

Environment Canada: Loretta Ransom														
ID	Topic	Reviewer Comment/Recommendation			Proponent Response	Board Response								
1	Species at Risk Act (SARA)	<p><b>Comment</b> The following comments are pursuant to the Species at Risk Act (SARA), which came into full effect on June 1, 2004. Section 79 (2) of SARA, states that during an assessment of effects of a project, the adverse effects of the project on listed wildlife species and its critical habitat must be identified, that measures are taken to avoid or lessen those effects, and that the effects need to be monitored. This section applies to all species listed on Schedule 1 of SARA. However, as a matter of best practice, EC suggests that species on other Schedules of SARA and under consideration for listing on SARA, including those designated as at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), be considered during an environmental assessment in a similar manner. Table 1. below lists species that may be encountered in the project area that have been assessed by COSEWIC as well as their current listing on Schedule 1 of SARA (and designation if different from that of COSEWIC). Project impacts could include species disturbance and attraction to operations. Table 1. Terrestrial Species at Risk potentially occurring within the project area.</p> <table border="1" data-bbox="443 1130 1304 1333"> <thead> <tr> <th>Terrestrial Species at Risk 1</th> <th>COSEWIC Designation</th> <th>Schedule of SARA</th> <th>Government Organization with Lead Management Responsibility</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Terrestrial Species at Risk 1	COSEWIC Designation	Schedule of SARA	Government Organization with Lead Management Responsibility					<p>The GNWT has assessed the potential effects of the development on Species at Risk at a screening level and determined potential effects to be low to negligible for all Valued Components assessed. The GNWT has prepared a Wildlife and Wildlife Habitat Protection Plan (WWHPP) for the construction phase of the project. The WWHPP is included in the application and has been reviewed by the Sahtu and Gwich'in Renewable Resource Boards, the GNWT Department of Environment and Natural Resources and Environment Canada's Canadian Wildlife Service.</p>	<p>The conditions require the submission of an updated Wildlife and Wildlife Habitat Protection Plan.</p>
Terrestrial Species at Risk 1	COSEWIC Designation	Schedule of SARA	Government Organization with Lead Management Responsibility											

				<b>2</b>		
	Common Nighthawk	Threatened	Schedule 1	Environment Canada [EC]		
	Olive-sided Flycatcher	Threatened	Schedule 1	EC		
	Eskimo Curlew	Endangered	Schedule 1	EC		
	Yellow Rail	Special Concern	Schedule 1	EC		
	Bank Swallow	Threatened	Pending	EC		
	Barn Swallow	Threatened	Pending	EC		
	Horned Grebe	Special Concern	No Status	EC		
	Peregrine Falcon	Special Concern { <i>anatum-tundrius</i> complex <sup>3</sup> }	Schedule 1	Government of the Northwest Territories [GNWT]		
	Short-eared Owl	Special Concern	Schedule 1	GNWT		
	Rusty Blackbird	Special Concern	Schedule 1	GNWT		

Woodland Caribou [Boreal population]	Threatened	Schedule 1	GNWT
Grizzly Bear	Special Concern	Pending	GNWT
Wolverine [Western population]	Special Concern	Pending	GNWT
Little Brown Myotis	Endangered	Pending	GNWT
Northern Myotis	Endangered	Pending	GNWT
<p>1 The Department of Fisheries and Oceans has responsibility for aquatic species. 2 Environment Canada has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act [MBCA]. Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency. 3 The <i>anatum</i> and <i>tundrius</i> subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was assessed by COSEWIC as Special Concern, and was added to Schedule 1 of SARA in July 2012.</p> <p><b>Recommendation</b> • For any Species at Risk that could be encountered or affected by the project, the proponent should note any potential adverse effects of the project to the species, its habitat, and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the Species at Risk registry at <a href="http://www.sararegistry.gc.ca">http://www.sararegistry.gc.ca</a> for information on specific species as well</p>			

		<p>as the booklet "Species at Risk in the Northwest Territories" (2012 Edition) available at <a href="http://www.nwt-species-at-risk.com/en/Documents">http://www.nwt-species-at-risk.com/en/Documents</a>. As new species may have been assessed by COSEWIC or added to Schedule 1 of SARA since the booklet was last published, Proponents should always check the Species at Risk registry to obtain the most current information. • If Species at Risk are encountered or affected, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. • Monitoring should be undertaken by the proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of Species at Risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested. • For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project. • Mitigation and monitoring measures must be taken in a way that is consistent with applicable recovery strategies and action/management plans.</p>		
2	Engagement	<p><b>Comment</b> In their application the Proponent lists the agencies they have met with to discuss potential concerns and confirm the review process. Environment Canada notes that it was not engaged during this process. <b>Recommendation</b> EC recommends the Proponent engage with EC, including Directorates such as the Canadian Wildlife Service. Please contact Loretta Ransom, Senior Environmental Assessment Coordinator</p>	<p>The GNWT has engaged with Environment Canada and the Canadian Wildlife Service with respect to the project proposal and the WWHPP.</p>	<p>Response is satisfactory</p>

