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## **Environmental Working Group**

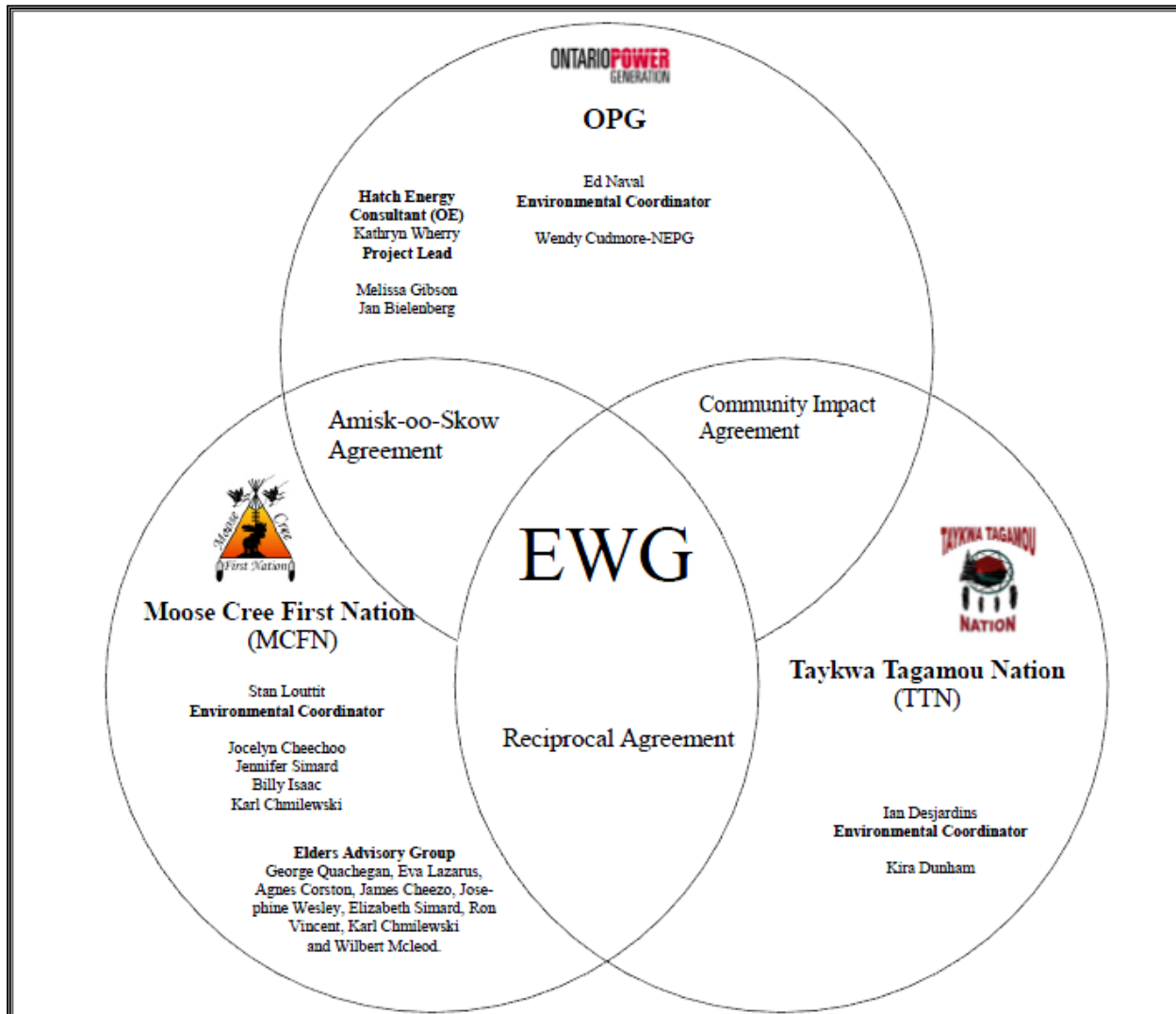
### **Monthly Report**

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**August 2013**



## 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.
- EWG members attended the MECC meeting in Moose Factory on August 20 and 21. During the meeting the EWG presented updates on LMRP Site Rehabilitation Plan, specifically an update on what hydro-seeding works and the proposed security measures (ex. fencing and signage), the status of KAPs Waste Rock Plan, a presentation on how TEK will be incorporated into the Cost Benefit Report for Reducing Spill Down Adam Creek, and a presentation on the preliminary results of the Environmental Due Diligence Audit.
- First Nation members of the EWG continued its community consultation work with the LMRP Site Rehabilitation Plan.
- During the month of August the EWG has been finalizing the results from the Environmental Due Diligence Audit on KAPs Environmental Management System conducted on the LMRP site in July.
- 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.
- 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. The writing team has now also given itself a deadline for a first draft by Sept 2013 for review. The writing team held a teleconference to discuss the POMRB on August 15, 2013.
- 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 "Wisdom of the Elders", by Peter Knudtson and David Suzuki. There is a discussion during the EWG weekly call to discuss each chapter as reading progresses.

