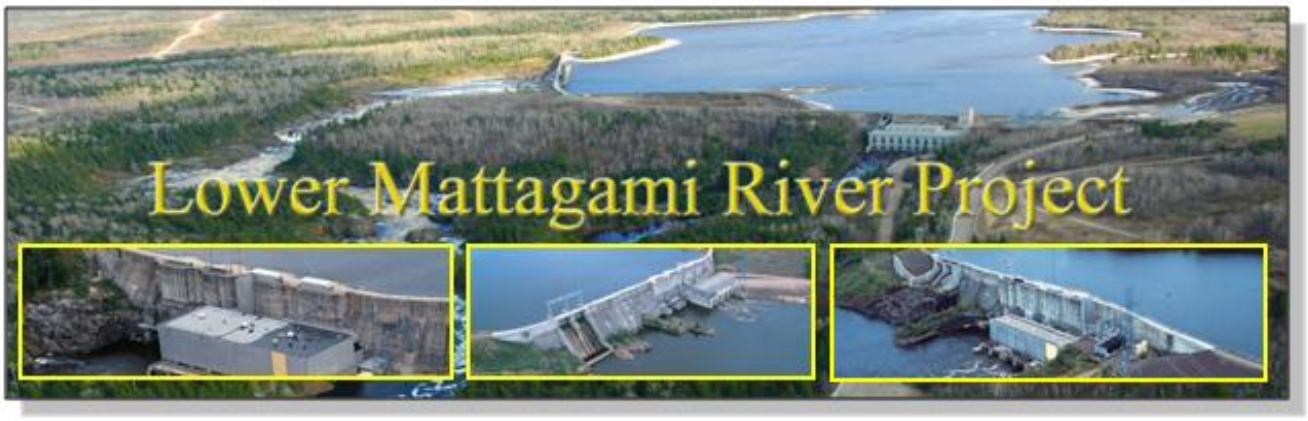
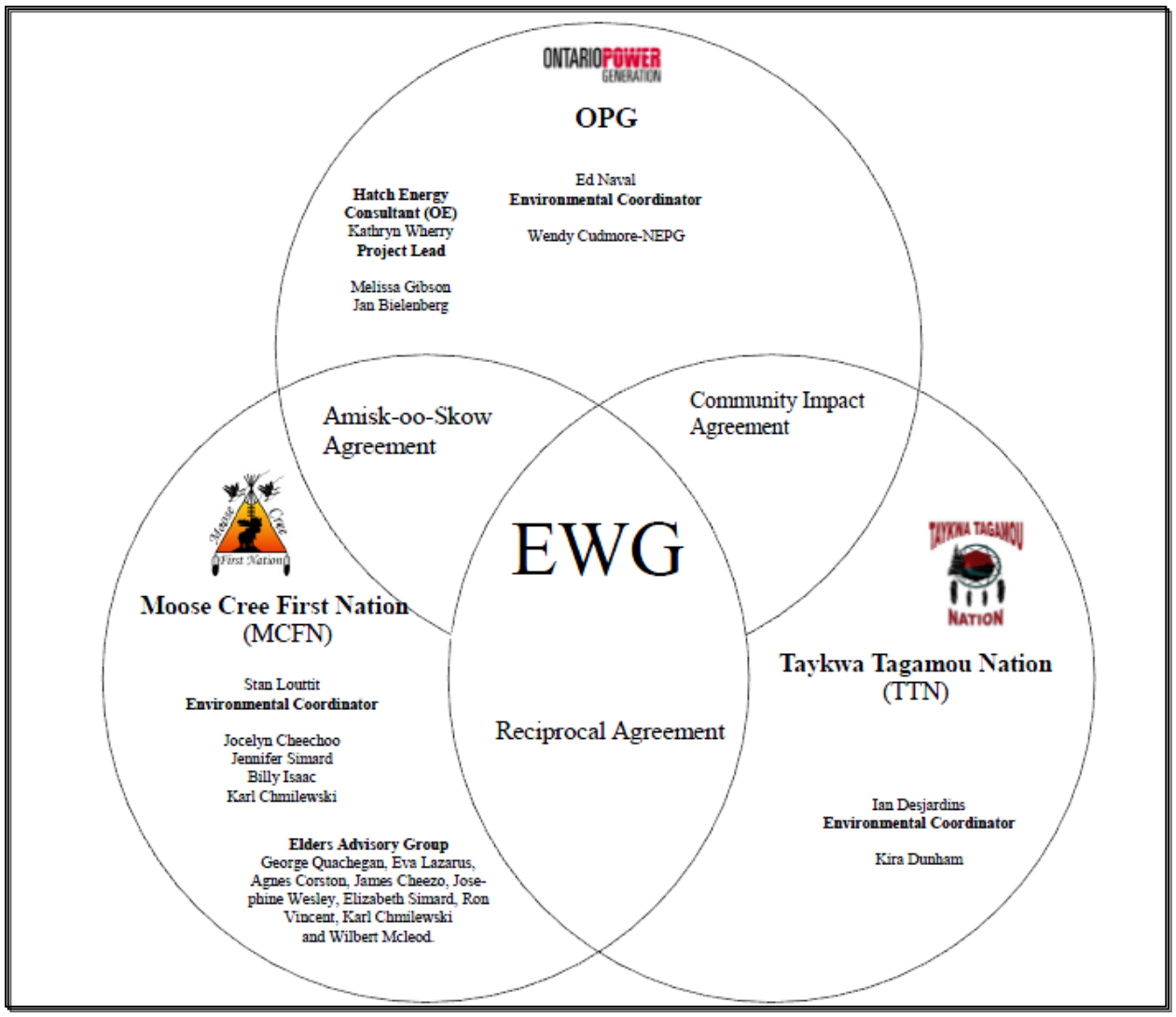


Environmental Working Group

Monthly Report

October 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 have been preparing for the MECC workshop in November. Jim Faught, LURA Consulting, had teleconferences with EWG members to help develop the agenda and the invitee list.
- On October 23, 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 confidentiality protection for those who contribute their stories, outstanding action items that have to be completed, as well the draft conclusion.
- 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.

