

**APPENDIX O**  
**LAND AND RESOURCE USE TECHNICAL SUPPORT DOCUMENT**





**CÔTÉ GOLD PROJECT  
TECHNICAL SUPPORT DOCUMENT:  
LAND AND RESOURCE USE**

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## GLOSSARY AND ABBREVIATIONS

the Agency	Canadian Environmental Assessment Agency
BMA	Bear Management Area
EA	Environmental Assessment
EACOM	EACOM Timber Corporation
EIS	Environmental Impact Statement
FMU	Forest Management Unit
FMZ	Fisheries Management Zone
GIS	Geographical information system
ha	hectare
IPZ	Intake Protection Zone
km	kilometre
kV	kilovolt
m	Metre
MNDM	Ministry of Northern Development and Mines
MNR	Ministry of Natural Resources
MOE	Ministry of the Environment
MRA	Mine Rock Areas
OFSC	Ontario Federation of Snowmobile Clubs
ROW	Right-of-Way
the Plan	Mattagami Region Source Water Protection Plan
the Project	Côte Gold Project
TLA	transmission line alignment
ToR	Terms of Reference
TMF	Tailings Management Facility
TSD	technical support document
WMU	Wildlife Management Unit

## EXECUTIVE SUMMARY

The Côté Gold Project (the Project) is an advanced stage gold exploration project located in the Chester and Neville Townships, District of Sudbury, in northeastern Ontario, approximately 20 kilometres (km) southwest of Gogama, 130 km southwest of Timmins and 200 km northwest of Sudbury. IAMGOLD proposes to construct, operate and eventually rehabilitate a new open pit gold mine on the property.

Criteria for assessing effects was based on:

- presence of a potential interface between a Project activity and a land and resource use; and
- application of effects management strategies.

Information gathered from other environmental disciplines (such as wildlife, vegetation, aquatics, noise, air quality and human health) informed the prediction of effects. Where applicable, effects were also determined using geographic information systems (GIS) analysis of the interface of the Project footprint with a specific land use management unit or planning area. Effects were also determined based on land and resource user interviews in which current land and resource uses and potential Project effects were discussed.

Small portions of Ontario's Living Legacy Land Use Strategy Areas will overlap with Project components. However, this is not expected to create any land use conflicts. The Project is located within the Mattagami Region Source Water Protection Planning zones. Based on the feedback received from the MOE and IAMGOLD's prediction of effects on water quality, it is expected that there will be no adverse effects on Timmins drinking water supply.

The transmission line alignment, as well as several components of the Project site infrastructure, are planned to be situated on mining claims owned by other entities. Therefore, exploration activities on these claims may be affected by the Project development. However, this will not limit the ability to exercise mineral exploration activities. Some areas will be more accessible due to Project development allowing easier access for exploration activities.

The Project, including the transmission line alignment, will overlap several small portion of surrounding Forest Management Units. This overlap will not substantially limit forestry resources or the ability to conduct forestry activities.

Similarly, a number of hunting, trapline and fishing areas overlap with the Project site and TLA alternatives. The Project will result in some displacement of wildlife species from the Project site; however, this displacement is not expected to have long-term effects on wildlife resources available for hunting. In addition, although the Project overlaps one WMU, one BMA and a

number of traplines, this overlap will not limit the ability to carry out hunting, trapping and fishing activities in the area.

The Project will not overprint any cottage properties. Cottagers, however, will notice increased volumes on Highway 144 during the construction phase. Some cottagers will also experience changes in background air quality, noise and vibration levels. However, these levels are expected to meet applicable regulations. The Project will not negatively affect the use of water for swimming or freshwater take. The Project will not limit the use of the area by existing cottagers.

Outfitters are not typically using the areas that would be overlapped by the Project. Tourism/outfitter lodges located in Gogama may see an increase in clientele related to accommodations for temporary visitors/workers/contractors at the Project site. The Project will not limit the use of the area by existing outfitters.

There are no anticipated effects to the use of powerboats on Mesomikenda Lake.

The 4M Canoe Route includes Three Duck Lakes, Weeduck Lake and Bagsverd Creek. IAMGOLD will establish a suitable portage/connection such that the 4M Canoe Route will still be usable. In addition, IAMGOLD will work with any potential canoe route users to identify suitable conditions for crossing the controlled-access lakes. With these measures in place, the 4M Canoe Route will remain usable after construction. It is possible that some canoers will avoid this route, since the MRA and TMF will be visible from Three Duck Lakes, Weeduck Lake and Bagsverd Lake. In summary, although the Project overlaps a portion of the 4M Canoe Route, it is not expected to limit the use of these canoe routes/waterways once the construction activities are completed.

Other recreational uses could include the use of motorized and non-motorized recreational vehicles, hiking, mushroom and berry picking, and wood gathering. Such uses will not be permitted on, or in close proximity to the Project site during construction and operations. However, there is very limited use of the Project site area for these recreational uses. Therefore, Project will not limit the use by outdoor recreation enthusiasts. Some snowmobilers may be affected during the short-term construction of the transmission line.

At the end of the closure phase, there will be no residual effects on land use policies and plans, mineral exploration, recreational and commercial fishing, cottagers and outfitters, canoeing and navigable waters and other recreational uses. During post-closure, affected areas will continue to re-naturalize and therefore habitat will be re-established. Access restrictions will be removed once the open pit is flooded and re-integrated into the watershed. As habitat is re-established, effects on forestry, hunting and trapping are expected to cease.

## 1.0 INTRODUCTION

The Côté Gold Project (the Project) is an advanced stage gold exploration project located in the Chester and Neville Townships, District of Sudbury, in northeastern Ontario, approximately 20 kilometres (km) southwest of Gogama, 130 km southwest of Timmins and 200 km northwest of Sudbury (see Figure 1). IAMGOLD proposes to construct, operate and eventually rehabilitate a new open pit gold mine on the property.

This technical support document (TSD) has been prepared by AMEC and is one in a series of technical reports to support the environmental assessment (EA) for the Project.

### 1.1 Overview of the Project

The proposed site layout places the required mine-related facilities in close proximity to the open pit, to the extent practicable. The proposed site layout is presented in Figure 2 showing the approximate scale of the Côté Gold Project. The site plan will be refined further as a result of ongoing consultation activities, land purchase agreements and engineering studies.

As part of the proposed development of the Project, several water features will be fully or partially overlapped. These include Côté Lake, portions of Three Duck Lakes, Clam Lake, Mollie River/Chester Lake system and Bagsverd Creek. As a consequence, these water features will need to be realigned for safe development and operation of the open pit.

The major proposed Project components are expected to include:

- open pit;
- ore processing plant;
- maintenance garage, fuel and lube facility, warehouse and administration complex;
- construction and operations accommodations complex;
- explosives manufacturing and storage facility (emulsion plant);
- various stockpiles (low-grade ore, overburden and mine rock area (MRA)) in close proximity to the open pit;
- concrete batch plant;
- aggregate extraction with crushing and screening plants;
- Tailings Management Facility (TMF);
- on-site access roads and pipelines, power infrastructure and fuel storage facilities;
- potable and process water treatment facilities;
- domestic and industrial solid waste handling facilities (landfill);

- water management facilities and drainage works, including watercourse realignments; and
- transmission line and related infrastructure.

## **1.2 Land and Resource Use**

The Project may affect the non-traditional use of land and resources within the Project's footprint as well as adjacent and neighbouring land and resource uses. These land and resources uses include:

- land use planning areas;
- industrial and commercial uses (mineral exploration and forestry); and
- outdoor recreation and tourism (hunting, trapping, fishing, cottaging, outfitters, canoeing, and motorized vehicles) including incidental wood gathering and/or berry/mushroom picking.

This Land and Resource Use technical support document (TSD) provides information that complies with the EA scope outlined in the Terms of Reference (ToR) approved by the Ontario Minister of the Environment and in the Environmental Impact Statement (EIS) Guidelines issued by the Canadian Environmental Assessment Agency (the Agency) in July 2013.

A description of the existing conditions that support this TSD, the Land and Resource Use Baseline Study Report is presented in Appendix I. This TSD provides a review of the non-traditional land and resource uses that have the potential to be affected by the Project. Aboriginal traditional knowledge and land uses are covered in a separate report (Aboriginal Traditional Land and Resource Use TSD). Land and resource use effects are predicted by overlaying the Project activities on the baseline conditions.

## **2.0 METHODOLOGY**

### **2.1 Spatial Boundaries**

The Côté Gold Project is located in the District of Sudbury, outside of any lower tier municipality boundary. The Project site is located within four geographic townships: Chester, Neville, Potier, and Yeo Township. The proposed transmission line will intersect with 20 geographic townships: Tisdén, Ogden, Deloro, Thorneloe, Price, McKeown, Doyle, Hassard, Gouin, Emerald, Mattagami, Burrows, Cabot, Connaught, Miramichi, Garibaldi, Londonderry, Champagne, Benneweis and Chester townships; it also intersects with the lower tier municipality boundary of the City of Timmins.

Depending on the type of land and resource use, the local and regional study areas for terrestrial or aquatic biology disciplines were used to set parameters for land and resource uses. For example, potential effects on recreational and commercial fishing are predicted in the regional study area and local study area for the aquatic biology disciplines, while the terrestrial biology regional study area and local study area are used to predict the potential effects on recreational hunting.

The local study area for terrestrial-based land and resource uses is defined by predicting the potential effects of the Project on nearby land and resource users such as forestry, mining exploration and cottaging. The proposed local study area is defined as a 2 km buffer around the Project site footprint, and also includes a 1 km buffer on either side of the TLA alternatives.

The local study area for the aquatic-based land and resource uses (fishing and bait fish harvesting) includes areas where there is potential for measurable effects as a result of construction, operation, closure or post-closure activities on water bodies, as well as downstream water bodies that may receive effluent or stormwater discharged from the Project, or may be affected by watercourse realignments. The extent of the water bodies included in the assessment was based on the currently defined Project, the expected extents of potential changes to the aquatic ecosystems and the expected changes associated with the Project. The aquatic biology local study area also includes a 1 km buffer on either side of the TLA alternatives.

The terrestrial biology regional study area includes areas with land and resource use based on wildlife and vegetation resources (hunting, fishing, forestry). To be conservative, the terrestrial biology regional study area is defined as a 30 km buffer around the Project site footprint. The buffer is anticipated to be an appropriate spatial boundary for quantifying baseline conditions and predicting Project-specific effects on land and resource use. The terrestrial biology regional study area also includes a 2 km buffer on either side of the TLA alternatives.

The regional study area for aquatic biology was extended downstream of the Project to the confluence of the Mollie River and the Mesomikenda Lake outflow. These waterways ultimately discharge to Minisinakwa Lake near the community of Gogama.

## 2.2 Temporal Boundaries

The temporal boundaries of the EA will span all phases of the Project:

- construction;
- operations;
- closure; and
- post-closure.

## 2.3 Selection of Effects Assessment Indicators

The effects assessment indicators selected for this Land and Resource Use TSD and the rationale for selection of these indicators is presented in Table 2-1. The effects assessment indicators were selected as a result of the land and resource use baseline investigations combined with the community consultation efforts related to the Project.

**Table 2-1: Effects Assessment Indicators for Land and Resource Use**

Effect Assessment Indicator	Rationale for Selection
Land Use Planning and Policies	The Project may create conflicts among users due to diversions from accepted land uses as stipulated in approved land use plans.
Mineral Exploration	The Project may change access to minerals for exploration and production.
Forestry	The Project may change access to forestry resources and activities.
Hunting	The Project may change access to and abundance of wildlife resources because of effects to wildlife resources from Project activities (such as air emissions, sound, effluent discharges, traffic and reduction in wildlife habitat), and therefore, the ability to hunt.
Trapping	The Project may change access to and abundance of wildlife resources because of effects to wildlife resources from Project activities (such as air emissions, sound, effluent discharges, traffic and reduction in wildlife habitat), and therefore, the ability to trap.
Recreational and Commercial Fishing	The Project may change access to and abundance of fisheries resources because of effects to aquatic/fisheries resources from Project activities (such as air emissions, sound, effluent discharges, traffic and reduction in wildlife habitat), and therefore, the ability to fish.
Cottagers and Outfitters	The Project may change access to cottages. The Project may alter enjoyment of properties, their surroundings and their property or intrinsic values.

Effect Assessment Indicator	Rationale for Selection
Canoeing and Navigable Waters	The Project may change access to or overlap areas that are used for canoeing, portaging and navigation.
Other Recreational Uses	The Project may change ability of residents and visitors to access public lands for non-consumptive purposes such as all-terrain travel (e.g., motorized recreational vehicles), viewing wildlife and landscape, and general physical activities such as walking and hiking.

No effects on aggregate operations are anticipated, as no existing operations overlap with the proposed Project site infrastructure or the terrestrial biology local study area. There is a potential for an increase in demand for aggregates due to the construction of the Project, which are generally addressed within the Socio-Economic TSD. Similarly, there are no known agricultural or grazing activities, Provincial or National Parks, Ecological Reserves or Conservation Areas in the local study area. Therefore, these uses have not been considered further in the effects assessment.

## 2.4 Prediction of Effects

For each effects assessment indicator, residual effects were predicted by assessing the:

- presence of a potential interaction between a Project activity and a land and resource use; and
- application of effects management strategies.

Information gathered from other environmental disciplines (such as wildlife, vegetation, aquatics, noise, air quality and human health) also informed the prediction of effects. For example, if there was an effect on moose population, then there could be a resulting effect on moose hunting in the area. Other effects were determined using geographic information systems (GIS) analysis of the interface of the Project footprint or area of influence on a specific land use management unit or planning area. Effects were also determined based on land and resource user interviews, during which, current use and potential Project effects were discussed.

Effects management strategy (rather than ‘mitigation’) is the term used throughout this document and refers to measures to avoid, mitigate and/or compensate land and resource use effects. Mitigation is generally applied to biophysical effects because it refers to mitigating adverse effects whereas effects management strategies address both positive and negative effects (including land and resource use). Effects management strategies can include elements inherent in the Project design to enhance a positive effect or prevent the effect from occurring. Effects management strategies also include compensation, as in the case of potential adverse effects to displaced land users, and are considered to offset adverse effects. If the anticipated

effect is positive, actions that could be taken to enhance the effect will be indicated. Effects management strategies were initially developed based on best practices and general discussions with land and resource users, and were refined to be locally or regionally appropriate and achievable. The residual effect (the effect remaining after effects management strategies are applied) is then described. Best professional judgement was used in carrying out the effects prediction, incorporating information from available sources, including opinions and perspectives expressed by the various government agencies, Aboriginal communities and stakeholders through the EA process.

### 3.0 PREDICTION OF EFFECTS

#### 3.1 Construction Phase

##### 3.1.1 Land Use Plans and Policies

##### 3.1.1.1 Ontario's Living Legacy Land Use Strategy Areas

Potential effects on land use planning areas during the construction phase of the Project may include:

- overlapping of land use policy area where the use would not be allowed; and
- creating land use conflicts.

Land use planning is outlined in the Crown Land Use Policy Atlas (MNR, 2011). Table 3-1 presents a description of each of the Crown Land Use Areas that are overlapped by Project components.

**Table 3-1: Crown Land Use Areas**

Crown Land Use Area	Name	Description
G1809	Gogama Resource Area	General Use Area with primary intent on timber production and mineral exploration and development. Additional tourism development is also encouraged as a secondary use, together with limited public recreation facilities. This area also contains lakes designated for lake trout management.
G1811	Tatachikapika Lake Area	General Use Area with primary intent on resource extraction and recreation; where recreation is given priority along shoreline areas and conversely resource extraction is given priority in non-shoreline areas.
G1813	Predominant Cottaging Area	General Use Area with primary intent on recreational use including a combination of public recreation, cottaging and commercial tourism. Forestry operations continue to be important in non-shoreline areas.
G1819	Timmins Porcupine Urban Area	General Use Area with primary intent on urban development for the Timmins-Porcupine area so that all development and uses confirm with the official plan and zoning by-law of the City of Timmins.
G1820	Deloro Grassy Complex	General Use Area with primary intent on resource extraction, commercial tourism as well as maintenance of canoe routes (Grassy, Mountjoy and Redstone rivers).
G1824	Tatchikapika Complex	General Use Area with primary intent on cottaging and recreation activities. In non-shoreline areas, priority on resource production and extraction.
G1826	Kenogamissi-Mattagami Recreation Corridor	General Use Area with primary intent on cottaging, recreation activities and commercial tourism.

Crown Land Use Area	Name	Description
G1828	Mattagami Aggregate Complex	General Use Area with primary intent on aggregate resources for the Timmins District and minimizing related impacts on shoreline areas.
G1831	Crothers Complex	General Use Area with primary intent on resource extraction on non-shoreline areas and recreation activities on shoreline areas.

Source: MNR, 2011

Table 3-2 presents the percentage of each Crown Land Use area overlapped by the Project components, including the TLA alternatives.

**Table 3-2: Crown Land Use Area Overlapped by Project Components**

Crown Land Use Area	Total Crown Land Use Area (ha)	Total Crown Land Use Area Overlapped by Project Components Footprint (%) <sup>1</sup>	Total Crown Land Use Area Overlapped by Transmission Line Alignment (%)	
			Cross-Country	Shining Tree
G1809	418,877	0.41	0.03	0.08
G1811	11,648	—	0.30	—
G1813	91,781	0.01	0.14	0.18
G1819	9,200	—	0.10	0.10
G1820	113,580	—	0.18	0.23
G1824	86,228	—	0.07	—
G1826	4,103	—	0.17	0.09
G1828	7,288	—	0.20	0.20
G1831	15,032	—	0.02	—

<sup>1</sup> The Project components footprint is a non-contiguous polygon; it is a cluster of polygons associated with various Project components. It is anticipated that access restrictions will be in place between some of these fragmented component areas but the access restrictions are currently not defined.

—: not applicable

Source: MNR, 2013

The Project site components overlap 0.41% of G1809 (Gogama Resource Area). This is an area described as a general use area for timber production and mineral exploration and development. The Project is consistent with the intent of this land use policy area.

The Project site components also overlap 0.01% of G1813 (Predominant Cottaging Area). This is an area for recreational use (such as public recreation, cottaging and commercial tourism) and non-shoreline forestry operations. While the Project footprint does not overlap with any cottages nor is the overlap along shorelines, it is inconsistent with this area's land use policy. This overlap will be discussed with MNR prior to the start of construction.

The proposed TLA alternatives overlap with a number of Crown Land Use Areas. Potential effects related to the construction of the selected TLA will be similar for either of the TLA alternatives. Less than 1% of each Crown Land Use area could potentially be overlapped by the TLA alternatives. The general use area policies are silent on transmission lines as a permitted use. However, since transmission lines already exist in general use policy areas, it is assumed that this land use will be acceptable and consistent with the intent of the Crown Land Use Area policies.

#### Government, Aboriginal and Public Comments and Concerns

To date, no comments have been made by Aboriginal groups or the general public on land use planning policies. The Ministry of Natural Resources (MNR) provided comments that the principles of land use compatibility need to be addressed in the EA and that land and resources users should be consulted on the Project.

The Ministry of the Environment (MOE), Northern Region Planning Unit, provided comments on the Draft ToR on June 8, 2013. Their comments included:

- the principles of land use compatibility need to be addressed in the EA;
- land and resources users should be consulted on the Project;
- information addressing potential influence areas, minimum separation distances, and the use of detailed studies to evaluate potential effects and identify appropriate effects management measures, is included in the MOE D-series Guidelines;
- land uses and activities which could result in land use conflicts should be considered, along with other factors, as the extent of these areas are identified or further refined; and
- add any landowners, resource users, or other interests who may potentially experience adverse effects as a result of the Project to the Project mailing list as they are identified, and include them in consultation activities throughout the EA process.

#### Effects Management Strategies

The primary effects management strategy for limiting adverse effects to land use policies will include incorporation the MOE D-series guidelines (MOE, 1995), which identify minimum setback requirements (300 m) for Class III Industrial Facilities, into Project planning.

### 3.1.1.2 Mattagami Region Source Water Protection Intake Protection Zones

The Mattagami Region Source Water Protection Plan (the Plan) identifies mining as one of the activities that could pose a potential threat to sources of drinking water (Mattagami Region Source Protection Committee, 2012). Potential effects on the Mattagami Region Source Water Protection Planning zones during the construction phase of the Project include:

- overlapping of Intake Protection Zone (IPZ) 3;
- transmission line alignment which could result in loss of area for source water re-charge; and
- effects on downstream drinking water quality.

IAMGOLD has worked with provincial authorities as well as with the Mattagami Region Source Protection Committee to avoid effects of the Project on the Timmins drinking water supply.

Upon review of the Draft ToR, the MOE provided the following feedback:

*“The Mattagami region local assessment report indicates that the proposed mine and associated infrastructure is in the Mattagami river watershed upstream of the City of Timmins water supply, in the following vulnerable areas: intake protection zone-3 (IPZ-3) with a vulnerability score of 2 and in the highly vulnerable aquifer (HVA) with a vulnerability score of 6. Vulnerability scores range from 0-10 with 10 being highly vulnerable. Intake protection zone 3 is part of the broader watershed area that contributes to the drinking water system for the City of Timmins. A score of 2 indicates that threats to drinking water could only be considered as low risk. Highly vulnerable aquifers are mapped based on local information about the susceptibility of underlying aquifers to water-borne contaminants. The proposal is in a HVA with a vulnerability score of 6, meaning that threats to drinking water could be considered low or moderate. Although the project does fall within these vulnerable areas, neither chemical nor pathogen threats would be considered significant. The potential impact of this proposal on the Timmins drinking water system would be considered low risk. The potential impact of this development on Timmins drinking water system is therefore minimal.” (MOE comments on the Draft ToR)*

Combined with IAMGOLD’s prediction of effects on water quality, it is expected that there will be no adverse effects on Timmins drinking water supply.

### Government, Aboriginal and Public Comments and Concerns

IAMGOLD held an open house in Timmins on February 26, 2013 to provide an overview of the Draft Project Description. During that session, individuals commented on the effluent discharge into Mesomikenda Lake (an Ontario Power Generation managed lake and headwaters for the City of Timmins) and the potential for an effect on water quality. Individuals from the Mattagami

Region Conservation Authority attended the session and identified that details about the Mattagami Region Source Protection Plan are available on their website.

In a May 23, 2013 meeting with MNDM, MOE and MNR, the MOE identified that the Project falls within IPZ-3 and that while the Plan is a draft, and currently under review, IAMGOLD should review the Plan as it may have implications for site design and management.

On June 4, 2013, the MOE provided comments on the Draft ToR, reiterating that the proposed Project is within the Mattagami Region Source Protection Area and that the Mattagami Region Conservation Authority should be consulted.

### Effects Management Strategies

Mitigation measures applicable are presented in the Water Quality TSD (see Appendix J of the EA).

#### **3.1.1.3 Residual Effects**

As described above, very small portions (less than 1%) of Ontario's Living Legacy Land Use Strategy Areas and Mattagami Region Source Water Protection Planning zones will be overlapped by Project components. However, this is not expected to limit the designated land use.

#### **3.1.2 Mineral Exploration**

Other than IAMGOLD, the two primary mineral claim holders near the Project site include:

- Sanatana Resources Incorporated (Sanatana): Sanatana holds 46 mining claims covering approximately 7,691 ha (Sanatana Resources, 2013a) on the south end of the Project site area.
- GoldON Resources Limited (GoldON): GoldON holds 18 mining claims covering approximately 6,640 ha (GoldON Resources, 2013) that adjoins or surrounds the Côté Gold Project.

The following Project components have been identified to be located on Sanatana claims:

- a section of the Chester Lake to Clam Lake watercourse realignment;
- a section of the Bagsverd Creek watercourse realignment;
- sections of the tailings pipeline alignments;
- a small portion of the main access road to the Project site and potentially portions of other site maintenance roads;
- retention dams located in Clam Lake;

- a small portion of the Cross-Country transmission line alignment; and
- a portion of the Shining Tree transmission line alignment.

The following Project components have been identified to be located on GoldON claims:

- a section of the Bagsverd Creek watercourse realignment;
- sections of the tailings pipeline alignments; and
- the TMF, which includes the polishing pond, and associated access roads as well as the discharge pipeline or a portion thereof.

GoldON resources has already provided their Consent to the Disposition of Surface Rights for the area that will be overlapped by the Project, including the TMF.

Both transmission line alignments cross claim areas near Timmins.

The Project may either create improved access through the development of new access roads or limit access by removing previously used access roads. Access to the Project site and other claim areas will be maintained via the Sultan Industrial Road. This is an active industrial road and neither its location nor design will be altered as a result of the Project.

The addition of linear components such as transmission lines and their corridors, access roads, tailings pipeline alignments and watercourse realignments are not expected to limit the ability to exercise mineral exploration activities.

#### **3.1.2.1 Government, Aboriginal and Public Comments and Concerns**

To date, no comments or concerns have been received from government agencies, Aboriginal groups or the public with respect to potential residual effects. Sanatana Resources commented that they are a potentially affected and interested stakeholder due to the Project's potential to directly affect their claims (Sanatana Resources, 2013b).

