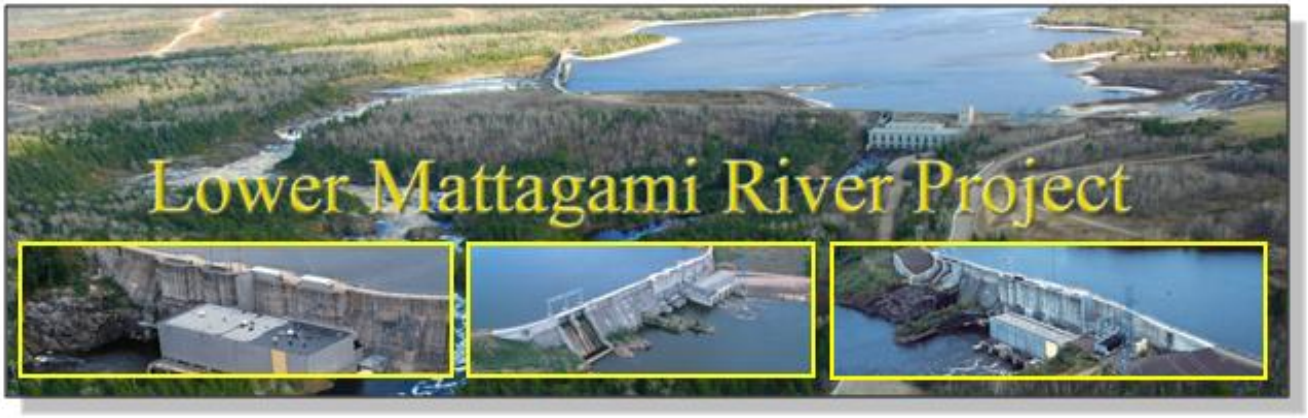


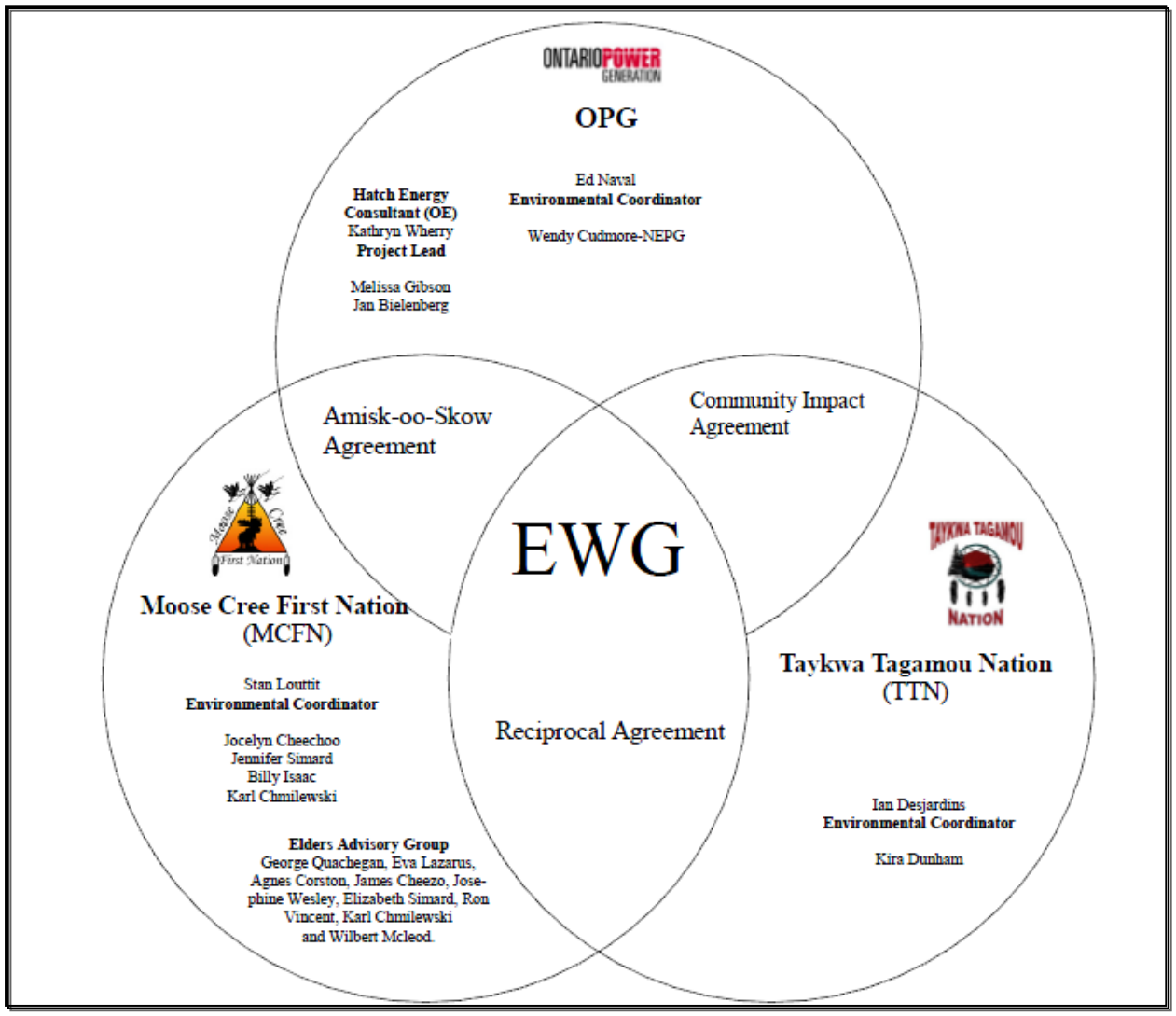
Environmental Working Group

Monthly Report

May2013

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 held its third face to face meeting of the year on May 13, 2013 in Toronto. EWG members worked towards finalizing its review of the options to deal with the contaminated soil piles at Smokey Falls. The EWG started its review of KAP's proposed Site Rehabilitation Plan. The EWG also discussed plans and preparations for community Workshops, the next steps in creating a Traditional Ecological Knowledge (TEK) Monitoring plan to include Aboriginal Knowledge (as per Term and Condition 13) so that the Environmental Effects Monitoring Plan is comprehensive.
- 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 presented summary of the Cost Benefits TEK study to the MECC in October 2012. TTN presented a draft Cost Benefits TEK study to the EWG during the face to face meeting.
- MCFN and TTN members of the EWG hold weekly TEK meetings for the development of a TEK Monitoring Program and discuss how it could 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 May 2, 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 Regina Flannery's book "Ellen Smallboy, Glimpses of a Cree Woman's Life". 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 Environnemental Due Diligence Audit #3												
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												
EWG read TEK book 'Sacred Ecology'.												
EWG read TEK book 'Ellen Smallboy: Glimpses of a Cree Women's Life'.												

