

5. Cumulative Effects

The consideration of cumulative effects is an evaluation of the impacts from concurrent or sequential activities. According to the Canadian Environmental Assessment Research Council (1988), cumulative effects occur when:

- impacts on the natural and social environments take place so frequently in time or so densely in space that the effects of the individual events cannot be assimilated; or when
- the impacts of one activity combine with those of another in a synergistic manner.

The issue of cumulative effects has become important in the NWT due to the increased level of mineral exploration, and concern over the possible effects of simultaneous mining developments. Cumulative effects are of particular concern to Aboriginal and environmental groups, communities, industry, federal and territorial governments owing to the mineral claim staking rush in 1991 and 1992; concerns over detrimental environmental effects on renewable resources; and changing jurisdictional mandates due to land claims and government changes. Since the concept of cumulative effects is generally not well understood, Indian and Northern Affairs Canada organized a workshop on the cumulative effects of development in the Slave Geological Province in February 1994 (ESSA 1994). One of the main conclusions of the workshop was the identification of the need for a regional assessment of cumulative effects within the Slave Geological Province.

In December 1994, the Minister of Indian Affairs and Northern Development (DIAND) announced that the federal and territorial governments had agreed to undertake a major study of environmental, social and economic issues related to mineral development in the Slave Geological Province. This announcement was made at the same time that the Environmental Assessment Panel was appointed to review the NWT Diamonds Project. Since the regional review will focus specifically on the concept of cumulative effects, the Panel has defined the scope within which cumulative effects should be addressed by the Proponent for this EIS.

The Environmental Assessment Panel reviewing the NWT Diamonds Project has specified in its *Final Guidelines for the Preparation of the EIS* that the EIS should assess the long-term cumulative effects of the project when combined with potential future development identified by the Proponent within the claim block. The Proponent has therefore based this assessment of cumulative effects on the combined effects of activities conducted within the claim block, with recognition of the fact that some effects of project activity may extend beyond the boundary of the claim block.

This study will examine the long-term cumulative effects of the current project and future development scenarios through the consideration of two types of cumulative effects:

- potential project impacts and their interactions with each other
- potential project impacts combined with impacts from any potential future development in the claim block.

Since research is often conducted according to specific components or disciplines and within fairly well-defined temporal and spatial scales, it is not easy to identify cumulative effects. The analysis of cumulative effects is complicated, since it attempts to evaluate the outcome of a number of different variables interacting at various temporal and spatial scales. As stated by one Coppermine resident:

“Everything is tied together as one package. You can’t take one little package out of life here and one little package out of life there. (When) you’re dealing with the mine, you have to deal with the socioeconomic(s), you have to deal with the environmental (effects). You have to deal with pollution impacts, everything. You can’t separate them.” (Bill Adamache, Coppermine 1995).

Cumulative effects evaluations have been undertaken for previous mining projects in North America. However, few studies have provided a specific method for defining and evaluating cumulative effects (Ecologistics Limited 1992). This analysis will be based on the approach adopted from Davies (1992) and used by Ecologistics (1992) to assess the cumulative effects of Saskatchewan uranium mining developments. The approach consists of the following steps:

- define boundaries
- identify pathways between environmental effects of project
- identify past projects and activities and their environmental effects
- identify future projects and activities and their potential environmental effects
- identify valued ecosystem components (VECs) within the zone of influence
- assess interactions of past, present and future activities through pathways
- determine likelihood and significance of cumulative environmental effects
- identify monitoring measures.

5.1 Boundary Definition

The general boundaries for the assessment of cumulative effects have been defined by the Environmental Assessment Panel. With respect to the analysis of particular activities, the examination of cumulative effects is limited to those initiated by the Proponent. The effects of any other types of development within the Slave Geological Province will be examined in the future federal and territorial regional review.

While many of the potential consequences of mine development will be experienced within the claim block, the effects of some project activities may extend beyond the boundaries of the claim block. In an effort to focus on the most significant impacts of project development, this assessment has been limited to those residual effects which have been evaluated as being greater than “negligible”. The significance of residual effects is summarized in the Impact Matrix (Appendix IV-A1).

The boundaries selected for the evaluation of cumulative effects are indicated in **Table 5.1-1**. The consideration of the combined effects of project activities on stationary valued ecosystem components (VECs) such as eskers, vegetation and permafrost has been limited to the claim block. The Coppermine River basin has been designated as the boundary for the evaluation of those VECs associated and affected by hydrology and water quality. The consideration of cumulative effects on migratory VECs has been evaluated within the relevant migratory range of a particular species. The combined effects of various project activities on social VECs has been restricted to the claim block, when pertaining to effects on employees at the project site, and to specific communities, when effects are experienced in the communities where employees live and where project-related spending is done. The evaluation of VECs related to land use requires consideration of how activities on the claim block may affect land use activities in adjacent areas.

5.2 Pathways Between Project Environmental Effects

Cumulative effects can be viewed as occurring through ecosystem pathways. Ecosystem pathways are the means by which impacts can be transmitted from one part of an ecosystem to another. These pathways can be determined from knowledge of ecosystem linkages and potential impacts of mine development.

“It’s all connected, it (the cumulative effects) might be a long way (off) but I think in the lakes, the area, the land, the food... or the wildlife that goes through there, I mean they all one way or the other eventually (will be affected)... It’s like one long chain that eventually gets back to us of course. It’s going to have some kind of effect on us...” (Ida McWilliam, Coppermine 1995).

**Table 5.1-1
Definition of Boundaries for Cumulative Effects**

Valued Ecosystem Component	Cumulative Effects Boundary
Eskers, vegetation, permafrost, historic sites/burial grounds	Claim block
Hydrology, water quality, fish	Coppermine River Basin
Caribou	Caribou migration range
Grizzly	Grizzly range
Benefit sharing/partnership, culture, economic development, employment/training, families, human health, community stability/immigration, traditional knowledge, traditional lifestyle, wage economy	Claim block/Communities
Territorial lands, land use and stewardship, outfitters, wilderness	Areas adjacent to the claim block

The main project activities affecting physical and biological VECs consist of dewatering lakes, diverting water courses, open pit mining, waste rock disposal on land, tailings disposal, road construction and the operation of a process plant and 400-person camp. Therefore, the main project ecosystem pathways are surface water, surface terrain and air. The presence of continuous permafrost precludes the consideration of groundwater as a major ecosystem pathway.

Water is the main pathway through which mining and processing impacts may affect surrounding ecosystems. Project activities may alter characteristics of local lakes, streams and fish, which could have implications for the downstream environment and the community of Coppermine. Terrain is another pathway through which project activities may affect vegetation, wildlife and land use within and around the claim block. Air is the pathway through which wildlife and people may experience impacts on basic living conditions such as noise. Air quality is not considered in this assessment since the significance of residual effects on air quality have been evaluated as being negligible.

The main project activities that could affect socioeconomic VECs are employment, the purchase of goods and services and land use. These can also be viewed as the main pathways that could affect socioeconomic components such as traditional lifestyle, health and community. The employment of NWT and non-NWT residents will alter social and economic conditions for individuals and the communities where employees live or to which they relocate. Economic development opportunities related to project development will also change employment and living conditions within communities. The change of land use at the mine site may also cause changes to environmental components that affect people living outside the claim block. For example, any

disturbance of fish and wildlife populations could affect those communities that harvest these resources outside the claim block.

5.3 Past and Present Projects and their Environmental Effects

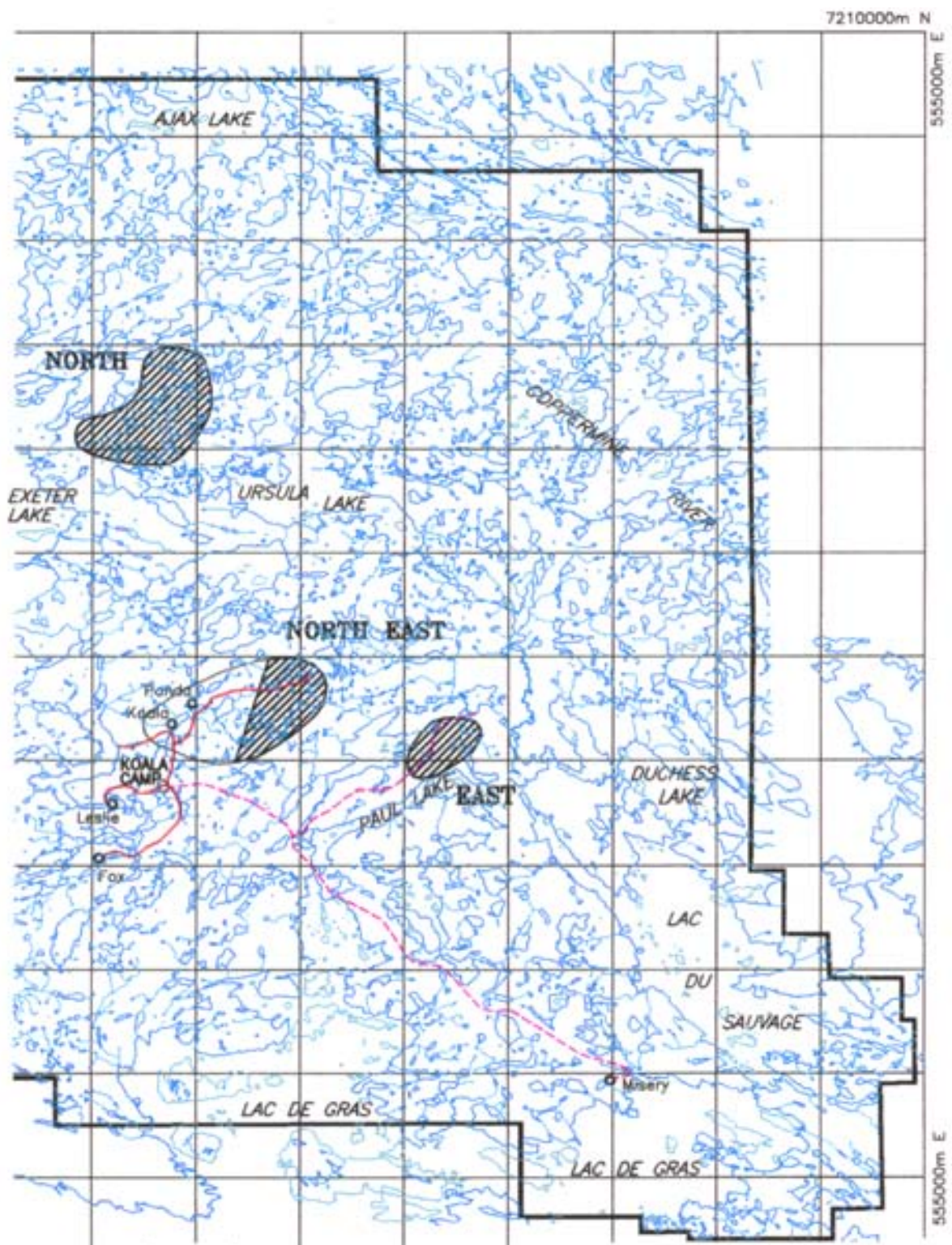
The claim block consists of relatively undisturbed tundra. Dene and Inuit groups have hunted and fished seasonally in the Lac de Gras area, with no significant residual effects. Excluding exploration activities, there has been no previous industrial activity within the claim block. Currently, there are no mining or large-scale industrial activities in operation or permitted within the Coppermine River Basin. The closest operation is the Lupin gold mine 80 km to the north. There is therefore no need to consider the effects of project development combined with any previous impacts within the claim block.

The only other type of human activity conducted near the proposed mine project is outfitting. Outfitting operations lead excursions focused on sport hunting and fishing as well as wildlife observation within the barren grounds area (Figure 4.7-1). The closest outfitter operates seasonal camps along the northeast and northwest shores of Lac de Gras, approximately 10 km from the proposed Misery pit and 30 km from the permanent camp, respectively. The cumulative effects of outfitting operations and mine development could increase noise and general disturbance, causing caribou to avoid the area. The combined increase in aircraft activity and human presence could also decrease the “wilderness experience” for clients of the outfitters, regardless of any changes to caribou use of the Lac de Gras region. If this were the case, outfitters could lose customers or be forced to relocate to other parts of the barren grounds

5.4 Future Projects and their Potential Environmental Effects

The NWT Diamonds Project mine development plan includes the establishment of five pits from dewatered lakes, the establishment of an access road, the use of one lake as a tailings depository and another lake as a quarry. However, further exploration within the claim block may identify other kimberlite pipes that are economically viable for development. The examination of cumulative effects requires that the impacts of the interaction of any simultaneous or consecutive project activities associated with additional development be evaluated.

An outline of hypothetical future development is presented in Volume 1, Section 3.10.2. The hypothetical case used in this EIS is based on the development of three kimberlite pipes within 30 km of the processing plant but outside the Koala watershed (Figure 5.4-1). Two of the pipes are speculated to underlie lakes and one would be land-based. All three pipes would be mined by the same open pit methods as the five project pipes, and would be equivalent in size and mining rates to the Panda pipe.



Legend

- Property boundary
- Existing roads
- Possible access roads to sites for bulk sampling or development
- Highest potential areas for discovery of economically viable kimberlite pipes



Scale: 1:300 000

NWT
DIAMONDS
 PROJECT

Figure 5.4-1
Access Roads and Hypothetical Targets

The development of additional pipes would likely be sequential following the development of the initial five pipes. Since the mining techniques would be similar to those applied to the five pipes proposed, any potential impacts would likely be similar to those experienced as a result of the original mining development. Ore would be processed at the already existing process plant. Tailings would be discharged into the mined out Panda or Koala pits. Each new pit would have an adjacent waste dump and access roads would be required. The longest road being 20 km. Particular care would be taken to minimize environmental disturbance through appropriate route selection.

The development of two pipes underlying lakes would require those lakes to be dewatered. This would affect local hydrology, fish habitat and migration. However, the construction of dams, diversions, appropriate construction techniques and compliance with the DFO “No Net Loss Policy” should minimize impacts. The hypothetical pipes are located in the Paul and Yamba watersheds, which flow into the Coppermine River. Neither of these watersheds is connected to the Koala watershed, where most of the effects of proposed development will be realized.

The development of additional pipes would extend the proposed mine life beyond 25 years. The sequential development of pipes would provide prolonged employment and economic development opportunities for northern communities. The continuous employment of NWT residents would enhance community stability. Local and territorial governments would benefit from additional taxes.

Although the environmental effects of future project development are considered to be similar to those of proposed development, specific baseline studies would be conducted prior to any future development. The existing physical and biological conditions in the areas surrounding the three additional pipes would be documented and evaluated. The information obtained from baseline studies combined with that gained from experience with the effects of the initial development of proposed pipes would assist in the identification of any particular issues of concern. Ongoing communication with Aboriginal groups, communities, governments and interest groups will assist in the assessment of any socioeconomic effects of additional pipe development.

The discovery of additional economically viable pipes is strictly speculative and has been included in order to evaluate cumulative impacts from hypothetical future developments.

5.5 Valued Ecosystem Components within the Zone of Influence of Project Development

To facilitate the evaluation of cumulative effects, this assessment focuses on the valued ecosystem components (VECs) that have been identified as experiencing some residual effect from some aspect of project development. Only those VECs that could be

affected by minor, moderate or major impacts have been considered with respect to cumulative effects. Negligible impacts have not been included in this analysis, since their implications are so minimal they are not anticipated to cause cumulative effects.

5.6 Interactions of Past, Present and Future Activities Through Pathways

Past activities in the claim block have likely been occasional subsistence fish and caribou harvesting by Inuit and Dene. As the residual effects of these activities are considered to be negligible, there is no need to assess the cumulative effects of past activities with those related to the proposed project development.

The only other current land use activity within the claim block is outfitting. The cumulative interactions of outfitting and mine development are evaluated in [Table 5.6-1](#).

The only speculated activities within the claim block are the development of additional pipes and the continuation of outfitting operations.

5.7 Likelihood and Significance of Cumulative Environmental Effects

The cumulative effects of the proposed mine development, future mine development and outfitting operations would generally benefit communities in terms of employment, economic development and community stability. However, the cumulative effects of these concurrent activities on the components of the immediate project area may cause some environmental losses. Overall, it is believed that the net socioeconomic benefits will outweigh any environmental losses that could occur. The cumulative effects of present and future project development as well as the concurrent operation of outfitting activities are evaluated in [Table 5.7-1](#).

Increased employment and expenditure on goods and services in the NWT will stimulate economic development and provide opportunities for NWT residents to expand their skills and education. The extension of the mine life through future development would enable communities to develop and plan services to ensure greater stability. The future of a wage economy would be extended and

**Table 5.6-1
Potential Cumulative Effects**

Valued Ecosystem Components	Pathway	Current and Future Activities	Interacting Effects	Potential Cumulative Effects
Hydrology/ water quality/ aquatic habitat/ fish	Surface water	Proposed mine + future mine development	Water diversions + lake storage changes + increased suspended solids from tailings and construction run-off	Decreased fish productivity resulting from local habitat degradation
Permafrost/vegetation	Surface terrain	Proposed mine + future mine development	Drilling + excavation + road and rock dump construction + reclamation	Initial loss of vegetation, followed by a potential gain of permafrost and vegetation through reclamation Initial loss of habitat for wildlife, followed by potential habitat gain through reclamation
Caribou	Surface terrain, air	Proposed mine + future mine development + outfitting operations	Habitat loss + noise disturbance + sport hunting	Caribou avoidance of project area Country food loss from area avoidance and migration interference
Grizzly bear	Surface terrain, air	Proposed mine + future mine development	Den habitat loss + area avoidance	Grizzly bear avoidance of project area
Wildlife/wildlife habitat	Surface terrain, air	Proposed mine + future mine development + outfitting operations	Habitat loss + noise disturbance + sport hunting (caribou, wolves and wolverine)	Wildlife avoidance of project area

(continued)

**Table 5.6-1 (completed)
Potential Cumulative Effects**

Valued Ecosystem Components	Pathway	Current and Future Activities	Interacting Effects	Potential Cumulative Effects
Employment/training/ wage economy/ economic development/ community stability/ human health/ benefit sharing/ families	Employment, purchase of goods and services	Proposed mine + future mine development + outfitting operations	Jobs + consumer spending + relocation of employees + economic development + training + gender equity + small community development Increased revenues for social services + less community health problems from unemployment	Increased employment community pressures associated with economic boom, followed by community stability Increased economic development Improved social services
Traditional lifestyle/traditional knowledge/culture	Employment, land use	Proposed mine + future mine development + outfitting operations	Wage employment + community stability Wildlife avoidance + hunting	Increased opportunities to integrate traditional lifestyle with wage employment due to rotation work schedule and increased income for equipment Country food loss from caribou avoidance and migration interference
Outfitters	Land use	Proposed mine + future mine development + outfitting operations	Wildlife avoidance + loss of wilderness experience for clients	Decreased business for outfitters and/or relocation to other hunting grounds
Territorial lands/ land use/stewardship/ historic sites/ burial grounds	Land use	Proposed more + future mine development + outfitting operations	land occupancy for mining + outfitting	Land use conflicts

**Table 5.7-1
Cumulative Effects Assessment Matrix**

Potential Cumulative Effect	Cumulative Effects Attributes							
	Geographic Extent	Duration or Frequency	Reversibility	Ecological or Social Context	Probability	Future Capacity of Renewable Resources and Sustainable Development	Mitigation	Significance of Cumulative Effects
decreased fish productivity	two watersheds within the claim block; Koala and Misery	permanent for the 7 lakes lost	nil	loss of aquatic life	high	low; loss of local biodiversity	plan being formulated to comply with DFO "No Net Loss" policy	minor
potential vegetation and wildlife habitat gain due to reclamation	project area	post-reclamation	moderate; depends on success of revegetation	potential gain in wildlife habitat	moderate	moderate; potential increase in biodiversity	monitoring	minor (positive)
caribou avoidance	project area	project life (25 yr)	moderate; due to habituation and habitat restoration	potential decrease in wildlife use of the area	moderate	high; caribou may alter migration routes, but will continue to sustain communities	minimization of road/traffic barrier effects; and initiation of reclamation	negligible/ minor
decrease of country food	communities that harvest caribou	project life (25 yr)	high; caribou reoccupation of reclaimed areas	relocation of hunting activities or loss of food source	low	high; caribou should continue to sustain communities	minimization of caribou disturbance and implementation of reclamation	negligible/ minor
grizzly bear avoidance	project area	project life (25 yr)	moderate	potential decrease in wildlife use of area	moderate	high; bears should reoccupy area after reclamation	minimization of bear-human encounters; solid waste management	negligible/ minor

(continued)

Table 5.7-1 (completed)
Cumulative Effects Assessment Matrix

Potential Cumulative Effect	Cumulative Effects Attributes							
	Geographic Extent	Duration or Frequency	Reversibility	Ecological or Social Context	Probability	Future Capacity of Renewable Resources and Sustainable Development	Mitigation	Significance of Cumulative Effects
increased employment	NWT communities	project life (25 yr) and beyond	low; possibility of temporary mine closure	income and training	high	high; will benefit communities	community counselling	major; includes a legacy of a trained work force
community tensions due to income disparity	NWT communities	project life (25 yr)	low; possibility of temporary mine closure	depends on community size and health	moderate	high; depends on social services and community stability	community counselling	minor
increased overall economic development	NWT	project life (25 yr) and beyond	low; possibility of temporary mine closure	increased NWT government revenues	high	high; depends on NWT planning and development	not applicable	major
improved social services	NWT	project life (25 yr) and beyond	low; possibility of temporary mine closure	increased NWT government revenues	high	high; depends on NWT planning and development	not applicable	major
integration of traditional life styles with rotating work schedules	communities of mine employees	project life (25 yr)	high	could benefit Aboriginal communities	high	high; individuals and communities should be able to integrate both ways of life	ongoing communications with communities	moderate
disturbance or relocation of outfitting operations	nearby project area	project life (25 yr)	high; disturbance will end with mine closure	affects quality of wilderness experience	high	high; outfitters should be able to sustain their activities in adjacent areas	ongoing communications with outfitters	minor
land use conflicts	NWT	project life (25 yr)	moderate, may require ongoing consultation	dissatisfaction among Aboriginal communities	moderate	moderate; may depend on resolution of land claims	ongoing communication	moderate

Aboriginal people would be able to live and work in a wage economy. The benefit from purchased goods to pursue a traditional lifestyle would be increased, since employment would provide income to purchase equipment for land-based activities such as fishing and hunting.

The effect of the proposed and potential future project development combined with outfitting activity will cause some local effects on fish and wildlife during project activity. While some long-term fish habitat will be lost, wildlife use of the project area should resume as specific areas are reclaimed and after project decommissioning. The reclamation of the Long Lake tailings depository may result in an overall gain in vegetation and wildlife habitat. Some local environmental degradation in terms of fish and wildlife habitat loss is likely during project operation, resulting in small changes in productivity and avoidance behaviour. If caribou, wolves and/or wolverine are disturbed and avoid the project area, outfitters may experience costs in terms of relocation. In addition, outfitting operations may lose clients if the wilderness experience is diminished through human presence and aircraft activity.

Cumulative effects at the project site would result largely from changes to water and local terrain. These pathways will therefore provide important opportunities for monitoring and management of individual impacts as well as cumulative effects. While there are few possibilities for synergistic relationships to affect valued ecosystem components, wildlife may be alienated by the dissection of their habitat or migration routes at one or more locations, resulting in their avoidance of the general area.

Adaptive management will provide the means to monitor particular elements of ecosystems and evaluate their response to project development. Experience with human and wildlife interactions in northern Canada indicates that many species of wildlife have a certain amount of adaptability and resiliency to combat environmental stress. Environmental management strategies will be implemented so that biophysical components do not reach critical threshold levels beyond which cumulative effects are irreversible.

Cumulative effects outside the project site in NWT communities will be largely due to increased employment and economic development opportunities. These pathways will convey impacts fairly rapidly. Cumulative effects may result in an economic boom in communities where employees reside and spend money, and where project expenditures are made. While those individuals and communities that do not receive direct benefits from the project may experience some income disparity, the large number of jobs, training and business development opportunities ensuing from mine development will generally contribute toward community stability.

Outfitting operations may be disturbed by proposed and future mine development. This cumulative effect may result in the relocation of outfitters to other areas within the barren

grounds. Ongoing communication with outfitters operating in the vicinity of the claim block should address this potential disturbance.

The additional development of pipes combined with proposed development and outfitting activities may cause land use conflicts. However, the communication of land use and mine development plans to interested groups as well as the monitoring of particular concerns should minimized land use conflicts. The resolution of land claims may also clarify land use issues.

Ongoing communication with Aboriginal organizations, communities, governments and interest groups will be important to identify potential problems that may lead to cumulative effects. The proposed monitoring plan will also assist in minimizing such effects. The benefits of increased training and employment are expected to contribute to long-term community development that will be felt long after mine closure.

5.8 Monitoring Measures

The best approach for addressing the potential cumulative effects of the project is the initiation of a monitoring program. Monitoring would provide information on environmental baseline conditions and enable assessment of actual effects.

“...if this project ever comes through, I'd like to see employment for the native people in the region and careful monitoring of the wildlife and the environment.”
(Jimmy Ross Miyok, Coppermine).

Cumulative effects will be monitoring using the same monitoring methods described in Volume III, Section 10. **Table 5.8-1** summarizes the methods to be used in cumulative effects monitoring. The table lists the variables to be monitored and appropriate monitoring methods, location, frequency and related project monitoring plans. Cumulative effects monitoring should be integrated within the overall monitoring plan.

