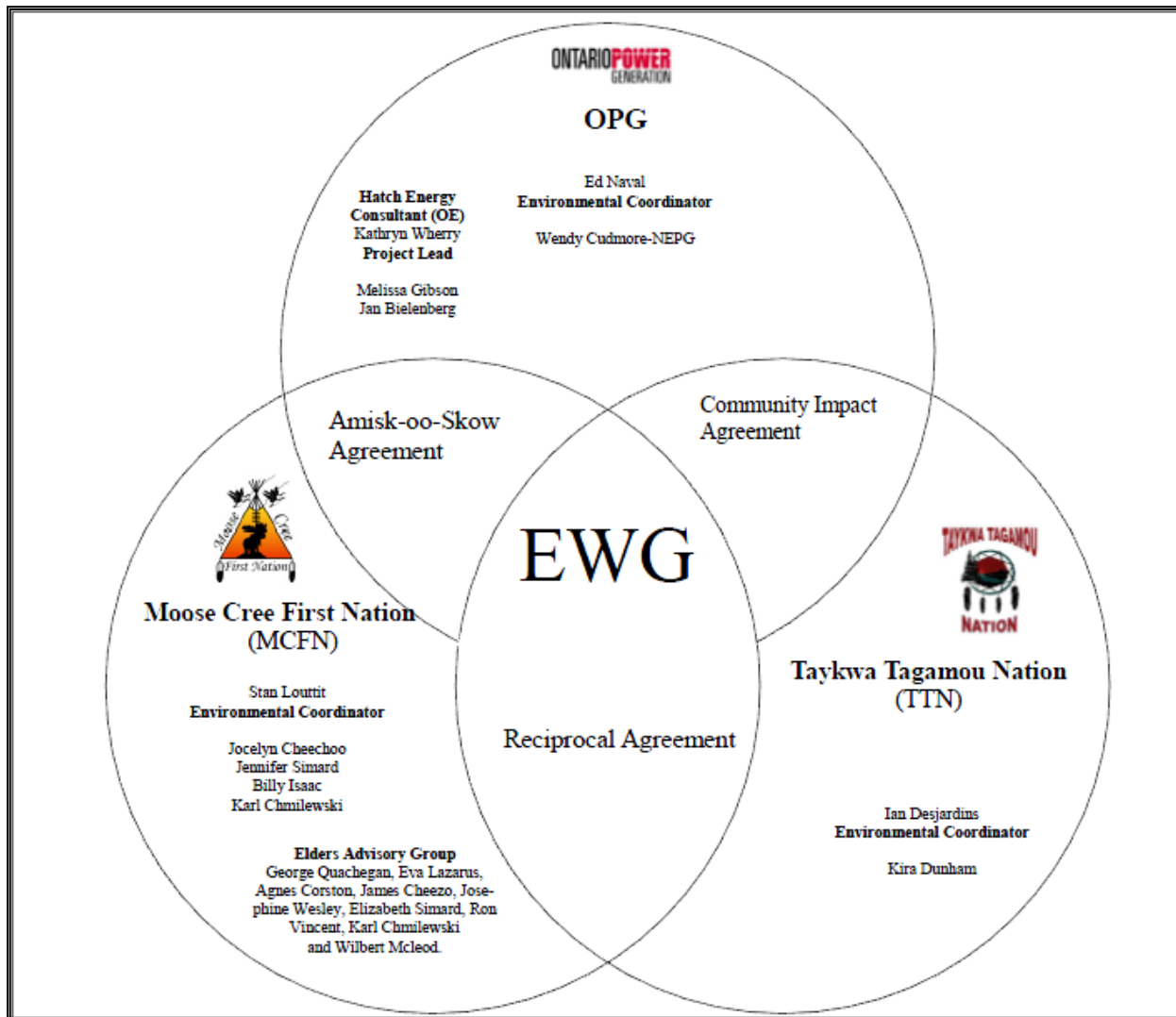


Environmental Working Group

Monthly Report



September 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 reviewed and commented on the draft Rock Management Plan.
- The EWG members finalized comments on the proposed LMRP Rehabilitation Plan for Little Long.
- The EWG members finalised their audit findings from June 30 to submit to Hatch for the final audit report.
- On September 25, 2014, 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 outstanding action items that have to be completed, as well the draft first chapter.
- 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 have started reading articles that relate to TEK and/or hydroelectric development. The first article read was entitled "Integrating Traditional Ecological Knowledge and Management with Environmental Impact Assessment", written by R.E. Johannes.

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"												TBD
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 or articles (Doc: The Reel Injun, Cree Hunters of the Mistassini and Watermark).													
Completed:  Pending:  *Additional work still required to fulfill EA Term and Condition													

Construction

Little Long

- KAP electricians pulled, dressed, and terminated power and control cables from TSS1 and TSS2 to the auto transfer switch for the Adam Creek power feed.
- KAP continued to work on closing out punch list items.
 - KAP electricians grounded the tailrace fences.
 - KAP earthworks performed grade corrections on the east earth dam as requested by OPG.



Figure 1: Little Long Unit 3

Harmon (Figure 2)

- KAP worked on closing out punch list items.
 - KAP millwrights reinstalled the tiller hoist motor for the draft tube hoist that had been sent off-site for repairs.
 - Polyurethane grout injections are ongoing on the powerhouse east wall, the generator floor, and the HPU piping trench.
 - KAP electricians troubleshoot grounding issues on the IPB enclosure.
 - Andritz performed vibration testing on Unit 3 to manually adjust air admission in order to find the lowest vibration measurements and then input them into the HEMI controls for automation.
 - Extel electricians worked to repair a fibre optic cable that was damaged during demobilization.
