

WHITEWATER FLOW STUDY

LOWER BARKER HYDROELECTRIC PROJECT
FERC No. 2808

Prepared for:

KEI (USA) Power Management (III) LLC
Gardiner, Maine

Prepared by:

Kleinschmidt

Pittsfield, Maine
www.KleinschmidtGroup.com

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WHITEWATER FLOW STUDY

LOWER BARKER HYDROELECTRIC PROJECT FERC PROJECT NO. 2808

KEI (USA) POWER MANAGEMENT (III) LLC GARDINER, MAINE

1.0 INTRODUCTION

The Lower Barker Hydroelectric Project (FERC No. 2808) is located on the Little Androscoggin River in Auburn, Maine, approximately 0.7 river miles upstream from the confluence with the Androscoggin River. Operation of the Lower Barker Project bypasses approximately 3,000 feet of the Little Androscoggin River; river flow in the bypassed reach is maintained by the minimum flow release from the dam, spill, and leakage through gates and flashboards. KEI (USA) Power Management Inc. (KEI (USA)) on behalf of KEI (Maine) Power Management (III) LLC operates the Lower Barker Project as run-of-river (i.e., inflow equals outflow) and operates the turbine/generator unit within a range of 150 cfs to 500 cfs, which are the approximate minimum and maximum hydraulic capacities of the turbine.

KEI (USA) completed a recreation inventory and assessment of existing recreation opportunities, use, and needs in the Lower Barker Project area pursuant to study requests from the Maine Department of Inland Fisheries and Wildlife (June 17, 2014) and the City of Auburn (June 24, 2014) and as described in the Final Study Plan (June 2015). The results of the recreation inventory and assessment are provided in Exhibit E of the Final License Application for the Lower Barker Project submitted to the Federal Energy Regulatory Commission on January 30, 2017. In addition, American Whitewater requested a whitewater flow study in the bypassed reach of the Lower Barker Project in its July 6, 2014, study request letter; this request was supported by the City of Auburn. The objective of the whitewater flow study was to assess the presence, quality, access, and preferred flow ranges for whitewater boating in the bypassed reach.

An angler wading analysis has also been developed to assess the effects of the flow increments being considered on wadeability in the reach.

2.0 METHODS

KEI (USA) completed the whitewater boating study on May 21, 2017. River flow at the Lower Barker Project during the study was approximately 590 cubic feet per second (cfs) at USGS Gage No. 010507000 (Little Androscoggin River near South Paris, Maine). The gage is located approximately 22 river miles upstream of the Lower Barker Project; data was pro-rated to the additional drainage area for the Lower Barker site¹. The final study plan specified that river flows of 300 cfs, 500 cfs (project capacity), and 660 cfs (May median flow) would be targeted. However, due to river flow levels available on the day of the study and operating capability of the turbine, river flows of approximately 350 cfs and 590 cfs were assessed. The flow of 590 was provided by turning the generating unit off and spilling all inflow to the Project. Due to minimum operating limitations (i.e., inability to operate the unit below 150 cfs), a flow of 500 cfs could not be assessed. Based on discussion with participants about low water levels in the bypassed reach at 590 cfs, it was agreed that about 350 cfs was preferred for the assessment rather than 300 cfs. KEI (USA) used standard hydraulic engineering calculations to estimate river flow based on USGS gage data at South Paris; flow through the unit was based upon the turbine flow vs. generation output curve.

A panel of eight whitewater boaters affiliated with American Whitewater participated in the study. All boaters put-in immediately downstream of the Lower Barker dam (Photo 1) and took-out approximately 3,800 feet (0.70 miles) downstream at Little Andy Park (Figure 1). The Lower Barker bypassed reach splits around several small islands resulting in two primary channels. Study participants ran 590 cfs two times; during the first run, participants boated the left channel, and during the second run, participants boated the right channel (Figure 1).

Study participants completed a pre-run survey, a post-run survey after the 590 cfs run, a post-run survey after the 350 cfs run, and a flow comparison survey; the pre-run, post-run, and flow comparison surveys are provided in Appendix A, Appendix B, Appendix C, and Appendix D. The pre-run survey asked questions regarding the participants' whitewater boating experience, boating preferences, and familiarity with recreation opportunities along the Little Androscoggin River and Androscoggin River. The post-run surveys evaluated characteristics of the bypassed

¹ The drainage area at the USGS gage is 73.5 square miles, and the drainage area at the Lower Barker Project is 357.4 square miles; therefore, the data from the gage was pro-rated by a factor of 4.9 (=357.4/73.5).

reach with respect to suitability of flows for navigation, safety, and aesthetics; for features, such as rapids, eddies, water depth, and water velocity; and for different experience levels using a Likert-type scale. The flow comparison survey asked participants to provide an overall evaluation of the study flows and their preferred flows for whitewater boating.



PHOTO 1 PUT-IN SITE IMMEDIATELY DOWNSTREAM OF THE LOWER BARKER DAM.

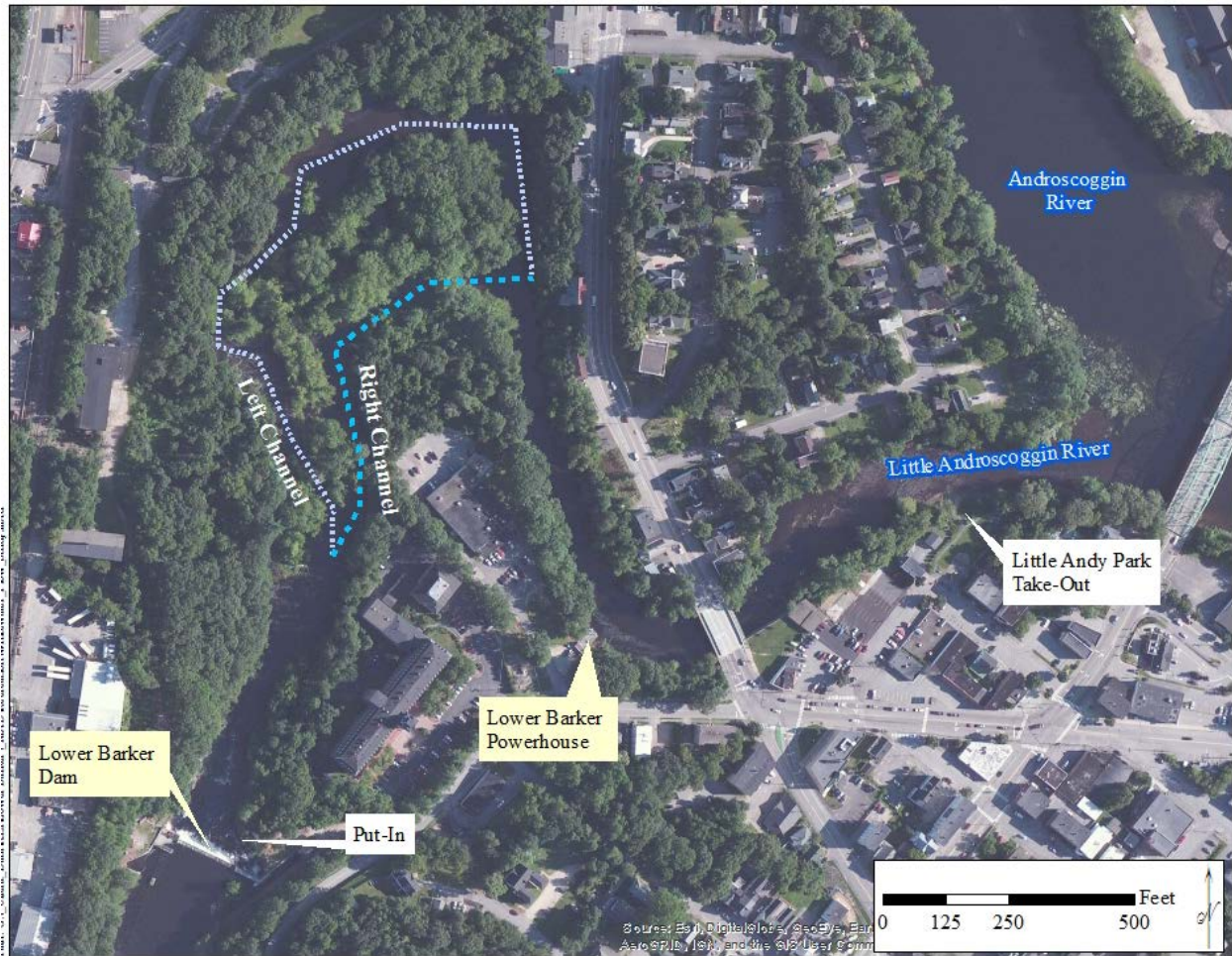


FIGURE 1 LOCATION OF PUT-IN AND TAKE-OUT SITES FOR THE WHITEWATER FLOW STUDY AT THE LOWER BARKER PROJECT. THE LEFT AND RIGHT CHANNELS OF THE BYPASSED REACH ARE DEPICTED BY DASHED LINES.

3.0 RESULTS

3.1 STUDY PARTICIPANT INFORMATION

Eight individuals participated in the study; six used a hard-shell kayak and 2 two used an open canoe. The participants had 10 to 60 years of experience whitewater kayaking or canoeing with an average of 29 years of experience. The participants rated their ability for whitewater kayaking or canoeing as intermediate to expert (Table 1). The desired type of whitewater boating experience of all study participants was a boating trip with technical elements, such as challenging rapids and play areas.

TABLE 1 EXPERIENCE LEVEL OF STUDY PARTICIPANTS FOR WHITEWATER KAYAKING OR CANOEING.

EXPERIENCE LEVEL	COUNT
1 Novice	0
2	0
3 Intermediate	2
4	4
5 Expert	2
Average	4.0

Only one boater was from the Lewiston/Auburn Area; the other boaters lived within twenty to eighty miles of the Lower Barker Project. Overall, study participants were not familiar with recreation activities on the Little Androscoggin River or Androscoggin River in the vicinity of the Lower Barker Project; half had never participated in recreation activities near the Lower Barker Project, and the other four boaters typically participated in recreation activities once per year or less. One participant had boated the Little Androscoggin River near South Paris, Maine, and two had boated the Androscoggin River at Dresser Rips and near Androscoggin Riverland State Park. Boaters indicated that they participated in recreation activities on the Little Androscoggin River or Androscoggin River in April through September.

3.2 590 CFS EVALUATION

Study participants ranked several whitewater features and characteristics based on their experience during the 590 cfs runs on a scale of 1 (unacceptable) to 5 (excellent). Overall, navigability, availability of rapids and play areas, water craft rate of travel, eddies, force of water, and speed of water were rated neutral to good (Table 2). Wadeability, water depth, and

exposure of rocks were rated poor to neutral (average ratings of 2.5 to 2.9) (Table 2). Aesthetic quality (average rating of 3.7) and overall quality (average rating of 3.4) were rated neutral to excellent. In general, based on their desired experience and skill level, study participants rated the river flow (590 cfs) as too low to just right (Table 2). The reasons participants gave for their rating of the overall quality of their experience at 590 cfs included that the Lower Barker bypassed reach provided a nice, short run with decent and fun play waves downstream of the dam, the run would be better with more water, and the availability of play waves and eddies end early in the run (see Table E1 in Appendix E for the complete responses). Boaters preferred the left channel to the right channel because it had faster water.

Participants rated safety due to both the river flow and debris or other hazards in the water as good (average rating of 3.9) (Table 2). One participant did identify the put-in trail as a safety hazard because it is steep and may be slippery during rain or wet weather. Another participant noted that rocks in the right channel are a possible safety hazard.

Overall, study participants rated the suitability of 590 cfs for boaters with novice and intermediate experience levels as neutral to good but gave a mix of responses for advanced and expert experience levels (Table 3). However, there was a general trend of lower suitability ratings for advanced (average rating of 2.8) and expert (average rating of 2.6) experience levels compared to novice (average rating of 3.4) and intermediate (average rating of 3.5) experience levels. Compared to 590 cfs, study participants would prefer a higher flow level for whitewater boating in the Lower Barker bypassed reach (Table 4).