Completed: Pending: *Additional work still required to fulfill EA Term and Condition

Construction
Little Long

- Clamming of cofferdam Cell 1 backfill was completed. The sheet piles were removed and the tremie concrete blasting was completed. Clamming of the blasted tremie concrete rubble has started (Figure 1).
- Andritz workers continue to install turbine and generator components. Components installed this month include the thrust bearing, the upper shaft, surface air coolers on the stator frame, and rotor poles. Installation has also started on the following Unit 3 components: generator enclosure, and generator upper bracket, rotor air brake pipes.
- Testing on the intake gate hoist was completed and deficiencies were identified on a punch list. AFI is addressing the issues identified on the punch list.
- The installation of final Isolated Phase Bus supports was completed.
- Testing identified that the transmission line between the disconnect yard and switchyard was installed incorrectly as there was a phase mismatch. PowerTel corrected the issue once it was identified.
- KAP continues to weld the external enclosures of the Isolated Phase Bus.
- Electricians continue to install panels, cable trays and cables in various areas in the powerhouse and the switchyard.
- The installation of fire protection system in Unit 3 continues.

Figure 1: Little Long cofferdam removal

Harmon

- 625 m^3 of concrete was poured this month, bringing the total poured to date to 11,677 m^3 of 12,302 m^3 total.
- Initial water up of the lagoon area behind the cofferdam was completed to perform the wet test for the draft tube gates. A minor issue was identified with the draft tube gates, requiring partial dewatering to repair. Once the repair was completed, water up was declared complete.
- Preparations for cofferdam removal have started now that water up is complete.

- Draft tube liner secondary concrete was successfully poured on May 5th and 6th. Minor deficiencies were identified and repairs have started.
- The stator frame assembly and the stator core loop test were successfully completed.
- AFI continues remedial work on the intake gates.
- KAP electricians continue to pull electrical cables, install cable trays, motor control centres, and install the new bus bar for the powerhouse crane.
- PowerTel erected the 230 kV switchyard structure, and installed the disconnect switch, various revenue metering components, and lightning arresters (Figure 2).

Figure 2: Kipling 230 kV switchyard towers erected

Smoky Falls

- 7,987 m^3 of concrete was poured this month in the service bay, powerhouse, and intake areas, bringing the total poured to date to 105,173 m^3 of 155,084 m^3 total.
- At the end of the month, twenty-two (22) concrete pours are in various stages of work (formwork started and/or rebar being installed) and progressing in the intake (Figure 3), powerhouse, East service bay, East gravity dam, and at the permanent bridge. Twenty-two (22) pours were completed during the month.
- Alstom continues to prepare Turbine/Generator components in the West Service Bay (WSB). They have completed the following tasks:
    - The Unit 1 stator core loop test was successfully completed. Stator winding is under way. Unit 1 rotor assembly continues. The rotor crown was welded to the hub and wedge carriers were installed and aligned;
    - At Unit 2, rebar and formwork are being installed for the scrollcase soffit concrete; and
    - At Unit 3, scrollcase soffit shoring is being installed.
- Sluiceway Gate 5 – AFI is installing reinforcements to the gate's hoist structure and are installing gate guide extensions. They have also positioned the gate control building on its new supports and have started installing the associated grating and handrails.

- Work continues to enhance the stability of the rock under the Service Bay East. Progress continues on drilling for rock anchors, anchor installation, anchor pipe sleeve installation, and concrete pours. KAP has started cleaning the rock bench at elevation 145 (m) in preparation for installing the footings of the East Service Bay superstructure.

Figure 3: Smoky Falls Intake Overview

Kipling

- Concrete work resumed May 7th, and 1,334 m^3 of concrete was poured this month, bringing the total poured to date to 6,735 m3 of 11,647 m^3 total.
- Demolition of the concrete ring from Cell 3 was completed and the debris was removed (Figure 4).
- Cell 3 sheet piles from the location of the breach were removed and inspected by the KECo engineers, insurance company representatives, and the third party engineer.
- The installation of intake shoring towers, and formwork and rebar installation for the first intake soffit pour have started (Figure 5).
- Installation of corrugated steel piping, forms, and rebar as part of the next concrete pour have started.
- Andritz has started the assembly of the pit liner.
- AFI continues to perform remedial work (grouting) of intake gate embedded parts.
- PowerTel glanded and terminated electrical cables at various panels in the switchyard and tested the cables.
- HEMI verified connections, settings, and operation o the teleprotection equipment.

