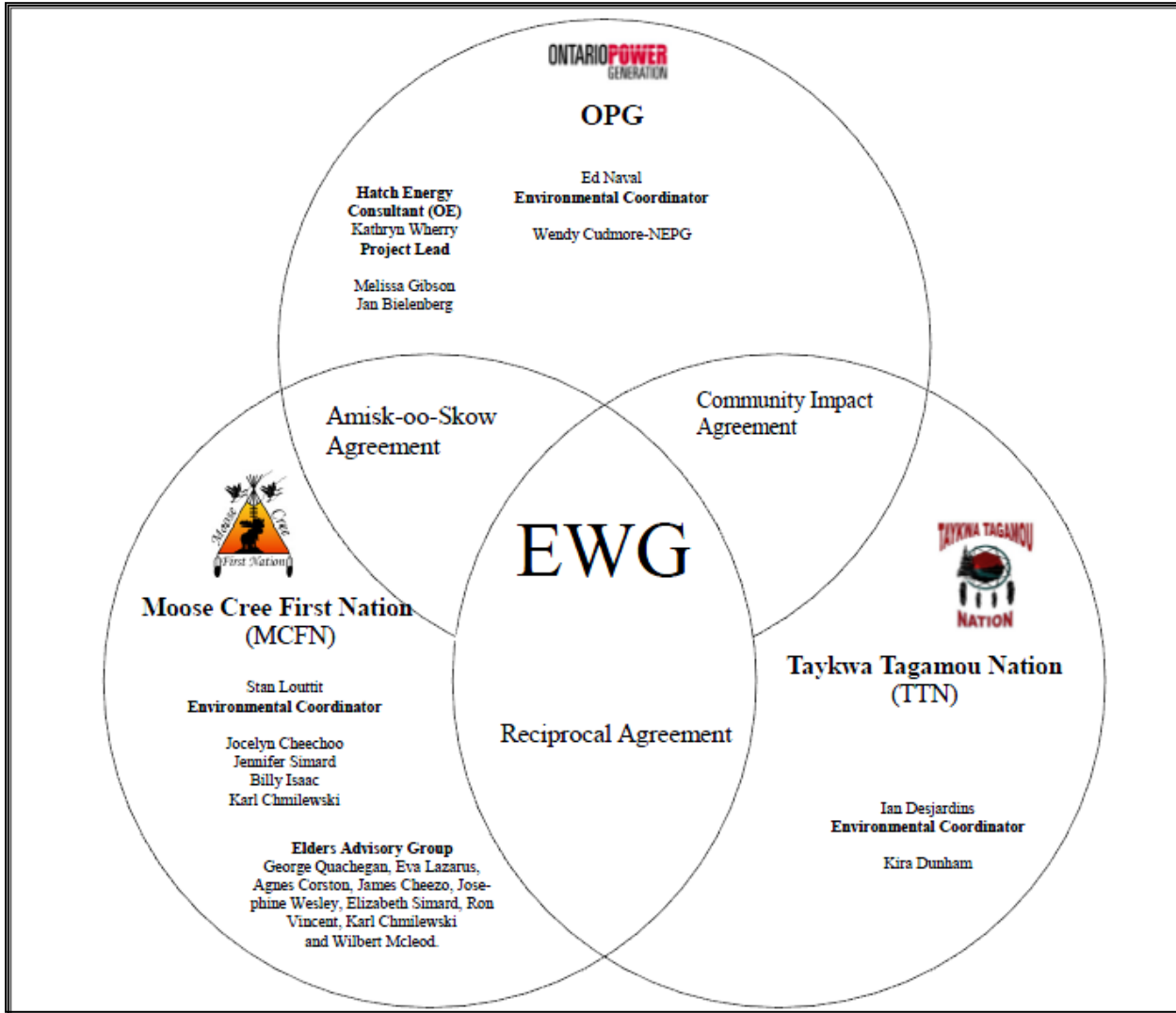


Environmental Working Group

Monthly Report

December 2014

ENVIRONMENTAL WORKING GROUP Relationship Organizational Chart



- Weekly Environmental Working Group (EWG) and EWG/Kiewit – Alarie, a Partnership (KAP) meetings.
 - The EWG review its Action Items that include priority permit reviews, and deliverables to the Mattagami Extensions Coordinating Committee (MECC).
 - KAP gives EWG a construction up date every week and discusses any upcoming issues and/or urgent permit reviews.
 - Specific items that were discussed are below.
- The EWG continued its review on KAPs proposed access road options for the construction of the fish habitat shoals downstream of Smoky Falls.
- TTN members of the EWG continued to work on developing their own Elders Advisory Group as well as the Custodial Body.
- TTN members of the EWG worked on incorporating TEK into the SENES Erosion and Aquatic Reports for Adam Creek (commissioned by the MECC). The MCFN Elders Advisory Group held a number of workshops in 2014 on fisheries, erosion, and isostatic rebound to understand the issues at Adam Creek and further downstream. The EAG held a meeting on Dec 1, 2014 and finalized its recommendations to SENES. The EAG recommendations will be included in the final SENES Reports.
- Inclusion of a First Nation perspective on the Cost Benefit Analysis of Mitigating and Reducing Spill in Adam Creek. MCFN have completed their draft, and TTN continues to work on their draft.
- MCFN and TTN of the EWG members continue to work on the development of a TEK Monitoring Program. The TEK Monitoring Program is intended to work with the OPG Environmental Effects Monitoring Plan to address term and condition 13 - Aboriginal Knowledge.
- In an effort to improve the understanding of TEK, members of the EWG have started reading articles that relate to TEK and/or hydroelectric development.
- There was no MECC meeting held in December.

