## **Brookfield**



# West Canada Creek Hydroelectric Project (FERC No. 2701) Proposed Study Plan Meeting

September 11, 2018

Brookfield Renewable A Leader in Renewable Power Generation

### Safety Briefing

- Brookfield Renewable Energy Health & Safety Policy: We continuously strive to achieve excellence in safety performance and to be recognized as industry leaders in accident prevention.
- In case of emergency, we will dial 911.
- Emergency exits and rally point outside.
- Restrooms





# **PSP** Meeting Agenda and Objectives

#### **Introductions and Meeting Objectives**

- Introductions
- Erie is pursuing a new license for the West Canada Creek Project (P-2710) from the Federal Energy Regulatory Commission (FERC or Commission), following FERC's Integrated Licensing Process (ILP)
- Erie developed a Proposed Study Plan (PSP) that was filed with the Commission on August 13, 2018.
- Erie's objectives of this PSP Meeting include:
  - Review of proposed studies and approaches in Erie's Proposed Study Plan (PSP);
  - Obtain initial stakeholder input regarding the PSP; and
  - Review the study plan process schedule and key dates.





## Meeting Agenda

Schedule	Торіс
10:00-10:30	Introduction, Meeting Objectives, Overall Schedule
	Overview of the PSP and Comments Received
10:30-12:00	Aquatic Mesohabitat Assessment Study
	Macroinvertebrate and Freshwater Mussel Surveys
	Impoundment Shoreline Characterization Study
12:00-12:30	Lunch
12:30-2:00	Fish Entrainment and Turbine Passage Survival Assessment
	Water Quality Study
	Recreation Use, Need and Access Study
	Aesthetics Assessment Study

### West Canada Creek Project Overview

- West Canada Creek Hydroelectric Project (FERC Project No. 2701) (Project) is owned and operated by Erie Boulevard Hydropower, L.P. (Erie), a Brookfield company.
- The Project is located on West Canada Creek in Oneida and Herkimer counties, New York.
- The Project consists of two developments: Prospect and Trenton.
- The Federal Energy Regulatory Commission (FERC) issued a license to Niagara Mohawk Power Corporation by Order dated March 18, 1983.
- Erie acquired the Project in July 1999.
- The existing license expires on February 28, 2023.



### Key Milestones of the West Canada Creek Project Relicensing Process

- Key Activities Completed
  - Erie filed Notice of Intent (NOI) and Pre-application Document (PAD)
  - FERC issued Scoping Document 1 (SD1)
  - FERC held Scoping Meeting and Site Visit
  - Erie filed Preliminary Study Plan (PSP)
  - FERC issued Scoping Document 2 (SD2)

#### Proposed Study Plan (PSP) Meeting

- Upcoming Key Activities
  - Comments on PSP
  - Erie file Revised Study Plan (RSP)
  - File comments on RSP
  - FERC issues Study Plan Determination (SPD)
  - Conduct First Season of Studies
  - File Initial Study Report
  - Conduct Second Year of Studies (if needed)
  - File Updated Study Report
  - File Draft License Application
  - File Final License Application

Activity	Responsible Party	Dates
File NOI/PAD	Erie	2/28/18
Scoping Meetings/Site Visit	Stakeholders	5/30/2018, 5/31/2018
File Comments on PAD/Study Requests	Stakeholders	6/29/2018
File Proposed Study Plan (PSP)	Erie	8/13/2018
Study Plan Meeting	Stakeholders	9/11/2018
File Comments on PSP	Stakeholders	11/11/2018
File Revised Study Plan (RSP)	Erie	12/11/2018
File Comments on RSP	Stakeholders	12/26/2018
Issuance of Study Plan Determination	FERC	1/10/2019
Conduct First Season of Studies	Erie	March - Nov 2019
Initiate Formal Study Dispute Resolution Process (if necessary)	Mandatory Conditioning Agencies	1/30/19
Dispute Resolution Panel Convenes	Dispute Resolution Panel	2/19/19
File Comments on Study Dispute	Erie	2/24/19
Dispute Resolution Panel Issues Recommendations	Dispute Resolution Panel	3/21/19
FERC Issues Study Dispute Determination	FERC	4/10/19
Conduct First Season of Studies	Erie	Spring-Fall 2019
File Initial Study Report	Erie	1/10/2020
Initial Sudy Report Meeting	Stakeholders	1/25/2020
File Initial Study Report Meeting Summary	Erie	2/9/2020
File Meeting Summary Disagreements	Stakeholders	3/10/20
File Responses to Meeting Summary Disagreements	Stakeholders	4/9/20
Resolution on Disagreements	FERC	5/9/20
Conduct Second Season of Studies (if necessary)	Erie	TBD 2020
File Preliminary Licensing Proposal (PLP) or Draft License Application (DLA)	Erie	10/1/2020
File Comments on Applicant's PLP or DLA	Stakeholders	12/30/2020
File Updated Study Report (if necessary)	Erie	1/10/2021
Updated Study Report Meeting (if necessary)	Stakeholders	1/25/2021
File Updated Study Report Meeting Summary (if necessary)	Erie	2/9/2021
File Final License Application	Erie	2/28/2021