**ACTIONS TO BE COMPLETED in 2013**

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
EWG Environmental Due Diligence Audit #3												
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.												TBD
EWG present to the MECC "Environmental Effects Monitoring Plan, Lower Mattagami Development" (EA T&C 3, 4b, 5b, 6, 7 and 14).												
EWG present to the MECC the "Erosion Monitoring Plan" (EA T&C 6).												TBD
EWG present to the MECC the results and recommendations of periodic re-evaluations (Condition 10 of EA T&Cs).												TBD
TEK Workshop												
MCFN TEK Workshop												
EWG read TEK book 'Sacred Ecology'.												
EWG read TEK book 'Ellen Smallboy: Glimpses of a Cree Women's Life'.												
EWG read TEK book 'Wisdom of the Elders'.												
Completed:  Pending:  *Additional work still required to fulfill EA Term and Condition												

**Construction****Little Long**

- Cofferdam clamping was completed and the equipment was demobilized and transferred to Harmon.
- Electrical and mechanical installation work was substantially completed in the month.
- Pre-operational testing of components continued, with a number of tests completed in the month. Verification of signals and alarms by Andritz and HEMI also continued.
- A number of components and systems were walked down in preparation for dry and wet commissioning.
- Preparations for wet commissioning started late in the month:
  - The draft tube was watered up on August 20.
  - The intake was filled on August 23 and an emergency closure test was successfully completed on the intake gate.
  - A leakage inspection was conducted following the emergency closure test, and a number of leaks were identified at construction joints, where embedded pipes emerged from the concrete, and along hairline cracks through the powerhouse floor. KAP is investigating and developing a repair plan.
- First rotation of Unit 3 was completed on August 24. Some noise was detected and minor adjustments were made. Rotation tests at nominal speed were done and the rotor was balanced (Figure 1).
- A mechanical heat run and two over speed tests were conducted on Unit 3. Following these the Unit was shut down for inspection.
- The transformer was energized from the Hydro One transmission line on August 29.



Figure 1: Little Long first Run of Unit 3 at nominal speed.jpg

**Harmon**

- Cofferdam removal is nearing completion. All sheet piles were removed from Cell 1, the Cell 1 template was disassembled and removed (Figure 2), blasting of tremie concrete in Cell 1 was completed and clamming of debris in the Cell 1 footprint is under way.
- Andritz is assembling the lower bracket and the thrust bearing.
- The generator shaft was connected to the turbine shaft.
- Rotor assembly (welding and leveling) continues in the Service Bay.
- Andritz completed erecting the generator enclosure wall steel frames and has started installing the enclosure panels.
- KAP continues to advance the Isolated Phase Bus (IPB) installation with welding and grinding IPB sections near the Generator Circuit Breaker (GCB) on the Mezzanine.
- Cable tray installation and cable pulling continues throughout the powerhouse.



Figure 2: Harmon Cofferdam Template Removal

**Kipling**

- 660 m<sup>3</sup> of concrete was poured this month, bringing the total poured to date to 9,298 m<sup>3</sup> of 11,885 m<sup>3</sup> total.
- KAP's earthworks team completed removing fill material from the cofferdam earth berm between the soldier pile wall and the timber lagging wall. The soldier pile wall and timber lagging wall have been removed. KAP has started to remove the crest of the earth berm in preparation for water-up, currently forecast for late September (Figure 3).
- Pressure relief hole drilling was completed (which is a prerequisite for water up).
- Work to pour the scroll case soffit (erect the shoring towers, installation of soffit decking, placement of rebar, installation of embedded piping) was nearly completed in the month. Pre-pour clean up has started.
- Andritz completed the following work on turbine embedded parts:
  - Welding bottom anchors to the stay ring;
  - Welding top anchors to the stay ring;



- Welding the stay ring sections together;
- Installing the baffle vane and welding it to the stay ring.
- Welding and grinding of lower and upper draft tube cone sections has started.
- AFI has started installing the upper draft tube stop log guides.



