

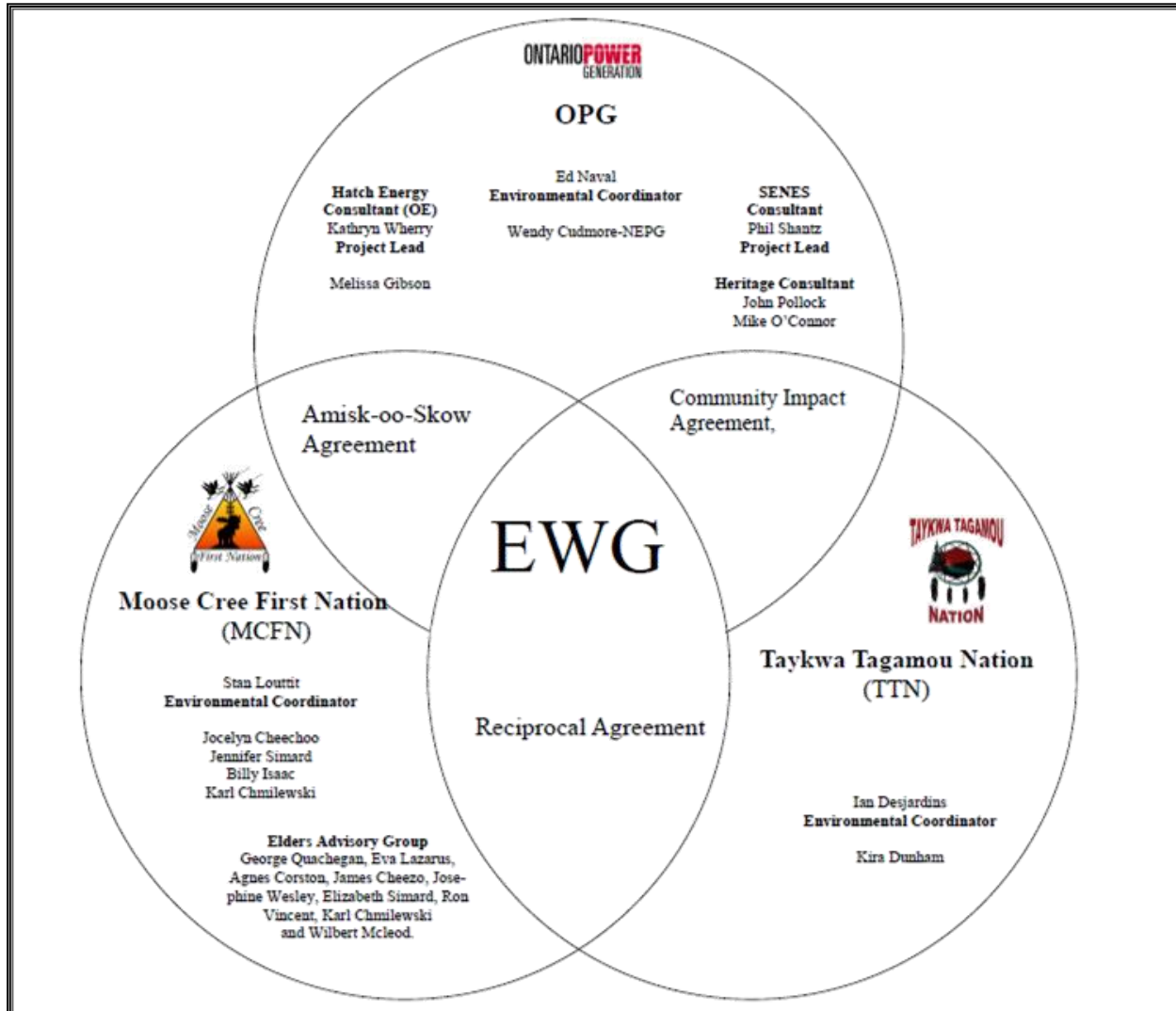
Environmental Working Group

Monthly Report

November 2012

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.
- 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.
- MCFN and TTN members of the EWG hold weekly Traditional Ecological Knowledge (TEK) meetings to develop TEK monitoring plan as component of Environmental Effects Monitoring Plan and to address term and condition 13 - Aboriginal Knowledge.
- Review and collection of baseline reports intended to fulfill EA Term and Condition 4b is ongoing.
- Reviews of the Terrestrial Habitat Restoration Downstream of Kipling report intended to fulfill EA Term and Condition 5b is ongoing. The report is being amended to include the comments received to date from OPG and TTN on the report. As part of the EWG review process, the Hatch authors will present their work to the EWG as soon as possible.
- 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. Access to review progress on the book, which is posted on a private blog, was offered to the MECC in October.
- Hatch members of the EWG have been incorporating comments on the final draft of the EWG Environmental Due Diligence Audit held in July 2012.
- On November 14 and 15, 2012, the EWG held a two day workshop to determine what baseline parameters are required for the baseline/monitoring EA Terms and Conditions, and how can TEK be taken into consideration within these conditions. The workshop was facilitated by LURA Consulting (EWG Team Building), and in addition to the members of the EWG (including Hatch) the workshop included MECC Experts Larry Onisto and Alex Litvinov, OPG Fisheries Biologist Dan Gibson, and TEK experts Richard Preston and Paul Wilkinson. Overall the workshop was successful in achieving its objectives.
- The EWG presented the results of the baseline and TEK workshop to the MECC, and the MECC accepted the recommendation. The EWG has started work on collecting additional baseline information and implementing the recommendations to incorporate TEK within the Baseline/monitoring EA Terms and Conditions.

ACTIONS TO BE COMPLETED in 2012

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
EA Terms and Conditions Environmental Compliance Plan – EWG Review and Submission to MECC.												

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
EWG Environmental Due Diligence Audit #2												
EWG present to the MECC the result of its review of the LMRP "Operations Report" (Condition 4(a) of EA T&Cs).												
EWG present to the MECC the result of its review of the "Fish Habitat Assessment Report", and "Baseline Fish Methyl Mercury Report" (Condition 4b of EA T&Cs) by Hatch*.												
