

## 10 MONITORING AND FOLLOW-UP

### 10.1 Introduction

The purpose of this section is to describe the proposed Socio-Economic Monitoring Plan. This plan is intended to meet regulatory requirements for follow-up on effects identified previously in this volume. A project of this magnitude will generate a range of positive and negative effects during construction. Because of the nature, scope and magnitude of the expected project-related effects, and in recognition of shared responsibility for effects management, the mitigation measures, management plans and programs that address the effects will require a coordinated and collaborative response from the project proponents and their contractors, affected communities, and territorial and federal government agencies. Mitigation measures, management plans and programs will need to be monitored throughout project construction and initial operations to:

- determine their effectiveness in reducing adverse effects and enhancing positive effects
- enable adjustments to be made where necessary
- develop new mitigation plans and programs, where required

The proposed Socio-Economic Monitoring Plan applies only to the Mackenzie Gas Project. The NOVA Gas Transmission Ltd. (NGTL) ancillary project in Alberta will develop and implement its own socio-economic programs, in consultation with affected parties.

### 10.2 Objectives

The objectives of the Socio-Economic Monitoring Plan are to:

- verify the accuracy and completeness of the socio-economic effects described in this volume and identify any additional effects
- determine the effectiveness of mitigation measures, management plans and programs in reducing or eliminating potential adverse effects
- determine the effectiveness of mitigation measures, management plans and programs in enhancing socio-economic benefits associated with the project
- adjust or develop new mitigation measures, as required
- provide direct and timely feedback to project managers, contractors, affected communities and government agencies

### 10.3 Monitoring Plan Strategy

#### Key Elements

The plan will use and supplement reporting required by regulators, the public, Government of the Northwest Territories (GNWT), and Aboriginal organizations and agencies.

The plan will use participative monitoring methods, recognizing that managing many socio-economic issues can only be effective if done with full cooperation of the project proponents, affected communities and government agencies. Decisions about suitable actions will require joint consideration by multiple stakeholders.

Regional committees will be created to monitor and report on:

- selected project-related effect indicators
- the effectiveness of mitigation measures, management plans and programs
- any unexpected effects that are identified

It is expected that three such committees would be required, one each for the Beaufort Delta Region (BDR) (Inuvialuit Settlement Region [ISR] and Gwich'in Settlement Area [GSA] combined), the Sahtu Settlement Area (SSA) and the Deh Cho Region (DCR). Monitoring committee composition should be based on the project-related effects selected for monitoring, and the agencies responsible for mitigating and managing the effects.

The monitoring committees will function as working groups and should be limited in size. Committee membership will be selected in consultation with affected communities, and the committees could have representatives, or could access information from:

- the project
- corridor communities
- regional health care and social services authorities
- local or regional RCMP detachments
- the pipeline working groups
- the GNWT, e.g., policy, resourcing and trans-regional issues coordination regarding:
  - transportation
  - economic development
  - education, culture and employment
  - health and social services

- local businesses
- local schools and Aurora College

Monitoring activities under the plan need to reflect the potential for community, regional and territorial socio-economic circumstances to change because of:

- normal growth
- the influences of other economic and political developments during construction and operations

Monitoring and analysis must attempt to distinguish between these effects and those of the project. The indicator information collected must be directly linked to the project.

An independent facilitator could be on each monitoring committee. The facilitator's responsibilities could include:

- arranging and facilitating committee meetings
- recording and circulating meeting minutes and assignments
- preparing annual monitoring reports for the committee
- liaison with the facilitators associated with the other regional committees to:
  - ensure consistency of purpose, process and intended outcomes
  - compare results

The monitoring committees should meet at least twice a year, more frequently if required.

As the project enters operations, and project-related activities and effects decrease, monitoring committee meetings could be reduced in frequency, until it is determined that the monitoring plan and committee are no longer needed.

Initial steps in developing and implementing the plan include:

- development of a conceptual plan
- meetings with study area communities to discuss the conceptual socio-economic monitoring plan, and the proposal for the regional committees to execute the plan
- regional workshops to identify and seek consensus on the conceptual plan, including:
  - project-related effects to be monitored
  - indicator data to be collected and reported on

- composition of regional monitoring committees
- schedules and locations of committee meetings
- nominating and selecting committee members in each region, to be completed at least six months before construction starts
- initial committee meeting in each region, scheduled before construction starts, to review and agree on the committee's mandate, tasks, process, schedules and intended outcomes
- developing operating budgets for the committees and determining responsibility for costs

The regional committees will be active before and during project construction. When project operations begin, it is expected that committee activities will decline, as described in Section 10.5, Project Effects Measurements – Operations.

#### 10.4 Project Effects Measurements – Construction

The plan to monitor socio-economic effects during construction would include the list of effects identified previously in this volume. The process would require committee agreement on:

- project effects to be monitored
- indicator data for each effect
- frequency with which data readings are to be taken
- process of evaluating the indicator data and deciding what, if anything, needs to be done in addition to mitigation measures in place
- frequency with which the evaluations will be made
- period during which the effects are to be monitored

Four broad categories of project socio-economic effects were identified for monitoring. Each of these categories includes several topics. The committees might wish to focus on selected effects of concern because too many categories and subtopics could be unmanageable.

The four broad categories are:

- economic effects, including migration
- infrastructure, community service and governance
- individual, family and community wellness
- traditional culture

The indicator data for these effects includes relevant statistical data and reliable qualitative data. Primary reliance should be on quantitative data, with qualitative data used to help interpret the quantitative data. Where possible, simultaneous collection and analysis of quantitative and qualitative data is preferable, because each can serve as a check on the reliability of the other. Selecting indicators should take into account the availability of preproject baseline data, comparability across regions, and existing administrative data collection and reporting protocols.

The committee, or its designate, will write a report at the end of each construction year that describes:

- actual versus predicted effects
- effectiveness of mitigation and optimization measures
- recommendations for further mitigation or optimization measures, if warranted
- concerns that were addressed, related to socio-economic effects
- what management adjustments were made and with what effect

The committee, or its designate, will produce a final report describing:

- issues and challenges encountered during construction and first two years of operations
- responses
- effects of responses

This report will have relevance:

- when any project component is expanded or enlarged
- during future construction of a similar project, or similar project components

## **10.5 Project Effects Measurements – Operations**

At the end of construction, and after the associated cleanup and site restoration, most employment and opportunities induced by the project will end. There will be ongoing well drilling activities, and operations and maintenance activities associated with the anchor fields, pipelines and associated facilities. The employment levels associated with these operations activities will be a small fraction of the peak construction workforce.

