MATTAGAMI LAKE DAM SUPPLEMENTARY REPORT

Prepared for:

ONTARIO POWER GENERATION

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1.0 INTRODUCTION

This Supplementary Report provides additional documentation to the Environmental Review Report (ERR) for the Mattagami Lake Dam (MLD) Project which was carried out under the *Guide to EA Requirements for Electricity Projects* and was completed in November 2010. OPG's initial proposal for the site is described in detail in the ERR (the 'Base Case'). A Notice of Completion was issued in January 2011. There were no elevation requests. A Statement of Completion was filed with the Ministry of the Environment in March 2011.

In mid-2011 OPG made the decision to explore alternative designs for the Generating Station (GS) it proposed in its original ERR for the MLD Project. The revised design assists in addressing some economic and constructability issues associated with the Project ("Alternate Proposal"). The OPG team has evaluated the Alternate Proposal, specifically the proposed modifications to the Base Case to consider if there are any negative environmental effects. It is the determination of the OPG team that the Alternate Proposal will have less environmental effect than the Base Case. Therefore, based on this determination OPG is of the opinion that an "Addendum" as per section B.5.2 of the *Guide* is not required. Consultation with stakeholders has confirmed this. This Report describes the Alternate Proposal and documents the planning and assessment decisions and process around these changes.

The Alternate Proposal is described in Section 2.0 of this Report. The environmental team reviewed the Alternate design and assessed the potential environmental effects, which is described in Section 3.0 of this Report. Consultation with Aboriginal, public and government stakeholders is described in Section 4.0 of this Report. Section 5.0 of this Report is the conclusion.

2.0 REVISED PROJECT OVERVIEW

Between 2006 and 2010 OPG undertook various technical and economic assessments, and completed the EA for Mattagami Lake Dam Generating Station Project in 2011 when it issued its Statement of Completion on March 14, 2011. Prior to proceeding with design and construction, OPG retained an Owner's Engineer to conduct a review of the initial proposal (the 'Base Case'). The review identified several constructability and economic challenges associated with the Base Case and also opportunities to reduce the environmental impact of the project. This Project Overview includes a description of the revised Proposed Undertaking and a rationale for the location of the project.

2.1 PROJECT PURPOSE

Ontario Power Generation Inc. (OPG) is proposing to develop a 5-7 megawatt (MW) hydroelectric generating station (GS) (Proposed Undertaking), in the immediate vicinity of OPG's existing Mattagami Lake Control Dam. The Proposed Undertaking also includes construction of a new transmission line. The proposed GS will be connected to the provincial grid via an existing Hydro One 115 kilovolts (kV) Transmission line (T61S) located about 3 kilometres (km) to the east.

OPG and Mattagami First Nation have entered into a non-binding Memorandum of Understanding (MOU) to discuss the possibility of the parties entering into a commercial relationship with respect to the Proposed Undertaking.

2.2 PROJECT LOCATION

The existing Mattagami Lake Dam is located at the outlet of Mattagami Lake (at Kenogamissi Falls) on the Mattagami River, about 54 km southwest of the City of Timmins and about 20 km north of the Mattagami First Nation Reserve. The dam controls the flows from Mattagami Lake into Kenogamissi Lake, which is the forebay of OPG's Wawaitin Generating Station. The dam's latitude and longitude are N48º 00' 48", W81º 33' 30", respectively. The site is about 2 km east of Highway 144 and accessible by Kenogamissi Falls Road (a primary forest access road) as shown in Figure 2.1.

Figure 2.1 General Location of Mattagami Lake Control Dam

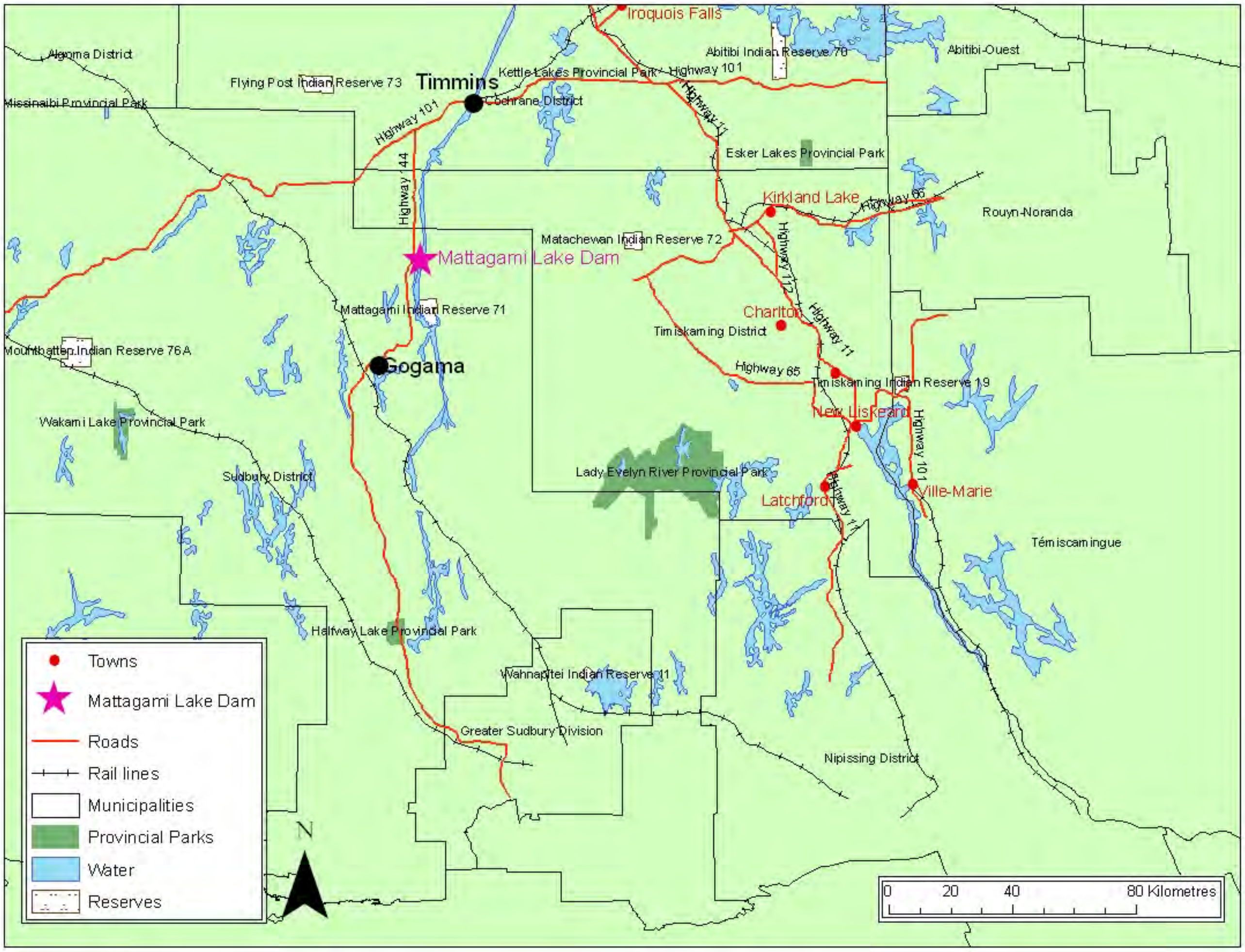
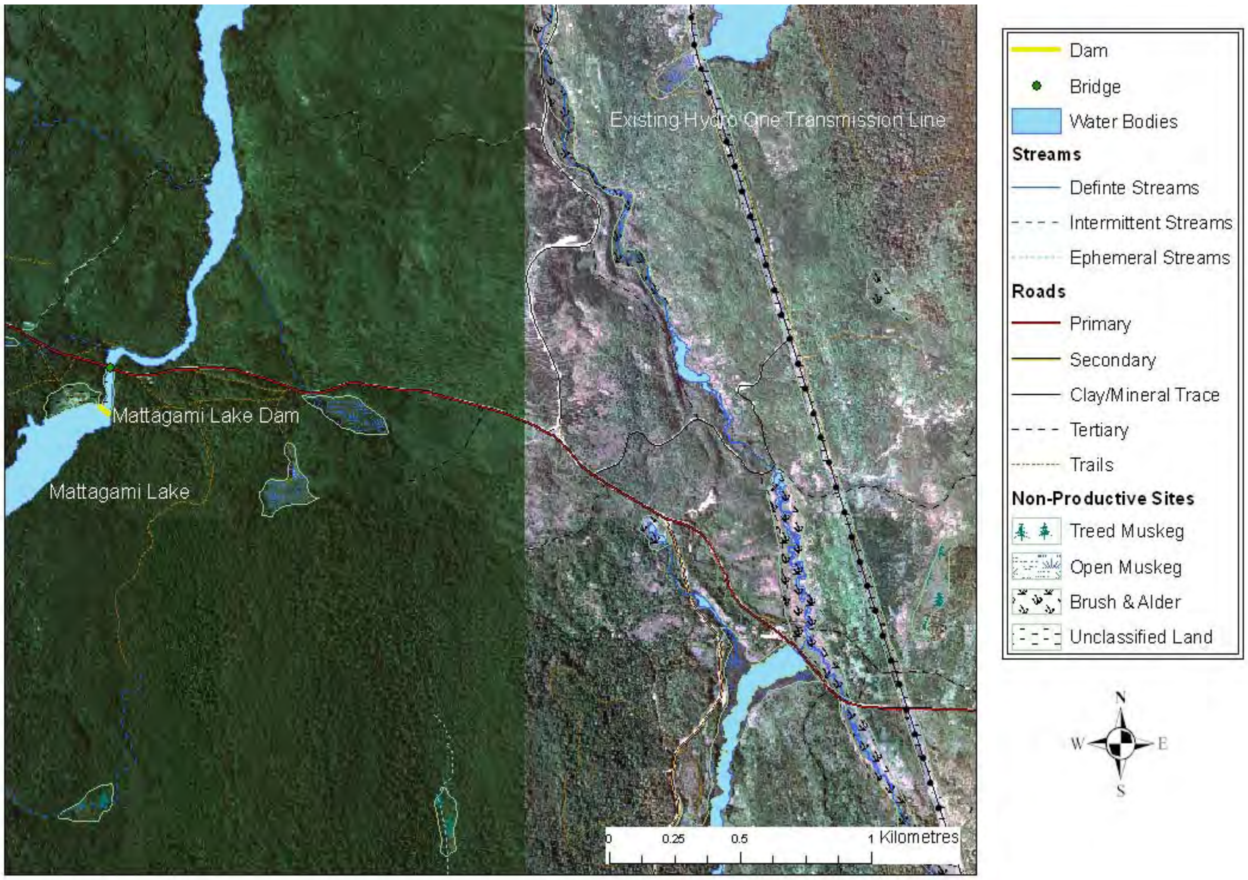


Figure 2.2 shows the location of the Proposed Undertaking with respect to the Hydro One transmission line, existing roads and natural, physical and human features.

Figure 2.2 General Location of Mattagami Lake Control Dam and Kenogamissi Falls



2.3 PROJECT DESCRIPTION

2.3.1 Existing Site and Facilities

The existing Mattagami Lake Dam (Photograph 2-1) was built by the Northern Power Company in 1921 and acquired by Hydro-Electric Power Commission of Ontario (HEPCO) in 1944. It is currently owned and operated by OPG (the successor to Ontario Hydro which is the successor to HEPCO). The Dam controls the flows from Mattagami Lake into Kenogamissi Lake. Mattagami Lake provides flood mitigation for the City of Timmins as it has the largest storage capacity on the Upper Mattagami River system.

Photograph 2-1 Mattagami Lake Control Dam

The dam consists of the following structures: east earth dyke, east concrete gravity wall, central concrete sluiceway, west concrete gravity wall and west earth dyke. The overall length of the dam is approximately 115 metres (Figure 2.3).

The centre sluiceway is 40 metres long and 9 metres high and consists of six sluices with a total discharge capacity of 524 cubic metres per second (m^3/s) at a reservoir water level of 331.48 metres (all levels and elevations are referred to Canadian Geodetic Datum). Sluices #3 and #4 are equipped with underwater ports to assist in winter drawdown operations.

The east concrete gravity wall extends from the #6 sluice side pier to the east earth dyke. It is 19 metres long and 0.9 metres wide at the crest with a maximum height of 7.6 metres. A vertical concrete core wall extends into the east earth dyke which is 13 metres long.

The west concrete gravity wall extends from the #1 sluice side pier to the west earth dyke. It is 16 metres long and 4 metres wide at the crest with an average height of 7 metres. A vertical concrete core wall extends into the west earth dyke which is 27 metres long.

Figure 2.3 Scheme of Existing Mattagami Lake Control Dam

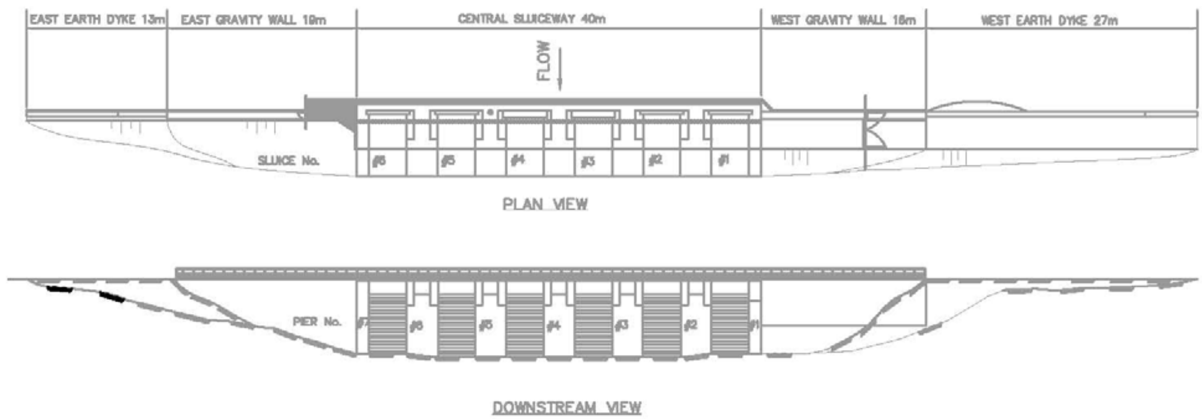
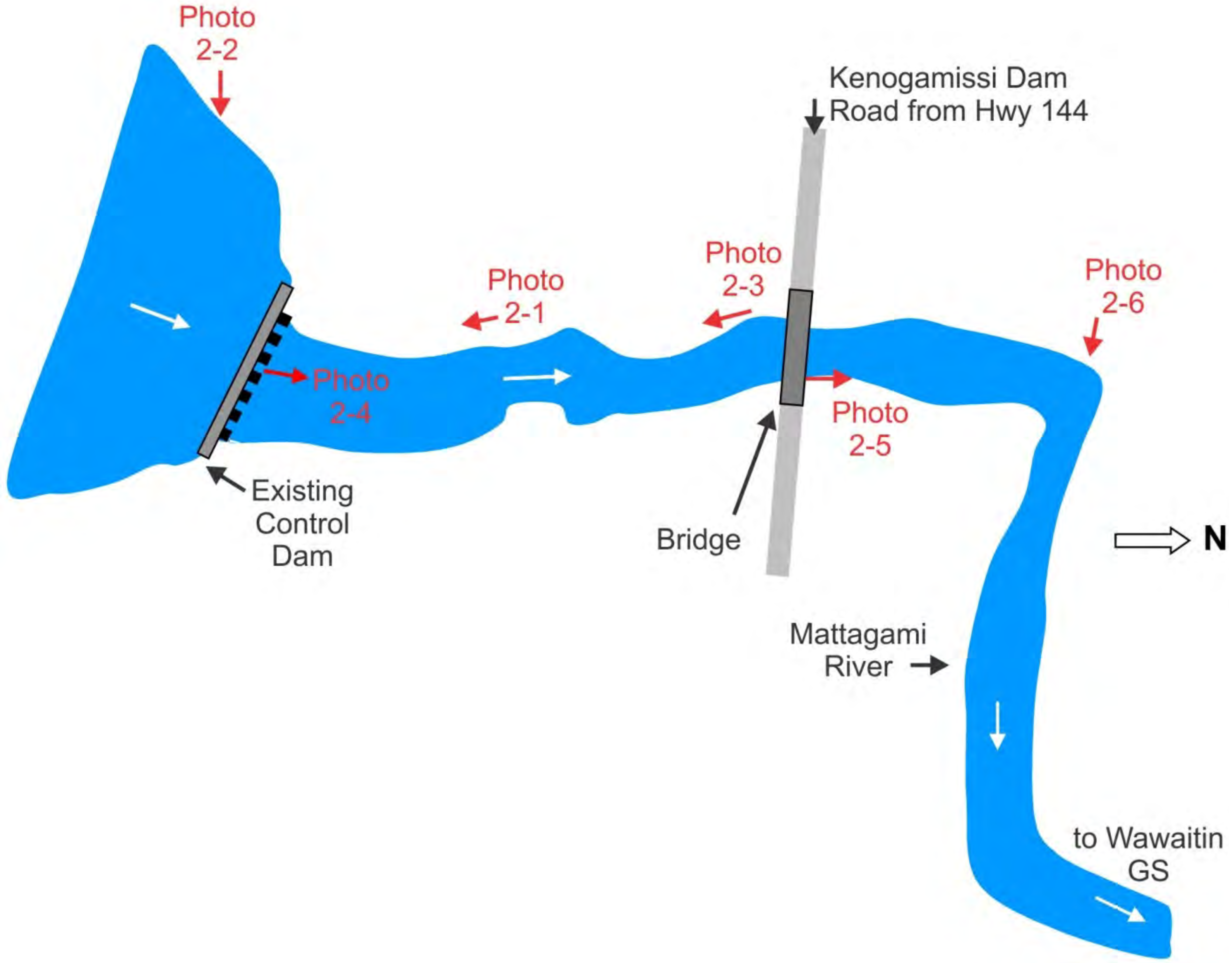


Figure 2.4 shows the existing structures and locations of photographs presented in this project description.

Figure 2.4 Existing Structures and Locations of Photographs 2-1 through 2-6

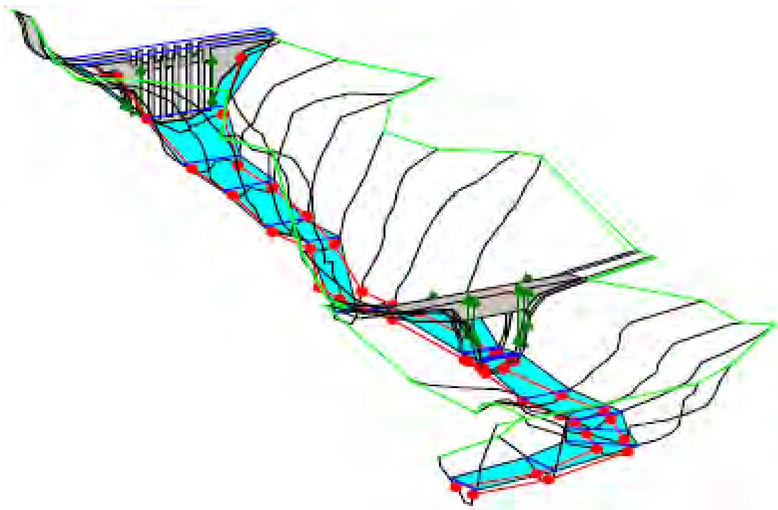


The existing Mattagami Lake Dam was constructed immediately upstream of the Kenogamissi Falls. A primary forest access road and a bailey bridge (owned by Tembec) is located about 150 metres downstream of the dam. The west river bank between the dam and the bridge is relatively steep, while the east river bank has a gentler slope. Downstream of the road and bridge, a creek merges into the river from the west side. The area between the road and the creek is relatively flat.

