tributary of Long Pond and the Chain of Ponds. The upper turbines and associated roads and buried cables are located above a single collector stream that flows north into our neighbor, Quebec. Nearly the entire access road and its 34kV power line runs into and along the upper reaches of Kibby Stream Valley. The result is that rather than receiving a few teaspoons of silt, these streams, and especially Kibby

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<sup>13</sup> DP 4860,B15.11, Surface Water Quality, pg,81

Stream, will receive the entire output of silt, organic washout material, and now more erratic water volumes from this expansion. This is a direct and enormously negative impact to just three streams from construction of these roads, permanent lines, and the continuing maintenance of the system. This is what is meant by ‘cumulative impact’. Kibby Stream and her sisters will be affected by not just a couple of crossings or pole locations, but by dozens of each all along the length of the highest parts where the steepest topography and worst weather results in the most active hydrology and the greatest assurance of erosion, siltation and damage to downstream habitat.

The placement of so many culverts and their impact upon fish passage is a question brought up by the Maine Department of Environmental Protection in its review of comments to Amendments to Chapter 305 Permit by Rule Standards, Section 10-Stream Crossings. A rule change requiring crossing structures for streams to be 1.2 times the bank-full width would better assure passage for fish and other aquatic organisms and allow a more natural stream flow. In an effort to look at fragmentation of habitats as a result of stream crossings, surveys in the Sheepscot and Penobscot River watersheds reveal that approximately 90% of crossings present passage problems and half severally impede fish passages. Surveys in other watersheds are also revealing problems of similar magnitude.<sup>14</sup> The DEP concurs with these findings. Current regulations for both new crossings and maintenance of existing crossings do not provide for adequate structures that allow for the easy passage of fish or other aquatic organisms.

In these higher elevations the fish and organisms are very small and subjected to enormous changes in water flow levels and temperatures. In addition, these tiny creatures must deal with the very first wave of eroded material coming off the mountain. Currently a storm deposits its water

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<sup>14</sup> MDEP, Basic statement, Amendments to Chapter 305, Permit by Rule Standards, section 10 ,Stream Crossings ,dated 12/17/2009

burden on the ridge tops and loosens and carries away some given amount of silt, organic material, and sand or gravel. The resident fish and aquatic life have evolved to deal with this. Once this ground cover has been broken and replaced with the 'hard surfaces' of gravel roads and pads, the volume of runoff and its velocity will be greatly increased. As a result the amount of erosion will also increase manyfold. Each new disturbance, be it power pole scar, culvert fringe, or a ditch dumping its load of silty water that drains from the road surface, will add to what the inhabitants of these streams have to deal with.

Kibby Stream in particular has to deal with the altered hydrology resulting from the Kibby Series A construction. Combine this with changes originating from Kibby Series B, and then add many cubic yards of silt, sand and organic matter from the requested Kibby Expansion onto Sisk Mountain, and the impact to fish and aquatic life rockets far beyond acceptable and possibly survivable limits. These three related complexes all sit in the headwaters region of Kibby Stream, and the disturbances resulting from construction and maintenance of all of these result in a cumulative impact many times greater than any single one would have done to Kibby Stream on its own.

In the "Criteria for approval" is included "the Natural Resource Protection Act', Title 38, §480-A. Findings; purpose; short title states, " The Legislature further finds and declares that the cumulative effect of frequent minor alterations and occasional major alterations of these resources poses a substantial threat to the environment and economy of the State and its quality of life. [1987, c. 809, §2 (NEW).]"

## **Road Construction**

A major concern is with cumulative impact. The applicant has claimed to be a model developer within the wind industry.<sup>15</sup> Given their recent history, documented by inspection reports and written reprimands, we regretfully reject that classification.

A great amount of impact is from the clearing for electricity lines and construction of roads, skidder trails, and lay down areas. Improvements to the Mile 5 Road, Wahl Road, pull-off areas of 20 feet by 300 feet, and the crane road to the ridge will require significant blasting and ripping. The applicant estimates 700,000 cubic yards of mountain and ridge top material will be blasted and excavated, with 640,000 CY used as fill elsewhere on the project. In Table B.13-3 Land Area, 17.5 miles of new road will be required for the Kibby Phase Two. Note that this must include significant extra width for ditching and erosion control measures and turn outs. Extra clearing will be necessary for the Mile 5 and Wahl road widening and improvements. An additional 17.8 miles by a varying width of terrain will be opened up and seriously altered for the collector corridor, the home-run to the substation and the access spurs.

The ‘tool box method’ of construction with significant room for on-the-spot modification was accepted during the phase one Kibby project hearings. It was understood that building roads in high mountain, fragile ecosystems was an unknown with many complexities. Of major concern were the consequences of significant blasting and how to deal with the combination of thixotropic properties of the soils, very steep slopes, and shallow depths to bedrock, shallow ground water tables, drainage ways that are concealed under organic matter, and groundwater seeps. Among the results of allowing this ‘tool box method’ were many erosion events, over burden being pushed over and beyond silt

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<sup>15</sup> DP 4860, B.9.2.1 The Applicant

fences, large boulders rolling off down the mountain side and the well-documented mud and slurry torrents that plagued the project.

Kibby Phase Two engineering plans call for up to 45 feet of cut or fill for road building with unknown amounts relating to the construction of turbine pads and lay down areas. It is being constructed on similar terrain and soils, and over similar hydrological systems. The same 'Tool Box' method of seat-of-the-pants engineering and progress is currently included in the application.

"Tool Box Engineering" may be allowed when a new operator is undertaking a new kind of construction in a new environment. TransCanada is no longer 'new' to high mountain construction. Industrial-strength road and wind turbine pad preparation is no longer a 'new' type of engineering. Sisk Mountain, the location of Kibby Phase Two, is not a 'new' environment or a 'new' and unknown quantity.

We oppose the permitting of Kibby Phase Two on the grounds that further development of this area will result in ever more cumulative impact upon the immediate area and the waterways and the inhabitants of therein for miles downstream. When areas are cleared for construction in sub-alpine, steep mountain terrain, and especially after the ground surface is disturbed by cutting, filling and blasting, open areas remain and cause a "parking lot effect." Without a canopy and good root system, heavy, wind-driven rain and sleet will hit the ground, rather than the tree tops, which would have absorbed the rain and sleet's energy. When rain and runoff occur on a smoothed surface, as on a road or parking lot or layout pad, it increases the speed and energy of the water. This greatly accelerates soil particles being dislodged and dissolved. When not checked, this effect causes severe erosion, undermines the root systems of the shallow-rooted, sub-alpine spruce and fir forest, and carries the silt and larger particles into the water courses. Enormous amounts of soil are lost as the

stream bed tries to absorb the newly increased water energy. The results are uprooted trees and damaged root systems as well as damage to under canopy, smaller plants. Along the way silt may cover low lying vegetation and create new drainages that in their turn begin to erode.