		(loretta.ransom@ec.gc.ca; 867-669-4744), to discuss meeting opportunities.		
3	Sewage Management	<p><b>Comment</b> The Project will use waterless, sealed bag "Pacto" toilets. The bags will be transferred to, and stored in, lined seacan containers. The Proponent indicates the bags will then be transported regularly for disposal in municipal sewage disposal facilities along the route.</p> <p><b>Recommendation</b> Given the majority of the communities along the route use lagoons to treat their sewage, how does the Proponent intend on disposing of the sewage from the "Pacto" bags into the sewage treatment facilities? It would not be practical to dispose of the bags themselves into the lagoons. Is there an alternate method of disposal available?</p>	<p>The project will not be using the Pacto bag sewage system. Instead, sewage from the camps will be collected in tanks, transported and discharged in municipal systems. Agreements for the use of municipal systems have been concluded and are appended to the PDR.</p>	Response is satisfactory.
4	Camp Waste	<p><b>Comment</b> Camp waste will be incinerated. Ash by-product and incombustible waste will be stored in lined seacans for transport for disposal in municipal solid waste facilities in the NWT on a biweekly or weekly basis. Larger solid waste items will be incinerated in an established area at each camp.</p> <p><b>Recommendation</b> EC recommends the Proponent provide more information on the type of waste that will be incinerated and provide information on the type of incinerator(s) that will be used to burn that specific waste type. EC recommends the Proponent use the EC Technical Document for Batch Waste Incineration to help guide their waste management practices. The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting and can be found at the following web link: <a href="http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&amp;n=5F6E5596-1">http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&amp;n=5F6E5596-1</a></p>	<p>Incineration is no longer proposed. All solid wastes will be transported and disposed of in municipal facilities as per agreements between the builder and municipality.</p>	Response is satisfactory.

5	Spill Contingency Planning - Agencies' Contact Information	<p><b>Comment</b> Table 8 of the Project Description, Regulatory Agencies' Contact Information for Spill Contingency Planning, lists Environment Canada's Emergency contact information and the applicable legislation. The Canadian Environmental Protection Act is listed.</p> <p><b>Recommendation</b> EC recommends adding Fisheries Act Subsection 36(3) to listed EC legislation. EC also enforces this act, related to deposit of deleterious substances into fish bearing waters. Subsection 36(3) of the Fisheries Act specifies that, unless authorized by federal regulation, no person shall deposit or permit the deposit of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water. In the definition of deleterious substance, Subsection 34(1) the Fisheries Act includes "any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water."</p>	Completed	The conditions require the submission of an updated Spill Contingency Plan.
6	Wildlife and Wildlife Habitat Protection Plan	<p><b>Comment</b> The Proponent states all installation and operational activities will be conducted in accordance with the Wildlife and Wildlife Habitat Protection Plan that will be developed for the Project.</p> <p><b>Recommendation</b> None</p>	The WWHPP has been completed and reviewed by agencies identified above.	The conditions require the submission of an updated Wildlife and Wildlife Habitat Protection Plan.
7	Migratory Birds - Incidental	<p><b>Comment</b> EC's mandate includes the protection of migratory birds and their habitat. Regulations pursuant to the Migratory Birds Convention Act provide for the conservation of migratory birds and the protection of their</p>	As stated in the WWHPP, the GNWT will undertake a number of mitigative	The conditions require the submission of an updated Wildlife and Wildlife Habitat Protection Plan.