<sup>1</sup> Activities in shaded areas are not necessary if there are no study disputes

## Key Milestones for Study Plan Development and Implementation

Schedule	Entity	Item
November 11, 2018	Stakeholders	File comments on Proposed Study Plan
December 11, 2018	Erie	File Revised Study Plan with FERC
December 26, 2018	Stakeholders	Stakeholders file Comments on Revised Study Plan
January 10, 2019	FERC	Issue Study Plan Determination
March – November 2019	Erie	Conduct First Year of Studies
Spring – Fall 2019	Erie	Data Collection
Summer – Fall 2019	Erie	Data Analysis/ Consultation
Fall-Winter 2019	Erie	Report Preparation
July and October 2019	Erie	Study Progress Reports
January 10, 2020	Erie	File Initial Study Report
January 25, 2020	Stakeholders	Initial Study Report Meeting
February 9, 2020	Erie	File Initial Study Report Summary

#### Filing of Comments on the Proposed Study Plan

- Comments on the PSP are due to FERC by November 11, 2018, and should include the FERC Project number (P-2701) in the subject line.
- Proposed modifications to the PSP must address the seven FERC study criteria in 18 CFR § 5.9(b).
  - 1. Describe the goals and objectives of each study proposal and the information to be obtained;
  - 2. If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;
  - 3. If the requestor is not a resource agency, explain any relevant public interest considerations regarding the proposed study;
  - 4. Describe existing information concerning the subject of the study proposal, and the need for additional information;
  - 5. Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;
  - 6. Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge; and
  - 7. Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

#### Accessing Relicensing Documents

- Documents filed with the Commission will be available from FERC's eLibrary under Docket P-2701.
- The eLibrary can be accessed through the FERC's homepage, at http://www.ferc.gov, or directly at https://elibrary.ferc.gov/idmws/search/fercgensearch.asp.
- Key relicensing documents can be downloaded from the Project's relicensing website at: <u>http://www.westcanadacreekproject.com</u>.
- All stakeholders are encouraged to contact Brookfield directly with any questions or concerns about the Project:

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# Overview of the Proposed Study Plan

### Purpose of the PSP and Comments Received

- Purpose of the PSP is to:
  - identify the study plan process schedule,
  - discuss agency and stakeholder study requests, and
  - to describe Erie's proposed studies and study approaches.
- Erie filed the PSP, pursuant to Section 5.11 of FERC's ILP Regulations, with FERC on August 13, 2018.
- Notification of the PSP filing and information to download the PSP document was provided to the stakeholder distribution list.
- Comments and study requests received following the Scoping Meeting:
  - Erie received 32 comment letters.
  - Twelve studies were requested from agencies/stakeholders.
  - Three entities provided formal study requests per the ILP Study Plan Criteria
    - U.S. Fish and Wildlife Service (USFWS),
    - New York State Department of Environmental Conservation (NYSDEC), and
    - American Whitewater (AW).
  - Seven entities, although not providing study requests that meets the Commission's ILP Study Plan Criteria, provided general comments regarding issues and the scope or type of studies to be conducted.
  - Erie undertook a thorough effort to identify and evaluate individual study requests regardless of whether these requests made a reasonable attempt to demonstrate consistency with FERC's study criteria.

