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**Environmental Working Group**

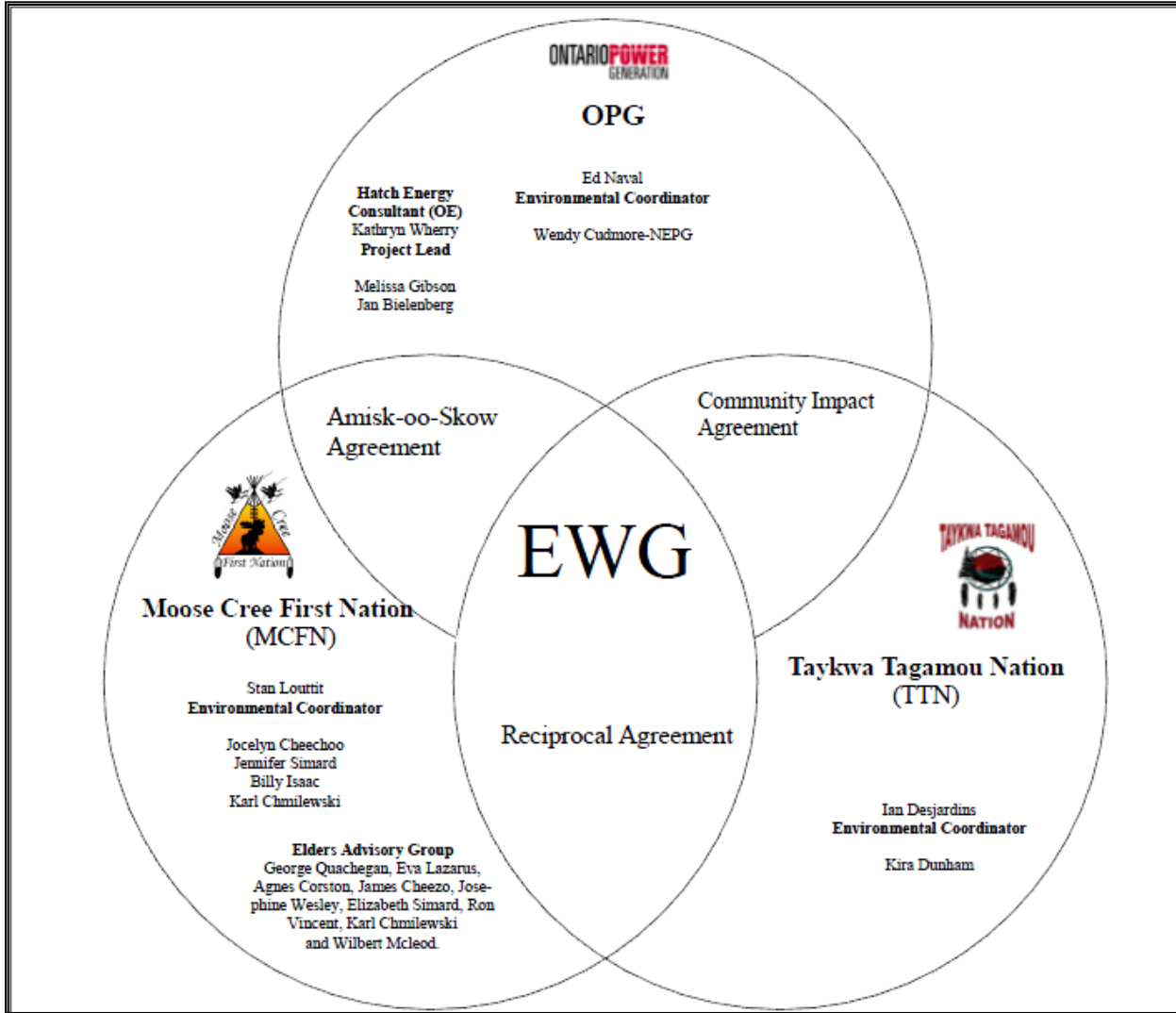
**Monthly Report**

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**October 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.
- During the month of October the EWG worked with KAP to have the soil stockpiles at Smoky Falls removed from the site (still ongoing).
- The EWG reviewed the first draft prepared by KAP of the Little Long Site Rehabilitation Plan.
- TTN members of the EWG worked 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.
- 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 face to face meeting was held on October 28 and 29 to discuss potential themes and organization of the submissions, in addition to pieces that are still required.
- 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 started reading the "The Inconvenient Indian, A Curious Account of Native People in North America", by Thomas King.

