AESTHETIC FLOW ASSESSMENT STUDY



WEST CANADA CREEK HYDROELECTRIC PROJECT FERC No. 2701-NY

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Aesthetic Flow Assessment Study

West Canada Creek Hydroelectric Project

FERC No. 2701-NY

Prepared for:

Erie Boulevard Hydropower, L.P. Fulton, New York

and

Kleinschmidt

Pittsfield, Maine

Prepared by:

Environmental Design & Research, Landscape Architecture,

Engineering & Environmental Services, D.P.C.

March 2020

AESTHETICS FLOW ASSESSMENT STUDY

WEST CANADA CREEK HYDROELECTRIC PROJECT

FERC No. 2701

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Upper High Falls

DEFINITIONS OF TERMS, ACRONYMS, AND ABBREVIATIONS		
AW	American Whitewater	
Brookfield	Brookfield Renewable	
cfs	cubic feet per second	
EDR	Environmental Design & Research, Landscape Architecture, Engineering &	
	Environmental Services, D.P.C.	
Erie or Licensee	Erie Boulevard Hydropower, L.P.	
FERC	Federal Energy Regulatory Commission	
TLP	Integrated Licensing Process	
ISR	Initial Study Report	
КОР	key observation point	
NYTU	New York Trout Unlimited	
NYSDEC	New York State Department of Environmental Conservation	
Project	FERC Project No. 2701, West Canada Creek Hydroelectric Project	
Project Area	The area within the FERC project boundary	
Project Boundary	The boundary line defined in the Project license issued by FERC that surrounds	
	the Project	
Project Vicinity	The general geographic area in which the Project is located; the towns of	
	Trenton and Prospect, New York	
Relicensing	The process of acquiring a new FERC license for an existing hydroelectric	
	project upon expiration of the existing FERC license	
RSP	Revised Study Plan	
SPD	Study Plan Determination	
Tailrace	Channel through which water is discharged from the powerhouse turbines	
USFWS	U.S. Fish and Wildlife Service	
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1.0 INTRODUCTION

Erie Boulevard Hydropower, L.P. (Erie), a Brookfield Renewable company (Brookfield), is the licensee, owner, and operator of the existing West Canada Creek Hydroelectric Project (FERC Project No. 2701, referred to in this report as the Project). The Project consists of two components, the Prospect Development and the Trenton Falls Development, both of which are located on West Canada Creek in the Town of Trenton, Oneida County and the Town of Russia, Herkimer County, New York. A detailed description of the Project is provided in the Pre-Application Document (Erie 2018).

The Federal Energy Regulatory Commission (FERC) issued the current license for the Project on March 18, 1983, which expires February 28, 2023. Erie is pursuing a new license under FERC's Integrated Licensing Process (ILP) and intends to file an application for a new license with FERC before February 28, 2021. On December 11, 2018, Erie filed a Revised Study Plan (RSP), and on March 7, 2019, FERC issued the Study Plan Determination (SPD) approving the RSP with modifications. On October 31, 2019, Erie requested a revision of the Process Plan and Schedule, and on December 5, 2019, FERC granted this revision to change the Initial Study Report (ISR) filing date to March 7, 2020, to align with one year following the issuance of FERC's SPD.

As part of the study implementation and in accordance with FERC's SPD, Erie initiated consultation with agencies regarding aspects of the Project's relicensing studies. Erie consulted with the New York State Department of Environmental Conservation (NYSDEC), the U.S. Fish and Wildlife Service (USFWS), American Whitewater (AW), New York State Fish and Wildlife Management Board, New York Trout Unlimited (NYTU), and the Town of Trenton on September 9 and 12, 2019, regarding the methodology, survey instruments and various components of the Recreation Use, Needs, And Access Study, Whitewater Boating Flow and Access Study, and Aesthetics Flow Assessment. Attendees on the calls included representatives from the USFWS, NYSDEC, AW and NYTU (i.e., the Recreation Working Group).

Relative to the Aesthetics Flow Assessment Study, Erie consulted with the Recreation Working Group regarding the Key Observation Point (KOP) locations, the selection of the KOPs for the in-field controlled flow evaluation, identification of the targeted flow releases for the Prospect and Trenton bypass reaches during the aesthetic controlled flow evaluation, and review of the evaluation forms and focus group questions. This Working Group also provided participants to serve on a focus group/rating panel for the in-field controlled flow assessment (see Section 2.0 for further discussion).

Documentation of this consultation was provided in the Study Progress Reports filed with FERC and distributed to the stakeholders on July 29, 2019, and October 31, 2019.

Erie and its relicensing consultant Kleinschmidt retained Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR) to conduct the Aesthetics Flow Assessment study. EDR is an industry leader in the field of aesthetic evaluation and visual impact assessment. EDR has over 30 years of experience in landscape design, the management of aesthetic resources, and the evaluation of visual impacts. This staff includes registered landscape architects, visualization professionals, and regulatory specialists with experience in a wide variety of visual and aesthetic studies, many of which have been associated with energy generation and transmission projects in New York, New England and the Midwest, specializing in utility-scale renewable energy projects and Visual Impact Assessments.

2.0 STUDY METHODOLOGY

The Aesthetic Flow Assessment Study investigated the aesthetic effects of various controlled releases through the Prospect and Trenton Falls bypass reaches. The goal of this study was to gather information on the existing aesthetic character and potential aesthetic flow viewing opportunities within the Project bypass reaches. Specific objectives of the study include the following:

- Document the existing aesthetic character and conditions in the Prospect and Trenton Falls bypass reaches;
- Document key viewing locations and opportunities (including special event activities);
- Collect photo documentation of various existing and controlled flow conditions within the Project bypass reaches; and
- Conduct focus group assessments of controlled flow conditions at representative key viewing locations adjacent to the Project bypass reaches.

The study involved identification and documentation of existing conditions at Key Observation Points (KOPs) associated with the Project's bypass reaches, development of an aesthetic flow survey form, determination of the range of targeted flow volumes to be used for the aesthetic flow evaluation, a controlled flow assessment field evaluation of the viewing characteristics from selected KOP locations, and analysis of the results of the controlled flow evaluation. A more detailed description of study methodology is presented below.

2.1 Study Area

The Project Study Area includes the Prospect and Trenton Falls bypass reaches on West Canada Creek (see Figure 1). Within this area, seven potential KOPs were identified for evaluation by Erie, five of which were ultimately chosen as locations for analysis of various flows. These include two sites with views of the Prospect bypass reach (KOPs 1b and 2) and three sites with views of the Trenton Falls bypass reach (KOPs 4, 5 and 7). These five final KOPs provide key views of notable waterfalls located within the Prospect and Trenton bypass reaches. See Section 2.3 for additional description of consultation pertaining to the selection of the KOPs, and Section 3.4 for descriptions of KOP locations and characteristics.



2.2 Data Collection

Data collection for the Aesthetic Flow Study within the Project bypass reaches followed a step-wise or phased approach, generally consistent with the methodology described in Whittaker and Shelby (2017). These phases included: (Level 1) desktop analysis, (Level 2) reconnaissance assessment, and (Level 3) controlled flow assessment, and are described in more detail below. In addition, in order to help characterize existing flow conditions, 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 forthcoming Updated Study Report.

2.2.1 Determination of KOPs to be Evaluated

Erie consulted with USFWS, NYSDEC, AW (May 29, 2019 and September 9, 2019) and TU (September 9, 2019) regarding the methodology for the aesthetic assessment, including flow releases and KOP locations for the aesthetic flow evaluation. During this consultation, Erie reviewed proposed KOPs locations of representative views of the falls and targeted flows for the aesthetic flow field assessment releases.¹ For the KOP locations, the consulted parties indicated preference for a relatively close view of Prospect Falls (KOP 2). Accordingly, two locations were selected for assessment for the Prospect bypass reach (KOP 1b and 2²). KOP 1b provides a full view of the Prospect Falls waterfall from one of the Town of Trenton overlook areas. KOP 2 is located on Project property in proximity to Prospect Falls and provides closer views of the Falls

¹ See consultation record in the Study Progress Reports filed with FERC on July 29, 2019, and October 31, 2019.

² KOP 2 location was added in response to the Working Group requests for evaluation of a viewing location in closer proximity to Prospect Falls, and Erie agreed to include the non-public KOP 2 location in the controlled flow assessment.

(this location is restricted from public access due to safety considerations, see Section 3.4.1 for additional description). For the Trenton Falls bypass area, three locations were selected for the KOP assessment, including KOPs 4, 5, and 7. These three locations were selected because they provided representative views of the key waterfall locations, and logistically allowed time for the evaluation of the various flow scenarios by the focus group. Specifically, KOP 4 provides a view of the Upper High Falls and upstream Mill Dam Falls, KOP 5 provides a view of the Lower High Falls, and KOP 7 provides a view of the Sherman Falls (see Section 3.4).

2.2.2 Determination of Flows to be Evaluated

Erie consulted with USFWS, NYSDEC, AW regarding the flow release ranges. Erie proposed aesthetic flow assessment releases of: Prospect bypass reach of leakage, 100 cubic feet per second (cfs) and 200 cfs, and for the Trenton bypass reach of leakage, 200 cfs and 400 cfs. for the aesthetics controlled flow study. During the September 9, 2019, consultation call, the participants suggested that the evaluation remove the leakage flow. The consulted parties stated that sufficient information was provided for the aesthetic conditions during leakage (and documented in photographs). The consulted parties recommended that the flow assessment include flows of 100, 200, and 400 cfs at both bypass reaches. Erie countered with targeted flows of 100, 200 and 300 cfs flow for the aesthetic controlled flow study at Prospect bypass and agreed to targeted flows of 100, 200 and 400 cfs for the study at Trenton.

Table 1 provides targeted flow releases and the estimated range of discharges to the Prospect and Trenton bypass reaches during the aesthetic controlled flow assessment on September 24, 2019. All study results in this report reference the target flows. The actual flow ranges were generally within the range of the flow targets with the exception of Trenton flows where the 100 cfs target flow was slightly higher (124-134 cfs) and the 400 cfs target was lower (298-323). The primary focus of the aesthetic evaluation was the evaluation of the various aesthetic attributes (see Section 2.2.5) and the comparative analysis of these attributes under a range of evaluation flows.

Development	Target Flow (cfs)	Gate Open- ing (ft)	Average Pond Elevation (feet msl USGS)	Engineering Calculated Discharge Range (cfs) ¹
Prospect	100	0.20	1159.0	99-107
bypass reach	200	0.40	1159.1	198-214
	300	0.60	1159.1	296-319
Trenton by-	100	0.65	1021.2	124-134
pass reach	200	1.25	1019.9	209-227
	400	1.85	1019.8	298-323

Table 1. Summary of Flow Ranges during the Aesthetic Flow Assessment

¹ Estimated flow release range based on engineering calculations of gate releases for the Prospect and Trenton bypass reaches during the September 24, 2019 aesthetic controlled flow release study.

2.2.3 Documentation of Existing Conditions

EDR characterized and documented (photographed) the identified KOPs adjacent to the Project bypass reaches during both the leaf-on and leaf-off seasons (see Appendix A). The assessment included identification of specific viewing characteristics (i.e., key features/structures, waterfalls, vegetation, in-channel geologic features, rapids and view distance) and characterized potential use and access to these areas. 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 forthcoming Updated Study Report.

2.2.4 Aesthetic Flow Survey Form

To evaluate the aesthetic attributes/benefits of the various flows under consideration, EDR developed a survey form (see Appendix B). The first page of the form requested general information on the individual conducting the evaluation and their familiarity with the Study Area. The second page requested an evaluation of the aesthetic characteristics of West Canada Creek at each selected KOP and at each flow level that was observed during the field evaluation. These included the following:

- Sound level;
- Amount of pools/still water in channel;
- · Amount of turbulence (visibility moving water in channel);
- · Amount of exposed rocks/stream-bed;
- · Contrast between pools and moving water;
- Amount of exposed rock at falls;
- · Wetted channel width (area of the river channel filled with water); and
- Waterfall size/volume (amount of water going over the falls).

For each flow under consideration, the evaluator was asked to assign a score to each of these attributes on a scale of 1 (very unappealing) to 5 (very appealing). A score for the overall aesthetic rating of each flow was also requested. In addition, the evaluator was asked to indicate whether higher or lower flows would be preferable, and to outline specific positive and negative attributes associated with the flow being evaluated. Suggestions for other enhancements that could improve the aesthetic viewing experience were also requested. In addition, following all of the controlled flow releases, each rating panel participant was asked to complete a comparative flow assessment form for each bypass reach (Prospect and Trenton) to obtain information regarding how the controlled flows compared based on their viewing experience (see Appendix B for Survey Form).

THE REPORT FORM
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Example Flow Analysis Rating Form

2.2.5 Documentation and Assessment of Controlled Flow Releases

For the in-field controlled flow assessment, Erie solicited the assistance of a focus group/rating panel consisting of eight individuals, including three representatives from the NYSDEC, two representatives from the USFWS, one representative of AW, and one representative of the Town of Trenton, as well as an in-house visual expert from EDR. Using the survey forms described above, these individuals conducted a review of the selected controlled flows at the five identified KOP locations within the Prospect and Trenton Falls bypass reaches on September 24, 2019.

As part of the on-site assessment, rating panel members were provided example sketches of the different river and waterfall attributes that could be present during the releases. This was provided to convey a common understanding of terminology and a basis for discussion and rating of the different river conditions that could occur under various flows (see illustrations in Appendix B). EDR conducted photo and video documentation of the three selected flows at each selected KOP location (see photolog in Appendix D). For each bypass reach, the rating panel reviewed the KOP aesthetic view characteristics and individually completed an evaluation form during each controlled flow event.

Two examples of the character sketches provided to the rating panel. See the full list of attributes associated with moving water below and rated as part of the flow analysis survey.

Attributes:

Amount of pools/still water in channel

Amount of turbulence (visibly moving water in channel)

Amount of exposed rocks/stream-bed

Contrast between pools and moving water

Amount of exposed rock at falls

Wetted Channel width (area of the river channel with water)

Waterfall size/volume (amount of water going over the falls)

Contrast between pools and moving water



Little moving water from pool to pool

Amount of exposed rock at falls

Visible ledges with any flowing

water restricted to narrow

ribbons or plumes



Sequence of well-defined pools and riffles



Fast moving water with whitewater over rocks



Multiple cascades of water with some veiling and portions of cliff face visible



Continuous veil of falling water with no visible rock ledges or cliff face

The rating panel completed the comparative evaluation form individually following the completion of all three controlled flow releases for each bypass reach. The rating panel also participated in two focus group discussions following the comparative flow assessments. The following topics were provided as potential topics for discussion during the focus group sessions:

- Suitability of the KOP locations;
- Any distinct aesthetic characteristics of each falls;
- · Aesthetic characteristics of the lowest, highest and optimal flow conditions for each falls;
- The positive attributes of the lower flows (i.e., leakage flows);
- The negative attributes of the lower flows (i.e., leakage flows);
- The positive attributes of the higher flows;
- The negative attributes of the higher flows;
- The timing and availability of the KOP locations for scenic viewing opportunities;
- Any enhancements that could be implemented at the KOP locations to improve the aesthetic viewing experience; and
- Overall aesthetic evaluation of the range of water flows available.

