

Big Grassy River First Nation Knowledge and Use Study Report

for

New Gold Inc.

Rainy River Gold Project

March 4, 2014

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Cooperative with the Big Grassy River First Nation

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Thanks and acknowledgements go to the Big Grassy River First Nation elders, knowledge holders, land users, staff, and leadership who contributed. This report could not have been completed without their support and expert knowledge.



Executive Summary

The Firelight Group Research Cooperative has been retained by Big Grassy River First Nation (BGRFN) to conduct a traditional knowledge and use study (the study) in relation to the proposed New Gold Inc. Rainy River Gold Project (the project).

This report provides non-confidential baseline information and assessment of anticipated project interactions based on current and available BGRFN knowledge and use data collected within the traditional lands of BGRFN and the vicinity of the proposed project. It includes analysis of knowledge and use mapping interviews conducted with 33 BGRFN members during two fieldwork periods between December 11-12, 2013, and January 13-17, 2014.

Analysis of site-specific data was based on the proposed project footprint (within 250 meters of the proposed project), a local study area (LSA) within 5 kilometers of the proposed project footprint, and a regional study area (RSA) within 25 kilometers of the proposed project footprint. Within the proposed project footprint, BGRFN members reported 31 site-specific use values. Within the LSA, not including the footprint, BGRFN members reported an additional 23 site-specific use values. BGRFN members reported 484 site-specific values within the RSA, for a total of 538 site-specific values in the footprint, LSA, and RSA. While not every site-specific value recorded includes time information, reported personal use values in the RSA date from the 1940s to today (2014).

Site-specific (mapped) values reported in the proposed Project footprint, LSA, and RSA include cultural and spiritual sites, environmental values, habitation values, subsistence harvesting values, and transportation values.

There is a large concentration of values in the northwestern region of the RSA, especially around the Big Grassy River and the roads along the northwestern portion of the RSA. The proposed Project footprint area is also noted as a spiritual site for multiple BGRFN members. The proposed Project footprint and LSA are reported to be areas used for collecting medicinal plants, picking berries, and hunting deer and other small game. These sites were of noted importance, especially due to the increase of private lands in the area which limits BGRGN members' ability to exercise their treaty rights and their traditional mode of life in portions of the proposed Project's LSA and RSA.

BGRFN members also identified a number of non-site-specific values relating to BGRFN knowledge and use that would be impacted by the proposed project. During data analysis and discussions with BGRFN participants, these were grouped into five non-site-specific Valued Components (VCs):

- Ungulates and other wildlife
- Fish and water
- Berries, wild rice, and other plants
- Spiritual sites and medicines

- Cultural continuity, access, and continued use of lands and waters

This report provides assessment of project effects on site-specific values and non-site-specific VCs. Based on analysis of interviews with BGRFN participants, a number of project interactions or impact pathways have been identified. These interactions are likely to result in adverse effects on BGRFN meaningful practice of Treaty rights.

BGRFN participants identified the following concerns with the proposed project:

- Habitat destruction and fragmentation
- Movement of animals further away from preferred harvesting areas
- Disturbance of important areas for harvesting medicines and other plants
- Potential changes to water quality, in the proposed Project footprint, LSA, RSA, and beyond to Lake of the Woods
- Lack of access to or disruption of important places and spiritual sites

The data collected, considered alongside the physical works and activities required by the Rainy River Gold Mine, indicates that project effects would further constrain BGRFN treaty rights practices in the RSA for multiple generations. The proposed project is likely to impact the intergenerational transmission of cultural knowledge, and the ability of BGRFN members to meaningfully practice a way of life consistent with rights under Treaty No. 3, within the LSA, including areas adjacent to and within the project footprint.

This report may be updated or revised by BGRFN as additional work is completed and new information arises. This report may contribute to, but is not a replacement for, other studies that may be required to support consultation, such as studies or assessments based on socio-economic and cultural impacts, diet and harvesting rates, community health and wellbeing, indigenous or treaty rights, governance, planning and policy, or cumulative effects.

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Acronyms and Abbreviations

BGRFN	Big Grassy River First Nation
CEAA	Canadian Environmental Assessment Agency
CV	Curriculum Vitae
EA	environmental assessment
EAO	Environmental Assessment Office
Firelight Group or Firelight	The Firelight Group Research Cooperative
GIS	geographic information system
Km	kilometer(s)
KML	Keyhole Markup Language
LSA	local study area
M	Meter
n.d.	no date
ON	Ontario
ROW(s)	right-of-way(s)
RSA	regional study area
the Project	The Rainy River Gold Project
the Proponent	Rainy River Resources Ltd., an entity wholly owned by New Gold Inc.
the study	BGRFN Knowledge and Use Study
tpd	Tonnes per day
TUS	traditional use study or studies
VC(s)	valued component(s)
ZOI	zone of influence

Introduction

1.1 Overview

The Firelight Group Research Cooperative (Firelight) is pleased to provide this traditional knowledge and use report to the Big Grassy River First Nation (BGRFN).

This report provides baseline information and consideration of anticipated project interactions based on current and available BGRFN knowledge and use data collected within the traditional lands of the BGRFN and the vicinity of the proposed Rainy River Gold Project (the Project). This report includes non-confidential site-specific (i.e., mapped) and non-site-specific information related to the proposed Project area, and maps of BGRFN site-specific values.

The report is organized into four sections:

- [Q](#) provides a brief overview of the scope of work, baseline data collection, and report limitations.
- Section 2 provides background information regarding BGRFN and the proposed Project.
- Section 3 presents the initial findings, including site-specific and non-site specific baseline data, and potential impacts of the proposed project.
- Section 4 summarizes the findings and conclusions.

1.2 Scope of Work

BGRFN retained Firelight to work with BGRFN to conduct a knowledge and use study (the study) in relation to the Rainy River Gold Project proposed by New Gold Inc. (the project).

Firelight was retained by BGRFN to:

- Identify key issues, locations of interest, and key knowledge holders for participation in interviews;
- Conduct up to 30 knowledge and use mapping interviews on the proposed Project, with elders and land users in Big Grassy River First Nation, and have the interviews transcribed; and
- Analyze the data, prepare the report, and present the findings to BGRFN, to support meaningful dialogue between BGRFN and New Gold Inc. on potential project impacts and required mitigation and accommodation.

1.3 Report Limitations

Limitations of this report include:

- Some knowledge-holders were not able to attend the various data-gathering sessions. Availability of knowledge holders was one of the most important limitations on the study. This report is based on a set of interviews involving a small sample of 33 BGRFN members out of a registered population of 757 members (4% of the total population). As such, the information provided in this report may only represent a small portion of total BGRFN use, occupancy, and knowledge in the proposed project area.
- Given the intensity and broad spatial extent of use of the area reported by BGRFN participants, it was impossible to fully document use, occupancy, and knowledge from those interviewed. Interviews lasted approximately one to three hours and data collected for each land user are limited to what the participant was able and willing to report in that time.
- Site-specific (mapped) values, such as cabins or kill sites, reflect specific instances of use that anchor the wider practice of livelihood within a particular landscape. Therefore, the area covered by recorded site-specific use values should be understood as only a portion of the area actually required for the meaningful practice of BGRFN way of life and treaty rights.

Given these limitations, it is especially important to note that **absence of data does not suggest absence of use or value.**

This report is based on the understandings of the author, and is not intended as a complete depiction of the dynamic way of life and of the living system of use and knowledge maintained by BGRFN elders and members.

Nothing in this report should be construed as to waive, reduce, or otherwise constrain BGRFN rights within, or outside of, regulatory processes. Nor should this report be construed as to define, limit, or otherwise constrain the Aboriginal or treaty use or rights of other First Nations or Aboriginal peoples. It should not be relied upon to inform other projects or initiatives without written consent of the BGRFN.

Section 2 Data Collection and Analysis

2.1 Community Meeting

A community-scoping meeting was conducted in Big Grassy River First Nation on Tuesday, December 10th, 2013 with BGRFN membership, and was facilitated by the Firelight Group. During the meeting participants identified key issues and concerns, and key participants who should be interviewed for the study. Methods and timelines were also discussed, and adjusted accordingly for the interview process.

2.2 Interview and mapping process

Data for this study was collected during mapping interviews with BGRFN members, which took place between December 10–12th, 2013 and January 13-17th 2014. 33 BGRFN members were interviewed, with 32 separate interviews conducted, as some members were interviewed together (with a maximum of two participants per interview).

Participants were identified during the community meeting, as discussed above, and also by BGRFN staff and leadership, as well as through a snowball effect by other participants during interviews. Participant identification codes (in the form B##) were allocated chronologically for each new participant.

The interviews took place at the BGRFN Health Centre and the BGRFN school on the BGRFN reserve.

Interview and mapping protocols were based on standard techniques (Tobias 2010, DeRoy 2012). All mapping interviews included documentation of prior informed consent (see the form in Appendix One), and followed a semi-structured format, guided by the interview guide in Appendix Two. All interviews were conducted in English. All mapping interviews were recorded using a digital audio recorder.

2.2.1 Site-Specific (mapped) data collection and analysis

For the purpose of this report, *site-specific* values are BGRFN values that are reported as specific and spatially distinct, and that may be and were mapped (though exact locations may be considered confidential).

Site-specific data were mapped and managed using a direct-to-digital process, which involved projecting Google Earth imagery on a wall or screen. Data were mapped using points, lines, or polygons geo-referenced at a scale of 1:50,000 or finer. Data collection focused on the

proposed project's footprint (within 250 m of the project and related physical works and activities),¹ local study area (LSA; within 5 km of the proposed project footprint),² and the regional study area (RSA; within 25 km of the proposed project footprint).³ See Figure 1 for a map of the proposed project and study areas.

The maps for this report were generated from the data mapped during the interviews. Points were randomized, and a 1 km buffer was generated around each point, line, and polygon in order to account for margin of error and to protect confidential information.

Site-specific values collected and mapped in this study were organized using five classes of site-specific Valued Components (VCs):⁴

- subsistence values (including harvesting and kill sites, plant collection areas, and trapping areas)
- habitation values (including temporary or occasional, and permanent or seasonal, camps and cabins)
- cultural/spiritual values (including burials, village sites, ceremonial areas, medicinal plants, and trapping and teaching areas)
- transportation values (including trails, water routes, and navigation sites)
- environmental feature values (including specific highly valued habitat for moose, elk, and deer)

The temporal boundaries for all data collection and analysis included current and past BGRFN knowledge and use. For the purpose of this study:

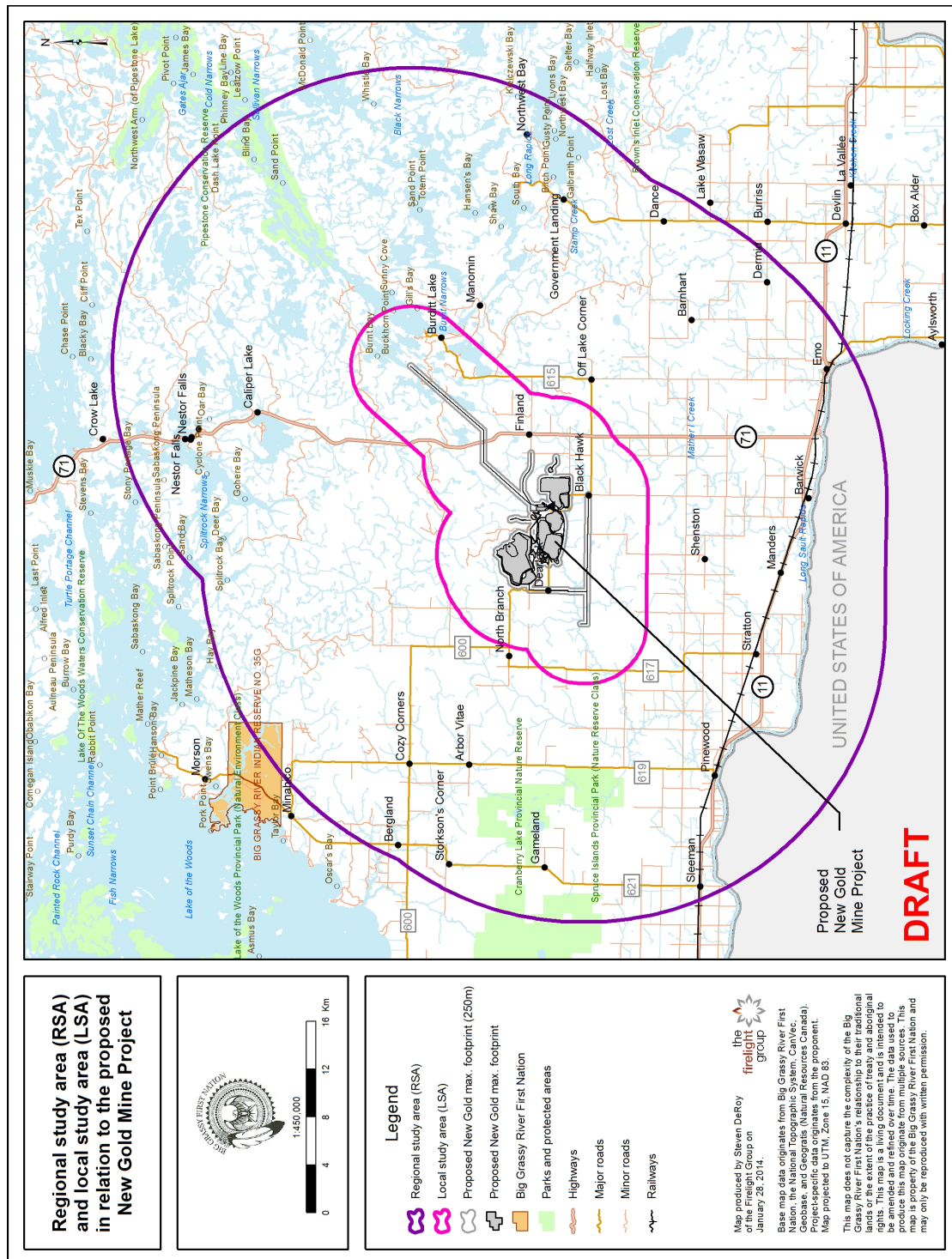
- a past value refers to an account of knowledge and use prior to living memory

¹ For designating the project footprint, a 250m Zone of Influence (ZOI) around the industrial footprint is used to document impacts on site-specific VCs, based on evidence that this distance is a reasonable approximation for a zone within which the abundance of wildlife and land use by humans may be altered (MSES 2010).

² Five kilometers is an approximation of the distance easily travelled in a day trip from a point of origin (e.g., a cabin, camp, or other location) by foot through bush and back to the point of origin, as when hunting (Candler et al. 2010). It is used as a reasonable approximation of the area of regularly relied-upon resource use surrounding a given transportation or habitation value.

³ The RSA is a broader area within which direct or indirect effects of the proposed project may be anticipated, such as noise, dust, odors, access management activities, traffic, effects on water, and other forms of disturbance experienced. Along with cumulative effects, these project effects may be expected to interact with BGRFN values.

⁴ A VC is defined as an important aspect of the environment that a project has the potential to affect (Hegmann et al. 1999). VCs may include tangible or biophysical resources (e.g., particular places or species), as well as less tangible social-, economic-, cultural-, health-, and knowledge-based VCs (e.g., place names, indigenous language, or traditional knowledge regarding a particular area).



- a current value refers to an account of knowledge and use within living memory

Figure 1: Regional study area (RSA) and local study area (LSA) in relation to the proposed New Gold Mine Project

2.2.2 Non-site-specific (unmapped) data collection and analysis

For the purpose of this report, *non-site-specific values* are those that may be specific to a resource or concern, but are spatially indistinct or otherwise difficult to map. Non-site-specific values often represent the critical conditions or elements that must be present for the continued practice of treaty and Aboriginal rights, such as hunting, fishing, and gathering culturally important plants (e.g., berries, medicines). As such, non-site-specific values range from the direct presence of traditionally hunted animals and gathered plants on the land to continued access to traditional hunting areas and non-contaminated sources of plants. Non-site-specific values also include intangible cultural resources, such as the transmission of knowledge across generations and the continued use of traditional place names.

Non-site-specific (unmapped) data were collected during discussions in the interviews. Interviews were then transcribed, coded and analyzed for issues of importance to BGRFN members in relation to the proposed project. The VCs were initially identified at the community meeting, and then further refined through the process of data collection and analysis to form the non-site specific valued components for the study. Quotes used in this report were also taken from the interview transcripts during this process.