**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).												TBD
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'.												
EWG read TEK book 'The Inconvenient Indian, A Curious Account of Native People in North America'.												TBD
Completed: <span style="background-color: green; display: inline-block; width: 15px; height: 15px; vertical-align: middle;"></span> Pending: <span style="background-color: yellow; display: inline-block; width: 15px; height: 15px; vertical-align: middle;"></span> *Additional work still required to fulfill EA Term and Condition												

**Construction****Little Long (Figure 1)**

- The focus of work in October was the completion of equipment installation; testing and commissioning; and Transfer of Control documentation.
- The root cause investigation identified a lack of sufficient clearance between the runner and the discharge ring as the root cause of the runner / discharge ring contact. KAP and Andritz identified further grinding of the discharge ring to increase clearances.
- Following the grinding, load rejection tests were performed at 25%, 50%, 75% and 100% of Unit power. More rubbing was identified on the discharge ring. Following further analysis, more grinding on the downstream side of the discharge ring was deemed necessary.
- Scratches were observed on the guide bearing pads. The pads were stoned to remove high spots. The turbine guide bearing oil pipes were flushed to ensure no debris remained in the guide bearing oil system.
- The KAP grouting crew continued to inject epoxy grout into the cracks in the concrete as a remedial measure for the leakage identified last month.
- A number of components and systems were walked down.
- Functional tests were completed for the GSU deluge system.



Figure 1: Little Long Overview.

**Harmon**

- Equipment was demobilized from the marine pad, and excavation of material is nearing completion at month-end (Figure 2). The spillway bridge is forecast to be removed by mid-November.

- Clear stone was placed in the transformer basin, however it was identified that incorrect sized material was used and the placed material needed to be removed.
- The rotor and rotor rim were installed in the Unit, and rotor pole installation is under way.
- The rotor was torqued to the thrust ring connection.
- Rotor rim shrinking was completed and Andritz millwrights have started taking rotor sweep measurements.
- Upper bracket assembly continued in the service bay.
- Cable tray installation and cable pulling continues throughout the powerhouse.
- AFI continues to work on the East intake gate roller path. The roller path modifications were completed and it was reinstalled. Measurements confirmed it was within tolerance.
- Formwork installation has started for west roller path and bearing plate grouting.
- KAP electricians installed the braided connections between the Isolated Phase Bus (IPB) and the Generator Step Up (GSU) transformer and installed the IPB covers.
- A number of walk downs and pre-operational tests were completed in the month.



Figure 2: Harmon Marine Pad removal

### Kipling

- 587 m<sup>3</sup> of concrete was poured this month, bringing the total poured to date to 10,954 m<sup>3</sup> of 11,885 m<sup>3</sup> total.
- The earth berm removal (Figure 4) was completed by October 21 and Units 1 and 2 were turned over to OPG. NEPG is performing some maintenance and the Units are expected to resume production in early November.
- Removal of fill from Cell 2 of the cellular cofferdam has started.
- The switchyard was backfilled with clear stone.
- Welding of the intake gate overlays was completed on the original sill beam, lintel and east and west sealing surfaces.
- Machining of the upper flange of the stay ring was completed.
- The discharge ring was installed in the Unit using the tower crane.

- Work continues in the switchyard to prepare for the installation of the GSU, currently forecast for early to mid-November.



Figure 3: Kipling – Earth berm removal

### Smoky Falls

- 4,666 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 137,919 m<sup>3</sup> of 155,084 m<sup>3</sup> total.
- At the end of the month, fifteen (15) concrete pours are in various stages of work (formwork started and / or rebar being installed) and progressing in the intake, powerhouse, Service Bays, and Gravity Dams. The first concrete pour was completed for Zone 3 (tailrace east). Sixty three (63) pours were completed during the month (a number of these were small pours).
- Supermétal completed erecting the Unit 3 superstructure and installed the crane girders in Unit 3 (Figure 4). They also completed installing Q-decking on structural steel for the Unit 3 roof, transformer and tailrace decks at Unit 3, in various areas in the mezzanines and the East Service Bay.
- Global Precast installed precast panels on the north side of Unit 3 and on the equipment building at the East Service Bay.
- Subcontractor Cyrheault continues to place concrete block walls throughout the powerhouse.
- Sucontractor CanAm continues to install the roof over the powerhouse.
- At Zone 5, the installation of additional rock anchors to improve the stability of the rock face continues, and one concrete pour was completed.
- At Zone 3, anchor hole drilling and anchor installation continues, with good progress made (90 of ~110 completed). KAP continues to report that work is progressing ahead of plan at

