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Memorandum

To: Marcia Spencer-Famous

From: Dana Valleau, TRC

Subject: DP 4860 Kibby Expansion, Response to MDIFW Comments, as Transmitted via E-mail March 4, 2010

Date: April 8, 2010

CC:

This memo provides a response to comments provided to LURC by MDIFW Assistant Regional Wildlife Biologist Robert Cordes and Regional Fisheries Biologist Dave Boucher on TransCanada's proposed Kibby Expansion Project. The comments are identified below and each is followed by TransCanada's response.

Wildlife Division Comments and Responses:

MDIFW Comment - Bicknell's Thrush: As currently proposed, this project has 5 turbines that will occur within Bicknell's Thrush habitat. Of those 5 turbines, Turbine # 11 and its access road are of greatest concern to MDIFW, because this development will essentially bi-sect the habitat block. Therefore, we recommend the following options (in order of preference) 1) the applicant relocated Turbine # 11 and its access road, or 2) The applicant implement a set of operational restrictions for Turbine # 11, during nesting and brood rearing periods for this species. The specific details of these restrictions should be developed between LURC, MDIFW and the Applicant. Also under option #2, a post-construction monitoring protocol needs to be implemented for this species with at least the same rigor and scope as the pre-construction studies.

TransCanada Response: Turbine #11 and the associated access road has been relocated downslope and west, moving it to the edge of suitable Bicknell's thrush habitat, consistent with the MDIFW first preference. See the attached map for the revised layout.

Comment - Northern Bog Lemming: The applicant identified several wetlands that are suitable and potentially occupied by Northern Bog Lemmings. As currently proposed, all access roads, laydown areas, turbine pads, and collector lines are located outside of the minor watersheds that contain these

wetlands. Likewise, no development is proposed within 500 ft a potentially occupied wetland. Therefore, MDIFW does not anticipate negative impacts this species/ habitat.

TransCanada Response: Comment noted, and TransCanada agrees that project design avoids negative impacts to this resource.

MDIFW Comment - Roaring Brook Mayfly/Spring Salamander: Both Roaring Brook Mayfly and Spring Salamander are known to occur within the Gold Brook Watershed (in proximity to the proposed development). Therefore the applicant conducted surveys for both of these species in the Kibby Stream Watershed. The surveys did not document either species within the watershed, however suitable habitat for both species occurs within the Kibby Stream Watershed. The applicant has agreed to follow MDIFW management guidelines (in final draft form and will be forthcoming ASAP) developed to protect the habitat for both species. As currently proposed, the “mile 5 access Rd” has 4 stream crossing with the greatest potential for this species to occur: C-09-S-0-1b, E-09-S-2-1, A-09-S-102-1, and F-09-S-2-1, for these stream crossings, we recommend that they be replaced as in-kind crossings that span at least 1.5 times the bankfull width of the stream channel and provide an openness ratio² of at least 0.60 meters. The rest of the perennial stream crossings associated with the access road can follow fisheries recommendations of 1.2 times the bankfull width. All collector line crossings of perennial streams should follow guidelines/standards similar to DEP’s draft Minimum Performance Standards for Electric Utility Corridors, found in Appendix A of Chapter 375 Rules.

TransCanada Response: In response to the MDIFW wildlife biologist’s comments, TransCanada is now proposing to bridge three of the four stream crossings where a culvert sized at 1.5 times bankfull width and an openness ratio of 0.60 meters is requested. A culvert that would meet the draft guidelines for this stream would be so large that a significant hump in the road would result, even after substantial additional fill was added to modify the grade of the improved road which in turn would increase significantly the width of the road improvements to meet side slope requirements. TransCanada believes more impact to the stream and adjacent wetlands would occur if such large culverts were installed, and is therefore proposing these three streams be bridged. The fourth stream where these criteria are requested, C-09-S-0-1b (which connects to A-09-S-200-1 on the other side of the existing road), already has a new bridge that has been recently installed by the landowner. This bridge will remain in place.

As recommended, the proposed culvert size and type for all of the other perennial stream crossings along new or improved permanent access roads will be revised, as needed, to meet the 1.2 times bankfull width guideline, with one exception. The exception is stream E-09-S-1-1 where a bridge is now proposed to replace the existing culvert. Similar to the three stream crossings discussed above, this stream will be bridged rather than install a very large culvert. The attached revision to Table 15-4 from the application documents the proposed changes at permanent access road stream crossings, as well as clarifies or corrects information provided in the original table.

With regard to the collector line crossings, TransCanada's proposed construction and vegetation maintenance standards meet DEP's draft Minimum Performance Standards for Electric Utility Corridors.