In addition, at the request of NYSDEC, following the flow assessment, participants were provided with photos of each flow and a supplemental comparative flow assessment form to afford further opportunity to compare and evaluate the various flows based on the photographic documentation. Erie received one follow-up with additional comparative evaluation information.

2.3 Data Analysis

Scores and comments provided by the rating panel were assembled and analyzed by EDR to determine the degree of aesthetic benefit provided by each of the evaluated flows. For each KOP, the range and average of individual scores for specific aesthetic attributes, as well as overall aesthetic quality, were determined. Observations and recommendations were also reviewed to determine common perceptions and specific attributes that benefitted most from the alternate flows under consideration. Finally, results of the focus group discussion for each bypass reach were reviewed to determine common impressions, areas of disagreement, and recommendations. Results of this analysis are provided in Section 3.5.

2.4 Variances from Approved Study Plan

There were no variances from the FERC SPD approved study plan. FERC recommended that Erie consult with interested stakeholders to determine the number of releases, the appropriate aesthetic flow levels for the study, and to help determine if any observation locations, in addition to those identified in the RSP, would be appropriate. As summarized in Section 2.2, Erie consulted with the interested stakeholders regarding the determination of KOP locations and the range of flows to be evaluated, as well as the evaluation forms.

3.0 STUDY RESULTS

3.1 General Description of Existing Conditions

West Canada Creek begins in the Town of Arietta, Hamilton County and flows south to the Hinkley Reservoir (located between Herkimer and Oneida Counties) before passing through the Project Area. Downstream of the Project, West Canada Creek ultimately empties into the Mohawk River in the Town of Herkimer, Herkimer County. West Canada Creek is located in the Mohawk River Drainage Basin (HUC 02020004) and spans approximately 76 miles. The Project itself is located in the West Canada Creek, Lower Main Stem subwatershed (HUC 02020004/140), just south of the Hinkley Reservoir (NYSDEC, 2010).

From Hinkley Reservoir, West Canada Creek enters the Prospect Reservoir, and the majority of flow is directed from there through the Prospect powerhouse. Residual (leakage) flow passes through the approximately 1.8-mile long Prospect bypass reach. This reach includes Prospect Falls, a rounded bedrock ledge that spans the creek channel and has a drop of approximately 20 feet. The bypass reach is bordered by primarily steep cliffs, a solidly wooded shoreline and adjacent forest. There are no provisions for public access to the bypass reach, but public overlooks are available from a small park with a wooden deck, and a formalized roadside overlook (both located in the hamlet of Prospect), and from the Military Road bridge downstream of the falls. Views from the hamlet have been made available by Erie through the clearing of trees to create open viewing corridors between the two overlooks and Prospect Falls. These views feature the falls in the distance, surrounded by forest. Beyond the falls, only limited portions of West Canada Creek are visible from these vantage points, including a bedrock channel upstream and rocky plunge pools immediately downstream. From the Military Road bridge, the portion of West Canada Creek that is visible includes some larger pools within a steeply walled gorge.

From the Prospect tailrace, West Canada Creek enters the Trenton Falls Reservoir. From the reservoir, the majority of the creek's flow is diverted into the penstock that leads to the Trenton Falls powerhouse. Residual flows (leakage) pass through the Trenton Falls bypass reach. Within the bypass reach the creek flows through a steeply walled gorge and includes one minor and three major waterfalls. These waterfalls (and their respective heights) include: Mill Dam Falls (approximately 14-foot drop), Upper High Falls (approximately 40-foot drop), Lower High Falls (approximately 100-foot drop), and Sherman Falls (approximately 33-foot drop). With the exception of Mill Dam Falls, all of these waterfalls consist of vertical ledges of exposed bedrock with deep plunge pools at the base of the falls. The Trenton Falls bypass reach is primarily forested and includes steep wooded slopes and cliffs border the creek channel throughout the bypass reach.

Public access to the Trenton Falls bypass reach is provided by Erie on a controlled basis along a cleared pedestrian trail, Trenton Scenic Trail, that accommodates the existing steel penstock and associated gravel access road. For several weekends (typically 2 to 4 weekends per year) each year, Trenton Scenic Trail is opened to the public, and views of the creek and falls are available from the trail system with five designated overlooks. The trail passes through a variety of landscape settings,

including open land adjacent to the existing steel penstock, the concrete "cradles" that carried the original wooden penstock, and wooded overlooks with open or partially screened views of the falls. The trail system also provides access to areas adjacent to the bypass reach more removed from the creek channel that offer views of the surrounding forest, a historic cemetery, and the hydroelectric facilities on site. See also West Canada Creek Project Recreation Use, Needs and Access Study (Kleinschmidt 2020g) for additional description of the facilities and recreational use and access at the Project. Additional information pertaining to aesthetics is also provided in the West Canada Creek Project Pre-Application Document (Erie 2018).

3.2 Key Observation Point Descriptions

Descriptions of existing conditions at the identified KOP locations for both the Prospect and Trenton bypass reach are provided below. Photos of the existing conditions of these KOPs, including both leaf-on and leaf-off conditions, are provided in Appendix A.



Figure 1 | Study Area with KOP Locations

Notes: 1. Basemap: USDA NAIP "2017 New York" orthoimagery map service. 2. This map was generated in ArcMap on March 6, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.





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3.2.1 Prospect Bypass Reach

KOP 1a - Prospect Overlook Park

The hamlet of Prospect provides a public viewing area, just outside of the Project boundary, located at Prospect Park, in the center of the hamlet. This KOP offers views of Prospect Falls from an overlook platform with a managed viewing corridor. Vegetation has been maintained periodically by Erie to provide unobstructed views of the falls from this prominent location. Prospect falls is located approximately 700 feet from the KOP, but the falls are still typically audible from this viewing location.

The aesthetic character of this KOP is defined by the park facilities and features, including the overlook platform, a pavilion, a water fountain, brick walkways and bench seating areas. The focal point of the park is the public viewing platform.

Access to this KOP is available to the public 24 hours a day, seven days a week.



Aerial context map of KOP 1a





Aerial context map of KOP 1b

KOP 1b – Prospect Falls Overlook

A short distance from KOP 1a, this KOP is a formalized roadside public viewing area on the northeast side of North State Street in the hamlet of Prospect. It offers views of Prospect Falls in its entirety. A brick sidewalk and stone wall, along with a small gathering place and benches, welcome viewers to the overlook location. With effort from both locals and Erie, an open viewing corridor has been cleared and maintained between the overlook and the riverbank. The cleared corridor allows for views of Prospect Falls, the pools immediately below the falls, and the upstream channel that leads into the falls. The falls are approximately 750 feet from the KOP, but close enough for the sound coming from the falls to be clearly audible at the elevated viewing position.

The aesthetic character of this KOP is defined by the site amenities at the overlook and the adjacent structures and activities associated with the hamlet of Prospect, including homes, businesses, roads, residential/pedestrian activity, and local travel.

Access to this KOP is available to the public 24 hours a day, seven days a week.



KOP 2 – Prospect Falls (Undeveloped Location)

Located within the Prospect bypass reach, this KOP is undeveloped, not publicly accessible and located behind an existing security fence installed by Erie for public safety purposes. The site is located near County Route 113 (Military Road) just south of the bridge crossing of West Canada Creek. Situated exclusively on property owned by Erie, KOP 2 is reached by passing through locked safety gates, and following an old trail/woods road through a heavily forested area to a small level area located approximately 30 feet above the shoreline of the creek. Erie recently cleared some tree limbs to provide windows of visibility upstream toward Prospect Falls and the rapids immediately below. The elevation and orientation of the viewpoint does not provide for views of the creek upstream of the falls; however, the proximity of the viewpoint does allow for a more intimate interaction with the water and the different ways in which it moves through the riverbed. This proximity to the creek also highlights the sound of the water as it passes over the falls upstream and through the channel below.

The aesthetic character of this KOP is defined by the adjacent creek and the forested land that occurs between Military Road and West Canada Creek. From the KOP, more distant land uses, such as transportation along Military Road and residential activities in the hamlet of Prospect, cannot be seen or heard by the viewer.

This KOP is not open to the public. No formalized access trail, overlook or roadside parking is available.



Aerial context map of KOP 2

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View of Trenton Upper High Falls from Trenton Trails designated accessible overlook, Town of Trenton, New York.

3.2.2 Trenton Bypass Reach

The following five KOPs are located entirely on property owned by Erie adjacent to the Trenton Falls bypass reach and located along the Trenton Falls Scenic Trail. These KOPs were identified and developed as overlooks during implementation of the Trenton Falls Trails Project in 2004, and are accessible to the public via a pedestrian trail system during the Trenton Fall Scenic Trail event. The overlooks also include safety fencing and interpretive features.

KOP 3–Trenton Trails Accessible Overlook

The Accessible Overlook provides parking and viewing opportunities for individuals with limited mobility as defined by the Americans with Disability Act (ADA), at the upstream extent of the Trenton Falls Trail. The Accessible Overlook is accessible to the public during the Trenton Falls Scenic Trail events via car along a gravel road from the powerhouse. The Accessible Overlook is located approximately 250 feet from Upper High Falls approximately 25-30 feet above the general location of the Upper High Falls Overlook (KOP 4). The Accessible Overlook provides a concrete platform with black metal railing located adjacent to the parking area, as well as benches. KOP 3 provides views of Upper High Falls, in the Trenton Gorge, the exposed bedrock creek bed, adjacent forested shorelines, and remnants of the old concrete penstock cradle. The sound of the falls are audible from this KOP location. Views further upstream and downstream are largely blocked by existing vegetation and the steep gorge walls.

The aesthetic character of this KOP is defined primarily by theoOverlook structure (concrete platform and black fencing) and views of Upper High Falls and the forested shorelines of West Canada Creek.



Aerial context map of KOP 3



View of Trenton Upper High Falls from Trenton Trails designated overlook, Town of Trenton, New York.



Aerial context map of KOP 4

KOP 4 – Upper High Falls Overlook

The Upper High Falls overlook provides an opportunity to view the full extent of Upper High Falls from two locations, one located at the end of the Trenton Falls trail and one adjacent location that is reached by walking down a short set of stairs to a lower elevation designated overlook. This lower location provides a full view of Upper High Falls and the river upstream. This KOP, located approximately 150 feet from the falls, offers a fully immersive experience of the site through the interplay of geology, the river, and human interventions over the years. Upper High Falls is a broad eroded bedrock ledge that drops approximately 40 feet to a lower tier of exposed bedrock and a plunge pool. Along with providing an open view of the falls, this overlook provides long distance views upstream, revealing views of the Mill Falls dam waterfall and the various channels that water can flow through as it approaches Upper High Falls. The upstream channel is characterized by expanses of level and stepped ledge, with a steep shoreline that is uniformly forested (primarily with white cedar). Lack of foreground trees offer expansive open views of the falls. The proximity of the overlook to the creek channel, the falls, and the plunge pool below also allows for the viewer to experience the sound and mist created by the falling water. The upper overlook location provides view of the Upper High Falls and the remnants of the old concrete penstock cradle.

The aesthetic character of this KOP is defined primarily by the falls, the gorge walls, and the associated forested shorelines. However, when approaching this KOP viewers will see the large steel penstock emerge from underground and run parallel to the access trail. A gravel access road and warning signs are additional developed features that contribute to the character to the site.



KOP 5 – Lower High Falls

KOP 5 is a designated overlook located at the terminus of a heavily forested portion of the Lower High Falls trail, which is a short secondary trail spur off the main Trenton Falls Trail. This KOP offers a small viewing window out to Lower High Falls. The base of the falls is approximately 350 feet from the KOP, with an elevation drop of approximately 100 feet to the water surface. Lower High Falls is a bedrock ledge, but is more stepped in character and less dramatic than Upper High Falls. The dense vegetation, small viewing window, and distance of the KOP from the water limits the viewers' overall experience of the creek at this location. Lower High Falls itself cascades down the rock face, with small drops in elevation along the way, before hitting a broad plunge pool. The KOP viewing window captures this unique feature of the falls. Views of the rapids and pools above or below the cascade are blocked by existing vegetation and the steep gorge walls.

The aesthetic character of this KOP site appears natural, with views of the hydroelectric development and other man-made features screened from view by the existing vegetation. However, when leaving the primary Trenton Falls Trail and entering the Lower High Falls trail, the Project's penstock is a prominent foreground feature.



Aerial context map of KOP 5





Aerial context map of KOP 6

KOP 6-Trenton Trail Cradle Overlook

Located in the southern portion of the Trenton Falls bypass reach, Sherman Falls is the last major waterfall before West Canada Creek exits the Project area. There are two areas along the trail network that offer viewing opportunities of Sherman Falls; the Trenton Trail Cradle Overlook (KOP 6) and the Sherman Falls Overlook (KOP 7). KOP 6 is located directly off the primary Trenton Falls Scenic Trail at a location directly above Sherman Falls. This KOP provides two overlook viewing locations between sections of the old concrete penstock cradle that have had safety fencing installed. These overlook areas provide a unique viewing experience of Sherman Falls and Trenton Gorge in the proximity of the historic (penstock cradle) and existing steel penstock runs along the opposite side of the Trenton FallsTrail. Focal points of the view from the Trenton Trail Cradle Overlook include Sherman Falls, the plunge pool below the falls, a short section of the bypass reach above Sherman Falls, as well as the forested shoreline areas. The sounds of water plunging into the pool below Sherman falls are clearly audible from this viewing location.

The aesthetic character of this KOP is defined by both industrial and natural features, with a strong presence of the old and new penstock structure features.



KOP 7 - Trenton Upper High Falls Overlook 43.281526°, -75.153634° View of Sherman Falls from Trenton Trails Designated Overlook, Town of Trenton, New York.

KOP 7 – Sherman Falls Overlook

The Sherman Falls Overlook (KOP 7) is located at the terminus of the Sherman Falls secondary trail. This KOP is located entirely within a wooded setting and provides a large viewing window through the vegetation with views to the river above the falls that provide a unique visual appreciation of the geological nature of the gorge. The upstream channel flows through a canyon with almost vertical walls of exposed rock and white cedar. Shallow water sheets across broad expenses of bedrock in the upstream channel, which is characterized by stepped shelves of varying height. The sheeting water flowing across the rock shelves concentrates just above the falls before dropping approximately 33 feet off the vertical edge of the falls. The powerful drop can be heard and felt from KOP 7.

