

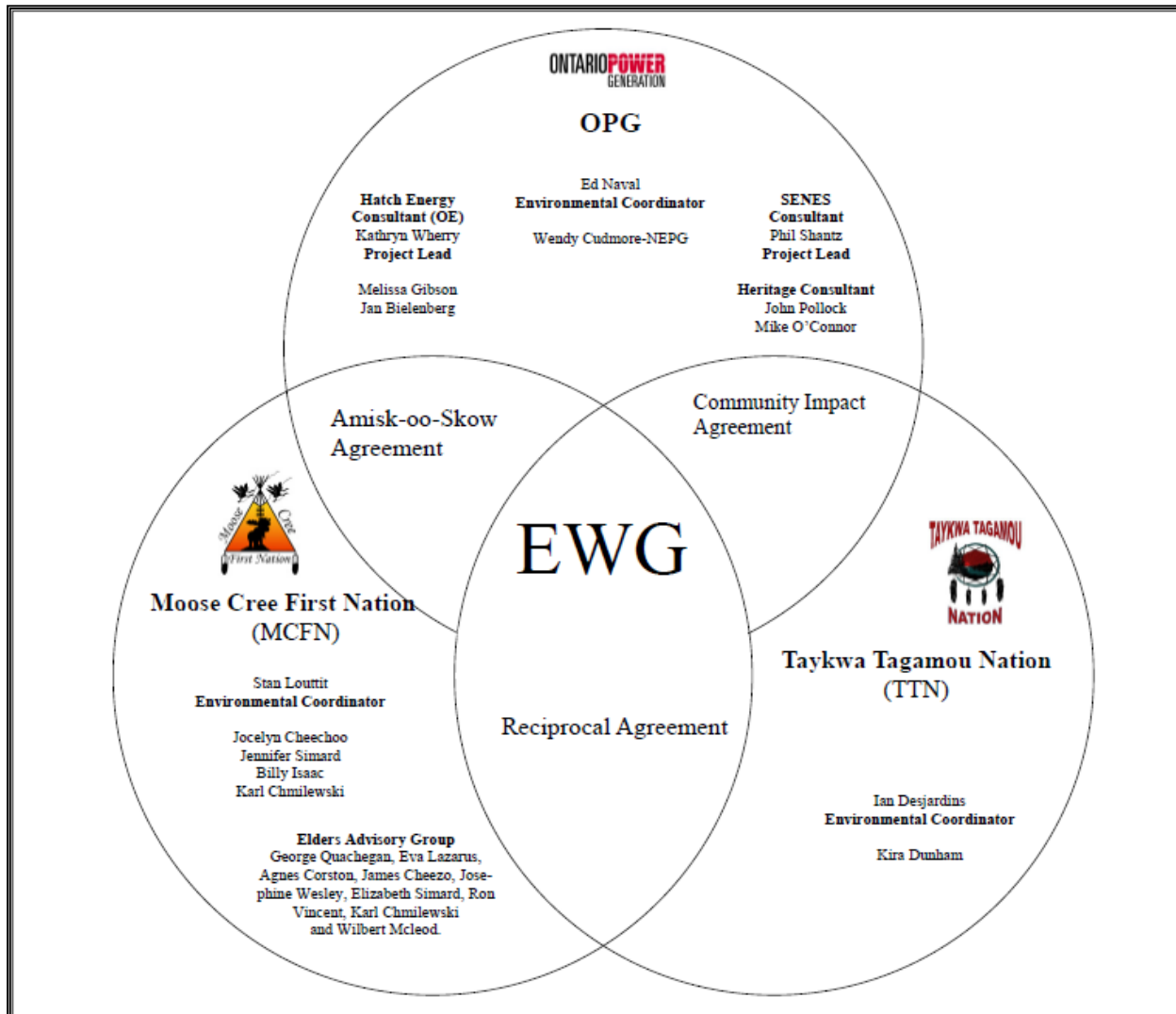
Environmental Working Group

Monthly Report

February 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.
- The EWG started planning for a TEK Workshop that will be held in March, this included presenting to the MECC and gaining acceptance to move forward from the MECC. The TEK workshop is a follow-up to the previous Environmental Effects Monitoring Workshop (Nov. 2011) and Baseline/TEK Workshop (Nov. 2012).
- The members of the EWG also worked with KAP to improve the Erosion, Sedimentation Control Plan proposed for the new Kipling Cofferdam.
- 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.
- 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 EWG continues to work on collecting additional baseline information and implementing 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 the book by Fikret Burkes, "Sacred Ecology". There is a discussion during the EWG weekly call to discuss each chapter as reading progresses. As of the end of February, the EWG has read 9 out of 12 chapters.