- this time due to better than anticipated rock conditions. The first concrete pour for the Zone 3 retaining wall was completed
- 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, Alstom completed repairs to the transition between the lower and upper draft tube cones. Alstom continued making adjustments to the concentricity and circularity of the rotor. The Unit 1 stator winding activities resumed in the pit;
    - At Unit 2, Alstom welded the upper and lower draft tube cones together. Unit 2 stator assembly continues in the West Service Bay;
    - At Unit 3, KAP continued to work on intake and powerhouse concrete pours.
  - Gate guide installation is advancing on the intakes on all 3 units (Figure 5). Concrete has been poured for Unit 1 bulkhead and intake lower gate guides. Canmec is preparing to pour concrete for the Unit 2 gate guides.
  - The Unit 1 transformer was placed on its pad in early October. The Unit 2 transformer was delivered during the week of October 25 and placed on its pad.
  - Dressing of both the Unit 1 and Unit 2 transformers has started.
  - Sluiceway Gate 5 – Electricians from subcontractor EEC have nearly completed clearing punch list items in the sluiceway gate 5 control building.



Figure 4: Smoky Falls – Superstructure erection



Figure 5: Smoky Falls Intakes

## Monthly Summary – October 2013

<b>SPILLS</b>			
<b>No. of Spills:</b>	6; Spill Reports 395-400 (see Figure 6 for LMRP spills breakdown).		
<b>Classification of Spills:</b>	<p><u>KAP Project Classification</u>                      Minor – 5 Moderate – 0 Major –1 To Water - 0</p> <p><u>MOE Classification</u>                      Non-reportable - 5                      Reportable to MOE</p> <ul style="list-style-type: none"> <li>- Class C – 1</li> <li>- Class B – 0</li> <li>- Class A – 0</li> </ul>		
Reportable Spills			
No.	Quantity /Product Spilled	Spill Site	Reason for being Reportable
1	800 L/ 50% Citric Acid	Smoky Falls – Site Services Dome	Reportable spill on-land. The cause of the spill was a combination of factors. The primary valve on the tote was damaged and this allowed acid to corrode the metal fitting attached. The tote was located on secondary containment, but the containment was determined to have a crack. This allowed acid to drain out of the containment onto the gravel pad inside the dome and out to the parking lot. All remaining totes were inspected to ensure valves were in good condition and any metal fittings were removed and replaced with a plastic cap to provide secondary protection.
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"> <li>• Class C - Less Serious</li> <li>• Class B – Serious</li> <li>• Class A – Very Serious</li> </ul>	
Sediment Pond Exceedance of Effluent Objective			
No. of Exceedance days recorded	Location	Mitigation Measures used	
n/a	n/a	n/a	

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## **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.