The aesthetic character at the Sherman Falls KOP is defined by both natural and industrial features. The overlook itself is in a forested setting, but unlike KOP 5, the penstock is clearly visible from the overlook, which reduces the feeling of being isolated in nature.



Aerial context map of KOP 7



Prospect Falls in Prospect Bypass Reach

3.3 Aesthetic Flow Assessment

3.3.1 Prospect Bypass Reach

On the morning of September 24, 2019, flows were evaluated in the Prospect bypass reach. The three flow volumes evaluated were approximately 100, 200 and 300³. As described in Section 2.2, under each flow regime, aesthetic characteristics were evaluated at KOPs 1b and 2 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). Photos illustrating the character of the creek/falls at each KOP under the different flows are included in Appendix C. Results of the completed survey at each KOP within the Prospect bypass reach are summarized below, and a summary table of the responses is provided in Appendix C.

³

Targeted flows. See Section 2.2.2 for summary of estimated flow ranges during the study period.

KOP 1b – Prospect Falls Overlook

At KOP 1b the average overall aesthetic rating for each flow ranged from 3.6 at 100 cfs, to 4.1 at 200 cfs, to 4.4 at flows of 300 cfs. All scores are in the range indicated as "appealing" (4.0) on the survey form. Overall aesthetic ratings from individual evaluators ranged from a low of 2.5 to a high of 4.0 at 100 cfs, from a low of 3.5 to a high of 5.0 at 200 cfs, and from a low of 4.0 to a high of 5.0 at 300 cfs.

At 100 cfs, the most appealing individual attribute at KOP 1b was the sound generated by the waterfall (average score of 4.0) and the least appealing was the contrast between pools and moving water in the river channel (average score of 2.75). Positive attributes noted by the evaluators at 100 cfs included good sound volume and a good mix of exposed rock and veiling at the falls. Negative attributes at this flow level included too much exposed rock, limited whitewater/turbulence in the channel, and the water appearing to be spread too thin over the falls and shallow within the channel.

At 200 cfs, the most appealing attributes were the sound level and the amount of exposed rock/stream bed (average score of 4.1), and the least appealing was the contrast between pools and moving water (average score of 3.6). Positive attributes noted by the rating panel included better water coverage/veiling at the falls and more riffles/turbulence upstream. Negative attributes at this flow level included the amount of exposed rock, lack of visible pools, and limited complexity of the flowing river.

With the final evaluated flow of 300 cfs at KOP 1b, waterfall size/volume was the most appealing aesthetic attribute (average score of 4.7), while the least appealing remained the contrast between pools and moving water in the channel (average score of 3.8). Positive attributes noted by the rating panel included appealing riffles upstream, fuller coverage of the falls, more color to the water (reflecting greater depth), more mist/spray coming off the falls, more turbulence in the plunge pool below the falls, and louder sound. Negative attributes included reduced variation of water and less exposed rock at the falls, and continued shallow water depth upstream of the falls. It is worth noting that three of the evaluators did not indicate any negative attributes at the 300 cfs flow level.

Prospect Overlook



No Release/Leakage



100 CFS



200 CFS



300 CFS

The individual attributes that experienced the greatest aesthetic improvement with increased flows at KOP 1b included the amount of turbulence, contrast between pools and moving water, and waterfall size/volume. Additional enhancements recommended by the panel at KOP 1b included additional vegetation clearing on the left side of the cleared viewing corridor to allow views of the entire falls, and perhaps some interpretive signage.

Below is the mean score for each flow release and the difference between levels.



Commonly used attribute descriptions used by the rating panel members during the flow assessment.

100 cfs	Positive descriptions at 100 cfs: Sound (5), Veiling (4), Decent (2) Negative descriptions at 100 cfs: Lack of Turbulence (3), Thin (4), Limited Flow (2)
200 cfs	Positive descriptions at 200 cfs: Rock (4), Veiling (4), Sound (3), Riffle (3) Negative descriptions at 200 cfs: Rock Exposure (3)
300 cfs	Positive descriptions at 300 cfs: Riffle (3), Rock Face/Protrusion (3), Turbulence (2), Mist/ Spray (2), Color (2), Channels (2) Negative descriptions at 300 cfs: No Upstream/Above Falls Change (2), Minimal Rock Exposure (2)

KOP 2 – Prospect Falls (Undeveloped Location)

At KOP 2, the average overall aesthetic rating for each flow ranged from 3.0 at 100 cfs, to 4.21 at 200 cfs, to 4.7 at 300 cfs. These scores range from what was indicated as "no opinion" (also described as "neutral" when the survey was administered on site) to "very appealing" on the survey form. Overall aesthetic ratings for individual evaluators ranged from a low of 2.0 to a high of 4.0 at 100 cfs, from a low of 3.0 to a high of 4.0 at 200 cfs, and from a low of 4.0 to a high of 5.0 at 300 cfs.

At 100 cfs the most appealing attribute at KOP 2 was the sound generated by the falls (average score of 4.1) and the least appealing was the wetted channel width (average score of 2.8). Positive attributes noted by the rating panel at 100 cfs included good sound volume, decent contrast in turbulence, and variable levels of veiling over the falls. Negative attributes at this flow level included excessive exposed rock, limited interaction between pools and moving water, limited water depth over the falls, and areas of dry streambed along the edges of the channel.

With an increase to 200 cfs, the most appealing attribute remained the sound level (average score of 4.3) and the least appealing remained the wetted channel width (average score of 3.6). Positive attributes noted by the rating panel at 200 cfs included a good mix of exposed rock and veiling at the falls, more noticeable water volume and speed, more whitewater/riffles in the upstream and downstream channels, and a nice ratio of whitewater to pools. Negative attributes noted at this flow included exposed rock, submerged terrestrial vegetation in the downstream channel, and less interaction between whitewater and pools as the channel filled up.

With the final evaluated flow of 300 cfs, sound level remained the most appealing individual attribute (average score of 4.9), while the amount of pools/still water in the channel was the least appealing attribute (average score of 3.9). Positive attributes noted by the rating panel at this flow level included optimal veiling and generation of mist at the falls, more wetted width within the downstream channel, and increased turbulence and variation of river features. Negative attributes included a lack of well-defined pools and some remaining exposed rock at the falls.



The individual attributes that experienced the greatest aesthetic improvement with increased flows at KOP 2 included the amount of turbulence, wetted channel width, and waterfall size/volume. Additional enhancements recommended by the panel at KOP 2 included some limited clearing of trees or branches at the overlook to provide wider open views of the river and formalizing public access to this site.

Below is the mean score for each flow release and the difference between levels.

100 cfs	Mean Score		
	3.00	-	
		Difference	
		+ 1.2	
200 cfs	Mean Score		
	4.2	-	
		Difference	
		+ 0.5	
300 cfs	Mean Score	_	
	4.7	-	

Commonly used attribute descriptions used by the rating panel members during the flow assessment.

100 cfs	Positive descriptions at 100 cfs: Sound (4), Negative descriptions at 100 cfs: Minimal Flow/Minimal Interaction (2)
200 cfs	Positive descriptions at 200 cfs: Rock/Boulder (3), Sound (3) Negative descriptions at 200 cfs: No common descriptions
300 cfs	Positive descriptions at 300 cfs: Mist (4), Veil (3), Cascading (3), Angle of View (2) Negative descriptions at 300 cfs: Lack of Pools (2)
Focus Group Discussion - Prospect Bypass Reach

After the final flow release was observed at Prospect, the rating panel members gathered for a group discussion on the results of their evaluation. The discussion started by mentioning the importance of KOP 1b (as well as the KOP 1a overlook at the park) to local residents, as well as visitors. Comments regarding aesthetic enhancements within the Prospect bypass reach included recommending that Erie consider tailoring the duration and volume of releases to specific time of day and seasonal conditions, and that a vegetation management be maintained for the Prospect KOPs to enhance views of the falls.

In general, higher flows were indicated as being preferable at KOP 1b, with benefits such as visible water depth, plumes of spray, visible mist, and louder sound mentioned specifically. However, it was also acknowledged that at higher flows some of the variability of the water flowing over the falls, the geologic features of the falls, and the variability of pools and channels above and below the falls were lost. Of the flows evaluated, the most significant improvement in aesthetic quality was noted when flows increased from leakage to 100 cfs and from 100 cfs to 200 cfs.

For KOP 2, although the KOPs themselves have quite different characteristics, the comments regarding visible characteristics at the different flow rates were fairly similar. However, because of its forested setting in closer proximity to the creek and the falls, KOP 2 offered a more intimate and tranquil viewing experience. The other unique feature noted by the group at this location was the view of the river channel below the falls. There was also a noticeable increase in the amount of sound one was able to perceive with increased flows. As at KOP 1b, the greatest increase in aesthetic benefits was perceived between leakage and 100 cfs and when flows increased to 200 cfs, although the 300 cfs flow generally resulted in more positive attributes at KOP 2 than at KOP 1b. Much of the discussion regarding KOP 2 focused on public access, with a general consensus that public access to this KOP, and improved facilities to accommodate such access, would be desirable.



Documentation of Upper High Falls during controlled releases

3.3.2 Tenton Falls Bypass Reach

On the afternoon of September 24, 2019, flows were evaluated in the Trenton Falls bypass reach. The three flow volumes evaluated were approximately 100 cfs, 200 cfs and 400 cfs⁴. Under each flow regime, aesthetic characteristics were evaluated at KOPs 4, 5 and 7 by the same rating panel using the same form as described in Section 2.2. Results of the completed survey at each KOP within the Trenton Falls bypass reach are summarized below, and a summary table of the responses is provided in Appendix C.

⁴

Targeted flows. See Section 2.2.2 for summary of estimated flow ranges during the study period.

KOP 4 – Upper High Falls (Lower Viewing Area)

At KOP 4, the average overall aesthetic rating for each flow increased from 3.3 at 100 cfs, to 4.1 at 200 cfs, to 4.4 at flows of 400 cfs. These scores range from what is considered "neutral" (3.0) to "appealing" (4.0) on the survey form. Overall aesthetic ratings from individual evaluators ranged from a low of 2.0 to a high of 4.0 at 100 cfs, from a low of 3.0 to a high of 5.0 at 200 cfs, and from a low of 4.0 to a high of 5.0 at 400 cfs.

At 100 cfs, the most appealing individual attribute at KOP 4 was the sound generated by the waterfall (average score of 4.0) and the least appealing was the wetted channel width (average score 2.6). Positive attributes noted by the evaluators at 100 cfs included good sound volume, nice veiling and spillover at the falls. Negative attributes at this flow level included too much exposed rock, with some evaluators noting the overall dryness and lack of water at the falls.

At 200 cfs, the most appealing attribute was again the sound of the falling water (average score of 4.4), and the least appealing attribute was the amount of pools/still water in the channel (average score of 3.4). Positive attributes noted by the rating panel included misting that could be seen and felt, better water veiling of the falls, and cascading flows. Negative attributes at this flow level again included the amount of exposed rock, with some evaluators noting a limited amount in change from the previous flow.

With the final evaluated flow of 400 cfs KOP 4, sound level continued to be the most appealing aesthetic attribute (average score of 4.9), while the least appealing was the contrast between pools and moving water in the channel (average score of 3.7). Positive attributes noted by the rating panel included clouds of mist rising from the falls and the series of small stepped falls with deep and wide cascading veils of water dropping into a plunge pool. Negative attributes included reduced variation of water movement, continued exposure of bare rock, and minimal overall change with the increase in water flow from 200 to 400 cfs.



The individual attributes of the river that experienced the greatest aesthetic improvement with increased flows at KOP 4 included the wetted channel width, contrast between pools and moving water, and the amount of exposed rock at the falls. Additional enhancements recommended by the panel at KOP 4 focused on further increasing water flow. The rating panel liked the current quality of the overlook and noted the availability of access for a variety of users. Tree clearing and the addition of a viewing platform were mentioned as possible enhancements. It is noting that at both 200 cfs and 400 cfs half of the reviewers provided no recommendations for further aesthetic enhancements.

Below is the mean score for each flow release and the difference between levels.

100 cfs	Mean Score		
	3.3		
		Difference	
		+ 0.8	
200 cfs	Mean Score		
	4.1		
		Difference	
		+ 0.3	
400 cfs	Mean Score		
	4.4		

Commonly used attribute descriptions used by the rating panel members during the flow assessment.

100 cfs	Positive descriptions at 100 cfs: Crashing Sound (4), Spread of Veiling (3), Negative descriptions at 100 cfs: Bare Rock/Dry Bedrock (7)
200 cfs	Positive descriptions at 200 cfs:
	Mist (5), Cascading/Violent Cascading (4), Veiling (3)
	Negative descriptions at 200 cfs:
	Exposed Rock/Bedrock (4)
400 cfs	Positive descriptions at 400 cfs:
	Mist (7), Veil/Dramatic Veil/Deep Veil (2), Roar of Falls (2),
	Sound (2), Updraft/Wind (2), Channel (2)
	Negative descriptions at 400 cfs:
	Bare Rock/Bedrock (3) Lack of Differentiation/Distinction (2)

KOP 5 – Lower High Falls

At KOP 5 the average overall aesthetic rating for each flow increased from 3.4 at 100 cfs, to 4.1 at 200 cfs, to 4.1 at flows of 400 cfs. These scores range from what is considered "neutral" to "appealing" on the survey form. Overall ratings from individual evaluators ranged from a low of 2.5 to a high of 4.0 at 100 cfs, from a low of 3.5 to a high of 5.0 at 200 cfs, and at 400 cfs.

At 100 cfs, the most appealing individual attribute at KOP 5 was the sound generated by the waterfall (average score of 4.0) and the least appealing was the amount of pools or still water in the channel (average score of 3.1). Positive attributes noted by the evaluators at 100 cfs focused on the amount of exposed rock at the falls, as well as the amount of water going over the falls, including thick veiling and cascading. Good sound from the falls was also mentioned. Negative attributes focused less on the flow level than the restricted viewing window. Reducing the amount of exposed bedrock, a desire for higher flow, and the need for tree clearing were mentioned as possible improvements.

At 200 cfs, the most appealing attribute continued to be the sound level generated by the falling water (average score of 4.5), and the least appealing attribute was the contrast between pools and moving water (average score of 3.3). Positive attributes noted by the rating panel included the quality and volume of sound, deeper pools resulting in darker water, and the presence of active or turbulent water. Negative attributes at this flow level continued to focus on the narrow, restricted view with exposed bedrock. It is also noteworthy that three of the evaluators provided no negative comments with two replying "none" or "N/A."