ACTIONS TO BE COMPLETED in 2014

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
EWG Environmental Due Diligence Audit #4													
EWG Face to Face Meetings													
EWG present to the MECC the result of its review of the draft "Cost Benefit Analysis of Mitigating and Reducing Adam Creek Spill" (Condition 4(c) and (e) of EA T&Cs) by Hatch.													
EWG present to the MECC the results and recommendations of periodic re-evaluations (Condition 10 of EA T&Cs).													
EA T&C 3a: Visual and Aesthetic Impacts EA T&C 4b: Hydrology, Fish and Aquatic Habitat	EWG present to the MECC "Environmental Effects Monitoring Plan, Lower Mattagami Development"												
	EA T&C 5b: Terrestrial Ecology EA T&C 6: Erosion and Sedimentology EA T&C 7: Mercury EA T&C 14: Permit Review and Compliance Monitoring Protocol												TBD
EA T&C 3a: Visual and Aesthetic Impacts EA T&C 5d: Terrestrial Ecology	EWG present to the MECC the results and recommendations of Little Long Rehabilitation Plan												
	EWG present to the MECC the results and recommendations of Harmon Rehabilitation Plan												
	EWG present to the MECC the results and recommendations of Kipling Rehabilitation Plan												
	EWG present to the MECC the results and recommendations of Smoky Falls Rehabilitation Plan												
EWG presents to the MECC a draft of the 'Peoples of the Moose River Basin', the cultural text outlined in EA T&C 2c.													TBD
EWG read TEK book 'The Inconvenient Indian, A Curious Account of Native People in North America'.													
EWG watch TEK related films or documentaries or articles (Doc: The Reel Injun, Cree Hunters of the Mistassini and Watermark).													
Completed: Pending: *Additional work still required to fulfill EA Term and Condition													

Construction

General

- There were approximately 300 people in the camp this month. KAP continues to reduce the staff and craft numbers reflecting the continued wind-down in construction activities. Following the Christmas shut-down the number of on-site staff will be reduced further.

Little Long

- KAP completed construction of the oil barrier grout curb around the HPU.
- Work was completed to the intake hoist system to correct electrical and protection and controls deficiencies identified as part of the Kipling intake gate incident from July 2014.
- KAP requested (and obtained) an outage as they continued to work on closing out punch list items.
- Andritz repeated the heat run test on Unit 3 to collect additional data.
- Little Long Unit was 3 (Figure 1) was declared in service on January 19, 2014.



Figure 1: Little Long Unit 3 June 2014

Harmon (Figure 2)

- KAP completed construction of the oil barrier grout curb around the HPU.
- Work was completed to the intake hoist system to correct electrical and protection and controls deficiencies identified as part of the Kipling intake gate incident from July 2014.
- KAP continued to work on closing out punch list items, such as:
 - Water seepage remediation continued in various areas throughout the powerhouse.
 - Vipond installed new deluge panels for the governor and GSU transformer fire protection system.

- Harmon (Figure 2) was declared in-service on June 3rd, 2014, three months ahead of the target in-service date.



Figure 2: Harmon overview, July 2014

Kipling

- Wet testing, demonstration testing and the trial run were completed. Unit 3 was declared in-service on December 17.
- KAP continued to work on closing out punch list items, such as:
 - Water seepage remediation continued in a number of locations in the powerhouse.
 - KAP repaired a malfunctioning valve on the tailwater air depression system.



Figure 3: Kipling unit 3 inspections completed and Demonstration and Trial run in progress.

Smoky Falls

- With all Units now in-service, KAP and Alstom have switched their focus to completing balance of plant work and correcting punch list items.
- BOP Mechanical and Electrical installation throughout the powerhouse continued to progress.
- The plant elevator installation is complete but the elevator is not yet commissioned.
- Architectural work continues to advance throughout the powerhouse, including:
 - HVAC ductwork and electrical cabling in various locations;
 - Installation of studs and drywall in various locations;
 - Priming and painting various rooms and structures throughout the plant;
 - Light fixtures in a number of locations throughout the powerhouse;
 - Steel doors and handrails in various locations;
- Divers were mobilized to old Smoky falls. They cleaned the intake water passages and took dimensional measurements for SLI.
- 600m² fish habitat Construction
 - Turbidity curtains in place (Figure 4).
 - Placing Rip-Rap, gravel, cobbles and boulders (Figure 5).
- Construction on all the generating units are complete:
 - Unit 1: declared in-service on September 30, 2014.
 - Unit 2: declared in-service on October 9, 2014.
 - Unit 3: declared in-service on December 2, 2014.