**Table 5.8-1
Summary of Cumulative Effects Monitoring**

Cumulative Effect	Variables	Methods	Location	Frequency	Associated Monitoring Plan¹
Decreased fish productivity	Total metals, dissolved metals, physical parameters, populations of fish, benthos and plankton, fish CPUE ²	Water samples for laboratory analysis, trap and gill net, Hess sampler, Eckman grab, electroshocker	4 lakes ³ ; 5 streams ⁴ , diversion channel, Long Lake outflow	Annually	Water
Potential vegetation and wildlife habitat gain due to reclamation	Mapping vegetation according to soil and terrain, numbers of wildlife and terrain use by wildlife	Ground soil-vegetation mapping, aircraft or ground surveys, employee observations	Reclamation sites	Depends on natural succession processes	Land
Caribou avoidance	Caribou counts according to area and habitat use	Aircraft or ground surveys	Camp sites, open pits, tailings pond	Ongoing observations by employees	Land
Decrease of country food	Numbers of caribou harvested in the area	Interviews in the communities	Wildlife study area	Spring and fall	Land
Grizzly bear avoidance	Habitat use, mine area counts, solid waste control, staff safety	Aircraft or ground surveys, radio-collaring of bears, monitoring the electric fence, employee education	Wildlife study area	Throughout project duration	Land

1: Detailed relationships between variables, methods, locations and frequency are described in the detailed water, land, air and socioeconomic monitoring plans (Volume III, Sections 10.1 to 10.4).

2: CPUE = Catch Per Unit Effort

3: Lakes: Vulture, Kodiak, Nema, Slipper

4: Streams: Vulture-Polar, Kodiak-Little, Nema-Martine, Slipper-Lac de Gras, Misery-Lac de Gras.

(continued)

Table 5.8-1 (completed)
Summary of Cumulative Effects Monitoring

Cumulative Effect	Variables	Methods	Location	Frequency	Associated Monitoring Plan¹
Increased employment	Employment statistics, training and education programs, changing consumer habits	Community interviews on habits and attitudes, social statistics	Yellowknife, Hay River, Aboriginal communities, Coppermine	Ongoing collection of statistics, scheduled meetings	Socioeconomic
Community tensions due to income disparity	Crime, education, community mobilization	Community interviews, social statistics, traditional lifestyles	Yellowknife, Hay River, Aboriginal communities, Coppermine	Annual statistics, scheduled meetings	Socioeconomic
Increased overall economic development	NWT revenues and other economic indicators	Statistics on economic indicators, direct NWT employment, consumption of goods and services	Yellowknife, Hay River, Aboriginal communities, Coppermine	Annual statistics	Socioeconomic
Improved social services	Social indicators of family and community well-being	Social statistics; crime, education, community mobilization	Yellowknife, Hay River, Aboriginal communities, Coppermine	Annual statistics	Socioeconomic
Integration of traditional life styles and rotating work schedules	Amount of participation in traditional life style activities and family well-being	community interviews, social statistics	Yellowknife, Hay River, Aboriginal communities, Coppermine	Annual statistics, scheduled meetings	Socioeconomic
Disturbance or relocation of outfitting operations	Tourists visiting the area	outfitter interviews, statistics	Claim block	Annual statistics	Socioeconomic

References

- Acres Consulting Services Ltd. 1982. *Northwest Territories Water Resources Study*. Report prepared for Department of Indian Affairs and Northern Development, Ottawa.
- AEPS. 1989. *Arctic Environmental Protection Strategy*.
- Air Tindi Ltd. 1995. *Telephone Conversation, T. Arychuk; Distances from Study Communities to NWT Diamonds Project Site*. Yellowknife: June 1995.
- Alberta, Municipal Affairs. 1995. *Fax from Lorraine Hetke; Population Figures, Selected Communities*. Edmonton: June 1995.
- Aldon, E.F. 1972. Reactivating Soil Ripping Treatments for Runoff and Erosion Control in the Southwestern US. *Annals of the Arid Zone* 11: Nos. 3-4.
- Aleksandrova, V.D. 1973. Russian approaches to classification of vegetation. *Handbook of Vegetation Science*. Part V:495-527.
- Alexander, V. and K. Van Cleve. 1983. The Alaska Pipeline: A success story. *Annual Review of Ecology and Systematics* 14:443-63.
- Aleyeska Pipeline Service Co. 1972. *Project Description of the Trans-Alaska Pipeline System*. 3 vols. Anchorage, Alaska.
- Allen, P.G.I. 1979. It goes this way. In *The Remembered Earth*, ed. G. Hobson, p191. Albuquerque: Red Earth Press.
- Anistratov, Yu.I. and K.Yu. Anistratov. 1992. Surface mining of diamond deposits in the severe conditions of Yakutian north. In: *Proceedings, 2nd International Symposium on Mining in the Arctic, Fairbanks, 19-22 July, 1992*. ed. S. Bandopadhyay and M. G. Nelson, p23-27. Rotterdam: A.A. Balkema.
- Anonymous. 1994. *NWT Business Opportunities in the NWT Mining and Mineral Exploration Industry, 1993 and Beyond*. Yellowknife.

References

- Anonymous. 1995. NWT Diamonds Project. *Above and Beyond* [July] 7(3): 31-50.
- Arnold, C. 1989. Traditional use. In *People and Caribou in the Northwest Territories*, ed. E. Hall p. 11-23. Yellowknife: Department of Renewable Resources, Government of NWT.
- Asch, M. 1977. The Dene economy. In *Dene Nation: The Colony Within*. ed. M. Watkins. Toronto: University of Toronto Press.
- Asels, Cpl. G. 1995. *Personal Interview RCMP*, Coppermine, February 1995.
- Ash, G. 1995. *Personal communication*. Principal, RLL Consultants. Edmonton. February, 1995.
- Avery, Cooper & Co. et al. 1994a. *Business Opportunities in the NWT Mining and Mineral Industry. 1993 and Beyond*. Yellowknife: NWT Energy, Mines and Petroleum Resources.
- Avery, Cooper & Co. et al. 1994b. *Increasing the Number of Northern Workers in the NWT Mineral Industry - Impacts and Strategies*. Unpublished.
- B.C. Environment, Lands and Parks, Environmental Protection Program Lower Mainland Region and University of Victoria, Department of Biology. 1992. *The Proposed Pipeline Discharge of Whistler's Treated Sewage Effluent to the Squamish River: A Preliminary Assessment*. Summary Report No. 92-01.
- B.C. Ministry of Energy, Mines and Petroleum Resources. 1977 to 1994. *Proceedings of the British Columbia Mine Reclamation Symposium*. Victoria.
- Bache, C.A., J.W. Serum, W.D. Young and D.J. Lisk. 1972. Polychlorinated biphenyl residues: Accumulation in Cayuga lake trout with age. *Science* 177: 1191-1192.
- Ball, H.E. 1989. *The Dynamics of a Polyphagous Lake Trout (Salvelinus namaycush) Population in a Northwestern Ontario Lake*. M.Sc. thesis, Lakehead University, Thunder Bay.
- Banci, V. 1987. *Ecology and Behavior of Wolverine in Yukon*. M.Sc. Thesis. Simon Fraser University, Burnaby.

References

- Banci, V. 1991. *The Status of the Grizzly Bear in Canada in 1990*. Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Ottawa.
- Banci, V. 1994. Wolverine. In *The Scientific Basis for Conserving Forest Carnivores, American Marten, Fisher, Lynx and Wolverine in the Western United States*, ed. L.F. Ruggiero, K.B. Aubry, S.W. Buskirk, L.J. Lyon and W.J. Zielinski, Chapter 5. Fort Collins, CO: United States Department of Agriculture, Forest Service. General Technical Report RM-254.
- Barrie, L.A. 1986. Arctic air pollution; an overview of current knowledge. *Atmospheric Environment* 20(4): 643-663.
- Barron, Kennedy, Lyzun and Associates Ltd. 1995. *Unpublished File Data Regarding Previous Work in Northern Alberta*.
- Bauer, A.M. 1970. A Guide to Site Development and Rehabilitation of pits and Quarries. *Industrial Mineral Report 33*. Toronto; Ontario Department of Mines.
- Beanlands, G.E. and P.N. Duinker. 1983. *An Ecological Framework for Environmental Impact Assessment in Canada*. Institute for Resource and Environmental Studies, Halifax: Dalhousie University and the Federal Environmental Assessment Review Office, Hull.
- Beaulieu, Darrell K. 1995. *Speech to Staking New Partnerships*. Canada Forum, Yellowknife, Chief, Yellowknives First Nation.
- Bell, M.A.M. and D.V. Meidinger. 1976. *Native Species in Reclamation of Disturbed Lands*. Unpublished Paper. Department of Biology, University of Victoria. Victoria.
- Bellrose, F.C. 1978. *Ducks, Geese and Swans of North America*. Harrisburg, Pennsylvania: Stackpole Books.
- Benke, A.C., K.A. Parsons and S.M. Dhar. 1991. Population and community patterns of invertebrate drift in an unregulated coastal plain river. *Canadian Journal of Fisheries and Aquatic Sciences* 48: 811-823.
- Bergerud, A.T., R.D. Jakimchuk and R.D. Carruthers. 1984. The buffalo of the north: caribou (*Rangifer tarandus*) and human development. *Arctic* 37(1):7-22.

References

- Bergmann, M.A. and H.E. Welch. 1990. Nitrogen fixation by epilithic periphyton in small arctic lakes in response to experimental nitrogen and phosphorus fertilization. *Canadian Journal of Fisheries and Aquatic Sciences* 47: 1545-1550.
- Berkes, F. 1993. Traditional Ecological Knowledge in Perspective. In: *Traditional Ecological Knowledge: Concepts and Cases*, ed. J.T. Inglis, p. 1-9. Ottawa: Canadian Museum of Nature.
- BHP Diamonds Inc. 1995a. *Draft Emergency Response Duty Codes*. Vancouver.
- BHP Diamonds Inc. 1995b. *Draft Emergency Response Plan*. Vancouver.
- BHP Diamonds Inc. 1995c. *Facsimile Communication Regarding the Collation of All Permafrost Data for the BHP NWT Diamonds Project*. D. Johnson (BHP Diamonds) to C. Pelletier (Rescan Environmental Services Ltd.), April 25, 1995.
- BHP Diamonds Inc. 1995d. *Inter Office Correspondence Regarding the Thermistor Readings from the Fox Decline and Koala Lake KDC-06*. K.B. Meikle to J.P. Zwaan (BHP Diamonds), April 13, 1995.
- BHP Diamonds Inc. 1995e. *NWT Diamonds Project Vol. V, Capital and Operating Cost*.
- BHP Diamonds Inc. 1995f. *Northern Vendors, Expenditures to December 31, 1994*. Yellowknife.
- BHP Minerals Canada Ltd. 1991. *Island Copper Mine: Occupational Health and Safety Handbook*. Vancouver.
- BHP Minerals Canada Ltd. 1993. *Island Copper Mine: Crisis Management Manual*. Vancouver.
- BHP Minerals Canada Ltd. 1993. *NWT Diamonds. Baseline Environmental Study Protocols*. Submitted to Regional Environmental Review Committee, Yellowknife, by BHP Minerals Canada Ltd., Oct., 1993. Prepared by Rescan Environmental Services Inc., Vancouver, B.C.
- BHP. 1994. *NWT Diamonds Project Description Report*. Report prepared by Rescan Environmental Services Ltd., Vancouver.

References

- Binkley, D., K. Cormack Jr. and R.L. Fredriksen. 1982. Nitrogen accretion and availability in some snowbush ecosystems. *Frost Science* 28(4): 720-724.
- Blight, G.E. 1994. The master profile for hydraulic fill beaches. *Proceedings Institution Civil Engineers, Geotechnical Engineering* 107: 27-40.
- Bliss, L.C. and E.B. Peterson. 1975. The ecological impact of northern petroleum development. In *Arctic Oil and Gas: Problems and Possibilities*. Vol. 2:505-537 ed. J. Malaurie, Paris: Contributions du Centre D'Etudes Arctique.
- Bliss, L.C. and R.W. Wein (ed.). 1972. *Botanical Studies of Natural and Man Modified Habitats in the Eastern Mackenzie Delta Region and the Arctic Islands*. Indian and Northern Affairs. ALUR 71-72-14.
- Bliss, L.C. and R.W. Wein. 1972. Plant community responses to disturbances in the western Canadian Arctic. *Canadian Journal of Botany*, 50: 1097-1099.
- Bliss, L.C., G.M. Courin, D.L. Pattie, R.R. Riewe, D.W.A. Whitfield, and P. Widden. 1973. Arctic Tundra Ecosystems. *Annual Review of Ecology and Systematics* 4: 359-399.
- Bliss, L.C., O.W. Heal, and J.J. Moore (ed.). 1976. *Tundra Ecosystems: A Comparative Analysis*. International Biological Program Vol. 25. Cambridge University Press, Cambridge.
- Blondin, T. 1994. Presentation to the Aboriginal Mining Conference.
- Blondin, Ted. 1994. *Speech to Aboriginal Mining Conference*. Land Claims Negotiator, Dogrib First Nation.
- Bohnet, Gary. 1994. *Speech to Staking New Partnerships*. Canada Forum, Yellowknife, President, Metis Nation.
- Bolduc, C. 1995. *Conversation, Regarding Education*. Arctic College, Coppermine.
- Boyd, D. 1995a. *Telephone Conversation Regarding Employment on site*. Human resource manager, NWT Diamonds Project. Yellowknife. February 1995.

References

- Boyd, D. 1995b. *Telephone Conversation Regarding Recruiting*. Human Resource Manager, NWT Diamonds Project. Yellowknife. February 1995.
- Boyd, D. 1995c. *Telephone Conversation Regarding Community Scholarships, Treaty 8 and Treaty 11*. Human Resource Manager, NWT Diamonds Project. Yellowknife. May 1995.
- Boyd, D.W., J.A. Heginbottom, G.H. Johnston, R.M. Strang and G.P. Williams. 1981. Northern engineering - basic considerations. In *Permafrost Engineering Design and Construction*, ed. G.H. Johnston, p. 1-30, New York: John Wiley and Sons.
- Brinkhurst, R.O. 1974. *The Benthos of Lakes*. London: Macmillan Press Ltd.
- British Columbia Acid Mine Drainage Task Force/Steffen Robertson and Kirsten/Norecol Environmental Consultants/ Gormely Process Engineering. 1989. Draft Acid Rock Drainage Technical Guide. *British Columbia Acid Mine Drainage Task Force Report*. Volume 1. Victoria.
- British Columbia Ministry of Environment, Lands and Parks University of Victoria. 1992. *The Proposed Pipeline Discharge of Whistler's Treated Sewage Effluent to the Squamish River: A Preliminary Assessment. Summary Report*. British Columbia Ministry of Environment, Lands and Parks, Environmental Protection Program, Victoria.
- British Columbia, Ministry of Tourism and Ministry Responsible for Culture. 1992. *British Columbia Archaeological Impact Assessment Guidelines*. Victoria.
- Brittain, J.E. and T.J. Eikeland. 1988. Invertebrate drift-a review. *Hydrobiologia* 166: 77-93.
- Broderson, A.B.; Edwards, R.G. 1976. Environmental noise impact of army helicopters. *Journal of Environmental Sciences* May/June: 9-18.
- Bromley, M. 1986. Fur trade in the Northwest Territories. In *A Way of Life*. ed. E. Hall. p7-29. Department of Renewable Resources, Government of the Northwest Territories, Yellowknife.
- Bromley, R. 1994. *Personal communication*. Waterfowl Biologist, Wildlife Management Division. Department of Renewable Resources, Government of the Northwest Territories, Yellowknife.

References

- Brooks, J.W., J.C. Bartonek, D.R. Klien, D.L. Spencer and A.S. Thayer. 1971. *Environmental Influences of Oil and Gas Development in the Arctic Slope and Beaufort Sea*. Resource Publication 96: 1-24. Washington, D.C.: U.S. Dept. of the Interior.
- Brown, J.E. 1973. Modes of contemplation through actions: North American Indians. *Main Currents in Modern Thought* 30: 192-97.
- Brown, R.J.E. 1967. *Permafrost in Canada*. Geological Survey of Canadian Map 1246, NRC Publication 9769.
- Brown, R.J.E. 1970. *Permafrost in Canada, Its Influence on Northern Development*. Toronto: University of Toronto Press.
- Brown, R.J.E., G.H. Johnston, J.R. Mackay, N.R. Morgenstern and W.W. Shilts. 1981. Permafrost distribution and terrain characteristics. In *Permafrost Engineering Design and Construction*, ed. G.H. Johnston, p31-72. New York: John Wiley and Sons.
- Brown, W.G., G.H. Johnston and R.J.E., Brown. 1964. Comparison of observed and calculated ground temperatures with permafrost distribution under a northern lake. *Canadian Geotechnical Journal* 1(3): 147-154.
- Bruce Geotechnical Consultants Inc. 1995. *Geothermal/Groundwater Modelling*. Report prepared for Rescan Environmental Services Ltd., Vancouver.
- Bruce Geotechnical Consultants Inc. 1995. *Preliminary Geothermal/ Groundwater Modelling*. Reprot prepared for BHP Diamonds Inc., Vancouver.
- Brugmans, P.J. 1989. Major aspects of the operation of coal mines in/below the permafrost area on Svalbard. In *Proceedings, 1st International Symposium on Mining in the Arctic, Fairbanks, 17-19 July 1989*. ed. S. Bandopadhyay and J. Skudrzyk, p87-93. Rotterdam: A.A. Balkema.
- Brusynk, L.M. and D.A. Westworth. 1985. *An Assessment of Post-Construction Use of a Pipeline Corridor by Ungulates*. Report prepared for NOVA Corp. Environmental Affairs, Calgary.
- Bryson, R.A. 1956. *Preliminary Estimates of the Surface Heat Budget on Summer Clear Days at Point Barrow, Alaska*. Madison, Wisconsin: Department of Meteorology, University of Wisconsin.

References

- Bunnell, F.L. and D.E.N. Tait. 1981. Population Dynamics of Bears - implications. In *Dynamics of Large Mammal Populations*. ed. T.D. Smith and C. Fowler, p75-98. New York: John Wiley and Sons.
- Busnel, R.G. 1978. Introduction. In *Effects of Noise on Wildlife*. ed. Fletcher, J.L. and R.G. Busnel, p7-22. New York: Academic Press.
- Butler, D. 1990. The Greening of Rogers Pass. *Nature Canada* 19: 40-44.
- Byrne, P.M. Eng. Ltd. 1994. *Properties of Tailings Materials*. Report submitted to Rescan Environmental Services, Vancouver.
- Cairns Jr., J. (ed.) 1980. *The Recovery Process in Damaged Ecosystems*. Ann Arbor, Michigan: Ann Arbor Science Publishers Inc.
- Cameron, R.D. 1983. Caribou and petroleum development in Arctic Alaska. *Arctic* 36:227-231.
- Canada Census. 1991a. *Census Profiles 1991*. Northwest Territories. Parts A and B. Yellowknife: NWT Bureau of Statistics, 1995.
- Canada Census. 1991b. *Census Profiles 1991*, selected NWT communities. Parts A and B. Yellowknife: NWT Bureau of Statistics, 1995.
- Canada Department of Transport. 1968. Meteorological Map Nos. T56-3667/6-1 and 2.
- Canada Mortgage and Housing Corporation. 1981. *New Housing and Airport Noise*. Cat. No. NH17-6/1981. p33.
- Canada Mortgage and Housing Corporation. 1994a. *Yellowknife Market Analysis, Comprehensive Report. 1993-1994*. E. Suzuki, market analyst. Yellowknife.
- Canada Mortgage and Housing Corporation. 1994b. *Yellowknife Rental Market Report*. Yellowknife.
- Canada Statistics. 1994. *Provincial Economic Accounts, Annual Estimates, 1981-1991*. Cat. N. 13-213.

References

- Canada, Fisheries and Oceans. 1994. *Annual Summary of Fish and Marine Mammal Harvest Data for the Northwest Territories*. Vo. 5. 1992-1993. Winnipeg: Freshwater Institute.
- Canada, Fisheries and Oceans. 1995a. *Letter from Colette Craig; Commercial Fishing Harvests, Selected Communities*, Central and Arctic Region, January 1995.
- Canada, Fisheries and Oceans. 1995b. *Unpublished Report; Experimental Licenses, Kugluktuk Angoniatit Assn. (Coppermine)*.
- Canada, Human Resources. 1995. *Telephone Conversation, Eileen Gour; Mining Employment in Hay River*. Manager, Canada Employment, Hay River.
- Canada, Human Resources. 1995a. *UI data, September/October, 1994. Selected Communities*. Yellowknife: NWT Directorate.
- Canada, Indian and Northern Affairs. 1993. *NWT Economic Review*. Yellowknife.
- Canada, Indian and Northern Affairs. 1995. *Band Support and Community Economic Development Funding, 1994/95. Selected communities*. Indian and Inuit Affairs, Yellowknife.
- Canadian Arctic Gas Study Ltd. 1974. *Biological Reports*. Vols. 1-41. Canadian Arctic Gas Study Ltd., Calgary.
- Canadian Council of Ministers of the Environment (CCME). 1989. *Operations and Emission Guidelines for Municipal Solid Waste Incinerators*. Report CCME-TS/WM-TRE003.
- Canadian Environmental Assessment Research Council. 1988. *The Assessment of Cumulative Effects: A Research Prospectus*. Hull: Supply and Services Canada.
- Capra, F. 1982. *The Turning Point*. Toronto: Simon and Schuster.
- Cargill, S.M. and F.S. Chapin III. 1987. Application of successional theory to tundra restoration: a review. *Arctic and Alpine Research* 19:366-372.

References

- Carl, L., M.F. Bernier, W. Christie, L. Deacon, P. Hulsman, D. Loftus, D. Maraldo, T. Marshall and P. Ryan. 1990. *Fish Community and Environmental Effects on Lake Trout (Salvelinus namaycush)*. Lake Trout Synthesis, Ontario Ministry of Natural Resources, Toronto.
- Carr, W.W. 1985. Watershed Rehabilitation Options for Disturbed Slopes on the Queen Charlotte Islands. *Land Management Report*. No. 36. Ministry of Forestry. Victoria.
- Carrick, H.J., F.J. Aldridge and C.L. Schelske. 1993. Wind influences phytoplankton biomass and composition in a shallow, productive lake. *Limnology and Oceanography* 38(6): 1179-1192.
- Carrier, W.D., III, Bromwell, L.G. and Somogyi, F. 1983. Design capacity of slurried mineral waste ponds. *ASCE, Journal of Geotechnical Engineering* 109: 699-716.
- Cashman, S. 1991. Systems of knowledge as systems of domination: the limitations of established meaning. *Agriculture and Human Values* Winter-Spring 1991:49-58.
- Cathro, D.C., Hayley, D.W. and Keen, A.J. 1992. Design and Construction of a Permafrost Core Earth Dam. In *Proceedings of the 2nd International Symposium on Mining in the Arctic*, ed. S. Bandopadhyay and M.G. Nelson, p153-162. Rotterdam: Balkema.
- Child, K.N. S.K. Stevenson and G.S. Watts. 1991. *Mountain Caribou in Managed Forests: Cooperative Ventures for New Solutions*. Wildlife Habitat Canada, Ottawa. Willow-Ahbau Forestry Association, Prince George. B.C. Ministry of Environment and B.C. Ministry of Forests, Victoria.
- Chilibeck, B., G. Chislett and G. Norris. 1992. *Land Development Guidelines for the Protection of Aquatic Habitat*. Fisheries and Oceans Canada. B.C. Ministry of Environment, Lands and Parks. Victoria, B.C.
- Church, M. 1974. Hydrology and permafrost with reference to Northern North America. In *Permafrost Hydrology, Proceedings of Workshop Seminar 1974, Canadian National Committee for the International Hydrological Decade*. p7-20. Ottawa.

References

- Cinq-Mars, J. 1973. *Preliminary Archaeological Study, Mackenzie Corridor*. Northern Pipelines Task Force on Northern Oil Development, Environmental-Social Committee Report 73-10. Ottawa.
- Cinq-Mars, J. And C.A. Martijn. 1981. History of Archaeological Research in the Subarctic Shield and Mackenzie Valley. In *Handbook of North American Indians, Volume 6, Subarctic*, ed. J. Helm, p30-34. Washington, D.C.: Smithsonian Institution.
- Clark, D.W. 1975. *Archaeological Reconnaissance in Northern Interior District of Mackenzie: 1969, 1970 and 1972*. National Museum of Man. Mercury Series, Archaeological Survey Paper 27. Ottawa: .
- Clark, D.W. 1977. Archaeological Survey of Great Bear Lake, 1976. In *Prehistory of the North American Sub-Arctic, The Athapaskan Question*, ed. J.W. Helmer, S. Van Dyke and F.J. Kense, p55-64. Calgary: The Archaeological Association of the University of Calgary.
- Clarkson, P.L. and I. Liepins. 1989. Inuvialuit Wildlife Studies, Grizzly Bear Research Progress Report 1988-89. Government of the Northwest Territories, Department of Renewable Resources, Inuvik Wildlife Management Advisory Council, Inuvik NT. Technical Report No. 8: 1-25.
- Colbeck, S.C. 1976. An analysis of water flow in dry snow. *Water Resources Research* 12(3): 523-527.
- Colomac Mine. 1995. *Telephone Conversation, Bob Steinke; Mine Employment*. Manager, human resources, Royal Oak Mines Inc.
- Comeau, P.G., M.A. Comeau and G.F. Utzig. 1982. *A Guide to Plant Indicators of Moisture for Southeastern British Columbia with Engineering Interpretations*. Land Management Handbook No. 5, B.C. Ministry of Forests. Victoria.
- Como, B.A., L.M. Lavkulich, A.A. Bomke and J.M. Robins. 1978. *Reclamation of Abandoned Mine Spoils in British Columbia*. B.C. Ministry of Mines and Petroleum Resources. Victoria.
- Con Mine. 1994. *Employment in the NWT Mining Industry*. Yellowknife: NWT Energy, Mines and Petroleum Resources.

