Significant Values and Mitigative Measures Options

The following table was developed in response to potential habitat, wildlife, tourism and heritage concerns that were identified during the gathering of information that was held prior to the Call for Nomination. It is a working document intended to identify mitigative measures which could be applied if when there is a development project proposed in an area with identified ecological and cultural values. The list is not comprehensive and it is acknowledged that industry may identify additional values and/or alternative mitigative measures options.

Ecological/Cultural Values	Description/concern	Options for Mitigative Measures
Bear Feeding (Fall)	Description: Berry patches, salmon spawning streams Concern: Important fall food source, may result in surprise encounter with end result being a dead bear	• No hunting by company personnel • Avoid oil and gas exploration within bear feeding areas during fall months berry patches/salmon bearing streams • Dogleg seismic lines at the junction of roads to reduce mortality from increased visual ability from hunters • Clean camp, proper garbage management and bear deterrent plan • Electric fencing for camp when in areas of high bear density/activity • Bear awareness training should be provided for all personnel
Bears (Grizzly) Spring and Fall	Description: found on roadsides in spring where vegetation is often first available Concern: Hunting pressure and disturbance by work crews in the area.	• No hunting by company personnel • Avoid oil and gas exploration within bear feeding areas during fall months berry patches/salmon bearing streams • Dogleg seismic lines at the junction of roads to reduce mortality from increased visual ability from hunters • Clean camp, proper garbage management and bear deterrent plan • Electric fencing for camp when in areas of high bear density/activity • Bear awareness training should be provided for all personnel

Ecological/Cultural Values	Description/concern	Options for Mitigative Measures
		• Explore mitigative measures options for reducing disturbance to denning bears
Beaver Key Habitat (All seasons)	Description: Beavers live in streams, rivers, marshes, and lakes near suitable food sources (willows and aspens). Concern: seismic disturbance on frozen ponds and lakes from shotholes	• Development activities which destroy or damage beaver dams will not be permitted. • Seismic setback from frozen lakes and ponds • Increased shot hole depth and reduced charge to eliminate disturbance and potential mortality.
Bonnet Plume Heritage River	Description: Heritage river program objectives include: • Raising public awareness of a river's heritage values • Seeking recognition of the need for integrated resource management to preserve such values • Ensuring a river management plan is prepared to that end The Bonnet Plume was selected primarily for its natural heritage values. The Plan stipulates a "higher duty of care" including the adoption of an ecosystem approach to resource management, a cooperative and watershed approach to planning and EA. Advanced consultation and shared research is also recommended. Concerns: • That the natural and human heritage resources of the Bonnet Plume River watershed be conserved and managed. • That the recreational and heritage appreciation opportunities be maintained.	• Decisions regarding development in the Bonnet Plume will be subject to greater involvement from representatives of all resource interests • Advanced consultation and high consideration for consultation results in this area • Exploration and seismic will be set back 50m from water and watercourses. Drilling and production will be set back 100m from water and watercourses. There is a zero tolerance for sediment or toxic substance discharge into natural water features. • Noise from drilling projects, production and transportation will be minimized wherever possible. • Minimize visual impact within the viewscape of the river through the use of low impact seismic and careful planning of drilling projects. • Restrict development to months with no tourism
Caribou (Barren-ground)	Description: Winter range for barren-ground caribou is considered key. Large expanses of the North Yukon are considered wintering grounds for these caribou. Concerns: Migratory route could be disrupted by human traffic and exploration	• Low-impact seismic practices to be used within important areas of caribou wintering habitat • Environmental/wildlife monitors to monitor for wildlife habitat in the area and ensure that work crews are offsite if wildlife is headed through