The slope of the river bed from downstream of the dam to the bridge is relatively steep with an elevation difference of about 12 metres. A series of bedrock outcrops between the control dam and the bridge are visible during low flows (Figure 2.5).

The Mattagami River in this location generally runs from south to north. Water flows northward from Mattagami Lake through the control dam and turns 90 degrees to the east about 50 metres downstream of the bridge, and runs about 550 metres before merging into Kenogamissi Lake. The existing structures and general topography around the Mattagami Lake Dam are illustrated in Figure 2.5. The slopes in this area are typically covered with adequate soil overburden and vegetated with mature trees and undergrowth.

Figure 2.5 Existing Structures and Topography of Mattagami River Section



Photograph 2-2 Mattagami Lake Control Dam, Mattagami Lake and Safety Boom

Photograph 2-3 Mattagami River from Tembec Bailey Bridge to Dam (Looking Upstream)

Photograph 2-4 Mattagami River Control Dam to Bailey Bridge (Looking Downstream and North)

Photograph 2-5 Widened Area of Mattagami River Just Downstream of Bailey Bridge and Turning 90 Degrees to the East

Photograph 2-6 View of the 90 Degree Turn in the River from Further Downstream

2.3.2 Proposed Undertaking

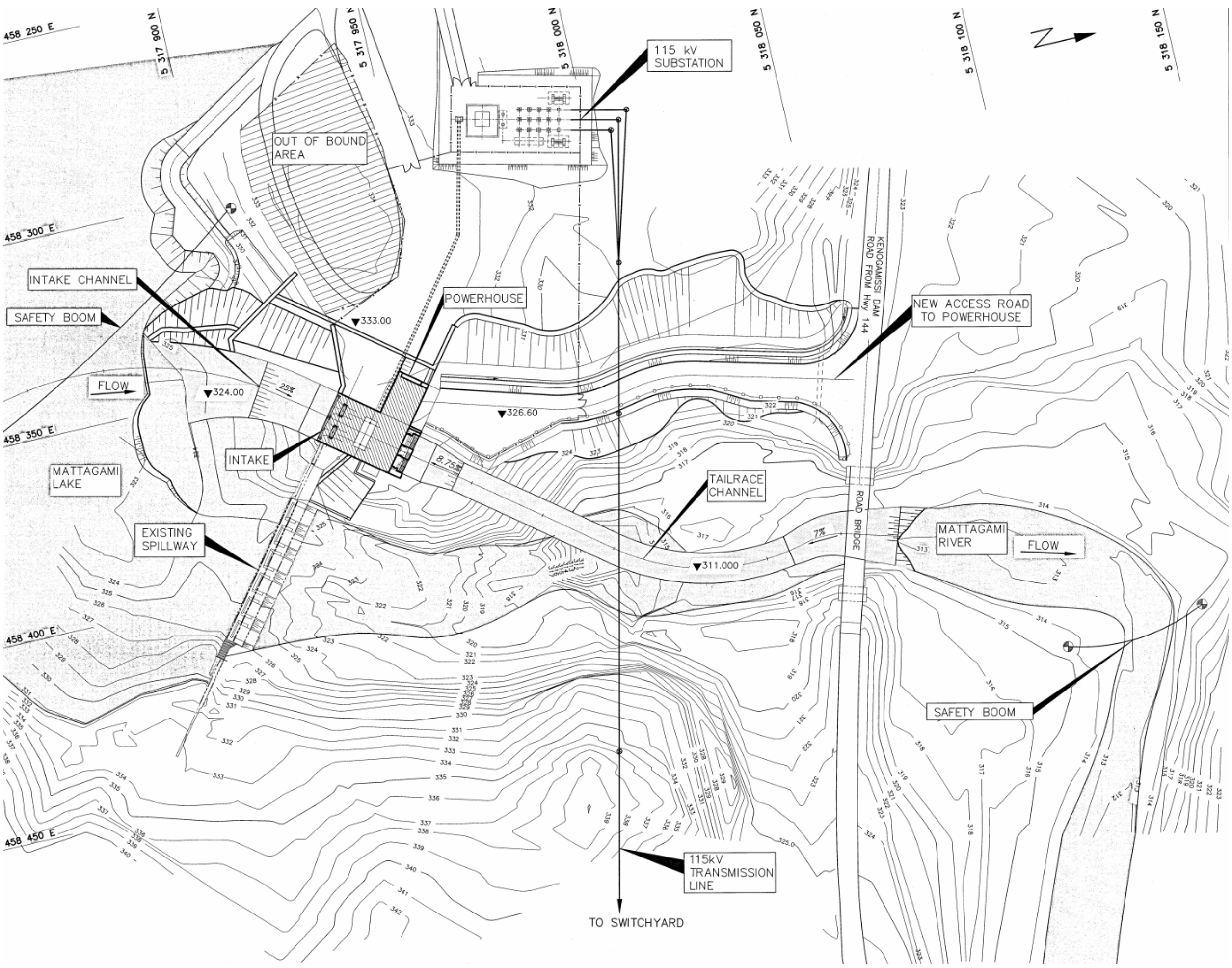
Assessments conducted by OPG indicate there is a potential for a small hydroelectric development at this site, with its operation consistent with how the River is currently managed. OPG's initial proposal for the site (the 'Base Case') was subject to Ontario's environmental assessment (EA) process. OPG successfully completed EA requirements in March 2011 as described in the Mattagami Lake Dam Environmental Review Report (ERR November 2010). Upon completion of the EA and prior to proceeding with the final design and construction, OPG retained an Owner's Engineer to conduct a review of the Base Case proposal. The review identified several constructability and economic challenges associated with the Base Case, and further opportunities to reduce the environmental impact of the project. An alternate proposed design layout and approach that could meet these challenges to developing the site (the "Alternate Proposal") has been recommended. The Alternate Proposal identifies a two-unit generating station (GS) having an installed capacity of 5 to 7 MW, with an average gross head of about 16 metres and design flow of approximately 40 m^3/s pending on the final plant capacity. This proposal has approximately the same energy, capacity and gross head as the Base Case.

The Alternate Proposal includes an intake channel, intake structure, powerhouse, tailrace channel, powerhouse switchyard, 3 km 115 kilovolts (kV) transmission line, and a connection switchyard near the existing Hydro One 115 kilovolts (kV) Transmission line (T61S). As in the Base Case, the hydraulic conveyance system will be located entirely on the left bank of the

Mattagami River, however the Alternate Proposal will return its flow approximately 75 m downstream from the existing dam and upstream of the road bridge and the spawning area, thus approximately 100 m farther upstream than the Base Case. This will result in the returned flow entering the river well upstream of the walleye and Lake Whitefish spawning area, allowing flow to enter the spawning area from its natural direction, resulting in little or no effect on that area.

The preliminary concept of the Proposed Undertaking is depicted below.

Figure 2.6 Plan View of Conceptual Design



Unlike the Base Case proposal described in the ERR, the Alternate Proposal is designed with a combined intake structure with the powerhouse, therefore eliminating the need for a long penstock. The Alternate Proposal powerhouse will be equipped with two smaller turbine units versus one as in the Base Case. Furthermore, the Alternate Proposal does not require utilizing any of the existing spillway bays of the dam. This means that there will be no need for workers to construct the intake directly behind the dam, eliminates the requirement for emergency sectional gate works to meet dam safety requirements (the Alternate Proposal will maintain all six existing sluices) and significantly reduces in-water operational constraints during the construction period of the new generating station.

Intake Channel and Intake

The intake channel will be located upstream of the west end of the dam. It will begin at an elevation of 324.0 m and will converge from a width of 20 m to 15 m. Approximately 19 m upstream of the intake structure, the intake channel will slope downward and contract in width to ensure a connection with the horizontal rock surface just before the intake.

The main intake structure will consist of two concrete hydraulic passages, initially beginning as horizontal rectangular sections and transitioning to circular sections angled at 45° to the horizontal over a distance of approximately 5 m. Each intake is designed for a capacity of 20 m^3/s. Additionally, both passages will be equipped with vertical trashracks. Downstream of the trashracks, gate wells equipped with steel gates will allow for the complete isolation of the turbine pits from the approach channel.

Powerhouse

The powerhouse will be connected directly to the intake structure, constructed in rock and located west of the existing dam and will consist of an approximate 23.6 m wide x 13.2 m long building. In this design, all of the sub-structure and walls will be constructed of reinforced concrete, excluding the floors and the roof and the service bay area which will consist in a steel superstructure. According to the available borehole information, the rock surface in the vicinity of the powerhouse area is located at an approximately elevation of 326.75 m. The powerhouse will be accessible from the North through the use of a newly constructed access road which sits mainly over the path of the penstock alignment of the Base Case and will branch off of the existing Mattagami Lake Dam access road. The design of the powerhouse will be performed according to the Ontario Building Codes. The stability analysis was performed on the structure according to the Canadian Dam Association (CDA) Safety Guidelines 2007. Assuming the full hydrostatic pressure acting on the upstream surface of the intake structure, the stability analysis concluded that the structure is stable.

In the Alternate Proposal, the station is designed with two 2.9 MW units each having a rated discharge of 20 m^3/s under a nominal net head of 14.6 m, while under the total generating station rated discharge of 40 m^3/s, the rated net head is 15.8 m as compared to 15.3 m for the Base Case. The alternate layout will have a minimum turbine flow requirement of approximately 4-5 m^3/s compared to 8-12 m^3/s in the Base Case, allowing the station to run at lower flows and thus limiting the frequency of releasing only the minimum fish flow of 2.8 m^3/s. The selection of two smaller turbines also reduces the height of the overall superstructure. The runner axis of the turbines will be located at an elevation of 313.25 m, thus ensuring that the minimum turbine setting of 1.4 m will be satisfied for the minimum tailwater level of 314.65 m for one unit running at maximum flow. The draft tube gate in combination with the intake gates will be used to isolate the hydraulic passages for maintenance work on the Turbine and Generator.

During construction for the powerhouse as well as for the intake channel and intake, a cofferdam will be constructed upstream of the dam. The cofferdam construction will take place in accordance to the approved in-water work windows and in compliance to the approved water management plan. Proper sediment control measures will be in place.

The total excavation volume of the intake channel upstream of the existing dam is estimated at 4,400 m^3. While some stakeholders including Tembec and the Mattagami Cottagers Association have indicated interest in obtaining the excavated bedrock for their own purposes, the remaining excavated material will be disposed of in a laydown area located on-site.

The proposed material laydown area covers the area downstream of the bridge where the powerhouse was to be located in the Base Case scenario, as this area was previously planned to be disturbed and is located close to the road.

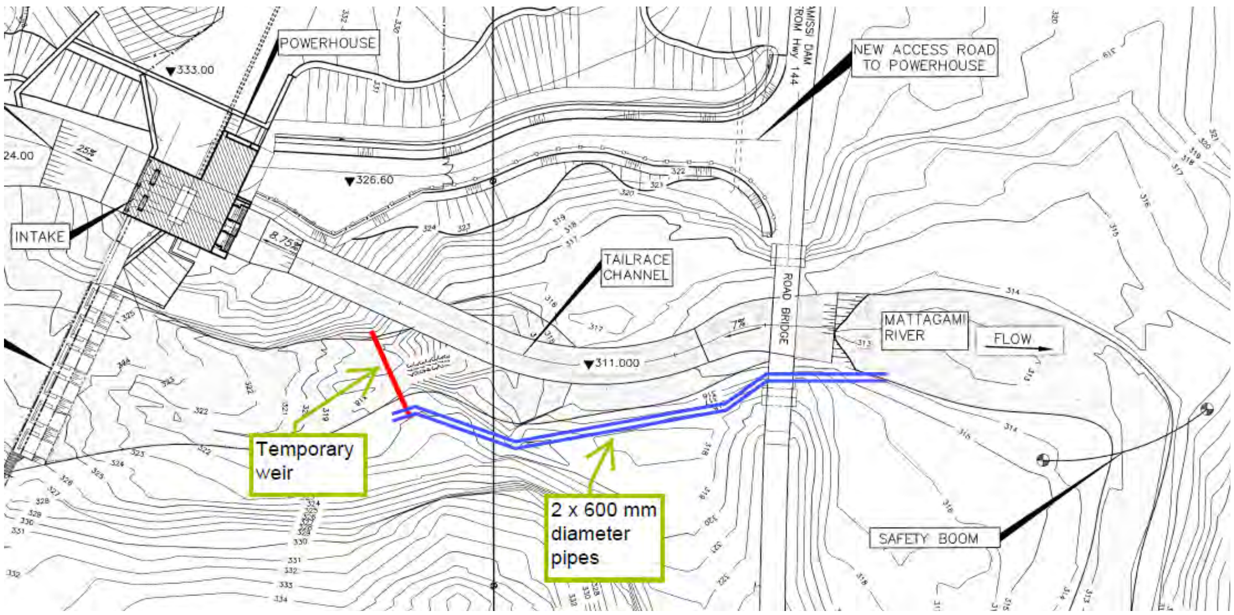
2.3.3 Tailrace Excavation

Tailrace excavation will involve work both on land and in a de-watered area. The planned 10.5 m wide tailrace channel will be excavated in rock and will begin at the draft tube outlets at an elevation of 310.27 m. The rock excavation will be stabilized locally through the use of grouted anchor bolts and shotcrete (if required). Approximately 5 m downstream of the draft tube outlets, the slope of the tailrace will increase from the horizontal to 8.75%, thus ensuring a connection with a horizontal section located at el. 311.0 m. In addition to the increase in bed elevation, the width of the tailrace channel will also decrease from 10 m to 7.75 m and the channel will merge with the Mattagami River near an existing scour hole. The approximate volume of excavated material, consisting of soil and rock, resulting from the on land portion of the tailrace channel is 3,600 m^3 which will be disposed of in the on-site material laydown areas.

In order to reduce head losses in the river while removing a natural sill that acts as a control located at the tailrace channel's outlet, excavation in the Mattagami River is planned. The river rock excavation (approximately 2,112 m^3) will consist in continuing the 7.75 m wide channel at the el. of 311.0 m for approximately 60 m downstream where the slope of the channel will change to 7% in order to reach a horizontal platform at el. 313.00 m, located directly upstream of the outlet of the Base Case scenario's tailrace channel. The in-river excavations will vary from 0.5 m to a maximum of 5 m in depth.

To ensure worker safety and compliance with the existing Water Management Plan during excavation work, a temporary weir and bypass system is planned between the existing dam and the scour hole (rock pool) to allow flows to reach downstream of the tailrace channel outlet, if flow releases are required to maintain compliance. The system will consist of a small temporary weir and two 600 mm diameter pipes approximately 100 m in length. The bypass system will be installed with the temporary weir, just prior to tailrace channel excavation and removed just after excavation is complete.

Figure 2.7 Temporary Weir and By-Pass System



Excavations will be conducted during the in-water work window (which runs from 21st June to 14th September each year) through the low flow summer months, in the dry and outside of the spawning window. This excavation work will be planned in order to not jeopardize the stability of the abutments of the existing Bailey bridge. It is expected that the excavation work duration would not exceed 45 days with the area to be dewatered for up to 60 days total. The above mentioned dimensions of the tailrace channel, as depicted in Figure 2.8, and the river excavation were preliminarily optimized using the one-dimensional numerical model HEC-RAS, developed by the U.S. Army Corps of Engineers; and later confirmed by CFD (Computational Fluid Dynamics) modelling that the proposed tailrace channel will have no adverse effect upon fish habitat, including spawning habitat, downstream of the bridge.

Transmission Line and Connection Switchyard

Similar to the Base Case, the proposed 3 km 115 kilovolts (kV) transmission line will run from the powerhouse switchyard, which will be built next to the powerhouse, to the connection switchyard near the existing Hydro One 115 kV Transmission line (T61S) (Photograph 2-7) running from Timmins Transformer Station to the Shiningtree Distributing Station. The connection switchyard will contain a motorized disconnect switch and associated structures and devices.

The final tap line from the connection switchyard to the existing Hydro One 115 kV Transmission line (T61S) will be constructed by Hydro One. The transmission line will be built to the CAN/CSA-C22.3 No. 1-06 standard. The Alternate Proposal does not alter the original Base Case presented in the currently approved EA.

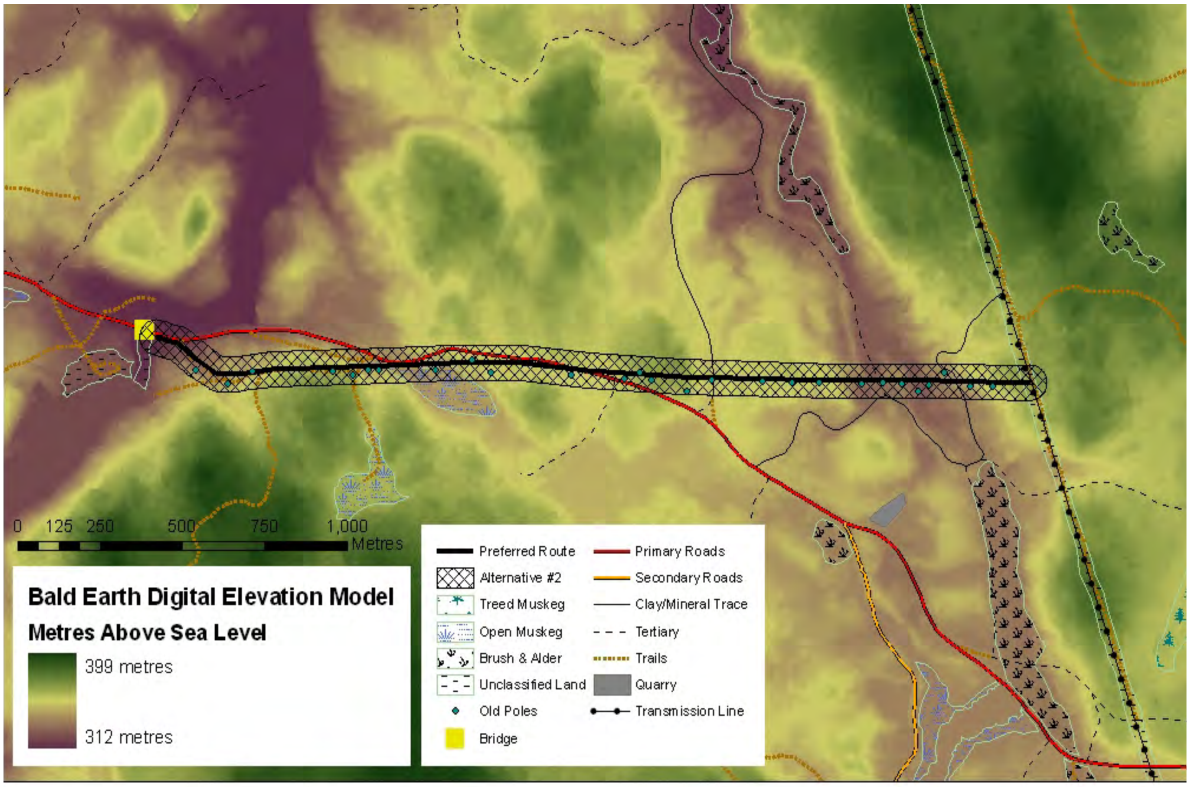
Photograph 2-7 Existing Hydro One Transmission Line

The proposed transmission line will be a 115 kV single or double wooden pole transmission line. A single wooden pole line is shown in the photograph below and the proposed line would resemble this design (Photograph 2-8) or a double wooden pole type of similar height.