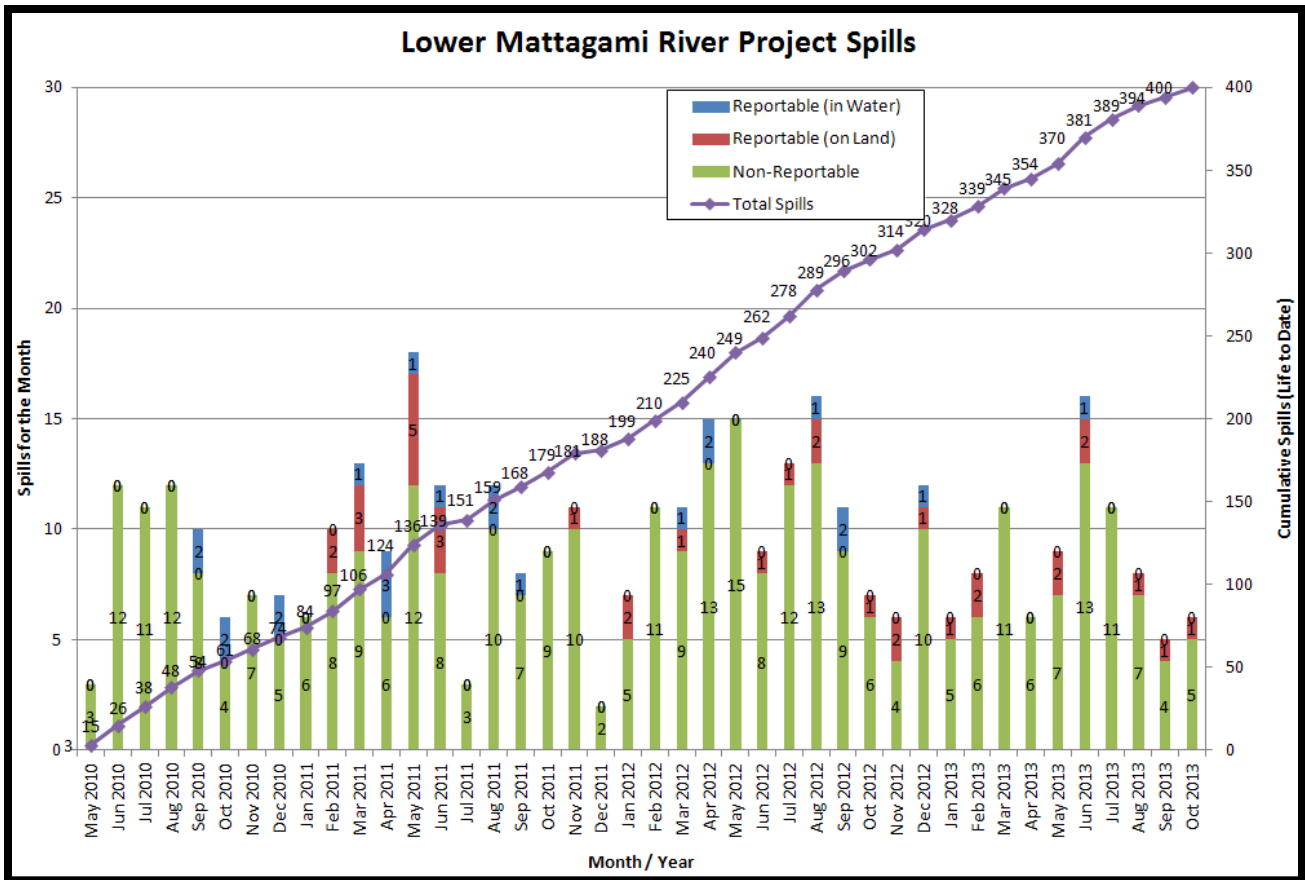


Figure 6: Lower Mattagami River Project spills

