



CANADIAN ASSOCIATION
OF PETROLEUM PRODUCERS

June 11, 2007

Ms. Judith Wright-Bird, Chair
Sahtu Land Use Planning Board
P. O. Box 235
Fort Good Hope, NT X0E 0H0

Dear Ms. Wright-Bird:

Re: CAPP Comments on Draft Sahtu Land Use Plan

The Canadian Association of Petroleum Producers (CAPP) represents 150 companies that explore for, develop and produce more than 95 per cent of Canada's natural gas and crude oil. CAPP also has 130 associate member companies that provide a wide range of services that support the upstream oil and natural gas industry. Together, these members and associate members are an important part of a \$100-billion-a-year national industry that affects the livelihoods of more than half a million Canadians.

CAPP appreciates the opportunity to review the draft Sahtu Land Use Plan (SLUP). We further recognize the efforts previously made by the Land Use Planning Board to meet with CAPP members in Calgary. We believe that land use planning requires the due and full consideration of all stakeholders' opinions.

CAPP wishes to raise some key concerns and comment on the current draft. CAPP believes a land use plan should set out the goals and visions for an area, providing a framework for sound land and resource management that balances environmental and social concerns with the economic benefits of responsible development. We do not believe the current draft accomplishes this goal. CAPP has identified the several points which we believe must be taken into consideration by the Planning Board:

- Limited access to land - Substantial constraints are being proposed on access to land, with 79% either prohibited from oil and gas activity or working conditions restricted
- Grandfathering of Rights – The rights of companies with existing leases are not sufficiently clarified or protected under the draft SLUP
- Terms of Conditions of the Special Management Zones – The conditions proposed are unnecessarily prescriptive, and will severely restrict industry activity in the Special Management Zones (the majority of the Plan area)

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CAPP believes that further thought needs to be given to how the economic interests of the Sahtu region will be served by the SLUP. With respect to how future oil and gas development is expected to enable those economic goals, consideration needs to be given to the cumulative impacts of restricted access to land combined with restrictive operating conditions. If adopted as written, the SLUP would have far reaching and substantial impact on future oil and gas operations.

The points below expand on the concerns raised above, as well as identify some additional general concerns that need to be addressed to create a practical land use plan that allows for a balance of conservation and development. In addition, we have provided a table with comments on the specific wording of the Plan. While we strongly encourage the Planning Board to adopt a goal oriented approach, we provided these comments to demonstrate that significant work would be required to make the conditions of the LUP practical and achievable. Switching to a goal oriented approach should resolve many of the issues identified in the table.

Access to Land – CAPP notes that under the proposed land use plan roughly 79% of the land use base is either a conservation zone or subject to the restrictions of the Special Management Zones. CAPP would appreciate an explanation of what consideration economic factors were given in the selection of zones, and how their areas were determined. In an area that is largely underdeveloped, we are concerned about the effect the Plan will have to discourage further exploration and future development in the region. It is unclear what consideration was given to oil and gas potential in the selection of zones as some conservation zones have high or very high oil and gas potential, while the potential of the multi-use zones is unclear.

The limited access to land is even more significant when we consider that the Protected Areas Strategy (PAS) process is not yet concluded, and could potentially identify additional areas to be protected within the Sahtu region. These limits on industry access to land will inevitable impact future activity and associated benefits.

Grandfathering of Rights – The SLUP needs to be much more explicit with regards to existing rights and how they will be “grandfathered” once the SLUP takes effect. The SLUP should grandfather proposed development activities that have been delineated in land use permit applications to the Sahtu Land and Water Board, or Mackenzie Valley Land and Water Board, prior to land use plan approval. Approved activities and submitted applications for approval would then not be subject to provisions of the land use plan.

In addition, the plan should grandfather development activities that could result from the discovery of hydrocarbons found on existing exploration licences. As some existing exploration licences cover land designated as conservation zones in the draft SLUP, this apparent conflicting use of land must be reconciled. Further, on page 13 the Plan states that any license renewals or amendments in Conservation zones must conform to the list of conditions laid out for those zones, which includes a prohibition on oil and gas development.

Terms and Conditions of Development Inside Special Management Zones (SMZs) – CAPP is concerned about the number and contents of the conditions laid out for the SMZs. We are concerned

about the prescriptive approach taken, the potential conflict they create with other existing legislation and regulations, and about the effect their collective implementation would have on industry development.

The previous draft Sahtu Land Use Plan and the approved Gwich'in Land Use Plan have fewer and more workable proposed conditions within SMZs.

Prescriptive Conditions – CAPP believes that the prescriptive nature of the SMZ development conditions will unnecessarily constrain future industry activities. We believe a more effective approach would be for the SLUP to adopt a goal oriented strategy, focusing on identifying key values and the management objectives for key values, as opposed to focusing on the details of managing specific activities associated with industrial operations. This high level approach would be more consistent with the objectives of an exercise such as a land use plan, and would avoid prescribing multiple conditions for all development that may or not be necessary or justified on a project by project basis. Individual projects would still be required to undergo examination as part existing regulatory process where it could be verified that the design and approach was consistent with SLUP goals, and conditions attached if required. The flexibility allowed in a plan that sets goals and objectives for resource management in SMZs means that a variety of environmental mitigation measures can be considered potentially further reducing environmental effects.

Potential Conflict and Overlap with Existing Legislation and Framework – CAPP notes that many of the conditions appear to already be addressed through existing legislation and would be addressed in the course of a regular review of a proposed project. For example, many of the conditions laid out on p. 20-21 under fish habitat are already addressed through the Fisheries Act and would be addressed in the course of DFO reviewing an application. As such, we believe the document could be greatly simplified by recognizing the existing framework already in place and removing those conditions.

If the current prescriptive approach to the plan is maintained, in those instances, where a development condition is to be added to SMZs that exceeds existing legislative requirements, the legislation should be identified as well as the reason why existing requirements are not sufficient.

Implementation - The prescriptive conditions, if adopted, could also establish different development conditions in the Sahtu as compared to other regions within the territory. This would amount to the creation of a new regulatory regime in the SMZs of the Sahtu and make compliance for developers much more difficult.

Rationale for Setbacks and Thresholds – The SLUP prescribes several thresholds and setbacks throughout the document. For example, p. 23 proposes that linear density threshold of 1km/km² not be exceeded. Although CAPP would prefer that a goal oriented approach be adopted, if the prescriptive approach is maintained, it's unclear in this case (and in other cases such as a mandatory setback from a feature), what the basis is for these numbers. It is necessary for CAPP to understand what information these thresholds are being derived from, and in particular how these numbers or thresholds mitigate or address the issue or concern, in order to comment on their appropriateness.