Photograph 2-8   Proposed Hydro Transmission Line Style

A preferred transmission corridor has been identified and is depicted in Figure 2.7. This corridor follows an old utility line. This corridor (right-of-way) is approximately 3 km long and will be about 40-45 metres in width.

Figure 2.8 Preferred Transmission Route



2.4 RATIONALE FOR LOCATION AND RE-CONFIGURATION

Described below is the rationale for the development of the proposed GS at Mattagami Lake Dam, the specific location of work and re-configuration.

2.4.1 Rationale for Location – Generating Station

As indicated in the Project Description the existing Mattagami Lake Dam was built by Northern Power Company in 1921, prior to Ontario Hydro acquiring the site in 1944. An archival drawing of the site dated to 1923 indicated that the Northern Power Company had contemplated putting in a generating station connecting sluice gates #5 and #6 with a penstock running along the eastern shoreline and a generating station at the bottom of the falls. For reasons unknown to OPG the facility was never built. That being said, the existing dam provides flood mitigation for the City of Timmins as it has the largest storage capacity on the Upper Mattagami River system.

In 2005 several factors came together for OPG to consider development at the site:

- First and foremost, the Mattagami First Nation approached OPG about potentially developing the site for a generating station in partnership with them;
- OPG recognized that it had already in place a control dam and operational site making development more feasible;
- The Water Management Plan for the Mattagami River System was being completed; and,
- The Government of Ontario identified the need for more power and specifically from renewable resources such as hydro.

Based on the above factors, OPG initiated engineering and environmental studies to explore the feasibility of developing the site.

Between 2006 and 2010 OPG undertook various technical and economic assessments, and completed the EA in 2011 when it issued its Statement of Completion on March 14, 2011. Prior to proceeding with design and construction, OPG retained an Owner's Engineer to conduct a review of the Base Case proposal. The review identified several constructability and economic challenges associated with the Base Case and also opportunities to reduce the environmental impact of the project. The Alternate Proposal, as described in the project description, has the following advantages over the Base Case.

- The Alternate Proposal eliminates the use of two sluices of the existing dam. It has a separate intake, thereby maintaining the discharge capacity of the existing dam and eliminating the requirement for emergency sectional gate works to meet dam safety requirements, and reduces water operational constraints during the construction period.

- The Alternate Proposal eliminates the penstock, which eliminates the need for in-water construction within or near the upstream limits of the Walleye and Lake Whitefish spawning area and significantly minimizes road closure requirements.
- The Alternate Proposal eliminates construction and removal of the downstream cofferdam within or near the spawning area.
- The Tailrace flow will be returned to the river upstream of the bridge and spawning area, resulting in flow entering the spawning area from its natural direction. This minimizes the alteration of flow patterns in the spawning area that would have occurred under the Base Case Design.
- The Alternate Proposal reduces impact to habitat productivity through a reduction in the frequency and magnitude of abrupt flow changes. It has two turbine units with a minimum operational flow of 5 m^3/s each, which provides the ability to reduce flows smoothly to 5 m^3/s. The Base Case Design had one turbine unit with a minimum operational flow of approximately 10 m^3/s, resulting in an abrupt flow change from 10 m^3/s to the minimum flow requirement of 2.8 m^3/s whenever there was insufficient water to operate.
- The excavation of the intake channel should allow OPG to draw down Mattagami Lake to the approved water level minimum, providing additional flood mitigation for Timmins.

2.4.2 Rationale for Location – Transmission Line

There is no proposed change to the previous Environment Report section 2.4.2 Rationale for Location – Transmission Line.

3.0 ASSESSMENT OF EFFECTS

3.1 AQUATIC ENVIRONMENT

3.1.1 Intake Channel and Intake

Existing Conditions

Compared to the approved base-case design, which had the GS intake at the two western-most sluices (sluice #1 and #2) of the Mattagami Lake Dam, the new design proposes an intake that is separate from the dam and 30 m farther west along the existing Mattagami Lake shoreline (Figure 2.6). The shore area where the intake is proposed appears to be part of a larger sand deposit that dominates the shoreline for as far as was observed along the shore west of the dam (Photographs 3-1, 3-2 and 3-3). From what can be observed from shore, combined with the substrate hardness map as determined by side-scan sonar (Figure 3.1), the sand-dominated substrate extends offshore into the deeper water, with increasing amounts of mixed-in harder material farther offshore, and a large area of hard material (yellow in Figure 3.1) in front of the dam and in occasional smaller patches throughout. The side-scan image shows that the structural habitat in the area above the dam is fairly uniform, with some scattered large wood debris in the nearshore areas (Figure 3.2). As shown in Photographs 3-1 and 3-2, as well as indicated in the bathymetry map (Figure 3.3), water depth increases rapidly from shore to about 6 m, and then becomes deeper more gradually.

Photograph 3-1 View of Mattagami Lake from Proposed Intake Location. May 9, 2011

Photograph 3-2 Shoreline Location of the Proposed GS Intake. Mattagami Lake Dam in Background. May 9, 2011

Photograph 3-3 Shoreline of Mattagami Lake Continuing in Opposite Direction from Viewpoint of Photograph 3-2. May 9, 2011

Figure 3.1 Sonar Map Showing Bottom Hardness, with Yellow Being the Hardest Substrate. Based Upon Comparisons Between this Map and Field Observations, it Appears that Pink Corresponds to Fine Sand Substrate Such as What Occurs Along the Shore to the Left of the Intake Channel, and is Shown in Photographs 3-1 and 3-2

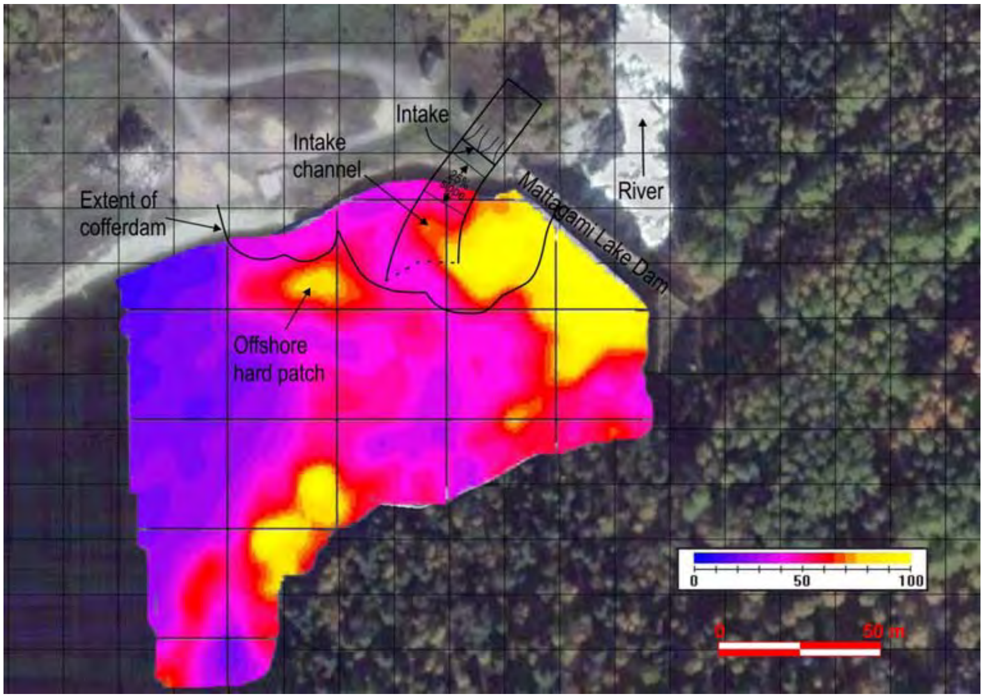
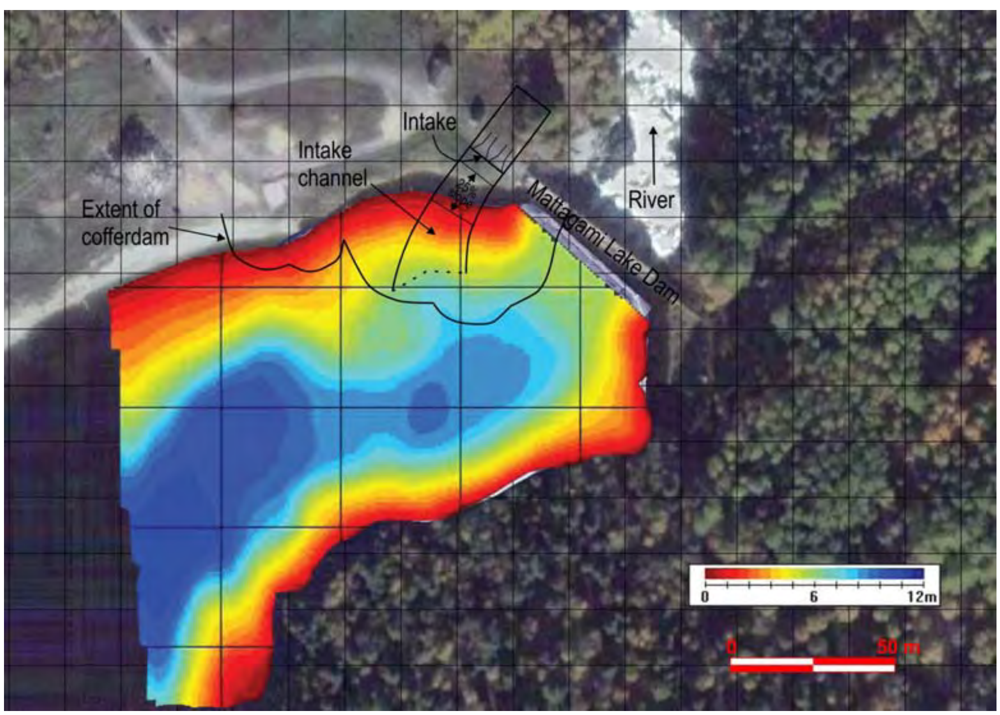


Figure 3.2 Side-scan Sonar Image of Mattagami Lake Adjacent to the Mattagami Lake Dam

Figure 3.3 Bathymetry of Mattagami Lake Adjacent to the Mattagami Lake Dam



Assessment

In regard to the type of in-water work required, there is little difference between the base case design and the new design. The main difference due to moving the intake channel and intake 30 m to the west, is that more in-water excavation is required because the intake will no longer utilize sluices in the existing dam. During construction, approximately 2500 m^2 of lakebed habitat will be temporarily disrupted by the placement of a work pad and associated cofferdam (Figures 3.1, 3.2 and 3.3), expected to occur and remain in place from June (Year 1) to August/September (Year 2) for a maximum of 16 months during the construction of the intake structure and the nearshore portion of the intake channel. The cofferdam will be constructed with rockfill material and its impermeability will be ensured by temporary sheet piles driven through a silty sand working pad located within the rockfill enclosure. During the installation of the cofferdam, as well as the removal of the cofferdam and the subsequent excavation and contouring of the offshore portion of the intake channel that will all occur within the summer in-water fisheries work period for this location, a silt curtain will be utilized to minimize the deposition of sediment outside of the work site. Once construction is complete, approximately 1000 m^2 of the steep slope that extends from the shoreline to approximately 23 m offshore, will have been permanently excavated and re-contoured to create an intake channel through which water will pass to the GS intake (Figures 3.1, 3.2 and 3.3). No significant change in the area of open water is expected to occur. The proposed construction sequence is provided in Appendix A (MLGS Upstream Cofferdam Construction Sequence, 2012).

The area that will be impacted by the construction of the intake channel and intake is sloping lake bed composed mainly of fine sand with some scattered rocks, which is typically habitat of low productivity, and would not provide critical habitat for any of the fishes listed in Table 3.1. As such, it is expected that the temporary disruption of this habitat area during construction will result in an insignificant and temporary loss in fish productivity. For the permanent post-construction condition there are no plans to line the bottom or reinforce the sides of the intake channel with concrete or rip rap, as the exposed native lakebed and shoreline materials will be suitable for this purpose. The upstream portion of the intake channel will consist of native granular lakebed material, and farther inshore but upstream of the 25% slope area (Figure 2.6), good quality bedrock will be encountered and will form the remainder of the intake channel to the intake.

As discussed in other parts of this document, improved dam safety, increased spill capacity and increased flood protection for the City of Timmins, are the benefits of the GS intake being separate from the existing dam. While there is the temporary loss and disruption of low productivity shoreline habitat in Mattagami Lake, post-construction permanent habitat at the same location may be slightly improved. Operationally, the new design will not have any significant effect upon Mattagami Lake, compared to either the Base Case design or existing conditions.

Table 3.1 Fish Species of the Mattagami River

Common name	Scientific name	Mattagami River[1]	Mattagami Lake[2]	Kenogamissi Lake[2]	Comments	Conservation rank (Ontario)
lake sturgeon	*Acipenser fulvescens*	✓			lower reaches only	S3 – rare to uncommon
brook trout	*Salvelinus fontinalis*	✓			certain tributaries	
lake whitefish	*Coregonus clupeaformis*	✓	✓	✓		
cisco	*Coregonus artedi*	✓	✓	✓		
northern pike	*Esox lucius*	✓	✓	✓		
goldeye	*Hiodon alosoides*	✓			lower reaches only	S3 – rare to uncommon
longnose sucker	*Catostomus catostomus*	✓				
common white sucker	*Catostomus commersonii*	✓	✓	✓		
greater redhorse	*Moxostoma valenciennesi*		✓		Probably *M. macrolepidotum*	
redhorse	*Moxostoma* sp.	✓			Probably *M. macrolepidotum*	
lake chub	*Couesius plumbeus*	✓				
golden shiner	*Notemigonus crysoleucas*	✓				
emerald shiner	*Notropis atherinoides*	✓				
common shiner	*Luxilus cornutus*	✓				
blacknose shiner	*Notropis heterolepis*	✓				
spottail shiner	*Notropis hudsonius*	✓	✓	✓		
fathead minnow	*Pimephales promelas*	✓				
bluntnose minnow	*Pimephales notatus*			✓		
longnose dace	*Rhinichthys cataractae*	✓				
fallfish	*Semotilus corporalis*	✓			lower reaches only	
pearl dace	*Margariscus margarita*	✓				
northern redbelly dace	*Phoxinus eos*		✓			
burbot	*Lota lota*	✓	✓	✓		
brook stickleback	*Culaea inconstans*	✓				
ninespine stickleback	*Pungitius pungitius*	✓				
stickleback	Gasterosteidae			✓		
trout-perch	*Percopsis omiscomaycus*	✓		✓		
smallmouth bass	*Micropterus dolomieu*	✓	✓	✓	upper reaches only	
yellow perch	*Perca flavescens*	✓	✓	✓		
walleye	*Sander vitreus*	✓	✓	✓		
johnny darter	*Etheostoma nigrum*	✓				
logperch	*Percina caprodes*	✓	✓	✓		
mottled sculpin	*Cottus bairdii*	✓				
sculpin	*Cottus* sp.		✓	✓		

[1]Riverine fish species of the Mattagami River (modified from Table 1 *In* Seyler, 1997). [2]OPG *et al*, 2006.

3.1.2 Tailrace Channel

Existing Conditions

Downstream of the Mattagami Lake Dam the Mattagami River flows over an approximately 150 m long bedrock slope, which ends at the Kenogamissi Falls Road Bridge. The upper half of this reach is the steepest portion with very fast flowing water, and is isolated from the lower half by short but relatively steep waterfalls (Photograph 3-4). The lower half is more gently sloping, with a deep bedrock pool below the waterfalls at its upstream end, and sloping bedrock rapids downstream of the bedrock pool to the bridge, with some scattered large boulders closer to the bridge on top of the bedrock (Photographs 3-4 and 3-5). Fish are capable of getting upstream in this lower half, as far as the bedrock pool. The bedrock substrate throughout this reach, in combination with the very fast flows, results in an apparently sparse fish community in the bedrock pool and downstream to where the lower flow velocities and coarse substrates occur downstream of the road bridge. Lake Whitefish and Walleye have not been observed beneath or upstream of the bridge during their respective spawning migrations, and only Logperch have been observed in the bedrock pool. Invertebrate productivity is likely very low and insignificant upstream of the bedrock pool, and probably a little better within the bedrock pool and downstream to the road bridge.

The approved base case design left the section of river between the dam and the road bridge untouched, with the tailrace entering the river a short distance downstream of the road bridge within a pool that is the upstream limit of spawning habitat for Walleye and Lake Whitefish. In order to reduce the impact upon spawning Walleye in this area, the tailrace angle in the base case design was adjusted to be almost perpendicular to the natural flow direction, resulting in some minor concern that this could potentially cause erosion on the opposite side of the river.

Assessment

The construction of the tailrace in the new design is different in location and method than what was proposed in the approved base case design. Under the new design the tailrace would enter the river upstream of the road bridge, in the vicinity of the bedrock pool, and then continue down the river in a channel excavated in the bedrock. Approximately 15 m upstream of the road bridge the channel floor would rise on a 7% slope, and the channel will correspondingly widen to maintain flow capacity, until it merges with the existing channel approximately 8 m downstream of the bridge (Figure 2.8; Photographs 3-4 and 3-5). The main advantages of this new design over the base case is that the tailrace construction will occur almost entirely within the marginal fish habitat of the bedrock channel, avoiding the important spawning habitats and more productive habitats downstream of the road bridge, and during GS operation the flow pattern downstream of the road bridge in the Walleye and Lake Whitefish spawning area will not be significantly altered.

Photograph 3-4 View Upstream from the Road Bridge, May 8, 2011. The Approximate Location of the Proposed Tailrace Channel is Shown

While the proposed new GS design will completely change the configuration of habitat in the lower half of the River section that extends from the Mattagami Lake Dam to the downstream road bridge, it is thought that these direct impacts to fish habitat will be insignificant with regard to the functioning of the river system. At present, the proposed impacted section of river is not used for spawning by any fishes, and likely supports a very sparse and simple fish community of a few species. The proposed tailrace channel will not function significantly different from the habitats that presently exist here, except that there is the potential to support more fish and invertebrates and a greater diversity of fishes, due to the increase in water depth, the reduction of maximum flow velocities, and improved accessibility. It is also possible that the tailrace channel may provide suitable spawning habitat for Lake Whitefish, where none existed before.

