APPENDIX EE COUNTRY FOODS ASSESSMENT

Country Foods Assessment

Treasury Metals Incorporated

November 10, 2014

ACRONYMS USED IN DOCUMENT

CIL – carbon-in-leach

the Company – Treasury Metals Incorporated

EEM – Environmental Effects Monitoring

FRI – Forest Resource Inventory

FMZ – Fish Management Zone

ha – hectares

HQ – Hazard Quotient

LSA – Local Study Area

MMER – Metal Mining Effluent Regulations

OMNRF- Ontario Ministry of Naural Resources and Forestry

the Project – the Goliath Gold Project

PWQO – Provincial Water Quality Objectives

HQ – Hazard Quotient

ha – hectares

RSA – Regional Study Area

Treasury – Treasury Metals Incorporated

TRV – Toxicity reference value

TSF – Tailings Storage Facility

WMU – Wildlife Management Unit

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1. INTRODUCTION

Treasury Metals (Treasury) is developing the Goliath Gold Project (the Project) in northwest Ontario. Local people, including First Nations, may consume country foods in the general region of the Project as part of their diet.

Country foods include animals, plants, and fungi used by humans for nutritional or medicinal purposes that are harvested through hunting, fishing, or gathering of vegetation. The quality of country foods is directly related to the quality of the surrounding environmental media (e.g., soil, water, and vegetation).

For the Project, the primary contaminants of potential concern are most likely to be metals, given that the Project includes the development of a metal mine. As metals occur naturally in the surrounding environment (e.g., soil, water), Project activities could potentially change metal concentrations in environmental media. As a result, metal concentrations in plants and animal tissues could also be altered, which could have the potential to affect the health of human consumers of country foods. Thus a baseline assessment of health risk associated with consumption of country foods in the vicinity of the Project was warranted to support a subsequent environmental assessment process.

2. PROJECT OVERVIEW

2.1 PROJECT LOCATION

The Goliath Gold Project is located within with the Kenora Mining Division in northwestern Ontario (Figure 2.1). The Project site is approximately 4 km northwest of the village of Wabigoon, 20 km east of Dryden and 2 km north of the Trans-Canada Highway 17 and within the Hartman and Zealand townships (Figure 2.2). Access to the Goliath Gold Project property is via existing gravel roads managed through the Local Services Board: Tree Nursery Road and Anderson Road which originates at Highway 17, west of the village of Wabigoon.

The Project is located within the area covered by Treaty 3. The Treaty 3 area includes approximately 14,245,000 hectares in Ontario ranging from the vicinity of Upsala in the east, following the Canada-United States border in the south, and extending past the Ontario-Manitoba border in the west. Treaty 3 includes 28 First Nations communities and a number of villages and towns including Wabigoon, Dryden, Eagle River, Vermillion Bay, Sioux Lookout, Atikokan, Fort Frances, and Kenora. The Project is also located within an area identified by the Métis Nation of Ontario as the Treaty 3/Lake of the Woods/Lac Seul/Rainy River/Rainy Lake traditional harvesting territories, also named Region 1.

The physical address of the Project Office is:

Treasury Metals Incorporated – Goliath Gold Project

899 Tree Nursery Road

Wabigoon, Ontario, Canada

P0V 2W0

The location of the Project Site (centered on the open pits) is:

UTM Coordinates (UTM NAD 83 15N):

- Easting – 528210.0

- Northing – 5511680.0

Latitude and Longitude

- Latitude – 49° 46’ 25.00” North
- Longitude – 92° 36’ 30.00” West

GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

SCALE: 10 000 000

TREASURY METALS INC.

LOCATION OF GOLIATH GOLD PROJECT (PROVINCIAL SCALE)

FIGURE: 2.1 | REV.01

DESIGN: AT 06 FEB. 2014
GIS: AT 20 FEB. 2014
CHECK: AT 16 OCT. 2014

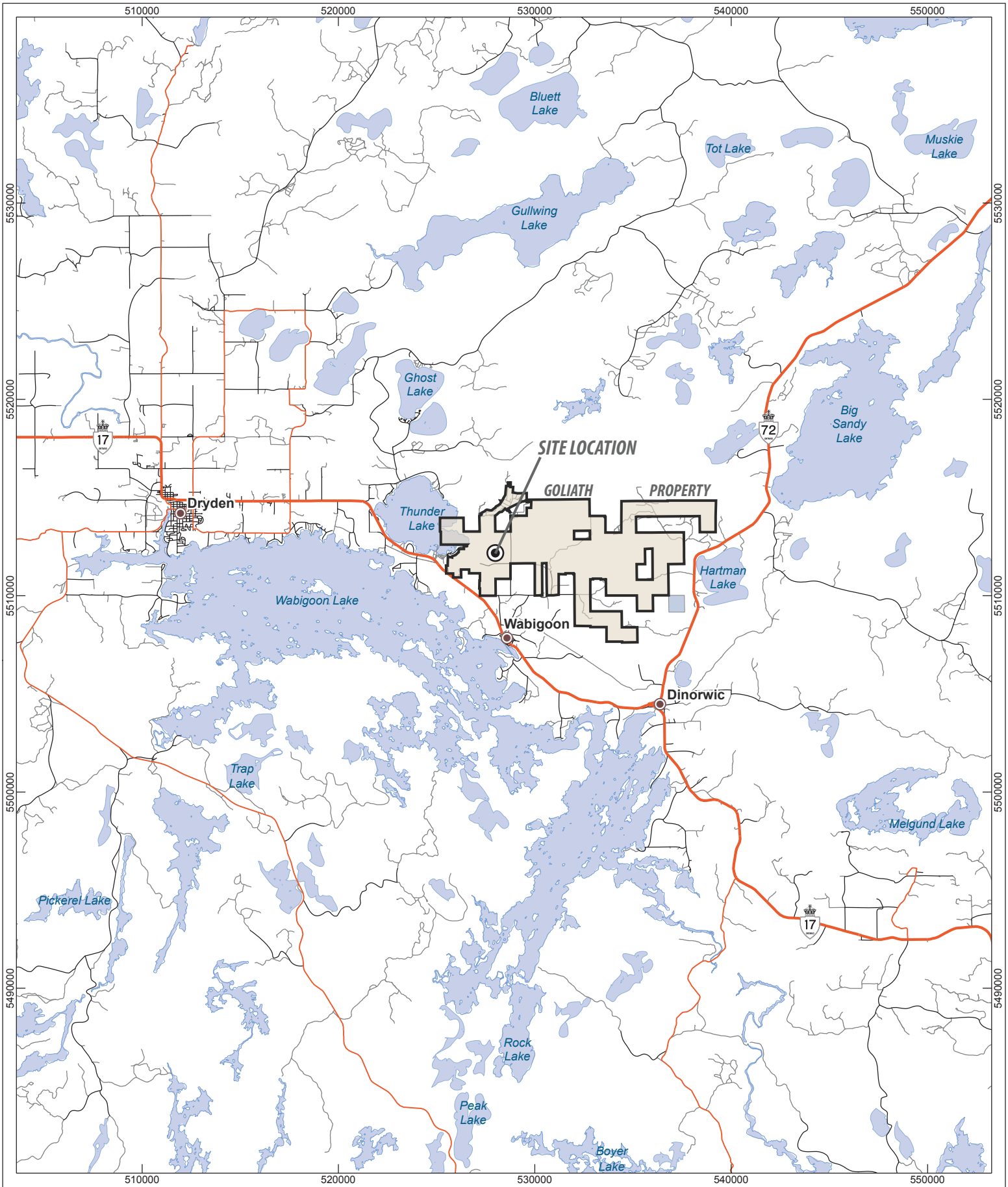
LEGEND

- Populated Area
- Goliath Gold Project Indicator
- Highway/Major Roadway
- Major Waterbody
- Canada
- United States

N

0 100 200 300
Kilometers

REFERENCE
Data by Treasury Metals Inc.
Projection: NAD83 UTM Zone 15N



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

LOCATION OF GOLIATH GOLD PROJECT (LOCAL SCALE)

FIGURE: 2.2 | REV.01

SCALE: 250 000

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2014
GIS: AT 20 FEB. 2014
CHECK: AT 16 OCT 2014

LEGEND

- Populated Area
- Goliath Gold Project
- Waterbody
- Project Site
- Arterial Road
- Highway
- Local Road
- Recreational Road

N

0 2,000 4,000 6,000
Meters

REFERENCE
Data by Treasury Metals Inc.
Projection: NAD83 UTM Zone 15N

2.2 PROJECT DESCRIPTION

The mine layout places all mine related facilities in close proximity to the proposed open pit and, to the extent possible, on private land parcels owned by Treasury (Figure 2.3). The Project footprint will cover approximately 188 ha during the maximum of extent of operations with 133 ha or 71% of the footprint on Treasury private lands.

Operation will occur at a rate of approximately 2,700 tonnes of ore per day to process a total of approximately 5,500,000 tonnes of open pit ore and 3,500,000 tonnes of underground ore over the 10-12 year operational phase of the mine. Overburden, waste rock, and low grade ore extracted from the open pit will be stockpiled and stored in nearby storage areas (waste rock storage area, overburden storage area, and low grade stockpile (Figure 2.4).