	<p><b>Take</b></p> <p>nests and eggs: Subsection 5[1] of the Migratory Bird Regulations states that no person shall hunt a migratory bird except under authority of a permit. "Hunt" means to chase, pursue, worry, follow after or on the trail of, lie in wait for, or attempt in any manner to capture, kill, injure or harass a migratory bird, whether or not the migratory bird is captured, killed or injured. . Paragraph 6 [a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. The inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs is known as incidental take. Currently, the regulations do not provide for authorizations or permits for the incidental take of migratory birds or their nests or eggs in the course of industrial or other activities. As such, to minimize the possibility of contravening the law, understanding your potential impact on migratory birds, nests and eggs, taking reasonable care, and avoidance are the best approaches to take when contemplating any activity or decision that has the potential to impact migratory birds, nests or eggs.</p> <p><b>Recommendation</b> To reduce the risk of incidental take of nests and eggs of migratory birds, EC recommends that Proponents know their legal obligations; avoid engaging in potentially destructive or disruptive activities in key sensitive periods and locations in order to reduce the risk of affecting birds, their nests or eggs; and develop and implement appropriate preventative and mitigation measures to minimize the risk of incidental take and to help maintain sustainable populations of migratory birds.</p>	<p>measures to minimize risk to migratory birds, including preconstruction nest surveys in areas where work may be conducted when breeding birds are present.</p>	<p>There are conditions relating to the storage of waste. The LUP and WL require the submission of an updated Waste Management Plan.</p>
<p>8</p> <p><b>Migratory Birds - Incidental Take</b></p>	<p><b>Comment</b> The Proponent states that project activities, including construction activities and clearing, will be scheduled to avoid the breeding season however the cable installation along the all-weather highway between Fort Simpson and Wrigley will occur in summer. EC is of the view that scheduling clearing outside the migratory bird breeding season should</p>	<p>The WWHPP includes nest searches in advance of construction during breeding bird season. Environmental monitors will be employed</p>	<p>The conditions require the submission of an updated Wildlife and Wildlife Habitat Protection Plan.</p>

	<p>be the primary mitigation measure. In the event that clearing cannot be scheduled outside of the breeding season, areas should be thoroughly surveyed for active nests within four days of destruction/clearing by an avian biologist or naturalist with experience with migratory birds and migratory bird behaviour indicative of nesting [e.g. aggression or distraction behaviour; carrying nesting material or food]. Any nest found should be protected with a buffer zone appropriate for the species and surrounding habitat until the young have left the nest. EC recommends that identified nests be monitored to determine the success of mitigation measures and the results should be provided in annual wildlife monitoring reports.</p> <p><b>Recommendation</b> The following nesting periods are provided as general guidance to assist proponents in planning their field activities. It is important to note that breeding periods may vary from year to year due to climatic conditions and some species may nest outside the dates provided if conditions are favourable. Along the proposed project footprint, migratory birds may be found incubating eggs the beginning of May to mid-August. This general nesting period may not be accurate for species under territorial jurisdiction [such as jay, owls, hawks, and blackbirds] or for species that can breed at any time when conditions are right, such as Red Crossbills and White-Winged Crossbills. If nests containing eggs or young of migratory birds are located or discovered, all disruptive activities in the nesting area should be halted until nesting is completed. Flushing nesting birds increases the risk of predation of the eggs or young, or may cause the parent bird to abandon its nest. Any nest found should be protected with a buffer zone appropriate for the species and the surrounding habitat until avoided until nesting is complete [i.e., the young have left the vicinity of the nest). For further advice on how to avoid incidental take or reduce risks to migratory birds and their nests and eggs, refer to the avoidance guidelines and frequently asked questions related to the protection of migratory bird</p>	<p>during construction to observe and document wildlife occurrences and contact officials to discuss further mitigations outside of the WWHPP if considered necessary.</p>	
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		<p>nests and eggs as well as the fact sheet "Planning ahead to Reduce the Risk of detrimental effects to migratory Birds, and their nests and eggs" at:</p> <p><a href="http://www.ec.gc.ca/nature/default.asp?lang=En&amp;n=ED993EAB-B7CE-4A51-82CF-45131E042E93">http://www.ec.gc.ca/nature/default.asp?lang=En&amp;n=ED993EAB-B7CE-4A51-82CF-45131E042E93</a></p>		
9	Waste Management	<p><b>Comment</b> None</p> <p><b>Recommendation</b> EC recommends that food, domestic wastes, and petroleum-based chemicals [e.g., greases, gasoline, glycol-based antifreeze] be made inaccessible to wildlife at all times. Such items can attract predators of migratory birds such as foxes, ravens, gulls, and bears. Although these animals may initially be attracted to the novel food sources, they often will also eat eggs and young birds in the area. These predators can have significant negative effects on the local bird populations.</p>	Agreed, the contractor is required to meet this recommendation.	
10	Migratory Birds Convention Act Section 5.1	<p><b>Comment</b> Section 5.1 of the Migratory Birds Convention Act prohibits persons from depositing substances harmful to migratory birds in waters or areas frequented by migratory birds or in a place from which the substance may enter such waters or such an area.</p> <p><b>Recommendation</b> For Proponent's information.</p>	Acknowledged.	Response is satisfactory.
11	Species at Risk - Eskimo Curlew	<p><b>Comment</b> Eskimo Curlew is designated as Endangered and listed on Schedule 1 of the Species at Risk Act. The general project area falls within the historical range of Eskimo Curlew. However, there have been no reliable sightings of Eskimo Curlew since 1998 and the National Recovery Team for this species has determined that recovery is not feasible at this time. It is EC's view that, in light of its current status, there is no need for further action with respect to Eskimo Curlew. An appropriate mitigation and monitoring plan should be developed with the proponent if it is established that this species does occur in the area.</p>	Acknowledged.	A condition requires the submission of an updated Wildlife and Wildlife Habitat Protection Plan.

of an updated Wildlife and Wildlife Habitat Protection Plan.