ACTIONS TO BE COMPLETED in 2014

		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
EWG Environnemental 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 EA T&C 4b: Hydrology, Fish and Aquatic Habitat	EWG present to the MECC "Environmental Effects Monitoring Plan, Lower Mattagami Development"												
EA T&C 5b: Terrestrial Ecology EA T&C 6: Erosion and Sedimentology EA T&C 7: Mercury EA T&C 14: Permit Review and Compliance Monitoring Protocol	EWG present to the MECC "TEK - Environmental Effects Monitoring Plan, Lower Mattagami Development"												TBD
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

- Site rehabilitation activities by First Nation Timber started. The following activities were completed (Figure 1):
  - Material was hauled from the excavation pile to the sediment pond;
  - The decommissioned dewatering pipe was removed from under the road;
  - Large boulders were removed from stockpiled topsoil;
  - The soil and ground cover remediation was completed;
  - Seeding and fertilization was completed at the west laydown area;
  - Tree planting in the sediment pond and stockpile areas will start in the spring.
- KAP electricians completed the installation of electrical components for the auto transfer switch for the Adam Creek power feed. At month-end, KAP and Orbis were performing electrical tests on the auto transfer switch.
- KAP continued to work on closing out punch list items.
  - KAP grouting crews continued to perform grout injections as required.
  - KAP performed floor repairs in the powerhouse.
- Little Long Unit was 3 (Figure 1) was declared in service on January 19, 2014.

Figure 1: Little Long sediment pond topsoil stockpile

Harmon (Figure 2)

- HPPE completed performance testing on the Unit and the equipment was demobilized.
- KAP tested the operation of several headgate limit switches.
- KAP demonstrated the operation of the amber beacon on the tailrace crane for OPG.
- KAP worked on closing out punch list items.
  - Polyurethane grout injections continue on the powerhouse east wall, the generator floor, and the HPU piping trench.

- KAP electricians completed troubleshooting grounding issues on the IPB enclosure. One of the P-clamps used to hold 750 MCM cables connecting the IPB to the 15 kV switchgear was found to have penetrated the external jacket of the cable and was in contact with the cable armour. Insulating rubber was added between the cables and the P-clamps to resolve the issue.
- As part of ongoing vibration testing on Unit 3, Andritz inspected the guide bearing and made adjustments to the guide bearing pads.
- Adjustments were made to the disconnect switch at the switchyard to eliminate interference between flexible shunts and bolts.

- Harmon was declared in-service on June 3rd, 2014, three months ahead of the target in-service date.

Figure 2: Harmon overview

Kipling

- KAP has removed the temporary deflector wall erected at the spillway for the construction period.
- KAP installed intake gate components (intake hoist wire rope, refurbished gate sections, upper gate guides).
- KAP electricians installed and terminated cables, installed cable tags, and installed tray covers on various cables and cable trays throughout the powerhouse and on top of the dam.
- KAP tested the operation of the drainage and dewatering pumps.
- KAP electricians modified the intake gate controls using updated drawings from RSW.
- KAP and Andritz performed a through final inspection of the Unit prior to the start of commissioning.
- It is forecasted that Kipling Unit 3 will be declared in service in December 2014.

Figure 3: Kipling Marine Pad removal

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:
  - Unit 1: No activity. (Unit 1 was declared in-service on September 30th.)
  - Unit 2: the Unit 2 was trial run was completed and Unit 2 was declared in-service on October 9th.
  - At Unit 3, the minor shaft seal leak repairs were completed early in October and wet testing resumed October 8th. Wet testing was completed on October 17th. An inspection was performed and the trial run started October 30th.
- BOP Mechanical and Electrical installation throughout the powerhouse continued to progress.
- Architectural work continues to advance throughout the powerhouse:
  - HVAC ductwork and electrical cabling is being installed in the west service bay and mezzanine offices;
  - Subcontractor Otis continues to install the plant elevator;
  - Studs and drywall are being installed in the plant stairwells, in the office areas, and on the mezzanine floor at elevation 151.8;
  - Subcontractor Global Precast is installing insulation and sealing the joint between the precast concrete panels and the tailrace deck;
  - Light fixtures are being installed in a number of locations throughout the powerhouse;
  - Steel doors and handrails are being installed in various locations;
  - Fireproofing insulation was sprayed on bare structural steel at a number of locations throughout the powerhouse;

- KAP is installing cables and temporary heaters throughout the powerhouse to ensure adequate heating during the winter months;
- Repairs to the compressed air pipes for the tailwater depression system is progressing well;
- Shotcrete application (Figure 5);
- Backfill of Zone 1 on top of the septic holding tanks is nearing completion (Figure 4);
- Bathymetry data was collected at the head pond and tailrace where the cofferdams had been located;
- It is forecasted that the in service date for Unit 3 will be in December for Unit 3.