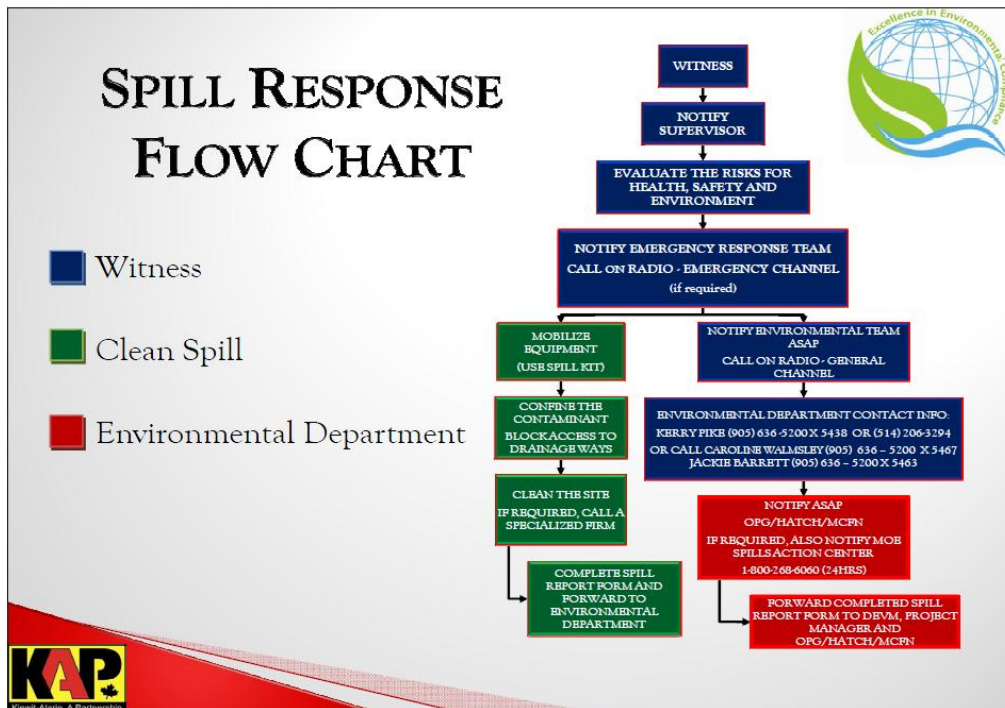
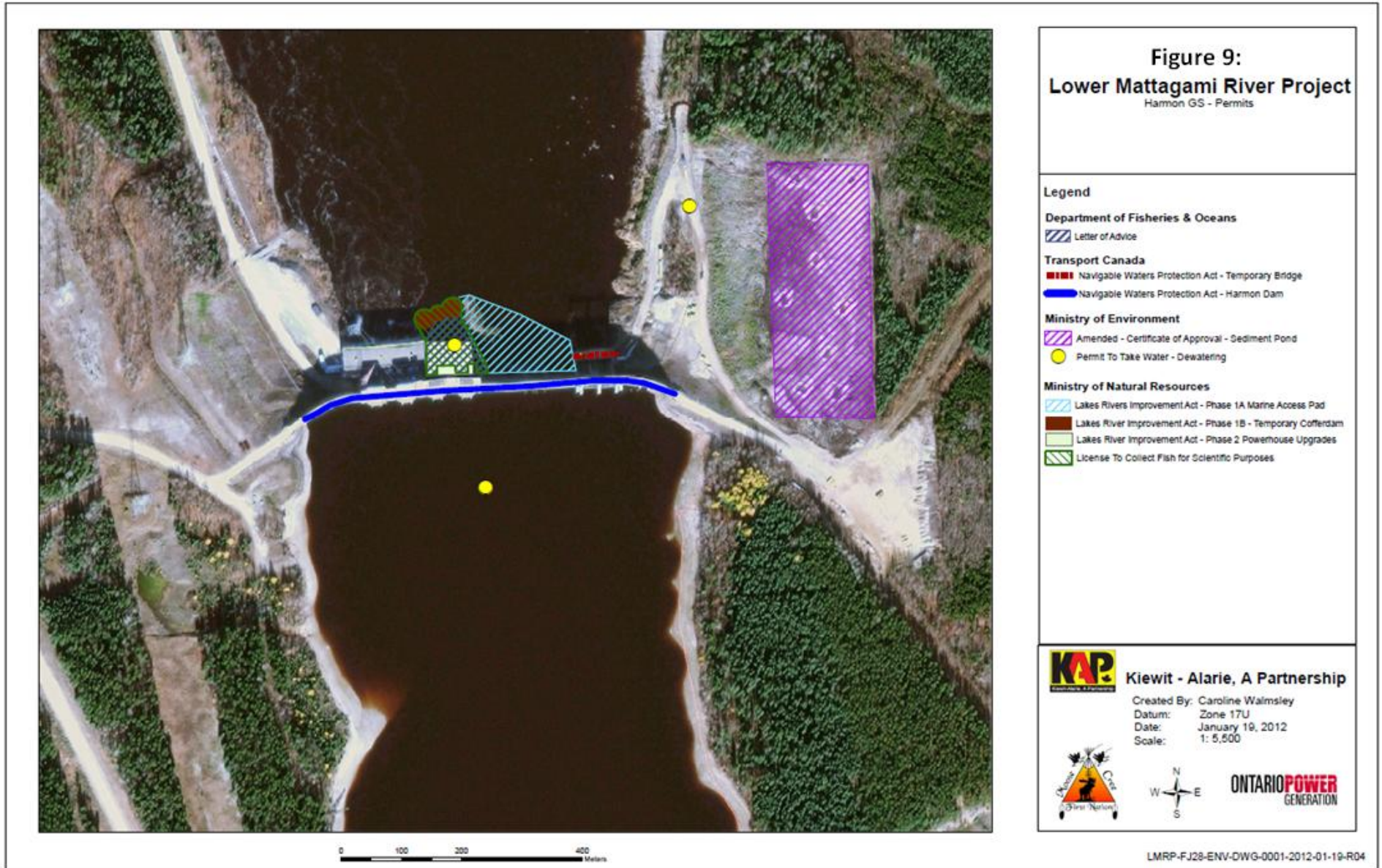