With regard to the in-river excavation of the proposed tailrace channel, it is estimated to take 60 days and will occur entirely within the first summer in-water work period. Most of the tailrace channel construction will be completed in the dry. The in-land tailrace channel section will be constructed in the dry using the existing bedrock as a rock plug. During the in-river excavation work, the river flow will be diverted around the construction area by a temporary weir and two 600 mm pipes (Figure 2.8). At the end of the construction period, the rock plug will be removed connecting the two tailrace sections and some in-water work will be required to shape the channel. A silt curtain will be used in this last stage to control the transport of suspended fine material, however, due to the bedrock/boulder substrate in this area, it is thought that there will be little potential for generating significant amounts of suspendable fine material.

Photograph 3-5 View Upstream from the Approximate End of the Proposed Tailrace Channel, May 8, 2011. The Approximate Location of the Proposed Tailrace Channel is Shown

3.1.3 GS Operation

The operation of the proposed redesigned GS has, from an environmental aspect, two main benefits over the former approved design. One benefit is the maintenance of the natural direction of flow into the area immediately downstream of the road bridge, where Walleye and Lake Whitefish are known to spawn, significantly reducing the degree that flow patterns will be altered from existing conditions. This has been confirmed by a 3D modeling exercise, conducted by OPG. In summary, 3D modelling showed that flow patterns will not change significantly, and the minor changes that are predicted may be beneficial to spawning Walleye and spawning Lake Whitefish. This is due to a slight predicted increase in flow velocity within shallow nearshore areas, where velocity is presently too slow, that may improve Walleye spawning habitat, and a predicted reduction in high midstream velocity that may improve Lake Whitefish spawning habitat (Appendix B - December 6, 2011).

The second benefit stems from the change in design from a single unit GS with a minimum turbine flow of approximately 10 m^3/s, to two smaller units with a minimum turbine flow of approximately 5 m^3/s. Under the base case scenario, flows could be reduced smoothly as riverflow decreased to 10 m^3/s, but then would abruptly drop to the 2.8 m^3/s approved minimum flow. Under the proposed new design scenario, flows could be reduced smoothly as riverflow decreased to 5 m^3/s, but then would abruptly drop a much smaller amount to the 2.8 m^3/s approved minimum flow, thus having less impact upon river functions and productivity. The annual period when minimum flows are probable will be reduced from about 12-13% of the time, to about 4-5% of the time, if the new design is implemented instead of the base case.

As in the base case design, the proposed new design will be operated within the parameters of the Water Management Plan. The minimum flow of 2.8 m^3/s will be provided through the generating station. Should both GS units be tripped unplanned, minimum flow will be provided through the turbines without producing power until staff are dispatched to the site (if long-term interruption). The base case provision of 0.2 m^3/s, to maintain the habitat function of the bedrock pool, will no longer be required as the pool in its original condition will no longer exist and flow will be provided through the pool location directly by the tailrace.

3.2 TERRESTRIAL ENVIRONMENT

The transmission component of the MLD Project is unchanged from the previously contemplated Project and therefore there is no change with respect to the impact assessment for that component.

The revised proposed GS will occur in largely the same area as the previously considered concept. The GS itself will occur in generally a smaller footprint than the previous concept which would have extended farther along the river to the north side of Kenogamissi Falls Road. At the same time, slightly more land is required on the west side of the proposed undertaking on the south side of Kenogamissi Falls Road to construct the Project. With either area there are no significant habitats or species of concern.

The MNR will need to issue a Forest Resource Licence for the timber that is to be cut. OPG has conducted the initial forest resources inventory of the area of the previous proposal.

The amount of rock and earth material to be excavated may require more on-site stockpiling of material. While OPG has provided an estimate of this material the total volume stored on-site at any given moment during construction will be dependent on the Contractor's ability to move the material off-site for other uses. As indicated elsewhere in this Report, both Tembec and the local cottagers on Mattagami Lake have indicated an interest in the material. As well, it is possible other users may also have an interest in the material. From a site management perspective it will be to the Contractor's advantage to move the material off the site as quickly as possible and therefore largely leave the site in-tact. The Contractor will be encouraged to develop a materials excavation plan as soon as possible in order to identify how they will manage excavated materials. The Contractor will be required to stabilize and revegetate (using native species only) all areas impacted by the construction project as indicated in the original Environment Report.

3.3 SOCIO-ECONOMIC ENVIRONMENT

The revised proposed undertaking does not result in any major new positive or negative socio-economic effects.

The revised concept does not change the overall aspects of the project with respect to impact on other land and resource users and access. The revised undertaking has a slight benefit to other resource users in that it will not result in extended road closures of the Kenogamissi Falls Road (the previous concept would have resulted in a short-term temporary shutdown). But this change is of a minor nature.

The revised concept results in a greater excavation of rock and overburden which may increase the overall number of trucks entering and leaving the site, on Kenogamissi Falls Road and Highway #144. However the net effect may be very minor as the revised Project also reduces the need for bringing in other construction materials such as the steel penstocks. As well, stakeholders such as Tembec and Mattagami Lake cottagers have also indicated an interest in obtaining these materials.

As the revised proposed undertaking enhances the likelihood of the Project proceeding and therefore its ancillary socio-economic benefits the current project should be considered positive.

3.4 CULTURAL ENVIRONMENT

Woodland Heritage Services Limited has examined the revised proposed undertaking and indicated that it has a possibility to have a limited additional effect on cultural heritage due to the fact that the proposed cofferdam will be attached on the west shore to a provincially registered and currently protected archaeological site. Woodland Heritage will inspect the site area affected by the cofferdam in the spring of 2012 (with the assistance/approval of the Mattagami First Nation) and assess what preparatory work or limited additional archaeological excavations that might be required ahead of this. As the shoreline slope where the cofferdam may be attached forms part of the protective buffer for the preserved archaeological site, this area according to Ministry of Tourism, Culture and Sport (MTCS) should be treated as part of the site. That means that any areas that might be disturbed through installation of the anchor point should be excavated by a licenced archaeologist ahead any cofferdam installations. But alternatively as it is a slope area and if no cultural materials are found buried in the slope from the initial shovel testing, then a case could be made for the registered site protection buffer ending at the top of the slope. If this is the case, then the concern here would be for any potential damage to the preserved portion of the site that sits at the top of the slope.

4.0 CONSULTATION

OPG has consulted on the Alternate Proposal with key stakeholders previously consulted on the Base Case. Accordingly, consultation has occurred with Mattagami First Nation, Métis Nation of Ontario, local cottagers, Tembec and a number of government agency consultations.

4.1 MATTAGAMI FIRST NATION

OPG is in regular communication with Mattagami First Nation on the Project as they are working together on it. The Mattagami First Nation Project Team is regularly informed about the Project's status and participates in key meetings. The revised Project was presented to the community in December 2011. Only a few individuals attended this meeting. There were no concerns expressed about the change to the Project design. Community members did ask about the economic benefits to Mattagami First Nation from the Project. The previous design would have required OPG to close down Kenogamissi Falls Road for a few to several days and this potentially could have had impacts on Mattagami First Nation trappers and other traditional resource users.

4.2 MÉTIS NATION OF ONTARIO

The Métis Nation of Ontario, Regional Consultation Committee were provided with a written summary on the revised Project design. No concerns were raised about the revised Project design. The revised design eliminates one of the previous concerns of the MNO. The previous design would have required OPG to close down Kenogamissi Falls Road for a few to several days and this potentially could have had impacts on Métis traditional gatherers. The proposed design eliminates the need to install the penstock and therefore eliminates the need for the extended road closure. All other commitments made to the Métis with respect to no herbicide use on the transmission line, communications with respect to any temporary road closures for pubic safety reasons and a commitment to facilitate a tour of the construction site will continue to be met as originally agreed to.

4.3 LOCAL COTTAGERS

A meeting was held on September 4th, 2011 with the Mattagami Lake Cottagers Association in order to apprise them of the revised Project design. The cottagers asked a large number of questions about the revised design and in general about the Project. There were no concerns raised specific to the revised design. There were some general questions raised about access around the dam near the intake. OPG responded that for safety reasons the public is not allowed to have immediate access at water power facilities. The revised design does not change this basic concern. Other questions raised were on topics such as fisheries, the portage, re-use of excavated materials, the environmental assessment process, studies and work that was recently done on the site. These were mostly general information questions and the revised design for the GS does not impact on any of the issues raised.

The cottagers association did request that OPG give them another update on the Project in the spring of 2012. OPG is more than willing to participate at another meeting.

4.4 TEMBEC

A meeting was held with Tembec which is the Sustainable Forest Licence (SFL) holder for the Romeo Malette Forest in which the Mattagami Lake Dam is situated. Tembec also owns the Kenogamissi Falls Bridge. OPG has made an effort to regularly update Tembec on the MLD Project. Tembec did not identify any specific concerns with the revised undertaking. Tembec also indicated an interest in the excavated rock and material associated with the Project.

4.5 GOVERNMENT AGENCY CONSULTATIONS

OPG has had on-going discussions with the Ontario Ministries of Natural Resources (Timmins District), Environment and Culture about the revised Project. As well, DFO has also been involved in presentations and discussions.

From an aquatic and fisheries perspective there has been an acknowledgement by MNR and DFO that the revised Project is probably slightly preferred from a fisheries perspective primarily owing to the GS being located further upstream and away from the existing spawning habitat. OPG is working with DFO to obtain the Letter of Advice.

5.0 CONCLUSION

OPG's revised proposed undertaking assists in addressing some economic and constructability issues associated with the Project.

Based on a review of the project design by the environmental assessment team and consultation undertaken with a large number of First Nations, Métis, forest industry, cottager and regulator meetings, OPG is of the opinion that the Project will have slightly less environmental effect from the previously conceived Project. There is a slightly reduced aquatic and perhaps socio-economic environment effect. The impacts with respect to terrestrial and cultural heritage environment are considered no greater.

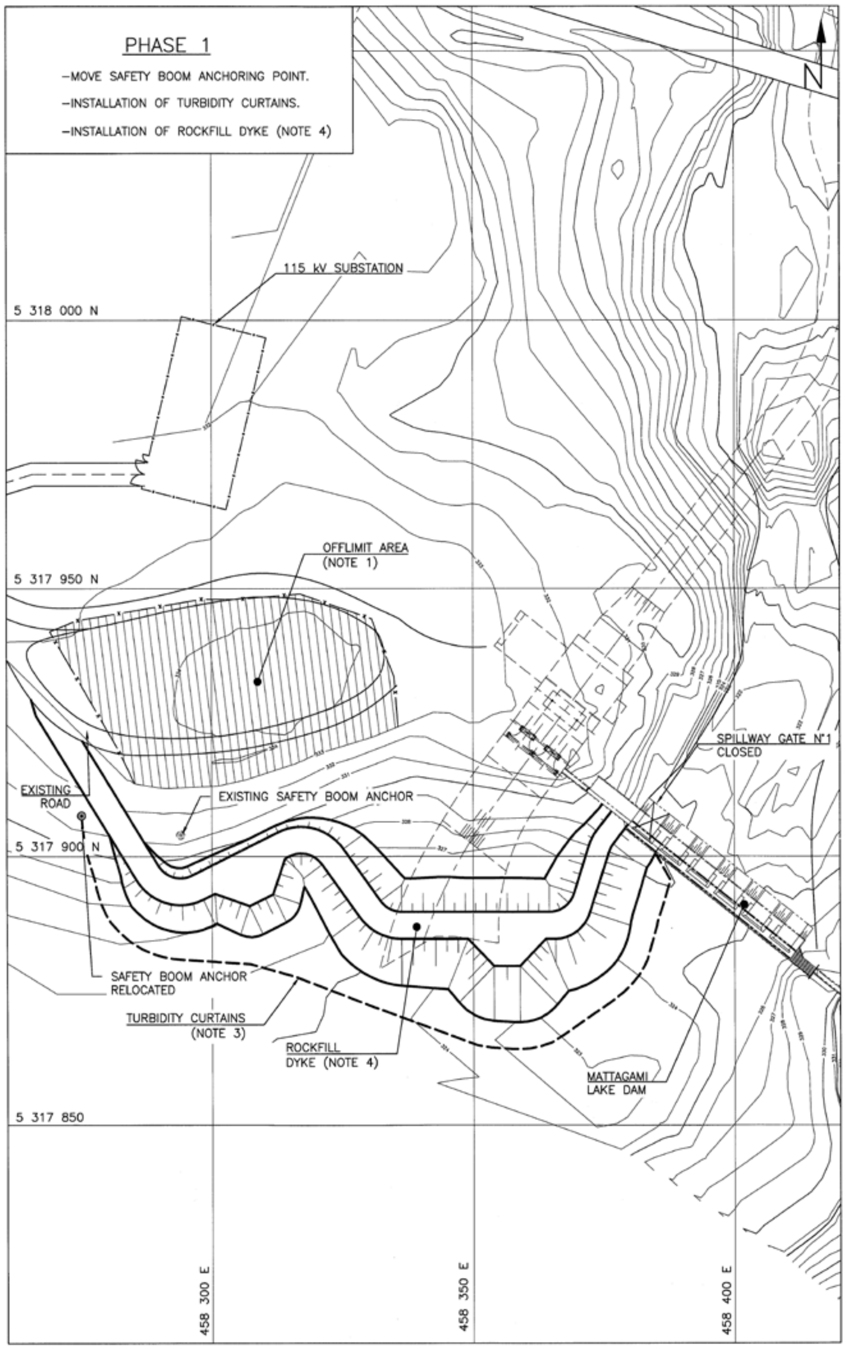
The OPG team has evaluated the Alternate Proposal, specifically the proposed modifications to the Base Case to consider if there are any negative environmental effects. It is the determination of the OPG team that the Alternate Proposal will have less environmental effect than the Base Case. Thus, based on this determination and the requirements of the *Guide* to Electricity Projects OPG it is of the opinion that an "Addendum" as per section B.5.2 of the Guide is not required. Consultation with stakeholders has confirmed this

APPENDIX A – UPSTREAM COFFERDAM CONSTRUCTION SEQUENCE

MLGS Upstream Cofferdam Construction Sequence

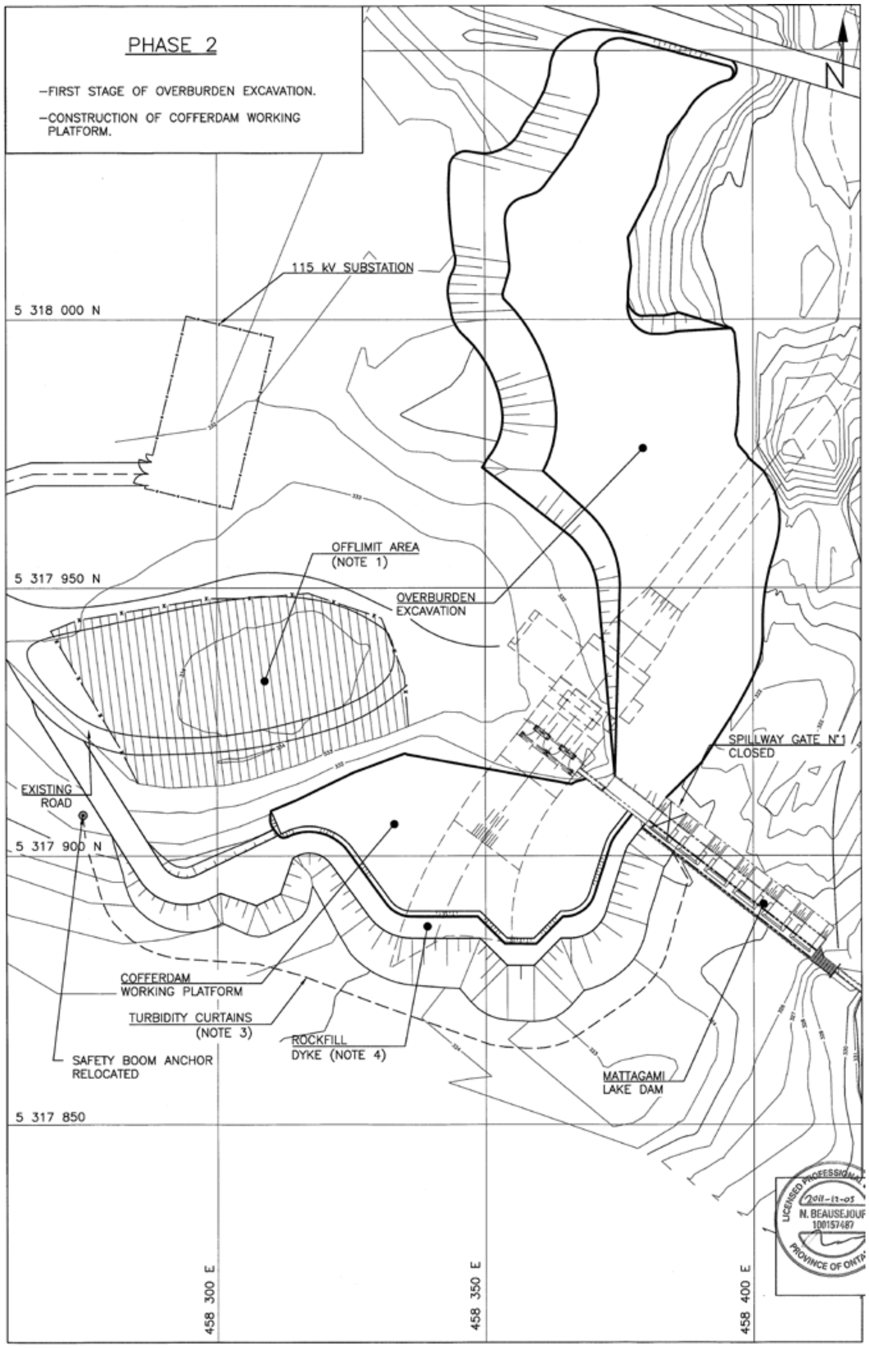
Phase 1:

- Move the safety boom anchoring point
- Close-off temporally the sluice #1 at the dam
- Install a turbidity curtain
- Install the cofferdam rockfill dyke to be conducted within the in-water work window from June 21th to September 14th