Figure 4: Smoky Falls Sewage Holding tank installation

Figure 5: Smoky Falls Shotcrete application

Monthly Summary – October 2014

<table>
<tr><td colspan="4">SPILLS</td></tr>
<tr><td colspan="2">No. of Spills:</td><td colspan="2">7; Spill Reports 466-472 (see Figure 6 for LMRP spills breakdown).</td></tr>
<tr><td colspan="2">Classification of Spills:</td><td colspan="2">KAP Project Classification
Minor – 5 Moderate – 0 Major – 2 To Water - 0
MOE Classification
Non-reportable - 5
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>200 L/Diesel</td><td>Main Road – Between Little Long Guard Shack and SF Batch Plan</td><td>Reportable (On-Land). The trucks were hauling cobble on site, and were passing through the security gate at Little Long. Upon inspection, it was noted that one of the trucks was leaking a large amount of diesel. The spill was caused by a fitting on the tank which broke, and caused oil to leak out, onto the ground. The tank on the truck that was leaking was emptied by the maintenance department. All the Villeneuve trucks that were used to transport material on site were inspected by the maintenance department before they could leave site or come back to site.</td></tr>
<tr><td>2</td><td>100 L/ Septic grey water</td><td>Kipling Office Pad</td><td>Reportable (On-Land). After observing a leak from the tank the Site Manager noticed that the service water pump that supplies water to the toilets was running and the two supply tanks were empty. It appeared that a malfunction in the pump caused the waste tank to overflow with service water. Upon further inspection it was determined that the root cause of the pump continuing to run was one of the toilets in the building had a leak that continually drained into the tank causing the overflow. The pump was shut down and a tray was placed under the tank to prevent loss of any additional material. The washcar was barricaded to prevent use until a plumber repairs the toilet and inspects the system.</td></tr>
<tr><td colspan="2">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)</td><td colspan="2">MOE Classification (see Reportable and Non-reportable Spills definition below)
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>n/a</td><td></td><td colspan="2"></td></tr>
</table>

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.