- Subcontractor HPPE arrived on site and started setting up their equipment in order to do performance testing on Unit 3.

- Draft tube stop log #2 jammed during installation, creating a short delay in the start of performance testing. The stop log was successfully freed and the minor damage that was identified upon removal of the stop log was repaired.
- Harmon was declared in-service on June 3rd, 2014, three months ahead of the target in-service date.



Figure 2: Harmon overview

Kipling

- Andritz removed materials from the draft tube, cleaned up and removed tool boxes and tools from Unit 3 and the area between Units 1 and 2 to the Service Bay.
- Andritz electricians installed instrumentation for wet commissioning and testing.
- KAP ironworkers installed the new bull and pinion gear in the intake gate house.
- KAP welded the replaced intake bearing plates and grouted behind the repaired gate guides and bearing plates.
- KAP's civil crew poured the grout for the bases of the tailrace storage racks.
- KAP electricians installed cables and terminated them at lighting control panels and the lighting distribution panel in the mezzanine.
- KAP installed insulation and collars on the IPB and IPB floor plates in the mezzanine.
- KAP initiated work related to backfill of the remaining cofferdam and the marine pad removal (Figure 3). Work put on hold until next available spillway outage in October.
- It is forecasted that Kipling Unit 3 will be declared in service in December 2014.



Figure 3: Kipling Cofferdam Backfill Operation

Smoky Falls

- With construction on all the generating units complete, Alstom worked with KAP and OPG to commission them. They have completed the following tasks:
 - The Unit 1 demonstration testing and trial run were completed, and Unit 1 was declared in-service on September 30th.
 - At Unit 2, wet testing and demonstration testing were completed. At month end the Unit was starting its trial run.
 - At Unit 3, construction was completed and wet testing started mid-month. A minor delay was incurred as a result of shaft seal leakage.
- BOP Mechanical and Electrical installation and architectural work throughout the powerhouse continued to progress.
- Concrete poured for East Access road (Figure 4)
- Sediment pond removed (Figure 5).
- It is forecasted that the in service date for Unit 3 will be in December for Unit 3.