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	activities. Linear disturbances may increase predation by natural predators and hunters. Caribou may be disrupted and leave important habitat used as feeding areas in winter months when food is scarce	• Restrict access for all exploration work to helicopter, existing trails or winter roads. Any roads which are developed should be decommissioned after use. • Seek community support to prohibit the public use of winter roads and linear corridors created through oil and gas activities. • Minimize linear disturbance through the use of meandering low-impact seismic, narrow cutlines and heli-portable
Caribou (Woodland) Migration Corridor/Winter Range	Description: As winter progresses, woodland caribou become particularly vulnerable. Deep, hard packed snow interferes with feeding, makes travelling difficult, and under certain conditions can inhibit escape from predators. Snow conditions become more unfavourable for woodland caribou as winter progresses. In response, they move along traditional routes or migration corridors to forests and, in moderate winters, subalpine shrub areas where snow conditions are less sever and where lichens, there primary food, are more readily available. Concerns: Migratory route be disrupted by human traffic and exploration activities. Linear disturbances may increase predation by natural predators and hunters. Caribou may be disrupted and leave important habitat used as feeding areas in winter months when food is scarce	• Restrict access for all exploration work to helicopter, existing trails or winter roads. • Minimize linear disturbance through the use of meandering low-impact seismic, narrow cutlines and heli-portable • Encourage access during production by helicopter, existing trails or winter road. • Where a permanent road is necessary, all precautions will be taken to minimize the impact on habitat. Any permanent roads will be private roads for company use only. • Any winter roads for seismic or drill sites to have access roads restricted to private roads
Deer (all seasons)	Description: south facing slopes during late winter and spring Concern: feeding areas important during this vulnerable time period	• No disturbance in these locations
Fish	Description: In North Yukon freshwater fish populations are not well studied. All waterbodies and watercourses are thought to contain healthy populations of freshwater fish.	• Prohibition on disruption of fish and fish habitat without authorization (Sec 32 and 35(1) *Fisheries Act*)

Ecological/Cultural Values	Description/concern	Options for Mitigative Measures
	Within the Whitehorse Trough area, most lakes support populations of lake trout, northern pike, whitefish and other species. Many of these populations support important recreational and subsistence fisheries. The waterways support Arctic grayling, northern pike and inconnu, as well as other species. Concerns: Protection of riparian areas – minimum setback Protection of water quality parameters required by fish Several of the lakes in the Whitehorse Trough area have fishing lodges/camps and are actively utilized. These could potentially be negatively impacted by oil and gas activities. Access management is a major concern, in addition to the possible fishing pressure placed on resources by staff of exploration crews. Water withdrawls from streams and lakes can reduce habitat availability. Seismic activity (shotholes) on frozen ponds/lakes may negatively affect fish	• Legal requirement to provide sufficient water flow (sec 22, *Fisheries Act)* • Zero tolerance for sediment or toxic substance discharge into natural water features. • Legal intake screening requirement when drawing from fish bearing waters (Sec 22 *Fisheries Act*) • Restrict access in order to avoid increased fishing • Prohibit fishing by industry personnel and ensure that current regulations and catch and possession limits are adhered to. • Seismic setback from fish bearing waters • Deeper shotholes and reduced charge for seismic on frozen fish bearing waters
Heritage Sites	Description The majority of Yukon's history is preserved only in the form of stone tools and debris and the elusive traces of ancient camps buried in the ground. For the most part, archaeological sites in the Yukon lie within the upper 20 – 30 cm of soil. Many regions in the Yukon have never been systematically inventoried for heritage resources. Dense forest cover, permafrost and lack of access result in standard heritage resource impact assessment being both difficult and costly. Historic resources are protected from disturbance under the Yukon Act – Archaeological Site Regulations and the Yukon Historic Resources Act.	• Traditional and historic sites, trails and resource areas should be mapped and buffered (minimum 30m) from oil and gas activities. Burial sites may require a management plan, to be jointly developed by the First Nation and the Government of Yukon. • The following areas should be identified through air photos and mapped for exclusion from development activities by a qualified archaeologist familiar with the archaeological record in the Yukon. - lands bordering water bodies, and of very high potential: stream confluences, lake inlets and outlets, lake narrows, points. A minimum 30 m buffer from the high water mark is required; a 100 m buffer for larger rivers and lakes.