#### **3.1.2.2 Effects Management Strategies**

IAMGOLD will work with claim holders to identify access changes and negotiate access agreements if there is any requirement to use or cross IAMGOLD properties.

#### **3.1.2.3 Residual Effects**

Exploration activities may be affected by the Project development, however, this will not limit the ability to exercise mineral exploration activities. Some areas will be more accessible due to Project development allowing for easier access for exploration activities.

### 3.1.3 Forestry

The potential effects on forestry due to the construction phase of the Project include:

- overlapping, and therefore, loss of Forest Management Units (FMUs) area;
- long-term removal of forest resources (at the Project site footprint and along transmission line alignment); and
- changes to access along the Cross-Country TLA and at the Project site.

Table 3-3 presents the percentage of the FMUs within the Project components footprint, and by the TLA alternatives that will be overlapped by the Project during construction.

**Table 3-3: Forest Management Unit (FMU) Effects**

FMU	Total FMU Area (ha)	Total FMU Area Overlapped by Project Components Footprint (%) <sup>1</sup>	Total FMU Area Overlapped by Transmission Line Alignment (%)	
			Cross-Country	Shining Tree
Pineland	393,919	—	0.02	—
Romeo Malette	629,954	—	0.06	0.06
Spanish	1,234,878	0.14	0.01	0.01
Timiskaming	1,538,912	—	—	0.02

<sup>1</sup> The Project components footprint is a non-contiguous polygon; it is a cluster of polygons associated with various Project components. It is anticipated that access restrictions will be in place between some of these fragmented component areas but the access restrictions are currently not defined.

Source: MNR, 2013

As shown in Table 3-3, a loss of 0.14% of the Spanish FMU is expected as a result of the development of Project components.

Potential effects related to the construction of the transmission line alignment will be similar for each of the proposed transmission line alignments. Less than 1% of the FMUs will be overlapped by the TLAs. The vegetation to be removed along the TLA alternatives consists predominantly of deciduous mixed forest, coniferous forest and coniferous swamp. The forest cover removed would be primarily within the Romeo Malette FMU and to a lesser extent in the Timiskaming, Pineland and Spanish FMUs.

If any future potential forest management areas are in conflict with the Project construction or operations, MNR will facilitate discussions between IAMGOLD and the applicable Sustainable Forest Licence Holder.

IAMGOLD will be required to obtain a forestry licence from MNR to clear forest resources for Project construction. The applicable Sustainable Forest Licence Holder will be given the first

right of refusal to harvest forestry resources that need to be removed due to Project construction.

Access at the Project site will be controlled by IAMGOLD. IAMGOLD intends to use the Sultan Industrial Road as the main dedicated access point to the Project site. EACOM owns the rights to the Chester Access Road to manage the Spanish FMU. The Chester Access Road is classified as a Primary Road under the Forest Management Plan. The road will likely remain under the care and control of EACOM and will be re-routed around the Project site. This road is currently in suitable condition and will not require any foreseeable upgrades to alignment or water crossings at this time because it is an active haul road.

Access to the Romeo Malette and Pineland FMUs may be increased as a result of the construction of the Cross-Country TLA. No access changes to FMUs along the Shining Tree TLA are anticipated since this alignment will be constructed adjacent to an existing right-of-way.

### **3.1.3.1 Government, Aboriginal and Public Comments and Concerns**

No comments from Aboriginal groups or the general public have yet been received regarding concerns about forestry resources.

During a November 8, 2012 meeting, the MNR identified the FMUs that the Project may affect and noted that they have the forest harvesting plans for the Gogama area. Forestry activities include access roads, harvesting, renewal (planting), and maintenance of planted areas. There are active forest activities within the Chester Township. A 10-year Forest Management Plan and current Annual Work Schedule is in place for each FMU.

IAMGOLD held an open house on May 22, 2013 in Gogama to provide an overview of the Draft ToR. During this session, an individual from EACOM commented that they currently use Chester Road to access harvest areas and inquired if there will be any gates or access restrictions.

### **3.1.3.2 Effects Management Strategies**

The primary effects management strategy for limiting adverse effects to forestry management and resources will include the re-route of the Chester Access Road south of the Project site.

### **3.1.3.3 Residual Effects**

Taking into consideration the effects management strategy, the loss of small percentages of the four FMUs due to the Project (described in Table 3-3) will not substantially limit the forestry resources or the ability to conduct forestry activities.

### 3.1.4 Hunting

A number of Wildlife Management Units (WMUs) and Bear Management Areas (BMAs) overlap with the Project site and TLA alternatives. Potential effects on hunting during the construction phase of the Project include:

- overlapping of, and therefore, limited use of, or access to WMUs;
- overlapping of, and therefore, limited use of, or access to BMAs;
- increased access to BMAs along the TLA alternatives; and
- changes to the abundance and distribution of wildlife that could affect hunting success rates due to construction activities.

#### Changes to Wildlife Management Units

The Project components overlap with WMU 31 by only 0.17% (see Table 3-4). Less than 1% of WMU 29 and WMU 31 will be overlapped by the either of the TLA alternatives.

**Table 3-4: Wildlife Management Unit (WMU) Effects**

WMU	Total WMU Area (ha) <sup>1</sup>	Total WMU Area Overlapped by Project Components Footprint (%) <sup>2</sup>	Total WMU Area Overlapped by Transmission Line Alignment (%)	
			Cross-Country	Shining Tree
29	815,473	—	0.03	0.09
31	1,024,189	0.17	0.03	0.00

<sup>1</sup> MNR, 2013

<sup>2</sup> The Project components footprint is a non-contiguous polygon; it is a cluster of polygons associated with various Project components. It is anticipated that access restrictions will be in place between some of these fragmented component areas but the access restrictions are currently not defined.

#### Changes to Bear Management Areas

The Project components will overlap 10.72% of BMA GO-31-064 (see Table 3-5). The TLA alternatives will overlap various BMAs by 1.31% or less.

**Table 3-5: Bear Management Areas (BMA) Effects**

BMA	Total BMA Area (ha) <sup>2</sup>	Total BMA Area Overlapped by Project Components Footprint (%) <sup>1</sup>	Total BMA Area Overlapped by Transmission Line Alignment (%)	
			Cross-Country	Shining Tree
GO-29-058	22,869	—	—	0.09
GO-29-060	39,826	—	—	0.52

BMA	Total BMA Area (ha) <sup>2</sup>	Total BMA Area Overlapped by Project Components Footprint (%) <sup>1</sup>	Total BMA Area Overlapped by Transmission Line Alignment (%)	
			Cross-Country	Shining Tree
GO-29-066	2,738	—	—	1.31
GO-31-054	20,662	—	0.56	—
GO-31-060	11,601	—	0.31	—
GO-31-062	6,483	—	1.01	—
GO-31-064	11,753	10.72	0.37	0.34
TI-29-002	7,888	—	0.62	0.58
TI-29-004	57,155	—	0.14	0.31
TI-29-007	117,410	—	0.12	0.12

<sup>1</sup> The Project components footprint is a non-contiguous polygon; it is a cluster of polygons associated with various Project components. It is anticipated that access restrictions will be in place between some of these fragmented component areas but the access restrictions are currently not defined.

<sup>2</sup> MNR, 2013.

### Changes in Access

In an interview with MNR representatives, it was noted that while the Project site is currently popular for hunting, other areas in the terrestrial biology regional study area are busier (more popular) (pers. comm., MNR, November 2012). MNR also noted that areas accessible from the Chester Lake Road are also used for hunting. Chester Lake Road will likely be re-routed around the Project site during construction to accommodate Project infrastructure. This will displace hunters using this road to areas adjacent to the new road location. Hunters will also not be able to use current site access roads for staging hunting activities (parking, camping etc.).

Access to BMA GO-31-064 will be limited to areas south of the Project site. According to the MNR, currently five other BMAs are available for allocation in the Timmins District (pers. comm., MNR, August 2013). The BMA holder of GO-31-064 could apply to the MNR to obtain license to additional BMAs in the Timmins District to augment the loss of access to the northern portion of GO-31-064.

Access to BMAs will not be affected by the construction of the Shining Tree TLA since it would be constructed adjacent to an existing TLA. Increased access to BMAs and the WMUs would be facilitated as a result of the Cross-Country TLA.

### Abundance and Distribution of Wildlife

Potential effects to wildlife is detailed in the Wildlife TSD (see Appendix L of the EA) including potential effects related to habitat loss, mortality due to increased vehicle traffic, decreased connectivity between local habitat areas and noise disturbance. It was determined that wildlife

displaced by the Project will likely find equally suitable habitat adjacent to the Project site. No changes to hunting quotas are anticipated as these are set by the MNR.

Wildlife will be temporarily displaced in the short period of time when the transmission line is being constructed and the associated effects are predicted to be minor and reversible when construction activities are completed. Once the transmission line is in place, moose, deer and bears (as well as other animals) will use these alignments for travel, and vegetation re-growth in the alignments will provide browse for animals (such as moose).

#### **3.1.4.1 Government, Aboriginal and Public Comments and Concerns**

On September 24, 2012, a three-person-hunting party inquired about the Project and whether or not there would be access restrictions to the area for hunting.

During a November 8, 2012 meeting with the MNR, they provided contact details for MNR staff responsible for the WMUs in the Project area. The MNR also provided comments that included:

- the terrestrial biology regional study area is heavily hunted for moose, small game and bear, as well as upland game bird;
- a Cervid Management Plan for this area aims to decrease deer populations and increase moose populations;
- some Elk sightings have occurred, especially in the southern end of the regional study area;
- BMAs are allocated to outfitters for non-resident harvesting;
- the site conditions allow for more time to hunt, so there is more frequent hunting;
- a lot of hunting occurs off the Chester Road and now that the bridge over Mesomikenda Lake has been re-established, there is more use of the area; and
- during the winter not much activity occurs at or around the Côté Gold site, but in the Fall hunting activity occurs at/near the site. However, busier places are located within the regional study area.

IAMGOLD held an open house on May 22, 2013 in Mattagami First Nation reserve to provide an overview of the Draft ToR. During this session, an individual from Mattagami First Nation commented that the Project would stop people from enjoying the land (such as fishing, camping, hunting, etc.).

#### **3.1.4.2 Effects Management Strategies**

Planned mitigation measures to limit adverse effects on wildlife and hence also effects on hunting are documented in the Wildlife TSD and the Transmission Line Terrestrial Biology TSD (see Appendices L and M of the EA), and include measures such as minimizing the Project

footprint to the smallest extent practicable, controlling sound and other disturbances, and managing site effluent quality.

The primary effects management strategies for limiting adverse effects to hunting occurring within the terrestrial biology local study area will include:

- Enforcement of speed limits and warning IAMGOLD personnel of areas of high wildlife activity and crossings;
- Prohibiting workers from hunting on-site;
- Disposing of food wastes generated on-site appropriately to reduce the attraction of wildlife; and
- Other strategies to be determined through consultation between the MNR and the affected BMA holder.

#### **3.1.4.3 Residual Effects**

The Project will result in some displacement of wildlife species from the Project site; however, this displacement is not expected to have long-term effects on wildlife resources available for hunting. Through the application of traffic and wildlife awareness programs, mortality of wildlife species is expected to be managed effectively.

Although the Project overlaps one WMU and one BMA, this is not expected to limit the ability to carry out hunting activities in the area.

#### **3.1.5 Trapping**

A number of trapline areas overlap with the Project site and TLA alternatives. Potential effects on trapping during the construction phase of the Project include:

- loss of trapline areas or trap cabins;
- changes to access to trapline areas or trap cabins; and
- changes to the abundance and distribution of furbearers that could affect trapping success rates, and therefore, trapping income due to changes in biophysical or anthropogenic conditions as noted below.

#### Effects to Trapline Areas and Cabins

The TLA alternatives overlap with 16 trapline areas along the Shining Tree TLA and 14 trapline areas along the Cross-Country TLA. Table 3-6 presents the percentage of each trapline area that will be overlapped by the Project components, and by either of the TLA alternatives.

**Table 3-6: Trapline Area Effects**

Trapline Area	Total Trapline Area (ha) <sup>2</sup>	Total Trapline Area Overlapped by Project Components Footprint (%) <sup>1</sup>	Total Trapline Area Overlapped by Transmission Line Alignment (%)	
			Cross-Country	Shining Tree
GO003	8,887	—	0.60	—
GO004	13,347	—	—	0.47
GO008	15,149	—	0.33	—
GO009	11,354	—	—	0.20
GO014	8,184	—	0.59	—
GO015	9,639	—	—	0.20
GO016	11,109	—	—	0.38
GO021	13,361	—	—	0.41
GO023	16,531	0.68	—	—
GO024	18,924	4.33	0.13	—
GO025	20,783	—	0.37	—
GO026	16,965	—	0.09	—
GO028	9,582	—	—	0.47
GO031	9,366	8.59	0.36	0.33
GO032	17,014	—	—	0.38
GO033	16,892	—	—	0.45
GO035	17,276	—	—	0.58
TI008	9,998	—	0.26	0.49
TI013	17,967	—	0.16	0.19
TI014	22,347	—	0.28	0.26
TI015	12,157	—	0.60	0.56
TI020	14,469	—	0.46	0.45
TI021	16,886	—	0.08	0.09
TI053	12,387	—	0.19	—

<sup>1</sup> The Project components footprint is a non-contiguous polygon; it is a cluster of polygons associated with various Project components. It is anticipated that access restrictions will be in place between some of these fragmented component areas but the access restrictions are currently not defined.

<sup>2</sup> MNR, 2013

Potential effects due to the development of the Project site will be predominantly to trapline areas GO023, GO024, and GO031. It is anticipated that use of trapline area GO031 will be severely limited. The associated trappers' cabin on Three Duck Lakes (Upper) will be removed during the construction phase of the Project to ensure safety of the trapper. Currently, no trapline area vacancies are found in the Timmins District (pers., comm., MNR, August 2013). Trappers are allowed only one trapline area, which is awarded competitively based on a Provincial point system. Points are awarded for a number of criteria including: residency, membership in a local trapper's council, length of trapping experience, etc. Notice of any

trapline area vacancies occurs annually in January. First Nation members with documented family claim or connection to a trapping area have six months to exercise their right of first refusal for the vacant trapline area (MNR, 2010). Given this information, it is reasonable to assume that opportunities are limited for being allocated a replacement trapline area in the Timmins District for this trapper, should the trapper wish to relinquish the trapline area.

There are no predicted effects on trappers along either of the TLA alternatives due to trapline area loss given the small proportion of trapline areas that would be affected by either transmission line alignment (less than 1% in all cases).

#### Access to Trapline Areas and Cabins

It is anticipated that access to trapline area GO031, and the trapper's cabin on Three Duck Lakes (Upper), will be removed during the construction phase of the Project due to the main access road being gated by IAMGOLD security for safety reasons. Trappers who have been allocated traplines west of the Project site, and who are currently using roads through the existing IAMGOLD claims, will need to use other access roads south of the Project site.

Improved access along the transmission line alignment could make it easier for trappers to access parts of their trapping areas or cabins. However, it could also improve access for other land users (snowmobilers, ATV users) creating a disturbance for and displacing furbearers, thereby negatively affecting trapper success. Incidences of trap cabin vandalism could also occur due to increased accessibility.

Compared to the Shining Tree TLA, which is already adjacent to a transmission line (historic or current) right-of-way (ROW), the Cross-Country TLA would open up new access to trapline areas that may have been previously more difficult to access.

The potential exists for effects to occur to trapper cabins along the Shining Tree TLA, most notably in trapline areas GO028, GO032, and GO033. Currently, the exact location of these trap cabins is unknown, and therefore it is not known if cabins would need to be moved due to incompatibility with the TLA. Cabins or other associated buildings could be moved if they are within the TLA as part of effects management measures, as negotiated with trap cabin owners. This would require a work permit under the *Public Lands Act* (MNR, 2006).

#### Abundance and Distribution of Furbearers

Potential effects to furbearers are detailed in the Wildlife and Transmission Line Terrestrial Biology TSDs (see Appendices L and M of the EA) including potential effects related to habitat loss, mortality due to increased vehicle traffic, decreased connectivity between local habitat areas, and noise disturbance. Furbearers displaced by the Project will likely find equally suitable

habitat adjacent to the Project. No change is anticipated to furbearer harvest volumes, as these are quotas set by the MNR.

#### **3.1.5.1 Government, Aboriginal and Public Comments and Concerns**

The holder of trapline area GO031 has been in regular contact with the IAMGOLD site staff to obtain information about access to the trapline area during the Project exploration phase. IAMGOLD provides information to trapline area holders as requested.

During a November 8, 2012 meeting, the MNR identified that trapping occurs in the area and that the MNR would need permission from the trappers and a data sharing agreement with IAMGOLD to release the trappers' names so that the company could contact them about the Project.

IAMGOLD held an open house on May 22, 2013 in Mattagami First Nation reserve to provide an overview of the Draft ToR. During this session, an individual from Mattagami First Nation inquired about the traplines and the effects the Project would have on harvesting quotas (specifically for GO035, which is not in the regional study area).

As part of the research to support the Land and Resource Use Baseline Study Report (see Appendix I), interviews were conducted with trappers on GO031. During these interviews, the individuals indicated that they:

- actively use the trap cabin at Three Duck Lakes (Upper) in late October for trapping and in March for ice fishing;
- they consume berries, fish, and game from the area but bring their own water; and
- trapping is very important as it part of their lifestyle and part of their culture and heritage.

#### **3.1.5.2 Effects Management Strategies**

Planned mitigation measures to limit adverse effects to furbearing mammals and hence also effects to trapping are documented in the Wildlife TSD and Transmission Line Terrestrial Biology TSD (see Appendices L and M of the EA), and include such measures as minimizing the Project footprint to the smallest extent practicable, controlling sound and other disturbances, and managing site effluent quality.

Additional effects management strategies for limiting adverse effects to trappers and furbearers within the terrestrial biology local study area will be determined through consultation between the MNR and affected trappers.

### 3.1.5.3 Residual Effects

Despite the measures to minimize adverse effects to trapline areas and trap cabins, some loss of use and access will occur to three trapping areas and most notably in GO031 where 8.59% of the trapline area will be removed and other parts of the trapline may be made inaccessible due to the Project. Additionally, the trapper's cabin located on Three Duck Lakes will be removed.

The construction of the transmission line could temporarily disturb trapping activities along the selected TLA, and, if the Shining Tree TLA is selected, could result in the need to move trap cabins or associated buildings. Access to trapline areas along the TLA alternatives is expected to stay the same (in the case of the Shining Tree TLA) or be improved (in the case of the Cross-Country TLA). Effects related to the transmission line construction are short-term. Trapping is seasonal, and therefore, trappers will experience effects more noticeably during the winter/early spring trapping season. The Project is anticipated to affect only a few trap cabins during the construction phase; therefore, overall trapping along the corridor will not be affected.

In summary, although the Project will overlap several traplines, it is not expected to limit the ability to carry out trapping in the area.

### 3.1.6 Recreational and Commercial Fishing

The Project site and TLAs overlap with Fisheries Management Zone (FMZ) 8 and several bait harvest areas. Potential effects on fishing during the construction phase of the Project include:

- loss of bait harvest areas or recreational fishing areas;
- changes to access to fishing areas; and
- changes to the abundance and distribution of fish that could affect fishing success rates, and therefore, any commercial fishing income (such as for bait fish harvesters) due to changes in biophysical or anthropogenic conditions as noted below.

The Project will overlap a very small proportion of FMZ 8. The MNR indicated in an interview that the Timmins/Gogama region is a popular fishing area and that angling pressure is high to very high in Biscotasi, Dividing, Mesomikenda, Minisinakwa, Ramsay and Rice Lakes (pers. comm., MNR, November 2012). Only Mesomikenda Lake is within the aquatic biology regional study area and access to this lake for fishing will not be affected. Furthermore, water quality, fisheries resources and human health assessments have indicated that fish will not be affected in Mesomikenda Lake. IAMGOLD will implement a no fishing policy for workers in lakes neighbouring the Project site. Public access to Three Duck Lakes, Chester Lake, Clam Lake, Bagsverd Lake and Unnamed Lakes will be controlled by IAMGOLD.

Four bait harvest areas are potentially affected by the Project site; TI0175, TI0176, TI0192 and TI0193. The current Project design includes an aquatic habitat compensation scheme that will compensate for any habitat lost due to the development of the Project. Bait harvest area TI0193

includes Côté Lake. Bait harvesting in this area may be affected until habitat compensation measures are fully established. Bait harvesting in the other three areas may be disrupted temporarily due to Project construction activities.

The Cross-Country TLA will overlap 19 bait fish harvest areas while the Shining Tree TLA will overlap 21 bait harvest areas. The construction of the transmission line is not anticipated to have any effect on bait fish harvesting areas.

According to the MNR, bait fish harvest areas are common within the MNR Timmins/Gogama district, with current vacancies for two blocks (pers. comm., MNR, August 2013). A bait fish harvester may be allocated more than one block (pers. comm., MNR, August 2013). The bait fish harvester allocated to TI0176, indicated in an interview that he has not used his harvest block recently due to the amount of road traffic at the Project site (pers. comm., Simmoneau, May 2013).

### **3.1.6.1 Government, Aboriginal and Public Comments and Concerns**

Comments and concerns related to fishing were received from government agencies, Aboriginal groups and the public.. During a November 8, 2012 meeting, the MNR identified that:

- the aquatic biology regional study area is a popular fishing area and that angling pressure is high to very high in some lakes (Biscotasi, Dividing, Mesomikenda, Minisinakwa, Ramsay and Rice Lakes);
- Mesomikenda Lake has a Lake Trout Policy that limits the type of development that can occur; and
- some lakes are stocked (including Dividing (Walleye); Mesomikenda (Lake Trout, Pike, Walleye, Bass).

IAMGOLD held an open house on May 22, 2013 in Mattagami First Nation reserve to provide an overview of the Draft ToR. During this session, an individual from Mattagami First Nation commented that the Project would stop people from enjoying the land (such as fishing, camping, hunting, etc.).

As part of the research to support the Land and Resource Use Baseline Study Report (see Appendix A), an interview was conducted with a local bait fish harvester. During the interview, the individual identified the following:

- active bait fish harvest occurs from May through September annually;
- access to the areas is by car and boat; and
- the lakes around the Project site area have not been used because it has been too busy (road traffic) for the last seven years; however, they used the lakes near the “mine shaft” (and part of Three Duck Lakes).

### **3.1.6.2 Effects Management Strategies**

Access to bait fish harvest blocks may be limited during the construction phase but other bait fish harvest blocks within the Timmins District could be allocated to affected bait fisher, if the bait fisher wishes to give up the affected harvest block(s).

Planned mitigation measures to limit adverse effects to water quality, fish and fish habitat are documented in the Water Quality TSD and Aquatic Biology TSD (see Appendices J and N of the EA, respectively).

### **3.1.6.3 Residual Effects**

For safety, recreational and bait fishing on lakes and streams within IAMGOLD property will not be permitted for IAMGOLD staff or contractors. Although access to several lakes will be controlled, most of the more popular fishing lakes will not require controlled access, including Mesomikenda Lake. The resulting water quality in the receiving water will be protective of aquatic life, and therefore recreational fishing will not be affected. With mitigation measure for water quality, fish and fish habitat in place, the overall use of the area for recreational and commercial fishing will not be limited.

### **3.1.7 Cottages and Outfitters**

Numerous cottages and outfitters are located near the Project site. Potential effects on the cottagers may include:

- decreased enjoyment and leisure lifestyle associated with cottaging due to construction noise and dust; perceived effects to water quality, quantity and area aesthetics); and
- increased vehicle traffic.

The potential effects of the Project on the outfitters may include:

- decrease in areas recommended by outfitters to clientele (related to effects on BMAs);
- perception that the area is not pristine or natural which could detract clientele; and
- increased local clientele due to increased workforce in area (staying or hunting, etc).

No overlapping or removal of active outfitter camps will occur since the outfitters camps are not located in close proximity to the Project. Outfitters are not typically using the areas that would be overlapped by the Project. Tourism/outfitter lodges located in Gogama may see an increase in clientele related to accommodations for temporary visitors/workers/contractors at Project site. The outfitters would welcome this as business is declining in the region.

Effects on receptors, such as cottagers, as a result of noise, vibration or dust are discussed in the Air Quality TSD and Noise and Vibration TSD (see Appendices F and G of the EA). Visual effects on receptors are addressed in the Visual Aesthetics TSD (see Appendix S of the EA).

The change to increased road traffic is addressed in the Socio-Economic TSD (see Appendix T of the EA). Some of the Project effects may potentially result in changes from baseline conditions for some cottagers. Air quality, noise and vibration levels at receptor locations are expected to meet applicable guidelines. Changes in the visual landscape are not expected to affect the enjoyment of the area by local land and resource users.

No change in cottagers' use of Mesomikenda Lake (swimming, fishing, boating) is predicted due to changes in water quality. No increase in boating is expected to occur on Mesomikenda Lake due to construction activities.