Non-site-specific VCs for the study are:

- Ungulates and other wildlife
- Water and fish
- Berries, wild rice, and other plants
- Spiritual sites and medicines
- Cultural continuity, access, and continued use of lands and waters

2.2.3 Project interactions collection and analysis

Potential project interactions (how the proposed project is anticipated to interact with and affect site-specific and non-site-specific VCs) were also determined through analysis of the community meeting and interview transcripts, as described above.

Section 2 Background

2.1 Big Grassy River First Nation

Mishkosiminiziibiing, also known as Big Grassy River, is an Ojibway First Nation community. BGRFN is located in northwestern Ontario, on the southeast shores of Lake of the Woods. They are members of the tribal council, Anishinabeg of Kabapikotawangag Resource Council. The registered population of BGRFN is currently 757 members. There are 241 members residing on the BGRFN Indian Reserve (I.R. No. 35G) and some members are either located on other reserves or off reserve areas (AANDC 2014). The reserve is 50 km North of the Canada/U.S.A. border and 450 km west of Thunder Bay.

2.1.1 BGRFN and Treaty 3

BGRFN is a signatory to Treaty 3 in 1873 and legal band status was achieved by BGRFN in 1964 (Woodland Heritage Services 2012). Historically, the Anishnaabe have shown their collective decision-making at all levels ranging from the local band through to the Grand Council. The Grand Council of Anishinabeg Chiefs governed the territory that was included in Treaty #3 during the 18th and 19th century. Unique to other governance structures in northern Ontario where the band leaders assumed many roles, leadership for Anishinaabe of Lake of the Woods and Rainy Lake were divided into different types of leaders and ranks (i.e. Grand Chief, civil chiefs, war chiefs).

After Treaty #3 in 1873, Canada affirmed its governance and influence over the Anishinaabe's social, religious and political life. The changes that followed included the enforcement of the Indian Act regime, the prohibition of Grand Councils, the appropriation of reserve land for non-Indian settlement or use, and outbreaks of various diseases and sickness. According to Holzkamm (2001) these impacts were attributed partially to the damage of resources (sturgeon, rice) and provinces control over natural resources. (Holzkamm et al. 2001)

2.1.2 BGRFN Land Use

Extensive land and water use by BGRFN members has been documented through various ethnographies, research papers, and government reports (Indian Affairs 1896 and 1891). These uses include: fishing, hunting, trapping, berry picking, wild rice harvesting, ceremonial sites, cultural sites, ceremony plants, and travel corridors. The following sections describe the historical nature of three major activities: fishing, agriculture, and wild rice harvesting. These activities provide insight into the impacts of commercial activities, repercussions of BGRFN signing Treaty #3 and the amendments to the Indian Act, and the deep-rooted significance of wild rice harvesting.

2.1.2.1 Fishing

Historically, indigenous peoples living in the north-central interior of Canada were overlooked for their fishing capacities. Rather, fishing was an activity related to the subsistence of marine coastal First Nation communities. Those living in areas near the Canadian Shield and in adjacent areas were viewed as big-game hunters. Because of this, past studies have failed to acknowledge the important role of large-scale fisheries and resources found in rivers and lakes for north-central First Nations. A valuable resource to Ojibway subsistence, commerce, society, and religion up until the end of the 19th century was sturgeon fishing, regardless of the number of game hunted. Areas west of Lake Superior watershed to Lake Winnipeg were abundant with sturgeon during the fur trade period. Although there are few historical records, sturgeon products were an important trade item within native exchange networks, as well as between the Ojibway and Euro-Canadian fur traders. From 1880 onward, American and Canadian commercial fishermen began to exploit Lake of the Woods. Since the early 1900s the sturgeon populations have plummeted due to overfishing and have not recovered. (Holzkamm, Lytwyn, and Waisberg 1988)

Records of the pulp and paper mill at Fort Frances were noted in Holzkamm, Lytwyn, and Waisberg (1988). The pollution from the mill further exacerbated the degradation of the sturgeon spawning grounds along the Rainy River. As a result, the Treaty 3 Ojibway have been deeply impacted from the dramatic decline of the regional sturgeon populations. Presently, however, fishing is still an important activity for BGRFN.

2.1.2.2 Wild Rice Harvesting

The Anishinaabe people of Treaty #3 have had an ancient relationship with wild rice (manomin), which can be traced back to 3000 years B.P.. Wild Rice is neither 'wild' nor 'rice', rather it's a member of the grass family that requires annual reseeding. The ancient term for wild rice, according to Elder Alex Skead of Wauzhushk Onigum, is *Manito gitigaan*, which means the Great Spirit's Garden. Hence, there are ceremonies and understandings by the Anishinaabe people to continue to be stewards and caretakers of the gifts from the Creator and ensure the continuing growth of manomin. (Avery-Kinew 1995)

2.1.2.3 Agriculture

As the population increased in the 19th century, agriculture grew to be an integral part of the regional Ojibway economy. One of the primary incentives of signing Treaty 3 was to further develop their agriculture sector, which involved assurances of federal farming assistance. The microclimates around the Lake of the Woods region were favorable spots for gardens. However, following the 1881 amendments to the Indian Act to prohibit unregulated commercial sales of Indian produce, many Ojibway stopped farming. Therefore, after the

1900s, people on Lake of the Woods continued subsistence gardening alongside hunting, fishing, trapping and wage labor activities.

Consequentially, as farming activities declined, there were more justifications to appropriate Ojibway reserve lands for regional interest groups (loggers, settlers, provincial government officials). By 1915, over 43,000 acres of reserve lands, the most suitable farming lands in Treaty 3, were released for Euro-Canadian Settlement purposes. (Holzkamm and Waisberg 1993)

2.2 Proposed Project⁵

Rainy River Resources (RRR) is proposing to construct, operate and eventually reclaim both an open pit and an underground gold mine at the Rainy River Property (RRP). Recently, New Gold Inc. (New Gold) completed its acquisition of Rainy River Resources and the Rainy River Project; however, Rainy River Resources will remain the proponent of the Project.

The Rainy River Project is located in the Township of Chapple, a district of Rainy River in northwest Ontario. More specifically, the Rainy River Project is located approximately 65 kilometers northwest of Fort Frances, Ontario and 420 kilometers west of Thunder Bay, Ontario. Figure 1 shows the proposed Project area.

The proposed Project components are expected to include:

- an open pit and under ground gold mine;
 - The open pit mine will have an approximate surface area of 170 hectares and will be 400 meters deep. Mining is proposed to occur at a rate of up to approximately 21,000 tonnes per day (tpd) of ore production over life of mine.
 - The underground mine will have an approximate depth of 800 meters below surface. Underground mining is proposed to occur at a rate of up to approximately 1,500 tpd.
- An ore process plant;
- Explosives manufacturing and storage facilities;
- Stockpiles to store overburden mine rock, run of mine ore and low grade ore;
- Tailings management area;
- Other buildings, facilities and areas;
- On-site access roads;
- Aggregate extraction;

⁵ The following information is taken from the New Gold Rainy River Project Final Environmental Assessment Report (Environmental Impact Statement) Version 2. Volume 1 (Summary). January 2014.

- Water management facilities and drainage works, including ponds, watercourse diversions and a constructed wetland;
- Domestic and industrial waste handling;
- Re-alignment of a section of highway 600; and
- 230 kV transmission line.

The life span of the mine is anticipated at 15 years, operating from 2016-2031. Throughout the operational life of the mine, the mine is estimated to earn gross revenues of \$5.6 billion dollars.

The Rainy River Project will have a total employment of 1,917 jobs in Ontario per year during the operation phase of the mine (CITE).

The project is wholly located within the traditional lands of BGRFN.

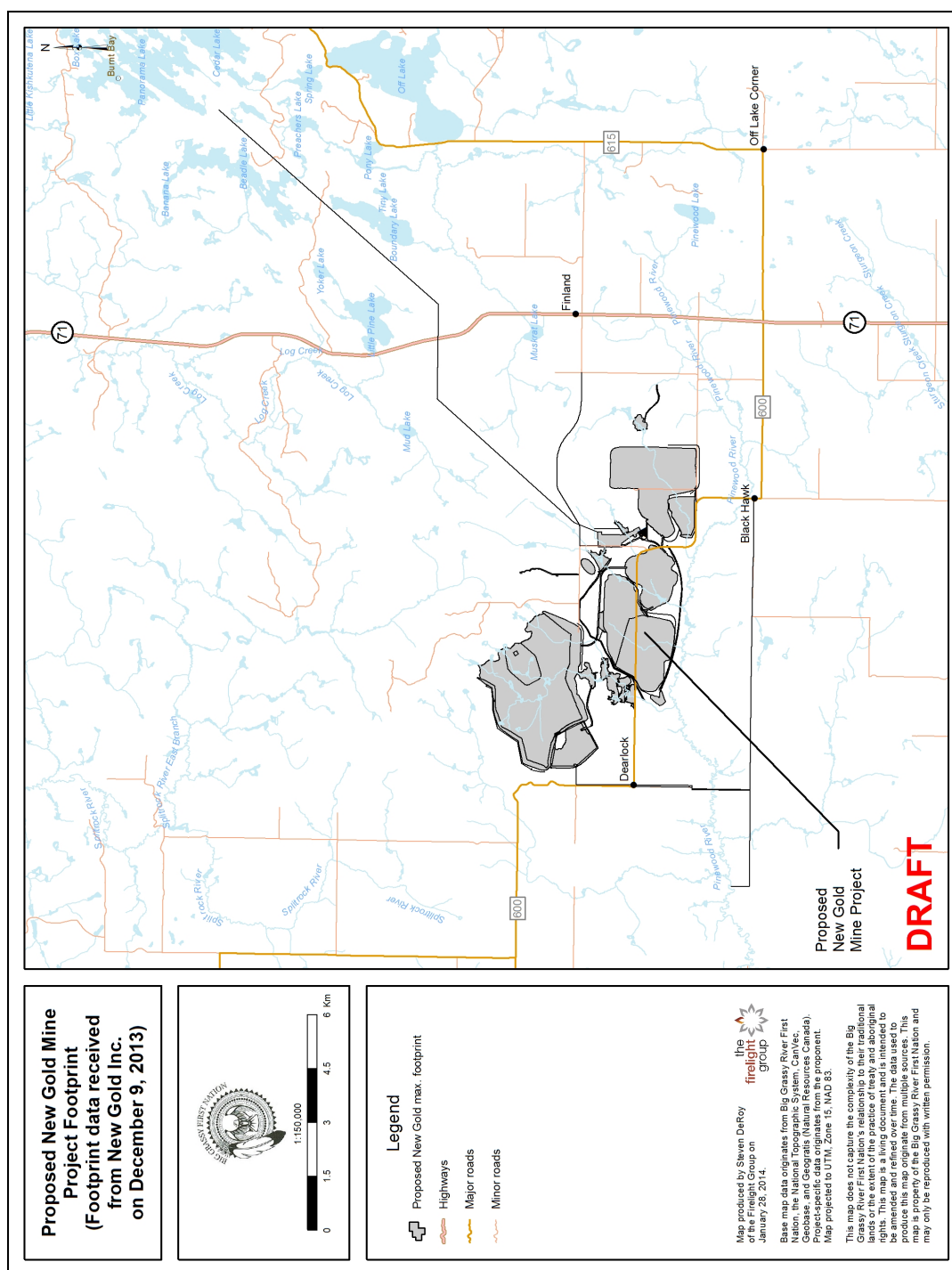


Figure 2: Proposed New Gold Mine Project

Section 3 Baseline and Project Interactions

The following section is divided into two classes of values: site-specific (values mapped during interviews) and non-site specific (values expressed during the community meeting and interviews that were not tied to a point on the map).

This section also discusses the ways in which these project interactions will impact site-specific and non-site-specific values.

It is important to note that, like many social and ecological values, First Nations traditional use and associated values exist within an interdependent environmental, cultural, economic, and social context that is rooted in the past and extends into the future. BGRFN knowledge and use involve complex and dynamic cultural and ecological systems. It is important to understand that what may appear to be minor changes in a single component may have larger and unexpected consequences for the whole. While change is a part of this context, it is also important to recognize that processes of change are neither inevitable nor necessarily easily adapted to by First Nations. Treaty #3 was signed in part to provide certainty to signatory First Nations that their ability to practice their traditional mode of life on the land in a meaningful way would not be irrevocably lost.

3.1 Site-Specific Values Baseline

The site-specific data clearly shows that the project footprint is intensely used by BGRFN members, particularly along Highway 600. This is reported as a very important travel route, which extends through the project footprint, LSA and RSA. This route is used to access Nestor Falls, a fishing area for BGRFN members. They also reported hunting for animals (such as moose, white-tailed deer, grouse and partridge) and collecting medicines, berries and water along this route in the project footprint. Spiritual sites are also recorded along this road in the project footprint. In the LSA, BGRFN members report hunting for deer and partridge along a network of roads. A minnow license was also reported in the southwestern section of the LSA.

3.1.1 Number of Participants Reporting Site-Specific Values

Within the proposed project footprint, 30% of BGRFN members interviewed for this study reported site-specific use values, dating from the 1970's to present (2014).

Within the proposed project LSA (not including the project footprint), 15% of BGRFN members interviewed for this study reported site-specific use values, dating from the 1960's to present (2013).

Within the proposed project RSA (not including the project footprint and LSA), 88% of BGRFN members interviewed for this study reported site-specific use values, dating from the 1940's to present (2014).

For the project footprint, LSA and RSA combined, 88% of BGRFN members interviewed reported site-specific use values.

Table 1 provides a summary of the number of participants who reported use in the project footprint, LSA and RSA.

Table 1: BGRFN Members reporting use in the New Gold Inc. Rainy River Gold Project area

Within 250m of the Proposed New Gold Mine Project (Footprint)		Within 5km of the Proposed New Gold Mine Project (LSA)		Within 25km of the Proposed New Gold Mine Project (RSA)		Total across Project footprint, LSA, and RSA	
# of respondents	% of total interviewed	# of respondents	% of total interviewed	# of respondents	% of total interviewed	# of respondents	% of total interviewed
10	30%	5	15%	29	88%	29	88%

3.1.2 Site Specific Values

A total of 538 site-specific values were reported in the study for the Rainy River Gold project (including the project footprint, LSA and RSA). Table 2 provides a summary of the reported site-specific values categorized by activity class for each of the project footprint, LSA and RSA.

Table 2: BGRFN Site Specific values within the Rainy River Gold Project area

Activity Class	Within 250m of the Proposed New Gold Mine Project (Footprint)		Within 5km of the Proposed New Gold Mine Project (LSA)		Within 25km of the Proposed New Gold Mine Project (RSA)		Total across project footprint, LSA and RSA	
	# of values	% of reported values	# of values	% of reported values	# of values	% of reported values	# of values	% of reported values
Cultural/Spiritual	8	26%	10	43%	46	10%	64	12%
Environmental	2	6%	0	0%	17	4%	19	4%
Habitation	0	0%	0	0%	12	2%	12	2%
Subsistence	19	61%	13	57%	380	79%	412	77%
Transportation	2	6%	0	0%	29	6%	31	6%
TOTAL:	31	100%	23	100%	484	100%	538	100%

3.1.3 Project Footprint

Within the proposed project footprint, 10 different BGRFN members reported 31 site-specific use values. While not every site-specific value recorded includes time information, reported use was documented from the 1970s to the present (2014).

BGRFN participants reported the following site-specific values in the proposed project footprint:

- **Subsistence harvesting values:** reported values include: large game kill locations for moose and deer; small game kill locations for grouse and partridge; berry picking sites for blueberries and cranberries; a lease fishing site for minnows; and a fresh water drinking source.
- **Cultural/spiritual values:** reported values include: a burial ground; medicinal plant picking sites for cedar, sweet grass and fungus; and spiritual sites.
- **Transportation values:** reported values include: transportation routes used by members for hunting and access to lands.
- **Environmental values:** reported values include: areas known for medicinal plant growth and pheasant habitat.

3.1.4 Local Study Area (LSA)

Within the proposed project LSA (not including the project footprint), five different BGRFN members reported a total of 23 site-specific use values. Not every site-specific value recorded includes time information. However, reported personal use and reported knowledge of use by other BGRFN members including ancestors gives use values in the LSA from the late 1960s to present (2013).

