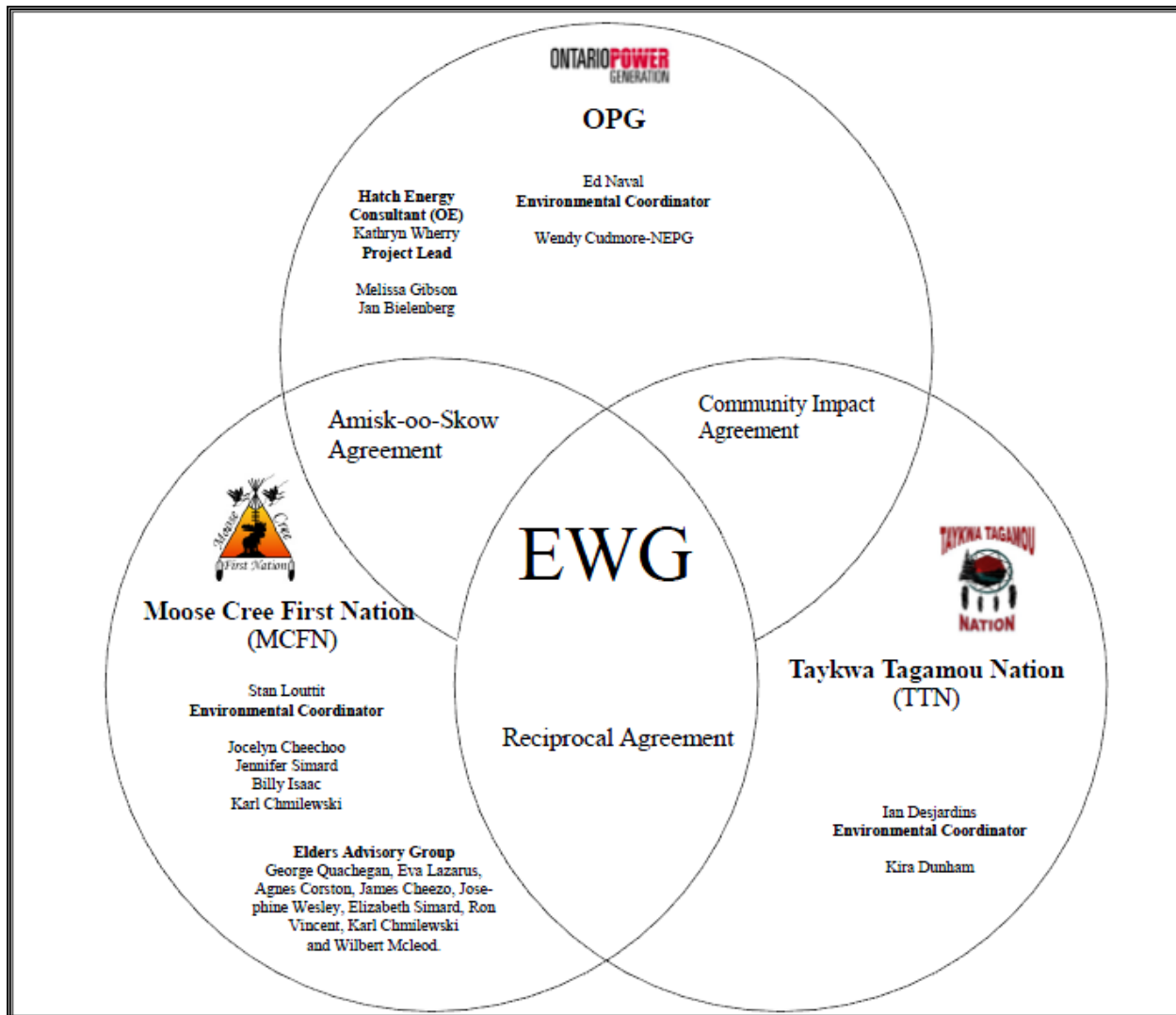


Environmental Working Group

Monthly Report



July 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 members finalised their audit findings from June 30 to submit to Hatch for the final audit report.
- The EWG members coordinated the presentations for the MECC regarding Adam Creek (Hydronet, and Dan Gibson).
- On July 28-29, MCFN members of the EWG conducted a follow-up site visit with their Elders Advisory Group regarding the LMRP Rehabilitation Plan.
- On July 30, members of the EWG with Traditional Ecological Knowledge experts held a teleconference to discuss the Cultural Text (EA T&C 2c), the discussion was mainly related to focus on strategies to move the book forward.
- 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).
- 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 have completed their draft, 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.
- In an effort to improve the understanding of TEK, members of the EWG watched the documentary entitled "Watermark".