References

- Coppermine, Hamlet Council. 1995. *Meeting Concerning NWT Diamonds Project Concerns. Coppermine: January 19, 1995.*
- Corns, I.G.W. 1974. Arctic plant communities east of the Mackenzie Delta. *Canadian Journal of Botany* 52: 1730-1745.
- Cornwell, J.C. 1992. Cation export from Alaskan arctic watersheds. *Hydrobiologia* 240: 15-22.
- Cowherd, C., P. Englehart, G.E. Muleski and Kinsey J.S. 1990. *Control of Fugitive and Hazardous Dusts.* New Jersey: Noyes Data Corporation.
- Crowe, K.J. 1974. *A History of the Original Peoples of Northern Canada.* Montreal: McGill-Queen's University Press.
- Curatolo, J.A. and S.M. Murphy. 1986. The effects of pipelines, roads and traffic on movements of caribou, *Rangifer tarandus*. *Canadian Field-Naturalist* 100:218-224.
- Cyr, H. and M.L. Pace. 1992. Grazing by zooplankton and its relationship to community structure. *Canadian Journal of Fisheries and Aquatic Sciences* 49: 1455-1465.
- Dalpe, C. 1994. *Personal communication.* Chemical Evaluation Division, Health and Welfare Canada, Ottawa. November, 1994.
- Davies, K. 1992. *An Advisory Guide on Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act: A Discussion Paper. Final Draft.* Ottawa: Federal Environmental Assessment Review Office.
- Davis, R.A. and A.N. Wiseley. 1974. Normal behavior of snow geese on the Yukon - Alaska North Slope and the effects of aircraft-induced disturbance on this behavior, September 1973. In *Studies on Snow Geese and Waterfowl in the Northwest Territories, Yukon Territory and Alaska, 1973.* ed. W.W.H. Gunn, W.J. Richardson, R.E. Schweinsburg and T.D. Wright, p85. Arctic Gas, Biological Report Series, Vol. 27. Prepared by LGL Ltd., Environmental Research Associates.
- de Jong, P. 1988. Uncertainties in EIA. In *Environmental Impact Assessment* ed. P. Wathern, p62-84. London: Unwin Hyman.

References

- de March, B.G.E. 1976. Spatial and temporal patterns in macrobenthic stream diversity. *Journal of Fisheries Research Board of Canada* 33: 1261-1270.
- de March, L., B. de March and W. Eddy. 1977. *Limnological, Fisheries and Stream Zoobenthic Studies at Stanwell-Fletcher Lake*. Fisheries and Marine Service, ESCOM Report No. AI-04.
- Demayo, A. and M.C. Taylor. 1980. *Guidelines for Surface Water Quality. Volume 1 - Inorganic Chemical Substances, Lead*. Environment Canada, Inland Water Directorate, Water Quality Branch. Ottawa.
- Demayo, A. and M.C. Taylor. 1981. *Guidelines for Surface Water Quality. Volume 1 - Inorganic Chemical Substances, Copper*. Environment Canada, Inland Water Directorate, Water Quality Branch. Ottawa.
- Demayo, A., M.C. Taylor and S.W. Reed. 1979. *Guidelines for Surface Water Quality. Volume 1 - Inorganic Chemical Substances, Arsenic*. Environment Canada, Inland Water Directorate, Water Quality Branch. Ottawa.
- den Hartog, G. and H.L. Ferguson. 1978a. Mean annual lake evaporation. Plate 17, *Hydrological Atlas of Canada*, Ottawa, Department of Fisheries and Environment, Ottawa.
- den Hartog, G. and H.L. Ferguson. 1978b. Water balanced-derived precipitation and evapotranspiration. Plate 25, *Hydrological Atlas of Canada*, Ottawa, Department of Fisheries and Environment, Ottawa.
- Dene Cultural Institute. 1993. Dene justice project. *Quarterly*. Hay River: July 1993.
- Dene Cultural Institute. 1994a. Traditional government research project: Rae Lakes. *Quarterly*. Hay River: April 1994.
- Dene Cultural Institute. 1994b. Traditional Dene medicine project: Lac La Martre. *Quarterly*. Hay River: April 1994.
- Dene Cultural Institute. 1995. *Letter from Joanne Barnaby to Letha MacLachlan*. Submitted during the review of Draft EIS Guidelines for the NWT Diamonds Project, Yellowknife.
- Dene Nation. 1984. *Denendeh: A Dene Celebration*. Yellowknife.

References

- Department of Energy, Mines and Petroleum Resources, Government of the NWT. 1991. *A Guide to Legislation Affecting Exploration and Mining in the Northwest Territories*. Yellowknife.
- Department of Environmental Sciences. 1994. *World Climate Review*. 2(4):1-50. University of Virginia, Charlottesville.
- Department of Fisheries and Oceans and Ministry of Environment. 1989. *Fish Habitat Inventory and Information Program: Stream Survey Field Guide*. Ottawa.
- DIAND, Northern Affairs Program. Undated. *Guide to Completing Application for a Land Use Permit Pursuant to the Territorial Land Use Regulations*.
- DIAND. 1975. Dene/Metis Land Selection, Comprehensive Claims Branch.
- DIAND. 1981. *A Guide to Territorial Land Use Regulations*.
- DIAND. 1987. Comprehensive Land Claims Policy.
- DIAND. 1993. NWT Economic Review, Nov.
- DIAND. 1994. *Cumulative Effects of Development in the Slave Geological Province*. Workshop report prepared for Northern Affairs Program, Yellowknife.
- DIAND. 1994. Treaty 8 Treaty Entitlement Negotiations Protocol Agreement.
- Dick, J.H. 1974. Selection and Propagation of Woody Plants Species for Reclamation in British Columbia. *Land Reclamation Short Course*. Vancouver: Centre for Continuing Education, University of British Columbia.
- Dickson, H.L., D. Jacques, S. Barry, E.S. Telfer and A.R. Smith. 1989. *Identification of Nesting and Staging Shorebird Areas in the Mackenzie River Delta and Richards Island Area, Northwest Territories, Using Landsat Thematic Mapper Imagery 1985-1987*. Canadian Wildlife Service, Northern Oil and Gas Action Program. Project Report C7.3. p133.

References

- Dillon, J.E. and F.H. Rigler. 1975. A simple method for predicting the capacity of a lake for development based on lake trophic status. *Journal of the Fisheries Research Board of Canada* 32(9): 1519-1531.
- Dingman, S.L. 1973. *The Water Balance in the Arctic and Subarctic Regions - Annotated Bibliography and Preliminary Assessment*. CREEL Special Report No. 187, Hanover, New Hampshire: Cold Regions Research and Engineering Laboratory, U.S. Army Corps of Engineers. p131.
- Dogrib Divisional Board of Education. 1994. *Divisional Report*, excerpts. Rae-Edzo.
- Dogrib Nation Holdings, Inc. 1993. *North Slave Region*. Business development brochure. Rae-Edzo.
- Dogrib Nation Holdings, Inc. 1995. *Fax from Al-Nashir Jamal; List of Joint ventures*. President, July 1995.
- Dominico, P.A. and Schwartz, F.W. 1990. *Physical and Chemical Hydrogeology*. New York: John Wiley and Sons.
- Donihee, J. and P.A. Gray. 1982. *A Review of Road Related Wildlife Problems and the Environmental Management Process in the North*. Information Report No. 2. Department of Renewable Resources, Government of the NWT, Yellowknife, NWT. 20 p.
- Dredge, L.A., B.C. Ward and D.E. Kerr. 1994. *Glacial Geology and Implications for Drift Prospecting in the Lac de Gras, Winter Lake and Aylmer Lake Map Areas (NTS 76D, 86A, 76C)*, Central Slave Province, NWT.
- Dufour, P.A. 1980. *Effects of Noise on Wildlife and Other Animals: Review of Research Since 1971*. No. 550/9-80-100. p97. Washington, D.C.: United States Environmental Protection Agency.
- Dufour, S. and I. Holubec. 1988. Performance of Two Earthfill Dams of Lupin, NWT. In: *Proceedings of the 5th International Conference on Permafrost, Trondheim, Norway*. Norway: Tapir Publishers. p1217-1222.

References

- Dyke, A.S. and L.A. Dredge. 1989. Quaternary geology of the northwestern Canadian Shield. In *Quaternary Geology of Canada and Greenland*, ed. R.J. Fulton, Geological Survey of Canada, Geology of Canada, no. 1 (also, Geological Society of America, The Geology of North America, v. K-1), p189-214.
- Dyke, A.S., J-S. Vincent, J.T. Andrews, L.A. Dredge and W.R. Cowan. 1989. The Laurentide Ice Sheet and an introduction to the Quaternary geology of the Canadian Shield. In *Quaternary Geology of Canada and Greenland*, ed. R.J. Fulton, Geological Survey of Canada, Geology of Canada, no. 1 (also, Geological Society of America, The Geology of North America, v. K-1), p178-189.
- EBA Engineering Consultants Ltd. 1994. *Koala Dam Sites Geotechnical Investigation*. Report prepared for BHP Diamonds Inc., Vancouver.
- EBA Engineering Consultants Ltd. 1995a. *Evaluation of "Airport Esker" as a Construction Material Source, Koala Lake, NWT*. Report prepared for BHP Diamonds Inc., Vancouver.
- EBA Engineering Consultants Ltd. 1995b. *Koala Project Tailings Dams Design Report*. Report prepared for BHP Diamonds Inc., Vancouver, BC.
- EBA. Engineering Consultants Ltd. 1995. *Particle Screen Size Analysis for NWT Diamonds Road Construction (Top Dressing) Materials*. Report prepared for BHP Diamonds Inc., Vancouver.
- Eberhardt, L.E., W.C. Hanson, J.L. Bengston, R.A. Garret and E.E. Hanson. 1982. Arctic fox home range characteristics in an oil-development area. *Journal of Wildlife Management* 46:183-190.
- Echo Bay Mines Ltd. 1994. *Transportation Emergency Response Plan — Winter Road Operational*.
- Ecological Stratification Working Group. 1995. *A National Ecological Framework for Canada*. Agriculture and Agri-Food Canada, Research Branch, Centre for Land and Biological Resources Research and Environment Canada, State of Environment Directorate, Ecozone Analysis Branch, Ottawa.

References

- Ecologists Limited. 1992. *Assessing Cumulative Effects of Saskatchewan Uranium Mines Development*. Report prepared for the Joint Federal-Provincial Land on Uranium Mining Developments in Northern Saskatchewan, Waterloo.
- Ecosystems Working Group. 1995. *Terrestrial Ecosystems Mapping Methodology for British Columbia*. Ecosystems Working Group, Terrestrial Ecosystems Task Force, Resources Inventory Committee. B.C. Ministry of Environment, Lands and Parks, Victoria.
- Elliot, G.V. 1980. First interim report on the evaluation of stream crossings and effects of channel modifications on fishery resources along the route of the trans-Alaska pipeline. U.S. Fish and Wildlife Service, Special Studies, Anchorage, Alaska, p77. In Northcote, T.G. 1993. *A Review of Management and Enhancement Options for the Arctic Grayling (Thymallus Arcticus) with Special Reference to the Williston Reservoir Watershed in British Columbia*. Fisheries Management Report No. 000.
- Ellis, D.H. 1982. *The Peregrine Falcon in Arizona: Habitat Utilization and Management Recommendations*. Report 1. Institute of Raptor Studies, Oracle, Arizona. p24.
- EMPR. 1993. NWT Mineral Sector Report.
- Eng, R.L. 1986a. Waterfowl. In *Inventory and Monitoring of Wildlife Habitat* ed. A.Y. Cooperrider, R.J. Boyd and H.R. Stuart, p371-386. Denver, Colorado: United States Department of the Interior, Bureau of Land Management, Service Centre.
- Eng, R.L. 1986b. Upland Game Birds. In *Inventory and Monitoring of Wildlife Habitat*. ed. A.Y. Cooperrider, R.J. Boyd and H.R. Stuart, p407-428. Denver, Colorado: United States Department of the Interior, Bureau of Land Management, Service Centre.
- Environment Canada. 1984b. *Northwest Territories Hydrometric Station Investigations: Report for 1983*. Water Resources Branch, Inland Waters Directorate, Western and Northern Region, Environment Canada, Yellowknife, p71.

References

- Environment Canada. 1986a. *Climatic Atlas - Canada Map Series 2 - Precipitation*. Atmospheric Environment Service, Environment Canada, Downsview, p2.
- Environment Canada. 1986b. *Snow Cover Data, Winter 1984-85*. Atmospheric Environment Service, Environment Canada, Downsview, p47.
- Environment Canada. 1988b. *Historical Streamflow Summary: Yukon and Northwest Territories to 1986*. Water Survey of Canada, Water Resources Branch, Inland Waters Directorate, Environment Canada, Ottawa. p145.
- Environment Canada. 1994. *Canada's National Report on Climate Change*, Ottawa.
- Environment Canada. 1995. *Scoping of Issues for the Proposed BHP Diamond Mine, Lac de Gras NWT*. A submission to the BHP diamond mine Environmental Assessment Panel, March 1995.
- Environmental Protection Agency. 1971. *Noise from construction equipment and operations, building equipment, and home appliances*. Washington, D.C. p188.
- Erasmus, W. 1995. Presentation to Environmental Review Panel, Yellowknife.
- Erman, D.C. and N.A. Erman. 1984. The response of stream macroinvertebrates to substrate size and heterogeneity. *Hydrobiologia* 108: 75-82.
- Erskine, A.J. 1984. *A Preliminary Catalogue of Bird Census Plots in Canada, Part 5*. Canadian Wildlife Service, Progress Notes No. 144, Ottawa, ON. p34.
- ESSA Technologies Ltd. 1994. *Cumulative Effects of Development in the Slave Geological Province*. p64. Workshop report prepared for Northern Affairs Program, Indian and Northern Affairs Canada, Yellowknife.
- Etkin, D. 1990. Greenhouse Warming: Consequences for Arctic Climate. *ASCE, Journal of Cold Regions Engineering* 4: 54-66.
- Evans, D.O., J. Brisbane, J.M. Casselman, K.E. Coleman, C.A. Lewis, P.G. Sly, D.L. Wales and C.C. Willox. 1991b. *Anthropogenic Stressors and Diagnosis of*

References

their Effects on Lake Trout Populations in Ontario Lakes. Lake Trout Synthesis, Ontario Ministry of Natural Resources, Toronto, p93.

Evans, D.O., J.M. Casselman and C.C. Wilcox. 1991a. *Effects of Exploitation, Loss of Nursery Habitat and Stocking on the Dynamics and Productivity of Lake Trout Populations in Ontario Lakes.* Lake Trout Synthesis, Ont. Ministry of Natural Resources, Toronto, p193.

EVS Consultants. 1992. *Guidelines for Monitoring Benthos in Freshwater Environments.* Report prepared for Environment Canada, North Vancouver.

Exceleration Corp. 1994. *Caribou Outfitting.* Yellowknife: Barrenground Caribou Outfitters Assn., NWT Economic Development and Tourism and NWT Renewable Resources.

Fancy, S.G. 1983. Movements and activity budgets of caribou near oil drilling sites in the Sagavanirktok River floodplain, Alaska. *Arctic* 36:193-197.

Farquharson, D.R. 1976. Inuit Land-use in the West-Central Arctic. In *Inuit Land Use and Occupancy Project: Volume One.* ed. M.M.R. Freeman, p33-62, Supply and Services, Ottawa.

Federal Environmental Assessment Review Office. 1994. *A Reference Guide for the Canadian Environmental Assessment Act: Addressing Cumulative Effects.* Hull: Supply and Services Canada.

Fee, E.J., R.E. Hecky and H.A. Welsh. 1987. Phytoplankton photosynthesis parameters in central Canadian lakes. *Journal of Plankton Research* 9(2): 305-316.

Ferguson, K.D. and S.M. Leask. 1988. The Export of Nutrients for Surface Coal Mines. Environment Canada. Conservation and Protection. Regional Program Report 87-12. West Vancouver, B.C.

Fidell, S., R. Horonjeff, T. Schultz, S. Teffeteller. 1983. Community response to blasting. *Journal of the Acoustical Society of America* 74 (3): 888-893.

References

- Findlay, B.F., 1978. Mean maximum depth of snow and time of occurrence. Plate 11, map [1], *Hydrological Atlas of Canada* Department of Fisheries and Environment, Ottawa.
- Fleck, S.E. and A. Gunn. 1982. *Characteristics of Three Barren-ground Caribou Calving Grounds in the Northwest Territories*. Northwest Territories Wildlife Service, Progress Report No. 7. Yellowknife.
- Fluor Daniel Wright Signet Ltd. 1994. Memorandum to BHP (Mr. Dan Johnson) from Mr. Norm Shaw regarding air emissions data for diesel generators, camp and process plant incinerators, fabric filters and wet dust scrubbers.
- Freedman, B. and J. Svoboda. 1982. Populations of breeding birds at Alexandra Fjord, Ellesmere Island, Northwest Territories, compared with other arctic localities. *Canadian Field Naturalist* 96:56-60.
- Freeman, M.M.R. (ed.). 1976. *Inuit Land Use and Occupancy Project: Vol. 3, Land Use Atlas*. Ottawa: Minister of Supply and Services.
- Freeman, M.M.R. and M.G. Stevenson. 1995. *They Knew How Much They Needed - Inuvialuit Traditional Knowledge and the Broad Whitefish*. Report submitted to the Fisheries Joint Management committee, Inuvik.
- Freeman, M.M.R., E. Wien and D. Kieth. 1992. *Recovering Rights: Bowhead Whales and Inuvialuit Subsistence in the Western Canadian Arctic*. Edmonton and Inuvik: Canadian Circumpolar Institute and Fisheries Joint Management Committee.
- Freeze, R.A. and J.A. Cherry. 1979. *Groundwater*. New York: Prentice-Hall.
- Fresci, D. 1995. *Interview on Impact of NWT Diamonds Project on Hay River*. Manager, Royal Bank, Hay River.
- Froelich, P. N., G. P. Klinkhammer, M. L. Bender, N.A. Luedtke, G. R. Heath, D. Cullen, P. Dauphin, D. Hammond, B. Hartman and V. Maynard. 1979. Early oxidation of organic matter in pelagic sediments of the eastern equatorial Atlantic: suboxic diagenesis. *Geochimica et Cosmochimica Acta* 43: 1075-1090.

References

- Fulton, R.J. 1989. *Quaternary Geology of Canada and Greenland* ed. R.J. Fulton, Geological Survey of Canada, Geology of Canada, No. 1 (also, Geological Society of America, The Geology of North America, v. K-1), 839 p.
- Fumeleau, R. 1975. *As Long as this Land Shall Last*. Toronto: MacLelland and Stewart.
- Gadgil, M. and F. Berkes. 1991. Traditional Resource Management Systems. *Resource Management and Optimization* 18:127-141.
- Galushin, V.M. 1974. Synchronous fluctuations in populations of some raptors and their prey. *Ibis* 116:127-134.
- Gamble, D. 1986. Crushing of cultures: western applied science in northern societies. *Arctic* 39:20-23.
- Gardner, C.L. 1985. *The Ecology of Wolverines in Southcentral Alaska*. M.Sc. Thesis, University of Alaska, Fairbanks.
- Garrott, R.A. and L.E. Eberhardt. 1987. Chapter 31: Arctic Fox. In *Wild Furbearer Management and Conservation in North America*. ed. M. Novak, J.A. Baker, M.E. Obbard and B. Malloch, p. 395-406. Ontario Ministry of Natural Resources, Toronto.
- Giant Mine. 1995. *Telephone Conversation, Bob Steinke; Mine Employment*. Manager, Human Resources, Royal Oak Mines, Inc.
- Giegerich, N.M. 1988. Arctic Mining in Permafrost Proceedings. In *2nd International Conference on Permafrost*, Trondheim. Norway: Tapir Publishers, p1382-7387
- Giegerich, N.M. 1992. Keynote Address: Mining in the Arctic. In *Proceedings of the 2nd Int. Symposium on Mining in the Arctic, Fairbanks, Alaska*. Rotterdam: A.A. Balkema, p3-9.
- Gillispie, B.C. 1981. Yellowknife. In *Handbook of North American Indians, Volume 6, Subarctic*. ed. J. Helm, Washington, D.C.: Smithsonian Institution. pp-285-290.
- GNWT, Economic Development & Tourism (Norecan Limited).

References

- GNWT. 1990. Health & Social Services, Health & Services in the Northwest Territories.
- GNWT. 1991. Bureau of Statistics, 1991 Census Profiles.
- GNWT. 1993. Bureau of Statistics, Population Projections, Jan.
- GNWT. 1994. Bureau of Statistics, Statistics Quarterly, Dec.
- GNWT. 1995. Bureau of Statistics, 1994 Labour Force Survey. Report No. 1, 1994, special reports.
- GNWT. 1995. Education, Culture & Employment (Lutra Assoc. Ltd.). A Strategy to Maximize Northern Employment in Mining, interim report.
- GNWT. Energy Mines & Petroleum Resources (Avery, Cooper).
- Godfrey, W.E. 1986. *The Birds of Canada* (revised edition). National Museum of Natural Sciences, Ottawa.
- Gollop, J.B., T.W. Barry and E.H. Iversen. 1986. *Eskimo Curlew - A Vanishing Species?* Special Publication No. 17, Saskatchewan Natural History Society, Regina.
- Gollop, M.A., J.E. Black, B.E. Felske and R.A. Davis. 1974a. Disturbance studies of breeding Black Brant, Common Eiders, Glaucous Gulls and Arctic Terns at Nunaluk Spit and Philips Bay, Yukon Territory, July 1972. p153-201. In *Disturbance to Birds by Gas Compressor Noise Simulators, Aircraft and Human Activity in the Mackenzie Valley and the North Slope, 1972*. ed. W.W. H. Gunn and W.J. Richardson Arctic Gas, Biological Report Series, 14: 153-201. Report prepared by LGL Ltd., Environmental Research Associates.
- Gollop, M.A., J.R. Goldsberry and R.A. Davis. 1974c. Effects of gas compressor noise simulator disturbance to terrestrial breeding birds, Babbage River, Yukon Territory, June, 1972. In *Disturbance to Birds by Gas Compressor Noise Simulators, Aircraft and Human Activity in the Mackenzie Valley and the North Slope, 1972*. ed. W.W. H. Gunn and W.J. Richardson Arctic Gas, Biological Report Series, Volume 14:49-96. Report prepared by LGL Ltd., Environmental Research Associates.

- Gollop, M.A., R.A. Davis, J.P. Prevelt and B.E. Felske. 1974b. Disturbance studies of terrestrial breeding bird populations: Firth River, Yukon Territory, June 1972. In *Disturbance to Birds by Gas Compressor Noise Simulators, Aircraft and Human Activity in the Mackenzie Valley and the North Slope, 1972*. ed. W.W. H. Gunn and W.J. Richardson. Arctic Gas, Biological Report Series, Volume 14: 97-152. Report prepared by LGL Ltd., Environmental Research Associates.
- Gombay, N. 1995. *Bowheads and Bureaucrats: Indigenous Knowledge and Natural Resource Management in Nunavut*. Masters thesis, Environmental and Resource Studies, University of Waterloo.
- Gordon, B.C. 1977. Temporal, Archaeological and Pedological Separation of the Barrenland Arctic Small Tool and Taltheilei Traditions. In *Prehistory of the North American Sub-Arctic, The Athapaskan Question*, ed. J.W. Helmer, S Van Dyke and F.J. Kense, pp. 77-84. Calgary: Archaeological Association of the University of Calgary.
- Government of Canada, 1990. *Canada's Green Plan*. Ottawa: Supply and Services Canada.
- Grahame, J. 1987. *Plankton and Fisheries*. London: Edward Arnold Publishers.
- Gratto-Trevor, C.L. 1994. Potential effects of global climate change on shorebirds in the MacKenzie Delta Lowlands. In *MacKenzie Basin Impact Study (MBIS) Interim Report #2*, ed. S.J. Cohen, p360-371. Environment Canada, Ottawa.
- Graves, J. and E. Hall. 1988. *Arctic Animals*. Department of Renewable Resources, Government of the Northwest Territories, Yellowknife.
- Green, R.H. 1979. *Sampling Design and Statistical Methods for Environmental Biologists*. Toronto: John Wiley and Sons.
- Griffiths, M.J., Oates, J.A.H. 1978. The propagation of sound from quarry blasting. *Journal of Sound and Vibration* 60(3): 359-370.
- Grotefend, R.T. 1976. *Selected Native Shrub Asexual Propagation, a Test Program for the United States Forest Service*. Unpublished paper prepared for the College of Forest Resources, Spokane, Washington: University of Washigton. Spokane Community College.

References

- Gunn, A. 1991. *Denning Survey for Barren-ground Grizzly Bears, Coppermine, October 1984 and Implications for a Commercial Quota on the Coronation Gulf Mainland*. Government of the Northwest Territories, Department of Renewable Resources, Yellowknife, NWT. Manuscript Report No. 46: 1-29.
- Hafenrichter, A.L., J.L. Schwendiman, H.L. Harris, R.S. MacLauchlan and H.W. Miller. 1968. *Grasses and Legumes for Soil Conservation in the Pacific Northwest and Great Basin States*. Agricultural Handbook 339. Soil Conservation Service. Washington, D.C.: U.S. Department of Agriculture.
- Haggerty, S.E. 1986. Diamond Genesis in a Multiple Constrained Model. *Nature* 320: 34-38.
- Hall, E. (ed.). 1989. *People and Caribou in the Northwest Territories*. Yellowknife: NWT Renewable Resources.
- Hall, E.T. 1977. *Beyond Culture*. Garden City, New York: Anchor Press/Doubleday.
- Hamilton-Taylor, J. 1979. Enrichments of zinc lead and copper in recent sediments of Windermere, England. *Environmental Science and Technology* 13: 693-697.
- Hamilton-Taylor, J. and M. Willis. 1990. A quantitative assessment of the sources and general dynamics of trace metals in a soft-water lake. *Limnology and Oceanography* 35: 840-851.
- Hamilton-Taylor, J. and W. Davison. In press. Redox cycling of trace elements in lakes.
- Hamilton-Taylor, J., M. Willis and C.S. Reynolds. 1984. Depositional fluxes of metals and phytoplankton in Windermere as measured by sediment traps. *Limnology and Oceanography* 29: 695-710.
- Hanson, H.C. 1953. Vegetation types in northwestern Alaska and comparisons with communities in other Arctic regions. *Ecology* 34: 111-140.
- Hanson, W.C. 1981. Caribou (*Rangifer tarandus*) encounters with pipelines in northern Alaska. *Canadian Field-Naturalist* 95:57-62.