### Summary of Proposed Studies

- Erie is proposing the following studies, as discussed in the PSP:
  - 1. Aquatic Mesohabitat Assessment Study;
  - 2. Macroinvertebrate and Freshwater Mussel Surveys;
  - 3. Impoundment Shoreline Characterization Study;
  - 4. Fish Entrainment and Turbine Passage Survival Assessment;
  - 5. Water Quality Study;
  - 6. Recreation Use, Need and Access Study; and
  - 7. Aesthetics Assessment Study.



#### **Drone Aerial Imagery Field Assessment**

- Several studies will involve gathering high definition aerial imagery data of the study area via an unmanned aerial vehicle (UAV or drone).
- This approach applies useful technology to gather valuable field data while addressing safety concerns by minimizing the need to deploy field personnel in hazardous areas.
- Following is an example of aerial drone imagery for both Prospect and Trenton developments.



#### West Canada Creek Project PSP Meeting

#### Brookfield 15

## Prospect Development – Example Drone Footage



#### West Canada Creek Project PSP Meeting

Brookfield 16

## Trenton Development – Example Drone Footage





# Aquatic Mesohabitat Assessment Study

#### Purpose, Goals and Objectives

- Study Purpose
  - Identify the aquatic mesohabitat, including quantity and spatial distribution of habitat types, within the study area.
- Study Goals and Objectives
  - Map and quantify the types, distribution and abundance of aquatic mesohabitat within the study area;
  - Document encountered National Wetlands Inventory (NWI) and NYSDEC identified wetlands;
  - Document encountered federal and state identified invasive species;
  - Document encountered federally-listed listed rare, threatened and endangered (RTE) species;
  - Document encountered mussel bed habitat; and
  - Assess the potential effects of Project operation on these aquatic habitats and resources.

#### Study Area

- Study Area
  - Prospect and Trenton bypass reaches, and portions of West Canada Creek extending from the Trenton tailrace to the confluence of the Newport Dam impoundment.



- Survey Parameters
  - Riverine aquatic mesohabitat will be typed by riffle, pool, run, glide, rapids, falls, etc.; dominant substrate; cover type and cover density will be noted for each mesohabitat.
- Drone Aerial Imagery
  - High definition drone aerial imagery will be collected for the study area to delineate mesohabitat boundaries and to identify candidate field investigation sampling sites within the study area.
  - Images will be georeferenced with the assistance of ground control points collected with a Real Time Kinematics (RTK) Global Positioning System (GPS).
  - To extent imagery resolution and data allows, imagery will be assessed to identify substrates and cover types.





• Example of the Drone Aerial Imagery



- Additional Field Survey
  - Where drone imagery is not feasible or inadequate, on-the-ground field surveys will be conducted.
  - The relative quantity and spatial distribution of each habitat will be characterized using handheld GPS units and the boundaries of mesohabitats will be geo-referenced.
  - Erie will deploy approximately six level loggers at intervals between Trenton and the Newport headpond.
  - The loggers will document the timing, magnitude and duration of stage changes in response to project operation.
  - Encountered NWI/NYSDEC identified wetlands, RTE species, invasive species and mussel beds will be documented.







#### Methodology - Data Analysis

- Data Analysis
  - Substrate and cover will be characterized using Wolman's (1954) particle classification scheme.
  - Imagery and geospatial data will be transferred to a GIS format.
  - Visual maps will be developed to depict the location and spatial distribution of each mesohabitat habitat type.
  - Tabular information will be developed to quantify the abundance and distribution of habitat features.
  - Imagery and field data will be processed to document locations of encountered wetlands, invasive species, RTE species, and habitats that contain substrates suitable for mussels, to the extent data allows.
  - Data will be used to evaluate project effects on aquatic resources in the study area.



#### **Report and Schedule**

- The Study Report will generally include the following components:
  - Introduction and background;
  - Description of study area and methodology;
  - Study results, discussion and analysis;
  - Documentation of any agency correspondence/consultation; and
  - Literature cited.