In addition to the site-specific values reported in the project footprint, BGRFN participants also reported the following site-specific values in the proposed project LSA:

- **Subsistence harvesting values:** reported values include: large game kill locations for white-tailed deer; small game kill locations for grouse (chicken), and partridges; berry picking sites for blueberries and cranberries; and lease fishing sites for minnows.
- **Cultural/spiritual values:** reported values include: ceremonial sites where offerings are made; an area where rocks are collected for sweat lodges; medicinal plant picking sites for cedar, sweet grass and fungus; a pinecone collecting area; and spiritual sites.

3.1.5 Regional Study Area (RSA)

Within the proposed project RSA (not including the project footprint and LSA), 29 different BGRFN members reported a total of 484 site-specific values. Not every site-specific value recorded includes time information. However, reported personal use and reported knowledge of use by other BGRFN members including ancestors gives use values in the RSA from the late 1940s to today (2014).

In addition to the site-specific values reported in the LSA and project footprint, BGRFN participants also reported the following site-specific values in the proposed project RSA:

- **Subsistence harvesting values:** reported values include: large game kill locations for moose, deer and wolves; small game kill locations for grouse (chicken), partridges, beaver, ducks, fisher, geese, mink, muskrat, otter, rabbit, and weasel; berry picking sites for pin cherries, and raspberries; mushroom picking sites; fish catch sites for bass, croppies, jackfish, juniper, lake trout, northerns, muskies, perch, pickerel (walleye), sturgeon, sucker, and whitefish; firewood collecting sites; and wild rice collecting sites.
- **Cultural/spiritual values:** reported values include: ceremonial sites for offerings and sundances; an area where pipestone and rocks are collected for sweat lodges; feather collecting location; traditional trapping areas; medicinal plant picking sites for cedar, sweet grass, water lilies, sage, Labrador tea, muskeg tea, weekay (rat root), mint tea, and fungus; a pinecone collecting area; teaching areas; and spiritual sites.
- **Transportation values:** reported values include: trails used for hunting large and small game, deer drives, fishing sites, berry picking, winter routes on frozen creeks, and shortcuts to Kenora and Nestor Falls; water routes used for canoeing to trapping areas, river fishing routes, and boat routes used for hunting and picking wild rice.
- **Environmental values:** reported values include: tree stands; habitat for duck, deer and turtle; beaver dams; wild rice growth areas; and a deer movement corridor.
- **Habitation values:** reported values include: permanent (i.e., regularly used) cabin sites, regularly returned-to camping sites, and sites used for day camps or temporary habitation.

Figure 3 is a map of all BGRFN site-specific values reported within the proposed project footprint, LSA, and RSA. Figure 4 through Figure 9 are maps by activity class of BGRFN site-specific values reported within the northern region of the proposed footprint, LSA, and RSA.

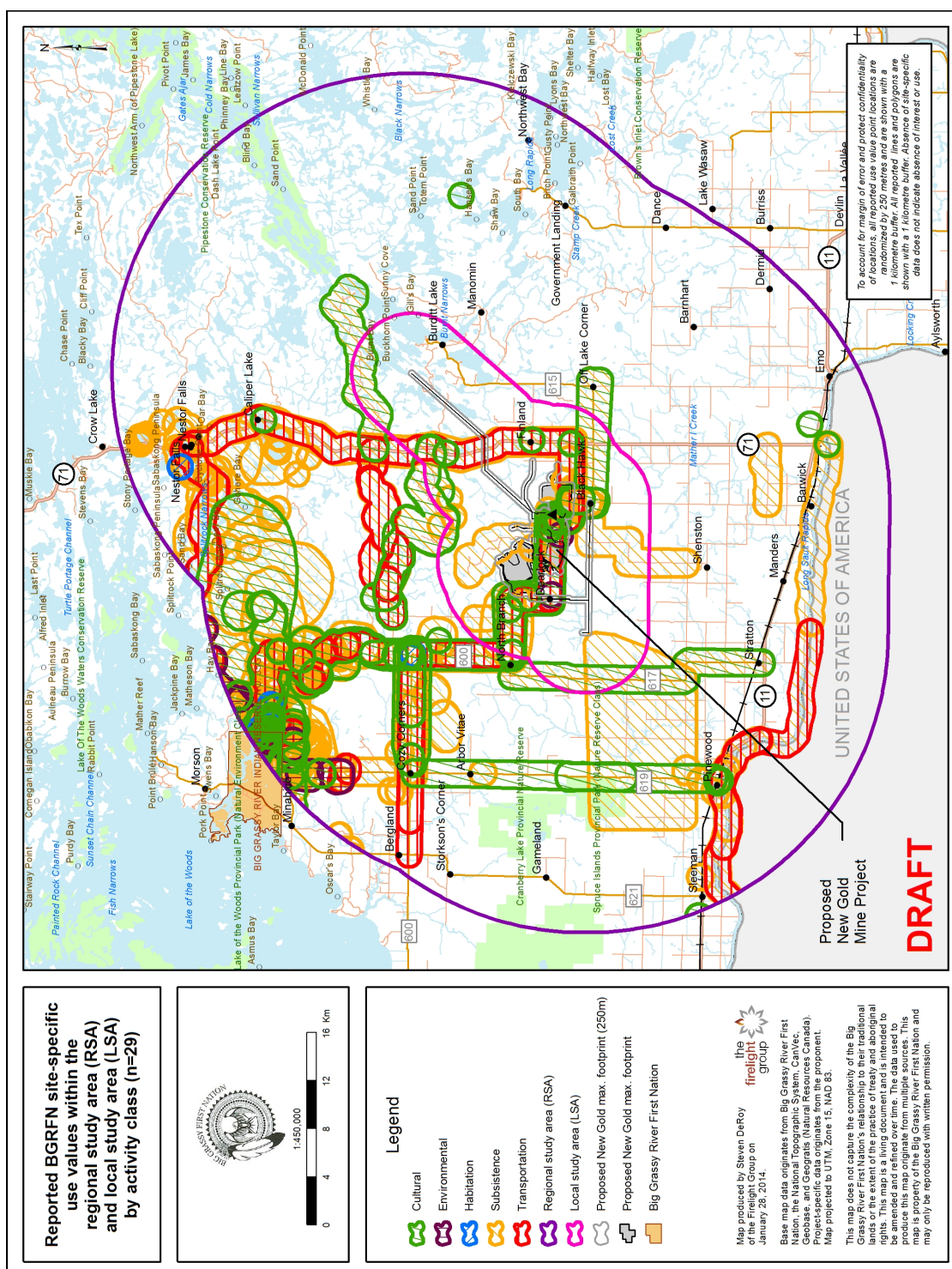


Figure 3: Reported BGRFN site-specific use values within the RSA and LSA by activity class

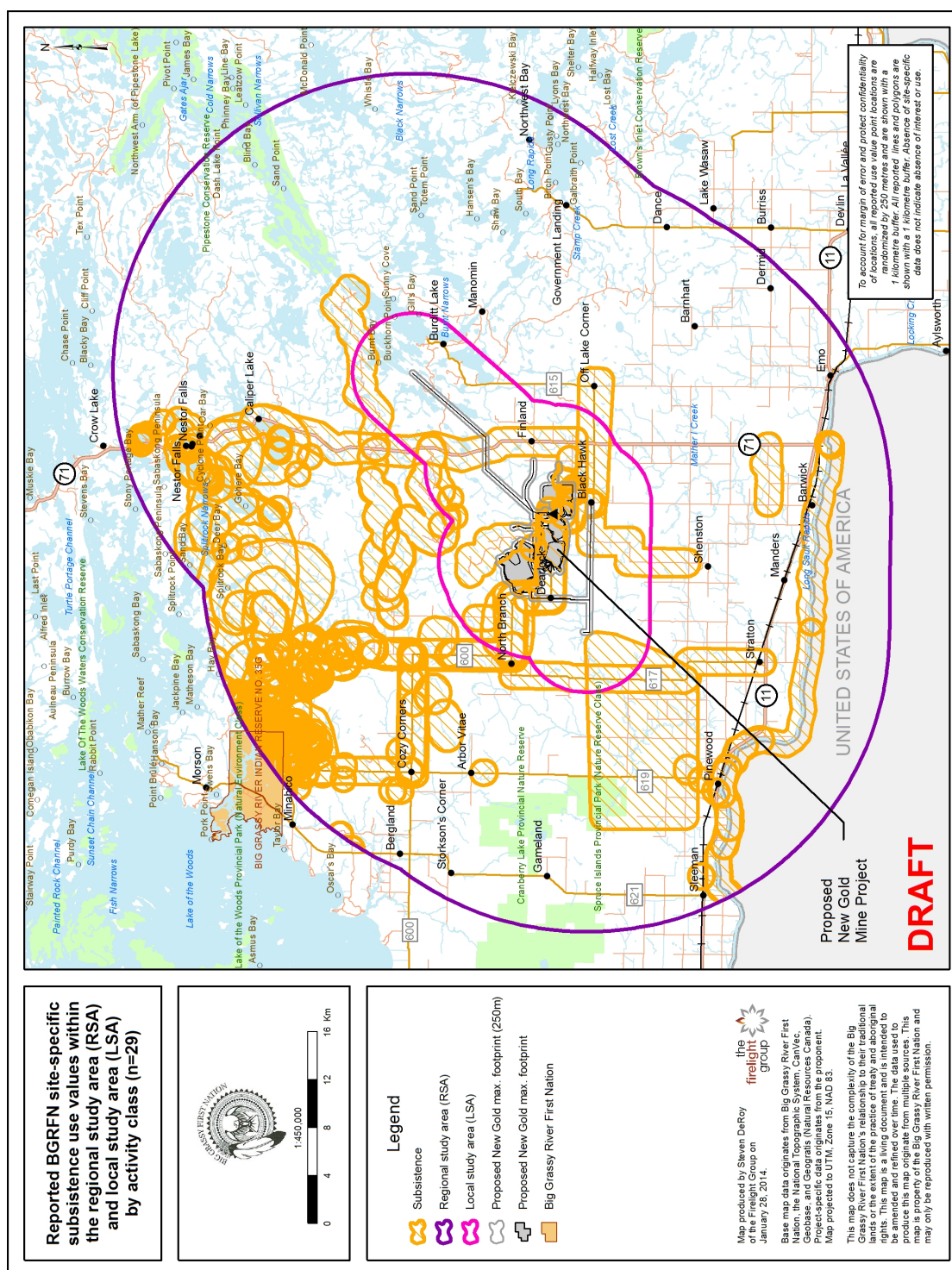


Figure 4: Reported BGRFN site-specific subsistence values by RSA and LSA

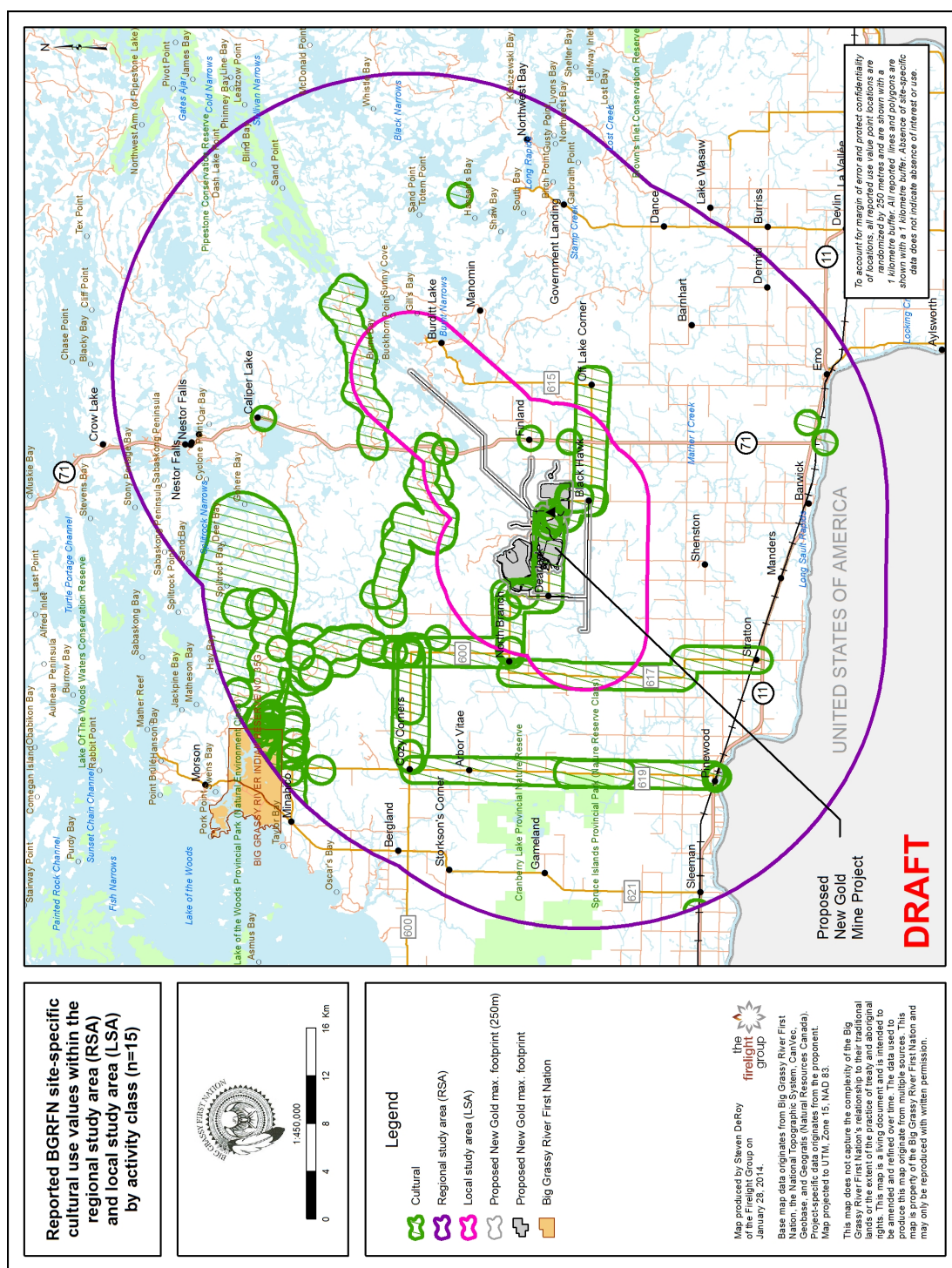


Figure 5: Reported BGRFN site-specific cultural use values within the RSA and LSA