### **3.1.7.1 Government, Aboriginal and Public Comments and Concerns**

IAMGOLD has engaged with many cottagers from Mesomikenda Lake. During a November 20, 2012 conference call with the Mesomikenda Cottagers Association, concerns raised include:

- decreased future access to the Project site area due to Project site activities; and
- increased activity (boating) on Mesomikenda Lake due to increase Project site activities.

IAMGOLD held an open house on February 28, 2013 in Sudbury to provide an overview of the Draft PD. During this session, cottagers on Mesomikenda Lake identified the personal importance of cottages to their heritage. Individuals also expressed concerns, including:

- changes to water quality and quantity and effects of effluent on Mesomikenda Lake;
- changes to noise;
- changes to fish and fish habitat;
- changes to wildlife and wildlife habitat;
- potential for increases in vandalism;
- potential for decreases in property values;
- proximity of cottages to the TMF structure and its overflow;
- proximity of cottages to the Mine Rock Areas (MRAs);
- incompatibility of mixing industrial and recreational land uses; and
- changes in traffic on roads.

Individuals from the Mesomikenda Cottagers Association sent a letter to the Agency on June 12, 2013 requesting that the cottagers be recognized as a stakeholder group during the EA process.

The Ministry of Tourism, Culture and Sport, Northern Policy and Planning Unit provided comments on the Draft ToR on June 7, 2013. Their comments related to tourism operators (outfitters) included ensuring outfitters are identified and consulted, and that effects management strategies are developed for outfitters that may be affected. As part of the research to support the Land and Resource Use Baseline Study Report (see Appendix A), interviews were conducted with local outfitters. No specific concerns related to the Project were identified.

### **3.1.7.2 Effects Management Strategies**

Planned mitigation measures to limit adverse effects to local cottagers and outfitters include such measures as minimizing the Project footprint to the smallest extent practicable, controlling noise, dust and other disturbances, and managing site effluent quality. These are documented in the TSDs listed above in Section 3.1.7.

Other effects management strategies include:

- prohibiting recreational boating for workers while they are staying at the on-site work camp;
- optimizing site design to manage Project distance from cottages, to the extent practical; and
- implementing a communications mechanism.

### **3.1.7.3 Residual Effects**

The Project will not overlap with any cottage properties. Cottagers will notice increased volumes on Highway 144 during the construction phase. Some cottagers will also experience changes in background air quality, noise and vibration levels, as described above. However, these levels are expected to meet applicable regulations. The Project will not negatively affect the use of water for swimming or freshwater take.

Outfitters are not typically using the areas that would be overlapped by the Project. Tourism/outfitter lodges located in Gogama may see an increase in clientele related to accommodations for temporary visitors/workers/contractors at Project site.

Overall, the Project will not limit the use of the area by existing cottagers or outfitters.

### **3.1.8 Navigable Waters**

The primary vessels used in navigable waters in the Project area are canoes and powerboats, with the latter being limited to Mesomikenda Lake due to lake depth and appropriate access. The 4M Canoe Route includes Three Duck Lakes, Weeduck Lake and Bagsverd Creek. During the construction phase, due to Project activities, access to Three Duck Lakes, Weeduck Lake and Bagsverd Lake will be controlled by IAMGOLD.

### **3.1.8.1 Government, Aboriginal and Public Comments and Concerns**

During a November 8, 2012 meeting with the MNR, they identified that they receive approximately 10 calls per year for canoe parties using the 4M Canoe Route and notes that the route is relatively popular with MNR staff.

IAMGOLD held an open house on February 27, 2013 in Gogama to provide an overview of the Draft PD. During this session, an individual from the MNR identified a canoe route at Three Duck and Bagsverd waterways.

IAMGOLD held an open house on May 21, 2013 in Sudbury to provide an overview of the Draft ToR. During this session, an individual commented that the 4M Canoe Route will be lost as a result of the Project.

### **3.1.8.2 Effects Management Strategies**

IAMGOLD will establish a suitable portage/connection such that the 4M Canoe Route will remain usable during the construction phase of the Project. In addition, IAMGOLD will work with any potential canoe route users to identify suitable conditions for crossing the controlled-access lakes.

### **3.1.8.3 Residual Effects**

There are no anticipated effects to the use of powerboats on Mesomikenda Lake.

With the effects management measures in place, the Project will not limit the use of the 4M Canoe Route. It is possible that some canoers will avoid this route, due to the activities near the Project site. Effects to other canoeing activities in the local and regional study areas are not expected to be affected.

### **3.1.9 Other Recreational Uses**

Other recreational uses include the use of motorized and non-motorized recreational vehicles, hiking, mushroom and berry picking, and wood gathering. The potential effects on other recreational uses include:

- temporary disruption of the snowmobile Trunk Trail due to construction of the Project transmission alignment;
- changes to access to the Project area that may have previously been used for other recreation uses; and
- changes in the natural aesthetic of the area which may detract some recreational users from using the Project area.

The Ontario Federation of Snowmobile Clubs (OFSC) trunk trail runs north-south, between Highway 101 and Highway 560, east of the Project site and along portions of the existing the Shining Tree TLA. No OFSC trails are located within close proximity of the Project site. Portions of the OFSC trail may be affected in these areas temporarily due to the construction of the transmission line, as construction will occur during the winter months.

Snowmobile use (not related to OFSC trails) is known to occur on local portage trails and forestry roads at or near the Project site. Some of these areas will become inaccessible during the construction phase for safety and to avoid conflicts with Project construction activities.

Due to the ongoing/previous exploration work that has historically occurred in the Project area, other recreational uses of the area have been limited to non-existent.

### **3.1.9.1 Government, Aboriginal and Public Comments and Concerns**

During a November 8, 2012 meeting the MNR identified that while no (OFSC) trails exist at the Project site; snowmobilers are using portage trails and forestry roads throughout the site area including a line between Mesomikenda Lake and Chester Road.

IAMGOLD held an open house on May 22, 2013 in Mattagami First Nation reserve to provide an overview of the Draft ToR. During this session, an individual from Mattagami First Nation commented that the Project would stop people from enjoying the land (such as fishing, camping, hunting, etc.).

### **3.1.9.2 Effects Management Strategies**

The primary effects management strategy for limiting adverse effects to some snowmobilers that may be affected during the short-term construction of the transmission line will include working with the OFSC to minimize potential conflicts.

### **3.1.9.3 Residual Effects**

Other recreational uses on the Project site will not be permitted during construction to protect recreational users. However, there is very limited use of the Project site area for other recreational uses. Therefore, the overall recreational use of the area will not be limited by the Project.

Some snowmobilers may be affected during the short-term construction of the transmission line.

## **3.2 Operations Phase**

### **3.2.1 Land Use Plans and Policies**

As described above, small portions of Ontario's Living Legacy Land Use Strategy Areas and Mattagami Region Source Water Protection Planning zones will be overlapped by Project

components. This effect will continue throughout the operations phase. However, this effect is not expected to create any land use policy conflicts.

Since overlapping footprints, access and disturbances are expected to be similar to the construction phase, the effects management strategies applied in the construction phase are also applicable in this phase.

Residual environmental effects for the Project's operations phase are anticipated to be the same as those outlined in the construction phase.

### **3.2.2 Mineral Exploration**

Effects on mineral exploration in the Project's operations phase are anticipated to continue throughout the operations phase. However, Project development is not expected to limit the ability to exercise mineral exploration activities. Some areas will be more accessible due to Project development to allow easier access for exploration activities.

Since overlapping footprints, access and disturbances are expected to be similar to the construction phase, the effects management strategies applied in the construction phase are also applicable in this phase.

During the operations phase of the Project, access to land for other mineral exploration companies will be maintained, and therefore the Project will not limit mineral exploration activities.

### **3.2.3 Forestry**

Effects on forestry in the Project's operations phase is anticipated to be the same as those outlined in the construction phase due to the continued overlapping of small portions of the surrounding FMUs. Effects management strategies developed for the construction phase will continue to be applied during the operation phase. Therefore, the loss of small percentages of the four FMUs due to the Project will not substantially limit forestry resources or the ability to conduct forestry activities.

### **3.2.4 Hunting**

Effects on hunting in the Project's operations phase are anticipated to be similar to those outlined in the construction phase. However, during the operation phase there will be very limited activity along the transmission line alignment, thereby potentially facilitating hunting activities. Development of the transmission line through a closed forest will open up the canopy, creating edges that encourage the growth of shrubs, which is the preferred browse for moose. Linear corridors may also be considered habitat enhancement if these corridors act as travel corridors for moose in otherwise unsuitable habitat. Ease of movement along corridors makes them attractive travel routes for moose in habitats with otherwise impenetrable vegetation.

Similar to the construction phase, the loss of hunting area as a result of the Project development is expected to be minor. The Project will result in some displacement of wildlife species from the Project site; however, this displacement is not expected to have long-term effects on wildlife resources available for hunting. With application of traffic and wildlife awareness programs mortality of wildlife species is expected to be managed effectively. The overlap of one WMU and one BMA is not expected to limit the ability to carry out hunting activities in the area.

### **3.2.5 Trapping**

Effects on trapping in the Project's operations phase are anticipated to be the same as those outlined in the construction phase with the exception of the following changes:

- reduction in noise along the transmission line alignment; and
- reduction in workers (and related traffic) at the mine site and transmission line alignment.

Effects to furbearer populations due to Project activities are not expected. Despite the measures to minimize adverse effects to trapline areas and trap cabins, some loss of use and access will continue to occur to three trapping areas and most notably in GO031 where 8.59% of the trapline area continue to be removed and other parts of the trapline will remain inaccessible due to the Project.

During the operations phase, overall trapping along the transmission corridor will not be limited.

### **3.2.6 Recreational and Commercial Fishing**

Recreational and bait fishing on lakes and streams within IAMGOLD property will continue to be prohibited for IAMGOLD staff during the operations phase. Although access to several lakes will continue to be controlled, most of the more popular fishing lakes will not require controlled access, including Mesomikenda Lake. The resulting water quality in the receiving water will be protective of aquatic life, and therefore recreational fishing and bait harvesting will not be affected. With mitigation measures for water quality, fish and fish habitat established during the construction phase in place, no residual effect is expected.

### **3.2.7 Cottages and Outfitters**

Even though traffic volumes during operations are expected to decrease compared to the construction phase, cottagers will likely continue to notice increased volumes on Highway 144 compared to existing conditions. Cottagers will continue to experience changes in background air quality, noise and vibration levels, as described above. However, these levels meet applicable regulations and are therefore not expected to limit the use of the area for cottaging.

As described for the construction phase, the Project is not expected to limit outfitting activities.

### **3.2.8 Navigable Waters**

There are no anticipated effects to the use of powerboats on Mesomikenda Lake.

During the operations phase, due to Project activities, access to Three Duck Lakes, Weeduck Lake and Bagsverd Lake will be controlled by IAMGOLD. IAMGOLD will establish a suitable portage/connection such that the 4M Canoe Route will remain usable during the operations phase of the Project. In addition, IAMGOLD will work with any potential canoe route users to identify suitable conditions for crossing the controlled-access lakes.

With the effects management measures in place, the Project will not limit the use of the 4M Canoe Route. It is possible that some canoers will avoid this route, since the MRA and TMF will be visible from Three Duck Lakes, Weeduck Lake and Bagsverd Lake.

### **3.2.9 Other Recreational Uses**

During the operation phase, there will be no negative effects along the transmission line. Portions of the TLA may be used by snowmobilers or other recreational users.

Other recreational uses on the Project site will not be permitted during operations phase to protect recreational users. However, there is very limited use of the Project site area for other recreational uses. Therefore, the overall recreational use of the area will not be limited by the Project.

## **3.3 Closure Phase**

During the closure phase most of the Project infrastructure will be removed. The TMF and MRA will be closed out and selected areas will be revegetated. At the end of the closure phase, there will be no residual effects on land use policies and plans, mineral exploration, recreational and commercial fishing, cottages and outfitters, canoeing and navigable waters and other recreational uses. The effects on forestry, hunting and trapping are expected to continue through the closure phase.

## **3.4 Post-Closure Phase**

Post closure, affected areas will continue to re-naturalize and vegetation and therefore habitat will be re-established. Access restrictions will be removed once the open pit is flooded and re-integrated into the watershed. As habitat is re-established, effects on forestry, hunting and trapping are expected to cease.

#### 4.0 CONCLUSIONS

Small portions of Ontario's Living Legacy Land Use Strategy Areas will be overlapped by Project components. However, the Project will not limit the designated land use. The Project is located within the Mattagami Region Source Water Protection Planning zones. Based on the feedback received from the MOE and IAMGOLD's prediction of effects on water quality, it is expected that there will be no adverse effects on Timmins drinking water supply.

The transmission line alignment, as well as several components of the Project site infrastructure, are planned to be situated on mining claims owned by other entities. Therefore, exploration activities on these claims may be affected by the Project development. However, this will not limit the ability to exercise mineral exploration activities. Some areas will be more accessible due to Project development such that it would allow easier access for exploration activities.

The Project, including the transmission line alignment, will overlap several small portion of surrounding Forest Management Units. This overlap will not substantially limit forestry resources or the ability to conduct forestry activities.

Similarly, a number of hunting, trapline and fishing areas overlap with the Project site and TLA alternatives. The Project will result in some displacement of wildlife species from the Project site; however, this displacement is not expected to have long-term effects on wildlife resources available for hunting. In addition, although the Project overlaps one WMU, one BMA and a number of traplines, this overlap will not limit the ability to carry out hunting, trapping and fishing activities in the area.

The Project will not overlap any cottage properties. Cottagers, however, will notice increased volumes on Highway 144 during the construction phase. Some cottagers will also experience changes in background air quality, noise and vibration levels. However, these levels are expected to meet applicable regulations. The Project will not negatively affect the use of water for swimming or freshwater take. The Project will not limit the use of the area by existing cottagers.

Outfitters are not typically using the areas that overlap with the Project. Tourism/outfitter lodges located in Gogama may see an increase in clientele related to accommodations for temporary visitors/workers/contractors at the Project site. The Project will not limit the use of the area by existing outfitters. There are no anticipated effects to the use of powerboats on Mesomikenda Lake.

The 4M Canoe Route includes Three Duck Lakes, Weeduck Lake and Bagsverd Creek. IAMGOLD will establish a suitable portage/connection such that the 4M Canoe Route will still be usable. In addition, IAMGOLD will work with any potential canoe route users to identify suitable conditions for crossing the controlled-access lakes. With these measures in place, the 4M

Canoe Route will remain usable after construction. It is possible that some canoers will avoid this route, since the MRA and TMF will be visible from Three Duck Lakes, Weeduck Lake and Bagsverd Lake. In summary, although the Project overlaps a portion of the 4M Canoe Route, it is not expected to limit the use of these canoe routes/waterways once the construction activities are complete.

Other recreational uses could include the use of motorized and non-motorized recreational vehicles, hiking, mushroom and berry picking, and wood gathering. Such uses will not be permitted on, or in close proximity to the Project site during construction and operations. However, there is very limited use of the Project site area for these recreational uses. Therefore, the Project will not limit the use by outdoor recreation enthusiasts. Some snowmobilers may be affected during the short-term construction of the transmission line.

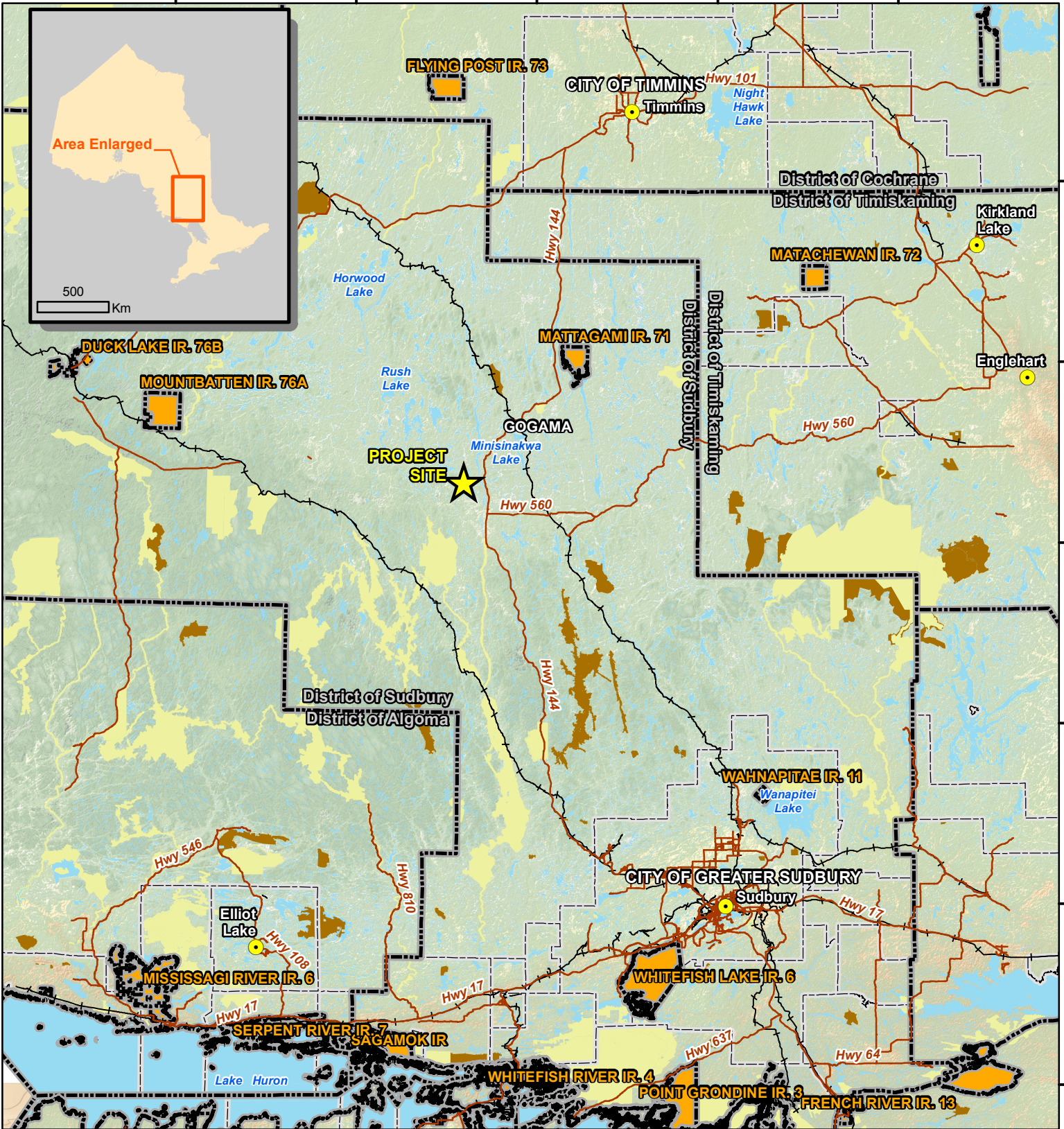
At the end of the closure phase, there will be no residual effects on land use policies and plans, mineral exploration, recreational and commercial fishing, cottages and outfitters, canoeing and navigable waters and other recreational uses. Post closure, affected areas will continue to re-naturalize and therefore habitat will be re-established. Access restrictions will be removed once the open pit is flooded and re-integrated into the watershed. As habitat is re-established, effects on forestry, hunting and trapping are expected to cease.

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## FIGURES

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**LEGEND**

- Project Site Location
- Regional Communities
- Major Roads
- Railway
- Lower Tier Municipality Boundary
- Upper Tier Municipality Boundary
- First Nation Reserve
- Conservation Reserve (Regulated)
- Provincial Park
- Waterbody / Large Watercourse
- Wooded Area

NOTES:  
- All base data on this map was extracted from Land Information Ontario, MNDM, OBM Ontario Digital Geospatial Database and Ontario Road Network Database.



**CÔTÉ GOLD PROJECT**

**Project Location**

Datum: NAD83  
Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

FIGURE: 1

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DATE: November 2013



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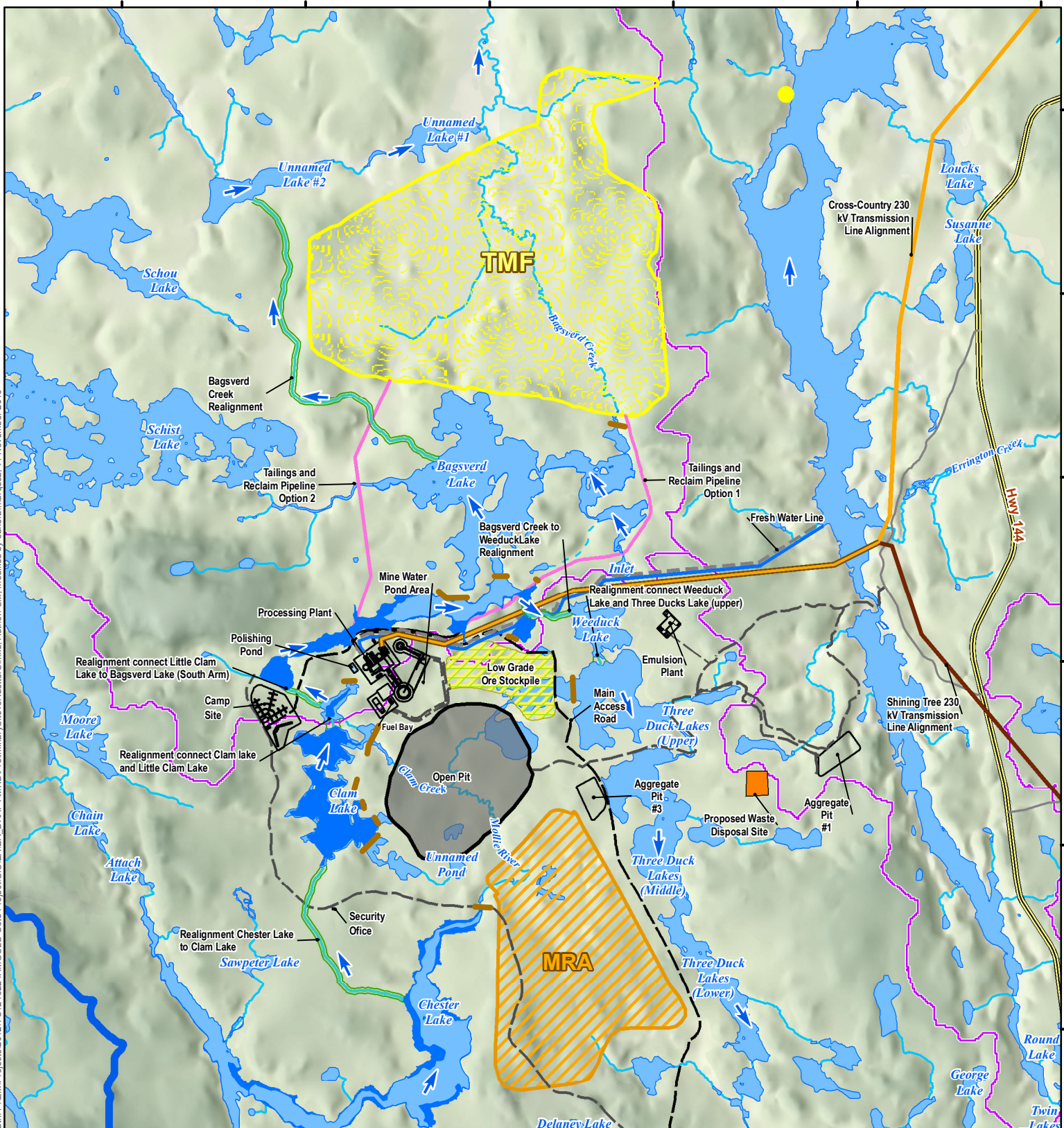
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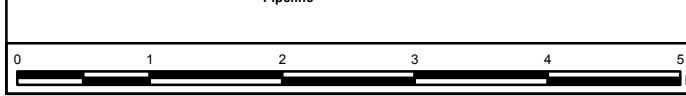
LEGEND	
	Existing Intermittent Watercourse
	Existing Permanent Watercourse
	Existing Waterbodies
	Highway
	Local Road
	Subwatershed Boundary
	Wooded Area
	Open Pit
	Potential Discharge Location
	Facilities
	Dam
	Main Access Road
	Access Road
	Cross-Country 230 kV Transmission Line Alignment
	Shining Tree 230 kV Transmission Line Alignment
	Tailings and Reclaim Pipeline
	Fresh Water
	Water Realignment
	Proposed Water Flow Direction
	Proposed Lake Area
	Polishing Pond
	Low Grade Ore Stockpile
	Proposed Mine Rock Area (MRA)
	Proposed Tailings Management Facility (TMF)
	Proposed Landfill

**NOTES:**  
 Ontario base data extracted from Land Information Ontario (MNR) - TMF and subwatershed provided by Golder Associates.  
 -Watercourse realignment and proposed lake area provided by Calder Engineering.  
 -Surface infrastructure, open pit, landfill, MRA and transmission lines provided by IAMGOLD.  
 -Mesomikenda Lake is preferred discharge option, but others are being investigated.