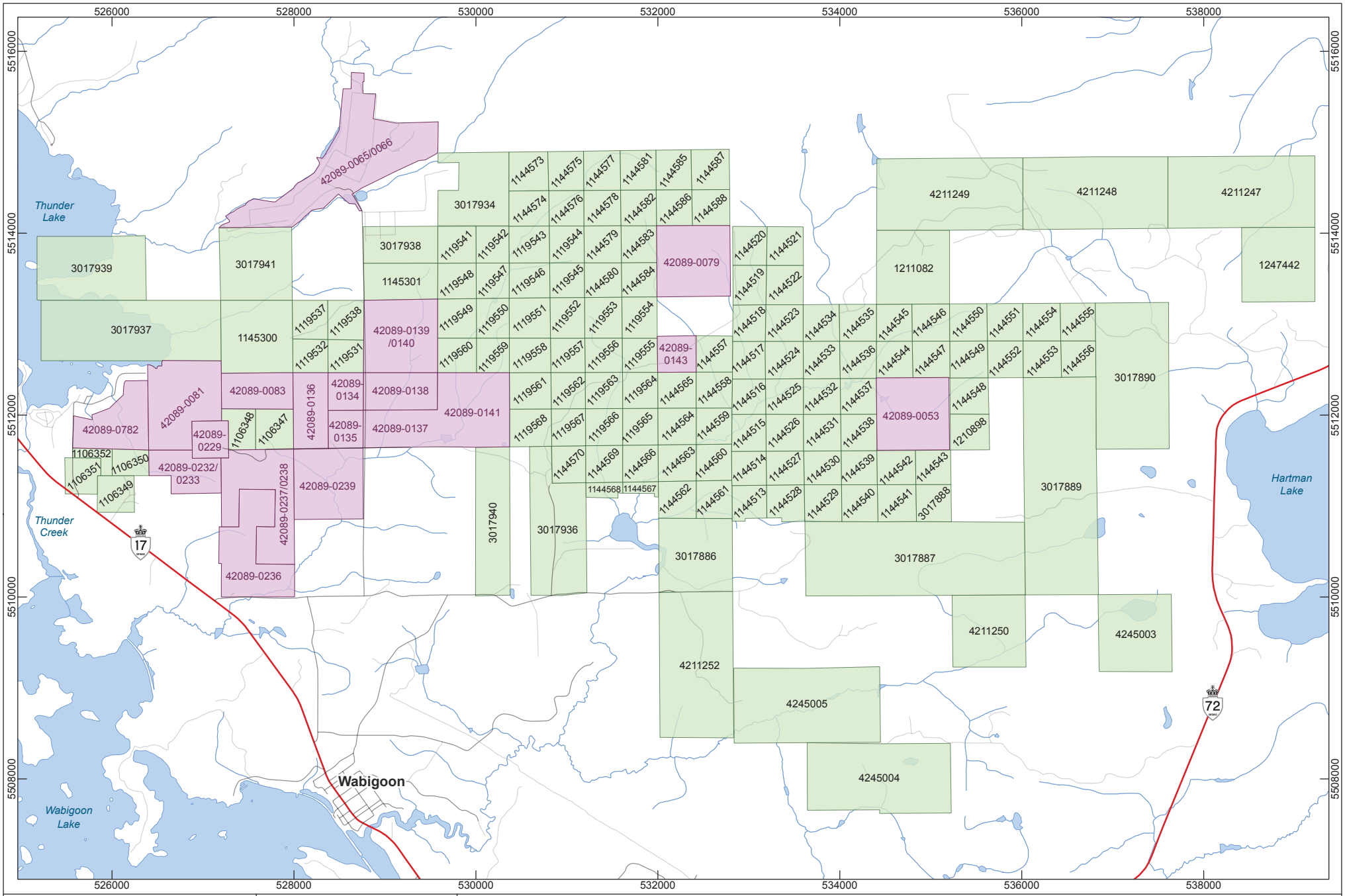
The processing plant at the Project will consist of a standard gravity/carbon in-leach (CIL) circuit with cyanide destruction of CIL tails (Figure 2.5). Tailings will be stored in a constructed Tailing Storage Facility (TSF). A high proportion of the ore processing plant water requirement will be sourced though the integrated site water management of water recycled from the TSF, open pit dewatering, and runoff collected from stockpiles collection ponds. Initially start-up water will be sourced from irrigation ponds south of the Treasury Metals Project Office, located in the former Ontario Ministry of Natural Resources and Forestry Tree Nursery facility. Excess site water will be discharged to Blackwater Creek via a polishing pond, and additional water treatment via reverse osmosis plant (Figure 2.6). Treasury has committed to discharge all water at applicable Federal and Provincial discharge requirements and will be protective of receiving water aquatic life.

Mining operations will be supported by the development of an explosives storage facility and a number of ancillary buildings. A maintenance garage, warehousing, and administration complex will be developed adjacent to the processing facility. In addition, Treasury intends to use existing infrastructure provided in the warehousing, and office facilities at the current Project Office. No on-site accommodations will be constructed as part of the development. Project personnel are expected to commute from the local communities of Wabigoon, Dryden, Ignace, and Sioux Lookout as well as local First Nation communities. Potable water will be sourced primarily from groundwater resources.

Non-hazardous solid waste will be stored temporarily for subsequent transport to an existing off-site landfill facility. The City of Dryden landfill currently has the capacity to support the future Goliath non-hazardous waste requirements. All sanitary and domestic sewage waste will be sent to an offsite contactor, all waste will be stored onsite in receiving/holding tanks prior to removal by an approved contactor. Waste oil and lubricants will be stored in containment vessels in bermed areas, and periodically removed by licensed haulers to an off-site licensed facility. Spent solvents, cleaners, and waste anti-freeze will also be stored in similar fashion and disposed of at a licensed facility off-site.

The existing power infrastructure includes an 115kV and 230kV Hydro One M2D line that cuts diagonally across the project property. Current electrical power is supplied by a separate and smaller power line that runs parallel to the Tree Nursery Road. Permanent power will be provided through the construction of a substation located on site.

As part of the development of the Project, a short section of Blackwater Creek will need to be diverted. This realignment is required for the safe development and operation of the TSF and the processing facility.



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

CLAIMS AND DISPOSITONS

FIGURE: 2.3 | REV.01

SCALE: 55000

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2013
GIS: AT 21 FEB. 2013
CHECK: AT 23 SEP. 2014

LEGEND

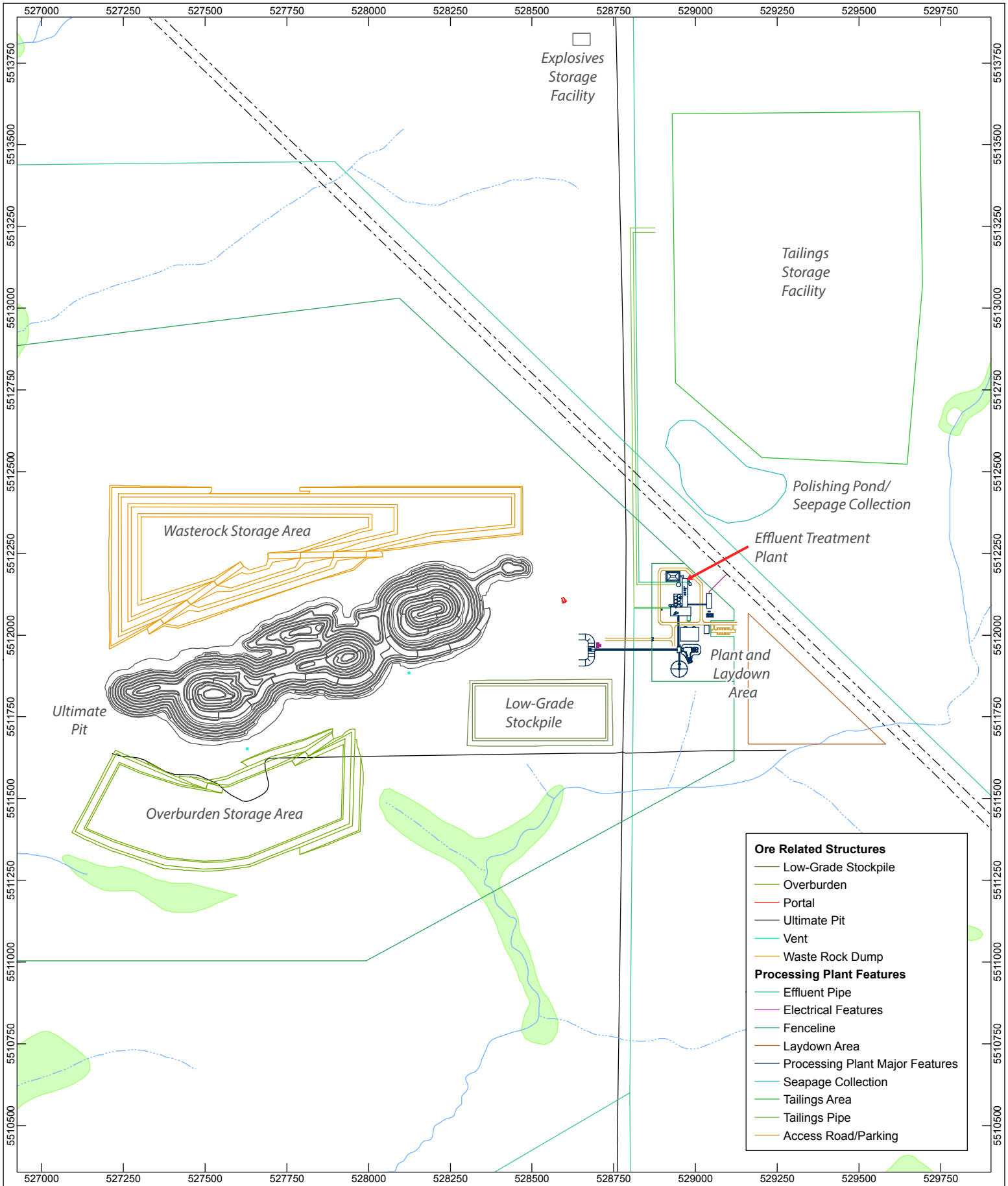
- Expressway / Highway
- Local
- Resource / Recreation
- Waterbody
- Watercourse
- Treasury Metals Disposition
- Treasury Metals Mining Claim

N

0 500 1,000 1,500 2,000
Meters

REFERENCE

Base Data: Treasury Metals Inc.
Claims Data: MNDM
Disposition Data: Treasury Metals Inc.
Projection: NAD83 UTM Zone 15N



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

GENERAL ARRANGEMENT OF PROJECT SITE DURING OPERATIONS PHASE

FIGURE: 2.4 | REV.00

SCALE: 15 000

TREASURY METALS INC.