Furthermore, clarification is required around the implementation of the linear density threshold and the road density threshold. Some area of scale must be given for these thresholds to be workable. As written, if one assumes that the density is to be calculated on an individual per square km basis, then the threshold is unachievable. It should be placed in the context of a larger area (e.g. the land use zone) to be practical.

Additional Concerns:

Infrastructure Corridors - The plan should make provision for infrastructure corridors that would allow for the development of pipelines, highways, and electricity transmission. At a minimum, a corridor should be identified for the Mackenzie River Valley and to the communities of Colville Lake and Deline. The corridors would allow for development abiding by the existing regulatory framework, but without needing to abide by the conditions for development in special management zones.

Implementation Process – The implementation process of the SLUP needs be further clarified. CAPP is concerned that the process whereby the Land Use Planning Board will establish conformity with the Plan does not address (amongst other things):

- How will applications be made available to the Planning Board?
- What timeline will the Planning Board have to determine conformity?
- Will the conformity check be concurrent or sequential with the review by the Sahtu Land and Water Board or Mackenzie Valley Land and Water Board?

Implementation of the SLUP will require the coordination of multiple regulatory authorities to avoid unnecessary delays in the application process.

Exceptions and Amendments – If the size and number of conservation and special management zones is maintained, and the prescriptive nature of developer conditions for special management zone activities remains largely intact, developers could require frequent amendments and exceptions to the SLUP. As a result, it would improve regulatory certainty if the SLUP could include additional description of the processes to be followed when the Planning Board considers exception and amendment applications, and the identification of a maximum timeline to process each request.

The exception and amendment application process should be straightforward and clearly defined. In addition, it should be easy to determine when a required change to the Plan triggers a required amendment or exception. Ideally, in the large majority of cases an exception approval would be needed that requires only local approval and not approval from Ministers in the territorial and federal governments. Local approval should be attainable in a clear, short process with prescribed timelines.

Summary

CAPP appreciates the opportunity to provide its voice on the draft SLUP and contribute to its development. CAPP believes that addressing the above points will provide for a balanced, goal oriented land use plan that lays out a common vision for all users of the land. The current draft of the

SLUP provides limited opportunities for oil and gas companies to access and explore the land, restrictive operating conditions, and will likely not allow the residents of the Sahtu to achieve the economic benefits that come from industry activity. We recognize that this is the first draft of the SLUP and moreover appreciate the efforts being made by the Planning Board to seek industry input into future revisions.

CAPP would appreciate an opportunity to discuss firsthand the ideas and concerns noted above directly with Land Use Planning Board. We will contact your office to make arrangements. If you have any questions, please contact me at masterson@capp.ca or 403-267-1117.

Sincerely,

John Masterson
Manager, Federal Regulatory Affairs

cc: Environment and Natural Resources
Indian and Northern Affairs Canada
Sahtu Secretariat Incorporated

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1	Sahtu Land Use Plan - Detailed Review		
2	Reference	Proposed Modification In Red or Clarification Required	Rationale
3	All pages	Wherever the land use plan refers to the Sahtu Land and Water Board, it should be changed to refer to a land and water board because the Mackenzie Valley Land and Water Board might have jurisdiction in the Sahtu when considering inter-regional projects. In the comments below, in most cases, references to the S.L.W.B. have been changed to a land and water board.	
4	Page 7, Sec 1.1	"Appropriately qualified professional" is a scientist specializing in an applied science to the specific situation, including but not limited to wildlife biology...	
5	Page 12, Sec 1.3.3	The plan draft excludes discussion of the Mackenzie River Islands conservation zone. The zone is indicated on the large Sahtu land use plan map, but is not in the plan itself. The zone should exclude the water or ice between the islands.	
6	Page 13, 1.3.3.1, C	Any renewals or substantial amendment of permits on development activities located within conservation zones are subject to the conditions laid out in 1.3.3.1, which includes prohibition on oil and gas exploration, development and transportation. This section to should be clarified as the way it is written effectively renders any existing permits and rights void on development activities within conservation zones once the original permits expire. The LUP should state explicitly up front that any rights held prior to the day the Plan is enacted are exempt from this Plan.	
7	Page 15, Sec 1.3.4.1, A.1	A. The following activities are prohibited in Special Management Zones: 1. in accordance with current Federal policy, any bulk water removal. ⁱⁱ Any water withdrawal will be conducted according to DFO protocol and a water licence from a land and water board (use of water for construction of winter roads, use in construction camps and for hydrotesting of pipelines is allowed).	Large quantities of water might be required within the Sahtu Settlement Area for construction camps, winter road construction and hydrotesting of a pipeline.
8	Page 15, Sec 1.3.4.1, A.2	The following activities are prohibited in Special Management Zones: 2. any direct or indirect deposit of wastes into the surface or ground waters which would have a negative impact on the ecological integrity of that ecosystem, or as approved by water licence.	Treated wastewater is released to the environment only under water licence approval.
9	Page 15, Sec 1.3.4.1, A3	3. any direct or indirect deposit of wastes through surface or ground water into a major water body, unless the deposit will be at or below natural background levels, or as approved by water licence — or in the case of historically-polluted drainages such as those in the vicinity of Port Radium on, pre-development levels when the waste stream enters a major water body;	The condition as stated, is not achievable. Any wastewater will be appropriately treated according to water licence prior to release to the environment.