Figure 4: Smoky Falls Fish Habitat Shoal – Sediment contained by curtain



Figure 5: Smoky Falls fish habitat shoal construction (placing cobble)

Demobilization

- KAP disassembled the Hub Maintenance Warehouse and put the sections into storage near the permanent camp.
- At the Permanent Camp, KAP removed Dorms 9 and 10.

Monthly Summary – December 2014

SPILLS			
No. of Spills:		4; Spill Reports 477-481 (see Figure 6 for LMRP spills breakdown).	
Classification of Spills:		<u>KAP Project Classification</u> Minor – 4 Moderate – 0 Major – 0 To Water - 1 <u>MOE Classification</u> Non-reportable - 4 Reportable to MOE <ul style="list-style-type: none"> - Class C – 1 - Class B – 0 - Class A – 0 	
Reportable Spills			
No.	Quantity /Product Spilled	Spill Site	Reason for being Reportable
1	<1 L/ Engine Oil	Smoky Falls – Fish Habitat Access & Tailrace	Reportable in-water. The long-stick excavator was working on the fish habitat, when a sheen was noted in the water on the east side of the pad. The foreman notified the operator, who immediately shut down his excavator. Upon further inspection, it was noted that the leak had occurred on the pad, however due to accumulated water on the pad from the marine excavations, the water with the oil leaked off the pad, into the tailrace. A permanent drip tray was also installed under the excavator to contain any leaks should they occur.
KAP Project Classification Minor: ≤ 10L Moderate: Between 10L and 100L Major: ≥100L To Water: Any amount is reportable to the MOE (See Figure 7: KAP Spills Response Flowchart)		MOE Classification (see Reportable and Non-reportable Spills definition below) Non-reportable: < 100L Reportable to MOE <ul style="list-style-type: none"> • Class C - Less Serious • Class B – Serious • Class A – Very Serious 	
Sediment Pond Exceedance of Effluent Objective			
No. of Exceedance days recorded	Location	Mitigation Measures used	
n/a			

Spills Response

When **any spill** occurs on site, KAPs spill response process is to be followed (Figure 7). This includes notification of the Supervisor and KAPs Environmental Department, and an assessment of the severity of the spill. Regardless of the quantity, clean-up measures are implemented for **every spill** using spill kits that are available throughout the site (materials used for clean-up and any contaminated soil are removed from the site). A spill report is then prepared for **each spill that occurs** which outlines the location, type, severity and quantity of the spill, in addition to details on how the spill occurred, how it was cleaned up and measures implemented on how the spill could be avoided for the future. This report is sent out to several OPG and Hatch representatives as well as all EWG members.

Reportable and Non-reportable Spills:

Section 92 of the *Environmental Protection Act* (EPA) requires that a **spill** be reported forthwith to the Ministry of the Environment. The definition of a spill in the EPA (subsection 91.1) is: a discharge,

- (a) into the natural environment,
- (b) from or out of a structure, vehicle or other container, and
- (c) that is abnormal in quality (e.g. the product spilled) or quantity (e.g. the amount spilled) in light of all the circumstances of the discharge.

Spills that are exempt from reporting to the Ministry of the Environment (ie. non-reportable) are discharges that don't fall within the 'spill' definition or, are exempted under EPA Regulation 675/98, *Classification and Exemptions of Spills and Reporting of Discharges*. This includes (not limited to) Class VI – Motor Vehicle exemptions, which exempts reporting of spills that are less than 100 L of fluid from a motor vehicle.

Subsection 30 .2 of the *Ontario Water Resources Act*, requires that the discharge of any material of any kind into water that is not in the normal course of events (e.g. regardless of quantity or quality) be reported to the Ministry of the Environment.