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	EWG present to the MECC "Environmental Effects Monitoring Plan, Lower Mattagami Development"												
EA T&C 4b: Hydrology, Fish and Aquatic Habitat													
EA T&C 5b: Terrestrial Ecology	EWG present to the MECC "TEK - Environmental Effects Monitoring Plan, Lower Mattagami Development"												
EA T&C 6: Erosion and Sedimentology													
EA T&C 7: Mercury													
EA T&C 14: Permit Review and Compliance Monitoring Protocol													
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'.													
EWG watch TEK related films or documentaries (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 600 people in the camp this month. KAP continues to reduce the staff and craft numbers, reflecting the continued wind-down in construction activities.

Little Long

- KAP continued to work on closing out punch list items.
- Remedial polyurethane grout injections started on the powerhouse east wall construction joint. The work was nearing completion at month-end.
- Little Long Unit was 3 (Figure 1) was declared in service on January 19, 2014.



Figure 1: Little Long Unit 3

Harmon (Figure 2)

- Concrete injections continued, in an effort to eliminate leaks inside the powerhouse.
- AFI / Andritz installed and welded reinforcements for the intake hoist frame. KAP, OPG and Hatch representatives witnessed a deflection test post repairs. There was no significant deflection.
- The installation of the components for the heat trace for the generator surface cooling water outlet pipelines continues. The junction box, control panel, and thermostat were installed and electricians are glanding and terminating cables between them.
- KAP worked on correcting punch list items throughout the month.
- Harmon was declared in-service on June 3rd, 2014, three months ahead of the target in-service date.



Figure 2: Harmon overview

Kipling (Figure 3)

- Pipefitters installed pipes on various systems in and around the generator enclosure.
- The wicket gate links were all installed.
- Upper bracket assembly was completed in the Service Bay. The upper bracket was installed in the Unit.
- Generator cover plate installation has started at the centre of the generator enclosure.
- Electricians pulled and terminated cables for various systems throughout the powerhouse.
- On the night of July 30 / 31, the intake gate free fell on the dogging system. The gate and upper gate guides sustained damage. KAP stabilized the gate and has mobilized a team to investigate the incident and develop a recovery plan. It is forecasted that Kipling Unit 3 will be declared in service in December 2014.



Figure 3: Kipling Overview

Smoky Falls

- Excavation of the upstream cofferdam was completed. Material placement for the marine pad is complete (Figure 1).
- Wet excavation of the tailrace plug material was completed (Figure 2).
- Alstom continued 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 construction of the Unit and turned it over to the commissioning team for wet testing.
 - At Unit 2, the overspeed detection system was installed, piping installation on various systems continues, generator covers were being prepared for installation, survey monuments were installed in the turbine pit, and the thrust bearing was filled with oil.
 - At Unit 3, rotor pole installation was completed. The generator shaft, wicket gate control mechanisms (links & levers) the rotor, the upper bracket, the upper generator shaft, and the upper guide bearing were all installed in the Unit.
- Unit 1 wet testing started on July 18th with the first rotation. Wet testing is ongoing and expected to be completed mid-to-late August.
- Unit 2 wet testing is forecast to start mid-August.
- Canmec completed repairs to the intake gate lintel sealing surface in water passages 1 and 2 (Unit 1). Load tests were completed for gates 1 and 2. Upon completion, the bulkhead gates were moved to water passages 3 and 4 (Unit 2).
- Canmec completed repairs to the intake gate lintel sealing surface in water passages 3 and 4 (Unit 2). Load tests were also completed for gates 3 and 4. Upon completion, the bulkhead gates were moved to water passages 5 and 6 (Unit 3).
- BOP Mechanical and Electrical installation work throughout the powerhouse continued to progress.
- It is forecasted that the in service date for Unit 1 will be in September 2014, November 2014 for Unit 2 and February 2015 for Unit 3.