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

Construction

General

- There were approximately 1,000 people in the camp this month. The permanent camp is near capacity. KAP completed relocating two dorms from the temporary camp and has set them up at the permanent camp, which will bring the total camp capacity to approximately 1,200 people. At this time one of the two dorms is occupied.
- Periodic extreme cold weather slowed work down as KAP was unable to use the tower cranes from time to time throughout the month.

Little Long

- CanAm continues to install architectural cladding (the transformer splash wall and the south parapet wall). They have also installed vent lines through the downstream powerhouse wall (Figure 1).
- Andritz workers completed the assembly of the G3 runner in the Service Bay. At month-end they were removing lifting lug stubs and machining the hub. Balancing was attempted, but it was discovered that an error during the initial machining had occurred so further machining was deemed necessary.
- Andritz continues to install top bars in the stator core, and high potential testing is advancing. Stator winding and installation of permanent wedging in the stator continues.
- Andritz has started assembling the rotor in the Service Bay.
- PowerTel continues to erect the 230 kV transmission tower structure, revenue current transformers, and the disconnect switch. They are also preparing to install the transmission line at the disconnect switchyard.
- AFI workers continue working on the tailrace hoist bus bar, crane rails, and the follower.
- KAP electricians continue the installation of the superimposed cable trays required for the 600 V / 208 V / 125 V DC distribution cables on the south side of the powerhouse, and have started pulling cables on the trays.
- The installation of fire protection and intrusion alarm systems in Unit 3 continues.
- Teleprotection system testing is ongoing. A joint walkdown between KAP, OPG, and Hatch occurred during the week ending March 1st. No significant issues were identified.



Figure 1: Little Long Power House

Harmon

- 150 m³ of concrete was poured this month, bringing the total poured to date to 10,986 m³ of 12,251 m³ total, against a plan of 9,658 m³.
- KAP has completed removing the shoring towers and formwork from the scroll case soffit pour. Concrete repairs inside the scroll case are progressing.
- Superm  tal is bolting and torquing superstructure steel members over Unit 3. They are also finalizing Q-decking placement and welding studs onto the Q-decking. CanAm has started installing the interior cladding (Figure 2).
- AFI hoisted the vertical gate guides and the lintel beams into place, and have started aligning them.
- AFI is also working on remedial work (installation of stainless steel overlays) to the intake gains.
- Andritz hoisted the draft tube liner sections into the pit, and has started welding draft tube liner sections together.
- The discharge ring and bottom ring components have been delivered to site and are being stored in the upper laydown area and service bay respectively.
- KAP electricians have started installing DC panels and cable trays in the telecommunication room. They are currently pulling cables for the teleprotection system.



Figure 2: G3 Pit and New Powerhouse wall

Kipling

- Unit 1 is running in "Speed No Load" to pass 65 cubic metres per second (CMS) downstream of Kipling, and to provide station service supply. Final approvals have been received for the new water retaining berm from the existing cofferdam to the west shore which will allow for dewatering the work area and restarting construction by late Spring 2013.
- Stockpiling of material for the water retaining berm is advancing. A pre-activity meeting (prior to construction) is scheduled for March 5th.
- KAP continues to control ice buildup in the lagoon using a bubbler system.
- Assembly of the Mammoeth 600 Ton crane is complete.
- H-piles were successfully driven into Cells 1 and 2 and the troll beam supports were installed on the H-piles.

- The bearing structure to support the troll beams on the Unit 2 tailrace deck was installed, bolted and grouted.
- The final troll beam components were delivered to site and assembled. KAP lifted them into place and tied to their supports (Figure 3).
- In the Mezzanine area, formwork and rebar installation are proceeding for a couple of pours.
- 50 m³ of concrete was poured for the last two wall sections of the Unit 3 intake.
- PowerTel has started grounding pedestals and 230 kV equipment in the switchyard.
- AFI has started remedial work on the intake gate guides for Unit 3.



