Falls of Neuse Whitewater Park
Feasibility Study
Raleigh, North Carolina

City of Raleigh

March 2011

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Falls of Neuse Whitewater Park Steering Committee

Victor Lebsock, City of Raleigh Project Manager
Kathy Capps, Steering Committee Chair
Seth Yearout, City of Raleigh Adventure Programs
Larry Ausley, Paddler
Elizabeth Gardner, Paddler
Bob High, Paddler
Michael Keeney, Paddler
Jade Wei, Paddler
Sarah King, Paddler
Mark Antonik, Paddler
Bob Zarzecki, Paddler
Carol Banaitis, US Army Corps of Engineers
Thomas Freeman, US Army Corps of Engineers
Tom Wright, River Mill Condominiums Homeowner
Alissa Bierma, Neuse Riverkeeper
Shari Bryant, North Carolina Wildlife Resources Commission
Chief Frank McLaurin, Swiftwater Rescue
Russ Scheve, Swiftwater Rescue

Prepared by:
Stewart Engineering and McLaughlin Whitewater Design Group

John T. Jenkins II, PE – Stewart, Principal-in-Charge
Cindy Szwarckop, AICP – Stewart, Project Manager
Garry Walston, RLA – Stewart, Project Landscape Architect
John Anderson – McLaughlin Whitewater, Project Manager
Aaron Asquith, PE – McLaughlin Whitewater, Hydraulic Engineer

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I. History/Scope of Project

History / Timeline

When construction began on Falls Dam in 1978, Wake County staff developed "The Falls Lake White Water Study" to consider a whitewater park below the dam. The study found that the tailrace of the Falls Dam was a suitable location for whitewater canoeing. In the mid-1990s, when the Triangle area made a bid for the Pan American Games, the original whitewater park plan was revisited to create a whitewater slalom course. As the Triangle was unsuccessful in this bid, the course was never built. In 1996, the Raleigh City Council adopted the Neuse River Master Recreation Plan which included the possibility of developing a whitewater course within and along the banks of the Neuse River, just south and east of the Falls Lake Dam. In 2003, City of Raleigh residents approved a Park Bond Referendum which included funding for the design of the whitewater park in this area.

Scope of Work

At the request of the local paddling community, the City of Raleigh issued a RFQ to study installing a paddling feature in the vicinity of Falls of Neuse Road on the Neuse River. The City of Raleigh Parks & Recreation Department and the Raleigh City Council selected Stewart Engineering, with McLaughlin Whitewater Design Group, to prepare a feasibility study to determine if a whitewater course could be developed to allow for the use of the area as a whitewater park during low flow periods as well as protecting the opportunity for continued use of the area during the less frequent high release days. Upon completion of the feasibility study, the design team would then create a conceptual plan and 30 percent design development drawings for the proposed whitewater park. The conceptual plan could then be used by the local paddling community to facilitate fundraising to construct the park.

As noted above, this project is a feasibility study and not a master plan. As suggested by the local paddling community and endorsed by the Raleigh City Council on May 19, 2009, the project included the establishment of a working group (Steering Committee) consisting of Parks and Recreation staff, Army Corps of Engineers staff, and several paddlers who would review and assist in the development of the conceptual plan.

II. Project Location

The study area for the proposed project is located east of the tail race of the Falls Lake Dam and the Falls of Neuse Road bridge, south of the River Mill Condominiums, and north of the Neuse River Trail (currently under construction). Historically, the paddling community has used this area of the river for practice and play.

III. Feasibility Study Process

The feasibility study process for the Falls of Neuse Whitewater Park included a Steering Committee led effort that resulted in nine Steering Committee meetings, three Community Meetings, and one meeting with the River Mill Condominium community. All meeting minutes, handouts, and public comments are located in Appendix I. The following is a summary of the public process:

January 19, 2010 - Steering Committee Meeting #1/Community Meeting #1

- Opening Remarks
- Introduction of Project/Design Team Members
- Vision/Functionality Exercise
- Hydraulic/Hydrology/Constraints Discussion

February 15, 2010 – Steering Committee Meeting #2

- Welcome and Ground Rules
- Vision Statement and Branding
- Whitewater Park Impact Research
- Engineering Update

March 2, 2010 – River Mill Community Meeting

- Representatives from the City of Raleigh and Stewart met with the River Mill community to discuss and receive comments/questions on the proposed Falls Whitewater Park project.

March 8, 2010 – Steering Committee Meeting #3

- River Mill Meeting Update
- Design Criteria Discussion
- Impact Research

April 12, 2010 – Steering Committee Meeting #4

- Full Value Contract
- Revised Vision Statement
- Branding Discussion
- NCWRC Site Visit Recap
- Webpage Preview
- Survey Update

July 14, 2010 – Steering Committee Meeting #5/Community Meeting #2

- Hydraulic Analysis
- Feasibility Study
- Preliminary Conceptual Design

August 16, 2010 – Steering Committee Meeting #6

- Impact of Water Diversion in the North Channel
- Discussion of Dam Images
- Swift Water Rescue Training Needs
- Land Based Elements Discussion/Design Session
- Email from Tom Wright, River Mill Homeowner – Steering Committee Member

September 21, 2010 – Steering Committee Meeting #7

- Hydrology/Hydraulic Analysis Update
- Conceptual Design Wish List
- NCWRC Memorandum on Fish Passage

October 4, 2010 – Steering Committee Meeting #8

- Fish Passage Discussion
- Final Water Based Issues Discussion
- Final Land Based Issues Discussion
- Vote on Design Approval

October 27, 2010 – Presentation to City of Raleigh Parks Planning Staff

- Stewart Engineering presented the proposed Falls Whitewater Park conceptual drawing and 30% Design Development drawings for review/questions by City staff.

November 3, 2010 – Community Meeting #3

- Project Overview
- Public Involvement Process
- Program Elements (Water and Land Based)
- Project Design Presentation

January 24, 2011 – Steering Committee Meeting #9

- Schedule and Next Steps
- USACOE Clarification on Boating/Features Upstream of Bridge
- Flow Clarification
- Mechanical Weir Discussion

Future Presentations/Meetings

- Parks Recreation and Greenway Advisory Board – March 17, 2011
- Parks Recreation and Greenway Advisory Board Action Meeting – April 21, 2011
- City Council – May 3, 2011 (Tentative)

Vision Statement and Branding

The vision statement and branding (naming) of the proposed park were developed through the Steering Committee process.

Vision Statement: "To create a river park that provides multiple water-based recreational and educational opportunities throughout as much of the year as possible with the known historical release levels. The river and its natural habitat will be enhanced and celebrated through the creation of this project."

Branding: The branding/naming of the project was discussed over the course of three Steering Committee meetings. City staff noted that the naming of City parks is mostly based on geography, not for a specific person, and that the park/facility will officially be named through the master plan process. The agreed upon name/brand for the feasibility study and to be utilized in private fundraising is *Falls of Neuse Whitewater Park.*

IV. Ideal Program

During the development of the Feasibility Study, the Steering Committee offered direction on the water and land-based elements that should be included as part of the project. The following items were excluded from consideration.

- National/regional competitions.
- Electronics: night lighting, buried communications wiring, etc. – The facility will operate on a dawn to dusk schedule, precluding the need for lighting.
- Pedestrian bridge to the island.

Location of Whitewater Course

The project area encompasses the South Channel from the Falls of Neuse Road Bridge to a point 600 feet downstream of the confluence of the North and South Channels. This defines an area which includes approximately 2,300 feet of river. The total hydraulic drop in this reach is approximately 11.6 feet confirmed by a survey conducted in 2009/2010; an average of .5 percent. This location was selected as it is the only current area along the Neuse River where there is enough vertical change in elevation to accommodate this type of facility.

Figure 1: Upper reach of South Channel and recommended site of whitewater improvements.

Correlation of Course Gradient and Length

The gradient range of whitewater courses is between 0.5 percent and 2 percent. One percent is the average gradient for moderately challenging “drop and pool” whitewater parks constructed today. The drop and pool configuration is the most popular because it provides waves and holes for practicing skills.

Course Location

Approximately seven feet of gradient is located in the upper 600 feet of the project area. This area is characterized by bedrock ledges riffles and small pools—and is indicative of a moderately high gradient river reach. Downstream of this point to the confluence, the gradient is flatter, with continuous riffles, fewer bedrock outcrops and no abrupt drops. The river bottom is cobble and gravel with areas of silt on the margins. Downstream of the confluence the river changes character to a very low gradient reach with no bedrock. The upper end of the large island is assumed to be composed of some high bedrock formations overlain by alluvial soils. The downstream end of the island in the area of the confluence is assumed to be all alluvial soil underlain by bedrock.

Selected Project Area

The course is located in the upper third of the project area, starting near the Falls of Neuse Road bridge and extending down the South Channel. This area contains over half of the usable drop. A longer course extending to the confluence would only capture an additional three feet of drop but would increase the cost due to the additional bank protection that would be required.

If the same course were to be constructed in the downstream half of the project area, it would be considerably less economical than the upper reach for several reasons:

1. Higher and more massive structures would be needed to transfer the existing gradient downstream.
2. Transferring the gradient to the lower part of the channel may create significant hydraulic head losses.
3. The course would be perched several feet higher than the adjoining North Channel, and there would be a natural tendency for water to seek the lower grade. To resist the long term effects of seepage as well as flood over topping, the downstream end of the island would need to be fortified and a lateral seepage cutoff wall would likely be needed.
4. The north river bank at the confluence is private property. Construction on the north bank (bank armoring and drop structure abutments) would require permanent easements for construction and maintenance.

In summary, the native fall of the upper third of the project area will support the proposed 600 foot-long course. By inspection, the utmost upstream end of the site is the most economical option and the one with least apparent impacts to the banks and surrounding vegetation.

Figure 2: Confluence of North and South channels at downstream end of study area.

Figure 3: Midpoint of South Channel, recommended end of whitewater park.

WATER-BASED PROGRAM

The Steering Committee desires that the whitewater park site serve local and regional citizens as an anchor for activities that include hiking, biking, walking, fishing, and passive viewing. While this community effort is one the City would embrace as a source of great pride, there are no plans to promote visitorship from outside the immediate geographical area. It should be noted that the United States Army Corps of Engineers (USACOE) has a mandated release regimen which prescribes the releases from Falls Lake. In over 80 percent of days, on an annual basis, the releases from the lake are very low.

As directed by the Steering Committee, the proposed Falls of Neuse Whitewater Park includes the following elements: course features, access, channel construction, hydraulics, and special events/programs/users.

1. Course Features

- Provide course with play waves (2 to 3).
- Hydraulic flow and course difficulty.

The proposed whitewater course responds to the water-based program items by providing a course with the following features:

- The hydraulic profile with three abrupt drops is geared toward recreational boating and local freestyle competition. This configuration with drops separated by pools is the most popular for general users although is acceptable for slalom races and down river boating. The drops will have a variety of hydraulic forms ranging from beginner waves to an intermediate hole (the upstream-most drop). In response to Steering Committee member's requests, the drops have a slightly different alignment so that the approach and exit angles vary. The hydraulic forms should be refined in final design either with three-dimension modeling or a physical model.
- Each drop is separated by a pool varying in length from 125 feet to 150 feet. The pools provide areas for self rescue, resting and queuing space for waiting one's turn to surf on the wave. The pools are excavated into the river bottom, which provide the water depth needed to float the course during low flow and to help the formation of play waves. The water depth will also enable "mystery moves" where the participant deliberately submerges his boat on an eddy line.

The course is designed for a flow range of 200 cfs (cubic feet per second) net in the South Channel up to approximately 1000 cfs net. This higher flow corresponds to a bank full condition of approximately 5,000 cfs total flow in the river. In this flow range the technical difficulty of the course would range from Class II to Class III on the International Scale of River Difficulty (see Appendix II).

The three constrictions concentrate the low flow to the center of the channel and create the whitewater drops and adequate depth for navigation. The hydraulics at the drops and the deep pools will accommodate the range of desired recreational and training programs listed above. At the range of operating flows above 200 cfs, the water will be of sufficient depth for trick boating moves and floating over the drops without hitting or scraping bottom. Fifty cfs is the likely minimum flow for the course to be navigable in standard whitewater canoes and kayaks.

2. Access

- A new put-in just upstream of the Falls of Neuse Bridge but outside of the restricted area below the spillway.
- Intermediate take out at the downstream-most pool at the end of the whitewater improvements.
- A take-out at the existing canoe launch.
- Access at various points along the whitewater course.
- Access downstream of the features, to minimize congestion in staging areas.
- Staging eddies above features.
- A continuous hardened area at the water's edge along the right bank (looking downstream) that is capable of withstanding foot traffic, including bank stabilization.

Access to the water is necessary to enter and exit the course and for self rescue at any point along the course. Self rescue is made possible by the low slope banks which are armored with large rocks that provide hand holds and footholds (presently the banks are high and nearly vertical at some points). The upper edge of the bank armoring is a continuous large boulder edge that is capable of withstanding foot traffic, albeit with limitations. It will not be a formal pathway or ADA accessible. The boulder surfaces will be natural rock with uneven faces, cracks between boulders and boulder faces that will not align with one another. This will allow a visitor to pick their way along the boulder edge, thus keeping traffic off the adjoining planted areas which are more susceptible to damage or erosion.

The put-in and new intermediate take-out areas shown on the conceptual plan provide formal access to the water and are ADA compliant with regard to surface treatment and slopes. The put- in is edged with large boulders which allow a wheelchair bound participant to transfer from the chair to a boat more easily. The grade of put-in and takeout is set at 6 to 12 inches above the 200 cfs water surface elevation, a dimension that will diminish as the flow increases and the water rises. The put in is designed for a "seal launch" and the takeout enables beaching the boat or sidling up to a hard edge and lifting oneself out of the boat. The Americans with Disabilities Act does not provide specific guidance for canoe and kayak launches, and it is assumed that a disabled participant will have the skills and strength/or manned assistance to participate in the sport.

3. Channel Construction

- Utilization of south channel.
- Stabilization of existing banks.

The course is designed to take advantage of the bedrock river bottom that dominates the geology of the site. The proposed structures which span the river and create the hydraulic formations will be built of faux rock to simulate the appearance of the river's natural rock. The construction of the faux rock features are shown in the conceptual plan and the 30% design development drawings. The rocks consist of a grouted rock core faced with high strength, reinforced concrete with integral color, stain and texture to look like natural rock. The uppermost drop is built over a natural ledge at the head of the South Channel, the lowest point of which (the invert) is elevated slightly over the existing grade. The inverts of the lower two drops are below the existing grade of the

river, so the whitewater drop is created by lateral constrictions.

The river banks in the project area are presently being undercut by water action, causing banks to slough into the river and trees to fall over and block the channel. The Falls of Neuse Whitewater Park project will reduce erosion with armoring and by improving the bank geometry. The geometric improvements include a lower overall slope to the banks (they are nearly vertical in some locations). Both banks will be laid back at a minimum 2:1 slope and armored with un-grouted rock to withstand the additional water velocity and foot traffic. The river right (looking downstream) bank will have a large boulder edge that conforms to the normal high water elevation at 4,000 cfs and marks the transition between armored rock and planted shoreline. The planted shoreline is underlain by buried rip rap to help withstand erosion until the trees and other plantings become established. When mature, the trees and herbaceous plants on the forest floor will stabilize the soil, and together with the armored shoreline will resist the undercutting which is currently active at the site. The base budget includes quarried rock for the shore armoring with an option for more aesthetically pleasing river rounded rock (at additional cost). The shore armoring also includes large feature boulders with one flat surface for seating. Solitary feature boulders will be placed at random intervals and in groups to add visual interest and variety.

4. Hydraulics

- Increased number of boating days.
- No impact to the 100-year flood plain.
- Recovery pools between drops.
- Calm water at eddy exits to encourage beginner's use and maximize time before flushing.
- Deep, long eddy lines for mystery moves.
- Diversion weir for augmenting flow to the course.
    1) Option 1 – Fixed Crest Diversion
    2) Option 2 – Movable Crest Diversion
    3) Option 3 – Less Effective Crest Diversion

The project is located just downstream of Falls Lake Dam where the river bifurcates at a large island into two distinct channels. The South Channel is the desired location for whitewater features; however, it receives the minority of the river flow. This analysis presents an estimate of the number of boating days in the South Channel with and without a diversion weir.

Hydrology / Boating Days

Water at the site is highly regulated by the Army Corps of Engineers' Falls Lake Dam. The purpose of the dam is flood control, water quality, water supply, and recreation, but it does not include special releases for whitewater boating. Therefore no special releases are contemplated by this project.

This analysis uses historic data from USGS Gauge No. 087183 located just downstream of the Falls Lake Dam outlet. The gauge is less than 200 yards from the project site with no significant inflow other than the dam and is therefore an excellent indicator of site hydrology. The years analyzed start in 1985, the year that Falls Lake was filled, to 2009, the most recent full year of records. It should be noted that the historic data from USGS is the average daily flow and not instantaneous flow, which tends to smooth any fluctuations in water release from the dam. Therefore there will likely be more periods of boatable water than presented due to high flow during some hours of the day but not others. Key hydrologic statistics[1] include the following:

- Drainage area 771 square miles
- Long term average discharge: 765 cfs
- Highest known flood (18 September 1945): 20,700*
- *(23,300 cfs published by U.S. Geological Survey)
- Maximum discharge: since filling of dam: 7,462 cfs (9/15/1996 --Hurricane Fran)
- Regulatory 100 year event: 11,100 cfs

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	692	966	1277	1017	427	314	304	268	441	374	398	616
Median	247	426	517	367	171	165	164	167	165	167	128	151
85th Percentile	70	106	146	137	125	120	121	129	125	116	80	66

Figure 4: Table of Mean, Median and 85 Percentile Flow (cfs)

Note: the median flow is the most reliable indicator of actual conditions in the river, as high flow events can skew results in a river where low flows are the norm.

This analysis presents the estimate of useable boating days in the South Channel based upon the following Steering Committee, agreed upon criteria:

1. Useable boating days are defined as a minimum net flow of 200 cfs in the South Channel. This corresponds to the low range of discharge in man-made whitewater parks of similar channel width and fall. Boating and other water activities will be possible and popular at lower flows; however, the quality of the experience is subjective. To eliminate subjectivity, the 200 cfs was selected as an objective cut off because it corresponds to what customers will pay for at other courses where admission is charged. At the Steering Committee's request an analysis of minimal navigation using 50 cfs net flow in the South Channel has also been included.
2. Days where flows are high, nearing a bank-full condition have also been discounted. This flow is approximately 4,000 cfs and eliminates only a small number of days due to the flood control and water management at the Falls Lake Dam.

[1]Source: US Army Corps of Engineers.

Flow Split at the North / South Channels

The early hydraulic analysis of the flow split relied on visual observations, one-dimensional computer modeling (Hec Ras) and hand calculations. With this it was estimated that the south channel captured 20 to 30 percent of the river flow. It was observed that there was significant cross flow at the head of the island as water crossed from the south side of the river to the north. Because of the limitations of one dimensional modeling to describe crossing flows, a two-dimensional analysis was performed using SRH2D software with SMS for pre and post processing. This two-dimensional analysis showed that the early estimates of flow capture were too high. The two dimensional modeled flow split is shown in Figure 5:

Estimated Existing Flow Split					
Total Flow (cfs)	South Channel Flow (cfs)		North Channel Flow (cfs)		
100	25	25%	75	75%	Interprolated
200	48	24%	152	76%	Modeled
500	78	16%	422	84%	Interprolated
1000	132	13%	868	87%	Modeled
2000	260	13%	1740	87%	Interprolated

Figure 5: Modeled/Interpolated Flow Split between North and South Channels.

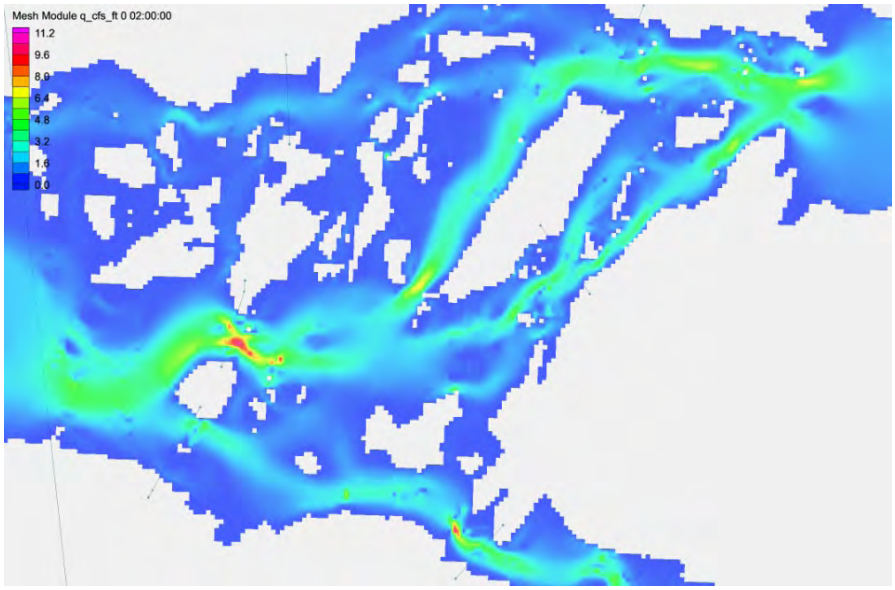


Figure 6: Model output for 200 cfs Flow Split, Existing Conditions

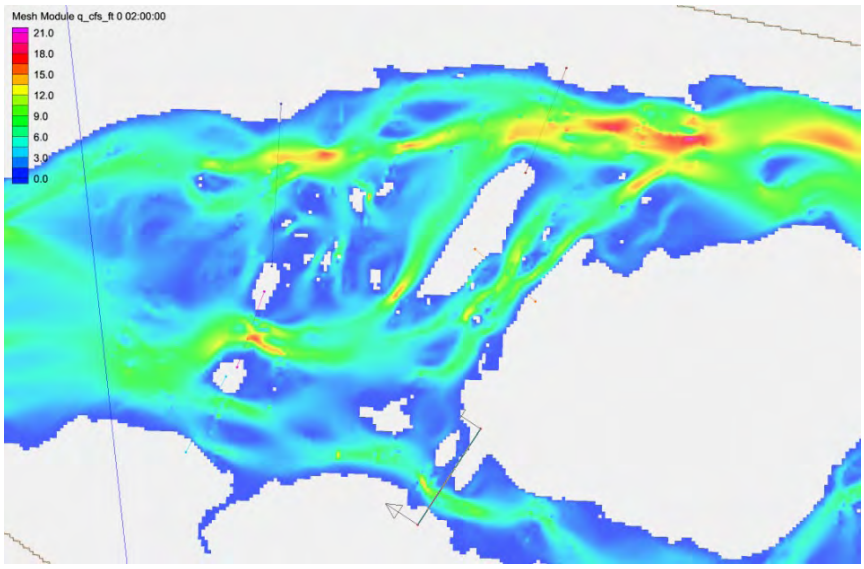


Figure 7: Model output for 1000 cfs Flow Split, Existing Conditions

Based upon the 2D analysis, approximately 1,500 cfs total river flow would be needed for the South Channel to receive 200 cfs, the lower range of boating according to the criteria. An analysis of boating days from historic flow data shows that on average there are only 35 days per year that meet the recommended 200 cfs flow in the South Channel and 165 days of the minimum 50 cfs flow. Therefore a diversion weir was considered[2]. The monthly distribution of existing boating days is shown in Figure 8.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All Year
50 CFS flow in South Channel (existing)	17	23	27	23	10	9	9	4	6	8	9	14	165
200 CFS flow in South Channel (existing)	5	5	7	6	1	1	1	1	1	1	2	4	35

Figure 8: Boating Days by Month without Diversion

Diversion Weir

The early diversion criteria, proposed to divert water at the median flows leaving the lower and higher flows unchanged, were developed following the initial Steering Committee meeting in January 2010. The fixed crest diversion (Option 1) was designed to be most effective during the 500 to 2,000 cfs range with diminished effects at higher and lower flows. However, the NCWRC concerns over lowering the flows in the North Channel during the spring fish migration period (if/when Milburnie Dam, located downstream, is removed to facilitate fish migration) led to renewed discussion of a movable or mechanical diversion weir (Option 2).

The movable or mechanical diversion weir would be lowered from March through May to maintain the normal flows in the North Channel as much as possible. An analysis of the movable diversion, however, revealed that many of the added boating days occur in the spring and would be eliminated by the movable weir. This led to a third option of a smaller fixed crest diversion that would leave more water in the North Channel during fish migration season, but would yield more boating days than the movable diversion weir.

[2] This figure is lower than the original boating 45 days presented in earlier drafts. This is due to an error in the number of years used in computing the averages.

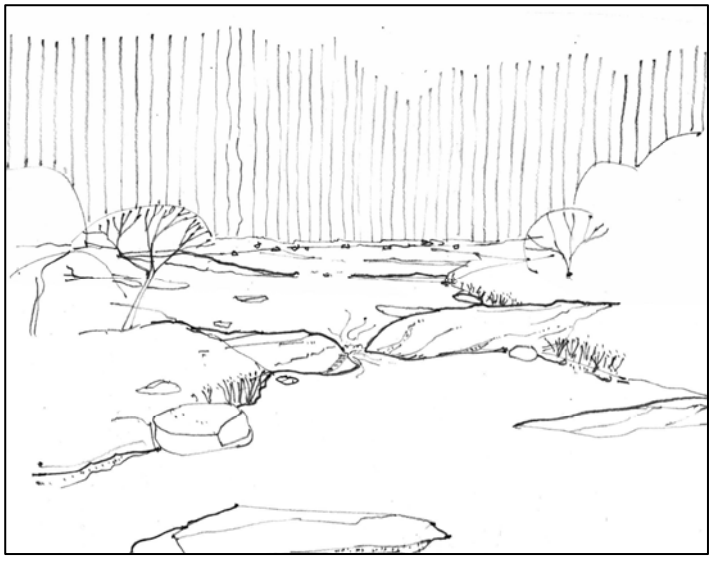
Option 1 Fixed Crest Diversion

The fixed crest diversion is a notched weir. The low flow notch in the weir serves to maintain the low flow in the North Channel by allowing low flow to pass unimpeded. As the flow increases towards 500 cfs, the water backs up behind the diversion and flows more strongly into the South Channel. As the water rises further it flows over the top of the diversion and preserves the existing flows in the North Channel and preserves the overall conveyance of the river during high flows. Target diversion is shown in Figure 9.

Existing vs. Proposed Conditions (South Channel)					
Existing Flow in South Channel			*Proposed Flow in South Channel*		
River Discharge	Existing Flow		Proposed Flow		Net Difference
(CFS)	(%)	(CFS)	(%)	(CFS)	(CFS)
100	25%	25	25%	25	0
200	24%	48	25%	50	2
500	16%	78	40%	200	122
1000	13%	132	40%	400	268
2000	13%	260	25%	500	240
Existing vs. Proposed Conditions (North Channel)					
Existing Flow in North Channel			*Proposed Flow in North Channel*		
River Discharge	Existing Flow		Proposed Flow		Net Difference
(CFS)	(%)	(CFS)	(%)	(CFS)	(CFS)
100	75%	75	75%	75	0
200	76%	152	75%	150	-2
500	84%	422	60%	300	-122
1000	87%	868	60%	600	-268
2000	87%	1740	75%	1500	-240

Figure 9: Existing vs Proposed Flow - Fixed Crest Diversion (Option 1)

Diversion Option 1 – a faux rock weir with a low flow notch (shown at low flow).



Boating Days at 200 CFS Flow With Fixed Crest Diversion	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**All Year**
Existing Conditions with no Diversion	4.56	5.36	6.88	5.68	0.72	0.72	1.12	0.8	1.32	1.16	2.16	4.04	34.52
Proposed Fixed Crest Diversion	10	12.2	14.56	11.44	3.68	2.68	2.08	2.4	2.8	2.84	5.36	7.72	77.76
Increased Days	5.44	6.84	7.68	5.76	2.96	1.96	0.96	1.6	1.48	1.68	3.2	3.68	43.24
Percentage Increase	**119%**	**128%**	**112%**	**101%**	**411%**	**272%**	**86%**	**200%**	**112%**	**145%**	**148%**	**91%**	**125%**

Figure 10: Boating Days with Fixed Crest Diversion (Option 1)

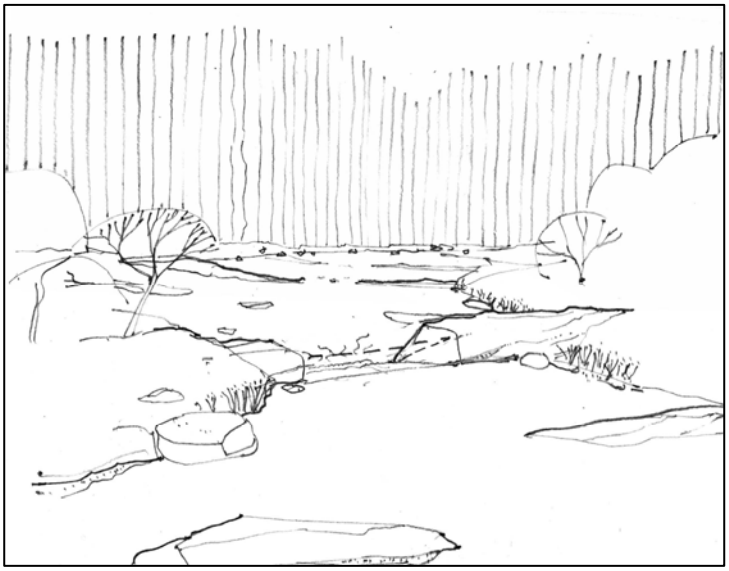
Option 2 - Movable Crest (Mechanical Weir) Diversion

The NCWRC expressed concerns (see the NCWRC memorandum in Appendix IV) with Option 1, Fixed Crest Diversion, with regard to future fish passage through the project area. The North Channel will be the primary passage for shad, striped bass and other migratory fish since it has the deepest water and because the South Channel would be constricted with whitewater drops, causing potential blockages. The proposed lower flow in the North Channel, and resulting reduction in water depth, could prevent fish from passing. (This would have to be confirmed with field measurements using known data for the fish's preference of water depth and velocity.)

The movable crest diversion, as shown in the drawing below, would alleviate some of the concerns expressed by the NCWRC by maintaining more natural flow conditions during the critical migration period of March 1 to June 1. Upon analysis of the impact of the movable crest diversion it was determined that a third of the added boating days would be eliminated due to the diversion being unused during the spring, the time when most of the added days are available. Figure 11 shows the results.

Boating Days 200 CFS Flow	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All Year
Existing Conditions, No Diversion	4.56	5.36	6.88	5.68	0.72	0.72	1.12	0.80	1.32	1.16	2.16	4.04	34.52
Proposed With Fixed Crest Diversion	10.00	12.20	14.56	11.44	3.68	2.68	2.08	2.40	2.80	2.84	5.36	7.72	77.76
Proposed With Movable Crest Diversion	10.00	12.20	6.88	5.68	0.72	2.68	2.08	2.40	2.80	2.84	5.36	7.72	61.36
Increased Days	5.44	6.84	0.00	0.00	0.00	1.96	0.96	1.60	1.48	1.68	3.20	3.68	26.84
Percentage Increase	**119%**	**128%**	**0%**	**0%**	**0%**	**272%**	**86%**	**200%**	**112%**	**145%**	**148%**	**91%**	**78%**

Figure 11: Boating Days with Movable Crest Diversion (Option 2)



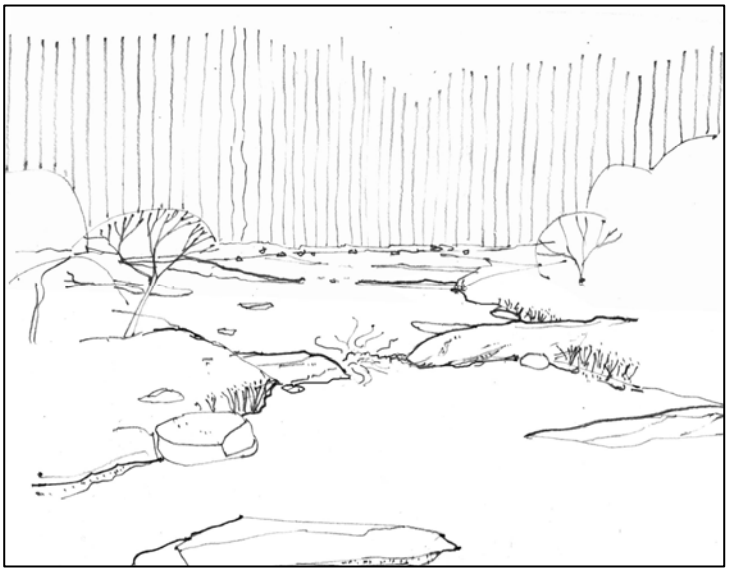
Diversion Option 2 – a moveable crest diversion shown in the down position. Dashed lines indicate the raised position. The center portion is made of a composite material or steel. The abutments are faux rock.

Option 3 - Smaller Fixed Crest Diversion

Consideration of the movable crest diversion and its disadvantages of the lost boating days and potential future maintenance costs led the design team to consider an alternate fixed diversion. A smaller fixed diversion would leave more flow in the river and attempt to match the performance of the movable crest diversion. As a trial run, the design team utilized the following criteria: provide 200 cfs boating flow midway between the existing condition (1,500 cfs) and the proposed Option 1 (500 cfs total river flow). In this option the boating flow would begin at 1,000 cfs.