References

- Harding, L.E. 1976. Den site characteristics of arctic coastal grizzly bears (*Ursus arctos L.*) on Richards Island, N.W.T., Canada. *Canadian Journal of Zoology* 54:1357-1363.
- Harding, L.E. and J.A. Nagy. 1980. Responses of grizzly bears to hydrocarbon exploration on Richards Island, Northwest Territories, Canada. In *International Conference on Bear Research and Management* 4:201-204.
- Hardy BBT Limited. 1989. *Manual of Plant Species Suitability for reclamation in Alberta* - 2nd Edition. Alberta Land Conservation and Reclamation Council Report No. RRTAC 89-4. Edmonton.
- Hardy BBT Limited. 1990. *Reclamation of Disturbed Alpine Lands: A Literature Review*. Alberta Land Conservation and Reclamation Council Report No. RRTAC 90-7. Edmonton.
- Hare, F.K. and J.E. Hay. 1974. The climate of Canada and Alaska. In *World Survey of Climatology: Climates of North America* 11:49-192. ed. R.A. Bryson and F.K. Hare, Amsterdam: Elsevier Scientific Publishing.
- Hartmann, H.T. and D.E. Kester. 1975. *Plant Propagation: Principles and Practices*. (3rd ed.) Englewood Cliffs, New Jersey: Prentice-Hall Inc.
- Hawthorne, J.B. 1975. Model of a kimberlite pipe. *Physics and Chemistry of the Earth* 9: 1-15.
- Hay River, Town of. 1994. *1995 Budget*.
- Hay River, Town of. 1995a. *Interview and Telephone Conversations, C. Scarborough; Hay river Data*. Town manager. March through June, 1995.
- Hay River, Town of. 1995b. *The Town of Hay River*. Community fact sheet.
- Hay River, Town of. 1995c. *Lot Availability and Pricing Sheets*.
- Hay River, Town of. 1995d. *Telephone Discussion, Larry Ronsko; Tax Assessments*. June 1995.

References

- Healey, M.C. 1978a. Fecundity changes in exploited populations of lake whitefish (*Coregonus clupeaformis*) and lake trout (*Salvelinus namaycush*). *Journal of the Fisheries Research Board of Canada* 35: 945-950.
- Healey, M.C. 1978b. The dynamics of exploited lake trout populations and implications for management. *Journal Wildlife Management* 42(2):307-328.
- Healey, M.C. 1984. Fish predation on aquatic insects. In *The Ecology of Aquatic Insects*, ed. V. H. Resh and D. M. Rosenberg, p255-288. Toronto: Praeger.
- Heard, D.C. 1989. Bathurst Herd. In *People and Caribou in the Northwest Territories*. ed. E. Hall, p109-115. Department of Renewable Resources, Government of Northwest Territories, Yellowknife.
- Heard, D.C. and T.M. Williams. 1992. Distribution of wolf dens on migratory caribou ranges in the Northwest Territories, Canada. *Canadian Journal of Zoology* 70: 1504-1510.
- Hebert, P.N. and B.J. Hann. 1986. Patterns in the composition of arctic tundra pond microcrustacean communities. *Canadian Journal of Fisheries and Aquatic Sciences* 43: 1416-1425.
- Heffner, R.S., Heffner, H.E. 1985. Hearing in mammals: the least weasel. *Journal of Mammalogy* 66(4): 745-754.
- Hellawell, J.M. 1986. *Biological Indicators of Freshwater Pollution and Environmental Management*. New York: Elsevier Applied Science Publishers.
- Helm, J. 1981. Dogrib. In *Handbook of North American Indians* 6:291-309, *Subarctic*. ed. J. Helm, Washington, D.C.: Smithsonian Institution.
- Hem, J.D., C.E. Roberson and C.J. Lind. 1985. Thermodynamic stability of CoOOH and its coprecipitation with manganese. *Geochimica et Cosmochimica Acta* 49: 801-810.
- Heron, R. and M.K. Woo. 1978. Snowmelt computations for a high arctic site. In *Proceedings, 35th Annual Eastern Snow Conference, 2-3 February 1978, Hanover, New Hampshire*, p162-172.

References

- Hershey, A.E. 1985. Effects of predatory sculpin on the chironomid communities in an arctic lake. *Ecology* 66(4): 1131-1138.
- Hettinger, L., A. Janz, and R.W. Wein. 1973. *Vegetation of the Northern Yukon Territory*. Arctic Gas Biological Report Series Vol. 1. Canadian Arctic Gas Study Ltd. 171 pp.
- Hildrew, A.G. and P.S. Giller. 1992. Patchiness, species interactions and disturbance in the stream benthos. In *Aquatic Ecology*, ed. P.S. Giller, A.G. Hildrew, and D.G. Raffaelli, p21-62. Cambridge: Blackwell Scientific Publications.
- Hobart, C.W. 1981. Impacts of industrial employment on hunting and trapping among the Canadian Inuit. In *Renewable Resources and the Economy of the North*. ed. M.M.R. Freeman. Ottawa: Association of Canadian Universities for Northern Studies.
- Hobart, C.W. and G. Kupfer. 1994. *Inuit Employment by Gulf Oil Canada: Assessment and Impact on Coppermine. 1972-73*.
- Hoeffler, T. 1995. *Telephone Conversation Regarding NWT Mining Prospects. Mining Royalties, Mining Employment*. Executive director NWT Chamber of Mines. Yellowknife. March to June 1995.
- Holmgren, B. 1971. Climate and energy exchange on a sub-polar ice cap in summer. In *Arctic Institute of North America Devon Island Expedition 1961-1963*. Parts A-F, Meddelande Nos. 107-112, Meteorologiska Institutionen, Uppsala Universitet, Sweden.
- Holubec, I. and Dufour, S. 1986. Performance of Frozen Tailings Dams. In *International Symposium on Geotechnical Stability in Surface Mining*, p259-265 Calgary.
- Homoky, S.G.J. 1987. *Case Histories of Hydroseeded Research Test Sits: Post - 1982 Period*. B.C. Ministry of Forests and Lands. Research Branch. Victoria.
- Hornocker, M.G. and H.S. Hash. 1981. Ecology of the wolverine in northwestern Montana. *Canadian Journal of Zoology* 59:1286-1301.
- Howes, D. and E. Kenk (ed.). 1988. *Terrain Classification System for British Columbia (revised edition)*. MOE Manual 10. B.C. Ministry of Environ.,

References

- Fisheries Branch and B.C. Ministry of Crown Lands, Surveys and Resource Mapping Branch. Victoria.
- Hubbard, W.F. and M.A.M. Bell. 1977. *Reclamation of Lands Disturbed by Mining in Mountainous and Northern Areas: A Synoptic Bibliography and Review Relevant to British Columbia and Adjacent Areas*. B.C. Ministry of Mines and Petroleum Resources. Victoria.
- Hutchinson, G.E. 1967. Phytoplankton associations. In *A Treatise on Limnology 2*: 355-397. New York: John Wiley and Sons.
- Hynes, H.B.N., N.K. Kaushik, M.A. Lock, D.L. Lush, Z.S.J. Stocker, R.R. Wallace and D.D. Williams. 1974. Benthos and allochthonous organic matter in streams. *Journal of the Fisheries Research Board of Canada* 31: 545-553.
- ICC. 1992. *Principles and Elements of a Comprehensive Arctic Policy*. Inuit Circumpolar Conference, Ottawa.
- ICC. 1993. *The Participation of Indigenous People and the Application of their Environmental and Ecological Knowledge in the Arctic Environmental Protection strategy (Vol. 1) — A Report on Findings*. A report prepared by the Inuit Circumpolar Conference for Indian and Northern Affairs, Ottawa.
- Indian and Northern Affairs Canada Nunavut Land Claims Agreement. 1993. Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada. Ottawa and Yellowknife.
- Institute for Land Rehabilitation. 1978. *Rehabilitation of Western Wildlife Habitat: A Review*. Utah State University for Western Energy and Land Use Team. Fish and Wildlife Service. US Dept. of Interior. Fort Collins, Colorado.
- Intergovernmental Working Group on the Mineral Industry. 1991. *Report on Native Participation in Mining. Phase II*.
- Intergovernmental Working Group on the Mineral Industry. 1992. *Report on Native Participation in Mining, Phase III*.
- International Geosphere-Biosphere Programme (The Royal Swedish Academy of Sciences). 1992. *Global Change: Reducing Uncertainties*. p26, Stockholm.

References

- Irons, J.G. III. 1988. Life history patterns and trophic ecology of Trichoptera in two Alaskan (U.S.A.) subarctic streams. *Canadian Journal of Zoology* 66: 1258-1265.
- Ivens, Jim. 1995. *Interview; Impact of NWT Diamonds Project on Hay River*. Past president, Hay River Chamber of Commerce. Hay River, March, 1995.
- Jackson, D.A. and H.H. Harvey. 1993. Fish and benthic invertebrates: community concordance and community - environment relationships. *Canadian Journal of Fisheries and Aquatic Sciences* 50: 2641-2651.
- Jacobs, L.L., M.T. Jogenson and T.C. Cater. 1994. *Wetland Creation and Revegetation on an Overburden Stockpile at Mine Site D. Kupareuk Oilfield, Alaska, 1993*. Fairbanks, Alaska: Alaska Biological Research, Inc. Report prepared for Arco Alaska, Inc. Anchorage.
- Janse, A.J.A. 1984. Kimberlites — Where and When. In *Kimberlite Occurrence and Origin: A Basis for Conceptual Models in Exploration*, ed. Glover J.E. and Harris P.G., Department of Geology and University Extension, University of Western Australia, Publication No. 8:19-61.
- Jenness, D. 1964. *Eskimo Administration. II. Canada*. Montreal: Arctic Institute of North America.
- Jennings, T.R. 1983. Survival, Growth, and Food Habits of Young-of-the-Year Arctic Grayling Stocked in Barren, Sub-arctic Lakes. M.Sc. Thesis, University of Alaska, Fairbanks, 69 p. In Northcote, T.G. 1993. *A Review of Management and Enhancement Options for the Arctic Grayling (Thymallus arcticus) with Special Reference to the Williston Reservoir Watershed in British Columbia*. Fisheries Management Report No. 000.
- Jessop, E.F., K.T.J. Chang-Kue and G. MacDonald. 1994. Fish Resource Data from Indin Lake, Northwest Territories. *Canadian Data Report of Fisheries and Aquatic Sciences* 907: 1-52.
- Johannes, R.E. 1993. Integrating Traditional Ecological Knowledge and Management with Environmental Impact Assessment. In *Traditional Ecological Knowledge: Concepts and Cases*. ed. J.T. Inglis, p33-39. Canadian Museum of Nature, Ottawa.

References

- Johnson, E.A. and J.S. Rowe, 1977. *Fire and Vegetation Change in the Western Subarctic*. Indian and Northern Affairs. ALUR 75-76-61. Ottawa.
- Johnson, L. 1972. Keller Lake: characteristics of a culturally unstressed salmonid community. *Journal of the Fisheries Research Board of Canada* 29: 731-740.
- Johnson, L. 1973. Stock and recruitment in some unexploited Canadian Arctic Lakes. *Rapport P.-V. Reun. Cons. International Exploration de la Mer*. 164: 219-227.
- Johnson, L. 1975. Distribution of fish species in Great Bear Lake, Northwest Territories, with reference to zooplankton, benthic invertebrates, and environmental conditions. *Journal of Fisheries Research Board Canada* 32: 1989-2004.
- Johnson, L. 1976. Ecology of Arctic populations of lake trout, *Salvelinus namaycush*, lake whitefish, *Coregonus clupeaformis*, Arctic char, *S. alpinus*, and associated species in unexploited lakes of the Canadian Northwest Territories. *Journal of the Fisheries Research Board of Canada* 33: 2459-2488.
- Johnston, G.H. 1981. *Permafrost Engineering Design and Construction*. New York: John Wiley and Sons.
- Johnston, V., C. Gratto-Trevor, S. Pepper and S. McCallum. 1994. Shorebird distribution and abundance in Rasmussen Lowlands. *Progress Report - Bird studies in the Rasmussen Lowlands* No. 6-34. Canadian Wildlife Service, Yellowknife.
- Kaesler, R.L., E.E. Herricks and J.S. Crossman. 1978. Use of indices of diversity and hierarchical diversity in stream surveys. In *Biological Data in Water Pollution Assessment; Quantitative and Statistical Analyses, ASTM STP 652*, ed. K.L. Dickson, J. Cairns, Jr. and R.J. Livingston., p92-112. Philadelphia: American Society for Testing and Materials.
- Kalff, J. and H.E. Welch. 1974. Phytoplankton production in Char Lake, a natural polar lake and in Meretta Lake, a polluted polar lake, Cornwallis Island, Northwest Territories. *Journal of the Fisheries Research Board of Canada* 31: 621-636.

References

- Kamperman, G.W. 1980. Human response to blasting noise and vibration. *Internoise Proceedings II*: p979-984, Miami, Florida.
- Katopodis, C. 1991. *Introduction to the Design of Culvert Fishways*. Winnipeg: Freshwater Institute.
- Katopodis, C. and R. Gervais. 1991. *Ichthyomechanics*. Winnipeg: Freshwater Institute.
- Kelsall, J.P. 1968. *The Migratory Barren-ground Caribou of Canada*. Department of Indian Affairs and Northern Development. Ottawa.
- Kennedy, C.E. (ed.). *Guidelines for Reclamation/Revegetation in the Yukon*. Habitat Management Section, Fish and Wildlife Branch, Yukon Renewable Resources. Whitehorse.
- Kerr Wood Leidal. 1980. *Stream Enhancement Guide*. Report prepared for Government of Canada; Fisheries and Oceans and Province of British Columbia: Ministry of Environment.
- Kidd, J. 1995. *Literature Review of Mine Reclamation Research in the Arctic (Working Draft)*. Fairbanks, Alaska: Alaska Biological Research, Inc. Report prepared for BHP Minerals, NWT Diamonds, Vancouver.
- King, R. 1995. *Telephone Conversation; Impact of Mining on Hay River*. Principal, Kingland Ford, Hay River. March 1995.
- Kingaunmiut Development Corporation. 1995. *Telephone Conversation, B. Warner; Population Estimates Bathurst/Umingmaktok Area*. Yellowknife, June, 1995.
- Kjarsgaard, B.A. 1994. *Personal Communication*. Geologist, Continental Geoscience Division, Geological Survey of Canada, Ottawa. July 30, 1994.
- Kjarsgaard, B.A. and R.J.S. Wyllie. 1994. Geology of the Paul Lake area, Lac de Gras-Lac du Sauvage region of the central Slave Province, District of Keewatin, Northwest Territories. In *Current Research 1994-C*, p23-32. Ottawa: Geological Society of Canada.
- Klein, D.R. 1971. Reaction of reindeer to obstructions and disturbances. *Science* 173:393-398.

References

- Klein, D.R. 1974. The reaction of some northern mammals to aircraft disturbances. *Transactions of the International Congress on Game Biology* 11:377-383.
- Klein, D.R. 1980. Reaction of caribou and reindeer to obstructions - a reassessment. In *Proceedings of the Second International Reindeer/Caribou Symposium, Roros, Norway, September 17-21 1979*. ed. E. Reimers, E. Gaare and S. Skjenneberg. p519-527. Trondheim.
- Kling, G. W., B. Fry and W. J. O'Brien. 1992. Stable isotopes and planktonic trophic structure in Arctic lakes. *Ecology* 73(2): 561-566.
- Kling, G. W., W. J. O'Brien, M. C. Miller and A. E. Hershey. 1992. The biogeochemistry and zoogeography of lakes and rivers in arctic Alaska. *Hydrobiologia* 240: 1-14.
- Knight, R.R., B.M. Blanchard and D. Mattson. 1986. *Yellowstone Grizzly Bear Investigations*. Annual Report of the United States Department of Interior, Interagency Grizzly Bear Study Team, 1985. Bozeman, Montana.
- Kochert, M.N. 1986. Raptors. In *Inventory and Monitoring of Wildlife Habitat*, ed. A.Y. Cooperrider, R.J. Boyd and H.R. Stuart, p313-349. United States Department of the Interior, Bureau of Land Management, Service Centre. Denver, Colorado.
- Koyasu, M. 1984. Evaluation and control of construction noise: the state-of-art. In *Internoise Proceedings 1984, II*: 773-776. Honolulu, Hawaii.
- Krebs, C.J. 1964. *The Lemming Cycle at Baker Lake, Northwest Territories, During 1959-62*. Arctic Institute of North America, Technical Paper No. 15.
- Krebs, C.J. 1989. *Ecological Methodology*. New York: Harper and Row.
- Kuntz, A. 1995. *Interview, Impact of NWT Diamonds Project on Business in Yellowknife*. Manager, business banking, Royal Bank, Yellowknife.
- Kuo, C.Y. 1976. The effect of education on the earnings of Indian, Eskimo, Metis and white workers in the Mackenzie District of northern Canada. *Economic Development and Cultural Change*. 24: 387-398.
- Kusky, T.M. 1989. Accretion of the Archaean Slave province. *Geology* 17: 63-67.

References

- Kwong, Y.T.J. 1993. Prediction and Prevention of Acid Rock Drainage from a Geological and Mineralogical Perspective. *MEND Report* 1.32.1. 47 p.
- Lalonde, A. 1993. African Indigenous Knowledge and its Relevance to Sustainable Development. In *Traditional Ecological Knowledge: Concepts and Cases*. ed. J.T. Inglis. p55-62. Canadian Museum of Nature. Ottawa.
- Larsen, J.A. 1971. Vegetation of Fort Reliance, Northwest Territories. *Canadian Field Naturalist* 85: 147-178.
- Latham, B. 1988. Evaporation and tailing ponds in the N.W.T. In *Proceedings of the Workshop on Evaporation and Evapotranspiration Processes*, ed. F.J. Eley, May 20 and 21, 1987, Canadian Climate Centre Report No. 88-2: 77-83. Atmospheric Environment Service, National Hydrology Research Centre, Saskatoon, Saskatchewan.
- Lee, J. 1994. *Wolverine Harvest and Carcass Collection, Coppermine, Bay Chimo and Bathurst Inlet, 1992/93*. Manuscript Report No. 76. Government of the Northwest Territories, Department of Renewable Resources. Yellowknife.
- LeFranc, M.N. Jr. *et al.* (ed). 1987. *Grizzly Bear Compendium*. United States Department of Interior, International Grizzly Bear Committee, Bozeman, Montana.
- Lester, N.P., M.M. Petzold, W.I. Dunlop, B.P. Monroe, S.D. Orsatti, T. Schaner and R. Wood. 1991. Sampling Ontario Lake Trout Stocks: Issues and Standards. In *Lake Trout Synthesis*, Ontario Ministry of Natural Resources, Toronto.
- Lewkowica, A.G. and H.M. French. 1982. The Hydrology of small runoff plots in an area of continuous permafrost, Banks Island, N.W.T. In *The Roger J.E. Brown Memorial Volume, Proceedings of the Fourth Canadian Permafrost Conference, 2-6 March 1981, Calgary, Alberta*, 151-162, Associate Committee on Geotechnical Research, National Research Council of Canada.
- Lind, O.T. 1979. *Handbook of Common Methods in Limnology*. St. Louis: C.V. Mosby Company.

References

- Linell, K.A. and C.W. Kaplar. 1966. Description and Classification of Frozen Soils. In *Proceedings, International Conference on Permafrost (1963)*, Lafayette. U.S. National Academy of Sciences, Publ. 1287, pp481-487.
- Lloyd, D.S., J.P. Koenings and J.D. LaPerriere. 1987. Effects of turbidity in fresh waters of Alaska. *North American Journal of Fisheries Management* 7: 18-33.
- Looy, L. 1994. *Fraser Environmental Services Methods Manual January 1994*. Fraser Environmental Services. Surrey, BC.
- Louie, P.Y.T. 1979. Lake evaporation estimates in northern latitudes. In *Canadian Hydrology Symposium: 79 - Cold Climate Hydrology, Proceedings*, 10-11 May 1979, Vancouver, BC., 490-501, Associate Committee on Hydrology, National Research Council of Canada (NRCC 17834), Ottawa, Ontario.
- Lupin Mine. 1995. *Letter from D. Willy; Mine Employment*. Manager, public affairs, Echo Bay Mines.
- Lutra Associates. 1995. *A Strategy to Maximize Northern Employment in Mining in Slave Geological Province, Phase I*. Initial report. Yellowknife: NWT Education, Culture and Employment *et al*.
- Lutsel K'e. 1995. Treaty 8 Tribal Council, Declaration on Akaitcho Traditional Territory.
- Macey, A. 1979. *The Status of the Grizzly Bear (Ursus arctos horribilis) in Canada*. Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 54 p. Ottawa.
- MacHutchon, Grant. 1995. *Personal Communication*. Grizzly Bear Biologist and Independent Consultant, Coquitlam, BC. Feb. 1995.
- MacInnis, C.D. and R.K. Misra. 1972. Predation on Canada Goose nests at McConnell River, Northwest Territories. *Journal of Wildlife Management* 36(2):414-422.
- MacLean, J.A., D.O. Evans, N.V. Martin and R. L. DesJardine. 1981. Survival growth and spawning distribution and movements of introduced and native lake trout (*Salvelinus namaycush*) in two inland Ontario lakes. *Canadian Journal of Fisheries and Aquatic Sciences* 38: 1685-1700.

References

- MacLean, N.G., J.M. Gunn, F.J. Hicks, P.E. Ihssen, M. Malhiot, T.E. Mosindy and W. Wilson. 1990. *Environmental and Genetic Factors Affecting Ecology of Lake Trout*. Lake trout Synthesis, 76 p. Ontario Ministry of Natural Resources, Toronto.
- MacNeish, R.S. 1951. An Archaeological Reconnaissance in the Northwest Territories. Annual Report for 1949-50. *National Museum of Canada Bulletin* 123:24-41.
- MacNeish, R.S. 1953. Archaeological Reconnaissance in the Mackenzie River Drainage. *National Museum of Canada Bulletin* 128:23-39.
- MacNeish, R.S. 1955. Two Archaeological Sites on Great Bear Lake, Northwest Territories, Canada. Annual Report for 1953-54, *National Museum of Canada Bulletin* 136:54-84.
- MacPherson, A.H. 1969. *The Dynamics of Canadian Arctic Fox Populations*. Canadian Wildlife Service, Report Series 8, 52 p. Ottawa.
- Madsen, E.H., and Madill, H.D. 1995. *Exploration to Development: DIAND's Regulatory Requirements in the Northwest Territories*. DIAND, Yellowknife.
- Magoun, A.J. 1985. *Population Characteristics, Ecology and Management of Wolverines in Northwestern Alaska*. Ph.D. Thesis, University of Alaska, Fairbanks.
- Maitland, P.S. 1990. *Biology of Freshwaters*. New York: Chapman and Hall.
- Manci, K.W., D.N. Gladwin, R. Villella and M.G. Cavendish. 1988. *Effects of Aircraft Noise and Sonic Booms on Domestic Animals and Wildlife: A Literature Synthesis*. No. NERC-88. National Ecology Research Centre, United States Fish and Wildlife Service, Ft. Collins, Colorado. 88 p.
- Marchant, C. and J. Sherlock. 1984. *A Guide to Selection and Propagation of Some Native Woody Species for Land Reclamation in British Columbia*. B.C. Ministry of Forests. Research Report RR84007-HQ. Victoria.
- Marsh, P. 1976. *A Preliminary Report on Hydrometeorology and Water Balance of a Small Arctic Basin, Cornwallis Island, N.W.T.* Unpublished report, Department of Geography, McMaster University, Hamilton.

