

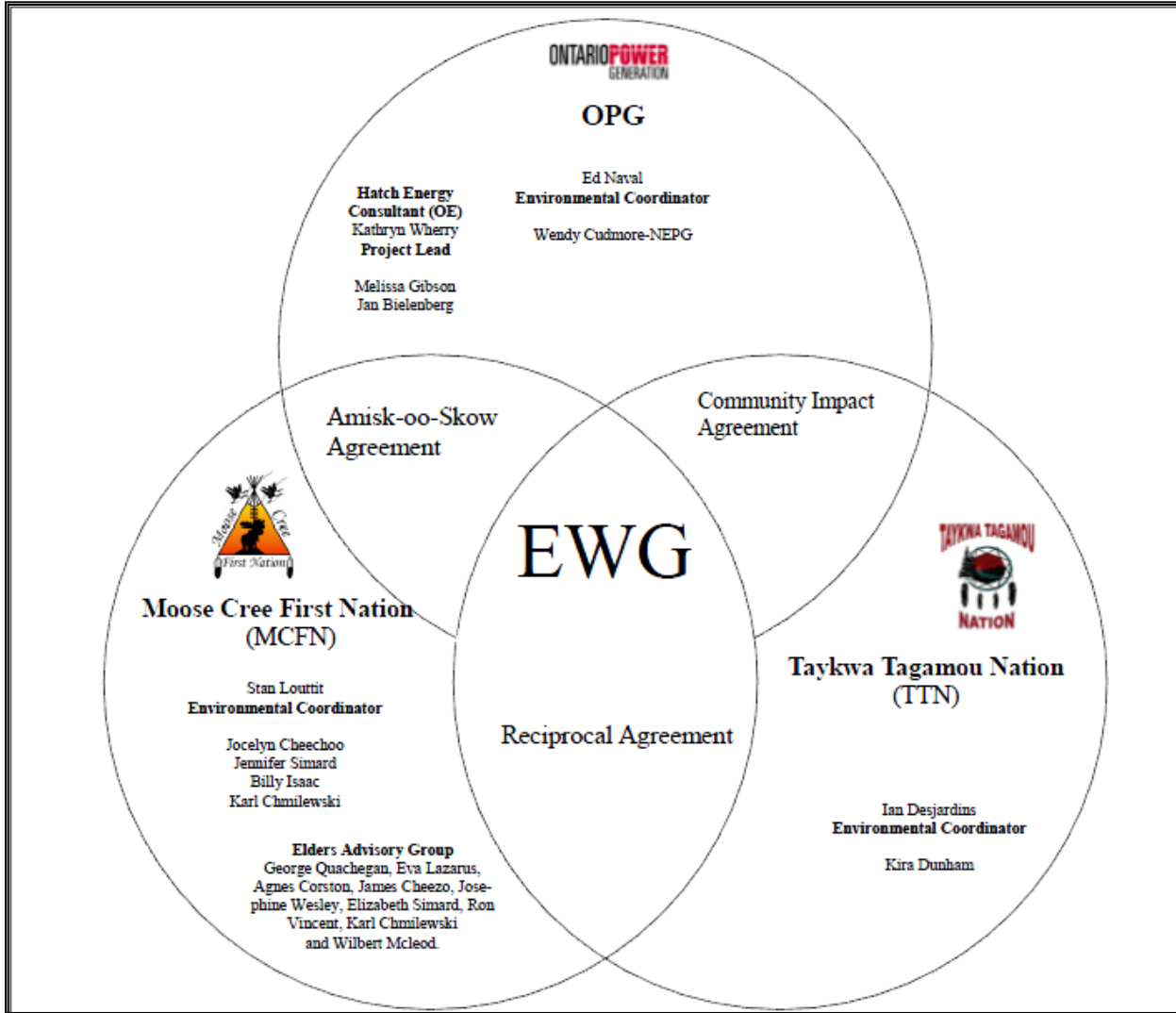
Environmental Working Group

Monthly Report

January 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.
- During the month of January members of the EWG continued their review of the Environmental Effects Monitoring Plan, including a review of the various comments received during the previous 3 workshops and how these comments have been incorporated.
- On January 15, 2014, the EWG held a teleconference with Fred Hunter, Interim MECC Chair, and discussed the EWGs role with the MECC and how the EWG members can best support their MECC member.
- TTN members of the EWG continued to work on developing their own Elders Advisory Group.
- MCFN and TTN members of the EWG worked on incorporating TEK into the SENES Erosion and Aquatic Reports for Adam Creek (commissioned by the MECC).
- Inclusion of a First Nation perspective on the Cost Benefit Analysis of Mitigating and Reducing Spill in Adam Creek. TTN and MCFN have completed their interviews and continue to look at ways to incorporate the First Nation perspective within the report. MCFN and TTN are now working independently to develop their own community's perspectives for the report. A presentation on the work completed to date was given by MCFN on Dec. 4, 2013. TTN continues to conduct additional Elder interviews.
- 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.
- Members of the EWG continued their work on the "Peoples of the Moose River Basin" historical text (EA Term and Condition 2c). Several members of the EWG have begun writing portions of the text. The MECC is now hosting the POMRB blog. A teleconference was held on January 28, 2014 to discuss the most recent submittals.
- The OPG and Hatch members of the EWG continue to work on collecting additional baseline information. The EWG members are also working on ways to implement the recommendations to incorporate TEK within the Baseline/monitoring EA Terms and Conditions.
- In an effort to improve the understanding of TEK, members of the EWG have been reading the "The Inconvenient Indian, A Curious Account of Native People in North America", by Thomas King.

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	EWG present to the MECC "TEK - Environmental Effects Monitoring Plan, Lower Mattagami Development"												