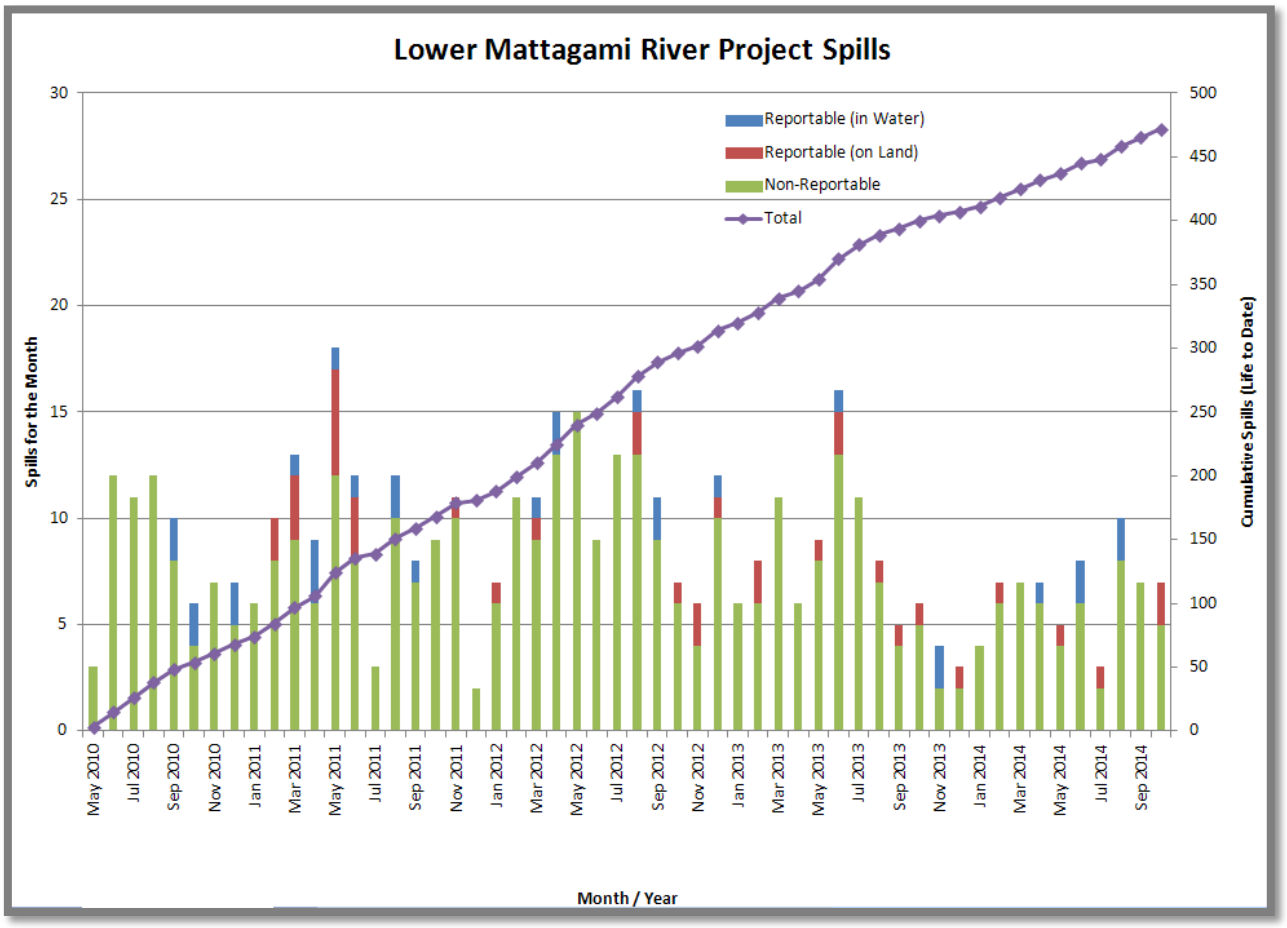


Figure 6: Lower Mattagami River Project spills

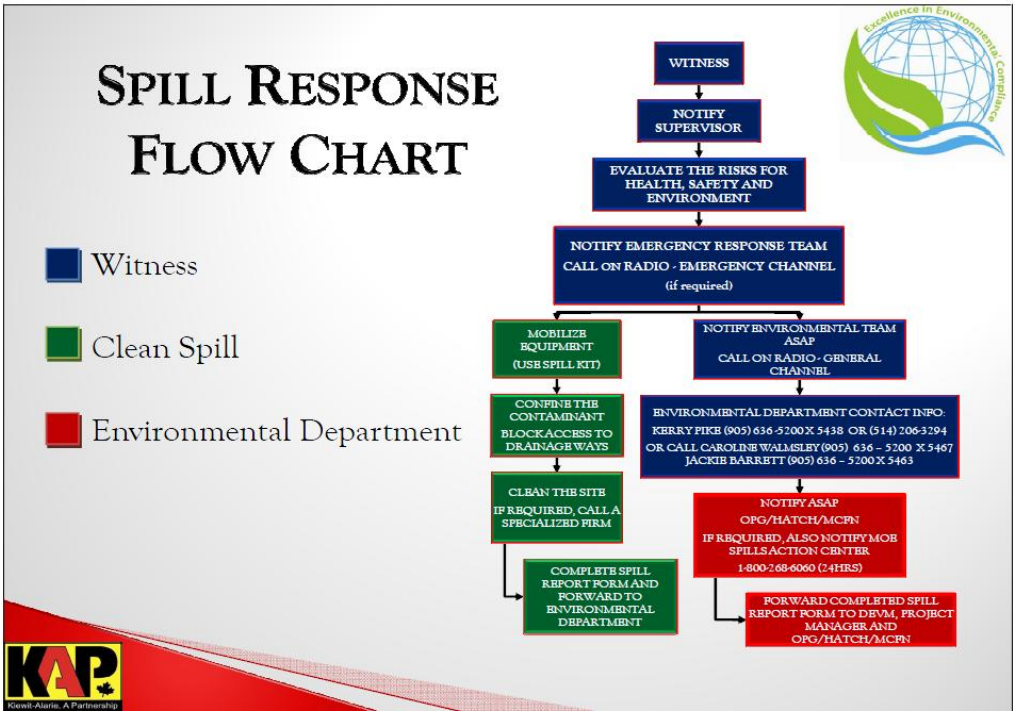


Figure 7: KAP Spills Response Flowchart

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	●	●	●

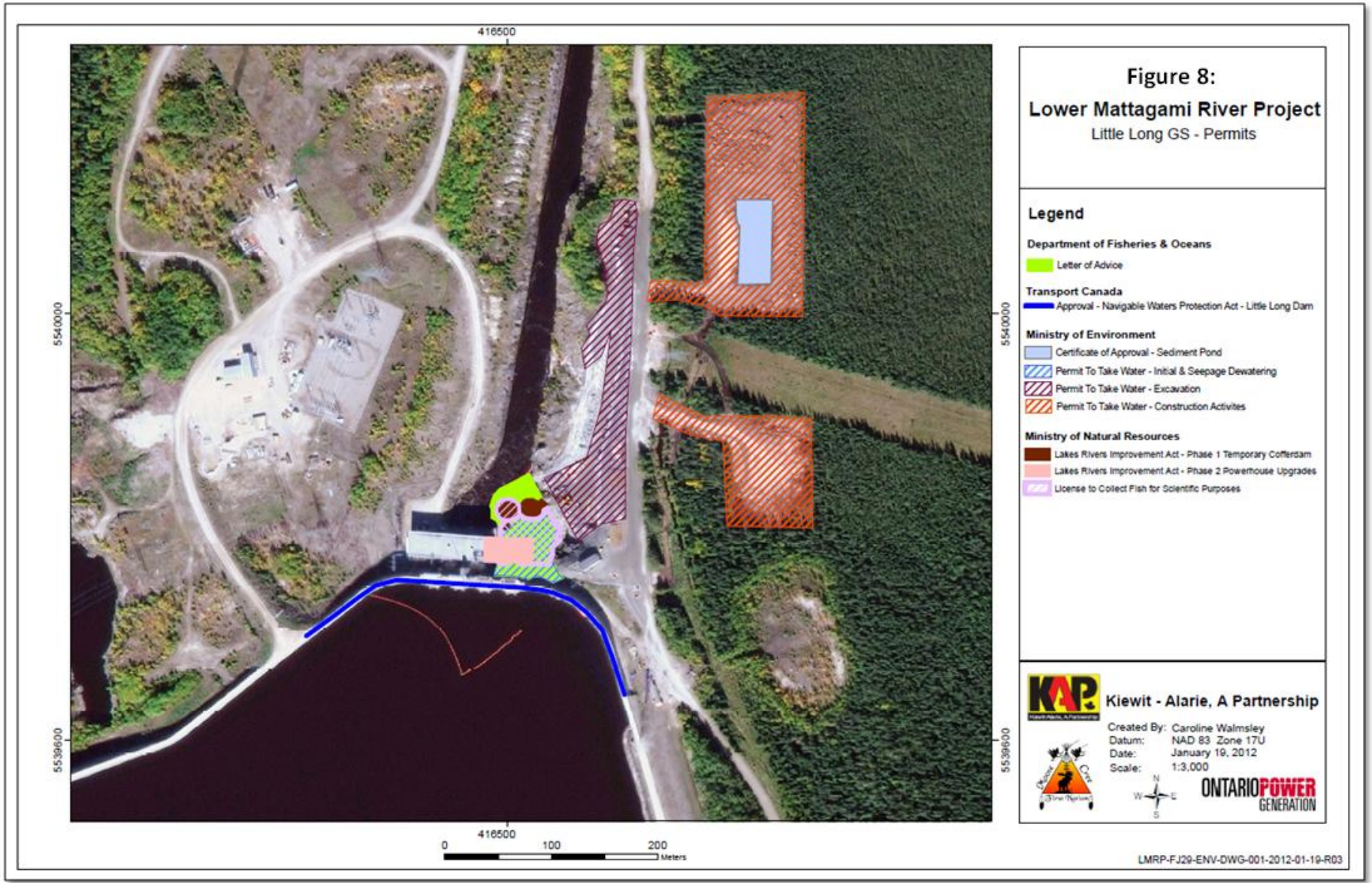

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Figure 8:
Lower Mattagami River Project
Little Long GS - Permits
Legend
Department of Fisheries & Oceans
Letter of Advice
Transport Canada
Approval - Navigable Waters Protection Act - Little Long Dam
Ministry of Environment
Certificate of Approval - 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
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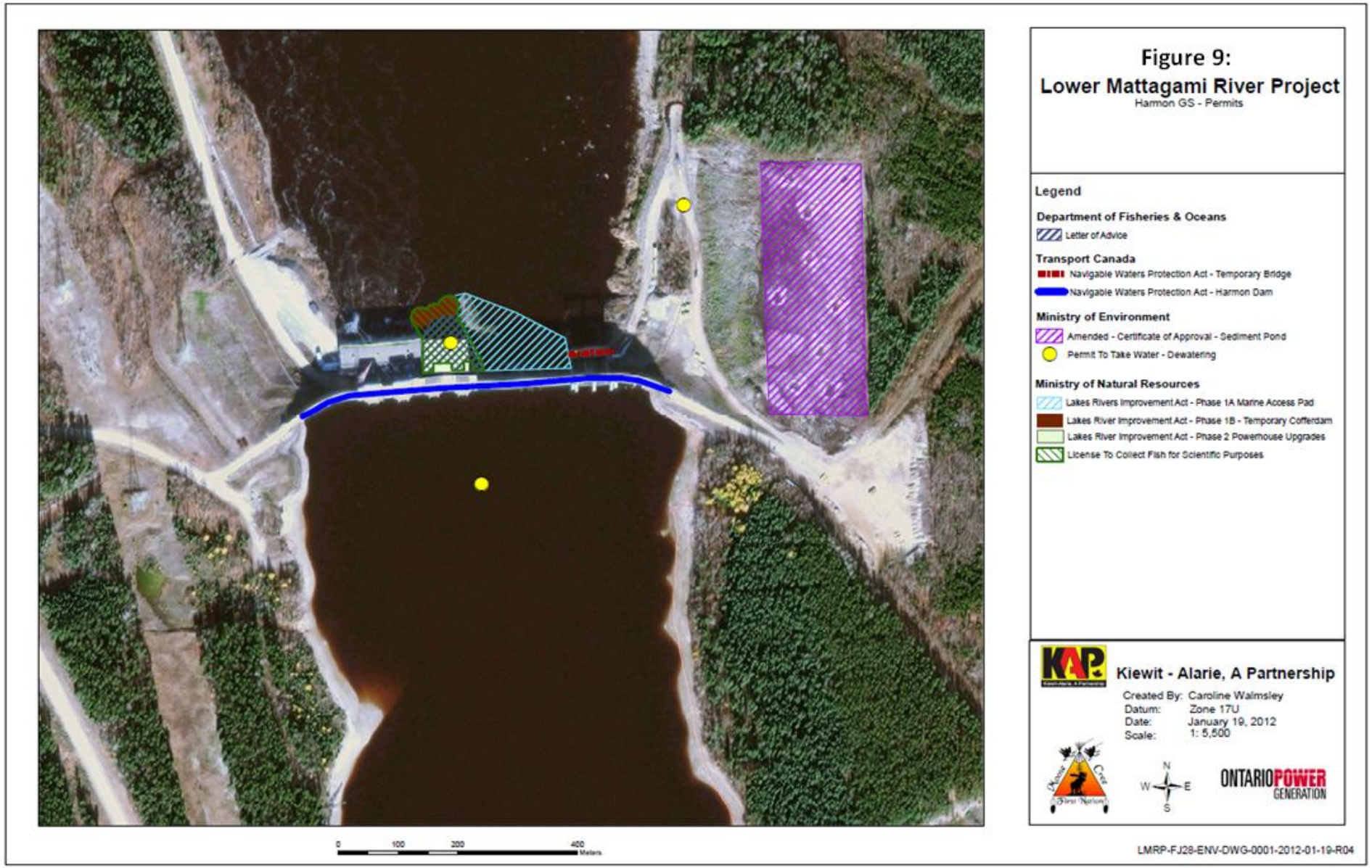