**CÔTÉ GOLD PROJECT**

**Preliminary Site Plan**

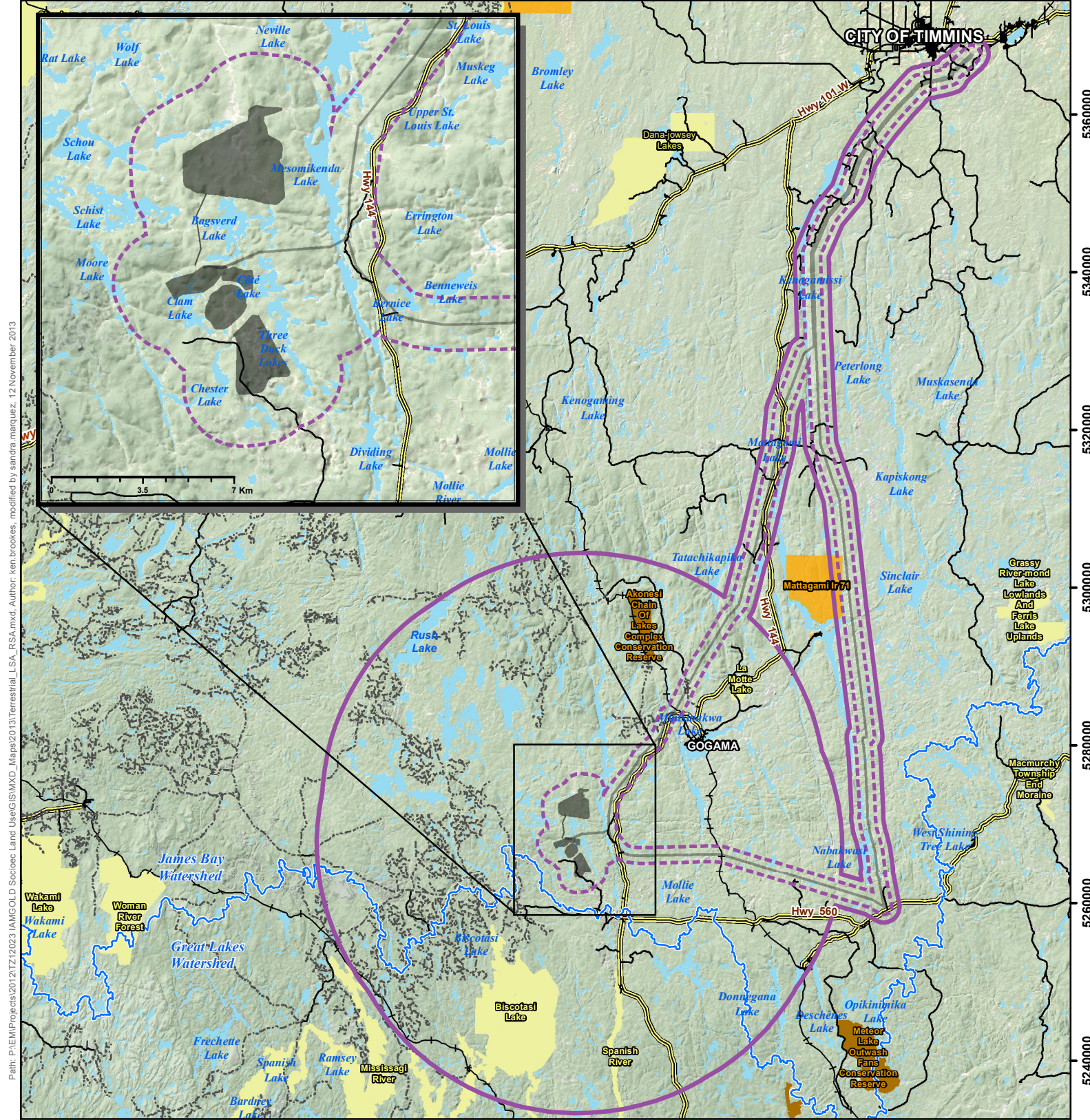


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**LEGEND**

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|--|--------------------------------------|--|---|
|  | <b>Proposed Site Facilities</b>      |  | <b>Railway</b>                          |
|  | <b>Regional Study Area</b>           |  | <b>Highway/Expressway</b>               |
|  | <b>Local Study Area</b>              |  | <b>Local Road</b>                       |
|  | <b>Watershed Divide</b>              |  | <b>Resource / Recreation Road</b>       |
|  | <b>Waterbody / Large Watercourse</b> |  | <b>First Nation Reserve</b>             |
|  |                                      |  | <b>Conservation Reserve (Regulated)</b> |
|  |                                      |  | <b>Provincial Park</b>                  |

**NOTES:**  
 - All base data on this map was extracted from Land Information Ontario, MNDM, OBM Ontario Digital Geospatial database and Ontario Road Network Database.



**CÔTÉ GOLD PROJECT**

**Terrestrial Regional and Local Study Areas**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

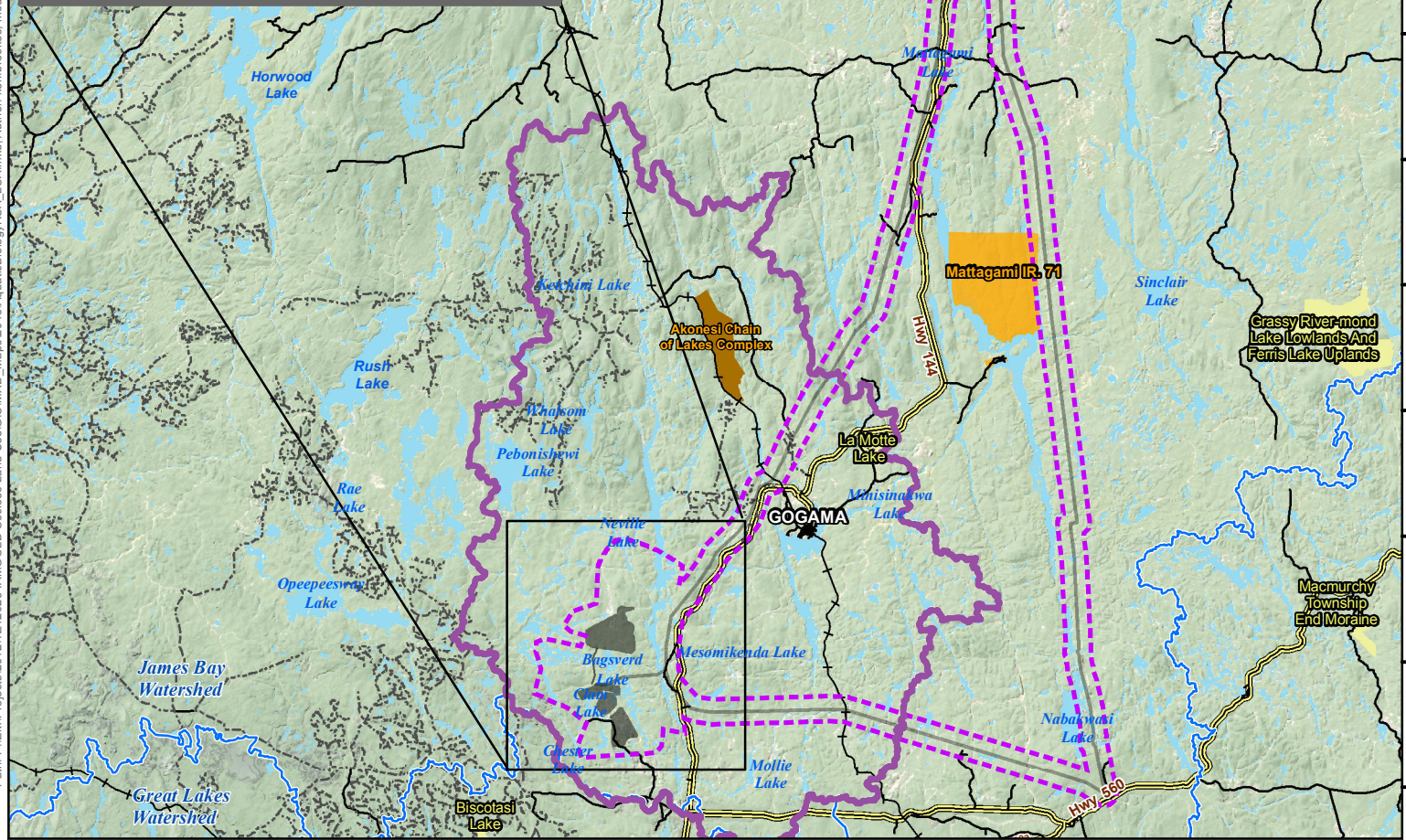
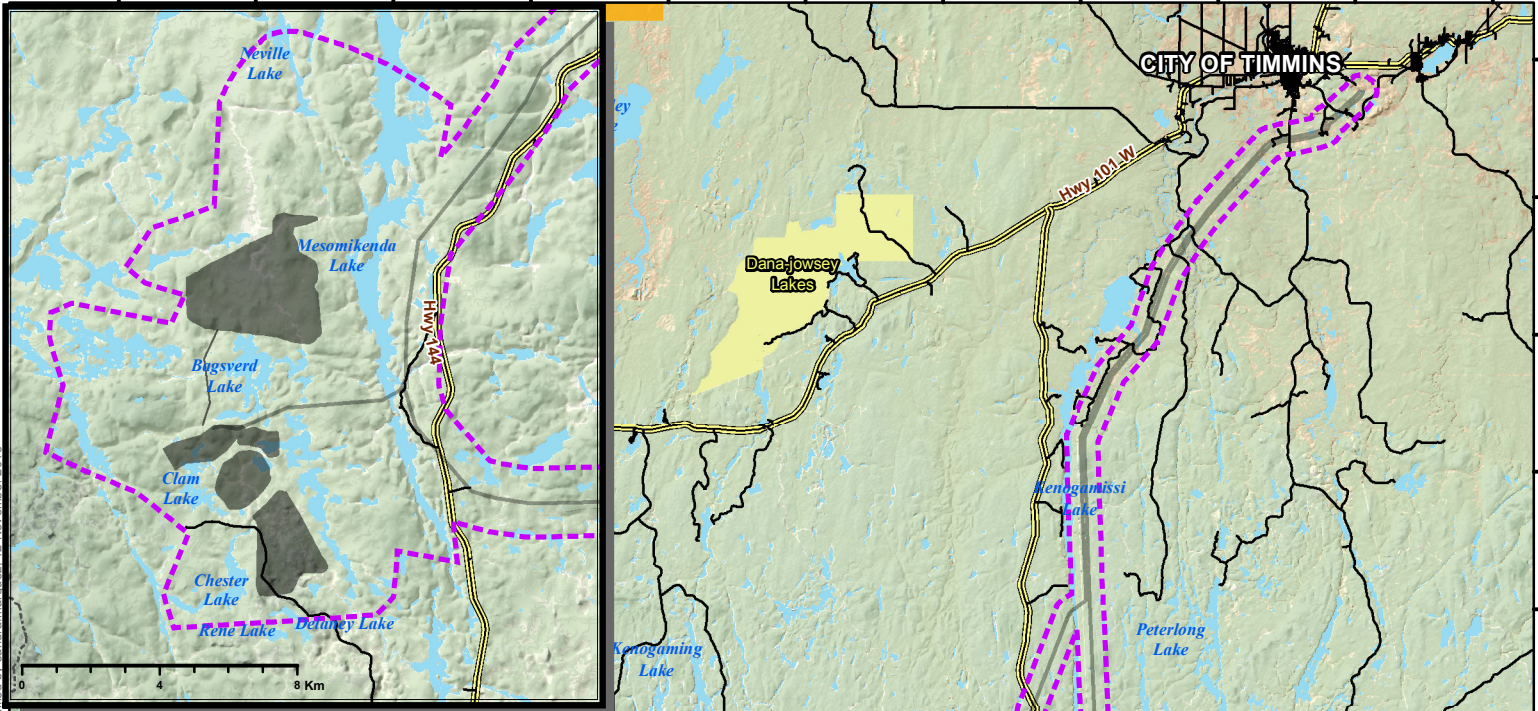
FIGURE: 3

SCALE: 1:660,000

DATE: November 2013



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**LEGEND**

- Proposed Site Facilities
- Regional Study Area
- Local Study Area
- Waterbody / Large Watercourse
- Watershed Divide
- Railway
- Highway/Expressway
- Local Road
- Resource / Recreation Road
- First Nation Reserve
- Conservation Reserve (Regulated)
- Provincial Park

**NOTES:**  
- All base data on this map was extracted from Land Information Ontario, MNDM, OBM Ontario Digital Geospatial database and Ontario Road Network Database.



**CÔTÉ GOLD PROJECT**

**Aquatic Biology  
Regional and Local Study Area**

Datum: NAD83  
Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

FIGURE: 4

SCALE: 1:550,000

DATE: November 2013



**APPENDIX I**

**LAND AND RESOURCE USE BASELINE STUDY REPORT**



**CÔTÉ GOLD PROJECT  
LAND AND RESOURCE USE BASELINE STUDY REPORT**

**Submitted to:  
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**October 2013**

**TZ12023**

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## GLOSSARY

AANDC	Aboriginal Affairs and Northern Development Canada
BMA	Bear Management Area
EA	Environmental Assessment
EMA	Enhanced Management Area
FMP	Forest Management Plan
FMU	Forest Management Unit
FMZ	Fish Management Zone
IAMGOLD	IAMGOLD Corporation
km	kilometre
MMAH	Ministry of Municipal Affairs and Housing
MNDM	Ministry of Northern Development and Mines
MNR	Ministry of Natural Resources
MOE	Ministry of the Environment
OFSC	Ontario Federation of Snowmobile Clubs
Project	Côté Gold Project
Report	Land and Resource Use Baseline Study Report
SFL	Sustainable Forest License
TMF	Tailings Management Facility
WMU	Wildlife Management Unit

## 1.0 INTRODUCTION

IAMGOLD Corporation (IAMGOLD) is planning to develop the Côté Gold Project (the Project) located approximately 20 kilometers (km) southwest of Gogama, 130 km southwest of Timmins, and 200 km northwest of Sudbury (see Figure 1).

This document is one of a series of physical, biological and human environment baseline reports to describe the current environmental conditions at the Project site. These baseline reports are written with the intent to support the Environmental Assessment (EA) process.

### 1.1 Overview of the Côté Gold Project

IAMGOLD is planning to construct, operate and eventually reclaim a new open pit gold mine at the Côté Gold Project site.

The proposed site layout places the required mine-related facilities in close proximity to the open pit, to the extent practicable. The proposed site layout is presented in Figure 2 showing the approximate scale of the Côté Gold Project. The site plan will be refined further as a result of ongoing consultation activities, land purchase agreements and engineering studies.

As part of the proposed development of the Project, several water features will be fully or partially overprinted. These include Côté Lake, portions of Three Duck Lakes, Clam Lake, Mollie River/Chester Lake system and Bagsverd Creek. As a consequence, these water features will need to be realigned for safe development and operation of the open pit.

The major proposed Project components are expected to include:

- open pit;
- ore processing plant;
- maintenance garage, fuel and lube facility, warehouse and administration complex;
- construction and operations accommodations complex;
- explosives manufacturing and storage facility (emulsion plant);
- various stockpiles (low-grade ore, overburden and mine rock area (MRA)) in close proximity to the open pit;
- aggregate extraction with crushing and screening plants;
- Tailings Management Facility (TMF);
- on-site access roads and pipelines, power infrastructure and fuel storage facilities;
- potable and process water treatment facilities;
- domestic and industrial solid waste handling facilities (landfill);

- water management facilities and drainage works, including watercourse realignments;  
and
- transmission line and related infrastructure.

## **2.0 SCOPE OF WORK**

This Land and Resource Use Baseline Study Report (Report) provides information on non-traditional land and resource use for the Côté Gold Project. These include land use planning zones that govern intended land uses, industrial and commercial land uses, recreation and tourism use and environmentally important areas. Aboriginal traditional knowledge and land uses are covered in a separate report (Aboriginal Traditional Knowledge/Traditional Land Use Baseline Study Report, AMEC, 2013a).

### 3.0 STUDY AREAS

The Côte Gold Project is located in the District of Sudbury, outside of any lower tier municipality boundary. The Project site is located within four geographic townships: Chester, Neville, Potier, and Yeo. The proposed transmission line will intersect with 20 geographic townships: Tisdén, Ogden, Deloro, Thorneloe, Price, McKeown, Doyle, Hassard, Gouin, Emerald, Mattagami, Burrows, Cabot, Connaught, Miramichi, Garibaldi, Londonderry, Champagne, Benneweis and Chester; it also intersects with the lower tier municipality boundary of the City of Timmins. Figure 1 presents the general location of the Project site.

The closest communities to the Project site are the community of Gogama, Mattagami First Nation's Reserve, with the City of Timmins and the City of Greater Sudbury being the closest urban service centers. Sudbury is the largest community in the area and, as such, is the largest service provider in the immediate region, followed by Timmins. Both cities are accessible by road (Highway 144), rail and air. The principal employment sectors are business services, healthcare and social services and retail and trade. Timmins' economy is similar to Sudbury's but has a stronger emphasis on resource-based industries, such as forestry and mining. The Project area is largely used for tourism related to hunting and fishing, and numerous cottages are located on Mesomikenda Lake.

To assess cumulative effects on land and resource uses, two regional study areas were selected (see Figures 3 and 4). Depending on the type of land or resource use, the regional study areas for terrestrial or aquatic biology disciplines were used. For example, effects on fishing used the regional study area for the aquatic biology disciplines, while the terrestrial biology regional study area was used for effects on recreational hunting.

The terrestrial biology regional study area includes areas with land and resource use based on wildlife and vegetation resources (hunting, fishing, forestry). To be conservative, the terrestrial biology regional study area is defined as a 30 km buffer around the Project site footprint. The 30 km buffer is anticipated to be an appropriate spatial boundary for quantifying baseline conditions and assessing Project-specific effects on land and resource use. The terrestrial biology regional study area also includes a 2 km buffer on either side of the preferred transmission line alignments.

The aquatic biology regional study area extends downstream of the Project to the confluence of the Mollie River and the Mesomikenda Lake outflow. These waterways ultimately discharge to Minisinakwa Lake near the community of Gogama.

To assess Project-specific effects, a local study area was identified. Depending on the type of land or resource use, the local study areas for terrestrial or aquatic biology disciplines were used. For example, effects on fishing used the local study area for the aquatic biology disciplines, while the terrestrial biology local study area was used for effects on recreational hunting.

The local study area for terrestrial-based uses is defined by potential effect of the Project on nearby land and resource users such as forestry, mining exploration and cottaging. The proposed local study area is defined as a 2 km buffer around the Project site footprint. The local study area also includes a 1 km buffer on either side of the transmission line alignment options.

The local study area for the aquatic-based uses (fishing and bait fish harvesting) includes areas where there is potential for measurable effects as a result of construction, operation, closure or post-closure on water bodies in the site study area, as well as downstream water bodies that may receive effluent or stormwater discharged from the Côté Gold Project or may be affected by watercourse realignments. The extent of the water bodies included in the assessment was based on the currently defined Project, the expected extents of potential changes to the aquatic ecosystems and the expected changes associated with the Project. The aquatic biology local study area also includes a 1 km buffer on either side of the transmission line alignment options.

#### **4.0 METHODS**

The data presented in this Report contains secondary information gathered from publically available data sources including the websites and published documents. Information was gathered informally during public consultation and discussions with local stakeholders and through interviews conducted in person or by telephone with local and regional land and resource users and stakeholder organizations.

Requests for detailed information from the Ministry of Natural Resources (MNR) on bear hunting (licensed outfitters and harvest data), trapping (trapline holders and harvest data), and outfitters have been made and the information is outstanding. Discussions with land and resource users will continue and new information with respect to capacity issues and baseline conditions will be shared in an addendum to this Report.

## 5.0 RESULTS

### 5.1 Regional Land Use Planning

This section provides an overview of regional land use planning which indicates the permitted land uses and policies in the regional study area and the local study area. Municipal / local land use plans are addressed in the Socio-Economic Baseline Study Report (AMEC, 2013b). Regional land use plans and policies are important to determine if the intended use of the Project site is consistent with these policies and, therefore, if the proposed Project is compatible with existing and committed land uses.

In areas of Northern Ontario with no municipal organization, land use planning is managed by a variety of authorities including:

- Ministry of Municipal Affairs and Housing (MMAH), through the *Planning Act*, identify planning areas and initiates zoning controls in some areas without municipal organizations or planning boards.
- Planning boards that coordinate land use planning activities and can develop official plans and zoning by-laws for areas that do not have municipal organizations (MMAH, 2013).
- Ministry of Northern Development and Mines (MNDM) advocates on behalf of Northern Ontario, delivering programs and services related to economic development (MNDM, 2013).
- MNR manages Crown land (MNR, 2013a) and Provincial Parks (MNR, 2013b) in Ontario.
- The federal government (Aboriginal Affairs and Northern Development Canada, AANDC) manages lands for First Nation Reserves (AANDC, 2013).

Land ownership is presented in Figure 5.

#### 5.1.1 Ontario's Living Legacy Land Use Strategy

Most of the land in the regional study area is Crown land. Ontario's Living Legacy Land Use Strategy (1999) governs land uses on Crown land in the regional study area. Land use policies are applied to lands managed by the MNR. Land use policies are taken from a variety of sources, from local to broad planning (MNR, 2011a). The land use policy areas outlined in the Crown Land Use Policy Atlas (MNR, 2011a) are depicted in Figure 6 and detailed in Table 5-1. In general, lakes and surrounding areas are identified for recreational and tourism purposes. Many trout lakes in the area are designated for the management of these fish.

Land in the regional study area is primarily designated for timber production, mineral exploration and development, and trapping. Other land use policies in the regional study area include provincial park lands (P1572, P192 and P1804), mainly dedicated to the protection of natural heritage sites as well as for recreation and tourism uses such as canoeing, hunting and fishing.

The Project site overlaps with area G1809, Gogama Resource Area, which is designated mainly for timber production, and mineral exploration and development.

**Table 5-1: Land Uses Policy Areas in the Regional Study Area**

Primary Land Use Code	Name	Description
G1809	Gogama Resource Area	General Use Area with primary intent on timber production and mineral exploration and development. Additional tourism development is also encouraged as a secondary use, together with limited public recreation facilities. This area also contains lakes designated for lake trout management.
G1813	Predominant Cottaging Area	General Use Area with primary intent on recreational use including a combination of public recreation, cottaging and commercial tourism. Forestry operations continue to be important in non-shoreline areas.
G1810	Kasasway Lake Area	General Use Area with primary intent on public recreation and commercial tourism. Resource extraction continues to be important in non-shoreline areas.
G1770	General Mixed Use Areas	General Use Area with primary intent on expansion of the forest, mining and trapping sectors. This is intermixed with locally dominant recreation and tourism.
G1814	Onaping-Threecorner Lake Area	General Use Area with primary intent on a combination of public recreation, cottaging and commercial tourism. Resource extraction is also a priority in non-shoreline areas.
P1572	Biscotasi Lake Addition	The Biscotasi Lake Provincial Park is located within the Spanish River Signature Site, one of 9 such areas featured in the Ontario's Living Legacy Land Use Strategy. Signature Sites are identified for their range of natural and recreational values and their potential to contribute to future recreation and tourism.
P192	Spanish River	The Spanish River Provincial Park is a provincially significant canoe route offering novice to intermediate river canoeing and backcountry travel on a challenging and scenic waterway. It also contains many significant natural heritage areas and is known to have one of the largest remaining old pine forests in Ontario.
P1804	La Motte Lake	The La Motte Lake Provincial Park does not contain any facilities but offers sport fishing, canoeing and wildlife viewing.

Source: Crown Land Use Policy Atlas (MNR, 2011a)

### 5.1.2 Mattagami Region Source Water Protection Plan

The Mattagami Region Conservation Authority has the mandate to protect and manage the entire Upper Mattagami River watershed and a portion of the Abitibi River watershed (including Gogama and Shaw Wellfields). The Mattagami River watershed includes the City of Timmins as well as the communities of Gogama, Westree and the Mattagami First Nation Reserve.

Conservation Authorities are identified in the *Clean Water Act, 2006* as Source Protection Authorities. The Act also identifies the watershed-based Source Protection Areas for which the Conservation Authorities develop Source Protection Plans. These science-based plans enable communities to protect their drinking water sources by focusing on activities and land uses around municipal wells and intakes in order to protect existing and future drinking water sources (MOE, 2013).

In August 2012, the Mattagami Region Source Protection Committee submitted to the Ministry of the Environment (MOE) the Proposed Source Protection Plan for the Mattagami Region Source Protection Area (Mattagami Region Source Protection Committee, 2012). The Plan must be approved by the Minister of the Environment; if approved, the Plan would be implemented by the City of Timmins and various provincial ministries.