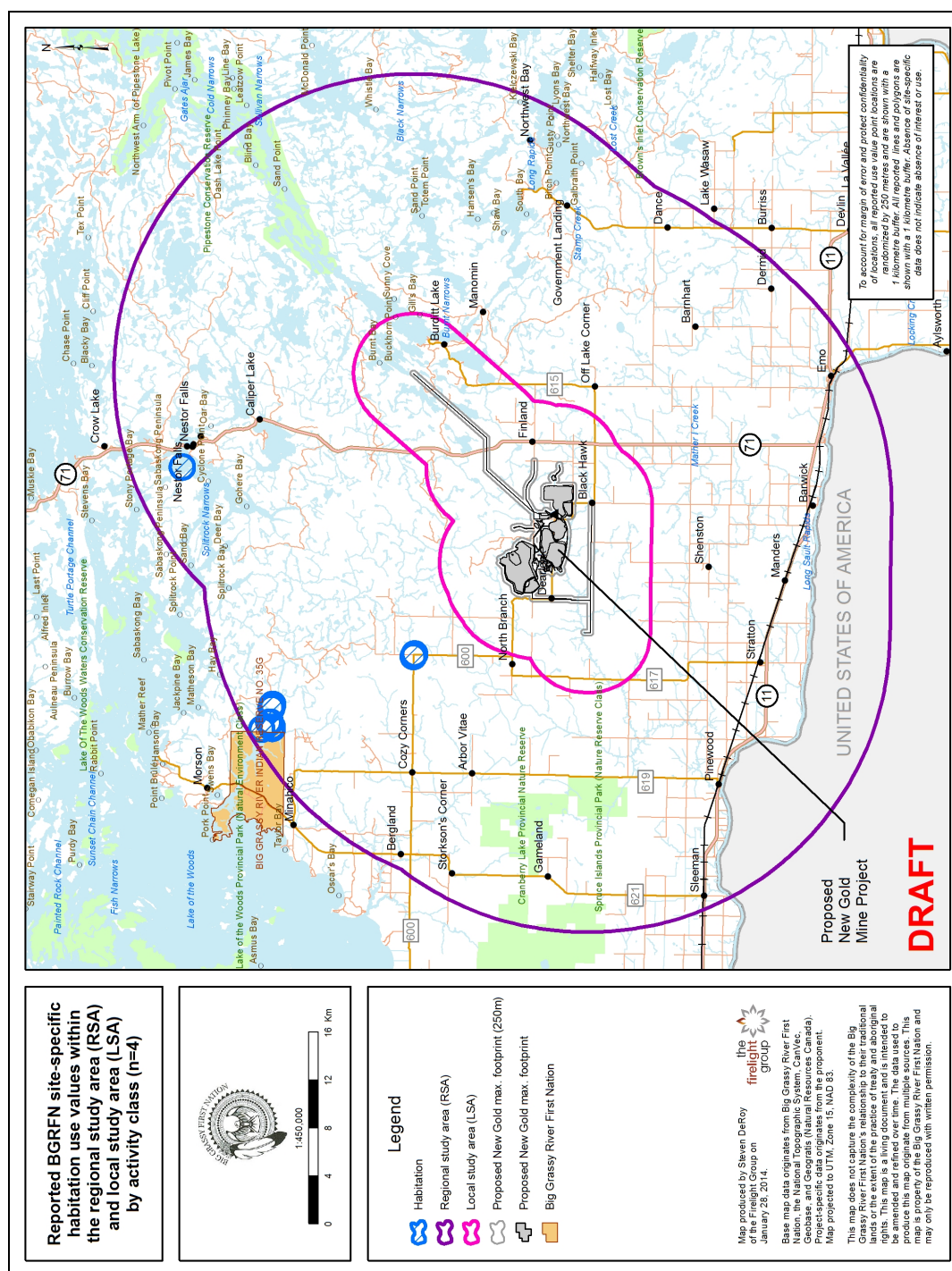


Figure 6: Reported BGRFN site-specific habitation use values in the RSA and LSA

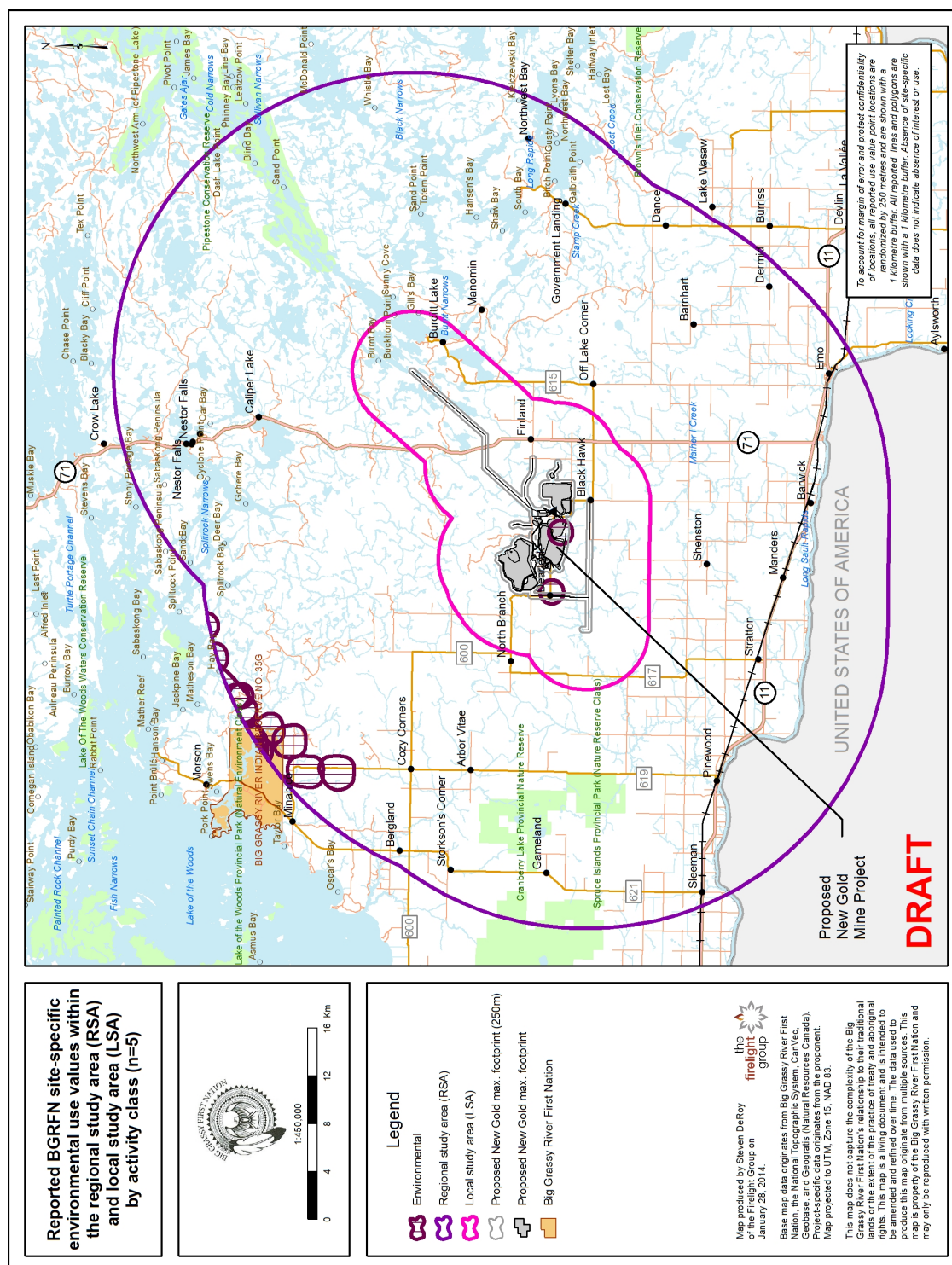


Figure 7: Reported BGRFN site-specific environmental use values in the RSA and LSA

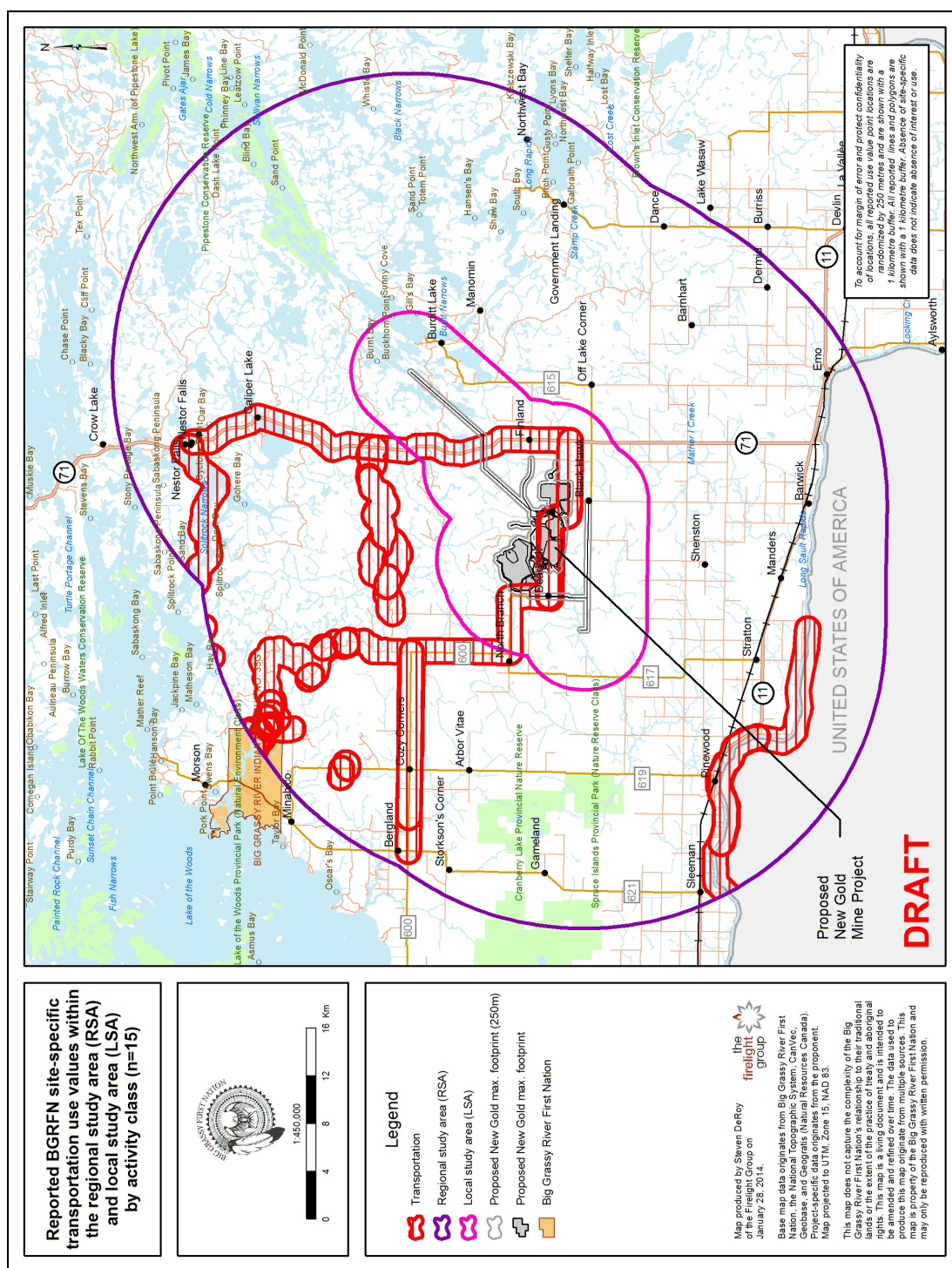


Figure 8: Reported BGRFN site-specific transportation use values within the RSA and LSA

3.2 Non-Site-Specific Values

During community meetings and interviews, BGRFN members identified a number of non-site specific values relating to BGRFN knowledge and use that would be impacted by the proposed project. During data analysis and discussions with BGRFN members, these were grouped into five non-site-specific Valued Components (VCs):

- Ungulates and other wildlife
- Water and fish
- Berries, wild rice, and other plants
- Spiritual sites and medicines
- Cultural continuity, access, and continued use of lands and waters

The discussion below describes these non-site-specific VCs, and how they will be impacted by the project interactions noted at the beginning of this section.

3.2.1 Ungulates and Other Wildlife

3.2.1.1 Baseline

Hunting is an important part of BGRFN food security and cultural continuity. Deer and other small game are actively harvested from the proposed Project footprint, LSA, and RSA. Small game includes chickens, rabbits, ducks, geese, muskrat, and beaver, and these are mainly harvested along the roadways throughout the Project footprint, LSA, and RSA, as well as along the Big Grassy River in the northwestern part of the RSA. Moose is occasionally hunted in the northeastern part of the RSA, including south of Nestor Falls; however, deer make up the majority of game in the area. BGRFN members stressed that hunting remains central to the BGRFN way of life, culture, and identity.

Deer, grouse, and rabbits are often hunted along the roads in the project Footprint, LSA, and RSA. As BGRFN members explain:

And there's a lot of places on the way up the Stratton Road that we shot deer ... It was amazing. But everywhere you went, you just went around a corner and there's a deer, you know? Then you go a couple clicks [kilometers] down the road and there's five more standing there, you know? (B08 2014)

I'd come out from North Branch there and then all the way down through this way. ... From here down this way, all the way up to Black Hawk [the proposed Project footprint], and then up through here you can hunt a little bit, down this road... so we kind of just stick to this area back in here, up this way. (B18 2014)

Lots of stuff out in the bush back there...Oh, yeah. I always go hunting in the back roads. Especially, if you see grouse and partridges. (B17 2014)

[Stratton Road area] So, I know all this area back in here. I've minnow trapped back in here. I knew the area pretty good because we were up back there just basically hunting, fishing, trying to make a living minnow trapping ... But I got to know the area pretty good. So, this general area all over in here, is pretty much where we hunt, minnow trap. Back in here too, there's a lot of hunting area. When we go back up in here it's all logged over, eh? So, it's a bunch of clear cut areas and it's good for deer hunting. (B18 2014)

Hunting for deer also occurs in larger areas away from the transportation routes. The practice of “drives” is a common form of hunting practice for BGRFN. Drives often include multiple hunters working together to harvest the animals. As BGRFN members explain below, the practice of drives is a communal event, and an importance socio-cultural aspect of harvesting game.

Well, what we used to do – we still do... we used to get together on a Friday afternoon, make plans, whenever we had time left during that day there, daylight... we'd get together seven, eight guys, even ten and do the hunting on the weekends. We tried to get everybody to get a deer. We'd get about seven or eight deer if everybody got a deer. If somebody didn't want their deer, we just passed that on to the group. That's what we did. We always, to this day, we still do that. If we want a deer, we still go out and pass it around the elders. (B13 2014)

[When hunting] We usually try and stay with our lifetime buddies there that don't get trigger happy. Like, when you get the younger guys, you don't know how they're going to react to hearing things or seeing things, because that's the number one thing that's hanging over your head. Trying to make noise as much as possible so you know where they're standing. (B13 2014)

From these descriptions of drives, it is clear that harvesting game is an important social and cultural event that brings together community members, and allows opportunities for sharing game with the broader BGRFN community.

BGRFN members also stressed the health aspects of eating wild game, and the socio-cultural and economic importance of having access to these resources:

We would make a fire and you put the [deer] bones in there. And my grandma and even my mom had a long cedar stick and they whittled a little spoon over there at the end, and the bone would start to steam. And then they'd take a butter knife and they'd just hit it and it'd would break and the marrow would ooze out. And they'd take this spoon and they'd eat that. And maybe you grab a bannock and drink some tea. And they just loved that. (B08 2014)

Well, I always like the wild meat, and part of the reason is because they're healthier, right? They're eating the medicines, the tea, everything that we go get, that's what they're already eating. But now with this mine coming in, and then they're gonna be drinking and eating stuff that's getting polluted from the mine, and how healthy is their meat going to be 40 years from now? (B20 2014)

I know we have to supplement the food that we buy ... there's a lot of us who can't afford the price of food from the stores anymore, and that's hard. So, a lot of the people here put away their fish in the fall, their meat. (B07 2013)

Along with the importance of having access to healthy wild game, some BGRFN members raised concerns over the possible contamination of these resources. As shown above, BGRFN members expressed concerns over the quality of harvested meat, and the continued access to these resources. In the next section, these concerns will be highlighted in relation to the proposed Rainy River Gold Project.