Figure 3: Troll Beams to stabilize the Cell 3 concrete ring

Smoky Falls

- 1,899 m³ of concrete was poured this month in the service bay, powerhouse, and intake areas, bringing the total poured to date to 88,180 m³ of 155,084 m³ total, against a plan of 90,627 m³.
- At the end of the month, thirteen (13) concrete pours are in various stages of work (formwork started and/or rebar being installed) and progressing in the intake, powerhouse, East service bay, East gravity dam, and at the permanent bridge. Eleven (11) pours were completed during the month (Figure 4).
- Alstom continues to prepare Turbine/Generator components in the West Service Bay (WSB). They have completed the following tasks:
- The Unit 1 stator handling device has been assembled in the WSB. Removal of lifting lugs is in progress;
- The positioning of the sole plates on top of the secondary concrete pour around the draft tube cone was completed. The stay ring was installed and the area was turned over to KAP for rebar and formwork installation; and

- The Unit 3 upper pit liner was welded to the lower pit liner and stay ring assembly. Secondary draft tube concrete was poured around the draft tube cone and is curing. The stay ring assembly is scheduled to be installed in Unit 3 in early March.
- Superm tal workers completed the Q-decking for the tailrace deck at Unit 2, and then moved their staff to Harmon. CanAm continues to correct deficiencies in the roofing for the superstructure. Global Precast completed installation of the precast concrete panels at Unit 2 below the tailrace deck. KAP has installed tarpaulins over Unit 2 to provide a winter enclosure and is heating the area.
- Sluiceway Gate 5 – Secondary concrete was poured at the guides and roller paths. AFI have left the site on turn around while the concrete cures.
- 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.



Figure 4: Smoky Falls Overview including Superstructure

Monthly Summary – February 2013

SPILLS			
No. of Spills:		6; Spill Reports 321-328(see Figure 6 for LMRP spills breakdown).	
Classification of Spills:		<u>Project Classification</u> Minor – 5 Moderate – 3 Major – 0 To Water - 0 <u>MOE Classification</u> Non-reportable - 2 Reportable to MOE <div>- Class C – 6 - Class B – 0 - Class A – 0</div>	
Reportable Spills			
No.	Quantity /Product Spilled	Spill Site	Reason for being Reportable
1	15L / Glycol	Kipling – Cell #2	Reportable (on-land due to quantity). The ground heater was thawing the soil of cell # 2 of the cofferdam when a hose containing glycol broke. The workers were reminded to conduct thorough visual inspections.
2	56L/Hydraulic Oil	Kipling – Cofferdam Cell #2	Reportable (on-land due to quantity). The ground heater was being used to thaw the ground on cell # 2, when a labor walking by observed a hose leaking. The environmental department attended Kipling daily morning / evening PTI meetings to give a refresher on spill reporting and spill procedure.
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 <div><div>• Class C - Less Serious</div><div>• Class B – Serious</div><div>• Class A – Very Serious</div></div>
Sediment Pond Exceedance of Effluent Objective			
No. of Exceedance days recorded	Location	Mitigation Measures used	
0	n/a	n/a	