When a mountain road is built, channelization (water flow control) is achieved through cut ditches and culverts. The applicant, using the tool box method, estimates 44 plunge pools, 12 rock sandwiches, and 24 ditch turnouts will be required along the main road and for the roads to the turbines along the ridge.

These engineering controls need to be maintained in order to work. After a significant rain event, most controls need to be checked and cleaned out in order to function correctly. This was an ongoing problem with Kibby Phase One. The roads were being built first, and then the erosion control methods were put in place. The placement and maintenance of water bars along newly grubbed roads was mentioned numerous times in inspection reports.<sup>16</sup> We question whether the applicant will continue with the day-to-day maintenance of these engineering controls once the construction phase is completed. It does not take many seasons of high mountain weather to negate these buried controls if the collector pools and culverts are not kept cleaned out. Please consider that there is no 'exit strategy' for the company here. This is a maintenance requirement that stretches on into perpetuity. This must be continued forever, or else the controls will fail and nature will begin tearing down the impacted mountainsides. The roads will wash out and the streams will be inundated with the material.

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<sup>16</sup> Field site inspection reports, Steve Roberge, PE0

**The following concerns stem from reviewing the engineering blue prints provided by TransCanada.**

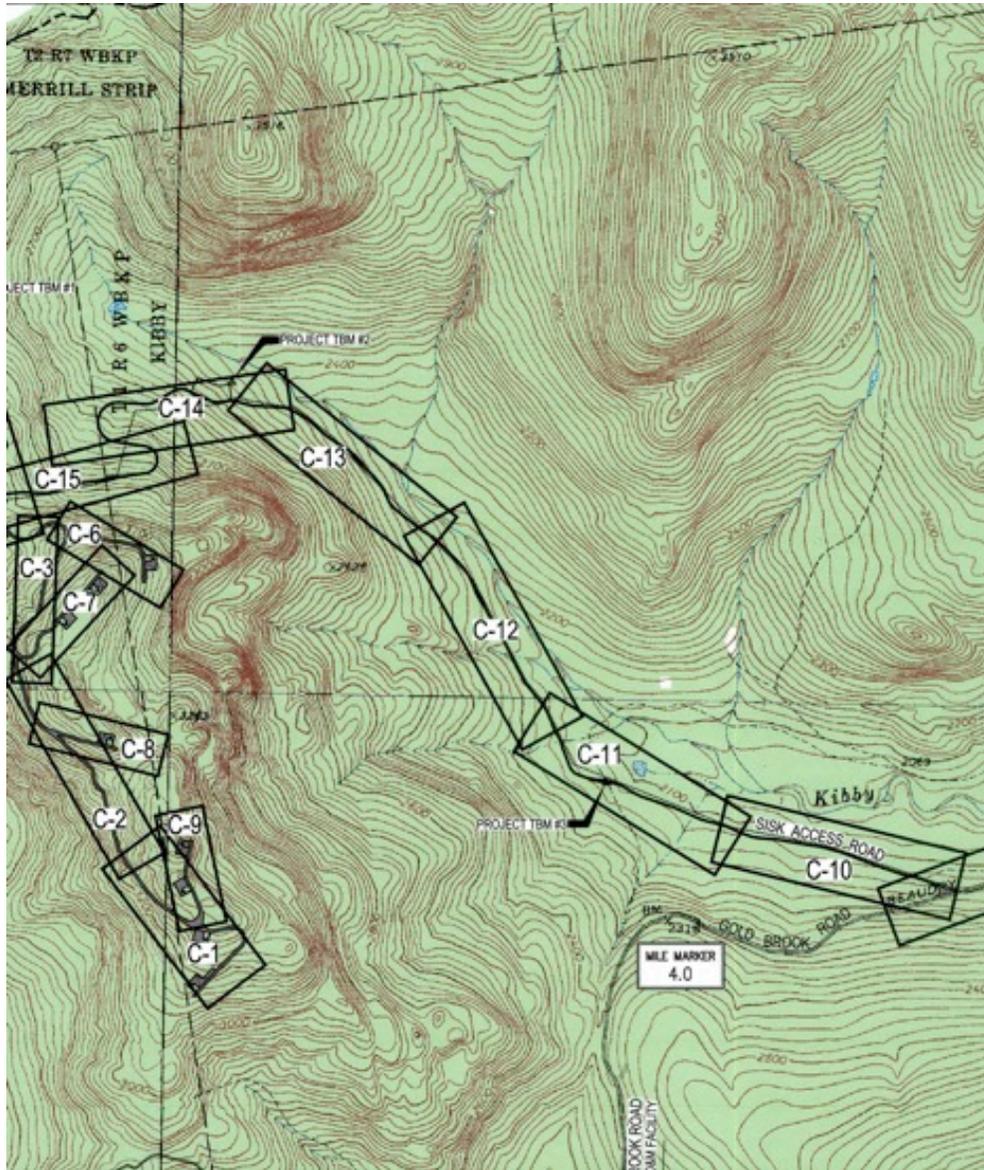
The road grade to Tower 1 exceeds the 12% grade standard. In places it exceeds 14 % . The area of fill surrounding the tower is extreme. There will be complete burial down the slope for 375 feet with a width of 300 feet across the face of the ridge. The buffer zone, the area between the end of the toe of the fill and the Canadian border zone itself, is only ten feet wide. Is this enough of a buffer for the border regulations? What happens when rocks and debris from the building of the platform slide or roll beyond the buffer zone?

From Tower 2 to Tower 3 there is a filled area 150 feet down and 400 feet across, following the road. Around and down from Tower 12 the area filled is 600 feet wide by 150 (average) long. The compacted material will rise 35 to 50 feet higher than the natural topography. How many rock sandwich controls will be needed to reconnect the hydrology when the natural slope of the ground is altered this extensively? Will an Erosion Control Berm at the toe of the slope of such a large road topped fill be enough to secure and buffer the area beyond the berm? How will water seeping down these huge, man-made, rock-covered faces, (waste dumps) impact anything down below? What will grow on these rock faces?

Along the proposed road to Tower 8 the area to be disturbed, otherwise known as buried, will be very large, impacting 100 feet by 900 feet alongside the road. Much of this is sub-Alpine Fir habitat, which is of particular value and interest. These parcels along the edge of the road and below combined are a significant amount of acreage, and burying all of this will result in unacceptable consequences to it and to the slopes below. The area of most concern is from engineering plans C13 through C10.<sup>17</sup>

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<sup>17</sup> TRC Overall Location Map, portion thereof



This area descends the ridge in gentle slopes with little grade change passed the Sisk access road.