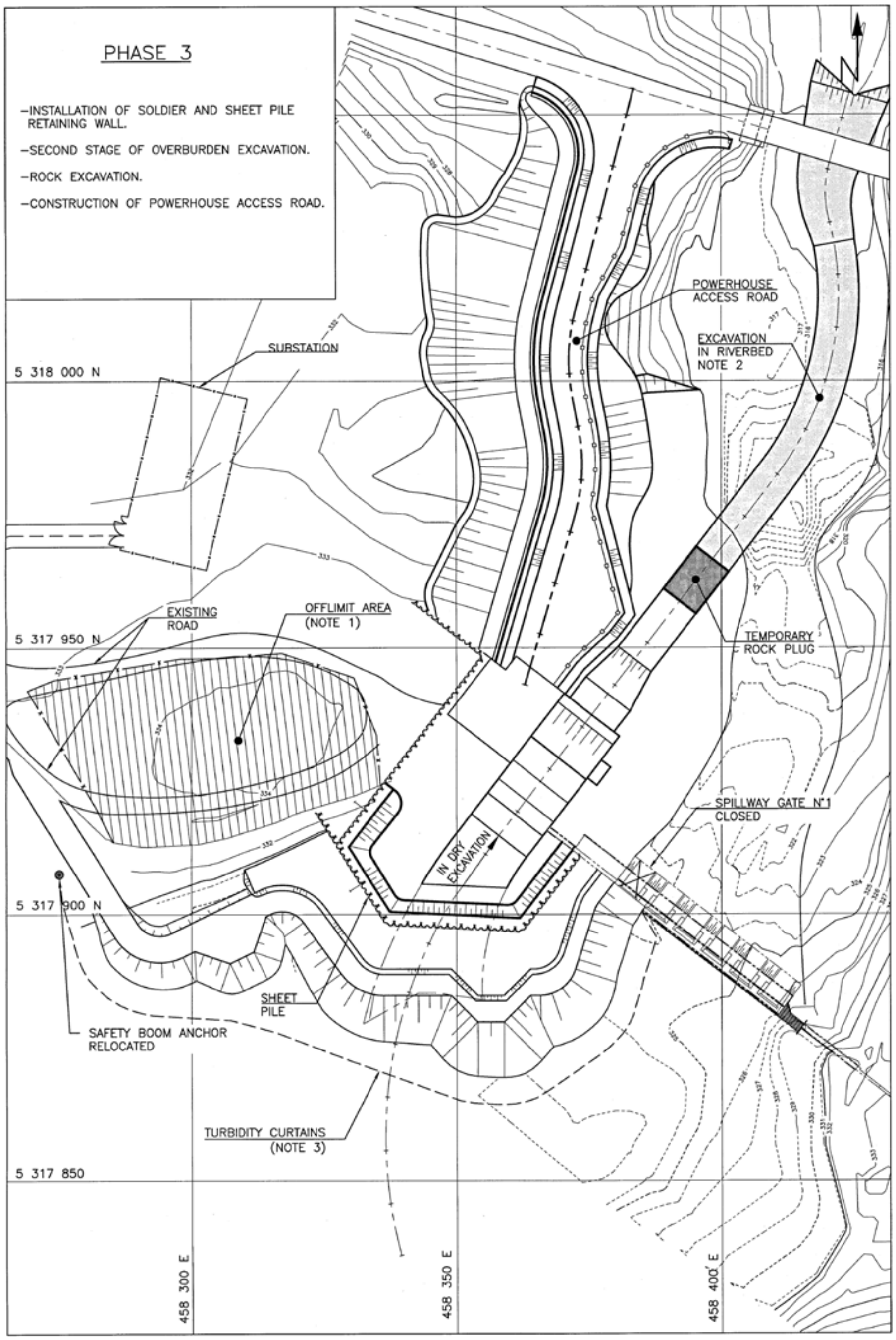
Phase 2:

- Execute the first stage of overburden excavation work
- Construct the cofferdam working platform



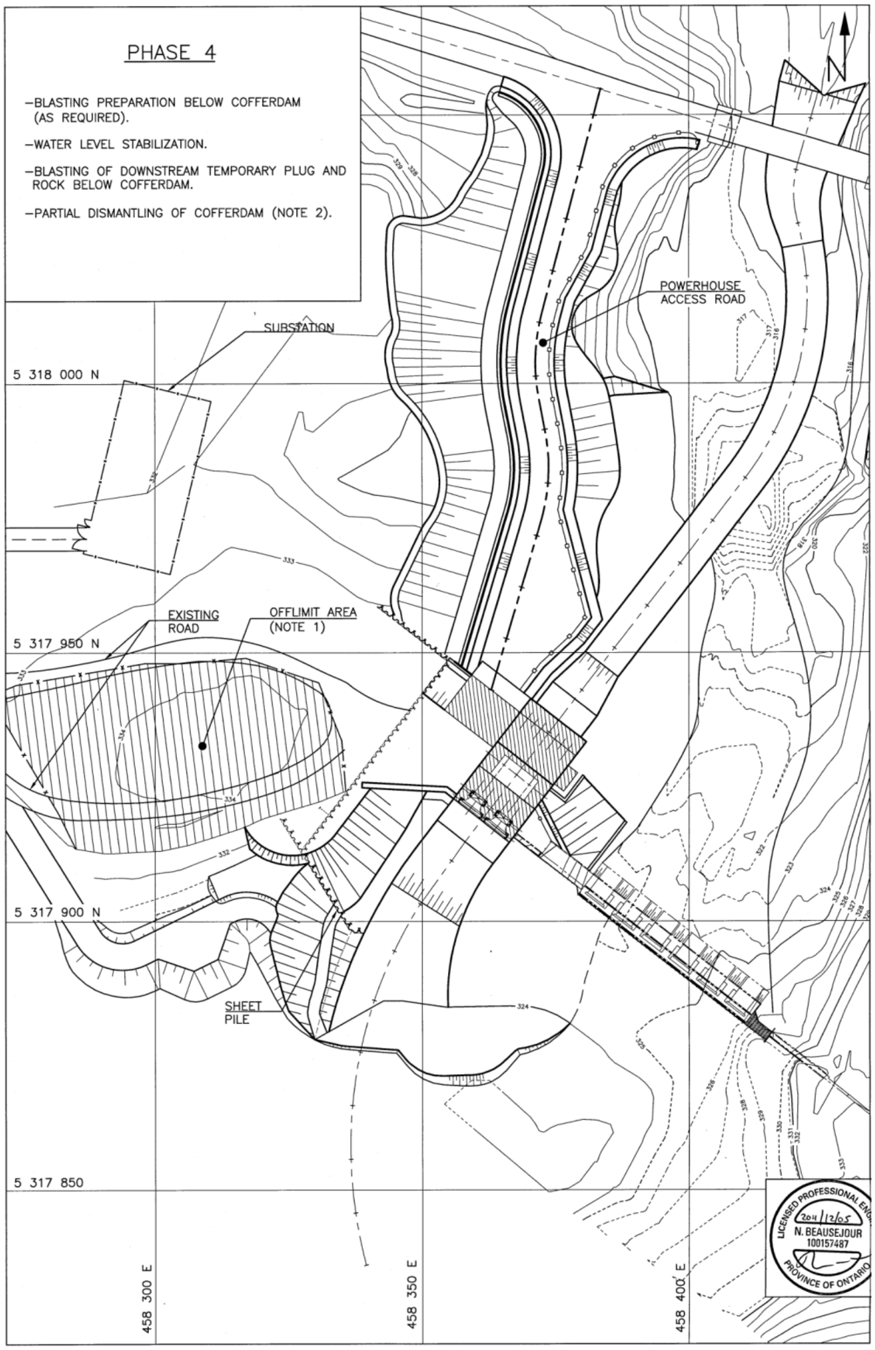
Phase 3:

- Install the cofferdam soldier and sheet piles and tiebacks
- Install the retaining wall
- Execute the second stage of overburden excavation work
- Execute the rock excavation work
- Construct the powerhouse downstream access road
- Construct the powerhouse, retaining walls and substation



Phase 4:

- Blast through the cofferdam to allow for the intake canal excavation
- Fill with water the area between the cofferdam and the intake to level the water elevation with the lake’s
- Dismantle and remove the upstream cofferdam and excavate the intake canal to the required invert
- Fill with water the area the tailrace channel up to the rock plug downstream cofferdam and then, blast and remove the rock plug



APPENDIX B – FLOW MODELLING PRESENTATION

Mattagami Lake Dam Development

Design Change Review
&
Implications for Aquatic Habitats

MNR and DFO

December 6, 2011

ONTARIO POWER GENERATION

Agenda

- Introduction
- Background / Project Update
- Highlights of Flow Model
- Model Plots & Implications for Habitat
- Operations
- Path Forward

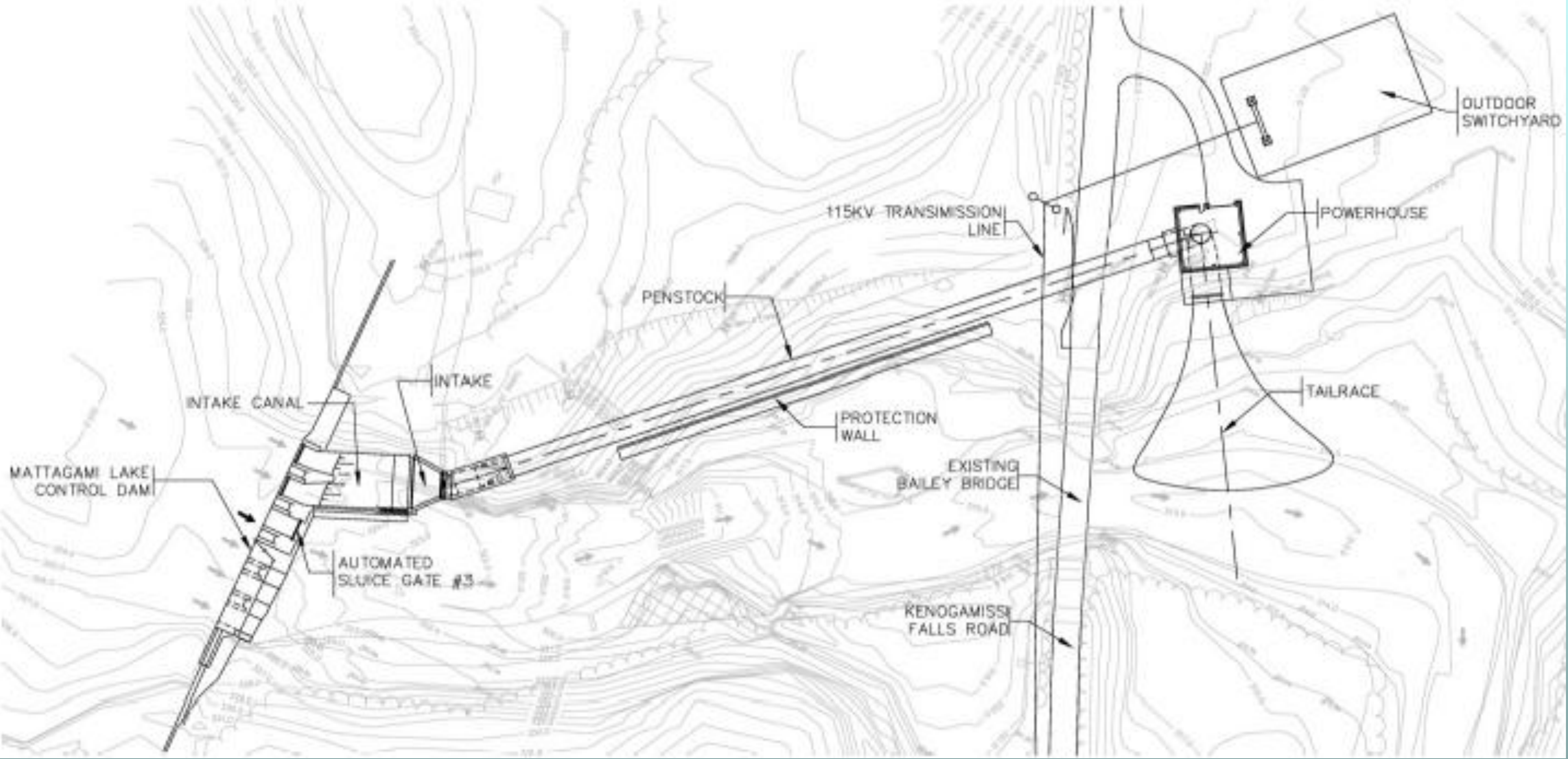
Objective of Meeting

- Address follow-up questions from MNR and DFO raised at the August design review meeting to complete the stakeholder consultation process.

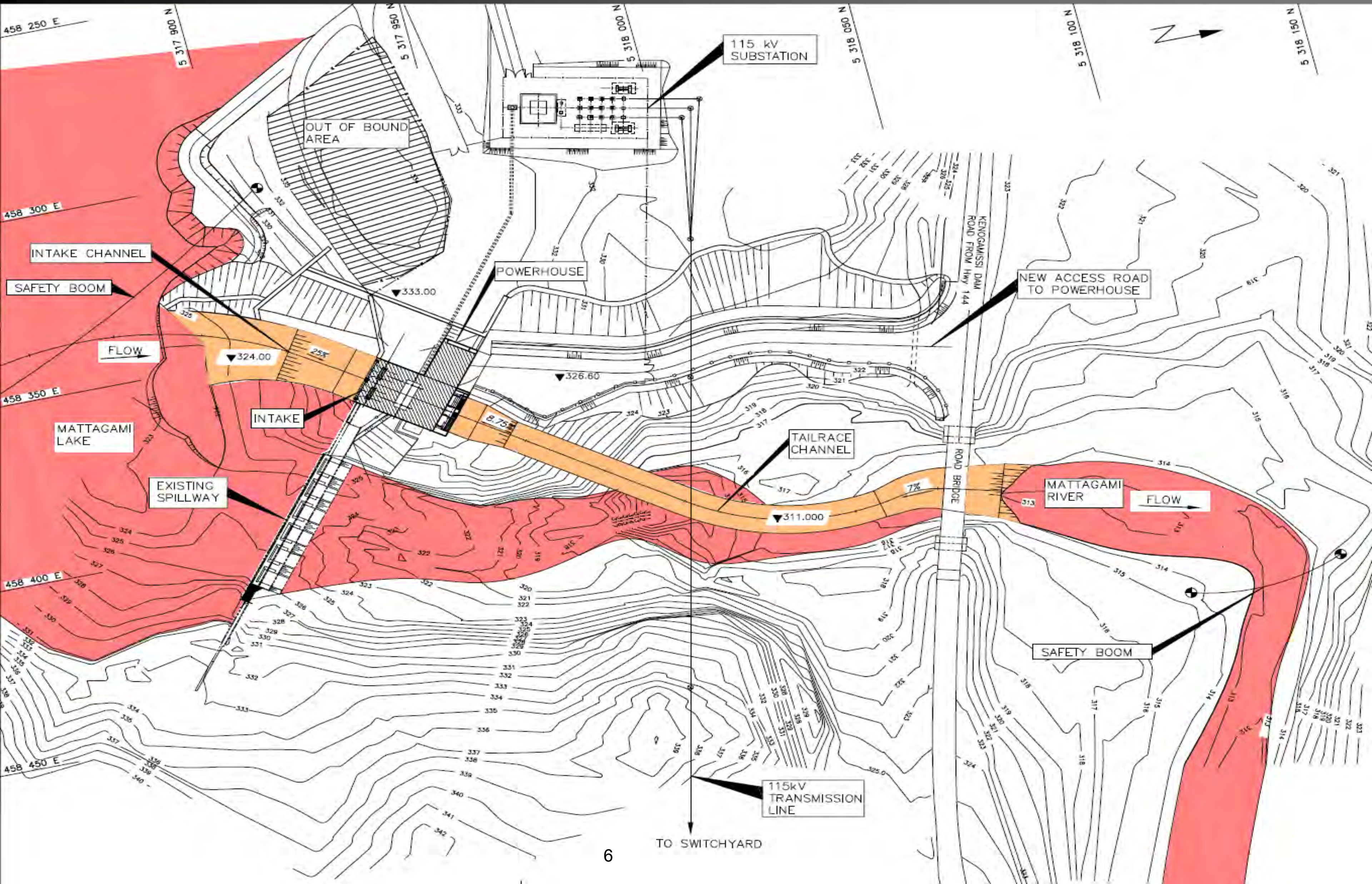
Background / Project Update

- Statement of Completion for MLD issued in Q1 2011
- Prior to proceeding with execution phase, OPG retained an Owner's Engineer to review the Base Case (EA alternative)
- Owner's Engineer reviewed Base Case, and suggested an Alternative Design due to several constructability and economic challenges, as well as opportunities to reduce the environmental impact of the project
- Transmission Line design remains the same as in the EA (no change to route, voltage, etc.)
- Changes are primarily to location of intake, penstock and powerhouse
- Further engineering work has confirmed the alternative design as the recommended layout

Base Case Schematic



Alternative Design Schematic



Alternative Design Benefits

- Eliminate the use of two sluices of the existing dam
  - The Alternative Design has a separate intake, thereby maintaining the discharge capacity of the existing dam and eliminating the requirement for emergency sectional gate works to meet dam safety requirements, and reduces water operational constraints during the construction period
- Eliminate the penstock
  - Eliminate the need for in-water construction within or near the upstream limits of the Walleye and Lake Whitefish spawning area
  - Significantly minimizes road closure requirements
- Eliminate construction and removal of the downstream cofferdam within or near the spawning area

Alternative Design Benefits

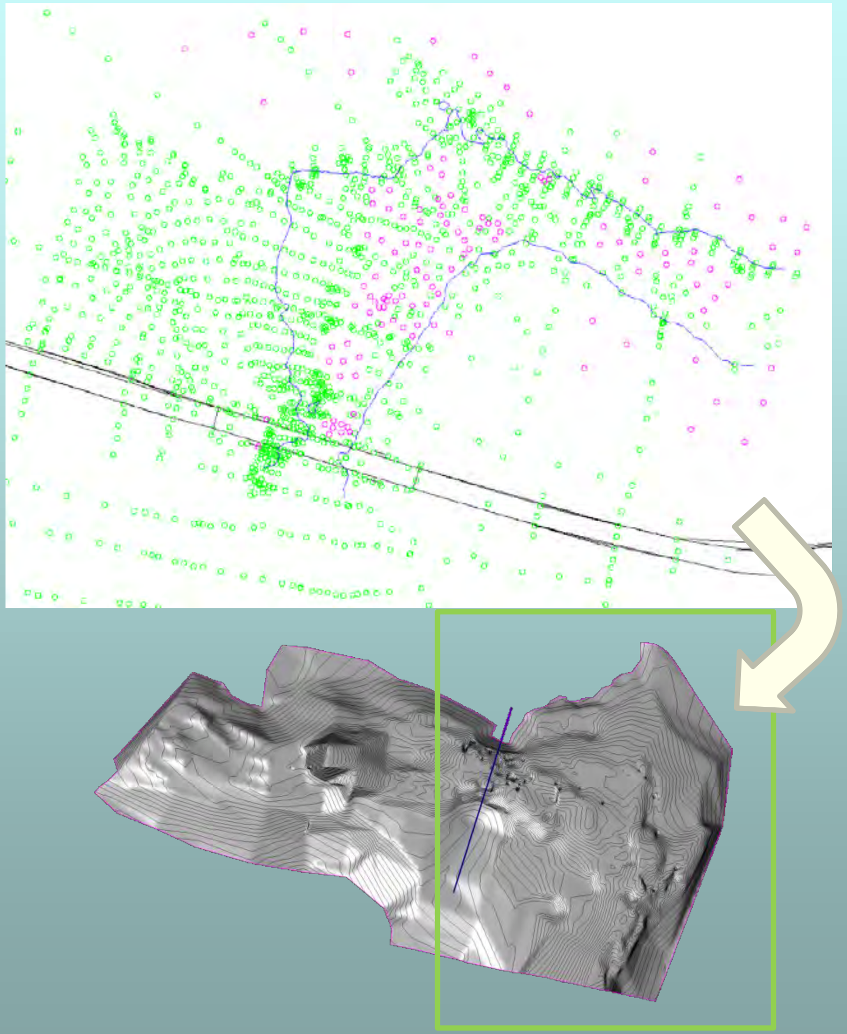
- Flow will be returned to the river upstream of the bridge and spawning area, resulting in flow entering the spawning area from its natural direction
  - Minimizing the alteration of flow patterns in the spawning area that would have occurred under the Base Case Design

- Reduced impact to habitat productivity through a reduction in the frequency and magnitude of abrupt flow changes
  - Alternative Design has two turbine units with a minimum operational flow of 5 cms each, which provides the ability to reduce flows smoothly to 5 cms
  - Base Case Design had one turbine unit with a minimum operational flow of approximately 10 cms, resulting in an abrupt flow change from 10 cms to the minimum flow requirement of 2.8 cms whenever there was insufficient water to operate.