TABLE 2 RATING OF WHITEWATER BOATING CHARACTERISTICS AND FLOW LEVEL FOR THE 590 CFS RUN.

		NAVIGABILITY	WADABILITY	AVAILABILITY OF RAPIDS	WATER DEPTH	AVAILABILITY OF WHITEWATER PLAY AREAS	WATER CRAFT RATE OF TRAVEL	EXPOSURE OF ROCKS	EXPOSURE OF SAND/GRAVEL BARS	EDDIES	FORCE OF WATER	SPEED OF WATER/CURRENT	SAFETY (DUE TO FLOW LEVELS)	SAFETY (DUE TO DEBRIS, OTHER HAZARDS)	AESTHETIC QUALITY	OVERALL QUALITY
Rating	1 Unacceptable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2 Poor	0	2	0	1	0	0	2	0	0	0	0	0	0	0	0
	3 Neutral	1	2	2	6	3	3	5	2	4	5	4	1	1	3	5
	4 Good	6	0	3	0	4	4	0	0	3	2	3	6	6	3	1
	5 Excellent	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1
	Average	3.9	2.5	4.0	2.9	3.6	3.6	2.7	3.0	3.4	3.3	3.4	3.9	3.9	3.7	3.4
	N/A	0	3	0	0	0	0	0	4	0	0	0	0	0	0	0
	Did not answer	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1
Flow was...	1 Too Low	4	0	4	4	2	1	3	2	2	3	3	1	1	1	3
	2 Just Right	3	3	1	1	2	3	1	0	2	1	1	3	3	2	0
	3 Too High	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average	1.4	2.0	1.2	1.2	1.5	1.8	1.3	1.0	1.5	1.3	1.3	1.8	1.8	1.7	1.0
	Did not answer	1	4	3	3	4	4	4	5	4	4	4	4	4	5	5

TABLE 3 RATING OF THE SUITABILITY OF 590 CFS FOR DIFFERENT WHITEWATER BOATING EXPERIENCE LEVELS.

		EXPERIENCE LEVEL			
		NOVICE	INTERMEDIATE	ADVANCED	EXPERT
Suitability	1 Unacceptable	0	0	0	2
	2 Poor	1	0	5	3
	3 Neutral	3	4	0	0
	4 Good	2	4	3	2
	5 Excellent	1	0	0	1
	Average	3.4	3.5	2.8	2.6
	Did not answer	1	0	0	0
Flow was...	Too Low	2	3	5	5
	Just Right	4	3	1	1
	Too High	0	0	0	0
	Average	1.7	1.5	1.2	1.2
	Did not answer	2	2	2	2

TABLE 4 FLOW LEVEL PREFERENCE COMPARED TO 590 CFS.

FLOW LEVEL	COUNT*
1 Much Lower	0
2 Lower	0
3 No Change	1
4 Higher	4
5 Much Higher	2
Average	4.1

*One participant did not answer.

Four boaters responded that they would participate in whitewater boating in the bypassed reach at the same flow level (i.e., 590 cfs); three boaters said they would not choose to participate in whitewater activities in the Lower Barker bypassed reach at 590 cfs. Participants stated that it was a nice short run, and while they would choose to boat the bypassed reach at 590 cfs, a higher flow would be better. Reasons why study participants would not participate in whitewater kayaking/canoeing at 590 cfs include that the run is too short, the fun features of the run are over too quickly, they live too far away, and the flow is too low (see Table E2 in Appendix E for the complete responses). Additional comments from the study participants based on the 590 cfs run are provided in Table E3 in Appendix E.

3.3 350 CFS EVALUATION

Study participants evaluated and ranked the same whitewater features and characteristics at 350 cfs.² The ability to navigate and wade; the availability of rapids and play areas; watercraft rate of travel; eddies; and force and speed of water were rated poor to good with average ratings ranging from 3.0 to 3.8 for the 350 cfs run (Table 5). Safety and aesthetic quality were rated neutral to excellent. The overall quality of the whitewater boating experience at 350 cfs was rated neutral to good with an average rating of 3.3 (Table 5). The flow level (350 cfs) was rated too low for navigation, availability of rapids and play areas, water depth, exposure of rocks, and overall quality; water craft rate of travel, exposure of sand/gravel bars, eddies, and force and speed of water, safety, and aesthetic quality were rated too low to just right (Table 5). The explanations given by participants for their overall quality rating included that it is a nice, scenic run with a

² Only seven boaters participated in the 350 cfs run; one elected not to participate based on the experience at 590 cfs.

couple whitewater features, but the flow was too low, there were more exposed rocks, and there was the potential for strainers and pinning (see Table E4 in Appendix E for complete responses).

Study participants rated the suitability of 350 cfs higher for whitewater boaters with novice and intermediate experience levels than for boaters with advanced or expert experience levels (Table 6). Furthermore, study participants rated the 350 cfs flow too low for boaters with advanced or expert whitewater experience levels (Table 6). All participants would prefer a flow level that was higher or much higher than 350 cfs for a quality whitewater experience (Table 7).

Three participants responded that they would choose to participate in whitewater activities at 350 cfs in the Lower Barker bypassed reach because there were some play waves and it was still a good run (see Table E5 in Appendix E for the complete responses). Four participants stated they would not choose to participate in whitewater activities because the flow is too low, the site is too far from home for a short run, and there are not enough play features in a short run.

Additional comments from the study participants based on the 350 cfs run are provided in Table E6 in Appendix E.

TABLE 5 RATING OF WHITewater BOATING CHARACTERISTICS AND FLOW LEVEL FOR THE 350 CFS RUN.

		NAVIGABILITY	WADEABILITY	AVAILABILITY OF RAPIDS	WATER DEPTH	AVAILABILITY OF WHITewater PLAY AREAS	WATER CRAFT RATE OF TRAVEL	EXPOSURE OF ROCKS	EXPOSURE OF SAND/GRAVEL BARS	EDDIES	FORCE OF WATER	SPEED OF WATER/CURRENT	SAFETY (DUE TO FLOW LEVELS)	SAFETY (DUE TO DEBRIS, OTHER HAZARDS)	AESTHETIC QUALITY	OVERALL QUALITY
Rating	Unacceptable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Poor	1	0	1	2	0	0	4	2	1	1	0	0	0	0	0
	Neutral	3	1	2	5	5	4	1	1	4	5	4	0	0	1	5
	Good	2	3	4	0	2	3	2	1	2	1	3	7	5	5	2
	Excellent	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	Average	3.2	3.8	3.4	2.7	3.3	3.4	2.7	2.8	3.1	3.0	3.4	4.0	4.2	4.0	3.3
	N/A	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0
	Did not answer	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0

		NAVIGABILITY	WADEABILITY	AVAILABILITY OF RAPIDS	WATER DEPTH	AVAILABILITY OF WHITEWATER PLAY AREAS	WATER CRAFT RATE OF TRAVEL	EXPOSURE OF ROCKS	EXPOSURE OF SAND/GRAVEL BARS	EDDIES	FORCE OF WATER	SPEED OF WATER/CURRENT	SAFETY (DUE TO FLOW LEVELS)	SAFETY (DUE TO DEBRIS, OTHER HAZARDS)	AESTHETIC QUALITY	OVERALL QUALITY
Flow was...	Too Low	6	0	6	6	6	5	6	3	4	5	5	4	3	2	5
	Just Right	0	2	0	0	0	1	0	1	2	1	1	2	3	3	0
	Too High	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Average	1.0	2.0	1.0	1.0	1.0	1.2	1.0	1.3	1.3	1.2	1.2	1.3	1.5	1.6	1.0
	Did not answer	1	5	1	1	1	1	1	3	1	1	1	1	1	2	2

TABLE 6 RATING OF THE SUITABILITY OF 350 CFS FOR DIFFERENT WHITEWATER BOATING EXPERIENCE LEVELS.

		EXPERIENCE LEVEL			
		NOVICE	INTERMEDIATE	ADVANCED	Expert
Suitability	1 Unacceptable	0	0	0	2
	2 Poor	1	2	6	4
	3 Neutral	3	2	0	0
	4 Good	2	3	1	1
	5 Excellent	1	0	0	0
	Average	3.4	3.1	2.3	2.0
	Did not answer	0	0	0	0
Flow was...	Too Low	2	5	6	5
	Just Right	4	1	0	0
	Too High	0	0	0	0
	Average	1.7	1.2	1.0	1.0
	Did not answer	1	1	1	2

TABLE 7 FLOW LEVEL PREFERENCE COMPARED TO 350 CFS.

FLOW LEVEL	COUNT*
1 Much Lower	0
2 Lower	0
3 No Change	0
4 Higher	5
5 Much Higher	2
Average	4.3

3.4 FLOW COMPARISON

The panel of whitewater boaters evaluated and compared the quality of the 590 cfs and 350 cfs runs based on their desired experience, water craft, and skill level and specified flow levels they think would provide certain types of experiences. The 590 cfs run was rated more highly than the 350 cfs run (Table 8). The 350 cfs run was rated unacceptable to good (average rating of 2.6), and the 590 cfs run was rated poor to good (average rating of 3.4) (Table 8). Participants indicated that the lowest flows that would provide a minimum quality experience and a safe experience were 300 cfs to more than 600 cfs (Table 9). The optimal flow for the highest quality experience was specified as 600 cfs to 1,000 cfs (Table 9). Compared to other river reaches within a two-hour drive and within New England, the Lower Barker bypassed reach was rated below average to average (Table 10). Additional comments regarding the flows participated in are provided in Table E7 in Appendix E.

TABLE 8 OVERALL EVALUATION OF THE 350 CFS AND 590 CFS FLOWS BASED ON CRAFT, SKILL LEVEL, AND DESIRED EXPERIENCE.

RATING	350 CFS	590 CFS
1 Unacceptable	1	0
2 Poor	2	1
3 Neutral	3	2
4 Good	1	4
5 Excellent	0	0
Average	2.6	3.4

TABLE 9 FLOWS THAT WOULD PROVIDE CERTAIN TYPES OF EXPERIENCES IN THE LOWER BARKER BYPASSED REACH BASED ON THE STUDY PARTICIPANTS' DESIRED EXPERIENCE, SKILL LEVEL, AND CRAFT.

EXPERIENCE	FLOW IN CFS
What is the lowest flow that you consider acceptable for a minimum quality experience?	300 to >600
What flow provides the highest quality (i.e., optimal flow) experience?	600 to 1,000
What is the lowest flow that provides a safe experience?	300 to 600
What is the highest flow that provides a safe experience?*	600 to 800
What is the highest flow you would consider boating?	600 to 3,000

*Only 3 participants responded.

TABLE 10 RATING OF THE LOWER BARKER BYPASSED REACH COMPARED TO OTHER RIVER REACHES OF SIMILAR DIFFICULTY (ASSUMING OPTIMAL FLOWS).

COMPARED TO RIVER REACHES OF SIMILAR DIFFICULTY, THE LOWER BARKER BYPASS REACH IS...	OTHER REACHES WITHIN A 2-HOUR DRIVE	OTHER REACHES IN NEW ENGLAND
1 Far Below Average	0	0
2 Below Average	5	5
3 Average	1	1
4 Above Average	0	0
5 Much Better than Average	0	0
Average	2.2	2.2

3.5 WADING SUITABILITY ANALYSIS

KEI (USA) assessed the ability to safely wade the bypassed reach for angling at whitewater boating flows using the “Rule of Ten” wading index, which is a common rule of thumb describing limiting conditions for safe wading. Abt et al. (1989) states that it is unsafe to wade in water where the product of the water depth (feet) and water velocity (feet per second (fps)) (referred to as the wading index below) is greater than 10 ft²/second.