The soils are rated as having very low potential by the Natural Resource Conservation Service, which means that there are severe initial and continuing limitations that must be overcome in order to build stable roads while minimizing environmental impacts or major erosion events. Once the soils become unstable and have their connectedness or natural bonds interrupted, mud movement can occur quite quickly. This part of the road is down in a gully, where everything from above flows down and collects. A majority of the engineering controls are placed on this stretch of road for good reason. This is where concentrated flow from above will end up, and it needs to be dispersed or major problems will occur. Can the rock sandwiches, plunge pools, and ditch turnouts handle the amount of water coming down off the roads and ditches from above? If these plug or otherwise cease to function, the material under the roadbed may become saturated, either giving way due to the concentrated volume of water pushing against it or eroding and cutting down thru it. Will the 12 rock sandwich engineering controls adequately connect the hydrology between wetlands that are fragmented by a road? When a fill is 35 to 40 feet above the adjacent surface, will these controls function or will some eventually plug, holding all the water to the uphill side for significant distances, drying out and destroying the former wet lands on the downhill side? And for the ones that function as planned, how much suspended silt and organic material will now be carried down the filled slopes thru the controls and into the stream? How much impact from this section of road can the Kibby stream adsorb? It has already been impacted by the first phase of the Kibby project.

## **Conclusion**

**One final comment from a review of criteria under the NRPA, §480-A. Findings; purpose; short title:**

*“The Legislature finds and declares that the State's rivers and streams, great ponds, fragile mountain areas, freshwater wetlands, significant wildlife habitat, coastal wetlands and coastal sand dunes systems are resources of state significance. These resources have great scenic beauty and unique characteristics, unsurpassed recreational, cultural, historical and environmental value of present and future benefit to the citizens of the State and that uses are causing the rapid degradation and, in some cases, the destruction of these critical resources, producing significant adverse economic and environmental impacts and threatening the health, safety and general welfare of the citizens of the State. [1987, c. 809, §2 (NEW).]”*

*“The Legislature further finds and declares that there is a need to facilitate research, develop management programs, and establish sound environmental standards that will prevent the degradation of and encourage the enhancement of these resources. It is the intention of the Legislature that existing programs related to Maine's rivers and streams, great ponds, fragile mountain areas, freshwater wetlands, significant wildlife habitat, coastal wetlands and sand dunes systems continue and that the Department of Environmental Protection provide coordination and vigorous leadership to develop programs to achieve the purposes of this article. The well-being of the citizens of this State requires the development and maintenance of an efficient system of administering this article*

*to minimize delays and difficulties in evaluating alterations of these resource areas. [1987, c. 809, §2 (NEW).]*”

Based upon a review of the application and your criteria and requirements listed in the Land Use District and Standards for approval, the commissioners should reject DP 4860, an extension of the Kibby Wind Project onto the Sisk Mountain Range. TransCanada has not met the burden of proof relative to LURC and other state agencies and the public. Insufficient substantial evidence has been submitted to convince the responsible parties that no undue impacts will occur to the environment, wildlife and the area’s quality of place.

When LURC denied the Redington/Black Nubble project, they had good reason. Those same good reasons now exist at the proposed Kibby-Sisk Expansion. The Land Use Regulation Commission should also deny this current expansion.

April 20, 2010

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Nancy O’Toole  
B.S., Environmental Engineering

---

Bertrand Lambert, P. E.

Dated April 20, 2010

Nancy O'Toole  
Nancy O'Toole  
B.S. Environmental Engineering

State of Maine  
County of Franklin

April 20, 2010

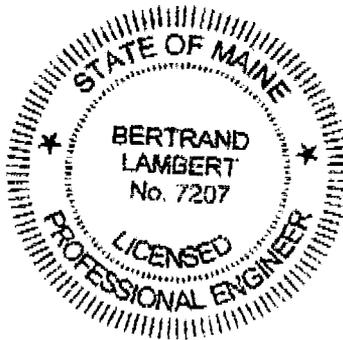
Personally appeared before me the above named Nancy O'Toole and made oath as to the truth of the foregoing statements.

Before me,

Cynthia G. Dixon  
Notary Public/Attorney at Law

CYNTHIA G. DIXON  
Notary Public • State of Maine  
My Commission Expires March 13, 2017

Dated 4/20/10



Bertrand Lambert  
Bertrand Lambert, P.E.

State of Maine  
County of Franklin

April 20, 2010

Personally appeared before me the above named Bertrand Lambert and made oath as to the truth of the foregoing statements.

Before me,

Cynthia G. Dixon  
Notary Public/Attorney at Law

CYNTHIA G. DIXON  
Notary Public • State of Maine  
My Commission Expires March 13, 2017

**PRE-FILED DIRECT TESTIMONY OF C. DIANE BORETOS  
ON BEHALF OF FRIENDS OF THE BOUNDARY MOUNTAINS**

**BEFORE THE LAND USE REGULATION COMMISSION  
IN THE MATTER OF THE TRANSCANADA APPLICATION FOR  
DEVELOPMENT PERMIT DP 4860 FOR THE KIBBY EXPANSION PROJECT  
ON SISK MOUNTAIN IN THE KIBBY AND CHAIN OF PONDS TOWNSHIPS,  
FRANKLIN COUNTY, MAINE**

**INTRODUCTION**

On behalf of the Friends of the Boundary Mountains I have been asked to review the above-referenced TransCanada project to construct 15 industrial wind turbines, associated roadways, re-grading, and transmission line connectors on Sisk Mountain. My testimony addresses wetland, wildlife and vernal pool impacts that may result from the project. My resume is attached as Exhibit 1.

**WILDLIFE IMPACTS**

- 1.) The proposed project will increase adverse impacts, particularly above the 2,700 feet elevation, to interior forest species by creating additional linear edges all along the service roads, transmission line connectors, and turbine footprints. In Exhibit B.15-15, the applicant dismisses this impact by stating that forestry harvesting has already fragmented the area. This ignores the issue of addressing the amount (acreage) and impact of all those miles of additional new edge within forested areas that will result from the project. The proponent has not done a comprehensive, seasonal, mammal survey in the area other than for the Canada lynx, yet readily concludes that the increase in edge, habitat loss and fragmentation will not result in adverse impacts to mammal species that potentially occur there. How can that statement be made without knowing what species are present and how they are utilizing the habitat?
- 2.) The Environmental Assessment does not address potential noise impact from the wind turbines to wildlife. A recent study published in the journal *Trends in Ecology and Evolution* (Barber, Crooks, Fristrup, 2010) is a result of a research project from the National Park Service Natural Sounds Program. This study shows that human background noise, including wind turbines, can have major impacts to animals by impacting their “effective listening area”. The effective listening area is defined as “*the area over which animals can communicate with each other, or hear other animal calls or movement; as might be expected, animals focus especially on listening for sounds at the very edges of audibility, so that even a small increase in background noise (from a road, wind farm, or*

*regular passing of airplanes) can drown out sounds that need to need to be heard.”* This study, found that an increase as low as 10dB (decibels) in background noise can reduce the listening area for animals by 90%. This can be a very significant adverse impact to wildlife in the area from the turbine background noise. LURC should take this impact into consideration for not just the rare species such as the Bicknell thrush , but for all the species inhabiting the area. An acoustical footprint study generated by on the ground recordings at the turbine site, mimicking the turbine decibel levels should be provided to define the zone of acoustical impact.