With the final evaluated flow of 400 cfs, sound level maintained its position as the most appealing aesthetic attribute (average score of 4.7). Similarly, the least appealing attribute remained the contrast between pools and moving water in the channel (average score 3.5). Positive attributes noted by the rating panel related to the sound and movement of the water with descriptive adjectives such as "thundering", "gushing", and "dynamic" used. Negative attributes again focused on the narrowness of the viewing window and a minimal perceived change from the previous flow. Loss of contrast due to deeper water was also mentioned.



The individual attributes of the river that experienced the greatest aesthetic improvement with increased flows at KOP 5 included the amount of turbulence, wetted channel width, and waterfall size and volume. Additional enhancements recommended by the panel at KOP 5 centered on remedying the narrowness of the viewing window. Tree clearing and trimming of branches were recommended as a means of enhancing the view. However, some of the reviewers were careful to specify judicious clearing or pruning and not clear-cutting, noting value in the secluded, heavily forested setting.

Below is the mean score for each flow release and the difference between levels.

100 cfs	Mean Score		
	3.4	—	
		Difference	
		+ 0.7	
200 cfs	Mean Score		
	4.1	_	
		Difference	
		+ 0.0	
400 cfs	Mean Score		
	4.1	—	

Commonly used attribute descriptions used by the rating panel members during the flow assessment.

_	100 cfs	Positive descriptions at 100 cfs:
		Veiling (3), Spans/Covers (2), Cascading (2), Sound (2), Rock (2)
		Negative descriptions at 100 cfs:
		Narrow View/Obscured (2)
	200 cfs	Positive descriptions at 200 cfs:
		Rock/Boulder (3), Sound (3)
		Negative descriptions at 200 cfs:
		Narrow View/Obscured (2)
	400 cfs	Positive descriptions at 400 cfs:
		Thunderous Sound (2), Mist (2)
		Negative descriptions at 400 cfs:
		No Common Descriptions

KOP 7 – Sherman Falls Overlook

At KOP 7, the average overall aesthetic rating for each flow ranged from 3.1 at 100 cfs, to 3.9 at 200 cfs, to 4.1 at 400 cfs. These scores range from what is considered to be "neutral" to "very appealing". Overall aesthetic ratings for individual evaluators ranged from a low of 2.0 to a high of 4.0 at 100 cfs, from a low of 3.0 to a high of 4.5 at 200 cfs, and from a low of 3.5 to a high of 5.0 at 400 cfs.

At 100 cfs the most appealing attribute at KOP 7 was the sound generated by the falls (average score of 3.6) and the least appealing was the wetted channel width (average score of 2.7). Positive attributes noted by the rating panel at 100 cfs included good sound volume, filling of the low portion of the channel, spillover outside of the defined channel onto the various rock ledges, and cascades of white water down the face of the falls. Negative attributes at this flow level included a lack of wetted channel, difficulty viewing the falls, and limited turbulence or variety in the water flow.

At 200 cfs, the most appealing attribute at KOP 7 remained the sound level (average score of 4.1), while the least appealing attribute was the amount of exposed rock at the falls (average score of 3.5). Positive attributes noted by the rating panel included the increase in wetted channel width, "micro falls" or stepped features, turbulence and variety in water movement, and good sound. Negative attributes noted at the 200 cfs flow included the difficulty viewing the full extent of the falls, exposed rock, and a loss of definition in angular rock features at the falls.

With the final evaluated flow of 400 cfs, sound remained the most appealing individual attribute (average score of 4.6), while the amount of exposed rock/ streambed and the wetted channel width were the least appealing attributes (both with an average score of 3.8). Positive attributes noted by the rating panel at this flow level included additional increase in wetted width of the riverbed and the falls, veiling of water over the falls, and increase cascading and turbulence resulting from the increased water velocity. Negative attributes included a loss of contrast between the pools and moving water, (attributed to the increased water depth), and too much

Sherman Falls Overlook To be Provided in Report SUP No Release/Leakage 100 CFS 200 CFS 400 CFS

exposed rock in the cannel and across the falls.

The individual attributes that experienced the greatest aesthetic improvement with increased flows at KOP 7 included wetted channel width, amount of exposed rock in the streambed, and the amount of turbulence. Additional enhancements recommended by the panel at KOP 7 were primarily aimed at improving the available view, and included providing an overlook or viewing platform to provide a full view down to the base of the falls. Currently the position of the overlook and the abundance of adjacent vegetation limits the experience of the falls by allowing only portions to be visible. The benefits of tree maintenance were discussed generally, and specifically to open views to the base of the falls.

Below is the mean score for each flow release and the difference between levels.



Commonly used attribute descriptions used by the rating panel members during the flow assessment.

100 cfs	Positive descriptions at 100 cfs:
	Crashing Sound (6),
	Negative descriptions at 100 cfs:
	Lack of Wetted/Covered Channel (3)
200 cfs	Positive descriptions at 200 cfs:
	Wetted Width (4), Turbulent (3), Sheeting (2), Sound/
	Volume
	Negative descriptions at 200 cfs:
	Exposed Rock/Bedrock (2), Loss of Detail/Features (2)
400 cfs	Positive descriptions at 400 cfs:
	Veil (3), Wetted Channel (3), Cascading (2), Upper Step (2),
	Sheeting/Sheet Flow (2)
	Negative descriptions at 400 cfs:
	No Common Descriptions

Focus Group Discussion – Trenton Falls Bypass Reach

Following the multiple flow releases at the Trenton Falls bypass reach, the rating panel members convened once again to discuss the results of their evaluation, and highlight any key observations. The group noted they each expected there to be more of a change in the character of the river and falls as the flow increased.. The aesthetic features that were the focus of the group conversation for KOP 4 was the feel of the mist, the sound of the falls, the open view above the falls, the vertical drop of the water into the plunge pool, and the bounce of white water off the rocks below. KOP 4 has a wide cleared area for viewing which is important to maintain in order to continue to enjoy the full experience of this overlook. There was consensus within the group that KOP 4 had the highest aesthetic value of any KOP regardless of the flow observed. The conversation around KOP 5 was focused heavily on the need for tree clearing at this overlook. The topic of discussion was how much of the vegetation should be removed and maintained. The common consensus was that only limited clearing should take place. The small window/frame through the trees concentrated the view and focused the participant's attention directly on the falls, limiting distractions from adjacent scenery and land uses. It was important to the participants that this sense of undisturbed nature be maintained at this KOP, which is unique when compared to the other overlooks.

Although the KOP 7 overlook was the location evaluated by the rating panel for views of Sherman Falls, KOP 6 (Trenton Trail Cradle Overlook) was also visited and discussed during the group discussion. KOP 6 is a unique viewing location that is located within the concrete ruins of the old penstock cradles. During the development of the Trenton Falls Trails this KOP was created to take advantage of an overlook located on a cliff face with minimal vegetation between the viewer and the falls. It provides a unique perspective on the river and the gorge walls.

In general, higher flows were indicated as being preferable, with benefits such as, water movement and channel development within the rock ledges, amount of veiling at the falls edge, rapids above and below the falls, and plumes of spray. However, it was also acknowledged that at higher flows some of the variability of the water flowing over the falls, the geologic features of the falls, and the variability of pools and channels above and below the falls were lost. This was brought up specifically with KOP 7 where the mix of multiple channels, water depths, and exposed rock located at the edge of the falls merge into one uniform channel and views of the rock ledge that forms the waterfall is lost. The most significant improvement was again noted by going from leakage to and then from 100 cfs to 200 cfs. Other comments



regarding aesthetic enhancements within the Trenton Falls bypass reach included recommending that Erie consider additional weekend releases at different times of the year with varying seasonal conditions, and that a vegetation maintenance plan, including selective clearing to enhance overlook viewing locations, be maintained for both the Prospect and Trenton bypass reaches to enhance views of the falls from all identified KOPs.

3.4 Trenton Falls Scenic Trail Event Visitor Scenic Quality Ratings

As part of the Recreation Use, Needs and Access Study (Kleinschmidt 2020h), Kleinschmidt conducted a total of 443 visitor intercept surveys over the two weekends during the 2019 Trenton Falls Scenic Trail event (May 18 and 19, 2019; September 14 and 15, 2019). Several of the survey questions were related to visitor perceptions of the overall scenic quality and scenic view ratings of the KOP locations. During the Trenton Falls Scenic Trail events, the average flow rate through the Trenton Falls bypass reach was approximately 325 cfs on May 18 and May 19, 2019; approximately 250 cfs on September 14, 2019, and approximately 200 cfs on September 15, 2019.

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). The average rating for the overall scenic views was 4.6, on a scale from 1 to 5, with 1 being poor and 5 excellent. Similar results were found for each survey day and for the individual overlooks. The average ratings for the individual overlooks were: Upper High Falls (rating of 4.7), Lower High Falls (rating of 4.6); Cradle Overlook (rating of 4.6), and Sherman Falls Overlook (rating of 4.4). See Appendix E for figures of visitor rating estimates for each KOP for each event.

Across all days and flow levels, the excellent ratings were the highest ratings and ranged from: KOP 4 - 70 percent to 78 percent; KOP 5 - 60 percent to 73, KOP 6 - 58 percent to 77 percent, and KOP 7 - 48 percent to 71 percent.. The highest percentage of respondents stated that they would prefer flows that were the same as the day they were visiting (40 percent). A similar number of respondents replied that the flow rate does not matter (30 percent) or that they would prefer higher flows (29 percent). See the Recreation Use, Needs and Access Study (Kleinschmidt 2020g) for additional information.

4.0 CONCLUSIONS

Review of background data, field reconnaissance, and the on-site aesthetic flow evaluation allows several conclusions to be drawn:

- All of the evaluated flows provide significant aesthetic benefits when compared to the baseline (leakage) flows that are typically present in the Prospect and Trenton Falls bypass reaches. Even at the lowest flow evaluated, overall average aesthetic rating at all KOPs averaged greater than 3.0, indicating some level of visual appeal. Comparison of the flows of 100 cfs at Prospect and 100 cfs at Trenton at each KOP with baseline conditions, as well as the flows evaluated during this aesthetic controlled flow assessment is presented in Appendix D.
- 2. According to the scores and comments provided by the rating panel, the greatest aesthetic benefits were realized at the highest flows for each bypass reach (300 cfs for Prospect and 400 cfs for Trenton Falls). In addition, several of the evaluators indicated that even slightly higher flows would be preferable. However, aside from the significant benefit of going from the baseline flow to 100 cfs (as described above), the greatest incremental benefit was realized in both bypass reaches by going from 100 cfs to 200 cfs in Prospect and 100 cfs to 200 cfs in Trenton. Average overall aesthetic rating scores increased by an average of 27.2 percent by going from 100 cfs to 200 cfs in the Prospect bypass reach, and by 24.7 percent by going from 100 cfs to 200 cfs in the Trenton Falls bypass reach. By contrast, the same scores increased by 10.1 percent when going from 200 cfs to 400 cfs in the Trenton Falls bypass reach.
- 3. Consistent with the finding above, it is worth noting that at 200 cfs at Prospect and 200 cfs at Trenton, the majority of the rating panel assigned scores in the range of 4.0 (3.6-4.2) for overall aesthetic quality at all of the KOPs evaluated in both the Prospect and Trenton Falls bypass reaches. This indicates that at this flow aesthetic conditions were generally considered appealing at all of the sites evaluated within the study area.
- 4. At Trenton Falls, intercept surveys of visitors during the 2019 Trenton Falls trail days indicated that flows released on these days (within the range of 200 to 325 cfs) were widely viewed as aesthetically appealing by the public. For the overall scenic quality, 94 percent of the respondents collectively (total across all days) rated the scenic quality as excellent (69 percent) or good (25 percent). The average rating for the overall scenic views was 4.6, on a scale from 1 to 5, with 1 being poor and 5 excellent. Similar results were found for each survey day for the individual overlooks with nominal rating differences between the various flows levels.

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KOP 1a – Prospect Overlook Park



KOP 1a – Prospect Overlook Park

Leaf-off

KOP 1a – Prospect Overlook Park

Leaf-on

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



KOP 1b – Prospect Falls Overlook



KOP 1b – Prospect Falls Overlook

Leaf-off

KOP 1b – Prospect Falls Overlook

Leaf-on

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



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KOP 2 – Prospect Falls (Undeveloped Location)



KOP 2 – Prospect Falls (Undeveloped Location)

Leaf-off

KOP 2 – Prospect Falls (Undeveloped Location)

Leaf-on

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



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West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



Sheet 4 of 8

KOP 4 – Upper High Falls Overlook



KOP 4 – Upper High Falls Overlook

Leaf-off

KOP 4 – Upper High Falls Overlook

Leaf-on

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



Sheet 5 of 8

KOP 5 – Lower High Falls



KOP 5 – Lower High Falls

Leaf-off

KOP 5 – Lower High Falls

Leaf-on

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



Sheet 6 of 8

KOP 6 – Trenton Trail Cradle Overlook



KOP 6 – Trenton Trail Cradle Overlook

Leaf Off

KOP 6 – Trenton Trail Cradle Overlook

Leaf On

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



KOP 7 – Sherman Falls Overlook



KOP 7 – Sherman Falls Overlook

Leaf-Off

KOP 7 – Sherman Falls Overlook

Leaf-on

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix A | Photolog of Leaf-on and Leaf-off Conditions at Key Observation Points



Sheet 8 of 8

Prospect Development

	AESTHETIC FLOW ASSESSMENT FORM	
WEST	CANADA CREEK AESTHETICS FLOW STUD	D١

	omparisons o	of the flow ra	nges.			2
PRO	SPECT BY	PASS REAC	ЭН			
Date:		Weath	er:			
THIS SECTION	ASKS ABO	UT YOU PI	ERSONALL	Y		
Participant Name:	А	ffiliation:				
Home Zip Code:	А	.ge:	_			
Participant Email:	C	ell Phone:				
Gender of respondent: 🛛 Male	🗆 Fema	le 🗆 Pre	fer not to ans	wer		
THIS SECTION	ON ASKS GI	ENERAL Q	UESTIONS			
 Prior to this project have you ever pa 	rticipated in a	an aesthetic f	low assessme	ent:		
	11 1/ 75			d W (C	1 6 10	
 Have you ever visited the Prospect Fa Yes No 	ills and/or 1 h	enton Falls a	rea located on	the west Ca	nada Creek?	
 Have you ever attended Trenton Trail 	Days to viev	v the falls loo	ated on the W	/est Canada (Creek?	3
TYes No	If Yes, h	ow often?				
4. On a scale from 1 to 5, with 1 being poo	r and 5 excelle	ent, how wou	ld you rate the	e overall aest	hetics of the	
Prospect bypass reach under existing	g conditions.	4	5	_		4
Poor Fair Sati	sfactory	4 Good	Excellent			
If less than satisfactory, please explai	in why					5
 On a scale from 1 to 5, with 1 being poo Trenton bypass reach under existing 	r and 5 excelle conditions.	nt, how wou	ld you rate the	e overall aest	hetics of the	-
1 2	3	4	5			
Poor Fair Sati	sfactory	Good	Excellent			6
AESTHETIC CHARACTERISTI AESTHET West Canada	CS OF EAC 1 IC FLOW A CREEK AE	H KOP LOO SSESSMEN STHETICS	CATION AT r Form Flow Stui	SPECIFIC F	FLOWS	
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AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

cation <u>No. 1 Prospect Overlook</u> Flow approximately 100 cfs

e identify the any unique aesthetic features of this KOP viewing location:

evaluate the flow at this level for each of the following characteristics. (Circle one number for tem.)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	2	4	5

heral, would you prefer a flow that was higher, lower, or about the same as this (check one): Much lower flow Slightly higher flow

Slightly lower flow Much higher flow

About the same flow Does not matter

pecific positive attributes of this flow level:_

pecific negative attributes of this flow level:

ere any enhancements that could be implemented at this viewpoint to improve the aesthetic ng experience

2

AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

cation No. 1 Prospect Overlook Flow approximately 200 cfs

- identify the any unique aesthetic features of this KOP viewing location:
- evaluate the flow at this level for each of the following characteristics. (Circle one number for item.)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

neral, would you prefer a flow that was higher, lower, or about the same as this (check one):

- Much lower flow

 Slightly higher flow
- Slightly lower flow Much higher flow
- About the same flow Does not matter

pecific positive attributes of this flow level:

pecific negative attributes of this flow level: _____

ere any enhancements that could be implemented at this viewpoint to improve the aesthetic ng experience?