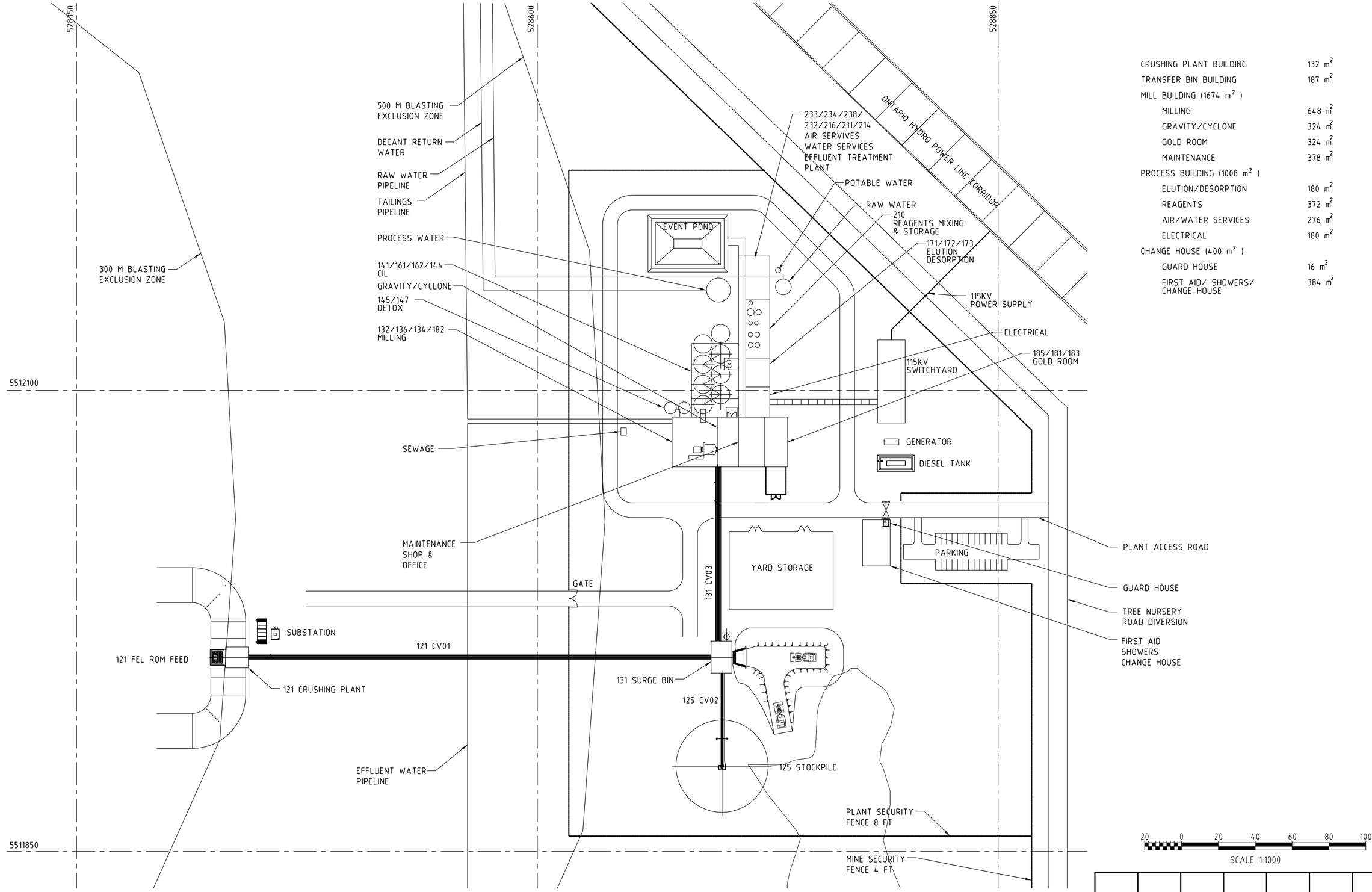
DESIGN: AT 20 FEB. 2014
GIS: AT 24 JUNE. 2014
CHECK: AT 12 SEP. 2014

Intermittent Watercourse
Permanent Watercourse
Roadway
Wetland
Waterbody
Utility Line

N

0 100 200 300
Meters

REFERENCE
Data by Treasury Metals Inc.
Projection: NAD83 UTM Zone 15N



CRUSHING PLANT BUILDING	132 m^2
TRANSFER BIN BUILDING	187 m^2
MILL BUILDING (1674 m^2)	
MILLING	648 m^2
GRAVITY/CYCLONE	324 m^2
GOLD ROOM	324 m^2
MAINTENANCE	378 m^2
PROCESS BUILDING (1008 m^2)	
ELUTION/DESORPTION	180 m^2
REAGENTS	372 m^2
AIR/WATER SERVICES	276 m^2
ELECTRICAL	180 m^2
CHANGE HOUSE (400 m^2)	
GUARD HOUSE	16 m^2
FIRST AID/ SHOWERS/ CHANGE HOUSE	384 m^2

Figure 2.5

DRG No	REFERENCE DRAWINGS

No	DATE	REVISIONS	DRN	CHK'D	DESIGN	DESIGN APP'D	PROJ APP'D	CLIENT APP'D
A	24MAR14	ISSUED FOR STUDY	MFJ		MB	DT	TF	

DRAWN	CHECKED	DESIGN	SENIOR ENG	DESIGN APP'D	PROJ APP'D	CLIENT APP'D

CLIENT: TREASURY METALS INC.

PROJECT: GOLIATH GOLD

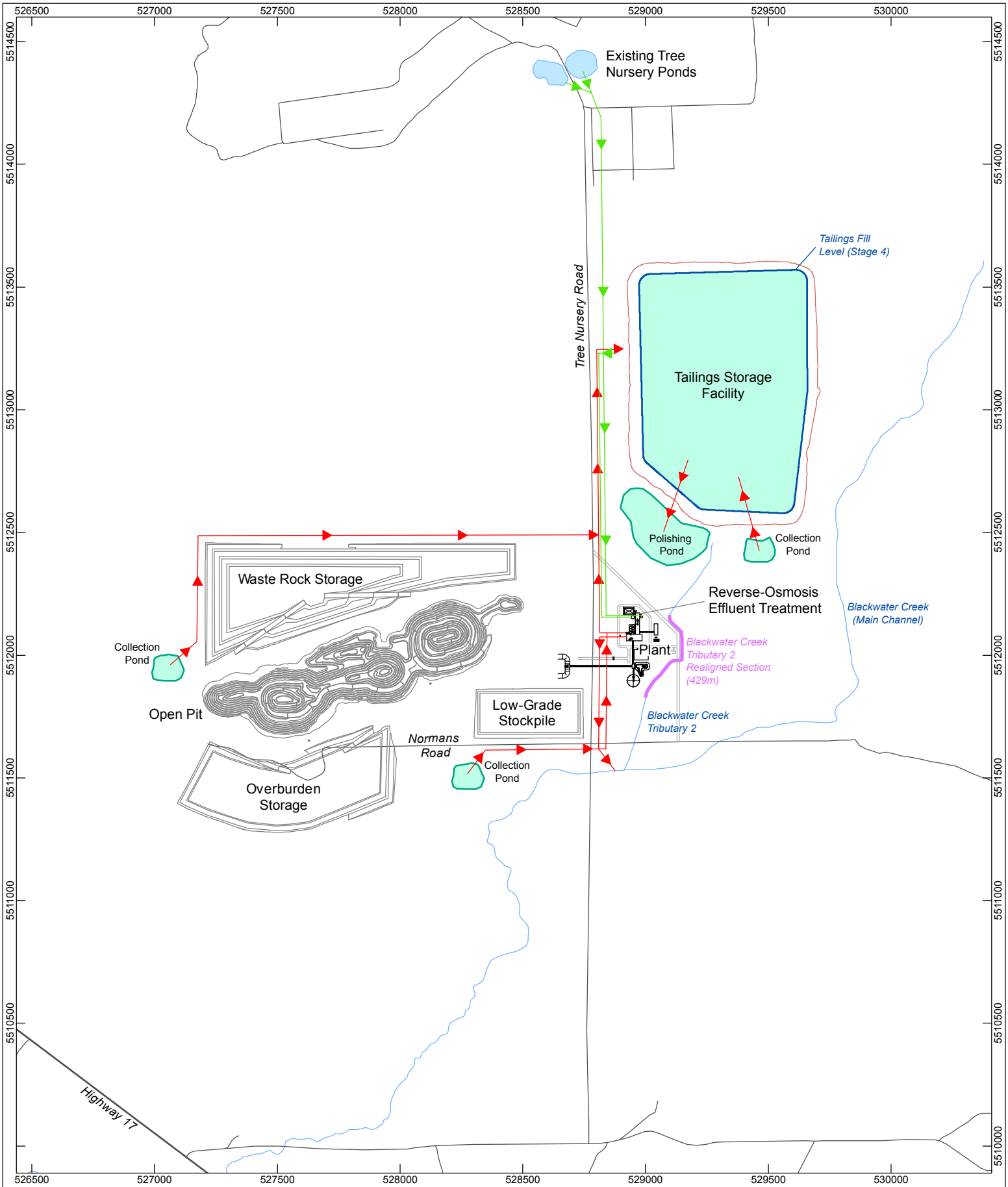
Lycopodium
Lycopodium Minerals Canada Ltd Corp. No: 767 852-5
5060 Spectrum Way, Suite 302, Mississauga, Ontario L4W 5N5
Phone: (905) 206 2600 www.lycopodium.com.au

DRAWING TITLE: PROCESS PLANT SITE MECHANICAL GENERAL ARRANGEMENT PLAN - ALTERNATIVE 1

SCALE	JOB No.	DWG No.	REV.
1:1000	5027	5027-G-003	A

DRAWN	DATE
MFJ	20FEB14

A1



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

Discharge Networks and Water Structures

FIGURE: 2.6 | REV.03

NOT FOR CONSTRUCTION

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2014
GIS: AT 21 AUG. 2014
CHECK AT 12 SEP. 2014

- Tailings Fill Level
- Tailings Embankment Toe
- Water Intake
- Water Output
- Main Processing Plant Structures
- Access Roads/Parking
- Existing Road
- Blackwater Creek (Post Realignment)
- Realigned Section of Blackwater Creek
- Created Water Structure
- Existing Water Structure

0 100 200 300
Meters

N

Notes:

1. *UTM Zone 15N, NAD83*
2. *Base Data Source: OBM*
3. *1:20 000 scale NTS*
4. *Non Base Data by TML*

3. BACKGROUND INFORMATION

Data used in this country food assessment was obtained from local studies conducted in the area of the Project in support of Environmental Impact Statement (EIS) completion and Project design. All sources can be sourced within the EIS document appendices. Data sources reviewed to support this country food assessment includes:

2010 – 2011: Baseline Study Report (Klohn Crippen Berger);

2012: Archeological Assessment (Boreal Heritage Consulting);

2012 – 2013: Aquatic Baseline Study (DST Consulting Engineers);

2013: Terrestrial Wildlife Study (DST Consulting Engineers);

2013: Wetland Baseline Study (DST Consulting Engineers);

2013: Surface Hydrology Study (DST Consulting Engineers);

2014: Geochemical Evaluation of the Goliath Project (EcoMetrix);

2014: Geochemical Modelling (Tetra Tech);

2014: Noise Baseline Study, Acoustic Assessment and Environmental Noise Assessment (RWDI Consulting Engineers);

2014: Air Quality Baseline Study, Emission Summary and Dispersion Modelling Report, Best Management Practices for Dust (RWDI Consulting Engineers);

2014: Light Baseline Study (RWDI Consulting Engineers);

2014: Hydrogeological Study (AMEC);

2014: Hydrologic Modelling (Tetra Tech);

2014: Screening Level Risk Assessment (Tetra Tech);

2014: Socioeconomic Baseline Assessment (gck Consulting);

2014: Tailings Storage Facility Alternatives Report (WSP Canada);

2014: Water Management Plan (Lycopodium); and

2014: Optimization Study (Lycopodium).