KEI (USA) used water depth and velocity data collected at Transect 1 during the June 2016 instream flow habitat study for the analysis (for more information see the Lower Barker Final Study Report and Final License Application). Transect 1 is approximately 300 feet downstream from the Lower Barker dam (Photo 2) and was selected for analysis because it reflects habitat conditions in an attractive location for angling. Microhabitat data were collected at five flows during the instream flow study; data from the highest flow (300 cfs) were used in this analysis. Water depth along Transect 1 ranged from approximately 0.1 feet to 3.2 feet (Figure 2), and velocity ranged from approximately 0 fps to 3.3 fps. Wading index scores ranged from 0 to 5 ft²/second along most the transect; however, the index ranged from 5 to 9.5 ft²/second for approximately 20 percent of the transect (Figure 2). Therefore, the edges of the channel are safe for wading but the main channel is marginally safe for wading at 300 cfs. However, it is evident that at higher flows (e.g., 600 and 1,000 cfs), depth and velocities would continue to increase, and the wading index would gradually exceed 10 ft²/second in an increased area and thus become unsafe for angler wading.

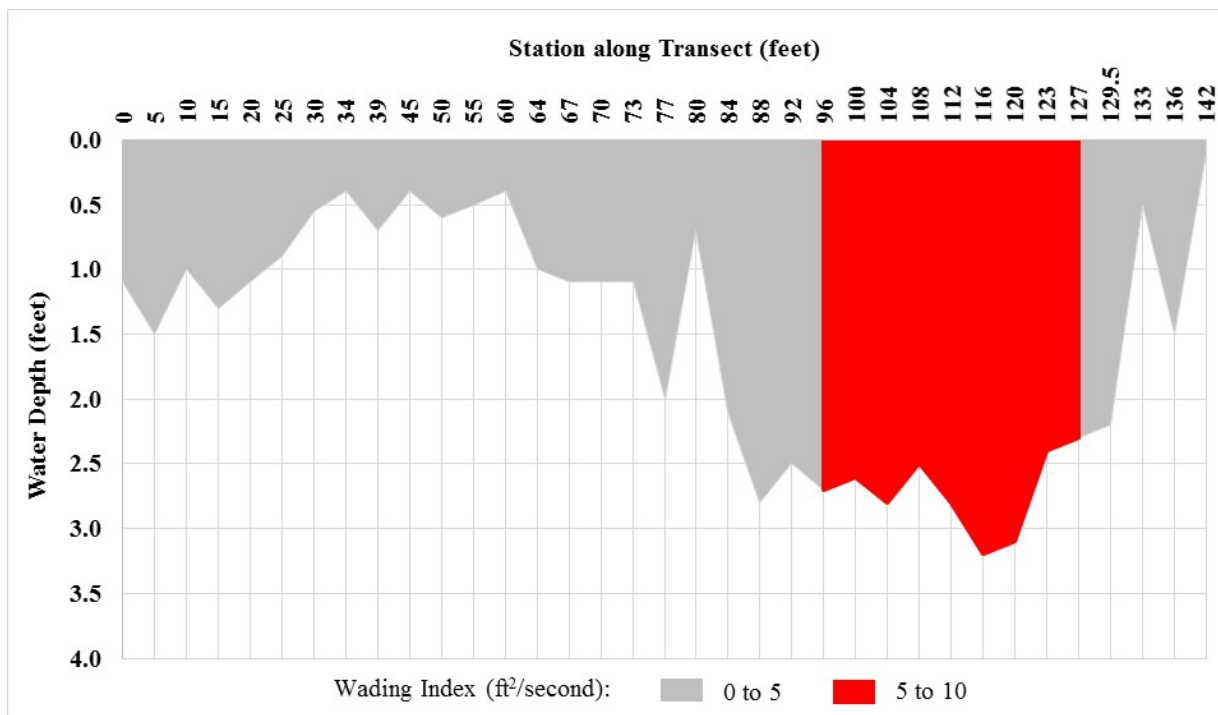


FIGURE 2 WATER DEPTH AND WADING INDEX (FT²/SECOND) ALONG TRANSECT 1 FROM THE LOWER BARKER BYPASSED REACH INSTREAM FLOW STUDY AT APPROXIMATELY 300 CFS.



PHOTO 2 **VIEW LOOKING UPSTREAM FROM TRANSECT 1 DURING THE LOWER BARKER BYPASSED REACH INSTREAM FLOW STUDY AT 300 CFS.**

4.0 SUMMARY

The panel of whitewater kayakers and canoers indicated that they would prefer a flow level higher than 600 cfs for a quality whitewater boating experience in the Lower Barker bypassed reach. Overall, study participants thought that the Lower Barker bypassed reach has potential as a site for recreationists desiring a short run or for boaters with novice or intermediate experience levels to practice. The flow levels experienced during the whitewater flow study (350 cfs and 590 cfs) were too low to provide a high-quality experience for boaters with advanced to expert experience levels.

KEI (USA) performed hydrologic analyses to evaluate typical inflows to the Lower Barker Project from April to September, and the availability of inflows ranging from 600 cfs to 1,000 cfs; flows of 600 cfs and 1,000 cfs were assessed because these were identified by study participants as the optimal flows for whitewater boating (Table 9). Both the mean and median inflows decrease throughout the recreation season (i.e., April to September) and are lower than the flow levels preferred (greater than 600 cfs) by the panel of whitewater boaters to provide a high-quality whitewater experience from June to September (Table 11). Furthermore, except for early spring (April and May), sufficient river flow is not available to provide whitewater boating flows greater than 600 cfs (plus the existing 20 cfs minimum flow). For example, assuming the single turbine at the Lower Barker Project is not operating, flows greater than 620 cfs are available less than 25 percent of the time in June to September; flows greater than 1,020 cfs are available less than 14 percent of the time (Table 12). If the turbine is operating, river flows greater than 620 cfs or 1,020 cfs are available to be provided for whitewater boating less than 12 percent and 8 percent of the time, respectively, from June to September (Table 12).³

TABLE 11 DAILY MEAN AND MEDIAN INFLOWS BY MONTH FOR THE LOWER BARKER PROJECT (INFLOW DATA FROM USGS GAGE NO. 010507000 (LITTLE ANDROSCOGGIN RIVER NEAR SOUTH PARIS, MAINE, APRIL TO SEPTEMBER 1985 TO 2015)).

MONTH	MEAN INFLOW (CFS)	MEDIAN INFLOW (CFS)
April	2,034	1,364
May	916	676

³ KEI (USA) is proposing to increase the minimum flow from 20 cfs to 100 cfs for the new term of the license (the current license expires in 2019). Performing the same analysis using a minimum flow of 100 cfs instead of 20 cfs provides the same results as shown in Table 12; thus, the results with a minimum flow of 100 cfs are not shown.

MONTH	MEAN INFLOW (CFS)	MEDIAN INFLOW (CFS)
June	634	343
July	327	141
August	281	92
September	196	83

TABLE 12 PERCENT OF TIME 600 CFS OR 1,000 CFS COULD BE PROVIDED TO THE LOWER BARKER BYPASSED REACH (PLUS 20 CFS MINIMUM FLOW) FOR WHITEWATER BOATING WITH THE TURBINE ON AND WITH THE TURBINE OFF (INFLOW DATA FROM USGS GAGE NO. 010507000 LITTLE ANDROSCOGGIN RIVER NEAR SOUTH PARIS, MAINE, APRIL TO SEPTEMBER 1985 TO 2015).

MONTH	TURBINE OFF		TURBINE ON	
	PERCENT OF TIME 620 CFS IS AVAILABLE	PERCENT OF TIME 1,020 CFS IS AVAILABLE	PERCENT OF TIME 620 CFS IS AVAILABLE	PERCENT OF TIME 1,020 CFS IS AVAILABLE
April	91	68	64	45
May	55	26	23	13
June	25	14	12	8
July	13	6	6	4
August	11	5	5	4
September	6	3	3	2

KEI (USA) also assessed the availability of water for the three flows specified in the final study plan (300 cfs, 500 cfs, and 660 cfs) (see Exhibit E Recreation Section of the Final License Application for more details). This analysis demonstrated that to provide a desirable flow for whitewater boaters (i.e., greater than 600 cfs) in a scheduled manner, the Lower Barker impoundment would typically need to be drawn down during the recreation season, the available storage would be used up in less than approximately five hours, and the impoundment would require several hours to refill.

As required by the project license, KEI (USA) operates the Lower Barker Project as run-of-river where inflow to the project is equal to the outflow. This mode of operation provides a steady, constant outflow for the protection of aquatic resources in the Little Androscoggin River. Furthermore, there are not any storage dams upstream of the Lower Barker Project which could hold and release water to provide recreational boating flows. Thus, the available inflow to the Lower Barker Project is limited during the recreation season.

5.0 REFERENCES

Abt, S. R., R. J. Wittler, A. Taylor, and D. J. Love. 1989. Human stability in a high flood hazard zone. American Water Resources Association, Water Resources Bulletin, 25(4) 881-889, August 1989.

APPENDIX A

PRE-RUN FLOW EVALUATION

**Pre-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: 5/21/17 Participant ID#: 1

THIS SECTION ASKS ABOUT YOUR BOATING EXPERIENCE

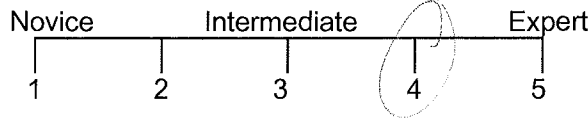
1. What is your primary activity for on-water boating? (Check one box.)

- Whitewater kayaking/canoeing
- Flatwater kayaking/canoeing
- Other – please specify: _____

2. How many total years have you been participating in **whitewater or flatwater kayaking/canoeing**? (Fill in blank.)

40 TOTAL YEARS EXPERIENCE

3. On a scale from 1 to 5, with 1 being novice/not very experienced, 3 being intermediate/moderately experienced, and 5 being expert/very experienced, how would you rate your ability for **whitewater or flatwater kayaking/canoeing**? (Circle one number.)



THIS SECTION ASKS ABOUT YOUR EXPERIENCE IN THE AUBURN REGION

4. How often do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check one box.)

- | | |
|--|--|
| <input type="checkbox"/> Weekly / At least once per week | <input checked="" type="checkbox"/> At least once per year |
| <input type="checkbox"/> Monthly / At least once per month | <input type="checkbox"/> Less than one time per year |
| <input type="checkbox"/> Several times per year | <input type="checkbox"/> Never |

5. During what month(s) do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check all that apply.)

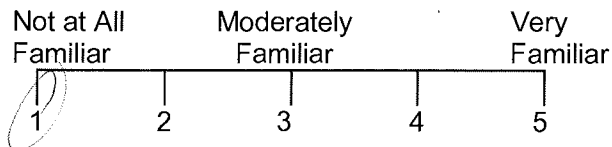
- | | |
|--|---|
| <input type="checkbox"/> January | <input type="checkbox"/> February |
| <input type="checkbox"/> March | <input checked="" type="checkbox"/> April |
| <input checked="" type="checkbox"/> May | <input checked="" type="checkbox"/> June |
| <input checked="" type="checkbox"/> July | <input type="checkbox"/> August |
| <input type="checkbox"/> September | <input type="checkbox"/> October |
| <input type="checkbox"/> November | <input type="checkbox"/> December |

6. In the past year, how many days have you participated in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Fill in blank.)

1 TOTAL DAYS PARTICIPATING IN THE PAST YEAR upstream

Pre-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Circle one number.)



8. How many years of experience do you have participating in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)

3 YEARS

9. What recreation site do you typically use when participating in **whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: _____

10. What section(s) of **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project** do you typically use when participating in recreation activities? (Check all that apply – please indicate specific location as appropriate.)