4

West Canada Creek Hydroelectric Project (FERC No. 2701-NY)

3

Town of Trenton, Oneida County, New York



Prospect Development

AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

KOP Location No. 2 Prospect Falls View Flow approximately 200 cfs

- 1. Please identify the any unique aesthetic features of this KOP viewing location:_
- 2. Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

- 3. In general, would you prefer a flow that was higher, lower, or about the same as this (check one): Much lower flow Slightly higher flow □ Slightly lower flow Much higher flow
 - About the same flow Does not matter

4. List specific positive attributes of this flow level:

- 5. List specific negative attributes of this flow level:
- 6. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience?
 - 5

AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

Flow approximately 300 cfs KOP Location No. 2 Prospect Falls View

1. Please identify the any unique aesthetic features of this KOP viewing location:

2. Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item.) Attribute Very Unappealing No Opinion Appealing Very

	Unappealing	chappening	. to opinion	representation	Annoaling
Sound level	1	2	3	4	Appearing
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

3. In general, would you prefer a flow that was higher, lower, or about the same as this (check one); Slightly higher flow Much lower flow

□ Slightly lower flow Much higher flow

About the same flow Does not matter 4. List specific positive attributes of this flow level:

5. List specific negative attributes of this flow level:

Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience?

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AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

- KOP Location No. 1 Prospect Overlook Flow approximately 300 cfs
- 1. Please identify the any unique aesthetic features of this KOP viewing location:_
- 2. Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item.)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

3. In general, would you prefer a flow that was higher, lower, or about the same as this (check one): Much lower flow Slightly higher flow Much higher flow

- Slightly lower flow
- □ About the same flow Does not matter

4. List specific positive attributes of this flow level:

5. List specific negative attributes of this flow level:

6. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience

AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

6

COMPARATIVE FLOW EVALUATION PROSPECT BYPASS REACH

1. Which flows did you participate in? (Check all that apply.)

□ 100 cfs □ 200 cfs □ 300 cfs

2. Please provide overall evaluations for the following flows for the Prospect bypass reach based on your experience.

Flow	Unacceptable	Poor	Acceptable	Good	Excellent	No Response
100 cfs	1	2	3	4	5	NA
200 cfs	1	2	3	4	5	NA
300 cfs	1	2	3	4	5	NA

3. Based on your viewing of the controlled flow ranges, please specify the flows that you think would provide the following types of experiences for the <u>Prospect</u> bypass reach. (You may specify flows which you have not observed, but which you think would provide the type of experience specified.)

Experience	Flow in cfs
What is the lowest flow that you consider acceptable for a quality	
aesthetic viewing experience?	
What flow provides the highest quality (i.e., optimal flow) aesthetic	

4. Based on your evaluation of the controlled flow ranges, please indicate the optimal flow for based on your containation on a contract now narges, prass matter at <u>original</u> now no aesthetic viewing opportunities for the following KOP locations. Please consider all of the flow-dependent characteristics that contribute to the aesthetic experience (e.g., sound, rock exposure, flow in channel, volume of flow over falls, etc.). (*Please check one flow for each KOP Location*).

KOP Location	100 cfs	200 cfs	300 cfs	Other (please specify)	No Response
Prospect Overlook (KOP 1)					NA
Prospect Falls View (KOP 2)					
Trenton Sherman Falls (KOP 7)					

5. Compared to other rivers with comparable scenic viewing locations, how would you rate the aesthetic viewing opportunity at the Prospect bypass reach (assume optimal flows). (Circle one number for each).

Compared to river reaches of similar difficulty	Far Below Average	Below Average	Average	Above Average	Much Better than Average	No Response
Other rivers within a one-hour drive	1	2	3	4	5	NA
Other rivers in New York State	1	2	3	4	5	NA
Other rivers in the Northeast	1	2	3	4	5	NA

West Canada Creek Hydroelectric Project (FERC No. 2701-NY)

Town of Trenton, Oneida County, New York



Prospect Development

AESTHETIC FLOW ASSESSMENT FORM West Canada Creek Aesthetics Flow Study

How many times per year should the KOP locations be open to the public for viewing opportunities?
 ______per year

7.	During (Please	what month(s) sh check all below t	ould the	KOP location	s be	open to the public	for	viewing opportunities?
	- .				-	x 1	-	0.11

January	ш	April	July	October
February		May	August	November
March		June	September	December

 Please provide any additional comments or relevant information regarding the scenic views and flows that you observed today.

THANK YOU FOR YOUR PARTICIPATION!

AESTHETIC FLOW ASSESSMENT FORM West Canada Creek Aesthetics Flow Study



FIGURE 1. LOCATION OF KEY OBSERVATION POINTS (KOP)

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York



Trenton Falls Development

Observation Point (KOP) locations (i.e., bypass reaches (See Figure 1). This asso locations. We will then convene to comp discussion for overall impressions and c	etic Flow Str duct a review , view of wat essment will l plete a compa omparisons of	udy for the W w of identified erfall areas) a be conducted arative flow a of the flow ra	Vest Canada C d flow ranges adjacent to the for three flow assessment for nges.	Freek Project for key ident e Prospect and vs at the select rm and a focu	relicensing. ified Key d Trenton cted KOP is group	
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Participant Email:	C	ell Phone:				
Gender of respondent: 🛛 🗆 Male	🗆 Fema	le 🗆 Pre	fer not to ans	wer		
THIS SECTION	ON ASKS GI	ENERAL Q	UESTIONS			
 Prior to this project have you ever pa Yes No 	rticipated in a	an aesthetic f	low assessme	nt:	unda Cranak?	
 Have you ever visited the Prospect Parallel 1 and 1 a	Days to view	v the falls loc	ated on the W	/est Canada O	reek?	
Yes No 4. On a scale from 1 to 5, with 1 being poo	If Yes, h	ow often?	d you rate the	e overall aesti	netics of the	
1 2 Poor Fair Satisfies	3 sfactory	4 Good	5 Excellent			
If less than satisfactory, please explai 5. On a scale from 1 to 5, with 1 being poo Trenton bypass reach under existing	n why r and 5 excelle conditions.	nt, how woul	ld you rate the	e overall aestl	netics of the	
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AESTHETIC FLOW ASSESSMENT FORM West Canada Creek Aesthetics Flow Study

KOP Location No. 4 Trenton Upper High Falls Flow approximately 100 cfs

- . Please identify the any unique aesthetic features of this KOP viewing location:
- . Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item.)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

In general, would you prefer a flow that was higher, lower, or about the same as this (check one):
 Much lower flow
 Slightly higher flow

- □ Slightly lower flow □ Much higher flow

. List specific positive attributes of this flow level:

5. List specific negative attributes of this flow level: _

 Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience?

2

AESTHETIC FLOW ASSESSMENT FORM West Canada Creek Aesthetics Flow Study

DP Location <u>No. 7 Sherman Falls Overlook</u> Flow approximately 100 cfs

- 1. Please identify the any unique aesthetic features of this KOP viewing location:
- 2. Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item.)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

3. In general, would you prefer a flow that was higher, lower, or about the same as this (check one):

- Much lower flow
- □ Slightly lower flow □ Much higher flow

. List specific positive attributes of this flow level:

5. List specific negative attributes of this flow level: _____

6. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience?

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West Canada Creek Hydroelectric Project (FERC No. 2701-NY)

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Town of Trenton, Oneida County, New York



Trenton Falls Development

AESTHETIC FLOW ASSESSMENT FORM West Canada Creek Aesthetics Flow Study

KOP Location No. 4 Trenton Upper High Falls Flow approximately 200 cfs

7. Please identify the any unique aesthetic features of this KOP viewing location:

8. Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item.)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

 9. In general, would you prefer a flow that was higher, lower, or about the same as this (check one):

 Much lower flow
 Slightly lower flow
 Much higher flow
 About the same flow
 Does not matter

10. List specific positive attributes of this flow level:

11. List specific negative attributes of this flow level:

12. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience?

5

AESTHETIC FLOW ASSESSMENT FORM West Canada Creek Aesthetics Flow Study

KOP Location No. 7 Sherman Falls Overlook Flow approximately 200 cfs

7. Please identify the any unique aesthetic features of this KOP viewing location:

 Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item.)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

In general, would you prefer a flow that was higher, lower, or about the same as this (*check one*):
 Much lower flow
 Slightly higher flow

12. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic

7

- Slightly lower flow
 Much higher flow
- □ About the same flow □ Does not matter

10. List specific positive attributes of this flow level:

11. List specific negative attributes of this flow level: _____

viewing experience?

AESTHETIC FLOW ASSESSMENT FORM West Canada Creek Aesthetics Flow Stu	D١

 KOP Location No. 5 Trenton Lower High Falls
 Flow approximately 200 cfs

 7. Please identify the any unique aesthetic features of this KOP viewing location:
 100 cfs

8. Please evaluate the flow at this level for each of the following characteristics. (*Circle one number for*

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealin
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5
List specific negative attributes of this	s flow level:				
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15. In general, would you prefer a flow that was higher, lower, or about the same as this (check one):

- $\hfill\square$ Much lower flow $\hfill\square$ Slightly higher flow
- Slightly lower flow
 Much higher flow

 About the same flow
 Does not matter

16. List specific positive attributes of this flow level:

17. List specific negative attributes of this flow level: _____

18. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience?

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West Canada Creek Hydroelectric Project (FERC No. 2701-NY)

Town of Trenton, Oneida County, New York



Trenton Falls Development

AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

KOP Location No. 5 Trenton Lower High Falls Flow approximately 400 cfs

13. Please identify the any unique aesthetic features of this KOP viewing location:

14. Please evaluate the flow at this level for each of the following characteristics. (Circle one number for each item)

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

15. In general, would you prefer a flow that was higher, lower, or about the same as this (check one): Much lower flow Slightly higher flow Much higher flow □ Slightly lower flow

□ About the same flow Does not matter

16. List specific positive attributes of this flow level:

17. List specific negative attributes of this flow level: _

18. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic erience? viewing expe

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AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

COMPARATIVE FLOW EVALUATION TRENTON BYPASS REACH

1. Which flows did you participate in? (Check all that apply.)

□ 100 cfs □ 200 cfs □ 400 cfs

2.

Please provide overall evaluations for the following flows for the **Trenton** bypass reach based on your experience.

Flow	Unacceptable	Poor	Acceptable	Good	Excellent	No Response
100 cfs	1	2	3	4	5	NA
200 cfs	1	2	3	4	5	NA
400 cfs	1	2	3	4	5	NA

3. Based on your viewing of the controlled flow ranges, please specify the flows that you think would provide the following types of experiences for the **Trenton** bypass reach. (*You may specify* flows which you have not observed, but which you think would provide the type of experience specified.)

Experience	Flow in cfs
What is the lowest flow that you consider acceptable for a quality	
aesthetic viewing experience?	
What flow provides the highest quality (i.e., optimal flow) aesthetic	
viewing experience?	

Based on your evaluation of the controlled flow ranges, please indicate the optimal flow for aesthetic viewing opportunities for the following KOP locations. Please consider all of the flow-dependent characteristics that contribute to the aesthetic experience (e.g., sound, rock exposure, flow in channel, volume of flow over falls, etc.). (*Please check one flow for each KOP Location*)

KOP Location	100 cfs	200 cfs	400 cfs	Other (please specify)	No Response
Trenton Upper High Falls (KOP 4)					NA
Trenton Lower High Falls (KOP 5)					
Trenton Sherman Falls (KOP 7)					

5. Compared to other rivers with comparable scenic viewing locations, how would you rate the aesthetic viewing opportunity at the Trenton bypass reach (assume optimal flows). (Circle one number for each)

Compared to river reaches of similar difficulty	Far Below Average	Below Average	Average	Above Average	Much Better than Average	No Response
Other rivers within a one-hour drive	1	2	3	4	5	NA
Other rivers in New York State	1	2	3	4	5	NA
Other rivers in the Northeast	1	2	3	4	5	NA

West Canada Creek Hydroelectric Project (FERC No. 2701-NY)

Town of Trenton, Oneida County, New York

Appendix B | Aesthetic Flow Survey Form and River Characteristic Illustrations

AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

KOP Location No. 7 Sherman Falls Overlook Flow approximately 400 cfs

13. Please identify the any unique aesthetic features of this KOP viewing location:_

14. Please evaluate the flow at this level for each of the following characteristics. (Circle one number for

Attribute	Very Unappealing	Unappealing	No Opinion	Appealing	Very Appealing
Sound level	1	2	3	4	5
Amount of pools/still water in channel	1	2	3	4	5
Amount of turbulence (visibly moving water in channel)	1	2	3	4	5
Amount of exposed rocks/stream-bed	1	2	3	4	5
Contrast between pools and moving water	1	2	3	4	5
Amount of exposed rock at falls	1	2	3	4	5
Wetted channel width (area of the river channel filled with water)	1	2	3	4	5
Water fall size/volume (amount of water going over the falls)	1	2	3	4	5
Overall Aesthetic Rating	1	2	3	4	5

15. In general, would you prefer a flow that was higher, lower, or about the same as this (check one): Much lower flow

 Slightly higher flow □ Slightly lower flow Much higher flow

About the same flow

Does not matter

16. List specific positive attributes of this flow level:

17. List specific negative attributes of this flow level:

18. Are there any enhancements that could be implemented at this viewpoint to improve the aesthetic viewing experience?

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AESTHETIC FLOW ASSESSMENT FORM WEST CANADA CREEK AESTHETICS FLOW STUDY