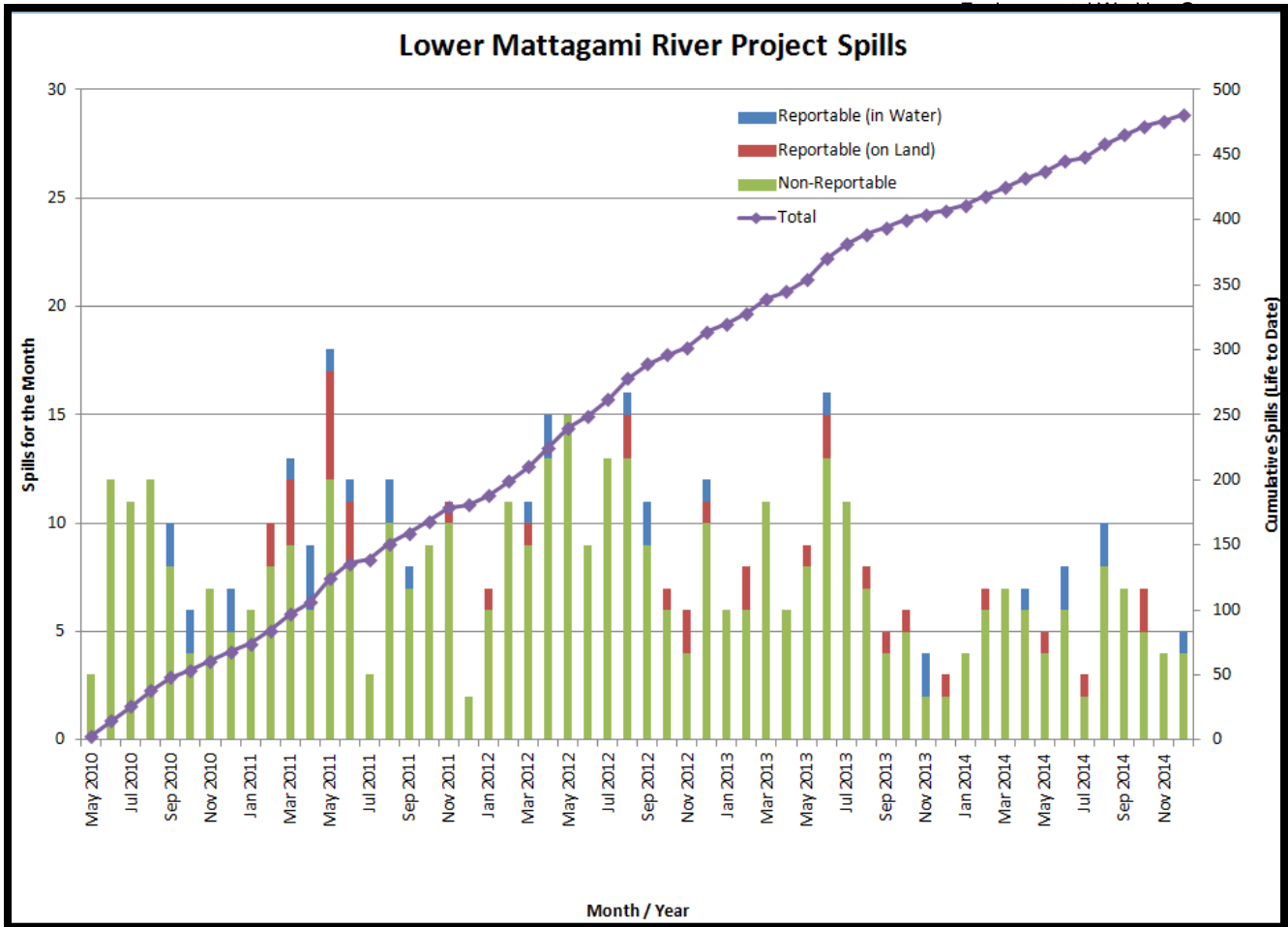


Figure 6: Lower Mattagami River Project spills

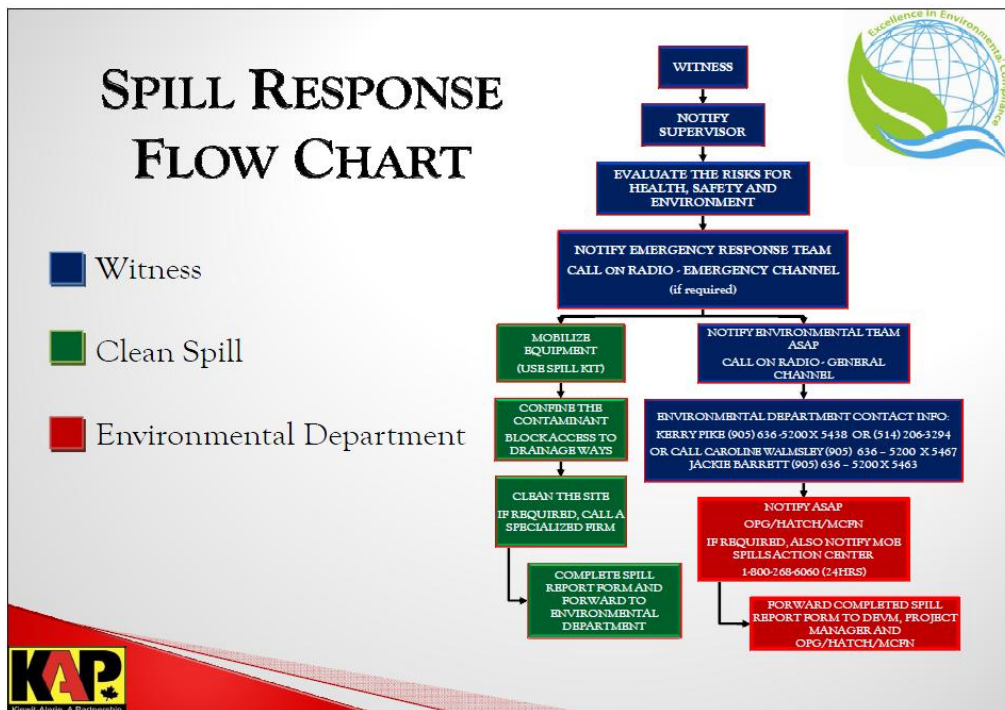


