Figure 4: Smoky Falls spur dike and marine pad/replacement beach



Figure 5: Smoky Falls tailrace

Monthly Summary – July 2014

SPILLS			
No. of Spills:		3; Spill Reports 446-448 (see Figure 6 for LMRP spills breakdown).	
Classification of Spills:		<u>KAP Project Classification</u> Minor – 2 Moderate – 1 Major – 0 To Water - 0 <u>MOE Classification</u> Non-reportable - 2 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	50L/ Activated sludge	Main Camp – Waste Water Treatment Plant (WWTP)	Reportable (on-land). A fitting at the alum injection point corroded and cracked spilling waste activated sludge into a on-site building and onto the ground. Some of the material sprayed in the UV/blower building and some spilled under the building onto the ground. The spilled material was contained in a soil containment area and cannot flow to the nearby Mattagami River. The union was cut and capped and a new injection point was drilled into the pipe.
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.

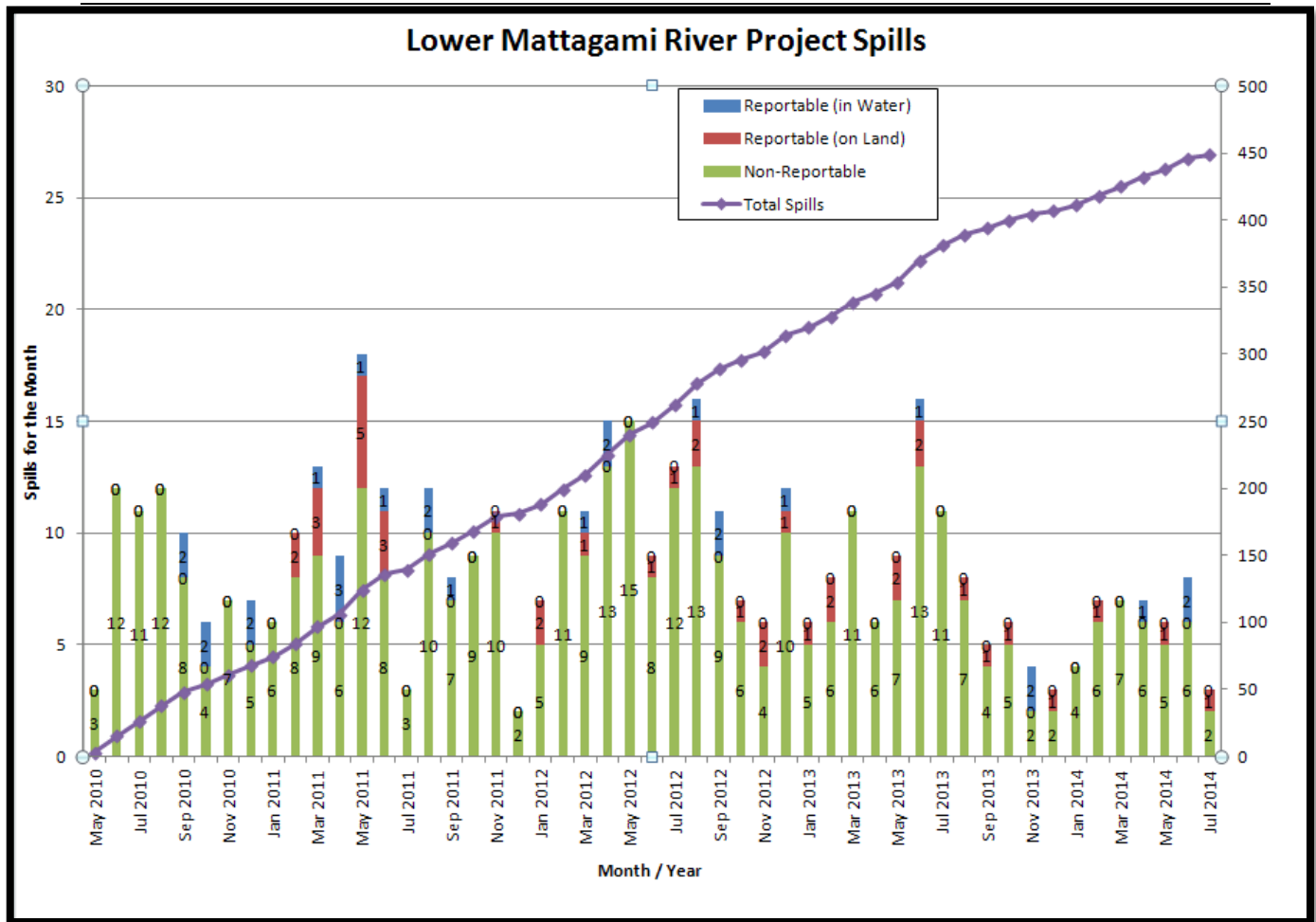


Figure 6: Lower Mattagami River Project spills

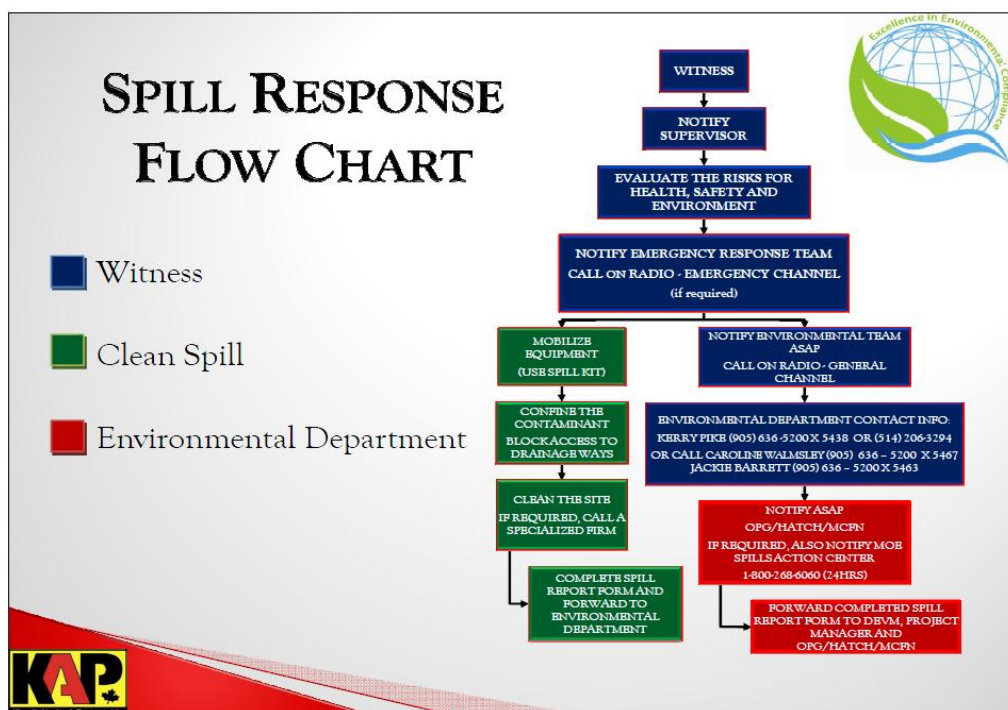


Figure 7: KAP Spills Response Flowchart

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			




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



0 100 200 400
Meters



Kiewit - Alarie, A Partnership

Created By: Caroline Walmsley

Datum: Zone 17U

Date: January 19, 2012

Scale: 1: 5,500



ONTARIO POWER
GENERATION

LMRP-FJ28-ENV-DWG-0001-2012-01-19-R04



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 River Improvement Act - Phase 1A-1 Deflector Wall