Therefore, throughout operations, there will be no substantial residual effects on infrastructure, family and community wellness conditions and services, or

preservation of any aspects of traditional culture. There will be no resulting need for mitigation measures, and no need for committees to monitor project effects.

The operations and maintenance employment generated will contribute to local capacity in only a few communities and will be long term. Training and employment for the long-term positions will be captured in indicator data before and during the first year or two of operations. Similarly, northern procurement for operations and maintenance of the anchor fields, pipelines and associated facilities will be established over the initial one or two years of operation. Beyond this period, project effects are expected to be largely undetectable and there would be limited value in continuing the socio-economic monitoring activities. The committees might choose to continue monitoring socio-economic information. However, the project's role will decline.

Ongoing reporting of benefits data will take place, consistent with any relevant requirements of project benefits and access agreements and the GNWT Socio-Economic Agreement.

## REFERENCES

- Alberta Learning. 2004. *High School Completion Rates for Alberta School Jurisdictions*. Available at: [www.learning.gov.ab.ca/k\\_12/completion/](http://www.learning.gov.ab.ca/k_12/completion/). Accessed: June 15, 2004.
- Andrews, T. 2002. Territorial Archaeologist. Prince of Wales Northern Heritage Centre, Northwest Territories. Personal communication. February 13, 2002.
- Arnold, Charles. 1981. *The Lagoon Site (OjRl-3): Implications for Paleoeskimo Interaction*. National Museum of Man Mercury Series, Archaeological Survey of Canada, Paper No. 107. Ottawa, Ontario.
- Arnold, Charles. 1989. Arctic harpoons. *Arctic* 42(1): 80–81.
- Asch, Michael I. 1981. Slavey. In: June Helm (ed.). *Handbook of North American Indians, Volume 6, Subarctic*. Washington, D.C: Smithsonian Institution. 338–349.
- Assumption RCMP commanding officer. 2002. Personal communication.
- Beckel, D. 1975. *IBP Ecological Sites in Subarctic Canada: Areas Recommended as Ecological Sites in Region 10, Yukon and Northwest Territories Boreal Forest to the Treeline*. Canadian Committee for the International Biological Program. Lethbridge, Alberta: University of Lethbridge Production Services.
- Berger, T. 1977. *Northern Frontier, Northern Homeland: The Report of the Mackenzie Pipeline Inquiry*. 2 volumes. Minister of Supply and Services. Ottawa, Ontario.
- Blondin, George. 1997. Yamoria – The lawmaker. In: *Stories of the Dene*. Edmonton, Alberta: NeWest.
- Bryshum, Doug. 2003. Economic Consultant. Hay River, Northwest Territories. Personal communication. June 19, 2003.
- Burn, C. 2002. Climate. In: Black and Fehr (ed.). *Natural History of the Western Arctic*. Altona, Manitoba: Friesen Printing. 11–12.
- CAL EPA (California Environmental Protection Agency). 1998. *Health Risk Assessment for Diesel Exhaust, Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant*. Office of Environmental Health Hazard Assessment.

- Canadian Environmental Assessment Agency. 2003. *Canadian Environmental Assessment Act*. November 2003.
- Canadian North, First Air and North Wright Airways Ltd. 2003. Airline personnel. Personal communication.
- Chalmers and Associates Consulting Ltd. 2002. *A State of Emergency . . . A Report on the Delivery of Addictions Services in the Northwest Territories*. Prepared for GNWT HSS.
- Chipeniuk, Ken. 2004. Indian and Northern Affairs Canada. Personal communication. June 17, 2004.
- Cinq-Mars, J. 1973. *Preliminary Archaeological Study Corridor (Second Report)*. DIAND Publication QS-1506-000-EE-XA1. Northern Pipelines Task Force on Northern Oil Development, Environmental-Social-Committee Report 73-10. Ottawa, Ontario.
- Cinq-Mars, J. and C.A. Martijn. 1981. History of archaeological research in the Subarctic Shield and Mackenzie Valley. In: J. Helm (ed.). *Handbook of North American Indians, Volume 6: Subarctic*. Washington, D.C.: Smithsonian Institution. 30–34.
- Cinq-Mars, J. and J.-L. Pilon. 1991. The NOGAP archaeology project: A brief introduction. In: Cinq-Mars and Pilon (ed.). *NOGAP Archaeology Project: An Integrated Archaeological Research and Management Approach*. Canadian Archaeological Association Occasional Paper No. 1. 1–6.
- Clark, D. 1975. *Archaeological Reconnaissance in Northern Interior District of Mackenzie 1969, 1970 and 1972*. Archaeological Survey of Canada Mercury Series Paper No. 27, National Museum of Man. Ottawa, Ontario.
- Clark, D. 1977. Archaeological survey of Great Bear Lake, 1976. In: J.W. Helmer, S. Van Dyke and F.J. Kense (ed.). *Prehistory of the North American Subarctic: The Athapaskan Question*. The Archaeology Association of the University of Calgary. Calgary, Alberta. 55–64.
- Clark, D. 1981. Prehistory of the western subArctic. In: J. Helm (ed.). *Handbook of the North American Indians, Volume 6, Subarctic*. Washington, D.C.: Smithsonian Institution. 107–129.
- Clark, D. 2001. Microblade-culture systematics in far northwestern Canada. In: Jean-Luc Pilon, Michael W. Kirby and Caroline Theriault (ed.). *A Collection of Papers Presented at the 33rd Annual Meeting of the Canadian Archaeological Association*. The Ontario Archaeological Society Inc.