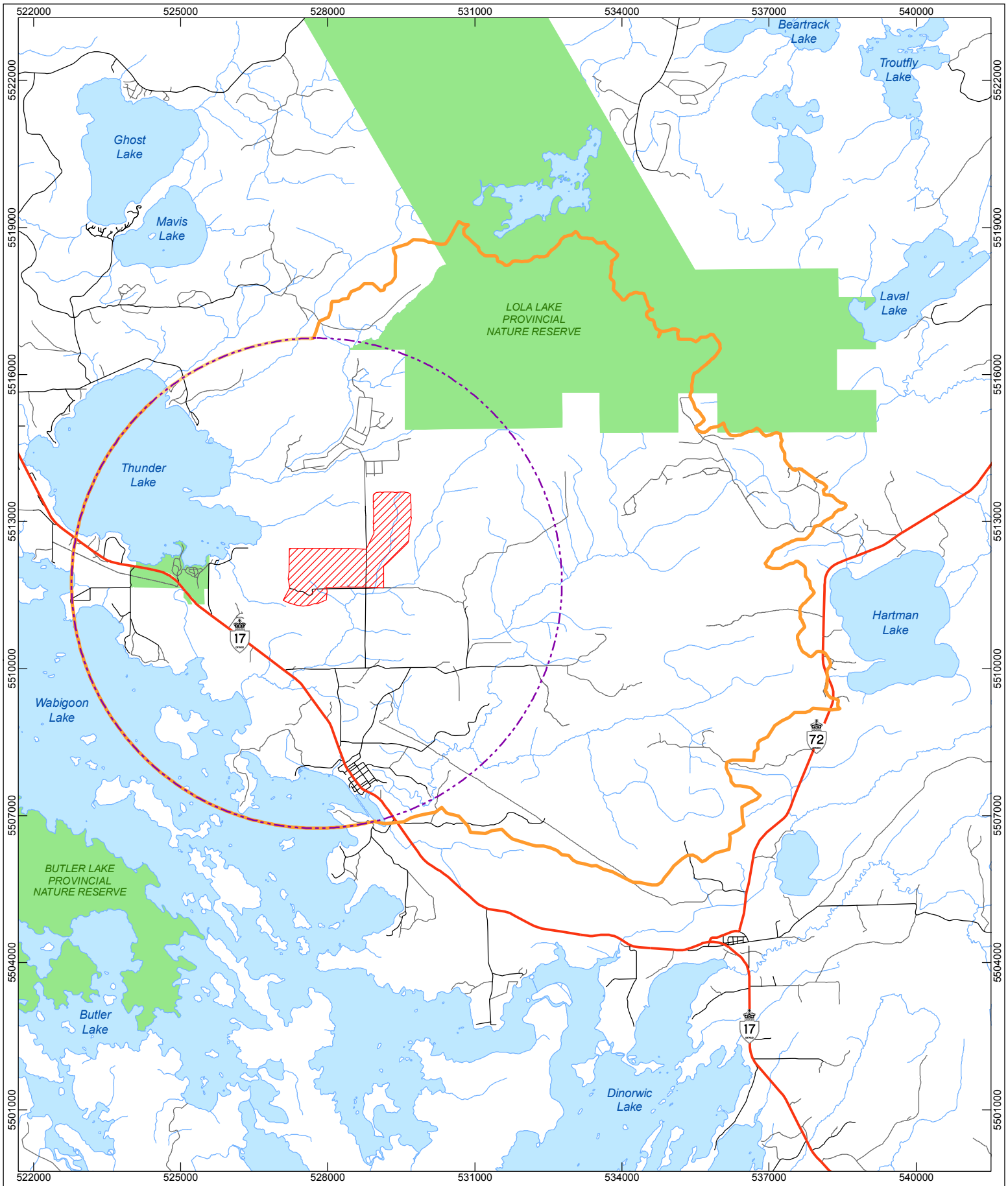
Treasury has been exploring the Project site since 2008 and has completed more than 370 diamond drill holes totalling approximately 119,000 meters. Beginning in 2008, Treasury commenced extensive environmental, geotechnical, metallurgical, engineering, socio-economic, and logistical studies in order to advance the Project towards commissioning and operation.

Treasury Metals has endeavored to keep the public and First Nations informed of developments relating to the Goliath Gold Project. Clearly it is in the best interests of Treasury, that the public be fully informed and have full understanding of project plans, schedules, potential impacts, mitigation options, and the benefits to be realized from the project development. In addition to keeping the public and First Nation communities informed Treasury has sought their input in relation to concerns surrounding the Project, and local land use concerns.

4. STUDY AREA

Country foods are primarily affected by air and water emissions. Effects on air quality and water quality will begin during construction and reach a peak during operations, diminishing again during closure and post-closure. Therefore, the local study area (LSA) for country foods are based on a scenario when impacts would be highest throughout the life of the project see Figure 4.1.

The country foods assessment was completed for the regional study area (RSA) which includes the mine site area and local communities supporting the Project. This area is large enough to capture the potential measurable impacts on air quality and surface water within Blackwater Creek and Wabigoon Lake that may be impacted by discharge.



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

Local and Regional Study Area for the Goliath Gold Project

FIGURE: 4.1 | REV.00

SCALE: 100 000

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2014
GIS: AT 07 NOV. 2014
CHECK: AT 07 NOV. 2014

- Arterial Road
- Highway
- Local Road
- Recreational Road
- Study Area (Local)
- Study Area (Regional)
- Immediate Project Extents
- Waterbody
- Provincial Park
- Watercourse

N, W, E, S

0 1,000 2,000 3,000
Meters

REFERENCE
Projection: NAD83 UTM Zone 15N
Base Data: OBM
RSA and LSA: KBM

5. COUNTRY FOODS ASSESSMENT

5.1 INTRODUCTION

People that harvest country foods from the study area may include:

- Local residents (i.e. residents of the local area, Wabigoon, Dryden), including both First Nations and non-First Nations; and
- Residents from other communities that have travelled to the study area to engage in hunting or fishing activities.

5.2 COUNTRY FOODS IDENTIFIED

The country foods selected for this study were based on engagement with local residents and First Nation communities. Current valued country food practices identified by the public and First Nation communities include:

- Surface Water Use
    - Public and First Nations source potable water via Wabigoon Lake.
- Gathering of vegetation;
    - Vegetation potentially collected within region include: blueberries, raspberries, pin cherries, wild cranberries, and chanterelle mushrooms; and
    - Wild Rice.
        - Wild rice is a commercial and agricultural venture for the public and First Nation groups within the RSA.
- Hunting;
    - Game species potentially hunted within the region include: moose, deer, grouse, and waterfowl.
- Fishing;
    - No large bodies fish occur on site (KCB 2012, DST 2013);
    - Downstream of discharge is Wabigoon Lake which supports a number of large bodied fish species of value to the public and First Nations. Particular species of interest include: Walleye, Muskellunge, and Northern Pike.
- Trapping;
    - Fur bearing species identified within the RSA include: beaver, muskrat, marten, fisher, otter, fox, lynx, and rabbit.

Areas identified as possible use for country food collection are identified within Figures 5.1, 5.2, 5.3, and 5.4.

5.2.1 Surface Water Use

Surface water has been identified a valued component for both public and First Nation stakeholders. Local users include residents along Wabigoon Lake, and the City of Dryden. Treasury has assessed the human health risks associated with discharge from the Goliath site, as detailed within the Screen Level Risk Assessment completed by Tetra Tech.

To ensure water quality objectives are met Treasury Metals has designed its facility to ensure that all discharge meets Provincial Water Quality Objectives (PWQO). PWQO's are set at a level of water quality which is protective of all forms of aquatic life and all aspects of the aquatic life cycles during indefinite exposure. Discharge location and water management structures are detailed in Figure 2.6. Discharge qualities are illustrated in Table 5.1.

Therefore it is not anticipated that the Project will have any effects to the LSA, RSA, residual, or cumulative effects to surface water resources within the area.

5.2.1.1 Treatment Methodology

All contaminated water will be treated in the cyanide destruction circuit with subsequent attenuation in the tailings storage facility. By destroying cyanide prior to discharging the tailings to the storage facility, potential cyanide contamination situations such as dam seepage or tailings facility overflow during extreme storm events late in the project life are eliminated. By design, the cyanide treatment circuit will destroy cyanide to a level acceptable for direct discharge to the environment and reduce the environmental safety requirements placed on the TSF. This method ensures that wildlife, including waterfowl and aquatic life, are protected, that cyanide consumption is minimized, and that contingency is in place to prevent the inadvertent release of cyanide into the environment. It also provides for the smallest tailings storage facility footprint.

The Inco SO_2-Air process has been selected as the preferred method for in plant cyanide destruction. This method is detailed in the discussion of alternative cyanide destruction methods.