- Little Androscoggin River - please specify: near S. Paris
- Androscoggin River – please specify: _____
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)

- Male
- Female

12. Do you own a permanent or seasonal home **in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?** What is your zip code? (Check one box and fill in the blank for zip code.)

- YES Permanent Home → ZIP CODE: _____
- YES Seasonal Home → ZIP CODE: 04076
- NO Not a resident of Lewiston/Auburn → ZIP CODE: _____

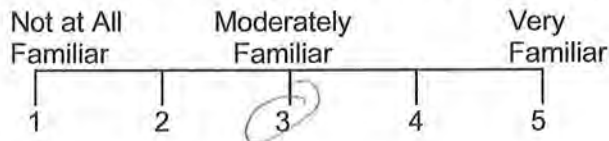
13. In what year were you born? (Fill in blank.)

1957 YEAR

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Pre-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Circle one number.)



8. How many years of experience do you have participating in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)

0 YEARS

9. What recreation site do you typically use when participating in **whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: _____

10. What section(s) of **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project** do you typically use when participating in recreation activities? (Check all that apply – please indicate specific location as appropriate.)

- Little Androscoggin River - please specify: _____
- Androscoggin River – please specify: Preser Rips
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)

- Male
- Female

12. Do you own a permanent or seasonal home **in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?** What is your zip code? (Check one box and fill in the blank for zip code.)

- YES Permanent Home → ZIP CODE: _____
- YES Seasonal Home → ZIP CODE: _____
- NO Not a resident of Lewiston/Auburn → ZIP CODE: 04032

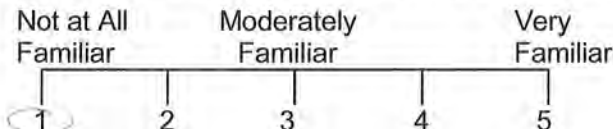
13. In what year were you born? (Fill in blank.)

1976 YEAR

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

**Pre-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Circle one number.)



8. How many years of experience do you have participating in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)

 YEARS

9. What recreation site do you typically use when participating in **whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: _____

10. What section(s) of **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project** do you typically use when participating in recreation activities? (Check all that apply – please indicate specific location as appropriate.)

- Little Androscoggin River - please specify: _____
- Androscoggin River – please specify: _____
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)

- Male
- Female

12. Do you own a permanent or seasonal home **in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?** What is your zip code? (Check one box and fill in the blank for zip code.)

- YES Permanent Home → ZIP CODE: _____
- YES Seasonal Home → ZIP CODE: _____
- NO Not a resident of Lewiston/Auburn → ZIP CODE: 04921

13. In what year were you born? (Fill in blank.)

1956 YEAR

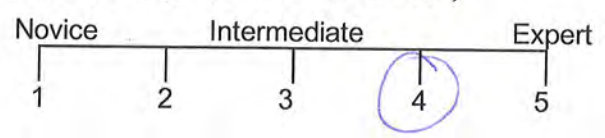
THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Pre-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: 5-21-17 Participant ID#: 4

THIS SECTION ASKS ABOUT YOUR BOATING EXPERIENCE

- What is your primary activity for on-water boating? (Check one box.)
 - Whitewater kayaking/canoeing
 - Flatwater kayaking/canoeing
 - Other – please specify: _____
- How many total years have you been participating in whitewater or flatwater kayaking/canoeing? (Fill in blank.)
20 TOTAL YEARS EXPERIENCE
- On a scale from 1 to 5, with 1 being novice/not very experienced, 3 being intermediate/moderately experienced, and 5 being expert/very experienced, how would you rate your ability for whitewater or flatwater kayaking/canoeing? (Circle one number.)



THIS SECTION ASKS ABOUT YOUR EXPERIENCE IN THE AUBURN REGION

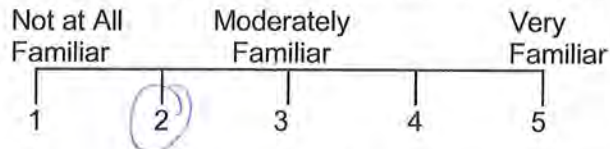
- How often do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

<input type="checkbox"/> Weekly / At least once per week	<input type="checkbox"/> At least once per year
<input type="checkbox"/> Monthly / At least once per month	<input checked="" type="checkbox"/> Less than one time per year
<input type="checkbox"/> Several times per year	<input type="checkbox"/> Never
- During what month(s) do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check all that apply.)

<input type="checkbox"/> January	<input type="checkbox"/> February
<input type="checkbox"/> March	<input type="checkbox"/> April
<input type="checkbox"/> May	<input checked="" type="checkbox"/> June
<input checked="" type="checkbox"/> July	<input checked="" type="checkbox"/> August
<input checked="" type="checkbox"/> September	<input type="checkbox"/> October
<input type="checkbox"/> November	<input type="checkbox"/> December
- In the past year, how many days have you participated in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)
1 TOTAL DAYS PARTICIPATING IN THE PAST YEAR

**Pre-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Circle one number.)



8. How many years of experience do you have participating in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)
- 2 YEARS
9. What recreation site do you typically use when participating in **whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: not sure of name

10. What section(s) of **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project** do you typically use when participating in recreation activities? (Check all that apply – please indicate specific location as appropriate.)

- Little Androscoggin River - please specify: _____
- Androscoggin River – please specify: where it's like a lake
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)

- Male Female

12. Do you own a permanent or seasonal home **in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?** What is your zip code? (Check one box and fill in the blank for zip code.)

- YES Permanent Home → ZIP CODE: _____
- YES Seasonal Home → ZIP CODE: _____
- NO Not a resident of Lewiston/Auburn → ZIP CODE: 04075

13. In what year were you born? (Fill in blank.)

1957 YEAR

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

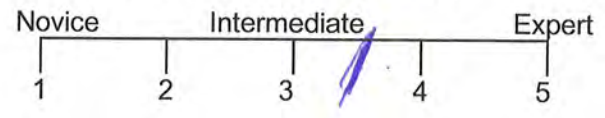
#5

Pre-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: 21 May Participant ID#: Paul O'Donnell

THIS SECTION ASKS ABOUT YOUR BOATING EXPERIENCE

- What is your primary activity for on-water boating? (Check one box.)
 - Whitewater kayaking/canoeing
 - Flatwater kayaking/canoeing
 - Other – please specify: _____
- How many total years have you been participating in whitewater or flatwater kayaking/canoeing? (Fill in blank.)
25 TOTAL YEARS EXPERIENCE
- On a scale from 1 to 5, with 1 being novice/not very experienced, 3 being intermediate/moderately experienced, and 5 being expert/very experienced, how would you rate your ability for whitewater or flatwater kayaking/canoeing? (Circle one number.)



THIS SECTION ASKS ABOUT YOUR EXPERIENCE IN THE AUBURN REGION

- How often do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

<input type="checkbox"/> Weekly / At least once per week	<input checked="" type="checkbox"/> At least once per year
<input type="checkbox"/> Monthly / At least once per month	<input type="checkbox"/> Less than one time per year
<input type="checkbox"/> Several times per year	<input type="checkbox"/> Never
- During what month(s) do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check all that apply.)

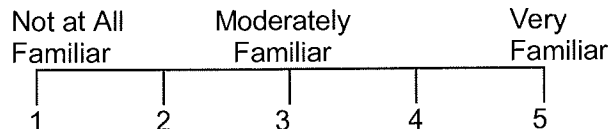
<input type="checkbox"/> January	<input type="checkbox"/> February
<input type="checkbox"/> March	<input type="checkbox"/> April
<input type="checkbox"/> May	<input type="checkbox"/> June
<input type="checkbox"/> July	<input type="checkbox"/> August
<input type="checkbox"/> September	<input type="checkbox"/> October
<input type="checkbox"/> November	<input type="checkbox"/> December

Never on Little Androscoggin
- In the past year, how many days have you participated in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)

_____ TOTAL DAYS PARTICIPATING IN THE PAST YEAR
I've done the "Andro. Trek to the Sea" 4 times

Pre-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with ***the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?*** (Circle one number.)



8. How many years of experience do you have participating in recreation activities ***on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?*** (Fill in blank.)
- _____ YEARS
9. What recreation site do you typically use when participating in ***whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?*** (Check one box.)
- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: _____
10. What section(s) of ***the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project*** do you typically use when participating in recreation activities? (Check **all** that apply – please indicate specific location as appropriate.)
- Little Androscoggin River - please specify: _____
- Androscoggin River – please specify: _____
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)
- Male Female
12. Do you own a permanent or seasonal home ***in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?*** What is your zip code? (Check one box and fill in the blank for zip code.)
- YES Permanent Home → ZIP CODE: _____
- YES Seasonal Home → ZIP CODE: _____
- NO Not a resident of Lewiston/Auburn → ZIP CODE: _____
13. In what year were you born? (Fill in blank.)
- _____ YEAR

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

**Pre-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: 05/21/17 Participant ID#: #6

THIS SECTION ASKS ABOUT YOUR BOATING EXPERIENCE

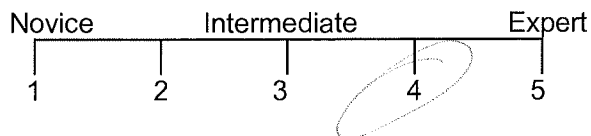
1. What is your primary activity for on-water boating? (Check one box.)

- Whitewater kayaking/canoeing
- Flatwater kayaking/canoeing
- Other – please specify: _____

2. How many total years have you been participating in **whitewater or flatwater kayaking/canoeing**? (Fill in blank.)

38 TOTAL YEARS EXPERIENCE

3. On a scale from 1 to 5, with 1 being novice/not very experienced, 3 being intermediate/moderately experienced, and 5 being expert/very experienced, how would you rate your ability for **whitewater or flatwater kayaking/canoeing**? (Circle one number.)



THIS SECTION ASKS ABOUT YOUR EXPERIENCE IN THE AUBURN REGION

4. How often do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check one box.)

- Weekly / At least once per week
- Monthly / At least once per month
- Several times per year
- At least once per year
- Less than one time per year
- Never

5. During what month(s) do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check all that apply.)

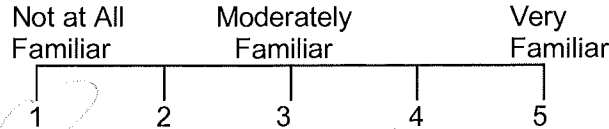
- January
- March
- May
- July
- September
- November
- February
- April
- June
- August
- October
- December

6. In the past year, how many days have you participated in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Fill in blank.)

0 TOTAL DAYS PARTICIPATING IN THE PAST YEAR

Pre-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Circle one number.)



8. How many years of experience do you have participating in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)

2 YEARS

9. What recreation site do you typically use when participating in **whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: _____

10. What section(s) of **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project** do you typically use when participating in recreation activities? (Check all that apply – please indicate specific location as appropriate.)

- Little Androscoggin River - please specify: _____
- Androscoggin River – please specify: Androscoggin River/and State Park
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)

- Male
- Female

12. Do you own a permanent or seasonal home **in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?** What is your zip code? (Check one box and fill in the blank for zip code.)

- YES Permanent Home → ZIP CODE: 04210
- YES Seasonal Home → ZIP CODE: _____
- NO Not a resident of Lewiston/Auburn → ZIP CODE: _____

13. In what year were you born? (Fill in blank.)

1948 YEAR

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

D

**Pre-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: 5/21/17Participant ID#: 7

THIS SECTION ASKS ABOUT YOUR BOATING EXPERIENCE

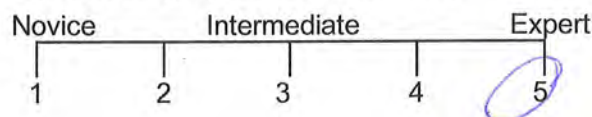
1. What is your primary activity for on-water boating? (Check one box.)