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10	Page 16, Sec 1.3.4.1, A7	The following activities are prohibited in Special Management Zones: activities that disturb or interfere with migrating caribou. (Activities that may interfere with migration will cease until the migration has passed). (Where caribou come into contact with a project, the situation will be assessed and project activities may be altered, if deemed appropriate)	Flexibility is needed to address varying circumstances dependent on the quantity of animals in contact with project activities, and the stage of project development.
11	Page 16, Sec 1.3.4.1, A8	The following activities are prohibited in Special Management Zones: 8. activities that disturb or interfere with burial and archaeological sites (except archaeological excavation under the direction of the Prince of Wales Northern Heritage Centre).	Explanation is self evident.
12	Page 16, Sec 1.3.4.1, B	B. All uses of land or water and all deposits of waste in the Special Management Zone must be consistent with the maintenance of the ecological integrity of the Special Management Zone. The condition should be deleted.	The condition is a duplicate of condition A2.
13	Page 16, Sec 1.3.4.1, C	C. All infrastructure in a Special Management Zone must be built, monitored and managed so as to prevent and where necessary mitigate rectify any negative environmental effects that may result from the infrastructure's degradation or aggradation of permafrost, where practical.	It is not always possible to rectify the effects, but mitigation should be possible in most circumstances. Some minor environmental effects might be tolerable.
14	Page 16, Sec 1.3.4.1, D	Activities in a Special Management Zone must not block the migration routes of migratory fish species or other migratory or semi-migratory wildlife species, unless authorized by DFO or a land and water board, as appropriate.	Efforts will be made to avoid blocking migratory routes for wildlife, however, there could be circumstances where it cannot be reasonably avoided. Some flexibility is required.
15	Page 16, Sec 1.3.4.1, F	Activities in a Special Management Zones should, wherever practical , have the support of District authorities. Where practical , given the scale of activities or their potential impacts on cultural integrity, consultation should be characterized by joint planning on the part of proponents and the appropriate District authorities.	Support from district authorities, and joint planning are preferred methods for development. However, it might be unrealistic to expect support from all district authorities for all proposed projects.
16	Page 16, Sec 1.3.4.1, G	The Developer(s) shall obtain all required licenses, permits, and/or approvals for all construction and operational activities from the Sahtu Land and Water Board (or Mackenzie Valley Land and Water Board) and shall be in compliance with all Sahtu Land Use Plan conditions, as well as other government agencies, including Department of Fisheries and Oceans, Department of Environment and Natural Resources, and all responsible legislation unless variances are granted by the appropriate regulatory agency(ies).	Appropriate approvals could also come from the MVLWB if the project in question is trans-boundary. The other change allows for some flexibility in the regulatory framework.
17	Page 16, Sec 1.3.4.1, H	The Developer(s) shall obtain a license, permit, and/or approval for all construction and operational activities and shall be in compliance with all Sahtu Land Use conditions, as well as other government agencies, including Environment Canada, Department of Fisheries and Oceans, Department of Environment and Natural Resources, and all responsible legislation.	H is a duplicate of G and should be removed.
18	Page 17, Sec 1.3.4.1, I	I. Prior to development, the Developer(s) shall conduct comprehensive surveys and research to establish and document baseline environmental data, evaluate possible environmental impacts, and prescribe ways in which adverse environmental impacts are to be prevented or minimized as indicated by the SLWB or MVLWB.	Surveys and research are ordinarily required by the appropriate land and water board.
19	Page 17, Sec 1.3.4.1, K	K. The Developer(s) shall work with an appropriately qualified professional to develop a site restoration reclamation and revegetation plan for the specific site(s) being reclaimed restored.	Restoration of developed sites is unlikely.

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20	Page 17, Sec 1.3.4.1, L	The Developer(s) shall clearly demonstrate in their application that they have the most current information on the location of caribou in the areas in which they plan to conduct activities and they must schedule the timing of their activity in such a way that minimizes impact on caribou, where practical.	The movement and presence of caribou will be considered when development activities take place, but there could be circumstances where project cost and schedule considerations make it difficult for work to be stopped due to the presence of caribou.
21	Page 17, Sec 1.3.4.1, M	M. The Developer(s) shall hire appropriately qualified professionals to assist in the identification of important areas and time periods and to monitor all development construction and activities to ensure important areas and time periods are avoided as specified.	Part M is a duplication of J and should be deleted.
22	Page 17, Sec 1.3.4.1, N	N. The Developer(s) shall consult the relevant Renewable Resources Council prior to submitting an application for development and shall clearly identify and address the Council's concerns within their application. The condition should be removed.	This is a requirement of the land and water boards.
23	Page 17, Sec 1.3.4.1, O	Where in the judgment of the Renewable Resources Council monitor, as required under section 1.3.4.3, an activity has a negative impact on the feeding pattern and movement of caribou, the monitor shall advise have the authority to direct the Developer(s). to ceases the activity; Where caribou come into contact with the development, the situation will be assessed and development activities might be altered, if deemed appropriate.	The effect of the development on caribou feeding and movement should be mitigated, when practical.
24	Page 17, Sec 1.3.4.1, P1-P6	P. General Infrastructure - Developer Conditions 1. The Developer(s) shall re-use existing roads whenever practical 2. The Developer(s) shall minimize the number of wells, roads, etc. whenever practical 3. The Developer(s) shall cluster roads and infrastructure whenever practical 4. The Developer(s) shall re-use existing pipelines whenever practical . 5. The Developer(s) shall minimize the number of pipelines whenever practical . 6. The Developer(s) shall cluster pipelines whenever practical .	Everything is possible, practicality restricts the provisions to those circumstances where they are reasonably cost and schedule effective.
25	Page 17, Sec 1.3.4.1, P7	What are the parameters for using an existing campsite? Under what circumstances should a developer reasonably consider a camp to be usable? Is there a distance from a perfect project that would render a campsite impractical for use?	
26	Page 18, Sec 1.3.4.1, P8	The Developer(s) shall maintain not interfere with surface runoff channels for all activities requiring surface contouring, where practical. Whenever the developer interferes with surface runoff channels for activities requiring surface contouring, mitigation measures will be adopted to minimize negative environmental effects.	Surface runoff channels might be interfered with to prevent surface runoff and silt from being transported into a waterbody. Surface runoff channels might also be impacted by construction or operations. Adopting responsible mitigation measures will minimize the effect.
27	Page 18, Sec 1.3.4.1, P10	The Developer(s) shall not construct an adit (?) or drill site within 100 m of the normal high water mark of a stream unless approval in writing is obtained from a land and water board. the S.L.W.B.	
28	Page 18, Sec 1.3.4.1, P12	When constructing snow watercourse crossings, the Developer(s) shall use only clean snow.	The use of clean snow for snow bridges is an industry practice.
29	Page 18, Sec 1.3.4.1, P13	The Developer(s) shall not locate any sump within 100 m of the normal high water mark of any permanent streams.	