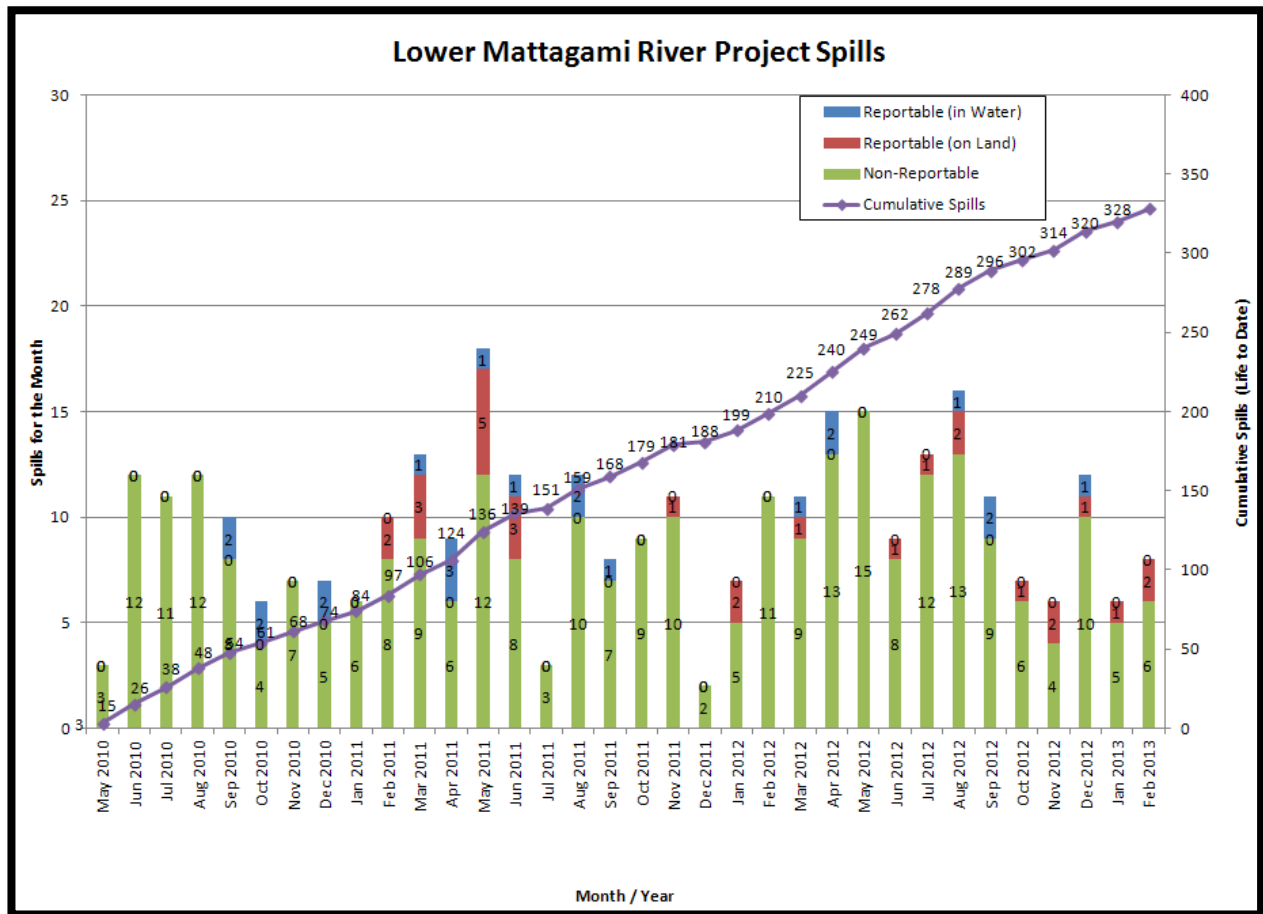


Figure 6: Lower Mattagami River Project spills

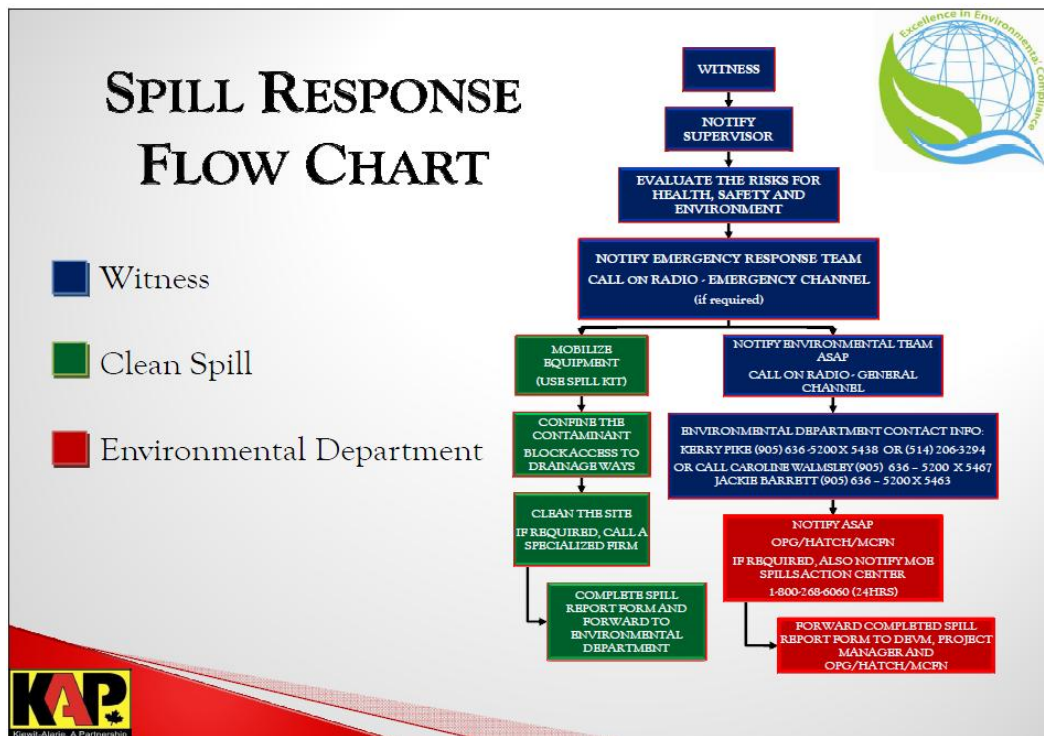


Figure 7: KAP Spills Response Flowchart

PERMIT AND APPROVAL REVIEW			
No. Reviewed:	0	List:	<ul style="list-style-type: none"> Kipling Cofferdam LRIA Approval
No. Sent to KAP:	0	List:	<ul style="list-style-type: none"> Kipling Cofferdam LRIA Approval
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 Draft Environmental Effects Monitoring Plan
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