3.2.1.2 Project Interactions

The potential for industrial activity to affect the quantity and quality of deer, grouse, rabbits, waterfowl, beavers, muskrats and other animals is of great concern to the BGRFN. These concerns include habitat destruction and contamination. During the construction phase, increased activity in the area, including the clearing of land, will affect habitat for deer and other small game animals such as grouse and rabbits. BGRFN members also expressed concerns over possible contamination of resources. Concerns also included access to sufficient quantities of preferred wild game, as well as quality of the game. As BGRFN members explain:

Well, if they're killing off all the animals, what are we going to do? ... There's still people here that like to hunt. But it still happens that people put away their food in the late fall. And if that disappears, you know the food, the animals, well then we're going to have a harder time surviving, I guess. (B07 2013)

Yeah. Well, last year I took a little walk hoping to get some partridge with some people, and within those four hours I only heard about three taking off, in four hours of walking. I finally gave up. And same with the muskrats. Their numbers have really just taking a nose dive. In the summertime, I found three dead muskrats floating by my dock. (B13 2014)

No signs of any beaver activity. They cut down back where there's poplar, and that's what the beaver like to eat. The muskrats. So, that tells you something. Their clear cutting this, so the animal – not only that, but the deer – don't have any cover. So they're gone from that area – out of our area. (B13 2014)

BGRFN members also expressed concern over deer and other wildlife ingesting contaminated plants and water. As one BGRFN member explains, the possible contamination of resources has led to his avoidance of using certain areas:

I don't go hunting east of Fort Frances. I used to until I saw a plane go by and he's using pesticide. And so, he's killing the underbrush, but yet they're replanting more trees. So, where does that pesticide go to? ... With the rain it washes away, it finds a pool, and you need one thing for sure to survive...is water. And the animals are going to go to a watering hole, and they digest it. And you go over there and you shoot them – you don't know what you're eating. (B08 2013)

[Ministry of Natural Resources] Then they sent another letter, and there's going to be some aerial spraying. Now you stop to think. It goes to the ground. They do a clear cut and then they spray it. Then when that dies down, new plants, new trees come up, but where does that go? ... So, when that washes out, it's going to go to the lowest spot and then the animals they've got to eat fresh growth. So, you shoot that animal, you eat it, who's got it now? (B08 2013)

Contamination, and the perception of contamination, was identified as a key concern for BGRFN members. It is important to note that the perception of contamination already has had will continue to directly contribute to how BGRFN members will use the land for the continued practice of their treaty rights, regardless of whether or not contamination or resources has occurred. Concerns from BGRFN members include:

So, now I don't know how far [down the drilling] this is going to be...once I know this thing is going to go up, I doubt very much I'll go hunting there anymore ... when you unearth something from down below and you bring it up to the surface, what else are you bringing up other than gold? There's a reason why something is down there. And to me, why are you bringing it up? And then you're going to hurt the environment, and then it goes into stages. Pretty soon you hurt people. You hurt the animals. (B08 2013)

When you dig something out of the ground – like I say, it's there for a reason ... and when you bring it out, let's say it flows into this lake. This is part of Lake of the Woods. It's called Sabaskong Bay, but it's part of Lake of the Woods, and Big Grassy is down here more, and this is a deep spot. The metal is going to go to the lowest part. These ducks dive down there, and what do they eat? Anything from the bottom. See, and there again, you shoot the deer, shoot the duck, whatever animal, you eat it, who has that now? (B08 2013)

[Thoughts on mining] Nobody knows what causes cancer. Well, like I said, there's a reason for that stuff to be down there. And if it comes up, they're not going to tell you. They'll just tell you, buy a share and you're going to get rich. That's all they're going to tell you. They're not going to tell you, this rock contains this and it's harmful to your body. They're not going to say that the deer are in that area and they're eating stuff...that's going to wash away...and they're going to end up eating that. You shoot the deer, you eat it, in my case I give it to somebody, then who gets the blame? You know what I mean? It's kind of scary. (B08 2013)

BGRFN members currently use the area of the proposed Project, LSA and RSA for hunting ungulates and other wildlife, and the proposed Project will likely impact BGRFN hunting practices. The proposed Project is likely to infringe BGRFN treaty rights, including the rights to hunt, trap and practice a traditional mode of life.

3.2.2 Water and fish

3.2.2.1 Baseline

Water is central to every aspect of the continued practice of BGRFN traditional mode of life. BGRFN reserve is situated at the confluence of the Big Grassy River and Lake of the Woods. As such, the lake is central to BGRFN way of life. BGRFN members have complex understandings of the watershed, including flow patterns, interactions between groundwater, creeks, rivers, and the lake. The importance of the Lake of the Woods for BGRFN members was emphasized in the interviews for this study:

Because it's beautiful what we have now. It's not about the money. It's something that – I know how they feel. And we're the ones directly impacted, because we're at a lower elevation than the other reserves... We're right in there. But it's our lake we're concerned about. (B38 2014)

I spend more time on the lake [Lake of the Woods] than just about anybody ... right from the time the ice goes out to the time it comes in ... I'm out there every day. I'm out there when the sun comes up, and I'm out there when the sun goes down. (B14 2014)

And then I also fish on the lake quite a bit. But hunting wise, I hunt all over. I pretty much grew up on the lake, and ever since I was a baby my parents have taken me out there. (B12 2014)

Despite the centrality of use on the Lake of the Woods, the data clearly shows that BGRFN members also frequently use the tributaries to the lake, including the Rainy River and the Big Grassy River and smaller creeks and rivers.

You can go up there a little ways [fishing], I'm not too sure how far up. They've got a boat ramp in Pinewood, so usually we'll go out to there...(B12 2014)

[Big Grassy River] Anywhere back up in here. There's a bay there, a bay there, a bay there. This bay is usually good for ducks too, way back in here ... Good for duck hunting. There's even a couple beaver lakes up in here ... Yeah, you can catch northerns [pike], walleyes, bass all along here. Anywhere. (B18 2014)

BGRFN members also cite the importance of smaller beaver ponds and muskeg areas to collect plants and medicines (See Section 3.3.3 for more detail), and to trap minnows.

[A lake up Stratton Road] We go in there. We usually find little lakes that we can walk into, and usually we leave a couple traps there just to see if there's any minnows in them, and if there's minnows I'll come back and set 10 to 12 traps ... Probably – jeez, I don't know – 30, 40 gallons [of minnows] out there ... (B18 2014)

Fishing in the waters in the project RSA for subsistence and commercial fishing is an important activity for BGRFN members. Types of fish reported in the project RSA are: bass, croppies, jackfish [northern pike], lake shiner, lake trout, sturgeon, walleyes, and whitefish. As one BGRFN member explains:

We mainly live off the lake ... If you don't work on a lake, you're out there doing something with it, you know? You're either fishing it or people just use it traditionally... (B14 2014)

3.2.2.2 Project Interactions

Based on reported BGRFN knowledge and review of project information, the construction, operation, closure, and post-closure project effects of the proposed Rainy River Gold Project will include:

- Increased risk of contaminant release into the environment as a result of accidents or failures
- Ongoing construction, operations and closure phase impacts to local and regional air quality and water quality (through exposure of waste rock piles, potential seepage, and ongoing transmission of contaminants via air, rain, and snow)

Affects on water were of utmost concern to BGRFN members in relation to the proposed Project. Concerns focused on the potential decreases in water quality, and its cascading effects on other vegetation and wildlife, BGRFN members' health, and the subsequent inability to practice a traditional mode of life. BGRFN members explain:

I think they should be thinking about our water systems, because that's life. Without water, how are we going to survive? ... We have to make sure our traditional ways are taken care of, and that's where plants and everything comes in. (B11 2014)

[Rainy River Gold mine] I suppose the only way that it will affect the way I use the land would be if there was pollution ... I think that's our biggest concern here, with most of the people here. That's what they're more concerned about the land and the river system. And the water, I think, is really important to us. And it affects the animals, that would be another big thing ... Well, if there's pollution there, you know, they're going to die off. (B07 2013)

That's what I'm worried about. Our drinking water from the lake [Lake of the Woods]. (B09 2014)

Nothing would be pure anymore, especially the water. (B17 2014)

BGRFN members consistently raised concerns regarding the flow patterns and interactions between groundwater, creeks, rivers and the lake in relation to the proposed Project:

But my concern, is where this is the water flows – right here – the water flows, and most of the water goes to Big Grassy River. And who's there? Big Grassy's there. And what's going to happen to Big Grassy? What's going to happen to the Indian people on Big Grassy? (B08 2014)

I'm always worried...about anything that comes into the rivers or streams. There are underwater systems too, right? And how is it going to affect us and affect my kids? (B11 2014)

All I can see is a big pit ... And they say it's not going to affect the water, but I don't see how it's not going to affect it. Because there's springs all over there, and wells ... There's water seeping underground. I don't know, I just don't like the idea of that mine. (B05 2013)

Just if it's going to – I've heard stories where the mines are close to lakes and they'll kill the lakes beside them or they'll kill a certain species and stuff like that. That's a concern of mine, if it will kill the whole lake. I mean, it's an old lake we live on... (B12 2014)

[Rainy River Gold mine] All that area, even towards Nestor Falls, because the water still moves this way [from the mine towards the Lake of the Woods]. Whatever lives in there will be affected. And that's the concern I had about the mine, and also if they make a smoke stack, it's not only going to affect us it's going to affect everybody. It will go all over the land – all directions. It will all be polluted. (B09 2014)

These other lakes that fill up and now the mining goes up and what comes out of the ground nobody knows, they fill up and this is going to rush into Big Grassy. (B08 2014)

The only thing I'm worried about is the water that comes off of this area, it all runs into all these little streams that all meet up to here. (B15 2014)

Just because I know it's going to ruin the lake, the river, because this is all surface stuff, but I know they hit the underground rivers and that will affect the, which come into the Big Grassy River. A lot of the streams run to Rainy River, and Rainy River runs into Lake of the Woods. (B20 2014)

Well, with the fish everything will drain with the rapids and the Rainy River ... under the ground water table or ever the surface. Everything drips into the big lake – Lake of the Woods – and then to other lakes. It will do quite a bit of damage to the environment. All the species. Ecosystems will get ruined – everything like that. Like, I don't know what kind of toxins come from a mine. That's a big area. (B17 2014)

BGRFN members' ability to practice a traditional mode of life is dependent on a healthy and intact ecosystem. BGRFN members reported concerns over the potential negative affects of water quality for subsistence, especially fish. A few BGRFN members reported a decrease in water quality (i.e. ability to drink water from the lake), and fish quality (i.e. catching fish with visible deformities). An increase in industrial activity in the area, including the proposed Project, was viewed by some BGRFN members as intensifying the negative effects on the natural resources upon which they currently rely for subsistence and economic activity:

Well, the only thing I worry about is whatever happens here [at the Rainy River Gold Mine] that does somehow make it into our main stream and bother us over here ... is it going to bother what we do now, because that's how we make our living, and we live off the land. (B14 2014)

I'm always worried...about anything that comes into the rivers or streams. There are underwater systems too, right? And how is it going to affect us and affect my kids? (B11 2014)

Not like it used to be. I remember when I was 10, 12 years old, we could just take our cup and drink from the lake. Now we don't do that anymore. (B20 2014)

Here's a fish. He eats food that has metal, it's going to settle in the bottom of the body. When I clean a northern, I take a strip out about an inch and a half and then I don't eat that. I don't eat the belly meat part. But you hate to waste food. That's food. But if you think ... thinking that mercury goes down to the lowest spot. (B08 2014)

I know there's a lot of fish in the lake here already that have these warts on them. They look like warts. Those are cancers, eh? I don't know if that's from the mill in Fort Frances, because all that water drains down to this lake. Toxins, chemicals, they dump in the lake, wastes. I know that's got some effect on the fish already. And then if a mine does come in this close, that's going to destroy everything. (B17 2014)

Everything out there is alive, and it would be nice to keep it that way, you know? (B14 2014)

The Project will add to existing industrial effects and is likely to impact the ability of BGRFNs' to practice their treaty rights by reducing access to clean, abundant water, and affecting fish quality and quantities.

3.2.3 Berries, Wild Rice, and Other Plants

3.2.3.1 Baseline

Along with hunting and fishing, gathering berries, wild rice, and other plants is an important subsistence and cultural activity for BGRFN members. Picking berries is prevalent in the project RSA, especially along the roads in the northern and northwestern sections of the RSA, such as the Stratton Road, and the Split Rock road. BGRFN members reported picking blueberries, raspberries, chokecherries, and pin cherries in the project RSA. Picking wild rice also occurs in the project RSA, with a high concentration of use in the northwestern part of the RSA, along the Big Grassy River. BGRFN members describe the practice of gathering berries:

I'm trying to get my kids into it, because we started blueberry picking when we were their age. So, I'm trying to get them used to having to go sit in there and pick. (B20 2014)

The wild berries you can freeze them and take them out of the freezer for your meals. I still have mine in my freezer. (B13 2014)

Anywhere where there's a stand of jackpine – that's where I used to go [for pinecones]...Also blueberries. We would pick blueberries up there. Anywhere there's a jackpine stand with shade. (B17 2014)

Once in a while they did see some [berries]. The best time is just before it starts to snow and everything freezes up. There's probably lots of game around that time, more access to the roads, and it was frozen. (B17 2014)

We used to go out anyplace we could find rocks, but this old lady said if you see jack pine trees, that's where the blueberries are. (B02 2013)

Harvesting wild rice is also a common practice for BGRFN. Maintaining the practice is important to BGRFN and their ability to practice their treaty rights in the project RSA, in particular along the Big Grassy River. BGRFN members explain how the rice is harvested and prepared:

We used to use a 16-ft canoe. I'm not sure how long they were – the fiberglass canoes that we use. She sat in one spot and I stood behind her ... And I would push the canoe forward and she would just pull the rice in with threshing stick and knock it off ... She used to pick some days, four, five, six bags in the morning and do that in the afternoon ... All she did was pull the rice in with one, and we'd stand in one area and she'd take a threshing stick and knock off all the rice and it would land in the canoe in front of her and she'd she do the same on the other side. (B15 2014)

[Preparing wild rice] You roast it, I guess. She used to have a hole and dump it in the ground with probably about a foot by foot deep – maybe a foot and a half deep, or whatever – and the whole inside of it was clay ... And she used to pour the rice in there and she'd get out and put her moccasins on and she'd dance on the rice ... Taking all the husks and everything off, and then she'd take them all out of there. And then when the breeze came, on a windy day, she'd pour it into another container and the only thing that would fall into the bowl was the rice that was already taken off the husks ... Yeah, the wind would blow away the other stuff. All what would be sitting in the bowl was the rice. She'd cook it and everything. (B15 2014)

Our traditional [way], you have a pail or something and you put your moccasins on, make a fire, and then you stir it with a paddle or something. And then you hop in that thing and you start like dancing on it ... like just to get the shells off I guess you can say...and then you get a little basket and you kind of shift it I guess into the wind and all that stuff goes off ... That's what I was taught. (B30 2014)

3.2.3.2 Project Interactions

The proposed project may affect BGRFN use of plants. BGRFN members note that increasing pressures of privatized land and lack of access to preferred areas for berry picking have already and will continue to affect BGRFN members' ability to pick berries and these areas. The proposed Project will increase the lack of land available to practice BGRFN treaty rights and mode of life. As one BGRFN member explains:

The reason why we kind of watch [where we pick] now because we're not allowed to pick [berries] as we want. There's a lot of private land. We generally don't go in those areas. (B09 2014)

As described in Section 3.3.2, BGRFN members expressed concern over berries and wild rice if the quality of the water were to be negatively affected by the proposed Project. One BGRFN member explained the connection between water, berries, and wild rice:

And in between [the lake and the proposed Project footprint] there is all of our hunting – all of our deer hunting – all of our blueberry picking, all of our stuff that we do every year ... Because everything runs this way. All the water runs off towards this area. That's the only thing I'm worried about. ... And everybody needs that river. We guide and pick rice in the summer, and commercial fish in the fall and summer – from spring to fall ... what's going to happen to our rice fields? Are we going to lose our rice fields? (B15 2014)

Loss of plants (or of equal importance, loss of ability/access to harvest them) can also occur due to both actual and perceived contamination on cleared areas and roads. BGRFN members reported that these areas are sprayed with herbicides and that they therefore would not pick berries or use the land in these areas.

In summary, identified potential project interactions with berries, wild rice and other plants include:

- Direct removal of plants during the construction of the mine.
- Replacement of native species with non-native species during reclamation.
- Contamination or perceived contamination of plant picking sites due to spraying of herbicides around mine site or along roads.
- Contamination or perceived contamination of plant picking sites by traffic fumes along roads and access routes used for the project's construction or maintenance.

The Project is likely to exacerbate existing cumulative impacts, including access to lands, on the ability of members to harvest berries, wild rice and other culturally important plants, infringing on BGRFN members' ability to practice their traditional mode of life and exercise their treaty rights in a meaningful way.