- The excavation of the approach channel should allow OPG to draw down Mattagami Lake to the approved water level minimum, providing additional flood mitigation for Timmins

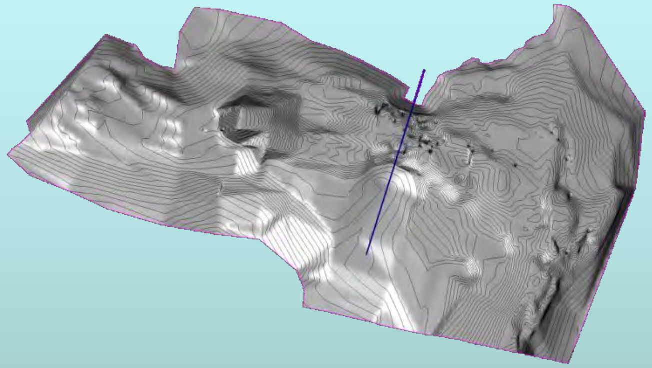
Highlights of Updated Flow Model

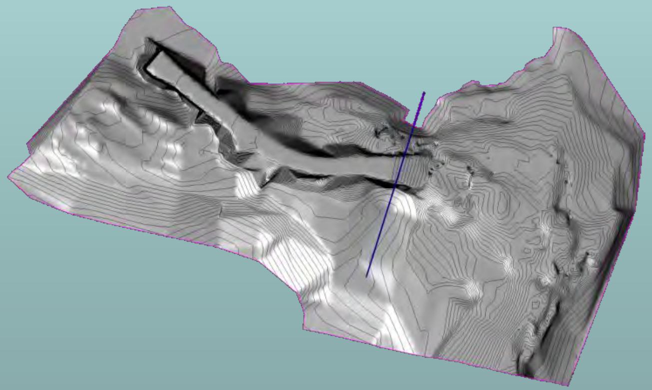
- The model was generated using existing topological data
- Software for solution: ANSYS CFX v13.0
  - A fully 3D flow solver
- Calibrated using field measurements of water level



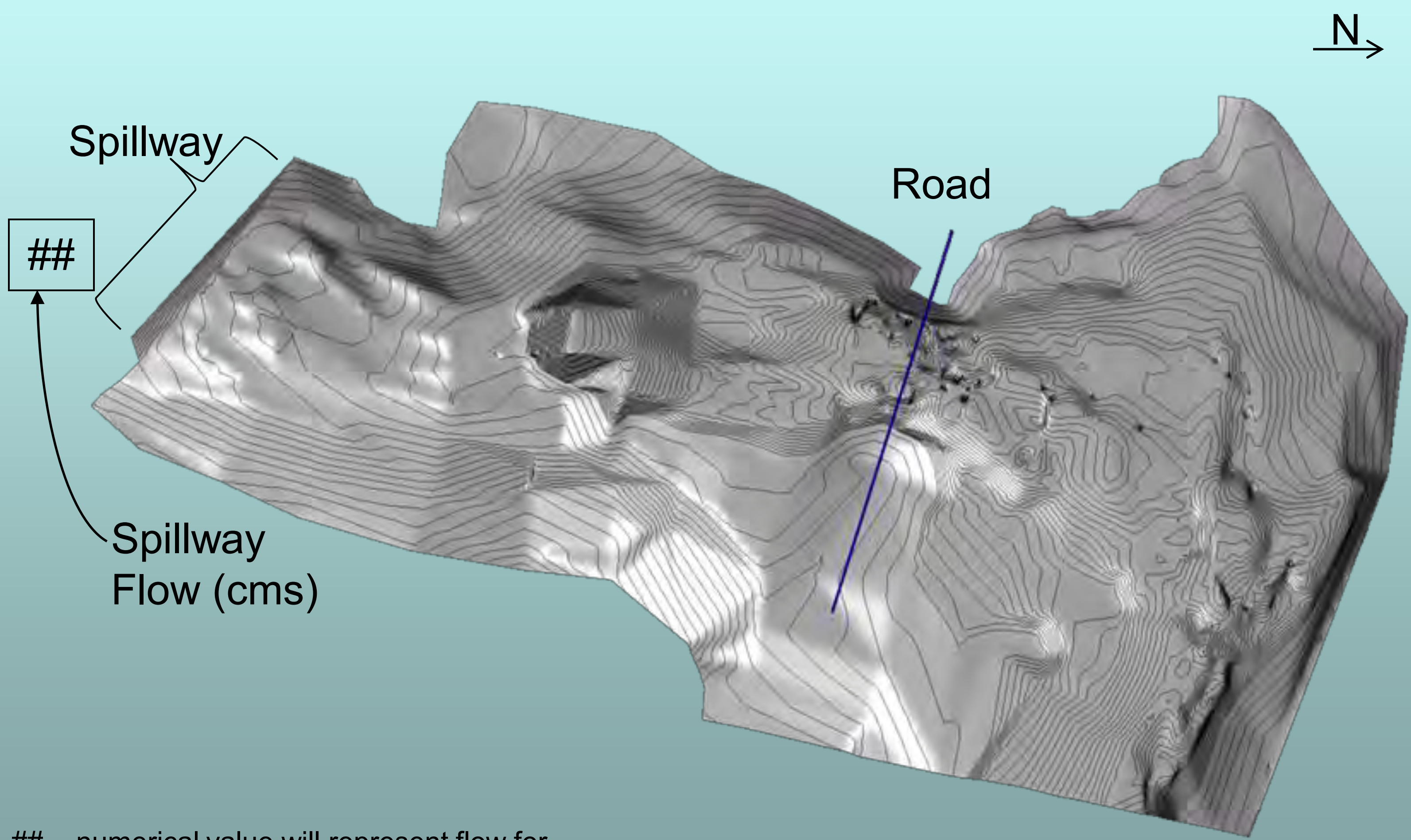
Highlights of Updated Flow Model

- Two models created
  - Pre-construction 'as is conditions'
  - Post-construction 'as proposed'
- Focus of analysis is water level and critical velocities



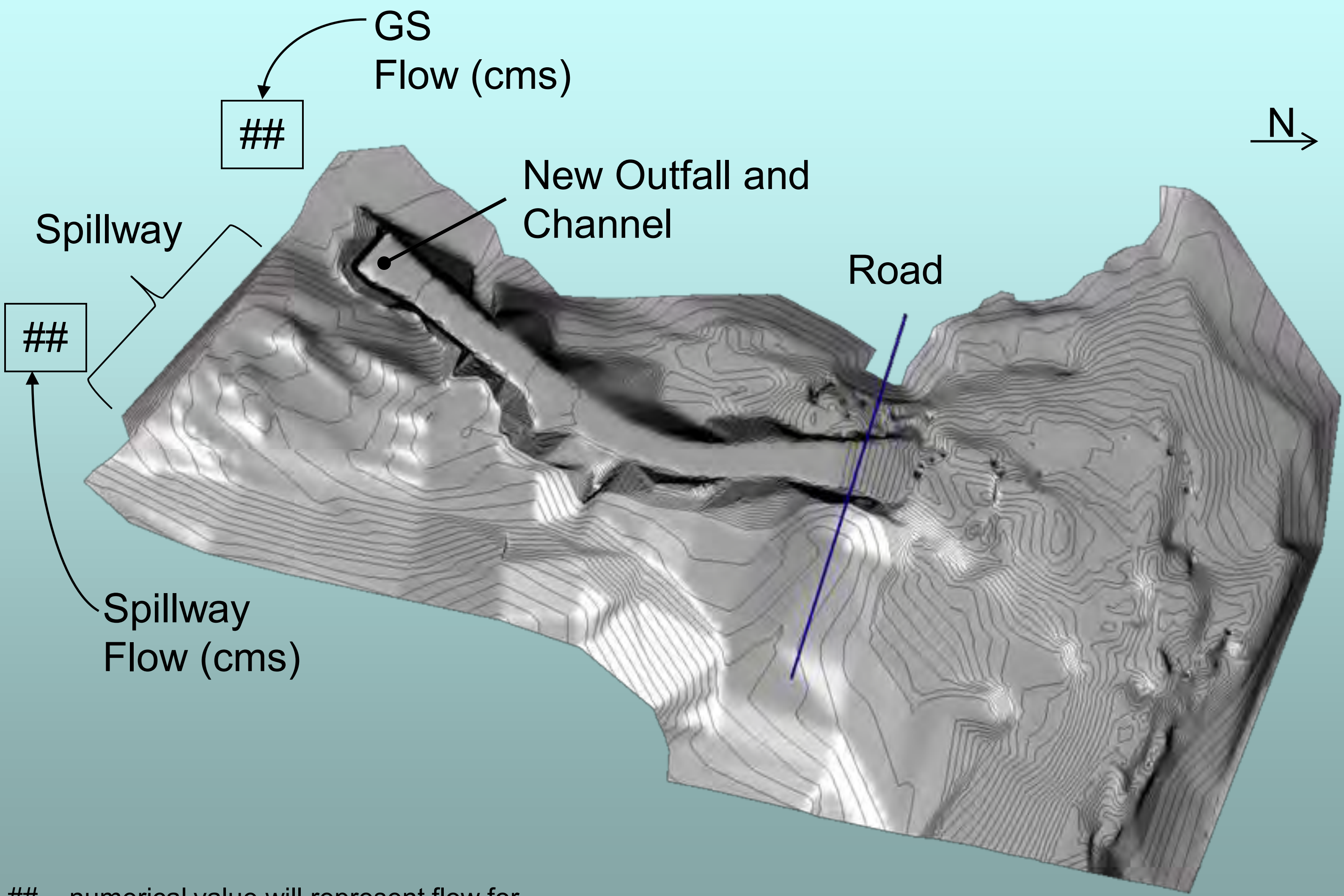


Pre Construction Model



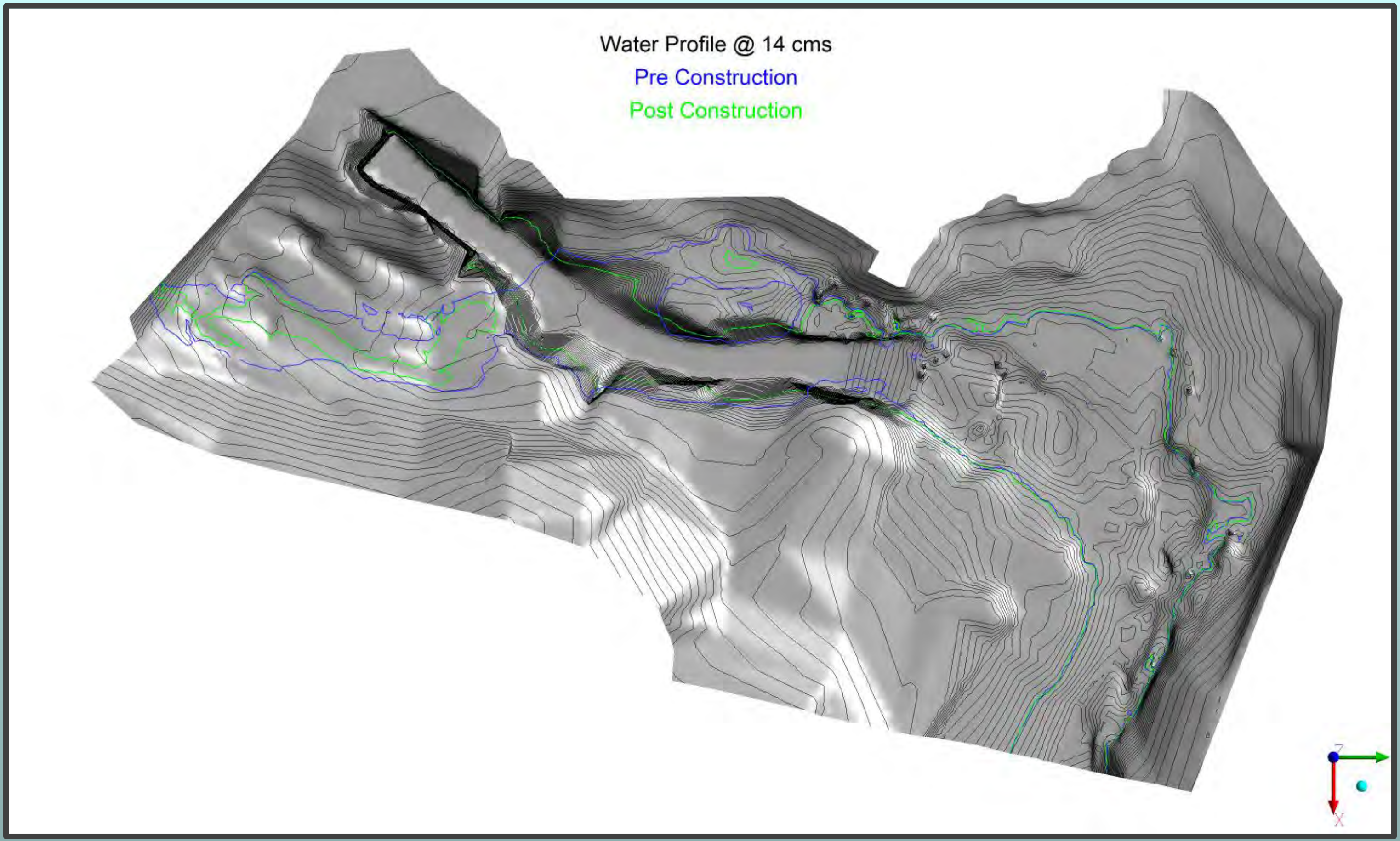
- numerical value will represent flow for that particular scenario

Post Construction Model



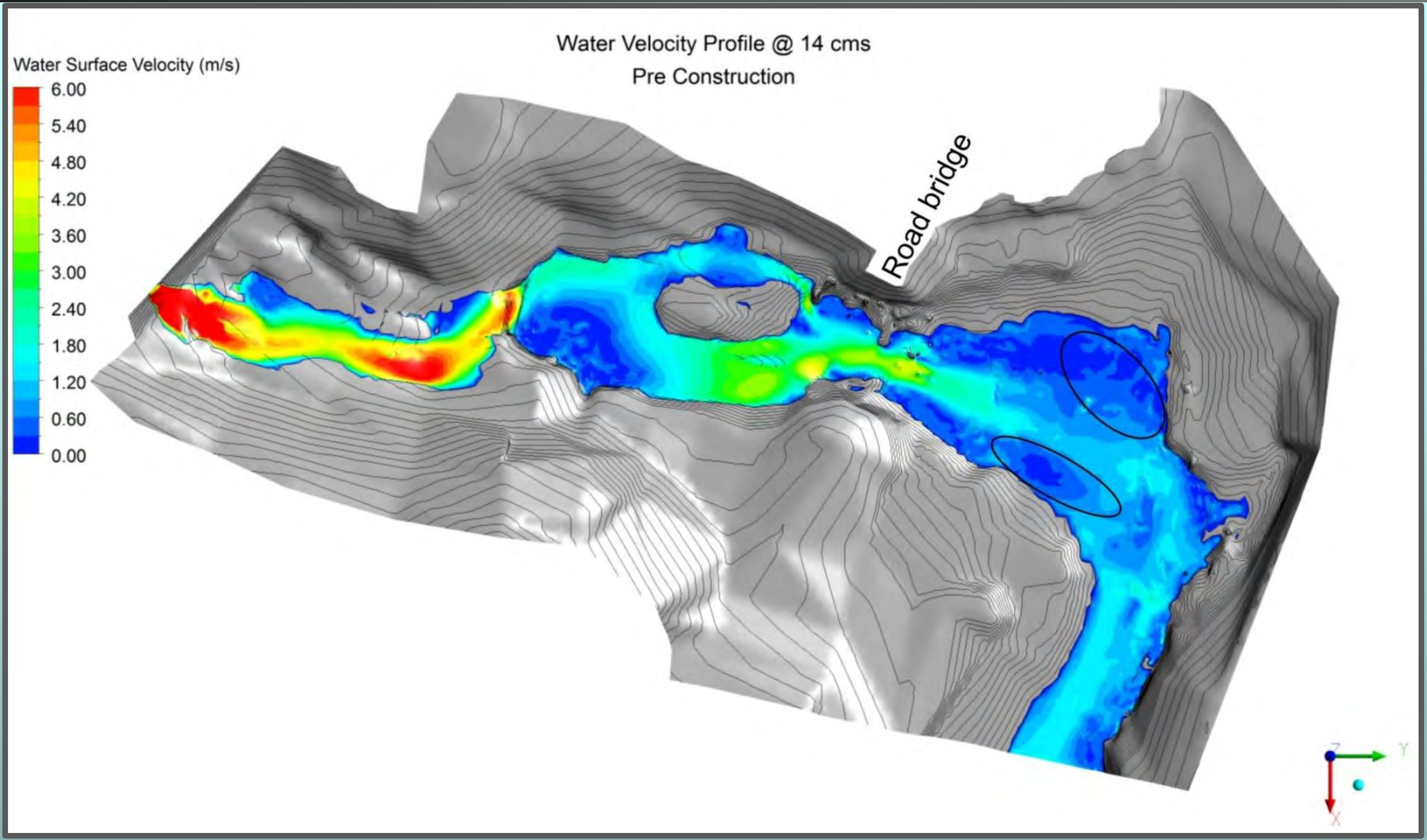
- numerical value will represent flow for that particular scenario