- Clarke, G.M., D. Dalmer and J. McKillop. 2003. *Heritage Resources Focused Reconnaissance of the Mackenzie Gas Project*. Northwest Territories Archaeologists Class II Permit: NWT 2002-916. Submitted to the Prince of Wales Northern Heritage Centre. Yellowknife, Northwest Territories.
- Clarke, G.M., V. Balls, D. Dalmer, L. Bouchet-Bert and A.R. Mason. 2004. *Heritage Resources Focused Reconnaissance of the Mackenzie Gas Project*. Northwest Territories Archaeologists Class II Permit: NWT 2003-933. Submitted to the Prince of Wales Northern Heritage Centre. Yellowknife, Northwest Territories.
- ColtKBR (Colt Engineering Corporation). 2003. *Anchor Fields – Mackenzie Gas Project: Preliminary Job and Business Opportunities*. WP-801-027, Rev. 0. August 21, 2003.
- ColtKBR. 2004. *Labour Force Requirements, Gathering System and Hay River Module Assembly*. March 9, 2004.
- Community of Aklavik, the Wildlife Management Advisory Council (Northwest Territories) and the Joint Secretariat. June 2000. *Aklavik Inuvialuit Community Conservation Plan*.
- Community of Inuvik, the Wildlife Management Advisory Council (Northwest Territories) and the Joint Secretariat. 2000. *Inuvik Inuvialuit Community Conservation Plan*. June 2000.
- Community of Tuktoyaktuk, the Wildlife Management Advisory Council (Northwest Territories) and the Joint Secretariat. 2000. *Tuktoyaktuk Community Conservation Plan*. June 2000.
- ConocoPhillips. 2004a. *Capital Expenditures, Parsons Lake Anchor Field*. May 18, 2004.
- ConocoPhillips. 2004b. *Labour Force Requirements, Parsons Lake Anchor Field*. May 14, 17, 18, 2004.
- Davis, M. 2002. GIS Technician. Prince of Wales Northern Heritage Centre, Northwest Territories. Personal communication. September 12, 2002.
- De Beers Canada. 2003. *Snap Lake Diamond Project Fact Sheet*. Available at: [www.debeerscanada.com/files/snap/infrastruct.html](http://www.debeerscanada.com/files/snap/infrastruct.html). Accessed: September 22, 2003.
- Deh Cho First Nation. 2002. *Deh Cho First Nations Member Communities*. Available at: [www.cancom.net/~dehchofn/member.htm](http://www.cancom.net/~dehchofn/member.htm). Accessed: December 2002.

REFERENCES

---

- Deh Cho First Nation. no date (c. 1998). *Contaminants in the Deh Cho – A Summary of Five Years of Research Under the Northern Contaminants Program*. Fort Simpson, Northwest Territories: Deh Cho First Nations.
- Dempsey, Bill. 2004. Personal communication.
- Diaz-Sanchez, D. et al. 1997. Combined diesel exhaust particulate and ragweed allergen challenge markedly enhances human in vivo nasal ragweed-specific IgE and skews cytokine production to a T helper cell 2-type pattern. *J. Immunol.* 158: 2406–2413.
- Donahue, Conan. 2003. Personal communication. August 25, 2003.
- DTFN (Dene Tha' First Nation). 1997. *Dene Tha' Traditional Land-Use and Occupancy Study*. Calgary, Alberta: Arctic Institute of North America.
- EBA Engineering Consultants Ltd. (EBA). 1987. *Inuvialuit Settlement Sand and Gravel Inventory and Recommendations for Development, Inuvik, Northwest Territories*. Prepared for Indian and Northern Affairs Canada.
- Ellis Consulting Services. 2002a. *Housing Demand Study: Estimated Impact of Mining Developments on the Demand for Housing in Hay River*. May 2002.
- Ellis Consulting Services. 2002b. *Housing Demand Study: Estimated Impact of Mining Developments on the Demand for Housing in Inuvik*. May 2002.
- Ellis Consulting Services. 2002c. *Housing Demand Study: Estimated Impact of Mining Developments on the Demand for Housing in Norman Wells*. May 2002.
- Ellis Consulting Services. 2002d. *Housing Demand Study: Estimated Impact of Mining Developments on the Demand for Housing in Yellowknife*. May 2002.
- Ellis Consulting Services. 2004. *Predicted Economic Impacts of the Proposed Mackenzie Gas Project*.
- Ellis, Roy. 2004. Personal communication. Various dates.
- Environment Canada. 1986. *Terrestrial Ecozones of Canada: Ecological Land Classification Series No. 19*. Compiled by E. Wiken, Lands Directorate, Environment Canada. Ottawa, Ontario: Minister of Supply and Services.

- Fedirchuk, G. and J.F.V. Millar. 1981. *Heritage Resource Overview, Transportation Corridor, Beaufort Sea Mackenzie Valley Development Project. Volume II A*. Manuscript No. 2232, on file in the Archives of the Archaeological Survey of Canada, Canadian Museum of Civilization, Hull, Quebec.
- FJMC (Fisheries Joint Management Committee). 1994. *Beaufort Sea Beluga Management Plan Tourism Guidelines within the Inuvialuit Settlement Region*. Inuvik, Northwest Territories.
- Fort Good Hope RCMP Commanding Officer. 2002. Fort Good Hope, Northwest Territories. Personal communication.
- Fort Liard RCMP Officer. 2003. Fort Liard, Northwest Territories. Personal communication.
- Fort Providence RCMP Officer. 2003. Fort Providence, Northwest Territories. Personal communication.
- Fort Simpson Flight Service Station Personnel. 2004. Fort Simpson, Northwest Territories. Personal communication.
- Fort Simpson RCMP Officer. 2003. Fort Simpson, Northwest Territories. Personal communication.
- Freeman, Milton, M.R. Elanor, F. Wein and Darren E. Keith. 1992. *Recovering Rights: Bowhead Whales and Inuvialuit Subsistence in the Western Canadian Arctic. Canadian Circumpolar Institute and Fisheries Joint Management Committee, Studies on Whaling No. 2*. Edmonton, Alberta: Canadian Circumpolar Institute.
- Gill, D. 1971. *Vegetation and Environment in the Mackenzie River Delta, Northwest Territories: A Study in Subarctic Ecology*. PhD thesis. University of British Columbia, Vancouver, British Columbia.
- Gillespie, Beryl. 1968. *Ethnographic Notes from Fieldwork among Dogrib, Bear Lake Indians and Mountain Indians, Northwest Territories*.
- Gillespie, Beryl. 1981. Mountain Indians. In: J. Helm (ed.). *Handbook of North American Indians, Volume 6, Subarctic*. Washington, D.C.: Smithsonian Institution.
- GNWT (Government of the Northwest Territories). 1994. *Access to Information and Protection of Privacy Act*. Available at: [www.justice.gov.nt.ca/ATIPP/atipp.htm](http://www.justice.gov.nt.ca/ATIPP/atipp.htm). Accessed: February 2004.