Figure 9:
Lower Mattagami River Project
Harmon GS - Permits
Legend
Department of Fisheries & Oceans
Letter of Advice
Transport Canada
Navigable Waters Protection Act - Temporary Bridge
Navigable Waters Protection Act - Harmon Dam
Ministry of Environment
Amended - Certificate of Approval - Sediment Pond
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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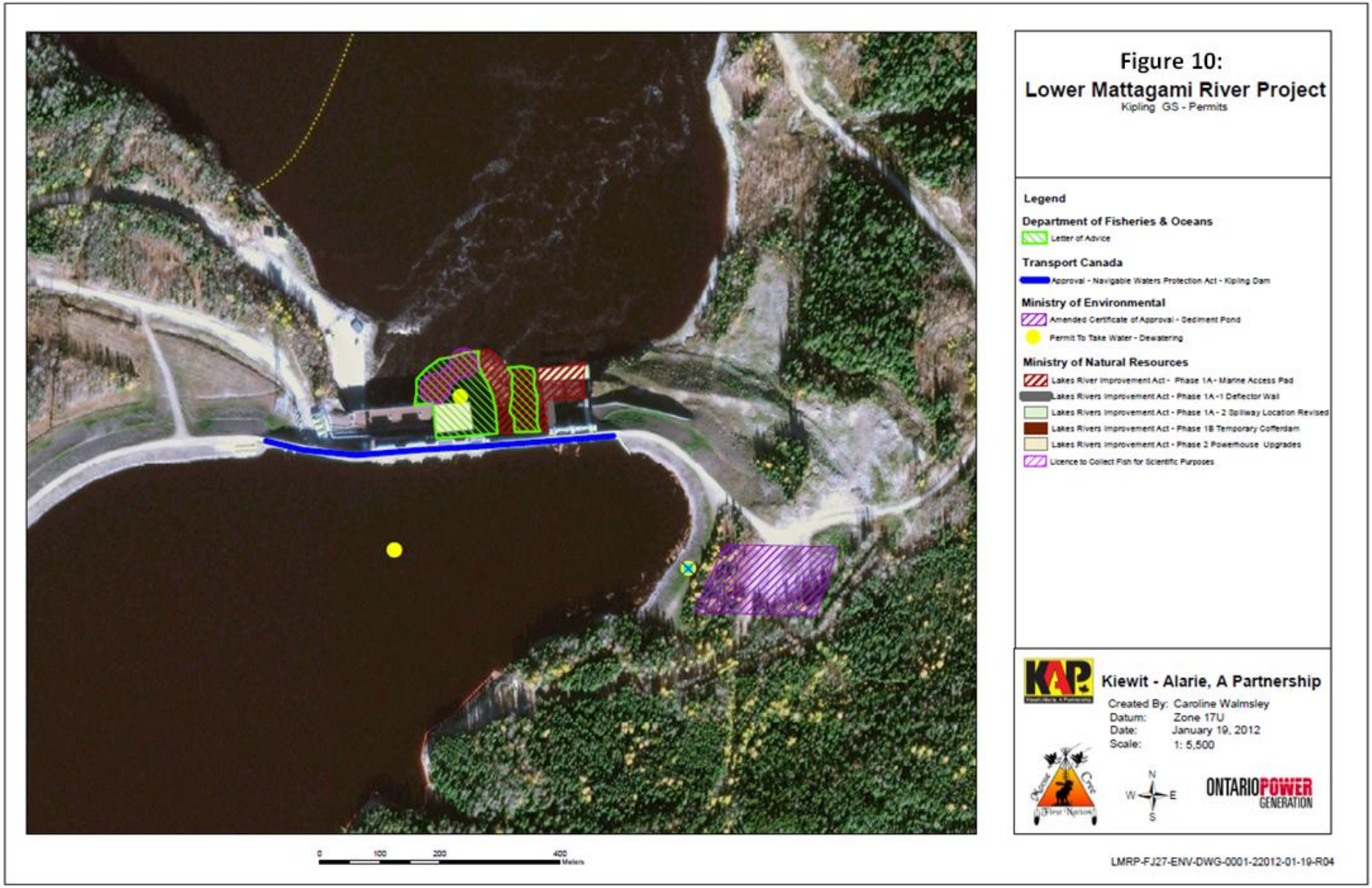
Figure 10:
Lower Mattagami River Project
Kipling GS - Permits
Legend
Department of Fisheries & Oceans
Letter of Advice
Transport Canada
Approval - Navigable Waters Protection Act - Kipling Dam
Ministry of Environmental
Amended Certificate of Approval - Sediment Pond
Permit To Take Water - Dewatering