Figure 4: Sand Removal from Kipling Draft Tube

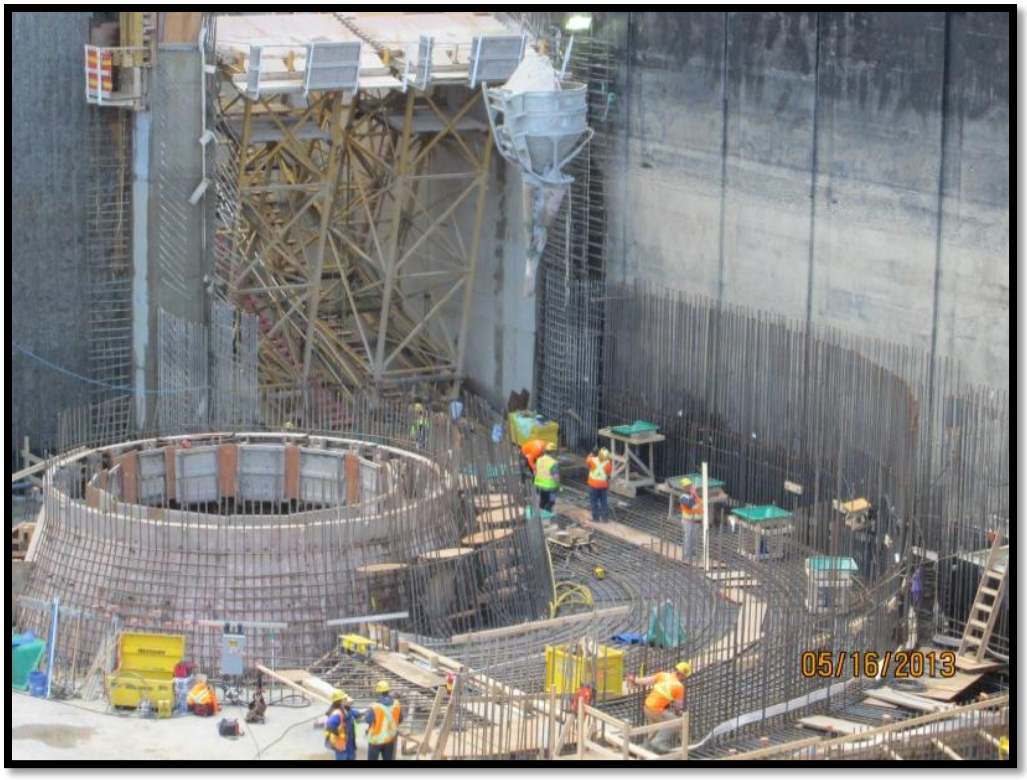


Figure 5: Concrete pouring at Kipling

Monthly Summary – May 2013

<table>
<tr><td colspan="4">SPILLS</td></tr>
<tr><td colspan="2">No. of Spills:</td><td colspan="2">9; Spill Reports 346-354 (see Figure 6 for LMRP spills breakdown).</td></tr>
<tr><td colspan="2">Classification of Spills:</td><td colspan="2"><u>Project Classification</u>
Minor – 7 Moderate – 2 Major –0 To Water - 0
<u>MOE Classification</u>
Non-reportable - 7
Reportable to MOE
- Class C – 2
- Class B – 0
- Class A – 0</td></tr>
<tr><td colspan="4">Reportable Spills</td></tr>
<tr><td>No.</td><td>Quantity /Product Spilled</td><td>Spill Site</td><td>Reason for being Reportable</td></tr>
<tr><td>1</td><td>13.5L/ Compressor Oil</td><td>Smoky Falls – Carpenter Shop</td><td>On-land reportable spill. A fire occurred at the Carpenter Shop at the Smoky Falls site. A small wooden enclosure outside of the main shop was affected and the compressor inside was damaged. Once the fire was extinguished, oil was observed in fire protection water accumulated in the compressor’s built-in secondary containment. With the large volume of water used to put out the fire it was determined that the containment would have been overfilled resulting in a release.</td></tr>
<tr><td>2</td><td><1L/ Diesel Fuel</td><td>Harmon Upper laydown yard</td><td>A spill was noticed from a trailer that was unhitched with a generator stored inside. Initially reported by KAP, but determined to be a non-reportable due to the small quantity.</td></tr>
<tr><td colspan="2">Project Classification (KAP)
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)</td><td colspan="2">MOE Classification
Non-reportable: < 100L
Reportable to MOE
• Class C - Less Serious
• Class B – Serious
• Class A – Very Serious</td></tr>
<tr><td colspan="4">Sediment Pond Exceedance of Effluent Objective</td></tr>
<tr><td>No. of Exceedance days recorded</td><td>Location</td><td colspan="2">Mitigation Measures used</td></tr>
<tr><td>4 (May 1 to 4)</td><td>Smoky Falls Sediment Pond</td><td colspan="2">Due to the increased solids from the spring runoff being directed to the pond. KAP added flocculent to the pond, but it took 2-3 days for it to work its way through the pond and bring the levels down to the objective.</td></tr>
<tr><td>1 (April 30th, 2013)</td><td>Smoky Falls Fuel Farm</td><td colspan="2">The quarterly sample collected from the Smoky Falls fuel farm was slightly above the 15 mg/L objective for oil and grease, with a result of 18 mg/L. KAP has emptied out the water and oil in secondary containment at the fuel farm with a vac-truck,</td></tr>
</table>

		and the petro plug will also be replaced with a new one. As per the C of A, KAP will increase the frequency of sampling to once per month, until the readings have returned within the objective limits.
2 (May 13 and 20, 2013	Harmon Sediment Pond	On May 13, the sediment pond samples were slightly above the TSS objective (15 mg/L) with a reading of 16 mg/L. This was due to the re-arranging of pumps inside the cofferdam area in preparation for the re-watering, which stirred up some of the sediment in the water being directed to the sediment pond. On May 20, the sediment pond samples were above the TSS objective of 15 mg/L with a result of 18 mg/L, due to the water level in the pond dropped once pumping was stopped to allow for the water up of the cofferdam. When dewatering resumed the resulting inflow to the pond disturbed the sediment at the bottom.
2 (May 20, 2013)	Kipling Sediment Pond	Effluent exceedance of the pH limit for the sediment pond. The required range is 6.0 to 9.0 and the sample was 4.0. The cause was an overdose of the ferric sulphate used in the treatment process used to remove suspended solids. The inflow rate to the pond decreased due to lower seepage rates from the cofferdam and the dosage rate of the sulphate was not adjusted accordingly. The dosage rate was corrected and the pH levels returned to the required range in the afternoon. On the same day, the sediment pond was above TSS limit of 25 mg/L with a result of 32 mg/L. This was related to the previously reported turbidity and pH objective exceedances due to the issue with the treatment system.