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	Concern: The impacts on heritage resources lie principally in activities which result in alterations to the ground, for example roads, stream crossings, mechanical clearing and drill holes.	- elevated portions of the landscape - look-out sites: knolls, ridges, terraces, hills. Outcrops and exposed bedrocks (including shales, cherts, chalcedony and agate), are potential quarry areas. A 30 m setback from the edges of topographic prominences will address the protection of potential heritage sites in these locations. • Information on patterns of traditional land use must be obtained with the cooperation of the affected First Nation. Documentation of traditional sites must be presented in map form. At the request of the First Nation, this information may be kept confidential, although locational information must be available for the regulatory agencies. A qualified archaeologist or anthropologist should be contracted to assemble this information with the First Nation. • Overview inspections of the development area should include the participation of First Nation elders and/or individuals familiar with traditional sites and features.
Mineral Lick	Description: Mineral lick sites are thought to be discovered initially by chance by moose, sheep, goats and deer and are subsequently visited frequently to obtain mineral elements which are presumably not in sufficient supply in their food. Lick sites are usually surrounded by an extensive network of trails. Concern: Oil and gas activities in and around mineral licks may result in animals avoiding the area and as a result experience greater stress and lacking the intake of the important minerals that they access at the mineral licks	• Stay 1 km away from important mineral licks from 15 April-30 July, recognizing that the licks may be used year round and caution should be taken at all times. • Trails and travel routes should be identified and avoided. • Environmental/wildlife monitors to monitor wildlife habitat and ensure that work crews are offsite if wildlife is headed through • Low-impact seismic practices to be used within the surrounding area •
Moose (All Seasons)	Description: In the north Yukon, year-round range is considered key for moose, because suitable habitat is limited. In a landscape dominated by tussock tundra and where forested areas are scarce, moose are found primarily in forest and shrub habitats throughout the year. This habitat type is mainly limited to narrow bands along rivers, streams and gullies,	• Minimize linear disturbance through the use of meandering low-impact seismic, narrow cutlines and heli-portable. • Encourage access during production by helicopter, existing trails or winter road.

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	and represents only about 5% of the North Slope landscape. Concern: Because it is very limited in the northern Yukon, direct habitat loss or displacement from suitable habitat will likely have a negative impact on moose abundance Linear disturbances may increase predation by natural predators and hunters. Moose may be disrupted and leave important habitat used as shelter and feeding areas in winter months when food is scarce	• Avoid activities in areas of important moose habitat along rivers, streams and lakes to minimize direct loss of habitat or displacement from it. • Avoid the creation of new trails and access roads that can be used by hunters to access remote areas • Where a permanent road is necessary, all precautions will be taken to minimize the impact on habitat. Any permanent roads will be private roads for company use only. • Where a permanent road is necessary, all precautions will be taken to minimize the impact on habitat. Any permanent roads will be private roads for company use only.
Moose Breeding (August to October)	Description: Concern: Linear disturbances may increase predation by natural predators and hunters. Moose may be disrupted and leave important pre-rut, rut and post rut habitats. This could result in reduced pregnancy rates.	• Avoid oil and gas activities in these areas during breeding months. • Minimize linear disturbance through the use of meandering low-impact seismic, narrow cutlines and heli-portable. • Do not overfly these areas at low level during breeding period. • Where a permanent road is necessary, all precautions will be taken to minimize the impact on habitat. Any permanent roads will be private roads for company use only.
Moose Calving (May and June)	Description: The traditional use of calving sites by adult cows is important. For example, some islands seem to be heavily used for calving by moose. Since these sites are not usually identified during moose surveys, this information is dependent on local knowledge. Shallow lakes and ponds with emergent vegetation are important moose feeding sites in late spring and summer Concern: Displacement from important calving areas will likely result in increase calf	• Identify important moose calving sites • Avoid oil and gas activities in moose calving areas from May to June. • Minimize linear disturbance through the use of meandering low-impact seismic, narrow cutlines and heli-portable. • Where a permanent road is necessary, all precautions will be taken to minimize the impact on habitat. Any permanent roads will be

