

June 5, 2020

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**SUBJECT: West Canada Creek Project (FERC No. 2701-059)
Response to Comments on ILP Relicensing Initial Study Report**

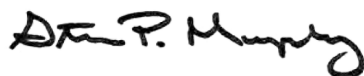
Dear Secretary Bose:

Erie Boulevard Hydropower, L.P. (Erie or Licensee), a Brookfield Renewable company, is the Licensee, owner and operator of the West Canada Creek Hydroelectric Project (FERC No. 2701) (Project). The West Canada Creek Project consists of two developments, Prospect and Trenton, and is located on West Canada Creek in Oneida and Herkimer counties, New York. The current license for the West Canada Creek Project expires on February 28, 2023. Erie is pursuing a new license for the Project using the Federal Energy Regulator Commission (FERC or Commission) Integrated Licensing Process (ILP) pursuant to 18 C.F.R. Part 5 of the Commission's regulations.

In accordance with 18 C.F.R § 5.15(c), Erie filed the Initial Study Report (ISR) on March 6, 2020 to provide the results of the field studies conducted in 2019 pursuant to the Commissions Study Plan Determination. According to 18 CFR §5.15, Erie held the ISR meeting on March 19, 2020, within 15 days of filing the ISR. Erie filed an ISR meeting summary with the Commission on April 3, 2020.

Comments on the ISR were filed by FERC (dated May 5, 2020), the United States Fish and Wildlife Service (USFWS) (dated May 6, 2020), the New York State Department of Environmental Conservation (NYSDEC) (dated May 6, 2020), and American Whitewater (AW) (dated May 5, 2020). In accordance with 18 CFR § 5.15(c)(5), Erie hereby files with FERC its responses to the ISR comments (Attachment A). According to the relicensing Process Plan and Schedule, FERC will issue a Director's Determination on any Disagreements/Amendments by July 5, 2020.

If you have any questions or require any additional information, please contact me at (315) 598-6130 or via email at steven.murphy@brookfieldrenewable.com.



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ATTACHMENT A

RESPONSES TO INITIAL STUDY REPORT COMMENTS

BACKGROUND

Erie Boulevard Hydropower, L.P. (Erie or Licensee), a Brookfield Renewable company, is the Licensee, owner and operator of the West Canada Creek Hydroelectric Project (FERC No. 2701) (Project). The West Canada Creek Project consists of two developments, Prospect and Trenton, and is located on West Canada Creek in Oneida and Herkimer counties, New York. The current license for the West Canada Creek Project expires on February 28, 2023.

Erie is pursuing a new license for the Project using the Commission's Integrated Licensing Process (ILP) pursuant to 18 C.F.R. Part 5 of the Commission's regulations. On December 11, 2018, Erie filed a Revised Study Plan (RSP), and on March 7, 2019, Federal Energy Regulatory Commission (FERC or Commission) issued the Study Plan Determination (SPD) approving the RSP with modifications. Pursuant to 18 C.F.R. §5.15(b) and as identified in its RSP, Erie filed with FERC the first and second ILP Relicensing Studies Progress Reports for the West Canada Creek Project on July 29, 2019, and October 31, 2019, respectively. On October 31, 2019, Erie requested a revision of the Process Plan and Schedule to change the ISR filing date to March 7, 2020, to align with one year following the issuance of FERC's SPD, and FERC granted this revision on December 5, 2019.

Erie filed the Initial Study Report (ISR) on March 6, 2020, to provide the results of the field studies conducted in 2019 pursuant to the Commission's SPD. Erie held the ISR meeting on March 19, 2020, and filed an ISR meeting summary with the Commission on April 3, 2020. Erie completed eight of the nine resource studies which include:

- Aquatic Mesohabitat Assessment Study;
- Macroinvertebrate and Freshwater Mussel Survey;
- Impoundment Shoreline Characterization Study;
- Fish Assemblage Assessment;
- Fish Entrainment and Turbine Passage Survival Assessment;
- Water Quality Study;
- Recreation Use, Needs and Access Study; and
- Aesthetic Flow Assessment Study.

In the ISR filing, Erie provided a study progress report for the Whitewater Boating Flow and Access Study; additional field study will be conducted for this study during the 2020 field season, and results of this assessment will be provided in the Updated Study Report (USR). A supplement to the Aesthetic Flow Assessment Study will be provided in the USR to provide photographs of the leakage/flow conditions at the Key Observation Point (KOP) locations. In addition, Erie will conduct a desktop evaluation of existing available data regarding the timing and volume of flow events within the past 5 years and provide this summary in the USR.