- Whitewater kayaking/canoeing
 Flatwater kayaking/canoeing
 Other – please specify: _____

2. How many total years have you been participating in **whitewater or flatwater kayaking/canoeing**? (Fill in blank.)

25 TOTAL YEARS EXPERIENCE

3. On a scale from 1 to 5, with 1 being novice/not very experienced, 3 being intermediate/moderately experienced, and 5 being expert/very experienced, how would you rate your ability for **whitewater or flatwater kayaking/canoeing**? (Circle one number.)



THIS SECTION ASKS ABOUT YOUR EXPERIENCE IN THE AUBURN REGION

4. How often do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check one box.)

- | | |
|--|---|
| <input type="checkbox"/> Weekly / At least once per week | <input type="checkbox"/> At least once per year |
| <input type="checkbox"/> Monthly / At least once per month | <input checked="" type="checkbox"/> Less than one time per year |
| <input type="checkbox"/> Several times per year | <input type="checkbox"/> Never |

5. During what month(s) do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check all that apply.)

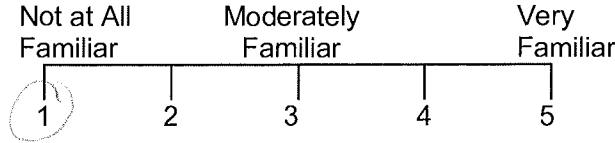
- | | |
|---|---|
| <input type="checkbox"/> January | <input type="checkbox"/> February |
| <input type="checkbox"/> March | <input checked="" type="checkbox"/> April |
| <input checked="" type="checkbox"/> May | <input checked="" type="checkbox"/> June |
| <input type="checkbox"/> July | <input type="checkbox"/> August |
| <input type="checkbox"/> September | <input type="checkbox"/> October |
| <input type="checkbox"/> November | <input type="checkbox"/> December |

6. In the past year, how many days have you participated in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Fill in blank.)

0 TOTAL DAYS PARTICIPATING IN THE PAST YEAR

Pre-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Circle one number.)



8. How many years of experience do you have participating in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)

0 YEARS

9. What recreation site do you typically use when participating in **whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: _____

10. What section(s) of **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project** do you typically use when participating in recreation activities? (Check all that apply – please indicate specific location as appropriate.)

- Little Androscoggin River - please specify: _____
- Androscoggin River – please specify: _____
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)

- Male
- Female

12. Do you own a permanent or seasonal home **in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?** What is your zip code? (Check one box and fill in the blank for zip code.)

- YES Permanent Home → ZIP CODE: _____
- YES Seasonal Home → ZIP CODE: _____
- NO Not a resident of Lewiston/Auburn → ZIP CODE: 04105

13. In what year were you born? (Fill in blank.)

1957 YEAR

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Pre-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: _____ Participant ID#: _____

THIS SECTION ASKS ABOUT YOUR BOATING EXPERIENCE

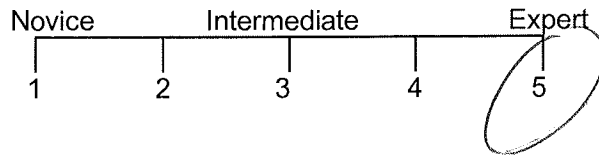
1. What is your primary activity for on-water boating? (Check one box.)

- Whitewater kayaking/canoeing
- Flatwater kayaking/canoeing
- Other – please specify: _____

2. How many total years have you been participating in **whitewater or flatwater kayaking/canoeing**? (Fill in blank.)

60 TOTAL YEARS EXPERIENCE

3. On a scale from 1 to 5, with 1 being novice/not very experienced, 3 being intermediate/moderately experienced, and 5 being expert/very experienced, how would you rate your ability for **whitewater or flatwater kayaking/canoeing**? (Circle one number.)



THIS SECTION ASKS ABOUT YOUR EXPERIENCE IN THE AUBURN REGION

4. How often do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check one box.)

- Weekly / At least once per week
- Monthly / At least once per month
- Several times per year
- At least once per year
- Less than one time per year
- Never

5. During what month(s) do you typically participate in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Check all that apply.)

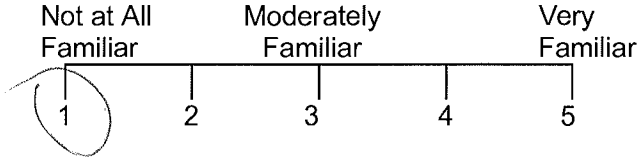
- January
- March
- May
- July
- September
- November
- February
- April
- June
- August
- October
- December

6. In the past year, how many days have you participated in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project**? (Fill in blank.)

0 TOTAL DAYS PARTICIPATING IN THE PAST YEAR

**Pre-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

7. On a scale from 1 to 5, with 1 being not at all familiar, 3 being moderately familiar, and 5 being very familiar, how would you rate your familiarity with **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Circle one number.)



8. How many years of experience do you have participating in recreation activities **on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Fill in blank.)

0 YEARS

9. What recreation site do you typically use when participating in **whitewater or flatwater kayaking/canoeing on the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project?** (Check one box.)

- None - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project
- Little Andy Park
- Lower Barker Informal Angling Access Area
- Other – please specify: _____

10. What section(s) of **the Little Androscoggin River or the Androscoggin River in the vicinity of the Lower Barker Project** do you typically use when participating in recreation activities? (Check all that apply – please indicate specific location as appropriate.)

- Little Androscoggin River - please specify: _____
- Androscoggin River – please specify: _____
- Neither - I have not paddled the Little Androscoggin River or the Androscoggin River in the vicinity of the Project

THIS SECTION ASKS ABOUT YOU PERSONALLY

11. What is your gender? (Check one box.)

- Male
- Female

12. Do you own a permanent or seasonal home **in the vicinity of the Lower Barker Project (i.e., Lewiston or Auburn)?** What is your zip code? (Check one box and fill in the blank for zip code.)

- YES Permanent Home → ZIP CODE: 02491
- YES Seasonal Home → ZIP CODE: _____
- NO Not a resident of Lewiston/Auburn → ZIP CODE: 04901

13. In what year were you born? (Fill in blank.)

1944 YEAR

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

APPENDIX B

POST-RUN FLOW EVALUATION: 590 CFS

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: 5/21 Flow: 600 ft Participant ID#: 1

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed *at the Lower Barker bypass reach today?* (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use *at the Lower Barker bypass reach today?* (Check one box.)

- Hard Shell Kayak
 Closed Deck Canoe
 Raft
 Inflatable Kayak
 Open Canoe
 Other: _____

3. What time did you put-in on the water *at the Lower Barker bypass reach today?* (Fill in blank.)

11 am/pm ^{+/-}

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

12:23 am/pm 2 RUNS

600 of

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

Although start run the rapids are not too overpowering and could be a good practice area but in + take out are reasonably convenient and it is walkable under 1/4 mile?

#1
600cf

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: Put in trail Description: steep may be slipping
in rainy / or wet weather

Location: in river Description: Typical trees / branches

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

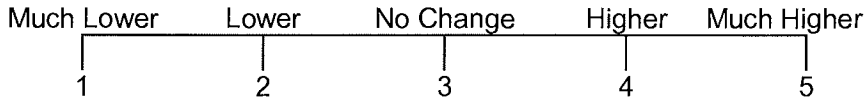
Location: upper section Description: good play surfing

Location: lower section Description: good attainment practice
Below Bridge / above take out site

#1 600 cfs

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) _____

15. Do you have any additional comments? (Fill in the blank.) _____

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: 5/27/17 Flow: 590 Participant ID#: 2

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed *at the Lower Barker bypass reach today?* (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use *at the Lower Barker bypass reach today?* (Check one box.)

- Hard Shell Kayak
 Closed Deck Canoe
 Raft
 Inflatable Kayak
 Open Canoe
 Other: _____

3. What time did you put-in on the water *at the Lower Barker bypass reach today?* (Fill in blank.)

10:00 am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

11:45 am / pm

#2 600 cfs

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

good short white water run that could benefit from more water

#2 600 cfs

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

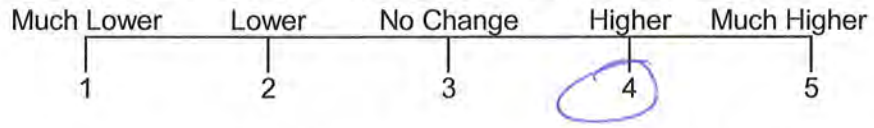
Location: near just below park Description: sur features

Location: _____ Description: _____

#2 600 cfs

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) yes but higher would be better

15. Do you have any additional comments? (Fill in the blank.)

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: 5/21/17 Flow: 600 Participant ID#: 3

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- Hard Shell Kayak Inflatable Kayak
 Closed Deck Canoe Open Canoe
 Raft Other: _____

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

#3 600 cfs

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

Kind of short duration of white water
few nice play waves. ~~It~~ Nice short
run.

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

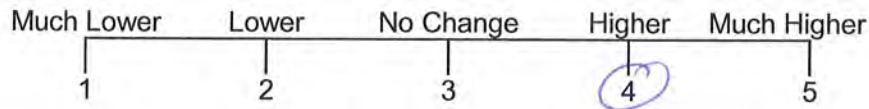
11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: River Description: genie

Location: Put in Description: Nice whitewater

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) Nice short run for a boater.

15. Do you have any additional comments? (Fill in the blank.) Think it would be a great run for people learning whitewater and a good run for more advanced. Pretty area.

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: 5-26-17 Flow: 600 Participant ID#: (4)

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
- Whitewater canoeing/kayaking
- Wade angling
- Shoreline angling
- Tubing → SKIP TO QUESTION 3
- Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Hard Shell Kayak | <input type="checkbox"/> Inflatable Kayak |
| <input type="checkbox"/> Closed Deck Canoe | <input type="checkbox"/> Open Canoe |
| <input type="checkbox"/> Raft | <input type="checkbox"/> Other: _____ |

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

#4 600 cfs

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

THE FIRST RAPID IS FLOW AND HAS SOME SWIF WAVES.
 THE REMAINDER IS LARGELY FLAT.
 (1) channel better quick water
 (2) channel too low at this level

#4. 600 CF

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

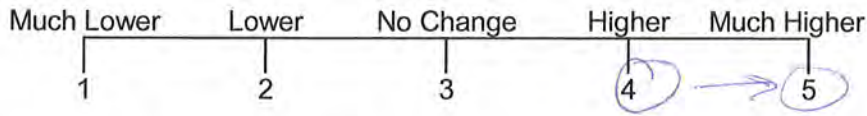
Location: _____ Description: _____

Location: _____ Description: _____

#4 600 cfs

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) I am 45 minutes away and likely
wouldn't make the drive for such a short run

15. Do you have any additional comments? (Fill in the blank.) If slow gates
were put in - I would do slow

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: 21 May Flow: 580 Participant ID#: #5

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- Hard Shell Kayak
 Closed Deck Canoe
 Raft
 Inflatable Kayak
 Open Canoe
 Other: _____

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

10 00 am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

11 00 am / pm

at 590 fps the top is a good class 4 play spot
 with 2 play drops. the next section
 right is too rocky/shallow, the ~~right~~ left
 side has more water & some surf waves -
 then the bottom section is scenic flatwater
 with viles - probably good fishing area.

#5 6000 CF

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

#5 600 cfs

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: Right side Description: many rocks

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

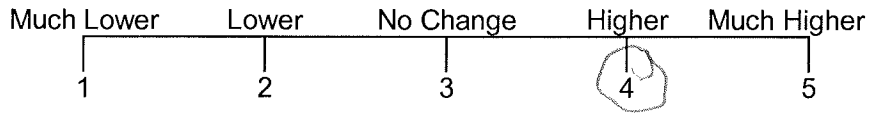
Location: Top nearest Dam Description: good play spots class 4

Location: _____ Description: _____

#5 600 cfs

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) _____

15. Do you have any additional comments? (Fill in the blank.) _____

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: 05/21/17 Flow: 600 Participant ID#: #6

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed *at the Lower Barker bypass reach today?* (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use *at the Lower Barker bypass reach today?* (Check one box.)