References

- Marsh, P. 1988. Soil infiltration and snow-melt run-off in the Mackenzie Delta, N.W.T. In *Proceedings, 5th International Conference on Permafrost, 2-5 August 1988, Trondheim, Norway*; 1: 618-621. ed. K. Senneset, Trondheim: Tapir Publishers.
- Marsh, P. and M.K. Woo. 1984a. Wetting front advance and freezing of meltwater within a snow cover. 1. Observations in the Canadian Arctic. *Water Resources Research* 20(12): 1853-1864.
- Marsh, P. and M.K. Woo. 1984b. Wetting front advance and freezing of meltwater within a snow cover. 2. A simulation model. *Water Resources Research* 20(12): 1865-1874.
- Marsh, P. and M.K. Woo. 1985. Meltwater movement in natural heterogeneous snow covers. *Water Resources Research* 21(11): 1710-1716.
- Marsh, P. and S.C. Bigras. 1988. Evaporation from Mackenzie Delta lakes, N.W.T., Canada. *Arctic and Alpine Research* 20(2): 220-229.
- Marsh, P., W.R. Rouse and M.K. Woo, 1981. Evaporation at a high arctic site. *Journal of Applied Meteorology* 20(6): 713-716.
- Marshall, I.B. 1980. *The Ecology and Reclamation of lands Disturbed by Mining: A selected bibliography of Canadian references*. Lands Directorate. Environment Canada. Ottawa: Supply and Services Canada.
- Martin, N.V. 1957. Reproduction of lake trout in Algonquin Park, Ontario. *Transactions of the American Fisheries Society* 86: 231-244.
- Martin, N.V. 1960. Homing behaviour in spawning lake trout. *Canadian Fish Culturist* 26: 3-6.
- Martin, N.V. and C.H. Olver. 1976. *The Distribution and Characteristics of Ontario Lake Trout Lakes*. Ontario Ministry of Resources, Fish and Wildlife Research Branch Research Report. No. 97: 30 p.
- Martin, N.V. and C.H. Olver. 1980. The Lake Charr, *Salvelinus namaycush*. In *Charrs*. ed. E.K. Balon, p205-279. The Hague: Dr. W. Junk bv Publishers.
- McCourt, K.H. and L.P. Horstman. 1974. The reaction of barren-ground caribou to aircraft. In *The Reaction of Some Mammals to Aircraft and Compressor*

References

- Station Noise Disturbance.* ed. Jakimchuk, R.D. *Arctic Gas, Biological Report Series* 23:1-36.
- McCourt, K.H., J.D. Feist, D. Doll and J.J. Russell. 1974. Disturbance studies of caribou and other mammals in the Yukon and Alaska. *Arctic Gas, Biological Report Series* 23: 1-246.
- McCown, B.H. and D.R. Simpson (ed.). 1972. *Proceedings of the Symposium on the Impact of Oil Resource Development on Northern Plant Communities, 23rd AAAS Alaskan Science Conference*, University of Alaska. Fairbanks.
- McCoy, G.A. 1983. Nutrient limitation in two Arctic lakes, Alaska. *Canadian Journal of Fisheries and Aquatic Sciences* 40: 1195-1202.
- McGhee, R. 1970. Excavations at Bloody Falls, N.W.T. Canada. *Arctic Anthropology* 6 (2): 53-72.
- McKee, P., R. Watters and D.L. Lush. 1989. *Supporting Document 4. Aquatic Baseline Conditions - Kiggavik Project Area. District of Keewatin, Northwest Territories.* Report prepared for Urangesellschaft Canada Limited, Toronto.
- McKenna, D. 1994. *Personal communication.* Department of Fisheries and Oceans, Yellowknife, N.W.T. November, 1994.
- McKinley, W.R. and R.D. Webb. 1956. *A Proposed Correction of Migratory Fish Problems at Box Culverts.* Department of Fisheries, State of Washington, Olympia.
- McLellan, B.N. 1990. Relationships between human industrial activity and grizzly bears. In *International Conference on Bear Research and Management* 8:57-64.
- McLellan, B.N. and D.M. Shackleton. 1989a. Immediate reactions of grizzly bears to human activities. *Wildlife Society Bulletin* 17:269-274.
- McLellan, B.N. and D.M. Shackleton. 1989b. Grizzly bears and resource extraction activities: habitat displacement in response to seismic exploration, timber harvesting and road maintenance. *Journal of Applied Ecology* 26:371-380.

References

- McMullen, Andy. 1995. *Personal communication*. Conservation Education, Resource Development Officer. Department of Renewable Resources, Government of the Northwest Territories, North Slave Area, Yellowknife, NWT. January 1995.
- McNeill, D. 1995. *Telephone Conversation Regarding Fuel Distribution Through Hay River*. Principal, McNeill Petroleum, Hay River. March 1995.
- McPhail, J.D. and C.C. Lindsey. 1970. Freshwater Fishes in Northwestern Canada and Alaska. *Bulletin of the Fisheries Research Board of Canada*. 173: 1-381.
- Meidinger, D. undated. *A Preliminary Study of Germination Requirements of Seeds of Selected Coast of Rocky Mountain Species*. unpublished undergraduate paper.
- Metcalf, F. and C. Kobelka. 1978. *1977 Coppermine River Archaeological Survey*. Report on file with the Prince of Wales Northern Heritage Centre, Yellowknife.
- Metis Nation. 1995. Presentation to Environmental Review Panel, Yellowknife.
- Meuller, F. 1995. *Tundra Esker Systems and Denning by Grizzly Bears, Wolves, Foxes and Ground Squirrels in the Central Arctic, Northwest Territories*. File report No. 115, 68 Department of Renewable Resources, Government of the NWT., Yellowknife.
- Miller, F.L., C.J. Jonkel and G.D. Tessier. 1972. Group cohesion and leadership response by barren ground caribou to man-made barriers. *Arctic* 25(3):193-202.
- Miller, L. 1981. *Noise Control for Buildings and Manufacturing Plants*. Cambridge, Massachusetts: Bolt Beranek and Newman Inc.
- Miller, M.C. and J.R. Stout. 1989. Variability of macroinvertebrate community composition in an arctic and subarctic stream. *Hydrobiologia* 172: 111-127.
- Miller, R.B. and W.A. Kennedy. 1948. Observations on the lake trout of Great Bear Lake. *Journal of the Fisheries Research Board of Canada* 5: 176-189.

References

- Mills, L.S., M.E. Soule and D.F. Doak. 1993. The Keystone-Species Concept in Ecology and Conservation. *BioScience* 43: (4): 219-224.
- Mining Association of Canada and Canada, Natural Resources. 1993. *Mining in Canada, Facts and Figures*. Ottawa.
- Mining Association of Canada. 1994. *Taking action to Keep Mining in Canada*. Ottawa: brief presented to Standing Committee on Natural Resources.
- Minshall, G.W., K.W. Cummins, R.C. Petersen, C.E. Cushing, D.A. Bruns, J.R. Sedell and R.L. Vannote. 1985. Developments in stream ecosystem theory. *Canadian Journal of Fisheries and Aquatic Sciences* 42: 1045-1055.
- Mitchell, B. 1980. *Bathurst Caribou Collaring Project, Contwoyto Lake, July 26 - August 3 1979*. File Report No. 9, p23. Northwest Territories Wildlife Service, Yellowknife.
- Mitchell, R.H. 1986. *Kimberlite: Mineralogy, Geochemistry and Petrology*. New York: Plenum Press.
- Mitchell, W.R., R.N. Green, G.D. Hope and K. Klinka. 1989. *Methods for biogeoclimatic ecosystem mapping*. Internal Report of the Ministry of Forests Research Program, RR 89002-.K.L. B.C. Ministry of Forests, Victoria.
- Momaday, N.S. 1976. Native American attitudes towards the environment. In *Seeing with a Native Eye*. ed. W. Capps, New York: Harper and Row.
- Moore, J.W. 1978a. Composition and structure of zooplankton communities in eighteen Arctic and subarctic lakes. *International Revue Gestion Hydrobiologie* 63: 545-565.
- Moore, J.W. 1978b. Distribution and abundance of phytoplankton in 153 lakes, rivers, and pools in the Northwest Territories. *Canadian Journal of Botany* 56: 1765-1773.
- Moore, J.W. 1978c. Importance of algae in the diet of the oligochaetes *Lumbriculus variegatus* (Muller) and *Rhyacodrilu sodalis* (Eisen). *Oecologia* 35: 357-363.

References

- Moore, J.W. 1978d. Some factors influencing the diversity and species composition of benthic invertebrate communities in twenty arctic and subarctic lakes. *International Revue Gestion Hydrobiologie* 63(6): 757-771.
- Moore, J.W. 1979. Distribution and abundance of attached, littoral algae in 21 lakes and streams in the Northwest Territories. *Canadian Journal of Botany* 57: 568-577.
- Moore, J.W. 1981a. Factors influencing the species composition, distribution and abundance of benthic invertebrates in the profundal zone of a eutrophic northern lake. *Hydrobiologia* 83: 505-510.
- Moore, J.W. 1981b. Inter-species variability in the consumption of algae by oligochaetes. *Hydrobiologia* 83: 241-244.
- Morgaine, C.A. 1992. Helping People Change Themselves: A Critical Approach to Family Life Education. In *Human Ecology*. ed. R. Riewe and J. Oakes. Canadian Circumpolar Institute, p69-79.
- Morin, K. 1995. *Personal communication*. President and Research Scientist, Morwijk Enterprises Ltd. Vancouver, BC. April 1995.
- Morin, K.A. 1990. Problems and proposed solutions in predicting acid drainage with acid-base accounting. In *Acid Mine Drainage - Designing for Closure*, Geological Association of Canada/ Mineralogical Association of Canada Conference, Vancouver, May 16-18, p93-107.
- Morin, K.A., and N.M. Hutt. 1994. Observed preferential depletion of neutralization potential over sulfide minerals in kinetic tests: Site-specific criteria for safe NP/AP ratios. In *Proceedings of the Third International on the Abatement of Acidic Drainage, Pittsburgh, Pennsylvania, USA, April 24-29*, Volume 1:148-156.
- Morin, K.A., N.M. Hutt, and K.D. Ferguson. 1995. Measured rates of sulfide oxidation and acid neutralization in humidity cells: Statistical lessons from the database. In *Sudbury '95, Mining and the Environment*.
- Morris, M. 1973. Great Bear Lake Indians: A historical demography and human ecology. Part 2. *Muskox* 12: 58-80.

References

- Moss, B. 1988. *The Ecology of Fresh Waters: Man and Medium*. London: Blackwell Scientific Publications.
- Mueller-Dombois, D. 1967. Ecological Relations in the Alpine and Subalpine Vegetation on Mauna Loa, Hawaii. *Journal of the Indiana Botanical Society* 46(4).
- Mugikura, K., Tsuruta, M., Korenaga, Y., Nagatomo, M. 1984. A simplified prediction method for noise propagation at construction sites. In *Internoise Proceedings 1984*, II: 777-782. Honolulu, Hawaii.
- Munro, W.T. 1990. *Committee on the status of endangered wildlife in Canada*. *BioLine*. 9(2): 10-12.
- Murdock, J. 1988. Cree Cognition in Natural and Educational Contexts. In *Indigenous Cognition: Functioning in Cultural Context*. ed. J.W. Berry, S.H. Irvine, and E.B. Hunt. p231-256. Martinus Nijhoff Publishers.
- Murphy, S.M., and J.A. Curatolo. 1987. Activity budgets and movement rates of caribou encountering pipelines, roads and traffic in northern Alaska. *Canadian Journal of Zoology*. 65:2483-2490.
- Murray, J.W. and J.G. Dillard. 1979. The oxidation of cobalt (II) adsorbed on manganese dioxide. *Geochimica et Cosmochimica Acta* 43: 781-787.
- n.d. Yellowknives Dene First Nations Treaty Entitlement: Information for Membership. Manuscript on deposit, Yellowknife.
- Nagpal, N.K. 1989. *Ambient Water Quality Criteria for Mercury - Technical Appendix. Approved Working Criteria for Water Quality*. B.C. Ministry of Environment, Victoria.
- Nagy, J.A. and R.H. Russell. 1978. *Ecological Studies of the Boreal Forest Grizzly Bear (Ursus arctos L.)*. Annual Report for 1977. p72. Canadian Wildlife Service, Edmonton.
- Nagy, J.A., A.M. Pearson and R.H. Russell. 1977. *The Barren-ground Grizzly Bear, Annual Report for 1976*. p7. Unpublished Report, Canadian Wildlife Service, Edmonton.

References

- Nagy, J.A., R.H. Russell, A.M. Pearson, M.C.S. Kingsley and C.B. Larsen. 1983. *A Study of Grizzly Bears on the Barren-grounds of Tuktoyaktuk Peninsula and Richards Island, Northwest Territories, 1974 to 1978.* p136. Unpublished Report, Canadian Wildlife Service, Edmonton.
- Nanisivik Mine. 1995. *Telephone Conversation, J. Haynes; Employment.* Personnel Manager. Nanisivik.
- Nassichuk, W.W. and D.J. McIntyre. 1995. Cretaceous and Tertiary fossils discovered in kimberlites at Lac de Gras in the Slave Province, Northwest Territories. In *Current Research 1995-B:* 109-114. Geological Survey of Canada, Ottawa.
- National Defence. 1994. *An Environmental Impact Statement on Military Flight Activities in Labrador and Quebec.* Ottawa
- Newcombe, C.P. and D.D. MacDonald. 1991. Effects of suspended sediments on aquatic ecosystems. *North American Journal of Fisheries Management* 11: 72-82.
- Newman, J.S., E.J. Rickley and T.L. Bland. 1982. *Helicopter Noise Exposure Curves for Use in Environmental Impact Assessment.* U.S. Federal Aviation Administration Report. No. FAA-EE-82-16. p140. Washington, D.C.
- Nishi-Khon Forestry Service Ltd. 1995. *Letter from Seguro Ndabene; Seasonal Firefighter Workforce.* General Manager. Rae-Edzo.
- Nixon Geotech Ltd. 1992. *1-D Geothermal Program (THERM1, Version 92-2) Description and User's Manual.* Nixon Geotech Ltd. Calgary.
- Noble, W.C. 1971. Archaeological Surveys and Sequences in Central District of Mackenzie, N.W.T. *Arctic Anthropology* 8(1): 102-135.
- Noble, W.C. 1977. The Taltheilei Shale Tradition: An Update. In *Prehistory of the North American Sub-Arctic, The Athapaskan Question*, ed. J.W. Helmer, S. Van Dyke and F.J. Kense, p65-71. Archaeological Association of the University of Calgary.

References

- Noble, W.C. 1981. Prehistory of the Great Slave Lake and Great Bear Lake Region. In *Handbook of North American Indians, Volume 6 (Subarctic)*: 97-106. ed. J. Helm. Washington, D.C., Smithsonian Institution.
- Norecon Limited. 1995. *NWT Economic Review and Outlook*. Yellowknife: NWT Economic Development and Tourism.
- Northcote, T.G. 1993. *A Review of Management and Enhancement Options for the Arctic Grayling (Thymallus arcticus) with Special Reference to the Williston Reservoir Watershed in British Columbia*. Fisheries Management Report No. 000.
- Northland Utilities (NWT) Limited. 1995. *Electrical Rates, Selected Communities*. Hay River.
- Northwestel, Inc. 1995. *Telephone Conversation, Mike Carter; Telecommunications Facilities*. Manager, public affairs, Whitehorse. March 1995.
- NWT Air. 1995. *Telephone conversation, Karen Siebold; Passenger Traffic*. March 1995. Yellowknife.
- NWT Bureau of Statistics. 1989. *1989 Labour Force Survey*. Report No. 1. Yellowknife.
- NWT Bureau of Statistics. 1993. *Population Projections 1991 to 2006*. Yellowknife.
- NWT Bureau of Statistics. 1993a. *NWT Economic Multipliers*. Yellowknife.
- NWT Bureau of Statistics. 1994a. *1994 Labour Force Survey*. Report No. 1. Yellowknife.
- NWT Bureau of Statistics. 1994b. *Statistics Quarterly*. Vol. 16, No. 4. December 1994. Yellowknife.
- NWT Bureau of Statistics. 1994c. *Statistics Quarterly*. Vol. 16, No. 2. June 1994. Yellowknife.
- NWT Bureau of Statistics. 1995a. *Statistics Quarterly*. Vol. 17, No. 1. March 1995. Yellowknife.

References

- NWT Bureau of Statistics. 1995b. *Profiles*, Northwest Territories, Parts A and B. Yellowknife.
- NWT Bureau of Statistics. 1995c. *Profiles*, selected NWT communities. Parts A and B. Yellowknife.
- NWT Bureau of Statistics. 1995d. *National Occupational Classification by Selected Communities*. From 1994 NWT Labour Force Survey data. Special request. Yellowknife.
- NWT Bureau of Statistics. 1995e. *Labour Force Activity, by Involvement in Trapping, During 1993*. From 1994 Labour Force Survey data. Special request. Yellowknife.
- NWT Bureau of Statistics. 1995f. *Tax Model, BHP Project*. Yellowknife.
- NWT Chamber of Mines. 1995a. *Mining Industry Forecast/Status, 1995*. Yellowknife.
- NWT Chamber of Mines. 1995b. *Exploration Companies Working in the NWT*. Yellowknife.
- NWT Diamonds Project. 1995a. *Internal Memo Regarding Markup on Equipment Sales, Discussion With Supplier*. Vancouver.
- NWT Economic Development and Tourism. 1975 to 1990. *Trip Reports. Coppermine River*. Yellowknife.
- NWT Economic Development and Tourism. 1993. *Kitikmeot Business Identification Study*. Cambridge Bay. Unpublished.
- NWT Economic Development and Tourism. 1994. *NWT Community Database*. Computer database by Dan Westman. Yellowknife.
- NWT Economic Development and Tourism. 1995a. *Licensed Businesses, Dogrib Communities*. Rae-Edzo.
- NWT Economic Development and Tourism. 1995b. *Fax from Irvin Sumter-Frietag; Community Businesses, Rae-Edzo*. Economic development officer, Rae.

References

- NWT Economic Development and Tourism. 1995c. *Telephone Conversation, Gunnar Paulson; Community Businesses. Rae Lakes, Wha Ti, Snare Lake.* Economic development officer, Rae Lakes.
- NWT Economic Development and Tourism. 1995d. *Telephone Conversation with Eric Yaxley: Tourism Impact on Yellowknife.* Product development coordinator, Yellowknife.
- NWT Economic Development and Tourism. 1995e. *North Slave Region Licensed Outfitters.* Yellowknife, December 1994.
- NWT Education, Culture and Employment. 1994. *People: Our focus for the Future, A Strategy to 2010.* Yellowknife.
- NWT Education, Culture and Employment. 1995a. *List of NWT Schools and Enrollments 1994-95.* Yellowknife.
- NWT Education, Culture and Employment. 1995b. *Apprenticeship Trades.* Yellowknife.
- NWT Education, Culture and Employment. 1995c. *Registered Apprentices, 1994/95.* Yellowknife.
- NWT Energy, Mines and Petroleum Resources. 1994. *Employment in the NWT Mining Industry, 1994.* Yellowknife.
- NWT Finance. 1995. *Formula Financing Grant Calculation, 1993-1994.* Yellowknife.
- NWT Financial Management Board Secretariat. 1994. *Capital Estimates, 1995-1996.* Yellowknife.
- NWT Financial Management Board Secretariat. 1995. *Main Estimates, 1995-1996.* Yellowknife.
- NWT Health and Social Services. 1995a. *Social Assistance Information System. Program Analysis Reports, 1993 and 1994. Selected Communities.* Yellowknife.

References

- NWT Health and Social Services. 1995c. *Interview, Carolyn Mandrusiak; Community Services and Impact of the Proposed NWT Diamonds Project on Yellowknife*. Area director, Yellowknife, March 1995.
- NWT Health. 1990. *Health and Health Services in the NWT*. Yellowknife: THIS/Health.
- NWT Housing Corporation. 1992. *Housing Needs Survey*. Yellowknife.
- NWT Housing Corporation. 1994. *A New Rent Scale for Social Housing*. Yellowknife.
- NWT Housing Corporation. 1995. *HAP housing, Selected Communities, 1992 to 1994*. Yellowknife.
- NWT Liquor Commission. 1994. *Status of NWT Community Liquor Restrictions*. Hay River.
- NWT Mining Act. Chapter M-16, Mining Safety Regulations. Yellowknife.
- NWT Municipal and Community Affairs. 1994a. *Community Inventory and Needs*. Fort Smith Region and Kitikmeot Region. Yellowknife.
- NWT Municipal and Community Affairs. 1994b. *Historical Facility Costs*. Yellowknife, Sport and Recreation Division.
- NWT Municipal and Community Affairs. 1995a. *Hamlet Budgets*. Selected communities, 1994 and 1995. Yellowknife.
- NWT Municipal and Community Affairs. 1995b. *Telephone Conversation, John Holland: Community Income Rae Lakes, Snare Lake*. Area Superintendent. Yellowknife.
- NWT Municipal and Community Affairs. 1995c. *Fax from Judi Noseworthy: Municipal Status of Selected NWT Communities*. Yellowknife.
- NWT Municipal and Community Affairs. 1995d. *Five Year Capital Forecasting Plan, 1995-2000*. Detail by settlement, selected communities. Yellowknife.

References

- NWT Power Corporation. 1995a. *Telephone Conversations, Bill Braden; Status of Dogrib Hydro Power Project*. Public affairs. Yellowknife.
- NWT Power Corporation. 1995b. *Faxes from Cheryl Lorinez; Electricity Rates and Installed Capacity, Selected Communities*. Director, rates and regulatory affairs, Hay River.
- NWT Renewable Resources. 1994a. *Resident Hunter Harvest Survey Data*. Yellowknife, December 1994.
- NWT Renewable Resources. 1994b. *Resident Hunting Statistics, 1994*. Selected communities. Yellowknife, December 1994.
- NWT Renewable Resources. 1994c. *Wildlife Management Zones, 1993/1994*. Caribou and muskox. Maps. Yellowknife.
- NWT Renewable Resources. 1995. *Contributions to Local Wildlife Committees*. Selected communities. Yellowknife and Fort Smith.
- NWT Renewable Resources. 1995b. *Telephone Conversation, Andy McMullen; Estimate of General Hunting License Holders Resident in Yellowknife*. March, 1995.
- NWT Transportation. 1990. *Transportation Strategy*. Yellowknife.
- NWT Transportation. 1993. *Northwest Territories Highway Traffic*. Yellowknife.
- NWT Transportation. 1994. *Transportation Strategy Update*. Yellowknife. Unpublished.
- NWT Transportation. 1995. *Letter from Masood Hassan; Air, Highway and Marine Services, Selected NWT Communities*. Yellowknife.
- NWT Water Board. 1987. *Guidelines for Contingency Planning*. Yellowknife.
- O'Brien, W.J., C.B. Buchanan and J.F. Haney. 1979. Arctic zooplankton community structure: exceptions to some general rules. *Arctic* 32: 237-247.

References

- Obst, J. 1993. *Proposal for a Recovery Plan Project for the Eskimo Curlew (Numenius borealis) in the Northwest Territories*. Unpublished Report, Ecology North and Department of Indian and Northern Affairs, Yellowknife.
- Obst, Joachim 1995. *Personal communication*. Wildlife Technician and Independent Contractor, Yellowknife, NWT. January 1995.
- Ohmart, R.D. and B.W. Anderson. 1986. Riparian habitat. In *Inventory and Monitoring of Wildlife Habitat*. ed. A.Y. Cooperrider, R.J. Boyd and H.R. Stuart, p. 169-199. United States Department of the Interior, Bureau of Land Management Service Centre. Denver, Colorado.
- Ohmura, A. 1981. *Climate and Energy Balance on Arctic Tundra, Axel Heiberg Island, Canadian Arctic Archipelago, Spring and Summer 1969, 1970 and 1972*. Zürcher Geographische Schriften, Heft 3, Zürich: Geographisches Institut, Eidgenössische Technische Hochschule.
- Ohmura, A. 1982. Climate and energy balance on the Arctic tundra. *Journal of Climatology* 2(1): 65-84.
- Oldham, Jim. Shell Canada. Telephone Interview 8 May 1995. Canada 1994 Canada's National Report on Climate Change.
- Ollerhead, J.B., Jones, C.J. 1993. Aircraft noise and sleep disturbance: a U.K. field study. *Proceedings of the 6th International Congress on Noise as a Public Health Problem (Noise & Man '93)*. ed. M. Vallet. Arcueil, France: Institut National de Recherche sur les Transports et Leur Sécurité (Actes INTRETS No. 34), 1" p 55 only and 3: 353-358.
- Onesti, L.J. and S.A. Walti, 1983. Hydrologic characteristics of small arctic-alpine watersheds, central Brooks Range, Alaska. In *Permafrost, Fourth International Conference, Proceedings, 17-22 July 1983, Fairbanks, Alaska* Washington, D.C. National Academy Press, p957-961.
- Otto, C. 1983. Adaptations to benthic freshwater herbivory. In *Periphyton of Freshwater Ecosystems*, ed. R.G. Wetzel, p199-205. The Hague: Dr. W. Junk Publishers.
- Outcrop Ltd. 1990. *Northwest Territories Data Book; 1991-1992*. Yellowknife.

References

- Outcrop Ltd. 1995. *Survey of Coppermine Residents for NWT Diamonds Project*. February 1995. Unpublished.
- Palmer, M.A., A.E. Bely and K.E. Berg. 1992. Response of invertebrates to lotic disturbance: a test of the hyporheic refuge hypothesis. *Oecologia* 89: 182-194.
- Parkinson, D., R. Gossen and S. Henderson. 1975. *Effects of Oil Spillage on Microorganisms in northern Canadian Soils*. Indian and Northern Affairs. ALUR 74-75-82. Ottawa.
- Parsons, T.R., Y. Maita and C.M. Lalli. 1984. *A Manual of Chemical and Biological Methods for Seawater Analysis*. Toronto: Pergamon Press.
- Patalas, K., J. Patalas, and A. Salki. 1994. Planktonic Crustaceans in Lakes of Canada. *Canadian Technical Report of Fisheries and Aquatic Sciences*. 1954:1-218.
- Pater, L.L. 1976. Noise abatement program for explosive operations at NSWC/DL. In *Seventeenth Explosives Safety Seminar of the DDESB*, Denver, Colorado.
- Peterson, E.B. and N.M. Peterson. 1977. Revegetation information Applicable to Mining Sites in Northern Canada. *Indian and Northern Affairs. Environmental Studies* No. 3. QS-8144-000-EE-A1. Ottawa.
- Pickard, G.L. and W.J. Emery. 1982. *Descriptive Physical Oceanography*. Toronto: Pergamon Press.
- Pihlainen, J.A. and G.H. Johnston. 1963. *Guide to the field description of permafrost*. Canada, National Research Council, Associate Committee on Soil and Snow Mechanics, Technical Memorandum 79, 23 p.
- Pike, W. 1892. *The Barren Ground of Northern Canada*. New York and London: MacMillan and Company.
- Pitelka, F.A., P.Q. Tomich and G.W. Treichel. 1955. Ecological relations of jaegers and owls on lemming predators near Barrow, Alaska. *Ecological Monographs* 25: 85-117.