Anticipated Schedule	Task
Spring 2019	Initial Study Planning and Literature Review
Summer - Fall 2019	Data Collection/Field Study
Fall – Winter 2019	Data Analysis
January 10, 2020	Report included in the Initial Study Report



# Macroinvertebrate and Freshwater Mussel Surveys

#### Purpose, Goals and Objectives, and Study Area

- Study Purpose
  - Provide information on existing macroinvertebrate and freshwater pearly mussel (Unionoidae) communities that could be affected by the Project operations.
- Study Goals and Objectives
  - Document the current macroinvertebrate community,
  - Document encountered mussel communities, if present, and
  - Assess potential effect of Project operations on these communities.
- Study Area
  - The littoral zone within the existing Project boundary of the Prospect and Trenton impoundments;
  - Prospect and Trenton bypass reaches within the existing Project boundary; and
  - Within West Canada Creek approximately 1 mile downstream from the Trenton station tailrace.

#### Methodology

- The benthic macroinvertebrate community metrics proposed to be analyzed for this assessment include:
  1) Species Richness, 2) EPT Richness, and 3) Hilsenhoff's Biotic Index.
- These sampling sites will then be field surveyed to include:
  - Benthic macroinvertebrate kick net sampling in representative habitats in the study area.
  - Sampling is proposed on hard bottom substrate composed of rock, rubble, gravel, and sand.
  - Depth is proposed to be less than one meter, and current speed would generally be  $\geq$  40 cm/sec.
  - Sampling is proposed to continue for 5 minutes for 5 meters.
  - Samples will be examined under a dissecting microscope and all invertebrates larger than 1.5 mm will be removed and identified.
- A presence/absence survey of unionid mussels is proposed in conjunction with the proposed Aquatic Mesohabitat Assessment Study.
  - Surveys will be conducted consistent with one or more of the protocols from Smith et al. 2001, Strayer and Smith 2003, or West Virginia Department of Natural Resources
  - Aerial imagery data via drone flight will be collected to identify candidate field investigation sampling sites within the study area.

#### **Report and Schedule**

- The Study Report will generally include the following components:
  - Introduction and background;
  - Description of study area and methodology;
  - Study results, discussion and analysis;
  - Documentation of any agency correspondence/consultation; and
  - Literature cited.

Anticipated Schedule	Task
Spring 2019	Initial Study Planning and Literature Review
Summer - Fall 2019	Data Collection/Field Survey
Fall – Winter 2019	Data Analysis
January 10, 2020	Report included in the Initial Study Report



# Impoundment Shoreline Characterization Study

#### Purpose, Goals and Objectives, and Study Area

- Study Purpose
  - Map the distribution and abundance of littoral aquatic habitat within the Project impoundments, evaluate the types of aquatic habitats that occur there, and identify any potential effects of operations of the West Canada Creek Project on this habitat.
- Study Goals and Objectives
  - Identify the aquatic habitats within the study area, including quantity and spatial distribution of habitat types;
  - Document encountered National Wetlands Inventory (NWI) and NYSDEC identified wetlands;
  - Document encountered federal and state identified invasive species;
  - Document encountered federal and state listed RTE species;
  - Document encountered mussel bed habitat; and
  - Assess the potential effects of Project operation on these aquatic habitats and resources.
- Study Area
  - The littoral region of the Prospect and Trenton impoundments within the existing Project boundary.

- Impoundment aquatic mesohabitat will be defined by littoral zone substrate, cover type, cover density and depth.
- Drone Aerial Imagery
  - Collect aerial imagery data via drone flight to visually document those aquatic habitats and resources within the fluctuation zone and identify major aquatic habitat types.
  - The flight will occur in the summer during a period of low pond (i.e., Prospect minimum surface elevation at 1,156.5 ft, and Trenton minimum surface elevation at 1,011.9 ft)
  - Encountered NWI/NYSDEC identified wetlands, RTE species, invasive species and mussel beds will be documented.





- Additional Field Survey detailed microhabitat data will be collected on representative transects.
  - Obtain one transect accounting for each major type of shoreline slope/littoral substrate/cover condition documented during the survey.
  - The locations of all transects will be geo-referenced with GPS.
  - Elevations will be surveyed in Project datum so that data can be integrated with other project operation data for analysis.
  - Each transect will extend from top of bank to an elevation approximately 3 feet below low pond.
  - Verticals will be located along each transect to depict the following reservoir elevations: top of bank;
     Normal high-water elevation and toe of bank; and elevation 3 ft below normal low pond elevation.
  - Additional verticals will be established at intervals wherever micro-changes in slope, substrate embeddedness, or cover are encountered.