Comments on the ISR technical studies were filed by FERC (dated May 5, 2020), the United States Fish and Wildlife Service (USFWS) (dated May 6, 2020), the New York State Department of Environmental Conservation (NYSDEC) (dated May 6, 2020), and American Whitewater (AW) (dated May 5, 2020). No new studies were requested, and no comments were filed on the ISR meeting summary. In accordance with 18 CFR § 5.15(c)(5), the following are Erie's

responses to the ISR comments. According to the relicensing Process Plan and Schedule, FERC will issue a Director's Determination on any Disagreements/Amendments by July 5, 2020.

RESPONSE TO ISR COMMENT LETTERS

General Comments

G1-FERC Comment: *FERC requested that Erie file available g Global Positioning System (GPS), or Geographic Information System (GIS) supporting documentation for the study reports with the draft license application (DLA).*

G1-Erie Response: Erie will review the available GIS layers requested by FERC and file available data with the DLA filing.

Aquatic Mesohabitat Assessment Study Report

AM1-FERC Comment: *FERC states that it is not clear if ground verification of the drone imagery was conducted at any additional locations beyond the three mesohabitat/level logger transects. FERC requested that Erie, in the DLA, specify how the level of effort and location of sites were determined in order to verify mapped mesohabitat, substrate, and cover classifications, as well as any observed disagreements between drone imagery and field observations.*

AM1-Erie Response: As summarized in Study Progress Report 2,¹ Erie conducted on-the-ground visits to selected segments to verify that the object size substrate classification was consistent with the data obtained via the drone documentation and empirical observation. The on-the-ground survey included: qualitative habitat assessments, GPS mapping of these areas, substrate characterization, photographs, and cover type and density characterization. The on-the-ground data were compared to drone data to confirm drone data consistency with that obtained via traditional on-ground data collection method.

Erie conducted transect surveys at each logger location, selected in consultation with the NYSDEC and the USFWS, for a total of nine transects. Three transects within the Prospect bypass reach were initially documented via the drone.² Each transect site was waded and field verified during the field data collection effort. Also, areas of the Prospect bypass reach where safe access on foot was achievable were waded to confirm information obtained from the drone flights. The resulting substrate data were compared against the classifications characterized through the drone documentation.

Based on review of the drone footage and field observations, the drone footage observations resulted in data that accurately assesses and documents mesohabitat substrate. No inconsistencies between the drone data and the field verification were identified. Generally the high resolution camera and water clarity meant that it was easier to view using the drone; the altitude allowed for

¹ See consultation record in the Study Progress Report filed with FERC October 31, 2019.

² Erie also surveyed six transects in the downstream reach (West Canada Creek from Trenton tailrace to the confluence with Mohawk River) which were assessed via traditional on ground assessment approach (i.e., float trip) rather than drone assessment.

a broader vantage point than traditional field methods. In areas that would be difficult or impossible to access via wading/float trip, the drone methodology provided a more comprehensive access and inventory of the mesohabitat substrates than would otherwise have been possible. Additional details regarding drone documentation methods, including in-field controls and data assessment, are provided in the Aquatic Mesohabitat Assessment Report.

AM2-FERC Comment: *FERC stated that it is unclear if streamflow was directly measured at or near the first water level logger deployed downstream of Morgan Dam as required by the SPD. If direct measurement of streamflow at this location was not made please explain in the draft license application the reasons for deviating from the SPD.*

AM2-Erie Response: The level logger and study site immediately below Morgan Dam is in a relatively high gradient reach of rapids and turbulent riffles. Such stream channels are inherently poor for gaging discharge. It was concluded that real-time discharge data recorded by Erie from Trenton Station, adjusted for water diversion at Morgan Dam would provide a more accurate estimate of discharge through this particular study site.

AM3-USFWS Comment: *The USFWS states Erie indicated that the largest increase in wetted area in the Prospect bypassed reach riffle Transect 3 was from a 3 cubic feet per second (cfs) leakage flow to 10 cfs; however, in Table 3-15, the wetted area increased 1,523 square feet from all flows, including leakage, 10, 25, and 50 cfs. The USFWS states that it is unlikely that exactly the same increase in wetted area occurred during each flow measurement and recommends that Erie re-evaluate the flow and wetted area information for this transect in the DLA.*

AM4-Erie Response: Wetted area is calculated by multiplying mesohabitat linear length by the wetted width occurring at each respective discharge. In this example, the net linear distance of habitat represented by Transect 3 was 1,523 feet. Figure 3-8 in the Aquatic Mesohabitat Assessment Report shows that the changes in depth and wetted width at each flow increment between leakage and 50 cfs are very slight at this transect given the relatively steep slope. Wetted width, therefore, corresponded to about a 1-foot increase for each respective flow incremental increase. This resulted in a linear increase in wetted area across the flow range in question.