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
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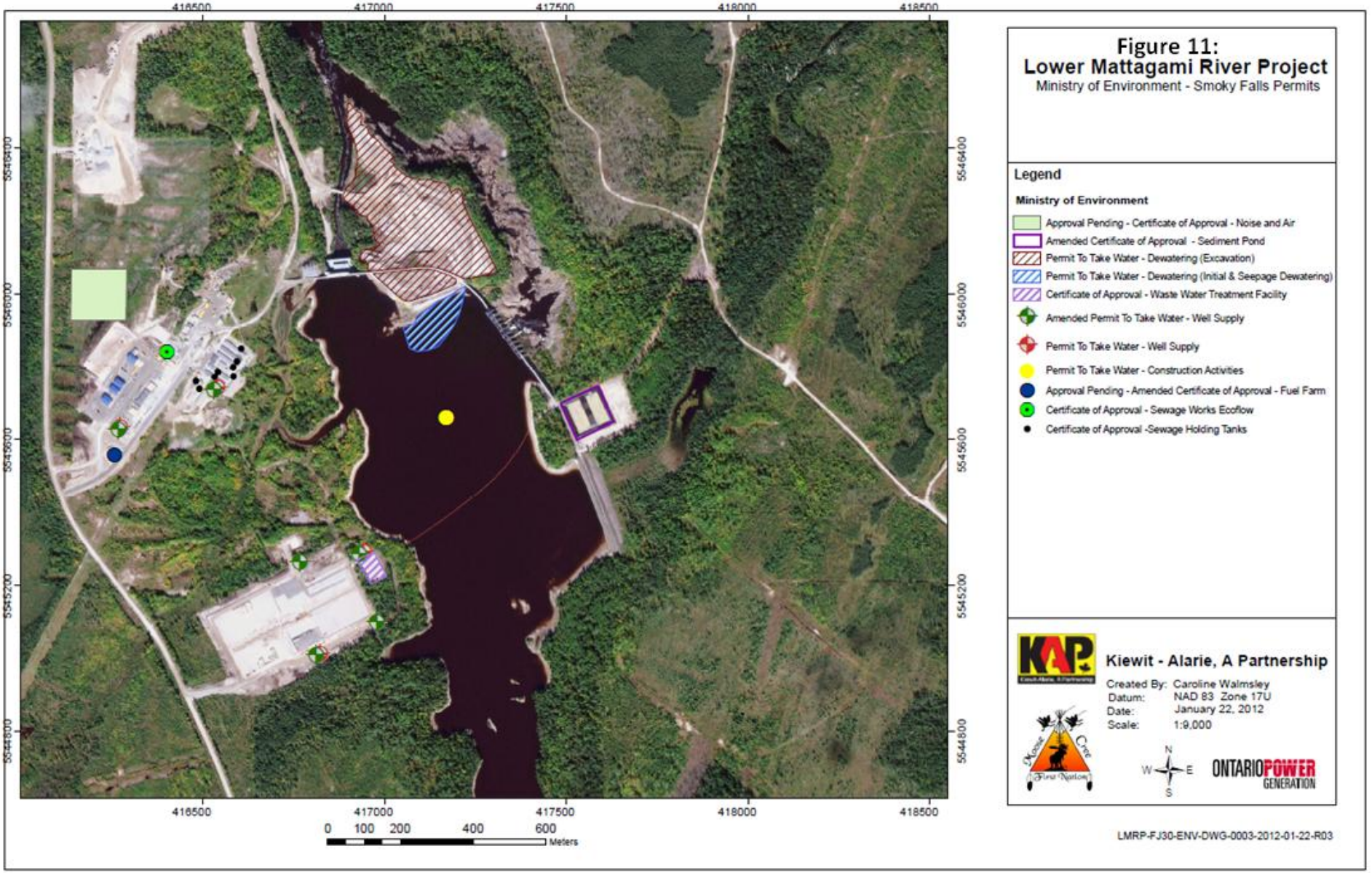
Figure 11:
Lower Mattagami River Project
Ministry of Environment - Smoky Falls Permits
Legend
Ministry of Environment
Approval Pending - Certificate of Approval - Noise and Air
Amended Certificate of Approval - Sediment Pond
Permit To Take Water - Dewatering (Excavation)
Permit To Take Water - Dewatering (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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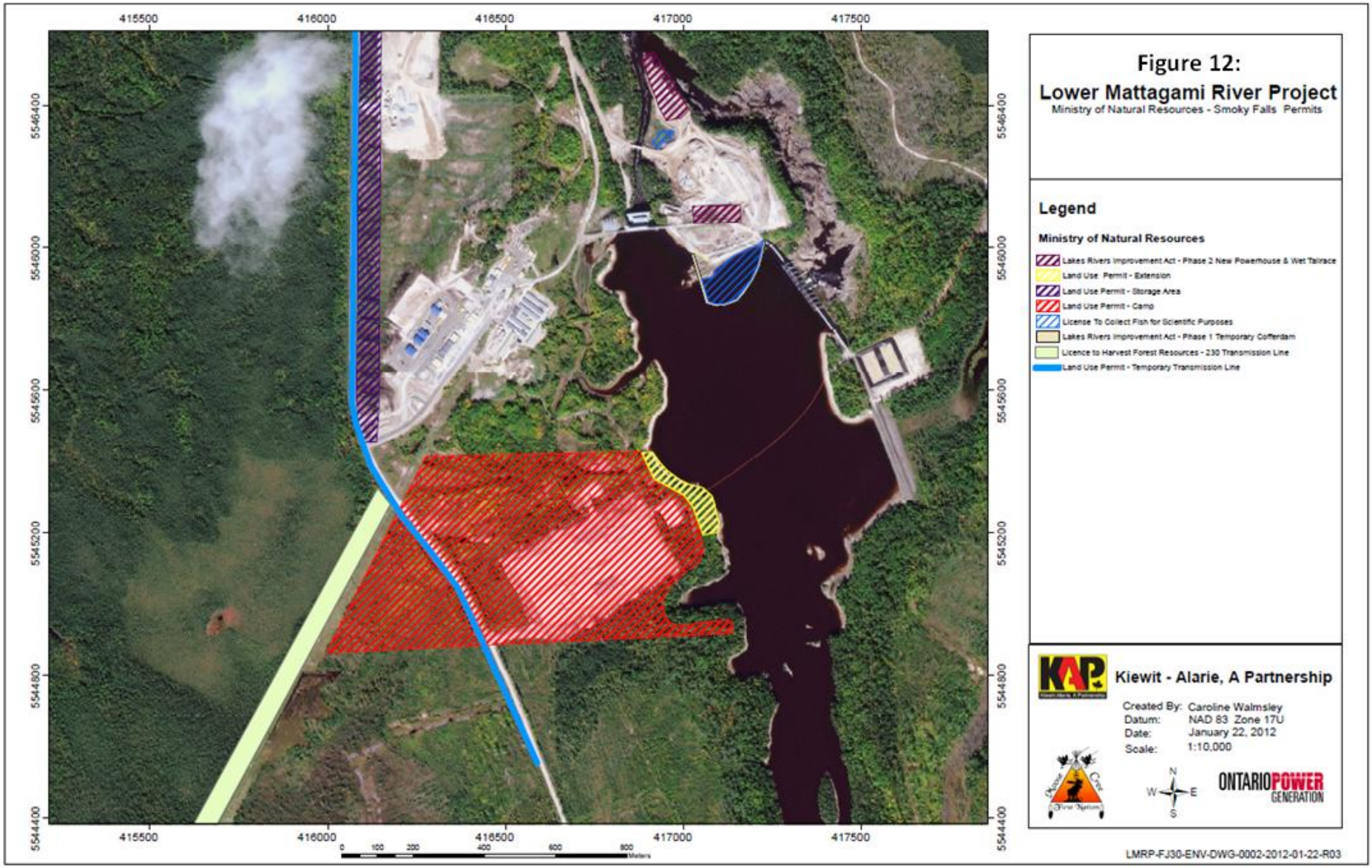
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Figure 12:
Lower Mattagami River Project