Water Profile Comparison 14 cms



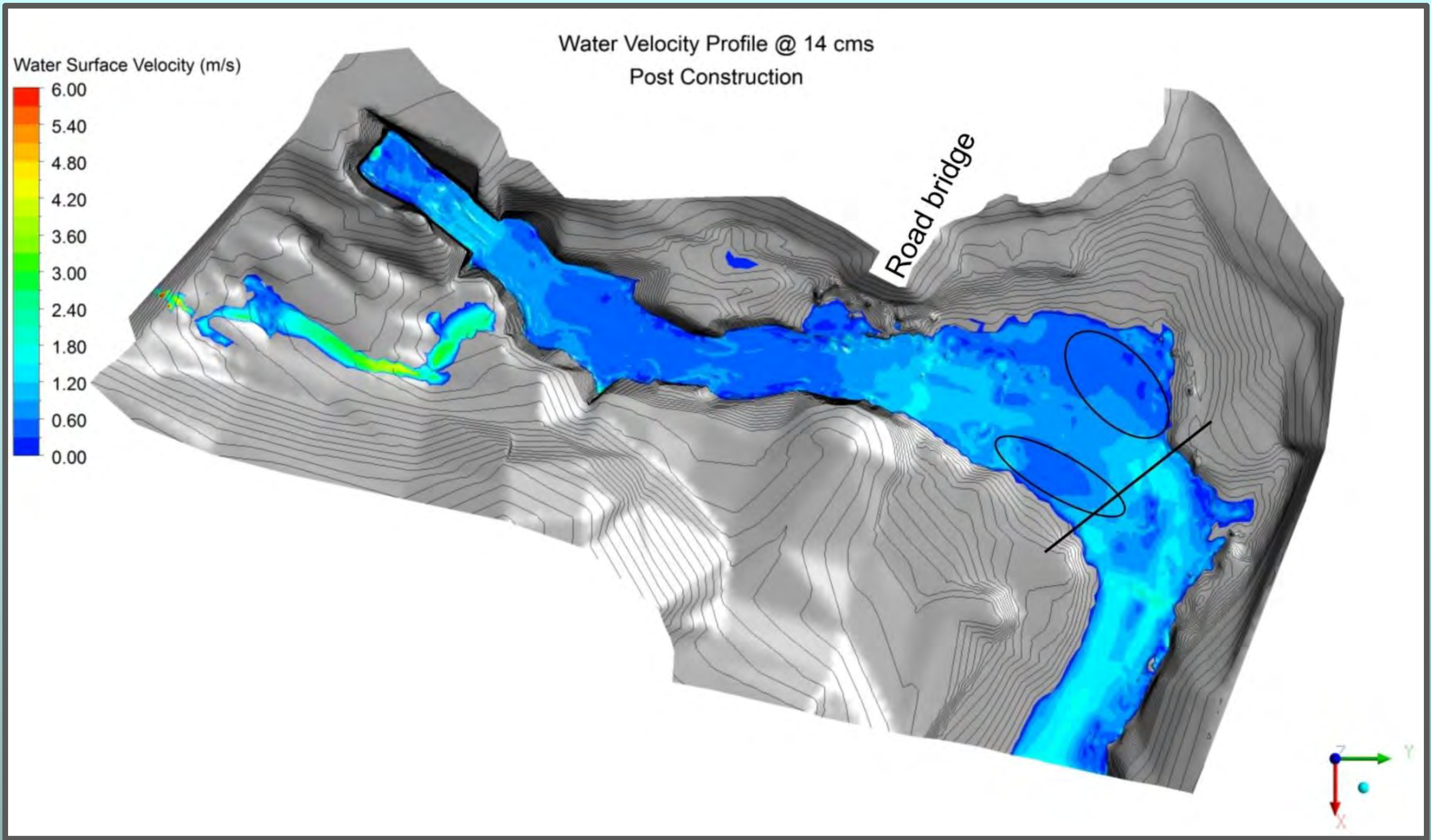
- Downstream of the excavated tailrace channel and below the road bridge where the farthest upstream walleye and lake whitefish spawning occur, there is very little change in wetted area between pre and post-GS construction (blue vs. green outline).

Water Velocity Pre Construction 14 cms



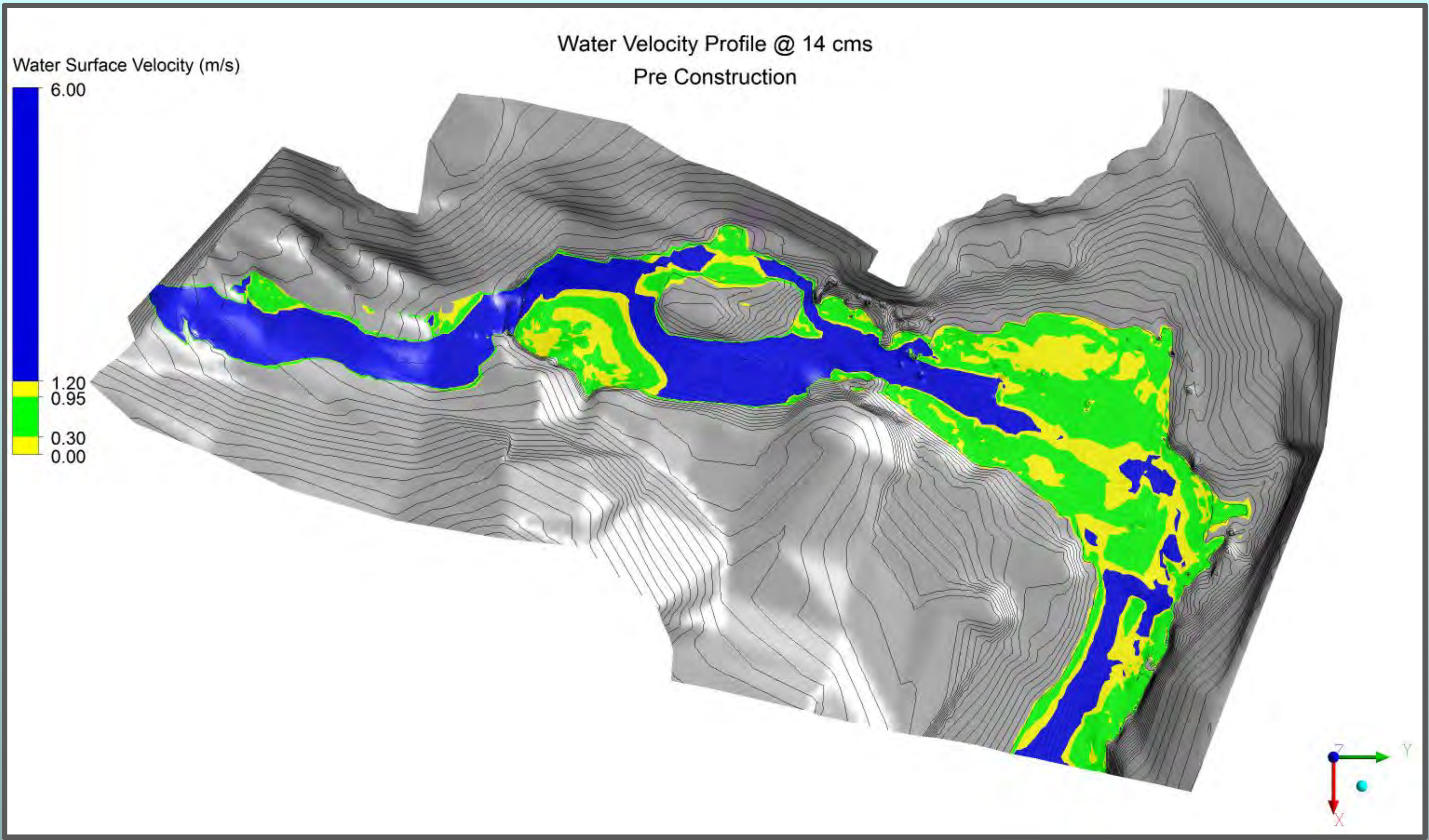
- 14 cms is the approximate river flow during the walleye spawning period.
- Based upon observations over 2006 – 2011, a small proportion of the spawning walleye that are observed between the road bridge and Kenogamissi Lake, occur in the slower shallow water along the shore downstream of the bridge (ellipses).
- The upper ellipse in particular has depth and substrate appropriate for walleye spawning, but lacks somewhat in flow velocity.

Water Velocity Post Construction 14 cms



- Flow velocity downstream of the bridge has been somewhat reduced in the centre of the channel where the water is too deep for walleye spawning, and increased slightly in the shallow shoreline areas to provide better spawning habitat for walleye where they have been typically observed.
- Flow velocity is not affected downstream of this area (downstream of line).

Spawning Suitability - Pre Construction 14 cms

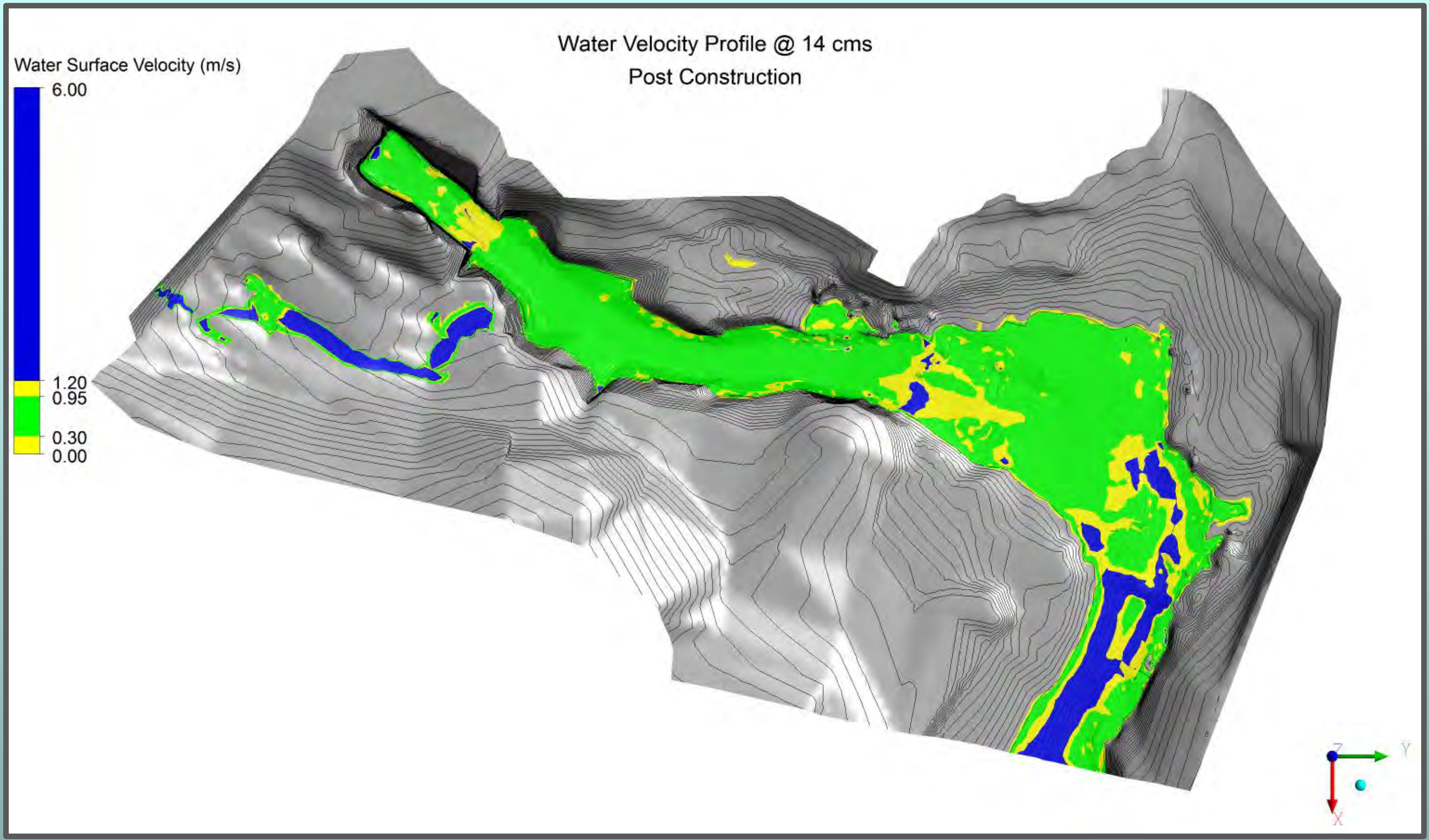


- Flow velocity suitability for spawning walleye is presented here, where green is high suitability and yellow is moderate and low suitability. Blue is unsuitable.

<u>Reference</u>

Gillenwater, D., T. Granata, and U. Zika. 2006. GIS-based modeling of spawning habitat suitability for walleye in the Sandusky River, Ohio, and implications for dam removal and river restoration. Ecological Engineering 28: 311-323.

Spawning Suitability - Post Construction 14 cms

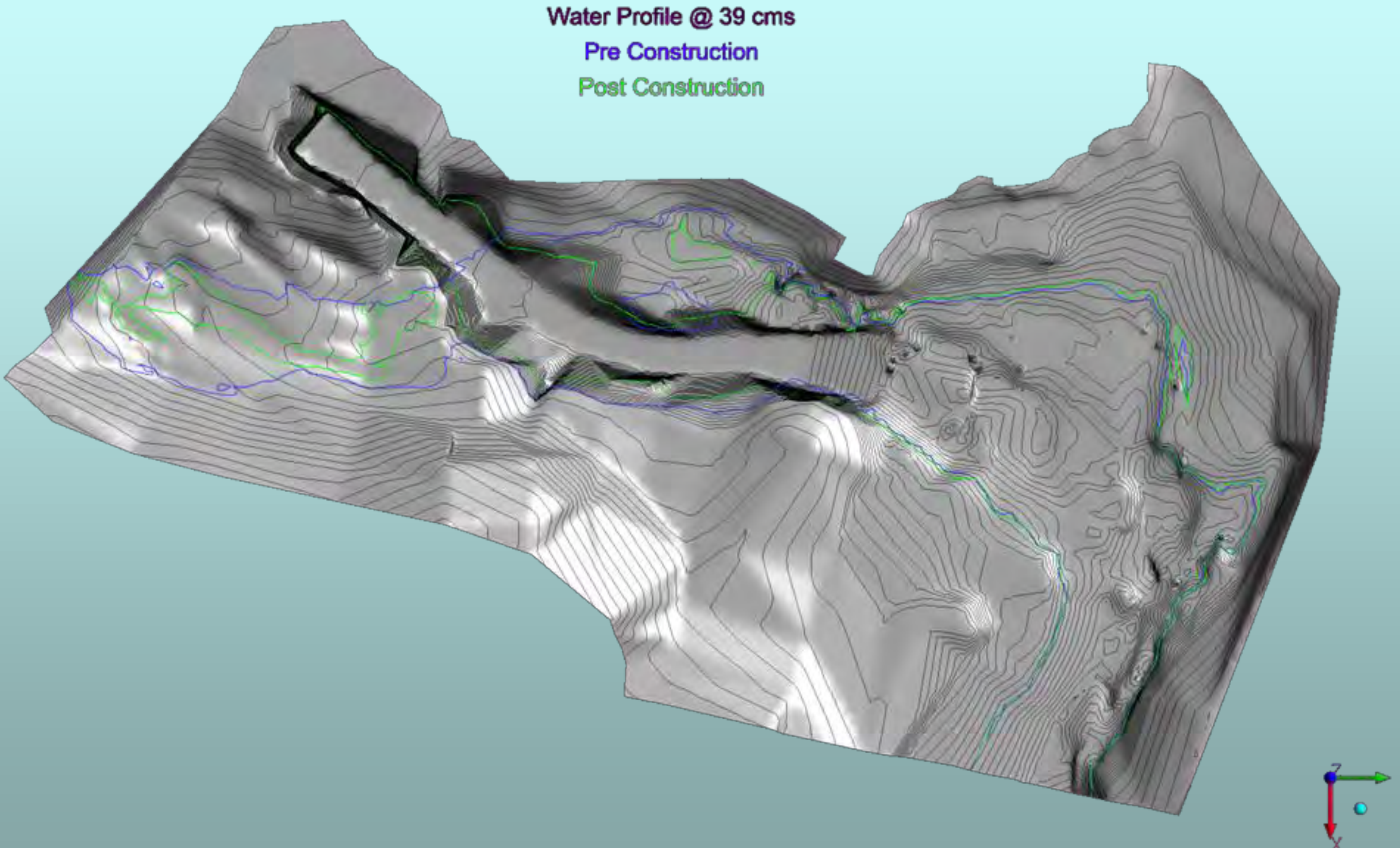


- Flow velocities of high suitability for walleye spawning occur over a larger area in the post-construction scenario, which includes most of the existing areas that have suitable water depths and substrate type for walleye spawning.

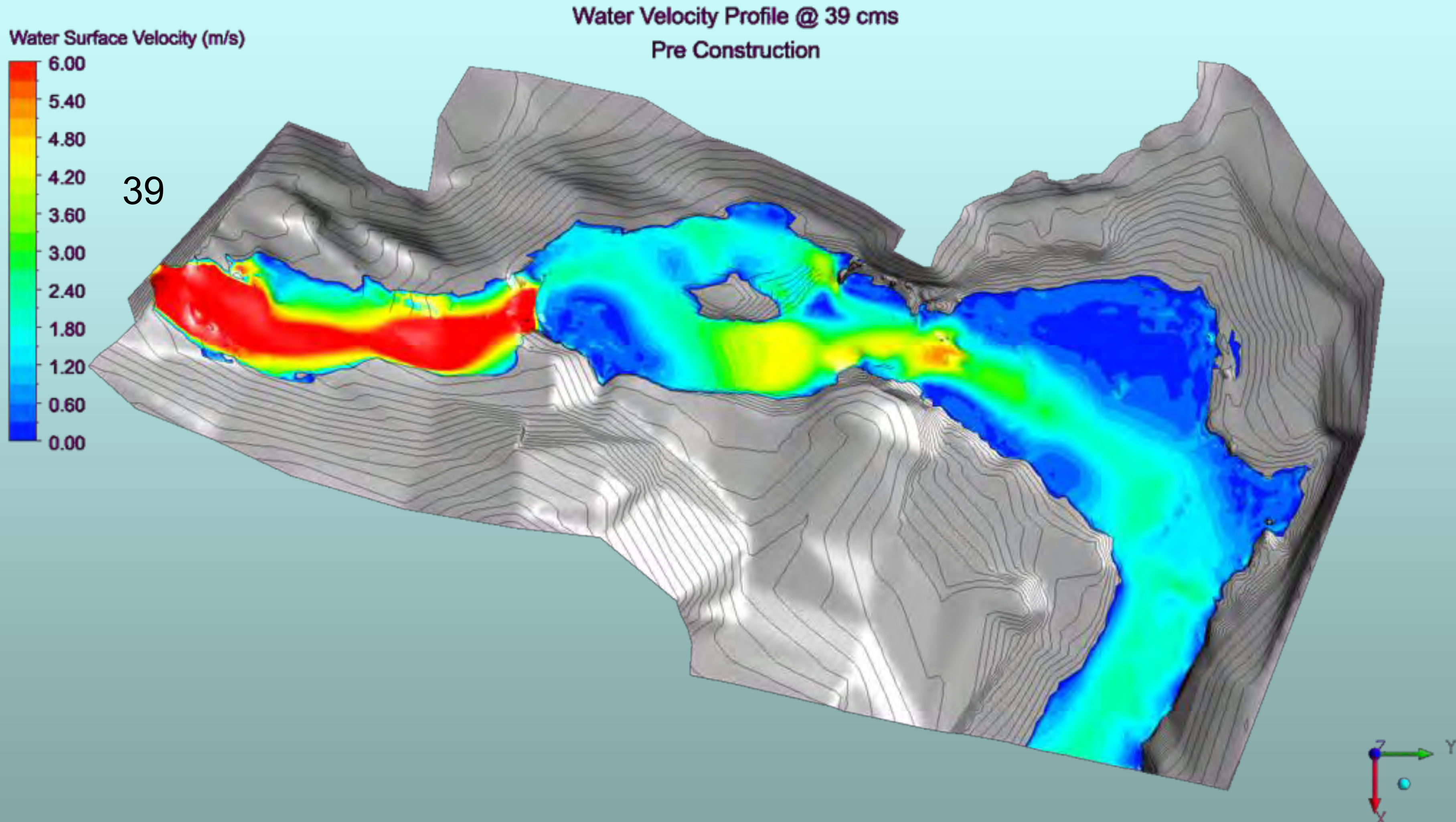
Additional Simulations – 39 cms, 74 cms

- The following plots provide the same information for a series of higher flow rates: 39 and 74 cms. These flows can be reasonably expected during the lake whitefish spawning period in the late fall.
- In both of these scenarios the flow velocities immediately downstream of the road bridge have their maximum velocities reduced, and minimum velocities increased in other areas.
- The impact upon velocity extends only a short distance downstream of the road bridge to where the river turns to the right.
- Lake whitefish tend to spawn in midwater, in water approximately 2 or more metres in depth, over a variety of substrates.
- We believe that the modest redistribution of flow velocity predicted to occur post-construction immediately downstream of the bridge where lake whitefish have been observed spawning, will make this area more like the other known lake whitefish spawning area that is located 220 m farther downstream and is known to be preferred by lake whitefish.
- We also speculate that the proposed tailrace channel may provide additional lake whitefish spawning habitat.