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 the "Waste Management Plan" (EA T&C 19).												
EWG present to the MECC "The Noise Protocol Plan" (Condition 18 of EA T&Cs).												
EWG present to the MECC "Environmental Monitoring Plan, Lower Mattagami Development" (EA T&C 14).												TBD
EWG present to the MECC the "Erosion Monitoring Plan" (EA T&C 6).												TBD
EWG present to the MECC the "Evaluation of the Need to Conduct Terrestrial Habitat Restoration Downstream of Kipling" (EA T&C 5)*.												
Draft of Traditional Ecological Knowledge in relation to the Lower Mattagami River Project*.												
EWG present to the MECC the results and recommendations of periodic re-evaluations (Condition 10 of EA T&Cs).												TBD
Completed:  Pending:  *Additional work still required to fulfill EA Term and Condition												

Construction

Little Long

- As noted last month concrete work is nearing completion, with only small pours remaining to complete that phase of the work. 4 m³ of concrete was poured this month, bringing the total poured to date to 13,267 m³ of 13,886 m³ total, against a plan of 13,611 m³.
- The foam insulation and outer cladding installation are complete for both the north and east walls of the powerhouse (Figure 1). Canam continues to waterproof the Unit 3 powerhouse roof.
- Adjustments to and the survey of the bottom ring / discharge ring / draft tube liner assembly is complete. The final survey has confirmed that the assembly meets the required specifications.
- KAP workers have completed the erection of the formwork required for the secondary concrete to be poured in the area between the bottom of the draft tube liner and the bottom part of the stay ring. All rebar and tie anchors have been installed and the pour is scheduled for early December.
- AFI workers have completed the installation of the intake gate roller path and side guides. They are also working on the erection of the draft tube gate hoist superstructure on the Unit 3 tailrace deck.
- KAP electricians have completed the installation of the three superimposed cable trays required for the 13.8 kV Unit 3 power cables, and 600 V and 125 V DC distribution cables.
- Subcontractor Northern Fencing has installed the fence around the new switchyard.
- Removal of the cofferdam continues. All blasting to remove Cell 2 and Cell 3 tremie concrete is complete and clamming of the blasted concrete is under way. Cell 2 spud pile removal is nearing completion. The template for Cell 1 removal has been partially assembled on the barge.