Table 5.1: Discharge Qualities of Goliath Effluent

Parameter	Predicted Tailings Supernatant (mgpl)	MMER Max Monthly Mean (mgpl)
Average Solution Hourly Flow m3/h	61.1	
Aluminum	0.199	
Ammonia (as N)	6*	
Antimony	0.002	
Arsenic	0.018	
Barium	0.012	
Beryllium	0.0005	
Bismuth	0.0005	
Boron	0.02	
Cadmium	0.002	
Calcium	7.15	
Carbonate	15.88	
Chromium	0.0001	
Chloride	0.78	
Cobalt	0.004	
Copper	0.018	0.3
Cyanide	0.04	1
Iron	0.358	
Lead	0.082	0.2
Lithium	0.024	

Parameter	Predicted Tailings Supernatant (mgpl)	MMER Max Monthly Mean (mgpl)
Magnesium	1.44	
Manganese	0.063	
Mercury	0.0018	
Molybdenum	0.001	
Nickel	0.021	0.5
Nitrate (as N)	7.07	
pH	6.16	
Phosphorus	0.06	
Potassium	1.78	
Selenium	0.0005	
Silicon	0.099	
Silver	0.00005	
Sodium	1.16	
Strontium	0.032	
Sulphates	68.67	
Sulphur	22.94	
Thallium	0.642	
Tin	0.0005	
Titanium	0.003	
Uranium	0.005	
Vanadium	0.004	
Zinc	0.04	0.5

* Assumed Values, **At least one value used in determination was based on limit of detection

Tailings storage facility decants will be pumped to the effluent treatment plant for treatment prior to discharge to the polishing pond and ultimately Blackwater Creek.

In the effluent treatment plant, tailings pond decant water will be treated in three distinct process steps including an advanced oxidation process for residual cyanide destruction, multimedia filtration, and reverse osmosis membrane filtration.

TSF decant water will be pumped from a transfer tank to a three chamber multimedia filtration system, operating in parallel, via three multimedia filter feed pumps. The transfer tank may also be used to capture any out-of-compliance reverse osmosis permeate water which can be diverted from discharge.

In addition, this tank could be utilised as a temporary short term storage volume for the diversion of reverse osmosis reject water in order to continue operation of the reverse osmosis system while other areas of the facility are shut-down for routine repair or maintenance. Both sulphuric acid and sodium bisulphite will be dosed into the water stream prior to the multimedia filtration step. Sulphuric acid will be used to lower pH and sodium bisulphite

is required to consume any excess oxidants. A polymer or coagulant addition will also be included as a flocculation agent. In the intermediate step of the treatment process, particle filtration will include depth filtration down to a nominal 1.0 micron range. Filtration media will consist of a combination of anthracite, silica sand, and garnet.

In the next step, filtrate from the multimedia filter will be dosed with sulphuric acid, if required for pH adjustment, as well as an anti-scalant to protect the following Reverse Osmosis membranes and reduce the requirement frequency for clean-in-place of the membranes. As a safety precaution, filtrate will be passed through cartridge filters prior to the reverse osmosis system to remove any residual solids and prevent membrane damage.

The resulting impact of these pre-treatment steps is to enable the RO to operate at recoveries as high as 90 percent. Scaling calculations will indicate the upper limits on recovery and efficiency. High pressure pumps will then boost the pressure of the feed water to the reverse osmosis system from a minimum of 25 psig up to 250 psig. This feed pressure overcomes the natural osmotic pressure allowing for the rejection to waste of greater than 98% of all contaminants including: in-organics, organics [greater than 200 NMWL], bacteria and suspended solids as small as 0.003 microns depending upon their shape and strength. The pre-treated feed water will be split into three streams: product, reject and recycle. The recycle stream enables higher recovery by reducing the effects of concentration polarization and creating better cross flow to reduce system cleaning frequency.

Reverse Osmosis permeate is stored in the permeate storage tank, from where it is returned to the process or discharged to the environment via the polishing pond. If permeate quality is out of specification it can be diverted to the transfer tank for retreatment. The Reverse Osmosis reject will report to the residual cyanide destruction process tanks. Hydrogen peroxide (oxidant) and copper sulphate (catalyst) will be dosed in-line prior to a static mixer. Dosed wastewater will flow by cascading gravity sequentially through the cyanide destruct reactors, where cyanide will be eliminated and complex dissolved heavy metals will be precipitated. The treated reject stream will then return to the TSF.

The effluent treatment plant will ensure that water discharged meets (or exceeds) the provincial water quality objectives.

5.2.2 Vegetation

First Nation communities and the public have not identified any specific plants or berries which may be negatively affected by the development of the Goliath Mine. Nor have any locations within the Goliath Project area from which plants and berries are being gathered been identified**.**

Treasury recognizes that the gathering of plants and berries by Aboriginal people is part of a traditional life style which continues to this day. However, it must also be recognized that while the gathering of plants and berries is a part of a traditional lifestyle, the presence of the plants and berries to be gathered is dependent on a wide variety of factors including:

- Forest ecotype;
- Soil type;
- Moisture regime;
- Stage of forest development and succession;
- Occurrence of late spring or early fall frosts;
- Annual precipitation;
- Occurrence of forest fires; and
- Effects of forest insects.

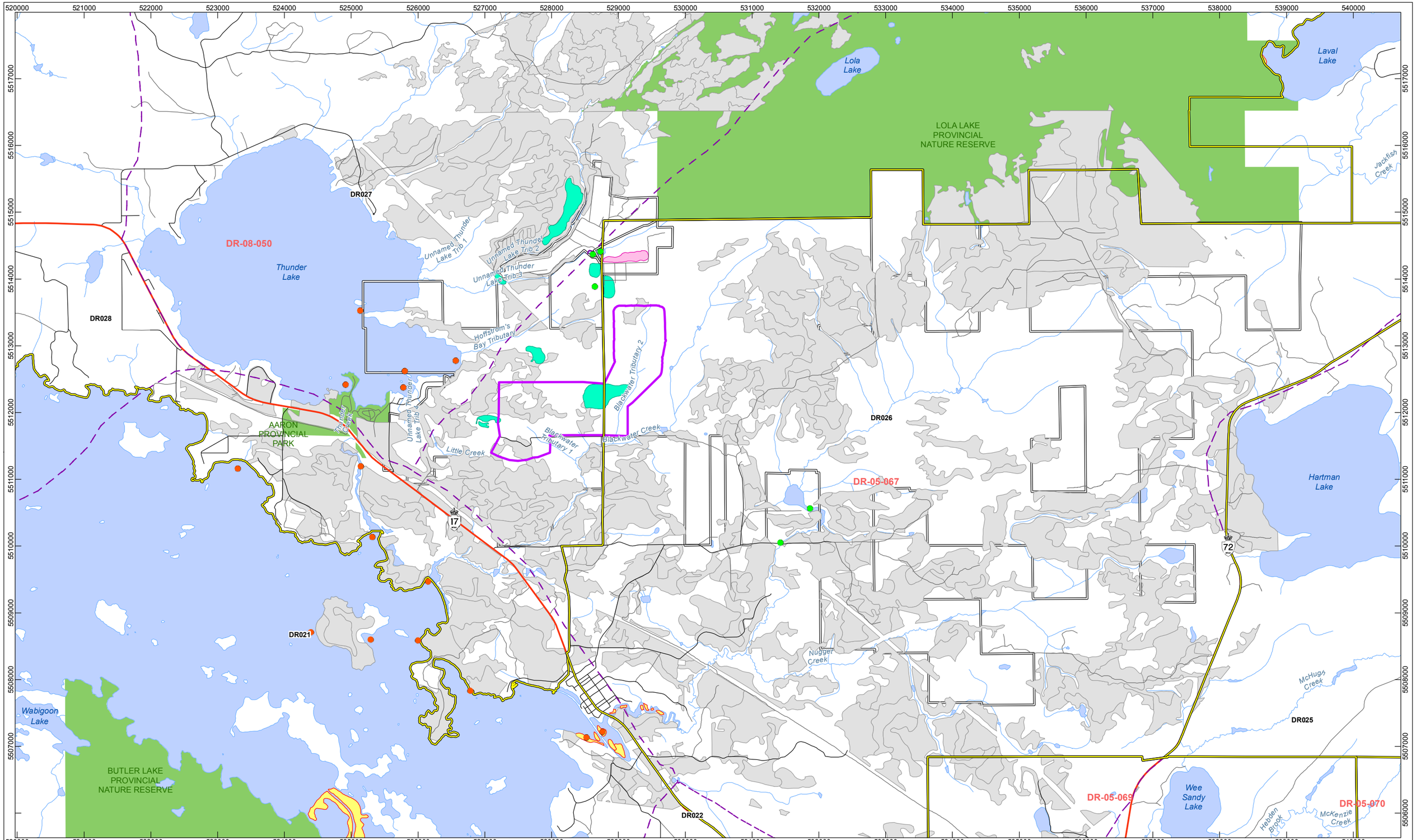
Consequently, although the gathering of plants and berries may be ongoing from year to year, the specific area where gathering may take place can change within a very short time.

Blueberries, chanterelle mushrooms, and wild rice have been identified by public stakeholders and First Nations as components for additional consideration and are detailed below.

5.2.2.1 Blueberries

Blueberries have been identified as a country food that is commonly used though the local study area. Blueberries are common to the boreal forest but not on all sites. Blueberries prefer the sandy or rocky soils associated with jack pine forests but also occasionally can be found on clays rich soils. Blueberries are an early succession species and thrive for a few years following disturbance such as fire or logging, but decline rapidly as the newly regenerating forest reaches crown closure. Generally the period in which blueberry crops proliferate on a site is approximately 4 to 6 years. Blueberries are also very dependent on an absence of late spring frost and rely on adequate sunshine and moisture during growing season to allow berries to mature. Consequently, even on ideal sites, and at the right stage of forest development, there is no guarantee that blueberries will be available. It is not realistic to expect blueberry crops to be available for picking on the same specific location over an extended period of time. However, disturbance and change within the boreal forest is common and blueberry crops can usually be found at similar sites which are at an earlier stage of forest development. Such sites can frequently be found in close proximity to sites where blueberries have previously been picked.
Known blueberry patches within the local area have been identified. As locations have not been identified within the Project site, Treasury has identified additional areas of the property that provide the natural conditions for blueberry occurrence. This has been determined via Forest Resource Inventory (FRI) compiled by the OMNRF, and quantifying area via suitable ecosite area as defined by the OMNRF. In addition to this Treasury has identified known sources of blueberries within the local area. These sites has been documented though observations on site, and communications with public stakeholders. These sites are identified within Figure 5.1 at a regional scale and Figure 5.2 at a local scale.

Other plant species may require different conditions to thrive than do blueberries, but virtually all plant species have particular conditions (eco-site and stage of forest development) under which their abundance is optimal and other conditions where they may be absent from the site.