Figure 7: KAP Spills Response Flowchart

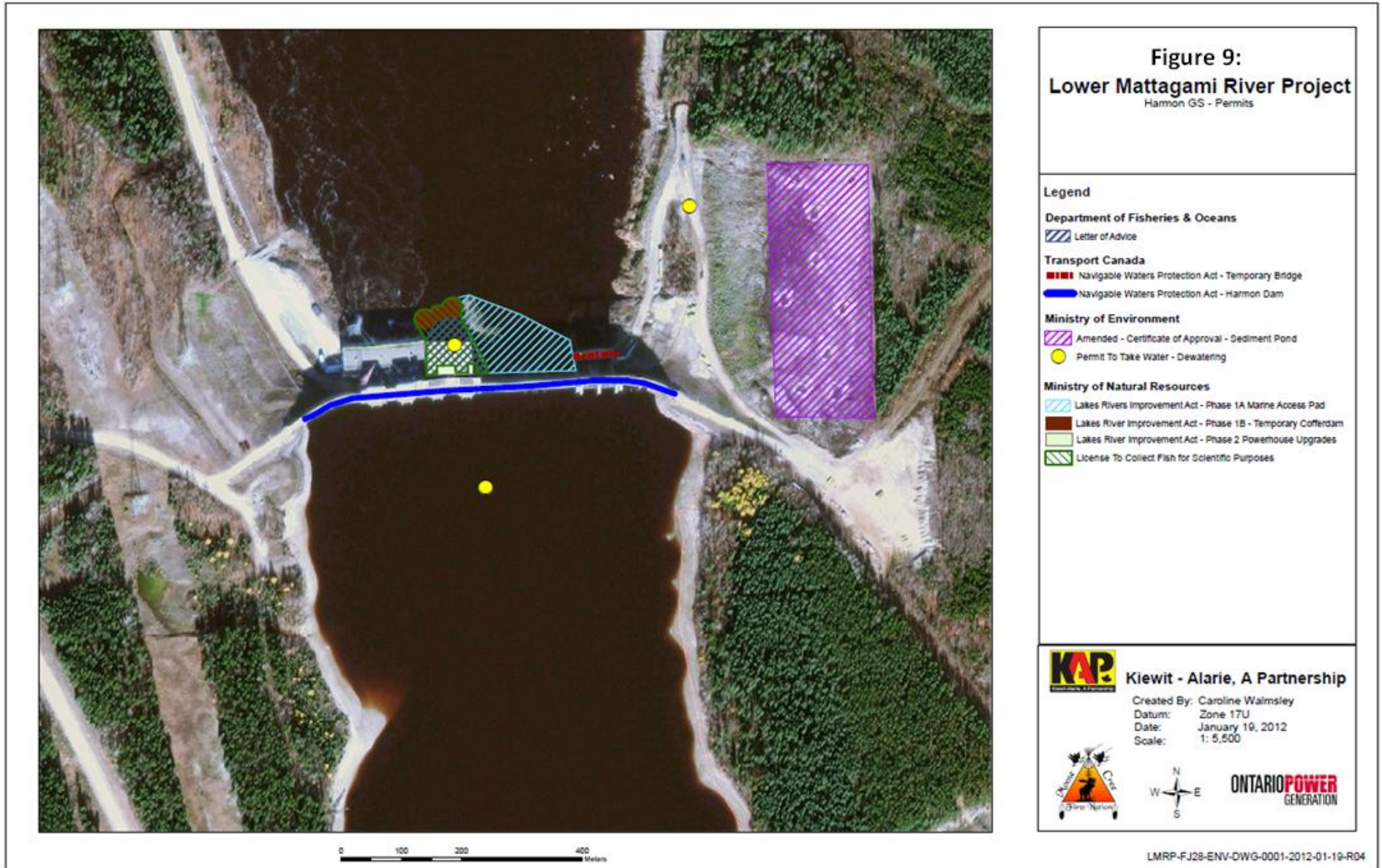
Monthly Permit and Approval Review Table