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.

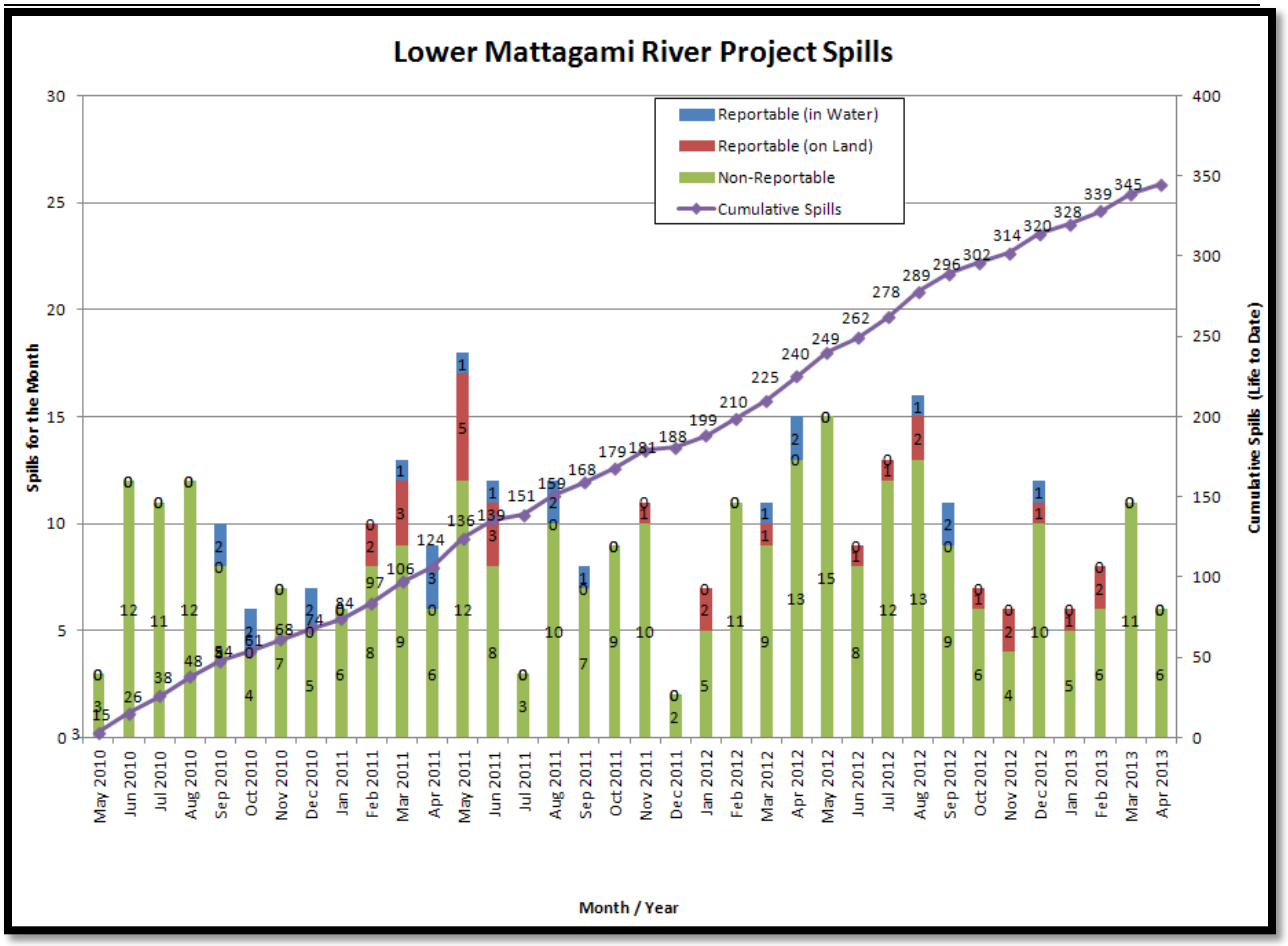


Figure 6: Lower Mattagami River Project spills

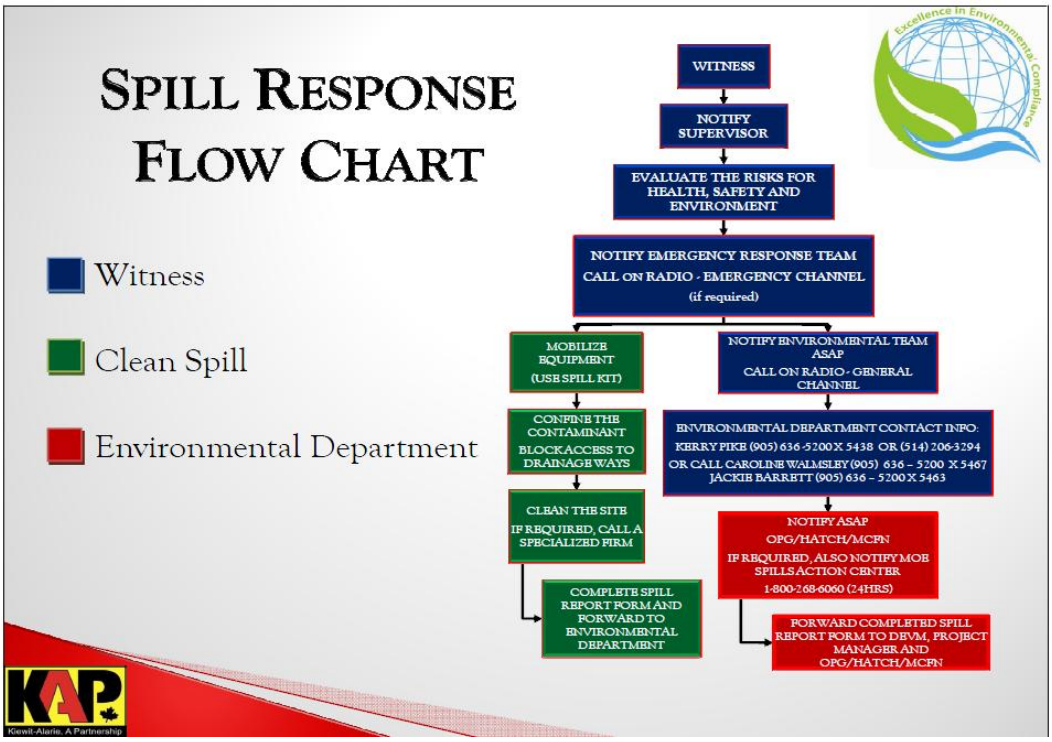


Figure 7: KAP Spills Response Flowchart

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: • 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
No. Review Completed	4	List:	• 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.			