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30	Page 18, Sec 1.3.4.1, P14	With the exception of wastes generated during a horizontal directional drill, the Developer(s) shall maintain all drill wastes at least 1.2 m below the lowest elevation of contiguous surrounding ground surface the active layer at all times.	The proposed condition is not practical for the wastes generated during horizontal directional drilling.
31	Page 18, Sec 1.3.4.1, P15	15. The Developer(s) shall backfill and restore all sumps prior to removal of men and equipment from the area.	Sump restoration is not possible.
32	Page 18, Sec 1.3.4.1, P16	16. The Developer(s) shall contain drill wastes containing salt through "total-encapsulation" , removal, or depositing down hole pending approval by the National Energy Board, or a land and water board.	Total encapsulation has resulted in some difficulties while attempting to contain drill wastes in the North.
33	Page 18, Sec 1.3.4.1, P17	The Developer(s) shall remove any obstruction to natural drainage caused by any part of this a land use operation.	
34	Page 18, Sec 1.3.4.1, P18	With the exception of watercourses of less than 5 metres in width, the Developer(s) shall not cut any stream bank unless authorized in writing by the Land Use Inspector, or the appropriate land and water board.	Watercourses of less than 5 metres in width will require the cutting of banks to be crossed. Watercourse crossings of greater than 5 metres in width will require land and water board approval.
35	Page 18, Sec 1.3.4.1, P19	19. The Developer(s) shall not use any material other than water and ice in the construction of ice bridges.	
36	Page 18, Sec 1.3.4.1, P20	The Developer(s) shall not allow any ice or snow bridge to materially restrict hinder the flow of water in any stream.	Ice or snow bridges could alter the flow of water in a watercourse, but not materially restrict it. The condition could be removed because the issue is dealt with routinely by land and water boards, and in P22 below.
37	Page 18, Sec 1.3.4.1, P22	The Developer(s) shall remove or notch snow fills in stream crossings as the land use operation progresses in such a manner that stream flow is not impeded , unless otherwise authorized in writing by the Land Use Inspector.	The notching of snow fill crossings can be done in such a way that it does not materially impede water flow in the stream.
38	Page 19, Sec 1.3.4.1, P23	With the exception of permanent all weather roads and roads transferred to the communities, the Developer(s) shall remove all culverts prior to the demobilization of men and equipment from the permitted area.	Culverts will be needed on a longer term basis in some areas.
39	Page 19, Sec 1.3.4.1, P24	24. The Developer(s) shall remove or remediate any spill resulting from salt wastes.	
40	Page 19, Sec 1.3.4.1, P25	The Developer(s) shall not quarry to a depth below that of the water table. Do not quarry below existing pit floor.	Quarry development could result in development below that of the water table and below the existing pit floor. Appropriate mitigation measures would be used to mitigate environmental effects.
41	Page 19, Sec 1.3.4.1, P26	The Developer(s) shall have all wastewater clarified in settling ponds, or in vegetated upland areas, prior to its being returned to the stream; or alternatively discharged into an approved disposal well.	There are a variety of techniques available for wastewater treatment.
42	Page 19, Sec 1.3.4.1, P27	27. The Developer(s) shall locate settling ponds above the high water mark of the stream.	The siting of settling ponds should be done according to water licence.
43	Page 19, Sec 1.3.4.1, P28	The Developer(s) shall not place any petroleum fuel storage containers within 400- metres-50 metres of the normal high water mark of any stream, unless double walled tanks or secondary containment is used.	The use of double walled tanks and secondary containment will mitigate the risk of fuel spills within the 50 metre limit.
44	Page 19, Sec 1.3.4.1, P30	30. The Developer(s) shall inspect product pipelines regularly and repair any problems, thereby reducing the likelihood of gradual subsidence.	The change ensures pipelines are referred to in a consistent manner.

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45	Page 19, Sec 1.3.4.1, Q	Are the locations of Karst topography known and documented?	
46	Page 19, Sec 1.3.4.1, Q2	The Developer(s) shall not remove existing ground cover within 8 m of known karst areas, where practical , and shall erect a temporary silt barrier and maintain the outer perimeter of the 8-m buffer area during the construction period, where practical .	Locating a pipeline centreline across karst features will be avoided. However, it may not be possible at all times to react to unexpected occurrences occurrences of karst formations.
47	Page 19, Sec 1.3.4.1, Q4	For karst features, such as sinkholes, less than or equal to 0.1 ha in area, the Developer(s) shall not conduct activity within 8 m of the sinkhole rim, where practical .	Locating a pipeline centreline across karst features will be avoided. However, it may not be possible at all times to react to unexpected occurrences occurrences of karst formations.
48	Page 19, Sec 1.3.4.1, Q5	For karst features, such as sinkholes, greater than 0.1 ha in area, the Developer(s) shall not conduct activity within 16 m of the sinkhole rim, where practical .	Locating a pipeline centreline across karst features will be avoided. However, it may not be possible at all times to react to unexpected occurrences occurrences of karst formations.
49	Page 19, Sec 1.3.4.1, Q6	For compound karst features, such as a complex of sinkholes, less than or equal to 0.1 ha in area, the Developer(s) shall not conduct activity within 8 m of the sinkhole rim, where practical .	Locating a pipeline centreline across karst features will be avoided. However, it may not be possible at all times to react to unexpected occurrences occurrences of karst formations.
50	Page 20, Sec 1.3.4.1, Q7	For compound karst features greater than 0.1 ha in area, the Developer(s) shall not conduct activity within 16 m of the sinkhole rim, where practical .	Locating a pipeline centreline across karst features will be avoided. However, it may not be possible at all times to react to unexpected occurrences occurrences of karst formations.
51	Page 20, Sec 1.3.4.1, R1	The Developer(s) shall actively consider all possible science, technology and adaptive management applying reasonable commercial efforts to avoid or minimize fish and fish habitat impacts.	Proven technology, science and management techniques will often be preferred over other available options.
52	Page 20, Sec 1.3.4.1, R2	The Developer(s) shall not be permitted to conduct activities within fish bearing water bodies during critical fish spawning and migration times as set out by the Sahtu Renewable Resources Board and the Department of Fisheries and Oceans, unless permitted by the Sahtu Renewable Resources Board land and water board and the Department of Fisheries and Oceans .	It is important to maintain the option of requesting a harmful alteration, disruption or destruction of fish habitat authorization from DFO.
53	Page 20, Sec 1.3.4.1, R3	The Developer(s) shall time construction activities to avoid sensitive life stages for fish (spawning, incubating, rearing, migration and known over-wintering areas), where practical . Where it is not practical, appropriate mitigation measures must be adopted to minimize effects .	Watercourse crossings cannot completely avoid over-wintering habitat. Where it exists isolated and or horizontal directional drilling crossing techniques will be used to minimize effects. It is important to maintain the option of requesting a harmful alteration, disruption or destruction of fish habitat authorization from DFO.
54	Page 20, Sec 1.3.4.1, R4	The Developer(s) shall not detonate explosives within 15 m of any body of water, which is not completely frozen to the bottom, where practical, or as allowed by DFO .	A watercourse crossing by a pipeline might, in rare circumstances, be required to use explosives in order to execute an open cut or isolated crossing technique. The explosives could be used to support right of way preparation and excavation of a pipeline trench.