AM5-USFWS Comment: *The USFWS notes that Table 3-5 indicates that only 11 percent of the West Canada Creek below the Project are pool habitats and recommend that Erie address the potential for flow variations to affect the majority of the habitats in the downstream areas of West Canada Creek in the DLA.*

AM5-Erie Response: There are approximately 18 riverine pools significant enough in volume to have been detected during the mesohabitat survey. These are contiguous with other mesohabitats such as riffles and runs. These pools are distributed along West Canada Creek primarily in the upper half of the study area. The effect of flow variation on the majority of habitats is documented in the data collected from the transects, which were selected in consultation with USFWS and NYSDEC specifically to depict representative habitats in downstream areas.

AM6-USFWS Comment: *The USFWS states that the flow rate of the valve could vary depending on headpond level, which can fluctuate up to 12 feet at the Trenton Development, and*

Erie did not provide the impoundment level measured during their assessment. The Service recommends that Erie provide a stage-discharge curve for the minimum flow valve to understand the amount of water released across varying headpond elevations.

AM6-Erie Response: As stated in the Aquatic Mesohabitat Assessment Report, the measured automated minimum flow release valve discharge is 269.05 cfs, which exceeds the required 160 cfs minimum flow. The recorded Trenton impoundment pond levels during the period of the gaging effort was at an approximate elevation of 1,012 feet msl; at the lowest pond elevation of 12 feet below the normal pond elevation of 1,023.9 feet msl. Therefore, even at the lowest pond elevation, the minimum flow release at the Trenton Development provides sufficient discharge to meet the downstream 160 cfs minimum flow requirement.

AM7- NYSDEC Comment 2: *NYSDEC states that Erie should clarify whether the minimum flow release valve works automatically as it should during a unit trip scenario if this was not tested during this evaluation.*

AM7-Erie Response: As stated in the Pre-Application Document, the minimum flow valve is electronically controlled by a programmable logic controller (PLC). If the turbine outflow (minimum flow) is interrupted by a turbine shutdown (unit trip), the minimum flow valve tied to Unit No. 6 at the powerhouse is automated to open full to allow the passage of the required minimum flow.

AM8 - AW Comment: *AW commented that Erie did not evaluate the impact on wetted area from a release of the project minimum flow of 160 cfs nor the impact on wetted area from the 100, 200, or 300 cfs aesthetic flow. With regard to the downstream reach, the Licensee evaluated flows ranging from 160 to 1500 cfs, the range of flows within full range of the project's generating capacity.*

AM8-Erie Response: The existing license requirement is to provide a baseflow release of 160 cfs or inflow (whichever is less) for fisheries and aquatic habitat immediately downstream of the NYSCC diversion weir. This is located below the Trenton Tailrace and is not a flow requirement within the Prospect bypass reach. In addition AW references flows of 100, 200 and 300 cfs, which were flows evaluated for the Aesthetic Assessment Study, not related to the Aquatic Mesohabitat Assessment.

Erie conducted an extensive Aquatic Mesohabitat Assessment, both within the Project area and the downstream reaches (over approximately 33 miles downstream), consistent with the RSP, the SPD and based on consultation with stakeholders, as documented in the Study Progress Reports³ and in the Aquatic Mesohabitat Assessment Report. As reviewed during the ISR meeting and summarized in the Study Report, Erie evaluated flows of leakage (existing condition), 10, 20 and 50 cfs. The flow of 50 cfs was chosen because it is significantly higher flow; the other flows assessed (10 cfs and 20 cfs) provided incremental measurements between leakage and 50 cfs.

³ See consultation record in the Study Progress Reports filed with FERC on July 29, 2019, and October 31, 2019.

Impoundment Shoreline Characterization Study

IC1-USFWS Comment: *The USFWS noted that the net elevation changes in Table 3-1 are incorrect. These net changes were likely calculated from un-rounded numbers, but do not match the rounded values included in the minimum and maximum pond columns, and recommended that these values be corrected.”*

IC1-Erie Response: The updated Table 3-1 of the Impoundment Shoreline Characterization Study Report is provided below. The USFWS is correct the discrepancy was due to rounding values.