Figure 3: Kipling – Removing road from Kipling cofferdam

### Smoky Falls

- 5,494 m<sup>3</sup> of concrete was poured this month in the service bay, powerhouse, and intake areas, bringing the total poured to date to 125,804 m<sup>3</sup> of 155,084 m<sup>3</sup> total.
- At the end of the month, seventeen (17) concrete pours are in various stages of work (formwork started and/or rebar being installed) and progressing in the intake, powerhouse, East service bay, East gravity dam, and West Gravity Dam. Twenty-four (24) pours were completed during the month.
- Global Precast has resumed their work on site, installing precast panels on the north side of Units 1 and 2.
- Alstom was off-site for most of the month, returning in the third week. They resumed preparation of Turbine/Generator components in the West Service Bay (WSB). They have completed the following tasks:
  - Unit 1 – Alstom and KAP conducted another survey of the weld between the embedded draft tube cone and the upper draft tube cone. Alstom checked the concentricity and circularity of the rotor, and started preparations for the rotor rim shrinkage by installing heaters;
  - At Unit 2, given that Alstom was off-site for most of the month, no significant activity occurred on the assembly of the Unit 2 rotor;
  - At Unit 3, KAP completed installing rebar and formwork for the scrollcase soffit concrete pour, and poured the soffit concrete (Figure 4).
- Sluiceway Gate 5 – AFI completed the leak test and worked on commissioning punch list items. All the stop logs were removed and wet testing was successfully completed on August 29th.

- Superm  tal has installed structural steel frame over the East Service Bay and has torqued the bolts. Unit 3 superstructure erection is also under way (Figure 5).
- At Zone 5, the installation of additional rock anchors to improve the stability of the rock face continues.

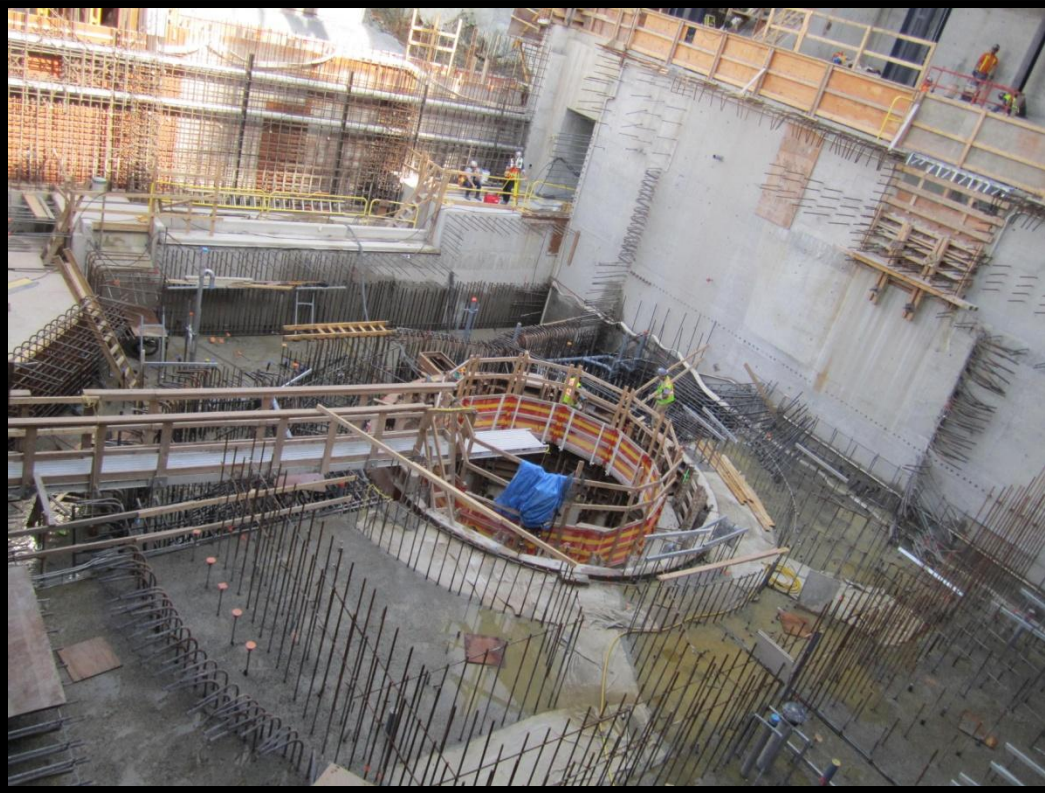


Figure 4: Smoky Falls: Progress view of Unit 3



Figure 5: Smoky Falls: Unit 3 superstructure erection



## Monthly Summary – August 2013

SPILLS			
No. of Spills:		8; Spill Reports 382-389 (see Figure 6 for LMRP spills breakdown).	
Classification of Spills:		<u>KAP Project Classification</u> Minor – 6   Moderate – 1   Major –1   To Water - 0 <u>MOE Classification</u> Non-reportable - 7 Reportable to MOE <div>- Class C – 1 - Class B – 0 - Class A – 0</div>	
Reportable Spills			
No.	Quantity /Product Spilled	Spill Site	Reason for being Reportable
1	5 m <sup>3</sup> / Raw Sewage	Waste Water Treatment Plant	Reportable spill on-land. A leak was noticed coming from the inlet pipe of the sewage tank. The leak was caused by a broken pipe, which caused raw sewage to leak out inside the bermed area surrounding the waste water treatment plant. The inlet pipe was repaired.
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 <div><div>• Class C - Less Serious</div><div>• Class B – Serious</div><div>• Class A – Very Serious</div></div>
Sediment Pond Exceedance of Effluent Objective			
No. of Exceedance days recorded	Location	Mitigation Measures used	
n/a	n/a	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.