Existing vs. Proposed Conditions (North Channel)					
Existing Flow in North Channel			*Proposed Flow in North Channel*		
River Discharge	Existing Flow		Proposed Flow		Net Difference
(CFS)	(%)	(CFS)	(%)	(CFS)	(CFS)
100	75%	75	75%	75	0
200	76%	152	76%	152	0
500	84%	422	80%	400	-22
1000	87%	868	80%	800	-68
2000	87%	1740	80%	1600	-140
Existing vs. Proposed Conditions (South Channel)					
Existing Flow in South Channel			*Proposed Flow in South Channel*		
River Discharge	Existing Flow		Proposed Flow		Net Difference
(CFS)	(%)	(CFS)	(%)	(CFS)	(CFS)
100	25%	25	25%	25	0
200	24%	48	24%	48	0
500	16%	78	20%	100	22
1000	13%	132	20%	200	68
2000	13%	260	20%	400	140

Figure 12: Existing vs. Proposed Flow with Smaller Fixed Crest Diversion



Diversion Option 3 – a faux rock weir with a wider notch. The wider notch leaves the lower and moderate flows unchanged in the north channel.

Boating Days 200 CFS Flow	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	
Existing Conditions, No Diversion	4.56	5.36	6.88	5.68	0.72	0.72	1.12	0.80	1.32	1.16	2.16	4.04	34.52
Proposed With Smaller Fixed Diversion	6.84	9.90	11.50	9.00	2.20	2.50	2.10	2.05	2.80	2.75	4.85	7.50	65.70
Increased Days	2.28	4.54	4.62	3.32	1.48	1.78	0.98	1.25	1.48	1.59	2.69	3.46	30.70
Percentage Increase	**50%**	**85%**	**67%**	**58%**	**206%**	**247%**	**88%**	**156%**	**112%**	**137%**	**125%**	**86%**	**90%**

Figure 13: Boating Days with Smaller Fixed Crest Diversion (Option 3)

As noted in the preceding figures, and due to the necessity for fish passage from March to May, the smaller fixed crest diversion is recommended, adds to the annual boating days exceeding the performance of the movable crest diversion. It also avoids the capital and maintenance cost of the movable gate. The Steering Committee, during the January 24, 2011 meeting, voiced approval for Option 3 which offers a compromise between Option 1 and Option 2.

In addition, at the January 24, 2011 Steering Committee meeting, members also voiced unanimous support for the following motion that would delay consideration of fish passage design elements until environmental review and permitting of the project:

> "It is the opinion of the NCWRC that if Milburnie Dam should be removed or other fish passage provided around Milburnie Dam, diadromous fish might traverse up river to the Falls of Neuse Whitewater Park. The Steering Committee is amenable to design elements if necessary that will allow for the passage of diadromous fish up river, should this dam be removed or other fish passage provided around Milburnie Dam. The details of which will be resolved during the environmental review and permitting process."

5. Special Events / Programs / Users

- Allow multiple users (kayakers, canoeists, tubers, fishermen, etc.).
- Informal citizen races.
- Local slalom and freestyle events targeted at experienced boaters in those disciplines.
- Events/course programming for beginners, families, and children.
- Per event or demand slalom gates.
- Swift water rescue training.

A key consideration in the development of the feasibility study was to ensure that the proposed whitewater park could be utilized by multiple user groups, not just for whitewater kayaking. The proposed design will accommodate fishermen, those merely interested in viewing, and other river enthusiasts. On days when the cfs flow is not sufficient to support whitewater kayaking it is anticipated that the area will be utilized for other river recreational uses such as tubing.

Competitive Events

The course is 600 feet in length including portions of the start pool and the pool downstream of the last drop. The hydraulics at the ledges will support local freestyle events at the 200 cfs flow level, but due to the infrequency of high flows it cannot support regularly scheduled events. A scheduled event would be possible through a special release from Falls Lake Dam; however, releases for recreational purposes is not part of the dam's authorization[3] and as such can not be a requirement of this project.

For whitewater slalom, an Olympic event, the minimum course length is 250 meters (820 feet) and the maximum course length is 400 meters (1312 feet). The minimum course would have to include a portion of the natural channel downstream of the project. The slalom event and slalom training requires gates to be suspended over the

[3] Thomas Freeman, USACE personal communication

river by wires. For events, the gates are installed temporarily and taken down afterwards. Training gates could be left up all year. Training gates require a dedicated group to maintain and pull aside when not in use so as not to inconvenience other course users. The gates would be subject to periodic damage by floods and the suspension wires are a possible source of conflict with fishermen whose lines could become caught on them. As noted above, permanent power, communications and wiring for events are not included in the project, so these items would need to be added on an as-needed and temporary basis.

Citizen races and family events would not be subject to the same requirements as more formal events so they could be held more frequently.

Swift Water Rescue

The course will be usable by swift water rescue personnel for training. The abrupt drops and deep pools between the drops will provide adequate depth for swimming and wading as well as hydraulics for tethered boogie board training. Tie-off points to the shore will be available in the cracks and spaces between the loose boulder edge, though the anchoring mechanisms would have to be provided by the users. Rescue groups requested midstream pinning points and a submerged automobile for rescue training. These two items are not provided in the base project but may be added on an as needed basis, provided that they obtain any necessary environmental permits. It should be noted that pining points and other obstructions should be temporary installations, as they could impede the use of the course by other groups.

LAND-BASED PROGRAM

As a compliment to the Falls of Neuse Whitewater Park, the Steering Committee desires to create amenities to serve the park, including upgraded parking facilities with pedestrian access and enhanced landscaping along the riverbank and between the park and parking areas. It is also critical that the new access routes and support facilities be seamlessly integrated into the Neuse River Trail, which is currently under construction immediately adjacent to the proposed park.

Therefore the proposed Falls of Neuse Whitewater Park includes the following elements: access/accessibility/circulation, bathroom/changing facility, spectator viewing area, shoreline stabilization, and signage/lighting.

1. Access, Accessibility, and Circulation

- ADA access.
- Existing drive access improvements.
- Improvements to canoe launch.
- Parking needs, including accommodations for boaters.

The new Whitewater Park will be located in an area that makes it impractical to utilize the existing parking facilities at the dam, or at the canoe launch area to the east as primary parking areas. In order to accommodate the additional vehicular traffic at the park, a new paved parking lot will be provided just south of the access drive from Falls of Neuse Road to the existing canoe launch. Improvements to the drive are currently under way. The proposed parking lot is designed for thirty-nine cars and boat trailers, or forty-nine cars. Parking spaces designated for boaters will be wider than the standard parking spaces to allow for side loading and unloading of kayaks, canoes, etc. Early in the design process, parallel parking along the canoe launch access road was considered, but was deemed to be an impediment to circulation, and therefore removed from consideration.

A locking gate will be provided at the entrance from Falls of Neuse Road. Initially, this gate will remain unlocked except during adverse weather or flood conditions in order to protect the public. There was much discussion among the steering committee members of how to monitor and control access to the Falls of Neuse Whitewater Park. The City of Raleigh is currently considering methods to control access to city parks after hours, and these methods may be implemented at the site in the future. As planned, the Whitewater Park will be in operation from sunrise to sunset.

The parking lot will contain accessible parking spaces, and an accessible route will be provided from the parking facilities to the put-in and take-out areas for the Whitewater Park. Direct access to the put-in and take-out areas will be provided by a series of stairs and connected sidewalks. Pedestrian access to and along the river is designed to minimize conflicts between disparate users, such as fisherman, greenway users, and boaters. A more direct route for people carrying kayaks or canoes has been created apart from the accessible routes.

During early Steering Committee meetings, improvements to the existing canoe launch were discussed, with particular attention paid to ADA accessibility. It was determined

that the canoe launch area is outside of the current scope of the Whitewater Park project and that any improvements to that facility would be made as part of the Neuse River Trail greenway construction project.

2. Bathroom / Changing Facility

- Provision of public bathroom facilities.
- Indoor/outdoor shower facilities.
- Changing area.

The feasibility study for the Whitewater Park includes bathroom and changing facilities for park users as a future phase of the development. These facilities are outside of the current scope of the project, but should be considered in the context of an overall master plan for a future City of Raleigh park on the property. This building would include ADA accessible bathrooms, changing areas and indoor and outdoor shower facilities. The current plan is for a building approximately five hundred square feet in size. The building would be available to all park users, as well as greenway users during normal hours of operation. This building would be constructed adjacent to the ADA accessible parking spaces in the new parking lot.

3. Spectator Viewing Area

- Seating capacity.
- Use of natural materials.
- Maximum vantage point.

A spectator viewing area will be provided across the Neuse River Trail from the first drop in the Whitewater Park. This area will provide seating for a maximum of seventy-five people, including an ADA accessible area. The seating will be incorporated into the side slope of the approach ramp for the Falls of Neuse replacement bridge, providing an elevated vantage point that allows viewers to see downstream along the entire length of the whitewater course. This seating area will be accessed directly from the Neuse River Trail. Careful consideration has been given to selection of materials for this area, and local, natural materials including wood and stone will be used where possible to construct the viewing area.

4. Shoreline Stabilization

- Repair, re-vegetation, and protection of river bank and riparian buffers.
- Screening of parking facilities.
- Removal of invasive plants.

As noted in the water based elements section of this feasibility study, there will be significant changes along the river bank along the north and south banks, including reshaping of the bank to repair decades of erosion and undermining of the bank. This will provide a great opportunity to remove invasive plant materials from the bank that have established over decades, and replace them with more native and local trees and shrubs. In time, the new plantings, in conjunction with shoreline armoring, will provide a healthier, natural protective riparian edge for the river, helping to reduce erosion from dam releases and abnormally high water conditions.

A similar approach will be taken to enhance the shoreline stabilization on the north side of the northern channel along the River Mill Condominiums property line. At the final Steering Committee meeting on January 24, 2011, the Steering Committee voted (seven to three with one abstention) to include the stabilization effort as part of the final construction documents and permitting for the project. The City will work closely with the River Mill community to provide a natural vegetated shoreline that enhances the river bank while meeting environmental requirements.

Additionally, landscaping will be installed to enhance and screen the new parking lot from the right of way, and to minimize the view from the Neuse River Trail. Areas denuded during construction of the access drive and parking lot will be replanted with locally grown, native plant material that will help return the area to a more natural condition.

5. Signage and Lighting

- U. S. Army Corps of Engineers participation signage.
- Educational/ safety signage.
- Environmental education.
- Voice notification system.
- Site Lighting

A unified signage package will be created for the park, incorporating standards from the U.S. Army Corps of Engineers and the City of Raleigh. Signs will be located strategically along the course and in common areas that address items such as boater safety, user regulations, wayfinding, and environmental education. The City of Raleigh will work closely with the U.S. Army Corps of Engineers to provide signage as appropriate for each authority. The City of Raleigh has adopted a Master Signage Plan for use in parks and along the Neuse River Trail, and the standards of that plan will be incorporated into the Whitewater Park signage where possible.

The U.S. Army Corps of Engineers currently incorporates a “Giant Voice” notification system for warning boaters and fishermen when water releases from the dam are being increased. The current system is loud enough to be heard in the vicinity of the put-in for the Whitewater Park.

The provision of lighting for the water course or parking lots is not part of the scope of this project.

VI. Falls of Neuse Whitewater Park Plan

This preliminary conceptual plan was presented to the Steering Committee on September 21, 2010 for review and consideration.

During the Steering Committee meeting, members were directed to study the preliminary conceptual plan and provide comments/suggestions to be incorporated into the final plan to be presented at the November 3, 2010 Community Meeting.

Final Conceptual Plan presented at Community Meeting #3 on November 3, 2010.

Changes from the 9/21/10 draft to the final 11/3/10 version include:

- finalizing put-in and take out areas,
- direct connections from parking lot to take-out area,
- the parking lot was rotated to accommodate existing topography, and
- parking spaces were widened or increased in size to accommodate loading and unloading of kayaks.

VII. Estimate of Probable Cost

Falls Whitewater Park

Design Development Submittal

Opinion of Probable Construction Costs

Contruction Item	Quan	Unit	Unit Cost	Total Cost
Water Based Cosntruction				
Access Paths				
Grouted boulder at put in	88	CY	$ 150.00	$ 13,200.00
Grouted boulder at take out	69	CY	$ 150.00	$ 10,350.00
Concrete - put in launch and steps	15	CY	$ 400.00	$ 6,000.00
Concrete - put in path, flat work	9	CY	$ 200.00	$ 1,800.00
Rip rap armoring of put in path	35	CY	$ 77.00	$ 2,695.00
Rip rap armoring of takeout path and ADA	125	CY	$ 77.00	$ 9,625.00
concrete steps and take out area	15	CY	$ 400.00	$ 6,000.00
concrete stairs at takeout	3	CY	$ 800.00	$ 2,400.00
concrete take out path and ada path	25	CY	$ 200.00	$ 5,000.00
				$ -
Shore Armoring/ Bank Stablization				$ -
Clear and grub	0.5	Acre	$ 10,000.00	$ 5,000.00
Earth excavate and haul off for bank right	2230	CY	$ 10.00	$ 22,300.00
Earth excavation for features	770	CY	$ 10.00	$ 7,700.00
Earth excavation for divider islands	252		$ 10.00	$ 2,520.00
Excavate and spoil on site	128	CY	$ 10.00	$ 1,275.00
Buried rip rap (upslope from boulder edge)	425	CY	$ 80.00	$ 34,000.00
Geotextile river right	2185	SY	$ 2.00	$ 4,370.00
Geotextile river left	446	SY	$ 2.00	$ 892.00
Large boulder edge river right only	160	CY	$ 200.00	$ 32,000.00
Ungrouted boulder armoring river right	860	CY	$ 109.00	$ 93,740.00
Ungrouted boulder armoring river left	130	CY	$ 109.00	$ 14,170.00
Gravel beding river right	285	CY	$ 68.00	$ 19,380.00
Silt fence, install, maintain, remove	1500	LF	$ 10.00	$ 15,000.00
Erosion mat cover on 3:1 slope	635	SY	$ 9.00	$ 5,715.00
Feature Boulders	300	CY	$ 200.00	$ 60,000.00
Whitewater Channel				
Dewatering/water control	1	LS	$ 40,000.00	$ 40,000.00
Water quality pond	1	LS	$ 10,000.00	$ 10,000.00
Access road/work pads install	1330	Cy	$ 68.00	$ 90,440.00
Access road / work pads remove	1330	CY	$ 15.00	$ 19,950.00
Bedrock excavation	75	CY	$ 1,125.00	$ 84,375.00
Grouted core rock under faux rock features	700	CY	$ 150.00	$ 105,000.00
Grouted rock under ww features, buried in banks	770		$ 151.00	$ 116,270.00
Grouted core rock under diverter island	212	CY	$ 150.00	$ 31,800.00
Faux rock surface, whitewater drops	1000	SY	$ 270.00	$ 270,000.00
Faux rock surface, diverter island	364	SY	$ 270.00	$ 98,280.00
Shore Armoring - River Mill				
Clear and grub	0.25	Acre	$ 10,000.00	$ 2,500.00
Earth excavate and haul off for bank right	1400	CY	$ 10.00	$ 14,000.00
Excavate and spoil on site	128	CY	$ 10.00	$ 1,275.00
Buried rip rap (upslope from boulder edge)	425	CY	$ 80.00	$ 34,000.00
Geotextile river right	800	SY	$ 2.00	$ 1,600.00
Gravel beding river right	140	CY	$ 68.00	$ 9,520.00

Silt fence, install, maintain, remove	400	LF	$	10.00	$	4,000.00
Erosion mat cover on 3:1 slope	635	SY	$	9.00	$	66,895.00
Water Based Costs				**Subtotal**	**$**	**1,375,037.00**

Land Based Construction

Site Preparation						
Clearing and Grubbing	0.88	AC	$	10,000.00	$	8,800.00
Topsoil Removal and Stockpiling	590	CY	$	2.00	$	1,180.00
Erosion & Sediment Control						
Erosion Control	1	LS	$	20,000.00	$	20,000.00
Earthwork						
Rough Grading (cut/fill on site)	2,500	CY	$	2.50	$	6,250.00
Rough Grading (export cut)	1,970	CY	$	12.00	$	23,640.00
Erosion Control Matting	1,000	CY	$	2.00	$	2,000.00
Storm Drainage						
RCP Drain Line - 15"	75	LF	$	45.00	$	3,375.00
Rip Rap	5	CY	$	60.00	$	300.00
Flared End Section	6	EA	$	500.00	$	3,000.00
Stormwater BMP's	1	LS	$	40,000.00	$	40,000.00
Hot-Mix Asphalt Paving						
Asphalt Paving (normal duty)	2,510	SY	$	22.00	$	55,220.00
Traffic Marking	1	LS	$	5,000.00	$	5,000.00
Cement Concrete Pavement						
Concrete pavement (4")	6,000	SF	$	4.50	$	27,000.00
Concrete Steps	295	LF	$	40.00	$	11,800.00
Concrete Wheel Stops	26	EA	$	75.00	$	1,950.00
Soil Preparation						
Fine Grading and Amendments	1,415	SY	$	2.00	$	2,830.00
Seeding						
Turfgrass Seeding	1,200	SY	$	0.35	$	420.00
Trees and Shrubs						
Shade Trees	20	EA	$	350.00	$	7,000.00
Ornamental Trees	17	EA	$	225.00	$	3,825.00
Shrubs	85	EA	$	30.00	$	2,550.00
Additional Shoreline Plantings	1	LS	$	20,000.00	$	20,000.00
Unit Masonry						
Segmental Retaining Wall	600	SF	$	65.00	$	39,000.00
Timber Wall Bleachers						
Timber Wall	363	SF	$	40.00	$	19,965.00
Metal Railings						
Handrails (Stairs)	105	LF	$	28.00	$	2,940.00
Guardrails (Retaining walls)	205	LF	$	40.00	$	8,200.00

Site Furnishings						
Benches, receptacles, etc	1	LS	$	10,000.00	$	10,000.00
Signage						
Informational, educational, wayfinding	1	ls	$	3,000.00	$	3,000.00
Land Based Costs				**Subtotal**	**$**	**329,245.00**
Combined Construction Costs					**$**	**1,704,282.00**
Mobilization (2%)					$	34,085.64
General Conditions (5%)					$	85,214.10
Overhead and Profit (7%)					$	119,299.74
Bonds(1%)					$	17,042.82
				Subtotal	**$**	**1,959,924.30**
Contingency 25%					$	489,981.08
Total Construction Costs					**$**	**2,449,905.38**
A/E design and construction services (8%)					$	195,992.43
				Subtotal	**$**	**2,645,897.81**
Permit Fees	1	LS	$	2,500.00	$	2,500.00
Estimated Stream and buffer mitigation fees	1	LS	$	196,350.00	$	196,350.00
Total Project Cost					**$**	**2,844,747.81**

Add Alternates

large rounded boulders in lieu of quarried rock for feature bldrs	300	CY	$	91.00	$	27,300.00
rounded rock in lieu of quarried rock at bank armoring and boulder edge	1150	CY	$	107.00	$	123,050.00
				Subtotal	$	150,350.00
Recommended contingency 30%					$	45,105.00
				Subtotal	**$**	**195,455.00**

Appendix I
Public Process

STEWART

TO:	Falls White Water Park Steering Committee Members City of Raleigh Parks & Recreation Department Design Team Members
FROM:	Cindy Szwarckop, AICP
DATE:	1/27/10
REFERENCE:	Steering Committee Meeting Minutes 1/19/10
STEWART PROJECT NUMBER:	C09047

Steering Committee Attendees:
Elizabeth Gardner, Paddler
Larry Ausley, Paddler
Seth Yearout, City of Raleigh
Vic Lebsock, City of Raleigh
Carol Banaitis, US Army Corps of Engineers
Jim Wei, Paddler
Jade Wei, Paddler
Mark Antonik, Paddler
Mike Keeney, Paddler
Bob Zarzecki, Paddler
Tom Freeman, US Army Corps of Engineers
Sarah King, Paddler
Bob High, Paddler
Kathy Capps, City of Raleigh
Alissa Bierma, Upper Neuse Riverkeeper (not on Steering Committee)

Design Team Attendees:
John Jenkins, Stewart
Graham Smith, Stewart
Cindy Szwarckop, Stewart
John Anderson, McLaughlin Whitewater
Aaron Asquith, McLaughlin Whitewater
Risa Shimoda, McLaughlin Whitewater

Opening Remarks, Introduction of Project and Design Team Members

- Kathy Capps opened the meeting and asked that all attendees make introductions.
- Vic Lebsock gave a history of the project noting that there is funding of $300,000 for the feasibility study ($150,000 from the City and $150,000 from the County).
- In 2009, the City Council directed the Parks & Recreation Department to develop a concept for the park.
- The Steering Committee includes paddlers, representatives from the Army Corps of Engineers, and City staff. The project needs to have public input to learn of concerns, ideas, support, or non-support of the project.

McLaughlin Whitewater presented a brief powerpoint and detailed projects that they have worked on throughout the Country.

Vision/Functionality

- Vic put forth an idea for the vision of the project: "To enhance the river system while providing paddling and other recreational opportunities for all skill levels throughout as much of the year as possible with the given release levels."
- The group was told that they would soon participate in an activity to help define the vision for the project.
- The following ideas were expressed by the group:
    - Project should accommodate all users – kids through experts

- Maximize the ability to use the river through given release levels.
- USACE release levels are fixed.
- Should we engage natural resource agencies informally? - Vic noted that through our communications we will inform the regulatory agencies and collect comments/concerns in the event that the project progresses to the NEPA process.
- The natural resource agencies can provide a lot of good information. It was noted that Stewart Engineering is the design consultant and are the experts and will do any permitting associated with the project.
- The project should include a safe, reliable location for swift water rescue training. Should some one from the public safety realm be included?
- "Enhance the river system to provide paddling" - the project should accommodate paddling and other recreational activities. Need to include fishermen.

- Tom Freeman, US Army Corps of Engineers - welcomed everyone to the Visitor Facility. He noted that Falls Lake is a multi-purpose civil works project. The project was started in 1978, the dam was completed in 1982, and opened in 1983. The Lake provides water to the City of Raleigh.
  - The Corps of Engineers has five mandates for Falls Lake: (1) flood damage reduction, (2) recreation, (3) fish/wildlife, (4) water supply, and (5) water quality.
  - Tom noted that DWQ takes the lead role in water quality issues and that the purpose of Falls Lake is low flow augmentation. 42% of the pool is allocated to the City of Raleigh. The USACE is a working partner with the City of Raleigh.
  - ACOE is the premier provider of natural resource based recreation in the nation. ACOE provides fishing opportunities, fishing platform, and restroom facilities at the Tail Race.
  - Falls Dam is a "heavy-hitter" in flood damage reduction in the Wilmington District. This is a direct result of the population centers down stream in eastern North Carolina.
  - ACOE is a public land management steward and a major provider of outdoor recreation areas in the Triangle.
- What should the park be called? "Branding" - should it be called White Water Park or Paddle Sports Facility. It is all about managing expectations; for example, many people will associate this proposed park with the Charlotte White Water Park and they are two completely different parks/areas. It was noted that white water is a special component of this area and the project. It will fall on the Steering Committee to educate the public.

At this point in the meeting, the Steering Committee members were given sticky-notes and asked to write down words or phrases that capture their "Vision" for the project. Following this exercise, Graham and Cindy took the notes and grouped them into the following categories:

FISHING

- Systems for fish habitat
- Fishing/Fish Habitats
- Fishing Opportunities
- Fish Pools & Eddys
- Enhanced Fish Habitat

PASSIVE/EDGES

- Family recreation
- Walkway along the river/park
- A gathering place for the public to walk, wade, tube, picnic
- Trails
- Passive opportunities (access to river, viewing)
- Other rec opportunities

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STABILIZATION
- Maximize stability after construction/durability
- Minimal disturbance during construction

NATURAL/CULTURAL RESOURCES
- To preserve the river system while enhancing paddling.
- Preserve character & integrity of the river system.
- Protect natural beauty and shoreline vegetation
- Cultural resources – River Mill, Falls Village
- Environment Sensitive – aesthetics, protected riparian buffers, limit river bed disturbance

MAXIMIZE DAYS
- Maximum paddling days (flow diversion)
- Use throughout the year
- Extended time

WATER RECREATION
- Paddle sports
- Tubing
- Special Events/Races
- Multiple enter/exit points
- Make use of the river – enhanced recreational opportunities (multipurpose)
- Recreation/paddling (other)

EDUCATION
- Calm pools of water for roll practice, teaching opportunities
- Paddling instruction
- Competition training
- Swift water rescue
- Location for both recreational and instructional activities for paddlers of various skill levels.
- Education
- Safety/rescues instruction
- Education friendly – paddlers, biologists, SWR

FEATURES
- Multi-features for kayakers
- Step/pool/riffle integrated into whitewater features
- Multi-feature system with sequential rapids of varying difficulty to allow use by varying levels of boaters
- Whitewater competition length (long as possible)
- Competition grade slalom course

It was noted that over the course of the next week or so, Stewart and City staff will study the vision "phrases" and prepare a draft vision statement for review and comment by the Steering Committee. It was also noted that the group needs to consider and discuss goals/outcomes. This topic will be addressed at the next Steering Committee meeting.

Hydraulics/Hydrology/Constraints Discussion – McLaughlin
- Please see the attached presentation slides

Meeting Wrap-Up, Discuss Next Steps, and Schedule
- Kathy Capps thanked everyone for their attendance, noted that the Open House would start at 7pm, and welcomed the Steering Committee to stay for the Open House.
- The Committee discussed the preferred day of the week and time for future Steering Committee meetings. It was decided that Steering Committee

STEWART

meetings would be held on either Monday or Tuesday nights at 5pm and that the next meeting would be held at the Stewart office in downtown Raleigh on Fayetteville Street.

- It was noted that the next meeting would be held within the next month and that the next Open House/Public Meeting would occur some time within the first two weeks of March.
- Topics for the 2nd Steering Committee meeting include:
  - Refine vision/mission statement
  - Branding
  - Update on hydraulics/hydrology analysis

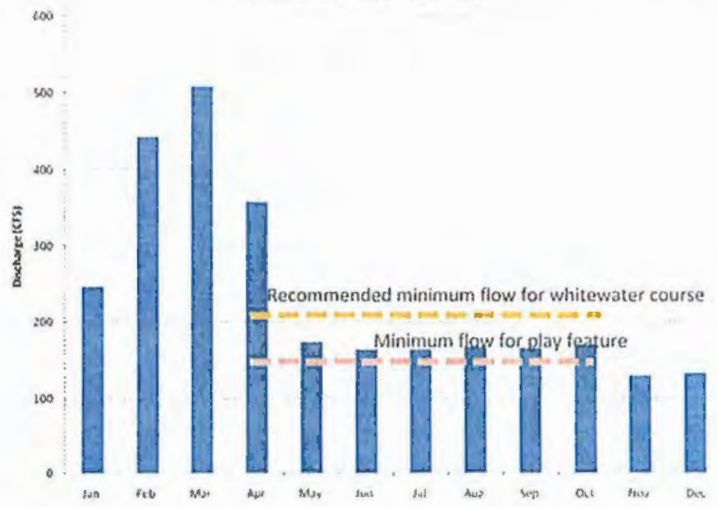
Falls of the Neuse Paddle Facility

January 19, 2010

Site Hydrology

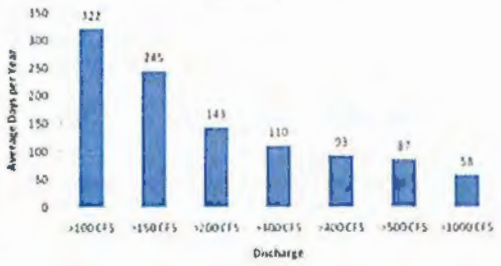
USGS Daily Statistics 1985 to 2008, 23-3/4 Years of Data

Median Monthly Discharge



Site Hydrology

Overall Site Hydrology
100% Flow

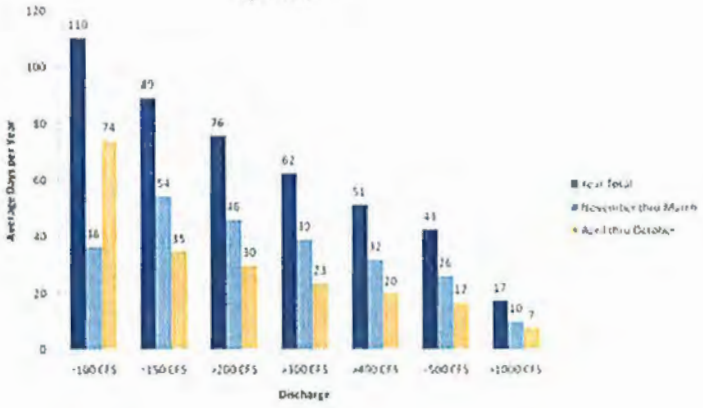


USGS Daily Statistics 1985 to 2008,
23-3/4 Years of Data

Seasonal Hydrology
100% Flow

Site Hydrology

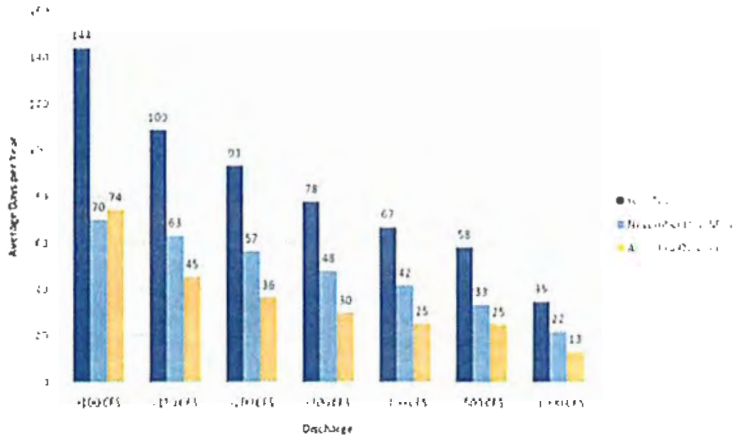
Seasonal Hydrology
1/3 Flow



USGS Daily Statistics 1985 to 2008, 23-3/4 Years of Data

Site Hydrology

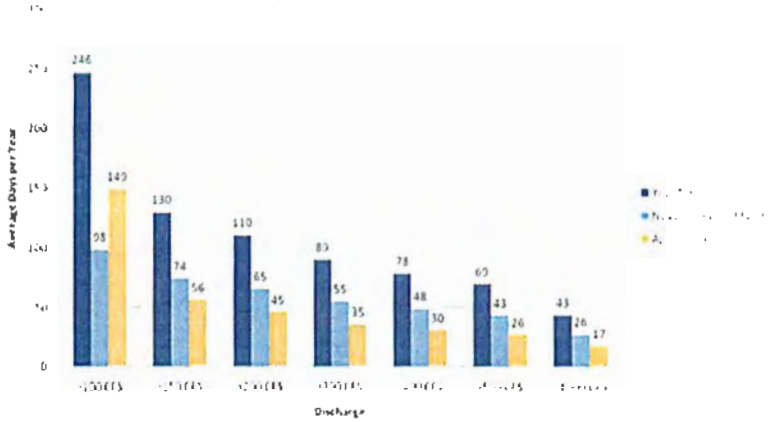
Seasonal Hydrology
1/2 Flow



USGS Daily Statistics 1985 to 2008, 23-3/4 Years of Data

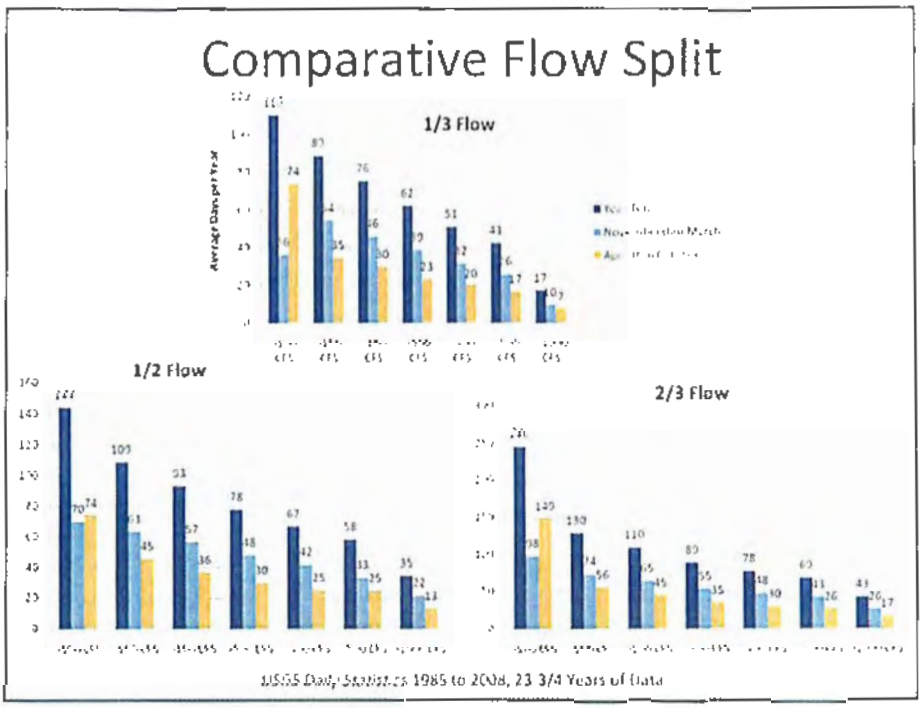
Site Hydrology

Seasonal Hydrology
2/3 Flow



USGS Daily Statistics 1985 to 2008, 23-3/4 Years of Data

Comparative Flow Split



USGS Daily Statistics 1985 to 2008, 23 3/4 Years of Data

City Of Raleigh
North Carolina

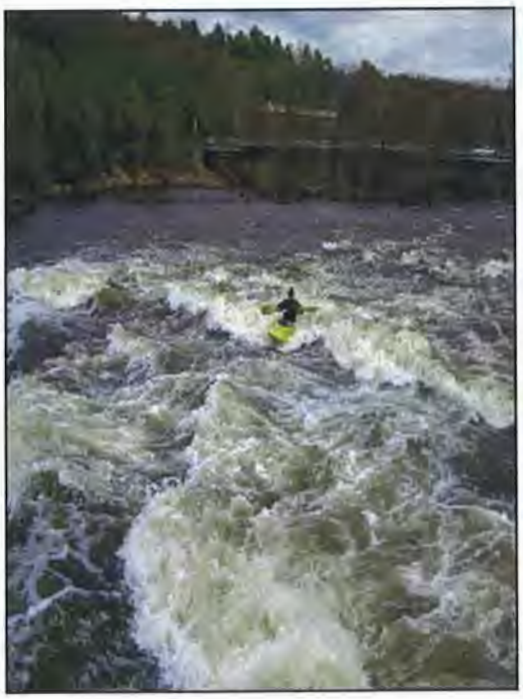
Falls of Neuse White Water Park
Community Open House Invitation

January 2010, Community Open House Event #1

Background

In October 2003, City of Raleigh residents approved a Parks and Recreation Bond that included funding for the design of a White Water Park in the area of the Falls Lake Dam.