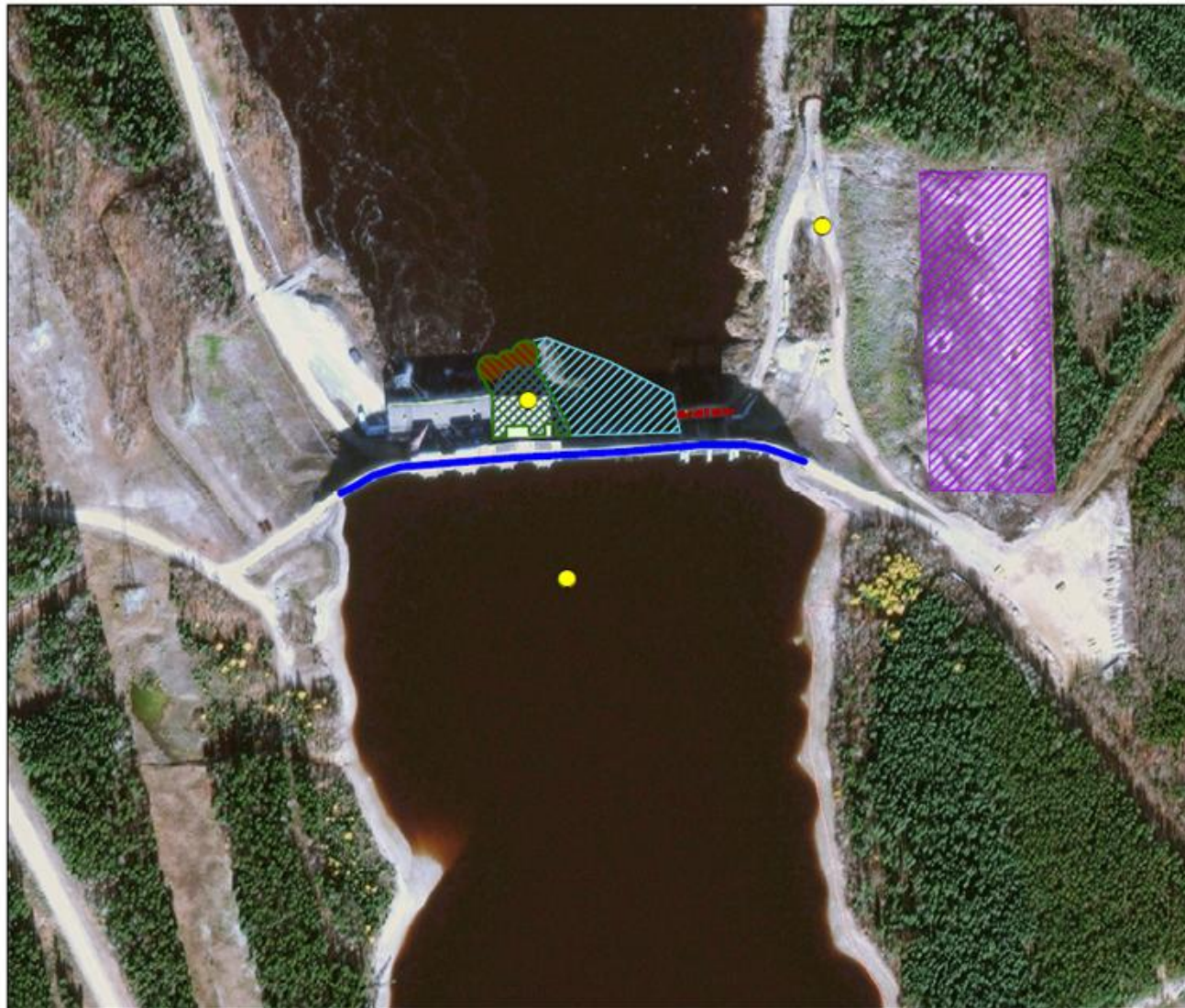
Ministry of Natural Resources

 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



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 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