TABLE 3-1 PROSPECT IMPOUNDMENT ELEVATIONS DURING UAV AND MICROHABITAT SURVEYS

Date	Time (24 hour)	Average Pond El. (feet)	Min Pond El. (ft)	Max Pond El. (feet)	Net El. Change (ft)
8/6/2019	10:00-16:00	1,156.5	1,156.4	1,156.9	0.5
8/20/2019	11:00- 19:00	1,160.2	1,160.0	1,160.3	0.3
8/22/2019	15:00- 18:00	1,159.2	1,159.0	1,159.6	0.6

Fish Assemblage Assessment

FA1-NYSDEC Comment: *NYSDEC states that Erie should clarify the units of measure for conductivity measured throughout the Fish Assemblage Assessment.*

FA1-Erie Response: Conductivity was measured in $\mu\text{S}/\text{cm}$ throughout the Fish Assemblage Assessment.

Fish Entrainment and Turbine Passage Survival Assessment (FETPSA)

FE1-USFWS Comment: *The USFWS states that the FETPSA study makes several assumptions that likely underestimate the potential for entrainment at the Project and that the USFWS generally does not support the methods and conclusions of the study. The USFWS states that Erie should review a recent entrainment mortality study from other peaking projects in New York for reference and re-evaluate the study methods and results.*

FE1-Erie Response: In response to comments on the RSP and during the study plan consultation calls, the USFWS indicated general support and no objections to the study approach, other than that Erie provide methods for site specific data collection prior to conducting the study. In the SPD, FERC recommended that Erie provide an analysis or discussion of potential impingement effects based on trash rack spacing, intake velocities, size of fish species present in the impoundment, and swimming speeds of these species. In addition, FERC recommended that Erie describe its goals and methods for collecting site-specific data (e.g., intake velocity) and provide this information to USFWS and NYSDEC so that the agencies may provide comments and recommendations prior to conducting the study. Erie conducted the study consistent with the FERC SPD and consistent with standard methodologies for fish

entrainment and turbine passage survival studies (Franke et al. 1997,⁴ FERC 1995,⁵ USFWS 1989⁶). In addition, consistent with the FERC SPD, Erie reviewed the study methods and approach with USFWS and NYSDEC during a study consultation call on April 18, 2020 (see Study Report 1 filed July 29, 2020).

As indicated in the FETPSA Report results, the magnitude of the average annual fish entrainment estimate presented in the report is likely an overestimate of the actual entrainment that typically occurs at the Project. The method used to determine Project operations was conservatively based on “ideal” conditions and assumes the Project is always available to operate at maximum capacity. The ability to account for times when the Project is not operating, or operating at a reduced flow, would act to further reduce the magnitude of entrainment and mortality estimates.

FE2-USFWS Comment: *The USFWS states that the use of average monthly flows likely under-represents the amount of entrainment that can occur at the Project under peaking conditions as short-duration, high-velocity conditions can lead to higher rates of entrainment and impingement. The USFWS recommends that Erie conduct the analysis using generation records representing a dry, average, and wet year to account for this variation in entrainment risk during peaking operations.*

FE2-Erie Response: The purpose of the desktop entrainment study was to characterize entrainment by estimating the order-of-magnitude fish entrainment rate rather than computing an exact number or develop precise variations based on varying hydrologic conditions. Flow data used in this evaluation were averaged from a 20-year period between 1997 - 2017. This long-term average provides entrainment estimates based on standard, average river conditions. This approach was specifically used to account for annual variation in entrainment between wet and dry years, as the average over the long-term data series encompasses variation in river discharge, providing an entrainment estimate that is reflective of entrainment over the duration of a project license. Further, using long term average flows for periods of 10 - 20 years is a common practice in desktop entrainment studies, and there are multiple examples of long-term average river flows being used to estimate project flows (Alden 2012,⁷ Kleinschmidt 2015,⁸ Kleinschmidt 2019,⁹).

The methodology outlined in the study plan notes that existing practices would be used in this study, and did not specify a scenario for multiple entrainment estimates to be run at low, mid, and high flow conditions. The use of a 20-year average in this evaluation does not underestimate entrainment rate and is an appropriate methodology standardly used in desktop entrainment

⁴ Franke, G. F., Webb, D. R., & Fisher, R. K. (1997). Development of Environmentally Advanced Hydropower Turbine System Design Concepts. Tech. rep., Lockheed Idaho Technologies, Co.

⁵ Federal Energy Regulatory Commission (FERC). 1995. Preliminary assessment of fish entrainment at hydropower projects. Office of Hydropower Licensing, FERC, Washington, DC.

⁶ U.S. Fish and Wildlife Service. 1989. Water velocity standards at power plant intakes: traditional and alternative rationales. Research Information Bulletin No. 89-61.

⁷ Alden 2012. Atlantic Salmon Survival Estimates at Mainstem Hydroelectric Projects on the Penobscot River. Phase 3 Final Report. Prepared for National Marine Fisheries Service. 240 pp.