		Recommendation For Proponent's information.		
12	Species at Risk - Olive-sided Flycatcher	<p><b>Comment</b> Project activities will overlap with the range of Olive-sided Flycatcher, a migratory bird listed as Threatened on Schedule 1 of SARA. The preferred habitat of Olive-sided Flycatcher is near open areas containing tall trees or snags for perching and young forest after a forest fire or clearcut.</p> <p><b>Recommendation</b> EC recommends that the proponent avoid clearing residual tall trees or snags that may serve as perching or nesting habitat for Olive-sided Flycatcher.</p>	Where possible, the GNWT will attempt to avoid clearing residual tall trees or snags.	A condition requires the submission of an updated Wildlife and Wildlife Habitat Protection Plan.
13	Bird Observations	<p><b>Comment</b> The Canadian Wildlife Service of EC is interested in observations of birds, especially observations of birds identified as Species at Risk [e.g. Olive-sided Flycatcher] or of species occurring outside their known ranges.</p> <p><b>Recommendation</b> Proponents are encouraged to submit their observations to eBird Canada [<a href="http://ebird.org/content/canada">http://ebird.org/content/canada</a>]. Observations submitted to eBird are immediately available to anyone interested in birds in the north. Observations can also be sent to the NWT/NU Bird Checklist program: NWT/NU Bird Checklist Survey Canadian Wildlife Service, Environment Canada 5019 - 52 Street, 4th Floor P.O. Box 2310 Yellowknife NT, X1A 2P7 Phone: 867.669.4771 email: NWTChecklist@ec.gc.ca Please contact the Canadian Wildlife Service for blank checklist forms.</p>	Noted, if Species at Risk birds are observed, the GNWT will provide these records to the NWT/NU Bird Checklist Survey program, Environment Canada.	A condition requires the submission of an updated Wildlife and Wildlife Habitat Protection Plan.
14	Boreal Woodland Caribou	<p><b>Comment</b> Project activities will also overlap with the Northwest Territories Range [NT1] of the boreal woodland caribou range identified in the "Recovery Strategy for the Woodland Caribou [Rangifer tarandus caribou], Boreal Population, in Canada" posted on the Species at Risk Public Registry on 5 October 2013 found at: <a href="http://www.sararegistry.gc.ca/document/default_e.cfm?documentID=2253">http://www.sararegistry.gc.ca/document/default_e.cfm?documentID=2253</a></p> <p>The recovery strategy identifies the amount of habitat disturbance within a</p>	Agreed. Updated shape files of the route and Project-related disturbances will be provided following Project completion.	Response is satisfactory.

	<p>boreal caribou range as a key factor determining whether a local population is likely to be self-sustaining over time. As a matter of best practice and whenever possible, the Proponent should use as much existing disturbed area as possible to minimize the amount of new disturbance added to the landscape.</p> <p><b>Recommendation</b> EC recommends that the Proponent provide updated shape files of the final access routes, staging areas, storage areas, and camps upon project completion to aboriginal, territorial and federal agencies responsible for the management of boreal caribou and their habitat in the Northwest Territories in order to keep track of habitat disturbance within the NT1 boreal woodland caribou range.</p>		
15	<p><b>Key migratory bird terrestrial habitat sites</b></p> <p><b>Comment</b> According to the map provided by the Proponent, the project footprint may overlap the following areas identified by the Canadian Wildlife Service of EC as a key migratory bird terrestrial habitat sites: . Lower Mackenzie River Islands, NT Site 14 . Middle Mackenzie River Island, NT Site 16 These sites are traditional spring stopover points for waterfowl migrating up the Mackenzie River. Geese arrive in early or mid-May and congregate in high numbers on river islands where open water and exposed shorelines provide the only habitat for feeding during migration. Staging waterfowl are sensitive to both aircraft and ground-based disturbance. Pollution of riverine areas could have detrimental effects on waterfowl and their habitats and lowland habitats and permafrost environments are susceptible to terrain disturbance and degradation. For further information on these sites, refer to: Latour, P.B., J. Leger, J.E. Hines, M.L. Mallory, D.L. Mulders, H.G. Gilchrist, P.A. Smith and D.L. Dickson. 2008. Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut. 3rd edition. Canadian Wildlife Service Occasional Paper No. 114. Available at: <a href="http://publications.gc.ca/site/eng/317630/publication.html">http://publications.gc.ca/site/eng/317630/publication.html</a></p>	Acknowledged,	Response is satisfactory.