No.	PERMIT AND/OR APPROVAL REVIEW	Reviewed by EWG	Submitted to KAP
-	0	0	0

**Provincial Environmental Assessment Term and Condition (EA T&C)
Reports Review and Environmental Audits Table**

No.	Report or Audit	Applicable EA T&C	Reviewed or Under Review by EWG	Submitted to KAP	Submitted to MECC
14	KAP Kipling Site Rehabilitation Plan.	3a and 5			-
13	KAP Harmon Site Rehabilitation Plan.	3a and 5			-
12	Cost Benefit Analysis of Mitigating and Reducing Spill in Adam Creek	4c		n/a	-
11	Mercury in Fish Flesh Summary Report	4b and 7a		n/a	
10	Fish Habitat Assessment Report	4b		n/a	
9	Terrestrial Habitat Restoration Downstream of Kipling GS	5b		n/a	-
8	Draft Environmental Effects Monitoring Plan	3a, 4b, 5b, 6, 7 and 14		n/a	
7	KAP Little Long Site Rehabilitation Plan.	3a and 5			
6	Operation Overview Report	4a		n/a	
5	Waste Management Plan	19			
4	Noise Control Plan	18			
3	The Interim Measures Agreement as it relates to EA Term and Condition 14c (Permit Review and Compliance Monitoring Protocol)	14c			
2	2013 Environmental Audit	14			
1	2012 Environmental Audit	14			