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	mortality. Mortality in adult cows attempting to defend their calves is also likely to increase. Linear disturbances may increase predation by natural predators and hunters.	private roads for company use only. • Avoid activities around shallow ponds and lakes that may be moose feeding sites between may and September • Do not establish camps or bases of operation around these lakes
Moose Late Winter	Description: Winter can be a stressful season for moose as they are affected by the difficulties of travelling through deep snow and having to dig to reach the shrubs on which they feed. Late winter range is key during years of significant snowfall (i.e. greater than 70cm). Identifying and protecting late winter ranges is necessary to provide moose with safe areas to weather these difficult times. River valleys are typical of late winter habitats. The bands of shrubs and poplar near the river provide browse for the moose. Associated mature spruce forests with dense canopy which intercepts snow and provides travel corridors and shelter cover for moose. Concern: Linear disturbances may increase predation by natural predators and hunters. Moose may be disturbed and leave important habitat used as shelter and feeding areas in winter months when food is scarce and travel difficult. This would likely result in increased over winter mortality	• Identify late winter range moose habitat and avoid oil and gas activities in these areas during late winter. • Avoid oil and gas exploration in these areas during high snow fall years. • Minimize linear disturbance through the use of meandering low-impact seismic, narrow cutlines and heli-portable. • Where a permanent road is necessary, all precautions will be taken to minimize the impact on habitat. Any permanent roads will be private roads for company use only.
Muskrat (all seasons)	Description: The muskrat generally inhabits wetlands with an abundant supply of aquatic vegetation such as swamps, marshes, lakes, ponds, and slow-moving streams. Concern: Seismic activity on lakes and ponds may negatively affect muskrats	• Oil and gas development activities which destroy or damage muskrat lodges will not be permitted. • Explosives will not be detonated within 15 metres of any body of water which is not completely frozen to the bottom.
Raptor Summer Nesting	Raptors such as Gyrfalcon, Peregrine Falcons, Golden Eagle, Bald Eagle and Osprey are highly vulnerable to disturbance. Nest sites are used from	• Avoid oil and gas activities within areas of raptor habitat during months in which raptors are nesting.

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	March to August, with some variation depending on the species. Disturbance within two kilometres of raptor nest can damage breeding success. These raptors tend to use the same nest every year. Concern that nesting raptors and young are disrupted by increased human traffic and noise. Concern that operational wells, including potential sour gas wells and associated air-borne pollutants could have a significant negative impact on raptor productivity. Concern for degradation and loss of habitat.	• no development or activity within at least 1 km of a raptor nest • Minimize disturbance within the areas of raptor habitat (identified by Department of Environment). • Undertake studies in areas of known raptor habitat to determine locations of nests and surrounding habitat. • Gyrfalcons are present year round and care should be taken to avoid impacts on them and their habitat.
Riparian Corridor	Description: Riparian corridors are well-established sources of biodiversity, biological productivity, and are essential in ecosystem function. Concerns: Degradation and loss of habitat Riparian corridors have in the past been used for transportation corridors that causes damage to the habitat and increased access. Permafrost issues should be taken into special consideration. There is sensitive habitat within riparian corridors which should be identified and avoided.	• Exploration and seismic will be set back 50m from water and watercourses. Drilling and production will be set back 100m from water and watercourses. Setbacks could be larger if additional concerns are raised regarding the sensitivity of the riparian zone. • There is a zero tolerance for sediment or toxic substance discharge into natural water features. • Where development is planned to occur within riparian corridors, studies should be undertaken to determine where there is sensitive habitat. • Sensitive habitat should be avoided. • Trained wildlife monitors could be trained to identify sensitive habitat and ensure that activities are conducted to minimize or avoid impacting these areas.
Sheep Fall Rut	Small groups of sheep use rutting, or mating, grounds in early winter. The locations and physical characteristics of rutting grounds are not well known. Preventing the disturbance of these rutting groups is important to ensure successful reproduction.	• Prohibit activities within 1 km of sheep rutting areas from 15 Nov-15 Dec • Avoid snow compaction prior to this time period in order to reduce increased predation.
Sheep Migration Corridor	Description: Sheep travel along well-worn migration routes to access summer and winter ranges, mineral licks and other key habitats.	• Identify and prohibit disturbance of migratory trails