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55	Page 20, Sec 1.3.4.1, R5	The Developer(s) shall not remove water from fish-bearing rivers, streams, and natural lakes unless authorized in writing by the Land Use Inspector or the a land and water board. S.L.W.B. (which ever is appropriate).	Transboundary projects might be permitted by the Mackenzie Valley Land and Water Board and not the Sahtu board.
56	Page 20, Sec 1.3.4.1, R6	The Developer(s) shall not remove snow from fish bearing rivers, streams, and natural lakes unless authorized in writing by the Land Use Inspector or the S.L.W.B. a land and water board (which ever is appropriate).	
57	Page 20, Sec 1.3.4.1, R8, & 10	8. The Developer(s) shall not site permanent major facilities within 150 m of fish-bearing streams (excluding main channels) or and water bodies, where practical. -10-The Developer(s) shall not site facilities within 150 m of all other fish-bearing water bodies.-	Major permanent facilities includes eg. compressor stations and gas processing facilities. Generally this requirement is achievable however there might be circumstances where it is necessary to locate facilities within the 150 metre requirement. The new R8 combines R8 & R10.
58	Page 20, Sec 1.3.4.1, R9	9. The developer shall not site permanent major facilities within 800 metres of the banks of main channels, where practical.	Major permanent facilities includes eg. compressor stations and gas processing facilities. Mitigative measures will be used if facilities are located within the 800 metre to prevent negative environmental effects.
59	Page 20, Sec 1.3.4.1, R 11	The Developer(s) shall align road crossings perpendicular or near perpendicular to watercourses, where practical.	The added "where practical" accounts for those circumstances where local terrain makes crossing on a perpendicular basis more difficult.
60	Page 20, Sec 1.3.4.1, R12	The Developer(s) shall be required to collect baseline fish and fish habitat data prior to start up and sample shall use adaptive management for ongoing monitoring periodically during the each phase of development and operations operation of permanent facilities.	
61	Page 21, Sec 1.3.4.1, R 14	The Developer(s) shall construct and maintain all structures placed in streams frequented by fish, in such a manner that will not obstruct passage of fish, except for short durations.	When an isolated watercourse crossing is done to mitigate the effect of the crossing, there might be a temporary obstruction of fish passage.
62	Page 21, Sec 1.3.4.1, R 16	The Developer(s) shall use culverts of a size that will ensure the velocity of the stream flow is not increased where practical.	Culverts will be sized to accommodate the largest anticipated flows, where practical.
63	Page 21, Sec 1.3.4.1, R 17	17. The Developer(s) shall place the bottoms of all culverts installed in streams inhabited by fish at a level that maintains the natural contour of the stream, where practical.	
64	Page 21, Sec 1.3.4.1, S	What is the definition of bird habitat? Are bird habitat areas known and can they be included in the Plan? A map of bird habitat areas should be included in the LUP.	
65	Page 21, Sec 1.3.4.1, S1	The Developer(s) shall conduct clearing of vegetation outside bird nesting and fledging season (April 15 to August 31 for waterfowl, June 1 to July 15 for upland birds, and March May 1 to August 1 for raptors including owls), where practical.	Summer clearing of vegetation will be necessary in some areas of a large development. When summer clearing is required, appropriate mitigation measures will be utilized. The raptor nesting and fledging period is believed to start 2 months after the date indicated.
66	Page 21, Sec 1.3.4.1, S2	For all activities requiring a permit, license or authorization, the Developer(s) shall actively consider all possible science, technology and adaptive management applying reasonable commercial efforts to avoid or minimize bird and bird habitat impacts.	The addition of "reasonable commercial efforts" is intended to increase the acceptance of cost effective mitigation measures using proven technology.

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67	Page 21, Sec 1.3.4.1, S4	The Developer(s) shall not knowingly remove or destroy any tree known to contain an active nest during the upland bird breeding season (June 1 to July 15) ¹⁷ without the prior approval of the land and water board and shall adopt appropriate mitigation measures, to ensure, where practical, that all activities are be conducted in a manner that shall not disturb or harm nesting upland birds. The Developer(s) shall consult with the Canadian Wildlife Service as required.	Most clearing will be done during the winter, however there is likely to be some summer clearing. It will not be practical to avoid disturbing upland birds in all cases but mitigation measures will minimize the disturbance.
68	Page 21 & 22, Sec 1.3.4.1, S6-S8	What is the scientific basis for these setbacks?	
69	Page 21 & 22, Sec 1.3.4.1, S6	6. Except in an emergency, the Developer(s) shall ensure that aircraft maintain a horizontal distance of 3 km from large concentrations of birds.	
70	Page 21, Sec 1.3.4.1, S7	7. The Developer(s) shall ensure that aircraft maintain a minimum altitude of 650 m (agl) when flying all-year-round. The condition should be removed.	Flights will occur within the 650 metres identified in order to allow helicopters to support construction, to conduct routine aerial patrols by fixed wing aircraft or helicopter, and to conduct important low-level aerial reconnaissance to assist in refining construction execution planning details.
71	Page 21 & 22, Sec 1.3.4.1, S8	8. Except in an emergency, the developer(s) shall avoid all known raptor nesting sites by a minimum of 1000 m for disturbances during the species breeding, nesting and fledging period (March 4 May 1 to August 1). A setback distance from known raptor nests, outside breeding, nesting and fledging periods (August to February), is recommended at a minimum of 500 m buffer for high activity disturbances. Other mitigation measures, excluding the above, will be required if raptor nesting sites nests become known only during construction, or in the case of pipeline construction, after the final pipeline centreline alignment has been set.	The setback distance might be difficult to implement whenever raptor nesting sites are discovered late in the construction process. The setback distances should be 1000 metres only when raptors are present.
72	Page 21 & 22, Sec 1.3.4.1, S9	9. Except in an emergency, the Developer(s) shall ensure that all activities (including motorized and non-motorized water vessel use) be limited within a minimum of 250 m of all identified waterfowl staging and colonial nesting areas ¹² , in active use, where practical. Limits should be most strict during breeding, nesting, fledging, and migration seasons. The Developer(s) shall consult with the Canadian Wildlife Service or the relevant resource management authority, as required.	The execution of a summer water course crossing or a summer field study might make this condition difficult to abide by. Most waterfowl nests are widely spaced, the exception being those species that nest in colonies or large concentrations in key habitat areas for nesting, brood rearing and staging. Setback distances developed with regulators and resource managers are appropriate for these areas.
73	Page 22, Sec 1.3.4.1, S10	10. Except in an emergency, the Developer(s) shall ensure that from June 1 to August 31, aircraft over flights avoid identified waterfowl nesting and brood rearing habitat, and from August 15 to September 15, the fall staging areas for waterfowl, by an altitude of 450 m, or a lateral distance of 1.5 km.	
74	Page 21 & 22, Sec 1.3.4.1, S11	The Developer(s) shall ensure that aircraft maintain a minimum altitude of 650 m (agl) when flying over identified waterfowl nesting and brood rearing habitat, all year round. The condition should be removed.	Since waterfowl are not present in the period of roughly mid-September to early May, there is no apparent need to have minimum altitudes. S10 addresses the key time period for waterfowl.