References

- Pojar, J., K. Klinka and D.V. Miedinger. 1987. Biogeoclimatic ecosystem classification in British Columbia. *Forest Ecology and Management* 22: 119-154.
- Polaris Mine. 1995. *Telephone Conversation, Jim Flower; Mine Employment.* Personnel manager, Cominco Polaris Mine.
- Polster, D.F. 1994. *Mount Klappan Coal Project 1994 Exploration and Reclamation Report Permit Number C-160.* Polster Environmental Services. Duncan, B.C. Report prepared for Gulf Canada Resources Limited, Calgary.
- Polster, D.F. 1994. *Whitehorse Copper Mine Tailings Pond Reclamation.* Polster Environmental Services. Duncan, B.C. Report prepared for Hudson Bay Mining and Smelting Co. Limited. Flin Flon, Manitoba.
- Polster, D.F. 1989. Successional reclamation Western Canada: New light on an old subject. In *Canadian Land Reclamation Association and American Society for Surface Mining and Reclamation Conference, Calgary, Alberta, August 27-31, 1989.*
- Porcupine Technical Committee. 1993. Sensitive habitats of the Porcupine Caribou herd. International Porcupine Caribou Board. 28 p.
- Porsild, A.E., and W.J. Cody. 1980. Vascular Plants of the Continental Northwest Territories. National Museum of Natural Sciences, National Museums of Canada. Ottawa, Canada. ISBN 0-660-0019-5.
- Porter, T.R., D.M. Rosenberg and D.K. McGowan. 1974. *Winter Studies of the Effects of a Highway Crossing on the Fish and Benthos of the Martin River, N.W.T.* Environment Canada Fisheries and Marine Service, Technical Report Series # CEN/T-74-3.
- Power, G. 1978. Fish population structure in Arctic lakes. *Journal of the Fisheries Research Board of Canada* 35: 53-59.
- Price, A.J. and T. Dunne. 1976. Energy balance computations on snowmelt in a subarctic area. *Water Resources Research* 12(4): 686-694.
- Price, A.J., T. Dunne and S.C. Colbeck, 1976. Energy balance and runoff from a subarctic snowpack. CRREL Report No. 76-27, Cold Regions Research and

References

- Engineering Laboratory, U.S. Army Corps of Engineers, Hanover, New Hampshire, p29.
- Putman, R.J. 1994. *Community Ecology*. New York: Chapman and Hall.
- Quimby, R. 1974. Grizzly bear. In *Mammal Studies in Northeastern Alaska with Emphasis Within the Canning River Drainage*. ed. R.D. Jakimchuk. p1-85. Canadian Arctic Gas Study Ltd., Biological Report Series 24.
- Rae-Edzo. Hamlet of. 1995. *Hamlet Employment, fax*. April 1995.
- Rampton, V.N. 1994. *Quaternary Geology of the BHP-Diamet Main Block, Lac de Gras, NWT*. Report prepared by Terrain Analysis & Mapping Services Ltd. to BHP Minerals Canada Ltd. November, 1994.
- Rassudov, A., S. Dolgykh, V. Karasev, and K. Anistratov. 1992. Environmental protection problems in mining of "Udachnaya" pipe diamond deposit under severe conditions of the Far North. In *Proceedings of the Second International Conference on Environmental Issues and Management of Waste in Energy and Mineral Production, Calgary, Alberta, September 1-4*, ed. R.K. Singhal, A.K. Mehrotra, K. Fytas and J-L. Collins. 1: 319-327.
- Raven, K.G., J.L. Smith and R.A. Freeze. 1992. *Hydrogeologic Scoping Calculations on Radionuclide Transport to the Biosphere*. Report prepared for Nuclear Programs Division Environment Canada, Ottawa.
- Rawson, D.S. 1950. The grayling (*Thymallus signifer*) in Northern Saskatchewan. *Canadian Fish Culturist* 6: 3-10.
- Rawson, D.S. 1961. The lake trout of Lac La Ronge, Saskatchewan. *Journal of the Fisheries Research Board of Canada* 18(3): 423-462.
- RCMP "G" Division. 1995a. *Telephone Conversation, S/Sgt Chris Bergman; Detachments and Employment in the NWT*. Yellowknife.
- RCMP "G" Division. 1995b. *NWT Detachment Statistics, 1994*. Selected communities. Yellowknife.
- RCMP "G" Division. 1995c. *Alberta Detachment Statistics, 1994*. Selected communities. Yellowknife.

References

- Reed, R.J. 1964. *Life History and Migration Patterns of Arctic Grayling*. Research Report, Alaska Department of Fish and Game, Anchorage.
- Reeder, S.W., A. Demayo and M.C. Taylor. 1979. *Guidelines for Surface Water Quality. Volume 1 - Inorganic Chemical Substances, Cadmium*. Environment Canada, Inland Water Directorate, Water Quality Branch. Ottawa.
- Reice, S.R., R.C. Wissman and R.J. Naiman. 1990. Disturbance regimes, resilience and recovery of animal communities and habitats in lotic ecosystems. *Environmental Management* 14(5): 647-659.
- Renewable Resources Consulting Services Ltd. 1994. *EIS: Military Flight Training. An Environmental Impact Statement on Military Flying Activities in Labrador and Québec*. Volume I, Technical Report 7. A review of the literature pertaining to the effects of noise and other disturbance on wildlife. Canada National Dept. of Defence, Ottawa.
- Renewable Resources, Department of. 1988. *Bathurst Caribou management plan*. Government of the Northwest Territories. Yellowknife.
- Rescan. 1993. *Environmental Data Report BHP Minerals Canada Ltd. Boston Property, NWT*. Report prepared for BHP Minerals Canada Ltd. Vancouver.
- Rescan. 1994. *Biophysical Environmental Study, Snare Cascades Hydroelectric Project*. Report prepared for Dogrib Power Corp. Yellowknife.
- Reynolds, C.S. 1984. *The Ecology of Freshwater Phytoplankton*. Cambridge: Cambridge University Press.
- Ricker W.E. 1975. Computation and Interpretation of Biological Statistics of Fish Populations. *Bulletin of the Fisheries Research Board of Canada*. 191: 1-382.
- Ritchie, R.J. 1991. Effects of oil development providing nesting opportunities for Gyrfalcons and Rough-legged Hawks in northern Alaska. *Condor* 93:180-184.
- Robertson, R.G. 1955. *The Northern Territories: Its Economic Prospects*. Ottawa: brief presented to Royal Commission on Economic Prospects.

References

- Roby, D.D. 1978. *Behavioral Patterns of Barren Ground Caribou of the Central Arctic Herd Adjacent to the Trans-Alaska Oil Pipeline*. M.Sc. Thesis, University of Alaska, Fairbanks.
- Roots, E.F. 1994. Some Concepts and Issues Surrounding the Place of Science in Assessment of Impacts on the Environment. In *The Role of Science in Environmental Impact Assessment*. ed. E. Higgs, M. Richardson, and R. Riewe, p1-10. Workshop Proceedings Published by the Athabasca University and the Canadian Circumpolar Institute. Edmonton.
- Rosenberg, D.M. and A.P. Wiens. 1978. Effects of sediment addition on macrobenthic invertebrates in a northern Canadian river. *Water Research* 12: 753-63.
- Rosillon, D. 1989. The influence of abiotic factors and density-dependent mechanisms on between-year variations in a stream invertebrate community. *Hydrobiologia* 179: 25-38.
- Roulet, N.T. and M.K. Woo. 1986a. Wetland and lake evaporation in the low Arctic. *Arctic and Alpine Research* 18(2): 195-200.
- Roulet, N.T. and M.K. Woo. 1986b. Hydrology of a wetland in the continuous permafrost region. *Journal of Hydrology* 89(1-2): 73-91.
- Roulet, N.T. and M.K. Woo. 1988. Runoff generation in a low arctic drainage basin. *Journal of Hydrology* 101(1-4): 213-226.
- Rouse, W.R. 1984a. Microclimate at Arctic tree line. I. Radiation balance of tundra and forest. *Water Resources Research* 20(2): 57-66.
- Rouse, W.R. 1984b. Microclimate at Arctic tree line. II. Soil microclimate of tundra and forest. *Water Resources Research* 20(1): 67-73.
- Rouse, W.R. 1984c. Microclimate at Arctic tree line. III. The effects of regional advection on the surface energy balance of upland tundra. *Water Resources Research* 20(1): 74-78.
- Rouse, W.R., P.F. Mills and R.B. Stewart. 1977. Evaporation in high latitudes. *Water Resources Research* 13(6): 909-914.

References

- Royal Commission on Aboriginal Peoples. 1995. *Treaty Making in the Spirit of Co-existence, An Alternative to Extinguishment*.
- Royal Oak Mines, Inc. 1995. *1994 Annual Report*. Kirkland, Washington
- RT & Associates. 1992. *Survey of Community Economic Needs and Aspirations*. Cambridge Bay: Kitikmeit CEDO.
- Rubec, C.D.A. 1981. *Characteristics of Terrestrial Ecosystems Impinged by Acid Precipitation Across Canada*. Working Paper No. 19 for Environment Canada Lands Directorate.
- Ryder, R.A. 1986. Songbirds. In *Inventory and Monitoring of Wildlife Habitat*. ed. A.Y. Cooperrider, R.J. Boyd and H.R. Stuart, p291-312. United States Department of the Interior, Bureau of Land Management, Service Centre. Denver, Colorado.
- Ryder, R.A., S.R. Kerr, K.H. Loftus and H.A. Regier. 1974. The morphoedaphic index, a fish yield estimator - review and evaluation. *Journal of the Fisheries Research Board of Canada* 31: 663-688.
- Sadasivaiah, R.S. and J. Weijer. 1979. *Test Plot Establishment: Testing of Selected Lines Produced in the Native Grass Project* (RRTAC #79-7-WEI). Alberta Land Conservation Reclamation Council Report # RRTAC 80-1. Edmonton.
- Sage, B. 1981. Conservation of the tundra. In *Tundra Ecosystems: A Comparative Analysis*. ed. L.C. Bliss, O.W. Heal and J.J. Moore. p731-746. New York: Cambridge University Press.
- Sayles, F.H. 1983. Design and Performance of Water-Retaining Embankments in Permafrost. In *4th International Conference on Permafrost*, p31-42. Fairbanks, Alaska.
- Schinder, D.W., H.E. Welch, J. Kalff, G.J. Brunskill, H. Kling and N. Kritsch. 1974. Physical and chemical limnology of char lake, Cornisallis Island. *Journal Fisheries Research Board Canada* 31: 587-607.
- Schomer, P.D. and G.A. Luz. 1994. A revised statistical analysis of blast sound propagation. *Noise Control Engineering Journal* 42(3): 95-100.

References

- Schweinsburg, R.E. 1974. Snow Geese disturbance by aircraft on the North Slope, September, 1972. In *Disturbance to Birds by Gas Compressor Noise Simulators, Aircraft and Human Activity in the Mackenzie Valley and the North Slope, 1972*. ed. W.W. H. Gunn and W.J. Richardson, R.E. Arctic Gas, Biological Report Series, Volume 14: 258-279.
- Schweinsburg, R.E., M.A. Gollop and R.A. Davis. 1974.. Preliminary waterfowl disturbance studies, Mackenzie Valley, August, 1972. In *Disturbance to Birds by Gas Compressor Noise Simulators, Aircraft and Human Activity in the Mackenzie Valley and the North Slope, 1972*. ed. W.W.H. Gunn and W.J. Richardson, R.E. Arctic Gas, Biological Report Series 14:232-257.
- Scott, W.B. and E.J. Crossman. 1973. Freshwater Fishes of Canada. *Bulletin of the Fisheries Research Board of Canada* 184: 1-966.
- SEBBC. 1994. *Co-management Plan for Southeast Baffin (Inuit) and Beluga*. Report prepared by M. Stevenson, S. Inness, M. Kilabuk, and G. Koshinsky for the Minister of Fisheries and Oceans, Ottawa.
- Sego, D.C. 1994. *BHP Tailings and Disposal Options*. Report submitted to Rescan Environmental Services. University of Alberta.
- Sego, D.C. 1995. *Preliminary Test Results*, University of Alberta.
- Selby, M.J. 1985. *Earth's Changing Surface: An Introduction to Geomorphology*. Oxford: Clarendon Press.
- Senes Ltd. and Taem Ltd. 1991. *McClean Lake Project Supporting Document II. Aquatic Environment*.
- Shaeffer, Dr. O. 1978. Value of native food resources. *Northern Nutrition*. Yellowknife: Government of NWT.
- Shaeffer, Dr. O. 1980. *Dietary Habits and Nutritional Base of Native Populations of the Northwest Territories*. Yellowknife: Science Advisory Board.
- Shank, C.C. 1993. *The Northwest Territories Small Mammal Survey: 1990-1992*. Department of Renewable Resources, Yellowknife. Manuscript Report No. 72:1-25.

References

- Sheath, R.G. and J.A. Hellebust. 1978. Comparison of algae in the euplankton, tychoplankton, and periphyton of a tundra pond. *Canadian Journal of Botany* 56: 1472-1483.
- Shewchuck, S.R. 1983. *An Acid Deposition Perspective for the Northwest Territories*. Report prepared for the Science Advisory Board of the NWT, Yellowknife.
- Shortreed, K.S. and J.G. Stockner. 1986. Trophic status of 19 subarctic lakes in the Yukon Territory. *Canadian Journal of Fisheries and Aquatic Sciences* 43: 797-805.
- Simpson, P.W., J.R. Newman, M.A. Keirn, R.M. Matter and P.A. Guthrie. 1982. Fish and Wildlife Service. U.S. Dept. of Interior, Washington.
- Smith, R.L. 1974. Fresh-water Ecosystems. In *Ecology and Field Biology*, 2nd ed., p593-627. New York: Harper & Row Publishers.
- Sonntag, N.C., R.R., Everitt, L.P. Rattie, D.L. Colnett, C.P. Wolf, J.C. Truett, A.H.C. Dorsey, and C.S. Holling. 1987. *Cumulative Effects Assessment: A Context for Further Research and Development*. Hull: Canadian Environmental Assessment Research Council.
- Special Committee on Health and Social Services. 1993. Talking and Working Together: Final Report. Chairman Charles Dent, MLA.
- Speich, S.M. 1986. Colonial waterbirds. In *Inventory and Monitoring of Wildlife Habitat* ed. A.Y. Cooperrider, R.J. Boyd and H.R. Stuart, p387-405 United States Department of the Interior, Bureau of Land Management, Service Centre. Denver, Colorado.
- Stabler, J.C. 1989. Dualism and development in the Northwest Territories. *Economic Development and Cultural Change*. 37(4): 805-839.
- Stabler, J.C. and E.C. Howe. 1990. *Socio-economic Transformation of the Native People of the Northwest Territories*. Saskatoon: University of Saskatchewan.
- Stanlake, E.A., D.S. Eastman and M.G. Stanlake. 1978. *Ungulate Use of Some Recently Reclaimed Strip Mines in Southeaster British Columbia*. Fish and Wildlife Report No. R-1. Victoria.

References

- Stanton Yellowknife Hospital. 1995. *Presentation on Services to Yellowknife Chamber of Commerce*. February 1995.
- Steffen Robertson & Kirsten (Canada) Inc. 1993. *Preliminary Geotechnical Assessment, Fox I Decline*, Report Bio4202.
- Steffen Robertson & Kirsten (Canada) Inc. 1994a. Letter from Dr. James I. Mathis of Steffen Robertson & Kirsten (Canada) Inc. to Mr. Jaap Zwaan of BHP Minerals – NWT Diamonds, March 29, 1994. Report of a site visit from March 22 to 26, 1994.
- Steffen Robertson & Kirsten (Canada) Inc. 1994b. Field notes on the “Decline Project” prepared nu Dr. James I. Mathis of Steffen Robertson & Kirsten (Canada) Inc., July 28, 1995. Installation details for Fox decline thermistors.
- Stevenson, M.G. 1992. *Two Solitudes?: South Amundsen Gulf History and Prehistory, NWT*. Manuscript on deposit, Parks Canada, Yellowknife.
- Stevenson, R. J. and R.L. Lowe. 1986. Sampling and interpretation of algal patterns for water quality assessments. In *Rationale for Sampling and Interpretation of Ecological Data in the Assessment of Freshwater Ecosystems, ASTM STP 894*, ed. B.G. Isom, p118-149. Philadelphia: American Society for Testing and Materials.
- Stewart, R.B. and W.R. Rouse. 1976a. Simple models for calculating evaporation from dry and wet tundra surfaces. *Arctic and Alpine Research* 8(3): 263-274.
- Stewart, R.B. and W.R. Rouse. 1976b. A simple method for determining the evaporation from shallow lakes and ponds. *Water Resources Research* 12(4): 623-628.
- Stuart, K.M. and G.R. Chislett. 1979. Aspects of the life history of Arctic grayling in the Sukunka Drainage. British Columbia Fish and Wildlife Branch, Prince George, Internal Report. In *A Review of Management and Enhancement Options for the Arctic Grayling (Thymallus arcticus) with Special Reference to the Williston Reservoir Watershed in British Columbia*, T.G. Northcote. 1993. Fisheries Management Report No. 000.
- Stumm, W. and J. J. Morgan. 1981. *Aquatic Chemistry*. New York: John Wiley and Sons.

References

- Sturtevant, W.C. ed. 1981a. Yellowknife, by Beryl C. Gillespie. *Handbook of North American Indians*. Vol. 6, Subarctic. Washington: Smithsonian Institute.
- Sturtevant, W.C. ed. 1981b. Dogrib, by June Helm. *Handbook of North American Indians*. Vol. 6 Subarctic. Washington: Smithsonian Institute.
- Subcommittee on Biophysical Land Classification. 1979. Ecological land classification projects in northern Canada and their use in decision making. In *Ecological (Biophysical) Land Classification in Canada*. ed. C.D.A. Rubec. p373-379. Ecological Land Classification Series No. 7, Ministry of Supply and Services, Ottawa.
- Surrendi, D.C. and E.A. DeBock. 1976. *Seasonal Distribution, Population Status and Behavior of the Porcupine Caribou Herd*. Mackenzie Valley Pipeline Investigations, Canadian Wildlife Service. 145 p.
- Sutherland, W.J. 1988. Predation may link the cycles of lemmings and birds. *Trends in Evolution and Ecology* 3: 29-30.
- Sverdrup, H.U. 1990. *The Kinetics of Base Cation Release Due to Chemical Weathering*. Lund University Press, Lund.
- Takyi, S.K., M.H. Rowell, W.B. McGill and M. Hyborg. 1977. *Reclamation and Vegetation of Surface Mined Areas in the Athabasca Tar Sands*. Environmental Research Monograph 1977-1. Syncrude Canada Ltd. Edmonton.
- Taylor, A.G, Kende, L.G., Scott, D.S. 1975. Quarry blast atmospheric wave (concussion) response of structure and human annoyance. In *1975 Noisexpo Proceedings, Atlanta, Georgia*. p34-39.
- Taylor, M.C. and A. Demayo. 1980. *Guidelines for Surface Water Quality. Volume 1 - Inorganic Chemical Substances -Zinc*. Environment Canada, Inland Water Directorate, Water Quality Branch. Ottawa.
- The Canadian Circumpola Institute (The Jasper Printing Group). 1994. Ollie Itinuar quoted from *Biological Implications of Global Change: Northern Perspective* 7 p.
- The Economist. April 1, 1995. p. 66. Figure 9.7-2.

References

- The Jasper Printing Group. 1994. *Biological Implications of Global Change: Northern Perspective*. p105-108.
- Thompson, P.H., D. Ross, E. Froese, J.A. Kerswill. & Peshko, M. 1993. Regional Geology in the Winter Lake-Lac de Gras area, central Slave Province, District of MacKenzie, Northwest Territories: In: *Current Research, Part C; Geological Survey of Canada, Paper 93-1C*. p61-70.
- Thorp, J.H. and A.P. Covich. 1991. *Ecology and Classification of North American Freshwater Invertebrates*. Toronto: Academic Press..
- Tornocai, C., and A.N. Boydell. 1975. *Biophysical Study of the Boothia Peninsula and Northern Keewatin, N.W.T.* Geol. Surv. Can. Paper 75-1: 423-424.
- Townsend, C.R. 1980. *The Ecology of Streams and Rivers*. London: Edward Arnold Publishers Limited.
- Transport Canada, 1985. *Helicopter Noise Level Tests Camel Point - Victoria, BC.*, TP 6654E. 61 p.
- Treaty 8 Tribal Council. 1995. Declaration on Akaitcho Traditional Territory, LutselKe.
- Truett, J.C., K. and Kertell. 1992. Tundra disturbance and ecosystem production: Implications for impact assessment. *Environmental Management* 16: (4):485-494.
- Turekian, K.K. and L.H. Wedepohl. 1961. Distribution of the elements in some major units of the Earth's crust. *Bulletin of the Geological Society of America* 72: 175-192.
- U.S. Army. 1956. *Snow Hydrology: Summary Report of the Snow Investigations*. North Pacific Division, U.S. Army Corps of Engineers, Portland, Oregon, 30 June, p437.
- UMA Engineering. 1994. *Rae-Edzo Community Plan*.
- United Nations. 1992. *Agenda 21. The United Nations Conference on Environment and Development*. New York. United Nations.

References

- United Nations. 1994. Report of the United Nations Conference on Population and Development. New York: United Nations.
- United Nations. n.d. *International Covenant on Economic, Social, and Cultural Rights*. New York: United Nations.
- United States Department of the Interior (USDI). 1984. *Flyways: Pioneering Waterfowl Management in North America*. ed. A.S. Hawkings, R.C. Hanson, H.K. Nelson and H.M. Reeves. Washington, D.C.
- University of Alaska. 1977. North American Forest Lands at Latitudes North of 60 Degrees: In: *Proceedings of a Symposium, University of Alaska, September 19-22, 1977*. Fairbanks, Alaska.
- Urabe, J. 1993. N and P cycling coupled by grazers activities: food quality and nutrient release by zooplankton. *Ecology* 74(8): 2337-2350.
- Urquhart, D.R. 1981. *The Bathurst Herd (First Draft)*. Unpublished document prepared for the Northwest Territories Wildlife Service. Government of Northwest Territories. Department of Renewable Resources. Yellowknife.
- Urquhart, D.R. 1989. History of research. In *People and Caribou in the Northwest Territories*, ed. E. Hall, p95-107. Government of Northwest Territories. Department of Renewable Resources, Yellowknife.
- Usher, P. 1971. The Canadian Western Arctic: A Century of Change. *Anthropologica*. 13(1-2): 169-183.
- Usher, P.J. 1971. *Fur trade posts of the Northwest Territories 1870-1970*. Department of Indian and Northern Affairs, Ottawa. 180 p.
- Usher, P.J. and G. Wenzel. 1987. Native harvest surveys and statistics: a critique of their construction and use. *Arctic* 40:145-160.
- Usher, P.J., M. Baikie, M. Demmer, D. Nakashima, M.G. Stevenson and M. Stiles. 1995. *Communicating About Contaminants in Country Food: The Experience in Aboriginal Communities*. Report prepared by the Inuit Tapirisat of Canada for the Arctic Environmental Strategy Contaminants Program, Ottawa.

References

- Vance, D. 1995. *Telephone Conversation Concerning Properties for Sale and Housing Vacancies*. President, Yellowknife Real Estate Board.
- Vanderploeg, K. 1995. *Telephone Conversation Regarding NTCL Facilities, Staff at Hay River. March 1995*. General manager. Northern Transportation Company Limited, Hay River.
- Vanni, M.J. 1987. Effects of food availability and fish predation on a zooplankton community. *Ecological Monographs* 57(1): 61-88.
- Voight, D.R. 1986. Red fox. In *Wild Furbearer Management and Conservation in North America* ed. M. Novak, J.A. Baker, M.E. Obbard, and B. Malloch, p378-392, Ontario Ministry of Natural Resources. Toronto.
- Vowinckel, E. and S. Orvig. 1964a. Energy balance of the Arctic. I: Incoming and absorbed solar radiation at the ground in the Arctic. *Archiv für Meteorologie, Geophysik und Bioklimatologie*. 13(3): 352-377.
- Vowinckel, E. and S. Orvig. 1964b. Energy balance of the Arctic. II: Long wave radiation and total radiation balance at the surface in the Arctic. *Archiv für Meteorologie, Geophysik und Bioklimatologie*. B13(4): 451-479.
- Walker, D.A. and K.R. Everett. 1987. Road dust and its environmental impact on Alaskan taiga and tundra. *Arctic and Alpine Research* 19:479-489.
- Walker, D.A., D. Cate, J. Brown, and C. Racine. 1987. Disturbance and Recovery of Arctic Alaskan Tundra Terrain. A Review of Recent Investigations. U.S. Army Cold Regions Research and Engineering Laboratory, Hanover, N.H. CRREL Report 87-11.
- Walker, D.G., R.S. Sadasivaiah and J. Weijer. 1978. *The utilization and Genetic Improvement of Native Grasses from the Alberta Rocky Mountains*. Unpublished report prepared for Alberta Environment, Alberta Fish and Wildlife, Alberta Forestry and Parks Canada. Department of Genetics. University of Alberta. Edmonton.
- Ward, B. 1992. *Surficial Geology, Lac de Gras (NTS 76D), Northwest Territories*. Open File 2680, Geological Survey of Canada, 1:125,000 scale.
- Ward, J.V. 1992. *Aquatic Insect Ecology. 1. Biology and Habitat*. Toronto: John Wiley and Sons.