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	Concern: If there is significant disturbance along these migration trails or if the trails themselves are destroyed, sheep populations could be prevented from reaching important areas within their total range.	• Monitoring for wildlife required in areas surrounding known sheep habitat to monitor wildlife habitat and ensure that work crews are offsite if wildlife is in the area
Sheep Spring Lambing	Lambing occurs between May and June 15thand is a key time of year for ewes and lambs. During lambing, they are vulnerable to predation. To avoid predators, ewes will give birth on steep cliff faces. These areas are used traditionally for lambing but may also be used as predator escape terrain during other seasons. Disruption of lambing by oil and gas exploration or development. Concern regarding increased access into areas of sheep habitat resulting in increased hunting and general disturbance.	• Prohibit oil and gas exploration activities within 1km of sheep spring lambing habitat from May 1st to June 15th • Minimize habitat disturbance • No aircraft overflights • Monitoring for wildlife required in areas surrounding known sheep habitat to monitor wildlife habitat and ensure that work crews are offsite if wildlife is in the area
Sheep Winter Range	Description: Generally, winter ranges are found on steep, south-facing slopes where strong winds and sunshine prevent snow accumulation. As winter progresses, sheep are confined and concentrated into these smaller snow-free, wind blown areas where forage is available. Concerns: That sheep will be disrupted and leave these forage areas during winter months when food is scarce. Habitat alteration (e.g. drill pads, trenching, etc.) is a concern at any time of year on the actual slopes that make up winter range. If the physical characteristics of the hillside are changed, snow may accumulate rather than be blown free. Increased access into areas of sheep habitat resulting in increased hunting and general disturbance. Concern that habitat may be disturbed.	• Avoid oil and gas exploration activities during the winter months within 1 km of sheep winter range • Avoid over-flying the area • Prohibit the alteration of physical characteristics of the hillsides, as snow may accumulate rather than be blown free • Monitoring for wildlife required in areas surrounding known sheep habitat to monitor wildlife habitat and ensure that work crews are offsite if wildlife is in the area
Tourism – established	Description	• Consult with trail users prior to utilizing them for oil and gas

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trails	Trails are primarily important from a Wilderness Tourism perspective for winter activity related such as mushing, although some trails are used for summer activities. Some wilderness tourism operators may not want trails to be used as access for oil and gas development. Trails are primarily used in winter and with some also used in summer. Concern The primary concern surrounding trails is related to potential damage to trail due to use as access for oil and gas exploration and development. In addition, wilderness tourism operators do not want increased access or loss of wilderness quality surrounding these trails.	exploration or development. • Minimize visual impact within the viewscape of the trails through the use of low impact seismic and careful planning of drilling projects.
Tourism - Lakes	Description: Remote fly-in lakes are used for high quality fishing and also as put-ins for wilderness river/hiking trips. They are also important locations for wildlife viewing values. Open water generally June to October but some resident use for winter activities – snowmobiling, skiing, dogmushing, ice fishing. Road accessible lakes generally used for camping/fishing. Higher number of users, more resident. More hunting by residents. Concerns The overall concern is that the wilderness tourism experience could be affected by increased access, increased sedimentation, noise, loss of habitat and visual scaring of the landscape along wilderness tourism viewscapes.	• Restrict access for all exploration work to helicopter, existing trails or winter roads. Most production access will also be by helicopter, existing trails or winter road. Where a permanent road is necessary, all precautions will be taken to minimize the impact on wilderness tourism values. Any permanent roads will be private roads for company use only. • Exploration and seismic will be set back 50m from water and watercourses. Drilling and production will be set back 100m from water and watercourses. There is a zero tolerance for sediment or toxic substance discharge into natural water features. • Noise from drilling projects, production and transportation will be minimized wherever possible through by buffering and carefully considering options for locations. • Minimize visual impact within the viewscape of the lake through the use of low impact seismic and careful planning of drilling projects. • Restrict development to months with no tourism
Tourism – Lodges, back country cabins and camps	Description Usually located on lakes and can vary from small tent frames to high-end	• Identify and avoid lodges, back-country cabins and camps