EA T&C 3a: Visual and Aesthetic Impacts	EWG present to the MECC the results and recommendations of Little Long Rehabilitation Plan												
EA T&C 5d: Terrestrial Ecology	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.													
EWG read TEK book 'The Inconvenient Indian, A Curious Account of Native People in North America'.													
Completed:  Pending:  *Additional work still required to fulfill EA Term and Condition													

Construction

General

- The ramp-up after the Christmas shut down period went quickly compared with the past two years. There were approximately 1,100 people in the camp this month.

Little Long

- The focus of work this month was on Unit testing and commissioning, deficiency (i.e. punch list) remediation, and Transfer of Control (TOC) documentation.
- KAP completed the OPG 10-day demonstration run on January 18, and Little Long Unit 3 was declared in service on January 19, 2014.
- KAP training of OPG operators started following the declaration of Unit in-service.
- Upon the declaration of in-service, KAP's focus switched to deficiency remediation (ex. generator floor leaking – Figure 1) and completing documentation. The current forecast completion date for deficiency remediation is March 1, 2014.



Figure 1: Little Long - Result of grout injection on Generator Floor

Harmon

- Runner blade / discharge ring clearance remediation was the critical activity this month. Remediation was completed on January 21.
- The runner was raised back into position and re-coupled to the generator shaft. Once this was complete, Andritz took a verticality check of the Unit.
- Clearance measurements were taken between the runner blades and the discharge ring.
- The generator enclosure installation was completed. Installation of the enclosure handrails is under way.
- Generator component installation advanced in the month, with a number of parts installed, including the upper bracket, brush enclosure, brush rigging support, air deflectors, thrust bearing assembly, servomotor linkage pins, and draft tube water level piping).

- The six original tailrace crane limit switches (rated for -30o C) were replaced as they were failing due to cold weather. The new limit switches are rated for -40o C weather. This same task will be performed at Little Long and Kipling.
- A number of walk downs and pre-operational tests were completed in the month.