Cultural Foods and Interests in Goliath Gold Project Area (Regional Scale)

FIGURE: 5.1 | REV.00

SCALE: 50 000

DESIGN: AT 06 FEB. 2014
GIS: AT 03 NOV. 2014
CHECK: -- Not Checked

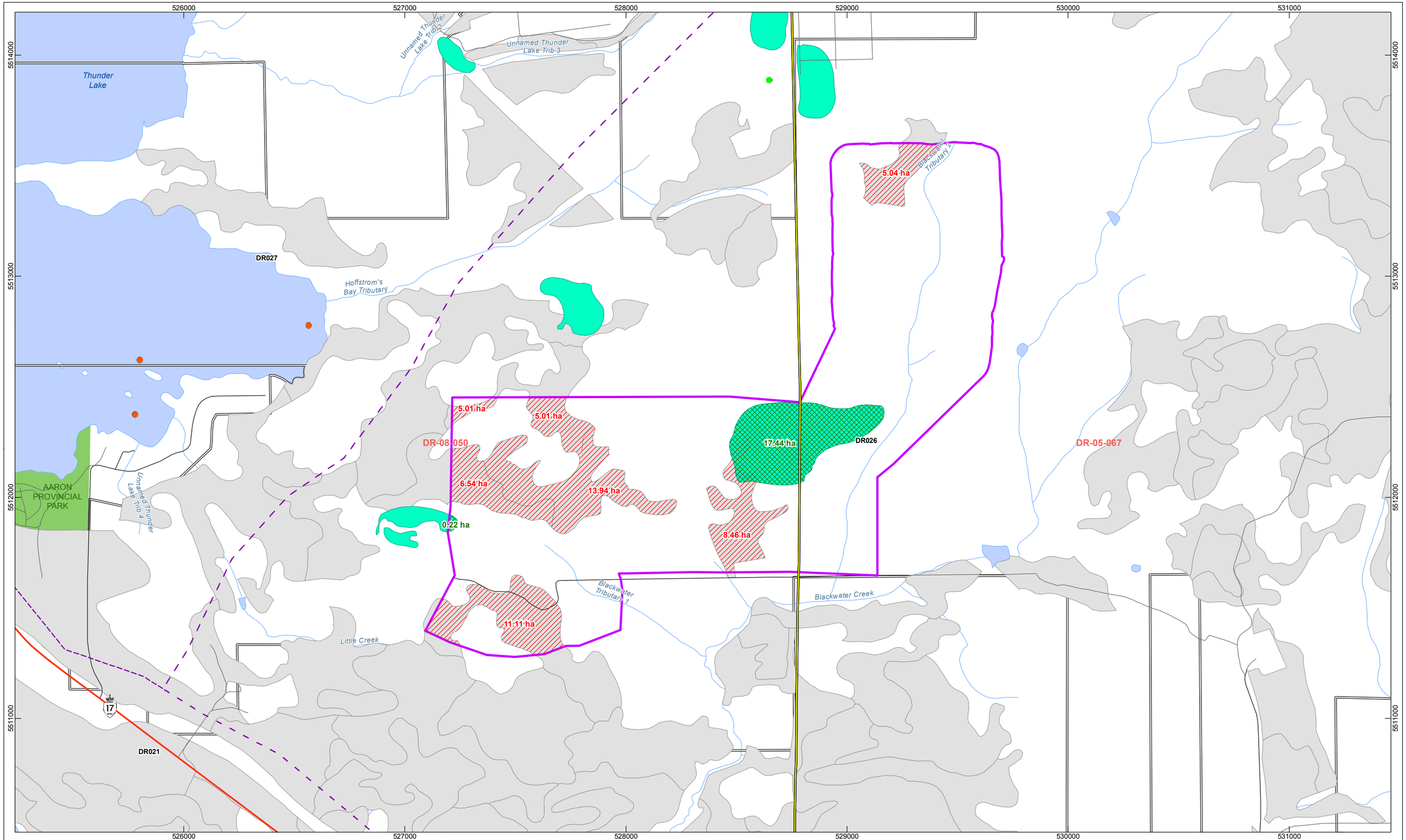
- Known Fishing Area
- Known Minnow Trapping Area
- Bear Management Area
- Immediate Project Extents
- Trapline Boundary
- Known Blueberry Harvest Area
- Potential Blueberry Habitat
- Known Chantrelle Mushroom Harvest Area
- Property Boundary
- Wildrice Area
- Provincial Park

N W E S

0 500 1,000 1,500 Meters

REFERENCE

Projection: NAD83 UTM Zone 15N
Base Data: OBM, Potential Blueberry Habitat based off MNRF Ecosite Data
FMZ ID: 5



Cultural Foods and Interests in Goliath Gold Project Area
(Local Scale)

FIGURE: 5.2 | REV.00

SCALE: 15 000

DESIGN: AT 06 FEB. 2014
GIS: AT 03 NOV. 2014
CHECK: -- Not Checked

- Known Fishing Area
- Known Minnow Trapping Area
- Bear Management Area
- Known Blueberry Harvest Area Removed
- Potential Blueberry Harvest Area Removed
- Immediate Project Extents
- Trapline Boundary
- Known Blueberry Harvest Area
- Potential Blueberry Habitat
- Known Chantrelle Mushroom Harvest Area
- Property Boundary
- Wildrice Area
- Provincial Park

N W E S

0 100 200 300
Meters

REFERENCE
Projection: NAD83 UTM Zone 15N
Base Data: OBM, Potential Blueberry Habitat based off MNRF Ecosite Data
FMZ ID: 5

Table 5.2: Total Blueberry Habitat and Loss within RSA

Potential Blueberry Habitat within RSA*	Potential Blueberry Habitat within RSA Lost Due to Development	% Lost
6341.2 ha	50.1 ha	0.8
Local Known Blueberry Site within RSA	Local Known Blueberry Site within RSA Lost Due to Development	% Lost
51.7 ha	17.7 ha	34.2

* Potential blueberry habitat sites have been sourced via FRI data via the OMNRF, and NWST Field Guide FG-02, 1996.

Potential effects to blueberry sites are minimal within the context of the RSA. FRI inventory data indicates a large amount of land that supports potential blueberry habitat. In addition to this the Dryden Forest Management Plan has harvested a number of sites in proximity to the Project site within 2012 to 2013 as seen in Appendix A. It is expected that blueberries will continue to be available on these harvested areas for the next few years, until crown closure of the regenerating forest occurs. Future logging in this area will result in ongoing picking opportunity.

Additional considerations to account for the loss of blueberry habitat locally within the Project area include the amount of private land associated with the Project (Figure 2.3). Known sites will be directly affected due to Project infrastructure development, however sites to the north of the mine site area will not be affected by Project development and upon closure will be available to the public and First Nation communities. Known sites within RSA and LSA have been documented though observations on site and communications with public stakeholders.

The development of the Goliath Gold Project will not adversely impact the gathering of blueberries as a source of country foods within the local and regional area.

5.2.2.2 Chanterelle Mushroom

Chanterelle mushroom picking activity has been documented within the LSA (Figure 5.1 and Figure 5.2). These areas will not be directly affected though Project development, although they will not be available to the public due to safety concerns. Upon closure of the Project this site will be available to the public and First Nation communities. Known sites within RSA and LSA have been documented though observations on site and communications with public stakeholders.

Table 5.3: Total Chanterelle Mushroom Habitat and Loss within RSA

Known Chanterelle Mushroom Picking Area in RSA	Known Chanterelle Mushroom Picking Area in RSA Lost	% Lost
7.5	0	0

5.2.2.3 Wild Rice

A wild rice harvesting and processing business known as Kawiosa Manomin was established by Wabigoon Lake Ojibway Nation in 1987. Next to using surface water as potable water, fish and wild rice are considered the primary aquatic country foods. Two locations of wild rice are documented with the regional area. Data on these locations was provided by the OMNRF (Figure 5.1 and Figure 5.2). These locations of wild rice fall within the discharge area of the Goliath Project. As detailed within Section 5.3 the Goliath Gold Project has been designed to discharge all effluent at PWQO guidelines. These guidelines are designed to protect aquatic life at all exposure levels. Therefore it will not adversely impact the gathering of wild rice within the local and regional area.

The level of Wabigoon Lake is controlled by a dam located at the Domtar pulp mill site in Dryden and operated by Domtar. Consequently the Goliath Gold Project will not alter the level of Wabigoon Lake and adversely affect wild rice locations.

5.2.3 Hunting and Trapping

Hunting and trapping are seen as a valued component by the public and First Nation stakeholders.

The Project is located within the Hartman and Zealand Townships in the Kenora Mining Division. The property has a total area of 4,976 ha and is comprised of 137 unpatented mining claims on 4,064 hectares and 20 patented mining claims on 912 ha (Figure 2.3). As seen within Table X, crown land accounts for 43.4 ha, or 1.11% of the total mine site area.

Crown land to the east of the Project accessed via Dump Road (Figure 2.3), or the Trans-Canada highway will not be disturbed by the Project will remain available for hunting. The immediate mine site area will be closed to the public due to safety concerns. .

The mine site area is fully enclosed within Wildlife Management Unit (WMU) 8, WMU 5 and WMU 9A are within the LSA (Figure 5.3). Trapping locations within the LSA include Trap lines DR026, DR027, and DR021 (Figure 5.3). Crown land losses applicable with trapping and hunting activities are listed Table 5.4.

Table 5.4: Total Crown Land associated with Goliath Gold Project, and Total Loss Crown Land due to Project

Crown Land associated with Goliath Property	Private Land and Patent Lands within Goliath Property	Crown Land Lost Due to Project	Crown Land Lost Due to Project by %
3896.3 ha	1520.7 ha	43.4 ha	1.11%

Game species that have been identified as valued components as part of hunting community include:

- Moose;
- White Tailed Deer;
- Waterfowl;
- Fur-bearing species; and
- Ruffed Grouse.

As detailed within the Screening Level Risk Assessment, exposure pathways were defined for wildlife that is seen as valued components (deer, hare, and ruffed grouse). These exposure pathways included direct soil/tailings contact, ingestion of soil/tailings (while foraging), ingestion of surface water, and the ingestion of food (i.e., plants, soil invertebrates). Hazard quotients (HQ) were calculated for the selected wildlife receptors based on the ratio of the estimated exposure to the toxicity reference value (TRV) to evaluate potential risk from exposure to mine-related containments of concerns (Tetra Tech, 2014).