The City of Raleigh is pleased to announce that the design process for this white water recreational facility is set to begin in January 2010. It is anticipated that when built the park will serve as a facility for recreational and competition-level activities. The park will also include viewing areas along the river banks.



Want to find out more?

Over the next several months, the City of Raleigh will hold three Community Open House events so that you may learn more about the project, meet the design team, and share with us your ideas. Please join us at the first Open House:

Tuesday, January 19, 2010
7pm to 8:30pm
US Army Corps of Engineers
Visitor Center
11405 Falls of Neuse Road
Wake Forest, North Carolina

Directions:
The Visitor Center is located on Falls of Neuse Road - 3 ½ miles south of NC 98 or 2 ½ miles north of 540. The gate at the Falls of Neuse Road entrance will be open the night of the event.

Project Contact Information

City of Raleigh
Mr. Vic Lebsock, Project Manager
City of Raleigh
Parks & Recreation Department
333 Fayetteville Street
Suite 300
Raleigh, NC 27601
victor.lebsock@ci.raleigh.nc.us

Design Team
Ms. Cindy Szwarckop, AICP
Stewart Engineering, Inc.
421 Fayetteville Street
Suite 400
Raleigh, NC 27601
cszwarckop@stewart-eng.com

FALLS WHITE WATER PARK

CONTEXT MAP

Falls White Water Park

January 19, 2010

Scope of Project

The Raleigh City Council adopted the Neuse River Master Recreation Plan in 1996 which included the possibility of developing a white water course in the area of the Falls Lake Dam. Historically, the paddling community has used this area for practice and play. The US Army Corps of Engineers has a mandated release regiment which prescribes the releases from the lake. In over 80% of the days, on an annual basis, the releases from the lake are very low. The objective of this project is to develop a white water course which will allow for the use of the area as a white water park during low flow periods as well as protecting the opportunity for continued use of the area during the less frequent high release days.

The 2003 Park Bond Referendum included funding for the design of the White Water Park. Stewart Engineering, in conjunction with McLaughlin Engineering, is preparing a concept plan for the 900-foot reach extending below the tail race of Falls Lake Dam. Once the concept plan is prepared, plan elements will be prioritized and a phasing plan will be developed accordingly.

Proposed Schedule and Milestones

Meeting #1 (Kick-off Meeting)	January 19, 2010
Schematic Design (Conceptual) Stage	January through February 2010
Meeting #2 (Presentation of Conceptual Design)	Early March 2010
Design Development Stage (Testing the Hypothesis)	March through early June 2010
Meeting #3 (Presentation of Design Development)	Mid-June 2010
Complete Design Development Drawings	Beginning of July 2010

Project Contact Information

City of Raleigh
Mr. Vic Lebsock, Project Manager
Parks & Recreation Department
333 Fayetteville Street
Suite 300
Raleigh, NC 27601
996-4786
victor.lebsock@ci.raleigh.nc.us

Design Team
Cindy Szwarckop, AICP
Stewart
421 Fayetteville Street
Suite 400
Raleigh, NC 27601
866-4823
cszwarckop@stewart-eng.com

FALLS WHITE WATER PARK

PROJECT SCOPE AND MILESTONES

SCOPE

THE RALEIGH CITY COUNCIL ADOPTED THE NEUSE RIVER MASTER RECREATION PLAN IN 1996 WHICH INCLUDED THE POSSIBILITY OF DEVELOPING A WHITE WATER COURSE IN THE AREA OF THE FALLS LAKE DAM. HISTORICALLY, THE PADDLING COMMUNITY HAS USED THIS AREA FOR PRACTICE AND PLAY. THE US ARMY CORPS OF ENGINEERS HAS A MANDATED RELEASE REGIMENT WHICH PRESCRIBES THE RELEASES FROM THE LAKE. IN OVER 80% OF THE DAYS, ON AN ANNUAL BASIS, THE RELEASES FROM THE LAKE ARE VERY LOW. THE OBJECTIVE OF THIS PROJECT IS TO DEVELOP A WHITE WATER COURSE WHICH WILL ALLOW FOR THE USE OF THE AREA AS A WHITE WATER PARK DURING LOW FLOW PERIODS AS WELL AS PROTECTING THE OPPORTUNITY FOR CONTINUED USE OF THE AREA DURING THE LESS FREQUENT HIGH RELEASE DAYS.

THE 2003 PARK BOND REFERENDUM INCLUDED FUNDING FOR THE DESIGN OF THE WHITE WATER PARK. STEWART ENGINEERING, IN CONJUNCTION WITH MCLAUGHLIN ENGINEERING, IS PREPARING A CONCEPT PLAN FOR THE 900-FOOT REACH EXTENDING BELOW THE TAIL RACE OF FALLS LAKE DAM. ONCE THE CONCEPT PLAN IS PREPARED, PLAN ELEMENTS WILL BE PRIORITIZED AND A PHASING PLAN WILL BE DEVELOPED ACCORDINGLY.

PROPOSED SCHEDULE AND MILESTONES

MEETING #1 (KICK-OFF MEETING)	JANUARY 19, 2010
SCHEMATIC DESIGN (CONCEPTUAL) STAGE	JANUARY THROUGH FEBRUARY 2010
MEETING #2 (PRESENTATION OF CONCEPTUAL DESIGN)	EARLY MARCH 2010
DESIGN DEVELOPMENT STAGE (TESTING THE HYPOTHESIS)	MARCH THROUGH EARLY JUNE 2010
MEETING #3 (PRESENTATION OF DESIGN DEVELOPMENT)	MID-JUNE 2010
COMPLETE DESIGN DEVELOPMENT DRAWINGS	BEGINNING OF JULY 2010

RALEIGH Parks and Recreation parks.raleighnc.gov

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McLaughlin Whitewater

FALLS WHITE WATER PARK

REFERENCE IMAGES

CONNECTIONS

ATHLETES

LOW FLOW CONDITIONS

VIEWING AREAS

CREATED DROP

SWIMMING

RALEIGH Parks and Recreation
parks.raleighnc.gov

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Laughlin Whitewater

STEWART

TO: Falls Whitewater Park Steering Committee Members
City of Raleigh Parks & Recreation Department
Design Team Members

FROM: Cindy Szwarckop, AICP

DATE: 2/17/10

REFERENCE: Steering Committee Meeting Minutes 2/15/10

STEWART PROJECT NUMBER: C09047

Steering Committee Attendees:
Elizabeth Gardner, Paddler
Larry Ausley, Paddler
Seth Yearout, City of Raleigh
Vic Lebsock, City of Raleigh
Jim Wei, Paddler
Jade Wei, Paddler
Mike Keeney, Paddler
Bob Zarzecki, Paddler
Tom Freeman, US Army Corps of Engineers
Sarah King, Paddler
Bob High, Paddler
Kathy Capps, City of Raleigh
Tom Wright, River Mill Homeowner
Bennett Wynne, NCWRC (representing Shari Bryant)

Design Team Attendees:
John Jenkins, Stewart
Graham Smith, Stewart
Cindy Szwarckop, Stewart
John Anderson, McLaughlin Whitewater – via phone
Risa Shimoda, McLaughlin Whitewater – via phone

Welcome and Ground Rules

- Kathy Capps opened the meeting, introduced the two new members (River Mill Homeowner and NCWRC) and then asked that all attendees make introductions.
- Cindy Szwarckop detailed the **Steering Committee Ground Rules**:
  - Attend meetings and be punctual.
  - Meetings start and end on time.
  - Meetings are uninterrupted.
  - Engage in active listening.
  - Don't take part in one-to-one meetings or sidebars.
  - Everyone participates actively.
  - Agree to give and receive feedback in a constructive manner.
  - Agree to work together to achieve both individual and group goals.

Vision Statement

- Graham Smith led the group in a recap of the vision statement exercise from the January 19, 2010 meeting and put forth a proposed vision statement (incorporating the ideas expressed at the previous meeting as well as email response received from Tom Wright of River Mill Condominiums):
  - **Initial Vision Statement** – To enhance the river system while providing paddling and other recreational opportunities for all skill levels throughout as much of the year as possible with the given release levels.
  - **Proposed Vision Statement** – To create a river park that provides multiple water-based recreational and educational opportunities throughout as much of the year as possible with the known historical release levels. The river and its natural habitat will be restored, enhanced, and celebrated through the creation of his project.

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- The following comments were offered by the Steering Committee:
  - Restoring the river to its natural habitat is a stretch.
  - How do we restore the river?
  - Enhance the aquatic environment.
  - "Restore" is a concern.
  - It was noted that areas downstream have remained in the same state for as long as can be remembered.
  - Should the last sentence include fortifying the area?
  - Increase access?
  - If the goal is to enhance, restore and celebrate, is that too much?
  - What is restoration? To what point in time to restore?
  - Consider just enhanced and celebrated, not restored.
  - What about stabilization? Can that really be done?

The following vision statement was agreed upon by the Steering Committee: "To create a river park that provides multiple water-based recreational and educational opportunities throughout as much of the year as possible with the known historical release levels. The river and its natural habitat will be enhanced and celebrated through the creation of this project."

Branding

During the January 19, 2010, Steering Committee meeting, the group began initial discussions related to branding the project. The following suggestions were offered during the meeting or via comment sheets:

- Falls Whitewater Park
- Falls Paddle Sports Facility
- Falls of Neuse River Park
- Falls of Neuse Recreation Area

- What should the park be called? "Branding" - it is all about managing expectations.
- Will the area be designated as a park?
- Falls of Neuse River Park identifies the location – could have a paddle sports facility within this park. Vic noted that the City recently acquired 85+/- adjacent acres that are slated to be an active recreation park.
- Five members noted a preference for 'park' as a generic entity.
- Three members noted a preference for 'whitewater park'.
- Paddle sport facility – could lead to misidentification of the facility.
- Could be generic or specific, just not paddle sports facility.
- Is there a downside to calling it a whitewater park?
- Is there a downside to being too generic?
- Need to recognize the vast number of user groups.
- Tom Freeman noted that the branding/naming will go to the USACOE for review and a broader name will have more appeal.
- Is there a concern about Falls of Neuse?
- Vic noted that this committee is charged with the whitewater park component, the overall park will be named through the master plan process.
- Branding will give a common language.
- Need to recognize "truth in advertising" – 75 percent of the time releases are 500 cfs or less.
- There needs to be a strong education component so that everyone understands.

No formal decision was made and this topic will be discussed at the March 8, 2010 Steering Committee meeting.

Whitewater Park Impact Research

Cindy Szwarckop noted that the City has instructed the design team to research the impacts/benefits that whitewater parks have on the natural environment. It was noted that as there was still a great deal of information to discuss at this meeting, the table would be emailed to all Steering Committee members, and that this information would be discussed at the next Steering Committee meeting.

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Engineering Update

Tom Anderson and Risa Shimoda with McLaughlin Whitewater presented the Engineering Update portion of the presentation: course location, course wish list, potential pedestrian bridge, hydraulics, existing flow split, hydrology, and potential diversion weir. (Please refer to the attached powerpoint presentation).

McLaughlin Comments:

- It was noted that the Hydrology slide (#20) describes an estimate of visual flow under existing conditions.
- Potential Diversion Weir Appearance (slide #22) – if this option is considered, the faux rock would be created by zoo rock artists. Pictures would be given to the artists to create rock that mimics the existing rock in the area.
- Potential Diversion Weir Hydraulic Criteria (slide #23) – Note that this is not engineering design by rather criteria to be negotiated and agreed upon as the project moves forward into design.
- Potential Diversion Weir (slide #25) – this information will be verified with the hydraulic model.
- Potential Diversion Weir Benefits (slide #26) – with the weir and diversion, the increase in days is 23 and the overall percent increase is 30 percent.
- Potential Diversion Weir Status (slide #27) – Design is awaiting the completion of the river survey (which has been delayed due to high release levels due to the high amounts of rain and snow this area has received). Prior to design will also need agreement on the diversion criteria.

Questions/Comments

- Bennett Wynne – once Milburnie Dam comes down fish will have access to Falls Dam for the first time in 100 years. The fish could get there during high flow but perhaps not at all times. This area will become a spawning habitat. Need to consider the impacts to fish populations.
- This project sounds like stream restoration.
- Need to meld habitat enhancement with paddle sports enhancement.
- Natural aquatic habitat enhancement - we need NCWRC to help with the fish habitat concerns.
- If rock habitat is to be created need to be sure that there are no adverse impacts to spawning areas.
- NCWRC would like to see the impacts from flows.
- Can we apply DWQ standards to this project to enhance the habitat?
- What about heron habitat?
- It is possible that diversion could be beneficial to the fish habitat. An increase in the water depth will help with fish passage and migration.
- The Corps does replicate natural conditions by releasing flows that have less peak and longer duration.
- If Milburnie Dam does come out, is there a chance the release regimes will change at Falls Dam? This change could allow the Corps to reach higher peaks in the range of 4,000 to 12,000 cfs.
- Artificial rock – Would like to see as little engineered rock as possible. Aesthetically using zoo rock is right on. This will be addressed appropriately during engineering design – whether it would be faux rock or natural stone with grout.
- Stream beds are made to move, they aren't constant.
- This area has changed dramatically in the past 25 years since the dam was constructed.
- Should the pedestrian bridge be taken off the table? It will stay on the table, but not a lot of design time or expense will be expended.
- User Days – while the table shows an increase of 23 days to 99 per year, need to recognize that there will actually be more days when you look at all user levels. Low flow = beginners; Higher Flow = advanced paddlers.
- Need to look at the broad range of paddlers that we want at these facilities.
- It will be a much safer place to get in a lower flows.
- Need to think about the protection of the river bank. The banks are highly eroded. Vic noted that this project will address restoration/stabilization.
- Concerned about potential increased pedestrian use on the north side of the

river. There should be signage to discourage people from trespassing on the north side of the river. The City can not advocate for usage on private property.

- Public lands = public access.
- It was noted that the eroding bank does discourage access.
- Vic – if it is determined that areas beyond public lands need stabilization the City would need to execute an agreement with the property owners.
- It was noted that the left side has lost 10' of bank over the past 26 years.
- With a course of 600 to 900 feet in length – how many features can be fit in? Typically within this length, three to six features could be designed but this depends on fish criteria and habitat.

Meeting Wrap-Up and Schedule

- The Committee discussed the preferred day of the week and time for future Steering Committee meetings. It was decided that Steering Committee meetings would continue to be held on Monday nights but that the start time would be pushed back to **5:30pm**.
- We will alternate the location of the meeting from downtown at Stewart to North Raleigh. The next meeting is tentatively set for the Durant Training Lodge on **Monday, March 8, 2010** – if this location isn't available or doesn't have A/V capabilities then the meeting will be held at the Falls Dam Visitor Center conference room.
- The next Community Meeting will be scheduled for some time in mid-April, following completion of the river survey and preliminary engineering analysis.

STEWART

TO:	City of Raleigh Parks & Recreation Department River Mill Community
FROM:	Cindy Szwarckop, AICP
DATE:	3/8/10
REFERENCE:	River Mill Community Meeting March 2, 2010
STEWART PROJECT NUMBER:	C09047

Attendees:
Vic Lebsock, City of Raleigh Parks & Recreation
Lisa Potts, City of Raleigh Parks & Recreation
Cindy Szwarckop AICP, Stewart Engineering, Inc.
Garry Walston RLA, Stewart Engineering, Inc.

The following individuals signed the attendance log: Sharron Parker, Dan Lee, Elaine Bartlett, Sheri Knight, Marie Guziejka, Susannah Koger, Charlotte Fougue, Gene Dodd, Brian Upchurch, Tessa Hunt, Roberta Forbes, Jason Clark, Tom Wright, Juli Brown, Rafael Soto, Charlotte Gross, Lamar Caldwell, Sandra McKeown, and Jannice Ashley

Comment sheets were handed out at the meeting and three were received back. Tom Wright serving as the River Mill representative to the Falls Whitewater Park Steering Committee will collect the comment sheets and bring them to the next Steering Committee meeting on 3/8/10.

Meeting Purpose:
On March 2, 2010, representatives from the City of Raleigh and Stewart Engineering met with the River Mill Community to discuss the proposed Falls White Water Park. The meeting began with a brief project project introduction by City of Raleigh Project Manager, Vic Lebsock. Cindy Szwarckop with Stewart Engineering then presented a powerpoint presentation, discussed the project schedule and gave an overview of the status of the project. It was noted that this project is purely a feasibility study to see if the project can be constructed in this location. The project is in the very beginning stages and data collection is still underway as the recent rains and inclement weather have precluded the Stewart survey crews from safely accessing the river to complete the in-river survey.

The following questions were asked by the River Mill residents:
1. Describe the feasibility study and the economic impact of the project.
2. Diversion – concerns with the drought – prefer medium flow.
3. Who is the paddling community?
4. What is the paddling community influence?
5. Where was the original park?
6. How many users per year are anticipated? Not sure.
7. Is it family oriented? Is it safe for families?
8. How many paddlers are on the steering committee? Nine
9. Are there other paddling areas nearby?
10. Is it connected to Forest Ridge Park? Does it tie in?
11. Has the southern parcel (85+/- acres) been planned?
12. Has a traffic study been done? No.
13. What will determine a go/no go decision?
14. Will an environmental assessment be provided?
15. Does public opinion matter?
16. Explain the process for city approval of the project.
17. When is the EA provided in the process?
18. What is the parameters/effect of the Milburnie Dam removal on fish habitat?
19. Who are the users of the park – fishermen?

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20. Are there user surveys? What is being used to determine need for this park?
21. Are there recreation surveys?
22. Can we survey River Mill residents?
23. Who decides what is too much of an impact? COE?
24. Is the City an advocate of the project?
25. Does City have performance data to determine the number of users?
26. Will this project improve the paddler experience?
27. What about impact to the river?
28. Why invest in a park that doesn't generate revenue?
29. Does Parks & Rec keep track of paddlers in the area?
30. What are the cumulative effects to the river from the new road, bridge, and this project?
31. How will traffic be impacted? This area has a country feel.
32. Where is the project in Parks & Rec's priority list?
33. Why brand the park now?
34. Concerned with lighting.
35. How far will users travel to visit the whitewater park?
36. How will rise not occur with diversion?
37. What methodology will be used in shoreline design?
38. Will paddlers use the north side?
39. It was noted that there are 20 paddlers that live in River Mill.
40. Where will the paddlers put in?
41. How do paddlers get back to the top?
42. Will users have to cross the bridge?
43. What will the broader impacts on the area be? - Roads, parking, etc.
44. Is the RFP that Stewart responded to public knowledge?
45. Was it an RFP or an RFQ?
46. Why does the study not include other concerns? Traffic, parking, etc.
47. Look at the number of users.
48. Concerned that users of the whitewater park will park on River Mill property.
49. Should there be more public involvement?
50. Would the NEPA document include the entire park (including 85+/- acres)?
51. How far into design will the project go?
52. Why is the whitewater park not part of the 85 +/- acre park?
53. Should it be master planned now? (There is a hope that this will connect to Forest Ridge as both parks are adventure programs).
54. Why invest in this park? Why not upgrade the area to make the area better?
55. Will the project recommend no change or a no-action decision?
56. What is the cost of the project?
57. Can the park compete with Charlotte? It was noted that this park is not in competition with Charlotte and is not a "competition-level" park but rather for informal events.
58. River Mill residents are concerned with trespassing.

River Mill
Community Meeting

March 2, 2010

STEWART

RALEIGH Parks and Recreation

Agenda

- Introductions - Tom Wright, Vic Lebsock
- History of Project – Vic Lebsock
- Project Status Update – Cindy Szwarckop
- Question/Comment Session

Project Schedule

Community Meeting #1: January 19, 2010
Data Collection/River Survey: Ongoing – March 2010
Preparation of Conceptual Design: April 2010
Community Meeting #2: Late April or Early May 2010
Design Development Stage: May through July 2010
Community Meeting #3: End of July 2010
Complete Design Development Drawings: Late August 2010

Community Open House
January 19, 2010

Open House Comments 1/19/10

I am against this water park. The project is only going to benefit a very small group of people and only for a small fraction of the year. The impact will be negative to the natural beauty and create eyesores to residents of the area who are here everyday of the year. The environmental impact is not worth sacrificing play for a few people. Taxpayer money would be better spent to help more people with less impact to the birds, fish, and plants in the area.
The potential project name should encompass multiple user groups. Emphasize that this isan augmentation of existing features. Project will increase user groups by including education, multi-level paddling/tubing, fishing (could be improved with riffle/pool systems) – will not exclude current user groups. Ecological integrity of the river system (locally & downstream) is critical to all players and partners – this includes stabilization after/during construction, keeping it as natural as possible.
I think this park is a great idea. It can help the soil erosion and other environment impact problems. And I am looking forward to paddling it.
I oppose this project. It is fiscally irresponsible to spend an unknown amount of money to build a 600 ft run that is only usable when the flow is high enough for such a small number of people.
Define enhance and what areas are we enhancing? Paddle Sports Facility
This is a great idea for Raleigh. I am excited about what these improvements will bring to the area in regards to fishing, boating, and overall enjoyment of the area.

Open House Comments, Continued

The park looks great. Big plus for Raleigh. Great for families.
I am in complete opposition to this project. It is a selfish small interest group project designed to serve a very small group and the taxpayers resources for this are, frankly a complete sham. Our Sheriff just announced that deputies will probably be laid off, Wake school are underfunded and so are many City issues that would serve a much broader range of taxpaying citizens. Furthermore, the environmental impact studies of this are far reaching. "Diverting" or controlling water flow should be out of the question, period. Streamflow should have to remain the same to both sides of the river. The reasons are numerous. The impact on hunting grounds for animals and birds of prey would be terrible. Spawning grounds would be permanently destroyed. Bridging to an island that has been a solice for wildlife for ages should be absolutely done away with!
Could be an opportunity to introduce new populations to a recreational activity not available now. Since flows will not be changed, there will still be lots of days for and areas for folks who like to fish, wade or enjoy the river, not boating. Maintaining health of the river is important. Public areas are important and any enhancement to provide enjoyment for additional uses brings more benefits to the area.
I feel that the bond/taxpayers money from the City of Raleigh is being used on a project that only 100's fo Raleigh citizens will use vs. projects such as swimming pools that 10's of 1,000's of Raleigh citizens will use.

Open House Comments, Continued

Initial plans look good. Along with the boating options I see added value for swiftwater training and improved fishing downstream. I would be in heaven with one bluntable wave and a loopable hole. Glad to see this coming into reality!
Good info shared on proposal. As a paddler, I would love any enhancements that would allow more days on the water. Thanks for organizing.
I live in the Rivermill community and am very concerned about this proposal. Right now life at the Mill is very quiet and enjoyable. At any given moment you can enjoy a leisurely stroll and see many types of wildlife. The view from my unit is breathtaking. My concerns involve the possible water diversion, the destruction to our side of the bank, the traffic along our side, the possible deterioration of the island. It seems to me this is a large amount of money for an exclusive group. Paddlers have the right to paddle but we also have the right to our quiet life at the Mill.
Everything looks great! I look forward to this being complete. It will be a big bonus for the area.
Looks great! Keep going!!
Please put more funding toward the greenway along the river, for the many who could enjoy the beauty of this area. Scrap the white water park, which puts phony rock among the natural rock, diverts water which gives us much-loved rapids on the north side of the island and takes away our chance to put kayaks in and paddle ourselves. We love the river and live there 24/7 so this negatively impacts 51 homeowners and their families more than it can ever benefit the few who visit occasionally.

2/15 Steering Committee Meeting

- Vision Statement
- Branding
- McLaughlin Whitewater Update
  - Whitewater Course Location
  - Whitewater Course Wish List
  - Potential Pedestrian Bridge
  - Potential Diversion Weir

Vision Statement

- "To create a river park that provides multiple water-based recreational and educational opportunities throughout as much of the year as possible with the known historical release levels. The river and its natural habitat will be enhanced and celebrated through the creation of this project."

Branding

- The Steering Committee is currently working to determine a name/brand for the project.
  - Falls Whitewater Park
  - Falls Paddle Sports Facility
  - Falls of Neuse Recreation Area
  - Falls of Neuse Recreation Area

Whitewater Course Location

- Project will be located in the South Channel.
- Most of the drop is at the upper end of the study area.
- Available drop is 6 to 8 feet.
- *1% gradient yields a course length of 600 to 800 feet.*

Whitewater Course Location

- Construction at the downstream end would be more expensive, have more impacts and yield few additional benefits.

Middle Section of South Channel

Confluence of North and South Channel looking Upstream

Whitewater Course Location

Whitewater Course Wish List Hydraulics

- Play waves.
- Eddies for queuing.
- Recovery pools between drops.
- Calm water at eddy exits to encourage beginners and maximize time before flushing.
- Deep, long eddy lines for mystery moves.
- Diversion weir for augmenting flow to the course.

Whitewater Course Wish List
Events and Programs

- Informal citizen races.
- Local slalom and freestyle events targeted at experienced boaters in those disciplines.
- Events for beginners, families and kids.
- Swift water rescue training.
- Instruction for varied skill levels.

Whitewater Course Wish List
Access

- Improved put in downstream of the dam outlet.
- Intermediate take out downstream of the whitewater improvements.
- Potential pedestrian bridge to island.
- Access at various points along the whitewater course including key whitewater play spots.
- A hardened area at the water's edge along the right bank (looking downstream) that is capable of withstanding foot traffic.

Potential Pedestrian Bridge

- Would provide access to the island.
- ADA accessibility.
- Elevated above the 12,000 cfs dam release.
- No impact to flood elevations.

Potential Pedestrian Bridge

- Proposed bridge location at the head of the South Channel.

Existing Flow Split

Flow split at the head of the island – visually estimated

- 2/3 goes north
- 1/3 goes south

Appearance of Potential Diversion Weir

- Possible Construction Methods

Faux rock to resemble natural rock outcrops

Grouted boulders

Potential Diversion Weir Status

- Design has not yet started.
  - Waiting on completion of river survey.
  - Need to reach agreement on diversion criteria and performance from Steering Committee.
  - Construction needs to be as natural looking as possible.
- Location has not been determined.

Contact Information

City of Raleigh

Mr. Vic Lebsock, Project Manager
Parks & Recreation Department
333 Fayetteville Street, Suite 300
Raleigh, NC 27601
Victor.lebsock@ci.raleigh.nc.us

Design Team

Cindy Szwarckop, AICP
Stewart Engineering, Inc.
421 Fayetteville Street, Suite 400
Raleigh, NC 27601
cszwarckop@stewart-eng.com

STEWART

TO:	City of Raleigh Parks & Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
DATE:	3/11/10
REFERENCE:	Falls Whitewater Steering Committee Meeting March 8, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Attendees:
Seth Yearout, City of Raleigh
Larry Ausley, Paddler
Mark Antonik, Paddler
Shari Bryant, NCWRC
Susan Clizbe, USACE Wilmington District Public Affairs
Tom Wright, River Mill HOA
Jade Wei
Carol Banaitis, USACE Falls Lake
Sarah King, Paddler
Alissa Bierma, Neuse Riverkeeper
Bob Zarzecki, Paddler
Tom Freeman, USACE Falls Lake
Jean B. Manuele, USACE, Raleigh Regulatory Field Office
Elizabeth Gardner, Paddler
Kathy Capps, City of Raleigh
Vic Lebsock, City of Raleigh

Design Team:
John T. Jenkins II, PE – Stewart
Garry Walston, RLA - Stewart
Cindy Szwarckop, AICP – Stewart
John Anderson, McLaughlin Whitewater (via phone)
Risa Shimoda, McLaughlin Whitewater (via phone)

Meeting Agenda:
1. Design Criteria Discussion
2. Branding Discussion
3. Impact Research
4. Meeting Wrap-Up, Schedule

Cindy Szwarckop opened the meeting by asking Tom Freeman to introduce Susan Clizbe (USACE Public Affairs Officer). She then gave the Steering Committee a brief update on the meeting that was held with the River Mill Community on 3/2/10. Approximately 25 to 30 River Mill residents attended the meeting hosted by Tom Wright. During the meeting Vic Lebsock and Cindy Szwarckop provided a brief overview of the project, received comments, and responded to questions. It was noted that the comments/questions received would be added to the comments received during the January Open House and added to the City website.

Tom Wright noted that he had not yet received any additional comment sheets from River Mill residents, but that he would check in with the residents.

Design Criteria
Cindy introduced the Design Criteria Exercise and John Anderson/Risa Shimoda with McLaughlin Whitewater (via phone) further detailed the data that they need to proceed with the design. The design team asked the Steering Committee to break

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into small groups and provide comments related to the following items:

1. Aesthetics
2. Riparian Protection
3. Physical Access
4. Hydraulic Features
5. Aquatic Habitat and Fish Passage
6. Diversion Weir
7. Landscape Materials

The summary of the small group exercise is attached.

Branding

The Branding portion of the meeting was deferred to the next Steering Committee meeting so that additional time could be given to the Design Criteria discussion.

Impact Research

Cindy Szwarckop asked the Steering Committee to report back on the "assignment" that was given to the members to research potential impacts. The American Whitewater table (that was discussed at a previous meeting) with annotation by McLaughlin Whitewater was also distributed for review.

- Larry Ausley noted that he had contacted Jay Sauber with the Environmental Sciences Section of DWQ to request that a riparian/instream habitat survey and possibly even more formal macroinvertebrate and fish population surveys be conducted.
    - In addition, he noted that he queried DWQ to see if there are fish surveys in the area. He noted that DWQ doesn't monitor this area because the areas are impacted; the next downstream monitoring area is Neuse at 401 and Neuse at Hwy 64.
    - Basin assessment for food was fair.
    - Structures could provide additional aeration.
- A question was asked of Tom Freeman related to a hydroelectric dam at Falls River. Tom noted that Congress has not authorized (as one of the five goals of Falls Lake) a hydropower plant. Jordan facility is now under construction.
- Seth Yearout noted that over the past three years there were a total of 1,872 participants in kayaking with an average of 624 participants per year. It is believed that there are a good deal of potential participants that would use this type of facility.
    - Seth was asked to explain the Adventure Program. It was noted the Progam serves users 12+ in age and that there are Adult and Senior programs.
- Jade Wei presented information related to education:
    - Paddle Creek send 4,500 people down the Neuse River each year.
    - The Carolina Canoe Club holds novice clinics per year (20) and three Swiftwater Rescue Classes (48 students) per year. It is expected that with more access the Canoe Club would hold more classes.
    - According to the Outdoor Industry Association, 17.8 million Americans aged 6+ participated in kayaking, canoeing, and rafting in 2008. 7.8 million Americans participated in kayaking.

Meeting Wrap-Up and Schedule

It was noted that the City and the Design Team would hold off scheduling another Steering Committee meeting until there were substantive items to discuss. The Steering Committee meeting will be held at least one week prior to the next Community meeting. It was also decided that the next Steering Committee meeting would be held at the Stewart office in downtown Raleigh.

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Cindy noted that due to high release levels the Stewart surveyors have not been able to get into the water to do the survey. Tom Freeman noted that the release levels on today (3/8/10) were 500 cfs and that it should be less than that in a few days, depending on the rains that are targeted to arrive this week.