REFERENCES

---

- GNWT. 1997. *Consolidation of the Historical Resources Act. Revised Statutes of the Northwest Territories, 1988*. Territorial printer, Northwest Territories. Yellowknife, Northwest Territories.
- GNWT. 2003. *Community Profile: Wrigley*. Available at: [www.assembly.gov.nt.ca/VisitorInfo/NWTMapandHistory/Wrigley.html](http://www.assembly.gov.nt.ca/VisitorInfo/NWTMapandHistory/Wrigley.html). Accessed: January 2003.
- GNWT. 2004. *Strategic Plan. Self-Reliant People, Communities and Northwest Territories – A Shared Responsibility*. June 2004. Yellowknife, Northwest Territories.
- GNWT Bureau of Statistics. 1999. *Northwest Territories Labour Force Survey*. Yellowknife, Northwest Territories.
- GNWT Bureau of Statistics. 2001. Unpublished data on the economy. Yellowknife, Northwest Territories.
- GNWT Bureau of Statistics. 2002a. *2001 Regional Employment and Harvesting Survey*. Yellowknife, Northwest Territories.
- GNWT Bureau of Statistics. 2002b. *Summary of Northwest Territories Community Statistics for 2001*. Yellowknife, Northwest Territories.
- GNWT Bureau of Statistics. 2003a. *Statistical Quarterly* 25(1). Yellowknife, Northwest Territories.
- GNWT Bureau of Statistics. 2003b. *Census Data*. Available at: [www.stats.gov.nt.ca/Stainfo/Census/census%2001/Commpop.xls](http://www.stats.gov.nt.ca/Stainfo/Census/census%2001/Commpop.xls). Accessed: 2003.
- GNWT Bureau of Statistics. 2003c. *Statistical Information by Category*. Available at: [www.stats.gov.nt.ca/statinfo.html](http://www.stats.gov.nt.ca/statinfo.html). Accessed: 2003.
- GNWT Bureau of Statistics. 2003d. *Mobility Data for 2001*. Yellowknife, Northwest Territories.
- GNWT Bureau of Statistics. 2004. *Population Data for 2003*. Available at: [www.stats.gov.nt.ca/statinfo.html](http://www.stats.gov.nt.ca/statinfo.html). Accessed: 2004.
- GNWT Education, Culture and Employment. 2004. *School Profile Data*. Yellowknife, Northwest Territories.
- GNWT HSS (Health and Social Services). 1995. *Working Together for Community Wellness*. Yellowknife, Northwest Territories.

- GNWT HSS (Health and Social Services). 2003a. *Canadian Community Health Survey Share File*. Yellowknife, Northwest Territories.
- GNWT HSS. 2003b. Unpublished health information. Yellowknife, Northwest Territories.
- GNWT HSS. no date. *HSS Action Plan, 2002–2005*. Yellowknife, Northwest Territories.
- GNWT Municipal and Community Affairs. 2002. Unpublished infrastructure and community services data. Yellowknife, Northwest Territories.
- GNWT Public Works and Services. 2002. *GNWT Occupational Health and Safety Regulations*. Yellowknife, Northwest Territories.
- GNWT RWED (Resources, Wildlife and Economic Development). 1999. Unpublished community profiles. Yellowknife, Northwest Territories.
- GNWT RWED. 2002. Unpublished facilities information. Yellowknife, Northwest Territories.
- GNWT RWED. Various years. Unpublished trapper data. Yellowknife, Northwest Territories.
- GNWT Transportation. 1995. Unpublished infrastructure data. Yellowknife, Northwest Territories.
- GNWT Transportation. 2000. Unpublished infrastructure data. Yellowknife, Northwest Territories.
- GNWT Transportation. 2001. Unpublished infrastructure data. Yellowknife, Northwest Territories.
- Government of Alberta. 2000. *Alberta Historical Resources Act*. Available at: [www.qp.gov.ab.ca/Documents/acts/H09.CFM](http://www.qp.gov.ab.ca/Documents/acts/H09.CFM). Accessed: 2003.
- Government of Canada, Department of Justice. 2002. *Mackenzie Valley Resource Management Act*. Available at: [www.laws.justice.gc.ca/en/m-0.2/79357.html](http://www.laws.justice.gc.ca/en/m-0.2/79357.html). Accessed: 2003.
- Government of Canada. 1985. *Canada Oil and Gas Operations Act*. Available at: <http://laws.justice.gc.ca/en/O-7/19408.html>. Accessed: 2004.
- Government of Canada. 1996. *Canada Oil and Gas Geophysical Operations Regulations*. Available at: [www.canlii.org/ca/regu/sor96-117/sec27.html](http://www.canlii.org/ca/regu/sor96-117/sec27.html). Accessed: February 2004.

REFERENCES

---

- Government of Canada. 1998a. *Mackenzie Valley Land Use Regulations*. Available at: [www.infosource.gc.ca/Info\\_1/MVL-LE-e.htm](http://www.infosource.gc.ca/Info_1/MVL-LE-e.htm). Accessed: February 2004.
- Government of Canada. 1998b. *Mackenzie Valley Resources Management Act*. Available at: [www.infosource.gc.ca/Info\\_1/MVL-LE-e.html](http://www.infosource.gc.ca/Info_1/MVL-LE-e.html). Accessed: February 2004.
- Government of Canada. 2001. *Northwest Territories Archaeological Site Regulations*. Available at: [www.pwnhc.learnnet.nt.ca/policy/archsite.htm](http://www.pwnhc.learnnet.nt.ca/policy/archsite.htm). Accessed: 2003.
- Government of Canada. 2003a. *Canadian Environmental Assessment Act*. Section 16. Ottawa, Ontario.
- Government of Canada. 2003b. *Territorial Land Use Regulations*. Available at: [www.laws.justice.gc.ca/en/T-7/C.R.C.-c.1524/](http://www.laws.justice.gc.ca/en/T-7/C.R.C.-c.1524/). Accessed: 2003.
- Gwich'in Land Use Planning Board. 2002. *Nanh' Geenjit Gwitr'it T'igwaa'in: Working for the Land. Draft Gwich'in Land Use Plan*.
- Gwich'in Renewable Resource Board. 1997. *Gwich'in Harvest Study Data Report August 1995 to December 1996*.
- Gwich'in Renewable Resource Board. 1998. *Gwich'in Harvest Study Data Report August 1996 to December 1997*.
- Gwich'in Renewable Resource Board. 1999. *Gwich'in Harvest Study Data Report August 1997 to December 1998*.
- Gwich'in Renewable Resource Board. 2000. *Gwich'in Harvest Study Data Report August 1998 to December 1999*.
- Gwich'in Tribal Council, Resource Management Office. 2001. *Traditional Management Principles for the Sustainable Use of Wildlife in the Gwich'in Settlement Region*. June 2001.
- Hanks, C. and D.L. Pokotylo. 1989. The Mackenzie Basin: An alternative approach to Dene and Métis archaeology. *Arctic* 42: 139–147.
- Hanna, Don. 2002. *Mackenzie Delta Heritage Resource Survey*. Prepared for AEC West Ltd., Anadarko, Devon ARL Corporation, BP Canada Energy Company, Burlington Resources Canada Energy Ltd., Chevron Canada Resources, Conoco Canada Resources Limited, Petro-Canada and Shell Canada Ltd. at the request of Inuvialuit Environmental and Geotechnical Inc. N.W.T. Research Permit 2001-910. On file at the PWNHC, Yellowknife, Northwest Territories.