6. How many times per year should the KOP locations be open to the public for viewing opportunities? ___ per year

7. During what month(s) should the KOP locations be open to the public for viewing opportunities? (Please check all below that apply)

January	April	July	October
February	May	August	November
March	June	September	December

8. Please provide any additional comments or relevant information regarding the scenic views and flows that you observed today._



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Sheet 6 of 6

Focus Group Discussion Questions

FOCUS GROUP DISCUSSION TOPICS

WEST CANADA CREEK AESTHETICS FLOW STUDY

Topics to be discussed with the Focus Group following completion of the individual flow and comparative flow assessment forms:

- 1. Suitability of the KOP locations
- 2. Discuss any distinct aesthetic characteristics of each bypass reach
- 3. What are the lowest, highest and optimal flow conditions for each bypass reach
- 4. Discuss the positive attributes of the lower flows (i.e., leakage flows)
- 5. Discuss the negative attributes of the lower flows (i.e., leakage flows)
- 6. Discuss the positive attributes of the higher flows
- 7. Discuss the negative attributes of the higher flows
- 8. Discuss the timing and availability of the KOP locations for scenic viewing opportunities
- 9. Discuss any enhancements that could be implemented at the KOP locations to improve the overall aesthetic viewing experience
- 10. Overall evaluation on the range of water flows available



West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York

River Attribute Terms, Definitions and Sketches

Attribute: Amount of pools/still water in channel

Substrate visible from bank to bank interspersed with still pools	Pools and riffles with obvious current and some exposed rocks	More or less continuous moving water throughout the channel
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Consol and a set		

Attribute: Amount of turbulence (visibly moving water in channel)

Still pools with minimal moving water	Moving water with obvious current	Turbulent moving water across entire channel

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix B | Aesthetic Flow Survey Form and River Characteristic Illustrations



River Attribute Terms, Definitions and Sketches

Attribute: Amount of exposed rocks/streambed



Attribute: Contrast between pools and moving water

Little moving water from pool to pool	Sequence of well-defined pools and riffles	Fast moving water with whitewater over rocks

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix B | Aesthetic Flow Survey Form and River Characteristic Illustrations



River Attribute Terms, Definitions and Sketches

Attribute: Amount of exposed rock at falls



Attribute: Wetted channel width (area of the river channel with water)



West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix B | Aesthetic Flow Survey Form and River Characteristic Illustrations Sheet 10 of 10



Prospect Bypass Reach KOP 1- Prospect Overlook 100 cfs

Attribute Rating												Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
											Slightly higher	good sound volume, reasonably good veiling	less distinguished separation of moving/still	
1	Broad Viewing Area when maintained	4	3	3	3	3	3	4	4	4	flow	over falls feature	waters (turbulence levels)	Unknown
													Can see dry channel, no real sense of	
											Slightly higher		turbulence, water 'spread thin' if there are	Viewing area already well maintained so nothing barring
2	Wide, sloping falls, views upstream of falls	4	3	3	3	3	4	3	3	3	flow	Decent veiling, some good sound	any pools they appear indistinguidable	an increase in flows
											Slightly higher		lot of exposed rock thin sheet flow	maybe some more vegetation clearing looking left to see
3	falls, pools riffle	4	3	3	3	3	3	3	3	4	flow	flowing water, cascading waterfall	upstream	entire falls (left from viewing area)
											Much higher			trees need to be trimmed regularly to enhance view.
4	Expansive view of falls	4	2.5	2.5	2.5	3	2.5	2.5	2.5	2.5	flow	sounds pleasing moving water over falls	exposed rock	More water. Public access needed
											Slightly higher			
5	\\reviewer left this area blank\\	4	١	2	4	2	4	4	4	4	flow	Good mix of exposed rock and veiling at falls	no turbulence above falls.	\\reviewer left this area blank\\
												Multiple channels flowing over falls/ some		
												channels with more veiling than others		
												enables a unique feature/ still pools above		
											Slightly higher	falls. Two distinct channels with small areas		
6	Publically accessible wide falls	4	4	4	3	2	4	4	4	4	flow	of over flow.	Minimal whitewater sound could be louder	more tree clearing at shoreline and bench
	Good views over small trees, basin, grass,										Slightly higher			
7	etc	4	4	3	4	3	4	3	3.5	4	flow	Adequate water coverage. Sound level good	not much for upper river flow	Take down a few more trees to open view on right & Left
	View to the northwest prospect falls steep													few trees on left side blocking river and falls. Descriptive
8	slope	4	١	3	2	3	2	3	2	3	Higher flow	Decent view- distant of falls. Nice sound	hard to see channel	signage.
100 cfs	Total Score	32	19.5	23.5	24.5	22	26.5	26.5	26	28.5				
	Average*	4.00	3.25	2.94	3.06	2.75	3.31	3.31	3.25	3.56				



Prospect Bypass Reach KOP 1- Prospect Overlook 200 cfs

					At	tribute Rati	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												very good veiling of falls feature; good ration		
	see previous, but overall good viewing								_		About the same	of white water to exposed rock over falls,		
1	angle	4	4	4	4	4	4.5	4.5	5	4	flow	sound great	N/A	ensure maintencance of viewpoint
												Very nice veiling flows, can see the riffle		
	vvide, gently sloped falls, variance in flows											running into pool above the fails, sounds		
	and riverine reaches views upstream of										About the same	good and looks to be moving over the rock	Naturally not much rock to expose above	
2	falls	4	4	4	3	4	4	4	4	4	flow	sheet	falls	\\reviewer left this area blank\\
										_	About the same	flowing water, cascading waterfall riffles		vegetation clearing looking left to see entire falls (left
3	falls, pools riffles	4	4	4	4	4	4	4	4	5	flow	upstream much more appealing	some exposed rocks, but not bad	from view area)
											Slightly higher	expansive view of falls sound of water. More		
4	Expansive views/ sound of water	4.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	flow	coverage of rock	some exposed rock	keep trees trimmed. More water to cover falls
_											Slightly higher			
5	\\reviewer left this area blank\\	4	3	3	4	3	4	4	4	4	flow	Good veiling riffles forming upstream	\\reviewer left this area blank\\	\\reviewer left this area blank\\
												l'urbulence above falls creates focal point.		
											a	Channels still visible on cliff face veiling is		
					,			,			Slightly higher	more visible and thicker. More flow in larger	No still pools for moving water to interact	
6	\\reviewer left this area blank\\	4	4	4	\	3	4	\	4	4	flow	distinct channels now visible	with	\\reviewer left this area blank\\
_											About the same	Good contrast between water flow and rock		100
7	\\reviewer left this area blank\\	4	4	4	4.5	4	4.5	3	4	4.5	flow	formation visibility	Still low flows in upper river (but not terrible)	same as 100
								<u> </u>	•		Slightly higher	more coverage of falls. Middle section & RR		
8	See previous	4	3.5	4	3	3	4	3.5	3	3.5	flow	especially-nice whitewater increase on RR	Very small increase in complexity	see previous
200 cfs	lotals	32.5	30	30.5	26	28.5	32.5	26.5	31.5	32.5				
	Average*	4.06	3.75	3.81	3.71	3.56	4.06	3.79	3.94	4.06				



Prospect Bypass Reach KOP 1- Prospect Overlook 300 cfs

					At	tribute Rat	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	I Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												Very aethetically pleasing, nice mist from	slightly obscures unique stepped features	
											Slightly lower	foreground falls; significant cover of rock	w/in falls, w/not much benefit over a slightly	
1	see previous	5	5	5	4	5	4.5	5	5	5	flow	faces across full feature	lower flow	see previous
											About the same	Nicely veiling and cascading flows,	a little less variation over the falls/ less	
2	Wide, gently sloping falls, views upstream	5	3	5	4	4	4	5	5	5	flow	turbulence very readily seen	exposed rock	\\reviewer left this area blank\\
												flowing water, cascading waterfall riffles		
											Slightly lower	upstream very appealing, falls on left fuller,		vegetation clearing looking left to see entire falls (left
3	falls, pools, riffles	4	4	4	4	4	4	4	4	4	flow	same for right	\\reviewer left this area blank\\	from view area)
											Slightly higher	Most of falls covered more flow over river	partial rock exposure but much better than	
4	full view of falls	4.5	4	4	4	4	4	4	4	4	flow	right side of falls	100 cfs	more flow; keep trees trimmed
												Good riffle feature above falls. Water		
												cascading nicely over different rock		
											About the same	protrusions on fall face. Turbulence in pool		
5	\\reviewer left this area blank\\	4	4	4	4	4	4	4	5	4	flow	below falls	\\reviewer left this area blank\\	\\reviewer left this area blank\\
												Starting to get "jetts" of water out from falls		
												wall. Color of main channel looks		
												darker/yellow with more flow / water		
												bounce/spray at bottom of falls noticeable at	No noticeable change to above falls	
											About the same	this flow. Ripple effect of the wider center	character as number of channels going	
6	\\reviewer left this area blank\\	4.5	2	4.5	4	4	4	3	4.5	4.5	flow	channels is more appealing at this flow	over falls	\\reviewer left this area blank\\
											About the same	The water flow is more noticeable with		different flows 100-300 at different times might be
7	\\reviewer left this area blank\\	4	4.5	4.5	4	4	4.5	4.5	5	5	flow	louder sounds (thinking 200-300 is optimum)	\\reviewer left this area blank\\	favorable?
											About the same	depth and color to the water. Whitewater		
8	See previous	4	3.5	4.5	3.5	3	4	3.5	5	4	flow	above flowing into channel	still not much depth upstream	see previous
300 cfs	Totals	35	30	35.5	31.5	32	33	33	37.5	35.5				
	Average*	4.38	3.75	4.44	3.94	4.00	4.13	4.13	4.69	4.44				



Prospect Bypass Reach KOP 2- Prospect Falls 100 cfs

Attribute Rating												Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
														broader field of view; presumably no public access here
	very nice angle to view larger features w/										Slightly higher		edges of bed dry, less ditinciton between	so changes may not be useful; great angle of the falls
1	small rapid below out of view from KOP 1	4	4	3	2.5	2.5	2.5	3	2.5	3	flow	good volume; nice rapids visible	turbulence levels	though
													Water spread thin over the top, still appears	
	Wide, gentle sloping falls, sharp bends,										Slightly higher	Decent veiling flow, some decent contrast in	relatively indistinguishable for the present	Widen the view point to see outside bend of the falls.
2	views downstream of falls	4	3	3	3	3	4	3	3	3	flow	turbulence, flowing faster vs. 'still' water	pools	Turn log into natural bench.
											Slightly higher	flowing water, cascading waterfalls forested	lot of exposed rock, but not as noticeable	Vegetation clearing, narrow viewing area clearing of
3	falls, pools, riffles, sharp bend in the stream	4	4	4	3	3	3	3	3	4	flow	viewing area	as KOP 1	branches only
	Much closer view of falls/louder water										Much higher			
4	sounds	4	2.5	2.5	2	2	2	2	2	2	flow	sound of water pleasing	too much exposed rock	trim trees, add water
											Much higher		Would like to see more wetted wideth and	
5	I like the wooded surroundings	4	3	3	3	3	3	2	3	3	flow	Pleasant sound	water over falls	tree clearing
												Different levels of veiling over falls at the		
	Proximity to falls- at eye height which is a										Slightly higher	different channels. Proximity to river below	Minimal interaction between still pools and	More clearing so that the entirety of the falls can be
6	different prospective	5	4	2	4	3.5	4	4	5	١	flow	the view up to falls	moving water	viewed.
7	\	/	/	/	/	/	/	/	/	\	/	\	l	1
													minimal flow over RR side. Narrow channel	
	Nice forest location hemlocks, falls, Boulder										Much higher		downstream. Some large slow pools. Not	
8	Channel	4	3	3.5	3	3.5	2	2.5	2.5	3	flow	Good sound Transverse view boulder rapids	much depth over falls	a little more clearing. Closer view.
100 cfs	Totals	29	23.5	21	20.5	20.5	20.5	19.5	21	18		• • • • • • • • • • • • • • • • • • •		
	Average*	4.14	3.36	3.00	2.93	2.93	2.93	2.79	3.00	3.00				



Prospect Bypass Reach KOP 2- Prospect Falls 200 cfs

Attribute Rating												Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
		_			_				_		About the same	good ratio white water; exposed rock, aural		
1	see previous	5	5	4.5	5	4.5	4.5	4.5	5	4.5	flow	aethetics great	N/A	see previous
	wide, gentley sloping falls, views													
	downstream of falls, sharp bedns variance	_		_		_	_		_	_	About the same	Very nice veiling flows, lovely variation of	Can't see flows directly below, but oh well	
2	of reverine features	5	4	5	4	5	5	4	5	5	flow	features, better viewing location of the two	on that one	opening this site for public use, make it formal
										_	About the same	flowing water, cascading waterfall, forested		
3	falls, pools, riffles, sharp bend in the stream	4	4	4	4	4	4	4	4	5	flow	viewing area	\\reviewer left this area blank\\	vegetation clearing (some branches only)
							•	•	_	_	Slightly higher	sound of water cascading water over most of		
4	Close up view, intense water sounds	4	3	3	3	3	3	3	3	3	flow	falls. Whitewater forming	some exposed rock	more water, trim trees public access
												Good mix of exposed rock and veiling on		
_											Slightly higher	falls. Starting to see riffles in channel		
5	Overall setting, wooded surroundings	4	3	3	4	3	4	4	4	4	flow	upstream and downstream	\\reviewer left this area blank\\	\\reviewer left this area blank\\
												Speed of water flowing over lip of falls is		
												noticeable. I urbulence in channel below		
								•			Slightly higher	falls/ Distinct channel flows over falls / speed	Less interaction between witewater and	
6	\\reviewer left this area blank\\	1	3	3.5	4	3	4	3	4	4	flow	of water noticeable at this flow	pools as channels fill up	\\reviewer left this area blank\\
7	\	1	\	\	\	\	\	١	\	\	١		\	
												louder- more impressive flow/speed/ RR		
												portion more impressive. More depth at crest		
												of falls. More flow in boulder. Pool less	more vegetation in water b/c usually no flow	
_				l .				-			Slightly higher	stagnant. Channel large pool has some	looks a little flooded, would imporve w/	
8	See previous	4	4	4	3	4	3.5	3	4	4	flow	velocity.	more regular flow	see previous
200 cfs	Totals	26	26	27	27	26.5	28	25.5	29	29.5				
	Average*	4.33	3.71	3.86	3.86	3.79	4.00	3.64	4.14	4.21				