Schedule –
Data Collection/River Survey: March 2010
Preparation of Conceptual Design: April 2010
Community Meeting #2: Late April or Early May 2010
Design Development Stage: May through July 2010
Community Meeting #3: End of July 2010
Complete Design Development Drawings: Late August 2010

STEWART

TO:	City of Raleigh Parks & Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
DATE:	4/15/2010
REFERENCE:	Falls Whitewater Steering Committee Meeting #4 April 12, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Attendees:
Seth Yearout, City of Raleigh
Shari Bryant, NCWRC
Tom Wright, River Mill HOA
Carol Banaitis, USACE Falls Lake
Sarah King, Paddler
Alissa Bierma, Neuse Riverkeeper
Bob Zarzecki, Paddler
Elizabeth Gardner, Paddler
Bob High, Paddler
Kathy Capps, City of Raleigh
Vic Lebsock, City of Raleigh

Design Team:
Garry Walston, RLA - Stewart
Cindy Szwarckop, AICP – Stewart

Meeting Agenda:
1. Full Value Contract – Kathy Capps
2. Branding Discussion – Cindy Szwarckop
3. NCWRC Site Visit Review – Shari Bryant
4. Updates
   - Project Webpage
   - Survey

Tentative Project Schedule:
- Data Collection/River Survey – March to April 2010
- Preparation of Conceptual Design – Late April to May 2010
- Community Meeting #2 – Late May 2010/Early June 2010
- Design Development Stage – May through August 2010
- Community Meeting #3 – August 2010
- Complete Design Development Drawings – September 2010

Full Value Contract - Kathy Capps led the group in a discussion related to the Full Value Contract – which is often used in recreation programs.
- This is a diverse group with diverse backgrounds.
- The goal is to work as part of the group.
- Need to reaffirm the commitment to the committee's purpose.
- Need to make sure that everyone is committed to the vision and goal of the group despite each individual's ideas/agendas – everyone needs to work together towards a common goal.
- A seat at the "table" is the place to make an impact – not individually.
- It is not appropriate to use information gained at the table to further your own individual goals/efforts.
- Alissa asked that the group reaffirm the vision statement. She noted that

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Branding Discussion – Cindy led the group in a discussion to determine the "brand/name" for the project. Vic first detailed the process for naming parks in the City.

- Naming is mostly based on geography, not person. Officially done at the Master Plan phase. This project is different, since there is not a master plan at this time. This will be named as a facility.
- Are there any words that can't be used? Not unless voted on and changed at master plan stage.
- Would there be a problem with naming now and using same later for the overall park?
- Cindy detailed the original options that were discussed at the January 19. 2010 Steering Committee meeting:
  - Falls Whitewater Park
  - Falls Paddle Sports Facility
  - Falls of Neuse River Park
  - Falls of Neuse Recreation Area
- Vic recommended that Falls be in the name.
- Alissa asked if people could confuse Falls of Neuse Recreation Area with Falls Lake Recreation Area.
- Falls of Neuse is a good identifier.
- Alissa noted that she is opposed to it being called a whitewater park.
- The Corps of Engineers (Carol) was asked if the Corps objected to whitewater park. Yes, because the feeling is that it is exclusive to paddlers.
- The Falls Lake Master Plan (1981) referred to whitewater park.
- Vic suggested eliminating Falls Paddle Sports Facility and Falls of Neuse Recreation Area.
- Alissa is concerned that there will have to be a lot of education associated with the name whitewater park and there will be objections from anglers.
- Elizabeth noted that all western facilities are called whitewater parks. The name needs to identify the use and create interest. Name should not confuse people or users.
- Alissa noted that with whitewater there will be required education of the public through signage, education, and explanations.
- Should provide clarification on use rather than design.
- Vic noted that historically this area has been called Falls and always had whitewater. Build on this history.
- The committee discussed who would use the facility and where they would come from to use it.
- Vic suggested Whitewater Park at Falls of Neuse.
- The group took a vote: Falls of Neuse Whitewater Park received 6 votes; Falls of Neuse River Park received 3 votes; and 2 members abstained from voting.
- The ***brand/name will be Falls of Neuse Whitewater Park***.

NCWRC Site Visit Recap – Shari Bryant

- Shari noted that she wouldn't detail word-for-word the report because it was provided to all Steering Committee members.
- She did note that there are concerns about the diversion weir. NCWRC needs more information from the design consultants.
- It was noted that some anglers have expressed concern about being forced out of the area. Need to figure out how everyone can co-exist. It is noted that the groups co-exist now.
- Tom mentioned that River Mill does allow some anglers to use the north bank – the City will need to discuss any improvements to the north bank with the homeowners.
- Alissa expressed a concern about removing subsistence fishing.
- Need to make sure that the project doesn't impede the areas where people fish for bass.
- If there were to be too big of an impact to anglers and subsistence fishers, could the park be moved down further?

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Webpage Preview - Cindy and Kathy previewed the project website for the *Steering Committee*. The link is http://raleighnc.gov/portal/server.pt/gateway/PTARGS_0_2_306_209_0_43/http%3B/pt03/DIG_Web_Content/category/Leisure/Park_and_Greenway_Planning/Current_Projects/Cat-MCH-2007222-094908-White_Water_Park.html

Survey Update – Cindy noted that the Stewart survey crews are actively working on the project with approximately 2 ½ weeks of field + office work remaining to complete the survey component of the project. This information will then be forwarded on to McLaughlin Whitewater Design.

Meeting Wrap-Up and Schedule

It was noted that the City and the Design Team would hold off scheduling another Steering Committee meeting until there were substantive items to discuss. The Steering Committee meeting will be held at least one week prior to the next Community meeting. It was also decided that the next Steering Committee meeting would be held at the Corps of Engineers Visitor Center. Prior to the meeting, there will be a walking tour/site visit. Additional information (time and place to meet) will be forwarded to the Steering Committee members via the meeting invitation.

STEWART

TO:	City of Raleigh Parks & Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
DATE:	7/19/2010
REFERENCE:	Falls Whitewater Steering Committee Meeting #5 July 14, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Attendees:
Shari Bryant, NCWRC
Bennett Wynne, NCWRC
Tom Wright, River Mill HOA
Carol Banaitis, USACE Falls Lake
Sarah King, Paddler
Bob Zarzecki, Paddler
Elizabeth Gardner, Paddler
Bob High, Paddler
Larry Ausley, Paddler
Kathy Capps, City of Raleigh
Vic Lebsock, City of Raleigh

Design Team:
Garry Walston, RLA - Stewart
Cindy Szwarckop, AICP – Stewart
John Anderson, McLaughlin Whitewater
Risa Shimoda, McLaughlin Whitewater

Meeting Agenda:
1. Introduction and Recap – Kathy Capps
2. Hydraulic Analysis, Feasibility Study & Conceptual Design – McLaughlin
3. Question & Answer Session – Design Team
4. Community Meeting Information – Cindy Szwarckop

John Anderson and Risa Shimoda presented the Hydraulic Analysis, Feasibility Study, and Conceptual Design presentation. It was noted that the same presentation would be given during the Community Meeting at 7pm that evening.

The following questions/topics for future discussion/analysis were noted after the presentation:

- Bank stabilization and aesthetic boulder placement.
- Significance of lower water height and minimum channel depth.
- It was noted that the north and south channels have changed over the years. Carol Banaitis noted that she found pictures of the area going back to the 1960s, 1970s, and 1980s.
- Diversion island. During high flow conditions would the island be able to handle the velocity? Yes, the island will be a grouted rock structure on one side with pockets of soil to encourage tree growth. It could also a mimic a form of a dam – perhaps a timber crib dam.
- What will be the height of the diversion island? It will not be higher than the existing island.

The Steering Committee was charged with going back to their respective groups/agencies to solicit comments and gain consensus on the project. During the next Steering Committee meeting, members will report back and provide any

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comments/questions/concerns that they have gathered during the interim. The design team will be moving into the design development stage of the project and will begin to design the hardscape elements (parking, access, etc.).

Meeting Wrap-Up and Schedule

The next Steering Committee meeting is scheduled for Monday, August 16th from 5pm to 6:30pm in the Stewart Engineering Training Room. 421 Fayetteville Street, Suite 400, Raleigh, NC

Project Schedule:

- Meeting #1 (Kick-off Meeting) – January 19, 2010
- Data Collection/River Survey – Complete – May 2010
- Preparation of Conceptual Design – May to Mid-July 2010
- Community Meeting #2 – July 14, 2010
- Design Development Stage – Late July through October 2010
- Community Meeting #3 – Mid-October 2010
- Complete Design Development Drawings – Mid-November 2010

Attachments: McLaughlin powerpoint presentation

STEWART

TO:	City of Raleigh Parks & Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
DATE:	7/20/2010
REFERENCE:	Falls Whitewater Park Community Meeting #2 July 14, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Location:
Durant Nature Park, Campbell Lodge

Meeting Time:
7pm to 8:30pm

Meeting Attendees:
The following 29 people signed the guest attendance log:
Scott Reston
Cleo Smith
Mary Stager
Shawn Gordon
Matt Howard
Ian Pond
Elizabeth Gardner
Sharron & Ken Parker
Carol Banaitis
Dick Bailey
Spencer Muse
Sig Hutchison
Jerry Walker
Paul Scrutton
Russ Scheve
Doug Stager
David Muse
Cal Coetlee
James Mong
H. B. Williamson
Larry Ausley
Garry Walston
Cindy Muse
Jeanne Smoot
David Smoot
Nancy Guthrie
H.H. Hancock
John Jenkins

City of Raleigh and Design Team Attendees:
Vic Lebsock – City of Raleigh
Kathy Capps – City of Raleigh
Garry Walston, RLA - Stewart
Cindy Szwarckop, AICP – Stewart
John Anderson, McLaughlin Whitewater
Risa Shimoda, McLaughlin Whitewater

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Meeting Agenda

1. Introduction, Recap, and Welcome – Kathy Capps
2. Hydraulic Analysis, Feasibility Study & Conceptual Design – McLaughlin
3. Question & Answer Session – Design Team

Kathy Capps noted that the new city webpage will be active on 8/1 and there will be a page dedicated to the Falls Whitewater Park project – parks.raleighnc.gov – then type in whitewater park. John Anderson and Risa Shimoda presented the Hydraulic Analysis, Feasibility Study, and Conceptual Design presentation.

The following questions/topics for future discussion/analysis were noted after the presentation:

- Will the park be competitive? It will be designed for local events and programming including rodeo activities.
- What is the purpose of seating? There will be informal seating areas located on the south channel area.
- Concern with erosion at the canoe launch and other activities, including illegal activities. Armoring will improve the erosion conditions and be an aesthetic improvement.
- Prior to the canoe launch there was a little traffic on the river. Now there are a lot of people and lots of illegal activities in the canoe launch area. There is a need for additional security. The south side of the river is a mess. Concerned about the impact of the greenway.
- The City wants to bring appropriate recreation to the area. Sig Hutchison noted that the greenway will bring controlled access to the area as opposed to uncontrolled access.
- Will waves be more dynamic with more movement?
- What is the cost range for the project? The cost will be determined during the design development phase of the project.
- What is the anticipated time for construction? It is anticipated that the whitewater park could be constructed during one construction season (late spring to early winter).
- How many users are expected? It was noted that there are 300 to 400 kayakers in the RDU area, 1,100 members in the Carolina Canoe Club, and that Paddle Creek sends over 4,000 people per year on trips down the river. This whitewater park will be open to the public for canoeing, kayaking, tubing, fishing, etc. It was acknowledged that the largest user group will be the boaters.
- What is the anatomy of the three drops? Project is being designed to provide variety.
- Why not vary the height in the drops? The fixed drops do not go over two feet which is a design standard.
- Can training be incorporated into the park?
- Can the park be designed for higher flows?
- It was noted that the presentation showed 99 days in the south channel with the proposed conditions. How does the 99 projected days compare to existing conditions since the south channel does not have the flow to support many paddling days?
- Larry Ausley noted that the park will introduce paddling to a larger community – the beginning paddlers.
- It was noted that in the presentation three play areas were shown. There was a question as to whether these areas will "do away with" the current natural play spots.
- Why does the plan start beneath the bridge? The USACOE has asked that the park be built downstream of the bridge for safety reasons. There are legal restrictions against building too close to the spillway.
- Can deep water rescue be included as part of the park programming? The park should include anchor points and areas for rope drills.
- Should include local rescue squads in the design of the park.

It was noted that the next community meeting will be held in mid-October. The purpose of that meeting will be to present the design development drawings including parking areas, access improvements, cost information, etc.

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Project Schedule:

- Meeting #1 (Kick-off Meeting) – January 19, 2010
- Data Collection/River Survey – Complete – May 2010
- Preparation of Conceptual Design – May to Mid-July 2010
- Community Meeting #2 – July 14, 2010
- Design Development Stage – Late July through October 2010
- Community Meeting #3 – Mid-October 2010
- Complete Design Development Drawings – Mid-November 2010

The following comments were received via the comment sheets:

This proposed park will be a big asset to the Raleigh area. There will be many teaching opportunities (ie) swiftwater rescue, intro to whitewater, kayaking, etc. It should enhance the area surrounding the tailrace and perhaps will bring more people to the river which should help to increase river stewardship.

I think this is GREAT! Great synergy with the greenway. I believe it should move forward.

The opportunity for teaching after the park is established is great and should be developed. Not only a source of revenue, but a way to encourage use of the park. This is a good resource for novices and beginners to turn to.

Please join the City of Raleigh Parks & Recreation Department, Stewart Engineering, and McLaughlin Whitewater as they present an update on the Falls Whitewater Park feasibility study. A question & answer session will follow the presentation.

Falls Whitewater Park
Community Meeting
Wednesday, July 14th, 2010
7pm to 8:30pm
Campbell Lodge at Durant Nature Park
3237 Spottswood Drive, Raleigh, NC 27615

If you have any questions in advance of the meeting, please contact:
Vic Lebsock at victor.lebsock@raleighnc.gov or 996-4786
Cindy Szwarckop at cszwarckop@stewart-eng.com or 866-4823

City Of Raleigh
North Carolina

Falls Whitewater Park Community Meeting #2

Guest Attendance

July 14, 2010 – 7pm to 8:30pm

	NAME	ADDRESS
1	JERRY WALKER	600 RIVER SIDE DR. WAKE FOREST, 27587
2	PAUL SCRUTTON	3 TIPPECANOE CT., DURHAM, NC 27713
3	RUSS SCHEVE	504 OLIVE BRANCH RD, DURHAM, NC 27703
4	DOUG STAGER	7508 DRAYTON CT RALEIGH NC 27615
5	David Muse	9629 Waterwood Ct Wake Forest, NC 27587
6	CAL COETZEE	709 N CHURCH, DURHAM, N.C., 27701
7	James Morg	5109 LENORAWAY DR RALEIGH, NC 27613
8	H.B. WILLIAMSON	5419 FIELDSTONE DRIVE, RALEIGH 27609
9	LARRY AUSLEY	6717 VALLEY WOODS LN., CARY NC 27519
10	GARRY WALSTON	421 FAYETTEVILLE ST. SUITE 400 RAL 27601
11	Cindy Muse	5410 Ravenwood Pl Durham NC 27713
12	Jeanne J. Smoot	940 Stone Falls Tr. 27614
13	David M. "	" 27614
14	Nancy Guthrie	6717 Valley Woods Ln, Cary NC 27519
15	H.H. HANCOCK	2624 WELLS AVE RALEIGH, NC 27608
16	John Jenkins	9616 Barton's Creek Rd Raleigh, NC 27615
17		
18		
19		
20		

City Of Raleigh
North Carolina

Falls Whitewater Park Community Meeting #2

Guest Attendance

July 14, 2010 – 7pm to 8:30pm

	NAME	ADDRESS
1	Scott Reston	7812 Harps Mill Woods Run
2	Cleo Smith	P.O. Box 17127 ; Raleigh, NC 27619
3	MARY STAGER	7508 DRAYTON CT RALEIGH, NC 27615
4	Shawn Gordon	9609 Waterwood Ct. Wake Forest 27587
5	Matt Howard	3824 Laurel Hills Rd. Raleigh, NC 27612
6	IAN POND	112 GRESHAM AV DURHAM 27704
7	Elizabeth Gardner	1806 Bickett Blvd. Raleigh NC. 27608
8	Sharron + Ken Parker	1500 River Mill Dr. #306, Wake Forest, NC 27587
9	Carol Banastis	USACE 11405 Falls of Neuse Rd
10	DICK BAILEY	P&R
11	Spencer Muse	5410 Ravenswood Pl Durham NC 27713
12	Liz Hutchinson	2704-Strong Meadow Ct. Ky 27614
13		
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Falls Whitewater Park
Community Meeting #2

July 14, 2010

Scope of Project

The Raleigh City Council adopted the Neuse River Master Recreation Plan in 1996 which included the possibility of developing a whitewater course in the area of the Falls Lake Dam. Historically, the paddling community has used this area for practice and play. The US Army Corps of Engineers has a mandated release regiment which prescribes the releases from the lake. In over 80 percent of the days, on an annual basis, the releases from the lake are very low. The objective of this project is to develop a whitewater course which will allow for the use of the area as a recreational/non-competitive whitewater park during low flow periods as well as protecting the opportunity for continued use of the area during the less frequent high release days.

The 2003 Park Bond Referendum included funding for the design of the Whitewater Park. Stewart Engineering, in conjunction with McLaughlin Whitewater Engineering, is conducting a hydraulic analysis, feasibility study, and preparing a conceptual plan for the 900-foot reach extending below the tail race of Falls Lake Dam. Once the concept plan is finalized, plan elements will be prioritized and a phasing plan will be developed accordingly.

Project Schedule and Milestones

Community Meeting #1 (Kick-off Meeting)	January 19, 2010
Data Collection/River Survey	Complete – May 2010
Preparation of Conceptual Design	May to Mid-July 2010
Community Meeting #2	July 14, 2010
Design Development Stage	Late July to Early October 2010
Community Meeting #3	Mid-October 2010
Complete Design Development Drawings	Mid-November 2010

Project Contact Information

City of Raleigh
Mr. Vic Lebsock, Project Manager
Parks & Recreation Department
333 Fayetteville Street
Suite 300
Raleigh, NC 27601
996-4786
victor.lebsock@raleighnc.gov

Design Team
Cindy Szwarckop, AICP
Stewart
421 Fayetteville Street
Suite 400
Raleigh, NC 27601
866-4823
cszwarckop@stewart-eng.com

Falls Whitewater Park
Community Meeting #2

July 14, 2010

Scope of Project

The Raleigh City Council adopted the Neuse River Master Recreation Plan in 1996 which included the possibility of developing a whitewater course in the area of the Falls Lake Dam. Historically, the paddling community has used this area for practice and play. The US Army Corps of Engineers has a mandated release regiment which prescribes the releases from the lake. In over 80 percent of the days, on an annual basis, the releases from the lake are very low. The objective of this project is to develop a whitewater course which will allow for the use of the area as a recreational/non-competitive whitewater park during low flow periods as well as protecting the opportunity for continued use of the area during the less frequent high release days.

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Project Schedule and Milestones

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Project Contact Information

City of Raleigh
Mr. Vic Lebsock, Project Manager
Parks & Recreation Department
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she agrees in theory, but there are some things that she can't agree with now in the current vision statement. She noted that the "lacking part" is the lack of protect. She agreed with celebrate because there are certainly pieces that are celebrated in the current form – this represents the historical part.

- Tom noted that through this process we may find out that the goal/vision is not possible. We may not be able to sustain or improve habitat. May not disrupt but may not enhance either.
- Shari with NCWRC noted that this might not be the case. Different fish species could have an improved habitat and others may not. This project could change the fish species in the area.
- Tom wondered what is a "fair" amount of material to place in the channel to constrict it. He would like additional information from the consultants.
- Kathy noted that everything that we do as a group is public record.
- Alissa isn't sure how the project can be done. She isn't convinced that it can be done. She feels that if the vision statement is tweaked, then she can support it.
- Kathy noted that there will be people that are for and people that will be against the project and each will try to generate public sentiment. By doing this, it discredits the work of the entire committee.
- It does not benefit the project or the committee when Steering Committee members solicit support for the project without the collaboration of the City. Soliciting support as a single entity instead of in concert with the City weakens the overall project and process.
- Steering Committee members should not try to sabotage the project or generate negative support of the project.
- We should work out any differences while seated at the table.
- Vic noted that we come here to share information without bias. Each Steering Committee member should solicit comments and bring them back to the entire group.
- We will not editorialize on the information or data that is presented to the Steering Committee.
- Any comments that are brought forth by a member from their respective interest group will be discussed at the table.
- Everyone needs to commit to the process to the end, whatever the end may be.
- The group will balance all activities that could/could not happen in this stretch of the river.
- There was unanimous support of the process.
- There was discussion related to altering the vision statement. It was asked if the vision statement could be altered to include "protect".
- Bob noted that there are certain areas where no impact should take place. He completely believes in this – especially to protect during construction. But we can't set up a project purpose where the entire area is to be protected.
- Sarah noted that she was leery of the word "protect." In this segment of the river, we are trying to create a whitewater park. What about protecting a part of the river?
- Celebrate is an important word. If it is celebrated – more people will come to experience the river.
- Protection is more of a quality descriptor. Would have action steps to protect but not celebrate.
- It was asked if we should leave the mission statement alone but acknowledge that protection is high on the list.
- How about protected wherever possible, enhanced, and celebrated?
- A vote was taken of the attendees – 9 voted to amend the vision statement and 1 voted against.
- The ***revised vision statement*** reads: "To create a river park that provides multiple water-based recreational and educational opportunities throughout as much of the year as possible with the known historical release levels. The river and its natural habitat will be protected, enhanced and celebrated through the creation of this project."

FALLS WHITEWATER PARK

July 14, 2010

Community and Steering Committee Meetings

Summary of Project Requirements

- Recreational whitewater course in south channel;
- Water diversion / Protect low flows in north channel;
- Surfing waves (2 to 3);
- Pools and calm water;
- Local events and programs;
- Access improvements;
- No impact to 100 year flood plain;
- No features upstream of the Falls of the Neuse bridge;
- No boating or water access within restricted area below spillway; and
- Pedestrian bridge and foot access to island has been removed from the project.

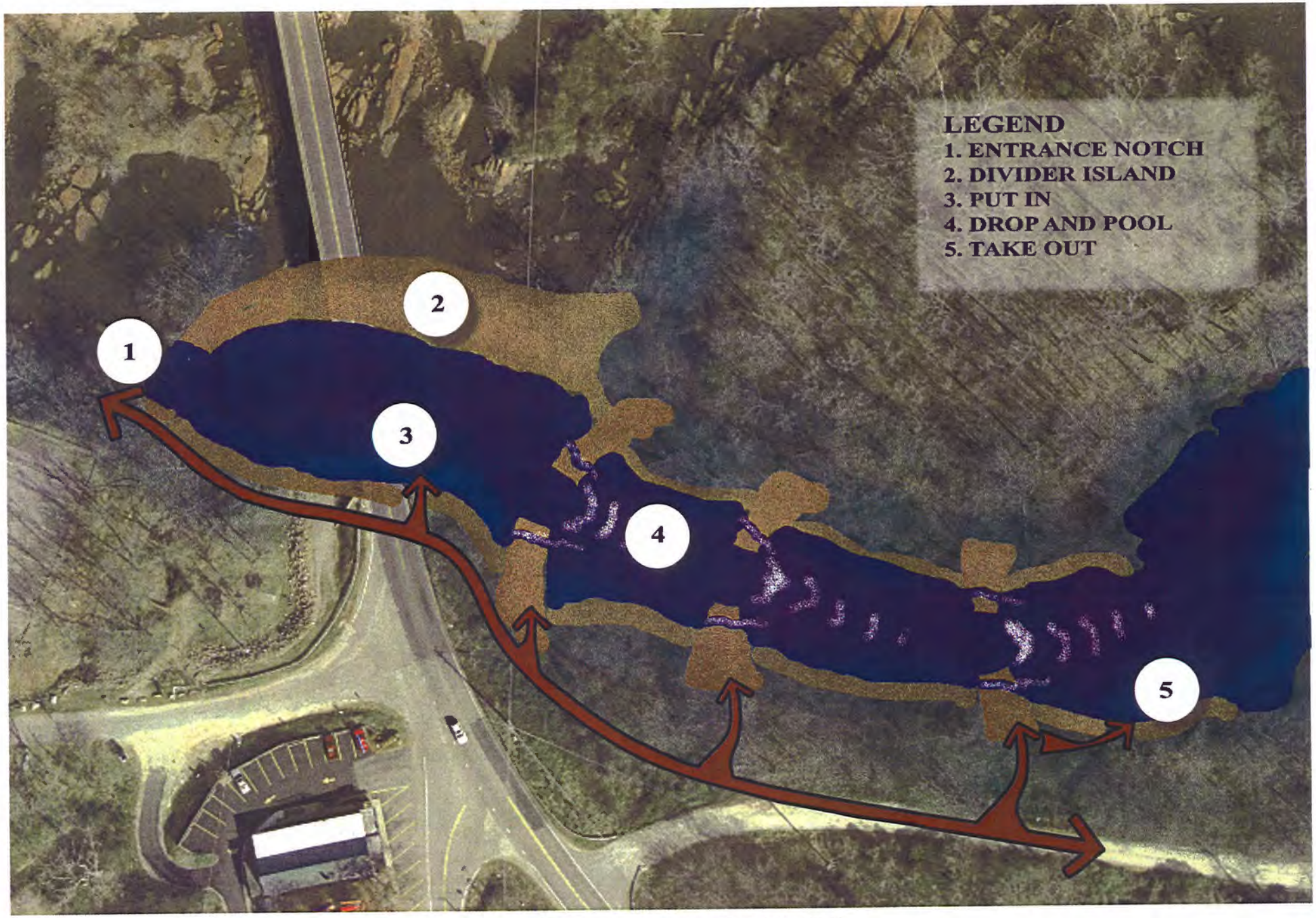


FIGURE 1 PLAN AT 500 CFS

FIGURE 2 ~ OVERALL SITE PLAN

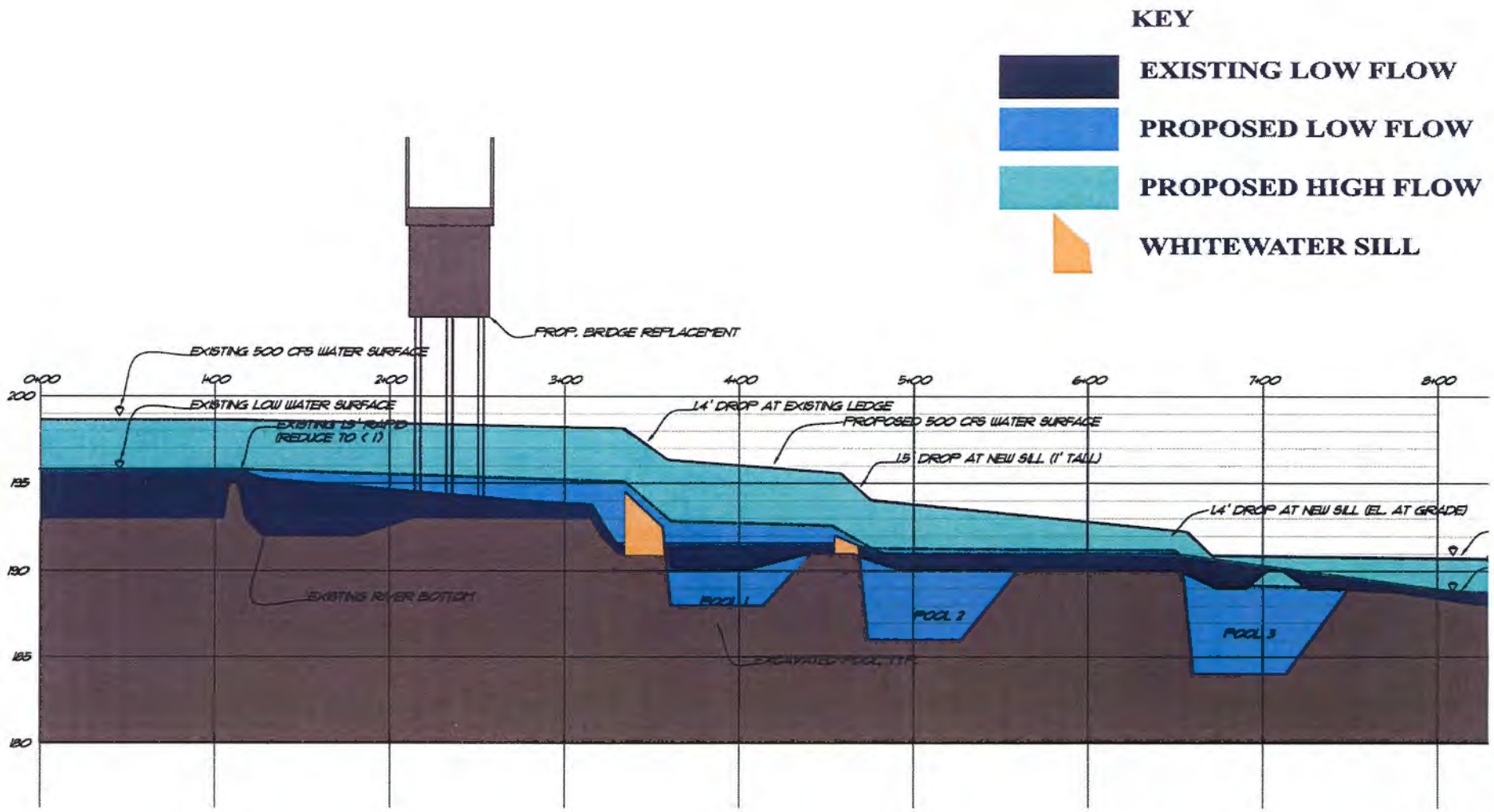


FIGURE 3 ~ SOUTH CHANNEL PROFILE

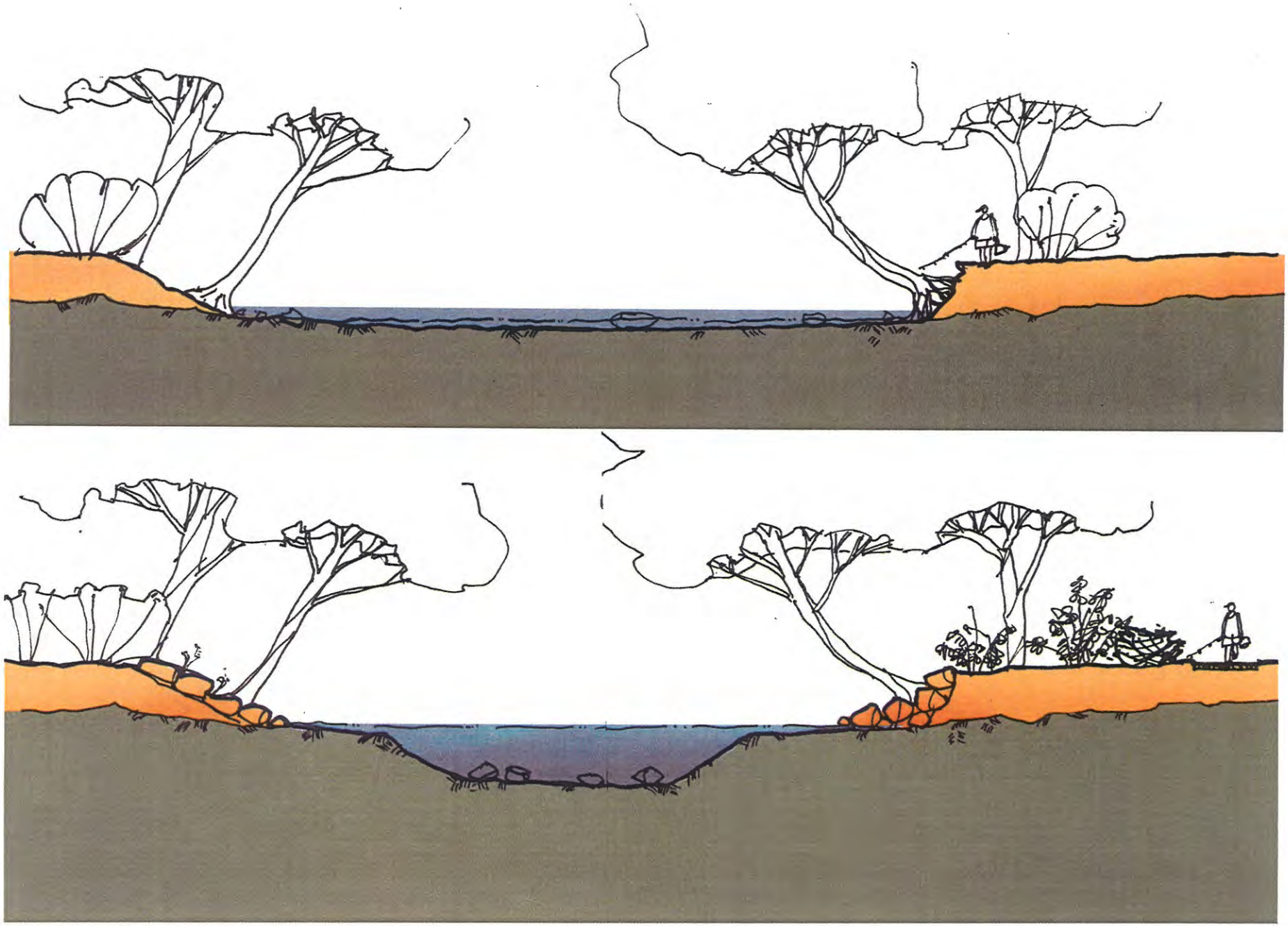


FIGURE 4 EXISTING AND PROPOSED CHANNEL CROSS SECTIONS

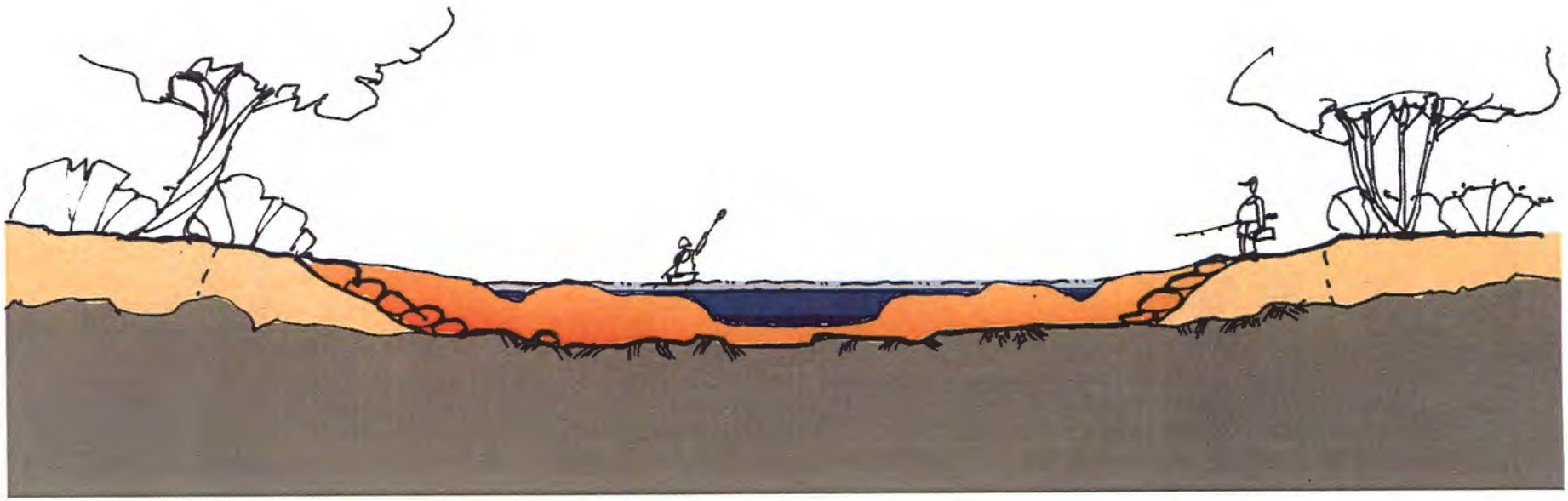


FIGURE 5 ~ ELEVATION OF TYPICAL DROP

Conceptual Design
Falls Whitewater Park

City of Raleigh, North Carolina

July 14, 2010

STEWART

McLaughlin Whitewater design group

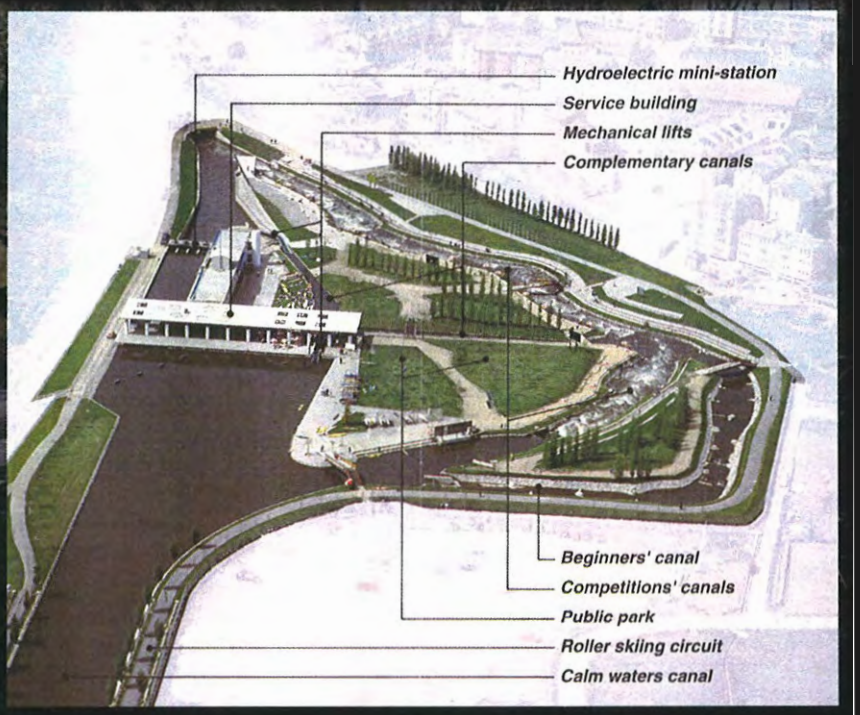
Contents

1. Whitewater Park Examples
2. Review of Project Requirements and Concerns
3. Conceptual Design
4. Hydraulic Analysis
5. Diversion
6. Impacts