- Hannon, Lyle. 2003. Personal communication. August 11, 2003.
- Harrison. 2002. *Sexual Abuse and Assault Information Workshop*. Presentation from Child Protection. Yellowknife, Northwest Territories. November 6, 2002.
- Hay River Recreation Director. 2003. Hay River, Northwest Territories. E-mail. July 28, 2003.
- Health Effects Institute. 1999. *Diesel Emissions and Lung Cancer: Epidemiology and Quantitative Risk Assessment*. A Special Report of the Institute's Diesel Epidemiology Expert Panel, Flagship Press, North Andover, Massachusetts.
- Hegmann, G., C. Cocklin, R. Creasey, S. Dupuis, A. Kennedy, L. Kingsley, W. Ross, H. Spaling and D. Stalker. 1999. *Cumulative Effects Assessment Practitioners Guide*. Prepared by AXYS Environmental Consulting Ltd. and the CEA Working Group for the Canadian Environmental Assessment Agency. Hull, Quebec.
- Heine, M., A. Alestine, I. Kritsche, A. Cardinal and the Elders of Tsiigehtchic. 2001. *Gwichya Gwich'in Googwandak: The History and Stories of the Gwichya Gwich'in*. Tsiigehtchic and Yellowknife, Northwest Territories: Gwich'in Social and Cultural Institute.
- Hobart, Charles W. 1984. The impact of resource development on the health of native people in the Northwest Territories. *The Canadian Journal of Native Studies* IV(2): 257–278.
- Hobart, Walsh and Associate Consultants Ltd. 1978. *Rotation Employment of Coppermine Inuit Men: Effects, and Community Perspectives*. Prepared for the Government of the Northwest Territories. Edmonton, Alberta.
- Imperial Oil Resources Limited. 2004a. *Capital Expenditures, Taglu Anchor Field, Gathering System, Gas Pipeline and Compression Facilities*. May 19, 2004.
- Imperial Oil Resources Limited. 2004b. *Labour Force Requirements, Taglu Anchor Field*. January 21, April 3, April 8, 2004.
- Imperial Oil Resources Limited. 2004c. *Construction Camps and Staff Requirements*. July 9, 2004.
- Imperial Oil Resources Limited. 2004e. *Pipeline of Opportunity*. Brochures on the Mackenzie Gas Project.

REFERENCES

---

- InfoNorth. 2002. Profile. Available at: [www.infonorth.org/profile](http://www.infonorth.org/profile). Accessed: November 2002.
- Innis H.A. 1962. *The Fur Trade in Canada*. Toronto, Ontario: University of Toronto Press.
- Inuvialuit Land Administration. 1986. *Inuvialuit Lands Administration Rules and Procedures*. Available at: [www.irc.Inuvialuit.com/corporate.ila.description.asp](http://www.irc.Inuvialuit.com/corporate.ila.description.asp). Accessed: 2004.
- Inuvik RCMP Commanding Officer. 2004. Inuvik, Northwest Territories. Telephone conversation. June 30, 2004.
- IRHSSA Director of Nursing. 2003. Northwest Territories. Personal communication. November 2002 and August 2003.
- IRHSSA Nursing Supervisor. 2002. Northwest Territories. Personal communication.
- Johnson, Martha and Robert A. Ruttan. 1993. *Traditional Dene Environmental Knowledge – A Pilot Project Conducted in Fort Good Hope and Colville Lake, Northwest Territories, 1989–1993*. Hay River, Northwest Territories: Dene Cultural Institute.
- Joint Secretariat. 2003. *Inuvialuit Harvest Study, Data and Methods Report*.
- Krech, Shepard. 1979. Interethnic relations in the lower Mackenzie River region. *Arctic Anthropology* XVI(2): 102–122.
- Kritsch, I.D. 1994. *Gwich'in Territorial Park (Campbell Lake) Oral History Project: Final Report*. Prepared for GNWT Economic Development and Tourism.
- Kroeber, Alfred L. 1939. *Cultural and Natural Areas of Native North America*. University of California Publications in American Archaeology and Ethnology. 38. Berkeley, California.
- Lamb, W. Kaye (ed.). 1970. *The Journal and Letters of Sir Alexander Mackenzie (1789–1819)*. Cambridge, England: University Press. Published for the Hakluyt Society.
- Larsen, J. 1972. *Vegetation and Terrain (Environment): Canadian Boreal Forest and Tundra*. Final Report Number UW-G1128. U.S. Army Research Office, Durham.