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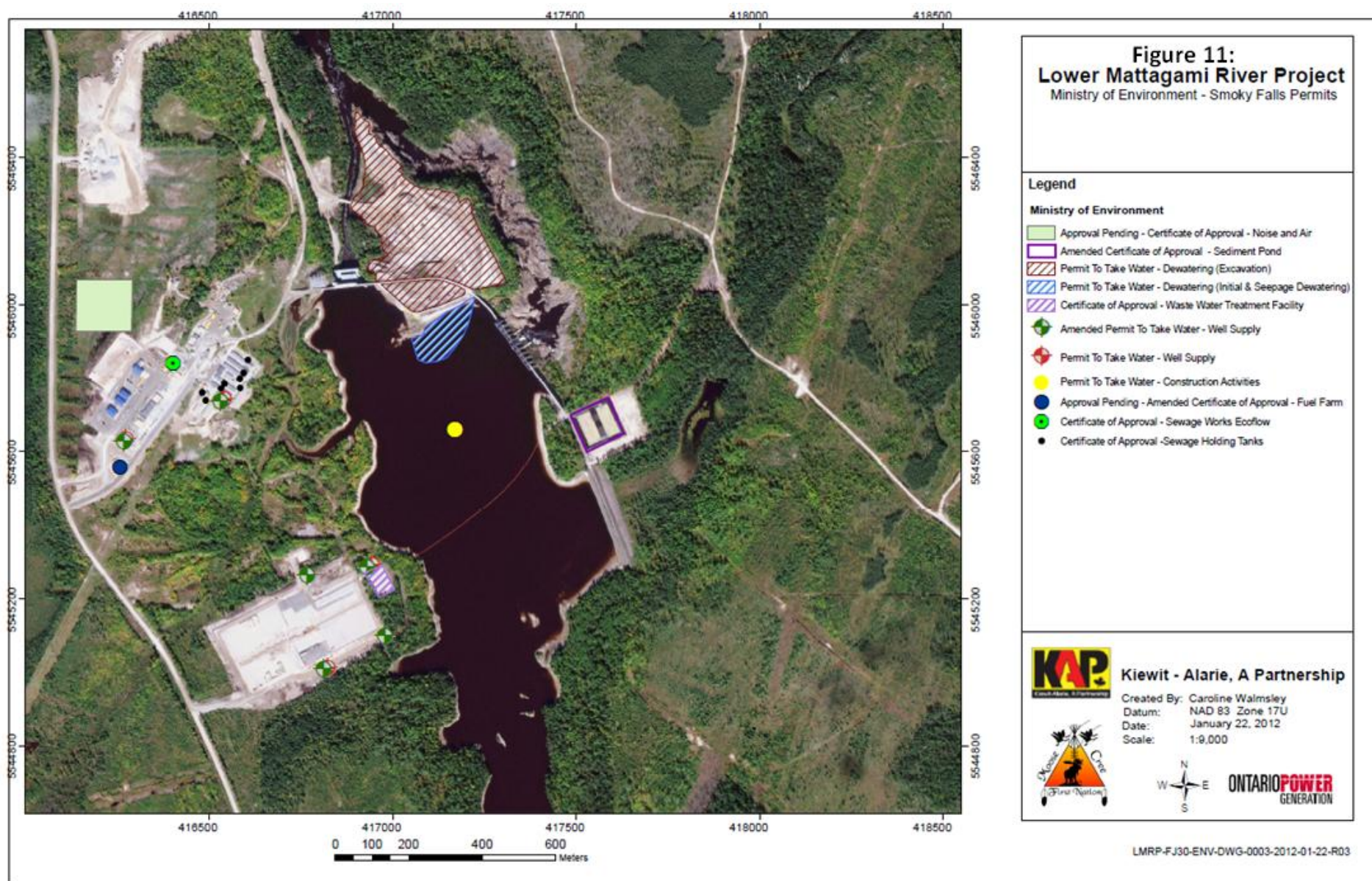
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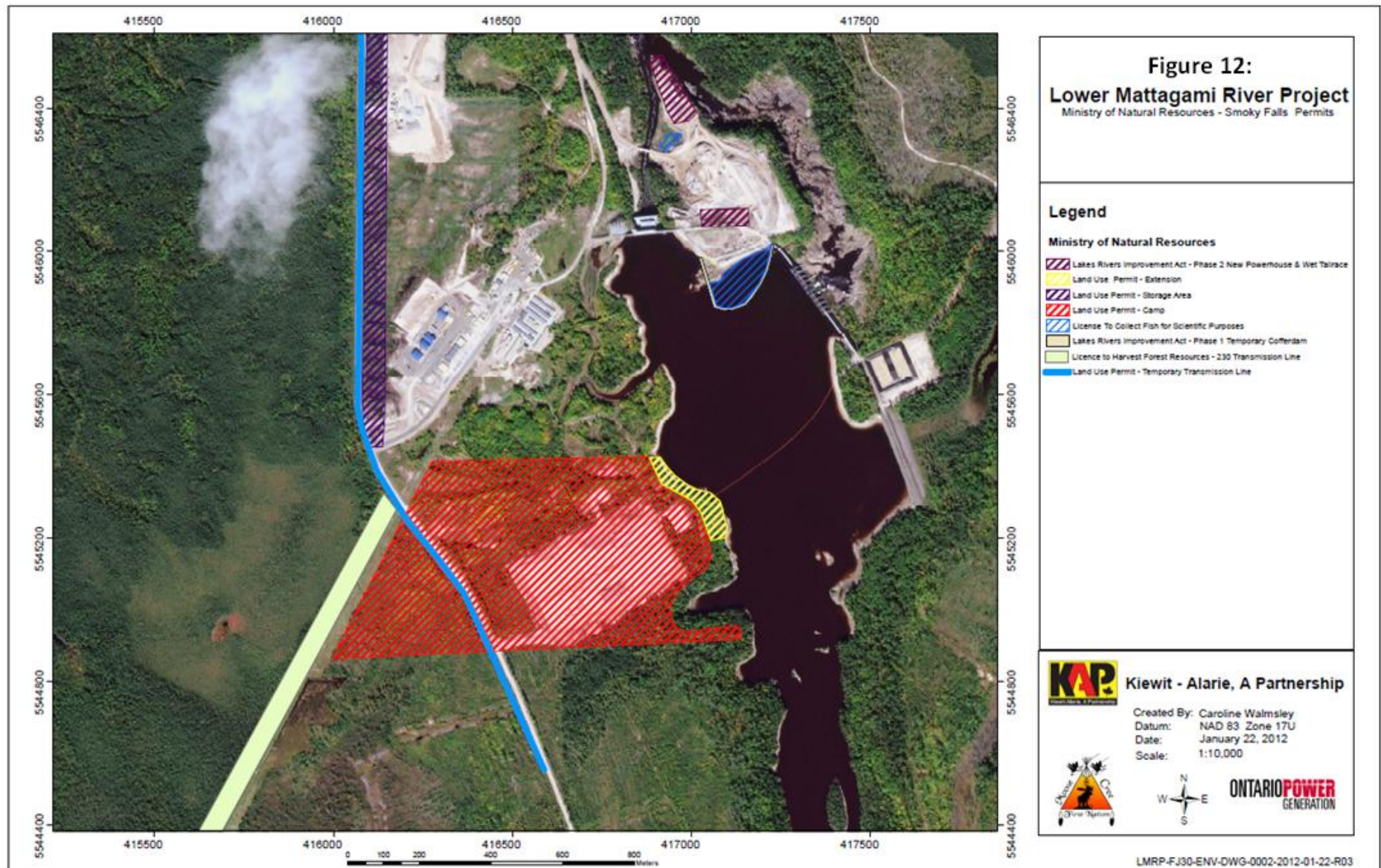
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