Olympic Heritage

Olympic Heritage

Olympic Heritage



US Paddle Sports Historical Markers

- 1950's Canoes mass-produced, paddling clubs
- 1960's Race and recreational network
- 1970's 1972 Olympics and *Deliverance*
- 1980's Kayaks mass-produced
- 1990's Sit on top kayaks, lake kayaks, inflatables
  2000's Whitewater park growth: 15 to 65

US Whitewater Parks

- Rockies - 40
- Midwest - 10
- Northeast - 2
- Mid-Atlantic - 3
- Southeast - 6
- Pacific / PNW - 7

International Whitewater Parks

- 10 - France
- 6 - England
- 5 - Czech Republic
- 2 - China, Germany, Greece, Slovakia, Spain
- 1 - Italy, Brazil, Canada, Netherlands, Norway, Poland, Slovenia, Wales, Australia

Self-Contained Parks

- Multiple trips or open use available for a fee
- Adventure Sports Center (MD), US National Whitewater Center (NC)

In-River Parks - Urban

- Destinations for river users
- Backdrop for shore-based recreation
- Urban parks serve diverse populations

Suburban, Small Town Locations

Economic Development

Family Friendly

Opportunities to Grow River Skills and Stewardship

- Accessibility
- Controlled environment
- Opportunity to grow river use and stewardship

2. Project Requirements

- Recreational whitewater course in South Channel
- Water diversion / Protect low flows in North Channel
- ~~Pedestrian bridge~~
- No impact to 100 year flood plain
- No features upstream of Fall of the Neuse bridge
- No boating or water access within restricted area below spillway

Whitewater Project Wish List

- Surfing waves (2 to 3)
- Pools and calm water
- Local events and programs
- Access improvements

Concerns

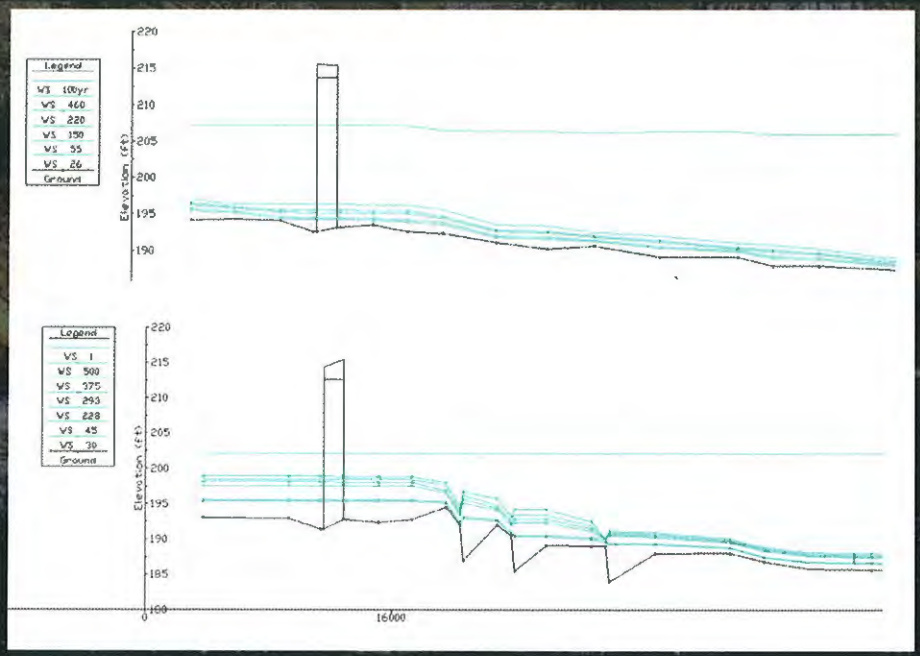
- Impact of water diversion
- Alteration of aquatic habitat, fish passage, fish stranding, etc.
- Increased level of activity
- Impacts to riparian zone, stream banks
- User conflicts
- Impact to flood hydraulics

Project Location

3. Conceptual Design

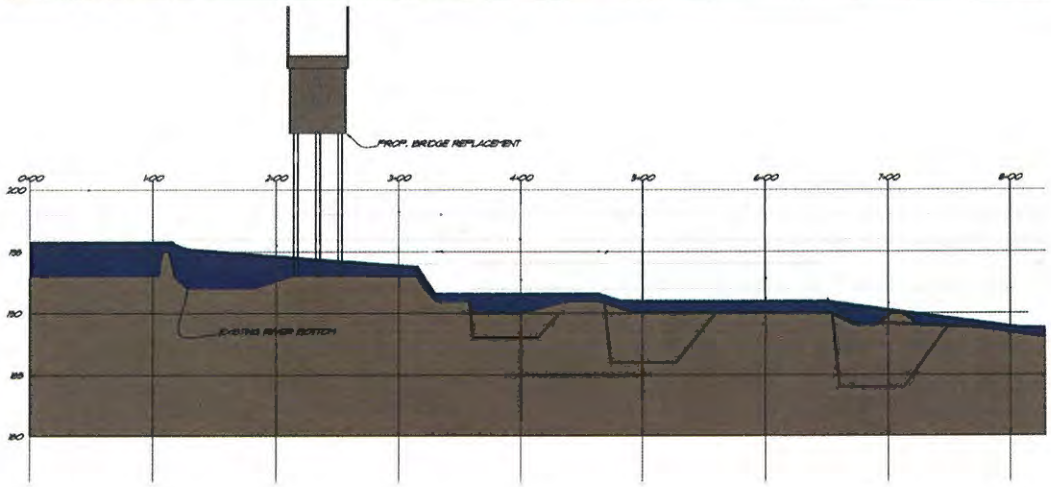
- 3 whitewater drops with play waves with 4.5 feet of drop
- Water diversion
- Access and bank protection

Initial Hydraulic Analysis



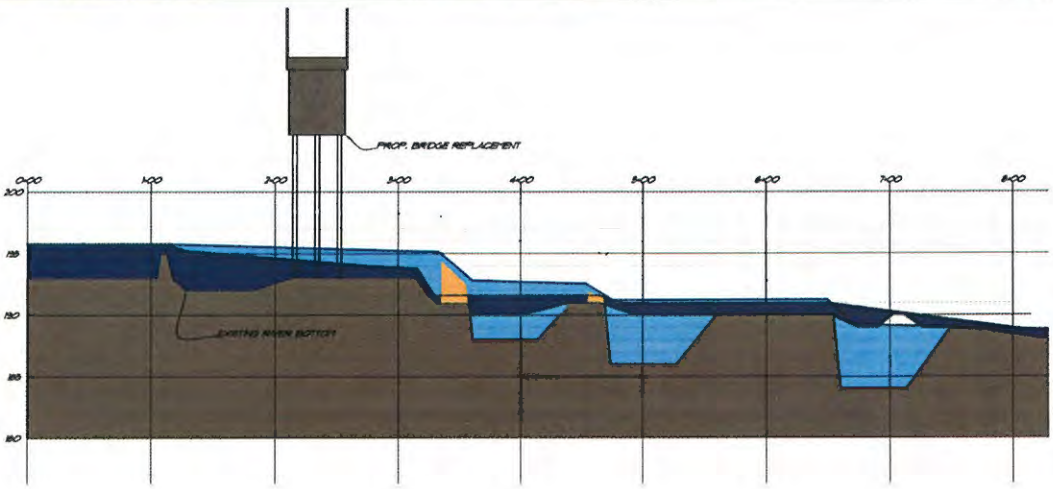
Hydraulic Profile

- Existing low flow water surface profile



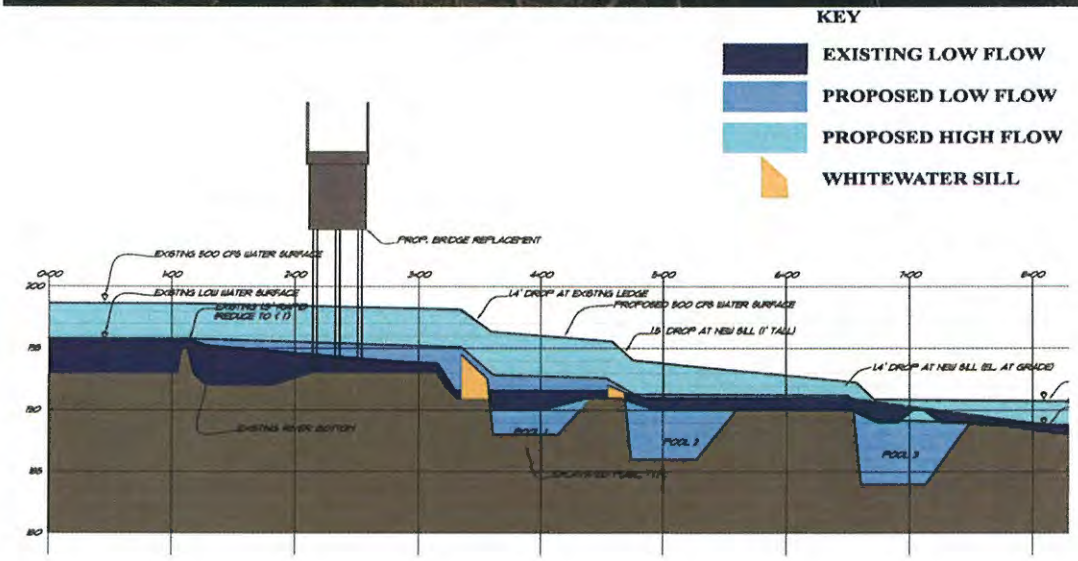
Hydraulic Profile

- Proposed low flow water surface profile including improvements:
  - 3 Sills to redistribute existing drop
  - Deep pools to help create better waves and depth for fish



Hydraulic Profile

- Proposed 500 cfs water surface profile including improvements:
  - 3 Sills to redistribute existing drop
  - Deep pools to help create better waves and depth for fish

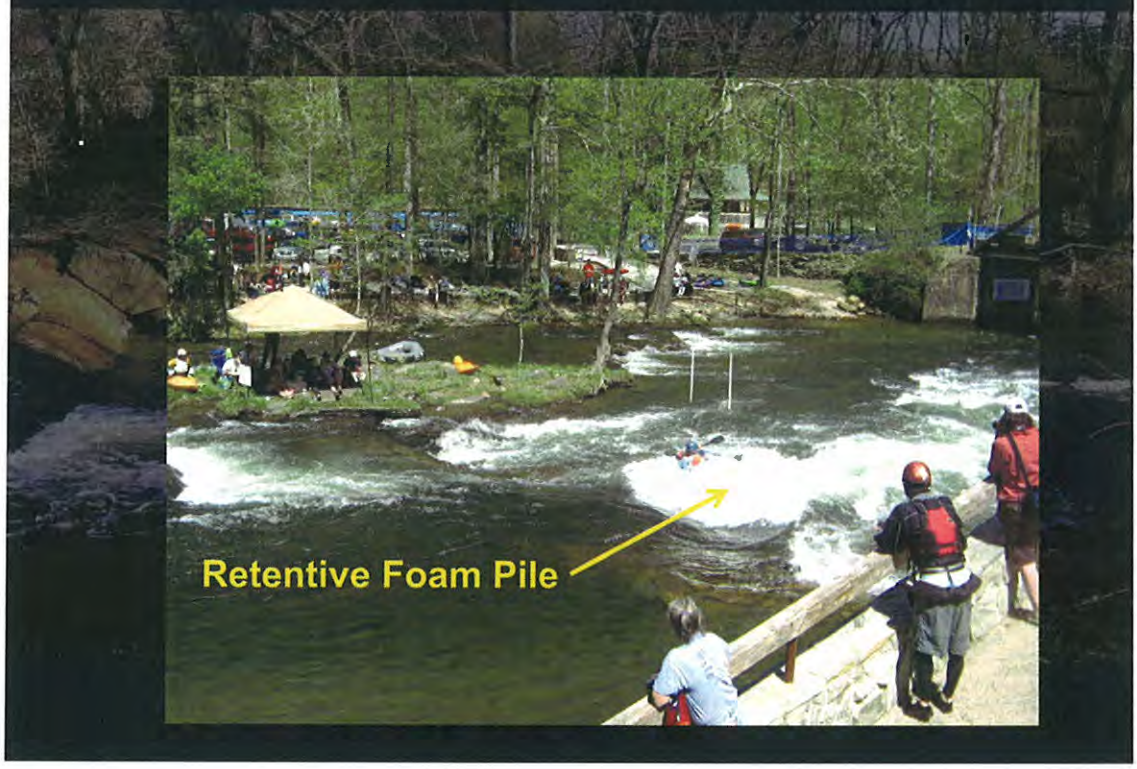


Plan ~ Low Flow

Plan ~ 200 to 500 cfs boating flow

Play Wave Anatomy

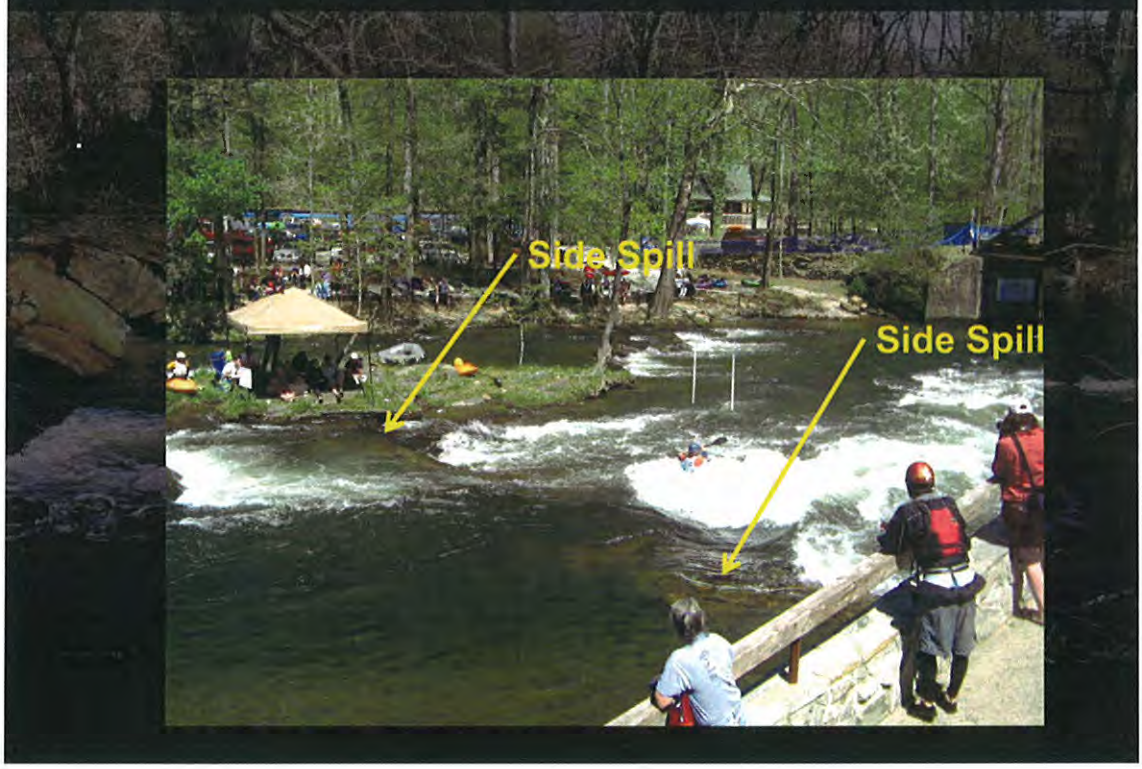
Play Wave Anatomy



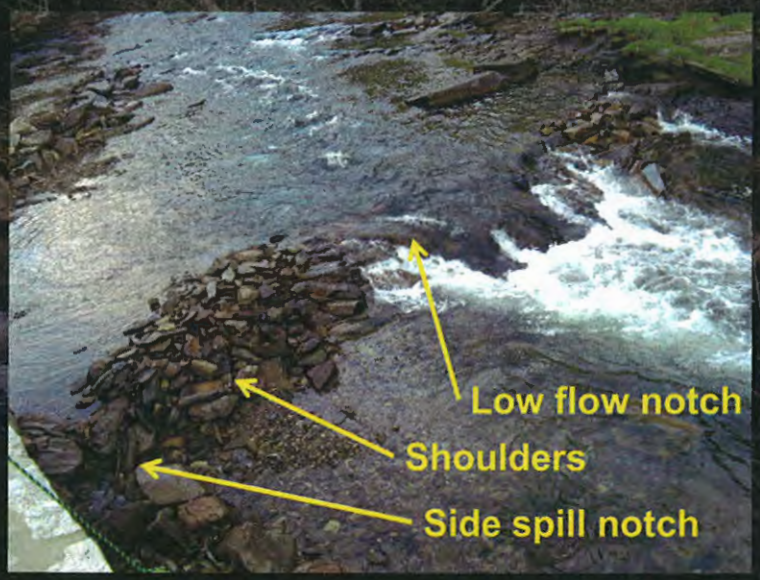
Play Wave Anatomy

Play Wave Anatomy

Play Wave Anatomy

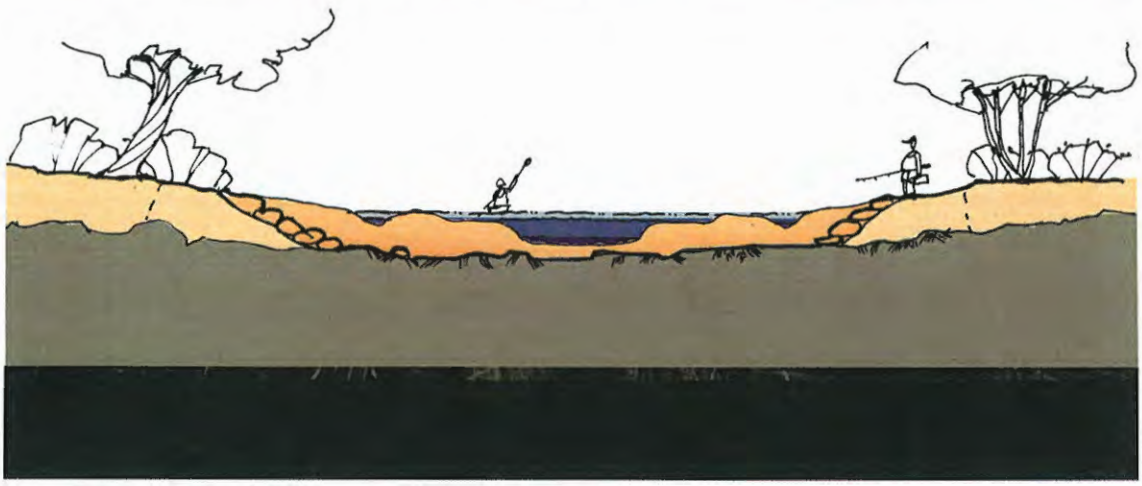


Play Wave Anatomy



Elevation of Typical Drop

- Low flow notch creates the play wave
- Shoulders and side spill notches help the wave formation and help prevent re-circulating eddies



Possible Construction Methods

- River Rock
- An economical source may not be available
- Taking rock from a river may not be permit-able

Possible Construction Methods

- Faux rock to resemble natural rock outcrops
- Readily available, but expensive

Possible Construction Methods

- Quarried granite boulders
- Readily available, least expensive material

Recommended Approach

- Use faux rock at the ledges and constrictions to blend in with the bedrock
- Use quarried granite for shore armoring and divider island

Access and Bank Protection

Problems
- Bank erosion from high water
- Recirculating flows from whitewater drops
- Foot traffic can trample herbaceous plants that can hold soil

Solutions
- Armor banks reduce erosion
- Limit shore access to hardened areas
- Main circulation paths located well back from rivers edge
- Limit traffic at waters edge and confine it to the armored banks

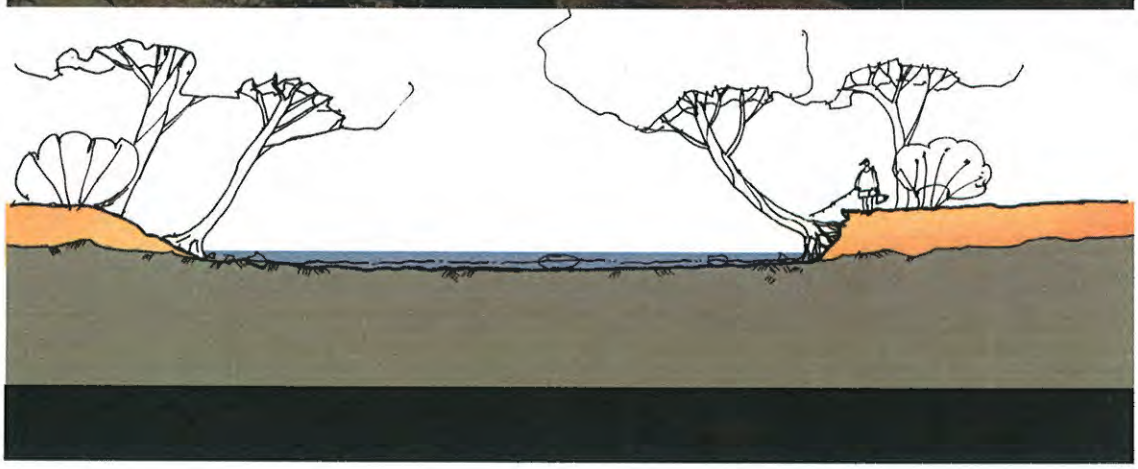
River Access Don't's

Removal of herbaceous plants and understory can result in soil loss

Turf grass site furnishings and light poles are inappropriate near the river's edge

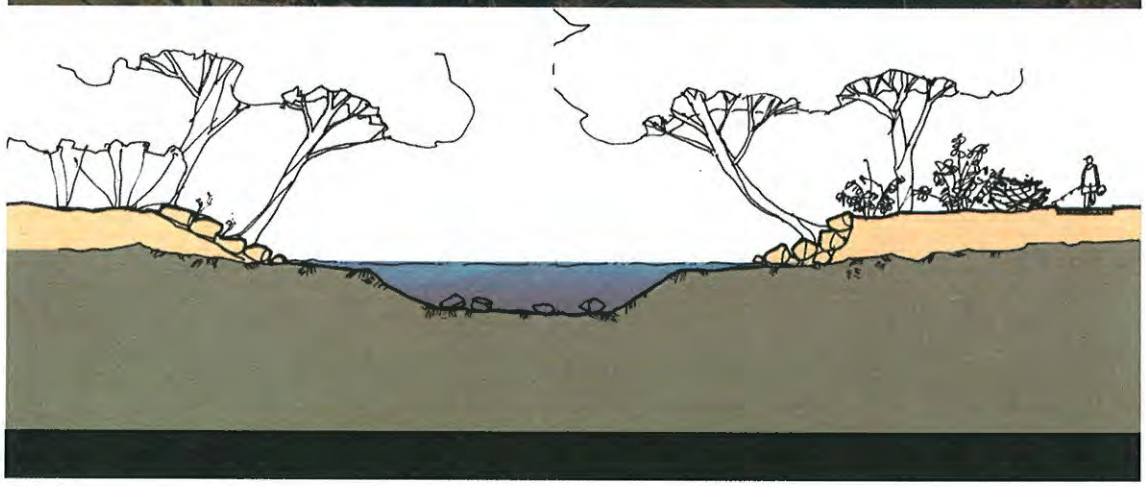
Existing Channel Section

- Foot traffic at top of bank erodes shoreline
- Undercut banks fail, causing trees to fall into river



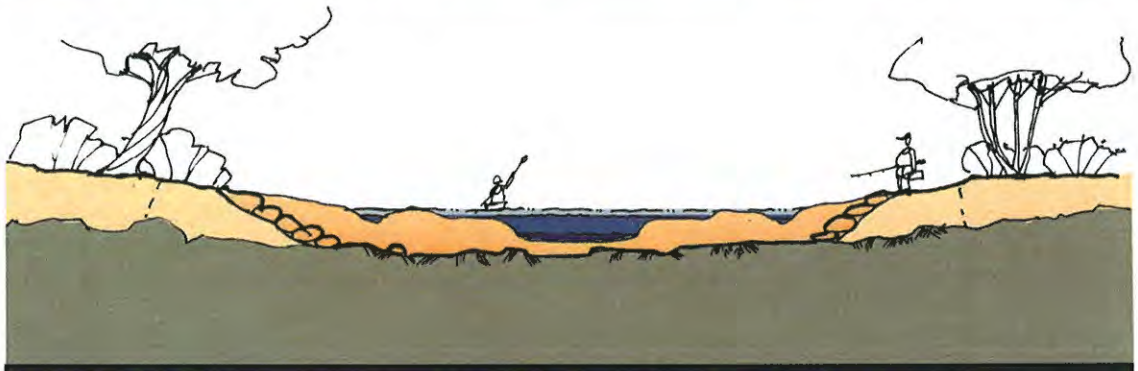
Proposed Channel Sections

- Bank armoring to reduce erosion and protect existing trees
- Limited foot traffic along armored shorelines
- Main foot traffic back from river's edge
- Slash piles to discourage traffic in riparian zone
- No clearing of undergrowth



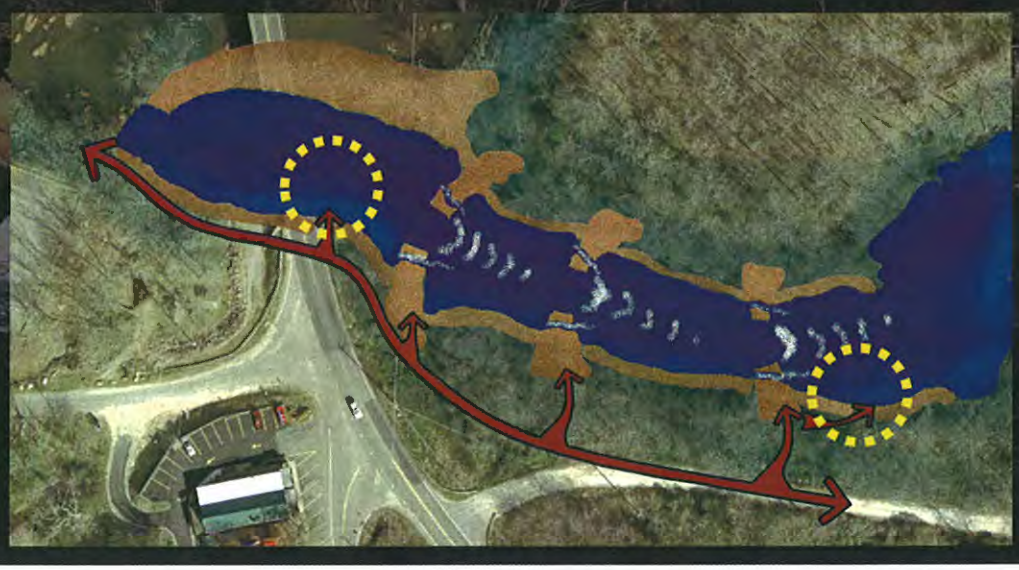
Proposed Sections

- Access at the whitewater drops for viewing and fishing
- Limited access along armored shoreline



Access Plan

- Main path is set back from river
- Access is concentrated at designated overlooks (at the drops)
- Selected hardened spaces for heavy traffic and viewing
- Put-in at bridge, intermediate take out below last drop



Water Diversion

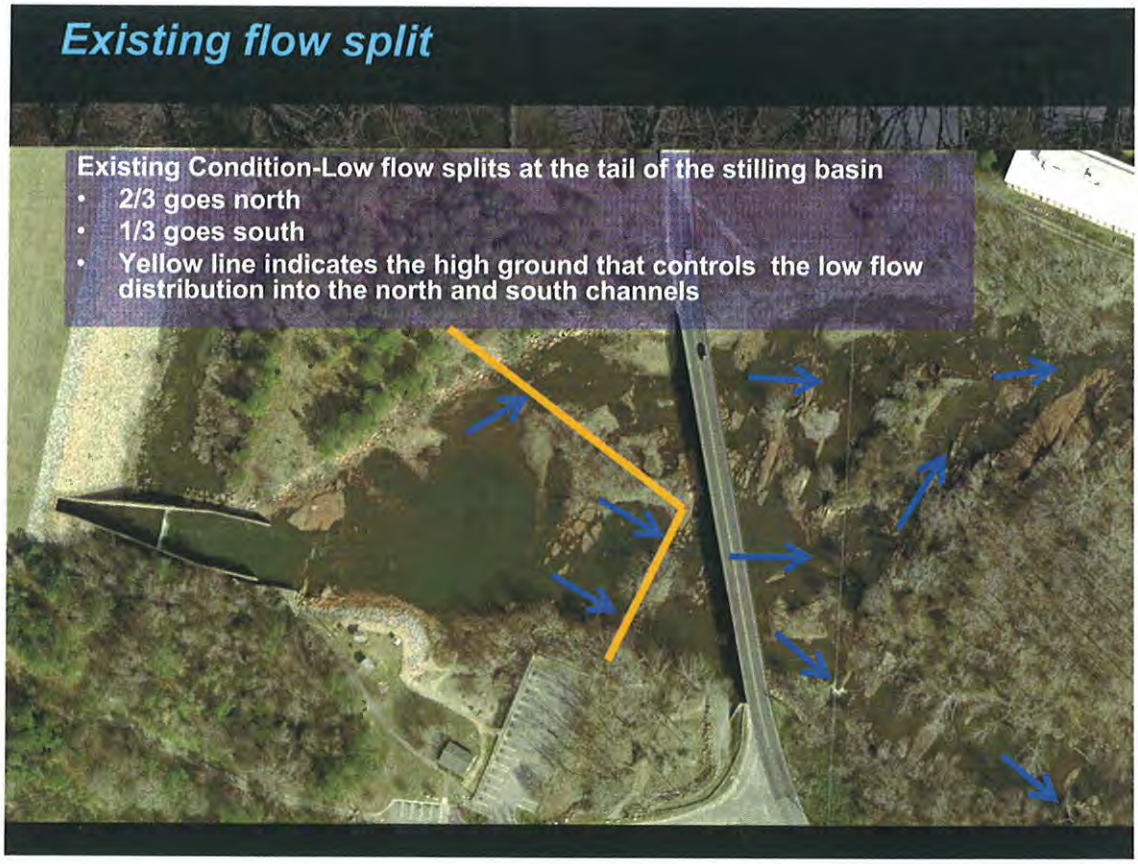
Purpose: Increase the number of boating days by diverting more water to the South Channel.