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	eco/fishing lodges used for winter tourism, mushing, snowmobiling and skiing. To date they are mostly fly-in locations. Can involve huge investment for high end lodge. Fishing, day trips and wildlife viewing are all activities which take place from lodges, cabins and camps. These areas are used from June to September and December to April. Concerns The overall concern is that the wilderness tourism experience could be affected by increased access (leading to over-fishing and over harvesting), noise, loss of habitat and visual scaring of the landscape surrounding lodges/back country cabins/camps.	• Restrict access for all exploration work to helicopter, existing trails or winter roads. Most production access will also be by helicopter, existing trails or winter road. Where a permanent road is necessary, all precautions will be taken to minimize the impact on wilderness tourism values. Any permanent roads will be private roads for company use only. • Noise from drilling projects, production and transportation will be minimized wherever possible through by buffering and carefully considering options for locations. • Minimize visual impact within the viewscape of lodges, cabins and camps through the use of low impact seismic and careful planning of drilling projects. • Restrict development to months with no tourism
Tourism – River Corridors	Description: River Corridors are travel routes that are used for day/multiday expedition style trips. These trips include canoeing, rafting, kayaking, motorized boating and day hiking from river-side camps, fishing, wildlife and bird watching. This is the most popular commercial wilderness activity in the Yukon. Open water is generally found from May to October depending on location in the territory. Concern: Wilderness tourism experience would be affected by increased access, increased sedimentation, noise, loss of habitat and visual scaring of the landscape along wilderness tourism viewscapes.	• Restrict access for all exploration work to helicopter, existing trails or winter roads. Most production access will also be by helicopter, existing trails or winter road. Where a permanent road is necessary, all precautions will be taken to minimize the impact on wilderness tourism values. Any permanent roads will be private roads for company use only. • Exploration and seismic will be set back 50m from water and watercourses. Drilling and production will be set back 100m from water and watercourses. There is a zero tolerance for sediment or toxic substance discharge into natural water features. • Noise from drilling projects, production and transportation will be minimized wherever possible through by buffering and carefully considering options for locations. • Minimize visual impact within the viewscape of the river through the use of low impact seismic and careful planning of drilling projects.

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		• Restrict development to months with no tourism
Territorially significant Wetlands	Description: Large wetland complexes are found in the northern basins and plateaus. Wetlands in the mountains of the Yukon are typically small and scattered. Wetlands help maintain water quality, trap sediments, and absorb toxic metals and chemicals[1]. Some wetlands are among the most productive ecosystems in the world, although they are best known for their abundance of waterfowl. Many freshwater fish species spawn in wetlands or use wetlands for nurseries. During spring and summer, Yukon moose use wetlands where there is an abundance of cover and high quality food. Other species, such as muskrat, mink, beaver, pike and many micro-organisms are permanent wetland residents. Key wetlands such as Tabor Lakes, Turner Lakes, Jackfish Creek headwaters, and Vittrekwa River wetlands have been found to support productive and diverse songbird and shorebird communities. These communities are unique in the Yukon with one species that is not known from any other Yukon location. Concerns: • That wetland habitat will be effected, reduced or contaminated resulting in negative impacts for migratory and resident birds and wildlife which depends on wetlands habitat for food and water. • Habitat loss and degradation, physical disturbance to breeding and migrant birds. • Concern that operational wells, including potential sour gas wells and associated air-borne pollutants could have a significant negative impact on ecosystem health, as well as songbird and shorebird productivity.	• Conduct wetlands studies in the summer months in order to classify wetland habitat and determine its location. • Restrict oil and gas exploration activities to winter months • Prohibit oil and gas exploration in near waterfowl habitat where and when water is not completely frozen. • Exploration and seismic will be set back 50m from water and watercourses. Drilling and production will be set back 100m from water and watercourses. There is a zero tolerance for sediment or toxic substance discharge into natural water features. • Develop and follow environmental/Best Practices guidelines in these locations. • Wildlife monitors on site to identify and assure the avoidance of wetland habitats.