The main purpose of the Source Protection Plan is to protect existing and future drinking water sources in the Mattagami Region Source Protection Area by identifying what needs to be done to protect the City's source of drinking water and what steps need to be taken to reduce the risks of existing significant threats and to prevent new risks from developing. The plan does not cover individual drinking water supplies, privately operated drinking water systems and non-residential supplies. The plan also does not cover Gogama and Shaw Wellfields.

The plan specifically applies to three types of vulnerable areas:

- surface water intake protection zones;
  - Zone 1, area immediately adjacent to Timmins Water Filtration Plant on Mattagami River,
  - Zone 2, area next to Zone 1 where potential spills could reach the Plant before an operator could take action; and
  - Zone 3, areas within the watershed providing source water.
- significant groundwater recharge areas; and
- highly vulnerable aquifers.

The majority of waterways of the regional study area and all waterways within the local study area are within Intake Protection Zone 3 (see Figure 7). The *Clean Water Act, 2006* identifies an Intake Protection Zone as an area related to the surface water intake where a need exists to regulate or monitor drinking water threats. While the plan does not identify any threats (based on the vulnerability score) in this zone, it does identify where certain activities should be addressed so that real threats do not endanger the water supply. Intake Protection Zone 3 includes a 120 metre setback around all first order streams (upstream of Zone 2) and a 500 metre buffer around all dams and generating stations for development control (R.J. Burnside & Associates Ltd., 2009).

Mining-related activities are identified as an activity that could pose a potential threat to sources of drinking water. Within the plan, Section 5.5 covers the Mining Strategic Action Policy that recommends that the MNDM consider the Plan when reviewing or certifying new mine closure plans. It also recommends the closing of mines through environmentally sound closure designs and within the regulatory framework of the *Mining Act*.

## **5.2 Industrial and Commercial Land Uses**

### **5.2.1 Mining**

Mining exploration and mining activities are regulated by MNDM under the *Mining Act* (1990, amended in 2009). A large portion of the regional study area is under active mining claims or mining leases (see Figure 8). Only a few pockets of land in the regional study area have been withdrawn.

IAMGOLD currently has mining claims in the regional study area. Other individual and small junior companies have mining claims near the proposed Project site and are described below.

Crown Gold Corporation is an exploration company that pursues high-grade underground gold and silver deposits. In Ontario, they have mining claims in Chester and Yeo townships that are next to the Project site. In 2010, 80% of these claims were sold to Trelawney and subsequently are now 80% owned by IAMGOLD (Crown Gold, 2013).

GoldON Resources Ltd., an exploration company, is pursuing two Ontario gold mining areas. Their Swayze Gold Project is next to the Project site. IAMGOLD is the company's largest shareholder (GoldON Resources, 2013).

Liberty Mines Inc. owns the Groves exploration project, located 15 km southeast of Gogama. Drilling activities took place during 2011 but stopped temporarily with plans of continuing the drilling in the future. The property covers 6,400 hectares (Liberty Mines, 2012).

Newcastle Resources Ltd. is an exploration company focused on sourcing and exploring mineral properties in Canada and have mining rights in the northern portion of the Project site as well as along one of alternative transmission line routes (Bloomberg Businessweek, 2012).

Sanatana Resources Inc. is a Canadian mineral exploration and development company with interests in the regional study area to the west of the IAMGOLD claims (Sanatana Resources, 2012). Sanatana has an option and joint venture agreement with Trelawney on the Watershed Property (Sanatana Resources, 2013).

### 5.2.2 Aggregate Operations

Under the *Aggregate Resources Act*, the MNR manages aggregate resources in Ontario. Aggregate operations, pit or quarry, are permitted or licensed in Ontario by the MNR. There are 12 permitted aggregate operators in the regional study area and 3 in the local study area (see Figure 9). Besides IAMGOLD's approved aggregate pits, there are no aggregate operations within the footprint of Project components.

### 5.2.3 Forestry

The majority of forests in Ontario are on Crown land and their management is the responsibility of the MNR in accordance with the *Crown Forest Sustainability Act* (1994). There is a 10-year Forest Management Plan (FMP) and current annual work schedule for the Gogama MNR area, which include forestry activities such as harvesting, planting and maintenance of the planted areas. The MNR identified that there are active forest activities in the Spanish Forest Management Unit (FMU), which overlaps with the Chester Township (pers. comm., MNR, 2012a).

The MNR forest management planning process divides the forests into Forest Management Units (FMUs), which are managed by individual forest companies under a Sustainable Forest License (SFL; MNR, 2011b). The Spanish Forest, Pineland Forest, Romeo Mallet Forest and Timiskaming Forest FMUs intersect the regional study area and the local study area (MNR, 2011b; see Figure 10).

The Spanish Forest FMU (1,094,530 hectares) was historically managed under a SFL (SFL542391) by Domtar Inc., which has recently been acquired by EACOM Timber Corporation (EACOM, EACOM, 2012). This Montreal-based global timber company, with a local office in Timmins, is a major Canadian producer of timber and their activities include manufacturing, marketing and distribution of lumber products (EACOM, 2012). EACOM is in charge of managing the Spanish Forest in a sustainable manner. EACOM is also part of the Timiskaming Forest Alliance Inc. which manages the Timiskaming Forest FMU also overlapping the regional study area. The FMP for the Spanish Forest covers the 2010 to 2020 timeframe (MNR, 2013c).

The Pineland Forest FMU (374,930 hectares) is managed under a SFL (SFL550816) by the Pineland Timber Company Ltd., located in Montreal (EACOM, 2012). The managing agent for this FMU is EACOM, responsible for all renewal and maintenance activities for the Pineland Forests, in order to maintain a sustainable forest (MNR, 2011b). The FMP for the Pineland Forest covers the 2011 to 2021 timeframe (MNR, 2013c).

The Romeo Mallet Forest FMU (591,000 hectares) is managed under a SFL (SFL550398) by Tembec Forest Industries Inc. (MNR, 2010). The FMP for the Romeo Mallet Forest covers the 2009-2019 timeframe (MNR, 2013c).

The Timiskaming Forest FMU (1,184,200 hectares) is managed under a SFL (SFL542247) by the Timiskaming Forest Alliance Inc., which is an alliance of forest-based companies focused on economic benefits to the business as well as to the community (EACOM, 2012). First Resource Management Group, Inc. is the managing agent for this FMU. Responsibilities include forest management and planning and operational duties including forest renewal and maintenance (Timiskaming Forest Alliance Inc., 2012). The FMP for the Timiskaming Forest covers the 2011 to 2021 timeframe (MNR, 2013c).

#### **5.2.4 Agriculture and Grazing**

The majority of the land in the regional study area is classified under the Canada Land Inventory as having little to no capacity for arable culture or permanent pasture (Agriculture and Agri-Food Canada, 2011).

Based on the 2011 Farm and Farm Operator Data Census, performed by Statistics Canada, the Sudbury, Unorganized North Part, (census division), which overlaps with the regional study area, has a total of 30 farms, which represents 0.01% of total farms in Ontario. A third (33%) of the farms in this census division farm hay, while a few focus on raising dairy and beef cattle (Statistics Canada, 2011). No active farming activities overlap with or are immediately adjacent to the Project site, although historically small farms existed in the area to support the Canadian National rail worker camps (pers. comm., MNR, 2012a).

### **5.3 Outdoor Recreation and Tourism**

The regional study area is popular regionally for its outdoor wilderness recreation potential, which supports activities such as, snowmobiling, hunting, canoeing and fishing. As a result, several outfitters offering guiding and accommodations are active in this region. Additional information on the tourism economic sector is provided in the Socio-Economic Baseline Study Report (AMEC, 2013b).

#### **5.3.1 Hunting**

The MNR manages hunting and fishing activities under the authority of the *Fish and Wildlife Conservation Act, 1997*. In Ontario, Wildlife Management Units (WMU), are areas with the intention to manage human interactions with the wildlife to ensure ecosystem sustainability. Although the focus of the WMUs tends to be aimed at specific species, the intention is to provide a balanced ecosystem for all species (MNR, 2011c). The regional study area and the local study area overlap with WMU 29, 31, 38, and 39 (see Figure 11).

Additionally, the regional study area falls within Cervid Ecological Zone (CEZ) C<sub>2</sub> of the Cervid Ecological Framework (MNR, 2009). The goal of this framework is to ensure a sustainable cervid population, which includes white-tailed deer, moose and elk. For the CEZ C<sub>2</sub>, the main focus is on increasing the moose population, although some management measures are proposed for sustaining the white-tailed deer population as well as for the elk. Aspects covered

under the Cervid Ecological Framework include: social, cultural and economic benefits, population management, habitat management, climate change, disease and human-cervid conflicts management.

MNR issues Outdoor Cards (an identification card valid for a one or three year period needed for the purchase of licenses and hunting seals), hunting licenses, validation tags and game seals (valid until the end of the season within the WMU issued). The number of validation tags (which allow the tag holder to harvest a specific species and sex in hunting season) issued for the WMU in a year is determined by MNR and considers the number of animals of each species that can be harvested in a sustainable manner in the WMU (see Table 5-2). If there is more demand for hunting tags than available tags, then the tags are issued by draw (MNR, 2011c).

**Table 5-2: Hunting Tag Limits 2013**

Game	WMU 29 (Gun Tags)	WMU 29 (Bow Tags)	WMU 31 (Gun Tags)	WMU 31 (Bow Tags)	WMU 38 (Gun Tags)	WMU 38 (Bow Tags)	WMU 39 (Gun Tags)	WMU 39 (Bow Tags)
Moose (bull)	40	40	31		100	11	75	
Moose (cow)	38	336	22		70	14	40	
Moose (calf)	0	0	0	0	0	0	0	0
Deer <sup>1</sup> (antlered)	See Note 1							
Deer <sup>2</sup> (antlerless)	50		50		75		150	
Bear <sup>3</sup>	See Note 3							

Source: MNR, 2013d

1 – Antlered deer can be harvested by any legally licensed hunter.

2 – Antlerless deer (where the deer has no antlers or antlers less than 7.5 cm (3 inches) in length) can only be harvested if the hunter or hunting party holds a valid antlerless deer tag.

3 – Non-residents require a Non-Resident Black bear Hunting License Validation Certificate (which is obtained from an outfitter licensed in Ontario to provide black bear hunting services to non-residents) unless hunting with an immediate relative or the individual owns property where that WMU has an open season for non-residents.

More specifically, the regional study area is popular for hunting moose, small game and bears (pers. comm., MNR, 2012a).

The MNR also noted that the regional study area is also popular for upland game bird hunting. MNR does not collect data on the quantity or the type of game birds hunted, and it is not as regulated as for moose, deer and bear hunting. For upland game bird hunting, a resident or non-resident simply needs to purchase a license prior to hunting (pers. comm., MNR, 2012a). The MNR confirmed that the Project site is used in the fall for hunting, but that it was not the

busiest location in the regional study area. The MNR also noted that hunters also frequent areas accessible from Chester Road.

### 5.3.1.1 Moose

In the regional study area, the 2013 moose hunting season with guns takes place from October 5 until November 15 while hunting with bows takes place from September 14 until October 4 (MNR, 2013d). Data was provided by MNR on the estimated amount of animals hunted by residents of Ontario. Table 5-3 presents this data for moose hunting by WMU within the regional study area between 2009 and 2011; 2012 harvest data are not yet available. While the demand for moose exceeds the supply of moose in most areas of Ontario (MNR, 2013e), the following data shows that the numbers of hunters and moose harvested has been relatively stable with some decreases in WMU 31.

**Table 5-3: Moose Hunting Activity and Harvest, 2009-2011**

WMU	Year	# of Active Hunters	Estimated Bull Harvest	Estimated Cow Harvest	Estimated Calf Harvest
29	2009	2,843	47	31	50
	2010	2,680	48	41	63
	2011	2,803	39	31	36
31	2009	1,510	16	5	10
	2010	1,388	18	10	24
	2011	1,339	12	2	11
38	2009	2,196	45	13	20
	2010	2,271	42	23	24
	2011	2,122	43	23	20
39	2009	2,111	42	20	30
	2010	2,014	39	21	36
	2011	1,856	44	21	75

Source: MNR, 2012b

### 5.3.1.2 White-Tailed Deer

In the regional study area, the 2013 white-tailed deer hunting season with rifles, shotguns, bows and muzzle-loading guns is from November 4 until November 16. In the regional study area, the 2013 bow-only white-tailed deer hunting season is from October 1 to November 3 and from November 17 to November 30. Similarly to moose, MNR collects data on the hunting activity and harvesting of white-tailed deer. Table 5-4 presents this data for white-tailed deer by WMU within the regional study area between 2009 and 2011. The data shows that most of the hunting activity takes place in WMU 39 and this activity has been increasing every year since 2009. The 2012 harvest data are not yet available.

**Table 5-4: White-Tailed Deer Hunting Activity and Harvest, 2009-2011**

WMU	Year	# of Active Hunters	Estimated Antlered Harvest	Estimated Antlerless Harvest
29	2009	23	0	0
	2010	48	0	0
	2011	0	0	0
31	2009	26	0	0
	2010	8	0	0
	2011	8	2	0
38	2009	83	9	0
	2010	171	6	0
	2011	228	32	0
39	2009	710	49	31
	2010	791	59	25
	2011	743	118	39

Source: MNR, 2012c

### 5.3.1.3 Black Bear

Within each WMU are a number of Bear Management Areas (BMA), which are areas of Crown land that are licensed annually to a tourist operator for providing black bear hunting services to non-residents. These BMAs are delineated based on black bear ecological zones which are rated for habitat quality and population density and productivity. Combined, these factors give strategic direction on black bear management and harvest resilience (MNR, 2011c). These BMAs were created to maintain an effective policy and legislative framework, which includes specific allocation criteria for non-resident bear hunting, to ensure that the allocation of opportunities meets the needs of both resource sustainability and the tourism industry. The regional study area overlaps 29 BMAs and the local study area overlaps with 13 of these BMAs (see Figure 12). s are allocated according to a provincial procedure and the size and boundaries may include areas that are not readily accessible due to other land uses. An outfitter can have more than one BMA allocated to them. BMAs were developed by the MNR based on historic use areas. The amount charged to an outfitter is based on the square kilometres of the BMA. (pers. comm., MNR, 2013g).

In the regional study area, the 2013 black bear hunting season is open from August 15 until October 31. Black bear hunting activity and harvesting data was provided by the MNR. Table 5-5 presents this black bear data for each WMU within the regional study area between 2009 and 2011 and shows that bear hunting is prominent in the region, although there is a decreasing trend in active hunters and associated harvest. The 2012 harvest data are not yet available.

**Table 5-5: Black Bear Hunting Activity and Harvest, 2009-2011**

WMU	Year	# of Active Hunters	Estimated Harvest
29	2009	599	180
	2010	576	157
	2011	520	127
31	2009	350	131
	2010	402	147
	2011	318	80
38	2009	425	131
	2010	351	85
	2011	388	79
39	2009	363	125
	2010	351	121
	2011	312	106

Source: MNR, 2012d

### 5.3.2 Trapping

Trapping of furbearing animals is also managed through regulations and policies administered by the MNR. The MNR uses a variety of management tools to regulate harvests and maintain healthy populations. Trappers must complete mandatory training, obtain a license (renewed yearly) and trap only during open season, with the exception of Aboriginal trappers who may harvest animals at anytime of the year. Every trapper on Crown land is assigned a specific trapping area and given the exclusive rights to that area. Each trapper can then manage the furbearer resources on a long term, sustainable basis (MNR, 2011d). The regional study area transects 41 trap areas and the local study area transects 23 trap areas (see Figure 13). There are 35 trapper cabins in the regional study area and 6 in the local study area (see Figure 13). One of the cabins, located on Three Duck Lake (Upper) within GO031, is directly within the footprint of the Project components. Two other cabins are within five kilometres of the Project components, located on Schist Lake (within GO023) and on Bagsverd Creek just west of Neville Lake (within GO024).

The Ontario Fur Managers Federation collects information on the use and success rate of each trap area. The data collected is shared with the MNR but is not publically available without permission from the trapper. Fur harvest and licensing information will be gathered directly from trapline permit holders. IAMGOLD maintains regular communication with the holder of the trapline (GO031) that overlaps with the Côte Gold Project claims.

Interviews conducted with trappers from trap area GO031 identified that trapping is an important aspect of their lifestyle (pers. comm., Lince, 2013; per. comm., Tamlin, 2013). The primary species that are trapped in this area include beaver, fisher, lynx, martin, mink, muskrat, otter, and weasel. The main trap areas for lynx and mink in this trap area are within the footprint of the Project components.

There are no trapline area vacancies in the Timmins District (pers. comm., MNR, 2013g). Trappers can only be allocated one trapline area, which is awarded competitively based on a Provincial point system. Points are awarded for a number of criteria including: residency, membership in a local trappers councils, and length of trapping experience. Notice of any trapline area vacancies occurs annually on in January.

The MNR identified that quotas for certain species could be adjusted if the trapline areas are reduced. The MNR does not compensate trappers for loss of traplines area, decrease in species, and loss of cabin (pers. comm., MNR, 2013g).

With respect to the associated trappers cabins, cabins or other associated buildings could be moved but this would require a work permit under the *Public Lands Act* (MNR, 2006).

Trapping conducted to exercise Aboriginal Treaty or rights was not identified in the Aboriginal Traditional Knowledge/Traditional Land Use Baseline Study Report (AMEC, 2013a).

### **5.3.3 Recreational and Commercial Fishing**

The MNR manages fisheries for the province by issuing sport fishing and conservation fishing licenses. Since 2008, new fisheries management zones (there are 20 in Ontario) have been created to make fishing regulations easier to understand. The regional study area and the local study area are located within Fisheries Management Zone (FMZ) 8 and 10 (see Figure 14).

Species of sport fish managed in FMZ 8 include Walleye, Sauger, Largemouth and Smallmouth Bass, Northern Pike, Yellow Perch, Sunfish, Brook Trout, Rainbow Trout, Lake Trout, Splake, Lake Whitefish and Lake Sturgeon (MNR, 2011e).

The FMZ 10 is a large area, which includes areas around the Great Lakes. Species of sport fish managed in FMZ 10 include Walleye, Sauger, Largemouth and Smallmouth Bass, Northern Pike, Muskellunge, Yellow Perch, Sunfish, Brook Trout, Brown Trout, Rainbow Trout, Lake Trout, Splake, Pacific Salmon, Atlantic Salmon, Lake Whitefish, Lake Sturgeon and Channel Catfish (MNR, 2011e).

Some fish sanctuaries are present in the regional study area in Mesomikenda Lake and Minisinakwa Lake. No fishing is allowed within those fish sanctuaries annually from April 15 to June 1 to allow for the conservation of aquatic species (see Figure 15).

Several lakes in the regional study area are popular sport fishing locations. These lakes include Azure Lake, Bernice Lake, Biscotasi Lake, Dividing Lake, Jessica Lake, Lost Lake, Makami Lake, Mesomikenda Lake, Minisinakwa Lake, Peach Lake, Pebonishewi Lake, Ramsey Lake, Rice Lake, St. Louis Lake, Threecorner Lake, Vrooman Lake, and Wizard Lake. Infrastructure indicating the importance of sport fishing for these lakes includes outpost camps, cottages,

camping sites and recreation access points. The angling pressure is high to very high in some of the lakes located in the regional study area, specifically for Biscotasi, Mesomikenda, Ramsey and Rice lakes. Only Mesomikenda Lake is located in the local study area (see Figure 14).

Both Mesomikenda and Dividing Lakes are stocked with fish. Mesomikenda Lake is stocked with Lake Trout, Pike, Walleye and Bass while Dividing Lake is stocked with Walleye.

There are no known commercial fisheries in the regional study area. There are 80 bait harvesting areas that transect the regional study area and 38 that transect the local study area (see Figure 15). The MNR identified two licensed bait harvesters in the regional study area (pers. comm., MNR, 2013f). The bait harvester covering Chester Township identified that bait harvesting typically occurs annually between May and September.

Based on the discussions with the MNR in August, bait fish harvest blocks are common within the MNR Timmins/Gogama district, with current vacancies for two blocks. A bait fish harvester may be allocated more than one block (unlike trapline areas where an individual can only be allocated one). The bait harvest blocks are associated with townships and harvesters are charged a fee by individual townships. The MNR does not compensate bait fish harvesters for inaccessible areas within their harvest area (pers. comm., MNR, 2013g).

#### **5.3.4 Cottages and Outfitter Camps**

A residential cottage area, consisting of approximately 41 cottages is located on Mesomikenda Lake in Neville Township. The cottages are used seasonally and situated along the eastern and western shorelines and at least one cottage is located on an island in Mesomikenda Lake. This cottage area is north of the Project Site but within the footprint of the Project components. The cottagers in the area have established a cottager association, Mesomikenda Cottagers Association. IAMGOLD has been actively engaging with the association and individual cottagers since 2012.

Many fly-in outfitting camps are located in the regional study area (but not within the footprint of the Project components) and are operated by the following organizations:

- from Gogama by Derry Air, Air Ivanhoe, John Theriault Air, Gogama Air Outfitters, Mackenda Wilderness Lodge (formerly Kenda Wilderness Lodge);
- on Lake Azure by Camp Gilla;
- on Biscotasing Lake by Grey Owl Camps and Ritchie's End of the Trail Lodge;
- on Kenogaming Lake by Kenogaming Lake Lodge;
- on Lake Mattagami by Green Wilderness Lodge;

- on Minisinakwa Lake by Gogama Lodge, Morin's All Season Resort, Twin J Hide-A-Way and Quiet Watters Cottages; and
- on Lake Tatachikapika by Tata Chika Pika Lodge.

These outfitters provide a wilderness experience and include activities such as fishing and hunting. Other outfitter camps are also accessible by car and are typically located off of local roads. Figure 16 shows the locations of cottages, tourism uses and outfitters operating in the regional study area.

Interviews were conducted with a number of these outfitters. The majority of the outfitters operate during the warm weather season (May through October) while a few offer all season services (where they are not limited by access in the winter months) or re-open in late January to provide services to snowmobilers. These outfitters provide accommodations (lodge, camp, cabin, trailer hook-ups), food, and guide services (hunting, fishing, boating, flying, snowmobiling). Drinking water is supplied mainly through wells or through treated lake water. Berry and mushroom picking is a common activity for many visitors to these sites.

Operators identified that the majority of their visitors come from Ontario. Operators identified a decrease in the number of visitors from the United States (mainly northeastern States) and attributed the decline to the recession. However, a number of operators identified that they have seen an increase in visitors during the 2013 season.

In terms of hunting services, the majority of the operators interviewed held BMAs and actively baited to support the black bear hunt. Most operators noted a concern about the decline in moose populations. Other hunting species identified included deer, duck and grouse.

### **5.3.5 Canoeing**

A few canoeing and portage routes are located in the regional study area. The 4M Circle Canoe Route is the canoe route located closest to the proposed Project location (see Figure 17). Few people have been observed by IAMGOLD staff as using this canoe and portage route since the start of exploration. Although the local MNR office does not track the use of this route, they indicated receiving approximately 10 calls per year for parties wanting to take the canoe route and this route is often popular with MNR staff and junior rangers. It was indicated that this route has an extensive history and is easily accessible which makes it available to a wide range of canoeists (pers. comm., MNR, 2012a).

### **5.3.6 Snowmobiling**

One portion of an Ontario Federation of Snowmobile Clubs (OFSC) trail connecting the Mattagami First Nation with Gogama is located in the regional study area. Many snowmobile trails exist in the area, but are not maintained by the OFSC. These trails are located on the side

of major roads as well as on the portage trails and existing forestry roadways. These trails are typically used by local residents.

## **5.4 Important Environmental Areas**

### **5.4.1 National and Provincial Parks**

There are no National Parks in the regional study area or in the local study area. Three Provincial Parks are located within the regional study area (outside of the local study area); the La Motte Lake Provincial Park, the Spanish River/Biscotasi Lake Provincial Park, and the Mississagi River Provincial Park (see Figure 16). These parks provide recreational activities, including camping, boating, and fishing. Provincial Parks are managed by the MNR under the *Provincial Parks and Conservation Reserves Act (2006)*.

The La Motte Lake Provincial Park (575 hectares) is less than 10 km northeast of Gogama and is an area of second growth mixed forest. It is not an operating park (i.e., no facilities exist to encourage recreation activities), but a recreational area where visitors can enjoy sport fishing, canoeing and wildlife viewing (Parks Ontario, 2010).

The Spanish River/Biscotasi Lake Provincial Park (35,386 hectares) is an operating waterway park located approximately 40 km southwest of Gogama. The park is known for its canoeing, fishing and camping. It is also home to many large mammals such as moose, black bear and river otter and supports an abundant birdlife including bald eagles, ospreys and others (Parks Ontario, 2008). Backcountry camping and a boat launch (Duke Lake) are available. There are no drive-in campsites or developed facilities.

The Mississagi Provincial Park (8,328 hectares) is an operating natural environment park located north of Elliot Lake (Parks Ontario, 2013). A small portion of this park transects the south extent of the regional study area.