- Constructed of natural rock and grout or Faux Rock that looks like existing bedrock
- No automated gates or moving parts
- No impact to flood elevations
- Maintain low flows in North Channel

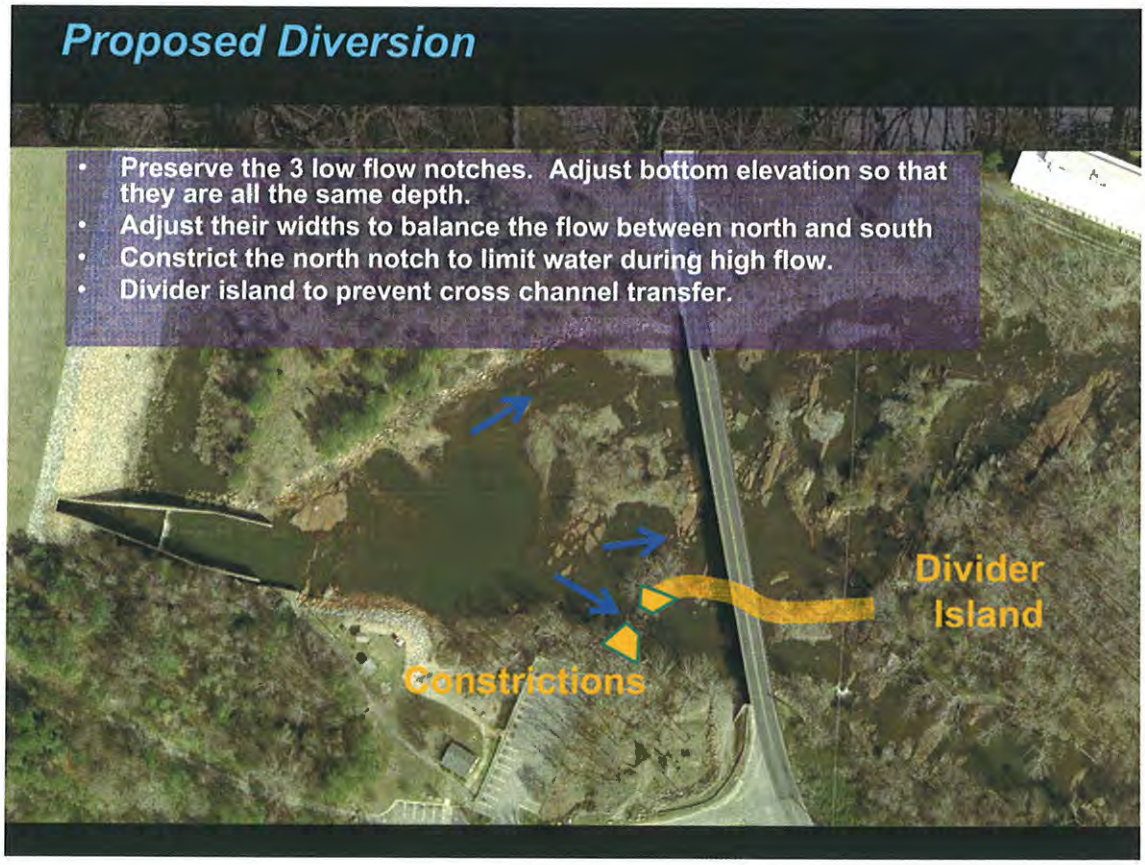
Water Diversion Hydraulic Criteria

- 100 cfs or less: no discernable impact to flow split.
- 100 to 300 cfs: moderate increase in flow to South Channel.
- 300 to 1000 cfs: noticeable increase in flow to the South Channel—the "zone" for boating.
- 1000 cfs: decreasing impact to flow split.
- Flood flows: little to no effect on flow split.

Existing flow split



Proposed Diversion



Diversion Performance

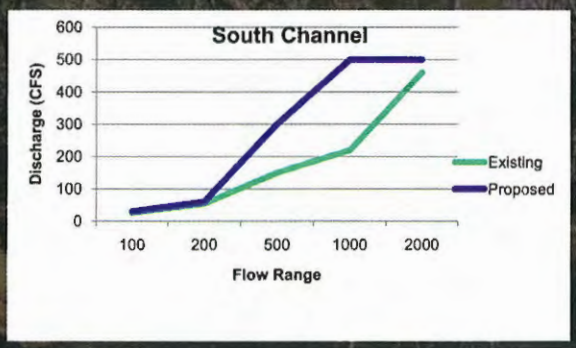
Estimated Existing Flow Split

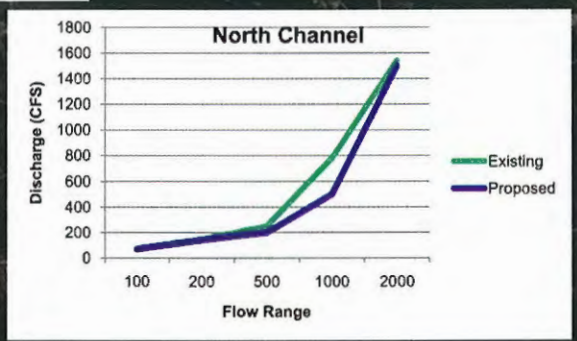
Total Flow (cfs)	North Channel Flow (cfs)		South Channel Flow (cfs)	
100	74	74%	26	26%
200	145	73%	55	28%
500	350	70%	150	30%
1000	780	78%	220	22%
2000	1540	77%	460	23%

Proposed Flow Split

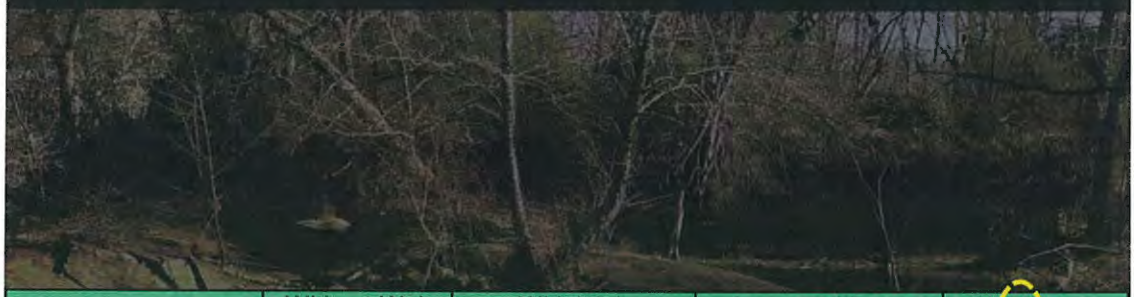
Proposed Flow Split (%)			*Proposed Flow Split (CFS)*		
River Discharge (CFS)	North Channel	South Channel	River Discharge (CFS)	North Channel	South Channel
<100	70%	30%	100	70	30
100 to 200	70%	30%	150	105	45
300 to 400	35%	65%	350	123	228
400 to 500	35%	65%	450	158	293
500 to 1000	50%	50%	750	375	375
1000 to 1500	70%	30%	1250	875	375
>2000**	75%	25%	2000	1500	500

Diversion (cont.)





Diversion Weir Benefits



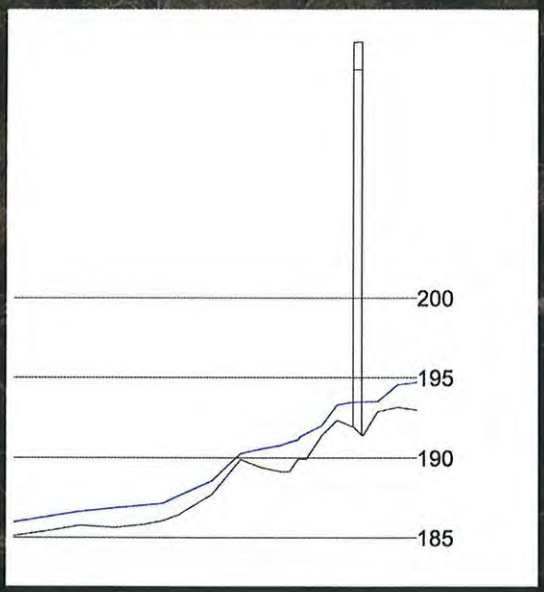
	Without Weir	With Weir	Increased Days	% Increase
Full Year	76	99	23	30%
April to October	28	38	10	36%
June, July, August	8	9	1	13%

Impacts

- **Transfer of water from North to South channel**
- **Flood Impacts**
- **Aquatic Habitat**

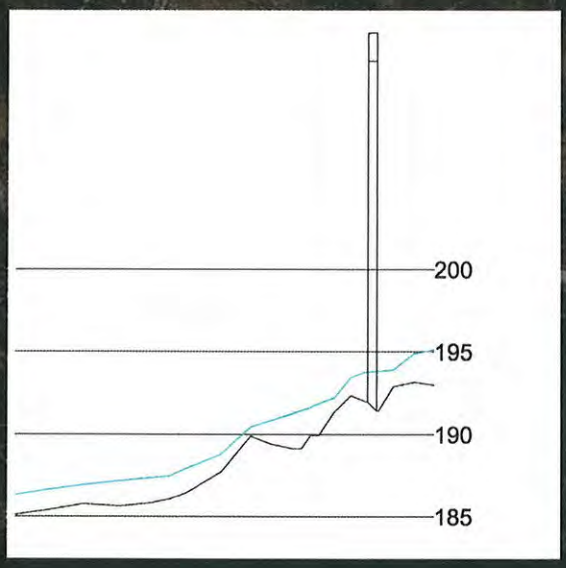
Impact of Diversion

- 100 cfs net in river
- 74 cfs existing in North Channel
- 70 cfs proposed in North Channel
- <1/4" difference in water surface



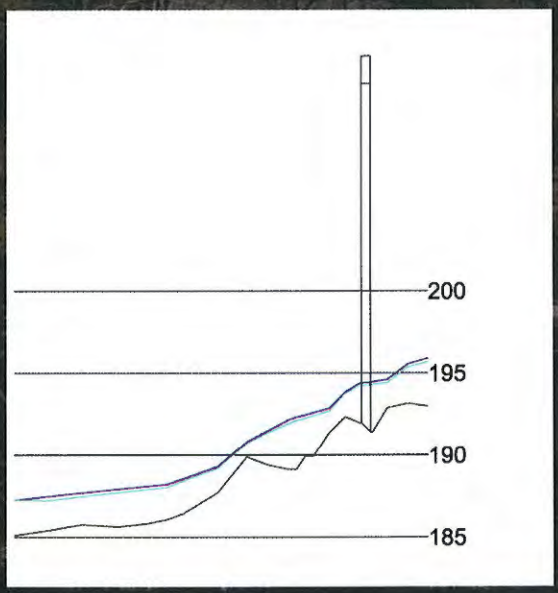
Impact of Diversion

- 200 cfs net in river
- 150 cfs existing in North Channel
- 145 cfs proposed in North Channel
- <1/4" difference in water surface



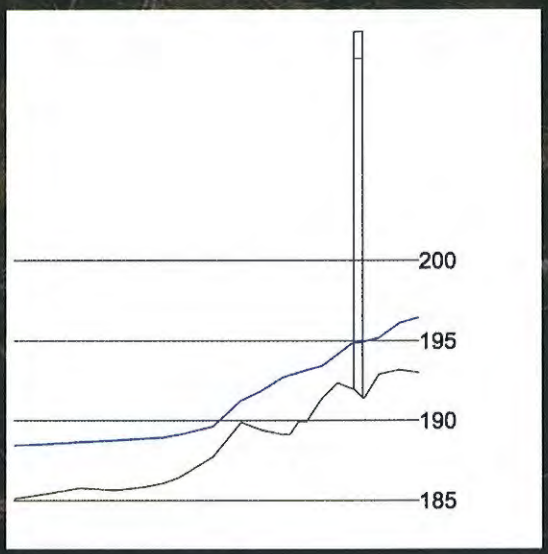
Impact of Diversion

- 500 cfs net in river
- 350 cfs existing in North Channel
- 200 cfs proposed in North Channel
- 4" difference in water surface



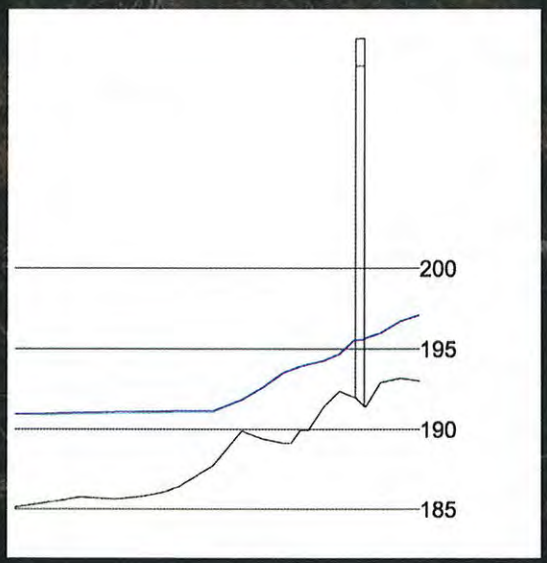
Impact of Diversion

- 1000 cfs net in river
- 780 cfs existing in North Channel
- 500 cfs proposed in North Channel
- 5" difference in water surface



Impact of Diversion

- 2000 cfs net in river
- 1540 cfs existing in North Channel
- 1500 cfs proposed in North Channel
- ½" difference in water surface



Flood Impacts

- Project has no impact to 100 year flood elevations, measured in 1/10 foot.
- Flood modeling does not take into account proposed bridge replacement.

Proposed Sills					Existing Conditions					Difference
River Sta	Q Total (cfs)	W.S. Elev (ft)			River Sta	Q Total (cfs)	W.S. Elev (ft)			
12350	11100	205.19			12350	11100	205.16			0.03
12300	11100	205.21			12300	11100	205.18			0.03
12230	11100	205.22			12230	11100	205.19			0.03
12190	11100	205.18			12190	11100	205.14			0.04
12170	Bridge				12170	Bridge				0
12150	11100	205.16			12150	11100	205.13			0.03
12100	11100	205.17			12100	11100	205.14			0.03
12060	11100	205.17			12060	11100	205.14			0.03
12010	11100	205.13			12010	11100	205.12			0.01
12009	11100	205.13								
12008	11100	205.15								
11931	11100	205.1								
11930	11100	205.09			11930	11100	205.1			-0.01
11929	11100	205.09								
11860	11100	205.09			11860	11100	205.08			0.01
11801	11100	205.06								
11800	11100	205.06			11800	11100	205.06			0
11799	11100	205.06								
11710	11100	205.07			11710	11100	205.07			0
11590	11100	205.07			11590	11100	205.07			0
11540	11100	205.06			11540	11100	205.06			0
11470	11100	205.05			11470	11100	205.05			0
11370	11100	205.02			11370	11100	205.02			0
11270	11100	204.99			11270	11100	204.99			0
11170	11100	204.97			11170	11100	204.97			0
11080	11100	204.97			11080	11100	204.97			0
10980	11100	204.95			10980	11100	204.95			0
10890	11100	204.91			10890	11100	204.91			0
10800	11100	204.86			10800	11100	204.86			0
10710	11100	204.83			10710	11100	204.83			0
10590	11100	204.82			10590	11100	204.82			0
10490	11100	204.76			10490	11100	204.76			0
10400	11100	204.73			10400	11100	204.73			0
10290	11100	204.69			10290	11100	204.69			0
10200	11100	204.69			10200	11100	204.69			0
10100	11100	204.63			10100	11100	204.63			0
10000	11100	204.62			10000	11100	204.62			0
67	11100	202.1			67	11100	202.1			0

Aquatic Environment Impacts

- No isolated fish stranding pools
- Three abrupt drops, vs. one existing
- Deeper pools with cover
- Bank protection

THANK YOU!

STEWART

TO:	City of Raleigh Parks & Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
DATE:	8/19/2010
REFERENCE:	Falls Whitewater Steering Committee Meeting #6 August 16, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Attendees:
Shari Bryant, NCWRC
Sarah King, Paddler
Bob Zarzecki, Paddler
Elizabeth Gardner, Paddler
Russ Scheve, Carolina Canoe Club – Swift Water Rescue
Chief Frank McLaurin, Swift Water Rescue
Kathy Capps, City of Raleigh
Vic Lebsock, City of Raleigh

Design Team:
Garry Walston, RLA - Stewart
Cindy Szwarckop, AICP – Stewart
John Jenkins II, PE - Stewart
David Boyette, PE – Stewart
Aaron Asquith, McLaughlin Whitewater (via phone)
Risa Shimoda, McLaughlin Whitewater (via phone)

Meeting Agenda:
1. Impact of water diversion in the north channel
2. Discussion of Dam Images
3. Swift Water Rescue Training Needs
4. Land Based Elements Discussion/Design Session

Meeting Discussion:
Water diversion
- Vic noted that the tables show that flows will still go to the north channel just not as much. Look at the existing/proposed conditions, the channel never loses water below the low flow standard. The north channel will still get water with increased releases just not as much.
- The depth of the water (unaltered vs. altered) is shown in the table.
- As flow increases the depth increases at each stage.
- The important distinction is that the depth is still there. It was noted that this should be shown graphically on a map.
- The average width in this portion of the river is 140', this project proposes to reduce down to 115' in width.
- At 2000 cfs water tops the divider island. The changes are very small at 2000 cfs, going back to natural flow split.
- The goal is at low flow to maintain the majority of what is in the north channel.
- Tom Freeman asked "assuming there is a constrictor device, will there be a backwater effect to the upstream portion of the pool?"" Aaron will look into this and provide an answer.
- Will there by an increase in tail race elevation due to the installation of the divider?
- Shari Bryant noted that the NCWRC still has concerns regarding whether shad will be able to move through the north channel. She noted that the

STEWART

500 to 1000 cfs flows are critical. She believes that the diversion of water to the north channel could reduce andramanous fish flows by 13 percent (since the south channel would include the whitewater course).

- Shari noted that it appears that 700 cfs really is 522 cfs in the north channel (with diversion). With the proposed plan fish would need 1000 cfs to get to the 700 cfs flow level.
- Is it possible to construct the diverter island with adjustability? It was noted that it had been decided by the committee and community groups that the diversion island should not look mechanical, but rather mimic the natural surroundings.
- Is the last 900' that important to the shad? The shad can't get past Milburnie Dam. Shad haven't been able to move up this area in the past 100 years.
- If the project can't produce the volumes needed for shad movement, can we create a habitat below this area for spawning? Look at creating this area 900' short of the course. This option would negate potential fisher/kayaker conflicts.
- How many days of the year do shad spawn? Shari noted that it depends on the water temperature and flow.
- Is the water temperature favorable to shad since the water comes from the reservoir? Tom note that the water comes from the top of the pool.
- From an operational standpoint – would paddlers have any impact on the sandy area just on the west side of the bridge? It was noted that it isn't believed that the upper low flow notch will be an area where boaters will want to paddle. This is a prime bank fishing area.
- Kathy Capps noted that Seth Yearout (Adventure Programs Director) could not attend the meeting, but forwarded on to Kathy a list of wants/concerns:
    - Is there an opportunity to vary the drops? Aaron Asquith noted that if there is a strong push for a specific type of training environment, they will try to incorporate those elements.
    - The drops have less teaching value with three straight down the middle play areas.
    - Could a boulder be put in the middle of the second play area to guide people left or right?
    - The Adventure Programs staff would like to see as much diversity as possible for teaching value.
- The Steering Committee needs to identify the play features/moves they wish to see in the park.
- Could the side spill areas be enlarged to enable fish to pass on the side? McLaughlin to study.
- NCWRC will do additional research and report back to the Committee.
- Steering Committee would like McLaughlin to further explain the modifications to the two low-flow notches.

Dam Image Discussion

- The faux rock mimics the natural environment.
- Does the top of the divider island need to be uniform in elevation? No, it can be raised or flat.
- Faux rock can be shaped to give irregularity, but it also gives a high level of control from an engineering perspective.
- Sliding failures are less of a concern with faux rock installations.
- Tom Freeman noted that he prefers the faux rock option because in times of high release levels, if the divider island is "blown out" there will be less to clean up.
- It was noted that the faux rock installation at the Ocoee has withstood releases of 70,000 cfs.
- The Steering Committee members in attendance noted their preference for the type of dam structure: City of Raleigh prefers the faux rock option as it will be easier to maintain and get permitted; Paddlers – faux rock; Corps of Engineers – faux rock; NCWRC – faux rock. It was acknowledged that not all groups were in attendance today (Tom Wright representing the adjacent homeowners and Alissa Bierma with the Neuse Riverkeeper Foundation) so these groups will be asked to note their preference.

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Swift Water Rescue Training Needs

Cindy noted that there were two new members of the Steering Committee in attendance this evening: Russ Scheve with the Carolina Canoe Club (Swift Water Rescue Training) and Chief Frank McLaurin (Raleigh Fire Department).

Russ Scheve noted the following swift water rescue training needs/wants:

- Wheelchair access, handicapped access. (Vic noted that the park must meet ADA requirements).
- Wading areas to move people across the river.
- Waist high water.
- Swift water entry.
- Footing areas conducive for training.
- Defensive position to aggressive position.
- Strainer bar drills, deeper the flow the better.
- Anchor points – downstream side of the rocks.
- Anchor bars across outflow.
- "Live bait" rescue.
- Ropes throwing.
- Zipline.
- Pinning of boats – vertically.
- How wide does water have to be for training? 20 to 25' is adequate.

Chief McLaurin noted the following swift water rescue training needs/wants:

- They utilize 16-18' Zodiacs.
- Would like four, 45- 50' bays (truck/trailer parking + bus parking).
- Would need improvements to the existing canoe launch so trucks could back in to unload equipment.
- Anchor points on island (one on either side). Will need several hundred sf on each side for anchoring and area to work. They need a 15 to 1 safety ratio (ie) 250 lb would need a 3000 lb anchor point.
- Permanent prop to mimic car rescues.
- Helio/aquatic rescue.
- Could class 3 rapids be provided?

Land Based Elements Discussion

1. **Access/Accessibility/Comfortable Walking Distances**

- There must be ADA accessible points at the put-in and take-out areas.
- Due to new regulations, the park must be ADA accessible. The greenway trail will be the best ADA accessible option.
- Existing drive/parking lot will be improved.
- Improvement to the canoe launch.
- Parking lot is approximately 1600 feet from the put-in area. What is a comfortable walking distance for the paddlers?
- What is the ideal location for the parking lot?
- There is a 10 foot grade change from the canoe launch to the river.
- Can New Falls of Neuse Road be shown on the maps? It was noted that this roadway is east of our project area and does not impact this project area. We can provide a small reference map.

2. **Vehicular Movement**
    - Parking Needs
    - Flow for Boaters

- Should a drop-off area be included? Most paddlers will park in the existing lot and walk their boats to the put-in.
- It was noted that people may park at the Corps parking lot and then boat down.
- Does the drive need to moved south?
- Should think about a parking lot north of the new drive location.
- Can parking be placed at the end of the course? Yes.
- What about parallel parking along the entrance road? Concerned about constricting the roadway to too narrow of a width as people may parallel park on each side. The City would prefer not to have parallel parking.
- How many spaces are appropriate? The number of spaces that we are able

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to provide will be driven by the size of the site. Vic noted 30 to 40 spaces.

3. **Changing Room**
- Should restroom/changing facilities be built within the parking lot area?
- It was noted that there is a concern regarding potential vandalism.
- It was noted that the paddlers aren't interested in changing facilities.
- Vic noted that we need to think of this as a master plan for all users of the park.
- Kathy noted that the changing facilities would be well used especially for new people.
- A restroom facility would also be good for greenway users and spectators.

4. **Spectator Areas – Bridge Abutment**
1. Should there be an elevated spectator area?
2. Need to determine the appropriate size.
3. Perhaps a terraced deck, boulder structure or a back-filled retaining wall.
4. Ask McLaughlin for the typical number of users in spectator areas.
5. Viewing areas along the river, perpendicular rive access areas.

5. **Signage – Branding**
- Work with the Corps as they have participation signage.
- Need Educational/Boater Safety signs.
- Environmental Education
- It was noted that the Corps has a "Giant Voice" notification system that announces when the water releases are being increased.

6. **Materials**
- Options for materials for boardwalk. Design team to make recommendations.

Water Use Control/Conflict
- How to split the usage of the facility between City of Raleigh programs, paddlers, training, etc? How can you tell the public that they can't use the facility during certain times?
- Not sure how this will be controlled, it is a relatively small area to share a great deal of programs.
- Vic and Kathy noted that there will need to be a MOU for shared use.
- It was noted that there will be a great number of swift water rescue teams that will want to use this facility.

Wish List
- Lights so that the park may be used at night.
- Livery operations by the City of Raleigh for boat rentals, tube rentals, etc.
- Concessions?

Next Steering Committee Meeting
- Tentatively scheduled for Monday, 9/20 from 5pm to 6:30pm at the Corps of Engineers Visitor Center.

Project Schedule:
- Meeting #1 (Kick-off Meeting) – January 19, 2010
- Data Collection/River Survey – Complete – May 2010
- Preparation of Conceptual Design – May to Mid-July 2010
- Community Meeting #2 – July 14, 2010
- Design Development Stage – Late July through October 2010
- Community Meeting #3 – Mid-October 2010
- Complete Design Development Drawings – Mid-November 2010

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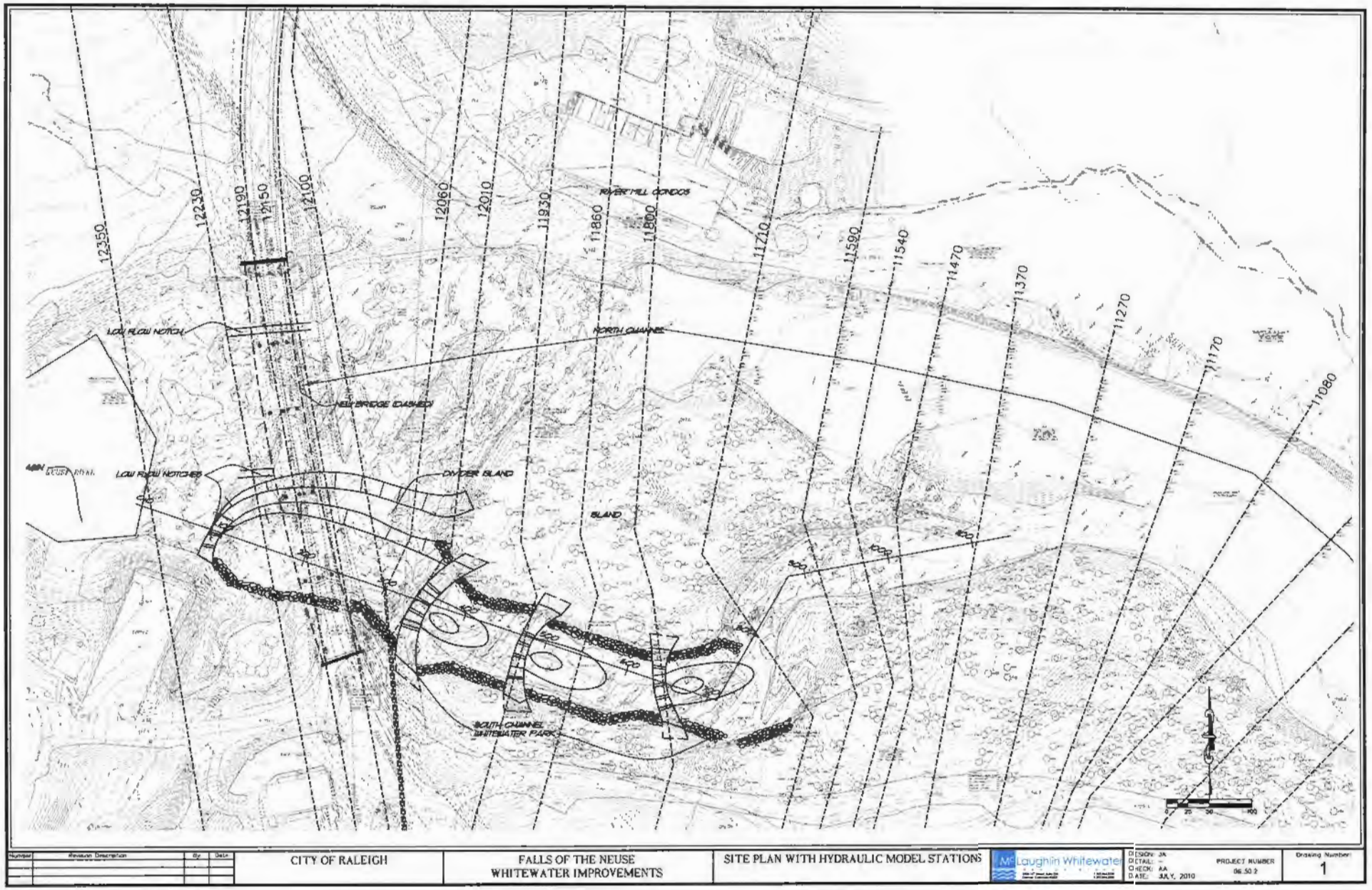
Attachments:

- Memorandum prepared by Bob Zarzecki
- Summary of comments received since Community Meeting #2



Number	Revision Description	By	Date

CITY OF RALEIGH

FALLS OF THE NEUSE
WHITEWATER IMPROVEMENTS

SITE PLAN WITH HYDRAULIC MODEL STATIONS

Laughlin Whitewater

DESIGN: JA
DETAIL: -
CHECK: AA
DATE: JULY, 2010

PROJECT NUMBER
06.50.2

Drawing Number
1

North Channel
100 cfs Net in River

North Channel Proposed Flows							
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(sq ft)	(ft)	(ft)
12350	70	193	194.7	0.69	101.19	105	1.7
12300	70	193.17	194.56	2.13	32.93	60.56	1.39
12230	70	192.91	193.51	3.41	20.51	48.71	0.6
12190	70	191.43	193.49	1	70.03	81.23	2.06
12150	70	192	193.47	0.73	96.29	112.56	1.47
12100	70	192.37	193.32	2.31	30.26	88.79	0.95
12060	70	191.42	192.02	2.64	26.53	112.95	0.6
12010	70	189.94	191.51	1.58	44.28	87.61	1.57
12009	70	189.94	191.31	2.37	29.55	58.09	1.37
12008	70	189.94	191.13	3.34	20.99	44.1	1.19
11931	70	189.13	190.97	1.85	37.88	51.46	1.84
11930	70	189.13	190.84	2.23	31.43	45.01	1.71
11929	70	189.13	190.79	2.39	29.24	42.59	1.66
11860	70	189.4	190.55	1.58	44.31	50.83	1.15
11800	70	189.89	190.27	1.54	45.37	150.76	0.38
11710	70	187.72	188.55	3.18	21.98	69.98	0.83
11590	70	186.43	187.6	1.43	49.03	98.43	1.17
11540	70	186.08	187.15	2.64	26.49	60.64	1.07

North Channel Existing							
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Flow Area	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(sq ft)	(ft)	(ft)
12350	74	193	194.72	0.72	103.45	105.36	1.72
12300	74	193.17	194.58	2.19	33.81	61.46	1.41
12230	74	192.91	193.54	3.41	21.69	49.09	0.63
12190	74	191.43	193.51	1.03	71.52	82.53	2.08
12150	74	192	193.49	0.75	98.19	113.31	1.49
12100	74	192.37	193.32	2.4	30.85	89.32	0.95
12060	74	191.42	192.04	2.6	28.45	116.28	0.62
12010	74	189.94	191.54	1.58	46.91	92.7	1.6
12009	74	189.94	191.33	2.37	31.2	62.67	1.39
12008	74	189.94	191.16	3.3	22.44	45.33	1.22
11931	74	189.13	191	1.87	39.58	53.32	1.87
11930	74	189.13	190.87	2.26	32.82	46.47	1.74
11929	74	189.13	190.82	2.43	30.51	44.01	1.69
11860	74	189.4	190.57	1.63	45.3	51.24	1.17
11800	74	189.89	190.28	1.58	46.75	150.83	0.39
11710	74	187.72	188.57	3.18	23.3	72.55	0.85
11590	74	186.43	187.62	1.44	51.22	99.94	1.19
11540	74	186.08	187.15	2.78	26.58	60.75	1.07