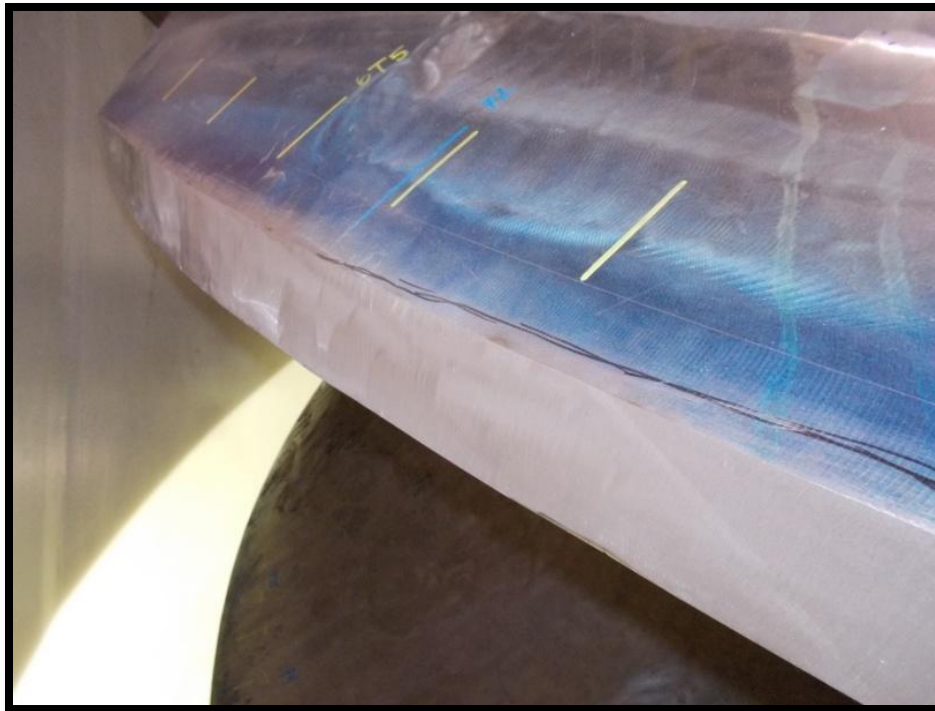


Figure 2: Harmon runner blade inspection

Kipling

- 3 m³ of concrete was poured this month, bringing the total poured to date to 11,263 m³ of 11,885 m³.
- Cofferdam Cell 1 removal resumed after the Christmas shut-down period.
- KAP removed the end wall on Unit 2, opening up the powerhouse (Figure 3).
- The overhead crane load test was successfully completed late in the month.
- Andritz millwrights continued welding the Unit 3 rotor spider.
- The runner pedestal and hub were placed between Units 1 and 2 to allow runner assembly to continue there.
- AFI installed bolts in preparation for the Unit 3 intake roller path installation.
- KAP continued to install service air and depression air lines on the generator floor under the mezzanine and on the mezzanine level.
- Subcontractor Moreau started installing cable trays in the mezzanine area, under the mezzanine floor, and on the east wall.
- A number of electrical components were delivered onto the mezzanine floor, including the Generator Circuit Breaker (GCB), 15 kV switchgear, Isolated Phase Bus (IPB) sections, protection and control panels, MCC, distribution panels, and lighting transformers.



Figure 3: Kipling Powerhouse

Smoky Falls

- 745 m³ of concrete was poured this month in the service bay, powerhouse, and intake areas, bringing the total poured to date to 140,910 m³ of 155,084 m³.
- Fourteen (14) pours were completed during the month. The remaining concrete at Smoky Falls consists of finishing details, small slabs and walls.
- Earthworks activities around the site continued from last month. Approach channel excavation is 70% complete at month-end (Figure 4).
- At Zone 5, concrete work is complete. One pour was completed in the month. Drilling of the lower anchors (at elevation 126) has started. Rebar installation has started on slopes that are to be covered with shotcrete (Figure 5).
- At Zone 3, concrete work (formwork, rebar, and concrete placement) continues, one pour was completed (331 m³) and formwork is being installed for the next pour.
- Alstom continues to prepare Turbine/Generator components in the West Service Bay (WSB) and work inside the Units. They have completed the following tasks:
 - At Unit 1, the outer head cover, tower assembly (runner and inner head cover), and turbine shaft were installed. The thrust bearing and operating ring are being assembled in the Service Bay;
 - At Unit 2, rotor assembly continues. Stator winding has started. Millwrights were preparing the bottom ring and discharge ring for assembly;
 - At Unit 3, stator frame assembly and welding was completed. Installation of stator laminations is under way.
- Upstream gate guide installation is advancing on the intakes on all 3 units. At month-end, deliveries of the intake gate sections started.
- KAP cleaned, prepared, and painted the Unit 1 and 2 Isolated Phase Bus bars.
- KAP electricians installed the Generator Circuit Breakers (GCBs). BOP electrical work continues to advance on schedule.

- Alstom Grid completed pre-commissioning tests on GCB's 1, 2, and 3. GCB's for all three units require internal cleaning prior to commissioning.



Figure 4: Smoky Falls excavating Intake Pad approach channel



Figure 5: Zone 5 (west side wall) rebar installation

Monthly Summary – January 2014

SPILLS			
No. of Spills:	3; Spill Reports 408-411 (see Figure 6 for LMRP spills breakdown).		
Classification of Spills:	<p><u>KAP Project Classification</u> Minor – 4 Moderate – 0 Major – 0 To Water - 0</p> <p><u>MOE Classification</u> Non-reportable - 4 Reportable to MOE</p> <ul style="list-style-type: none"> - Class C – 0 - Class B – 0 - Class A – 0 		
Reportable Spills			
No.	Quantity /Product Spilled	Spill Site	Reason for being Reportable
n/a			
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.