References

- Ward, W.H. and S. Orvig. 1953. The glaciological studies of the Baffin Island Expedition, 1950. Part IV: The heat exchange at the surface of the Barnes Ice Cap during the ablation period. *Journal of Glaciology* 2(13): 158-168.
- Washie, J. 1995. *Statement Cited in an Editorial*. Dogrib Treaty 11, Gameti (Rae Lakes). News/North May 15, 1995 edition.
- Wayman, M.L. and T. Andrews. 1994. Analyses of native copper artifacts from a Dene copper workshop at Snare Lake, Northwest Territories, Canada. In *Canadian Archaeology Conference, Edmonton, May 4-8, 1994*.
- Webb, F. 1995. *Diamond Mining and Impact on Other Land Users*. Coppermine: March 1995.
- Wedel, J.H. 1986. *An Evaluation of the N.W.T. Hydrometric Network*. Report No. IWD-WNR-WRB-HI-86-1, Water Resources Branch, Inland Waters Directorate, Western and Northern Region, Yellowknife. p44.
- Wedel, J.H., B.J. Olding and M. Palmer. 1988. *An Overview Study of the Coppermine River Basin N.W.T.* Environment Canada, Ottawa.
- Weller, M.W. 1986. Marshes. In *Inventory and Monitoring of Wildlife Habitat* ed. A.Y. Cooperrider, R.J. Boyd and H.R. Stuart, p. 201-224. United States Department of the Interior, Bureau of Land Management, Service Centre. Denver, Colorado.
- Welsh, H.E. and J.A. Legault. 1986. Precipitation chemistry and chemical limnology of fertilized lakes at Saqvaquac, N.W.T. *Canadian Journal of Fisheries and Aquatic Sciences* 43:1104-1134.
- Welsh, H.E., J.A. Legault and H.J. Kling. 1989. Phytoplankton, nutrients and primary production in fertilized and natural lakes at Saqvaquac, N.W.T. *Canadian Journal of Fisheries and Aquatic Sciences* 46: 90-107.
- Wetzel, R.G. 1979. *Limnology*. Toronto: W.B. Saunders Company.
- Wetzel, R.G. 1983. Opening. In *Periphyton of Freshwater Ecosystems*, p. 3-4. The Hague: Dr. W. Junk Publishers.

- Wiederholm, T. 1984. Responses of aquatic insects to environmental pollution. In: *The Ecology of Aquatic Insects*, ed. V. H. Resh and D. M. Rosenberg, p508-57. Toronto: Praeger.
- Wilbur, Stephen. 1989. Predicting sediment concentrations for small subarctic creeks in the Hoseanna Creek basin. In *1st International Symposium on Mining in the Arctic, Fairbanks, 17-19 July 1989*, ed. S. Bandopadhyay and F.J. Skudrzyk, p145-156. Rotterdam: A.A. Balkema.
- Williams, T.M. 1990. *Summer Diet and Behaviour of Wolves Denning on Barren-ground Caribou Range in the Northwest Territories, Canada*. M.Sc. Thesis, University of Alberta, Edmonton.
- Wiseley, A.N. 1974. Disturbance to snow geese and other large waterfowl species by gas-compressor sound simulation, Komakuk, Yukon Territory, August-September, 1973. In *Studies on Snow Geese and Waterfowl in the Northwest Territories, Yukon Territory and Alaska, 1973*. ed. W.W. H. Gunn, W.J. Richardson, R.E. Schweinsburg and T.D. Wright (eds). Arctic Gas, Biological Report Series, Volume 27:1-36.
- Wolfe, J., C. Bechard, P. Cizek, and D. Cole. 1992. *Indigenous and Western Knowledge and Resources Management System*. School of Rural Planning and Development, University of Guelph.
- Woo, M.K. 1980. Hydrology of a small lake in the Canadian High Arctic. *Arctic and Alpine Research* 12(2): 227-235.
- Woo, M.K. 1983. Hydrology of a drainage basin in the Canadian High Arctic. *Annals of the Association of American Geographers* 73(4): 577-596.
- Woo, M.K. 1986. Permafrost hydrology in North America. *Atmosphere-Ocean* 24(3): 201-234.
- Woo, M.K. 1988. Wetland runoff regime in northern Canada. In: *Proceedings, 5th International Conference on Permafrost, 2-5 August 1988*. ed. K. Senneset 1: 644-649. Trondheim, Norway: Tapir Publishers.
- Woo, M.K. and R. Heron, P. Marsh and P. Steer. 1983. Comparison of weather station snowfall with winter snow accumulation in High Arctic basins. *Atmospheric-Ocean* 21(3): 312-325.

References

- Woo, M.K. and R. Heron. 1979. Modelling basin snow storage in a high arctic environment. In *Canadian Hydrology Symposium: 79 – Cold Climate Hydrology, Proceedings, 10-11 May 1979, Vancouver, B.C.*, Associate Committee on Hydrology, National Research Council of Canada (NRCC 17834), Ottawa, Ontario, p206-216.
- World Commission on Environment and Development (WCED). 1987. *Our Common Future*. Oxford: Oxford University Press.
- World Commission on Environment and Development. 1987. *Our Common Future*. Oxford: Oxford University Press.
- Wotton, R.S. 1994. Method for capturing particles in benthic animals. In: *The Biology of Particles in Aquatic Systems*, 2nd ed., p183-204. Boca Raton: Lewis Publishers.
- Yellowknife Catholic Board of Education. 1995. *Interview with B. Girardin; School Enrollments and Plans for Growth*. Yellowknife.
- Yellowknife Education District No. 1. 1994. *Capacity, Facility Profiles and Straight Line Enrollments*.
- Yellowknife, City of. 1993. *Annual Report*. Yellowknife.
- Yellowknife, City of. 1994a. *1995 Budget*.
- Yellowknife, City of. 1994b. *Business License System*. License report, 1994.
- Yellowknife, City of. 1994c. *Residential capacity. Detached House Lots and Multifamily Dwellings, Existing and Proposed*. Planning and Lands.
- Yellowknife, City of. 1994d. *Niven Lake Development Scheme Report*. Yellowknife: Reid Crowther & Partners.
- Yellowknife, City of. 1994e. *Community Services Plan*. The Rethink Group.
- Yellowknife, City of. 1994f. *Commercial and Industrial and Capacity*. Planning and Lands.

References

- Yellowknife, City of. 1994g. *Urban Growth Estimates, 1994-1997*. Planning and Lands.
- Yellowknife, City of. 1995a. *Telephone Conversation, Paul Nicklen; Municipal Protection Services*. Director, Public Safety.
- Yellowknife, City of. 1995b. *Municipal Tax Assessments and Revenues by Property Class*. Finance.
- Yellowknife, City of. 1995c. *Telephone Communication, Max Hall; Community Facilities Usage*. Director, Community Services.
- Yellowknives Dene Band. 1995. *A Statement to the Environmental Assessment and Review Panel on the BHP Diamond Mine*, 8 April 1995.
- Yellowknives Dene First Nation. 1995. *In the Spirit of Co-existence*. Yellowknife.
- Yellowknives Dene First Nation. 1995. *Saving Our Community Cultural Heritage Resources: Policy Guidelines for Yellowknives Dene Traditional Knowledge*, Yellowknife.
- Young, S.B. 1971. The vascular flora of St. Lawrence Island with special reference to floristic zonation in the Arctic regions. *Gray Herbarium of Harvard University. Contribution No. 201*: 11-115.
- Younkin, W.E. 1974. *Ecological Studies of Arctagrostis Latifolia (R.Br.) Griseb. and Calamagrostis Canadensis (Michx.) Beauv. in Relation to their Colonization Potential in Disturbed Areas. Tuktoyaktuk Region, N.W.T.* Unpublished Ph.D. Thesis. University of Alberta. Edmonton.
- Zinchuk, N.N. 1982. Variation of the mineral composition and structural features of the kimberlites of the Yakutiya during weathering. *Geologiya i Geofizika* 23: 42-52.
- Zoltai, S.C., F.C. Pollett, J.K. Jeglum and G.D. Adams. 1973. Developing a Wetland Classification for Canada. In *Proceedings of the Fourth North American Forest Soils Conference, Laval, Québec*, ed. B. Bernfaier and C.H. Winget. Québec: Les Presses de l'Université Laval.

Keywords Index

Keyword	Volume	Section	Title	
Aboriginal communities	I	1.1	The Project	
		1.2	Traditional Knowledge - The Importance of Knowing	
		1.2.2	Proponent's Approach to the Integration of Traditional Knowledge - The Process	
		1.2.7	Communications Program and Public Involvement	
		1.4	Project Setting	
		1.4.2	Land Claims	
		2.10.3.2	Recruitment Process	
		2.10.3.3	Point of Hire	
		2.10.8	Community Programs	
		4.6	Site-specific Programs	
	II	5.1.1.5	Community Involvement	
		5.4	Methods of Addressing Future Concerns	
		4.	Socioeconomic Setting	
		4.1	Northwest Territories	
		4.2	First Nations Communities	
		4.3	Coppermine	
		4.4	Yellowknife	
		4.5	Hay River	
		III	10.4	Socioeconomic Impacts Monitoring
		IV	4.	Socioeconomic Impacts in the Northwest Territories
	4.1	Aboriginal Employees' Perceptions of the Project		
Access routes	I	2.2.3	Production Phase	
		2.4.6.1	Mine access	
		2.4.7	Haul Roads and Ore Delivery	
		2.7.2	Property Access	
		2.9.1	Road Transport	
	II	2.1.2.4	Misery Haul Road	
		3.3.2.5	Access Roads	
		3.3.9.3	Misery Haul Road	
	III	6.2.1	Echo Bay Winter Road	

Keywords Index

Air quality	I	2.11.8.16	Indoor Air Quality
	II	2.7	Air Quality
	III	2.1	Air Emissions Control
		2.2	Fugitive Dust Control
		2.3	Workplace Air Quality Control
IV	2.5	Air Quality	
Air transport	I	2.7.2.2	Airstrip
		2.9.2	Air Transport
		3.1	Fly-In/Fly-Out Work Force Versus Permanent Mining Town
		3.9	Transportation Options
		4.6.1	Commuting, Work Rotation and Northern Residency
	III	6.3	Air Traffic
Aquatic habitat	I	2.4.3.1	Panda Lake
	II	3.1	Aquatic Life
		3.1.1	Primary Producers
		3.1.2	Secondary Producers
		3.1.3	Fish
		3.3.7.1	Local Study Area: Waterfowl Surveys
	III	8.1	Habitat Creation and Enhancement
		8.2	Habitat Protection from Modification
		10.1	Water Monitoring
IV	3.3.3	Habitat Impacts	
Archaeology	II	4.8	Archaeology
	IV	4.2.1	Socioeconomic Issues
		4.15	Archaeological Impacts
Biodiversity	II	1.3	Ecosystem Characteristics and Linkages
		1.3.5	Ecological Integrity of the Study Area
Birds	II	3.3.6	Birds
		3.3.7.1	Local Study Area: Waterfowl Surveys
	III	7.6	Birds
		10.2	Land Monitoring
	IV	3.3.3	Wildlife
Caribou	II	1.3.2	Rationalization of the Study Design
		3.3.2	The Bathurst Caribou Herd
	III	7.3	Bathurst Caribou
		10.2	Land Monitoring
	IV	4.1.4	Caribou/Wildlife

Keywords Index

Climate	III	10.3	Air Monitoring	
	IV	2.6	Climatology Impacts	
Closure	III	3.4.3	Post-closure Pit Water Management	
		3.5.4	Post-closure Water management	
		9.7.4	Decommissioning and Closure	
Communication	I	1.2.7	Communications Program and Public Involvement	
		2.10.8.4	Community Communication	
		2.11.6	Occupational Health and Safety Communications	
		5.1	Local and Regional Residents	
		5.2	Organizations and Resource Users	
		5.3	Governmental Entities	
		5.4	Methods of Addressing Future Concerns	
		II	4.2.3.3	Transportation/Communications/Construction (First Nations Committee)
	4.3.2.3		Transportation/Communications/Construction (Coppermine)	
	4.4.2.4		Transportation/Communications/Construction (Yellowknife)	
	4.4.4.4		Communications (Yellowknife)	
	III	1.1	Environmental Policy	
		1.1.2	Environmental Communication and Training	
	IV	4.1.8	Communications	
	Communities	I	1.3.3	Economic Benefits to the NWT and Local Communities
			2.8.3.2	Community Relations Plan
2.10.3			Recruitment	
2.10.8			Community Programs	
4.3			Responsibility to Host Nations and Local Communities	
II		5.1.1.5	Community Involvement	
		4.1.7.3	Health and Social Profile(NWT)	
		4.1.11.4	Community Programs and Services (NWT)	
		4.1.11.5	Care Giving Organizations (NWT)	
		4.2.6.3	Social/Leadership Resources (First Nations Communities)	
		4.3.5.2	Social/Leadership Resources (Coppermine)	
III		4.4.5.2	Social/Leadership Resources (Yellowknife)	
		4.5.5.2	Social/Leadership Resources (Hay River)	
		10.4	Socioeconomic Impacts Monitoring	
IV	4.10	Community Well-Being		

Keywords Index

Community infrastructure	II	4.1.10	Infrastructure	
		4.2.5	Infrastructure - Municipal Government (First Nations Communities)	
		4.2.6	Capacity for Growth (First Nations Communities)	
		4.3.4	Infrastructure (Coppermine)	
		4.3.5	Capacity for Growth (Coppermine)	
		4.5.4	Infrastructure	
		4.5.5	Capacity for Growth (Hay River)	
	4.5.6	Community Attitudes (Hay River)		
	IV	4.5	Infrastructure/Service Utilization	
Community programs	I	2.10.8	Community Programs	
	III	10.4	Socioeconomic Impacts Monitoring	
Conservation	IV	4.10.5.1	Community Mobilization Programs	
		III	7.1	Habitat Protection
		7.2	Avoidance of Wildlife Disturbance	
		8.1	Habitat Creation and Enhancement	
		8.2	Habitat Protection from Modification	
		8.3	Harvesting of Fish	
Construction	I	2.8	Construction and Plant Commissioning Plan	
		2.2.2	Preproduction/Construction Phase	
		2.2.2.1	Facilities Construction	
		2.2.2.2	Mine Preproduction/Bulk Civil Works	
Contracting	I	2.8	Construction and Plant Commissioning Plan	
		2.8.2	Contracting Approach	
		4.6	Procurement	
Consultation	I	1.2.7	Communications Program and Public Involvement	
		5	Communications Program and Public Involvement	
	III	1.1.2	Environmental Communication and Training	
Coppermine	II	4.3	Coppermine	
	III	10.4	Socioeconomic Impacts Monitoring	
	IV	4.	Socioeconomic Impacts in the Northwest Territories	
		4.5.7	Local Economy - Coppermine	
Cultural sites	II	4.8	Archaeology	
	IV	4.15	Archaeological Impacts	
Cumulative effects	IV	5	Cumulative Effects	

Keywords Index

Demographics	II	4.1.7	People/Demographic Profile (NWT)
		4.2.2	People/Demographic Profile (First Nations Communities)
		4.3.1	People/Demographic Profile (Coppermine)
		4.4.1	People/Demographic Profile (Yellowknife)
		4.5.1	People/Demographic Profile (Hay River)
	IV	4.3	Employment and Income Impacts
		4.2	Population Growth
Discovery and exploration	I	1.1	The Project
		2.1	Discovery and Exploration Phases
Economics	I	1.3	Project Economic Analysis
		1.3.3	Economic Benefits to the NWT and Local Communities
		4.1.3	The Traditional Economy
		4.1.4	Emergence of the Mixed Economy
		4.1.5	The Current Economy
		4.1.8	Economic Activity/Sectors (NWT)
		4.2.3	Economic Activity/Sectors (First Nations)
		4.3.2	Economic Activity/Sectors (Coppermine)
		4.4.2	Economic Activity/Sectors (Yellowknife)
		4.5.2	Economic Activity/Sectors (Hay River)
	IV	4.5	Local Economies
	4.8	Traditional Economies/Lifestyles	
		4.14	Economic Impacts
Emergency response	III	4.2	Spill Contingency Plans and Emergency Response
Employee relations, benefits, and facilities	I	2.10.5	Labour Relations
		2.10.6	Employee Benefits
		2.10.7	Organizational Design
		2.10.9	Accommodation
		4.4	Responsibility to Employees
Employee responsibilities and training	I	2.10.4	Training/Education
	III	1.1.2	Environmental Communication and Training
Environmental impacts	IV	1	Approach to Impact Assessment
		2	Physical Impacts and Mitigation
		3	Biological Impacts and Mitigation
		4	Socioeconomic Impacts and Mitigation

Keywords Index

Environmental management	III	1.	Approach to Environmental Management
		2.	Air Quality Management Plan
		3.	Water Management Plan
		4.	Materials Management Plan
		5.	Waste Management Plan
		6.	Traffic Management Plan
		7.	Wildlife Management Plan
		8.	Aquatic Life Management Plan
		9.	Reclamation, Decommissioning and Closure Management Plan
		10.	Monitoring Plan
Environmental responsibility	I	4.2	Environmental Responsibility
	III	1.	Approach to Impact Assessment
Environmental setting	II	1	Approach to Environmental Assessment
		2.	Physical Setting
		3.	Biological Setting
		4.	Socioeconomic Setting
Eskers	II	2.1.1	Regional Terrain Conditions
		2.1.2	Terrain Characteristics in the Main Development Area
		3.3.8	Important Wildlife Habitats: Eskers
	III	7.1	Habitat Protection
		9.2	Land Use Objectives (Wildlife/Aquatic Habitats)
		10.2	Land Monitoring
	IV	2.1	Terrain Impacts
Families	III	10.4	Socioeconomic Impacts Monitoring
	IV	4.10	Community Well-Being
Fish and other aquatic life	II	3.1.1	Primary Producers
		3.1.2	Secondary Producers
		3.1.3	Fish
		3.1.4	Size Distribution
	III	8.2.4	Aquatic Life Management Plan
		10.1	Aquatic Life Monitoring Plan
	IV	3.1	Aquatic Life Impacts
Furbearers	II	3.3.4	Furbearers
	III	7.5	Furbearers
		10.2	Land Monitoring
	IV	3.3.6	Furbearers
Future development	I	3.10	Future Development

Keywords Index

Geology	I	2.3	Geology
Grizzly bear	II	3.3.3	Grizzly Bears
	III	7.4	Grizzly Bears
		10.2	Land Monitoring
	IV	3.3.5	Grizzly Bears
Hay River	II	4.5	Hay River
	III	10.4	Socioeconomic Impacts Monitoring
	IV	4.	Socioeconomic Impacts in the Northwest Territories
		4.5.7	Local Economy - Hay River
Health and safety	I	2.11	Occupational Health and Safety
Human health	I	2.11	Occupational Health and Safety
	II	4.1.7.3	Health and Social Profile (NWT)
		4.2.5.7	Health Facilities (First Nations Communities)
		4.4.4.8	Health Facilities (Yellowknife)
		4.5.4.8	Health Facilities (Hay River)
		4.4	Pass through Traffic - Yellowknife
		4.5	Infrastructure/Services Utilization
		4.6	Traditional Economies/Lifestyles
	IV	4.10	Community Well-Being
	Improvement and research	III	1.1.4
		8.1.1	Habitat Fund for Off-site Habitat Enhancement
		9.6	Reclamation Research
Infrastructure and facilities	I	2.7	Infrastructure
	II	4.1.10	Infrastructure
		4.2.5	Infrastructure - Municipal Government (First Nations Communities)
		4.2.6	Capacity for Growth (First Nations Communities)
		4.3.4	Infrastructure (Coppermine)
		4.3.5	Capacity for Growth (Coppermine)
		4.4.4	Infrastructure
		4.5.4	Infrastructure
		4.5.5	Capacity for Growth (Hay River)
	IV	4.7	Use of NWT Infrastructure and Services
Legal compliance	I	1.4.3	Regulatory Environment
	III	1.1	Environmental Policy
		1.1.1	Legal Compliance
Logistics	I	2.9.3	Transport Logistics
		3.9	Transportation Options

Keywords Index

Materials and safety	I	2.11	Occupational Health and Safety
	III	4.1	Hazardous Substances
		4.3	Ammonium Nitrate Storage and Emulsion Plant
Mitigation	III	8.1.2	Panda Diversion Channel
	IV	2	Physical Impacts and Mitigation
		3	Biological Impacts and Mitigation
		4	Socioeconomic Impacts and Mitigation
Noise	I	2.11.8.9	Noise
	II	2.8	Noise
	IV	2.7	Noise Impacts
		3.3.2.4	Response to Noise (Wildlife)
		3.3.7.2	Response to Noise (Birds)
Northwest Territories	I	1.3.1	Context: The NWT Economy
		1.3.3	Economic Benefits to the NWT and Local Communities
		1.4.1	Regional Context
	II	4.1	Northwest Territories
	IV	4.13	Government Income/Expenses
		4.14	Economic Impacts
		10.4	Socioeconomic Impacts Monitoring
On-site roads	I	2.4.7	Haul Roads and Ore Delivery
	III	6.1.2	Traffic Scheduling
		6.2	Vehicular Ground Traffic
Open pit mining	I	2.4.4	Open Pit Mining
	III	3.4.2	Operational Pit Dewatering
Opportunities	I	2.8.5	Work Force Requirements
		2.10.3	Recruitment
Outfitters	II	4.1	Northwest Territories
	III	10.4	Socioeconomic Impacts Monitoring
	IV	4.6	Traditional Economies/Lifestyles
		4.9	Land Users in Vicinity of the Mine
Permafrost and Geomorphology	II	2.1	Terrain and Permafrost
		2.2	Ground Instability
	III	10.2	Land Monitoring
	IV	2.1	Terrain Impacts
		2.2	Ground Instability Impacts
Plant site	I	3.4	Plant Site Location
	III	3.6	Plant Site

Keywords Index

Population growth	IV	4.4	Population Growth
Production phase	I	2.5	Mineral Processing
		3.5	Mineral Processing Options
		3.6	Ore Treatment Production Rates
Project	I	1.1	The Project
Project description	I	1.1	The Project
Proponent	I	1.5	The Proponent
Reclamation	I III	2.6.3	Long Lake Reclamation and Abandonment
		9	Reclamation, Decommissioning and Closure Management Plan
		10.2	Land Monitoring
Regional context	I	1.4.1	Regional Context
Reporting and audits	III	1.1.4	Environmental Management Systems and Audits
Riparian habitat and wetlands	II III IV	3.3.9	Special Wildlife Habitats: Riparian and Wetlands
		7.1.1	Important Habitats
		3.5	Shoreline Modification
Safety	I	2.11	Occupational Health and Safety
		4.1.1	Hazardous Substances
Schedule	I	2.2	Project Plan and Schedule
		2.4.2	Mine Production Schedule
Sediments	II III	2.5	Sediments
		3.4.1.1	Sediment Control
	IV	8.2.1	Turbidity and Sedimentation
		2.4	Water Quality Impacts
Social and cultural patterns	II	4.1	Northwest Territories
		4.1.7	People/Demographic Profile
		4.2	First Nations Communities
		4.3	Coppermine
		4.4	Yellowknife
		4.5	Hay River
	IV	4.8	Traditional Economies/Lifestyles

Keywords Index

Traditional knowledge	I	1.2	Traditional Knowledge
	II	1.1	Methods
		1.2	The Aboriginal Context
		2.1.1.1	Surficial Materials (2.1 Terrain and Permafrost)
		2.6.7.1	The Historical Record (2.6.7 Climate Change)
		3.1.3.1	Previous Research and Traditional Knowledge (3.1.3 Fish)
		3.3.2.1	Traditional Knowledge of Caribou
		3.3.3.1	Previous Research and Traditional Knowledge (3.3.3 Grizzly Bears)
		3.3.4.1	Previous Research and Traditional Knowledge (3.3.4 Furbearers)
	III	1.2	Aboriginal People and Traditional Knowledge in Environmental Management
		1.2.2	Proponent's Approach to Integration of Traditional Knowledge
		7.3.1	Habitat Management
		1.2	Indigenous Perspectives of Impacts
	IV	4.1.3	Traditional Knowledge
Traditional economy	II	4.1.3	Traditional Economy
	IV	4.2.1	Socioeconomic Issues
		4.8	Traditional Economies and Lifestyles
Traditional lifestyle	IV	4.2.1	Socioeconomic Issues
		4.8	Traditional Economies and Lifestyles
		4.11	Cross-Cultural Impacts
Training/education	I	2.10.4	Training/Education
	III	1.1.2	Environmental Communication and Training
	IV	4.1.2	Employment, Job Training and Business Opportunities
		4.12	Job and Education Aspirations
Treaties/land claims	I	1.4.2	Land Claims
	II	1.2.1	History of Aboriginal Land Use
Underground mining	I	2.4.6	Underground Mine Operations
Vegetation	II	3.2	Vegetation
	III	9.5	Reclamation Vegetation
	IV	3.2	Vegetation Impacts

Keywords Index

Wage economy	II	4.1.4	Economic Activity/Sectors
	III	10.4	Socioeconomics Impacts Monitoring
	IV	4.1.2	Employment, Job Training and Business Opportunities
		4.2.1	Socioeconomic Issues
		4.3	Employment and Income
Waste disposal	III	5.4	Hazardous Waste
		5.5	Non-Hazardous Waste
Waste rock and tailings management	I	2.4.5	Waste Rock Dumps
		2.6	Tailings Disposal Plan
		3.7	Alternative Tailings Disposal Site and Facility Assessment
	III	3.5	Tailings Impoundment
		3.7	Waste Rock Dumps
		5.1	Materials Reactivity Assessment
		5.2	Tailings Management Plan
		5.3	Waste Rock Management Plan
		9.3.2.2	Tailings Pond Unit
		Water and hydrology	II
2.4	Water Quality		
III	3		Water Management Plan
	3.3		Water Balance
	3.8		Road Construction
	8.2.3		Alteration of the Hydrological Regime
IV	10.1		Water Monitoring
	2.3		Hydrology Impacts
	2.4		Water Quality Impacts
	4.1.5		Water Quality, Reclamation and other Environmental Issues
Water diversion and lake drainage	I	2.4.3	Water Diversion and Lake Drainage
	III	3.4.1	Lake Dewatering
		3.4.1.2	Changes to Stream Flow
	IV	4.2.1	Socioeconomic Issues
Wildlife habitat	II	3.3.8	Special Wildlife Habitats: Eskers
	III	7.1	Habitat Protection
	IV	3.3	Wildlife, Birds and Habitat Impacts
Yellowknife	I	2.10.3.3	Point of Hire
	II	4.4	Yellowknife
		4.5.4	Local Economy - Yellowknife
		4.6	Pass-through Traffic - Yellowknife

Glossary and Abbreviations

Glossary

Abiotic Factors	Environmental influences that arise from non-living entities, e.g., climate.
Ablation Till	Unstratified rock material resulting from ablation processes that cause the accumulation of debris on the ice surface.
Aggrade	To spread or grow (permafrost).
Air Contaminant	Any solid, liquid, gas or odour, or combination thereof, which, if emitted into the air, would create or contribute to the creation of air pollution.
Air Pollution	A condition of the air, arising wholly or partly from the presence of one or more air contaminants, that endangers the health, safety or welfare of persons; interferes with normal enjoyment of life or property; endangers the health of animal life; or causes damage to plant life or to property.
Allochthonous	Materials formed elsewhere than in their present place.
Alluvial	Clay, silt, sand and gravel material deposited by running water.
Ambient Air Quality	The surrounding air quality present at a particular site.
Amorphous	Substances lacking any crystal structure or order; usually used with reference to oxides or organic matter.
Anthropogenic	Caused by human activity.
Appendages	Any considerable projections from the body of an animal.
Arctic Air Inversion	A layer in the troposphere in which there is an increase in air temperature with height. This differs from normal conditions in which temperature decreases with height from the surface.
Atmospheric Stability	The ability of the atmosphere to resist or enhance vertical motion.
Audiometric Testing	A series of tests to determine a person's auditory threshold for a given stimulus.