MDIFW Comment - Finally, a detailed post-construction monitoring plan should be developed and approved as part of the Development Permit. MDIFW re-states our willingness to work with the applicant in developing this monitoring plan. The post-construction monitoring efforts should be at least as rigorous as the pre-construction efforts. This monitoring plan should be conducted for a minimum of two years (preferably three) and can be distributed over a period of several years post-construction (i.e., years 1, 3, 5). We request that the post-construction monitoring plan is reviewed and approved by MDIFW and LURC prior to operation of any wind turbines. Post-construction monitoring protocols for wind projects are rapidly evolving. Many of the same techniques used at the Mars Hill and Stetson Mountain Wind Power Facilities should be used for the Sisk Mountain-Kibby Wind Expansion project and refined through consultation with MDIFW. This post-construction monitoring protocol should be adaptive as continued wind power projects shed new information on possible ways to minimize impacts on birds and bats. This may result in the modification of proposed studies through discussions among the applicant, MDIFW, and DEP.

TransCanada Response: TransCanada will continue to work with MDIFW to scope the post-construction work to be performed at wind power projects with the benefit of results of ongoing work at other projects. At a minimum the post-construction plan, which is yet to be finalized, will include mortality searches for two years, and agency consultation and adaptive management will be incorporated into the plan.

Fisheries Division Comments and Responses:

MDIFW Comment: 100-foot vegetated buffers should be maintained along each side of all perennial streams that cross the transmission line corridors, and vegetation within the buffers should be allowed to grow to 10-15 feet, or higher where pole structures are placed within the buffer and wire heights are greater. (Both recommendations have been incorporated into the applicant's construction and maintenance plans).

TransCanada Response: MDIFW is correct in noting that both recommendations have been incorporated in the project plans.

MDIFW Comment: No special treatment of the 30± non-jurisdictional intermittent streams is proposed by the applicant. We urge LURC to encourage the applicant to at least [sic] minimize the disturbance of vegetation adjacent to these small streams. In addition, channelization (road ditching in particular) of intermittent streams should be minimized or eliminated where feasible.

TransCanada Response: Intermittent streams will be treated as perennial streams with respect to minimizing the disturbance of vegetation during construction of roads and collector lines, since the LURC standards do not differentiate between the flow regime of streams. State and Army Corps jurisdictional streams will be treated similarly during construction regardless. Standards and BMPs for streams require that impacts to streams are minimized. Minimization

is achieved by designing road crossings to the minimum width necessary for safe traffic flow. At electric line crossings, woody vegetation is typically cut during construction to facilitate stringing wire, however roots of vegetation are left in place and soil disturbance is kept to a minimum in order to meet erosion control standards. Further, vegetation maintenance performed in these corridors is done to promote the growth of shrub species, which discourages the re-establishment of tree species. Maintaining natural hydrology is also a basic requirement for this project, as recommended by the State Soil Scientist, so activities that adversely impact natural flows such as channelizing will not be utilized.

MDIFW Comment: We will rely on the State's Soils Scientist for a thorough review of the applicant's stormwater management plan's effectiveness for maintaining water flows off the mountain that remain as natural as possible. This would include a careful review of TransCanada's plans for winter construction in certain areas to assure underlying hydrology is properly identified and protected.

TransCanada Response: TransCanada has consulted with the State Soil Scientist during the permitting and construction of the Kibby Wind Power Project, and has continued that consultation during the design of the Kibby Expansion Wind Power Project. As part of this consultation, TransCanada has incorporated identifying non-jurisdictional drainage to the extent possible during pre-construction surveys for wetlands and soils. During construction, at the recommendation of the State Soil Scientist, a "toolbox" approach has been used effectively on the Kibby Project and is also proposed for construction of the Expansion Project.

MDIFW Comment: New culverts should be sized at least 1.2x the width of the stream crossing.

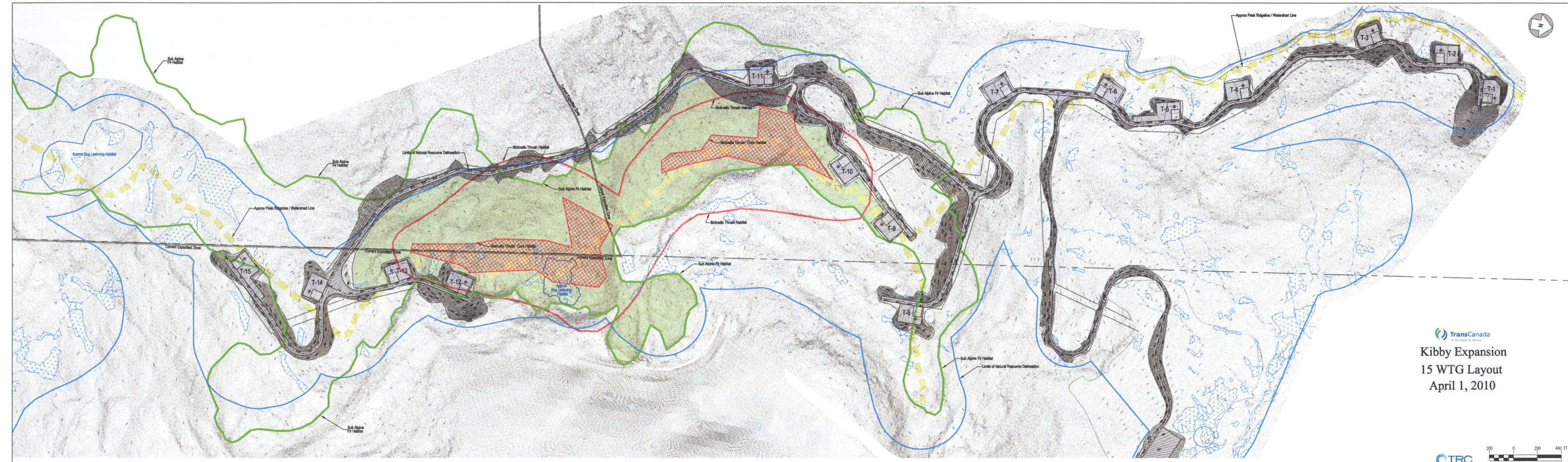
TransCanada Response: As requested, this recommendation has been incorporated for all new and replacement culverts for perennial streams along new or improved permanent access roads. See also the response to the Wildlife Biologist regarding culvert sizes at stream crossings and the attached stream crossing table identifying changes to proposed crossings.