### **5.4.2 Regional Parks**

No regional parks have been identified within the regional study area or the local study area.

### **5.4.3 Ecological Reserves and Conservation Areas**

Two conservation areas and no ecological reserves exist within the regional study area. None of these fall within the local study area.

The Akonesi Chain of Lakes Complex Conservation Reserve (1,470 hectares) is located 11 km northwest of Gogama. This conservation reserve is known for its glacial formation and old growth jack pine. Conservation reserves were established to protect natural areas (MNR, 2001). Commercial timber harvesting, mining, aggregate extraction and commercial hydroelectric development is prohibited within conservation reserves.

An Enhanced Management Area (EMA) associated with Biscotasi Lake Provincial Park has been established southwest of the Provincial Park. The EMAs were established to provide additional land use direction for areas that hold special values or features. The Biscotasi Lake EMA covers 32,859 hectares (MNR, 2002).

## 6.0 SUMMARY

Land uses in the regional study area and the local study area are managed through policies outlined in the Land Use Policy Atlas and include mineral exploration and development. The Project site overlaps with Intake Protection Zone 3 of the Mattagami River Source Water Protection Plan area, which provides drinking water for the City of Timmins and other downstream communities.

Mining and forest related activities are the predominant types of industrial or commercial land uses in the regional study area. There is no active agriculture in the region. A large portion of the regional study area is under active mining claims or mining leases. Aside from IAMGOLD's mining claims in the regional study area, the other claims and leases are held by individuals or junior companies.

The regional study area has active forestry uses and transects four Forest Management Units (FMUs) including the Spanish Forest, Pineland Forest, Romeo Mallet Forest, and Timiskaming Forest FMUs.

The regional study area is a popular region for outdoor recreation, hunting, fishing, and trapping. Numerous outfitters provide services for outdoor recreation, hunting and fishing. Outdoor recreation users use the land within the regional study area for activities such as hiking, camping, canoeing, and snowmobiling.

Hunted species in the regional study area include black bear, moose and white-tailed deer. A decline in the moose population is a noted concern among outfitters.

Trapping in the regional study area is conducted on provincially regulated trapline areas. Twenty-three traplines intersect with the local study area and 41 with the regional study area. Various species are trapped based on quotas identified by the Ministry of Natural Resources.

No commercial fisheries occur in the regional study area, but sport fishing is popular throughout the lakes of the regional study area. Eighty bait harvest areas transect the regional study area that are regulated by the Ministry of Natural Resources.

No National Parks, regional parks, or ecological reserves are located in either the regional study area or the local study area. Two Provincial Parks are located within the regional study area; the La Motte Lake Provincial Park and Spanish River/Biscotasi Lake Provincial Park, and one that transects the southern regional study area (Mississagi River Provincial Park). Biscotasi Lake has an associated Enhanced Management Area to the southwest. A conservation reserve (Akonesi Chain of Lakes Complex) is located just north of Gogama.

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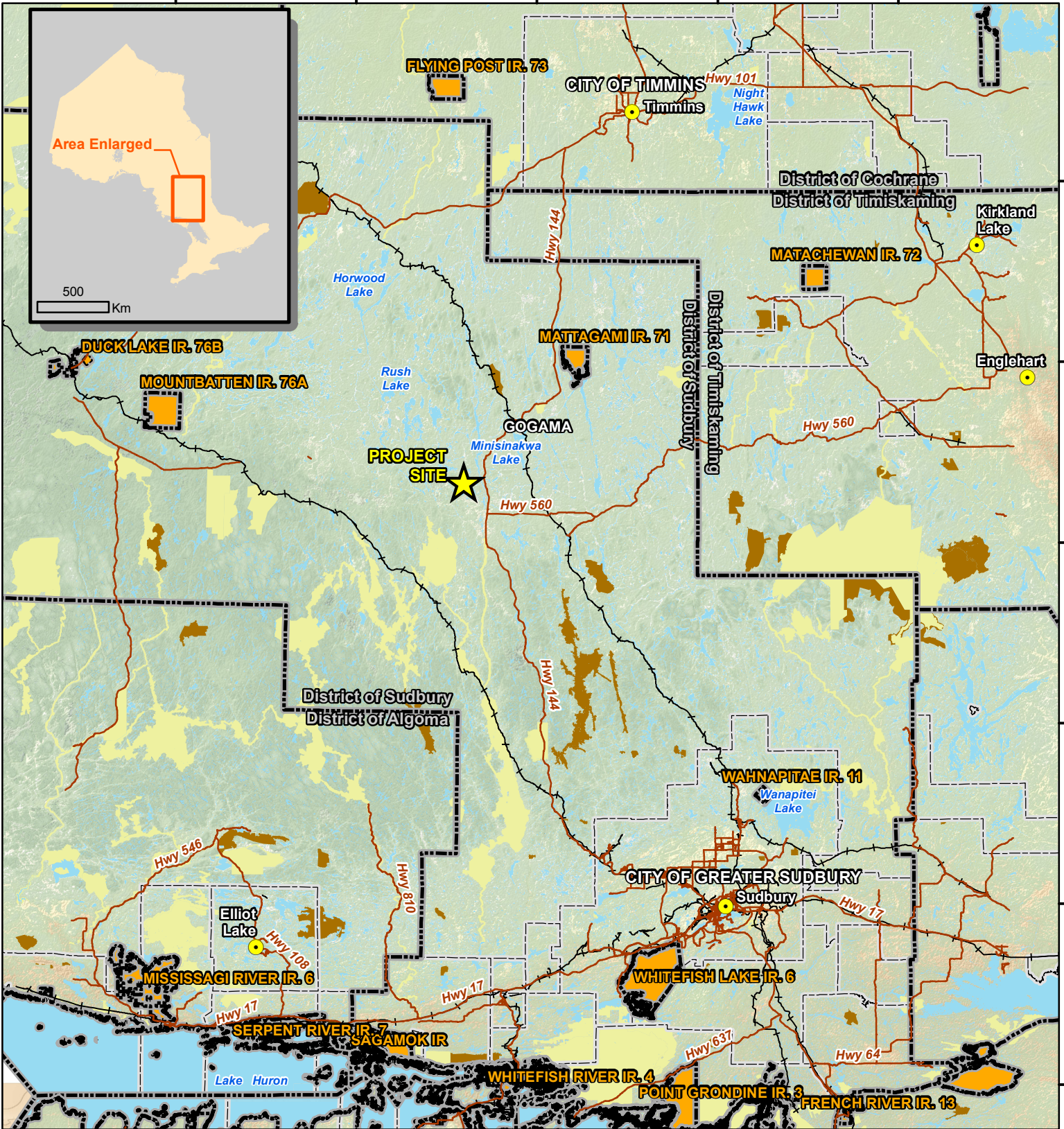
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**FIGURES**

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**LEGEND**

- Project Site Location
- Regional Communities
- Major Roads
- Railway
- Lower Tier Municipality Boundary
- Upper Tier Municipality Boundary
- First Nation Reserve
- Conservation Reserve (Regulated)
- Provincial Park
- Waterbody / Large Watercourse
- Wooded Area

NOTES:  
- All base data on this map was extracted from Land Information Ontario, MNDM, OBM Ontario Digital Geospatial Database and Ontario Road Network Database.



**CÔTÉ GOLD PROJECT**

**Project Location**

Datum: NAD83  
Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

FIGURE: 1

SCALE: 1:1,450,000

DATE: October 2013

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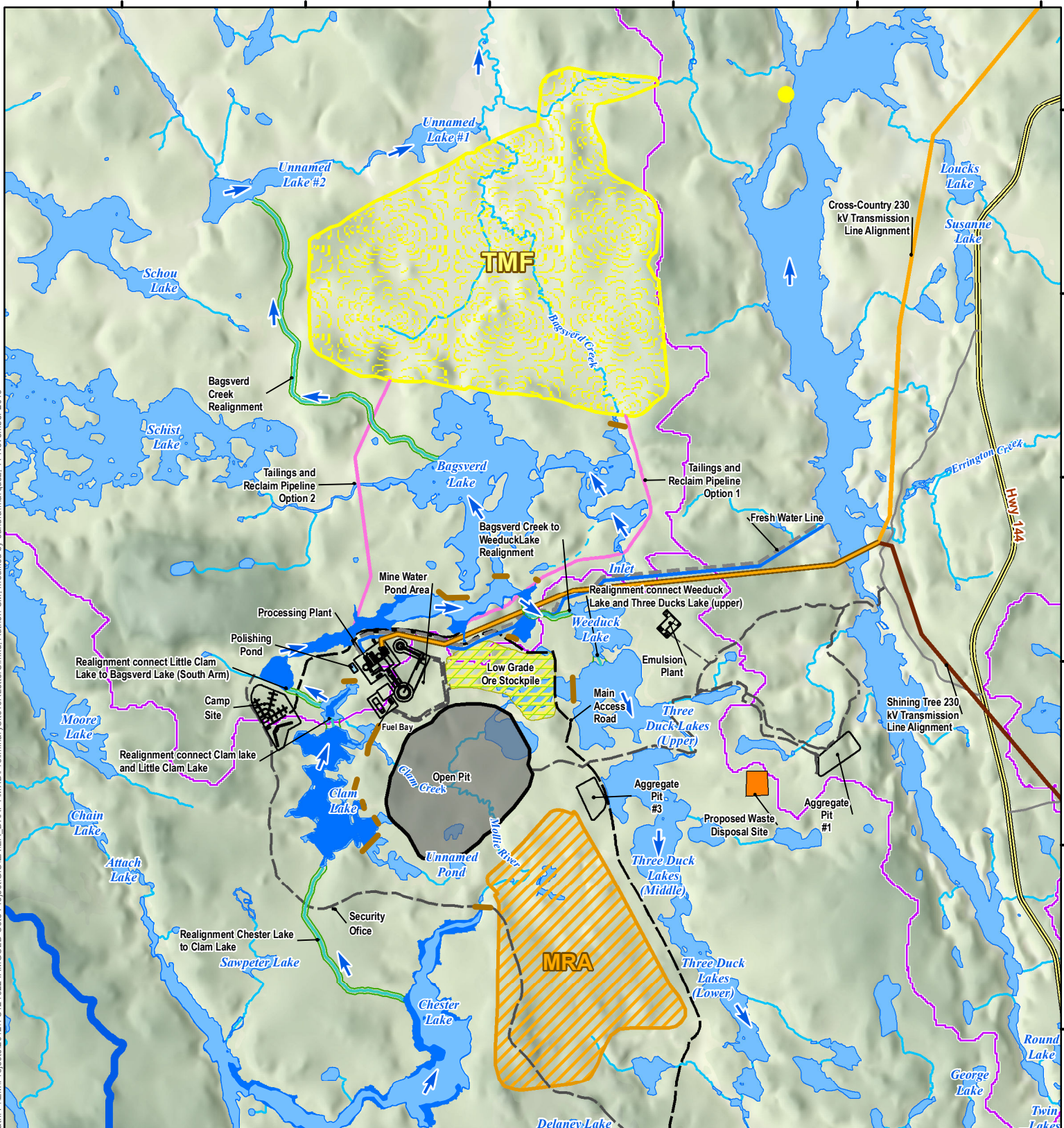
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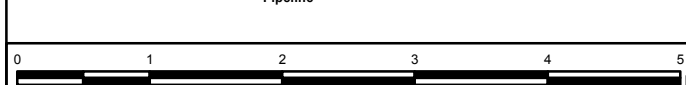
LEGEND	
	Existing Intermittent Watercourse
	Existing Permanent Watercourse
	Existing Waterbodies
	Highway
	Local Road
	Subwatershed Boundary
	Wooded Area
	Open Pit
	Potential Discharge Location
	Facilities
	Dam
	Main Access Road
	Access Road
	Cross-Country 230 kV Transmission Line Alignment
	Shining Tree 230 kV Transmission Line Alignment
	Tailings and Reclaim Pipeline
	Fresh Water
	Water Realignment
	Proposed Water Flow Direction
	Proposed Lake Area
	Polishing Pond
	Low Grade Ore Stockpile
	Proposed Mine Rock Area (MRA)
	Proposed Tailings Management Facility (TMF)
	Proposed Landfill

**NOTES:**  
 Ontario base data extracted from Land Information Ontario (MNR) - TMF and subwatershed provided by Golder Associates.  
 -Watercourse realignment and proposed lake area provided by Calder Engineering.  
 -Surface infrastructure, open pit, landfill, MRA and transmission lines provided by IAMGOLD.  
 -Mesomikenda Lake is preferred discharge option, but others are being investigated.



**CÔTÉ GOLD PROJECT**

**Preliminary Site Plan**

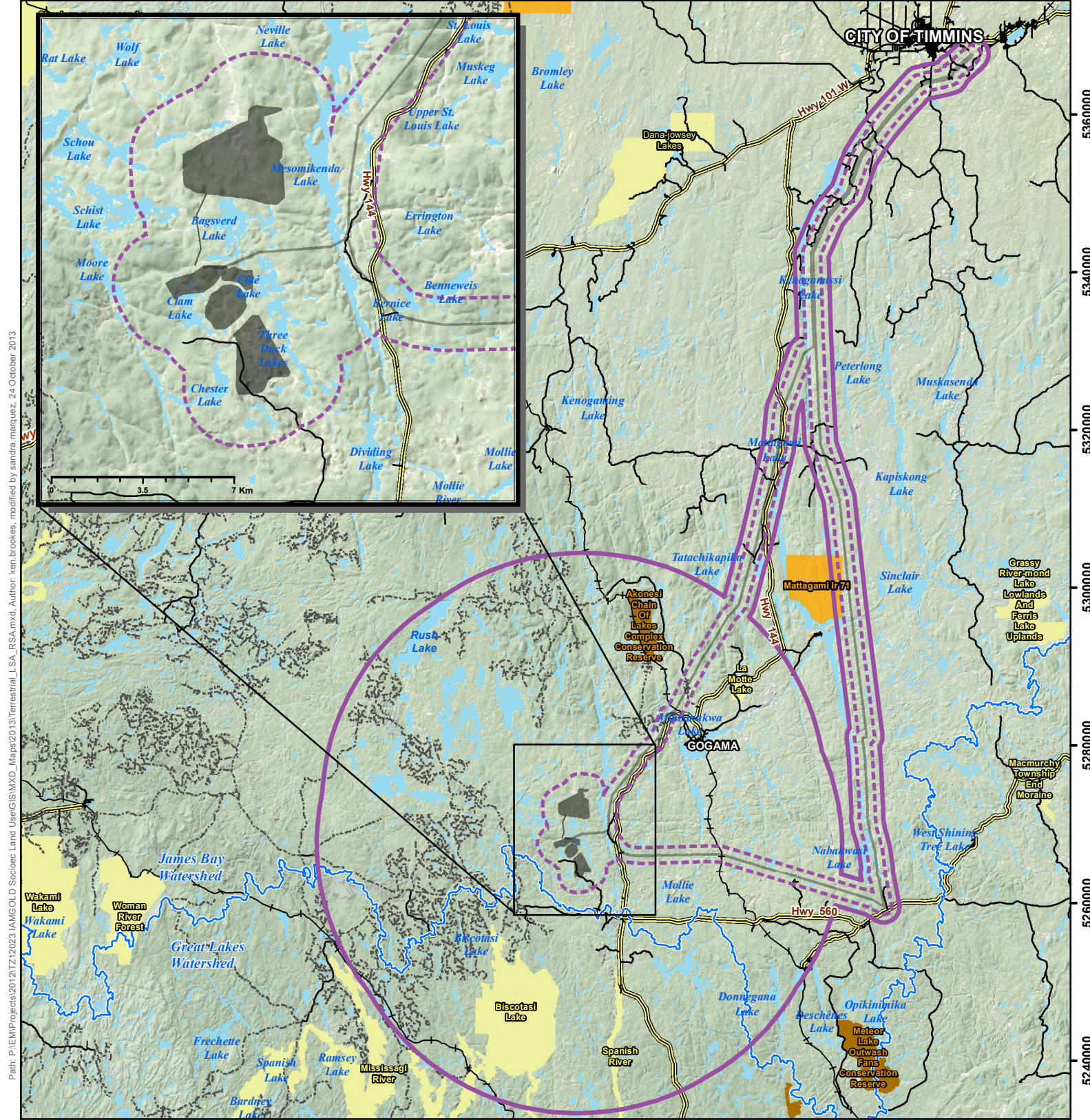


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PROJECT N<sup>o</sup>: TC121522  
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**LEGEND**

- |  |                                      |  |   |
|--|--------------------------------------|--|---|
|  | <b>Proposed Site Facilities</b>      |  | <b>Railway</b>                          |
|  | <b>Regional Study Area</b>           |  | <b>Highway/Expressway</b>               |
|  | <b>Local Study Area</b>              |  | <b>Local Road</b>                       |
|  | <b>Watershed Divide</b>              |  | <b>Resource / Recreation Road</b>       |
|  | <b>Waterbody / Large Watercourse</b> |  | <b>First Nation Reserve</b>             |
|  |                                      |  | <b>Conservation Reserve (Regulated)</b> |
|  |                                      |  | <b>Provincial Park</b>                  |

**NOTES:**  
 - All base data on this map was extracted from Land Information Ontario, MNDM, OBM Ontario Digital Geospatial database and Ontario Road Network Database.



**CÔTÉ GOLD PROJECT**

**Terrestrial Regional and Local Study Areas**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TC121522

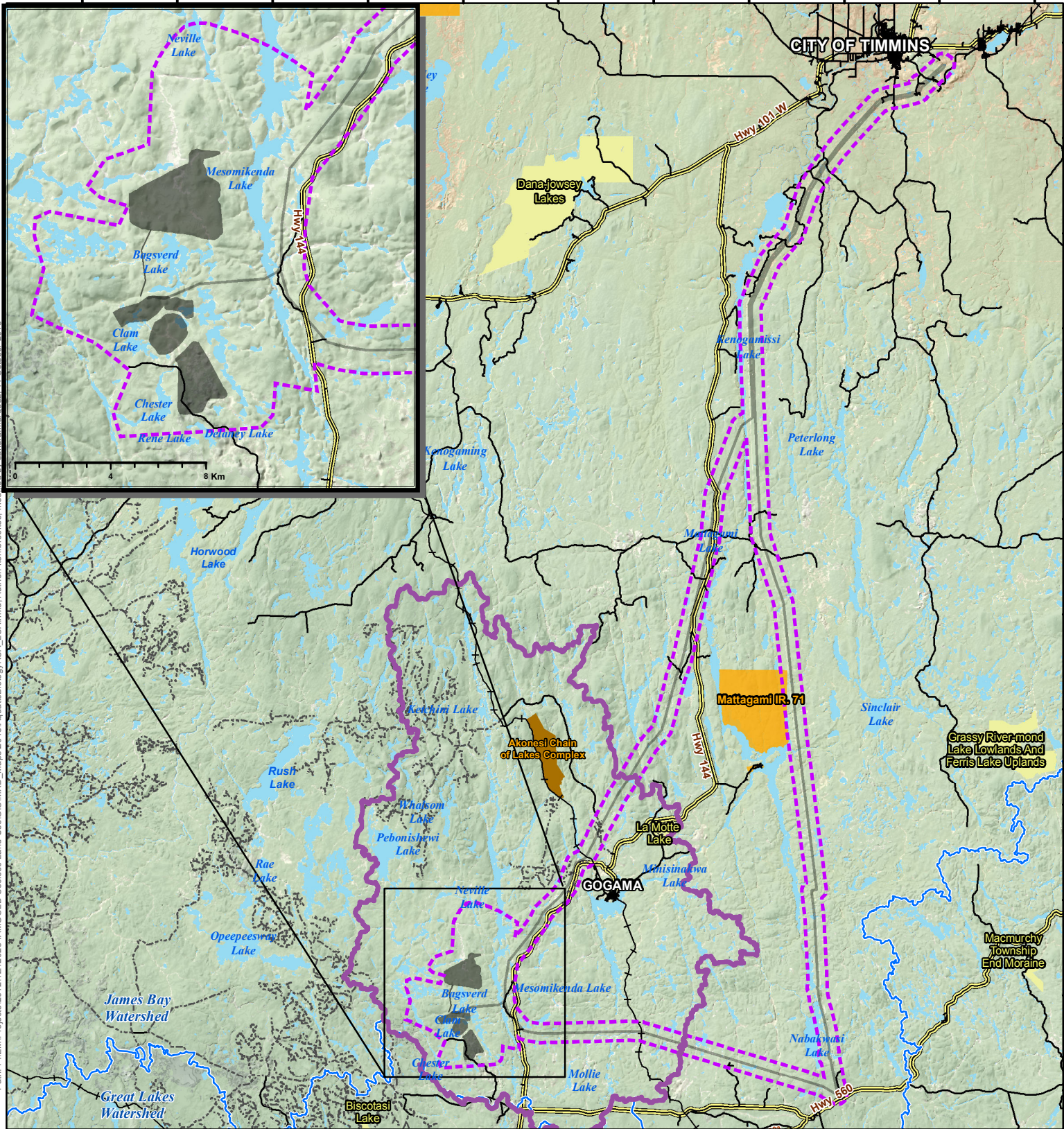
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DATE: October 2013



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**LEGEND**

- Proposed Site Facilities
- Regional Study Area
- Local Study Area
- Waterbody / Large Watercourse
- Watershed Divide
- Railway
- Highway/Expressway
- Local Road
- Resource / Recreation Road
- First Nation Reserve
- Conservation Reserve (Regulated)
- Provincial Park

NOTES:  
- All base data on this map was extracted from Land Information Ontario, MNDM, OBM Ontario Digital Geospatial database and Ontario Road Network Database.