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75	Page 21 & 22, Sec 1.3.4.1, S15	If helicopters are required for operations, the Developer(s) shall ensure that the smallest helicopter possible be used, reducing the noise level and footprint at each site. The condition should be removed.	Safety, availability and load carrying capability dictate the size of the helicopter used for a given task. The proposed requirement places too many restrictions on the operations of the developer.
76	Page 22, Sec 1.3.4.1, S16	If helicopters are required for operations, the Developer(s) shall ensure that the helicopter has remote fuelling capabilities, which would reduce the number of flyovers and disturbance. The condition should be removed.	Aerial transport can be logistically complicated. While there might be fuel caches, it is unrealistic for a developer to have to commit to remote refuelling.
77	Page 22, Sec 1.3.4.1, T	How is ungulate habitat defined? Can a map of ungulate habitat be provided? The Plan also references areas of high use ungulate habitat. How is this defined? A map of ungulate habitat areas should be included in the LUP	
78	Page 23, Sec 1.3.4.1, T3	3. The Developer(s) shall not block access to known not be permitted to conduct activities that block or impede access to known ungulate habitat including calving areas, and winter and summer ranges. The developer will take measures to mitigate, to the extent practical, any impediments to access to these areas.	Construction might impede access to a limited degree, but mitigative measures will minimize this effect.
79	Page 23, Sec 1.3.4.1, T4	4. The Developer(s) shall not be permitted to conduct activities, without the prior written approval of a land and water board , that coincide with important life requisite stages (e.g.: calving). The Developer(s) shall consult with the Canadian Wildlife Service and Department of Environment and Natural Resources as required.	Project planning will help to avoid these important periods, but there might be unique circumstances that require activities in these periods. Mitigative measures will minimize the effect of these activities.
80	Page 23, Sec 1.3.4.1, T5 & T6	5. The Developer(s) shall not be permitted to increase linear disturbance density (for linear disturbances greater than 3 m wide, except for roads) beyond 1 km / 1 square km. 6. The Developer(s) shall not be permitted to increase road linear disturbance density beyond 0.3 km / 1 square km.	The method used to measure linear disturbance density needs to be clarified. Is the 1 km/1 square km referring to an average density applicable to the region? Further, the proposed width of 3 m for proposed linear disturbances will likely make this threshold impractical or prohibitive for potential road and pipeline construction or conventional winter seismic operations.
81	Page 23, Sec 1.3.4.1, T7	7. The Developer(s) shall employ appropriate mitigation measures to restore ungulate habitat to a quality similar to pre-disturbance conditions.	Most developments require that existing trees be cleared and some level of surface contouring. In many cases, it is necessary to keep these cleared areas free of trees and not recontour the surface during operations. Often it is not possible to return the habitat to pre-disturbance conditions and still operate the development.
82	Page 23, Sec 1.3.4.1, T8	8. The Developer(s) shall discourage off-road vehicle use by the public on all new linear accesses, other than highways (i.e. pipelines, seismic lines, and forestry roads) as requested by government and the local community.	Development personnel will utilise project developed access roads. Discouraging public use of linear disturbances will be done when required for safety reasons and when requested by local communities and government.
83	Page 23, Sec 1.3.4.1, T9	The Developer(s) shall ensure all new linear disturbances in ungulate habitat be of minimal width (less than or equal to 3 m width) and limit the line-of-sight from roads.	The condition should be removed. Many developments, such as pipelines, require a minimum width significantly larger than what has been proposed. The minimum width that can be accommodated depends on safety, logistics and constructability considerations.

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84	Page 23, Sec 1.3.4.1, T10	For all activities requiring a permit, license or authorization, the Developer(s) shall actively consider all practical possible science, technology and adaptive management applying reasonable commercial effort to avoid or minimize impacts to ungulate and ungulate habitat.	The addition of "reasonable commercial efforts" is intended to increase the acceptance of cost effective mitigation measures using proven technology.
85	Page 23, Sec 1.3.4.1, T11	The Developer(s) shall ensure all aircraft maintain a minimum altitude of 610 m19 over known caribou habitat year round, and 1000 m* during calving seasons from June 1 — 25 (Barron ground Caribou 11) or a lateral distance of 1.5 km, excluding takeoffs and landings, from caribou concentrations1. (A concentration means numbers of animals in excess of the general density o those animals found in the area). Where safe to do so, a minimum flying altitude of 600 metres above the surface will be maintained in areas where concentrations of caribou occur, unless otherwise established upon consultation with the regional resource manager. Helicopter flight corridors and timing will be established in consultation with the regional resource manager prior to commencement of construction activities.	The restriction is not practical given the support required by helicopter flights during the pipeline construction phase, aerial reconnaissance of the pipeline route during construction, and the flights over the pipeline right of way required during pipeline operations.
86	Page 23, Sec 1.3.4.1, T14	The Developer(s) shall slope the side of excavations and embankments except in solid rock two (2) horizontal to one (1) vertical, unless other wise authorized in writing by the Land Use Inspector. The condition should be deleted.	Developers have the skill and capability to design and construct excavations and embankments with a variety of slope angles that provide a high degree of safety and environmental compliance. The proposed plan should not be so prescriptive that they restrict the developers flexibility to construct safe and cost effective projects.
87	Page 23, Sec 1.3.4.1, T15	The Developer(s) shall remove remediate any spill resulting from salt wastes.	There are no suitable regional landfills to take this material that would guarantee it does not leach into the surrounding environment.
88	Page 24, Sec 1.3.4.1, T17	The Developer(s) shall ensure that operations be suspended or shut down if caribou and/or muskox are spotted within 500m of any work/camp site. Caribou presence and activity in proximity to construction or operations will be monitired by qualified development staff. When caribou come into contact with a development, the situation will be assessed and development activities altered, if deemed appropriate.	Project effects on the presence of caribou can be mitigated if deemed appropriate. More flexibility is required than initially proposed.
89	Page 24, Sec 1.3.4.1, T18	18. The Developer(s) shall make the windrow of brush and debris lie flat and compact by bucking the material into suitable lengths and lopping the branches from the stem. The developer shall adopt appropriate mitigation measures regarding the use of windrows for brush and debris in areas of ungulate habitat as determined by regulatory authorities.	The condition suggested allows for additional flexibility in achieving the objective not to restrict caribou movement.
90	Page 24, Sec 1.3.4.1, T19	19. The Developer(s) shall not pump groundwater into areas known to be important ungulate habitats, where practical .	Pumping groundwater into known ungulate habitat areas might be unavoidable in some circumstances.
91	Page 24, Sec 1.3.4.1, T20	20. The Developer(s) shall not pump groundwater during periods that coincide with important life requisite stages (e.g.: calving), where practical . The Developer(s) shall consult with the Canadian Wildlife Service and Department of Environment and Natural Resources as required.	Pumping groundwater into known ungulate habitat areas might be unavoidable in some circumstances.