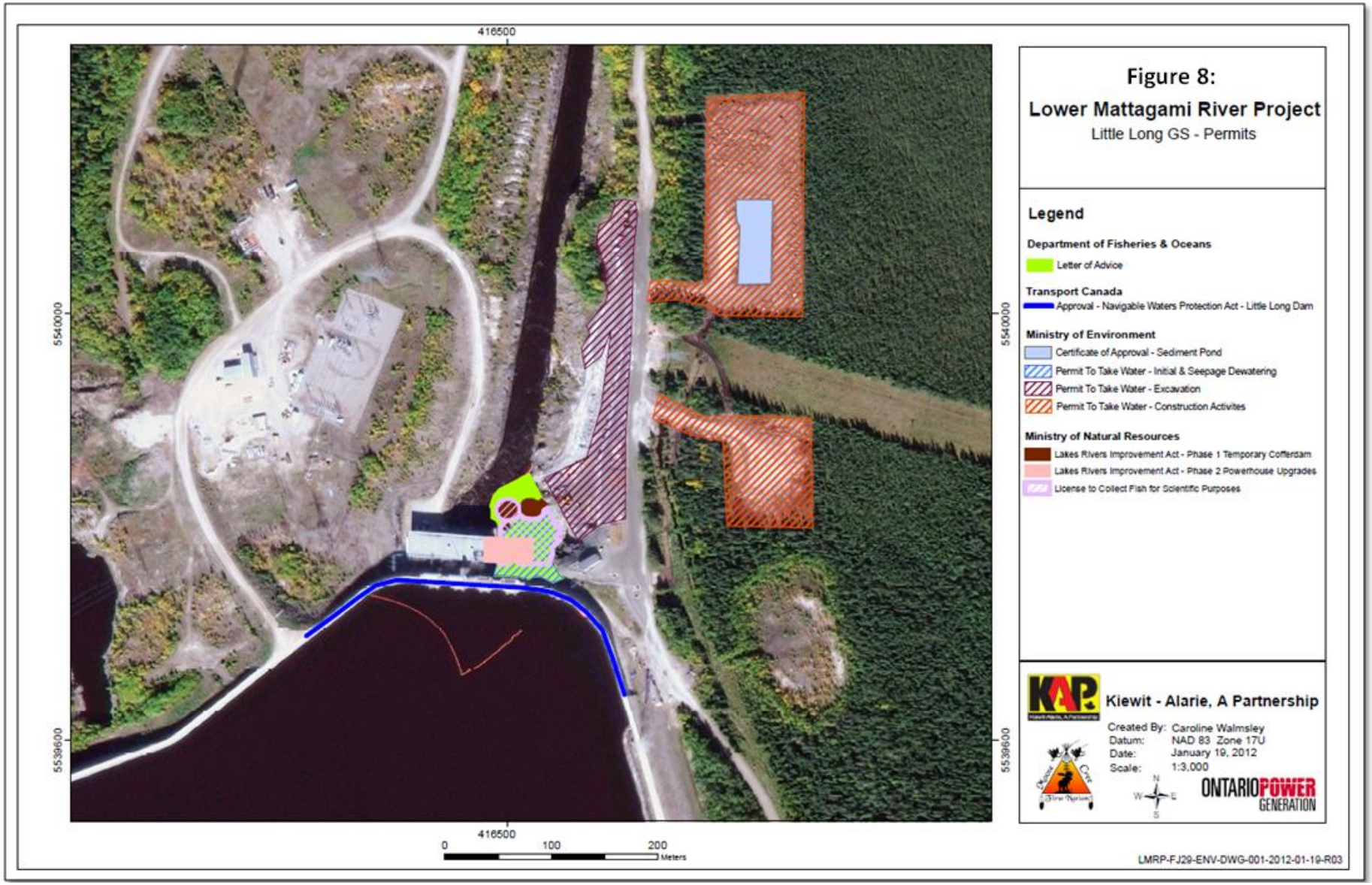

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Figure 8:
Lower Mattagami River Project
Little Long GS - Permits
Legend
Department of Fisheries & Oceans
Letter of Advice
Transport Canada
Approval - Navigable Waters Protection Act - Little Long Dam
Ministry of Environment
Certificate of Approval - Sediment Pond
Permit To Take Water - Initial & Seepage Dewatering
Permit To Take Water - Excavation
Permit To Take Water - Construction Activites
Ministry of Natural Resources
Lakes Rivers Improvement Act - Phase 1 Temporary Cofferdam
Lakes Rivers Improvement Act - Phase 2 Powerhouse Upgrades
License to Collect Fish for Scientific Purposes
Kiewit - Alarie, A Partnership
Created By: Caroline Walmsley
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LMRP-FJ29-ENV-DWG-001-2012-01-19-R03