Based on the calculated HQs, estimated risks for wildlife were below risk thresholds (1.0) for Hare and Deer exposed to mercury and lead for the Operational Phase. For grouse, the HQ for mercury was below risk thresholds for the Operational Phase. However, the HQ for lead was just above the risk threshold (HQ = 1.2) for grouse exposed to lead from the ingestion of tailings and food (plants and soil invertebrates) from the tailings during the Operational Phase. The HQ falls below the risk threshold when the assumption is made that grouse obtain one third rather than one half of their food from plants and soil invertebrates living on the tailings. These HQ were derived using a very small set of COC concentrations in tailings, and modelled surface water concentrations.

Therefore based on the private land holdings, and the screening level risk assessment it has been determined that the Project will have minimal effect to hunting and trapping activities within the LSA. Regionally hunting and

trapping can continue as per the limits imposed by the OMNRF. Current numbers for active hunters within the region are detailed in Table 5.5 and Table 5.6.

Table 5.5: White-Tailed Deer Hunting Activity

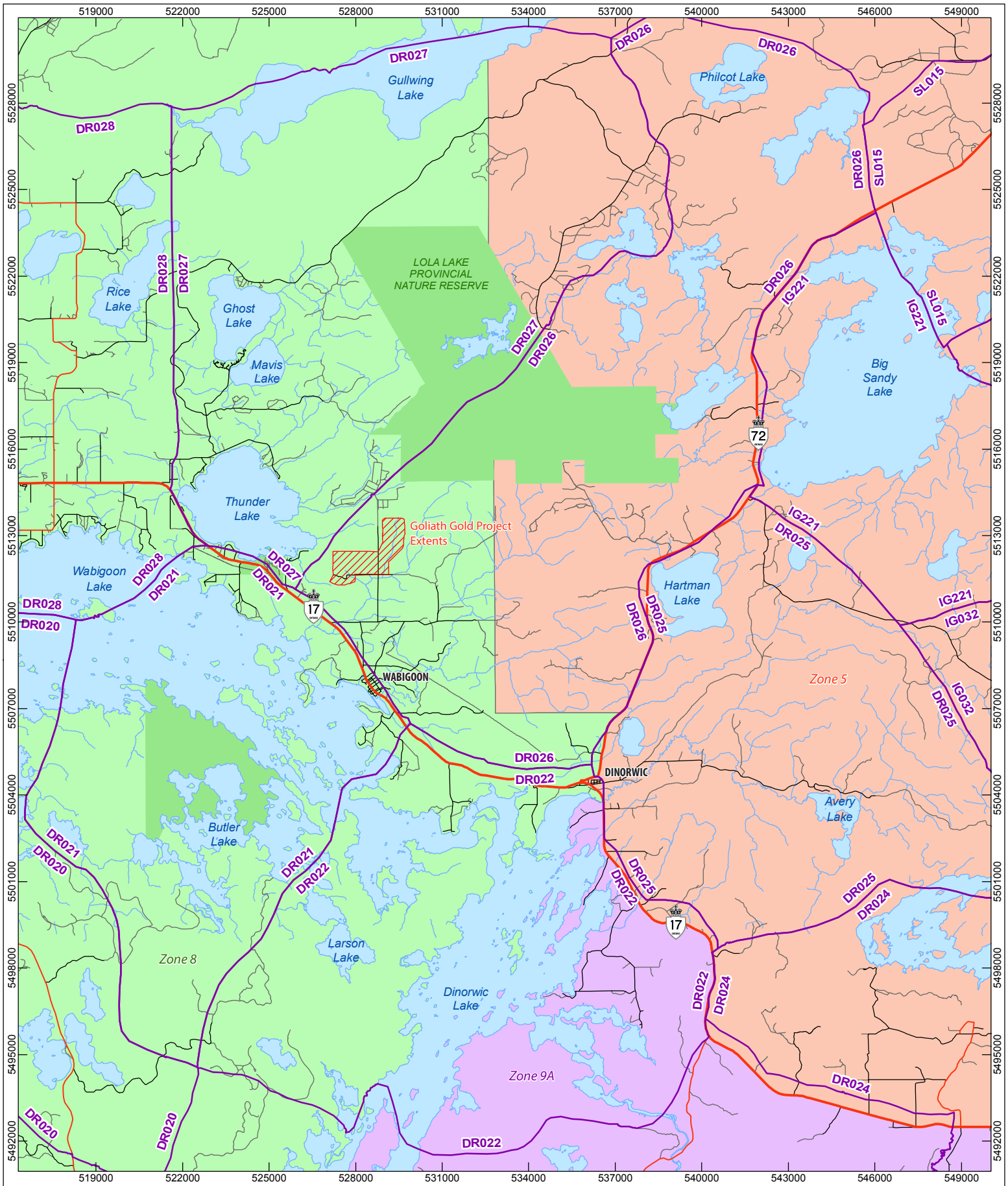
Year	Estimates for Resident Hunters	
	Estimated # of Active Hunters	Estimated Total Harvest
2008	1394	1206
2009	1352	1055
2010	1394	1216
2011	1475	1148
2012	1552	1304

Source: OMNRF, 2013 and Tetra Tech, 2014

Table 5.6: Moose Hunting Activity

Year	Estimates for Resident Hunters	
	Estimated # of Active Hunters	Estimated Total Harvest
2006	1398	218
2007	1485	166
2008	1184	166
2009	1261	110
2010	1145	123
2011	975	106
2012	809	89

Source: OMNRF, 2013 and Tetra Tech, 2014



GOLIATH GOLD PROJECT DRYDEN, ONTARIO, CANADA	SCALE: 170 000 *TREASURY METALS INC.*	Immediate Project Extents Trapline Boundary Arterial Road Highway Local Road Recreational Road Waterbody Provincial Park Watercourse **Wildlife Management Area** Zone 5 Zone 8 Zone 9A
Traplines and Wildlife Management Areas Surrounding Project	*DESIGN: AT 06 FEB. 2014* *GIS: AT 07 NOV. 2014* *CHECK: AT 07 NOV. 2014*	N, W, E, S 0 1,000 2,000 3,000 Meters
FIGURE: 5.3 REV.00		***REFERENCE*** *Projection: NAD83 UTM Zone 15N* *Base Data: OBM* *WMU and Trapline Data: MNR*

5.2.4 Fishing and Aquatic Species

The Project is located within the Lower English River Section of the Boreal Forest Region, of the Lake Wabigoon Ecoregion (Ecoregion 4S). It is also within the northern limits of the OMNRF Fisheries Management Zone (FMZ) 5 (Figure 5.4). Ranging from the Manitoba border east to Quetico Provincial Park and the United States border north to the Wabigoon River Watershed, the total area covers 44,360 km^2 (KCB 2012, DST 2014).

Aquatic habitat surrounding the Project site is generally of low to moderate value (KCB 2012, DST 2014). Substrates of lakes and streams are primarily dominated by fines (silts and clays), spawning gravels required for some species (i.e., walleye, sucker, lake whitefish) are limited. The aquatic vegetation required for northern pike and muskellunge spawning is more abundant. In-stream cover is available mostly in the form of pools, woody debris and vegetation (overhanging, emergent and submergent). Additional areas that have been considered include the spawning areas associated with Thunder Creek, and Nugget Creek. The mouth of Nugget Creek at Wabigoon Lake is designated a Provincial Fish Sanctuary to protect spawning walleye and fishing is prohibited in this area during the walleye spawning season, and therefore is seen as a culturally important and relevant to country food harvesters as a valued component.

Additionally Naotkamegwanning First Nation holds commercial fishing licenses on both Thunder and Wabigoon Lakes. Eagle Lake First Nation, the Métis Nation of Ontario, and the Aboriginal People of Wabigoon have all expressed an interest in the fishery of Wabigoon Lake.

Thunder Lake and Wabigoon Lake support diverse fish populations that include large predatory fish such as walleye and northern pike; therefore these water bodies must contain suitable spawning and rearing habitat. Assessed streams indicate that suitable habitat is present for small forage fish species (KCB 2012, DST 2014).

If an aquatic species was confirmed present during the baseline studies, or expected to be present (due to habitat quality and niche size), or if they were listed by either COSEWIC or SARO or Cultural / economic important then, valued components for public stakeholders and First Nation communities. Aquatic species selected include:

Table 5.7: Aquatic Components

Species	Rationale for Selection
Northern Pike	Cultural / Economic Importance
Smallmouth Bass	Cultural / Economic Importance
Walleye	Cultural / Economic Importance
Muskellunge	Cultural / Economic Importance
Lake Whitefish	Cultural / Economic Importance
Lake Trout	Cultural / Economic Importance
White Sucker	Cultural / Economic Importance