Net Change						
Change in flow	Change in depth		Change in width		Change in velocity	
(cfs)	(ft)	(%)	(ft)	(%)	(ft/s)	(%)
-4	-0.02	-1%	-0.36	0%	-0.03	-4%
-4	-0.02	-1%	-0.9	-1%	-0.06	-3%
-4	-0.03	-5%	-0.38	-1%	0	0%
-4	-0.02	-1%	-1.3	-2%	-0.03	-3%
-4	-0.02	-1%	-0.75	-1%	-0.02	-3%
-4	0	0%	-0.53	-1%	-0.09	-4%
-4	-0.02	-3%	-3.33	-3%	0.04	2%
-4	-0.03	-2%	-5.09	-5%	0	0%
-4	-0.02	-1%	-4.58	-7%	0	0%
-4	-0.03	-2%	-1.23	-3%	0.04	1%
-4	-0.03	-2%	-1.86	-3%	-0.02	-1%
-4	-0.03	-2%	-1.46	-3%	-0.03	-1%
-4	-0.03	-2%	-1.42	-3%	-0.04	-2%
-4	-0.02	-2%	-0.41	-1%	-0.05	-3%
-4	-0.01	-3%	-0.07	0%	-0.04	-3%
-4	-0.02	-2%	-2.57	-4%	0	0%
-4	-0.02	-2%	-1.51	-2%	-0.01	-1%
-4	0	0%	-0.11	0%	-0.14	-5%
average	-0.02	-2%	-1.55	-2%	-0.03	-2%
	(0.24")					

Flow Split to South Channel via Middle Channel							
11470	51	185.83	186.93	0.71	72.1	131.98	1.1
11370	51	185.64	186.82	1.07	47.62	59.97	1.18
11270	51	185.78	186.62	1	50.9	107.91	0.84
11170	51	185.4	186.19	1.54	33.02	86.82	0.79
11080	51	185.07	185.79	1.18	43.04	71.63	0.72
10980	51	184.32	185.15	2.66	19.2	46.94	0.83
10890	51	183.3	184.94	0.98	51.95	66.73	1.64
10800	51	183.67	184.68	1.82	28	63.99	1.01

11470	46	185.83	186.89	0.69	66.73	128.87	1.06
11370	46	185.64	186.78	1.01	45.44	58.54	1.14
11270	46	185.78	186.6	0.96	47.97	107.22	0.82
11170	46	185.4	186.16	1.52	30.31	86.44	0.76
11080	46	185.07	185.76	1.13	40.71	71.06	0.69
10980	46	184.32	185.1	2.69	17.08	45.4	0.78
10890	46	183.3	184.9	0.94	49.1	66.08	1.6
10800	46	183.67	184.64	1.79	25.65	60.13	0.97

5	0.04	4%	3.11	2%	0.02	3%
5	0.04	4%	1.43	2%	0.06	6%
5	0.02	2%	0.69	1%	0.04	4%
5	0.03	4%	0.38	0%	0.02	1%
5	0.03	4%	0.57	1%	0.05	4%
5	0.05	6%	1.54	3%	-0.03	-1%
5	0.04	2%	0.65	1%	0.04	4%
5	0.04	4%	3.86	6%	0.03	2%

North Channel
200 cfs Net in River

North Channel Proposed Flows						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	140	193	195.06	1	122.92	2.06
12300	140	193.17	194.84	2.65	85.2	1.67
12230	140	192.91	193.87	3.54	59.03	0.96
12190	140	191.43	193.78	1.44	105.58	2.35
12150	140	192	193.74	1.09	128.82	1.74
12100	140	192.37	193.44	3.34	99.51	1.07
12060	140	191.42	192.21	2.84	126.08	0.79
12010	140	189.94	191.84	1.79	111.61	1.9
12009	140	189.94	191.68	2.29	105.72	1.74
12008	140	189.94	191.58	2.73	97.89	1.64
11931	140	189.13	191.41	2.05	80.94	2.28
11930	140	189.13	191.27	2.45	75.91	2.14
11929	140	189.13	191.21	2.65	73.41	2.08
11860	140	189.4	190.82	2.38	55.53	1.42
11800	140	189.89	190.42	2.06	151.92	0.53
11710	140	187.72	188.76	3.45	98.36	1.04
11590	140	186.43	187.9	1.69	125.43	1.47
11540	140	186.08	187.48	2.7	97.78	1.4

North Channel Existing						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	145	193	195.08	1.01	124.29	2.08
12300	145	193.17	194.87	2.65	87.61	1.7
12230	145	192.91	193.89	3.56	59.7	0.98
12190	145	191.43	193.8	1.46	106.77	2.37
12150	145	192	193.76	1.11	130.04	1.76
12100	145	192.37	193.45	3.42	100	1.08
12060	145	191.42	192.22	2.85	126.53	0.8
12010	145	189.94	191.85	1.81	111.91	1.91
12009	145	189.94	191.7	2.31	106.74	1.76
12008	145	189.94	191.6	2.73	99.91	1.66
11931	145	189.13	191.43	2.07	81.44	2.3
11930	145	189.13	191.29	2.47	76.84	2.16
11929	145	189.13	191.23	2.66	74.36	2.1
11860	145	189.4	190.84	2.44	55.73	1.44
11800	145	189.89	190.42	2.09	152	0.53
11710	145	187.72	188.78	3.46	98.51	1.06
11590	145	186.43	187.91	1.72	125.97	1.48
11540	145	186.08	187.47	2.88	94.36	1.39

Net Change						
Change in flow	Change in depth		Change in width		Change in velocity	
(cfs)	(ft)	(%)	(ft)	(%)	(ft/s)	(%)
-5	-0.02	-1%	-1.37	-1%	-0.01	-1%
-5	-0.03	-2%	-2.41	-3%	0	0%
-5	-0.02	-2%	-0.67	-1%	-0.02	-1%
-5	-0.02	-1%	-1.19	-1%	-0.02	-1%
-5	-0.02	-1%	-1.22	-1%	-0.02	-2%
-5	-0.01	-1%	-0.49	0%	-0.08	-2%
-5	-0.01	-1%	-0.45	0%	-0.01	0%
-5	-0.01	-1%	-0.3	0%	-0.02	-1%
-5	-0.02	-1%	-1.02	-1%	-0.02	-1%
-5	-0.02	-1%	-2.02	-2%	0	0%
-5	-0.02	-1%	-0.5	-1%	-0.02	-1%
-5	-0.02	-1%	-0.93	-1%	-0.02	-1%
-5	-0.02	-1%	-0.95	-1%	-0.01	0%
-5	-0.02	-1%	-0.2	0%	-0.06	-2%
-5	0	0%	-0.08	0%	-0.03	-1%
-5	-0.02	-2%	-0.15	0%	-0.01	0%
-5	-0.01	-1%	-0.54	0%	-0.03	-2%
-5	0.01	1%	3.42	4%	-0.18	-6%
average	-0.02	-1.0%	-0.62	-0.01	-0.03	-1.3%
	(0.24")					

Flow Split to South Channel via Middle Channel						
11470	84	185.83	187.15	0.79	160.03	1.32
11370	84	185.64	187.02	1.39	68.23	1.38
11270	84	185.78	186.78	1.23	111.97	1
11170	84	185.4	186.37	1.72	89.07	0.97
11080	84	185.07	185.98	1.46	75.08	0.91
10980	84	184.32	185.41	2.36	73.14	1.09
10890	84	183.3	185.17	1.25	70.29	1.87
10800	84	183.67	184.89	2.01	68.41	1.22

11470	83	185.83	187.15	0.79	159.79	1.32
11370	83	185.64	187.01	1.38	67.89	1.37
11270	83	185.78	186.78	1.22	111.86	1
11170	83	185.4	186.37	1.71	89.01	0.97
11080	83	185.07	185.98	1.45	74.99	0.91
10980	83	184.32	185.4	2.36	73.09	1.08
10890	83	183.3	185.16	1.24	70.24	1.86
10800	83	183.67	184.88	2	68.3	1.21

1	0	0%	0.24	0%	0	0%
1	0.01	1%	0.34	1%	0.01	1%
1	0	0%	0.11	0%	0.01	1%
1	0	0%	0.06	0%	0.01	1%
1	0	0%	0.09	0%	0.01	1%
1	0.01	1%	0.05	0%	0	0%
1	0.01	1%	0.05	0%	0.01	1%
1	0.01	1%	0.11	0%	0.01	0%

North Channel
500 cfs Net in River

North Channel Proposed Flows						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	200	193	195.29	1.16	152.64	2.29
12300	200	193.17	195.04	2.79	107.05	1.87
12230	200	192.91	194.09	3.75	68.67	1.18
12190	200	191.43	193.98	1.67	120.83	2.55
12150	200	192	193.93	1.3	140.04	1.93
12100	200	192.37	193.52	3.96	106.42	1.15
12060	200	191.42	192.36	2.85	144.77	0.94
12010	200	189.94	192.02	2.02	118.45	2.08
12009	200	189.94	191.88	2.42	112.34	1.94
12008	200	189.94	191.81	2.64	111.08	1.87
11931	200	189.13	191.67	2.22	87.18	2.54
11930	200	189.13	191.55	2.5	84.31	2.42
11929	200	189.13	191.51	2.61	83.36	2.38
11860	200	189.4	191.06	2.71	81.69	1.66
11800	200	189.89	190.51	2.42	152.67	0.62
11710	200	187.72	188.9	3.72	99.9	1.18
11590	200	186.43	188.07	1.9	137.77	1.64
11540	200	186.08	187.63	2.98	111.97	1.55

North Channel Existing						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	350	193	195.7	1.41	214.46	2.7
12300	350	193.17	195.39	3.11	124.61	2.22
12230	350	192.91	194.43	4.43	83.02	1.52
12190	350	191.43	194.32	2.15	130.48	2.89
12150	350	192	194.25	1.72	168.2	2.25
12100	350	192.37	193.79	4.1	153.43	1.42
12060	350	191.42	192.71	2.73	196.81	1.29
12010	350	189.94	192.42	2.34	133.52	2.48
12009	350	189.94	192.31	2.6	128.67	2.37
12008	350	189.94	192.27	2.69	127.56	2.33
11931	350	189.13	192.12	2.57	132.36	2.99
11930	350	189.13	191.96	2.99	102.34	2.83
11929	350	189.13	191.92	3.1	97.89	2.79
11860	350	189.4	191.36	3.46	96.89	1.96
11800	350	189.89	190.73	3.03	154.33	0.84
11710	350	187.72	189.15	4.37	102.89	1.43
11590	350	186.43	188.4	2.25	158.58	1.97
11540	350	186.08	188.11	2.6	158.63	2.03

Net Change						
Change in flow	Change in depth		Change in width		Change in velocity	
(cfs)	(ft)	(%)	(ft)	(%)	(ft/s)	(%)
-150	-0.41	-15%	-61.82	-29%	-0.25	-18%
-150	-0.35	-16%	-17.56	-14%	-0.32	-10%
-150	-0.34	-22%	-14.35	-17%	-0.68	-15%
-150	-0.34	-12%	-9.65	-7%	-0.48	-22%
-150	-0.32	-14%	-28.16	-17%	-0.42	-24%
-150	-0.27	-19%	-47.01	-31%	-0.14	-3%
-150	-0.35	-27%	-52.04	-26%	0.12	4%
-150	-0.4	-16%	-15.07	-11%	-0.32	-14%
-150	-0.43	-18%	-16.33	-13%	-0.18	-7%
-150	-0.46	-20%	-16.48	-13%	-0.05	-2%
-150	-0.45	-15%	-45.18	-34%	-0.35	-14%
-150	-0.41	-14%	-18.03	-18%	-0.49	-16%
-150	-0.41	-15%	-14.53	-15%	-0.49	-16%
-150	-0.3	-15%	-15.2	-16%	-0.75	-22%
-150	-0.22	-26%	-1.66	-1%	-0.61	-20%
-150	-0.25	-17%	-2.99	-3%	-0.65	-15%
-150	-0.33	-17%	-20.81	-13%	-0.35	-16%
-150	-0.48	-24%	-46.66	-29%	0.38	15%
average	-0.36222	-18%	-24.6406	-17%	-0.335	-12%
	(3.8")					

Flow Split to South Channel via Middle Channel						
11470	125	185.83	187.37	0.88	167.86	1.54
11370	125	185.64	187.22	1.65	79.26	1.58
11270	125	185.78	186.95	1.42	116.33	1.17
11170	125	185.4	186.56	1.9	91.37	1.16
11080	125	185.07	186.17	1.75	78.29	1.1
10980	125	184.32	185.63	2.39	75.07	1.31
10890	125	183.3	185.4	1.48	72.34	2.1
10800	125	183.67	185.1	2.09	99.1	1.43

11470	196	185.83	187.67	1.02	177.69	1.84
11370	196	185.64	187.49	1.98	93.75	1.85
11270	196	185.78	187.2	1.68	118.68	1.42
11170	196	185.4	186.83	2.16	94.68	1.43
11080	196	185.07	186.43	2.11	82	1.36
10980	196	184.32	185.94	2.59	77.71	1.62
10890	196	183.3	185.7	1.85	74.89	2.4
10800	196	183.67	185.44	2.07	109.52	1.77

-71	-0.3	-16%	-9.83	-6%	-0.14	-14%
-71	-0.27	-15%	-14.49	-15%	-0.33	-17%
-71	-0.25	-18%	-2.35	-2%	-0.26	-15%
-71	-0.27	-19%	-3.31	-3%	-0.26	-12%
-71	-0.26	-19%	-3.71	-5%	-0.36	-17%
-71	-0.31	-19%	-2.64	-3%	-0.2	-8%
-71	-0.3	-12%	-2.55	-3%	-0.37	-20%
-71	-0.34	-19%	-10.42	-10%	0.02	1%
average	-0.2875	-17%	-6.1625	-6%	-0.2375	-13%

North Channel
1000 cfs Net in River

North Channel Proposed Flows						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	500	193	196.01	1.54	276.21	3.01
12300	500	193.17	195.67	3.36	135.56	2.5
12230	500	192.91	194.72	4.69	107.94	1.81
12190	500	191.43	194.57	2.54	140.94	3.14
12150	500	192	194.48	2.04	178.95	2.48
12100	500	192.37	193.93	4.63	159.85	1.56
12060	500	191.42	192.99	2.61	240.93	1.57
12010	500	189.94	192.72	2.6	146.76	2.78
12009	500	189.94	192.61	2.84	143.32	2.67
12008	500	189.94	192.58	2.92	141.49	2.64
11931	500	189.13	192.45	2.78	136.46	3.32
11930	500	189.13	192.31	3.1	134.72	3.18
11929	500	189.13	192.26	3.23	134.12	3.13
11860	500	189.4	191.57	4.11	101.4	2.17
11800	500	189.89	190.93	3.41	155.85	1.04
11710	500	187.72	189.34	5.02	105.07	1.62
11590	500	186.43	188.68	2.48	168.99	2.25
11540	500	186.08	188.45	2.61	173.79	2.37

North Channel Existing						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	780	193	196.46	1.74	281.44	3.46
12300	780	193.17	196.12	3.51	204.21	2.95
12230	780	192.91	195.19	4.63	164.78	2.28
12190	780	191.43	194.96	3.06	164.16	3.53
12150	780	192	194.85	2.49	202	2.85
12100	780	192.37	194.16	5.31	172.06	1.79
12060	780	191.42	193.44	2.54	265.28	2.02
12010	780	189.94	193.18	2.91	192.9	3.24
12009	780	189.94	193.05	3.21	177.26	3.11
12008	780	189.94	193.01	3.3	173.9	3.07
11931	780	189.13	192.86	3.27	143.29	3.73
11930	780	189.13	192.73	3.56	141.79	3.6
11929	780	189.13	192.68	3.67	140.64	3.55
11860	780	189.4	191.87	5.08	108.57	2.47
11800	780	189.89	191.28	3.86	159.53	1.39
11710	780	187.72	189.61	6.09	109.52	1.89
11590	780	186.43	189.22	2.65	176.64	2.79
11540	780	186.08	189.08	2.54	192.75	3

Net Change						
Change in flow	Change in depth		Change in width		Change in velocity	
(cfs)	(ft)	(%)	(ft)	(%)	(ft/s)	(%)
-280	-0.45	-13%	-5.23	-2%	-0.2	-11%
-280	-0.45	-15%	-68.65	-34%	-0.15	-4%
-280	-0.47	-21%	-56.84	-34%	0.06	1%
-280	-0.39	-11%	-23.22	-14%	-0.52	-17%
-280	-0.37	-13%	-23.05	-11%	-0.45	-18%
-280	-0.23	-13%	-12.21	-7%	-0.68	-13%
-280	-0.45	-22%	-24.35	-9%	0.07	3%
-280	-0.46	-14%	-46.14	-24%	-0.31	-11%
-280	-0.44	-14%	-33.94	-19%	-0.37	-12%
-280	-0.43	-14%	-32.41	-19%	-0.38	-12%
-280	-0.41	-11%	-6.83	-5%	-0.49	-15%
-280	-0.42	-12%	-7.07	-5%	-0.46	-13%
-280	-0.42	-12%	-6.52	-5%	-0.44	-12%
-280	-0.3	-12%	-7.17	-7%	-0.97	-19%
-280	-0.35	-25%	-3.68	-2%	-0.45	-12%
-280	-0.27	-14%	-4.45	-4%	-1.07	-18%
-280	-0.54	-19%	-7.65	-4%	-0.17	-6%
-280	-0.63	-21%	-18.96	-10%	0.07	3%
average	-0.41556	-15.4%	-21.5761	-11.9%	-0.38	-10.3%
	(5")					

Flow Split to South Channel via Middle Channel

11470	296	185.83	188	1.17	188.22	2.17
11370	296	185.64	187.8	2.27	112.33	2.16
11270	296	185.78	187.5	1.94	119.8	1.72
11170	296	185.4	187.15	2.44	98.56	1.75
11080	296	185.07	186.77	2.45	84.45	1.7
10980	296	184.32	186.35	2.74	81.21	2.03
10890	296	183.3	186.13	2.12	78.86	2.83
10800	296	183.67	185.96	1.89	129.11	2.29

11470	442	185.83	188.38	1.35	197.04	2.55
11370	442	185.64	188.17	2.55	118.46	2.53
11270	442	185.78	187.9	2.21	120.88	2.12
11170	442	185.4	187.58	2.69	99.83	2.18
11080	442	185.07	187.26	2.71	86.93	2.19
10980	442	184.32	186.96	2.79	84.29	2.64
10890	442	183.3	186.81	2.28	81.8	3.51
10800	442	183.67	186.72	1.68	149.84	3.05

-146	-0.38	-15%	-8.82	-4%	-0.18	-13%
-146	-0.37	-15%	-6.13	-5%	-0.28	-11%
-146	-0.4	-19%	-1.08	-1%	-0.27	-12%
-146	-0.43	-20%	-1.27	-1%	-0.25	-9%
-146	-0.49	-22%	-2.48	-3%	-0.26	-10%
-146	-0.61	-23%	-3.08	-4%	-0.05	-2%
-146	-0.68	-19%	-2.94	-4%	-0.16	-7%
-146	-0.76	-25%	-20.73	-14%	0.21	13%
average	-0.515	-20%	-5.81625	-4%	-0.155	-6%

North Channel
2000 cfs Net in River

North Channel Proposed Flows						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	1500	193	197.08	2.4	288.29	4.08
12300	1500	193.17	196.7	4	292.11	3.53
12230	1500	192.91	195.95	4.61	233.52	3.04
12190	1500	191.43	195.66	3.88	209.12	4.23
12150	1500	192	195.5	3.3	222.61	3.5
12100	1500	192.37	194.64	6.36	194.3	2.27
12060	1500	191.42	194.23	2.87	276.97	2.81
12010	1500	189.94	194	3.43	218.19	4.06
12009	1500	189.94	193.9	3.62	214.6	3.96
12008	1500	189.94	193.87	3.68	213.87	3.93
11931	1500	189.13	193.65	4.25	146.53	4.52
11930	1500	189.13	193.51	4.52	145.91	4.38
11929	1500	189.13	193.46	4.61	145.72	4.33
11860	1500	189.4	192.56	6.15	151.34	3.16
11800	1500	189.89	191.77	5.31	164.3	1.88
11710	1500	187.72	190.92	5.35	119.15	3.2
11590	1500	186.43	190.92	2.47	187.11	4.49
11540	1500	186.08	190.88	2.27	200.45	4.8

Flow Split to South Channel via Middle Channel						
11470	714	185.83	189.08	1.53	204.87	3.25
11370	714	185.64	188.88	2.74	126.11	3.24
11270	714	185.78	188.69	2.4	122.81	2.91
11170	714	185.4	188.47	2.81	101.5	3.07
11080	714	185.07	188.26	2.84	89.24	3.19
10980	714	184.32	188.09	2.8	86.64	3.77
10890	714	183.3	188	2.45	84.5	4.7
10800	714	183.67	187.97	1.54	170.17	4.3

North Channel Existing						
River Sta	Q Total	Min Ch El	W.S. Elev	Vel Chnl	Top Width	Max Depth
	(cfs)	(ft)	(ft)	(ft/s)	(ft)	(ft)
12350	1540	193	197.11	2.43	288.43	4.11
12300	1540	193.17	196.72	4.04	292.31	3.55
12230	1540	192.91	195.98	4.61	234.93	3.07
12190	1540	191.43	195.69	3.92	213.27	4.26
12150	1540	192	195.52	3.34	222.83	3.52
12100	1540	192.37	194.68	6.34	195.77	2.31
12060	1540	191.42	194.27	2.89	277.39	2.85
12010	1540	189.94	194.04	3.45	219.96	4.1
12009	1540	189.94	193.94	3.64	215.58	4
12008	1540	189.94	193.91	3.7	214.86	3.97
11931	1540	189.13	193.69	4.3	146.68	4.56
11930	1540	189.13	193.54	4.57	146.06	4.41
11929	1540	189.13	193.5	4.66	145.87	4.37
11860	1540	189.4	192.59	6.2	153.47	3.19
11800	1540	189.89	191.81	5.33	164.68	1.92
11710	1540	187.72	191.01	5.28	119.55	3.29
11590	1540	186.43	191.02	2.46	187.38	4.59
11540	1540	186.08	190.98	2.26	200.9	4.9

11470	725	185.83	189.1	1.53	205.05	3.27
11370	725	185.64	188.91	2.74	126.45	3.27
11270	725	185.78	188.73	2.41	122.89	2.95
11170	725	185.4	188.51	2.82	101.57	3.11
11080	725	185.07	188.3	2.84	89.33	3.23
10980	725	184.32	188.13	2.8	86.72	3.81
10890	725	183.3	188.04	2.45	84.59	4.74
10800	725	183.67	188.02	1.54	170.38	4.35

Net Change						
Change in flow	Change in depth		Change in width		Change in velocity	
(cfs)	(ft)	(%)	(ft)	(%)	(ft/s)	(%)
-40	-0.03	-1%	-0.14	0%	-0.03	-1%
-40	-0.02	-1%	-0.2	0%	-0.04	-1%
-40	-0.03	-1%	-1.41	-1%	0	0%
-40	-0.03	-1%	-4.15	-2%	-0.04	-1%
-40	-0.02	-1%	-0.22	0%	-0.04	-1%
-40	-0.04	-2%	-1.47	-1%	0.02	0%
-40	-0.04	-1%	-0.42	0%	-0.02	-1%
-40	-0.04	-1%	-1.77	-1%	-0.02	-1%
-40	-0.04	-1%	-0.98	0%	-0.02	-1%
-40	-0.04	-1%	-0.99	0%	-0.02	-1%
-40	-0.04	-1%	-0.15	0%	-0.05	-1%
-40	-0.03	-1%	-0.15	0%	-0.05	-1%
-40	-0.04	-1%	-0.15	0%	-0.05	-1%
-40	-0.03	-1%	-2.13	-1%	-0.05	-1%
-40	-0.04	-2%	-0.38	0%	-0.02	0%
-40	-0.09	-3%	-0.4	0%	0.07	1%
-40	-0.1	-2%	-0.27	0%	0.01	0%
-40	-0.1	-2%	-0.45	0%	0.01	0%
	-0.044	-1.2%	-0.88	-0.4%	-0.02	-0.5%
average	(0.53")					

-11	-0.02	-1%	-0.18	0%	0	0%
-11	-0.03	-1%	-0.34	0%	0	0%
-11	-0.04	-1%	-0.08	0%	-0.01	0%
-11	-0.04	-1%	-0.07	0%	-0.01	0%
-11	-0.04	-1%	-0.09	0%	0	0%
-11	-0.04	-1%	-0.08	0%	0	0%
-11	-0.04	-1%	-0.09	0%	0	0%
-11	-0.05	-1%	-0.21	0%	0	0%

Images for Diversion Weir

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McLaughlin Whitewater

General Configuration

- Would need step configuration on one or both sides.
  - On downstream side to break up hydraulic roller
  - On whitewater course side for self-rescue (vertical surface would prevent escape)

Faux Rock to Mimic Bedrock

- Mimic bedrock outcrops
- (Actual granite ledges James River, Richmond VA)

Faux Rock to Mimic Bedrock

- Mimic bedrock outcrops
- ("Slam Dunk" ledge, Ocoee River, TN)

Faux Rock to Mimic Bedrock

- Mimic bedrock outcrops
- ("Best Ledge" Ocoee River, TN)

Rock Masonry Dam

- Would need *step configuration for self* rescue

Rock Masonry Dam

- Would need step configuration for self rescue

Rock Masonry Dam

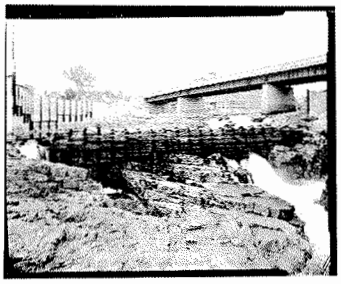
- Would need step configuration for self rescue

Timber Crib

- Not recommended due to high maintenance

Timber Crib

- Not recommended due to high maintenance



Cindy Szwarckop

From: Tom Wright [tjwrightjr@earthlink.net]
Sent: Friday, August 13, 2010 4:16 PM
To: Cindy Szwarckop
Subject: Re: Falls Whitewater Park Steering Committee Meeting

Cindy,

I will be out of town the week of August 16 and will miss the meeting on monday.

Concerns of my neighbors here in the Falls area are listed below:

-Apprehensions exist among the property owners regarding diverting all flow to the north channel during whitewater course construction should the project gain approval. Possibilities of a rain event causing flooding could occur. Both channels would need to be available for high releases from dam.

-Velocity and depth of flow on the north channel after introduction of diverter island. A precise answer rather than estimate. (Currently we know exactly what the depth and flow is at a variety of release levels and the sound of the rapids is a big part of living at River Mill).

-Residents have made a significant investment in their property and the natural elements associated with it such as scenic views and historic character is very important. If the project moves forward this should be kept in mind and our investment should be protected from anything that would detract from what we have now.

-More precise impact data is desired. Environmental and aesthetic.

-Availability of south channel for wading and fishing.

I apologize for missing the meeting but will make every effort to make the next one.

Thanks,
Tom

> ----- Original Message -----
> **From:** Cindy Szwarckop
> **To:** Alissa Bierma ; Bob High ; Bob Zarzecki ; Carol Banaitis ; Elizabeth Gardner ; Jade Wei ; Jim Wei ; Kathy Capps ; Larry Ausley ; Mark Antonik ; Michael Keeney ; Sarah King ; Seth Yearout ; Shari Bryant ; Thomas Freeman ; Tom Wright ; Victor Lebsock ; frank.mclaurin@raleighnc.gov ; rjscheve@hotmail.com
> **Cc:** Risa Shimoda ; 'Aaron Asquith' ; j.anderson126@verizon.net
> **Sent:** Tuesday, August 10, 2010 10:58 AM
> **Subject:** Falls Whitewater Park Steering Committee Meeting
>
> Good morning!

Just a quick reminder that the next Falls Whitewater Park Steering Committee meeting will be held on Monday, 8/16 from 5pm to 6:30pm at Stewart (Bank of America Building, 421 Fayetteville Street, Suite 400, Raleigh, NC). Please review the attached information prior to the meeting. If you have any questions, please feel free to either call or email me.

Let me know if you will not be able to attend.

Thanks!
Cindy

Agenda:

1. Impact of water diversion in the north channel
2. Discussion of dam images
3. Swiftwater rescue training needs
4. Land based elements discussion/design session

Cindy Szwarckop, AICP | Senior Planner
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Main 919.380.8750
Fax 919.380.8752
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Whatever you can imagine, we say "Why Not."
See what we mean at: www.stewart-whynot.com

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TO:	City of Raleigh Parks and Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
REFERENCE:	Falls Whitewater Steering Committee Meeting #7 September 21, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Attendees:
Shari Bryant, NCWRC
Vic Lebsock, City of Raleigh
Russ Scheve
Jade Wei
Bob Zarzecki
Tom Freeman
Dana Matics
Tom Wright
Kathy Capps
Mike Kenney
Elizabeth Gardner
Bob High
Sarah King

Design Team:
Garry Walston, RLA – Stewart
Cindy Szwarckop, AICP - Stewart
Dave Boyette, PE – Stewart
John Anderson – McLaughlin Whitewater (via telephone)
Risa Shimoda – McLaughlin Whitewater (via telephone)
Aaron Asquith, McLaughlin Whitewater (via telephone)

Meeting Agenda:
1. McLaughlin Follow-Up – McLaughlin (via telephone)
2. NCWRC Memorandum – Shari Bryant
3. Conceptual Design – Garry Walston, Stewart

McLaughlin Follow-Up
- Aaron Asquith detailed the cross sections and provided information on the notches.
- It was noted that there is a desire to see variety in play areas. Seth Yearout (via written comments) requested: (1) the ability to navigate through three drops (ie) rock in middle at low flow. This is a challenge as that at many levels there isn't enough flow to play. (2) Alter the shape of the three drops so that they would change when the water levels change. 1st drop should be more of

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a hole for kayakers to practice. The 2nd/3rd should be a breaking waves type feature. Beginners would be encouraged to put in between the 1st and 2nd drop. All three drops should be distinct in character so that at every flow level there will be different things to do.

- Could a secondary fish passage be provided? Splitting flow through the features is not recommended from a course design perspective because it will be a detriment to the whitewater.
- There will be 5' of total drop through the reach.
- Could center drop be shifted to the island side? Offset wings to create a tight eddy on river left. Slow moving on river right. More of a lower drop than the 1st drop.
- Lowest drop, point back down middle of channel – provide variation. Relatively easy going feature.
- Water backs up relatively quickly – 1st feature to drown out. The low flat beach area is great for instruction, out of the area for tubers. Good for swimming, wading, etc.
- ADA access at take-out. The put-in area is less problematic. 4'-5' change because proposed grade of bridge is much lower.

Conceptual Design

- All comments from the Steering Committee meetings will be put into a wish list, discussed, and incorporated into the functional plan.
- Fire/rescue needs were detailed.
- Design is based on the new bridge being in place.
- Accessible put-in will need 80 to 100' of accessible route due to the elevation of the greenway.
- Seat 50 to 60 people in the viewing area.
- Viewing area is to be located in buffer, but this area is already being disturbed with the bridge construction.
- Full accessibility at put-in and take-out areas.
- Boardwalk materials: natural wood appearance. Could consider wood structure with Trex (recycled plastics/wood); hardwood; PermaTrack (concrete system – modular looks like wood decking). Trex has a life span of 20 to 30 years, but does mold, it compares very well to hardwood. PermaTrack has not been tested in flood conditions.
- ACOE is more comfortable with the put-in location closer to bridge. The current put-in is located on ACOE land and may be removed by ACOE at some point in the future. There has been an allowance by the Corps but there is a concern from a safety perspective. The existing put-in is located within a zone of concern (ACOE).
- Should there be additional put-in locations? What is preferable? Do not want boaters to maneuver over the pilings due to safety concerns. Put-in should be upstream of pilings at a point where there is some flow.
- Per vote of the Steering Committee, the put-in will be above the bridge.
- Tom Freeman comments: (1) US government owned land should be noted. (2) Look at hardening of put-in on south shore of river. This area is experiencing erosion. It was noted that the south bank will be stabilized and replanted as part of this project.
- Walkway access – there are concerns regarding additional impervious within the buffer. Access below the 1st drop should be sufficient. Vic and Garry noted that trying to get additional access points will push the buffer issue. The design team will look at route just below the first drop.
- Armoring – Vic noted that from perspective of stream channel, it is preferable to go to a 3 to 1 slope, but it is understood that the project will probably be restricted to a 1 to 1 slope due to permitting concerns. It was acknowledged that the review of streambank stabilization will be a small component of the overall environmental review.
- Consider how people are currently using the area. Consider incorporating green elements into the project.
- USACOE noted that there is not a lot of flow most of the year. Want to make sure that expectations are realistic, there is not always a lot of water.
- McLaughlin will study to determine the maximum variance in the north channel.

STEWART

- Can spillway notches be designed to offset concern that this project will be a barrier to fish migration? Can these be enlarged? Per Aaron – the concern is the amount of water. The north channel is probably the best upstream fish passage channel. These passages would utilize a great amount of the flow.

NCWRC Memorandum

- NCWRC still has concerns that the whitewater park could potentially be a barrier to fish passage once/if the Milburnie Dam is removed.
- NCWRC will continue to study and report back to the Committee during the next Steering Committee meeting.