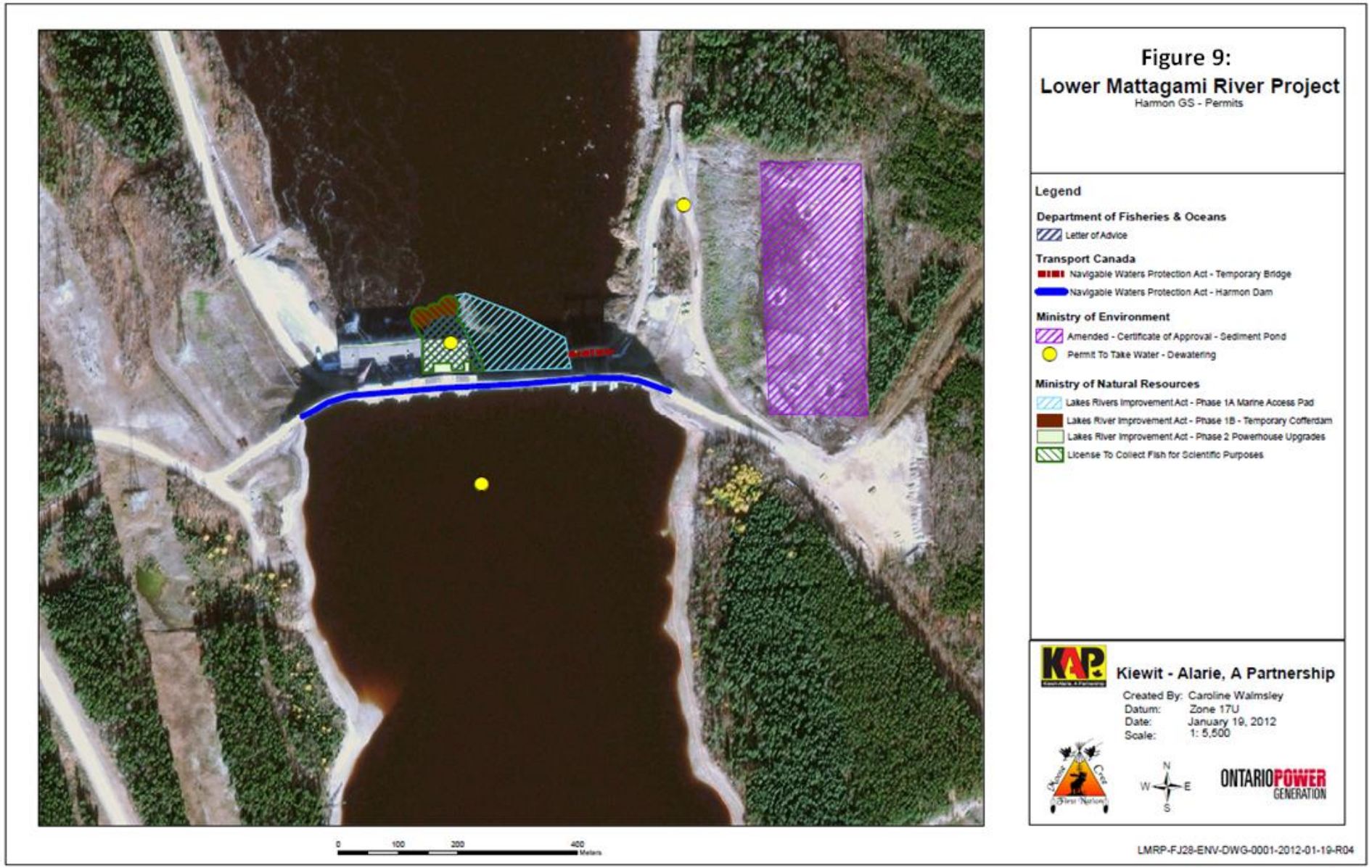
Figure 9:
Lower Mattagami River Project
Harmon GS - Permits
Legend
Department of Fisheries & Oceans
Letter of Advice
Transport Canada
Navigable Waters Protection Act - Temporary Bridge
Navigable Waters Protection Act - Harmon Dam
Ministry of Environment
Amended - Certificate of Approval - Sediment Pond
Permit To Take Water - Dewatering
Ministry of Natural Resources
Lakes Rivers Improvement Act - Phase 1A Marine Access Pad
Lakes River Improvement Act - Phase 1B - Temporary Cofferdam
Lakes River Improvement Act - Phase 2 Powerhouse Upgrades
License To Collect Fish for Scientific Purposes
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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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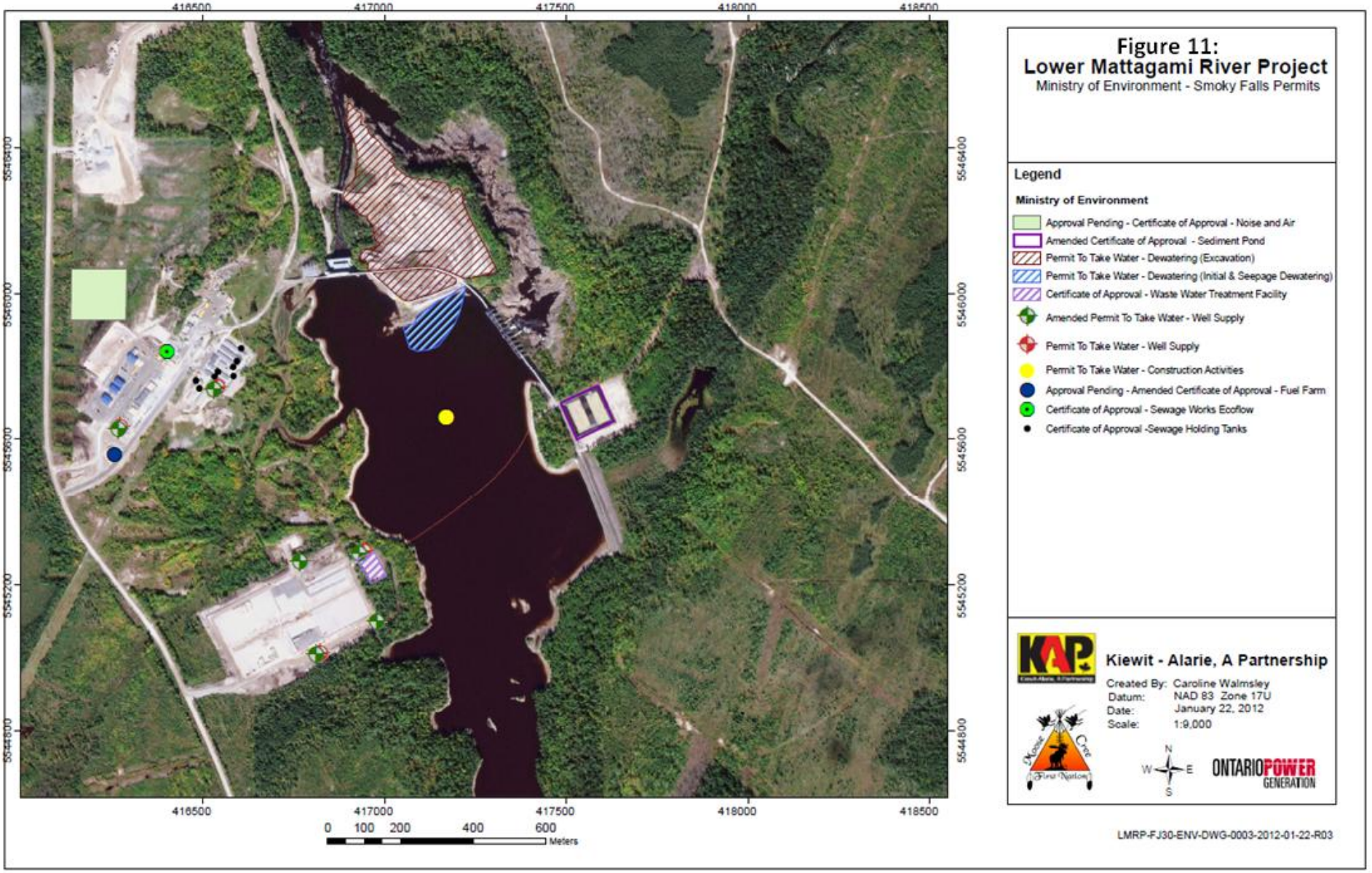
Figure 11:
Lower Mattagami River Project
Ministry of Environment - Smoky Falls Permits
Legend
Ministry of Environment
Approval Pending - Certificate of Approval - Noise and Air
Amended Certificate of Approval - Sediment Pond
Permit To Take Water - Dewatering (Excavation)