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92	Page 24, Sec 1.3.4.1, T22	22. As to avoid contamination of ungulate habitat and drinking water sources, the Developer(s) shall not pump groundwater into receiving environment without undergoing necessary and appropriate treatment as directed by the Land Use Inspector or the S.L.W.B. (which ever is appropriate).-The condition should be removed.	The quality of pumped water will vary. Some might just be ground water pumped from excavations which can be released untreated. As circumstances might vary, this provision should not be so specific.
93	Page 24, Sec 1.3.4.1, T24	The Developer(s) shall maintain seasonal no-fly zones for helicopters and fixed-wing aircraft that are a minimum 2,000 m horizontal and vertical distance from known goat habitats, as identified by an appropriately qualified professional, unless goats are separated by a physical barrier that would minimize disturbance levels (e.g., mountain or terrain block)-The condition should be removed	The restriction is not practical given the support required by helicopter flights during a pipeline construction phase, aerial reconnaissance of a pipeline route during construction, and the flights over a pipeline right of way required during pipeline operations.
94	Page 24, Sec 1.3.4.1, T25	If helicopters are required for operations, the Developer(s) shall ensure that the smallest helicopter possible be used, reducing the noise level and footprint at each site.-This condition should be removed.	Safety, availability and load carrying capability dictate the size of the helicopter used for a given task. The proposed requirement places too many restrictions on the operations of the developer.
95	Page 24, Sec 1.3.4.1, T26	26. If helicopters are required for operations, the Developer(s) shall ensure that the helicopter has remote fuelling capabilities, which would reduce the number of flyovers and disturbance.	Aerial transport can be logistically complicated. While there might be fuel caches, it is unrealistic for a developer to have to commit to remote refuelling.
96	Page 24, Sec 1.3.4.1, T27	27. The Developer(s) shall maintain a minimum of 500 m from high ungulate (moose, sheep) use areas, where practical , such as wetlands, winter and summer habitats as identified in the field by appropriately qualified professionals.	Since moose are wide ranging but predictably are most common in association with wetland and shrub habitat any time of year, this setback might be difficult to work with. Disturbance will be mitigated to these habitats, when encountered or identified with a qualified professional by moving through as quickly as possible and containing activities as much as possible to the identified work area. These areas will also be avoided, where practical, for access and other construction support.
97	Page 25, Sec 1.3.4.1, U3	3. The Developer(s) shall not be permitted to conduct activities that coincide with important life requisite stages (e.g.: denning). The Developer(s) shall consult with Department of Environment and Natural Resources as required regarding developer activities that coincide with important life requisite stages (eg. denning).	Work cannot be stopped in the event that animal dens are encountered, however, consultation with ENR might assist with minimizing effects on denning animals.
98	Page 25, Sec 1.3.4.1, U5, U6	5. The Developer(s) shall burn garbage and debris in a container acceptable to a Land Use Inspector. 6. The Developer(s) shall burn garbage and debris at least daily.	Waste management is an important component of any development. The optimum way to dispose of garbage depends on the garbage type. In some cases it is preferable to not burn the garbage. The frequency of garbage disposal should depend on the disposal method.
99	Page 25, Sec 1.3.4.1, U7	7. As they are used by denning furbearers, the Developer(s) shall detour around all sand hills, unless otherwise authorized in writing by the Land Use Inspector. This condition should be deleted.	The route of linear projects are subject to many technical and environmental considerations. The routing is reviewed extensively in a regulatory process culminating in an approval for a specific route. Sand hills are only one of the important ant considerations when arriving at the optimum route.

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100	Page 25, Sec 1.3.4.1, U9, U10, U11	9. The Developer(s) shall not destroy or damage beaver dams, unless prior notification and consultation is conducted with hunters and trappers associations, and the appropriate regulatory authorities. 10. The Developer(s) shall not drain water from any water body with an active beaver house, unless prior notification and consultation is conducted with hunters and trappers associations, and the appropriate regulatory authorities. 11. The Developer(s) shall not destroy or damage muskrat lodges, unless prior notification and consultation is conducted with hunters and trappers associations, and the appropriate regulatory authorities.	It is not always practical to avoid beavers or their dens and dams but through effective mitigation the effects can be minimized. Consultation with the hunter's and trapper's associations and the regulators will help identify optimum mitigation measures.
101	Page 25, Sec 1.3.4.1, U12	The Developer(s) shall ensure that exploration and production activities not be conducted near within 800 m of known occupied grizzly bear dens.	The no activity buffer zone requires flexibility to recognize unique development circumstances.
102	Page 25, Sec 1.3.4.1, U13, U14	13. The Developer(s) shall not be permitted to pump groundwater into areas known to be important furbearer habitats, unless approved by the appropriate regulatory authority. 14. As to avoid contamination of furbearer habitat and drinking water sources, the Developer(s) shall not pump groundwater into receiving environment without undergoing necessary and appropriate treatment as directed by the Land Use Inspector or the S.L.W.B. (which ever is appropriate)-	The pumping of ground water must be evaluated to ensure that there will be no significant harmful environmental effect. The effect from the ground water pumping depends on the source of the ground water, its quality and the ultimate disposal location. This design should be left to the developer to establish and be subject to any necessary regulatory process.
103	Page 25, Sec 1.3.4.1, U15	If helicopters are required for operations, the Developer(s) shall ensure that the smallest helicopter possible be used, reducing the noise level and footprint at each site. This condition should be removed.	Safety, availability and load carrying capability dictate the size of the helicopter used for a given task. The proposed requirement places too many restrictions on the operations of the developer.
104	Page 26, Sec 1.3.4.1, U16, U17	16. If helicopters are required for operations, the Developer(s) shall ensure that the helicopter has remote fuelling capabilities, which would reduce the number of flyovers and disturbance. 17. The Developer(s) shall ensure that helicopter and fixed wing flight altitudes maintain a minimum of 650 m over grizzly bears present during operations. The Developer(s) shall maintain a minimum of 500 m, from high ungulate (moose, sheep) use areas, such as wetlands, winter and summer habitats as identified in the field by appropriately qualified professionals.	16. Aerial transport can be logistically complicated. While there might be fuel caches, it is unrealistic for a developer to have to commit to remote refuelling. 17. Flights will occur within the 650 metres identified in order to allow helicopters to support construction, to conduct routine aerial patrols by fixed wing aircraft or helicopter, and to conduct important low-level aerial reconnaissance to assist in refining construction execution planning details.
105	Page 26, Sec 1.3.4.1, U18	The Developer(s) shall maintain a minimum of 500 m, from high ungulate (moose, sheep) use areas, such as wetlands, winter and summer habitats as identified in the field by appropriately qualified professionals.	Delete, is a duplicate of T27.
106	Page 26, Sec 1.3.4.1, W1	What is meant by "heavily monitor"?	
107	Page 26, Sec 1.3.4.1, Y1	1. The Developer(s) shall use existing barge landings where practical whenever possible.	The use of barge landings has to consider many issues such as logistic requirements, environmental effects, cost and schedule implications.
108	Page 26, Sec 1.3.4.1, Y2	The Developer(s) shall time barging and dredging for the spring when water levels are higher to limit the extent of dredging. The condition should be removed.	Large development projects require the full barge season to transport the equipment and materials to the barge landing sites.