#### Methodology - Data Analysis

- Data Analysis
  - Imagery and geospatial data will be transferred to a GIS format.
  - Visual maps will be developed to depict the location and spatial distribution of habitat types.
  - Tabular information will be developed to quantify the abundance and distribution of habitat features.
  - Imagery and field data will be processed to document locations of encountered wetlands, invasive species, RTE species, and native mussels within the study area, to the extent data allows.
  - Data will be used in conjunction with operational data to evaluate project effects on aquatic resources in the study area.



Lir	ear Distance of Habita	t
Habitat Type	Length (ft)	Length (mi)
Bedrock	30,850	5.84
Boulder / Cobble Patch	1,260	0.24
Cobble	39,115	7.41
Fines	53,715	10.17
Fines / Cobble Patch	10,895	2.06
Gravel	30,555	5.79
Riprap	12,945	2.45
Wetlands	7,045	1.33

#### **Report and Schedule**

- The Study Report will generally include the following components:
  - Introduction and background;
  - Description of study area and methodology;
  - Study results, discussion and analysis;
  - Documentation of any agency correspondence/consultation; and
  - Literature cited.

Anticipated Schedule -	Task
Spring 2019	Initial Study Planning and Literature Review
Summer - Fall 2019	Data Collection/Field Survey
Fall – Winter 2019	Data Analysis
January 10, 2020	Report included in the Initial Study Report



## Fish Entrainment and Turbine Passage Survival Assessment

#### Purpose, Goals and Objectives, and Study Area

- Study Purpose
  - Assess the potential effects of Project operations on fish entrainment mortality.
- Study Goals and Objectives
  - Provide information on probability of fish entrainment turbine mortality at the Project.
  - Estimate the rate of mortality from turbine stressors with equations that predict the probability of leadingedge turbine blade strike.
  - The results of the turbine strike and entrainment mortality estimates would determine the need to explore alternate methods to exclude fish from the Project turbines and safely pass fish downstream.
- Study Area
  - Prospect and Trenton impoundments.



**Literature Review** 



#### Methodology

- Information regarding Project and turbine parameters such as turbine type, runner speed and diameter, head and discharge will be collected. These data, in combination with biological data, including target species, size and body characteristics will be used to calculate the probability of mortality from turbine stressors (Franke et al. 1997).
- The blade strike model allows for the tailoring of parameters such as fish size or turbine characteristics specific to each development to determine the relative effect on turbine passage survival.
- A blade strike correlation factor will be used to calibrate the turbine mortality estimates. The correlation factor is utilized in the Advanced Hydro Turbine model to adjust the predictive model results to correspond with documented empirical data. These data will be compiled from the Electric Power Research Institute (EPRI) entrainment database (EPRI 1997) from studies with similar turbine types.

#### **Report and Schedule**

- The Study Report will generally include the following components:
  - Introduction and background;
  - Description of study area and methodology;
  - Study results, discussion and analysis;
  - Documentation of any agency correspondence/consultation; and
  - Literature cited.

Anticipated Schedule	Task
Spring 2019	Initial Study Planning and Literature Review
Summer - Fall 2019	Data Collection/Field Study
Fall – Winter 2019	Data Analysis
January 10, 2020	Report included in the Initial Study Report



# Water Quality Study

#### Water Quality Study

#### Purpose, Goals and Objectives, and Study Area

- Study Purpose
  - Provide baseline water quality information at the Project to identify any potential impacts the Project may have on West Canada Creek and to inform the state 401 Water Quality Certificate (WQC) application.
- Study Goals and Objectives
  - Characterize water quality parameters (water temperature, DO, pH and conductivity) downstream of the powerhouses (Prospect and Trenton) using data loggers capable of 15-minute interval readings from April 15 to November 15 for one (1) year.
- The Study Area will include two water quality monitoring stations:
  - Immediately downstream of the Prospect powerhouse, and
  - Immediately downstream of the Trenton powerhouse.