Authigenic	A mineral formed by precipitation within the water column or sediments, as opposed to mineral(s) imported from erosion elsewhere.
Back	The ceiling or roof of an underground mine opening.
Backfill	Waste rock material used to fill the void created by mining an ore body.
Basal Till	Unsorted glacial debris at the base of the soil column where it comes into contact with the bedrock below.
Basic Rock	An igneous rock, relatively low in silica and composed mostly of dark-coloured minerals.
Bedrock	The more-or-less solid, undisturbed rock in place either at the ground surface or beneath superficial deposits of gravel, sand or soil.
Bedrock Geology	The study of the origin, composition, structure and history of bedrock.
Benthic	Pertaining to the bottom region of a water body.
Benthos	Assemblage of animals living in or on the bottom sediments of a lake and dependent upon the decomposition cycle for most if not all of its basic food supply.
Bifaces	A stone tool used by ancient peoples. A type of artifact that has been chipped from a larger stone on both sides.
Biodiversity	The variety of organisms that exist on the planet and the varieties within these species and the ecosystems they inhabit.
Biogenic	Arising from or associated with biological sources.
Blasthole	A hole drilled for purposes of blasting rather than to obtain exploration or geological information.

Bulk Sample	A large sample of mineralization, frequently involving hundreds of tonnes, selected in such a manner as to be representative of the potential ore body being sampled. Used to determine metallurgical characteristics, verify grade and obtain diamond quality information.
Carat	A unit of weight for precious stones (200 milligrams).
Carnivore	A flesh-eating mammal.
Catch Per Unit Effort (CPUE)	The number of fish caught per 24-h soak time per 100 m of gillnet; or per 24-h soak time for trapnets.
Cilia	Fine cytoplasmic threads projecting from the surface of a cell.
Clarification	Process of cleaning dirty water by removing suspended material.
Classify	A mineral process that separates minerals according to size and destiny.
Climatology	The study of the long-term, prevailing weather conditions in a given area.
Concentrate	The product of the crushing, grinding and cleaning process contains valuable mineral and from which most of the waste material in the ore has been eliminated and discarded as tailings.
Core	A long, cylindrical piece of rock recovered by diamond drilling.
Crater	A circular depression formed by extrusion of volcanic material and its deposition in a surrounding rim.
Craton	A portion of a continent that has attained stability and has not been subjected to major deformation for a prolonged time, typically since Precambrian or Early Paleozoic time.
Critical Depth	The depth in a lake at which sufficient light penetrates to enable photosynthesis in plants to equal their respiration.
Crusher	A machine for crushing rock, such as a gyrating crusher or a cone crusher.

Cumulative Effects	Effects cause by the interaction of project components or activities with other activities of the past, or effects that are occurring simultaneously or sequentially.
Debitage	Pieces of stone removed during the manufacture of stone tools.
Decibel (dB)	The basic unit for measuring the magnitude of sound pressure levels. The entire range of audible sound pressure (a range of more than 10 million to one for individuals with normal hearing) can be compressed into a practical scale of sound pressure levels from 0 to 140 dB. One decibel is the minimum difference in loudness that is usually perceptible.
Decline	An inclined underground opening connecting levels to allow machine access from level or from surface; also called a ramp.
Decommissioning	The process by which a mining operation is shut down and closed.
Demographics	The analysis of factors such as births, marriages, diseases and other vital statistics, which allow the assessment of a population in a given area.
Dendogram	Tree-like diagram indicating resemblance among members of a group of organisms or sites.
Deposit	Any collection of earth material accumulated through the activities of water, wind, ice or other agents.
Detritivore	An organism that eats detritus.
Detritus	Unconsolidated material composed of both inorganic and dead and decaying organic material.
Development	Work carried out to provide access to the mineral ore of value and to construct the facilities required for production operations.
Diabase	A common basic igneous rock usually occurring in dykes or sills.
Diagenesis	The sum of all chemical, physical and biological influences on sediment composition.

Diamond	The hardest known mineral, composed of pure carbon.
Diatom	Common name for Bacillariophyta; a type of phytoplankton.
Diatreme	A breccia-filled volcanic pipe that was formed by a gaseous explosion.
Dike	An earth-fill structure similar to a dam designed to impound water or saturated material such as tailings.
Dip	The angle at which a structure or rock bed is inclined from the horizontal as measured at right angles to the strike.
Diurnal	Daily.
Dorsal	Pertaining to the back.
Dorsal Fin	A fin on the back of a fish, usually central in position and supported by rays or spines.
Drift	A horizontal, or nearly horizontal, underground opening that follows along the length of a rock formation, as opposed to a crosscut, which crosses the rock formation.
Dry	A building, with showers and storage for work clothes, where miners change and wash.
Dump	A pile or heap of broken rock on surface.
Dyke	A long and relatively thin body of igneous rock that, while in the molten state, intruded a fissure in older rocks.
Ecology	The study of the interactions between organisms and their environment.
Ecosystem	A community of interacting organisms considered together with the chemical and physical factors that make up their environment.
Ecosystem Approach	A holistic, interdisciplinary method of studying a system that seeks to integrate biophysical and socioeconomic factors with input from a variety of sources.
Ecosystem Integrity	A measure of the overall health of an ecosystem.

Emission Rate	The rate at which a source releases air contaminants.
Englacial	Contained, embedded or carried within the body of a glacier or ice sheet.
Environment	The interrelated physical, chemical, biological, social, spiritual and cultural components that affect the growth and development of living organisms.
Environmental Assessment and Review Process (EARP)	The process used by the federal government to consider the environmental implications of all proposals for which the federal government has decision-making authority.
Environmental Impact Assessment (EIA)	A process designed to identify, predict, interpret and communicate information about the impact of an activity on human health and well-being, including the well-being of ecosystems on which human survival depends.
Environmental Impact Statement (EIS)	A detailed document that describes the potential environmental consequences of a proposed activity.
Environmental Quality Objectives	Goals or purposes toward which an environmental control effort is directed, including goals or purposes stated in quantitative or qualitative terms.
Ephemeral Stream	A stream that lasts for only a short time.
Epiclastic	Pertaining to mechanically deposited sediments consisting of weathered products of older rocks.
Epilithon	Periphyton attached to submerged rocks.
Esker	Sinuous ridge of weakly stratified gravel and sand deposited by a stream flowing in (or beneath) the ice of a retreating glacier, and left behind when the ice melted.
Euphotic Zone	A zone near the water surface into which sufficient light penetrates for photosynthesis to take place.
Eutrophic	Nutrient rich waters with high primary productivity.
Face	The end of an underground drift or crosscut, or of an open pit bench, in which mining is progressing.

Facies	The set of characteristics of a rock that reflects the conditions of its origin and that distinguishes it from adjacent or associated units.
Fault	A break in the Earth's crust caused by tectonic forces that have moved the rock on one side with respect to the other; faults may extend for many kilometres or be only a few centimetres in length; similarly, the movement or displacement along the fault may vary widely.
Fecundity	Potential ability of an organism to produce eggs or young.
Fin Ray	An articulated or jointed rod that supports the membrane of a fin.
Flake	A piece of rock intentionally removed from another rock that may be further modified to become a tool, or left unmodified as debitage or detritus.
Flowsheet	An illustration showing the sequence of operations, step by step, by which ore is treated in a mineral separation process.
Fork Length	Distance from the proximal tip of the head to the tip of the middle ray of the caudal fin.
Freshet	Increased volume of flow over a relatively short period of time (e.g., snowmelt).
Frost Boil	An unsorted circle of fresh soil material formed by frost action and commonly found in fine-grained sediments underlain by permafrost.
Fry	Young fish, newly hatched, after the yolk has been used up and active feeding has commenced.
Fumigation	A meteorological condition occurring when a strong radiation inversion begins to break up as the Earth's surface begins to warm up during early to mid-morning. Fumigation conditions can cause high ground level pollutant concentrations for short time intervals; for instance, the plume from a stack may be carried to ground level within a few hundred metres of the stack by convective currents.

Gaussian Dispersion	The dispersion of a pollutant after it leaves the top of the stack; often follows a pattern similar to the so called “bell-shaped curve.”
Geology	The science concerned with the study of the rocks that compose the Earth.
Geomorphology	The study of the classification, description, nature, origin and development of landforms and their relationships to underlying structures, and the history of geologic changes as recorded by these surface features.
Glaciofluvial Deposits	Unconsolidated rock material deposited by meltwater streams flowing from glaciers.
Granite	A coarse-grained (intrusive) igneous rock consisting of quartz, feldspar and mica.
Granitoid	A granitic rock.
Gyratory Crusher	A machine that crushes ore between an eccentrically mounted crushing cone and a fixed crushing throat.
Heavy Medium Separation (HMS)	A unit process in which crushed ore is washed in rotary drum scrubbers to break up agglomerated ore particles and remove soft fines and clay minerals.
Herbivore	An animal that feeds on plants.
Holistic	A total interrelated system perspective.
Host Rock	The rock surrounding an ore deposit.
Hydrology	The study of the properties of water and its movement in relation to land.
Hypabyssal	Kimberlite magma that has remained at the base of the pipe and crystallized <i>in situ</i> .
Hyporheos	Organisms that live in the interstitial spaces within the sediments of lakes and streams.

- Ice Wedge Polygon** A large polygon characterized by borders of intersecting ice wedges, found only in poorly drained areas of permafrost regions and formed by contraction of frozen ground. The fissured borders may be either ridges or shallow troughs underlain by ice wedges.
- Igneous** A rock formed by the solidification of magma.
- Index Gill Netting** Standard sampling design (used in the 1994 project area) where small-mesh gillnets are set perpendicular to shore beginning at depths of 2 m to 3 m.
- Indigenous Knowledge** Working definition from the Inuit Circumpolar Conference (1993): “... comprised of information and concepts about the environment and ecology that are known, but usually not formally recorded by individuals who belong to a particular culture group that has occupied an identifiable territory over a long period of time. It includes facts, concepts and theories about the characteristics which describe the objects, events, behaviours and interconnections that comprise both the animate and inanimate environments of indigenous peoples.”
- Insolation** The rate of radiation from the sun received per unit of the Earth’s surface. Insolation is a strong determining factor for atmospheric stability.
- Invertebrates** Collective term for all animals without a backbone or spinal column.
- Isolated Find** An archaeological site with a single artifact.
- Isostatic Adjustment** Adjustment of the lithosphere of the earth to maintain equilibrium among units of varying mass and density; excess mass above (e.g., a glacier) is balanced by a deficit of dense mass below, and vice versa.
- Kame** A mound, knob or short irregular ridge composed of stratified sand and gravel. The deposit can be formed by a subglacial stream as a fan or delta at the margin of a melting glacier, by a superglacial stream through a hole on the surface of the glacier, or as a ponded deposit on the surface or at the margin of sedentary ice.

Kettle	A depression in a glacial deposit formed by the melting of a detached block of ice buried in the deposit.
Kimberlite	An ultrabasic igneous rock that consists mainly of the mineral olivine and is found in volcanic pipes. The name is derived from Kimberley, South Africa, where the rock contains diamonds.
Labile	Rocks and minerals that are easily decomposed.
Lacustrine	Pertaining to, or produced by, a lake.
Lag	A residual accumulation of coarse rock fragments on a surface after the finer material has been blown away by winds.
Lake Overturn	Vertical mixing of layers in a body of water brought about by seasonal changes in temperature.
Lamproite	The only other diamondiferous volcanic rock type known besides kimberlite.
Lapse Rate	The rate of temperature decrease with height in the atmosphere. Lapse rates have been used as an index for vertical stability. The usual lapse rate for the troposphere is - 0.98°C per 100 m of elevation gain.
Larva	The immature stage, between egg and pupa, of an insect with complete metamorphosis.
Leaching	A natural process by which groundwaters dissolve minerals, thus leaving the rock with a smaller proportion of some of the minerals than it contained originally.
Leq	The maximum allowable noise exposure level for a specified length of exposure time.
Level	A system of horizontal underground workings connected to the shaft; the basis of operations for excavation of ore above or below.
Limnology	The study of fresh water, including biological, geological, physical and chemical aspects.
Lithic	Of or pertaining to stone.

Littoral	Region of a lake from the highest water level to the depth at which photosynthesis ceases.
Lodgement Till	A till carried at or deposited from the underside of a glacier; commonly containing stones oriented with their long axes generally parallel to the direction of ice movement.
Lotic	Flowing freshwater environments (e.g., streams and rivers).
Macrophyte	A macroscopic photosynthetic organism growing submerged, floating or emergent in the water.
Mesotrophic	Waters with moderate primary productivity.
Microclimate	The weather variations in a very local area.
Mineral	A naturally occurring, homogeneous substance having definite physical properties and chemical composition and, if formed under favourable conditions, a definite crystal form.
Mineral Claim	A portion of land held by either a prospector or a mining company under federal or provincial law.
Mitigation	An activity aimed at avoiding, controlling or reducing the severity of adverse physical, biological and/or socioeconomic impacts of a project activity.
Mixing Height	The effective depth of the atmosphere, measured from ground level, through which the dispersion of pollutants can take place.
Moraine	A mound or ridge of unstratified glacial sediments, chiefly till, deposited by direct action of glacier ice.
Ndè	A Dogrib term usually translated as “land”. As defined by the Dene Cultural Institute: <i>“Ndè is much closer to the scientific concept ‘ecosystem’, however, where ecosystem is based on the idea that living things exist in association with non-living elements, the Dogrib term Ndè is based on the idea that everything in the environment has life and spirit. Ndè includes both the spiritual and physical aspects of the land, people, animals and their habitats.”</i>
Oligotrophic	Nutrient deficient waters with low primary productivity.

Open Pit	A surface mine, open to daylight, such as a quarry. Also referred to as open-cut or open-cast mine.
Ore	A mineral, or group of minerals, that can be extracted from the ground at a profit under existing economic conditions.
Ore Body	A natural concentration of valuable material that can be extracted and sold at a profit.
Otolith	Inner ear bone found in bony fishes (flat and oval in structure).
Outcrop	An exposure of rock or mineral deposit that can be seen on surface i.e., not covered by overburden or water.
Oxidant	A compound capable of receiving electrons from the decomposition of matter.
Oxidation	A process of decomposition; electrons that hold matter together are transferred to another compound called an oxidant.
Pectoral Fins	The most anterior or uppermost of the paired fins of a fish.
Pelagic	Inhabiting the open water of a lake, in contrast to the lake bottom (benthic region).
Periphyton	Community of microbiota (algae, bacterial, fungi, rotifers, nematodes, protozoans and detritus) that are loosely attached to submerged substrata that may be inorganic, organic, living or dead.
Phytoplankton	Small floating plant life in aquatic ecosystems, sometimes microscopic.
Pipe	The vertical conduit along which gas and magma ascend to the surface, usually filled with breccia and may be mineralized; a more or less vertical, cylindrical ore body.
Piscivorous	Fish eating.
Planktivorous	Plankton eating.

Plant Site	A centralized area containing the process plant, permanent camp, equipment maintenance facilities and other infrastructure required to support the mining and diamond production operations.
Plunge Pool	The water occupying a deep hollow scoured in the bed of a stream at the foot of a waterfall; also, the hollow or basin itself.
Portal	The surface entrance to a tunnel or adit.
Post-decommissioning	The time after which an operation has closed and equipment and facilities have been removed from the site.
Primary Production	Production by photosynthetic organisms.
Primary Productivity	Rate at which energy is stored by the photosynthetic activity of plants.
Process Plant	A building in which crushed ore is washed, screened, concentrated and sorted for the recovery of diamonds.
Profundal	Region of a lake lying below the euphotic zone.
Proponent	The organization, company or institution planning to initiate a project.
Pupa	The stage between larva and adult in insects with complete metamorphosis.
Pyrite	The most widespread and abundant of all the sulphide minerals and occurs in all kinds of rocks; a common yellow mineral with a brilliant metallic lustre.
Pyroclastic	Pertaining to clastic rock material formed by volcanic explosion or aerial expulsion from a volcanic vent.
Quaternary Geology	Rocks from the Quaternary, a period of the Cenozoic era, which began two to three million years ago and extends to the present.
Radiation Inversion	A condition in which rapid cooling of the ground by radiation causes ambient temperatures to increase with height.

Raise	An underground opening driven upward from one level to another.
Reclamation	An activity aimed at rehabilitating a disturbed site to some level of ecological productivity.
Recruitment	In biology, an addition to the population by reproduction of new individuals.
Redox Conditions	A measure of electron activity of an environment (i.e., sediments); high redox conditions mean oxygen-rich environments, low redox conditions mean oxygen-poor environments.
Residual Effects	Effects that persist after mitigation measures have been applied.
Retouch	A type of modification used in the manufacture of stone tools.
Riffle	Shallow areas in a stream or river section characterized by increased habitat heterogeneity, sediment size, stream velocity, and sometimes oxygen content.
Rock	Any natural combination of minerals; part of the Earth's crust.
Rock Mass Rating (RMR)	A geomechanic classification of a rock slope or drill core that provides quantitative data for the purpose of mine design and ground reinforcement. RMR values range from 0 (very poor rock) to 100 (very good rock).
Rotary Drill	A machine that drills holes by rotating a rigid, tubular string of drill rods attached to a bit. Commonly used for drilling large diameter blastholes in open pit mines; recovers chips rather than rock core.
Run-of-Mine	Typical excavated ore or waste rock that has not been upgraded, sorted or otherwise processed.
Salmonid	Family of freshwater or anadromous fishes; dominant family in northern waters of North America (includes lake trout, round whitefish, arctic grayling).
Sample	A small portion of rock or a mineral deposit, taken so that the metal content can be determined by assaying.

Sampling	Selecting a fractional but representative part of a mineral deposit for analysis.
Scoping Sessions	Public meetings where all relevant issues and concerns related to a proposed project or activity are identified.
Scrubbing	A gravity concentration process that separates high density particles, including diamonds, from low density, non-diamond material in a conventional separating cyclone.
Secondary Production	Production by consumer organisms.
Setae	Bristles or “hair” of invertebrates.
SGP	Slave Geological Province
Shaft	A vertical or inclined excavation in rock for the purpose of providing access to an ore body. Usually equipped with a hoist at the top, which lowers and raises a conveyance for handling workers and materials.
Sill	An intrusive sheet of igneous rock of roughly uniform thickness, generally extending over considerable lateral extent, that has been forced between the bedding planes of existing rock.
Solifluction	The slow downslope movement of saturated earth materials resulting from alternate freezing and thawing of ground ice.
Sorted Circle	A dominantly circular form of patterned ground, developed singly or in groups, that has a sorted appearance commonly due to a border of stones surrounding finer material.
Sound Level Meter	The basic instrument used to measure sound pressure variations.
Standing Crop	Amount of living organic matter found in a given area or volume of water at a given time; expressed as number per unit area or unit volume.

Steady-state Noise	Noise that may be characterized as having a steady magnitude (usually measured in dBA) and a prolonged duration. Examples would be noise generated by fans, diesel power plant engines and any other heavy equipment at normal operating state.
Stockpile	A supply of material, for example, blasted rock or crushed ore, set aside for future use.
Stope	An excavation in an underground mine from which ore is being or has been extracted.
Striation	One of a series of fine parallel straight lines cut into a bedrock surface by rock fragments embedded at the base of a moving glacier, or cut on the rock fragments themselves.
Sublevel	A system of horizontal underground workings, normally within stope areas only, required for ore production.
Supraglacial	Carried at the top of a glacier or ice sheet.
Surficial Geology	The study of material at or near the surface of the earth, usually unconsolidated soil or rubble.
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Tailings	Ground waste material and water (slurry) rejected from a mill or process plant after most of the valuable minerals have been extracted.
Tailings Pond	An engineered storage site used to confine tailings.
Talik	A layer or body of unfrozen ground below the active layer in a permafrost area.
Thermocline	Layer in a thermally stratified body of water in which temperature changes rapidly relative to the remainder of the body.
Thermokarst	The process by which characteristic karst-like landforms result from the thawing of ice-rich permafrost, forming cave-in bogs, caverns, pits and other small depressions.

Thickener	A large, round tank used in mineral processing operations to separate solids from liquids; clear fluid overflows from the tank and rock particles sink to the bottom.
Thorax	In insects, the group of three segments behind the head that bears the three pairs of legs and (when present) the wings.
Till	Unstratified rock material deposited directly by glaciers, consisting of a mixture of clay, silt, sand, gravel and boulders ranging widely in size and shape.
Traditional Environmental Knowledge (TEK)	As defined by the Dene Cultural Institute: <i>“...a body of knowledge and beliefs transmitted through oral tradition and first hand observation. It includes a system of classification, a set of empirical observations about the local environment and a system of self-management that governs resource use. Ecological aspects are closely tied to social and spiritual aspects of the knowledge system.”</i>
Traditional Knowledge	As defined by the Dene Cultural Institute: <i>“Knowledge and values which have been acquired through experience, observation from the land and from spiritual teachings, and handed down from generation to generation.”</i>
Trim Line	A sharp boundary line defining the maximum upper level of the margins of a glacier that has receded from an area.
Trophic Levels	Functional classification of organisms in an ecosystem according to feeding relationships, from first level autotrophs through succeeding levels of herbivores and carnivores.
Turbidity	A condition of reduced transparency in water caused by suspended colloidal or particulate material.
Utilidor	Enclosed and heated corridor for utility piping, electrical conduits and personnel access.
Valued Ecosystem Components	Environmental attributes or components identified as a result of a social scoping exercise as having scientific, social, cultural, economic or aesthetic value.
Waste Rock	Barren rock or rock too low in grade to be mined or processed economically.

Xenolith	A foreign inclusion in an igneous rock.
YOY (young of the year)	Juveniles during the period from the last larval stage to adulthood, or one year of age, whichever comes sooner.
Zone	An area of distinct mineralization.
Zooplankton	Small floating or weakly swimming invertebrate animals in freshwater and marine ecosystems.

Abbreviations

Ampere	A	Kilometre	km
Annum	a	Kilometres per hour	km/h
Billion years	Ga	Kilopascal	kPa
Canadian dollar	\$ or CDN\$	Kilovolt	kV
Carat	ct	Kilovolt-ampere	kVA
Carats per stone	ct/stone	Kilowatt	kW
Centimetre	cm	Kilowatt hour	kWh
Cubic metre	m ³	Kilowatt hours per tonne	kWh/t
Cubic metres per hour	m ³ /h	Kilowatt hours per year	kWh/a
Cubic metres per minute	m ³ /min	Less than	<
Cubic metres per year	m ³ /a	Litre	L
Day	d	Litres per year	L/a
Days per week	d/wk	Litres per hour	L/h
Days per year	d/a	Litres per minute	L/min
Degree	°	Litres per second	L/s
Degrees Celsius	°C	Megahertz	MHz
Gram	g	Megajoules per litre	MJ/L
Grams per cubic centimetre	g/cm ³	Megapascal	MPa
Grams per kilowatt hour	g/kWh	Megavolt-ampere	MVA
Grams per litre	g/L	Megawatt	MW
Grams per tonne	g/t	Megawatt hour	MWh
Greater than	>	Metre	m
Hectare	ha	Metres per day	m/d
Hertz	Hz	Metres per minute	m/min
Horsepower	hp	Metres per second	m/s
Hour	h	Metric tonne	t
Hours per day	h/d	Micrometre (micron)	μ
Hours per year	h/a	Milligrams per litre	mg/L
Kilogram	kg	Millimetre	mm
Kilograms per cubic metre	kg/m ³	Million years	Ma
Kilograms per hour	kg/h	Minute	min
Kilograms per tonne	kg/t	Month	mo
Kilograms per year	kg/a	Parts per million	ppm
Kilojoule	kJ	Percent	%

Glossary and Abbreviations

Plus or minus	±	Revolutions per minute	rpm
Second	s	U.S. dollar	US\$
Square kilometre	km ²	Volt	V
Tonne	t	Water gauge	w.g.
Tonnes per cubic metre	t/m ³	Watt	W
Tonnes per day	t/d	Week	wk
Tonnes per hour	t/h	Year (annum)	a
Tonnes per year	t/a		