⁸ Kleinschmidt 2015. Parr Hydroelectric Project Desktop Fish Entrainment Study. Prepared for South Carolina Electric and Gas. Cayce, SC.

⁹ Kleinschmidt. 2019. Fries Fish Entrainment and Turbine Mortality Study. Prepared for Aquenergy Systems, LLC. Fries, VA.

evaluations. As stated in the FETPSA Report, monthly flow estimates were calculated by multiplying the average daily powerhouse flows (based on station capacity) by the number of days in the month. The monthly flow in cfs was then converted to the volume of water expected to pass through the powerhouse in million cubic feet (MCF). The monthly MCF values were summed to calculate the annual volume of water that is expected to be passed through the Project powerhouse. This approach is very conservative and assumes that the Project operates at maximum capacity with no turbine outages during the year. Because that is rarely the case this approach overestimates project operation and adds a conservative element to the analysis.

FE3-USFWS Comment: *The USFWS states that the assumption that larger fish are capable of swimming away from the intakes and are unlikely to be entrained does not account for the fact that larger fish are regularly entrained through hydroelectric turbines. In addition, the USFWS recommends that Erie reconsider the entrainment analysis without the assumption that larger fish will not be entrained.*

FE3-Erie Response: The USFWS's generic claim that *larger fish are regularly entrained through hydroelectric turbines* does not account for site-specific conditions, such as trashrack spacing versus fish size. This study employed a basic risk analysis to determine susceptibility using standard methods employed in numerous studies. For example, the study excluded fish based not only on swim speeds (i.e., an index of the ability of a fish to volitionally escape from an intake flow field), but also on size compared to trash rack spacing. In this analysis, fish were excluded based on body width because they would not be able to fit through the trash racks. This approach is a standard component of desktop evaluations in that not all fish in an impoundment are susceptible to entrainment, and that fishes that are too large to physically fit through the racks are excluded from the entrainment estimate (EPRI 1992¹⁰).

Specific to this analysis, few fish relative to the overall sample were excluded based on body width or swim speed size because the fish assemblage is largely comprised of fishes and life stages that are able to be entrained. Species composition was dominated by fish that would not be able to outswim intake velocities and could fit through trash racks (i.e., 2-6 inch total length). The exclusion of some larger fish did not, therefore, appreciably change the entrainment estimate. The difference in the unfiltered entrainment estimate at Trenton with adding the larger fish sizes is only approximately a 1.9 percent (or approximately 1200 fishes) reduction and the difference in the unfiltered entrainment estimate at Prospect with adding the larger fish sizes is approximately a 3.5 percent (or approximately 1800 fishes) reduction. These filtered entrainment estimates are presented in Tables 3-8 and 3-9 in the FETPSA Report, while the original unfiltered estimates are presented in Tables 3-3 and 3-4. While it is relevant to include fish size and swim speed variables, these factors did not change the estimates of fish entrainment at an order-of-magnitude level. Additionally, this assessment assumed that the Project was operating at full capacity at all times and did not account for outages or periods of reduced operation. Thus, the magnitude of entrainment was likely overestimated for some periods. No further analysis is proposed as the estimates provided in the FETPSA Report were based on standard and appropriate methodologies for estimating entrainment at the West Canada Creek Project facilities.

¹⁰ Electric Power Research Institute. 1992. Fish entrainment and mortality review and guidelines. EPRI TR-101231. Sept. 1992. 281 pp. Elec. Pow. Res. Inst. Palo Alto, CA

FE4-NYSDEC Comment: *The NYSDEC states that the USGS gauge at Hinckley Reservoir (USGS 01343900), which is located just upstream of the Project, should be incorporated into the derivation of monthly mean flows for estimating annual fish entrainment and turbine passage survival of the Project.*

FE4-Erie Response: Prorated flows at the West Canada Creek Kast Bridge gage (USGS Gage No. 01346000) were determined to be representative of project flows, as it is located on the mainstem water body, and the use of Kast Bridge gage discharge data allows for consistency between the Fish Entrainment and Aquatic Mesohabitat Study. The application of the Kast Bridge gage is also consistent with the approach taken for the development of the monthly flow duration curves as presented in the Pre-Application Document. Flow data for the West Canada Creek Project at the Prospect Dam and Trenton Dam were based on prorations of their respective drainage areas.