**CÔTÉ GOLD PROJECT**

**Aquatic Biology  
Regional and Local Study Area**

Datum: NAD83  
Projection: UTM Zone 17N



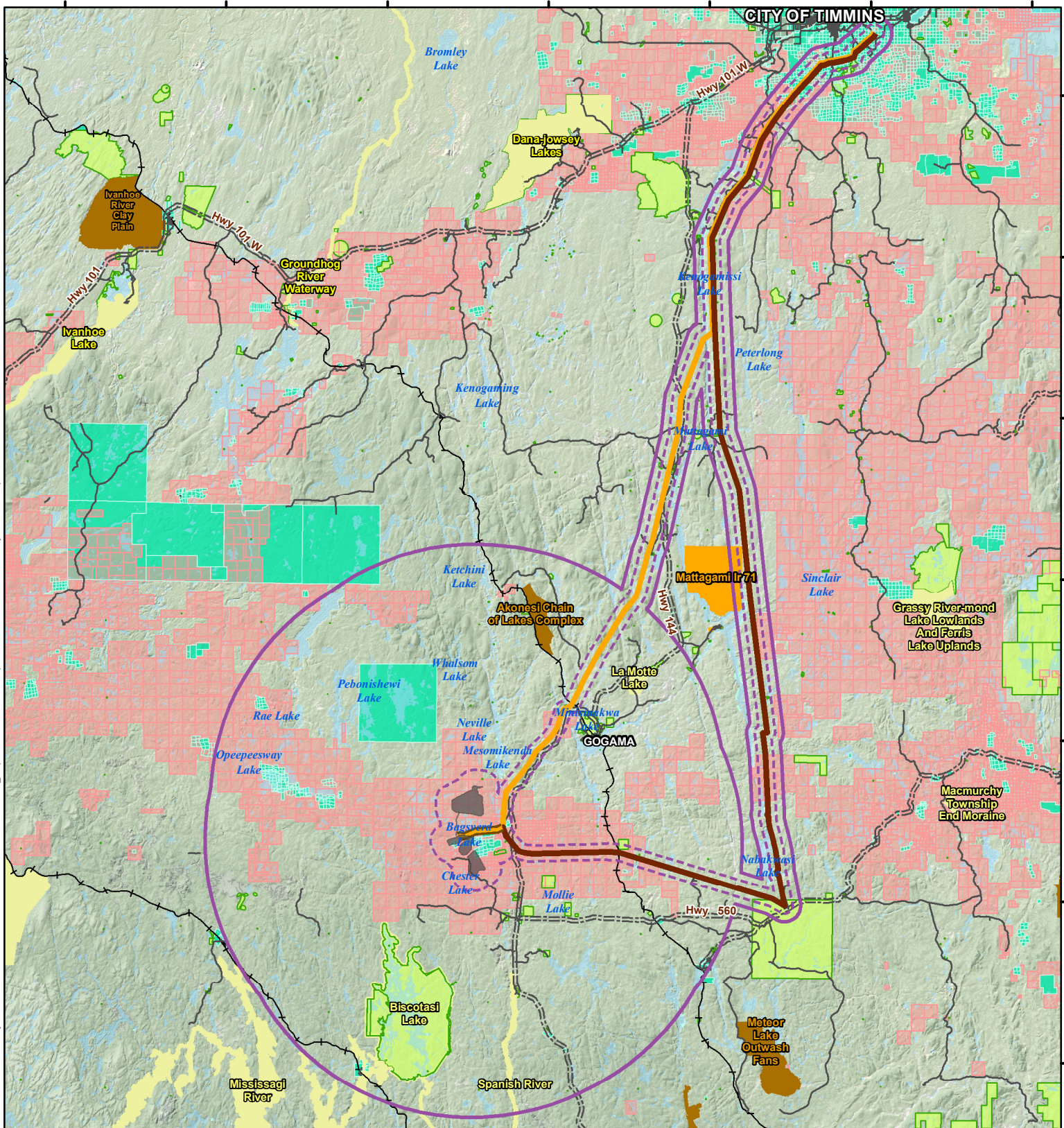
PROJECT N<sup>o</sup>: TC121522

FIGURE: 4

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DATE: October 2013





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**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- Crown Land Tenure**
- Alienation Area of Crown Land (active withdrawals and notifications)
- Disposition Area of Crown Land (active patent, lease or license of occupation)
- Active Claim Area of Crown Land (active staked land)
- First Nation Reserve
- Conservation Reserve (Regulated)
- Provincial Park
- Railway
- Highway/Expressway
- Local Road
- Waterbody / Large Watercourse
- Wooded Area

**NOTES:**  
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse  
 - Active mining claims, dispositions and alienation lands were downloaded from claim services, MNM, June, 2013



**CÔTÉ GOLD PROJECT**

**Land Ownership**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

FIGURE: 5

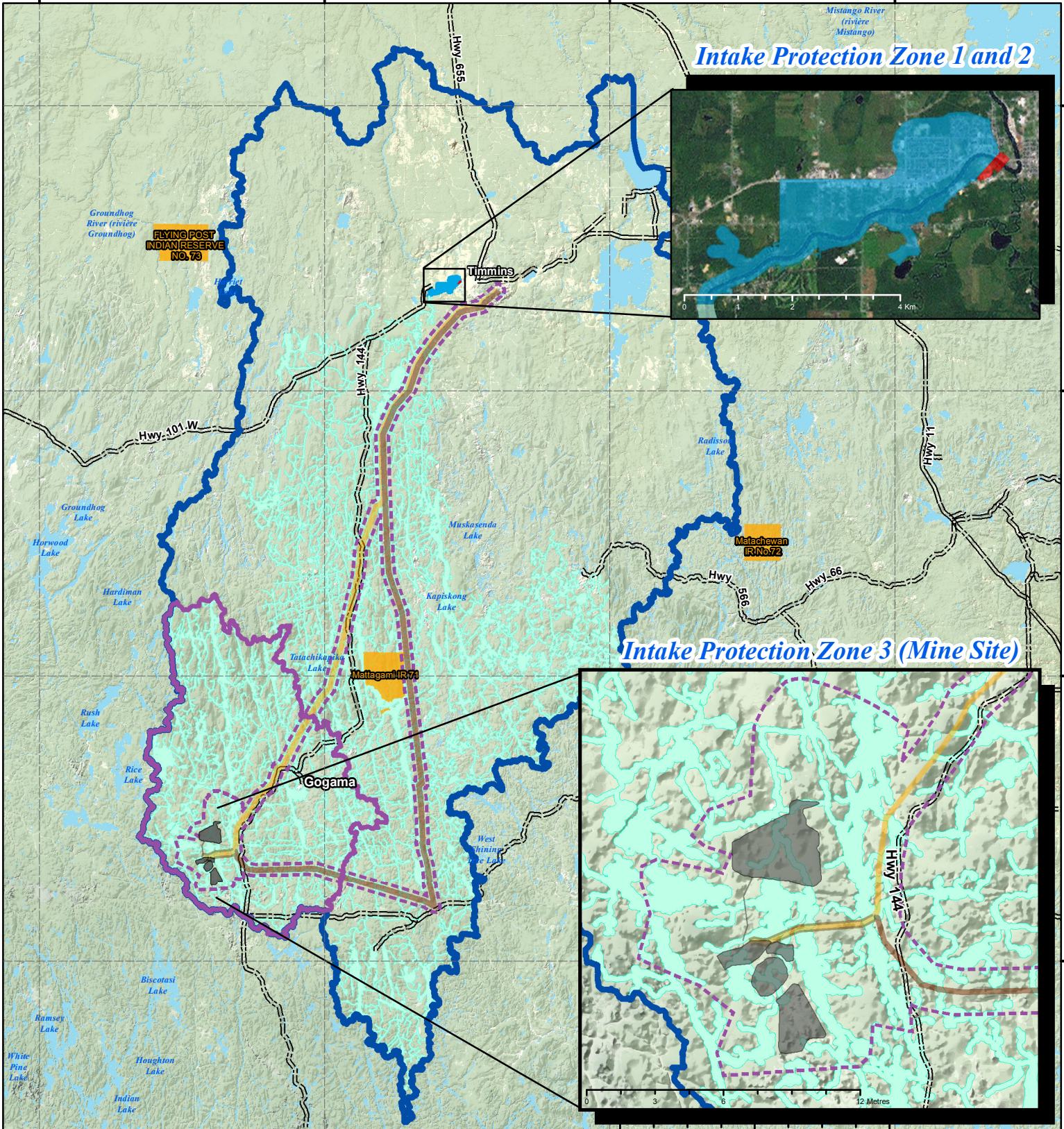
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DATE: October 2013





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**LEGEND**

- Proposed Site Facilities
- Regional Study Area
- Local Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- Highway/Expressway
- First Nation Reserve
- Mattagami Region Source Protection Area Boundary
- Intake Protection Zones Vulnerability Score**
- IPZ-1
- IPZ-2
- IPZ-3

**NOTES:**  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse.  
 - Mattagami Region Source Protection area boundary and Intake Protection Zones obtained from Mattagami Region Conservation Authority, 2013.



**CÔTÉ GOLD PROJECT**

**Mattagami Source Water Protection Zones**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

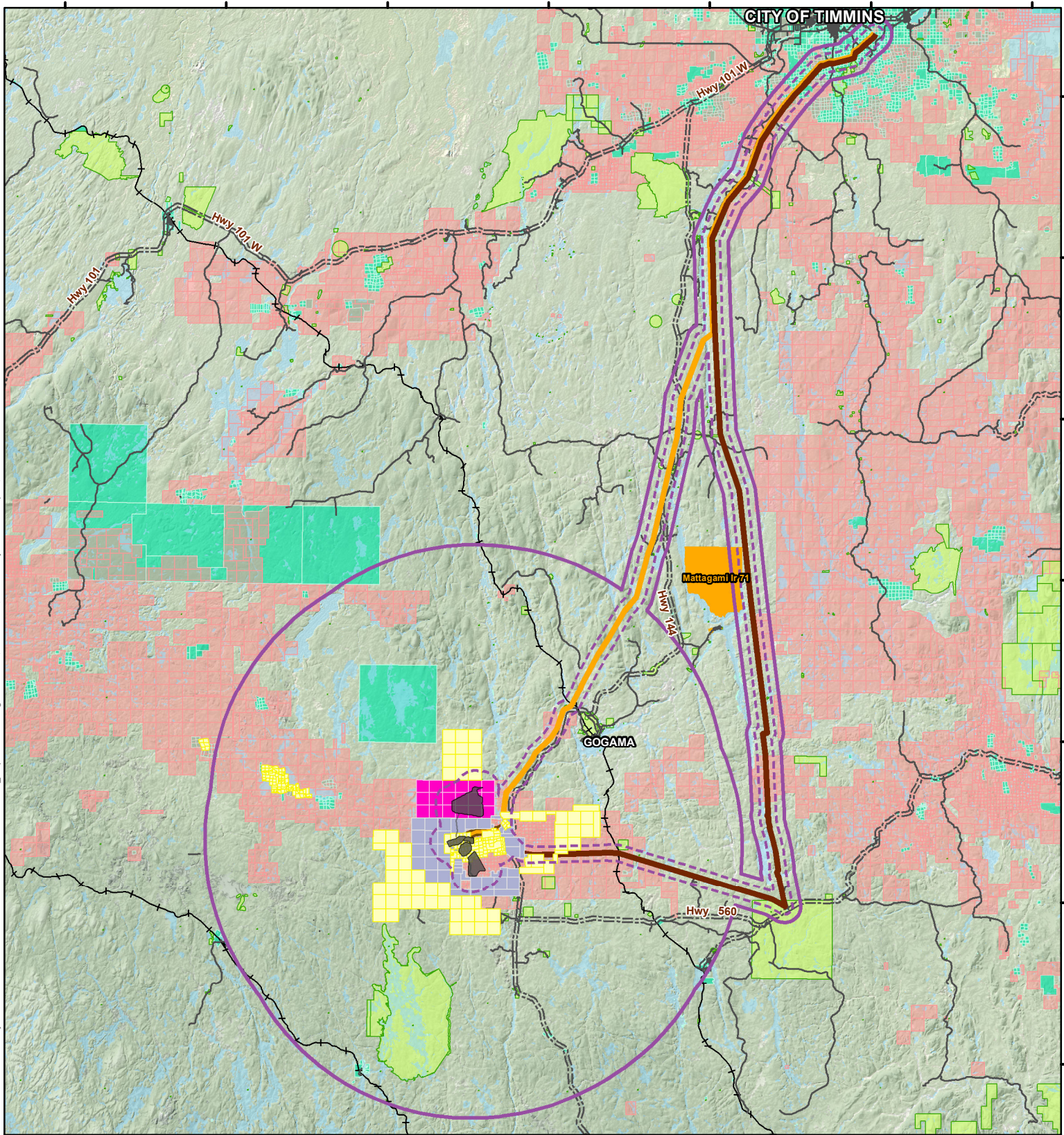
FIGURE: 7

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DATE: October 2013



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**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- First Nation Reserve
- Highway/Expressway
- Local Road
- Railway
- Waterbody / Large Watercourse
- Wooded Area
- Crown Land Tenure**
- Alienation Area of Crown Land (active withdrawals and notifications)
- Disposition Area of Crown Land (active patent, lease or license of occupation)
- Active Claim Area of Crown Land (active staked land)
- Claim holders <sup>1</sup>**
- IAMGOLD Corporation
- Newcastle Minerals Ltd.
- Sanatana Resources Inc

**NOTES:**  
 Recorded Holder(s) percentages of patent or unpatent may vary between claim holders due to ongoing negotiations. For more detail please go the MNDM website.  
 - Active mining claims, dispositions and alienation lands were downloaded from claimmap services, MNDM, June, 2013.  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse.



**CÔTÉ GOLD PROJECT**

**Active Mining Claims, Disposition Land and Alienation Land**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

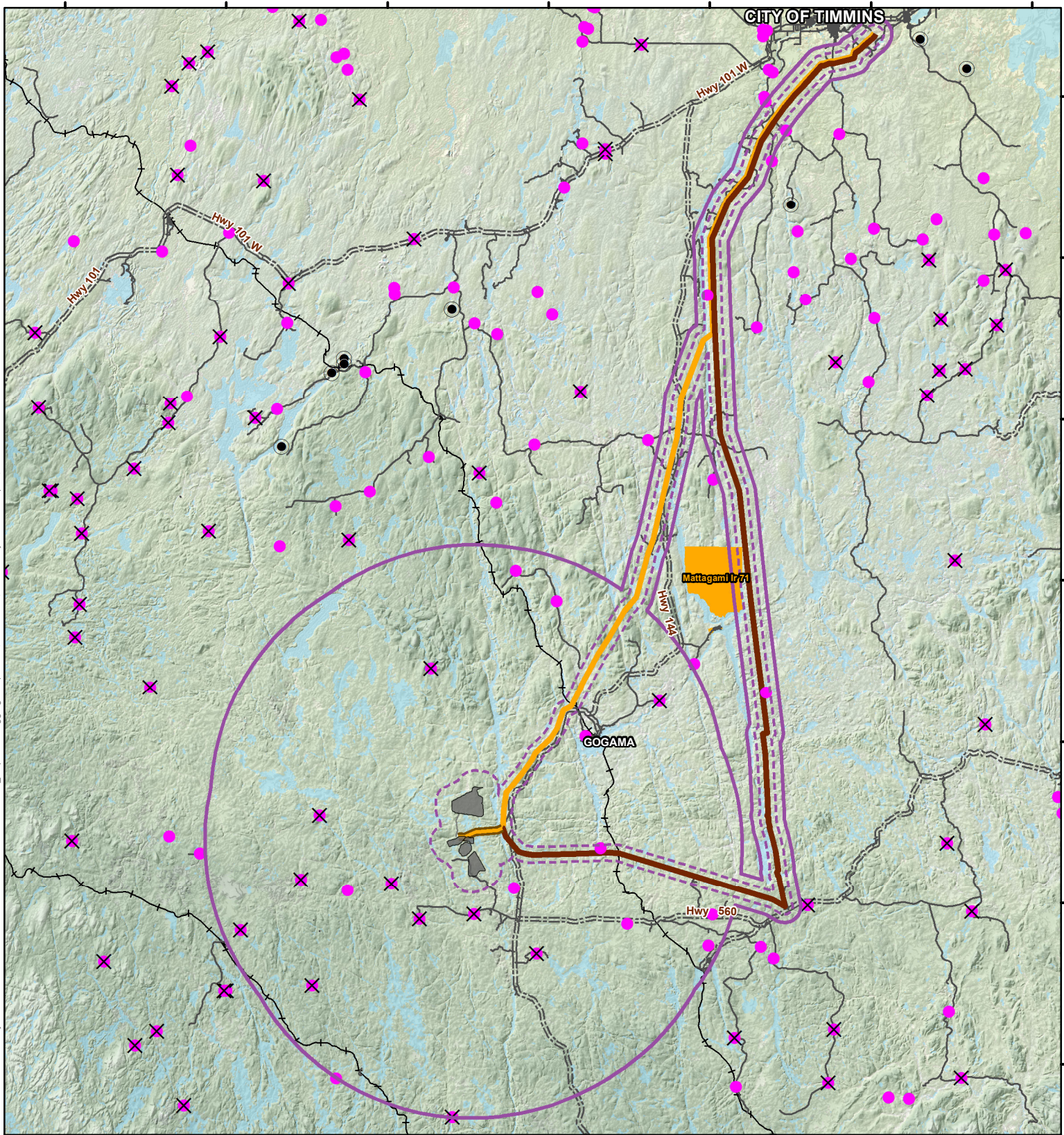
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DATE: October 2013



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**LEGEND**

- |  |  |  |                      |
|--|--|--|----------------------|
|  | Proposed Site Facilities                         |  | Aggregate Operations |
|  | Local Study Area                                 |  | Active Pit           |
|  | Regional Study Area                              |  | Surrendered Pit      |
|  | Cross-Country 230 kV Transmission Line Alignment |  |                      |
|  | Shining Tree 230 kV Transmission Line Alignment  |  |                      |
|  | First Nation Reserve                             |  |                      |
|  | Highway/Expressway                               |  |                      |
|  | Local Road                                       |  |                      |
|  | Railway  |  |                      |
|  | Waterbody / Large Watercourse                    |  |                      |
|  | Wooded Area                                      |  |                      |

**NOTES:**  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse.  
 - Locations of Aggregate Site Authorized extracted from Land Information of Ontario (MNR), 2013.



**CÔTÉ GOLD PROJECT**

**Aggregate Operations**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

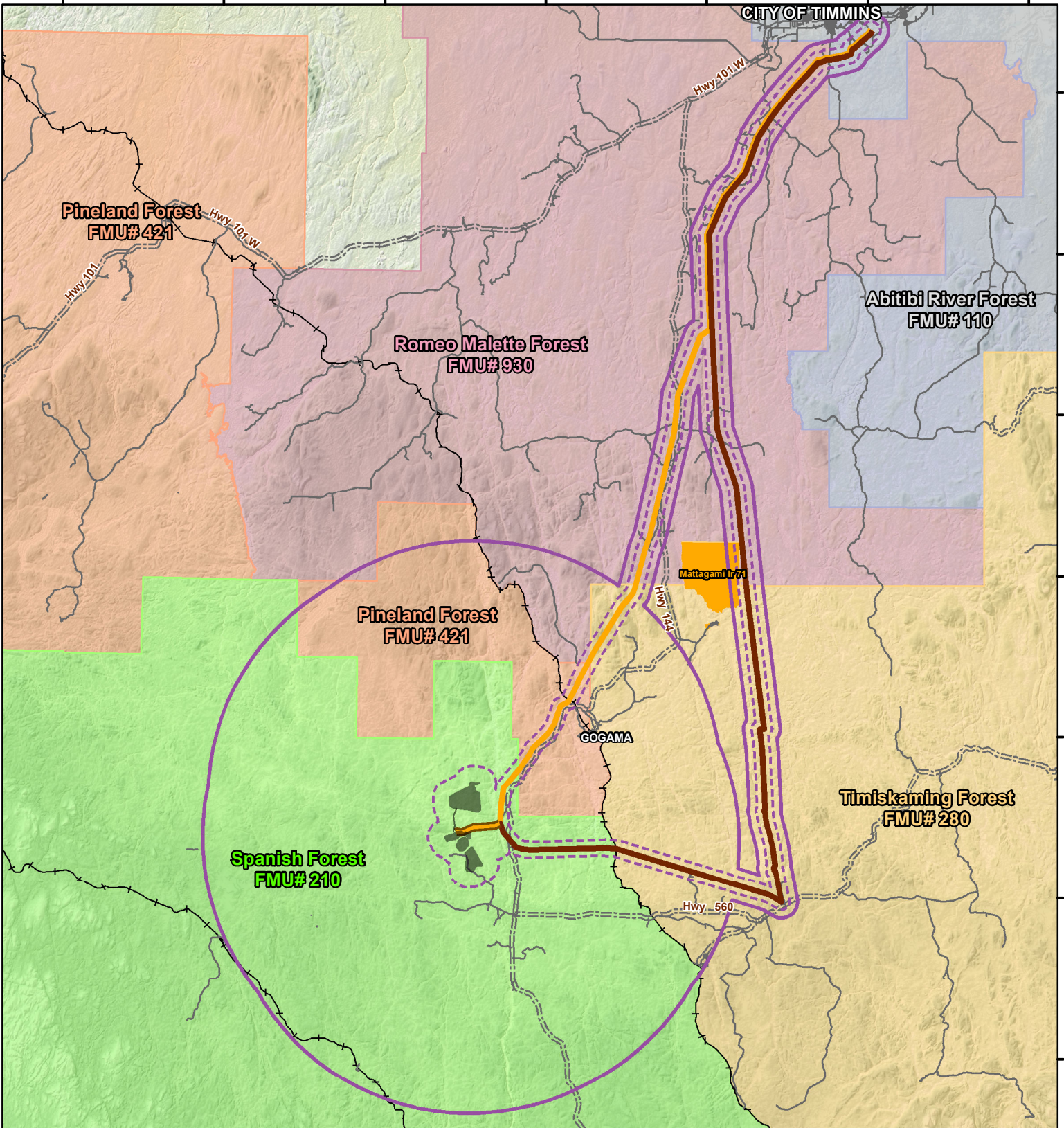
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DATE: October 2013



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**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area (RSA)
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- First Nation Reserve
- Railway
- Highway/Expressway
- Local Road

**Forest Management Unit (FMU)**

- Abitibi River Forest (FMU# 110)
- Pineland Forest (FMU# 421)
- Romeo Malette Forest (FMU# 930)
- Spanish Forest (FMU# 210)
- Timiskaming Forest (FMU# 280)

**NOTES:**  
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse  
 - Ontario Forest Management Units provided by Ontario MNR  
 Queen's Printer for Ontario, 2013



**CÔTÉ GOLD PROJECT**

**Forest Management Units**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

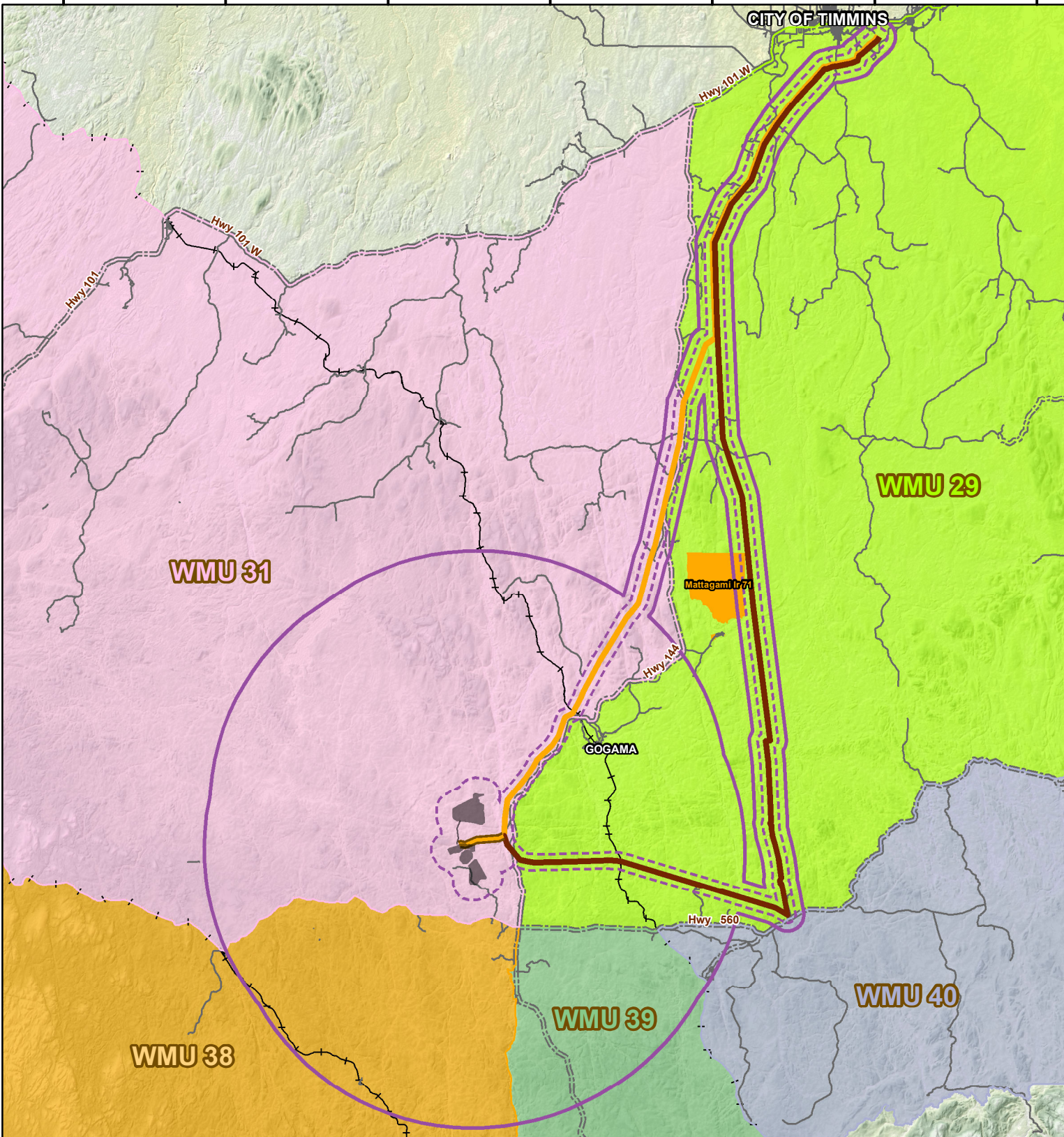
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DATE: October 2013



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**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- First Nation Reserve
- Railway
- Highway/Expressway
- Local Road

**Wildlife Management Unit**

- WMU 29
- WMU 31
- WMU 38
- WMU 39
- WMU 40

**NOTES:**  
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse  
 - Ontario Wildlife Management Units provided by Ontario MNR, Queen's Printer for Ontario, 2012