Figure 1: Little Long East Wall Outside Cladding

Harmon

- 1,132 m³ of concrete was poured this month, bringing the total poured to date to 10,227 m³ of 12,251 m³ total, against a plan of 8,787 m³.
- KAP has completed concrete repairs on the West wall of the penstock. Scaffolding is being relocated to the East wall for repairs there.
- The first scroll case soffit pour was completed (1,103 m³). Formwork, embedded piping, shoring tower, and rebar installation for the second scroll case soffit is advancing. The second soffit pour is planned for December 1st (Figure 2).

- Andritz have mobilized the self-leveling milling machine required for machining the stay ring. Staff required for that activity will be arriving on site in December. Scaffolding was erected in the draft tube to support the stay ring machining operation.
- A temporary insulated wall and other winter measures were put in place in the existing south gallery of the powerhouse to protect existing utilities. This was required to remove the block wall required for the extension of the gallery. Once the winter measures were put in place, the demolition of the block wall was completed.



Figure 2: Harmon Generator Floor Pour

Kipling

- 1,109 m³ of structural concrete was poured this month, bringing the total poured to date to 4,294 m³ of 11,647 m³ total, against a baseline plan of 8,500 m³.
- As the volume number indicates above, several large concrete pours were completed in the month. Rebar and formwork are under way for the next large powerhouse pour (Figure 3).
- Backfilling and landscaping in the switchyard continues.
- Installation of the new 15 kV bus bars continues.
- A joint walkdown between OPG/Hatch and KAP was held prior to testing the station disconnect switch and the stand-alone switch, and several items were added to the testing punch list. The new switch is planned to be transferred to OPG on December 13th. This activity is required to connect the existing units to the new Hydro One 230 kV circuit.



Figure 3: Kipling Powerhouse Overview

Smoky Falls

- 5,943 m³ of concrete was poured this month in the service bay, powerhouse, and intake areas, bringing the total poured to date to 81,124 m³ of 155,084 m³ total, against a plan of 81,930 m³.
- 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, East gravity dam (Figure 4), and at the permanent bridge. Twenty six (26) pours were completed during the month.
- Alstom has welded the anchors on the draft tube cone at Unit 1, and are fitting and welding the lower pit liner to the stay ring.
- Alstom also successfully completed the welding of the Unit 2 draft tube cone, and follow-up quality inspections revealed no welding defects.
- In the switchyard, drain piping was installed and backfilling was completed. Valard electricians are working on terminating the control wiring for the disconnect switches and the high voltage wiring for the current transformers.
- The steel superstructure erection over the Service Bay West is now enclosed and heated. Superm  tal workers are now working at erecting the superstructure over Units 1 and 2 and the station tailrace deck.
- Some operational testing of the 275-ton Kone crane was completed and a partial load test was successful, allowing KAP to turn over the crane to Alstom for their use in the service bay for assembly of stay rings, draft tube cones and other turbine embedded components.
- Sluiceway Gate 5 – A crack was identified in the east pier concrete. Rivard Engineering has provided a report and a repair method to KAP. AFI has started installing anchors for the new hoist control building.
- Valard has completed installing insulators and travelers on the tower structures. They are stringing cables between structures #6 and #15 of the transmission line. Dead-ends were installed at structure #15. Travelers were installed in preparation for stringing the transmission line between structures #6 and #4.