3.2.4 Spiritual sites and medicines

3.2.4.1 Baseline

BGRFN members identified several sacred and spiritual sites in the proposed Project footprint. These sites are of particular significance to certain individual members, with broader implications for the BGRFN community. In Annishnabe spiritual traditions, individuals may experience events involving spiritual beings at particular sites in the cultural landscape. Having experienced such an event, certain ceremonies or duties (e.g. offering tobacco) must be performed by the individual concerned. Spiritual leaders in the community are often asked for their guidance on which ceremonies or duties may be appropriate. From then on, the relationship between the individual and the spiritual being is ongoing, and often more knowledge is received over time during multiple interactions. Therefore, these spiritual sites on the map indicate a continuing and evolving relationship between the BGRFN knowledge holder and that particular place or spirit. These spiritual interactions are one facet of the complex relationship between the BGRFN community and the landscape, in which maintaining balance between humans and the environment, and protecting the land are key. As one BGRFN member explains:

And there's lots of water up here. I've been taken there numerous times, and there's sacred water there. There's lots of sacredness around there. I'm not old enough yet to understand fully what they mean. I still have to gain more understanding. That's why I don't say too much, because I see lots and I've been taken to places, but I still don't know very much about it. It's just like a mystery. But the things that I'm shown, I take on a responsibility to try and make a difference... Because if I don't, and I'm getting all these...you know, I'm shown these things, then I'm kind of wasting it for my community to help them out... I'm trying to gain more understanding. So, I'll continue to give my offerings there. I'm going to continue to ask about that too. (B38 2014)

One BGRFN member explains how he is a member of the Lynx clan, and an interaction with Lynx that had particular significance in the proposed Project footprint:

When I stopped on the road, that lynx walked off the road into the bush. And then I went closer and got out of the van and the lynx led me to the edge of the bush there. So, I put some tobacco out for him. After I was done with the tobacco and saying my prayers for that lynx, then I was just ready to leave and then I turned and I saw a little one laying there. They were both listening to me. So, I put tobacco down for them and said a prayer and was talking to them. Then, again, when I was leaving, I was turning and I saw another baby one there. There was three of them – all three of them....So, I always put tobacco out

on that certain hill [in proposed project footprint]. There's a big boulder there where I go put tobacco out and a little bit of food for them. For their spirits – the lynxes. (B17 2014)

Other BGRFN members have had other spiritual interactions in the project footprint area:

And that's where I put my offering and I put some food out for all that stuff that I saw there, because weird things have happened. The other – And this is where the spirits came. There were two circles there [in the proposed Project footprint] – one over here, and there was another one right here. And what they marked out – Because I could tell this was present, and they used those machines and put them out in circles – three circles. (B38 2014)

Well, I was shown that mountain because there is a spirit of the mountain. (B38, 2014)

They just put offerings down every season or if you want to feed your loved one, you go put something out in the bush. And the trees, we use for healing. (B05 2013)

Sabay [sasquatch], it lives around there [proposed Project footprint]. And when they did a ceremony, he [another BGRFN member] had to put out an offering for that Sabay. So, I'm not the only one. They know about that now. There's a lot of significance there. There's lots of medicine down there too. (B38 2014)

BGRFN members reported collecting rocks and other earth materials for use in ceremony in the proposed Project LSA, and RSA.

[Stratton Road] Yeah, right here. That's where I collect a lot of rocks [for sweats] ... I'm getting hundreds and hundreds of rocks ... we turn the rocks over. I just burn them once. They get really hot on one side and then roll them over, because they're black underneath. You get that nice and white and then you're ready for this one. (B38 2014)

The proposed project footprint, LSA and RSA are also areas where BGRFN members collect medicines. BGRFN members reported picking cedar, sweetgrass, beaver roots, fungus, bark, water lilies, Labrador or muskeg tea, swamp tea, weekay, rat root, mint and sage in the RSA, including areas in the proposed Project footprint and LSA.

Yeah, like picking medicines – yeah. Like cedar, sage – I think you can pick weekay there too, somewhere around there. Weekays – I don't know what it's called in English. We call it weekays. It's like a root that you pick up – you pick it out of maybe, out of weeds or something ... We use it for anything – even if you grind it up you can seep in a cup and have a drink. Or else if we have a toothache ... Yeah, smudging mostly. Recently my friend lost her son and that's all I could think of was to go find my weekays so I could smudge her. (B05 2013)

There's an Indian name for it, but I've heard somebody say 'Labrador tea'. What it is, is it's probably two feet off the ground to plant and when it's ready to pick it kind of droops over. The leaves kind of pop ... You pick it just before they turn colour. You've got to time it just right. (B08 2013)

[I collect medicines] pretty much all over...Yeah, pretty much all over ... Anywhere along the road. Anywhere where it looks like there's medicines or certain beaver lakes. Whatever is easy access – easy access along the road. (B17 2014)

Yeah, we stop and pick cedar – fresh cedar. Two to three times a month, I'll pick cedar. Anywhere around these roads are cedar, like Pinewood. (B17 2014)

Oh yeah, I've seen a lot [of tea], and when I just went through hunting ... because there still wasn't that much snow yet. I was able to – Because my grandma, she's into all the stuff for tea and medicine, and I was able to spot some over there, too, up the Stratton. Because where we did our walk in the bush there, it's all rock back there. There's a lot of tea leaves back there. (B20 2014)

I like to pick a lot of birch bark up there. I put it in bags and give it to the elders ... There's many uses for that birch bark. And it's just birch that's just hanging. It's not like you cut the tree. It's just birch bark shavings ... It naturally comes off, you don't have to cut it off. (B38 2014)

Picking medicines and the associated knowledge is a spiritual and healing practice for most BGRFN members. As one member explains:

You could ask that spirit for just about anything to heal, and they'll heal it, because you're connected with the medicines, as well as special healing ceremonies, but you have to commit both ... both the physical part of the medicine, the plant, and the spirit that are inside it. There's two sides. (B38 2014)

The things that are wrong with our communities, like abuses or addictions that are connected with dealing with the spirit and that. That's where the plants can really help. (B38 2014)

3.2.4.2 Project Interactions

The proposed Rainy River Gold Project stands to significantly impact BGRFN use of and access to spiritual sites and medicinal plant gathering areas in the proposed Project footprint, LSA, and RSA. BGRFN members note that during construction, impacts can occur from direct removal and disturbance of medicinal plants when large areas of land are cleared. BGRFN members return to the spiritual sites over many years to perform ceremonies, as well as the same medicinal plant patches, and are particularly impacted when these sites are removed. Maintaining the spiritual relationship to the proposed Project area is integral to BGRFN. One member explains:

I'm a sacred keeper, and I run the sweat lodge, and we have sacred items. I'm always worried about the environment and how it can affect us. As far as I know, I don't know if

there has ever been a ceremony done for this [mine site] in order to make sure everything is okay. And what kind of chemicals are they going to use, and are they going to affect us later on with serious diseases? I think they didn't do the protocol of doing the ceremony before they even touch a piece of dirt. (B11 2014)

...I think they [New Gold] should respect our ways, our beliefs, our traditional lives, our culture. I think they should do ceremonies, not just once. Everything is in four. So, there are four directions. So I think they should do ceremonies four times a year. (B11 2014)

[New Gold mine site] This isn't just about the rocks, and, you know, we have medicines growing all over the place – we can't say a certain place – wherever you look, there is! That's what I was told. But, carry your tobacco. And they should even put tobacco down before they even start! (B02 2013)

[New Gold mine site] I said, "because the Native people use rocks, and they blast rocks." I don't know what they do when they blast, they should have a ceremony before they do that. Ask some elder to do the ceremony. Because the Native people, that's what they use for their sweat lodge. (B02 2013)

The 600 [road] is - this is Splitrock Road, so right around there, there's a cedar swamp. Cedar - cedar trees, yeah. There are still some in there, but hopefully they [New Gold] don't cut those down because that is our medicines as well. (B11 2014)

Some medicinal plants are only found in certain places. Also, some BGRFN members pick medicines at favored sites to which they have returned many times. BGRFN members are therefore very concerned about the loss of use of these places or the destruction of these plants.

From the results of this study it can be stated with a high degree of confidence that the project is likely to infringe BGRFN treaty rights to practice a traditional mode of life, by negatively impacting key plant species used for sustenance and medicines, as well as destroying spiritual sites used by BGRFN members.

3.2.5 Cultural continuity, access, and continued use of lands and waters

3.2.5.1 Baseline

The transmission of culture and traditional cultural practices from generation to generation, and the ability to carry out these practices into the future, is critical to BGRFN. These processes are referred to as cultural continuity, which includes the transmission of language, knowledge, place-based stories and values, and cultural practices. BGRFN members identified access and continued use of lands and water for traditional purposes as of critical value and importance. BGRFN livelihood and cultural continuity is dependent on unimpaired access to a healthy and intact ecosystem that supports the community's ability to hunt, trap, camp, fish, and be out on

the land. This includes the Lake of the Woods, as well as the proposed Project footprint, LSA, and RSA.

Maintaining a close connection to the land and animals is an important aspect of BGRFN culture and identity. Many BGRFN members have visited the same areas regularly throughout their lives, and often these are areas that their families have frequented and used for generations. This leads to a strong connection to certain places, and the desire to maintain them in their natural, peaceful state.

Cultural continuity and access to land and waters are connected through place-based learning on the landscape. As one BGRFN member explains:

Nobody taught me how to do stuff. I always tell them, my granddaughters ... [they ask] "Grandma, can you show me how to make that?" I said, "Nobody showed me how, I just watched." So, that's what they did. (B02 2013)

BGRFN members also reported that access to the land is essential in maintaining community relationships, and the role of the harvesting from the land and waters:

Okay, for me hunting is about survival. The Creator gave us animals to use, and the people who - there's a lot of single parents on this territory and the other one too, and they don't get to go out ... and if I give them something, they benefit from the land. And it makes me feel good when I do that. I mean, it just makes me want to do it again. And in the Indian culture, not too many people say thank you, but they have a smile on their face when you leave, you know? ... And that's why I say, it's about survival and also, to me, it's a gift from the Creator for these animals and the birds. (B08 2013)

There's so many people here that don't have any boats or that can't afford the equipment. Like the older people, they always call around for what they need, and at this time of the year it's fish, rabbits – mostly fish and rabbits – partridge. Anywhere they go. In the fall here, it's another thing they do. The community at the school here, they have every year what they call a 'community feast'. This is where they teach the young kids – even some of the high school kids come down just to get an idea of what goes on and what to do, how to cut up the fish, prepare everything like the deer, ducks - whatever they want, we always try and get what they need. It's more like putting it into words so they'll have an idea when the time comes for them that it's up to them later on what they want to do – either cut up the fish or just fish for fun. (B13 2014)

BGRFN members also noted that over time, access to the land has been impaired by privatization, logging, farming, and other activities. Lack of access to preferred areas for maintaining a traditional mode of life was a common concern amongst BGRFN members. Privatization of land has reduced access to hunt, pick berries, and gather medicines.

That's the way they look at it when it comes to trapping and hunting, or anywhere that there's 'no trespassing' signs. If you get caught you're looking at \$500 bucks [fine]. (B13 2014)

Years ago I used to hunt on farmland in Rainy River until they said you need written permission ... And then they [Ministry of Natural Resources] say you're only allowed to hunt on Crown land, not on private land ... I can understand that. So, instead of causing any problems, you don't hunt there anymore. (B08 2013)

3.2.5.2 Project Interactions

BGRFN members reported that the proposed Rainy River Gold Project would impact on BGRFN cultural continuity, and use and access in the area.

I think we need to focus on the land, that's what we all think about when we're here ... And I think that's the biggest thing. Because if our land is not there, you know, what's going to happen? They've taken away so much of our land around this area, you know, we lost a lot of land. And we can't get it back. They've taken everything. We just have a small area here and some areas out on the lake that still belongs to Big Grassy. But on the mainland we have very little. (B07 2013)

BGRFN members expressed that if the proposed Project were to go ahead, they would avoid the proposed Project footprint and LSA to practice their traditional mode of life:

[Hunting in the mine area after its built] I wouldn't even go there then. I wouldn't even go there then. (B08 2013)

When these mining companies get done, they're gone, but the thing that they dig out is still going to be there for us to consume. They're gone. They're going back to wherever they came from. They don't have to live here, and sooner or later what comes out, we're going to get it. Two generations from now, if this goes up, they're going to say, "My great grandfather used to live here." Used to live here. They used to hunt here. Then they're going to say, "Why aren't they here?" Because the mining company took over. (B08 2013)

BGRFN members reported that the proposed Rainy River Gold Project, with its impacts on the landscape, would discourage them from visiting or teaching their children in the area, with a consequent reduction in cultural continuity. Many BGRFN members feel that the area around the project's LSA has already been closed off to them through other factors, such as privatization of land, and that the new mine project would increase this situation for many decades. In addition, there are strong public concerns that areas between the mine and the lake, and the lake itself, which are not subject to as much current alienation as the LSA, will be adversely affected, increasing the alienation area for BGRFN members. As one member explains:

Well, it just sucks knowing that my kids won't be able to do what I do when they're older. I know that. Because of this, the lake – I know the lake is gonna eventually get more polluted as the years go by, but this is just speeding up the process. (B20 2014)

It can therefore be stated with a high degree of confidence that the project has the potential to greatly impact where, whether and how these families carry out their cultural activities, practice their treaty rights, and pass on their knowledge to younger generations, all with negative consequences for cultural continuity and access to lands and waters.

Section 4 Conclusion

4.1 Summary of Baseline and Project Interactions

Based on existing information, it is possible to state with a high degree of confidence that the proposed project area is of high importance to BGRFN knowledge, use, and occupancy, and that BGRFN members extensively and in some cases preferentially use the Rainy River Gold Project LSA and RSA for hunting, fishing, camping, plant collecting, and other cultural practices that are integral to BGRFN Aboriginal and treaty rights.

There is a large concentration of values in the northwestern region of the RSA, especially around the Big Grassy River and the roads along the northwestern portion of the RSA. The proposed Project footprint area is also noted as a spiritual site for multiple BGRFN members. The proposed Project footprint and LSA are reported to be areas used for collecting medicinal plants, picking berries, and hunting deer and other small game. These sites were of noted importance, especially due to the increase of private lands in the area which limits BGRFN members' ability to exercise their treaty rights, and their traditional mode of life in portions of the proposed Project's LSA and RSA.

BGRFN members also identified a number of non-site-specific values relating to BGRFN knowledge and use that would be impacted by the proposed project. During data analysis and discussions with BGRFN participants, these were grouped into five non-site-specific Valued Components (VCs):

- Ungulates and other wildlife
- Fish and water
- Berries, wild rice, and other plants
- Spiritual sites and medicines
- Cultural continuity, access, and continued use of lands and waters

This report provides assessment of project effects on site-specific values and non-site-specific VCs. Based on analysis of interviews with BGRFN participants, a number of project interactions or impact pathways have been identified. These interactions are likely to result in adverse effects on BGRFN use.

BGRFN participants identified the following concerns with the proposed project:

- Habitat destruction and fragmentation
- Movement of animals further away from preferred harvesting areas
- Disturbance of important areas for harvesting medicines and other plants

- Changes to water quality in, and effects of perception of same on willingness to use and harvest from, the proposed Project footprint, LSA, RSA, and beyond to Lake of the Woods
- Lack of access to or destruction of important places and spiritual sites

Project effects would further constrain BGRFN knowledge and use in the LSA for multiple generations. The proposed project is likely to impact the intergenerational transmission of cultural knowledge, and the ability of BGRFN members to meaningfully practice a way of life consistent with rights under Treaty No. 3, within the LSA, including areas adjacent to and within the project footprint.

4.2 Closure

Should you wish to discuss any aspect of this report, please do not hesitate to contact Rachel Olson at (778) 686-4547.

Sincerely,

ORIGINAL SIGNED

Rachel Olson, Ph.D. (Social Anthropology)

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Appendix 2: Consent Form

BGRFN Traditional Knowledge Study of the New Gold Mine Project

Declaration of Informed Consent and Permission to Use Information

I (name) _____, on this day (complete date) _____, give permission for _____ to interview me for the BGRFN Traditional Knowledge Study of the proposed New Gold Mine Project.

I understand that the study is being conducted by Big Grassy River First Nation (BGRFN). The purpose of this study is to document the rights and interests of BGRFN in the area of the proposed New Gold Mine Project.

By signing below, I indicate my understanding that:

- (a) I consent to have my words and responses recorded on maps, in notes, and using audio and video recording equipment.
- (b) I am free to not respond to questions that may be asked and I am free to end the interview at any time I wish.
- (c) The BGRFN will maintain intellectual property rights over information and recordings collected through my participation and may use the information and recordings, including audio, video, or pictures, in pursuit of its claims, and for defending and communicating the rights, interests, and titles of its members. This includes, but is not limited to, sharing information for the purposes of negotiation or participation in regulatory or court proceedings.
- (d) The BGRFN will ask permission from me or my descendants, before using my information for purposes not indicated above.

For more information, please contact Romeo Duguay at BGRFN: (807) 488-5614 x 227.

I would like my quotes included in reports: **yes** **no**

I would like my name included in reports: **yes** **no**

Signature of participant

Witness

PIN #:

The Firelight Group

Appendix 3: Interview Guide

Interview Guide for the BGRFN Traditional Knowledge Study for the New Gold Mine Project

INTERVIEW GUIDE FOR THE BGRFN TRADITIONAL KNOWLEDGE STUDY OF THE NEW GOLD MINE PROJECT

THIS GUIDE INCLUDES

- Questions
- Interview checklist
- Interview overview
- Mapping notes
- Mapping codes

Please read the guide completely before beginning interviews

1 INTRODUCTION

Complete the interview checklist, then read with AUDIO & VIDEO RECORDERS ON at the start of each session.