- Hard Shell Kayak
 Closed Deck Canoe
 Raft
 Inflatable Kayak
 Open Canoe
 Other: _____

3. What time did you put-in on the water *at the Lower Barker bypass reach today?* (Fill in blank.)

11:00 am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

#6 600 ft

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input checked="" type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

The upper + left channel of the river has play potential at a higher level. There are surfing waves that develop with nearby eddies.

6 600 FS

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

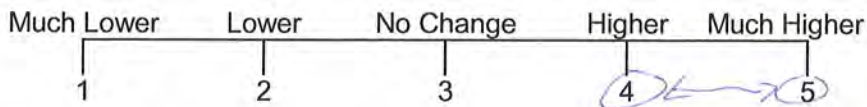
Location: _____ Description: _____

Location: _____ Description: _____

#6 600 cfs

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) The flow is too low

15. Do you have any additional comments? (Fill in the blank.) The Barker's Mill section has play potential at higher flows - It could be attractive to boaters

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: 5/21/17 Flow: 590 Participant ID#: 7

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- Hard Shell Kayak Inflatable Kayak
 Closed Deck Canoe Open Canoe
 Raft Other: _____

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

11 am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

#7 6000 ft/s

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

Some decent play waves early, below dam.
 Left channel better than right at this level.
 Play ends pretty quickly.

> 600 of

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: below dam, 1st Description: play waves

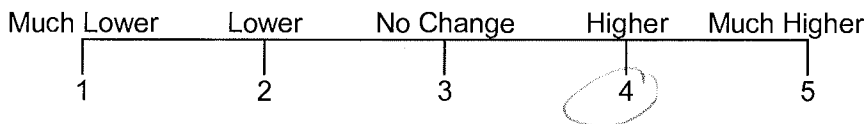
200 yds

Location: _____ Description: _____

#7 600 cfs

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) Insufficient fun over a
short run. It's over too soon, and nicer
features aren't part and play.

15. Do you have any additional comments? (Fill in the blank.) the river is
pretty

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: _____ Flow: 600 Participant ID#: 8

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- Hard Shell Kayak
 Closed Deck Canoe
 Raft
 Inflatable Kayak
 Open Canoe
 Other: _____

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

Morning am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

paddled Right side and Left side
 Right side had lots of Rock cross
 to surface and more difficult.

Left side more distance between
 Rock & surface. Easier paddle

#8 600 CF

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

Beautiful River

#8 600 CF

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: Top Description: I avoided first two drops. Have not paddle before

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

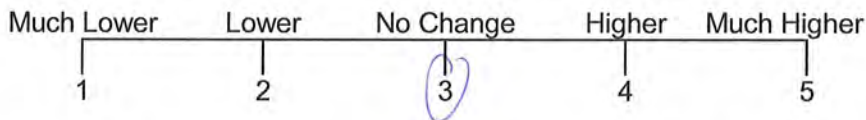
Location: Trees near banks Description: _____
banks need to be removed

Location: Near island Description: _____

#8 600 cfs

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.)

Higher River Flow, will bring in more challenges. Degree of expertise will have to be higher.

15. Do you have any additional comments? (Fill in the blank.)

Great asset. Enjoy.

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

APPENDIX C

POST-RUN FLOW EVALUATION: 350 CFS

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: _____ Flow: 300 Participant ID#: _____

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
REACH TODAY**

1. What is the primary recreation activity that you participated in or observed *at the Lower Barker bypass reach today?* (Check one box.)

- Flatwater canoeing/kayaking
- Whitewater canoeing/kayaking
- Wade angling
- Shoreline angling
- Tubing → SKIP TO QUESTION 3
- Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use *at the Lower Barker bypass reach today?* (Check one box.)

- Hard Shell Kayak
- Closed Deck Canoe
- Raft
- Inflatable Kayak
- Open Canoe
- Other: _____

3. What time did you put-in on the water *at the Lower Barker bypass reach today?* (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

300 (fs)

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

ID# 1

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

Although there was still some features available the flow/water level was low and made it harder to use them effectively

#1 300 ft/s

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

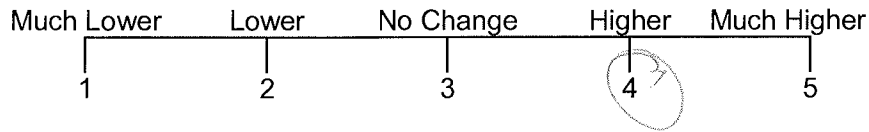
Location: _____ Description: _____
the area below Main Street bridge, seems to be the same; i.e. OK for attainment practice

Location: _____ Description: _____

1 300 CF

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) too low to travel this distance
for what is available

15. Do you have any additional comments? (Fill in the blank.)

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: _____ Flow: 300 Participant ID#: 7

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
 Whitewater canoeing/kayaking
 Wade angling
 Shoreline angling
 Tubing → SKIP TO QUESTION 3
 Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- Hard Shell Kayak Inflatable Kayak
 Closed Deck Canoe Open Canoe
 Raft Other: _____

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

300 cfs

ID# 2

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

A little too low on some parts
OK for play

#2 300 ft

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

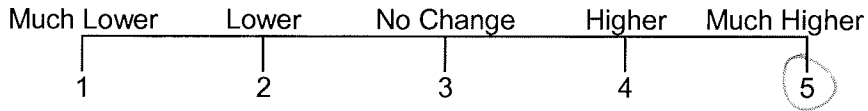
Location: below Dam Description: Play waterfalls

Location: _____ Description: _____

#2 300 (fs)

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) ok for some play waves

15. Do you have any additional comments? (Fill in the blank.)

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: 5/21/17 Flow: 300 Participant ID#: 3

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed *at the Lower Barker bypass reach today?* (Check one box.)

- Flatwater canoeing/kayaking
- Whitewater canoeing/kayaking
- Wade angling
- Shoreline angling
- Tubing → SKIP TO QUESTION 3
- Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use *at the Lower Barker bypass reach today?* (Check one box.)

- | | |
|--|---|
| <input type="checkbox"/> Hard Shell Kayak | <input type="checkbox"/> Inflatable Kayak |
| <input type="checkbox"/> Closed Deck Canoe | <input type="checkbox"/> Open Canoe |
| <input type="checkbox"/> Raft | <input type="checkbox"/> Other: _____ |

3. What time did you put-in on the water *at the Lower Barker bypass reach today?* (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

ID# 3

300 ft

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

The flow is still good for running just more rocks to miss, still a nice paddle at this level and still scenic!

3 300 (8)

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)					Flow was? (Check one box)			
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: Upper Dam Description: Rocks

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

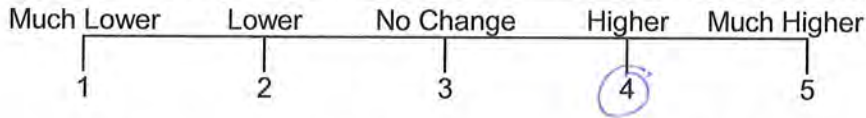
Location: Upper Dam Description: play waves

Location: whole Run Description: scenic

#3 300 of

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) still a good run at this level

15. Do you have any additional comments? (Fill in the blank.) Surprised was able to run the river but was nice

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

~~#4~~ 3

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: 5-26 Flow: 300 Participant ID#: 4

THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS REACH TODAY

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
- Whitewater canoeing/kayaking
- Wade angling
- Shoreline angling
- Tubing → SKIP TO QUESTION 3
- Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Hard Shell Kayak | <input type="checkbox"/> Inflatable Kayak |
| <input type="checkbox"/> Closed Deck Canoe | <input type="checkbox"/> Open Canoe |
| <input type="checkbox"/> Raft | <input type="checkbox"/> Other: _____ |

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)
_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)
1:45 am / pm

300 cfs

ID# 4

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

The lower level was runnable in the (L) channel
 The opening rapid is more fun with more water.
 There were surfable waves at each level.
 (L) channel has couple of strainers, but in areas without current.

#4 300 of 3

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

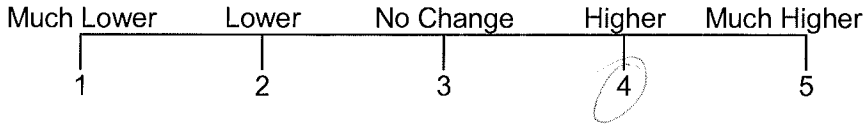
Location: _____ Description: _____

Location: _____ Description: _____

#4 300 of 3

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) Too far from my house for a
short drive.

15. Do you have any additional comments? (Fill in the blank.) Nice to have in the middle of town.

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: _____ Flow: 500 Participant ID#: 6

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed *at the Lower Barker bypass reach today?* (Check one box.)

- Flatwater canoeing/kayaking
- Whitewater canoeing/kayaking
- Wade angling
- Shoreline angling
- Tubing → SKIP TO QUESTION 3
- Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use *at the Lower Barker bypass reach today?* (Check one box.)

- Hard Shell Kayak
- Closed Deck Canoe
- Raft
- Inflatable Kayak
- Open Canoe
- Other: _____

3. What time did you put-in on the water *at the Lower Barker bypass reach today?* (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

300 cfs

ID# 6

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)



The flow at 2-300 is too low for a quality white water experience. Exposed & unexposed rocks have a pinning potential. The quality of surfing waves or holes is low.

6 300 of 3

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

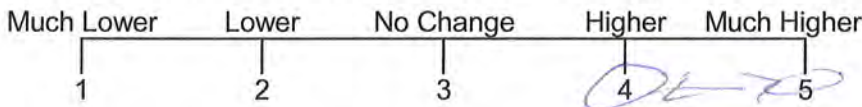
Location: _____ Description: _____

Location: _____ Description: _____

#6 300 ft

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) Water levels are
too low for good play.

15. Do you have any additional comments? (Fill in the blank.) The area has
potential with higher levels or
man made construction of riverbed formations.

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: _____	Flow: <u>300</u>	Participant ID#: <u>7</u>
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**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
- Whitewater canoeing/kayaking
- Wade angling
- Shoreline angling
- Tubing → SKIP TO QUESTION 3
- Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- | | |
|--|---|
| <input type="checkbox"/> Hard Shell Kayak | <input type="checkbox"/> Inflatable Kayak |
| <input type="checkbox"/> Closed Deck Canoe | <input type="checkbox"/> Open Canoe |
| <input type="checkbox"/> Raft | <input type="checkbox"/> Other: _____ |

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

ID# 7

300 CF

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

Just a bit too low, relative to the higher release. Lots of just-hidden rocks blocking eddies and features.

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: Early in run Description: some ok play waves,

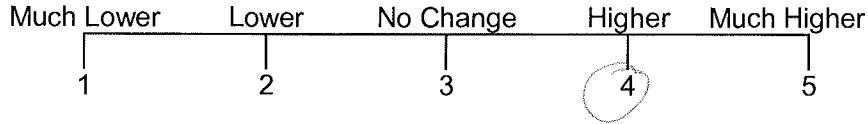
but a bit low with rocks blocking access

Location: _____ Description: _____

7 300 GFS

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) Not enough to do in a short
run.

15. Do you have any additional comments? (Fill in the blank.) _____

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

Date: _____ Flow: 300 Participant ID#: 6

**THIS SECTION ASKS ABOUT YOUR PARTICIPATION IN OR OBSERVATION OF WHITEWATER OR
 FLATWATER KAYAKING/CANOEING (OR OTHER ACTIVITY) ON THE LOWER BARKER BYPASS
 REACH TODAY**

1. What is the primary recreation activity that you participated in or observed **at the Lower Barker bypass reach today?** (Check one box.)