- LeBlanc, R.J. 1991. New data relating to the prehistory of the Mackenzie Delta region of the NOGAP study area. In: Jacques Cinq-Mars and Jean-Luc Pilon (ed.). *NOGAP Archaeology Project: An Integrated Archaeological Research and Management Approach*. Canadian Archaeological Association, Occasional Paper No. 1. 65–76.
- Local Informants. 2002, 2003. Northwest Territories. Personal communication.
- Local Recreation Directors. 2003. Northwest Territories. Personal communication.
- Losey, T.C. 1973. *Mackenzie Pipeline Archaeological Project: A Report*. Consultant report on file at the Prince of Wales Northern Heritage Centre.
- Mackay, J., W.H. Mathews and R.S. MacNeish. 1961. Geology of the Engigstciak archaeological site, Yukon Territory. *Arctic* 19: 25–52.
- Mackenzie Delta–Beaufort Sea Regional Land Use Planning Commission. 1991. *A Community-Based Regional Land Use Plan for the Mackenzie Delta–Beaufort Sea Region: A Land Use Plan*.
- Mackenzie, Alexander. 1801. *Voyages from Montreal on the River St. Lawrence, Through the Continent of North America to the Frozen and Pacific Oceans in the Years 1789 and 1793 with a Preliminary Account of the Rise, Progress and Present State of the Fur Trade of that Country*. London, England: Cadell and Davies.
- MacNeish, R.S. 1951. *An Archaeological Reconnaissance in the Northwest Territories: Annual Report for 1949–1950*. National Museum of Canada Bulletin 123: 24–41. Ottawa, Ontario.
- MacNeish, R.S. 1953. Archaeological reconnaissance in the Mackenzie River drainage. *National Museum of Canada Bulletin* 128: 23–39. Ottawa, Ontario.
- MacNeish, R.S. 1954. The Pointed Mountain site near Fort Liard, Northwest Territories, Canada. *American Antiquity* 19(3): 234–253.
- MacNeish, R.S. 1955. Two archaeological sites on Great Bear Lake, Northwest Territories, Canada: Annual Report for 1953–1954. *National Museum of Canada Bulletin* 136: 54–84. Ottawa, Ontario.
- MacNeish, R.S. 1956a. Archaeological reconnaissance of the delta of the Mackenzie River and Yukon Coast. *National Museum of Canada Bulletin* 142: 46–81. Ottawa, Ontario.

REFERENCES

---

- MacNeish, R.S. 1956b. The Engigstciak site on the Yukon Arctic coast. *Anthropological Papers of the University of Alaska* 4: 91–111.
- MacNeish, R.S. 1959. Men out of Asia: As seen from the northwest Yukon. *Anthropological Papers of the University of Alaska* 7(2): 41–70.
- MacNeish, R.S. 1964. *Investigations in the Southwest Yukon: Archaeological Excavations, Comparisons and Speculations*. Papers of the R.S. Peabody Museum for Archaeology 6(2). Andover, Maryland: Phillips Academy.
- Mason, J. Alden. 1946. Notes on the Indians of the Great Slave Lake area. *Yale University Publications in Anthropology* 34. New Haven, Connecticut.
- McClellan, Catharine and Glenda Denniston. 1981. Environment and culture in the Cordillera. In: June Helm (ed.). *Handbook of North American Indians. Volume 6: Subarctic*. Washington, D.C.: Smithsonian Institution. 372–386.
- McGhee, R. 1970. Excavations at Bloody Falls, Northwest Territories, Canada. *Arctic Anthropology* VI(2): 53–72.
- McGhee, R. 1982. *Fieldwork in the Mackenzie Delta–Beaufort Sea Region*. On file with the Prince of Wales Northern Heritage Centre. Yellowknife, Northwest Territories.
- McNeely, Muriel. 2003. Personal communication. August 11, 2003.
- Mental Health Working Group (Assembly of First Nations, Inuit Tapiriit Kanatami, First Nations and Inuit Health Branch). 2002. *Mental Wellness Framework: A Discussion Document for Comprehensive Culturally Appropriate Mental Health Services in First Nations and Inuit Communities*.
- Millar, J.F.V. 1968. *Archaeology of Fisherman Lake, Western District of Mackenzie, Northwest Territories*. PhD thesis. Department of Archaeology, University of Calgary, Calgary, Alberta.
- Millar, J.F.V. 1974. *Archaeological Supplement to the Biological Report Series: Proposal for Archaeological Salvage, Pipeline Corridor, Yukon and Northwest Territories*. 2<sup>nd</sup> Edition. Prepared for Canadian Arctic Gas Study Limited.
- Millar, J.F.V. 1981. Interaction between the Mackenzie and Yukon basins during the Early Holocene. In: Peter D. Francis, F.J. Kense and P.G. Duke (ed.). *Networks of the Past: Regional Interaction in Archaeology*. Proceedings of the 12th Annual Conference of the Archaeological Association of Calgary. 259–294.

- Millar, J.F.V. and G. Fedirchuk. 1974. *Report on 1973 Program – Archaeological Impact Study: Mackenzie Highway System*. Manuscript No. 1531, on file in the Archives of the Archaeological Survey of Canada, Canadian Museum of Civilization. Hull, Quebec.
- Millar, J.F.V. and G. Fedirchuk. 1975. *Report on Investigations: Mackenzie River Archaeological Survey*. Environmental-Social Committee, Northern Pipelines, Task Force on Northern Oil Development, Report No. 74-47.
- Minister's Forum on Health and Social Services. 2000. *Our Communities, Our Decisions – Let's Get On With It! Final Report*. Yellowknife, Northwest Territories. January 2000.
- Mooney, James. 1928. The Aboriginal population of America north of Mexico. *Smithsonian Miscellaneous Collection* 80(7). Washington, D.C.
- Morrison, D.A. 1984. The late prehistoric period in the Mackenzie Valley. *Arctic* 37(3): 195-209.
- Morrison, D.A. 1987. *The Inuvialuit of the Western Arctic from Ancient Times to 1902*. Inuvialuit Projects Inc. Canadian Museum of Civilization. Available at: [www.inuvialuit.com/cmcc6](http://www.inuvialuit.com/cmcc6). Accessed: November 2002.
- Morrison, D.A. 1988. *The Kugaluk Site and the Nuvorugmiut: The Archaeology and History of a Nineteenth-Century Mackenzie Inuit Society*. Archaeology Survey of Canada Mercury Series 137. Ottawa, Ontario: Canadian Museum of Civilization, Archaeological Survey of Canada.
- Nagy, John. 2002. *Mammals: Natural History of the Western Arctic*. Inuvik, Northwest Territories: Western Arctic Handbook Project.
- National Toxicology Program. 2000. *Ninth Report on Carcinogens*. Public Health Service. U.S. Dept. of Health and Human Services, Research Triangle Park, North Carolina.
- Native Women's Association of the Northwest Territories Personnel. 2003. Northwest Territories. Personal communication.
- NGTL (NOVA Gas Transmission Ltd.). 2004. Unpublished data and various communications.
- Noble, W.C. 1971. Archaeological surveys and sequences in the Central District of Mackenzie, Northwest Territories. *Arctic Anthropology* 8(1): 102–135.
- Noise Pollution Clearinghouse. 2004. Available at: [www.nonoise.org/news/noisenews.htm](http://www.nonoise.org/news/noisenews.htm). Accessed: 2004.