- 3.) Mountain ridges are often used as corridors by large roaming mammals such as coyote, mountain lion, wolves, and black bear. These corridors can be used by generations by some species. Although a breeding population has not been documented in Maine, wolves have been coming into Maine from the Canadian border.
- 4.) The project site contains habitat for numerous state and federally listed species such as the spring salamander *Gyrinophilus porphyriticus*, northern bog lemming *Synaptomys borealis*, Bicknell thrush *Catharus bicknelli*, Canada lynx *Lynx canadensis* , and roaring brook mayfly *Epeorus frisoni*. Fir-heart-leaved birch sub-alpine forest, ranked S3, will be directly and indirectly impacted (MNAP Letter, Feb. 24, 2010). How ecologically significant does an area have to be in Maine for State agencies to recommend denial of a project?

### **WETLAND IMPACTS**

- 1.) There will be 17 perennial and 22 intermittent stream crossings for the connector line alone. The potential for impacts to these riparian areas and associated wetlands, 21 of which are considered wetlands of special significance (WOSS), from erosion and invasive species is very significant. It is not realistic of any issuing authority to believe that erosion control and post-construction monitoring is successful in a project of this scale in this kind of topography. The Environmental Assessment, B15.11 acknowledges the potential for erosion into the streams. Given the severe erosion that occurred on Kibby under the applicant’s watch, my opinion is that this may very well be repeated, particularly during a significant storm event. What impacts would significant sedimentation have on the spring salamander, roaring brook mayfly and trout in Kibby and Gold Brook?
- 2.) Ninety wetlands were identified in the project site. The charts of wetland alteration was difficult to interpret in terms of total wetland loss. In my professional opinion from working in the field of wetland regulation for over 25 years wetland restoration does not fully “restore” wetland functions. What is the total amount in acreage of altered wetlands, including temporary alterations?

## VERNAL POOL IDENTIFICATION AND IMPACTS

- 1.) The applicant did not follow appropriate protocol for identifying certifiable vernal pools within the project area. The Department of Inland Fisheries and Wildlife Recommended Periods for Vernal Pool Egg Mass Survey by Geographic Region (Exhibit 2) recommends in the Northern Region, wood frog egg mass surveys should be conducted from May 5<sup>th</sup> to May 20<sup>th</sup> and for salamanders from May 15<sup>th</sup> to June 5<sup>th</sup>. TransCanada performed their vernal pool survey from July to October and identified only “potential vernal pools” because of the difficulty in meeting the required criteria, rare species, for certification during that part of the season. This is a serious flaw in their environmental assessment.
  
- 2.) Figure B.15-6, Pool Habitat Overview Map (Exhibit 3) shows the access road going through 12 of the 14 potential federal vernal pool 250 foot pool buffer zones. Because of the large scale of the map it is not possible to determine if the road is in the pool itself or how close it is to the pool. These pools are most likely to be part of a vernal pool complex that if surveyed during the early breeding season would probably qualify as significant vernal pools under Maine’s *Significant Wildlife Habitat Chapter 335.9 Regulations*. The construction of a roadway through vernal pools and their 250 foot buffer zones does not follow the Habitat Management Standards for Significant Vernal Pool Habitat found under 335.9 (C) (1 – 5) or Best *Development Practices* as described in Calhoun, A.J.K., M.W. Klemens, 2002). The applicant says that these are man-made pools and will follow general guidelines B.15-63. If these pools are indeed all man-made from forestry activity it still means that for obligate vernal pool species to be there they came from near by natural pools that have not been identified. For sound ecologically reasons LURC should still be committed in protecting these pools because of their breeding habitat and food generation for upland species.

## CONCLUSION

It is my professional opinion that the proposed TransCanada Wind Turbine proposal on Sisk Mountain will result in significant wetland loss and degradation. I am not convinced that there has been an adequate vernal pool survey performed on the project site and because of this significant vernal pools could be destroyed if the project goes forward. In addition, chronic noise impacts to wildlife have not been addressed at all. The project will alter numerous habitats for state listed wildlife species and unique, special, vegetative communities that goes beyond the reasonable trade off for economic gain for the region.

## References

Barber, Crooks, Fristrup. The cost of chronic noise exposure for terrestrial organisms. Trends in Ecology and Evolution, 2010

Colburn, E. A. 2004. Vernal pools: natural history and conservation. The McDonald & Woodward Publishing Company.

Calhoun, A.J.K. and M.W. Klemens, 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No.5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York.

DeGraff, R.M., M. Yamasaki. 2001. New England wildlife. University Press of New England, Hanover and London.

Hunter, M. L. Jr., A.J.K. Calhoun, M. McCollough, 1999. Maine amphibians and reptiles. University of Maine Press, Orono, Maine.

Maine Department of Environmental Protection, Significant Wildlife Habitat, Chapter 335

Whitaker, J.O. Jr., W.J. Hamilton Jr., 1998. Mammals of the eastern United States. Cornell University Press.

# Recommended Periods for Vernal Pool Egg Mass Survey by Geographic Region

Optimal times for counting egg masses of pool-breeding amphibians vary according to geography, elevation and weather. Egg mass counts are generally best conducted just past the peak breeding period. For wood frogs, this occurs approximately 1 to 2 weeks after full chorus. Salamanders have a more extended breeding period and their eggs do not hatch as quickly as wood frogs. Therefore, surveys to count salamander eggs should be conducted slightly later in the breeding season, generally 2-3 weeks following wood frog egg counts. **These recommendations are only guidelines and conditions may vary annually and locally thus requiring best professional judgment for the optimal timing of egg mass surveys.**

Region	Wood Frogs	Salamanders
 Southern	April 10 - April 25	April 20 - May 10
 Central	April 25 - May 10	May 5 - May 25
 Northern	May 5 - May 20	May 15 - June 5