- Flatwater canoeing/kayaking
- Whitewater canoeing/kayaking
- Wade angling
- Shoreline angling
- Tubing → SKIP TO QUESTION 3
- Other: please specify _____ → SKIP TO QUESTION 3

2. What type of craft did you use **at the Lower Barker bypass reach today?** (Check one box.)

- | | |
|--|---|
| <input type="checkbox"/> Hard Shell Kayak | <input type="checkbox"/> Inflatable Kayak |
| <input type="checkbox"/> Closed Deck Canoe | <input type="checkbox"/> Open Canoe |
| <input type="checkbox"/> Raft | <input type="checkbox"/> Other: _____ |

3. What time did you put-in on the water **at the Lower Barker bypass reach today?** (Fill in blank.)

_____ am / pm

4. What time did you take-out of the water at Little Andy Park? (Fill in blank.)

_____ am / pm

ID# 8

300 cfs

Post-Run Flow Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

THIS SECTION ASKS ABOUT YOUR EXPERIENCE AT THE LOWER BARKER BYPASS REACH TODAY

5. Please evaluate this flow for your primary activity and experience level for each of the following characteristics of **the Lower Barker bypass reach today**. (Check N/A box if characteristic is not applicable to your activity. Circle one rating number for each characteristic. Check one box for flow level rating.)

Right side

Characteristic	N/A	Please Rate Each Characteristic (Circle one number)					Flow was? (Check one box)		
		Unacceptable	Poor	Neutral	Good	Excellent	Too Low	Just Right	Too High
Navigability	<input type="checkbox"/>	1	2	3	4	5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wadeability	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Rapids	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Depth	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of Whitewater "Play Areas"	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Craft Rate of Travel	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Rocks	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure of Sand/Gravel Bars	<input checked="" type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eddies	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Force of Water	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed of Water/Current	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to flow levels)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety (due to debris, other hazards)	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetic Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Quality	<input type="checkbox"/>	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please provide a brief explanation of your rating of the overall quality of your experience or observation. (Fill in the blank.)

Nice River - Fun paddle - short paddle
Pn canes. Play boat can enjoy the river
more

8 300 of 3

**Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

7. Please evaluate the suitability of this flow **at the Lower Barker bypass reach today** for your primary activity for each experience level. (Circle one rating number for each experience level or check "Don't Know" if you cannot provide a rating. Check one box for flow level rating.)

Experience Level	Please Rate the Suitability of this Flow for Each Experience Level (Circle one number)						Flow was? (Check one box)		
	Unacceptable	Poor	Neutral	Good	Excellent	Don't Know	Too Low	Just Right	Too High
Novice	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert	1	2	3	4	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Did you experience or did you observe any significant problems or specific safety hazards associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 10

9. Please provide the location and a brief description of any experienced or observed hazards during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: _____ Description: _____

Location: _____ Description: _____

10. Did you experience or did you observe any outstanding features or opportunities associated with your primary activity during this flow **on the Lower Barker bypass reach today**? (Check one box.)

- YES
- NO → SKIP TO QUESTION 12

11. Please provide a brief description and location of any experienced or observed outstanding features or opportunities during this flow **on the Lower Barker bypass reach today**. (Fill in the blank.)

Location: Islands Description: The islands are

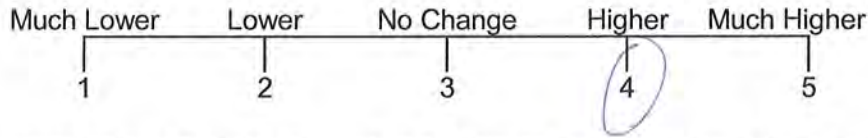
Beautiful and could have a walking
Bridge to in on the right bank to the

Location: _____ Description: _____

Island. Clean up the stress and put picnic table
for people to enjoy. Fishing is great for
people & fishing.

Post-Run Flow Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

12. Compared to **this flow level**, would you prefer a level that was higher, lower, or about the same for the activity you participated in or observed **at the Lower Barker bypass reach**? (Circle one number.)



13. Given the opportunity, would you choose to participate in this activity **at the Lower Barker bypass reach** at **this flow level**? (Check one box.)

- YES
- NO

14. Why or why not? (Fill in the blank.) _____

15. Do you have any additional comments? (Fill in the blank.) _____

This would make great park.

THANK YOU FOR YOUR HELP! WE APPRECIATE YOUR TIME TODAY!

APPENDIX D

FLOW COMPARISON EVALUATION

**Flow Comparison Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study**

Date: 5/21/2017 Participant ID#: 1

- Which flows did you participate in? (Check all that apply.)
 300 cfs 500 cfs 600 cfs
 +/ - +/ -
- Which of the following best describes your desired experience for this reach? (Check one)
 I am interested in whitewater boating trips that include technical elements (e.g., powerful hydraulics, whitewater "play areas," challenging rapids).
 I am interested in family-friendly, non-technical float (i.e., flatwater) trips that do not require previous technical boating experience, specialized equipment, or include challenging rapids.
 I am interested in wade angling.
 I am interested in shoreline angling.
 I am interested in other activities (e.g., tubing).
- Please provide overall evaluations for the following flows based on your craft, skill level, and desired experience. Please consider all of the flow-dependent characteristics that contribute to high quality trips (e.g., boatability, challenge, safety, aesthetics, etc.).

Flow	Unacceptable	Poor	Neutral	Good	Excellent
300 cfs	1	2	3	4	5
500 cfs	1	2	3	4	5
600 cfs	1	2	3	4	5

- Based on your desired experience selected in Question 2, your skill level, and craft, please specify the flows that you think would provide the following types of experiences in **the Lower Barker 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 minimum quality experience?	about 450
What flow provides the highest quality (i.e., optimal flow) experience?	600
What is the lowest flow that provides a safe experience?	300 +/-
What is the highest flow that provides a safe experience?	800
What is the highest flow you would consider boating or angling?	800

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

5. Compared to other river reaches of similar difficulty, how would you rate the boating opportunity at **the Lower Barker Bypass Reach** (assume optimal flows). (Circle one number for each. If you are unsure about a comparison, leave that item blank).

Compared to river reaches of similar difficulty...	the Lower Barker bypass reach is....				
	Far Below Average	Below Average	Average	Above Average	Much Better than Average
Other reaches within a 2-hour drive	1	2	3	4	5
Other reaches in New England	1	2	3	4	5

6. Please provide any additional comments or relevant information regarding the flows that you participated in today.

although it a short run, there are a few spots worthy of consideration for practice and easy river running / tubing

**THANK YOU FOR YOUR PARTICIPATION!
WE APPRECIATE YOUR TIME TODAY!**

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: 5/21/17 Participant ID#: 2

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

- 300 cfs 500 cfs 600 cfs

2. Which of the following best describes your desired experience for this reach? (Check one)

- I am interested in whitewater boating trips that include technical elements (e.g., powerful hydraulics, whitewater "play areas," challenging rapids).
- I am interested in family-friendly, non-technical float (i.e., flatwater) trips that do not require previous technical boating experience, specialized equipment, or include challenging rapids.
- I am interested in wade angling.
- I am interested in shoreline angling.
- I am interested in other activities (e.g., tubing).

3. Please provide overall evaluations for the following flows based on your craft, skill level, and desired experience. Please consider all of the flow-dependent characteristics that contribute to high quality trips (e.g., boatability, challenge, safety, aesthetics, etc.).

Flow	Unacceptable	Poor	Neutral	Good	Excellent
300 cfs	1	2	3	4	5
500 cfs	1	2	3	4	5
600 cfs	1	2	3	4	5

4. Based on your desired experience selected in Question 2, your skill level, and craft, please specify the flows that you think would provide the following types of experiences in **the Lower Barker 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 minimum quality experience?	350
What flow provides the highest quality (i.e., optimal flow) experience?	Undetermined 800?
What is the lowest flow that provides a safe experience?	350
What is the highest flow that provides a safe experience?	Unknown
What is the highest flow you would consider boating or angling?	3000 cfs

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

5. Compared to other river reaches of similar difficulty, how would you rate the boating opportunity at ***the Lower Barker Bypass Reach*** (assume optimal flows). (Circle one number for each. If you are unsure about a comparison, leave that item blank).

Compared to river reaches of similar difficulty...	the Lower Barker bypass reach is....				
	Far Below Average	Below Average	Average	Above Average	Much Better than Average
Other reaches within a 2-hour drive	1	2	3	4	5
Other reaches in New England	1	2	3	4	5

6. Please provide any additional comments or relevant information regarding the flows that you participated in today.

good spot for local recreation. great place to go for a short period to paddle

**THANK YOU FOR YOUR PARTICIPATION!
WE APPRECIATE YOUR TIME TODAY!**

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: <u>5/21/17</u>	Participant ID#: <u>3</u>
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1. Which flows did you participate in? (Check all that apply.)

- 300 cfs 500 cfs 600 cfs

2. Which of the following best describes your desired experience for this reach? (Check one)

- I am interested in whitewater boating trips that include technical elements (e.g., powerful hydraulics, whitewater "play areas," challenging rapids).
- I am interested in family-friendly, non-technical float (i.e., flatwater) trips that do not require previous technical boating experience, specialized equipment, or include challenging rapids.
- I am interested in wade angling.
- I am interested in shoreline angling.
- I am interested in other activities (e.g., tubing).

3. Please provide overall evaluations for the following flows based on your craft, skill level, and desired experience. Please consider all of the flow-dependent characteristics that contribute to high quality trips (e.g., boatability, challenge, safety, aesthetics, etc.).

Flow	Unacceptable	Poor	Neutral	Good	Excellent
300 cfs	1	2	3	4	5
500 cfs	1	2	3	4	5
600 cfs	1	2	3	4	5

4. Based on your desired experience selected in Question 2, your skill level, and craft, please specify the flows that you think would provide the following types of experiences in **the Lower Barker 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 minimum quality experience?	300
What flow provides the highest quality (i.e., optimal flow) experience?	800?
What is the lowest flow that provides a safe experience?	300
What is the highest flow that provides a safe experience?	?
What is the highest flow you would consider boating or angling?	800?

Flow Comparison Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

5. Compared to other river reaches of similar difficulty, how would you rate the boating opportunity at **the Lower Barker Bypass Reach** (assume optimal flows). (Circle one number for each. If you are unsure about a comparison, leave that item blank).

Compared to river reaches of similar difficulty...	the Lower Barker bypass reach is....				
	Far Below Average	Below Average	Average	Above Average	Much Better than Average
Other reaches within a 2-hour drive	1	2	3	4	5
Other reaches in New England	1	2	3	4	5

6. Please provide any additional comments or relevant information regarding the flows that you participated in today.

I think what's nice is how short the run is which means you can paddle the upper part many times scenic paddle

THANK YOU FOR YOUR PARTICIPATION!
WE APPRECIATE YOUR TIME TODAY!

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: 5-21 Participant ID#: 4

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

- 300 cfs 500 cfs 600 cfs

2. Which of the following best describes your desired experience for this reach? (Check one)

- I am interested in whitewater boating trips that include technical elements (e.g., powerful hydraulics, whitewater "play areas," challenging rapids).
- I am interested in family-friendly, non-technical float (i.e., flatwater) trips that do not require previous technical boating experience, specialized equipment, or include challenging rapids.
- I am interested in wade angling.
- I am interested in shoreline angling.
- I am interested in other activities (e.g., tubing).

3. Please provide overall evaluations for the following flows based on your craft, skill level, and desired experience. Please consider all of the flow-dependent characteristics that contribute to high quality trips (e.g., boatability, challenge, safety, aesthetics, etc.).