Ministry of Natural Resources - Smoky Falls Permits
Legend
Ministry of Natural Resources
Lakes Rivers Improvement Act - Phase 2 New Powerhouse & Wet Tailrace
Land Use Permit - Extension
Land Use Permit - Storage 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
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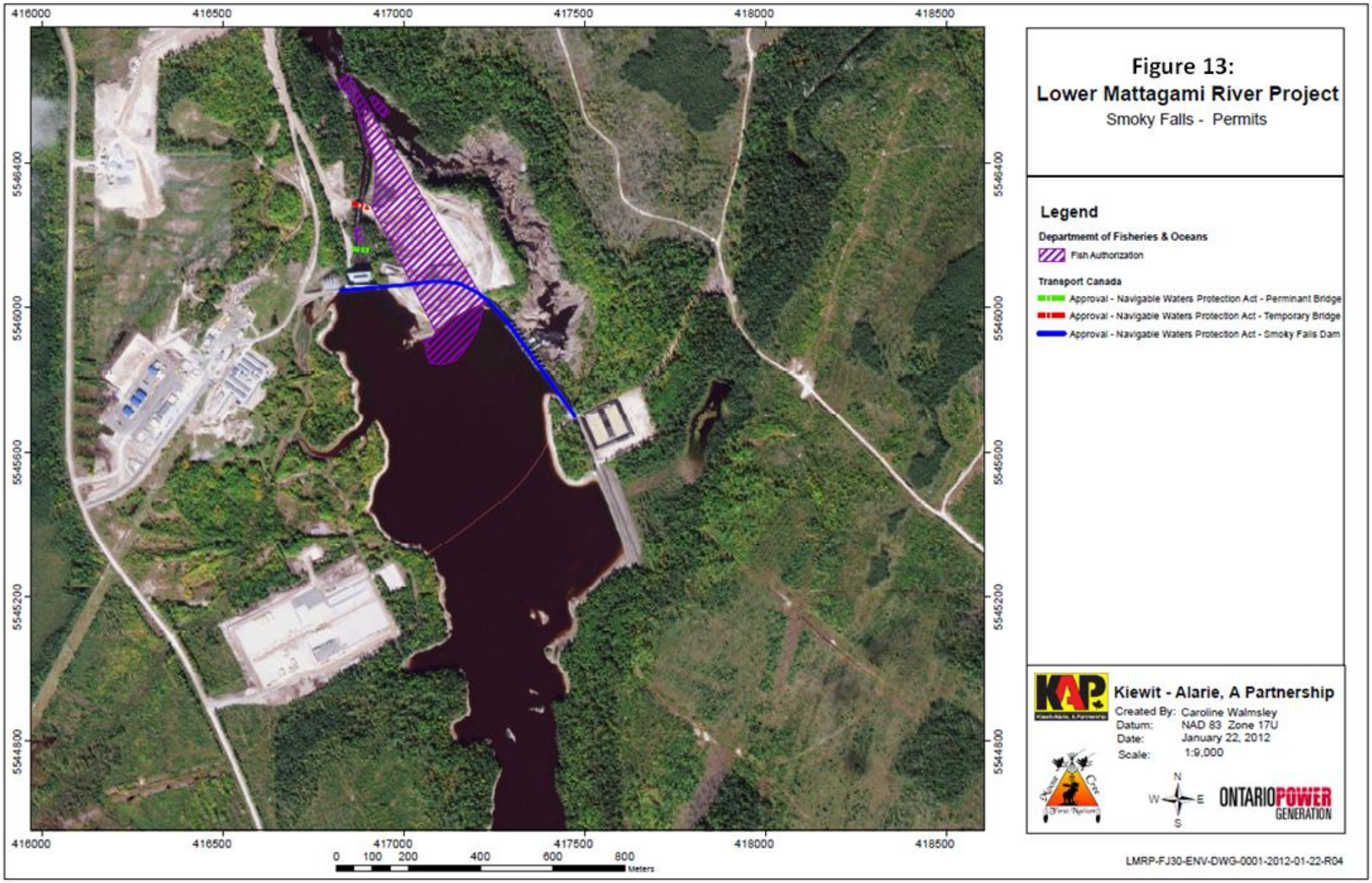
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Figure 13:
Lower Mattagami River Project
Smoky Falls - Permits
Legend
Department of Fisheries & Oceans
Fish Authorization
Transport Canada
Approval - Navigable Waters Protection Act - Perminant Bridge
Approval - Navigable Waters Protection Act - Temporary Bridge
Approval - Navigable Waters Protection Act - Smoky Falls Dam
Kiewit - Alarie, A Partnership
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Date: January 22, 2012
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Issues and Concerns

- Members of the EWG were concerned over a moose that was killed within the LMRP site boundaries. Members of the EWG wanted to ensure that no fire arms were on-site and that the workers knew the no-hunting policy.

  Action required: EWG concerns were communicated to KAP. KAP to ensure all workers were reminded that there are no fire arms or hunting allowed on-site. KAP confirmed that MNR had been made aware of the moose that was killed and that the person responsible (who was not a worker on site) would be dealt with by MNR once an investigation was completed.