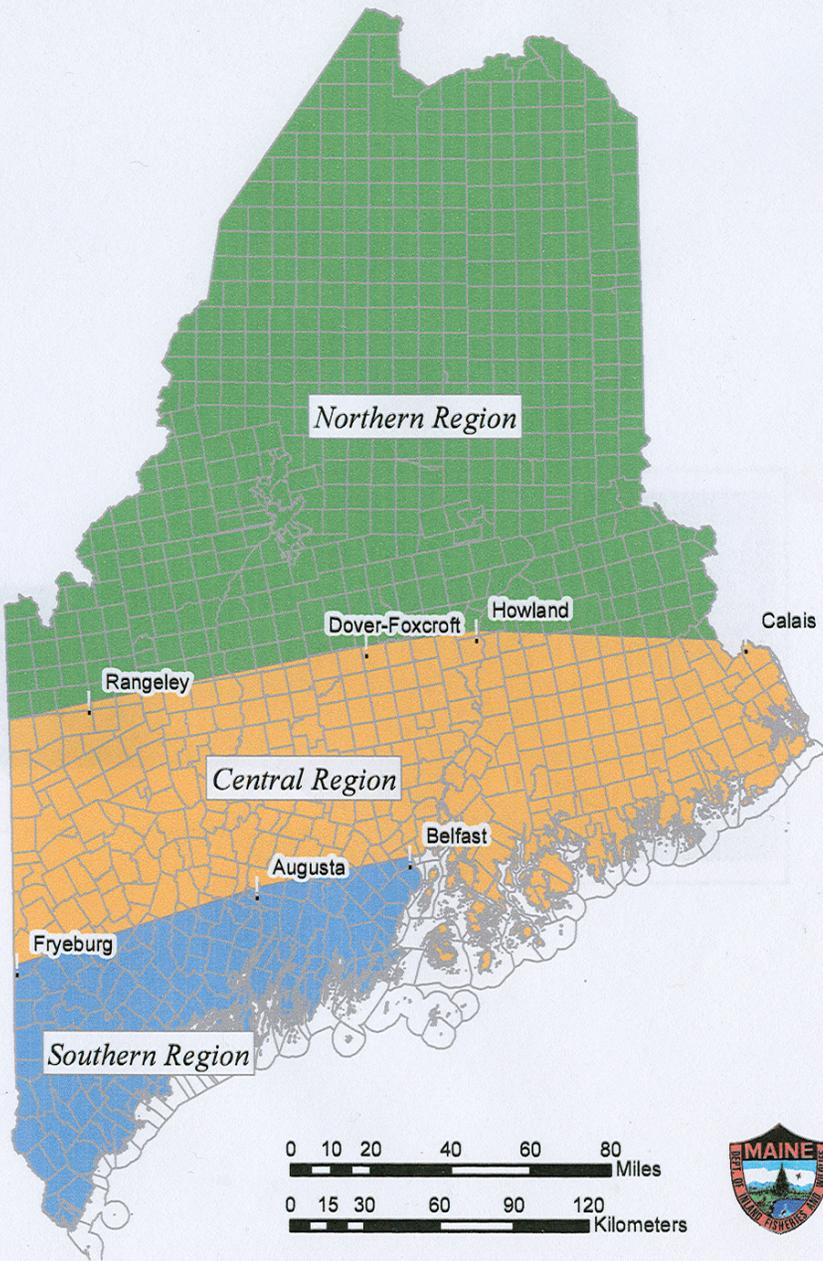
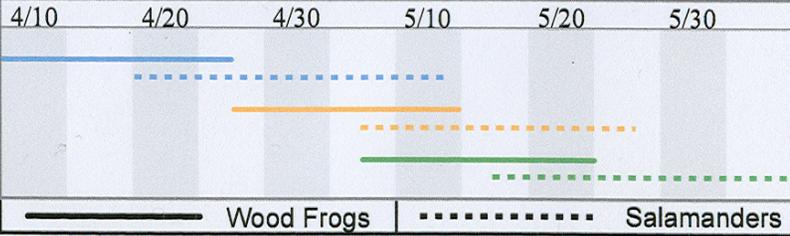
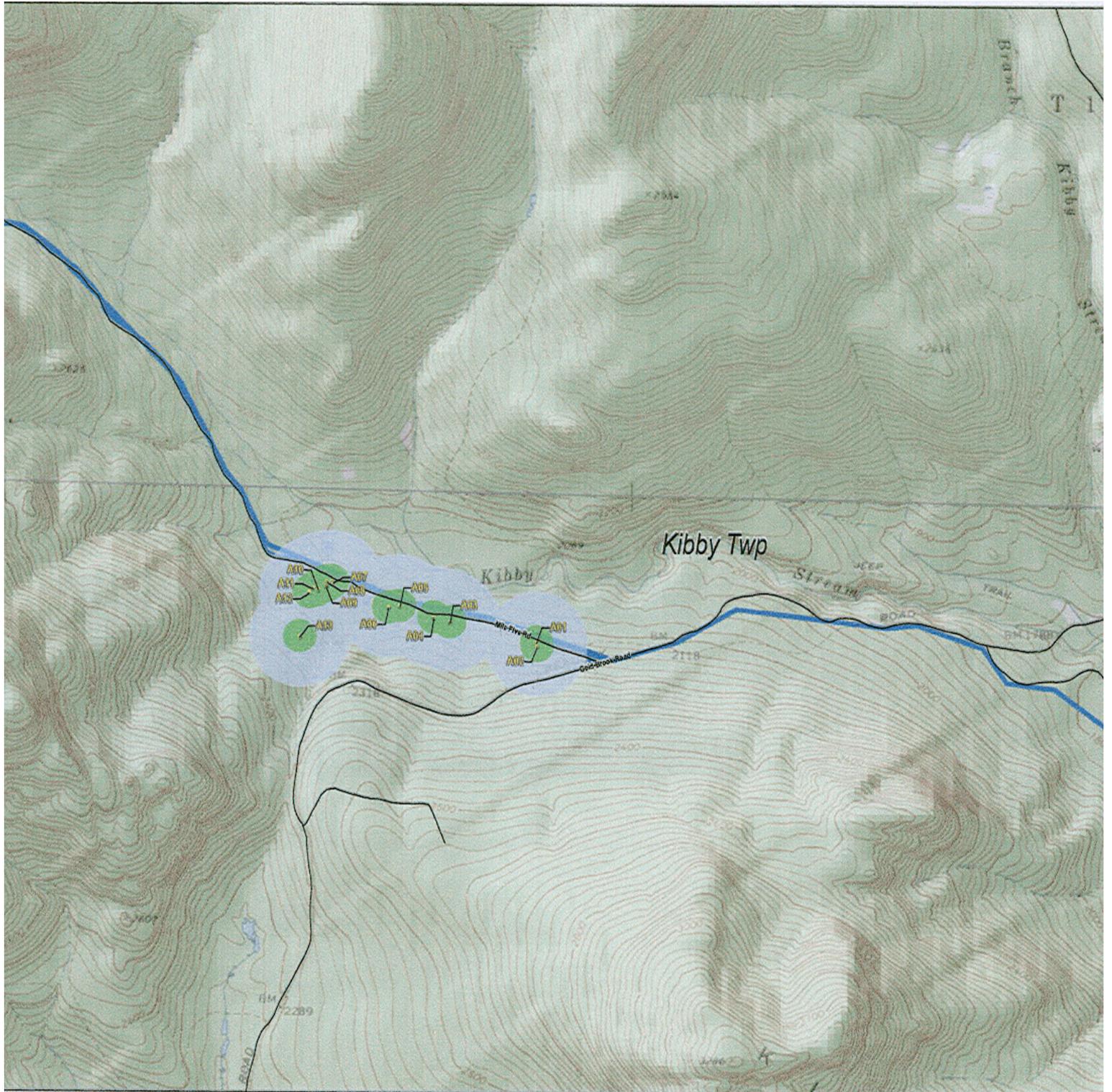