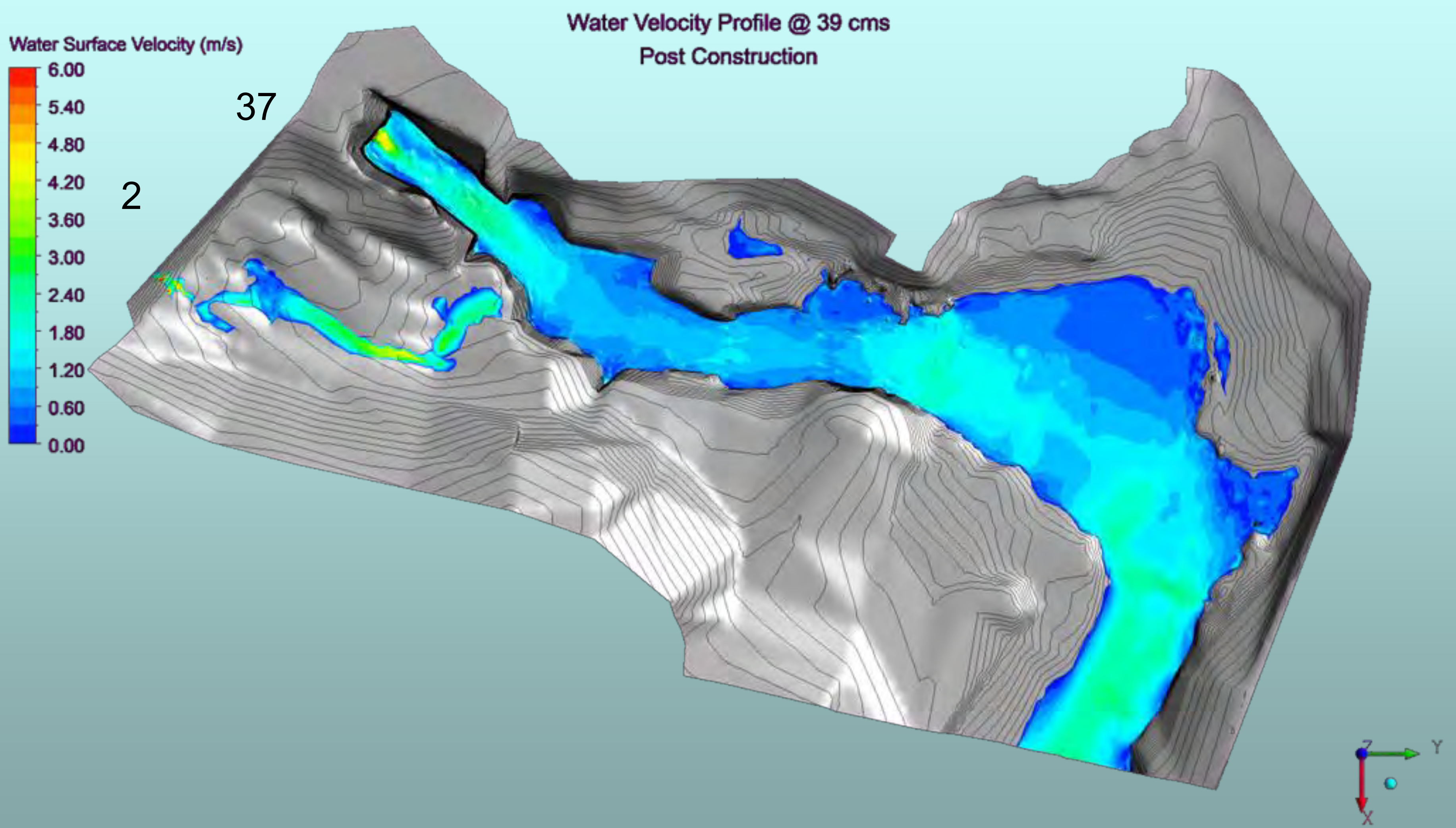
Water Profile Comparison 39 cms



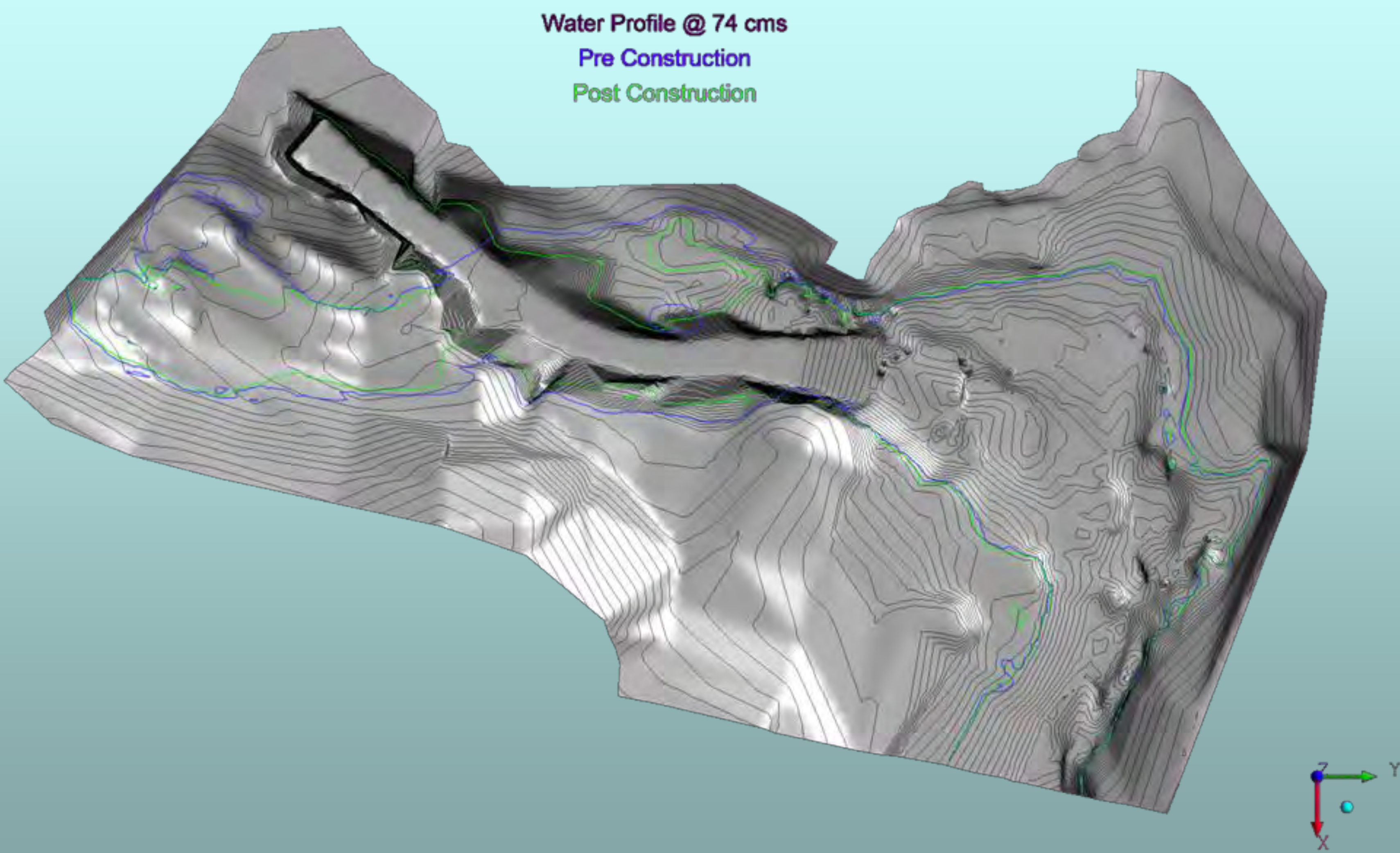
Water Velocity Pre Construction 39 cms



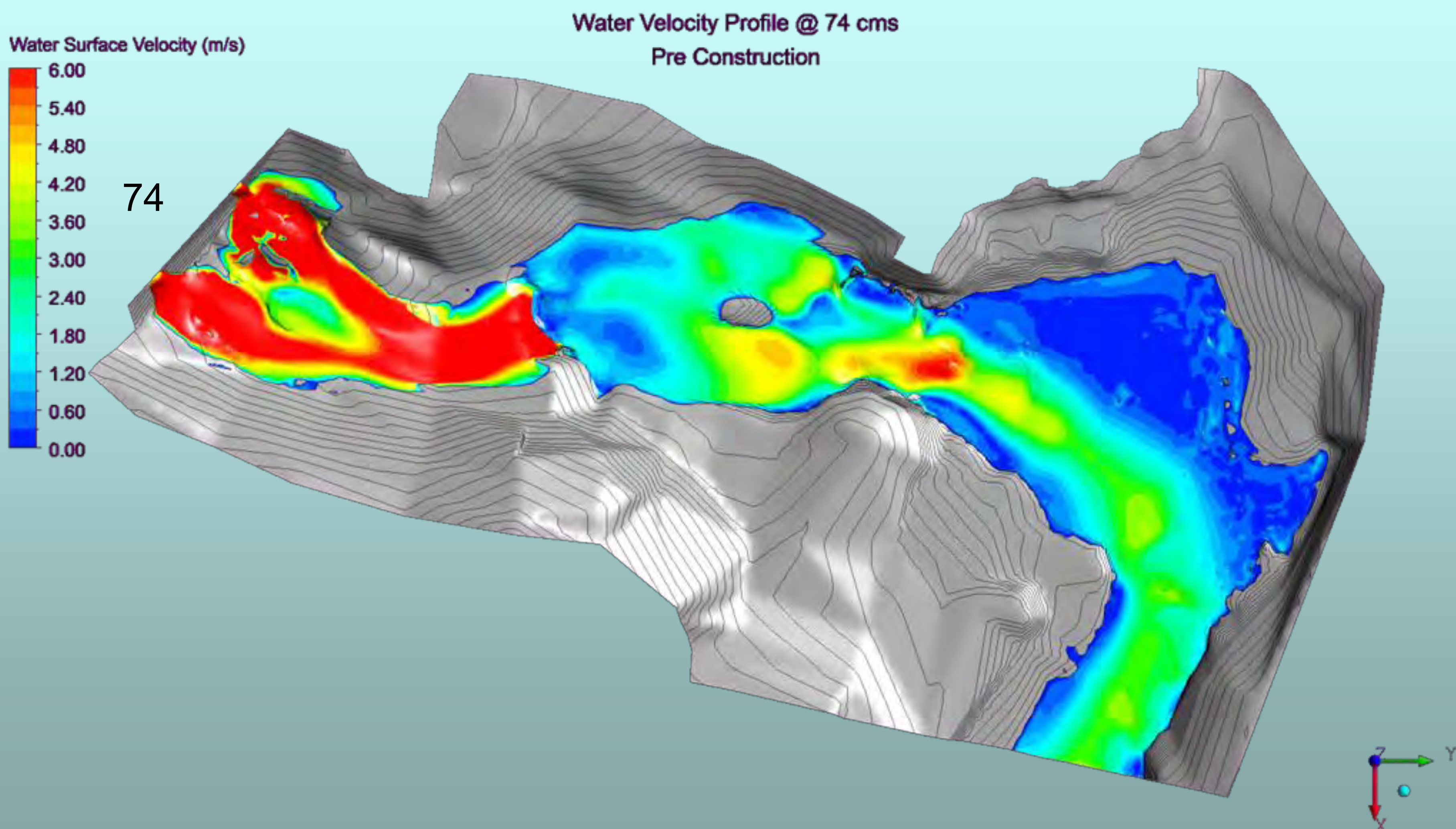
Water Velocity Post Construction 39 cms



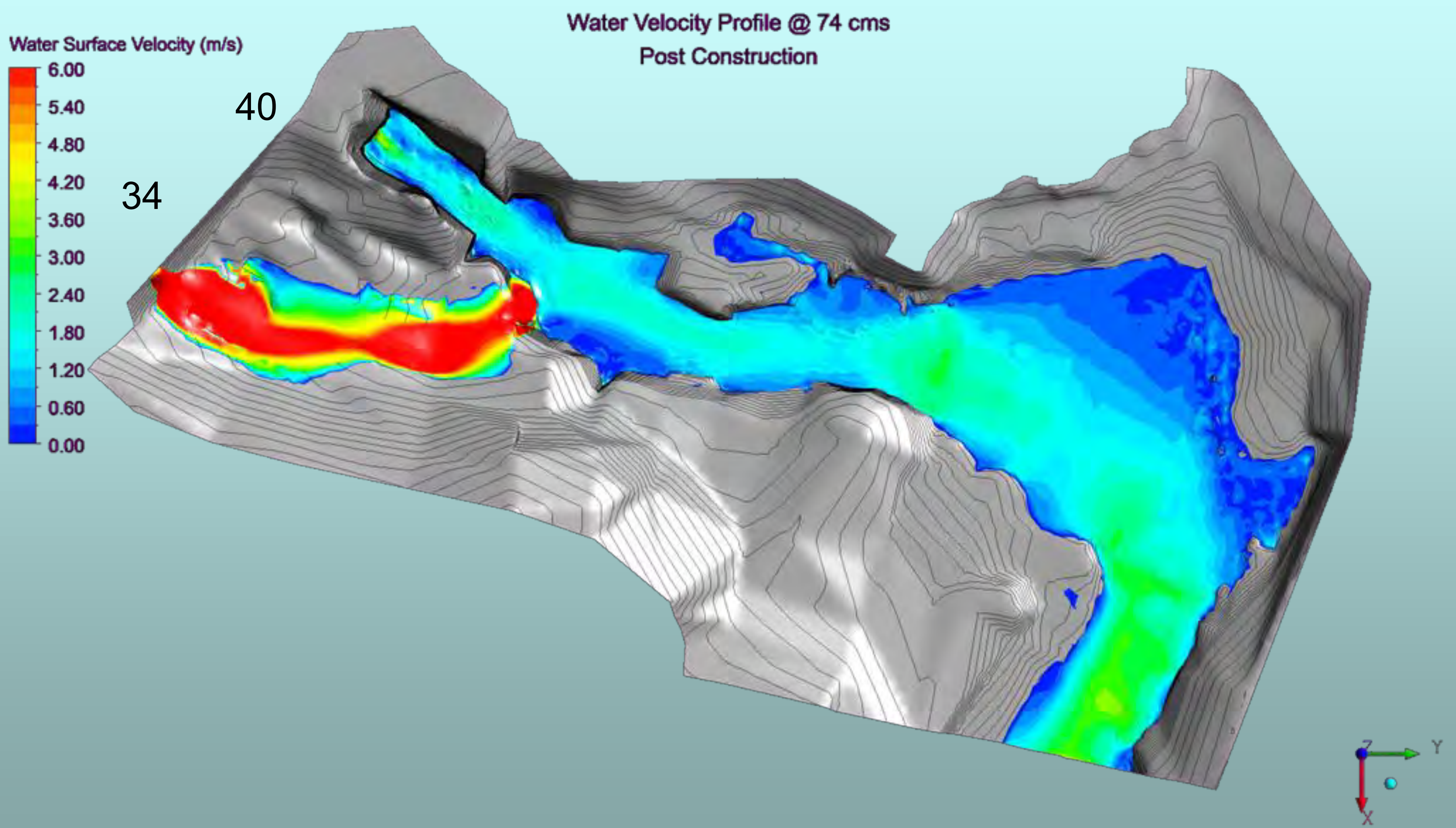
Water Profile Comparison 74 cms



Water Velocity Pre Construction 74 cms



Water Velocity Post Construction 74 cms



Operations: Minimum Flow Requirements

- As in the Base Case Design, the Alternative Design will be operated within the parameters of the Water Management Plan.
- No change proposed to the currently approved 2.8 cms minimum flow.
- Base Case provision of 0.2 cms to maintain the habitat function of the bedrock pool no longer required as flow will be provided to the pool directly by station.
- Minimum flow to be provided through the generating station
- Should both units be tripped unplanned, minimum flow to be provided through the generating station operating at speed no load (turbines spin without producing power) until staff dispatched to site (if long-term interruption)

Operations: Post Development Discharge Flow

- The Alternative design allows for a minimum operational flow through the powerhouse of 5 cms, which is significantly lower than the Base Case Design estimate of 8-12 cms
- Reduces the frequency of GS shutdown to pass the minimum flow by more than half (to ~4.5% of the time), when compared to a Base Case minimum flow of 8 cms (~12%-13%)
- Narrows the yearly period when minimum flows are probable
- It is believed that once the OPG operators gain experience in operating the existing Mattagami Lake Dam as a hydroelectric generating station, as well as a water control dam, the percentage of time that low flow will require the plant to shut down and pass the minimum ecological flow, will be further reduced

Operation: Discharged Flow

- Frequency of Average Daily Flow Discharged from the Mattagami Lake Dam Generating Station

Flow (cms)	Frequency (days)	Percent (%)
≥ 17	11592	67.5
16-17	38	0.2
15-16	380	2.2 *
14-15	55	0.3
13-14	35	0.2
12-13	38	0.2
11-12	18	0.1
10-11	3997	23.3 **
9-10	32	0.2
8-9	48	0.3
7-8	42	0.2
6-7	59	0.3
5-6	55	0.3
4-5	35	0.2
3-4	38	0.2
0-3	703	4.1***
Total	**17165**	**99.8**

* Larger value due to Walleye spawning requirements of 15 cms in later April / beginning of May.

** Larger value due to increased operation at minimum turbine flow to manage flows to maintain water management plan bands

*** Larger value due to minimum flow requirements of 2.8 cms when the plant cannot operate due to insufficient water levels and/or flow.

Path Forward

- Complete Stakeholder Consultation
  - To date:
    - Tembec, Mattagami Lake Cottagers Association, Metis Council of Timmins
  - In Progress
    - Mattagami First Nation
      - Met with Chief and EA Team
      - MFN community presentation being scheduled
    - MNR/DFO
      - Overview provided in Q2, Meeting in August
      - Follow-up meeting December 6
- Submit Assessment to Ministry of Environment