MDIFW Comment: Culverts should be embedded to facilitate passage of fish and other aquatic organisms, where downstream and upstream slopes don't naturally impede their free passage.

TransCanada Response: Current BMPs will be used during construction of this project, which include this standard for culvert installation.

MDIFW Comment: The instream work window should be narrowed to July 15-September 1 to better reflect the sub-alpine conditions and earlier staging and spawning of brook trout.

TransCanada Response: This recommendation will be incorporated into the project construction bid specification and erosion control plan, and TransCanada will accept it as a LURC permit condition.



 TransCanada
 Kibby Expansion
 15 WTG Layout
 April 1, 2010



**Table B.15-4 Revised: Kibby Expansion Project Unavoidable Stream Impacts
Associated with Access Road Crossings**

Stream ID (Figure B.15-5)	Culvert ID (Attach B.13-1)	INT / PER	Width (feet)	IFW Request	Existing Crossing Type	Proposed Crossing Type	
						Crossing in Dec '09 Application	New Proposal, if any
MILE 5 ROAD IMPROVEMENTS							
B-09-S-47-1b		PER	1.5	1.2 X W	18" CMP	Rock Sandwich	No impact to stream/no crossing Delete this stream from access road table
B-09-S-17-1		INT	1.5		Connects to B-09-S-47-2 - not a separate crossing		
B-09-S-47-2	A-2	PER	2	1.2 X W	18" CMP	30" HDPE + rock sandwich	35" X 24" CMP Arch Delete this rock sandwich from design
B-09-S-18-1/ B-09-S-48-1	A-3	PER	3	1.2 X W	18" CMP	30" HDPE	42" X 29" CMP Arch
A-09-S-223-1/ B-09-S-19-1	A-9	INT	3		18" CMP	36" HDPE	
F-09-S-2-1	A-14	PER	5	1.5 X W 0.6m openness ratio ("O.R.")	36" CMP	49" X 33" CMP Arch	Construct New Bridge
F-09-S-7-1	A-13	PER	3	1.2 X W	18" CMP	49" X 33" CMP Arch	
B-09-S-30-1		PER	4	1.2 X W	Connects to F-09-S-2-1 - not a separate crossing		
B-09-S-30-2		INT	3		Connects to F-09-S-2-1 - not a separate crossing		
A-09-S-102-1	A-15 & 16	PER	9.5	1.5 X W 0.6m O.R.	Old Bridge	Two 64" X 43" CMP Arches	Replace Bridge
E-09-S-1-1	A-17	PER	8	1.2 X W	36" CMP	36" HDPE	Construct New Bridge
E-09-S-2-1/ E-09-S-2-2	A-18 & 19	PER	4	1.5 X W 0.6m O.R.	Two 36" CMPs	Two 64" X 43" CMP Arches	Construct New Bridge
C-09-S-0-1b	A-20	PER	8.5	1.5 X W 0.6m O.R.	New Bridge	Keep existing bridge	
A-09-S-200-1		INT			Connects to C-09-S-0-1b - not a separate crossing		
C-09-S-43-1	A-26	INT	1			18" HDPE	
NEW ROAD (UPHILL)							
D-09-S-4-2	A-31	INT	1			36" HDPE	

Stream ID (Figure B.15-5)	Culvert ID (Attach B.13-1)	INT / PER	Width (feet)	IFW Request	Existing Crossing Type	Proposed Crossing Type	
						Crossing in Dec '09 Application	New Proposal, if any
D-09-S-54-1/ C-09-S-54-1	A-33	PER	2	1.2 X W		18 ' HDPE	28" X 20" CMP Arch
C-09-S-0-7	A-37	INT	1			36" HDPE	
WAHL ROAD IMPROVEMENTS							
A-09-S-0-3b		INT	1.5		18" CMP	24" CMP	24" HDPE
Total Crossings	19 14						

CMP=corrugated metal pipe culvert

HDPE=plastic pipe culvert

CMP Arch= corrugated metal pipe arch culvert

Corrections to original table data or table edits shown in red text

Culvert sizes that don't meet IFW criteria are highlighted in red