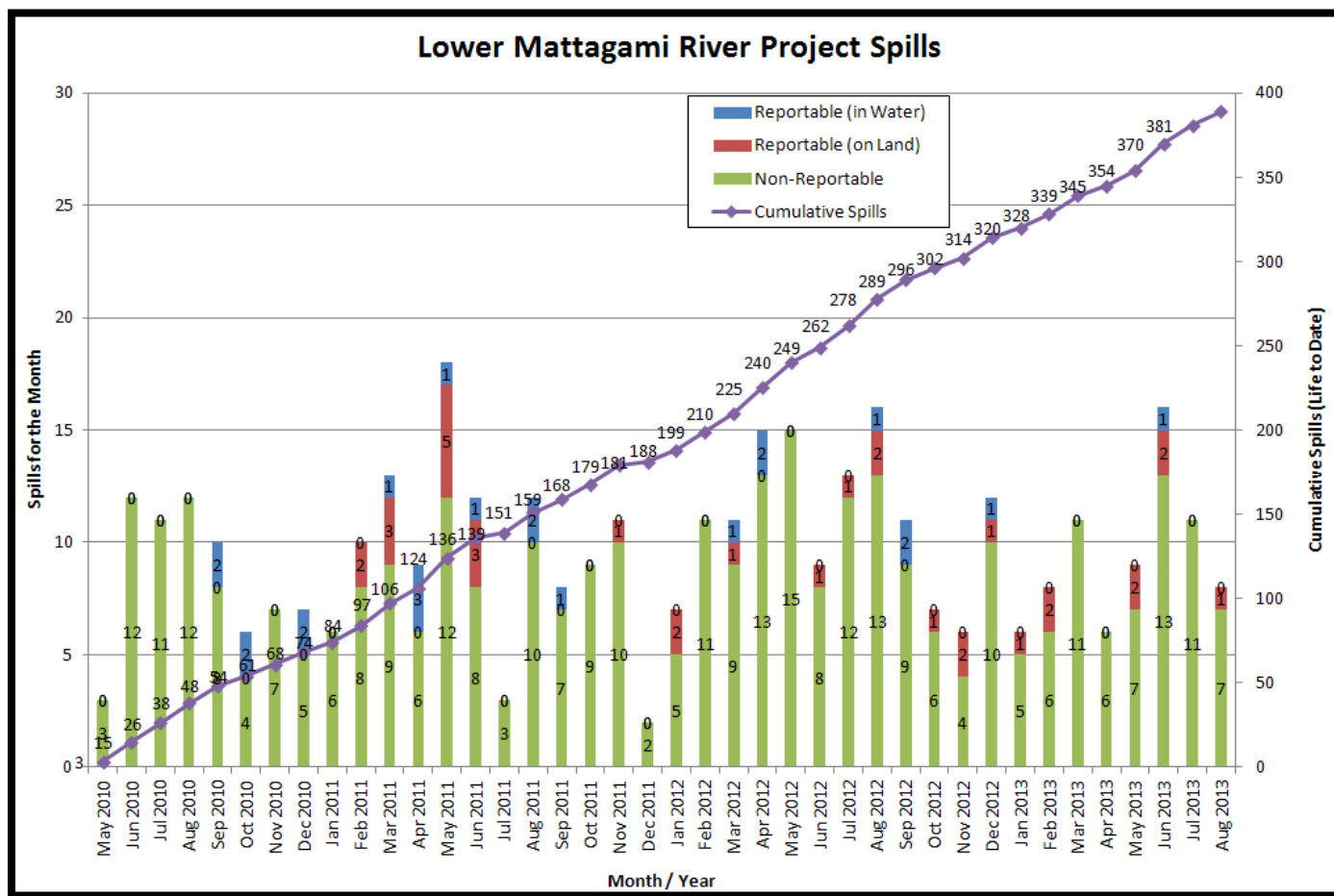


Figure 6: Lower Mattagami River Project spills

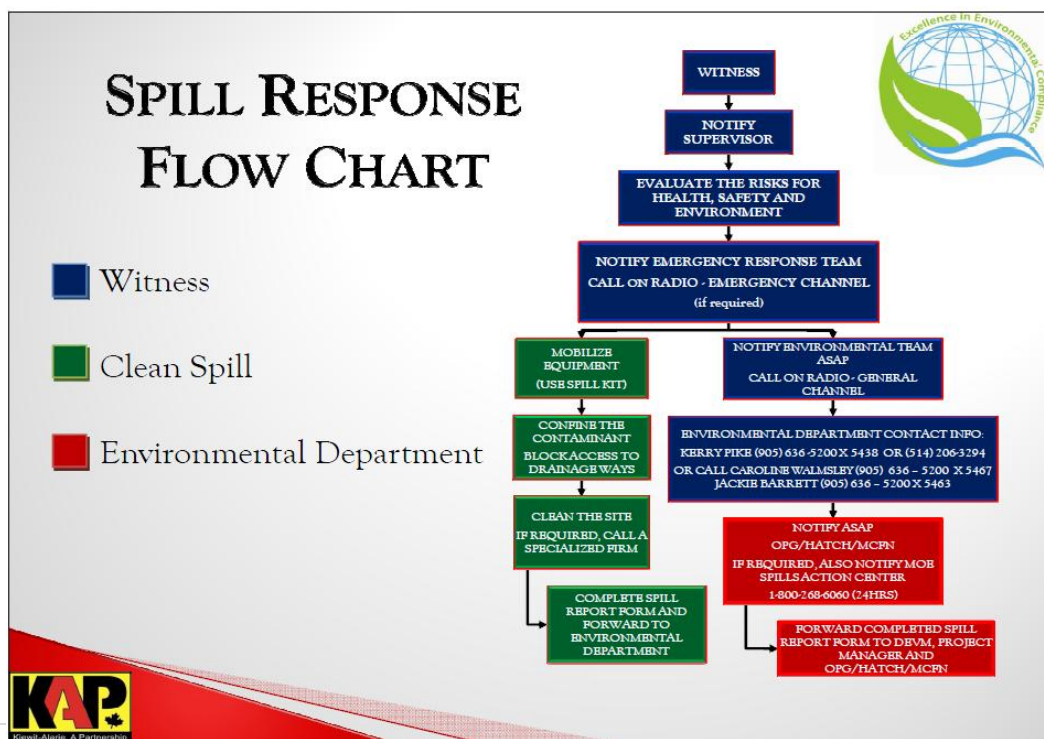


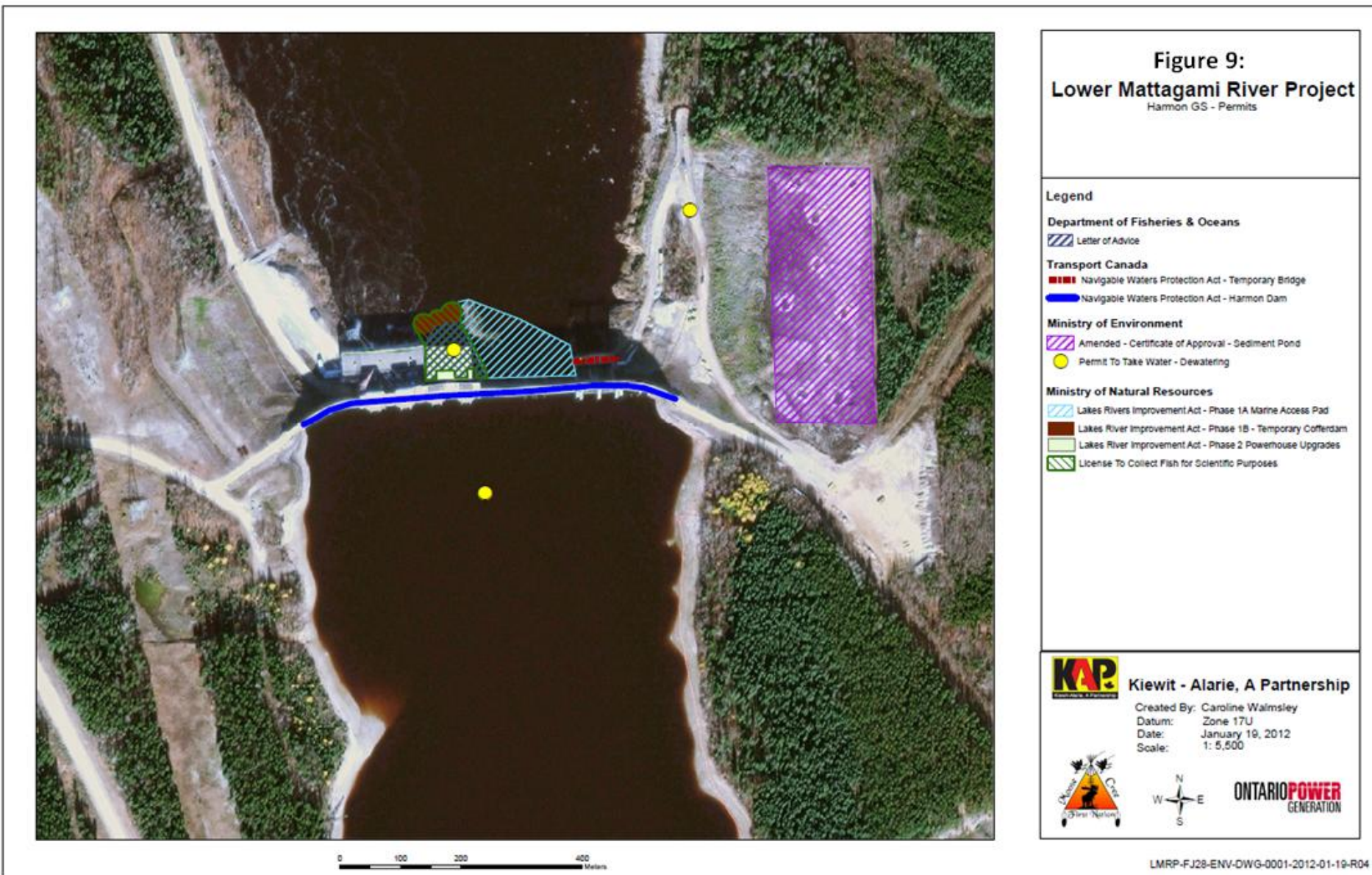
Figure 7: KAP Spills Response Flowchart

<b>PERMIT AND APPROVAL REVIEW</b>			
No. Reviewed:	0	List:	
No. Sent to KAP:	0	List:	
<b>Reports Review</b>			
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"> <li>• Cost Benefit Analysis of Mitigating and Reducing Spill in Adam Creek</li> <li>• Mercury in Fish Flesh Summary Report</li> <li>• Fish Habitat Assessment Report</li> <li>• Terrestrial Habitat Restoration Downstream of Kipling GS</li> <li>• Draft Environmental Effects Monitoring Plan</li> <li>• KAP LMRP Site Rehabilitation Plan</li> </ul>
No. Review Completed	4	List:	<ul style="list-style-type: none"> <li>• Operation Overview Report</li> <li>• Waste Management Plan</li> <li>• Noise Control Plan</li> <li>• The Interim Measures Agreement as it relates to EA Term and Condition 14c (Permit Review and Compliance Monitoring Protocol)</li> </ul>
<b>REQUESTS FOR INFORMATION (RFIs)</b>			
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.			