Prospect Bypass Reach KOP 2- Prospect Falls 300 cfs

					At	tribute Rati	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												new side cannels filled below falls, adding to		
												stepped appearance, stepped falls features		
											About the same	beautifully veiled from this angle; mist	less differentiation between pools/moving	see previous; excellent viewing area not accessible to
1	see previous	5	5	5	4.5	4.5	4.5	5	5	5	flow	coming from falls great	water	public
												Really 'feels' like a river particular angle of		
												view of veiling and cascading flows and		
	Wide, gently sloping falls, cascades, views										About the same	misting turbulence and variation of riverine		This location is the better viewpoint, widening view and
2	downstream of falls rising mist	5	3	5	5	3	4	5	5	5	flow	features	Lack of pools, but oh well on that	formalizing it/ making it accessible
	-											flowing water, cascading waterfall forested		
											About the same	viewing area, starting to see some mist at		
3	falls, pools, riffles, sharp bend in the stream	5	5	5	4	4	4	4	5	5	flow	the base of the flows	\\reviewer left this area blank\\	vegetation clearing (some branches only)
	Whitewater features present; better flows										Slightly higher	Appearance of water over rock much better,		
4	over rock	4.5	4	4	4	4	4	4	4	4	flow	falls mostly covered	some exposed rock on falls	slightly more water, trim trees public access
												Good riffles and associated sound		
											About the same	downstream of falls. Good veiling and rock		
5	Overall setting, wooded surroundings	5	4	5	4	4	4	4	5	4.5	flow	exposure on face of falls	\\reviewer left this area blank\\	\\reviewer left this area blank\\
												full sheeting over center channel creates a	channel below falls loses edge as water	
6	\\reviewer left this area blank\\	4.5	2	4	3.5	4.5	١	١	١	١	\	ripple effect in the cascade	spills and moves thorugh the streambed	\\reviewer left this area blank\\
7		\	/	\	\	\	1	١	1	\	/			
												Some mist especially upstream. More		
												velocity/roughness- jumping. More wetted		
												width below- extra channel on rL below falls.		
											About the same	Good rapids. Some flow spilling over RR		
											flow/ slightly	meander. Good flow in RR channel up by		
8	See previous	5	4	4	4	4	4.5	4.5	4.5	4.5	higher flow	falls.	meander but still not covered	see previous
300 cfs	Totals	34	27	32	29	28	25	26.5	28.5	28				
	Average*	4.86	3.86	4.57	4.14	4.00	4.17	4.42	4.75	4.67				


Trenton Bypass Reach KOP 4- Trenton Upper High Falls 100 cfs

					At	tribute Rat	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												surging water @ river right visually		raised viewing platform to see down stream into unique
											Slightly higher	appealing, nice veil over rest of high falls,	large swath of bare rock, generally	bowl feature; hard to see past flats on river left when
1	about eye level w/ upper level of high falls	4	N/A	4	5	N/A	3.5	3.5	3.5	4	flow	mill dam & ovon spill/ leakage from dam	featureless	you're short
														more flow, viewing facilities quite nice as is. Each
											Slightly higher	Good sound, visually nice for the	flow seems low, not as much veiling a lot of	location has a benefit the other dosen't, handicap can
2	Waterfall series, high cliff drop	4	3	4	3	3	3	3	4	4	flow	series/steps of falls	rock across fall face	see more downstream trail point has a front of falls view
	High Falls, Mill Dam Falls, Auxillary Dam/										Slightly higher			
3	Overflow	4	4	4	3	3	3	2	3	3	flow	Cascade & Vertical falls, plunge pool	A lot of bare bedrock	more water
											Much higher	Spectacular view of gorge; high falls; some		
4	Spectacular view of falls	4	2	2	2	2	2		2	2	flow	water flowing, mist/rainbow; sound of water	20% of bedrock covered	more water, more frequent access
											Much higher	Funneling of water to river right does create	Only 1/4 of falls face has water. Large	
5	Natural setting and overlook	4	3	3	3	3	3	3	4	3.5	flow	great sound and volume.	amount of dried rock below falls	\\reviewer left this area blank\\
												Different level of water in two main channels		
	Multiple sets of falls cascading into each											flowing over lower falls. Veiling at middle	Water is really concentrated into one overall	
	other. Large circular water falles are											falls very uniform with small channels	channel and the lower falls could have	great accessibility and informaiton panels open to public
6	surrounding rocks.	4	2	3.5	4	1	3	3	4	3.5	Not sure yet	forming at the sides	more side slip to create	as often as can
											Much higher			
7	\\reviewer left this area blank\\	4	3	3	4	4	3.5	3	3	3.5	flow	\\reviewer left this area blank\\	not enough water for very wide falls (rock)	\\reviewer left this area blank\\
												Nice chute on RR- lands on rocks & spreads		
												good veil on lowest. 1/5 of spillover nice		Viewpoint is somewhat far from edge. Needs plenty of
	Can view multiple falls. Historic power/dam											crashing sound. Rapids below to next falls.	large exposure of dry bedrock visable as	maintenance (clearing). Freshly done, but would need
8	feature. Gorge view	4	4	4	2.5	3	2	3	3.5	3	\	Some flow on RL of Mill dam falls	primary view. Most of falls are dry.	upkeep
100 cfs	Totals	32	21	27.5	26.5	19	23	20.5	27	26.5				
	Average*	4.00	3.00	3.44	3.31	2.71	2.88	2.56	3.38	3.31				



Trenton Bypass Reach KOP 4- Trenton Upper High Falls 200 cfs

					At	tribute Rat	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												"jumping" waters abundant; main seciton of		
											About the same	high falls violently cascading; better veiling of	f	
1	see previous	5	N/A	5	5	4.5	5	5	5	5	flow	mill dam & edges of high falls; can feel mist	N/A	see previous
												Veiling and cascading flows, misting, nice		
	multiple steps/ series of falls, long drop										Slightly higher	turbulence upstream falls in middle also very	still a lot of exposed rock, not much change	more flow? If the water could spread across more of the
2	over ledges	4	3	4	3	3	3	4	4	4	flow	nice	from the 100 cfs	larger fall's face it'd be more appealing?
	Cascading Falls w/nice vertical drop, good													
	size plunge pool, High Falls, Mill Dam &										About the same	good amount of mist created, more veiling		
3	Aux	5	4	4	3	4	4	3	4	5	flow	over Mill Dam Falls	Still a good amount of bare rock	\\reviewer left this area blank\\
											Slightly higher	view of cascading water sound of water,		
4	Good unobstructed view of falls	4	3	3	3	3	3	3	3	3	flow	good open view, mist	25% of bedrock covered	more water, more frequent access
	Natural setting at overlook. Vegetation on										Slightly higher	Noticeably more flow, albeit concentrated.		
5	falls.	5	4	4	3.5	4	3	3.5	4	4	flow	Water falling at different angles.	Only 1/3 of face spilling water.	\\reviewer left this area blank\\
												Two complete different types of falls		
												adjacent and distinct. Crashing of falls into		
											About the same	rocks/ledges below creates a unique reverse		
6	\\reviewer left this area blank\\	4	2	4.5	4	2	4.5	3	4.5	4	flow	fountain type visual	veiling starts to combine falls into one.	\\reviewer left this area blank\\
											Slightly higher	Much more volume of water on left side of		
7	\\reviewer left this area blank\\	4	3.5	3.5	4	4	3	3.5	3.5	3.5	flow	falls	Still only uses about 1/3 of width	more water
												much more turbulent. More veil flow over mill		
												dam falls on RR. More depth on RL.		
												Upstream of UHF more turbulent & defined.	Exposed bedrock primary view still a little	
												More depth an ~40ft more spill over at falls.	[indistinguishable text] on RR mill down	
												Plenty of mist lower channel white &	falls. Some lower definition w/ rock features	
8	\\reviewer left this area blank\\	4.5	4	4.5	3	3	3	3.5	4	4.5	\	turbulent. Louder boiling pool below LHF	at lower channel.	\\reviewer left this area blank\\
200 cfs	Totals	35.5	23.5	32.5	28.5	27.5	28.5	28.5	32	33				
	Average*	4.44	3.36	4.06	3.56	3.44	3.56	3.56	4.00	4.13				



Trenton Bypass Reach KOP 4- Trenton Upper High Falls 400 cfs

-													
			-		At	tribute Rat	ing	-		-		Attributes at	Current Flow
					Rocks/	Pools/	Exposed	Wetted					
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water				
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative
												C. H. S. T. S. L. C. L. C. H. S. L. S. S. L. S. H. S. L. S. S. L.	
												full extent of high falls channel veiled; ample	
												whitewater above; veil over mill dam really	
												dramatic; misting; steps furthest to river right	
												fully veiled & plenty of 'jumping' water; veil	
												closest to river center really nice; passing	
											Slightly higher	over vegetation- good overhang feature;	differentiation between mo
1	see previous	5	3	5	5	3.5	5	5	5	4.5	flow	basically ideal "roar" of falls	from turbulent essentially g
	·											Series of falls with veiling and cascading	
	Steps/ series of falls, large drop, widest										Slightly higher	flows, misting, good sound. Nice to see the	Not as much veiling flows/
2	view	5	4	5	5	4	4	5	5	5	flow	turbulence over the upstream reach	rock across falls face
					-					-	-		
	High Falls, Mill Dam Falls, & Auxillary Dam										About the same	good central cloud of mist cascade. &	
3	Falls Cascading falls w/nice vertical drop	5	5	5	4	5	5	5	5	5	flow	vertical falls, plunge pool, mist rising	A lot of bare bedrock
		•	, , , , , , , , , , , , , , , , , , ,		•	Ű	Ű	Ű	•	Ű	lion		
											About the same	More mist volume of rushing water no pools	
4	More impressive water flowing over falls	5	4	4	4	4	4	4	4	4	flow	above roar of water, nice water curtain	half of bedrock exposed
	More impressive water newing even land	Ū	-		т	т				т	11011		
												More mist emitted to air. Additional face	
												width wetted and rocks at bottom of falls	
											About the same	receiving cascading water. Increased	Only 1/3 of face wetted but
5	Secluded overlook	5	1	1	1	1	1	1	1	Λ	flow	undraft Increased channel width unstream	stream access to river left
5		5	-	-	7	7	7	7	7	7	11000	Mist/sound very noticeable as are feels part	
												of the falls middle falls starts to gain	
											About the same	of the fails fillible fails starts to gain	
G	Wraviewer left this area blank/	F	2	4.05	4	0	4 5	2	2 5*	١	About the same		abannal width the same
0		5	3	4.20	4	2	4.0	3	3.3	١	liow	channels	channel width the same
7		4 5	4	4	4	4	2	25	4	4	1	Mana walking a third 200	while it is more volume you
/	\\reviewer left this area diank\\	4.5	4	4	4	4	3	3.5	4	4	١	More volume than 200	much more of the fails (ove
													Martin a lateral discoverse
												TIOW ON KRIMUF. BIgger wavy pool below.	iviist is a bit occluding of ba
					o -			o -				Wind coming off of falls. Deep veil flow	Lower channel to LHF just
8	See previous	4.5	3.5	4	3.5	3	3	3.5	4	4	\	across all of Rieft side of spill.	distinctive.
400 cfs	lotals	39	30.5	35.25	33.5	29.5	32.5	33	34.5	30.5			
	Average*	4.88	3.81	4.41	4.19	3.69	4.06	4.13	4.31	4.36			

	Enhancements
e slack waters one	see previous
a lot of exposed	if there was a way to get more water across the whole
·	channel? It's nice otherwise, expecially the middle falls
	\\reviewer left this area blank\\
	it would take much more water to entirely cover, but over all this is a good flow to enjoy falls, need more access
topo constrains	
alls face	\\reviewer left this area blank\\
	\\reviewer left this area blank\\
do not see	
erall)	more water to use at least half of the area?
se of falls.	
	\\reviewer left this area blank\\



Trenton Bypass Reach KOP 5- Trenton Lower High Falls 100 cfs

		1			• •						I	• • • • • •	
					At	tribute Rat	ing					Attributes at	Current Flow
					Rocks/	Pools/	Exposed	Wetted					
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water				
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative
											About the same	thicker veiling of rock face; spans much of	
1	view into unique bowl feature	4	N/A	4	N/A	4	5	4	4	4	flow	fall feature	N/A
											Slightly higher		Very difficult to see, extren
2	a different vantage point	4	3	3	3	3	4	3	4	3	flow	Some nice veiling and cascading	viewing window
			-	-	-						-		- 0
	Cascading Falls w/nice vertical drop, good										Slightly higher	Wooded viewing area, steep walls to	
3	sized plunge pool wooded viewing area	4	4	4	3	3	3	3	3	3	flow	streambed	Very narrow view point
0	View of falls obstructed by foliage:			т	Ū	Ŭ	- U	Ū	0	Ŭ	Much higher	Cascading water over a portion of falls	
4	cascading water	Л	2	2	Ν/Δ	25	25	25	25	25	flow	sound of water	obstructed view: 50% of be
		7	2	2	N/A	2.5	2.5	2.0	2.5	2.5	11000		
											Clightly higher		
F	Demote Cetting	4	2	2	2	2	25	2	25	25		Cound and falls sourcess	no otvioto di viovu
5	Remote Setting	4	3	3	3	3	3.5	3	3.5	3.5	TIOW	Sound and fails coverage	restricted view
												Sheeting of water down falls fluctates	
												between whitewater and real areating feed	
												between whitewater and rock creating tocal	
												point. Water is fully veiling bottom of falls	
												there is "bounce" off the rocks and a nice	
												final fall into the very large pool below. Slight	
												mist created because of final fall. Pool at	
												bottom relatively still with turbulence only at	
6	\\reviewer left this area blank\\	1	2	2	2	2	2	2	4	1	Not ouro	water entrance. Heavy on water shannel full	No intoraction with falls of
0		4	3	3	3	3	2	3	4	١	Not Sule Much higher		definitely people to be clear
7	1.12.14.14.14.14.14.14.14.14.14.14.14.14.14.		_	4	~	2		25	2.5	25			definitely needs to be clear
1	High overlook, poor visibility	4	3	4	3	3	4	3.5	3.5	3.5	tiow	\\reviewer left this area blank\\	in over the years
8	Secluded woods location. Boulders	4	4	4	4	4	4	4	3.5	4	\	covers nearly all of the visable falls	could be more vigorous
100 cfs	Totals	32	22	27	19	25.5	28	26	28	23.5			
	Average*	4.00	3.14	3.38	3.17	3.19	3.50	3.25	3.50	3.36			

	Enhancements
	trimming of trees; hard to fully assess aesthetics &
	appreciate <u>visual</u> appeal when much is obscured
	Trimming, hard to evaluate because it's difficult to see.
ely limiting	Compared to KOP 4, not as valuable a viewing location.
	Need to open up/widen the viewing window
	Very narrow view point, vegetation clearing
1	
drock exposed	more water, trim trees; more access
	Come tree anyming equilation dense to ensure view of follo
	Some tree pruning could be done to open view of fails.
	Not clear cutting. Trees from fails is a good thing too.
annel	more clearing
ed out has filled	
	\\reviewer left this area blank\\
	needs clearing. Only small openning to view through.
	Rather far from falls. Viewpoint down water would
	improve view to downstream. Would need stairs & new
	platform.