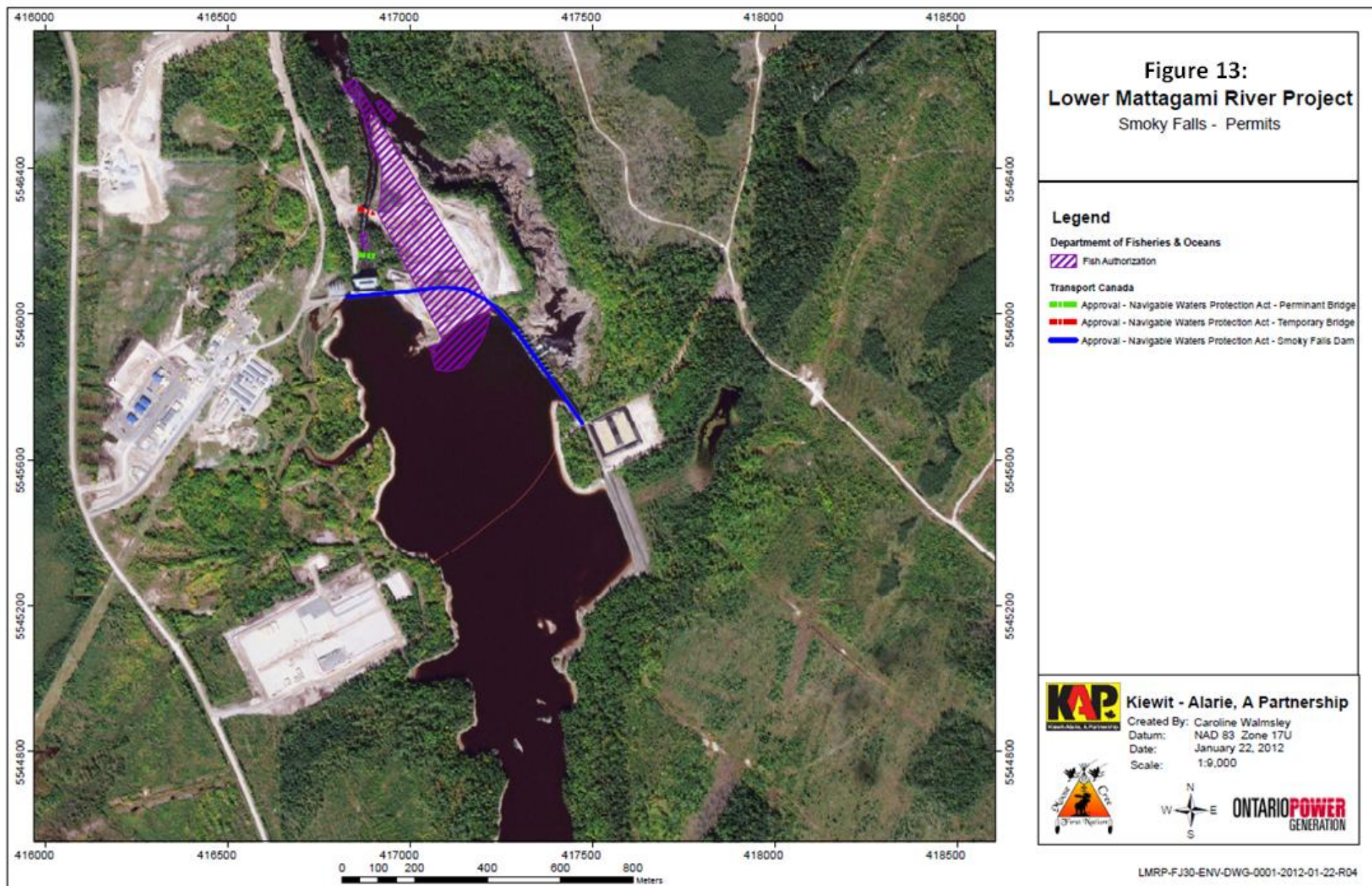


ONTARIO POWER
GENERATION

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







Issues and Concerns
<ul style="list-style-type: none">• EWG members were concerned with the mitigative measures associated with the new Kipling Cofferdam with regards to erosion, sedimentation and fisheries protection. <p>Action Required: EWG to work with KAP to enhance its Erosion, Sedimentation Control Plan for the new Kipling Cofferdam.</p>