**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

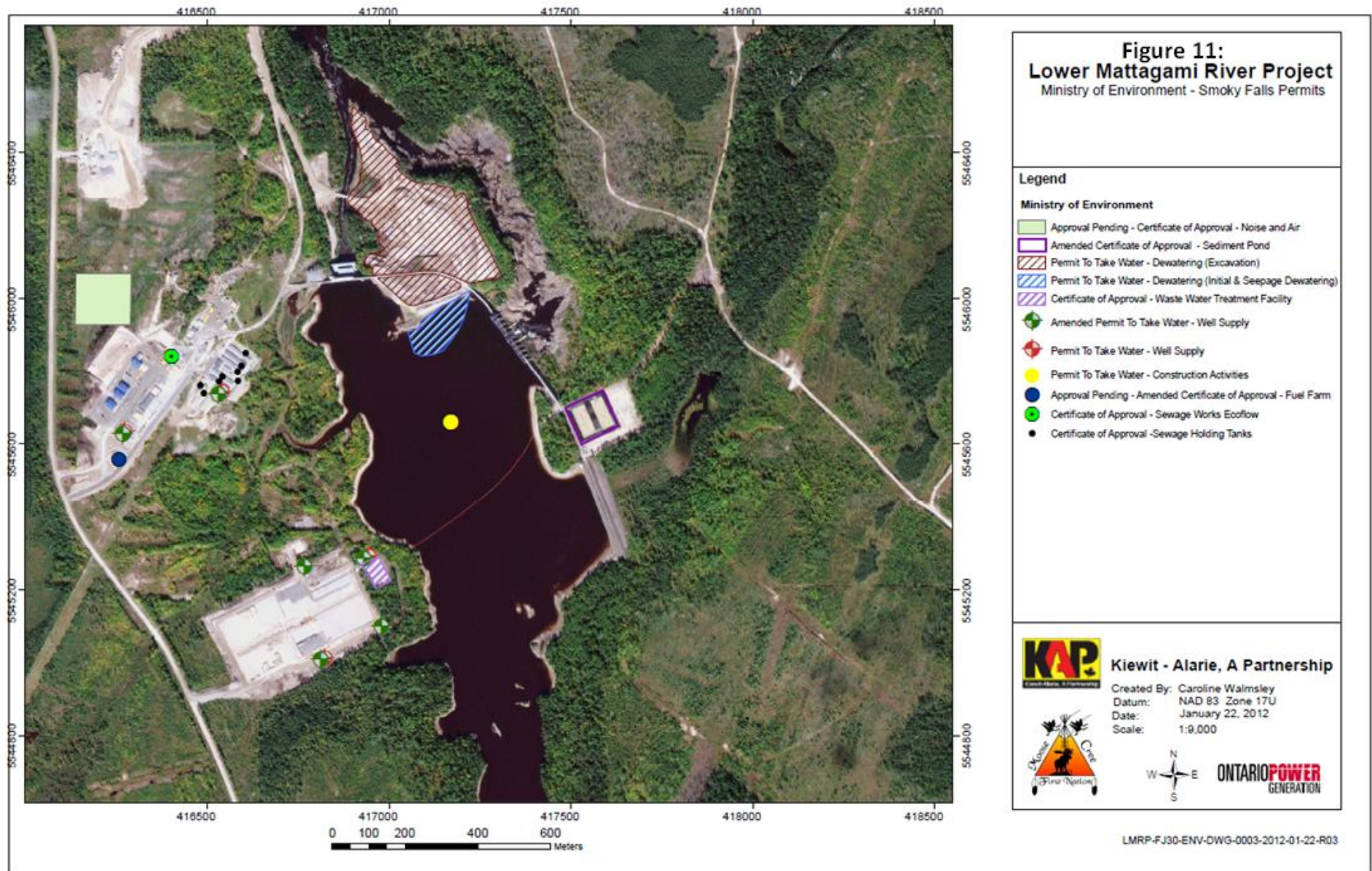