[1] " Wetland benefits are not provided by wetlands in isolation from the surrounding landscape. Wetlands are part of larger ecosystems that function together, interdependently. Developments that are not directly on a wetland but that affect the local hydrologic regime, for example, may also affect the wetland. In addition, some wetland values, such as the production of waterfowl, are inseparable from associated uplands. Conserving wetlands requires an understanding of how wetlands function within the larger ecosystem, and within watersheds. Wetland conservation refers to activities that maintain the functions, values and benefits of wetlands in a landscape context."

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	• Concern that increase land-sale parcels will compromise future potential for wetland conservation, habitat protection areas, and set-asides. • Concern for impacts of water quality both at specific sites and throughout watersheds (e.g. downstream impacts).	
Waterfowl • General • Spring Staging • Summer Moulting/ Nesting • Fall Staging	Description: Waterfowl includes species of ducks, geese, and swans. *Spring staging* areas are lake outlets or portions of rivers that become free of ice early in spring. Waterfowl aggregate on these areas to feed and wait for other wetlands to become ice-free. In the *summer*, concentrations of small pods (wetland complexes) or large, extensive marshes generally contain the highest densities of breeding ducks. Larger water bodies with available food are commonly used for moulting. Through the summer, waterfowl, particularly the young of the year, must build enough body reserves for the long flight south in the fall. Flocks of waterfowl use *fall staging* areas to reset and feed prior to and during fall migration. Both large lakes and wetland complexes may be used for fall staging. Concern: • Concern that wetland habitat will be effected, reduced or contaminated resulting in negative impacts for migratory birds and wildlife which depends on wetlands habitat for food and water. • Access management • Cumulative effects – while impacts of seismic and drilling may not be significant, activities involved with production may be significant, Also if multiple projects occur in an area the impact could be extensive.	• Conduct wetlands studies in the summer months in order to classify wetland habitat and determine its location. • Restrict oil and gas exploration activities to winter months • Prohibit oil and gas exploration near waterfowl habitat where and when water is not completely frozen. • Exploration and seismic will be set back 50m from water and watercourses. Drilling and production will be set back 100m from water and watercourses. There is a zero tolerance for sediment or toxic substance discharge into natural water features. • Wildlife monitors on site to identify and assure the avoidance of wetland habitats.

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	• Possibility that winter access could result in destruction or compaction of wetland vegetation. • Possibility that winter access could result in the introduction of debris (organic, foreign or toxic). • Concern for negative impact on ecosystem health resulting from potential sour gas well development and associated air-bourn pollutants. • Concern for impacts of water quality both at specific sites and throughout watersheds (e.g. downstream impacts). • Concern for staging habitat degradation and loss resulting from industrial activities, both during exploration and development. • Activities occurring close to wetland areas when they become free of ice could discourage waterfowl from using these areas and increase the stress on them. • Activities occurring close to nesting sites during summer months could disturb nesting waterfowl and their young resulting in decreased body reserves and increased mortality. • Development occurring close fall staging areas could disturb waterfowl resulting in decreased body reserves and increased mortality.	

Significant Cultural Values Identified Through the Information Gathering Process:

The following cultural values are addressed through the section on Heritage guidelines.

Abandoned Settlements
Archaeological Sites
Caribou Fence
Caves
Cultural Resource Area
Fossils
Traditional Camps and Cabins
Traditional Landmark
Big Game Hunting (Fall)

Canoe Trips
Canyon Creek (Landscape Feature)
Traditional Use Area
Caribou Hunting Grounds for Tetlit Gwich’in
Winter Recreation
Traditional Hunting and Trapping
Riparian Corridor
Summer Recreation
Eagle River (Landscape Feature)
Fishing