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

Lakes River Improvement Act - Phase 1B Temporary Cofferdam

Lakes River Improvement Act - Phase 2 Powerhouse Upgrades

Licence to Collect Fish for Scientific Purposes



Kiewit - Alarie, A Partnership

Created By: Caroline Walmsley

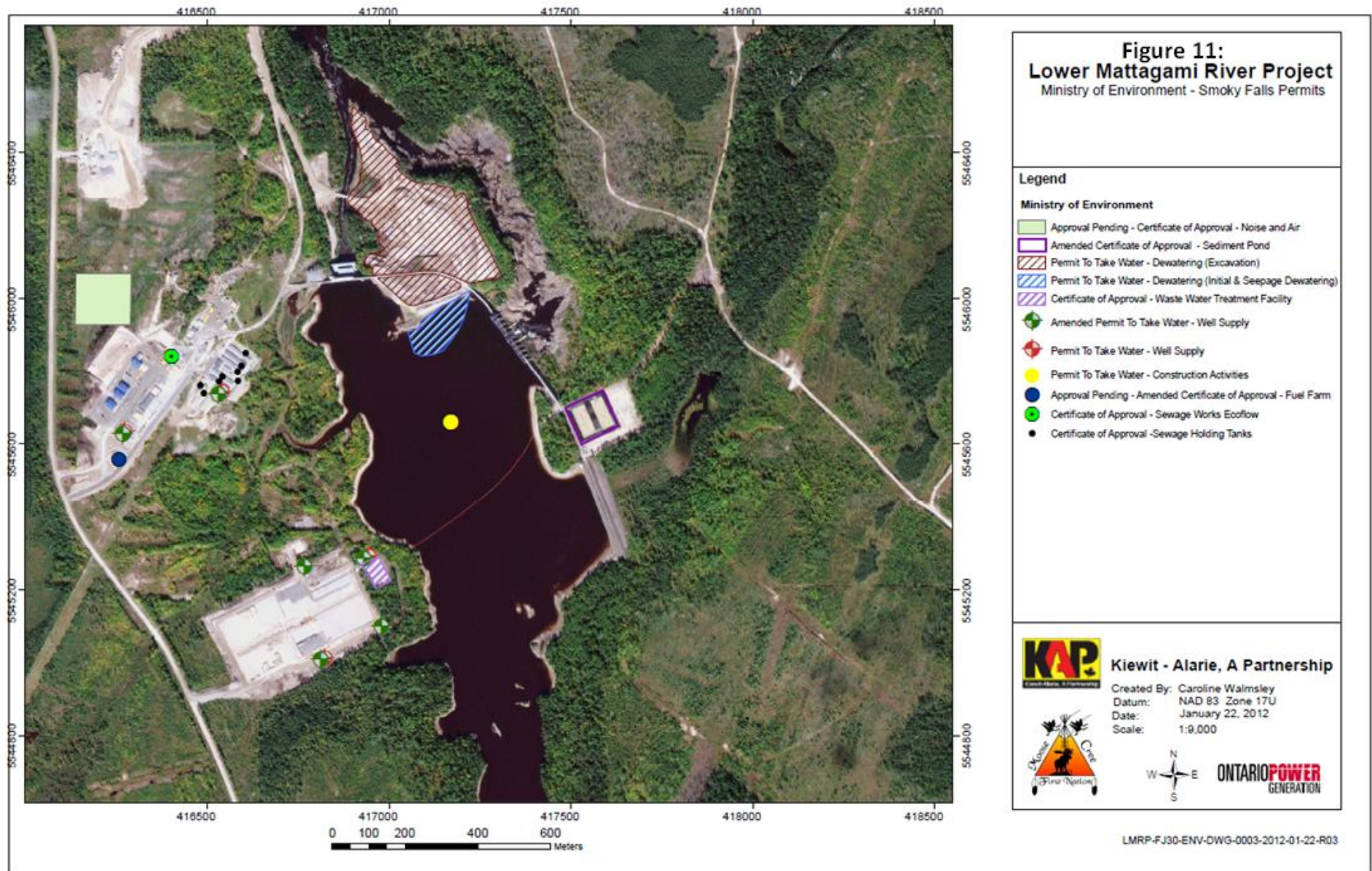