#### Methodology

- The data collection period for water quality monitoring will begin in mid-April 2019 and continue through mid-November 2019.
- The logger locations will be geo-referenced using GPS and included in the GIS database layer.
- The loggers will be suspended in the water column to mid-depth and secured in place by an anchored buoy and/or tether system.
- The loggers will monitor temperature, DO, pH, and conductivity on a 15-minute interval during the study period.
- Data will be downloaded and archived monthly throughout the monitoring period.

### **Report and Schedule**

- The Study Report will generally include the following components:
  - Introduction and background;
  - Description of study area and methodology;
  - Study results, discussion and analysis;
  - Documentation of any agency correspondence/consultation; and
  - Literature cited.

Anticipated Schedule	Task
Spring 2019	Initial Study Planning and Literature Review
Spring - Fall 2019	Data Collection/Field Study
Fall – Winter 2019	Data Analysis
January 10, 2020	Report included in the Initial Study Report



# Recreation Use, Need and Access Study

#### Purpose and Goals and Objectives

- Study Purpose
  - Gather information on existing recreation facilities, use, and estimated future demand and needs, as well as public access and safety at the Project.
- Study Goals and Objectives
  - Characterize existing public recreation access and facilities, within and immediately adjacent to (abutting) the Project boundary.
  - Estimate existing recreation use at the Project recreation sites and conduct visitor surveys during the special event activities at Trenton Falls to:
    - determine user perceptions of the operation and management of the facilities,
    - evaluate the adequacy of access to the Project recreation facilities, and
    - identify if any changes or upgrades to the sites are needed to meet current or future recreation needs and demand.
  - Identify and assess potential for additional public access areas within the existing Project boundary and associated public safety considerations.
  - Characterize existing downstream recreation opportunities, including whitewater boating, tubing, and fishing opportunities, and existing public safety alert systems.
  - Evaluate the potential effects of continued operation of the Project on recreation resources and opportunities at the Project.

## Study Area

- Study Area
  - For the recreation use and facility inventory: the existing Project recreation sites within the Project boundary, including the
    - Prospect reservoir boating access, and
    - Trenton Falls trail and access area.
  - For the assessment of potential for additional public access:
    - the Project reservoirs,
    - bypass reaches and
    - adjacent shoreline lands within the Project boundary.
  - For the downstream characterization: West Canada Creek immediately below the Project boundary downstream to the confluence with the Mohawk River.



## Study Area – Trenton Trails



### Downstream Study Area



### Methodology

- Conduct a recreation site facility inventory and condition assessment at the Prospect Boat Launch and the Trenton Falls Trail area.
- The assessment will include:
  - Site description;
  - Location of the facilities in relation to the Project boundary;
  - Type, number and condition of amenities provided at each site;
  - An estimate of parking capacity; hours/seasons of operation;
  - General observations of site use and accessibility;
  - Suitability of facilities to provide opportunities for persons with disabilities to participate in recreation opportunities; and
  - Accompanying photographs.





- Recreation Use Counts and Visitor Survey
  - For the Prospect Boat Launch area, Erie will:
    - Install a traffic counter and obtain vehicle count data during the recreation season (Memorial Day through Labor Day).
    - Conduct random spot counts during two days per month during study period to include one weekend day each month and/or holidays, for a total of 10 days of spot counts.
    - Spot count data collected will include: date, time, weather conditions, number of vehicles and boat trailers observed at the site, license plate (state of origin), number of visitors observed at the site, and type of recreation use.
  - For the Trenton Falls special event days, Erie will collect data on number of participants and conduct visitor intercept surveys to document visitor's:
    - Place of residency (county and state),
    - Number of people in a party,
    - Primary reason for visiting the Project (type of recreation activity),
    - Duration of visit,
    - Perception of the level of use, and
    - Opinions with regard to access, and the amount and types of recreation opportunities offered within the Project boundary.

### Methodology

- Public Access and Safety Assessment
  - Erie will inventory and map existing formal and informal public access at the Project.
  - Aerial (drone) photographic assessment of the Project bypass reaches will be reviewed to supplement field assessment.
  - Erie will conduct targeted on-site field assessment to identify site constraints and public access safety considerations.
- Downstream Recreation Opportunities
  - Erie will characterize existing downstream recreation opportunities, including angling, whitewater boating and tubing opportunities downstream to the Mohawk River confluence.
  - Erie will characterize existing public safety mechanisms immediately downstream of the Project (within approximately 1 mile), and flow notification systems for the reach downstream from Trenton tailrace to Newport dam.