		<b>Recommendation For Proponent's information.</b>		
16	Mitigation Measures	<p><b>Comment</b> All mitigation measures identified by the proponent, and the additional measures suggested herein, should be strictly adhered to in conducting project activities. This will require awareness on the part of the proponents' representatives (including contractors) conducting operations in the field.</p> <p><b>Recommendation</b> EC recommends that all field operations staff be made aware of the proponents' commitments to these mitigation measures and provided with appropriate advice / training on how to implement these measures.</p>	<p>Agreed. Prior to initiating construction, workers will receive a Project orientation, which will include information and training on Project commitments, environmental protection and the WWHPP.</p>	<p>Response is satisfactory.</p>
17	Mitigation Measures	<p><b>Comment</b> Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds and Species at Risk, but will not necessarily ensure that the proponent remains in compliance with the Migratory Birds Convention Act, Migratory Birds Regulations, and the Species at Risk Act. The proponent must ensure they remain in compliance during all phases and in all undertakings related to the project.</p> <p><b>Recommendation For Proponent's information.</b></p>	<p>Acknowledged.</p>	<p>Response is satisfactory.</p>

Fisheries and Oceans Canada: Triage Group Fisheries Protection Program				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	Fisheries and Oceans Canada - Fisheries Protection Program	<p><b>Comment</b> DFO Fisheries Protection Program has reviewed the submitted information to determine whether it is likely to result in serious harm to fish which is prohibited under subsection 35(1) of the Fisheries Act. It appears based on the information provided it is likely that aspects relating to DFO mandate adhere to DFO self-assessment guidance and measures to avoid harm as posted on our website at <a href="http://www.dfo-mpo.gc.ca/habitat">www.dfo-mpo.gc.ca/habitat</a>.</p> <p><b>Recommendation</b> Please follow self-assessment guidance on the DFO website at <a href="http://www.dfo-mpo.gc.ca/habitat">www.dfo-mpo.gc.ca/habitat</a>. If your plans have changed or the description of your proposal does not meet self-assessment criteria, please identify which aspects of the works do not meet the criteria and measures to avoid harm for DFO to review in greater detail.</p>	<p>Acknowledged. Following the selection of Northern Lights Fibre as the Preferred Proponent to construct and operate the MVFL, the proposed design has been reviewed and confirmed. The GNWT met with the DFO on October 14, 2014 to update them on project status. The Project design with respect to activities potentially affecting fish or fish habitat has not changed since the initial application. The Project design and mitigations comply with the Fisheries Act.</p>	Response is satisfactory

GNWT - Lands: Lindsay Armer				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	General File	<b>Comment</b> ( <a href="#">doc</a> ) Government of the Northwest Territories' (GNWT) approach to participation in the regulatory review of the proposed Mackenzie Valley Fibre Link Project <b>Recommendation</b>	N/A.	n/a
Gwich'in Renewable Resources Board: Janet Boxwell				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	General File	<b>Comment:</b> The GRRB would like to be fully engaged on this proposal and included in the distribution list for the application review. The RRCs should also be included on the distribution list. <b>Recommendation</b>	The GNWT has met with the GRRB in January, February, June and September 2014 and has provided the draft Bathymetry report and WWHPP for review. The GNWT has also met with RRCs in Inuvik and Tsiigehtchic on 3 and 4 occasions, respectively. The GNWT understands the GRRB and RRCs will be included in the technical review of applications.	Response is satisfactory.