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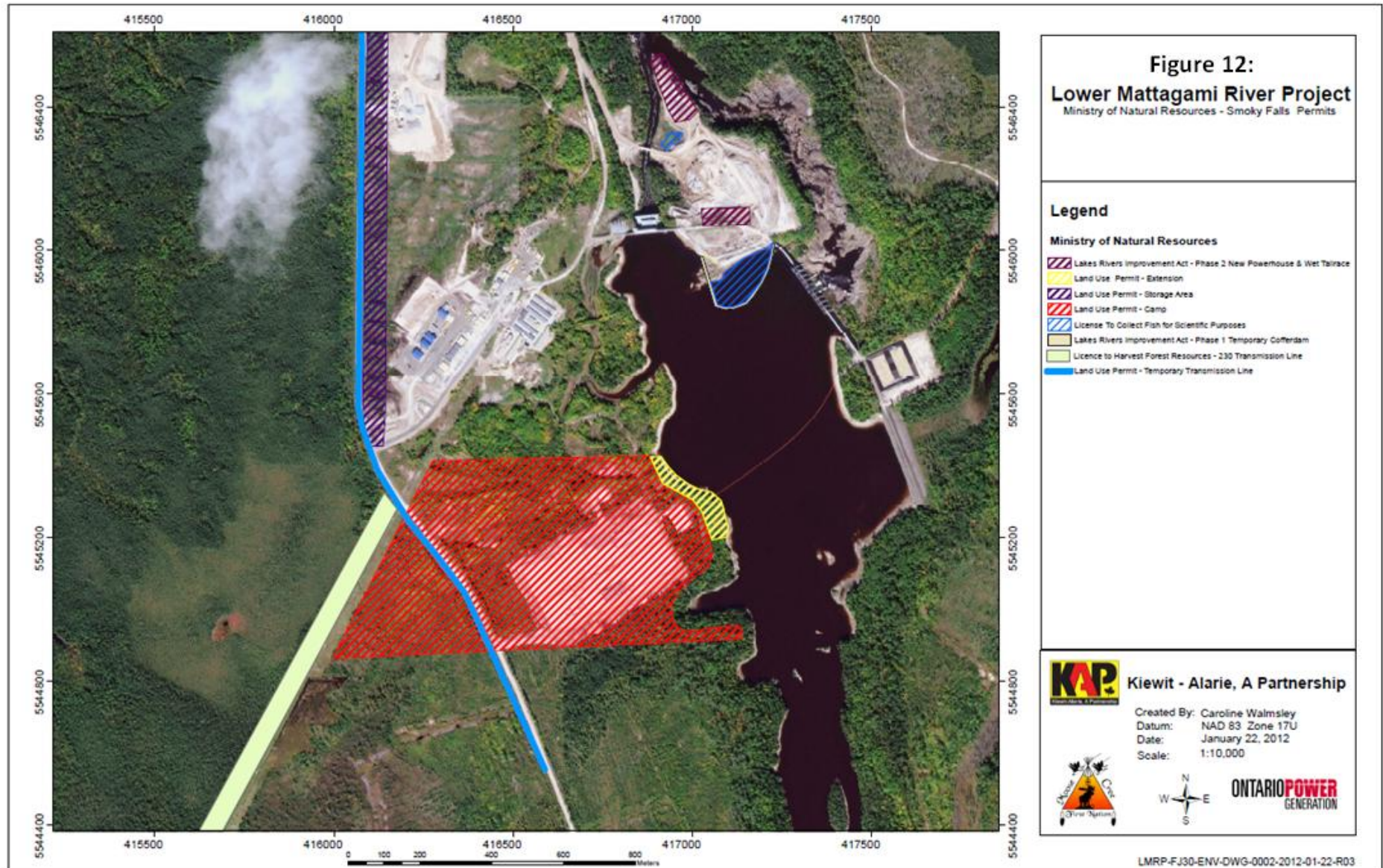
**ONTARIO POWER**  
GENERATION