Trenton Bypass Reach KOP 5- Trenton Lower High Falls 200 cfs

					At	tribute Rat	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												Noticeable sound increase; mist; very		
											About the same	powerful cascade, most of face covered;		
JG	see previous	5	N/A	5	5	N/A	5	5	5	5	flow	classic "cascade" falls	N/A	see previous
											About the same	Can see more of it, very active flow, lots of		limited view only shows the falls itself, need to widen the
NC	lower vantage point, curved falls face	5	3	4	4	3	4	3	4	4	flow	cascade and mist	Hard to see, not a very full view	view to really make the most of this location
	Cascading Falls w/ nice vertical drop, good										Slightly higher	Wooded viewing area, steep walls to		
RM	size plunge pool	5	4	4	3	3	3	4	4	5	flow	streambed	Very narrow view point	Very narrow view point, vegetation clearing might help
											Slightly higher	Sound of water; substantial flow over a		
BN	Good view of cascading water falls	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	flow	portion of bedrock	40% of bedrock exposed, partial obstruction	more water, clear tree brances
											About the same	More sound than at 100cfs. More turbulent		
TP	Secluded overlook	4	3	4	3	3	4	3.5	4	4	flow	than 100cfs. Deeper pool.	restricted view	\\reviewer left this area blank\\
											About the same		Minimal character as water falls down falls	
MR	\\reviewer left this area blank\\	4	3	3	3	3	4	\	4	3.5	flow	Loud falls- crash into pool	uniform veil and turbulence	\\reviewer left this area blank\\
											Slightly higher			
JS	\\reviewer left this area blank\\	4.5	4	4	4	3.5	4	4	4	3.5	flow	same as with 100 cfs	\\reviewer left this area blank\\	due to narrow passage, water has more volume
												More violent. Lots of whitewater boiling in		
												pool. Ice sheet flow area on RL before		
												lowest falls. Nice & loud. Deeper, darker		
JW	See previous	4.5	4.5	5	4	4	4	4	4	4.5	\	color.	none	see previous
200 cfs	Totals	36	25	32.5	29.5	23	31.5	27	32.5	33				
	Average*	4.50	3.57	4.06	3.69	3.29	3.94	3.86	4.06	4.13				



Trenton Bypass Reach KOP 5- Trenton Lower High Falls 400 cfs

					At	tribute Rat	ing				Attributes at Current Flow					
					Rocks/	Pools/	Exposed	Wetted								
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water							
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative			
											About the same	thunderous sound; excellent whitwater	not much difference (other			
JG	see previous	5	N/A	5	5	N/A	5	5	5	5	flow	cascade; feel cool/mist from falls	from 200 csf			
	Lower vantage point, sloped face for										About the same	dynamic motion, cascading flows, and	limited visibility. Can't see			
NC	dynamic bounce	5	3	5	3	3	4	4	5	4	flow	misting	channel			
	Cascading falls nice vertical drop, good										About the same	Wooded viewing area, steep walls to				
RM	size plunge pool	5	4	5	4	4	4	5	5	5	flow	streambed	Very narrow view point			
	Good view of water over falls but										About the same					
BN	obstructed	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	flow	gushing water over falls, more powerful	50% of bedrock showing			
												Sound and sheer volume through	, i i i i i i i i i i i i i i i i i i i			
											About the same	constricted/relatively narrow shute. More				
TP	Scenic/ Secluded overlook	5	3.5	4	3.5	3.5	4	4	4	4	flow	turbulence in pool below falls	View restricted			
											About the same	·				
MR	\\reviewer left this area blank\\	4.5	3	3	3	3	4	3	4	3.5	flow	sound starts getting a little bit of thundering	little noticeable change			
JS		\	\	\	\	١	\	/	\	\	/		Ĭ			
												louder. Not much different otherwise. Would				
												potentiall expect some differences below	getting deeper so that less			
JW	See previous	4.5	4.5	4.5	4	4	4	4	4	4	\	falls where not visible.	stepping can be seen.			
400 cfs	Totals	33	21.5	30	26	21	28.5	28.5	30.5	29						
	Average*	4.71	3.58	4.29	3.71	3.50	4.07	4.07	4.36	4.14						

	Enhancements
than mist/sound)	
,	see previous
nuch of the	improve the viewing opportunity, vastly improve this
	location on the whole to see more of the falls/ river
	very narrow viewpoint, some vegetation clearing might
	help
	trim branches
	View restricted
	\\reviewer left this area blank\\
contrast and	
	\\reviewer left this area blank\\



Trenton Bypass Reach KOP 7- Sherman Overlook 100 cfs

					At	tribute Rat	ina					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												good sound levels, nice section of river run		
											Slightly higher	above last falls section; nice cascade above	Potential for bigger riffles @ a higher level	trees further down bank obscure view; trimming may be
JG	almost top down view of Sherman falls	4	4	4	4	4	4	3.5	4	4	flow	run	of flow, possible benefit of higher flows	necessary
											Slightly higher	Very nice sound, likely due to narrow	a little hard to see, not much variety/mostly	some trimming. Overlook, looking down view, better to
NC	Step into a drop fall, gets good sun	4	3	3	3	3	3	3	4	3	flow	channel and drop	run and sheet flow	see the falls
											Slightly higher	Feels like the minimum needed to create an	much of the channel is not wetted. Difficult	More water might help still a difficult view of the Falls
RM	Long stretch before falls	3	3	3	2	4	2	2	3	3	flow	aesthetic experience	view of the Falls	maybe some vegetation clearing
	Good view of gorge; partial obstruction by										Much higher	Good vantage point; some water flowing;		
BN	foliage	4	2	2	2	2	2	2	2	2	flow	sound of water	only 20% of channel covered	need much more flow
											Slightly higher		Only approx. 1/5 of upstream channel	Hard to observe bottom of falls from this vantage point
TP	Feel Secluded	4	3	3	3.5	3.5	3	2	3.5	3.5	flow	Good sound and condensed volume	wetted.	but restricted by topo of gorge.
												small sheety falls above main falls to the		
												side whitewater is sheeting back into main		
												channel is unique. Unique pool at top of falls		
												just after corner. water meandering eddy's		
											Slightly higher	are visible. Heavy on the exposed pool and		
MR	\\reviewer left this area blank\\	3	3.5	\	2	2.5	3	3.5	\	\	flow	geology 20-40% of channel full.	minimal turbulence in main channel	clearing so more of main falls are visible
											Much higher		veins blocked, but probably way too difficult	_
JS	Very high overlook	3	3.5	3.5	4	4	4	3	3	3.5	flow	water volume speed good	to clear	clearing along river bank :)
	Nice upstream view of channel looking											fills the low portion of the channel good	large exposure of dry bedrock. Small	
	down at falls. Nice angles in rock. Big pow											crashing sound. Nice spill over. Small fall	concentrated flow at falls. Dry falls edge	hard to see the lower portion of the falls. A viewing
JW	over	3.5	3.5	3	2	4	2	2.5	3.5	2.5	\	above stream. good little chute above on RR	~4/5 dry	platform over the edge would be better.
100 cfs	Totals	28.5	25.5	21.5	22.5	27	23	21.5	23	21.5				
	Average*	3.56	3.19	3.07	2.81	3.38	2.88	2.69	3.29	3.07				



Trenton Bypass Reach KOP 7- Sherman Overlook

200 cfs

					At	tribute Rat	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	I Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												more definition (w/rapids/turbulence) around		
												rocks/other structures; bigger/better spillage		
												over stepped features; more visual appeal	water staining more evident in each	
											Slightly higher	generally; more "sheet water" flow on	cascade; slight detraciton to aesthetic	
JG	see previous	5	4.5	4.5	5	4	5	5	4.5	4.5	flow	smaller step/fall	appeal more typical of milky froth	see previous; old penstock platform = better view
														more flows to increase veiling across falls face trimming
											Slightly higher	Nice cascading and misting, some veiling	lots of rock exposed. Hard to view at	to widen the view, there is a limited window available
NC	large drop falls	5	4	4	3	4	3	3	4	4	flow	flows, good sound	location. Better view at additional overlooks	that makes it difficult to see the falls
											Slightly higher	seems to have better wetted width and more		maybe some vegetation clearing at the base of the falls
RM	Long stretch before falls	4	4	4	3	4	3	3	4	4	flow	turbulence	difficult view of the actual falls	would help the view
											Slightly higher	Upstream wetted width higher, more water	only 40% of bedrock covered much better	
BN	Good view upstream	4	3	3	3	3	3	3	3	3	flow	visibly flowing over falls, fewer static pools	than 100 cfs	more water, trim branches to improve view
												Volume and whitewater increase from		
											Slightly higher	100cfs. Increased wetted width up stream		
TP	Scenic/ Secluded	4	3.5	4	4	3.5	3.5	4	4	4	flow	and additional "micro falls".	\\reviewer left this area blank\\	Site restrictions to view entire falls.
												As water moves back into the main channel		
											About the same	and off of the shelfs unique contrast of slow		
MR	\\reviewer left this area blank\\	4	3	4	4	3	3.75	4.5	4	4	flow	moving sheet and fast turbulent channel	Loss of detail in rocks at falls	\\reviewer left this area blank\\
											Slightly higher			
JS	\\reviewer left this area blank\\	3.5	3.5	4	4	4	4	3.5	3.5	3.5	flow	\\reviewer left this area blank\\	\\reviewer left this area blank\\	Not much difference from 100 cfs
												more wetted width upstream on RL maybe		
												30-40% more. More turbulent in chute above		
												good boil, more stepped flow on RL of chute.		
												More coverage at lip of falls- thinner but		
												covered on RR ~ 15 feet? Deeper. More	lose a little definition of angular rock	
JW	See previous	3.5	4	3.5	3	4	3	3	4	4	١	boiling pool.	features above SF.	See previous
200 cfs	Totals	33	29.5	31	29	29.5	28.25	29	31	31				
	Average*	4.13	3.69	3.88	3.63	3.69	3.53	3.63	3.88	3.88				



Trenton Bypass Reach KOP 7- Sherman Overlook 400 cfs

					At	tribute Rat	ing					Attributes at	Current Flow	
					Rocks/	Pools/	Exposed	Wetted						
		Sound	Pool/ Still	Turbulen	Stream-	Moving	Rock	Channel	Water					
Reviewer	Unique Aesthetic	Level	Water	се	bed	Water	Falls	Width	Fall	Overall	Prefered Flow	Positive	Negative	Enhancements
												More sheet flow in upper step of falls, almost		
												eddying whitwater below; interesting small	Almost too much whitewater @ upper falls	
											Slightly lower	standing waves above bigger falls; steps	detracting from aesthetics of lower/larger	
JG	see previous	5	N/A	5	5	N/A	5	5	5	5	flow	towards river center veiled nicely	falls- diminishing their appeal	see previous
												Veiling, cascading, and trickle flows, misting.		Improving viewing by trimming, limited window at KOP
											About the same	Flats and steps with turbulence looks very	would like more veiling across falls face,	location. additional viewing very nice and could be good
NC	Small steps to large drop	5	5	5	4	5	4	4	5	5	flow	nice	lots of exposed rock	comparison (walkway?)
											About the same			maybe some vegetation clearing at the base of the falls
RM	Long stretch before falls	5	5	5	4	5	4	4	4	4	flow	More wetted width nice veiling over cascade	difficult view of the actual falls	would help the view
											About the same			
BN	Good view of roaring water over falls	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	flow	good flow over falls few pools	water covers about 50% bedrock	more access needed
											About the same	Sheer volume, upstream wetted width		
TP	Secluded, natural setting	5	4	4	3.5	4	3.5	3.5	4	4	flow	increase and velocity	\\reviewer left this area blank\\	View restricted of entire falls
													channel has filled in with depth and	
											Slightly lower	More shallow sheeting over steps creates	turbulence rapids are good with fast moving	
MR	\\reviewer left this area blank\\	4	3	3	3	3	١	3	4	3	flow	appealing feature	clear waters	\\reviewer left this area blank\\
JS		\	\	/	\	/	\	\	\	\	1	1	\	
												Nice full channel upstream flowing veil ~50%		
												wetted new falls. Fall flow over lip little veil		
JW	\\reviewer left this area blank\\	4	4.5	4	3.5	4	3.5	3.5	3.5	4	\	flows to RL of main falls.	Deeper- less definition at falls.	\\reviewer left this area blank\\
400 cfs	Totals	32	25	29.5	26.5	24.5	23.5	26.5	29	28.5				•
	Average*	4.57	4.17	4.21	3.79	4.08	3.92	3.79	4.14	4.07				



Prospect Development KOP 1b - Prospect Falls Overlook



No Release/Leakage

Target release rate 100 cfs



Target release rate 200 cfs



Target release rate 300 cfs

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix D | Photos of Comparison Flows at Key Obersvation Point Locations Sheet 1 of 2



Prospect Development KOP 2 - Prospect Falls (Undeveloped Location)





No Release/Leakage

Target release rate 100 cfs



Target release rate 200 cfs



Target release rate 300 cfs

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix D | Photos of Comparison Flows at Key Obersvation Point Locations Sheet 2 of 2



Trenton Development KOP 4 - Upper High Falls Overlook





No Release/Leakage

Target release rate 100 cfs



Target release rate 200 cfs

Target release rate 400 cfs

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix D | Photos of Comparison Flows at Key Obersvation Point Locations Sheet 3 of 3





West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix D | Photos of Comparison Flows at Key Obersvation Point Locations Sheet 4 of 4





Target release rate 200 cfs

Target release rate 400 cfs

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix D | Photos of Comparison Flows at Key Obersvation Point Locations Sheet 5 of 5





Target release rate 200 cfs

Target release rate 400 cfs

West Canada Creek Hydroelectric Project (FERC No. 2701-NY) Town of Trenton, Oneida County, New York Appendix D | Photos of Comparison Flows at Key Obersvation Point Locations Sheet 6 of 6





West Canada Creek Hydroelectric Project (FERC No. 2701-NY)

Town of Trenton, Oneida County, New York

Sheet 1 of 2

Appendix E | Summary of Visitor Scenic Rating Chart at Key Observation Points During Trenton Trail Days







West Canada Creek Hydroelectric Project (FERC No. 2701-NY)

Town of Trenton, Oneida County, New York

Appendix E | Summary of Visitor Scenic Rating Chart at Key Observation Points During Trenton Trail Days