EXHIBIT 2



- Pool Locations
- ★ Turbine Locations
- 250ft Pool Buffer
- Project Footprint
- 750ft Pool Buffer
- Road

Sources: Maine CGIS, USGS, TRC



# EXHIBIT 3

**Resume**  
**Catherine Diane Boretos, PWS**

**PROFESSIONAL EXPERIENCE**

**Principal Biologist, Call of the Wild Consulting and Environmental Services  
W. Falmouth, MA, and Sangerville, ME 1996 - present.**

Founder and senior biologist for consulting company specializing in wildlife inventories, habitat evaluations, wetland permitting, land management plans and tracking programs in New England. Clients include private landowners, land trusts and municipalities. Specializing in vernal pool habitats and rare species protection.

**Regional Ecologist, The Trustees of Reservations, Martha's Vineyard, MA, 1994 - 1996**

Inventoried and delineated natural resources on properties held by this land trust and made management recommendations concerning resource protection. Implemented shorebird protection program, including intensive monitoring of endangered shorebird species (piping plover and least tern) on barrier beach systems on three islands. Made policy recommendations regarding land use issues associated with these species. Supervised environmental education program administered by the Trustees in Martha's Vineyard Public Schools. Hired and supervised four biologists and other regional staff. Prepared and administered budget for the ecology department and environmental education program. Prepared grant applications. Prepared land management plans. Conducted field research projects dealing with ecological restoration and resource inventories/community descriptions.

**Environmental Analyst, Commonwealth of Massachusetts, Department of  
Environmental Protection, Division of Wetlands and Waterways, Southeast Regional  
Office, Lakeville, MA 1988 to 1994**

Provided technical review of projects pursuant to the *Massachusetts Wetlands Protection Act Regulations* specializing in wildlife habitat regulations. Delineated wetland resources. Reviewed permit applications. Coordinated review and worked with local, state and federal agencies. Reviewed and analyzed wetland restoration plans and made field visits to verify compliance. Carried out enforcement proceedings including issuances of civil penalties. Provided expert testimony in adjudicatory hearing proceedings. Participated in statewide policy making issues such as endangered species protection.

**Administrator, Barnstable Conservation Commission, Barnstable, MA 1986 to 1987**

Administered State Wetlands Protection Act Regulations and Town Non-zoning Wetlands Protection Bylaws. Developed and implemented land acquisition program. Developed management plans for town conservation land and comprehensive wetlands bylaw regulations. Reviewed municipal projects such as municipal golf courses to ensure natural resource protection. Worked with state agencies to protect rare plant species and ecological communities. Prepared annual budget.

**Assistant District Environmental Coordinator, State of Vermont, Department of Environmental Conservation, Pittsford, VT. 1985 to 1986**

Administered State Land Use Plan, Act 250. Reviewed and prepared conditioned permits for commercial development projects, considering traffic impacts, air and water quality and wildlife habitat. Coordinated input from other state agencies and other interested parties. Supervised administrative assistant.

**Conservation Commissioner, Town of Falmouth, MA 1981 to 1985**

Served as a volunteer conservation commission member implementing the Town Wetlands By Law and Wetlands Protection Act Regulations.

**EDUCATION**

1979-1981     University of Massachusetts, Amherst, MA  
                  B.S. Natural Resource Studies

1977-1979     University of Maine, Fort Kent, ME  
                  Studies in Environmental Sciences

### **ADDITIONAL EDUCATION**

- 2002 Winter Wildlife Tracking, Yellowstone Institute, WY.
- 2001 Workshop for Vernal Pool Educators, Wellfleet, MA.
- 1999 Grizzly Bear Ecology Course, Teton Science School, Jackson, WY.
- 1999 Wildlife Tracking Program, Jim Halfpenny, Gardiner, MT.
- 1999 Advanced Hydric Soil Workshop, Peter Fletcher, Cape Cod, MA.
- 1998 Hydric Soils Workshop, Peter Fletcher, W. Barnstable, MA.
- 1998 Hydric Soils Workshop, Ralph Tiner & Peter Veneman, Amherst, MA.
- 1996 Professional Wetland Scientist Certification, Certificate #0001088.
- 1994 The Nature Conservancy's Ecological Burn Workshop, MV, MA.
- 1993 Advanced Wetland Delineation Workshop, Ralph Tiner, Dartmouth, MA.
- 1993 Certification in "Project Wild" Programs.
- 1989 Wildlife Tracking courses with Paul Rezendes.
- 1989 Wetlands Identification and Delineation, Ralph Tiner & Peter Veneman, Environmental Institute, U. Massachusetts.
- 1988 Wetland Ecology and Wildlife, Ralph Tiner, Ashland, MA.
- 1987 Certification in U.S. Fish and Wildlife Service's Habitat Evaluation Procedures (HEP), Tampa, FL.

### **TEACHING**

- 1995-1998 Conducted wetlands education program for Paul Rezendes Programs in Tracking.
- 1996-present Conduct Barrier Beach Ecology and Wildlife Habitat courses for New England Wildflower Society and The Nature Conservancy
- 1996-present Conduct wildlife tracking programs for professional and non-profit organizations.
- 2000-present Conduct Adult Education Programs for towns of Orleans and Falmouth and Maine

### **PROFESSIONAL MEMBERSHIPS**

- 1982-present Member and past Board of Director's Member, Massachusetts Assoc. of Conservation Commissions
- 1985-present Member of The Society of Wetland Scientists
- 2003-present Member of Association of Maine Wetland Scientists
- 1996-1998 Member of Board of Directors of The Association for the Preservation of Cape Cod
- 1997-present Member of Association of Massachusetts Wetland Scientists

C. Diane Boretos

Page 4

## **PUBLICATIONS**

Author, *The Importance of Snags In Habitat Evaluations*, Association of Massachusetts Wetland Scientists Newsletter, May 1999.