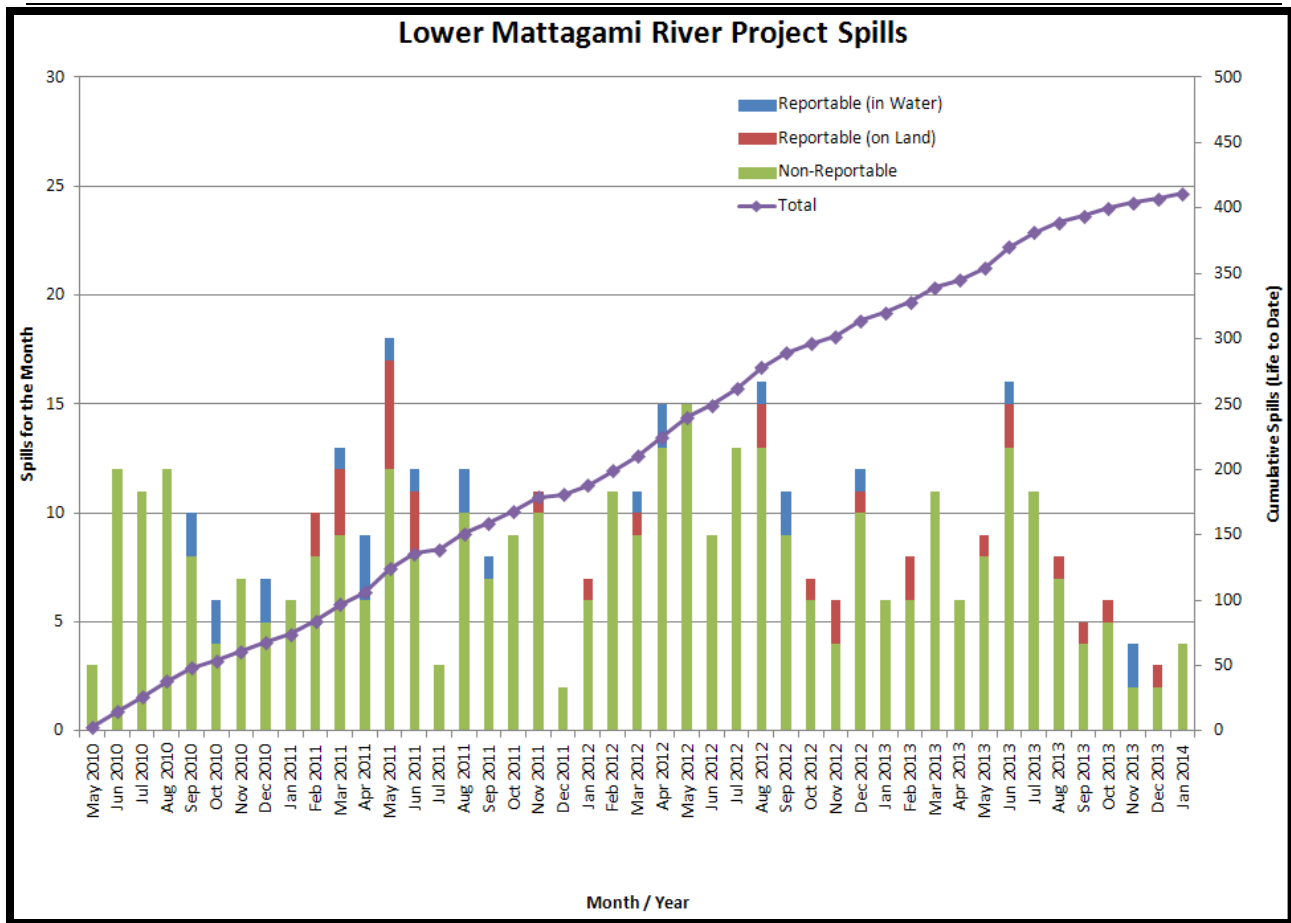


Figure 6: Lower Mattagami River Project spills