- Nolin, L. 1993. *Report of the 1992 NOGAP Archaeological Field Activities at Fishing Bear Lake (MjTp-3) and Arctic Red River (MiTr-1) in the Lower Mackenzie Valley, District of Mackenzie, Northwest Territories.* Manuscript on file (No. 3572), Document Collection, Library, Canadian Museum of Civilization, Hull, Quebec.
- Nolin, L. and J.-L. Pilon. 1994. Archaeological potential along the lower Mackenzie River, Northwest Territories: Recent data and some considerations. In: Pilon (ed.). *Bridges Across Time: The NOGAP Archaeology Project.* Canadian Archaeological Association, Occasional Paper No. 2: 151–217.
- Northern News. 2002. *The Deh Cho.* Available at: [www.nnsl.com/dehcho/ourhome.html](http://www.nnsl.com/dehcho/ourhome.html). Accessed: December 2002.
- Northern Pipeline Environmental Impact Assessment and Regulatory Chairs' Committee. 2002. *Cooperation Plan for the Environmental Impact Assessment and Regulatory Review of a Northern Gas Pipeline Project Through the Northwest Territories.* Available at: [www.neb-one.gc.ca/NorthOffshore/NorthernGasPipeline/northernngascoopplan\\_e.pdf](http://www.neb-one.gc.ca/NorthOffshore/NorthernGasPipeline/northernngascoopplan_e.pdf). Accessed: June 2004.
- Northwest Territories Arctic Tourism. 2003. *Canada's Northwest Territories Explorers' Guide – Sport Hunting Outfitters.* Available at: [www.nwtravel.nt.ca/html/list7.htm](http://www.nwtravel.nt.ca/html/list7.htm). Accessed: November 29, 2002.
- Northwest Territories Power Corporation. 2002. Available at: [www.ntpc.com](http://www.ntpc.com). Accessed: 2002.
- Northwestel Personnel. 2001. Personal communication.
- Notzke, C. 1995. *Aboriginal Tourism Development in the Western Arctic.* University of Lethbridge. Unpublished report. Lethbridge, Alberta.
- O'Donnell, Rose. 2004. Personal communication. April 2004.
- Osgood, Cornelius. 1932. The Ethnography of the Great Bear Lake Indians. In: *Annual Report for 1931, National Museum of Canada Bulletin 70.* Ottawa, Ontario. 1936.
- Osgood, Cornelius. 1936. *The Distribution of the Northern Athapaskan Indians.* Yale University Publications in Anthropology 14. New Haven, Connecticut.
- Park, R.W. 1999. *The Arctic Small Tool Tradition.* Available at: [www.arts.uwaterloo.ca/ANorthwestTerritoriesHRO/rwpark/ArcticArchStuff/ASTt.html](http://www.arts.uwaterloo.ca/ANorthwestTerritoriesHRO/rwpark/ArcticArchStuff/ASTt.html). Accessed: January 2003.

- Petitot, Emile. 1876. Sur les populations indigenes de l'Athabaskaw-Mackenzie. *Bulletins de la Societe d'Anthropologie de Paris* 9(6): 831–836. Paris, France.
- Pilon, Jean-Luc. 1992. *Report of the 1991 NOGAP Archaeological Field Activities in the Southwest Anderson Plain and in the Mackenzie Valley, District of Mackenzie, Northwest Territories*. Manuscript on file (No. 3438), Document Collection, Library, Canadian Museum of Civilization, Hull, Quebec.
- Pilon, Jean-Luc. 1994. *Report of the 1993 Archaeological Field Activities in the Southwest Anderson Plain and in the Mackenzie Valley, District of Mackenzie, Northwest Territories*. Manuscript on file (No. 3695), Document Collection, Library, Canadian Museum of Civilization, Hull, Quebec.
- PWNHC (Prince of Wales Northern Heritage Centre). 2002. Available at: [www.pwnhc.learnnet.nt.ca/policy/herserve.htm](http://www.pwnhc.learnnet.nt.ca/policy/herserve.htm). Accessed: various dates, 2003.
- RCMP (Royal Canadian Mounted Police). 2004. Unpublished letter to the City of Yellowknife dated February 25, 2004.
- RCMP, G Division. 2002. Yellowknife, Northwest Territories. Unpublished data.
- RCMP Local Detachments. 2002, 2003. Unpublished data and various personal communications.
- Ronaghan, B.M. 1999. *Heritage Resources Impact Assessment. Ranger Oil P66A Pipeline*. N.W.T. Research Permit 98-874. On file at the PWNHC, Yellowknife, Northwest Territories.
- Ronaghan, B.M. 2000a. *Heritage Resources Impact Assessment. Department of Transportation Mackenzie Valley Winter Road Upgrade Program*. N.W.T. Research Permit 99-892. On file at the PWNHC, Yellowknife, Northwest Territories.
- Ronaghan, B.M. 2000b. *Heritage Resources Impact Assessment. Paramount Resources Limited Fort Liard Drilling Project and Northwest Territories Portion of the Shiha Pipeline Project*. N.W.T. Research Permit 99-890. On file at the PWNHC, Yellowknife, Northwest Territories.
- Ross, Monique. 2001. The Dene Tha' consultation pilot project: An appropriate consultation process with First Nations' resources. *The Newsletter of the Canadian Institute of Resources Law* 76: Fall 2001.