Today is [DATE]. We are interviewing [NAME] for the Big Grassy River First Nation Knowledge and Use Study of the New Gold Mine Project. Thank you for coming.

My name is [NAME] and my co-researcher(s) is/are [NAME(S)]. We're at the [BUILDING] in [COMMUNITY/TOWN]. [NAME] has read and signed the consent forms, and we have assigned him/her participant ID [#]. We have explained the purpose of the study, mapping process, and interview plan.

Primary Goal: BGRFN is working to document community knowledge and use by BGRFN members in the area of the proposed New Gold Mine Project. We'd like to know how you have used these areas, as well as what you may know about how BGRFN members have used them in the past.

The study area is in regards to an open-pit gold mine proposed 65km northwest of Fort Frances. The mine is expected to produce 18,000 to 20,000 tonnes of ore production per day. Underground production will occur 800 meters below the surface, producing approximately 2,000 tonnes of ore per day. The mine life is expected to last 15 to 20 years. Construction also involves realigning a portion of Highway 600 south of the mine site, then reconnected to the local road network.

Interview Guide for the BGRFN Traditional Knowledge Study for the New Gold Mine Project

2

BACKGROUND & EXPERIENCE

Activities in and knowledge of the Project area

PERSONAL INFORMATION

- Full name
- Place of birth
- Age and year of birth
- Where you were raised
- Membership in Big Grassy River First Nation
- Parents and grandparents

GENERAL USE QUESTIONS

Have you ever used the area around the proposed Project, or areas nearby?

For hunting / trapping / fishing / camping / plant gathering / passing on traditional knowledge or language

- If yes
 - When?
 - What do you do there?
 - Who with?
 - How did you learn about this area?
- If no
 - Why not?

Have your family or community members ever used the area around the proposed Project, or areas nearby?

- If yes
 - What activities did they do there?
- If no
 - Why not?

- Is the Project area important to you / your family / your community? Why?

RELEVANT INFORMATION TO INCLUDE

- How they learned about the Project area
- First hand experience
- Second hand knowledge (map with *)
- No use
- Trapline number(s) of individual / family members
- Other named family members
- Remember to spell out all proper names

Interview Guide for the BGRFN Traditional Knowledge Study for the New Gold Mine Project

3

HABITATION

Places camped or stayed overnight

PERMANENT HABITATION (PX) & TEMPORARY HABITATION (TX)

Can you show us places you have stayed overnight?

Examples: a cabin you built / use(d), a tent, campsite, other temporary or permanent structures

How many times have you stayed there?

Once shortterm (less than a week) = TX

More than once or longterm = PX

OTHER HABITATION (PX OR TX AND *)

Can you show us places you have heard stories about your family or other BGRFN members staying overnight, but you haven't stayed at yourself?

How many times have they stayed there?

*Once shortterm (less than a week) = TX**

*More than once or longterm = PX**

MAPPING

- Map at an eye height of approximately 10km or less (1:50,000 or better)
- Each site is labeled with a code that includes: site use, site #, modifiers, participant ID
- Teaching code = TA
- Keep list of place names
- Spell out all proper names

Include for each mapped site in Google Earth description field of the dialogue box

- First and last use (day / month / season AND year / decade)
- Frequency of use
- Names and numbers of members who stayed there

SUGGESTED PROMPTS FOR DETAILED KNOWLEDGE AND USE

- Describe the location / the conditions
- Why do you go there?
- How did you find out about this place? / Who showed it to you?
- What do you like about the place?
- What activities do you do when staying there?
- What does this place mean to you?
- Is this place important to you / your family / community? Why?
- Is this place important to sustaining your culture / way of life? How?
- How would you explain the importance of this place to the government / industry?

Interview Guide for the BGRFN Traditional Knowledge Study for the New Gold Mine Project

4

TRANSPORTATION CORRIDORS

Routes used for hunting / fishing / habitation / other rights based practices

TRAIL (TR)

Can you show us routes you have travelled by road or by foot, quad or snowmobile?

For personal use (hunting, fishing, camping, other rights based activities)

Can you show us old trails that have been used by BGRFN members? (map with *)

WATER ROUTE (WR)

Can you show us routes you have travelled along creeks, lakes or rivers by boat?

For personal use (hunting, fishing, camping, other rights based activities)

Can you show us old routes that used to be used by BGRFN members? (map with *)

MAPPING

Include for each mapped site in Google Earth description field of the dialogue box:

- First and last use (day / month / season AND year / decade)
- Frequency of use
- Names and numbers of members who use this route

Transportation routes and all linear features should be controlled

- Map at an eye height of approximately 10km or less (1:50,000 or better)
- Follow the actual route and natural features (not a straight line from A to B)
- Include relevant modifiers (after the site code)
- Secondhand knowledge = *
- Commercial use = \$
- Approximate spatial information = ?

SUGGESTED PROMPTS FOR DETAILED KNOWLEDGE AND USE

- Why do you travel this route?
- How did you learn about this route?
- What do you do when you are travelling along here?
- Is this the only route to get from point A to B, or is there an alternative?
- Was this a new route, or a well-travelled, well-recognized route?
- Is this route important to you / your family / community? Why?
- Is this route important to sustaining your culture / way of life?
- What is the farthest point that you have travelled?

TIME CHECK! Need a break?

Interview Guide for the BGRFN Traditional Knowledge Study for the New Gold Mine Project

5

SUBSISTENCE

Hunting, fishing, and collecting medicines, plants and resources for food or cultural purposes; special habitats / places that these rely on

KILLED OR TRAPPED ANIMALS / BIRDS / FISH (...)

Can you show us places where you have killed or trapped animals or birds?

Can you show us places where you have caught fish?

Personal use – to feed you / your family / your community, or to use for cultural purposes

(Use codes on next page to prompt)

Can you show us places where members of your family or community have killed or trapped animals or birds? *(map with *)*

Can you show us places where members of your family or community have caught fish? *(map with *)*

ENVIRONMENTAL FEATURE (EF)

Can you show us the locations of special habitats or environmental features that are important to animals / fish / birds / plants?

Examples: calving or mating areas, mineral licks, spawning areas

ENVIRONMENTAL FEATURE CORRIDOR (EC)

What routes do animals use to move between environmental features?

Mapping

Include for each mapped site in Google Earth description field of the dialogue box

- First and last use (day / month / season AND year / decade)
- What they did with the meat / fur
- Who they were with
- Add a + if someone was present for the activity, but did not kill the game themselves

EF and MC

- Use controlled polygons (map at an eye height of approximately 10km or less)
- Include relevant information (e.g. salt lick) in the description field
- Pay close attention to where animals cross the Project area
- Include the species in the Google Earth description field (if applicable)

Interview Guide for the BGRFN Traditional Knowledge Study for the New Gold Mine Project

5

SUBSISTENCE CONTINUED

Codes: hunting / trapping / fishing

KILL SITES

BB = Black Bear	GR = Grouse	RB = Rabbit
BI = Bison / Buffalo	MD = Mule Deer	RC = Raccoon
CA = Caribou	MM = Whistler / Marmot	SH = Sheep
CH = Chicken	MO = Moose	WD = White-tailed Deer
EK = Elk	OG = Other Game	
GB = Grizzly Bear	PO = Porcupine	

FURBEARING KILL SITES

BR = Beaver	GT = Goat	OT = Otter
CO = Coyote	LX = Lynx	SQ = Squirrel
ER = Ermine	WE = Weasel	TP = General Trapping Area
FI = Fisher	MK = Mink	WO = Wolf
FO = Other Fur Bearer	MT = Marten	WV = Wolverine
FX = Fox	MU = Muskrat	BO = Bobcat

BIRD KILL SITES

DU = Duck	GR = Grouse	PT = Ptarmigan
EA = Eagle	HA = Hawk	SW = Swan
FL = Falcon	OB = Other Bird	PA = Partridge
GE = Geese	OW = Owl	

FISH CATCH SITES

BH = Bullhead/catfish	EE = Eel	PK = Pickerel / Walleye
BS = Bass	GD = Goldeye	RT = Rainbow Trout
BT = Bull Trout	GY = Grayling	SM = Salmon
CF = Coarse Fish	JF = Jackfish / Pike	SU = Sucker
CR = Char	LS = Lake Shiner	TU = Tulibee
CS = Croppies/sunfish/ blackslab	LT = Lake Trout	ST = Sturgeon
CY = Crayfish	MR = Maria / Burbot	SR = Sauger
DV = Dolly Varden	OF = Other Fish	WF = Whitefish
	PE = Perch	

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

5

SUBSISTENCE CONTINUED

Codes: medicines / plants / other resources

BERRIES / PLANTS / OTHER RESOURCES (...)

Can you show us places where you've collected berries / plants / water / other resources?

Personal use – collect berries / plants / resources for you / your family / your community

(Prompt with codes below)

Can you show us places where members of your family / community have collected berries / plants / water ... ? (map with *)

AB = Aspen Bark
BA = Barks (crafts, construction, etc.)
BE = Berries / Wild Fruit
BL = Balsam
CB = Cambium
CT = Cat Tail
CW = Cottonwood
DL = Dandelion
DP = Dye Plant
EG = Eggs
EM = Earth Material (rocks, clays, etc.)
FE = Feathers
FP = Food Plants (roots, bulbs, cambium)
FW = Firewood
JU = Juniper
FD = Fireweed

LP = Lily Pad
MS = Mosses / Mushrooms
ON = Wild Onion
OP = Other Plant
PA = Parsnip
PC = Pine Cones
PI = Pincherry
PU = Plums
PP = Poplar
RH = Wild Rhubarb
RS = Rose Bush
RW = Rotten Wood
SG = Spruce Gum
WA = Water (drinking water sources)
WL = Wild Rice

MEDICINE PLANTS (MP)

CC = Choke Cherry Bark
CE = Cedar Tea
CI = Chi
DC = Devils Club
FR = Flowers
FU = Fungus
LB = Labrador Tea
MA = Mountain Ash
MI = Mint Tea
MG = Muskeg Tea

NB = Northern Bed Straw
PM = Peppermint
RD = Red Willow
RE = Red Willow Bark
RR = Rat Root
SA = Sage
SE = Sweet Grass
TM = Tamarack
WI = Willow Fungus
YS = Yellow Slippers

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

Can you show us places where you've collected medicine plants?

Personal use – collected medicine for you / your family / your community

Can you show us places where members of your family / community have collected medicine plants?

*(map with *)*

Include for each mapped site in Google Earth description field of the dialogue box

First and last use (day / month / season AND year / decade)

MAPPING

Include for each mapped site in Google Earth description field of the dialogue box

- First and last use (day / month / season AND year / decade)
- Why do you collect medicine / plants / resources?
- What do you do with the medicine / plants / resources?

SUGGESTED Prompts for detailed knowledge and use

- Why do you collect medicine / plants / resources?
- What are these medicines / plants / resources used for?
- How important are these medicines / plants / resources to your daily life?
- Who taught you about collecting and using medicine / plants / resources? Where?
- Have you taught anyone about collecting and using medicine / plants / resources? Who? Where?
- Are these medicines / plants / resources important to sustaining your culture / way of life? How?
- How would you explain the importance of these medicines / plants / resources to the government / industry?
- **Are any of these medicines / plants / resources hard to find outside of the project area and nearby areas? (Who were they with? Species, if applicable?)**

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

Can you show us places where you've collected medicine plants?

Personal use – collected medicine for you / your family / your community

Can you show us places where members of your family / community have collected medicine plants?

*(map with *)*

Include for each mapped site in Google Earth description field of the dialogue box

First and last use (day / month / season AND year / decade)

MAPPING

Include for each mapped site in Google Earth description field of the dialogue box

- First and last use (day / month / season AND year / decade)
- Why do you collect medicine / plants / resources?
- What do you do with the medicine / plants / resources?

SUGGESTED Prompts for detailed knowledge and use

- Why do you collect medicine / plants / resources?
- What are these medicines / plants / resources used for?
- How important are these medicines / plants / resources to your daily life?
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- Are these medicines / plants / resources important to sustaining your culture / way of life? How?
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- **Are any of these medicines / plants / resources hard to find outside of the project area and nearby areas? (Who were they with? Species, if applicable?)**

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

6

CULTURAL USE

Gatherings/ceremonies/teaching areas/burials/spiritual places/place names

GATHERING PLACE (GP)

Can you show us important places where people gather?

Examples: pow wows, rodeos, treaty celebrations

- Use by you / your family members / your community

Current or past

CEREMONIAL PLACE (CP)

Can you show us places that are used for ceremonies?

Examples: cultural dances, sweat lodges

- Use by you / your family members / your community

Current or past

TEACHING AREA (TA)

Can you show us any places that have special knowledge or stories associated with them?

Examples: creation stories, dreamier stories, histories

- Who told you?

Can you show us places that are used for teaching knowledge to children or others?

- Current or past
- Use by you / your family members / your community

BURIAL (BU)

Can you show us places where members of BGRFN are buried or where their remains are (e.g. cremation)?

- Know firsthand or heard from family / community members

SPIRIT (SP)

Can you show us places where spirit beings live or there are special rules about how you act or respect the place?

- Know firsthand or heard from family / community members

PLACE NAME (PN)

Can you show us any places that have special place names?

MAPPING

- PN sites: include in Google Earth description field the place name and translation
- Include relevant modifiers (after the site code)
 - Secondhand knowledge = *
 - Commercial use = \$
 - Approximate spatial information = ?
- Prompt for detailed knowledge and use as relevant

MAPPING

Include for each mapped site in Google Earth description field of the dialogue box

- First and last use (day / month / season AND year / decade)
- Who they were with / who they heard about it from

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

7

IMPAIRED USE

Specific and general impaired use due to impacts from industry and other

GENERAL IMPAIRED USE (GL)

Can you show us any general areas where you used to hunt / gather / fish / camp / practice other rights, but do not go anymore because of impacts from industry or other reasons?

SPECIFIC IMPAIRED USE (SL)

Can you show us any specific places where you used to hunt / gather / fish / camp / practice other rights, but where you do not do those activities anymore because of impacts from industry or other reasons?

MAPPING

- Map at an eye height of approximately 10km or less (1:50,000 or better)
- Transportation routes and linear features should be controlled (follow natural features, do not draw a straight line from A to B)

Include for each mapped site in Google Earth description field of the dialogue box

- First and last use (day / month / season AND year / decade)
- Reason for avoidance

SUGGESTED PROMPTS FOR DETAILED KNOWLEDGE AND USE

- Why can you no longer go to this area?
- What activities did you used to do in this area?
- How often did you go to or use this area?
- Can you do those activities somewhere else?
- How does it make you feel that you can no longer go to or use this area?
- How has the loss of use impacted you / your family / your community?
- Has the loss of use impacted your culture / way of life? How?
- How would you explain the importance of this area to the government / industry?
- How would you explain the impact that not being able to use the area has had on you to the government / industry?

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

8 FINAL QUESTIONS & CONCLUSIONS

REVIEW VISUAL IMPACT MODEL

Turn on industry data and participant's mapped sites

- Based on your understanding of the Project, do you think the proposed mine will affect your ability to enjoy your treaty rights or way of life?
 - If so, how so?
 - What about your children's or grandchildren's ability to enjoy their treaty rights or way of life?
- What do you think the most important things are for BGRFN to focus on in relation to the proposed Project?
- Are there any other important places or issues related to the Project that you think we should be documenting today?
- Are there other BGRFN members that we should talk to?

CONCLUSION

Read with audio & video recorders on after every session

Today is ____, 2013. We have just finished interviewing ____ for the Big Grassy River First Nation of the proposed New Gold Mine Project. Thank you for coming.

My name is ____ and I'm here at the ____ building in ____ with _____. We've given ____ participant ID # _____. We've mapped a total of ____ sites in Google Earth at 1:50,000 or better, and recorded a total of ____ tracks on the digital recorder. Notes are recorded in/on _____. This interview has taken approximately ____ hours ____ minutes.