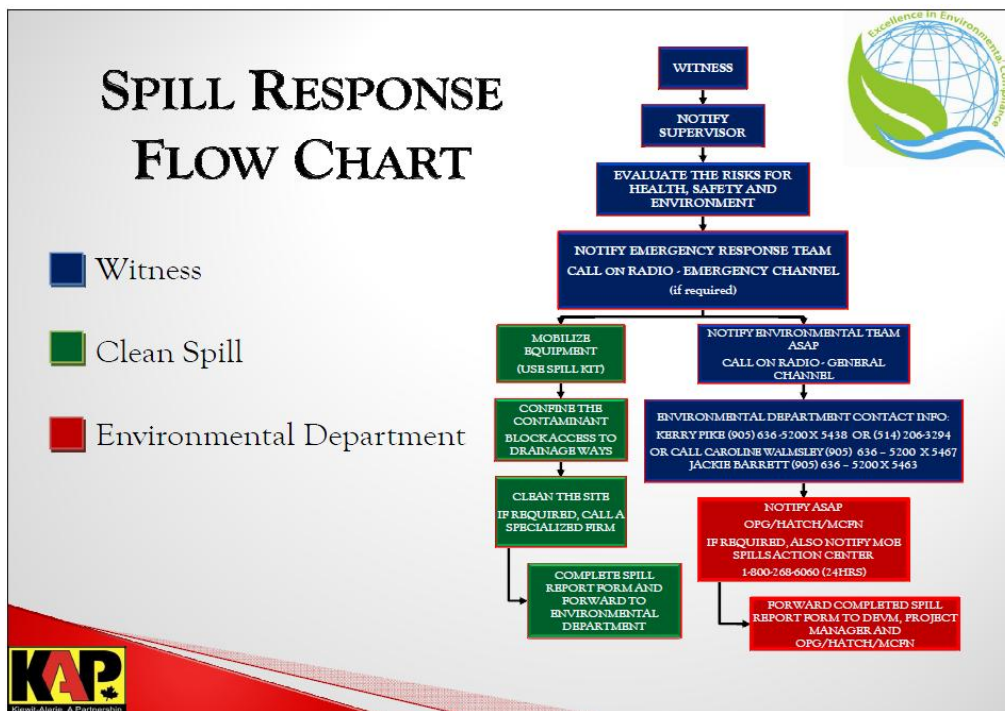
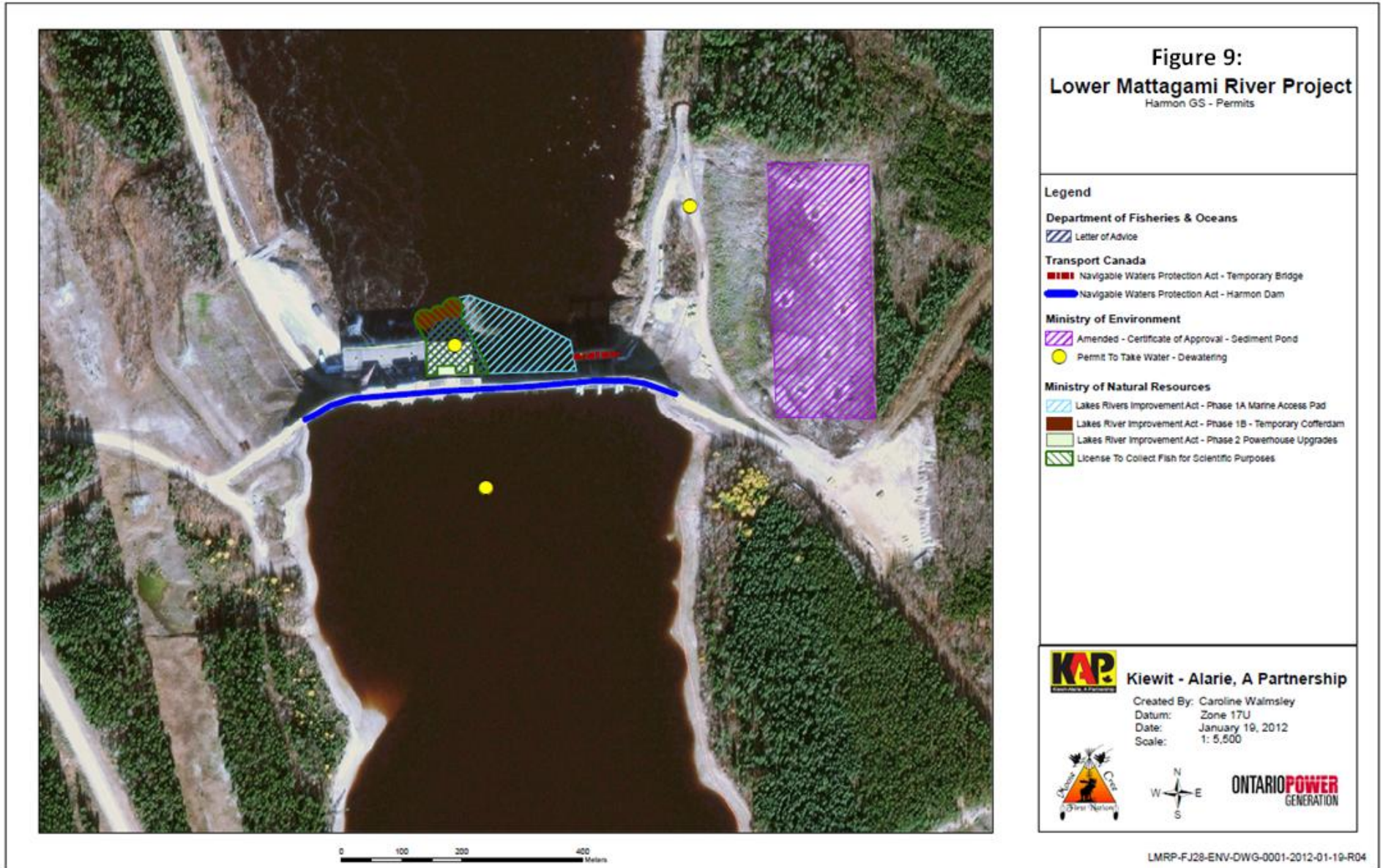