FE5-NYSDEC Comment: *NYSDEC states that Erie should conduct literature reviews of published burst swim speeds of many studied species of fishes to produce more accurate results.*

FE5-Erie Response: Calculating swim speeds based on body length is a common practice in desktop entrainment assessments (Kleinschmidt 2019,¹¹ Kleinschmidt 2003¹²), and a common metric for fish passage engineering design (Bell 1990,¹³ Haro et al. 2004¹⁴). A formula for using fish length to determine swim speeds and associated entrainment potential at hydroelectric facilities was developed by the USFWS in 1989¹⁵. Differences in swim speeds between a species-based swim speed assessment or a length based swim speed assessment would be minimal, especially considering that relatively few fish capable of fitting through the trash racks were excluded from the analysis due to swim speed analyses. Changing the methods for calculating swim speeds is unlikely to affect the order-of-magnitude entrainment and mortality estimates that desktop entrainment studies are designed to produce.

FE6-NYSDEC Comment: *NYSDEC comments that fish may be impinged laterally across an intake trash rack and this potential should be considered in the analysis of potential fish impingement.*

FE6-Erie Response: Utilizing swim speeds to determine impingement avoidance for fish that are too large to fit through trashracks is a common practice, as a formula to use fish lengths to assess swim speeds and associated entrainment potential was developed by the USFWS in 1989⁶. This methodology assumes that an individual fish is in standard good health, and can swim away from the trashrack even if impingement were to occur and therefore would not result in mortality. This is particularly true of this entrainment assessment which used sustained swim

¹¹ Kleinschmidt. 2019. Fries Fish Entrainment and Turbine Mortality Study. Prepared for Aquenergy Systems, LLC. Fries, VA.

¹² Kleinschmidt. 2003. Coosa and Warrior Impingement, Entrainment, and Turbine Mortality Study. Prepared for Alabama Power. Birmingham, AL.

¹³ Bell, M.C. 1990. Fisheries Handbook of engineering requirements and biological criteria. U.S. Corps of engineers. Fish Passage North Pacific Division, Portland, OR.

¹⁴ Haro, A., T. Castro-Santos, J. Noreika, and M. Odeh. Swimming performance of upstream migrant fishes in open-channel flow: a new approach to predicting passage through velocity barriers. *Can. J. Fish. Aquat. Sci.* **61**: 1590–1601 (2004)

speeds to evaluate entrainment and impingement as opposed to burst speed, which as a lower velocity threshold, is a more conservative approach than using burst speeds as recommended by the NYSDEC.

FE7-NYSDEC Comment: *NYSDEC states that Erie should in Section 3.3, Species Length Class and Composition, use survey data from other gear types and survey data from upstream of the Prospect impoundment. NYSDEC also states that there is no mention of using records of fish stocking in the Prospect impoundment or areas upstream of the impoundment and that Erie should re-evaluate the study to consider the number and sizes of trout that are stocked annually in the Prospect impoundment, Hinckley Reservoir, and in West Canada Creek upstream of Hinckley Reservoir.*

FE7-Erie Response: During study scoping, a Fish Assemblage Survey was requested by several stakeholders citing the need for Project specific data as existing data from upstream was considered insufficient for the assessment of the aquatic resources or for use in an entrainment evaluation. Specifically, USFWS in comments on the Proposed Study Plan (letter dated November 9, 2018) stated “*We disagree that the Hinckley Reservoir and upstream areas on West Canada Creek can be used as surrogates for the Project reservoirs and downstream areas of West Canada Creek as these areas differ notably in their habitat and are not subject to the impacts associated with the Project.*” The addition of other data sets are not appropriate for this evaluation for the same reasons stakeholders requested the fish assemblage study; the need for updated site specific data.

As stated in Erie’s RSP, a primary purpose of the Fish Assemblage Study was to characterize the fish assemblage data within the Project impoundment and to inform the Fish Entrainment and Turbine Passage Survival Assessment. The fish assemblage data, including species composition and relative abundance, used in this evaluation were obtained following agreed upon methods and is the most recent and localized data by which to estimate entrainment mortality. No trout were collected in the Project impoundments and thus none were included in the entrainment evaluation. Trout stocking in the Prospect impoundment is part of a put and take fishery, as opposed to a natural self-sustaining fishery. As such, trout abundance in Prospect impoundment is arbitrary and does not represent a native population, as it is mostly dependent on stocking efforts and does not reflect a natural production. A put and take population of trout in a warm water fish assemblage assumes a 100 percent mortality rate and is not appropriate to include in the fish entrainment evaluation.

Recreation Use, Needs, and Access Study

RS1-USFWS Comment: *The USFWS recommends that the angler bait and technique data should be presented in the DLA for both bait use and technique, separately.*

RS1-Erie Response: Based on survey responses, the following is a summary of the type of bait and techniques provided in the responses to survey question 46. In terms of bait types, of those anglers that responded, approximately 16 percent fished via bait, 57 percent fished via fly fishing, and 27 percent fished via artificial lures. Approximately 41 percent of the respondents indicated wade fishing, 34 percent of the respondents indicated bank fishing, and 25 percent indicated boat fishing.