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

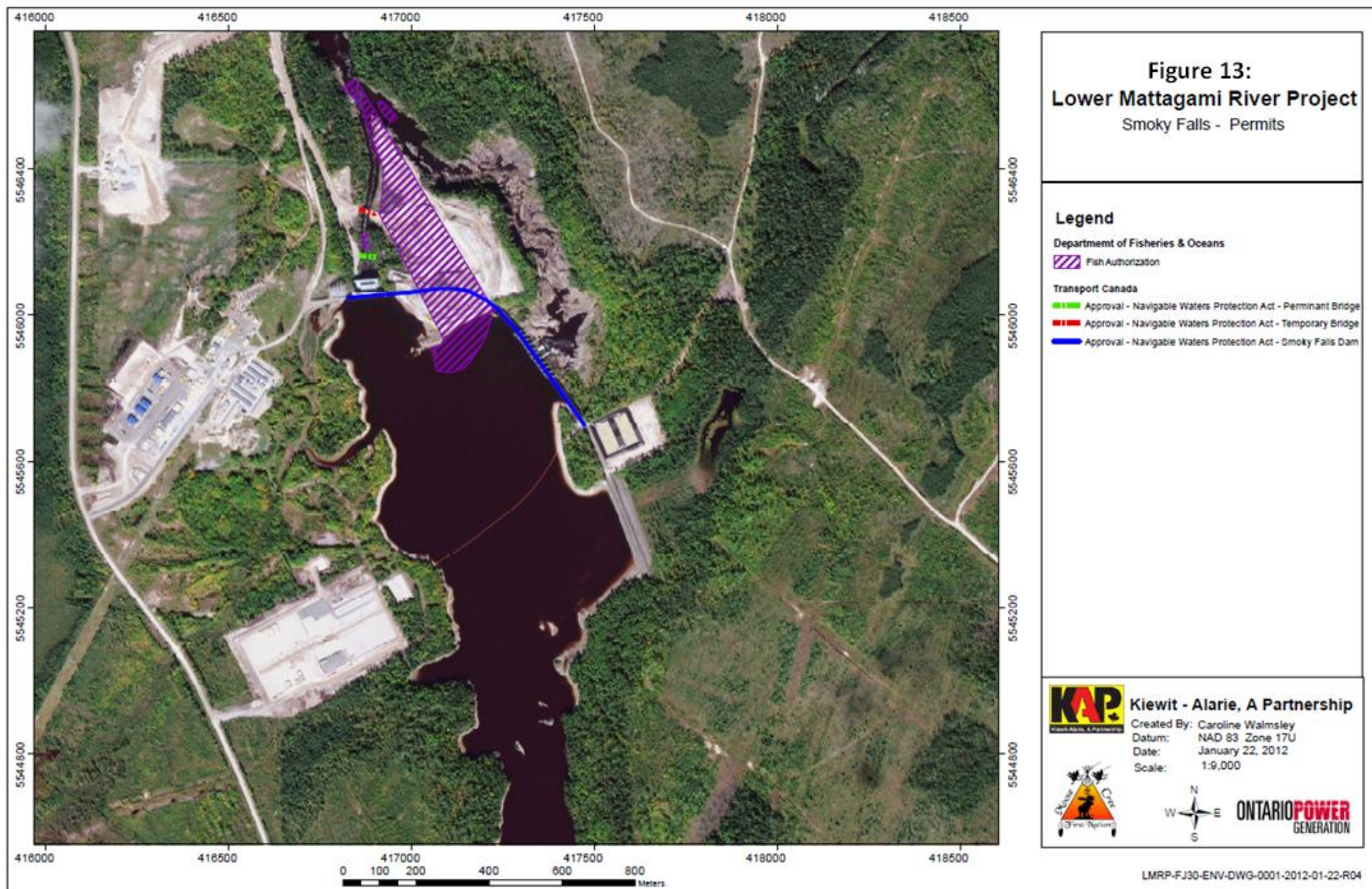












Issues and Concerns
No Issues this month.