Figure 7: KAP Spills Response Flowchart

<b>PERMIT AND APPROVAL REVIEW</b>			
No. Reviewed:	0	List:	<ul style="list-style-type: none"> <li>• Site Rehabilitation-Little Long</li> <li>• Kipling Cellular Cofferdam Removal</li> </ul>
No. Sent to KAP:	0	List:	<ul style="list-style-type: none"> <li>• Kipling Cellular Cofferdam Removal</li> </ul>
<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.			







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



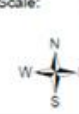
**Kiewit - Alarie, A Partnership**

Created By: Caroline Walmsley

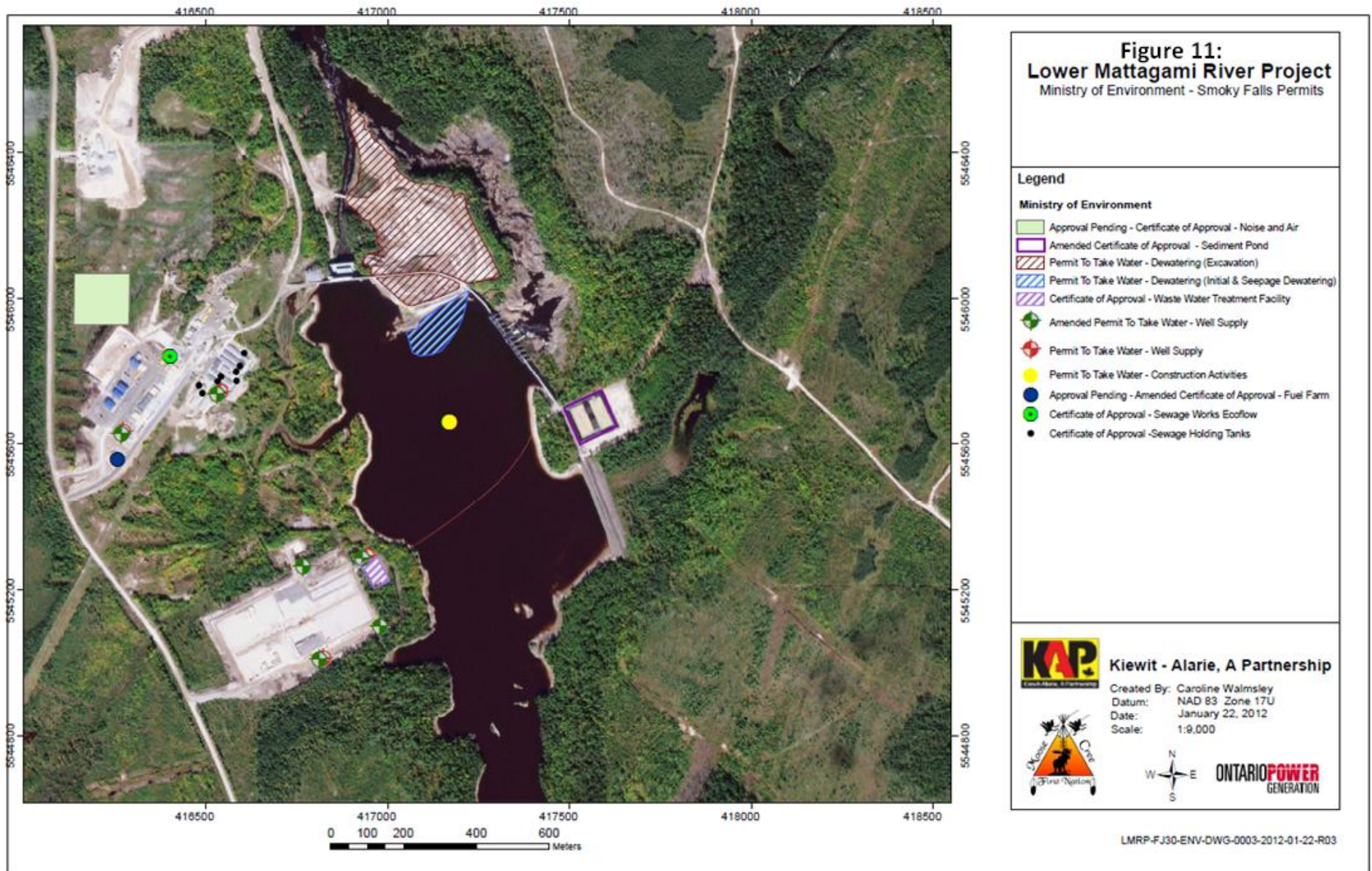
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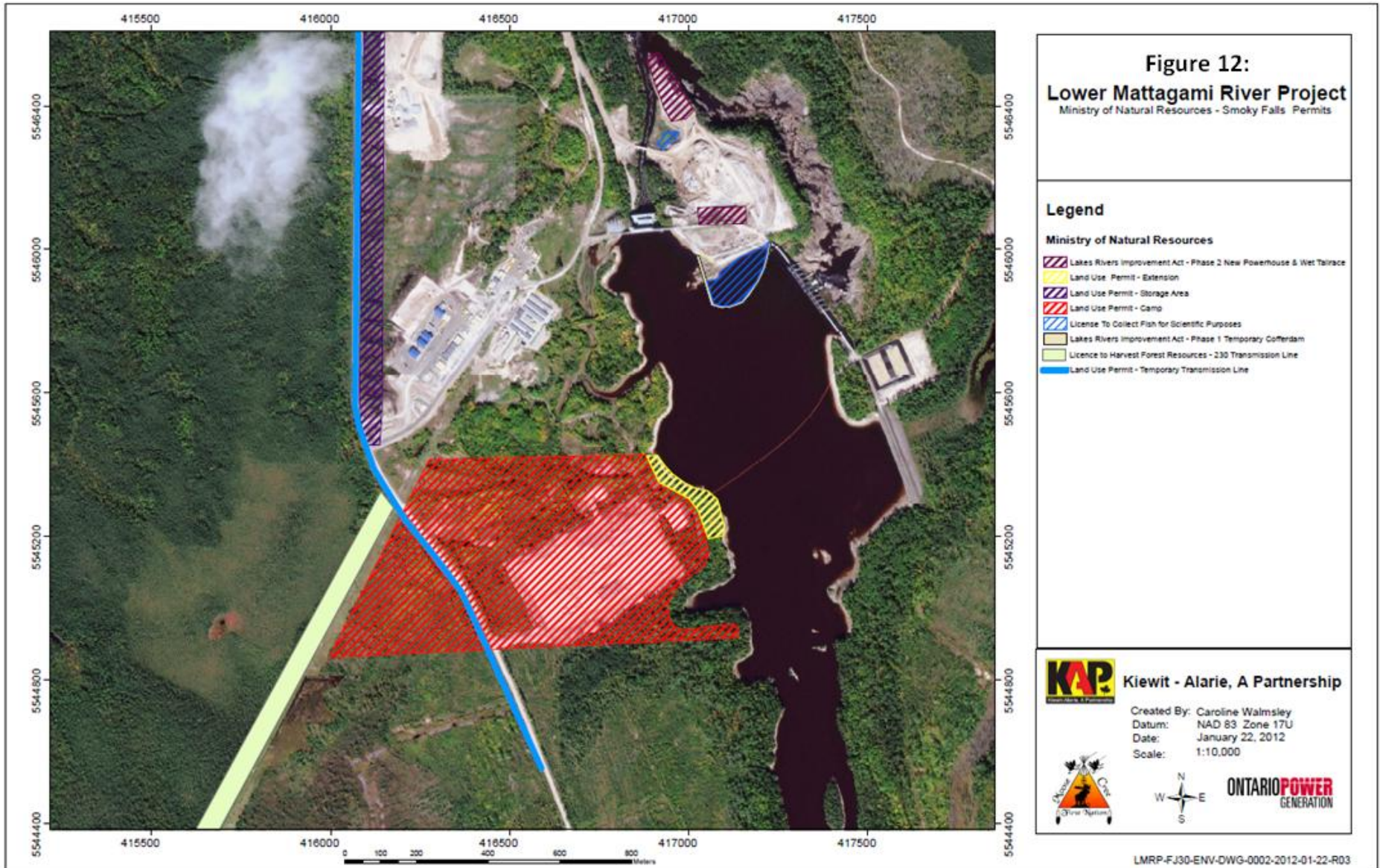
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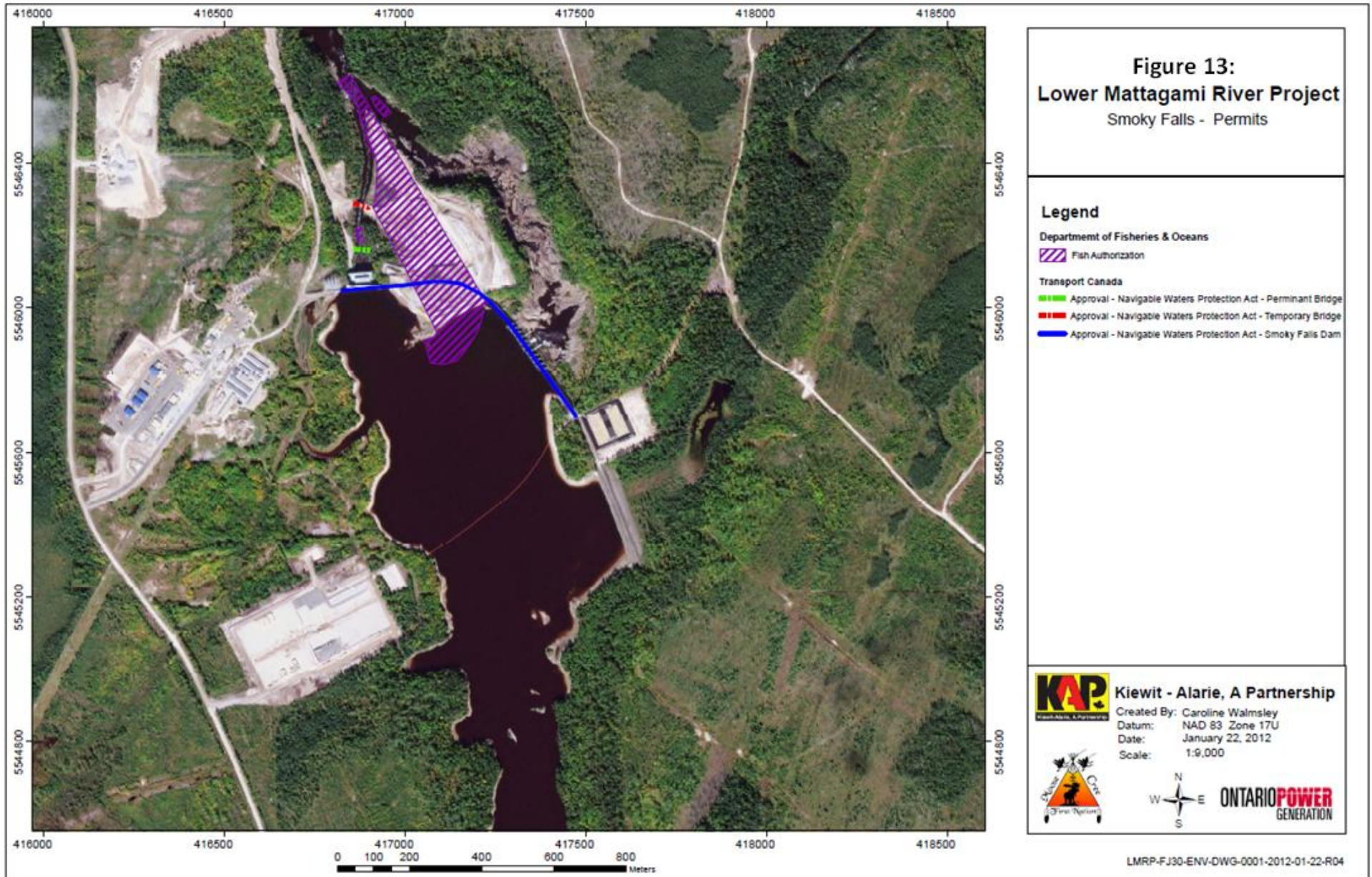
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**Issues and Concerns**

- After the August 2013 MECC meeting in Moose Factory, the MCFN and TTN Chief and Councils had issues with the role of the MECC Chair. The concerns were discussed with OPG.

Action: The Chief and Councils required that new Chair be placed on the MECC. Subsequently, MCFN recommended Fred Hunter who is now the new MECC Chair.