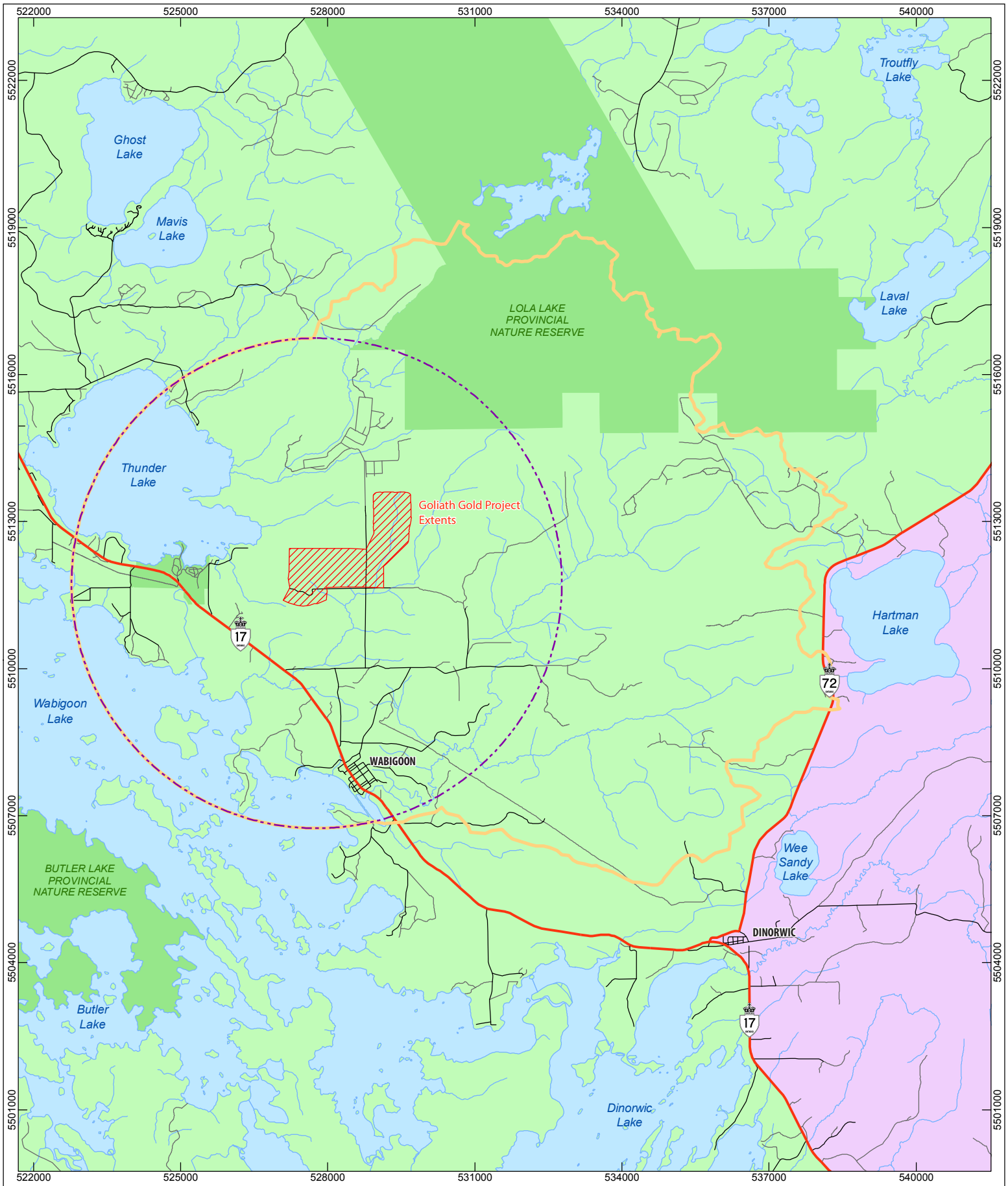
As detailed within Section 5.3 the Goliath Gold Project has been designed to discharge all effluent at PWQO guidelines. PWQO's are set at a level of water quality which is protective of all forms of aquatic life and all aspects of the aquatic life cycles during indefinite exposure. In addition to discharging all effluent at the appropriate standards, Treasury will initiate Environment Effects Monitoring (EEM) as per the Metal Mining Effluent Regulations (MMER).

EEM studies consist of:

- Effluent and water quality monitoring studies comprising effluent characterization, sub-lethal toxicity testing and water quality monitoring (MMER, Schedule 5, Part 1); and
- Biological monitoring studies in the aquatic receiving environment to determine if mine effluent is having an effect on fish, fish habitat or the use of fisheries resources (MMER, Schedule 5, Part 2).

The level of Wabigoon Lake is controlled by a dam located at the Domtar pulp mill site in Dryden and operated by Domtar. Similarly, the level of Thunder Lake is controlled by a dam located within the boundary of Aaron Provincial Park and operated by the OMNRF. Based on anticipated discharge levels as detailed with the Water Management Plant completed by Lycopodium, it is anticipated that the Goliath Gold Project will not impact the lake level of Wabigoon Lake. The level of Thunder Lake will not be affected by the Goliath Gold Project.

Therefore, the Goliath Gold Project will not cause any adverse effects to the valued aquatic components identified by public and First Nation stakeholders.



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

Fish Management Zones For the Goliath Gold Project Area

FIGURE: 5.4 | REV.00

SCALE: 100 000

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2014
GIS: AT 07 NOV. 2014
CHECK: AT 07 NOV. 2014

- Study Area (Local)
- Study Area (Regional)
- Immediate Project Extents
- Arterial Road
- Highway
- Local Road
- Recreational Road
- Waterbody
- Provincial Park
- Watercourse

Fish Management Zone ID

- FMZ 4
- FMZ 5

N W E S

0 1,000 2,000 3,000
Meters

REFERENCE

Projection: NAD83 UTM Zone 15N
Base Data: OBM
FMZ Data: MNR

6. REFERENCES

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Appendix A – Dryden Forest Management Plan Maps

Dryden Forest Management Unit
2012 - 2013
Annual Work Schedule Operations Map
OBM 52551

Legend

Planned Harvest
2012/ 2013 Harvest Blocks

Fuelwood Areas
Fuelwood Areas

Planned Residual Patches
Residual Areas

Area of Concern
AOC Type

Restricted AOC

Modified AOC

High Potential Cultural Heritage (A01)

Regeneration Treatments
Plant

Seed

Natural

Site Preparation Treatments
Mechanical

Tending Treatments
Chemical (ground)

Cleaning (manual)

Pre-Commercial Thin

Scheduled Road Construction
(1 km Corridor)

Primary Road Construction

Branch Road Construction

Operational Road Boundaries

Scheduled Crossing Construction
(100m Corridor)

Preferred Crossing

Restricted Area

Water Crossing Activities
AWS Year

2012 Construction

2013 Construction

Existing Water Crossings

Crossings Planned to be Decommissioned

Non-Water AOC Crossings
Non-Water AOC Crossings

Aggregate Areas
Scheduled DFMC Aggregate Extraction Areas

DFMC Aggregate Pits

Other Aggregate Areas

MTO Aggregate Permits

Transportation
Highway

Local Roads Boards

MNR Roads

Other

Railway

DFMC Roads
Primary

Branch

Operational

Roads Planned to be Decommissioned

Access Control

Decommissioned, plus Access Control

Utility Lines
Hydro Line

Natural Gas Pipeline

Transmission Line

Boundaries
Dryden Forest

Ontario Base Map

FRI Stand Boundaries

Ownership
Patent Land

Provincial Parks

Federal Indian Reserve

Conservation Reserve

Other Federal Land

Water
Lake Sensitivity

High; Moderate

Low

Stream Sensitivity

High; Moderate

Low

Portages
Blue Lake Canoe Route

Tree Improvement Areas
Tree Improvement Areas

Wildlife Management
Wildlife Management

Non-Forest
Treed Muskeg

Open Muskeg

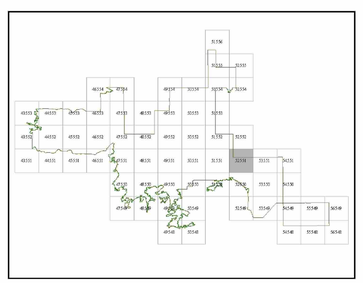
Alder

Rock

DAL

GRS

UCL



N

S

FRI Items

stand #
species composition
age, height, stocking
site class
ecosite
area (ha)

1:20,000

0 0.5 1 2 3 4 Kilometers

Note: All Harvest and Site Preparation Blocks are potentially available for Fuelwood subject to:

the purchase of a Fuelwood Permit from the MNR, and written permission from DFMC Office/ DFMC Shareholders.

This map is illustrative only. Do not rely on as being a precise indicator of routes, locations, or features, nor a guide to navigation.

North American Datum 1983,
Universal Transverse Mercator Zone 15

Printed February, 2012

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Dryden Forest Management Unit
2012 - 2013
Annual Work Schedule Operations Map
OBM 53550

Legend

Planned Harvest
- 2012/ 2013 Harvest Blocks

Fuelwood Areas
- Fuelwood Areas

Planned Residual Patches
- Residual Areas

Area of Concern
AOC Type
- Restricted AOC
- Modified AOC
- High Potential Cultural Heritage (A01)

Regeneration Treatments
- Plant
- Seed
- Natural

Site Preparation Treatments
- Mechanical

Tending Treatments
- Chemical (ground)
- Cleaning (manual)
- Pre-Commercial Thin

Scheduled Road Construction
(1 km Corridor)
- Primary Road Construction
- Branch Road Construction
- Operational Road Boundaries

Scheduled Crossing Construction
(100m Corridor)
- Preferred Crossing
- Restricted Area

Water Crossing Activities
AWS Year
- 2012 Construction
- 2013 Construction
- Existing Water Crossings
- Crossings Planned to be Decommissioned

Non-Water AOC Crossings
- Non-Water AOC Crossings

Aggregate Areas
- Scheduled DFMC Aggregate Extraction Areas
- DFMC Aggregate Pits
- Other Aggregate Areas
- MTO Aggregate Permits

Transportation
- Highway
- Local Roads Boards
- MNR Roads
- Other
- Railway

DFMC Roads
- Primary
- Branch
- Operational
- Roads Planned to be Decommissioned
- Access Control
- Decommissioned, plus Access Control

Utility Lines
- Hydro Line
- Natural Gas Pipeline
- Transmission Line

Boundaries
- Dryden Forest
- Ontario Base Map
- FRI Stand Boundaries

Ownership
- Patent Land
- Provincial Parks
- Federal Indian Reserve
- Conservation Reserve
- Other Federal Land

Water
Lake Sensitivity
- High; Moderate
- Low

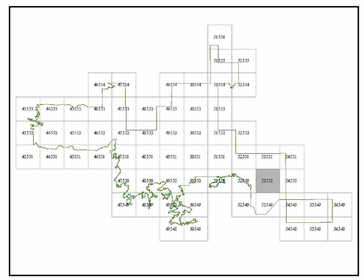
Stream Sensitivity
- High; Moderate
- Low

Portages
- Blue Lake Canoe Route

Tree Improvement Areas
- Tree Improvement Areas

Wildlife Management
- Wildlife Management

Non-Forest
- Treed Muskeg
- Open Muskeg
- Alder
- Rock
- DAL
- GRS
- UCL



N

S

FRI Items

stand #
species composition
age, height, stocking
site class
ecosite
area (ha)

1:20,000

0 0.5 1 2 3 4 Kilometers

Note: All Harvest and Site Preparation Blocks are potentially available for Fuelwood subject to:

the purchase of a Fuelwood Permit from the MNR, and written permission from DFMC Office/ DFMC Shareholders.

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North American Datum 1983,
Universal Transverse Mercator Zone 15

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