**CÔTÉ GOLD PROJECT**

**Wildlife Management Units**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

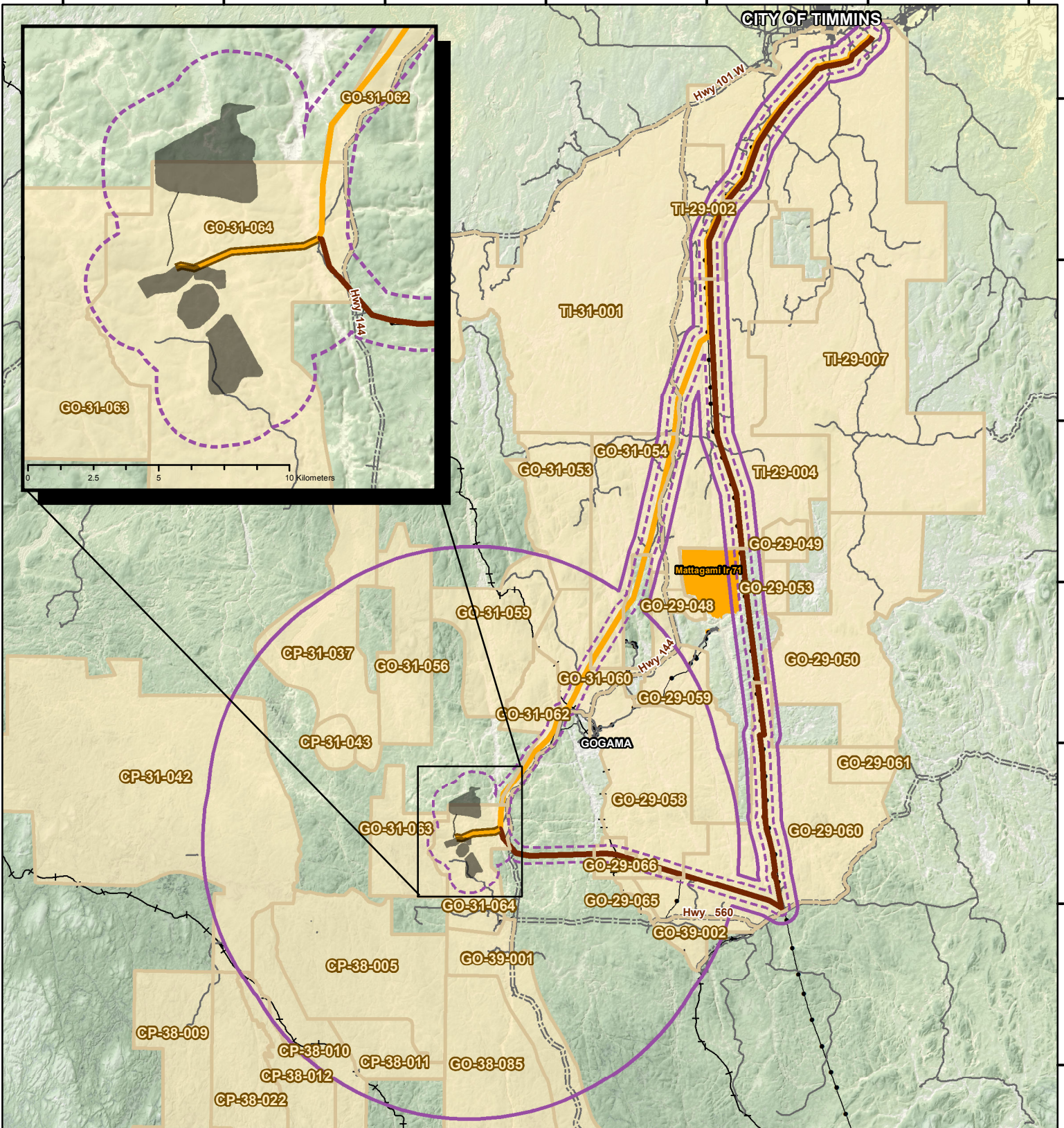
FIGURE: 11

SCALE: 1:650,000

DATE: October 2013



380000 400000 420000 440000 460000 480000 500000



Path: P:\EM\Projects\2012\TZ12023\IAMGOLD Socioec Land Use\GIS\WXD\_Maps\2013\BearManagAreas.mxd, Author: SM, modified by sandra.marquez, 11 October 2013

**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- First Nation Reserve
- Railway
- Transmission Line
- Highway/Expressway
- Local Road
- Wooded Area
- Bear Management Areas**  
(Label with ID)

**NOTES:**  
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse  
 - Ontario Bear Management Areas provided by Ontario MNR  
 Queen's Printer for Ontario, 2013



**CÔTÉ GOLD PROJECT**

**Bear Management Areas**

Datum: NAD83  
 Projection: UTM Zone 17N

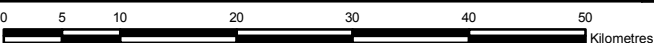


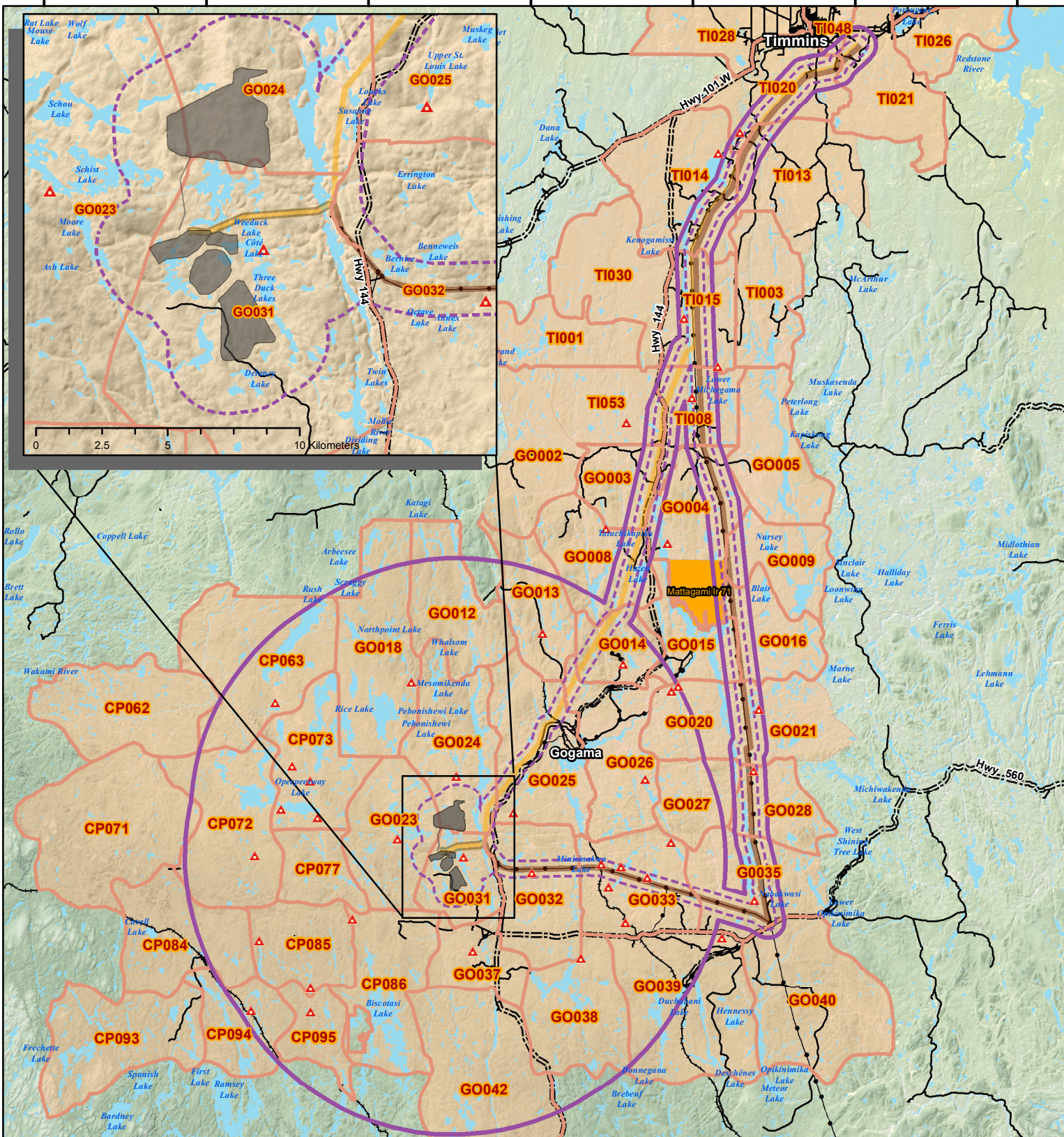
PROJECT N°: TZ12023

FIGURE: 12

SCALE: 1:650,000

DATE: October 2013





5360000  
5340000  
5320000  
5300000  
5280000  
5260000  
5240000

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**LEGEND**

- Proposed Site Facilities
- Regional Study Area
- Local Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- Trapper Cabin
- Trapline Area (Labelled with ID)
- Railway
- Transmission Line
- Highway/Expressway
- Local Road
- First Nation Reserve
- Wooded Area
- Waterbody / Large Watercourse

**NOTES:**  
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse  
 - Trapline areas and Trapper cabins provided by Ontario MNR  
 Queen's Printer for Ontario, 2013



**CÔTÉ GOLD PROJECT**

**Trapline Areas and Trapper Cabins**

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

FIGURE: 13

SCALE: 1:650,000

DATE: October 2013

0 5 10 20 30 40 Kilometres

380000

400000

420000

440000

460000

480000

5360000

5340000

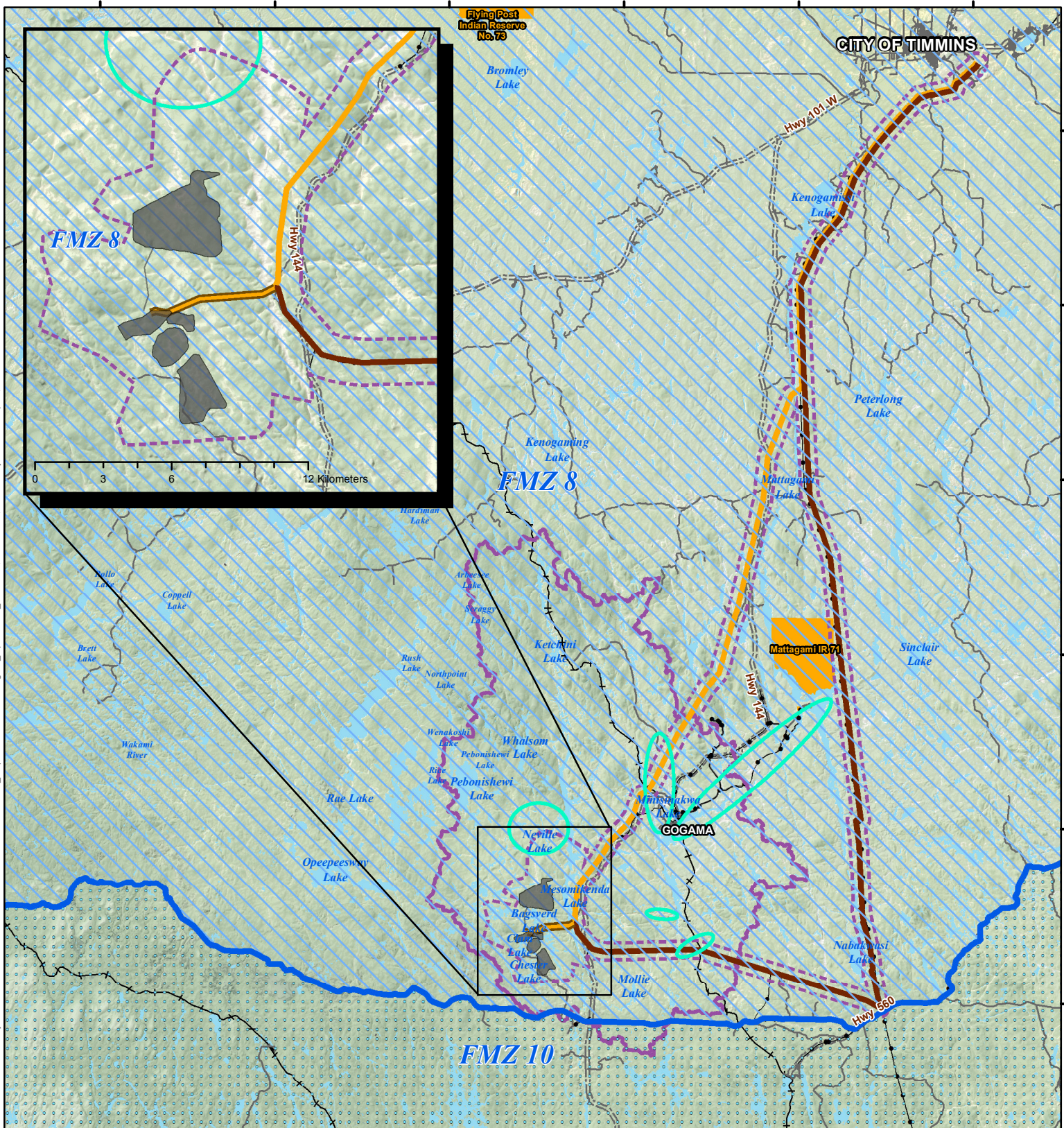
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Path: P:\EM\Projects\2012\TZ12023 IAMGOLD Socioec Land Use\GIS\WXD\_Maps\2013\Fisheries\mgmz\_aquatic\_SA\_RSA.mxd, Author: SM, modified by sandra.marquez, 25 October 2013



**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- Railway
- Transmission Line
- Highway/Expressway
- Local Road
- First Nation Reserve
- Waterbody / Large Watercourse
- Fisheries Management Zone (Labelled with ID)**
- FMZ 8
- FMZ 10
- Fish Sanctuary - General Area

**NOTES:**

- Road data extracted from Land Information Ontario, Ontario Road Network, MNR
- Ontario base data extracted from Land Information Ontario (MNR) data warehouse
- Ontario Fisheries Management Zones provided by Ontario MNR, Queen's Printer for Ontario, 2012
- Fish sanctuary areas are general approximations based on MNR recreational fishing regulations 2012 descriptions.



**CÔTÉ GOLD PROJECT**

**Fisheries Management Zones**

Datum: NAD83  
Projection: UTM Zone 17N



PROJECT N<sup>o</sup>: TZ12023

FIGURE: 14

SCALE: 1:600,000

DATE: October 2013



380000

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Flying Post Indian Reserve No. 73

CITY OF TIMMINS

T10037

T10039

T10055

T10056

T10057

T10071

T10072

T10086

T10103

T10110

T10111

T10112

T10126

T10127

T10143

T10144

T10159

T10170

T10171

T10172

T10181

T10182

T10183

T10195

T10196

T10197

T10205

T10206

T10207

T10175

T10176

T10192

T10193

T10132

T10133

T10134

T10138

T10139

T10140

T10146

CH0113

CH0114

T10149

T10150

T10154

T10155

T10161

CH0125

CH0126

CH0127

T10164

T10165

T10166

T10170

T10171

T10172

CH0139

CH0140

CH0141

T10175

T10176

T10177

T10181

T10182

T10183

CH0154

CH0155

CH0156

T10192

T10193

T10194

T10195

T10196

T10197

CH0169

CH0170

CH0171

CH0172

T10203

T10204

T10205

T10206

T10207

LEGEND

- Proposed Site Facilities
- Local Study Area
- Regional Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- Hudson Bay / Great Lakes Basin Divide
- Railway
- Transmission Line

- Highway/Expressway
- Local Road
- Waterbody / Large Watercourse
- First Nation Reserve
- Baitfish Harvest Area
- Fish Bait Block system (Labelled with ID)

NOTES:  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse  
 - Ontario Bait Harvest Area from MNR, Queen's Printer for Ontario, 2012



CÔTÉ GOLD PROJECT

Bait Harvesting Areas

Datum: NAD83  
 Projection: UTM Zone 17N



PROJECT N°: TZ12023

FIGURE: 15

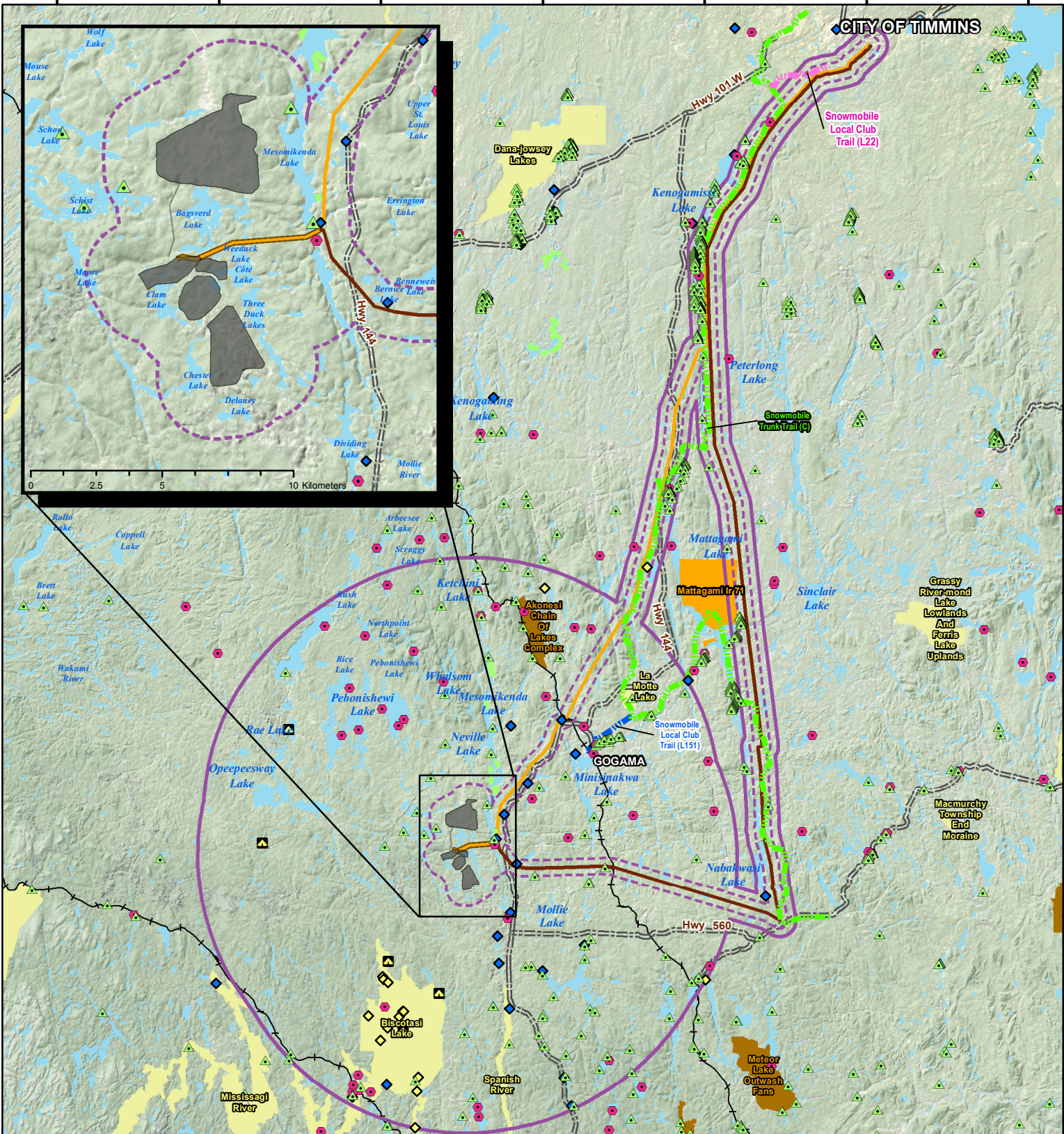
SCALE: 1:600,000

DATE: October 2013



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380000 400000 420000 440000 460000 480000 500000



Path: P:\EM\Projects\2012\TZ12023\IAMGOLD Socioec Land Use\GIS\MXD\_Maps\2013\Cottages\_ResidAreas.mxd, Author: SM, modified by sandra.marquez, 25 October 2013

**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area (RSA)
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- First Nation Reserve
- Conservation Reserve (Regulated)
- Provincial Park
- Railway
- Highway/Expressway
- Recreational Camping Area
- Tourist Establishment Area
- Cottage Residential Site
- Recreation Access Point
- Designated Camping Site
- Cottage Residential Area
- Snowmobile Trail - Local Club Trail (L151)
- Snowmobile Trail - Local Club Trail (L22)
- Snowmobile Trail - Trunk Trail (C)

**NOTES:**  
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse  
 - Cottage Residential Areas provided by Ontario MNR, Queen's Printer for Ontario, July, 2013  
 - Additional cottage residential areas in Whalen, Somme and Neville and part of Potler were provided by Mesomikenda Cottagers Association on December 2012.  
 - Trail head and trail information extracted from Land Information Ontario (MNR).  
 - Snowmobile trails approximated from online maps from Ontario Federation of Snowmobile Clubs (OFSC) 2013



**CÔTÉ GOLD PROJECT**  
**Local Recreational Sites, Trails, Tourist Establishment Areas and Cottage Residential Areas**

Datum: NAD83  
 Projection: UTM Zone 17N



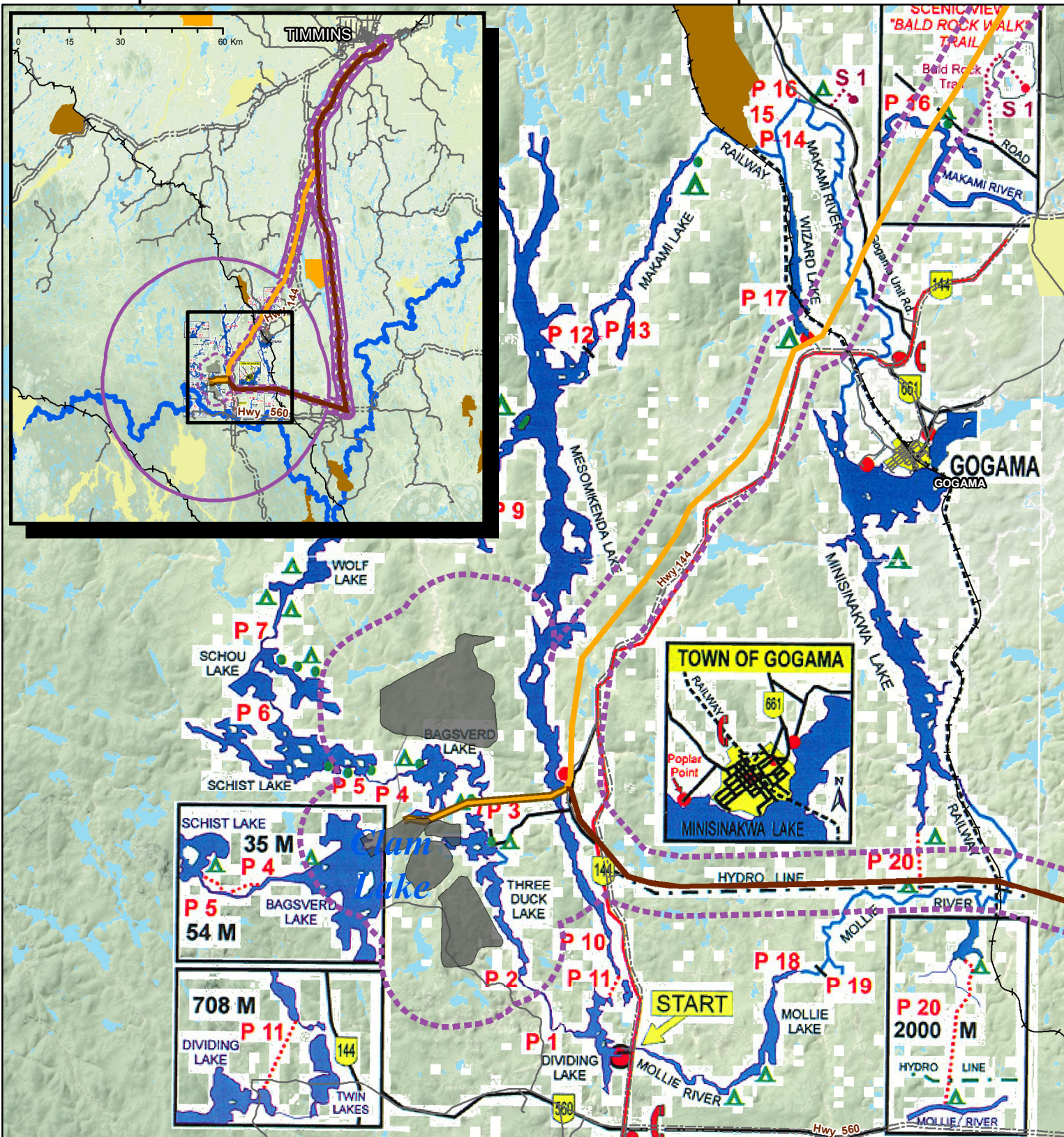
PROJECT N°: TZ12023

FIGURE: 16

SCALE: 1:650,000

DATE: October 2013





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**LEGEND**

- Proposed Site Facilities
- Local Study Area
- Regional Study Area
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- Hudson Bay / Great Lakes Basin Divide
- Railway
- Highway/Expressway
- Local Road
- First Nation Reserve
- Provincial Park
- Conservation Reserve (Regulated)

**4M Circle Canoe Route**

- CAMP SITE
- PORTAGE LENGTH ..... 100 M (METRES)
- PORTAGE NUMBER ..... P 1
- PORTAGE TRAIL
- SCENIC VIEW ..... S 1
- ACCESS POINT
- RAILWAY TRACKS

**NOTES:**

- Road data extracted from Land Information Ontario, Ontario Road Network, MNR
- Ontario base data extracted from Land Information Ontario (MNR) data warehouse
- Canoe route map derived from map extracted from Gogama.ca

Datum: NAD83  
Projection: UTM Zone 17N

**IAMGOLD CORPORATION**

**CÔTÉ GOLD PROJECT**

**4M Circle Canoe Route**

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PROJECT N<sup>o</sup>: TZ12023      FIGURE: 17

SCALE: 1:176,000      DATE: October 2013