0 100 200 400 Meters

Figure 10:
Lower Mattagami River Project
Kipling GS - Permits

Legend

Department of Fisheries & Oceans

Letter of Advice

Transport Canada

Approval - Navigable Waters Protection Act - Kipling Dam

Ministry of Environmental

Amended Certificate of Approval - Sediment Pond

Permit To Take Water - Dewatering

Ministry of Natural Resources

Lakes River Improvement Act - Phase 1A - Marine Access Pad

Lakes Rivers Improvement Act - Phase 1A-1 Deflector Wall

Lakes Rivers Improvement Act - Phase 1A-2 Spillway Location Revised

Lakes Rivers Improvement Act - Phase 1B Temporary Cofferdam

Lakes Rivers Improvement Act - Phase 2 Powerhouse Upgrades

Licence to Collect Fish for Scientific Purposes



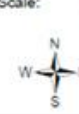
Kiewit - Alarie, A Partnership

Created By: Caroline Walmsley

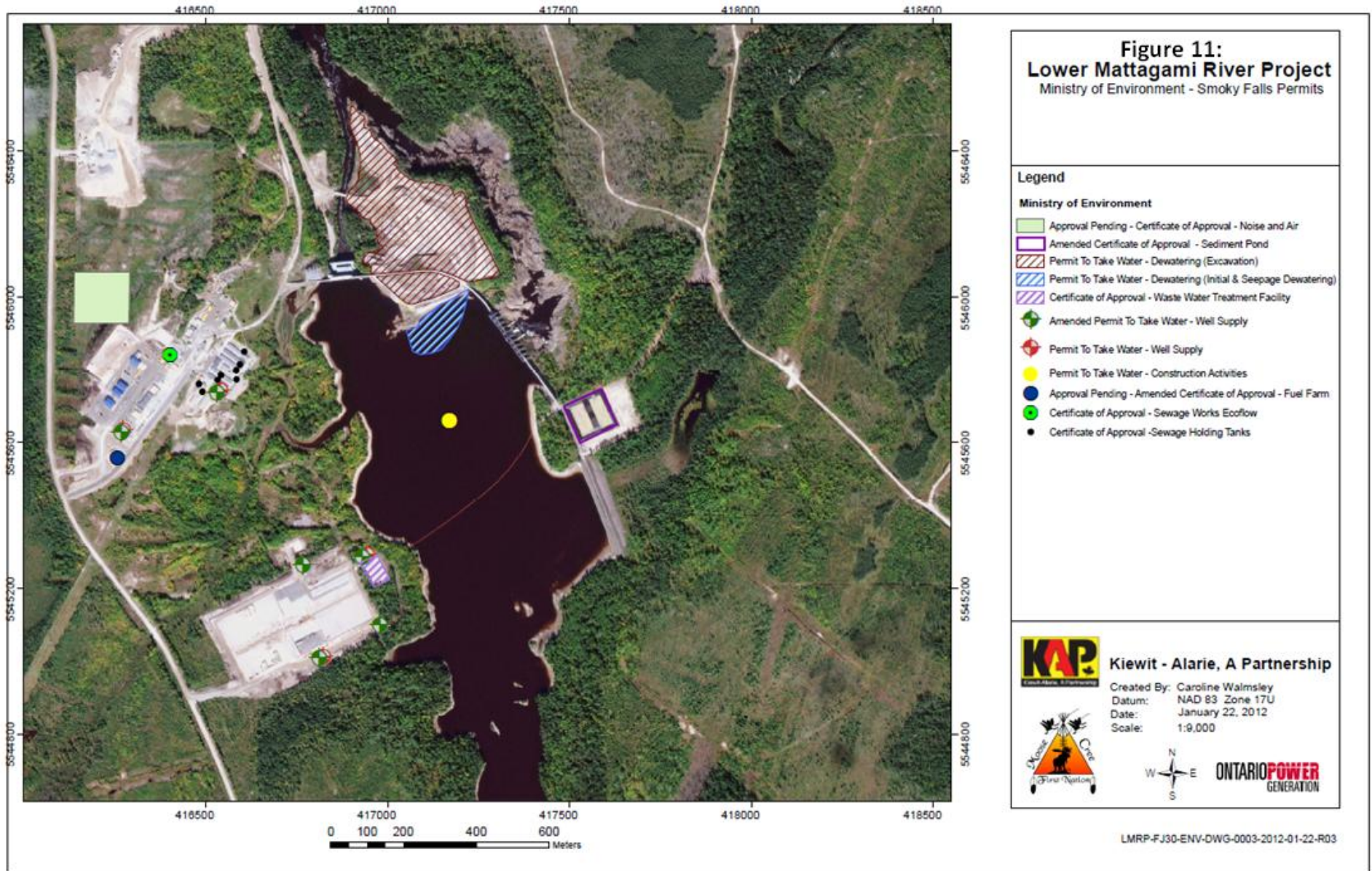
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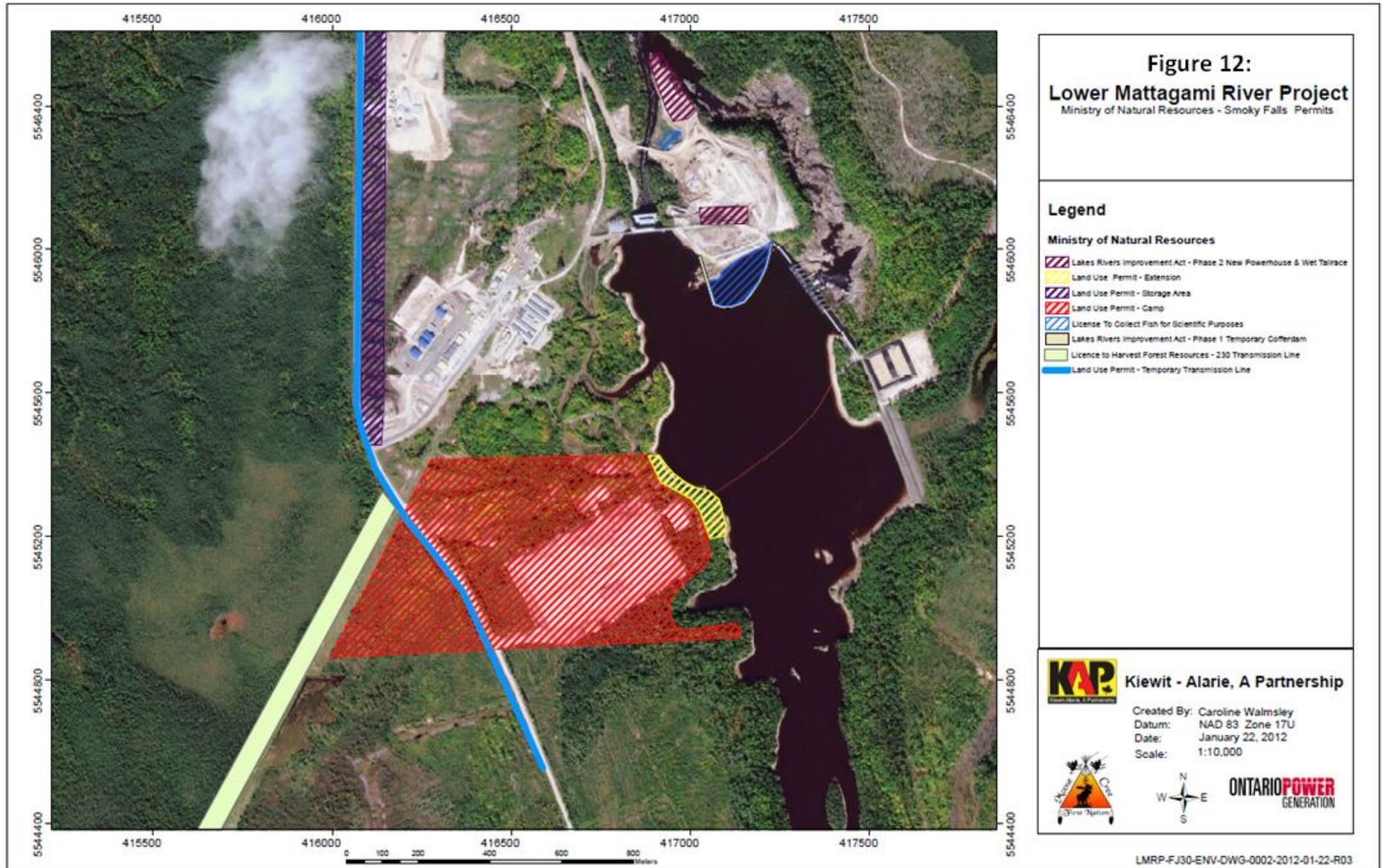