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109	Page 27, Sec 1.3.4.1, Z1	The Developer(s) shall ensure that there will be no extraction of aggregate within 1.5 meters of the water table.	Large developments require that aggregate be obtained from a variety of sources. While typically these excavations will be above the water table, there might be circumstances where lower excavations are required. Through proper mitigation, the effects of these excavations can be minimized.
110	Page 27, Sec 1.3.4.1, Z2	The Developer(s) shall ensure aggregate operations are conducted at a minimum distance of 100 m from any watercourse or wetland and 200 m from any wetland of conservation value, unless otherwise authorized in writing by the Land Use Inspector or a land and water board the S.L.W.B. (which ever is appropriate), where practical. These separation distances shall maintain a minimum buffer of 50 m undisturbed vegetation, where practical.	Most offset distances determined during construction execution planning have been in the range of 35 to 60 metres from the limits of waterbodies. "Environmental Guidelines Pits and Quarries" prepared for Land Resources, Northern Affairs Program, 1982, indicates that quarry pits should be located at least 30 metres away from a water body.
111	Page 27, Sec 1.3.4.1, Z4	4. In order to minimize sedimentation and turbidity problems, the Developer(s) shall ensure that water leaving aggregate operations be treated in a manner approved by the Land Use Inspector or the S.L.W.B. (which ever is appropriate).— Appropriate sediment & erosion control measures must be put in place to prevent sedimentation of water bodies for water leaving aggregate operations.	"Environmental Guidelines Pits and Quarries" prepared for Land Resources, Northern Affairs Program, 1982, does not indicate any requirement for treatment of water draining from aggregate extraction sites.
112	Page 27, Sec 1.3.4.1, Z6	The Developer(s) shall ensure that all gravel extraction activities for a single project are located on the same side of the floodplain in order to eliminate the need for crossing active channels with heavy equipment, where practical.	Large projects require additional flexibility when selecting appropriate borrow site locations. The locations chosen will be subject to the approval of a land and water board.
113	Page 27, Sec 1.3.4.1, Z7	7. The Developer(s) shall ensure that extraction of aggregate from the soil will be completed as quickly as possible, where practical.	Large developments often require aggregate from a specific source over multiple years.
114	Page 27, Sec 1.3.4.1, Z13	13. The Developer(s) shall address cumulative impacts on fish and fish habitat caused by multiple extractions and sites along a given river or stream and shall be incorporated into any gravel management plan. Effects on fish and fish habitat as a result of gravel site development shall be mitigated and managed according to legislative requirements provided by the Department of Fisheries and Oceans (DFO).	DFO has the responsibility for fisheries management.
115	Page 28, Sec 1.3.4.2, A	Through the conditions they attach to permits, licenses and other authorizations in Special Management Zones, the Sahtu Land & Water Board a land and water board and other appropriate authorities shall in addition to complying with Special Management Zone Prohibitions and Condition in 1.3.4.1, ensure that each authorized party or the prospective assignee of that party:	The cross reference indicated was incorrect.
116	Page 29, Sec 1.3.5.1, 1-3	What is the scientific basis for the proposed setbacks?	
117	Page 29, Sec 1.3.5.1, 1	Activities should demonstrate that there will be no adverse effects on active raptor nesting sites from the beginning of May 1 March to the mid August.	March and April are prime winter constructing months for developers and peregrine falcon and raptor nests are unlikely to be active at this time.
118	Page 29, Sec 1.3.5.1, 2	Active, raptor nesting sites should be avoided by a minimum of 1000 meters, where practical.	Avoidance of raptor nesting sites will be difficult if new nests appear after a pipeline corridor has been set.

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119	Page 29, Sec 1.3.5.1, 3	Aircraft should maintain a minimum altitude of 650 meters when flying over known areas likely to have nesting raptors, where practical.	Likely nesting raptor sites could be rather extensive, potentially resulting in the disruption of project construction and operations. Mitigation focussed on known raptor nesting sites is more practical.
120	Page 65, Sec 4.1.12 Smokes Conservation Zone	The Smokes Conservation Zone. Some details should be provided indicating why this is a conservation zone and the natural setting to be protected.	The zone might conflict with proposed development. We might request that the zone be changed into a special management zone.
121	Page 66, Sec 4.1.15, Tate and Stewart Lake Conservation Zone	Access for water withdrawal purposes should be allowed in the Tate and Stewart Lake Conservation Zone.	Stewart and Tate Lakes are water sources that operators depend upon for ice road construction in the area. The inability to use water, or even restricted water withdrawal from either of these lakes would have a serious impact on future projects in the area and would likely make them uneconomical enough that there would be a strong likelihood of projects being cancelled.
122	Page 63, 4.1.9-4.1.16, Conservation Zones	The Conservation zones listed here are shown to be 75km Northwest of Tulita and to have an approximate area of 29sq. kms or their area and distance from Tulita is not provided. These areas need to be very specific in their location and overall area. Provide accurate distance and areas for the Conservation zones	