Permit To Take Water - Dewatering (Initial & Seepage Dewatering)
Certificate of Approval - Waste Water Treatment Facility
Amended Permit To Take Water - Well Supply
Permit To Take Water - Well Supply
Permit To Take Water - Construction Activities
Approval Pending - Amended Certificate of Approval - Fuel Farm
Certificate of Approval - Sewage Works Ecoflow
Certificate of Approval -Sewage Holding Tanks
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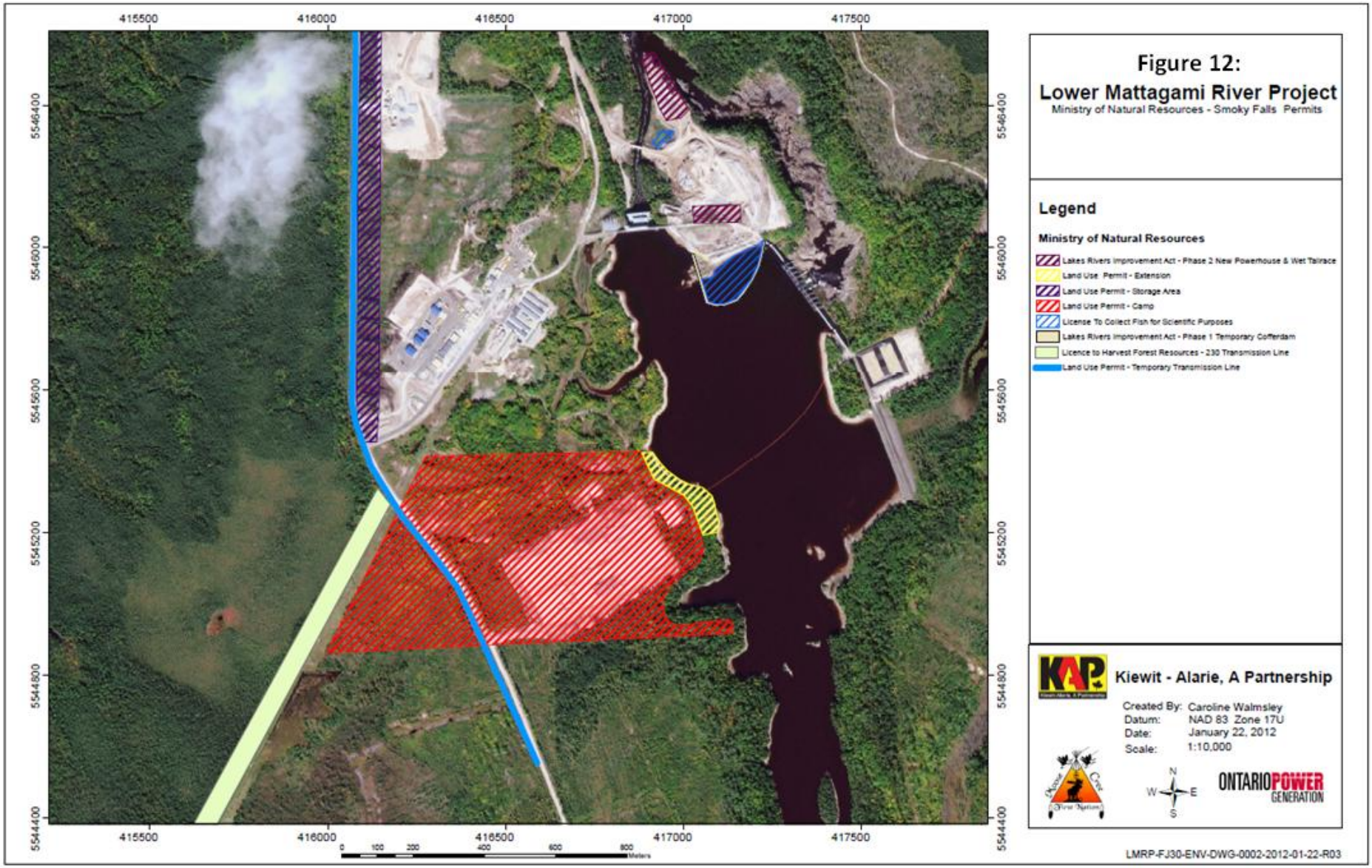
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Figure 12:
Lower Mattagami River Project
Ministry of Natural Resources - Smoky Falls Permits
Legend
Ministry of Natural Resources
Lakes Rivers Improvement Act - Phase 2 New Powerhouse & Wet Tailrace
Land Use Permit - Extension
Land Use Permit - Storage 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
Kiewit - Alarie, A Partnership
Created By: Caroline Walmsley
Datum: NAD 83 Zone 17U
Date: January 22, 2012
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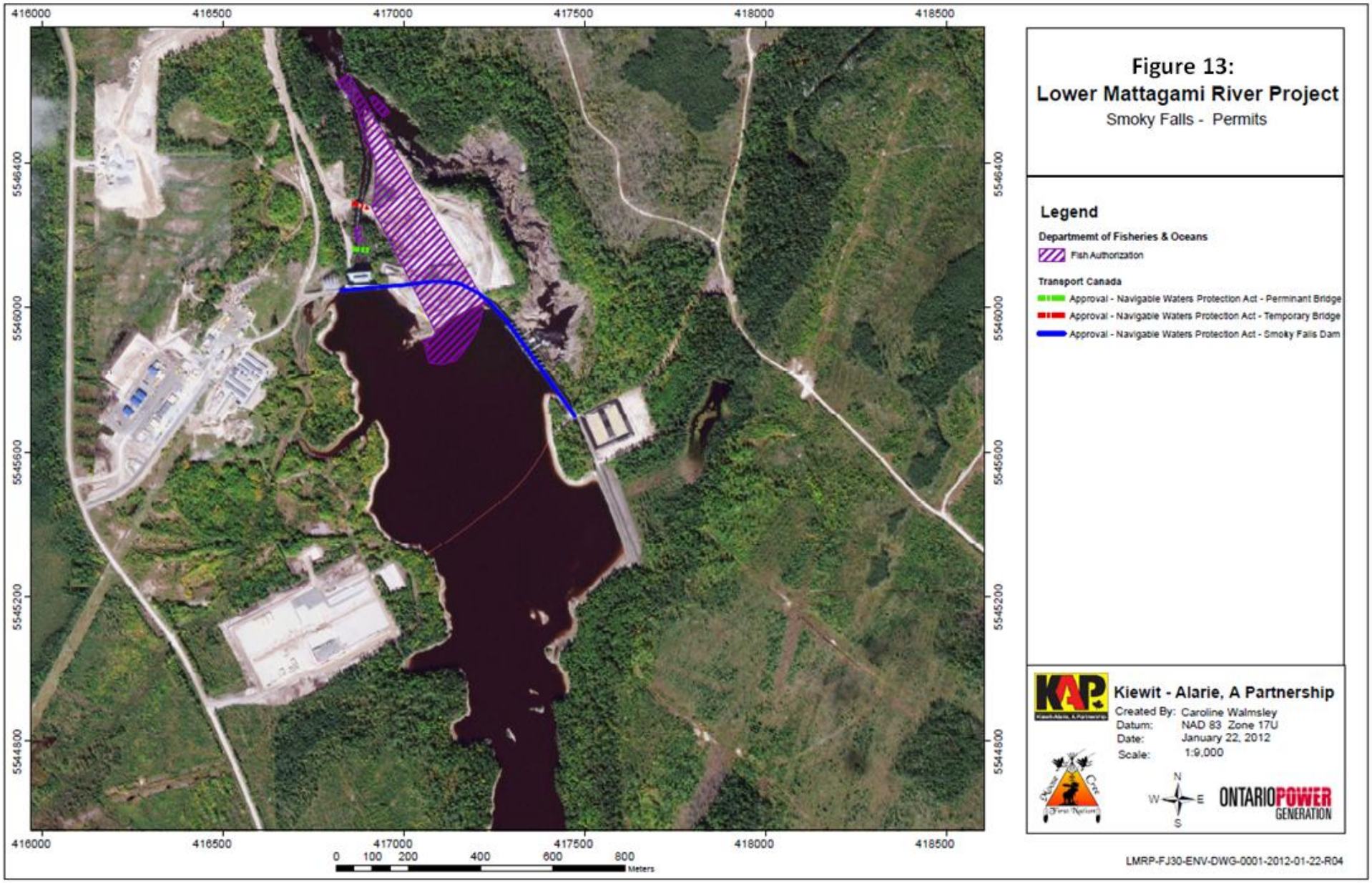
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Figure 13:
Lower Mattagami River Project
Smoky Falls - Permits
Legend
Department of Fisheries & Oceans
Fish Authorization
Transport Canada
Approval - Navigable Waters Protection Act - Perminant Bridge
Approval - Navigable Waters Protection Act - Temporary Bridge
Approval - Navigable Waters Protection Act - Smoky Falls Dam
Kiewit - Alarie, A Partnership
Created By: Caroline Walmsley
Datum: NAD 83 Zone 17U
Date: January 22, 2012
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Issues and Concerns

- MCFN members of the EWG were concerned that stray booms downstream of Kipling will not be picked up in a timely manner.

Action Required: KAP is waiting for OPG to install their safety booms; once this is done KAP will be able to safely collect the stray booms.

- The EWG was concerned with visual resources (LIDAR) didn't provide adequate images to understand the potential impacts of the new flows at Kipling (EA Term and Condition 5B).

Action Required: OPG and Hatch to further develop the images but in the interim OPG directed KAP to take photos of the different flows.