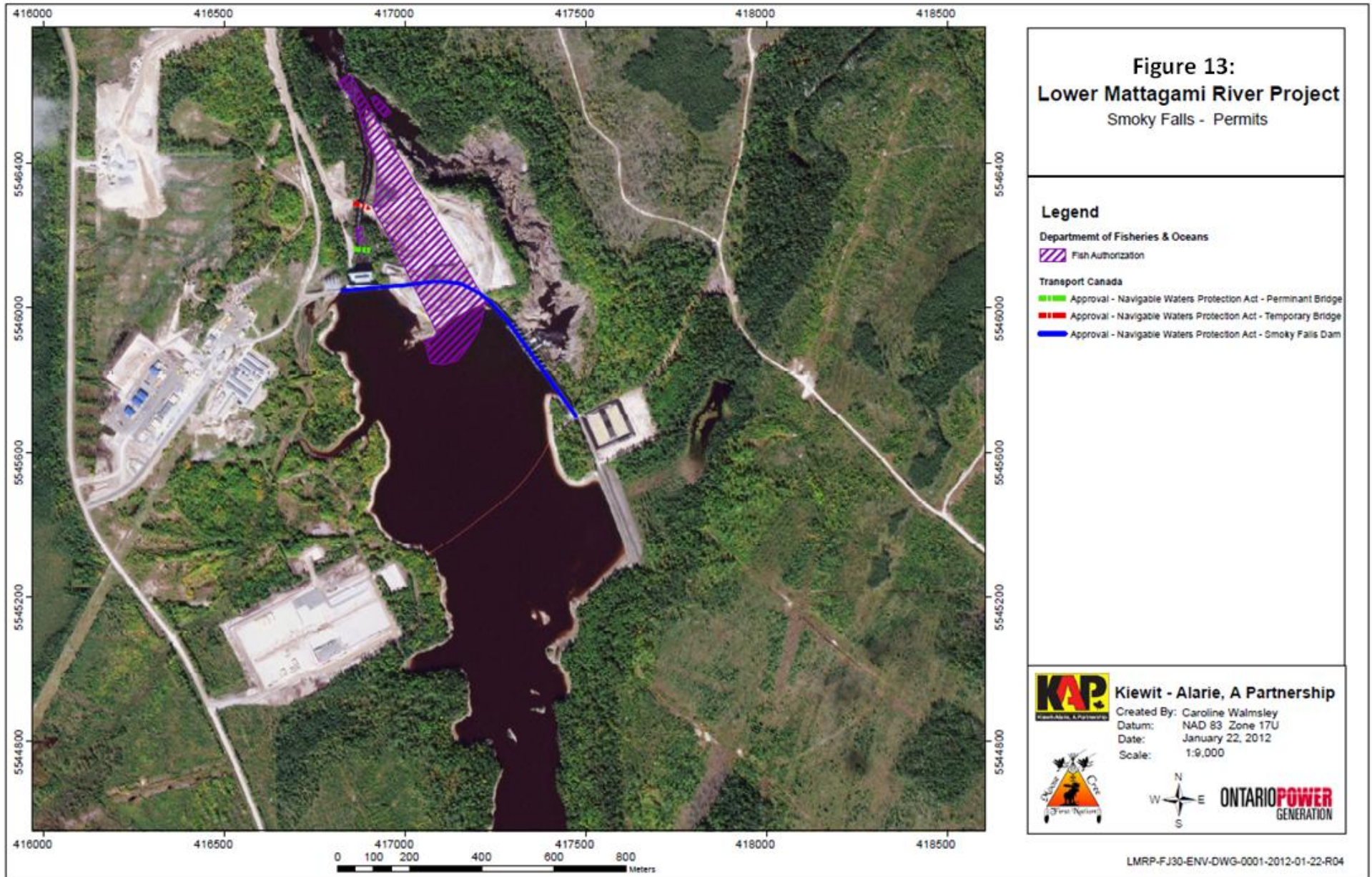
Figure 12:
Lower Mattagami River Project
Ministry of Natural Resources - Smoky Falls Permits

- Legend**
- Ministry of Natural Resources**
- Lakes Rivers Improvement Act - Phase 2 New Powerhouse & Wet Tailrace
 - Land Use Permit - Extension
 - Land Use Permit - Storage Area
 - Land Use Permit - Camp
 - License To Collect Fish for Scientific Purposes
 - Lakes Rivers Improvement Act - Phase 1 Temporary Cofferdam
 - Licence to Harvest Forest Resources - 230 Transmission Line
 - Land Use Permit - Temporary Transmission Line

KAP Kiewit - Alarie, A Partnership
Construction & Project Management

Created By: Caroline Walmsley
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Issues and Concerns

- Members of the EWG continue to be concerned over KAPs proposed access road for the fish habitat shoals downstream of Kipling. The proposed access would require additional in water work, which may impact fisheries. MCFN Elders would like all options considered.

Action required: KAP will consider other options over the winter.