Technical Editor, *Wetlands, The Web of Life*, P. Rezendes, P. Roy, 1996.

Co-author, *Bird Tracks & Sign*, Stackpole Publisher, 2001.

Contributor, *Guidelines for Barrier Beach Management in Massachusetts*. 1994. Massachusetts Coastal Zone Management Agency, EOEa.

Reviewer, *Technologies to Benefit Shoreline Property and Rare Species Habitat: An Atlantic Coast Example*, 1995. Congress of the United States, Office of Technology Assessment, Washington, D.C.

Wildlife habitat articles for various newsletters (DEP Newsletter, Taunton River Watershed Alliance, The Trustees of Reservations).

Preparation of expert testimony on behalf of state and municipal agencies.

**CERTIFICATION**

I do hereby certify that the attached, entitled

**PRE-FILED DIRECT TESTIMONY OF C. DIANE BORETOS, ON BEHALF OF FRIENDS OF THE BOUNDARY MOUNTAINS**

**BEFORE THE MAINE LAND USE REGULATION COMMISSION IN THE MATTER OF THE TRANSCANADA APPLICATION FOR DEVELOPMENT PERMIT DP 4860 FOR THE KIBBY EXPANSION PROJECT ON SISK MOUNTAIN IN THE KIBBY AND CHAIN OF PONDS TOWNSHIPS, FRANKLIN COUNTY, MAINE**

In my pre-filed testimony, prepared by me for the Maine Land Use Regulation Commission for their proceeding on Permit DP 4860.

Signed: *C. Diane Boretos*

C. Diane Boretos, PWS  
Call of the Wild Consulting  
592 East Sangerville Rd.  
Sangerville, ME 04479

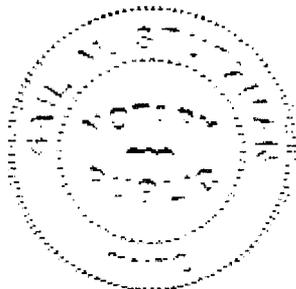
State of Maine  
County of Piscataquis

April 20, 2010

Personally appeared before me C. Diane Boretos, and being duly sworn on her oath, acknowledged the forgoing to be her testimony and her free act and deed.

*Paul M. Stutzman*  
Notary Public  
My Commission Expires

**Paul M. Stutzman, Notary Public  
State of Maine  
My Commission Expires 10/30/2013**



STATE OF MAINE  
LAND USE REGULATION COMMISSION

In the Matter of )  
Development Permit DP 4860 )  
TransCanada Maine Wind Development, Inc. )  
Kibby-Sisk Expansion Project )

PRE-FILED TESTIMONY OF WILLIAM BAKER

ON BEHALF OF INTERVENOR

FRIENDS OF THE BOUNDARY MOUNTAINS

There's a reason I choose to drive the nine hours to the mountains of Maine from my home in Connecticut, rather than to the much-closer Berkshires of Massachusetts, Catskills of New York, or Poconos of Pennsylvania. Maine's Chain of Ponds (CoP) and Boundary Mountains have both pristine beauty and abundant wildlife that make them far superior to all those other places.

Northern Maine is one of the few places left in the Eastern United States that so powerfully restores the spirit of those who visit it, sparks in them a sense of wonder, and promotes the quintessential American values of ruggedness and self-reliance – all because it's natural lands are still unspoiled.

This part of Maine has been preserved because the men and women of LURC have consistently made the right decisions for thirty years. For the amazing natural assets of this area to be lost forever, all it takes is one group of people to make the wrong decision, just once. I sincerely hope that the people [reading] hearing this testimony will not be that group.

About thirty years ago, I began researching places my family could go within a day's drive of New York City which were remote and relatively untouched. I wanted a place where my family could appreciate nature unspoiled by human intervention, where the forest was full of wildlife, the sunsets unobscured by buildings and pollution, and where the sky at night was truly dark and full of stars. My

research was aided by my astronomer friends at Case Western Reserve University. They used charts showing light pollution and human occupation of continental North America. They concluded that Western Maine, near the Canadian border was my best bet. Furthermore, after researching the area, I discovered that, like our national parks, it was protected by a strong state government agency whose purpose was to protect the land.

As your mission statement notes, LURC was set up to ensure responsible development and to “protect natural and ecological values.” I was further comforted that the area would be protected from industrial intrusion by the fact that the state owned the public reserved lands along CoP. After visiting, I fell in love with the scenery, and chose to invest what was then our family savings in a place. I felt it a place where public officials had a reputation for truly doing things in the public interest was a safe place to put my family savings. I never would’ve dreamed that, thirty years later, I and others would have to fight to preserve the natural beauty of northern Maine from any serious incursion, let alone something as antiquated and ecologically disruptive as wind farms.

My wife, daughters and I have spent many memorable summers in the CoP community. We have watched glorious sunsets over the mountains and woken up to forests full of bird song. It has been a joy to witness my daughters experience the unique magic of the wilderness. I am hopeful that my grandchildren will be able to experience it as well. Building the planned wind farm would take

away this experience from my grandchildren, and from all future generations: the turbine blades will kill migratory birds, chop any sunset vista into a million pieces, and the constant hum from the windmills will drive away the wildlife that has lived in the CoP area for millennia. Where wind farms and their associated structures and roads go, habitat for wild animals will be lost.

I have recently served as Chairman of the Advisory Board of the National Park System and aided producer Ken Burns on his film *National Parks: America's Best Idea*. As Chairman of the Parks Board, I felt it was a privilege to be part of the infrastructure that protects what I consider our country's greatest asset.

LURC has much the same role for the State of Maine and, indirectly, all the citizens of our country. Preserve and protect what is too important to belong to a single generation or a single organization.

Once the Boundary Mountains are invaded by wind farms, no matter how well intentioned, they will be changed, gone forever. In the Northeast, we are running out of places like the Boundary Mountains. The roads, turbines and transmission lines that will come with the wind farms will destroy the essence of this place—the rare peace and tranquility that local residents, camp owners like myself, and visitors treasure.

This is not about one part-time resident's complaint. And it isn't about wishy-washy concerns versus economic realities. The beauty of the

natural world and the refuge it provides to all American citizens are as tangible as any national asset can be. Conservation, as both a keystone to the preservation of a strong national character and long-term economic health, has been a core American value since the time of Teddy Roosevelt. Preserving the few wild areas we have left is not a controversial issue for the many, many people who enjoy them; it is only a controversial issue for those who want to take those wild areas away.

While TransCanada claims that the wind farm will not be visible from my camp, the turbines will be visible from state public reserved lands on the eastern shore and will affect what the Bureau of Parks and Lands calls “scenic views of state significance.” It is clear that the wind farm will affect the community.