		<p><b>Comment:</b> The GRRB is concerned about the lack of baseline data available for lakes and streams along the preferred alignment of the MH infrastructure corridor.</p> <p><b>Recommendation:</b> Prior to construction fish assessment surveys should be carried out on all lakes in and near the project corridor.</p>	<p>The GNWT has utilized existing data on fisheries along the route collected for the MGP and other initiatives. The effects to fish and fish habitat from the project are predicted to be none to negligible. Water withdrawal from lakes will comply with the DFO protocol which is intended to protect fish. The GNWT believes that fish habitat assessments are not required for this project.</p>	
2	General File	<p><b>Comment:</b> We are concerned about the lakes used as water sources for camps and construction.</p> <p><b>Recommendation:</b> Request the use of above tree line criteria under DFO Winter Water Withdrawal protocol. The GRRB requests the provision of all bathymetric data for lakes relevant to the project.</p>	<p>The water licence application identifies water sources and associated withdrawal volumes requested. All of the volumes requested are within what is allowed under the protocol and with one exception, are below 50% of the volume allowed under the protocol. The GNWT has shared bathymetric information with the GRRB</p>	<p>The WL requires that the GNWT adhere to the DFO Protocol for Winter Water Withdrawal from Ice covered Waterbodies in NWT and NU.</p> <p>The Board is also satisfied with the bathymetric data provided by the GNWT.</p>

			and has discussed lakes of concern with the GRRB.	
	<p><b>Comment:</b> We are concerned that the challenges of placing a line within northern continuous permafrost have not been adequately addressed or explained at consultations. The major concern is that improper laying of the line will lead to line breaks which leave negative environmental and fiscal impacts.</p> <p><b>Recommendation:</b> Request the use of above tree line criteria under DFO Winter Water Withdrawal protocol. The GRRB requests the provision of all bathymetric data for lakes relevant to the project.</p>		<p>The GNWT and its contractor Northern Lights Fibre (NLF) have studied the route and ground conditions, consulting with experts in permafrost and geohazards. The GNWT is confident that the project has been designed to withstand challenges presented by permafrost and that the contractor is taking the necessary action to minimize ground disturbance impacts. The contractor faces financial penalty if the line is out of service due to breakage or other faults.</p>	<p>The WL requires that the GNWT adhere to the DFO Protocol for Winter Water Withdrawal from Ice covered Waterbodies in NWT and NU.</p>
	<p><b>Comment:</b> We have concerns on impacts to wildlife along the proposed route which passes through several Special Management Zones and a Conservation Zone.</p> <p><b>Recommendation:</b> Fish assessments should be undertaken and water use minimized. Due care must be taken in the Conservation Zone,</p>		<p>The GNWT has assessed the potential effects of the project on fish and wildlife as none to low. Mitigations are proposed and a WWHPP has been developed for the construction phase. The draft WWHPP was submitted</p>	<p>The conditions require the submission of an updated Wildlife and Wildlife Habitat Protection Plan.</p>



			to the GRRB for review. Environmental Monitors will be employed and will have responsibilities for implementing parts of the WWHPP. As noted above fish assessments will not be undertaken and water volumes applied for are well below that allowed for by the DFO. The GNWT has worked with the Gwich'in Land Use Planning Board to receive an exemption to allow the project to pass through the Conservation Zone.	
3	General File	<p><b>Comment</b> Our staff is concerned that information provided to the GNWT during consultations, and the ways these concerns plan to be addressed, will not be adequately communicated to the contractor prior to construction.</p> <p><b>Recommendation:</b> The contractor should be required to re-write an environmental manual which can be provided to construction staff.</p>	NLF has been working with the GNWT on the project since August 2014. All consultation notes, commitments and anticipated requirements generated during project planning have been made available to NLF. The application and supporting documents, including the	The conditions require the submission of updated Management Plans including the submission of a updated Engagement Plan.

		<p>Environmental Protection Plan have either been reviewed or co- authored by the GNWT and NLF. NLF has also been participating in community consultations with the GNWT.</p>	
	<p><b>Comment</b> Where will sumps for disposal of greywater and drilling waste be located? <b>Recommendation :</b></p>	<p>The project is no longer proposing the use of sumps. No drilling waste will be generated in the GSA; however, where drilling does occur, waste drill fluids are proposed to be disposed of in low lying areas or land spread at least 100 m from the high water mark of any waterbodies. Greywater will either be disposed of in municipal facilities or in natural depressions at least 100 m from the highwater mark of any waterbody. Within the GSA, the mobile camps are expected to move daily or every second day so greywater discharge to any one location will be limited</p>	<p>Response is satisfactory.</p>

			to 1 or 2 days volume.	
		<p><b>Comment</b> Will the depth of the cable vary according to terrain, substrate and vegetation cover?</p> <p><b>Recommendation :</b></p>	<p>Yes, the intent is to install the cable between 30 – 60 cm below ground surface, largely to keep the cable within the active layer and minimize the risk of fire damage. However, in areas where the active layer is less than 60 cm deep, the cable will be buried at a level to keep it within the active layer. Also within areas of rock, where excavation of a trench may be difficult, the cable will be buried shallower and possibly covered with split pipe and/or locally collected rock.</p>	<p>Response is satisfactory.</p>
		<p><b>Comment</b> How have the implications of climate change and increased depth of the active layer been considered?</p> <p><b>Recommendation :</b></p>	<p>The GNWT has evaluated terrain conditions, including permafrost and geohazards along the route. The effects of climate change has also been considered in preparing the design for the cable installation. The GNWT is satisfied that the cable</p>	<p>Response is satisfactory.</p>

proposed for use and installation design and methods will mitigate risks posed by climate change.