RS2-NYSDEC Comment: *NYSDEC states that Erie should review all of its Accessible Elements associated with the Trenton Falls Scenic Trails for compliance with the 2010 Americans with Disabilities Act (ADA) Standards with respect to appropriate railings dimensions and proper toe clearance and review Section 703 of the 2010 ADA Standards for information regarding signs being placed at accessible locations.*

RS2-Response: Erie will review ADA standards and provide additional available information in the DLA.

RS3-AW Comment: *AW states that spot counts were limited to only certain formal recreational sites. AW also states that the study underrepresents recreational boating under current conditions in that it failed to correlate recreational boating to flow and failed to survey boaters at the most commonly used access points.*

RS3-Erie Response: Erie implemented a comprehensive Recreation Study, including assessment of Project recreation areas, as well as downstream recreation access according to the Study Plan and consistent with the FERC SPD. In addition, Erie consulted with the Recreation Study Group, of which AW was a participant, regarding the study methodology and during the study implementation as documented in the Study Progress Reports.¹⁶ During this consultation, Erie reviewed spot count locations and survey forms with the Recreation Working Group, and no objections were stated regarding the spot count locations or survey questions.

As summarized in the Recreation Study Report, the recreation survey was available online and notification of the study was distributed widely via public notice in the regional newspaper, postings at NYSDEC downstream access sites, surveys, drop box notification of online survey at the Prospect boat launch, and postings of information and link to the online survey on the Facebook websites of the following entities: Trenton Chamber of Commerce, West Canada Creek Campsites West Canada Creek Tubing, West Canada Creek Watershed Alliance, and Trout Power. In addition, AW posted a link to the survey on New York Whitewater Paddlers' Facebook page. Accordingly, Erie conducted a wide distribution of the recreation survey, resulting in 209 responses, to capture information regarding recreation user data, including the boating community, for the study area. In addition, Erie included questionnaires regarding downstream West Canada Creek recreation activities (including boating activities) as part of the Trenton Trail Visitor Survey, which resulted in 443 visitor responses, as summarized in the Recreation Study Report. responses to the Recreation Survey.

RS4-AW Comment: *AW comments that the downstream reach, boating opportunity is curtailed due to the lack of information on current flow conditions at the project and the lack of advance notification of planned generation limits recreational boating opportunity under current conditions. AW also states that the study does not address the impact of access restriction or flow alteration on recreational use and considers only recreational use under the current mode of operation.*

RS4-Erie Response: As described in the Recreation Study Report, Erie provides information regarding downstream flows via Safewaters, and as indicated in survey responses, approximately 62 percent of respondents indicated they access flow information prior to their visits, primarily

¹⁶ See consultation record in the Study Progress Reports filed with FERC on July 29, 2019, and October 31, 2019.

via Safewaters and the Kast Bridge USGS gage. Erie operates the Project consistent with the license requirements and is not proposing any changes in Project operations. Erie followed the approved study plan methodology. Assessment of impacts of different modes of Project operations were not identified as part of the FERC-approved Study Plan.

AS5-AW Comment: *AW states that substantial recreational use data was collected from participants in the Trenton Trail Days, but this data only reflected use on the select weekends when the trail is open to the public. AW stated concerns that large crowds seeking a public viewing opportunity may affect the user experience.*

RS5-Erie Response: AW correctly notes that substantial information was collected regarding Trenton Trail recreation visitors use and perceptions as documented in the Recreation Study Report. Consistent with the approved Study Plan, in addition to the Trenton Trail visitor survey, Erie also implemented a widely circulated online recreation use survey to capture information from recreation visitors within the study region, as detailed in the Recreation Study Report (see also response RS3). As noted in the Study Plan, over 90 percent of visitors surveyed during the Trenton Trail Days rated the crowdedness as light, with the average rating of 2.4, on a scale from 1 to 5, with 1 being light, 3 being moderate, and 5 being heavy.

Whitewater Boating Flow and Access Study Progress Report

WW1-NYSDEC Comment: *NYSDEC requests that the Working Group reconvene via telephone conference prior to conducting the 2020 on-water assessment of the controlled flow study to review the logistical aspects of conducting this study, report any access concerns, and describe any new considerations or changes due to COVID-19.*

WW1-Erie Response: Erie will reconvene the Recreation Working Group via conference call to review logistical aspects of the whitewater boating study prior to implementation of the field component.