Figure 4: Smoky Falls East Access Road



Figure 5: Smoky Falls sediment pond removal

Monthly Summary – September 2014

SPILLS			
No. of Spills:		7; Spill Reports 459-465 (see Figure 6 for LMRP spills breakdown).	
Classification of Spills:		<u>KAP Project Classification</u> Minor – 7 Moderate – 0 Major – 0 To Water - 0 <u>MOE Classification</u> Non-reportable - 7 Reportable to MOE <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	n/a	n/a	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.

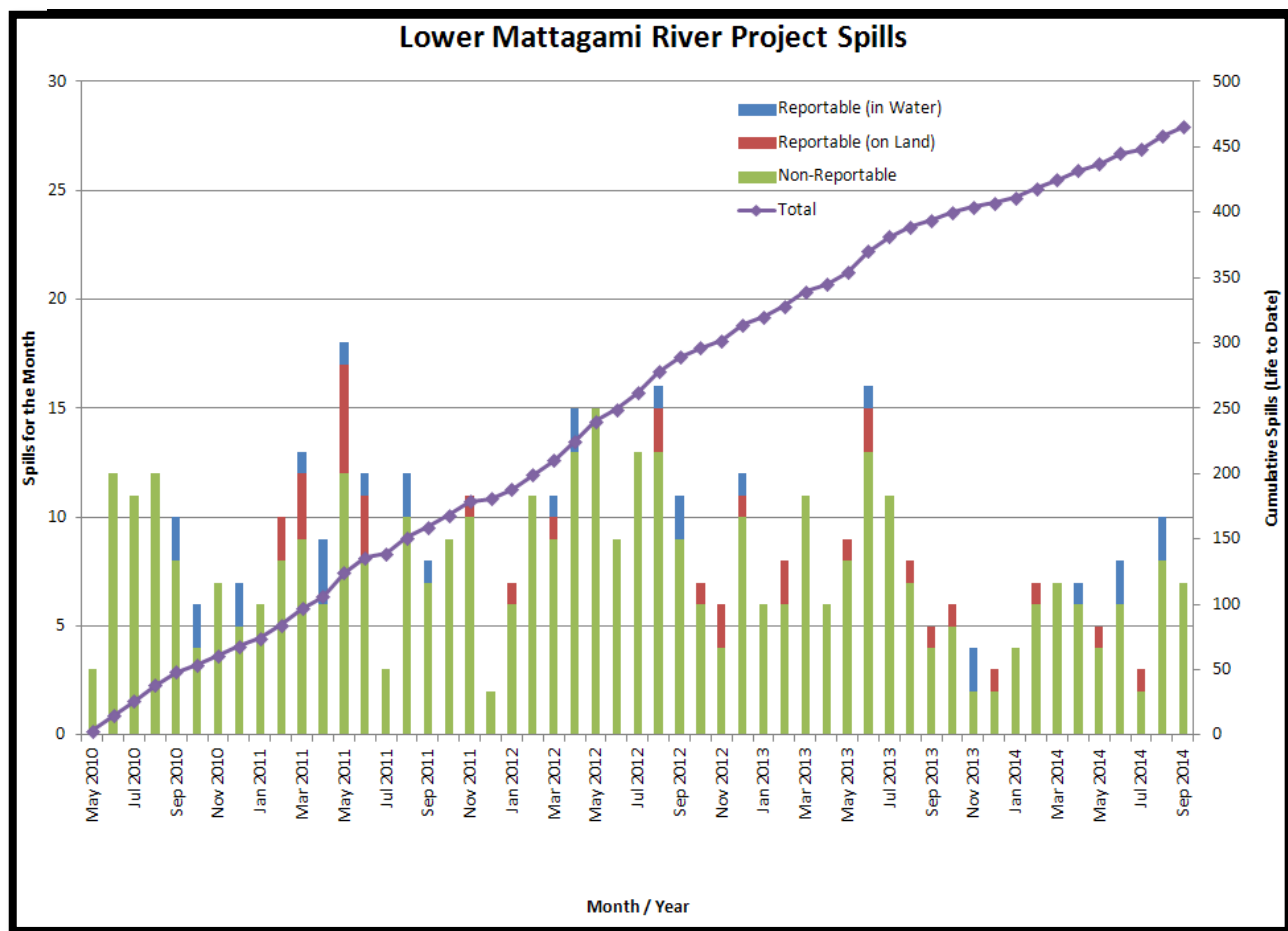


Figure 6: Lower Mattagami River Project spills

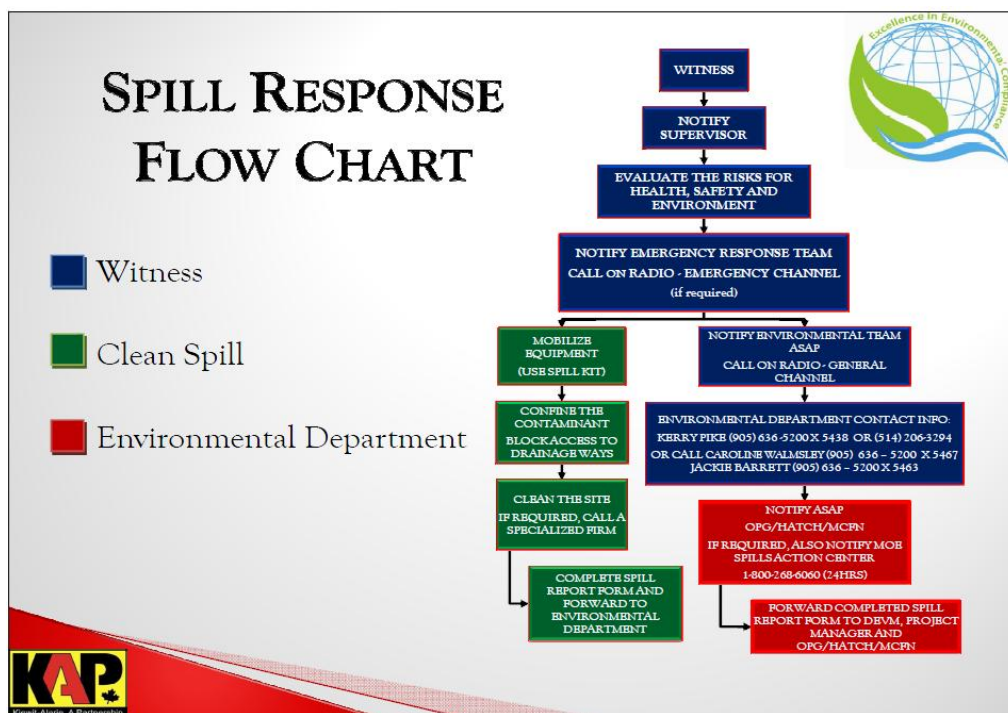


Figure 7: KAP Spills Response Flowchart