Figure 7: KAP Spills Response Flowchart

PERMIT AND APPROVAL REVIEW			
No. Reviewed:	0	List:	
No. Sent to KAP:	0	List:	
Reports Review			
No. Reviewed for KAP	0	List:	
No. Sent to KAP	0	List:	
No. Reviewed for MECC	5	List:	On-going: <ul style="list-style-type: none"> • Cost Benefit Analysis of Mitigating and Reducing Spill in Adam Creek • Mercury in Fish Flesh Summary Report • Fish Habitat Assessment Report • Terrestrial Habitat Restoration Downstream of Kipling GS • Draft Environmental Effects Monitoring Plan • KAP LMRP Site Rehabilitation Plan
No. Review Completed	4	List:	<ul style="list-style-type: none"> • Operation Overview Report • Waste Management Plan • Noise Control Plan • The Interim Measures Agreement as it relates to EA Term and Condition 14c (Permit Review and Compliance Monitoring Protocol)
REQUESTS FOR INFORMATION (RFIs)			
No. Reviewed:	0	List:	n/a
No. Sent to KAP:	0	List:	n/a
See figures 8 to 13 below for site location of the permits that have been or are pending approval.			







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



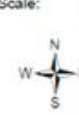
Kiewit - Alarie, A Partnership

Created By: Caroline Walmsley

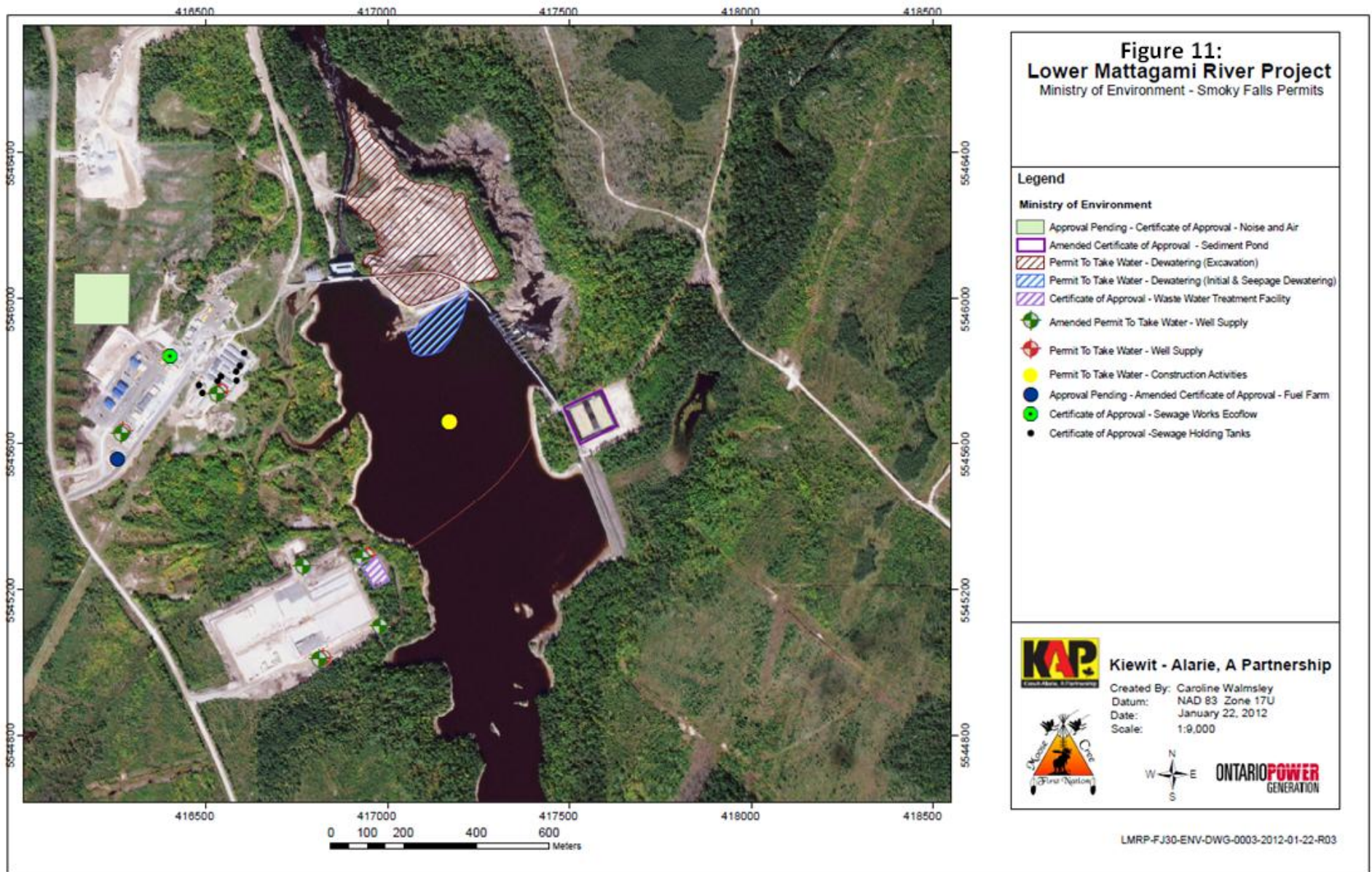
Datum: Zone 17U

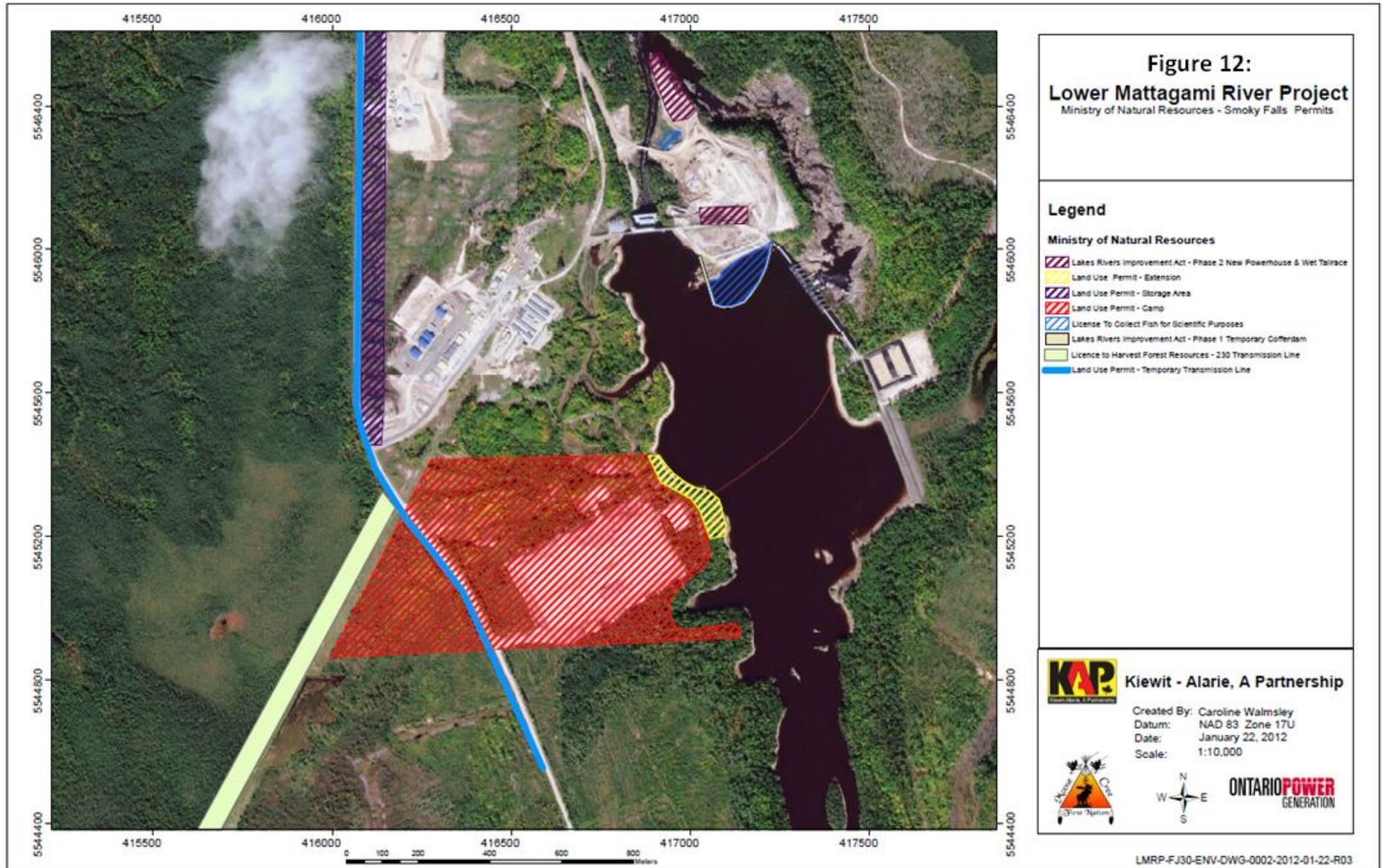
Date: January 19, 2012

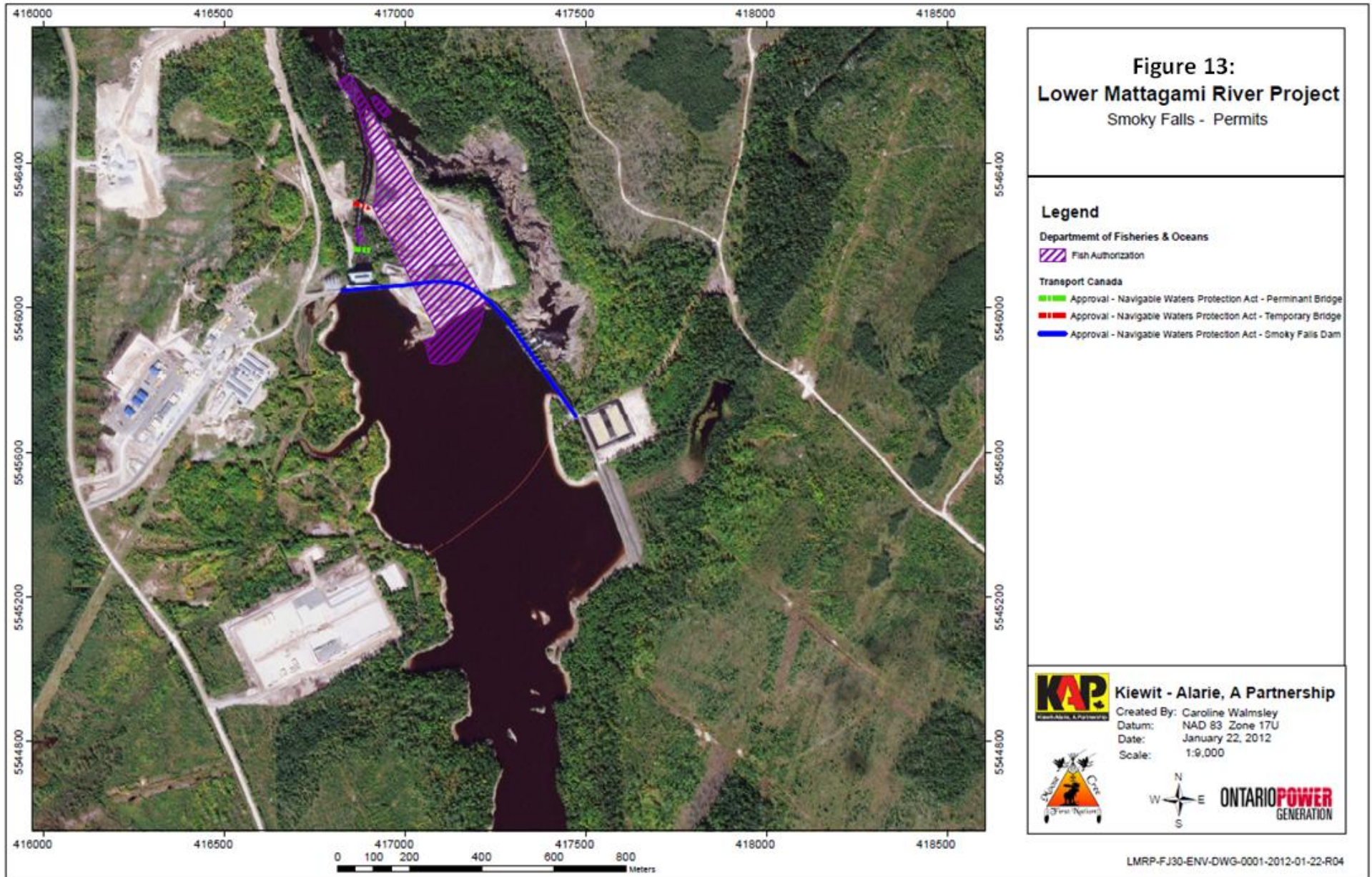
Scale: 1: 5,500



LMRP-FJ27-ENV-DWG-0001-22012-01-19-R04







Issues and Concerns
None this month