#### Data Analysis and Report

- The study report will:
  - Document the site inventory and condition assessment.
  - Characterize recreation use at the Project recreation sites based on the traffic count data, spot counts, visitation data, and recreation visitor surveys.
  - Discuss outdoor recreation activity trends reported in the New York Statewide Comprehensive Outdoor Recreation Plan.
  - Provide estimated projections of future recreation use at the West Canada Creek Project using the average annual increase in population growth over the past 10 years for the Oneida and Herkimer counties, as reported by the Census Bureau.
- The study will include an assessment of:
  - Project site opportunities and constraints;
  - Ability of sites to meet current and anticipated future recreation demand;
  - Potential effects of Project operations on recreation opportunities at the Project reservoirs, bypass reaches, and immediately downstream of the Project; and
  - Public access opportunities and safety considerations at the Project, including whitewater boating access opportunities within the Prospect bypass reach.

#### **Report and Schedule**

- The Study Report will generally include the following components:
  - Introduction and background;
  - Description of study area and methodology;
  - Study results, discussion and analysis;
  - Documentation of any agency correspondence/consultation; and
  - Literature cited.

Anticipated Schedule	Task
Spring 2019	Initial Study Planning and Literature Review
Summer - Fall 2019	Data Collection/Field Study
Fall – Winter 2019	Data Analysis
January 10, 2020	Report included in the Initial Study Report



# **Aesthetics Assessment Study**

### Purpose, Goals and Objectives, and Study Area

- Study Purpose
  - Gather information on existing aesthetic character within the Project lands and waters, and potential aesthetic flow viewing opportunities at the Project bypass reaches.
- Study Goals and Objectives
  - Document the existing aesthetic character and conditions;
  - Identify key viewing locations and opportunities; and
  - Assess existing flows and viewing opportunities at the Prospect and Trenton bypass reaches.
- Study Area
  - Lands and waters within and directly adjacent to the existing Project boundary, including the Prospect and Trenton reservoirs, and the Prospect and Trenton bypass reaches.





#### Methodology: Data Collection and Analysis

- Aerial imagery data collected under the Aquatic Mesohabitat Assessment Study and data from the Recreation Use, Needs, and Access Study will be reviewed to assess the existing public access areas and viewing opportunities within the study area.
- Erie will identify the key viewsheds and characterize key aesthetic character types within the study area.
- Erie will characterize and document (photograph) representative key observation points (KOP) during both a leaf-on period and leaf-off period.
- The assessment will include:
  - Identification of key viewing characteristics (i.e., key features/structures, vegetation, texture, and distance zones), and
  - Characterization of potential use and access of these areas based on information obtained as part of the Recreation Use, Needs and Access Study.
- Erie will characterize the timing and flow ranges of historic flow exceedance events within the past 5 years to extent data is available to characterize existing flow conditions as they relate to the aesthetic character of the Project bypass reaches.

#### **Report and Schedule**

- The Study Report will generally include the following components:
  - Introduction and background;
  - Description of study area and methodology;
  - Study results, discussion and analysis;
  - Documentation of any agency correspondence/consultation; and
  - Literature cited.

Anticipated Schedule	Task
Spring 2019	Initial Study Planning and Literature Review
Summer - Fall 2019	Data Collection/Field Study
Fall – Winter 2019	Data Analysis
January 10, 2020	Report included in the Initial Study Report

#### **PSP** Comments

- Comments on the PSP are due to FERC by November 11, 2018, and should include the FERC Project number (P-2701) in the subject line.
- Proposed modifications to the PSP must address the seven FERC study criteria in 18 CFR § 5.9(b).
- Documents filed with the Commission will be available from FERC's eLibrary at under Docket P-2701.
- The eLibrary can be accessed through the FERC's homepage, at http://www.ferc.gov, or directly at https://elibrary.ferc.gov/idmws/search/fercgensearch.asp.
- Key relicensing documents can be downloaded from the Project's relicensing website at: <u>http://www.westcanadacreekproject.com</u>.
- All stakeholders are encouraged to contact Brookfield directly at any time with any questions or concerns about the Project:

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