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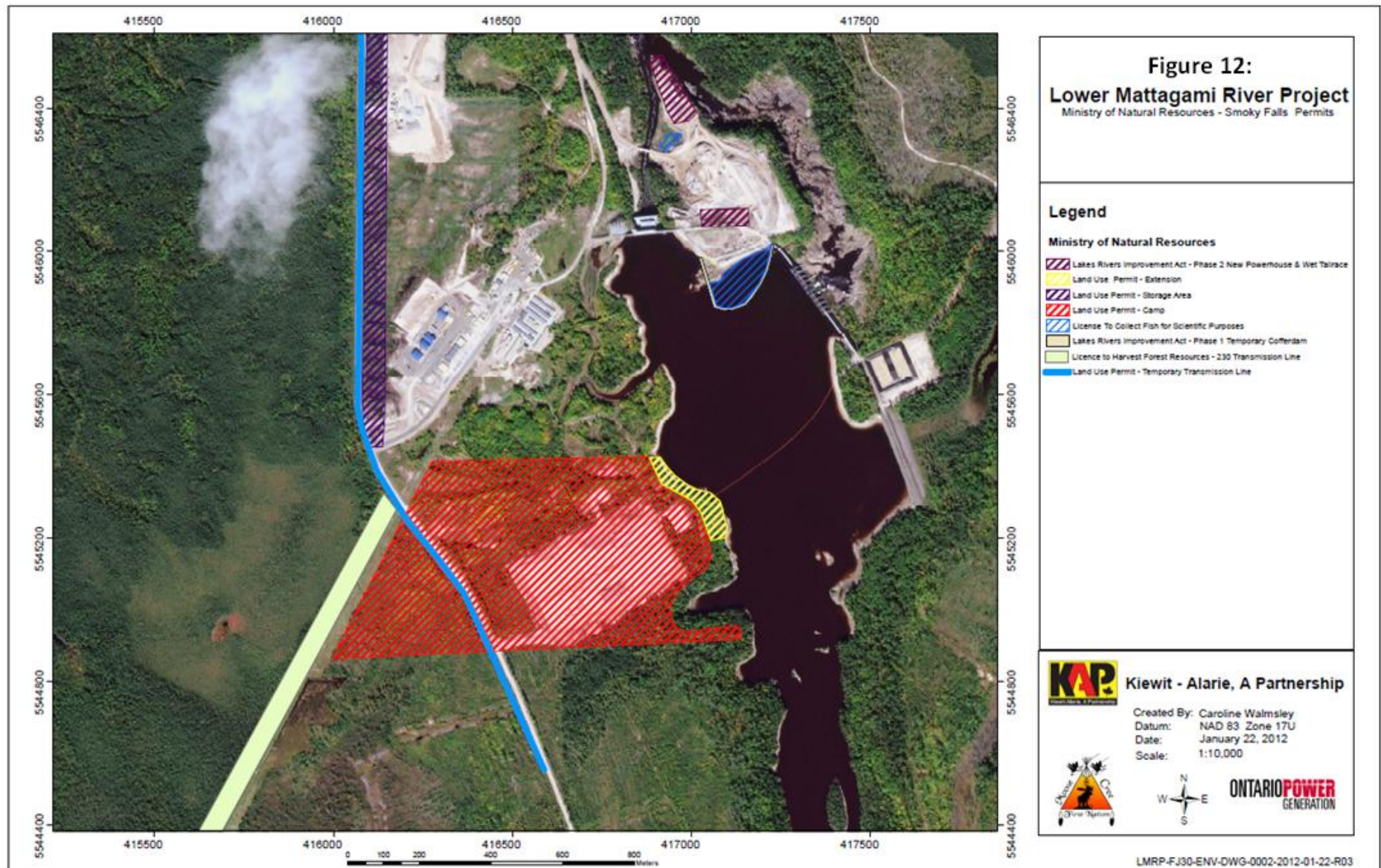
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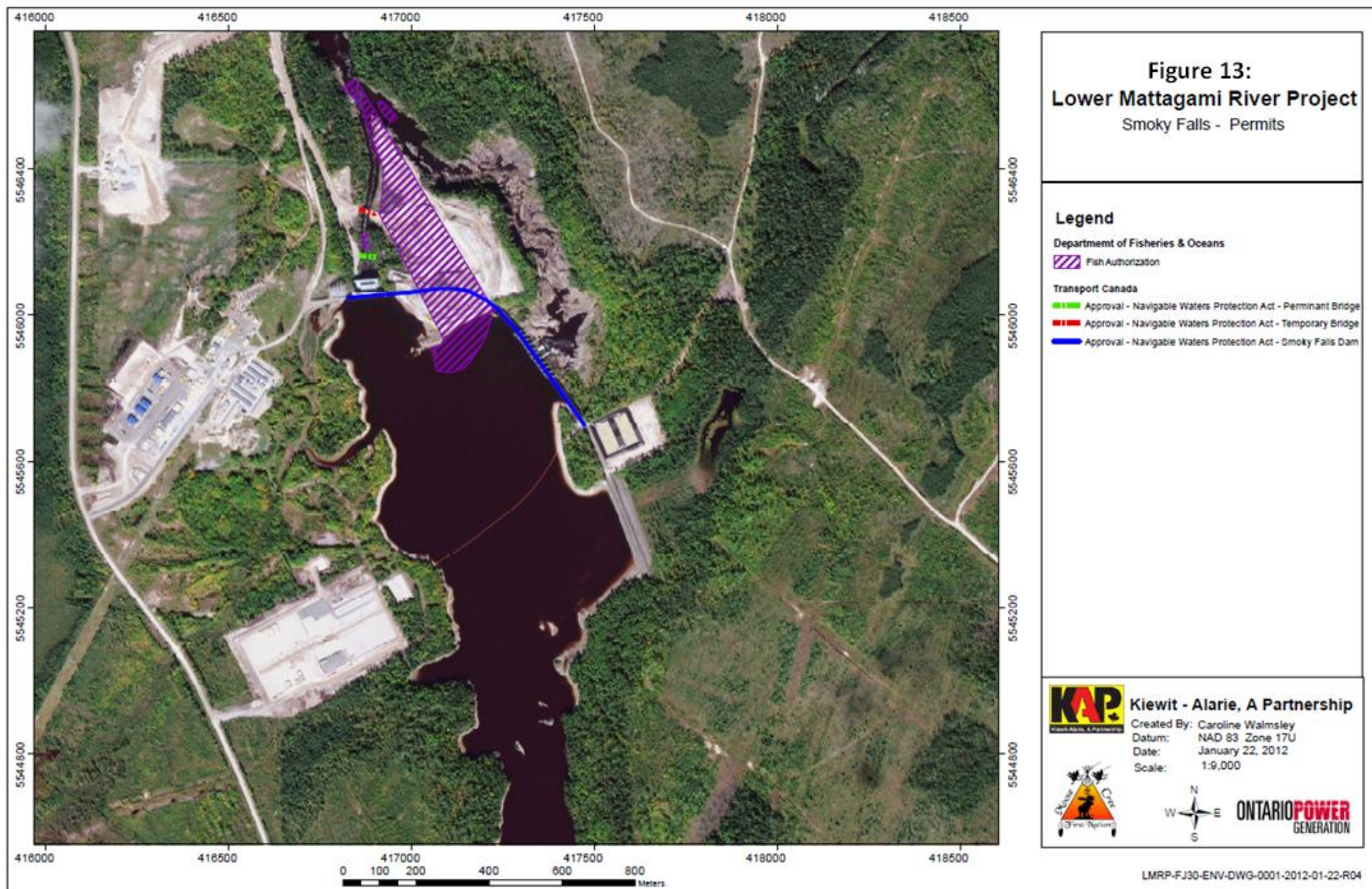
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Issues and Concerns

- The members of the EWG still had concerns with the potential for bear mortalities before other mitigation measures were exhausted.

Action required: KAP to follow process provided by MCFN that included the readjustment of traps, and the introduction of using rubber bullets before shooting of bears was to occur.

- The MCFN members of the EWG had concerns with pipe insulation leftover at the Kipling Sediment Pond area.

Action required: KAP to ensure all pipes and pipe insulation are removed from the Kipling Sediment Pond area.