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



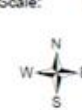
Kiewit - Alarie, A Partnership

Created By: Caroline Walmsley

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Date: January 19, 2012

Scale: 1: 5,500



ONTARIO POWER
GENERATION

0 100 200 400
Meters

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

Datum: Zone 17U

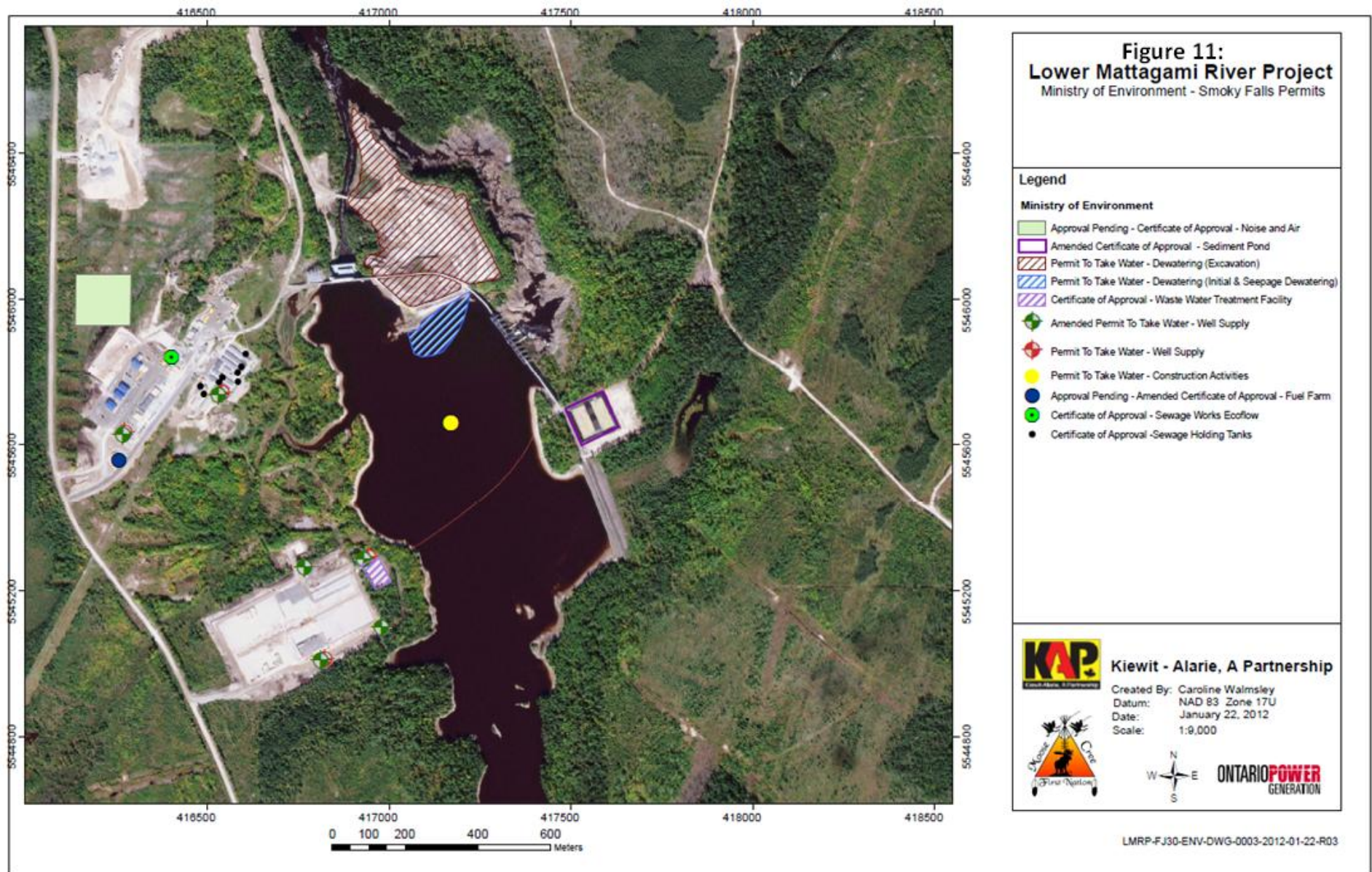
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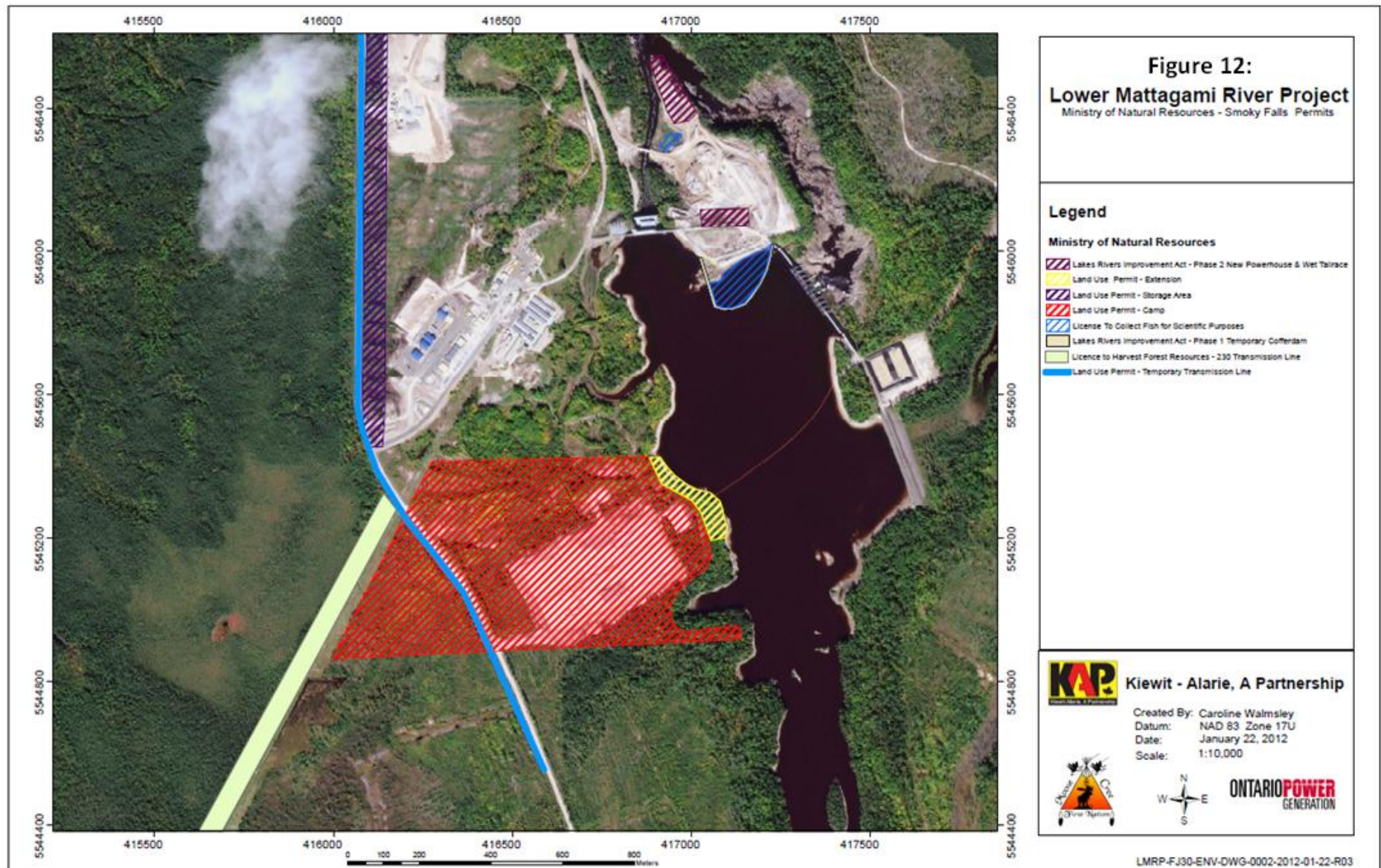
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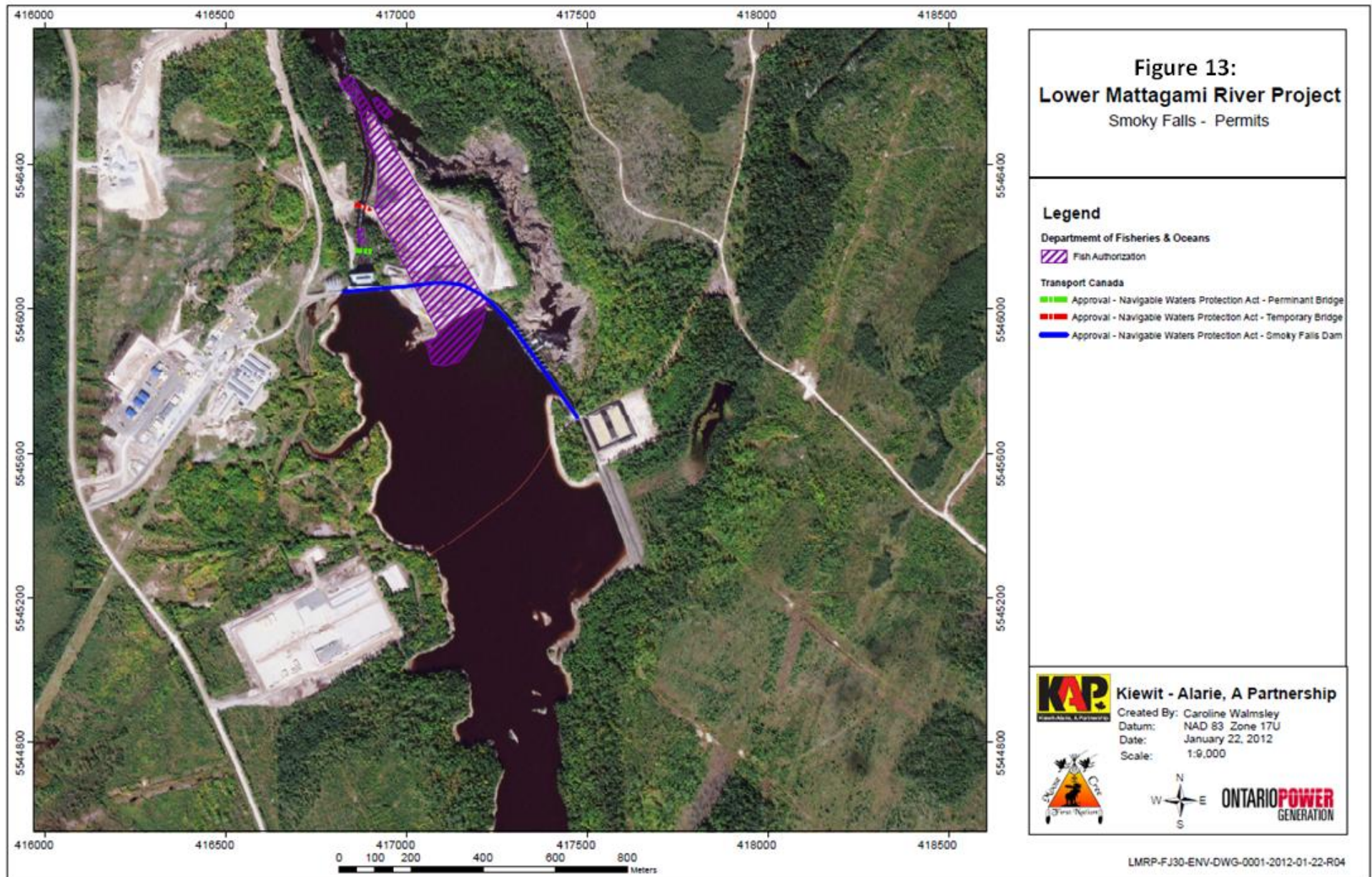


ONTARIO POWER
GENERATION

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







Issues and Concerns
<ul style="list-style-type: none">• The MCFN members of the EWG had concerns with garbage in the river along the shore (booms and turbidity curtains). <p>Action required: EWG concerns communicated to KAP. KAP to ensure all debris/turbidity curtains/booms are removed as soon as possible.</p>