Figure 4: Smoky Falls Overview including Superstructure

Monthly Summary – November 2012

SPILLS			
No. of Spills:		6; Spill Reports 297-302 (see Figure 6 for LMRP spills breakdown).	
Classification of Spills:		<u>Project Classification</u> Minor – 3 Moderate – 2 Major –1 To Water - 0 <u>MOE Classification</u> Non-reportable - 4 Reportable to MOE <div>- Class C – 2 - Class B – 0 - Class A – 0</div>	
Reportable Spills			
No.	Quantity /Product Spilled	Spill Site	Reason for being Reportable
1	Sewage/7800 L	Smoky Falls – Main Camp Waste Water Treatment Plant	Reportable (due to quality and quantity). A routine check of the waste water treatment plant by camp maintenance identified a large pool of water on the pad and noticed it was coming from the pump lift station. It was determined that although the high level alarm did function the level switch for the pump did not activate the pump. An audible alarm and light will be installed that will be triggered once the high level alarm is activated. An automated dialer will also be installed to notify the plant operator, OCWA, in the event of a high level alarm. KAP Electrical Department will investigate the cause of the electrical malfunction and replace circuit board if required.
2	Citric Acid/Between 10 – 20L	Harmon – Sediment Pond	Reportable (due to quantity). The valve on the citric acid tote located next to the sediment pond was observed to be leaking/spraying acid onto the ground. The valve and pipe on the tote was replaced with a new one and the secondary containment was adjusted to ensure the valve was underneath the containment.
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)			MOE Classification 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	
1 (Nov. 5)	Smoky Falls	On November 5, 2012 indicated that the Smoky Falls sediment pond was slightly above the 30 NTU objective with a reading of 30.3 NTU. The increase in turbidity was the result of large amounts of rain.	

2 (Oct. 29*, Nov. 12) *This was not reported until Nov.	Kipling	<p>Samples collected on Oct 29 for the Kipling sediment pond were above the 15mg/L effluent objective and the 25 mg/L effluent limit, with a reading of 55mg/L. The increase was due to the washing out of the ditch which the sediment pond was discharging into. On October 29, 2012 the discharge pipe was extended to the river and by the afternoon the sediment pond was directly discharging to the river. Notification was made on Nov 4.</p> <p>On November 12, the pH levels were above the C of A effluent objective (6.5 – 8.5), with a reading of 8.84pH. KAP added citric acid to the pond as a corrective measure to help decrease the pH levels. The increase in pH level was a result of the washing of the green-cut that occurred during the night and early this morning.</p>
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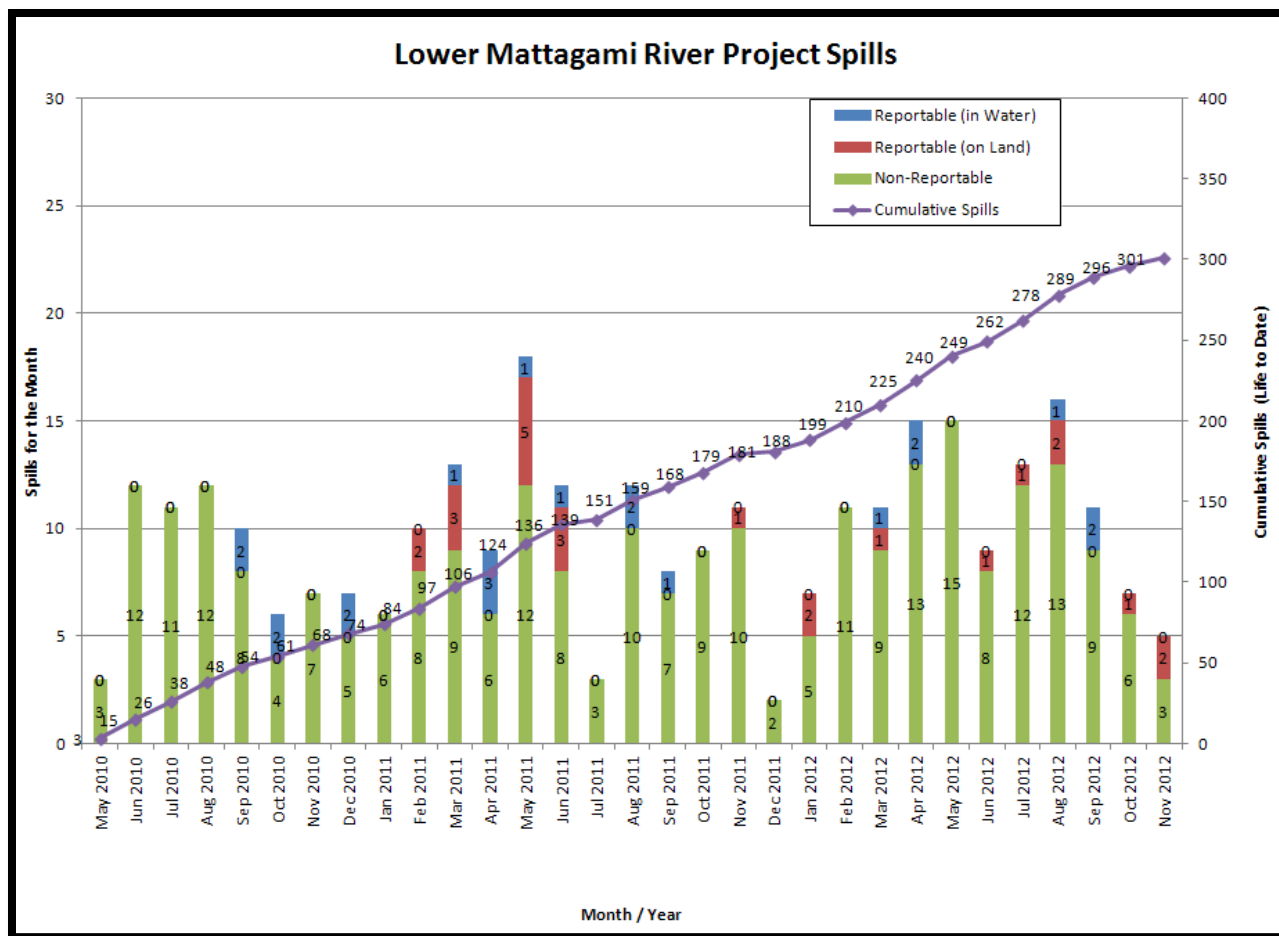