Wind farms are not an innovative, so-called “green” way to make energy. Electric generating turbines are an old technology that has been around for almost a century, and cause a severe disruption to the natural world in exchange for the energy they produce.

As Americans, we already know when long-term conservation is more important than supposed short-term economic gain. We learned it the hard way. In 1913, certain members of Congress worked hard to authorize a dam in Yosemite’s Hetch Hetchy Valley. The Hetch Hetchy was part of what was to become our first national park, Yellowstone. Congressman of the time William Kent argued, much as those supporting the Sisk wind farms claim, that the creation of the

dam “would not impair the beauty of this wonder spot.” As we now know, the dam was eventually built, the valley was ruined, and the incident became one of the most notorious examples of poor land management in the history of the United States. It is not difficult to see that in authorizing wind farms in this area we would be making exactly the same mistake for exactly the same reasons.

The battle to preserve our nation’s natural heritage is never over. Soon after the destruction of Hetch Hetchy, developers seeking cheap electric power moved to dam sections of the Colorado River which would have flooded parts of the Grand Canyon. Fortunately, Congress wisely preserved what has become a national icon as important as the Statue of Liberty or Mount Rushmore.

In Maine, right now, we are faced with an historic moment, and a simple choice — short-term economic gains paying lip service to environmental concerns, or a wise preservation of our natural heritage. Having visited so many of America’s national parks and worked on TV programs and films about those parks, I can tell you that this area--the Chain of Ponds and the Boundary Mountains--is unique in its beauty and pristine nature. It takes my breath away every time I see it.

I hope what I’ve said today drives home just how important a decision this is.

Once you choose to build the wind farms, there is no going back. Future generations will live with what you decide here. On their behalf, I ask you to save this irreplaceable national asset.

William F. Baker, Ph.D.

University Professor, Fordham University, NY

President Emeritus, WNET/Thirteen

## **WILLIAM F. BAKER**

Dr. William F. Baker directs the Bernard L. Schwartz Center for Media, Education, and Public Policy at Fordham University, where he is also Journalist-in-Residence and a professor in the Graduate School of Education. He is a professor at IESE Business School, ranked #1 globally by *The Economist*. Baker is a Senior Research Fellow at Harvard's Hauser Center for Nonprofit Organizations, Executive-in-Residence at the Columbia University Business School, teaches at the Juilliard School, and is President Emeritus of Educational Broadcasting Corporation (EBC), licensee of America's flagship PBS station Thirteen/WNET, and WLIW21, New Jersey's PBS affiliate.

Baker is co-author of the book *Leading with Kindness: How Good People Consistently Get Superior Results* (American Management Association, 2008), and hosts the documentary of the same name which premiered on public television in 2008.

Baker's career spans four decades. During his twenty years as chief executive officer of EBC, he distinguished himself as one of America's most prolific fundraisers, raising over \$1 billion for the station, and establishing the largest endowment in the history of public television. Among many other accomplishments at EBC, Baker introduced the landmark program *Charlie Rose*, oversaw the station's transition to digital broadcasting, and launched WNET's first cable channel, MetroArts/Thirteen.

Prior to joining EBC, he was president of Westinghouse Television and chairman of their cable and programming companies. At Westinghouse, Baker introduced Oprah Winfrey as a talk show host and established *PM Magazine* as the #1 syndicated program in America in the 1980s. During Baker's tenure, Westinghouse also launched five cable networks, including the Discovery Channel and the Disney Channel.

Baker is the executive producer of the *The Face: Jesus in Art*, a landmark Emmy-winning documentary film that traces the image of Jesus Christ in art around the world and across two millennia. *The Face* premiered nationwide on public television in 2001 and also enjoyed a limited theatrical release.

Baker is the recipient of seven Emmy Awards and is a fellow of the American Academy of Arts and Sciences. In 2007, he was inducted into the National Academy of Television Arts & Sciences (NATAS) Management Hall of Fame and received the *Mark Schubart Award* from the Lincoln Center Institute, given to individuals who most exemplify the Institute's ideal of integrating the arts with education. He has been inducted into *Broadcasting & Cable's* Hall of Fame and the New York State Broadcasters Association Hall of Fame. In addition to numerous other awards, Baker has received the Gabriel Personal Achievement Award, two Alfred I. duPont-Columbia University Journalism Awards and the 1987 Trustees Emmy Award, given in recognition of outstanding contribution to the advancement of television.

Baker is also the co-author of *Down the Tube: An Insider's Account of the Failure of American Television* (Basic Books, 1998) and the author of *Lighthouse Island: Our Family Escape* (Ruder Finn Press, 2004).

In addition to being Chairman of the National Parks System Advisory Board, Baker serves on the boards of Rodale Press and the Intrepid Sea, Air & Space Museum in New York City. He holds B.A., M.A. and Ph.D. degrees from Case Western Reserve University, and seven honorary doctorates.

Dr. Baker's long standing commitment to promoting education led him to establish WNET's Educational Resources Center, America's most prolific trainer in multimedia teaching techniques. He also established the Bernard L. Schwartz Center for Media, Education, & Public Policy at Fordham University, and he is an annual speaker at WNET's Celebration of Teaching and Learning.

His interests include astronomy, horology, and polar science, and he is believed to be one of only a few people who have stood on both the North and South Poles.

CERTIFICATION

I do hereby certify that the attached, entitled

PRE-FILED DIRECT TESTIMONY OF William F. Baker

ON BEHALF OF FRIENDS OF THE BOUNDARY MOUNTAINS

BEFORE THE MAINE LAND USE REGULATION COMMISSION IN THE MATTER OF TRANSCANADA'S APPLICATION FOR DEVELOPMENT PERMIT DP 4860 FOR THE SISK MOUNTAIN - KIBBY EXPANSION PROJECT IN THE CHAIN OF PONDS AND KIBBY TOWNSHIP, FRANKLIN COUNTY, MAINE

is my direct testimony, prepared by me for the MAINE LAND USE REGULATION COMMISSION for their proceeding on PERMIT DP 4860.

Signed: William F. Baker

NAME  
ADDRESS 2 HIGHGATE RD  
ADDRESS RIVERSIDE, CT 06878  
ADDRESS

APRIL 20, 2010

State of ~~Maine~~ <sup>CT</sup> CONNECTICUT  
County of ~~Franklin~~ <sup>FAIRFIELD</sup> SS.

Personally appeared before me William Baker and being duly sworn on his oath, acknowledged the forgoing to be his testimony and exhibits, and his free act and deed.

Urvashi R. Ghedia  
Notary Public:  
My Commission Expires:

URVASHI R. GHEDIA  
NOTARY PUBLIC  
State of Connecticut  
My Commission Expires  
August 31, 2011