MAPPING

- Save audio and video files to computer and portable hard drive
Example: X08_ParticipantName_21June2013_01.mp3
- Save KMZ files
- Complete interview tables and notes
- Upload all files to Alfresco

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

8 FINAL QUESTIONS & CONCLUSIONS

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CONCLUSION

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

INTERVIEW CHECK LIST

MAKE SURE YOU HAVE

- Laptop with mouse, microphone, projector, video camera, and other equipment
- Batteries (AA, AAA, 9V), memory cards, laser pointer, extension cord
- Consent forms, notebooks, pens, and other supplies
- Gifts and/or honoraria for participants

SET UP GOOGLE EARTH

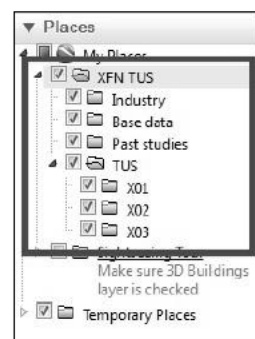
- Make sure project area with place name layers are projected on the screen
- Set up file structure (see example)
 - If interviewing more than one person, make sure each participant has a separate folder
 - Organize data into industry, base data, past studies, or TUS sub-folders

CHECK YOUR EQUIPMENT

- Make sure audio settings are set to record on MP3 (not WAV)
- Always test your recorders and microphones by playing back audio and video recorders

INFORM THE PARTICIPANT AND MAKE THEM COMFORTABLE

• Get them to the office location



Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

8 FINAL QUESTIONS & CONCLUSIONS

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Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

MAPPING NOTES

Map at an eye height of approximately 10km or less (1:50,000 or better)

Label each site consistently in the NAME FIELD of the site properties dialogue box (see ex.)

- Each code in should indicate
 - Site use
 - Site number
 - Modifiers (if relevant)
 - Source (participant ID)
- Modifiers (after the site number)
 - Firsthand knowledge has no modifier
 - Example: MO01-X08 (member with ID# X08 reports first mapped temporary shelter place where she has camped)
 - Secondhand knowledge is mapped with a *
 - Example: MO01*-X08
 - Approximate spatial information is mapped with a ?
 - Example: MO01?-X08
 - Commercial use (including guiding/outfitting) is mapped with a \$
 - Example: MO01\$-X08
 - First-hand witness of an activity is mapped with a +
 - Example: MO01+-X08

Google Earth - New Placemark

Name: [SITECODE][*?]-[USER ID]

Zone: 10 U

Easting: 505407.87 m E

Northing: 5463294.02 m N

Description: NOTES ABOUT THE SITE, INCLUDING DATE, WHO WAS INVOLVED, ETC.

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

8 FINAL QUESTIONS & CONCLUSIONS

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Turn on industry data and participant's mapped sites

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Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

MAPPING CODES – PAGE 1/2

HABITATION & TRANSPORTATION

PX = Permanent Habitation

TX = Temporary Habitation

TR = Trail

WR = Water Route

IMPORTANT PLACES & HABITAT

EC = Environmental Feature Corridor

EF = Environmental Feature

KILL SITES

BB = Black Bear

GR = Grouse

RB = Rabbit

BI = Bison / Buffalo

MD = Mule Deer

RC = Raccoon

CA = Caribou

MM = Whistler / Marmot

SH = Sheep

CH = Chicken

MO = Moose

WD = White-tailed Deer

EK = Elk

OG = Other Game

GB = Grizzly Bear

PO = Porcupine

FURBEARING KILL SITES

BR = Beaver

GT = Goat

OT = Otter

CO = Coyote

LX = Lynx

SQ = Squirrel

ER = Ermine

WE = Weasel

TP = General Trapping Area

FI = Fisher

MK = Mink

WO = Wolf

FO = Other Fur Bearer

MT = Marten

WV = Wolverine

FX = Fox

MU = Muskrat

BO = Bobcat

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

8 FINAL QUESTIONS & CONCLUSIONS

REVIEW VISUAL IMPACT MODEL

Turn on industry data and participant's mapped sites

- Based on your understanding of the Project, do you think the proposed mine will affect your ability to enjoy your treaty rights or way of life?
 - If so, how so?
 - What about your children's or grandchildren's ability to enjoy their treaty rights or way of life?
- What do you think the most important things are for BGRFN to focus on in relation to the proposed Project?
- Are there any other important places or issues related to the Project that you think we should be documenting today?
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CONCLUSION

Interview Guide for the BGRFN Knowledge and Use Study of the Rainy River Gold Project

MAPPING CODES – PAGE 2/2

MEDICINES, PLANTS & OTHER RESOURCES

AB = Aspen Bark	MI = Mint Tea
BA = Barks (Crafts, construction, etc.)	ME = Mosses
BE = Berries/Wild Fruit	MG = Muskeg Tea
BL = Balsam	MS = Mushrooms
CB = Cambium	NB = Northern Bed Straw
CC = Choke Cherry Bark	ON = Wild Onion
CE = Cedar Tea	OP = Other Plant
CI = Chi	PA = Parsnip
CT = Cat Tail	PC = Pine Cones
CW = Cottonwood	PM = Peppermint
DC = Devil's Club	PP = Poplar
DL = Dandelion	RD = Red Willow
DP = Dye Plant	RE = Red Willow Bark
EG = Eggs	RH = Wild Rhubarb
EM = Earth Material (rocks, clays, etc.)	RR = Rat Root
FD = Fireweed	RS = Rose Bush
FE = Feathers	RW = Rotten Wood
FP = Food Plant (roots, bulbs, cambium)	SA = Sage
FR = Flowers	SE = Sweet Grass
FU = Fungus	SG = Spruce Gum
FW = Firewood	TM = Tamarack

Appendix 4: Curriculum Vitae, Rachel Olson, Ph.D.

Education

Doctor of Philosophy in Social Anthropology, University of Sussex, Brighton, UK, 2013

Master of Research in Social Anthropology with Distinction, Ethnology and Cultural History, University of Aberdeen, Scotland, UK, 2003

Bachelor of Arts in Anthropology with Distinction, University of Alberta, Edmonton, AB, 1999

Rachel Olson Employment History

The Firelight Group – North Vancouver, BC

Director (2009 to date)

Responsible, as co-founder and director, for helping establish The Firelight Group, a firm of aboriginal and non-aboriginal professionals specialized in providing respectful and respected environmental and social science research, consulting, and support services in processes where aboriginal and non-aboriginal interests interact, and where good relationships are desired by all sides. Tasks include business development, as well as design, development, and delivery of technical services including community-based traditional knowledge research and documentation systems, environmental and socio-cultural impact assessments and monitoring programs, indigenous land use mapping, GIS technical support and training, archival research, community involvement processes, and First Nations consultation support services.

National Aboriginal Health Organization – Ottawa, ON

Research Officer (2007 to 2008)

As a member of the First Nations Centre research team, my primary research areas were the topics of maternity care and environmental health. Also held the research proposal development and workshop development files. Tasks included primary research, technical writing, and participating in various committees and workshops across Canada. Was primary author of NAHO's series entitled, "Celebrating Birth".

United Nations Educational, Scientific and Cultural Organization - Paris, France

Consultant (2006-2007)

Worked with the LINKS (Local and Indigenous Knowledge Systems) program in the Science Sector and facilitated ongoing projects with indigenous communities in New Zealand, Micronesia, and Central America. Also focused on proposal development and editing and publishing various LINKS documents, including edited volumes.

School of Nursing Research, University of British Columbia – Vancouver, BC

Social Science Researcher (2004-2005)

Position of Health Research Associate for the research project, "Access to Primary Care Services for Aboriginal People in an Urban Centre." Duties include literature reviews, project coordination, and data collection, including participant observation of an Emergency Department, and in-depth interviews with aboriginal patients and health professionals.

THE FIRELIGHT GROUP, 4270 HWY 100 UNIT 100, VICTORIA, BRITISH COLUMBIA, V8P 1J1

Ecotrust Canada – Vancouver, BC

Aboriginal Mapping Network Coordinator (2003-2004)

Managed the Aboriginal Mapping Network program by meeting and engaging with like-minded individuals and organizations at various conferences and workshops. Coordinated of over 120 aboriginal mapping professionals from across North America, Malaysia and Panama for the "Mapping for Communities: First Nations, GIS and the Big Picture" conference, held on November 20-21, 2003 in Duncan, BC. Conducted a comprehensive evaluation of the Aboriginal Mapping Network.

Dene Tha' First Nation - Chateh, AB

Data Collection Manager (2001 to 2003)

Developed and implemented Traditional Use Study in two First Nations communities, Chateh and Meander River. Included developing research design, methodology, training community researchers, and reporting to the Steering Committee of the Dene Tha' Consultation Pilot Project.

Treaty 8 Tribal Association - Fort St. John, BC

Interview Coordinator (1999-2000)

Coordinated land use mapping and life history interviews with community researchers in two communities, Halfway River and Doig River, focusing on qualitative methodologies and mapping processes.

Project Experience – Traditional Ecological Knowledge (TEK) and Traditional Use Studies (TUS)

Tlicho Government Northwest Territories	Project manager and technical lead for the Tlicho Government indigenous knowledge study for the Fortune Minerals NICO project. The project involved methodology development, data collection, analysis and final reporting. Presented findings at the public hearings of the MacKenzie Valley Environmental Impact Review Board.
Treaty 8 Tribal Association Northeastern British Columbia	Researcher for a Traditional Knowledge, Use and Occupancy Study for the Proposed 'Site C' Area along the Peace River. The project involved work planning, gap analysis, methodology development, and leading field interviews using direct-to-digital mapping.
Mikisew Cree First Nation Northern Alberta	Co-researcher for an Indigenous Knowledge study for assessing Shell-specific oil sands development projects near Fort McKay. The project involved work planning, gap analysis, methodology development, and leading and participating in field interviews using direct-to-digital mapping.

Athabasca Chipewyan First Nation and the Mikisew Cree First Nation Northern Alberta	Co-researcher for the collection of traditional ecological knowledge data for the Athabasca River Use and Traditional Ecological Knowledge Study. The project involved interviews with community members and active land users, established methodologies, data analysis, and final reporting.
UNESCO-LINKS New Zealand	Coordinated the Maori language version of the CD-ROM project, The Canoe is the People, entitled He Waka He Tangata. The goal of the CD-ROM is to revitalize the transmission of indigenous knowledge by strengthening the dialogue between elders and youth. New ICT tools like CD-ROMs are recognized as powerful vehicles for traditional knowledge and the bolstering of oral traditions. The CD-ROM includes 70 videos, 41 stories and accounts, 40 images and diagrams, of which 11 are animated, in addition to numerous maps, photos and texts.
Dene Tha' Nation Alberta	Developed and implemented Traditional Use Study in two First Nations communities, Chateh and Meander River. Included developing research design, methodology, training community researchers, and reporting to the Steering Committee of the Dene Tha' Consultation Pilot Project.
Halfway River First Nation British Columbia	Coordinated land use mapping and life history interviews with community researchers. Included training in qualitative methodologies and mapping processes.
Doig River First Nation British Columbia	Coordinated land use mapping and life history interviews with community researchers. Included training in qualitative methodologies and mapping processes.
Tr'ondek Hwech'in First Nation Yukon	Oral History Project (1999), focused on collecting life history interviews with elders, and stories of life in fish camps along the Yukon River.
Halfway River First Nation British Columbia	Completed site reports for the Halfway River First Nation Traditional Use Study as a research assistant for Third Stone Community Research.
Project Experience – Health and Social	
National Aboriginal Council of Midwives Canada-wide	Assisted in the organization of the annual meeting, and wrote the annual report for the Council. Ongoing participation with the Council and continue to support through technical writing/proposal development as requested.

Norway House Cree Nation Manitoba	On-going engagement with the community and local midwifery program. Designing and implementing a body mapping workshop with mother's focused on their childbirth experiences. Working collaboratively with the midwifery program and students on a broader project with regards to rural and remote maternity care.
Ktunaxa Nation Southern British Columbia	Wrote the health and language section of "Section C: Ktunaxa Nation Use, Rights and Interests Assessment for Teck Coal's Line Creek Operations Phase II Project". The project involved interviews, data analysis and final reporting.
National Aboriginal Health Organization Canada-wide	Celebrating Birth Series. Researched and wrote all papers and documents associated with the National Aboriginal Health Organization's series on maternal health.
Opaskwayak Cree Nation Manitoba	Assisted in the conducting of interviews for a qualitative study on mother's experiences of childbirth from a northern Manitoban community. Part of the Strengthening Families: Maternal Child Health Program Evaluation program.
Red Road HIV/AIDS Network British Columbia	Researcher for the "Mapping the Road to Healthier Communities" map directories of health services for the City of Vancouver and the Northern British Columbia region. Guest Editor for "Bloodlines" magazine. Continuing support in research and writing as requested.
Mother Saradadevi Social Service Society Tamil Nadu, India	MSSSS is a grassroots NGO working with HIV/AIDS, both in prevention and care, in the Dindigul District of Tamil Nadu. Conducted a baseline survey of youth and sexual health issues to aid in the development and implementation of prevention programmes in the district.

Selected Publications

Olson, Rachel and Carol Griffin. (2012). An Evaluation of Midwifery Services in Manitoba. Midwives Association of Manitoba for Manitoba Health. Winnipeg, Manitoba.

Olson, Rachel and Carol Couchie. (2010). Clearing the Path: An Implementation Plan for Midwifery Services in First Nations and Inuit Communities. Ottawa: Government of Canada.

Olson, Rachel. (2010). Restoring the Connection: Exploring Aboriginal midwifery and the context of the relocation for childbirth and in First Nation communities in Canada. In, Reproduction, Migration, and Identity. Unnithan-Kumar, Maya, and Sunil Khana (eds). Forthcoming.

National Aboriginal Health Organization. (2009). Celebrating Birth- Aboriginal Midwifery in Canada. Ottawa: National Aboriginal Health Organization. [Primary Author]

National Aboriginal Health Organization. 2008. Celebrating Birth - Exploring the Role of Social Support in Labour and Delivery for First Nations Women and Families. Ottawa: National Aboriginal Health Organization. [Primary Author]

Olson, Rachel. (2008). Exploring the Potential Role of Doulas and Doula Training for the Children and Youth Division of First Nations and Inuit Health, Health Canada. Ottawa: Government of Canada. Internal circulation only.

Corbett J. M., Giacomo Rambaldi, Peter A. Kwaku Kyem, Daniel Weiner, Rachel Olson, Julius Muchemi and Robert Chambers (2006). Overview - Mapping for Change the emergence of a new practice." Participatory Learning and Action 54. 13-20.

Candler, Craig, Rachel Olson, Steven DeRoy, and Kieran Broderick. (2006). PGIS as a Sustained (and Sustainable?) Practice: The Case of Treaty 8 BC. Participatory Learning and Action 54.

Guest Editor. Participatory Learning and Action. Issue 54, April 2006. International Institute for Environment and Development. London, UK.

Guest Editor. Bloodlines Magazine. Issue 5: Spring 2005. Red Road HIV/AIDS Network Society. West Vancouver, BC.

Olson, Rachel. Contributor to Encyclopaedia of the Arctic. 2003. Ed. Mark Nutall. Fitzroy Dearborn, Routledge: New York, NY.

Conferences / Workshops

Paper presentation, Uncertainty and Disquiet: 12th European Association of Social Anthropologists Association. Paris, France, July, 2012.

Presenter, Workshop on Indigenous Mapping and Cartography. United Nations Educational, Scientific and Cultural Organization, Paris, France, November, 2007.

Keynote Presenter, Mapping for Change, September 7 – 11, 2005 in Nairobi, Kenya, Africa

Participant of Strategic Planning Sessions, ESRI International User Conference, July 2004 in San Diego, California

Paper presentation, Indigenous Communities Mapping Initiative Conference, March 10 – 15, 2004 in Vancouver, British Columbia

Paper presentation, Breaking the Ice: Transcending Borders through Collaboration and Interdisciplinary Research, 7th ACUNS Student Conference on Northern Studies, October 24-26, 2003 at the University of Alberta, Edmonton, Alberta

Other Information

Member of the BC Aboriginal Perinatal Health Committee. Member of the Doula Training Committee.

Member of the Reading Panel for the 2004 Buffet Award for Indigenous Leadership in Portland, Oregon.

Proficient user of software applications such as Microsoft Office, Nvivo, and SPSS.

Completed the Labour Support Course – Training Doulas, held by the Doulas of North America. October, 2004.

Registered member of the Tr'ondek Hwech'in First Nation.