Figure 6: Lower Mattagami River Project spills

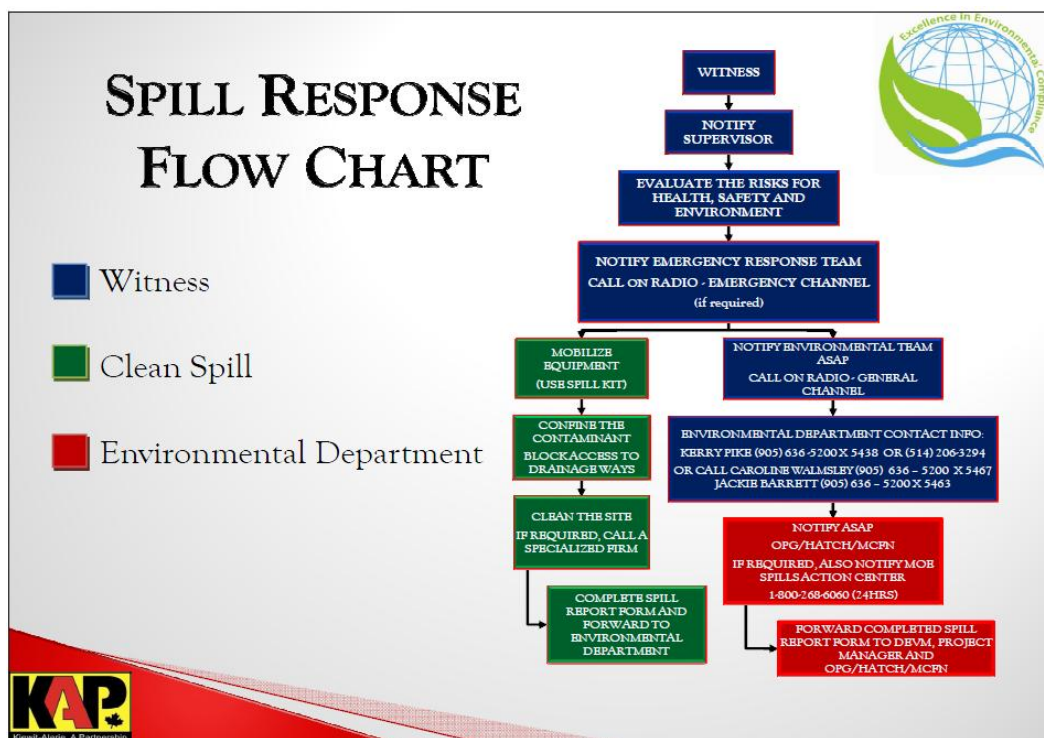


Figure 7: KAP Spills Response Flowchart

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: <ul style="list-style-type: none"> • 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
No. Review Completed	4	List:	<ul style="list-style-type: none"> • 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.			