- Rowe, John. 1972. *Forest Regions of Canada*. Revised edition. Canadian Forestry Service Publication 1300. Ottawa, Ontario.
- Royal Commission on Aboriginal Peoples. 1996. *Restructuring the Relationship*. Volume 2, Part 2. Ottawa, Ontario: Canadian Communication Book Publishing.
- Sahtu Heritage Places and Sites Joint Working Group. 2000. *Rakéké Gok'é Godi: Places We Take Care Of*.
- Sahtu Land Use Planning Board. no date (later than 1999). *Sahtu Land Use Plan – Preliminary Draft*. Fort Good Hope, Northwest Territories.
- Sahtu Renewable Resources Board. 2002. *Sahtu Settlement Harvest Study Data Report 1998 and 1999*.
- Sahtu Renewable Resources Board. 2003. *Sahtu Settlement Harvest Study Data Report 2000 and 2002*.
- Savishinsky, Joel and Hiroko Sue Hara. 1981. Hare. In: J. Helm (ed.). *Handbook of North American Indians, Volume 6: Subarctic*. Washington, D.C.: Smithsonian Institution.
- Schledermann, P. and G. Fedirchuk. 1983. *Historical Resources Overview: Polar Gas Project Proposed Phase I, Mackenzie Delta to Edson Pipeline*. Report prepared for the Polar Gas Project.
- Schledermann, P. and J.W. Helmer. 1980. *Historical Resources Overview: Polar Gas Combined Pipeline System*. Report Prepared for the Polar Gas Project. Arctic Institute of North America.
- Shell Canada Limited. 2004a. Capital Expenditures, Niglintgak Anchor Field Barge Option. Unpublished data. Received May 14, 2004 from Murray Slezak.
- Shell Canada Limited. 2004b. Peak Construction Labour Force Requirements, Niglintgak Anchor Field. Unpublished data. May 14, 2004.
- Simpson, E. 2002. *Aboriginal Claims – Northwest Territories: Sahtu and Métis Claims*. Available at: [www.ualberta.ca/~esimpson/claims/sahtudene.htm](http://www.ualberta.ca/~esimpson/claims/sahtudene.htm). Accessed: October 2002.
- Slobodin, Richard. 1981a. Kutchin. In: June Helm (ed.). *Handbook of North American Indians, Volume 6: Subarctic*. Washington, D.C.: Smithsonian Institution. 514–532.

- Slobodin, Richard. 1981b. Subarctic Métis. In: June Helm (ed.). *Handbook of North American Indians, Volume 6: Subarctic*. Washington, D.C.: Smithsonian Institution. 514–532.
- Smith, D.G. 1981. Mackenzie Delta Eskimo. In: W.C. Stutevant (ed.). *Handbook of North American Indians, Volume 5: Arctic*. Washington, DC: Smithsonian Institution.
- Smith, D.G. 1994. Glacial Lake McConnell: Paleogeography, age, duration and associated river deltas, Mackenzie River basin, western Canada. *Quaternary Science Reviews* 13: 829-843.
- Stager, John K. 1962. Fur trading posts in the Mackenzie region up to 1850. *Occasional Paper in Geography* 3: 37-46. Canadian Association of Geographers, B.C. Division, Vancouver, British Columbia.
- Statistics Canada. 2001. *Census of Canada*. Unpublished raw 2000 and 2001 data.
- Statistics Canada. 2002. *Youth in Transition Survey, 2000*. Available at: [www.statcan.ca/Daily/English/020123/do20123a.htm](http://www.statcan.ca/Daily/English/020123/do20123a.htm). Accessed: 2003.
- Statistics Canada. 2003. *Canadian Community Health Survey: A First Look*. Available at: [www.statcan.ca/Daily/English/020508/d020508a.htm](http://www.statcan.ca/Daily/English/020508/d020508a.htm). Accessed: 2003.
- Statistics Canada. 2004. *Education Attainment Data*. Available at: [www.statcan.ca](http://www.statcan.ca). Accessed: 2004.
- Status of Women Council of the Northwest Territories Personnel. 2003. Northwest Territories. Personal communication.
- Stefansson, Vilhjalmur. 1919. The Stadansson-Anderson Arctic expedition of the American Museum: Preliminary ethnological report. *Anthropological Papers of the American Museum of Natural History* (14)1. New York, New York.
- Sue, Hiroko. 1964. *Hare Indians and Their World*. PhD thesis in Anthropology, Bryn Mawr College, Bryn Mawr, Pennsylvania.
- Talbott, E. and S.J.Thompson. 1995. Health effects from environmental noise exposure. In: *Introduction to Environmental Epidemiology*. Lewis Publishers, New York, New York. 209–219.
- Thomson, C. and E. Stoddart. 2001. *Preliminary Historical Resource Inventory and Assessment for the Proposed Mackenzie Valley Pipeline Route, Northwest Territories*. N.W.T. Permit 2001-914. Prepared for Alaska Gas Producers Pipeline Team Feasibility Study.

REFERENCES

---

- Town of Norman Wells. 2003. *Breaking Down the Barriers: A Proposal for Community Partnership and Action*. Submitted June 13, 2003.
- Travis Food Services. 2004. Unpublished data on camp staff requirements.
- U.S. Bureau of Land Management. 1998. *Northeast National Petroleum Reserve – Alaska Final Integrated Activity Plan / Environmental Impact Statement*. Available at: [www.ndo.ak.blm.gov/npra/final/html/4d15.html](http://www.ndo.ak.blm.gov/npra/final/html/4d15.html). Accessed: various dates, 2003.
- U.S. Bureau of Land Management. 2002. *Trans-Alaska Pipeline System Renewal Environmental Impact Statement*. Available at: [www.tapseis.anl.gov/documents/docs/feis/Volume3/Section4.3.pdf](http://www.tapseis.anl.gov/documents/docs/feis/Volume3/Section4.3.pdf). Accessed: Various dates 2003.
- U.S. EPA (United States Environmental Protection Agency). 2000. *Health Assessment Document for Diesel Exhaust*. Science Advisory Board. National Center for Environmental Assessment and Office of Research and Development, Washington, D.C. July 25, 2000. EPA/600/8-90/057E.
- Usher, Peter. 1971. *Fur Trade Posts of the Northwest Territories, 1870–1970*. Ottawa, Ontario: Northern Science Research Group, Dept. of Indian Affairs and Northern Development.
- Usher, Peter. 1976. Evaluating country food in the northern native economy. *Arctic* 29(2): 104–120.
- Wildlife Management Advisory Council (N.W.T.) and Fisheries Joint Management Committee. 1988. *Inuvialuit Renewable Resource Conservation and Management Plan*. Yellowknife, Northwest Territories.
- Wood, W. 1978. An archaeological appraisal of Bistcho Lake, far northwestern Alberta. In: W.J. Byrne (ed.). *Archaeology in Alberta 1977*. Archaeological Survey of Alberta Occasional Paper No. 5, Alberta Culture, Edmonton.
- Yellowknife Catholic School Official. 2004. Yellowknife, Northwest Territories. Personal communication.
- Yellowknife Mental Health Counsellors. 2002. Yellowknife, Northwest Territories. Personal communication.
- Yellowknife YWCA (Young Women’s Christian Association). 2004. Yellowknife, Northwest Territories. Unpublished data.