Gwich'in Social and Cultural Institute: Sharon Snowshoe

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board <span style="background-color: black; color: black;">[REDACTED]</span> Response
1	3.7.1 Field Studies	<p><b>Comment</b> Are no Traditional knowledge/Traditional land use studies planned?</p> <p><b>Recommendation</b> consider TK/TLU studies for -areas where traditional use may be impacted, -areas where scientific studies of biophysical indicators are not well understood and TK may contribute</p>	<p>The GNWT has utilized studies conducted for the MGP and Mackenzie Highway extension for much of the baseline data, traditional land use and traditional knowledge. Additionally, the GNWT has reviewed several Traditional Knowledge studies for the Travaillant Lake area. Through a licence agreement with the GSCI, the GNWT acquired traditional land use data along the route in the GSA which helped inform target area selection for the archaeological assessment completed in the GSA during</p>	<p>Response is satisfactory.</p>

			August 2014.	
2	3.7.2 Route Investigation	<p><b>Comment</b> Archaeological training for wildlife monitors or other field workers, considering ground-altering impacts will occur</p> <p><b>Recommendation</b> Consider having group members have archaeological training to identify common archaeological artifacts, assess whether geotechnical work will be done in areas of increased archaeological potential which might warrant post-impact assessment.</p>	<p>The Archaeological Impact Assessment for a 60 m wide area along the route was completed in August 2014. The location of sites identified within the assessment area will be confirmed with the contractor prior to construction so that avoidance can be achieved. Archaeological awareness training will be included in worker orientation sessions.</p>	Response is satisfactory.
3	4.9.1.3 Gwichâ€™in Settlement Area	<p><b>Comment</b> Natural gas/propane. Use of Imperial Oil (MGP) background materials from 2004 do not reflect current situation in Inuvik about heating fuel.</p> <p><b>Recommendation</b> Update later materials to better reflect current conditions.</p>	<p>Acknowledged, the information has been updated in the PDR.</p>	Response is satisfactory.
4	4.9.1.3.1 Tsiiegtchic	<p><b>Comment</b> Comment about naming is slightly inaccurate: "Tsiiegtchic was originally named Arctic Red River" - it was known as Tsiiegtchic first, then Arctic Red River, then back to Tsiiegtchic. Spelling of the community name may also change. Note, the spelling of Tsiiegtchic may change to Tsiiegtshik by the Tsiiegtchic Charter/Band Council in the near future.</p> <p><b>Recommendation</b> Update later materials.</p>	<p>Acknowledged. The PDR has been updated to reflect this information.</p>	Response is satisfactory.

5	4.9.1.3 Gwichâ€™in Settlement Area	<p><b>Comment</b> Traditional use section is very brief considering the possible implications. Also, should mention GTC's role in administering GSA. Cellular service is also available now in Tsiigehtchic.</p> <p><b>Recommendation</b> Expand this section using existing and/or new sources.</p>	Additional references have been consulted and the PDR has been updated.	
6	6.6.11 Traditional and Local Land Use â€“ Including Harvesting	<p><b>Comment</b> Unclear/unproven: "the Project is considered unlikely to interfere with subsistence harvesting activities and long-term use of traditional/ local trails, or to create new long-term access to the area between Fort Good Hope and the Dempster Highway."</p> <p><b>Recommendation</b> Provide further details on sources used to back this up. What has happened on other lines in similar environmental/cultural contexts?</p>	<p>The proposed project will involve clearing a 6 m wide work area between Fort Good Hope and the Dempster Highway to enable the cable to be installed. Once construction is complete the work area will be allowed to revegetate and over time will no longer be suitable for access. Additionally, snowfills for water course crossings will be removed after construction making it difficult for future crossings of water courses. Upon completion of the work (after winter 2016) vegetation will be brought back on the access trail at each end to make it difficult for access. Through, consultations with</p>	Response is satisfactory.