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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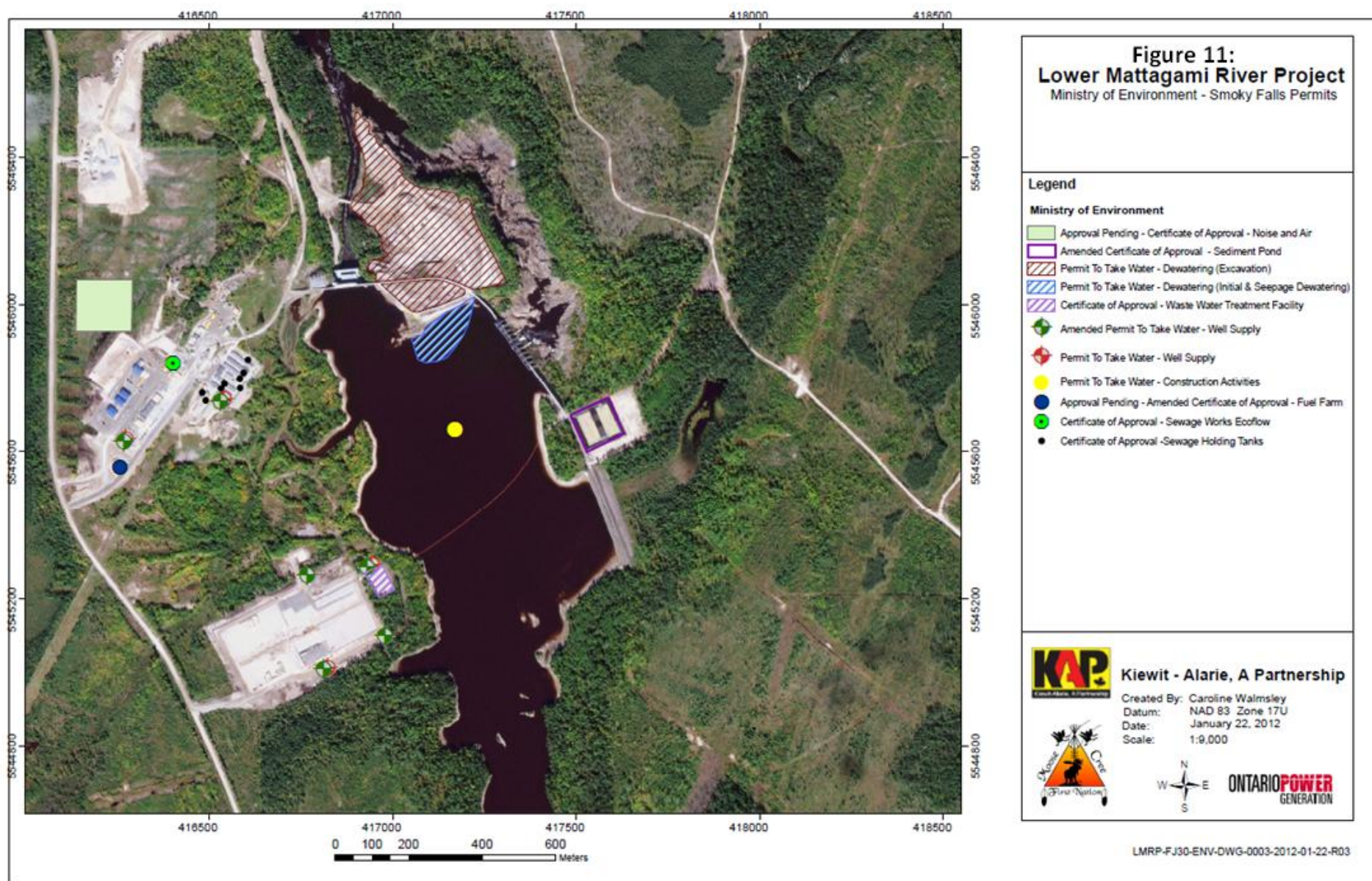