WW1-AW Comment: *AW states that AW will continue to work with Erie to complete a Level 2 single-flow evaluation of the Prospect bypassed reach and determine the need for a Level 3 multiple flow evaluation. We anticipate that the Level 2 evaluation will occur during the 2020 study season.*

WW2-Erie Response: Erie will reconvene the Recreation Working Group via conference call to review logistical aspects of the whitewater boating study prior to implementation of the field component.

Aesthetic Flow Assessment Study

AF1-NYSDEC Comment: *In Section 3.3 (Aesthetic Flow Assessment), NYSDEC recommends developing one table at the end of this section that would list the KOP Location, Flows Observed and the Mean Score to allow stakeholders to compare all locations, flows, and mean scores in one easily readable format.*

AF1-Erie Response: Following is the consolidated table as requested by NYSDEC.

KOP ID and Location	Targeted Flow (cfs)	Estimated Observed Flow Range (cfs)	Average Rating Score¹	Difference Between Levels²
Prospect Bypass Reach				
KOP 1b - Prospect Falls Overlook	100	99-107	3.6	NA
	200	198-214	4.1	+0.5
	300	296-319	4.4	+0.3
KOP 2- Prospect Falls (Undeveloped Location)	100	99-107	3.0	NA
	200	198-214	4.2	+1.2
	300	296-319	4.7	+0.5
Trenton Bypass Reach				
KOP 4 - Upper High Falls (Lower Area)	100	124-134	3.3	NA
	200	209-227	4.1	+0.8
	400	298-323	1.1	+0.3
KOP 5 - Lower High Falls	100	124-134	3.4	NA
	200	209-227	4.1	+0.7
	400	298-323	4.1	+0.0
KOP 7 - Sherman Falls Overlook	100	124-134	3.0	NA
	200	209-227	3.9	+0.9
	400	298-323	4.0	+0.1

¹ Average ratings of aesthetic characteristics as evaluated by an eight person rating panel using a form that listed various aesthetic characteristics and allowed rating of those characteristics on a scale of 1 (very unappealing) to 5 (very appealing).

² Changes in rating from the previous (lower flow) evaluated flow observation.

AF2-AW Comment: *AW states that the Aesthetic Study Report refers to the highest flow evaluated as 400 cfs, when in reality, no flow above 298-323 cfs was evaluated. AW states that Erie should include photographs of higher flows, correct the reference to the 400 cfs demonstration flow, and that the lower flow (than the targeted 400 cfs) should be noted as a variance from the study plan. AW also states that overall ratings increased by approximately 1 point (e.g., 3.3. to 4.4 at KOP4) from all locations as flows increased.*

AF2-Erie Response: As stated upfront in Section 2.2 of the Aesthetics Assessment Report, and reviewed during the ISR meeting, all study results in the report referenced the target flows while citing an estimated observed flow range (as shown in Table 1 in Section 2.2 of the Aesthetics Assessment Report and the table presented above in AF1). This approach was taken because the survey instruments and results were taken and documented with those target flows. Erie consulted with the stakeholder group regarding the target flows as required in the FERC SPD. As

discussed during the field study orientation, the primary focus was evaluation of the aesthetic attributes; the flow ranges were targets and it is not uncommon in these type of flow studies for targeted flows to have a level of variation given the Project release structures utilized were designed for flood control purposes. Although Erie attempted to meet all the targeted flows, as expected, variation between targeted and “actual” (flow range based on engineering calculation of gate release, restrictions and head pond elevations) existed at all targeted flows. As indicated in the study plan, these are target flows and Erie attempted to meet these flow levels; therefore, Erie did not document this as a study variance.

Erie provided photographs of the flows viewed during the Aesthetics Assessment Study assessment and will provide documentation of flows during leakage conditions.

As documented in the Aesthetics Assessment Report, and as summarized in Erie’s response AF1, responses increased between 0.3 to 1.2 ratings. These ratings reflect an overall average of 0.5 increase (rather than 1 point). The average increase was 0.8 between the 100 and 200 cfs flow ranges, and less of a difference, average rating of 0.2, between 200 to 300 cfs ranges. In addition, as documented in both the Aesthetics Assessment Report and the Recreation Study Report, the average rating for the overall scenic views of recreation visitors during the 2019 Trenton Trail Days was 4.6, on a scale from 1 to 5, with 1 being poor and 5 excellent, with flows ranging from 200 cfs through 325 cfs. For the overall scenic quality of the Trenton Falls trail during the event, 94 percent of the respondents collectively (total across all days) rated the scenic quality as excellent (69 percent) or good (25 percent). All demonstrating that lower flow amounts still resulted in favorable aesthetic viewing conditions.