Flow	Unacceptable	Poor	Neutral	Good	Excellent
300 cfs	1	2	3	4	5
500 cfs	1	2	3	4	5
600 cfs	1	2	3	4	5

4. Based on your desired experience selected in Question 2, your skill level, and craft, please specify the flows that you think would provide the following types of experiences in **the Lower Barker 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 minimum quality experience?	600
What flow provides the highest quality (i.e., optimal flow) experience?	> 600
What is the lowest flow that provides a safe experience?	300
What is the highest flow that provides a safe experience?	not sure > 600
What is the highest flow you would consider boating or angling?	not sure > 600

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

5. Compared to other river reaches of similar difficulty, how would you rate the boating opportunity at **the Lower Barker Bypass Reach** (assume optimal flows). (Circle one number for each. If you are unsure about a comparison, leave that item blank).

Compared to river reaches of similar difficulty...	the Lower Barker bypass reach is....				
	Far Below Average	Below Average	Average	Above Average	Much Better than Average
Other reaches within a 2-hour drive	1	(2)	3	4	5
Other reaches in New England	1	(2)	3	4	5

6. Please provide any additional comments or relevant information regarding the flows that you participated in today.

Maybe try at a higher flow level.

**THANK YOU FOR YOUR PARTICIPATION!
WE APPRECIATE YOUR TIME TODAY!**

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: 05/21/17 Participant ID#: #6

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

- 300 cfs 500 cfs 600 cfs

2. Which of the following best describes your desired experience for this reach? (Check one)

- I am interested in whitewater boating trips that include technical elements (e.g., powerful hydraulics, whitewater "play areas," challenging rapids).
- I am interested in family-friendly, non-technical float (i.e., flatwater) trips that do not require previous technical boating experience, specialized equipment, or include challenging rapids.
- I am interested in wade angling.
- I am interested in shoreline angling.
- I am interested in other activities (e.g., tubing).

3. Please provide overall evaluations for the following flows based on your craft, skill level, and desired experience. Please consider all of the flow-dependent characteristics that contribute to high quality trips (e.g., boatability, challenge, safety, aesthetics, etc.).

Flow	Unacceptable	Poor	Neutral	Good	Excellent
300 cfs	1	2	3	4	5
500 cfs	1	2	3	4	5
600 cfs	1	2	3	4	5

4. Based on your desired experience selected in Question 2, your skill level, and craft, please specify the flows that you think would provide the following types of experiences in **the Lower Barker 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 minimum quality experience?	600
What flow provides the highest quality (i.e., optimal flow) experience?	1000
What is the lowest flow that provides a safe experience?	600
What is the highest flow that provides a safe experience?	?
What is the highest flow you would consider boating or angling?	2000

Flow Comparison Evaluation Form
Lower Barker Bypass Reach Whitewater Flow Study

5. Compared to other river reaches of similar difficulty, how would you rate the boating opportunity at **the Lower Barker Bypass Reach** (assume optimal flows). (Circle one number for each. If you are unsure about a comparison, leave that item blank).

Compared to river reaches of similar difficulty...	the Lower Barker bypass reach is....				
	Far Below Average	Below Average	Average	Above Average	Much Better than Average
Other reaches within a 2-hour drive	1	2	3	4	5
Other reaches in New England	1	2	3	4	5

6. Please provide any additional comments or relevant information regarding the flows that you participated in today.

Higher releases (1000 cfs) may produce water levels more conducive to play boating. There is a spot (left channel) where a 0 man made slide could be built to produce a surfing wave/play hole at levels seen today (600 cfs).

THANK YOU FOR YOUR PARTICIPATION!
WE APPRECIATE YOUR TIME TODAY!

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: _____ Participant ID#: 7

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

- 300 cfs 500 cfs 600 cfs

2. Which of the following best describes your desired experience for this reach? (Check one)

- I am interested in whitewater boating trips that include technical elements (e.g., powerful hydraulics, whitewater "play areas," challenging rapids).
- I am interested in family-friendly, non-technical float (i.e., flatwater) trips that do not require previous technical boating experience, specialized equipment, or include challenging rapids.
- I am interested in wade angling.
- I am interested in shoreline angling.
- I am interested in other activities (e.g., tubing).

3. Please provide overall evaluations for the following flows based on your craft, skill level, and desired experience. Please consider all of the flow-dependent characteristics that contribute to high quality trips (e.g., boatability, challenge, safety, aesthetics, etc.).

Flow	Unacceptable	Poor	Neutral	Good	Excellent
300 cfs	1	2	3	4	5
500 cfs	1	2	3	4	5
600 cfs	1	2	3	4	5

4. Based on your desired experience selected in Question 2, your skill level, and craft, please specify the flows that you think would provide the following types of experiences in **the Lower Barker 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 minimum quality experience?	> 600
What flow provides the highest quality (i.e., optimal flow) experience?	600
What is the lowest flow that provides a safe experience?	300
What is the highest flow that provides a safe experience?	?
What is the highest flow you would consider boating or angling?	3000

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

5. Compared to other river reaches of similar difficulty, how would you rate the boating opportunity at ***the Lower Barker Bypass Reach*** (assume optimal flows). (Circle one number for each. If you are unsure about a comparison, leave that item blank).

Compared to river reaches of similar difficulty...	the Lower Barker bypass reach is....				
	Far Below Average	Below Average	Average	Above Average	Much Better than Average
Other reaches within a 2-hour drive	1	2	3	4	5
Other reaches in New England	1	2	3	4	5

6. Please provide any additional comments or relevant information regarding the flows that you participated in today.

**THANK YOU FOR YOUR PARTICIPATION!
WE APPRECIATE YOUR TIME TODAY!**

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

Date: 5/21/17 Participant ID#: 8

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

- 300 cfs 500 cfs 600 cfs

2. Which of the following best describes your desired experience for this reach? (Check one)

- I am interested in whitewater boating trips that include technical elements (e.g., powerful hydraulics, whitewater "play areas," challenging rapids).
- I am interested in family-friendly, non-technical float (i.e., flatwater) trips that do not require previous technical boating experience, specialized equipment, or include challenging rapids.
- I am interested in wade angling.
- I am interested in shoreline angling.
- I am interested in other activities (e.g., tubing).

3. Please provide overall evaluations for the following flows based on your craft, skill level, and desired experience. Please consider all of the flow-dependent characteristics that contribute to high quality trips (e.g., boatability, challenge, safety, aesthetics, etc.).

Flow	Unacceptable	Poor	Neutral	Good	Excellent
300 cfs	1	2	3	4	5
500 cfs	1	2	3	4	5
600 cfs	1	2	3	4	5

4. Based on your desired experience selected in Question 2, your skill level, and craft, please specify the flows that you think would provide the following types of experiences in **the Lower Barker 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 minimum quality experience?	either work high flow for play boats 300 is safe 500 ok for experts no opinion
What flow provides the highest quality (i.e., optimal flow) experience?	
What is the lowest flow that provides a safe experience?	
What is the highest flow that provides a safe experience?	
What is the highest flow you would consider boating or angling?	

Flow Comparison Evaluation Form Lower Barker Bypass Reach Whitewater Flow Study

5. Compared to other river reaches of similar difficulty, how would you rate the boating opportunity at **the Lower Barker Bypass Reach** (assume optimal flows). (Circle one number for each. If you are unsure about a comparison, leave that item blank).

Compared to river reaches of similar difficulty...	the Lower Barker bypass reach is....				
	Far Below Average	Below Average	Average	Above Average	Much Better than Average
Other reaches within a 2-hour drive	1	2	3	4	5
Other reaches in New England	1	2	3	4	5

There are a number of good/excellent paddling rivers in Maine. This too short to be competitive.

6. Please provide any additional comments or relevant information regarding the flows that you participated in today.

This would make a great park with the islands are beautiful. Put a bridge to island and let people picnic & fish. Clean up to dead trees in the water.

**THANK YOU FOR YOUR PARTICIPATION!
WE APPRECIATE YOUR TIME TODAY!**

APPENDIX E

RESPONSES TO OPEN-ENDED QUESTIONS

Table E1. Response to 590 cfs post-run survey Question 6: Explanation for rating of overall quality of the experience at 590 cfs.

Participant ID	Response
1	Although short run, the rapids are not too overpowering and could be a good practice area. Put in and take out are reasonably convenient and it is walkable (under 1/4 mile?).
2	Good short white water run that could benefit from more water.
3	Kind of short duration of white water. Few nice play waves. Nice short run.
4	The first rapid is fun and has some good waves. The remainder is largely flat. Left channel better quick water. Right channel too low at this level.
6	The upper and left channel of the river has play potential at a higher level. There are surfing waves that develop with nearby eddies.
7	Some decent play waves early below dam. Left channel better than right at this level. Play ends pretty quickly.
8	Beautiful river.

Table E2. Response to 590 cfs post-run survey Question 14: Reason why participant would or would not participate in whitewater boating activities at the Lower Barker bypassed reach at 590 cfs.

Participant ID	Response
2	Yes, but higher would be better.
3	Nice short run for a boater.
4	I am 45 minutes away and likely wouldn't make the drive for such a short run.
6	The flow is too low.
7	Insufficient fun over a short run. It's over too soon, and nicer features aren't park and play.
8	Higher river flow will bring in more challenges. Degree of expertise will have to be higher.

Table E3. Response to 590 cfs post-run survey Question 15: Additional Comments

Participant ID	Response
3	Think it would be great run for people learning whitewater, and a good run for more advanced. Pretty area.
4	If slalom gates were put in, I would do slalom.
5	At 590 cfs, the top is a good class 4 play spot with 2 play drops. The right is too rocky/shallow. The left side has more water and some surf waves. Then the bottom section is scenic flatwater with riffles- probably good fishing area.
6	The Barkers Mill section has play potential at higher flows. It could be attractive to boaters.
7	The river is pretty.
8	Great asset. Enjoy. Paddled right side and left side. Right side had lots of rocks close to surface and more difficult. Left side more distance between rock and surface. Easier paddle.

Table E4. Response to 350 cfs post-run survey Question 6: Explanation for rating of overall quality of the experience at 350 cfs.

Participant ID	Response
1	Although there were still some features available, the flow/water level was low and made it harder to use them effectively.
2	A little too low on some parts. Ok for play.
3	The flow is still good for running. Just more rocks to miss. Still a nice paddle at this level and still scenic!
4	The lower level was runnable (?) in the left channel. The opening rapid is more fun with more water. There were surfable waves at each level. Left channel has couple of strainers, but in areas without current.
6	The flow of 2-300 is too low for a quality whitewater experience. Exposed and unexposed rocks have a pinning potential. The quality of surfing waves or holes is low.
7	Just a bit too low, relative to the higher release. Lots of just hidden rocks blocking eddies and features.
8	Nice River- fun paddle- short paddle for canoes. Play boat can enjoy the river more.

Table E5. Response to 350 cfs post-run survey Question 14: Reason why participant would or would not participate in whitewater boating activities at the Lower Barker bypassed reach at 350 cfs.

Participant ID	Response
1	Too low to travel this distance for what is available.
2	Ok for some play waves
3	Still a good run at this level
4	Too far from my home for a short run.
6	Water levels are too low for good play.
7	Not enough to do in a short run.

Table E6. Response to 350 cfs post-run survey Question 15: Additional Comments

Participant ID	Response
3	Surprised was able to run the river but was nice.
4	Nice to have in the middle of town.
6	The area has potential with higher levels on manmade construction of riverbed formations.
8	This would make great park.

Table E7. Responses to flow comparison survey Question 6: Additional comments or relevant information

Participant ID	Response
1	Although it a short run, there are a few spots worthy of consideration for practice and easy river running/tubing
2	Good spot for local recreation. Great place to go for a short period to paddle.
3	I think what's nice is how short the run is which means you can paddle the upper part many times. Scenic paddle.
4	Maybe try at a higher flow level.
6	Higher releases (1000 cfs) may produce water levels more conducive to play boating. There is a spot (left channel) where a man-made slide could be built to produce a surfing wave/play hole at levels seen today (600 cfs).
8	There are a number of good/excellent paddling rivers in Maine. This too short to be competitive. This would make a great park. The islands are beautiful. Put a walking bridge to island and let people picnic and fish. Clean up dead trees in the water.