			community organizations and management agencies, the GNWT understands that, while significant in the past, there is limited subsistence harvesting currently occurring in the project area.	
7	Table 6-3 Potential Effects and Mitigations for Valued Components: Harvesting and Traditional Land Use and Land Use (Allowing the line to naturally re-vegetate)	<b>Comment</b> When the line is opened to the Dempster Highway, the proposal is to allow the line to naturally revegate. However, once open, people may continue to use the line to travel along the route to access various key resources (fish lakes, hunting areas, timber harvest for example). Subsequently, the line will remain open and accessible. <b>Recommendation</b> Gather input from Gwich'in participants on if and how they want the access to be maintained or deactivated (if possible), and if (and what) mitigation is needed due to increased access.	This topic was discussed with RRCs in Tsiigehtchic and Inuvik, the GRRB and the Inuvik office of the GNWT Department of Environment and Natural Resources. Parties knowledgeable about current activity in the area noted that harvesting in the area is currently low and not expected to increase substantially with the clearing of the access trail. The proposal to bring cleared vegetation back on to each end of the trail to make access more difficult was viewed positively by those parties consulted.	Response is satisfactory
8	Table 6-5 Summary of	<b>Comment</b> Linear disturbance effects on caribou and other ungulates relating to predation not included?	Specific mitigation measures related to caribou and other	The conditions

require the submission of an updated Wildlife and Wildlife Habitat Protection Plan.

Residual Project Effects	<b>Recommendation</b> Include this issue if needed.	wildlife species are addressed in the WWHPP.	
9 Table 6-5 Summary of Residual Project Effects	<p><b>Comment</b> Land use effects short term? Could be long-term if access remains in use.</p> <p><b>Recommendation</b> Must include reasoning behind why land-use will only be short term, as noted in other comments.</p>	<p>The MVFL will be constructed in stages over two winter and one summer construction seasons; as such, physical activity in any one location is of short duration. Once construction is complete, there will be no need for routine maintenance of the fibre optic cable. The work area that is cleared for installation of the cable will be seeded and allowed to revegetate naturally, and unless there is a cable break, there are no plans to revisit the cable line, except for aerial monitoring of the line. As such the physical activity that may interact with other land uses is limited and there is no need for on-going land use activity during the operational period of the</p>	Response is satisfactory.



			project.	
10	<p><b>GAP:</b> Consultation about traditional rules of access (and effects) missing from report.</p>	<p><b>Comment</b> Traditionally, Gwich'in people would not go into another group's area without permission. This line will likely increase access to the Gwichya Gwich'in use area by many other Gwich'in and non-Gwich'in travelers alike. It is considered impossible to prevent the line from serving as access to this area if people continue to use it.</p> <p><b>Recommendation</b> Careful consultation could take place with Gwichya Gwich'in living in both Tsigehtchic and Inuvik focusing on this topic to determine mitigation as appropriate.</p>	<p>The GNWT believes this discussion is best held amongst the Gwich'in organizations and is not within the authority of the MVFL project.</p>	<p>Response is satisfactory.</p>
11	<p><b>GAP:</b> Effects of similar installations on traditional use.</p>	<p><b>Comment</b> No information on effects on TLU from the installation of similar lines (or other linear access-granting developments) in Alaska, northern Ontario etc.</p> <p><b>Recommendation</b> Add background from similar, recent developments.</p>	<p>Potential effects of linear disturbance on wildlife is well documented; however, we have been unsuccessful in finding specific reference to effects on TLU. Residual effects of the project on wildlife and traditional land use are predicted to be low. In some consultation sessions; harvesters have indicated that clearing of the access trail may benefit TLU as many of the previous access trails are grown over.</p>	<p>Response is satisfactory.</p>

Transport Canada: Holly Pokiitar

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	Project Description	<p><b>Comment</b> Transport Canada notes that the proponent intends to submit an application under of the Navigation Protection Act (NPA) for a directionally drilled crossing under the Mackenzie River (Easting 122.5331, Northing 62.1426). The proponent is advised that an application under the NPA may also be required for the potential barge landing at Little Chicago on the Mackenzie River, as well as for water intakes and any other structures proposed to be built in, on, over, under, through or across any scheduled waterways under the NPA.</p> <p><b>Recommendation</b> The proponent is requested to list the timeline for submission of NPA application(s), and provide as much information as possible to Transport Canada, e.g. historical and current navigation of the waterway near the site of the work(s), so that a determination can be made as to whether an application under the NPA is required.</p>	<p>Use of the barge landing at Little Chicago is not certain, but if it does occur it will not be until Summer 2015. TC will be consulted in advance to discuss any permitting requirements. The design for the Mackenzie River crossing will be completed following acquisition of land and water approvals. The GNWT will provide an application and design in January 2015 to enable approvals to be in place to allow drilling in Spring 2015.</p>	<p>Response is satisfactory.</p>