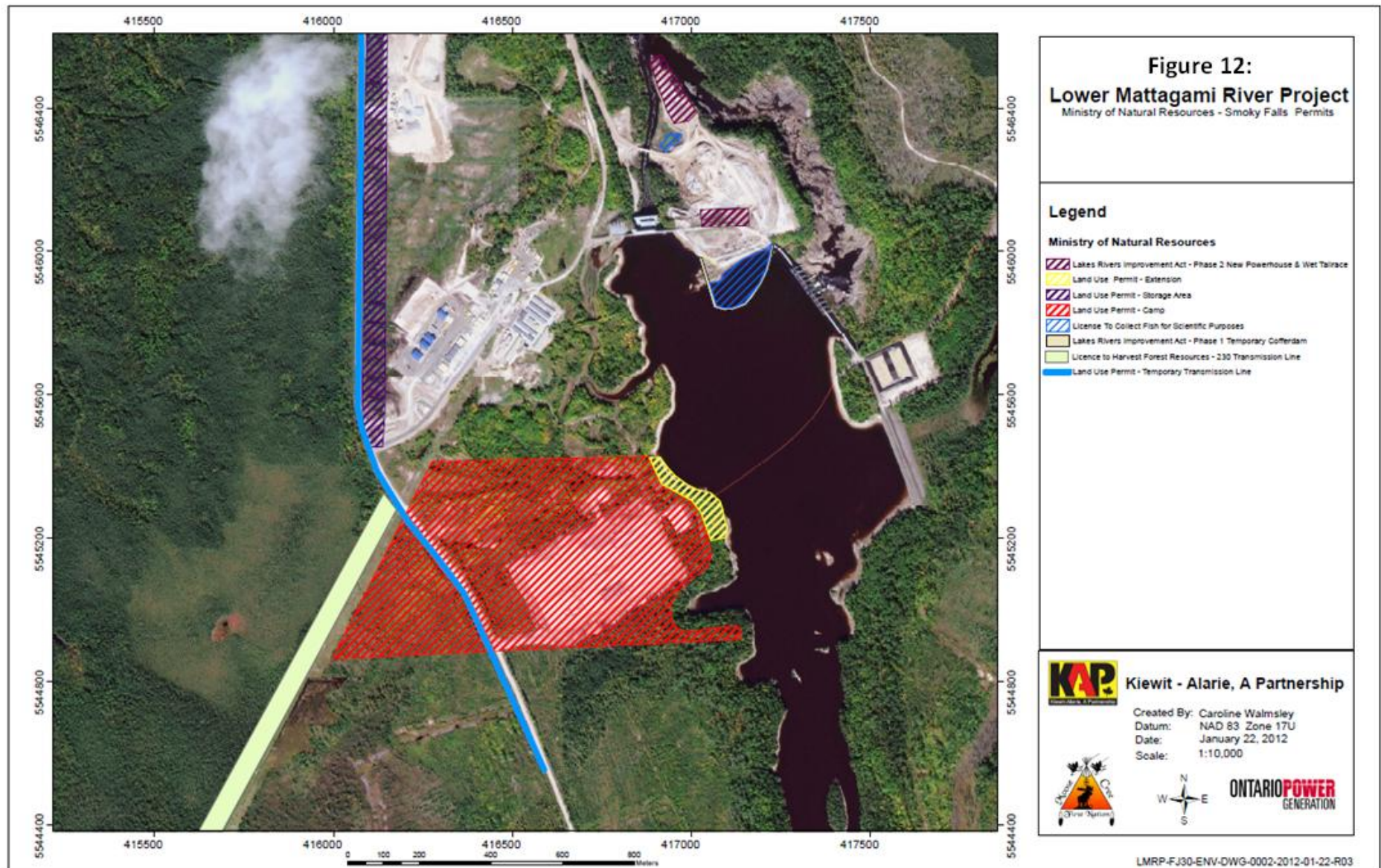
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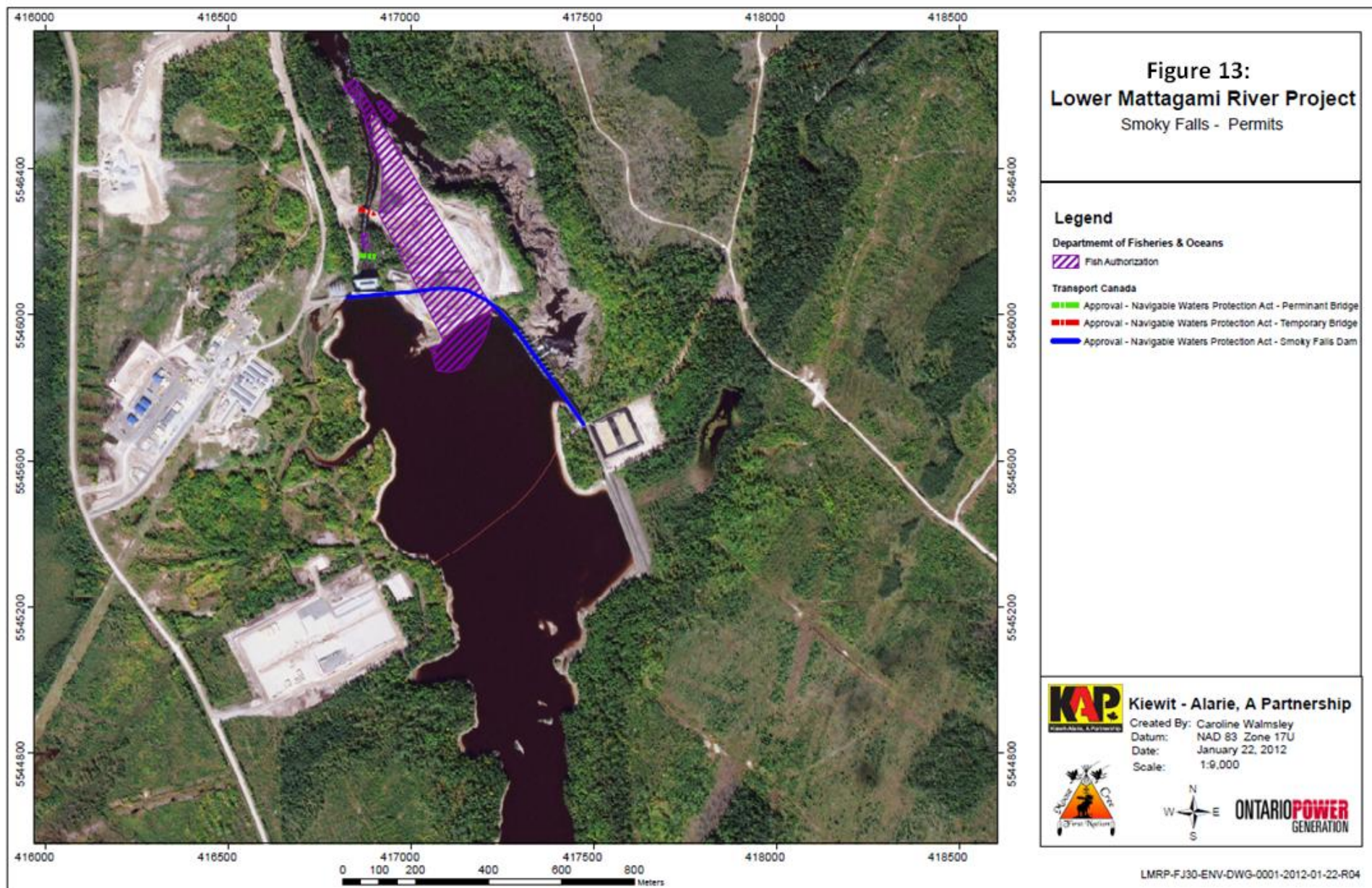
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Issues and Concerns

- During the Baseline/TEK Workshop held in November 2012, concerns were brought forth by MCFN and TTN members of the EWG regarding the inadequate incorporation of TEK within the LMRP. The underlying issue was that the baseline studies were designed without FN input as was directed by the EA terms and conditions. The workshop resulted in all EWG members acknowledging this problem and identifying the need to conduct additional extensive studies which were identified, as well as focussed workshops with the First Nations on various terms and conditions and the need to improve the EWG understanding of TEK. Additional baseline parameters were identified for the baseline/monitoring EA Terms and Conditions, and recommendations were brought forward on how TEK can be taken into consideration within these conditions.

Action: Implement the recommendations from the Baseline/TEK workshop held in November 2012, and continue to pursue ways to incorporate TEK within studies, monitoring and other activities in relation to the LMRP (ex. additional workshops).