Next Meeting

- Monday, October 4, 2010

North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

TO: Cindy Szwarckop, Senior Planner
Stewart Engineering

FROM: Shari L. Bryant, Piedmont Region Coordinator
Habitat Conservation Program

DATE: 20 September 2010

SUBJECT: Falls Whitewater Park – Conceptual Course Design

On September 10, 2010, staff with the N.C. Wildlife Resources Commission and U.S. Fish and Wildlife Service met to discuss the proposed whitewater course conceptual design and its potential impact on aquatic resources, particularly diadromous species in Neuse River. Diadromous species include anadromous species such as American shad and striped bass that live in saltwater and spawn in freshwater, and catadromous species such as American eel that live in freshwater and spawn in saltwater.

Aquatic Resources in Neuse River

Aquatic resources in this section of Neuse River include resident fish species such as sunfish (*Lepomis* sp.), largemouth bass (*Micropterus salmoides*), crappie (*Pomoxis* spp.), and white perch (*Morone americana*). Diadromous species such as American eel (*Anguilla rostrata*), American shad (*Alosa sapidissima*), and striped bass (*Morone saxatilis*) historically have used this section of Neuse River. Freshwater mussel species such as the state threatened triangle floater (*Alasmidonta undulata*) have been documented in the south channel where the whitewater course is proposed to be constructed. Also, there are records for the state threatened Eastern lampmussel (*Lampsilis radiata*) and Carolina fatmucket (*Lampsilis radiata conspicua*), and historic records for the federal and state endangered dwarf wedgemussel (*Alasmidonta heterodon*), the federal species of concern and state threatened Carolina madtom (*Noturus furiosus*), the state threatened Roanoke slabshell (*Elliptio roanokensis*) and the state special concern Neuse River waterdog (*Necturus lewisi*) and notched rainbow (*Villosa constricta*) in Neuse River upstream of the confluence with Crabtree Creek.

Whitewater Park Conceptual Design and Fish Passage

On June 8, 2010, the N.C. Wildlife Resources Commission provided recommendations to address fish passage within the whitewater course in the south channel. We recommended developing a holistic approach to fish passage. This would have required measurements to be collected of the existing habitat (line transect type data) under low flow conditions. Then, we recommended that each characteristic (water velocity, water depth, passage width, abrupt drop) not be modified by more than 10%. So, for example, if the existing habitat has 40% of the stream width with water depths between 1 and 2 feet, (at

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Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

some reference gage height), then between 30-50% of the channel should have these water depths after any stream bed modifications are made. This would maintain the habitat diversity needed by the existing fish community within this section of the Neuse River, but allow for some modification of the streambed to meet the objectives of developing a whitewater park.

On June 25, 2010, the N.C. Wildlife Resources Commission participated in a conference call with the design engineer, Mr. John Anderson, to discuss the potential to incorporate the above recommendations into the whitewater course design. Mr. Anderson indicated that adhering to our recommendations would not meet the objectives for the whitewater course. We tentatively agreed with Mr. Anderson's proposed conceptual design, but indicated we had concerns regarding the diversion weir/divider island and asked if that could be eliminated from the design. We were informed that while the whitewater course did not require a diversion weir/divider island, this was a design requirement by the project proponents. We indicated more information was needed on the effect of the diversion weir/divider island on flows in the north channel. It was clear diadromous fish would not be able to pass through the south channel due to physical barriers of the proposed whitewater course design, but if the diversion weir/divider island did not significantly affect flows in the north channel, then there may be the potential for diadromous fish to pass through the north channel.

Information and data were provided on the effect of the diversion weir/divider island on flows in the north channel. The data showed the greatest impact to flow would occur between 300 and 1,000 cfs; this is the flow range that is critical for diadromous fish passage. A cursory review of flow data from Falls dam showed that flows in the range of 300 to 1,000 cfs could be reduced up to 13% of the days between March 1 and May 31 in the north channel following construction of the whitewater course and diversion weir/divider island. At this point, we were concerned the whitewater course design would not allow for fish passage in the south channel, and reductions in flow could significantly affect fish passage in the north channel.

During the August 16, 2010 meeting, we shared these concerns with the Steering Committee members. Several questions were asked, and we agreed to further review the Neuse River hydrograph, and respond to the questions that were asked.

A review of the Neuse River hydrograph between 1971 and 2010 shows construction of the dam itself affected the frequency of flows in the 300-1,000 range; however, the proposed diversion weir/divider island would further reduce the frequency of flows in this range (Figure 1). At this time, we feel the project as proposed could be a migration barrier to diadromous species in the Neuse River by providing a physical barrier in the south channel and a flow barrier in the north channel.

<u>Steering Committee Members' Questions</u>

Question: With Milburnie dam still in place do we need to be concerned about anadromous fish passage?

Answer: Yes. Although Milburnie dam is still in place, there is currently a proposal to remove it. Even if it is not removed, there is the potential for fish passage around the dam to be provided at some point in the future.

Question: If the dam is removed will anadromous fish be able to get to Falls dam? How often?

Answer: Yes, diadromous fish will be able to get to Falls dam. There are historical records of diadromous species reaching the Eno River and Flat River upstream of Falls dam. American eel, American shad, and striped bass are expected to be able to reach Falls dam. It is anticipated American eels will reach Falls dam annually. How often American shad and striped bass get to Falls dam will

depend on flows. We know it takes 500 cfs for American shad and striped bass to migrate to Milburnie dam and currently these species are able to get to Milburnie dam four out of every five years.

Question: What is the flow that anadromous fish need to pass through the north channel?

Answer: It is unknown at this time. At the previous meeting, we indicated 500 cfs as a conservative estimate for our cursory review of the Falls dam flow data since we know it takes 500 cfs for American shad and striped bass to reach Milburnie dam. Currently, we are reviewing Habitat Suitability Index (HSI) data for American eel, American shad, and striped bass to see if these data can provide better estimates of what the flow needs may be for each of these species. However, it is likely that we will not know definitively until fish have access to this section of the river.

Question: How many days of flow are needed for anadromous fish passage?

Answer: Adequate flows are needed between March 1 and June 1.

Question: Is habitat in the north channel suitable for anadromous fish?

Answer: It is unknown at this time. Again, currently we are reviewing Habitat Suitability Index (HSI) data for American eel, American shad, and striped bass to determine whether habitat in the north channel is suitable for these species.

Question: Do the fish have to come to the dam?

Answer: Yes. A diadromous fish restoration plan has not been developed for the Neuse River yet. However, the goal of the U.S. Fish and Wildlife Service, National Marine Fisheries Service, N.C. Division of Marine Fisheries, and N.C. Wildlife Resources Commission is to maintain all options for upstream migration of diadromous species above Falls dam. There is restoration potential for American eel above Falls dam. At this time, it is unclear whether there are restoration opportunities for American shad or striped bass above Falls dam. Therefore, to pass diadromous species above Falls dam these species would need to be able to get to the dam.

Question: Could the habitat be enhanced for anadromous fish downstream of where the north and south channels confluence?

Answer: No. As stated above, one goal of the resource agencies is to maintain all options for upstream migration of diadromous species above Falls dam. Therefore, to pass diadromous species above Falls dam, these species would need to be able to get to the dam.

Question: Could habitat in the north channel be modified to provide more desirable flows to pass anadromous fish?

Answer: It is unlikely that streambed modifications will improve habitat in the north channel because spawning success is also related to stream discharge. However, we are reviewing the Habitat Suitability Index (HSI) data to see if there is a potential.

Question: Can the whitewater design, particularly the side channels, be modified to pass anadromous fish?

Answer: Possibly. We are working with migratory fish experts to see if there is a possibility for modification that would allow for fish passage within the proposed conceptual design of the whitewater course.

Other Issues

- As discussed above in the section Aquatic Resources in Neuse River, there are historical records for several listed aquatic species in Neuse River. It has come to our attention that the Carolina madtom and Neuse River waterdog are under consideration for possible listing by the U.S. Fish and Wildlife Service. If either of these species is listed prior to project permitting, the U.S. Fish and Wildlife Service would require a Section 7 review.
- Restoration of freshwater mussel species that historically occurred in this section of Neuse River may depend on diadromous fish species. At this time, it is unknown whether any of the diadromous species in Neuse River serve as hosts for any of the mussel species. Therefore, any freshwater mussel restoration may be dependent on ensuring diadromous fish passage.
- It appears all three of the natural low flow notches in the river may be modified. It was our understanding the southern most low flow notch may be modified during construction of the whitewater course and diversion weir/divider island. We have concerns about modifications to the other natural low flow notches in the river. More detailed information on the proposed modification of these low flow notches and the possible impact to flows and aquatic habitat needs to be presented.
- In Mr. Zarzecki's correspondence dated August 16, 2010, he stated "I have seen documentation and studies from WRC on rip-rap banks at the coast improving habitat and documenting greater diversity and species of fish, etc." We would like to clarify that our preference is for natural bank stabilization, whenever feasible. However, if natural bank stabilization is not an option, then we prefer rip-rap over other hardening structures (e.g., seawall) because rip-rap provides better aquatic habitat than other hardening structures.

Alternatives

The primary goal of the resource agencies is to retain the utility of this section Neuse River to provide spawning and migration pathways for resident fish species, diadromous species, and freshwater mussel species. At this time, we feel the proposed conceptual design could be a migration barrier to diadromous species in the Neuse River by providing a physical barrier in the south channel and a flow barrier in the north channel. We have several alternatives for consideration by the Steering Committee. These include:

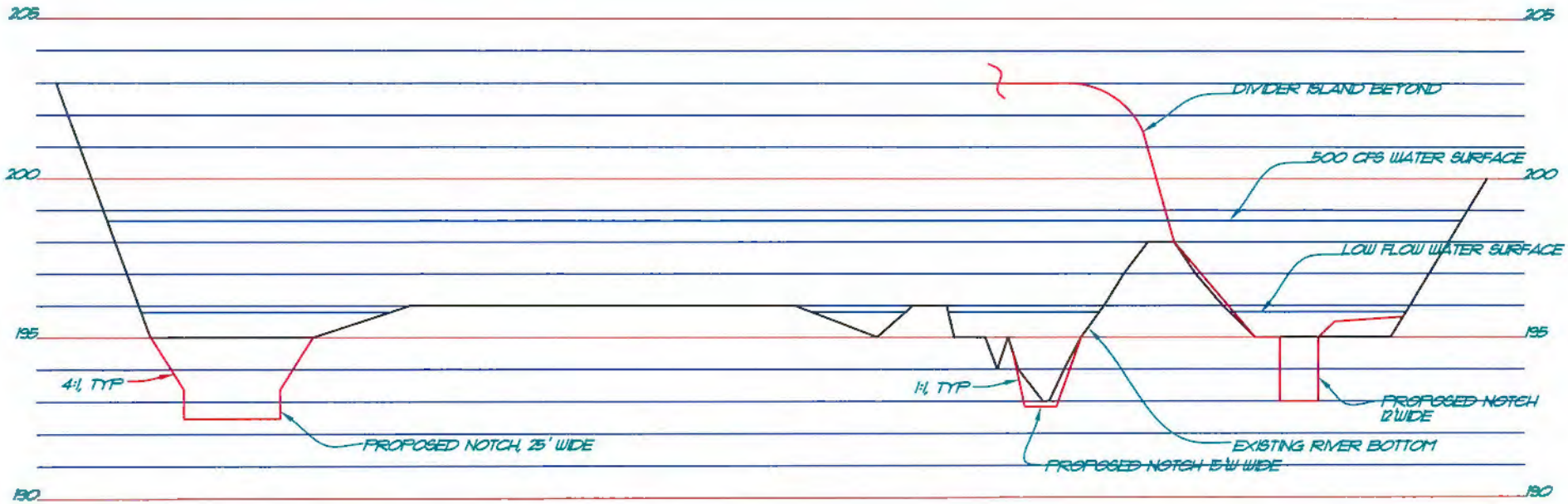
- Design a whitewater course that does not require a diversion weir/divider island, but could be retrofitted with a diversion weir/divider island at a later date. Once diadromous species have access to this section of the river, more data will be available on how these species (i.e., American eel, American shad, and striped bass) will use the area. Once this data is available, discussions regarding the possibility of retrofitting the whitewater course to include a diversion weir/divider island could take place.

- Include an adjustable weir in the project design. During critical migration periods (i.e., March 1 to June 1), the weir could be adjusted to provide sufficient flows to the north channel to allow for upstream migration of diadromous species. We understand the Committee members do not want an adjustable weir, but this would resolve many of the resource agencies concerns regarding the proposed conceptual design.

- Conduct an Instream Flow Incremental Methodology (IFIM) study to evaluate the effect to flow and habitat in the north channel with and without the project.

Thank you for the opportunity to participate on the Whitewater Park Steering Committee and to provide comments regarding the development of the proposed Falls Whitewater Park. If we can be of further assistance, please contact our office at (336) 449-7625.

ec: Bennett Wynne, WRC


205
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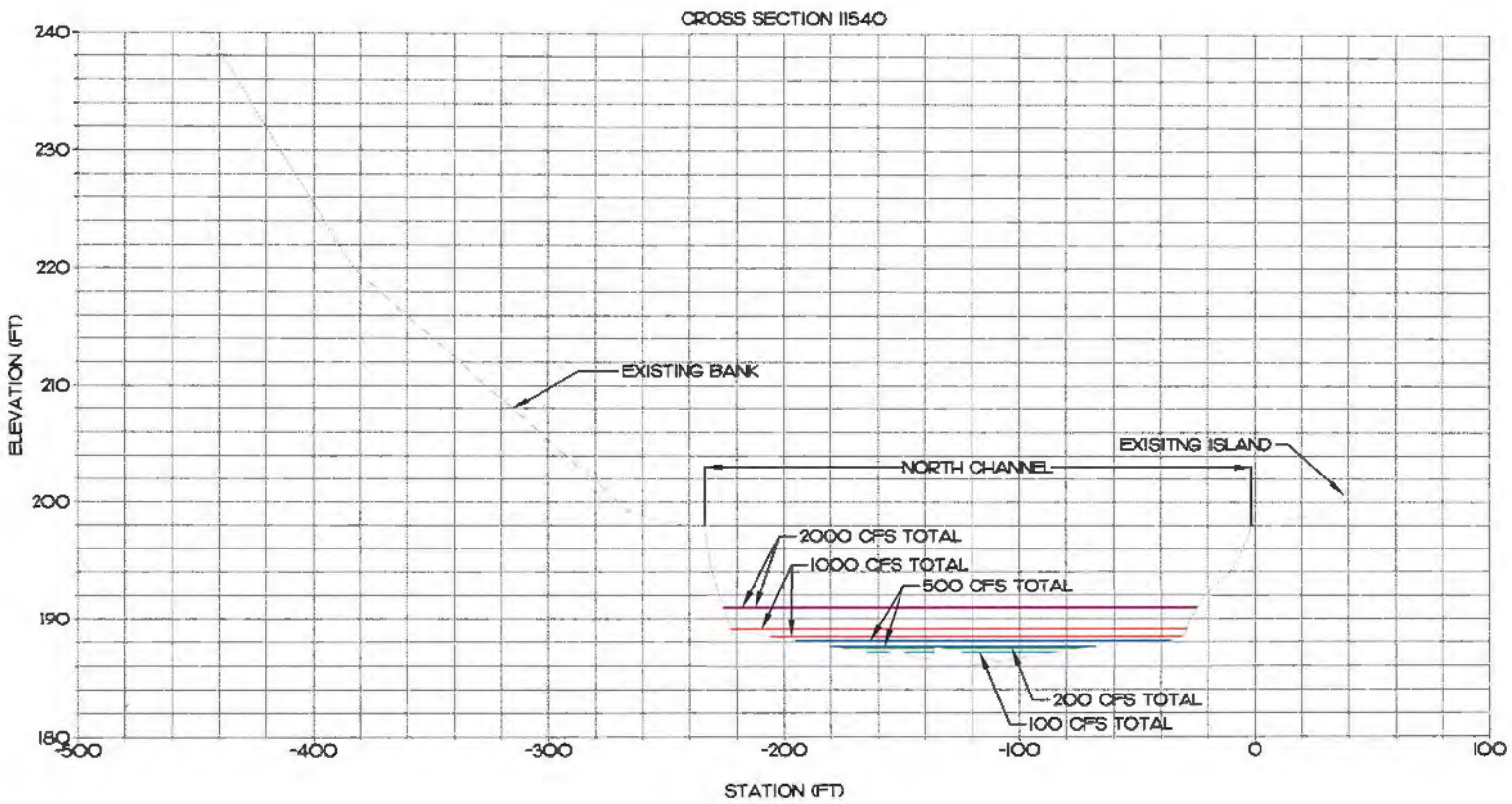
4:1, TYP
PROPOSED NOTCH, 25' WIDE
DIVIDER ISLAND BEYOND
500 CFS WATER SURFACE
LOW FLOW WATER SURFACE
1:1, TYP
PROPOSED NOTCH 12' WIDE
EXISTING RIVER BOTTOM
PROPOSED NOTCH 5'W WIDE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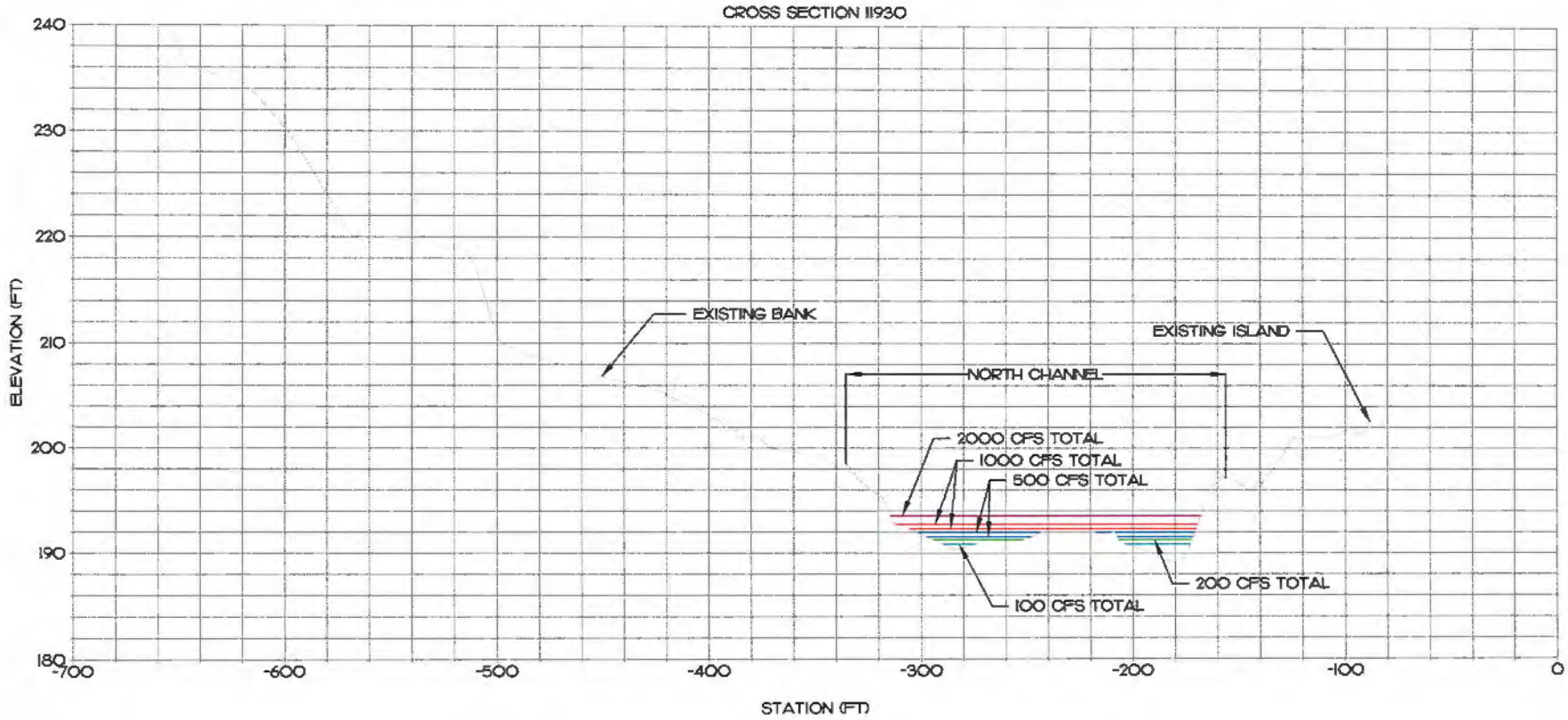
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EXISTING ISLAND
NORTH CHANNEL
2000 CFS TOTAL
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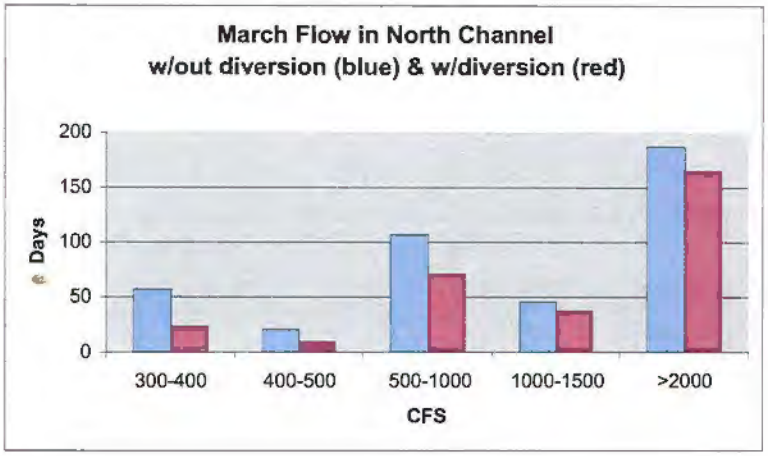
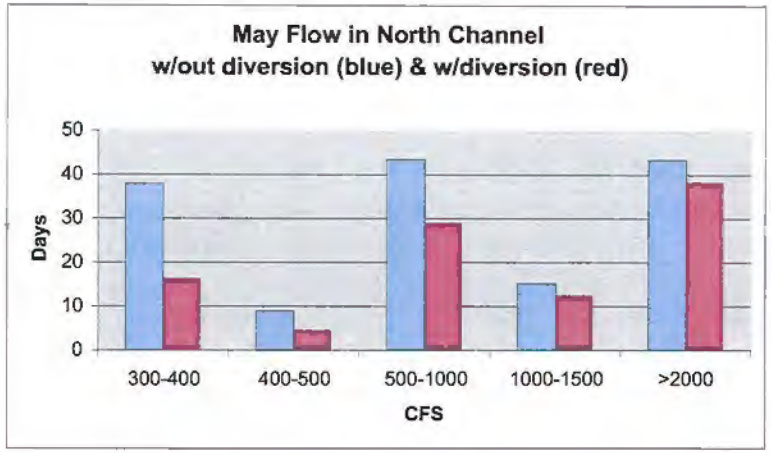
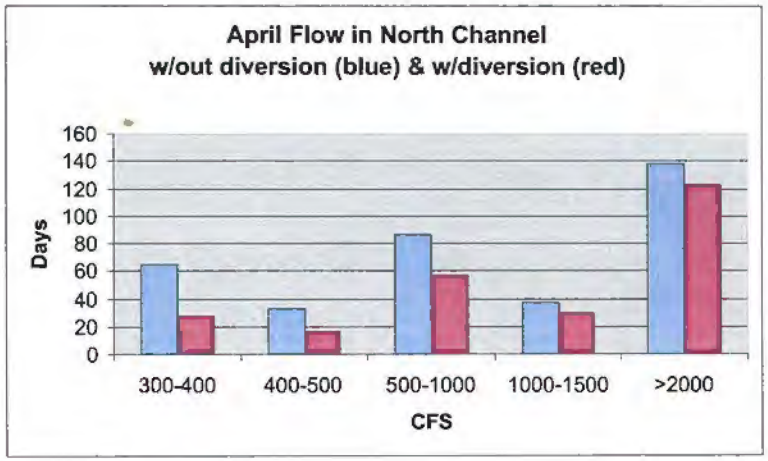
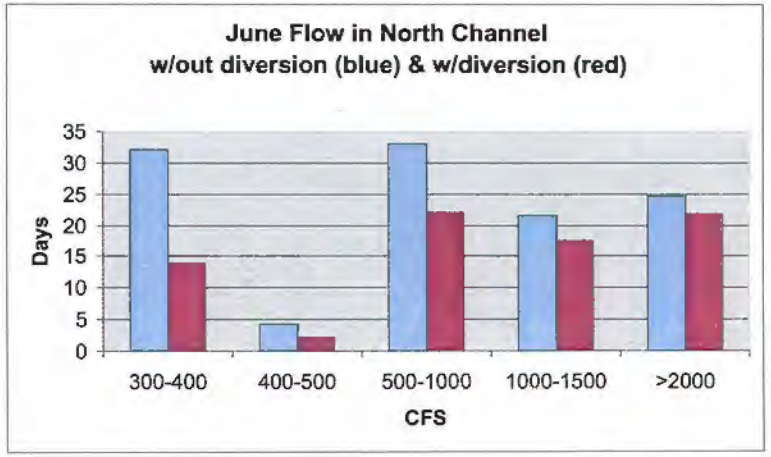
Figure 1. Flow in the north channel without the diversion weir/divider island and with the diversion weir/divider island.









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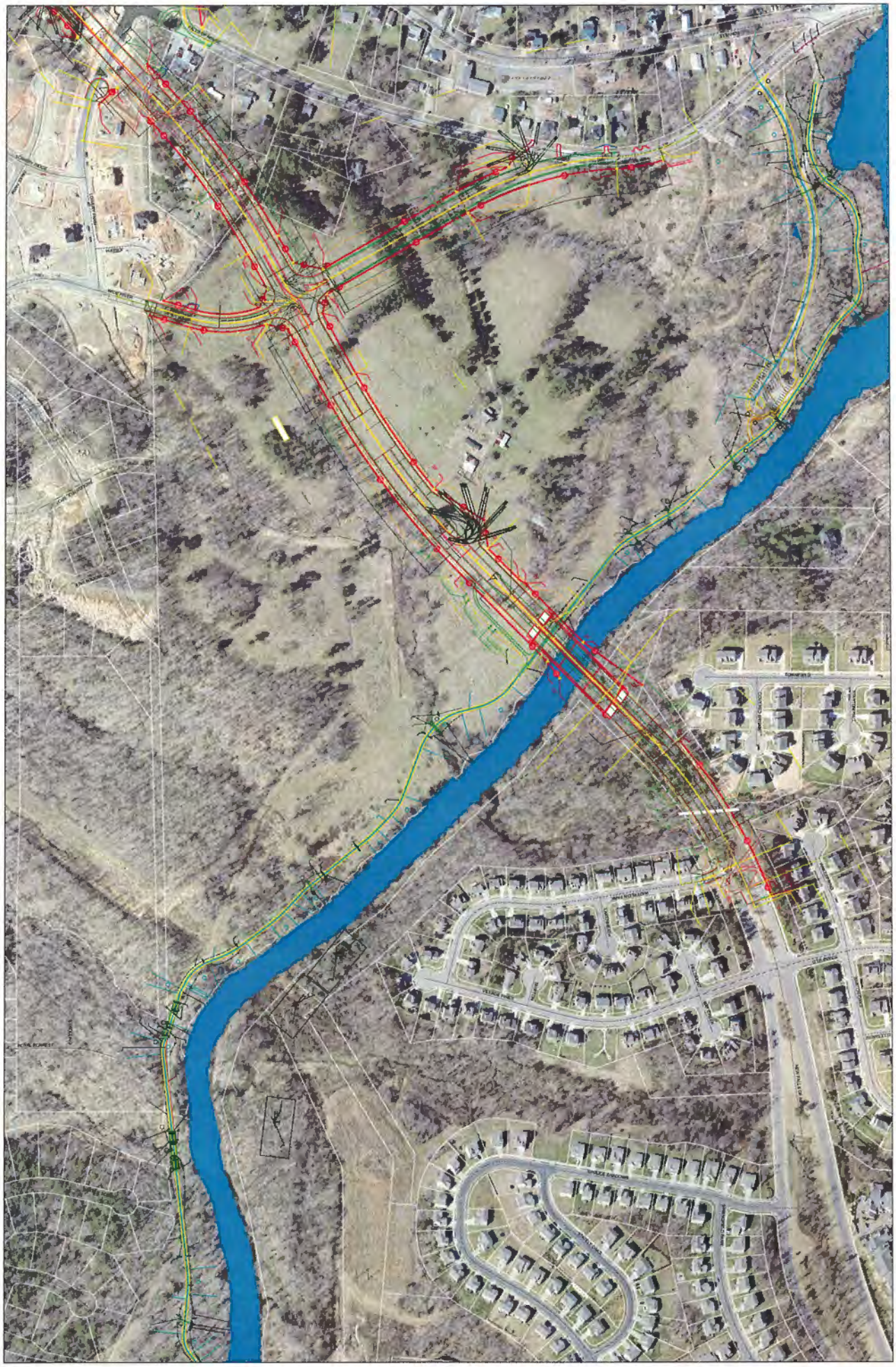
STEWART

Loughlin Whitewater



STEWART

TO:	City of Raleigh Parks and Recreation Department Falls Whitewater Steering Committee
FROM:	Garry P. Walston, RLA, ASLA, LEED
DATE:	10/5/2010
REFERENCE:	Falls Whitewater Steering Committee Meeting #8 October 4, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Attendees:
Shari Bryant, NCWRC
Bennett Wynne, NCWRC
Dana Matics, USACE Falls Lake
Sarah King, Paddler
Elizabeth Gardner, Paddler
Jade Wei, Paddler
Bob High, Paddler
Mark Antonik, Paddler
Kathy Capps, City of Raleigh
Vic Lebsock, City of Raleigh
Seth Yearount, City of Raleigh
Tom Freeman, USACE Falls Lake

Design Team:
Garry Walston, RLA – Stewart
Dave Boyette, PE – Stewart
John Anderson – McLaughlin Whitewater
Risa Shimida – McLaughlin Whitewater (via telephone)
Aaron Asquith, McLaughlin Whitewater (via telephone)

Meeting Agenda:
1. Complete Discussion of Fish Passage
2. Discuss final Water Based Issues – John Anderson
3. Discuss final Land Based Issues – Garry Walston
4. Final Vote of Design Approval– Vic Lebsock

Shari recapped the report on fish passage that was provided at the previous Steering Committee meeting. She and Bennett led a discussion that touched on the following items:

- The conclusion of the NCWRC is that the project has the potential to impact future fish spawning habitat in the event that the Milburnie Dam is removed in the future.

- The entire discussion is only applicable if the dam is removed. Shad and Striped Bass are sometimes found upstream of the dam during flood events.
- The rocky bottom between the end of the proposed whitewater course and the dam outlet are prime spawning areas.
- There was much discussion about how fish would get into Falls Lake from the river. Three possible options were discussed, including fish ladders, fish lifts, and fish transport.
- If transporting of fish into Falls Lake is so important, why isn't it being done at present?
- Is there a target date for removal of the Milburnie Dam? It is currently under government review, but public opinion has turned against it. No date has been set for removal.
- Are there any similar fish passage projects in the area that have been studied and the results quantified? Not locally.
- After a lengthy discussion on whether or not there is enough data to support either side of the debate, John Anderson recommended that we move forward with the project as designed, with the understanding the issue could be revisited in the future if and when more data is provided.
- Vic asked whether USFWC could provide any data to indicate whether or not it would matter if the Milburnie Dam was removed, since the Falls Dam was built decades after the Milburnie Dam, and the river between the two has significantly changed in the intervening years. There is no finite answer to the question.
- Sarah asked if the introduction of a diverter control were introduced into the project, would it help the USFWC feel better about supporting the project. Shari indicated that it would.
- Vic expressed concern on the part of the City of Raleigh with long term maintenance and cost of such devices.
- Sarah reiterated that if fish passage is ever reintroduced in the area, that passage all the way to the dam is crucial.

Vic stated that the diverter issue could not be resolved without more discussion among the City staff, so he will ask the Steering Committee members to vote for or against a mechanical diverter in the coming weeks via email.

John Anderson then led a discussion of the outstanding water based issues from the emails generated by the Steering Committee after the previous meeting.

1. Diverter Island/Diversion Weir – The City staff will discuss the cost/benefit of such a device and ask the Steering Committee to vote on it.
2. Targeted Flow Volumes – John provided a chart and cross-sections to demonstrate impact on flow in the north channel.
3. Put-in Locations: (size, number and location) – the put in will be moved to just east of the stream feature that intersects the river in the pool area.
4. Confirm that features will "run" during normal flow levels – John confirmed this.
5. At what level will features "wash out" – The lower level will continue to flow at 4000 cfs.
6. Could a "user friendly" bottom be incorporated into the design? – Yes, the bottom will be natural granite.
7. Impact to shoreline beyond end of course? – Armoring will begin and end approximately as shown on the current plans.
8. Armoring on north shore? - The City will discuss shoreline stabilization with the River Mill homeowners and ask them to put the issue to a vote among the homeowners. The City will provide this service if the residents of River Mill want it.

Garry Walston led a discussion of the outstanding land based issues from the emails generated by the Steering Committee after the previous meeting.

1. Bank Stabilization – it was decided that armoring would be used with a 2:1 slope to just above the high water line, and 3:1 slopes and re-vegetation would be used above that point.

STEWART

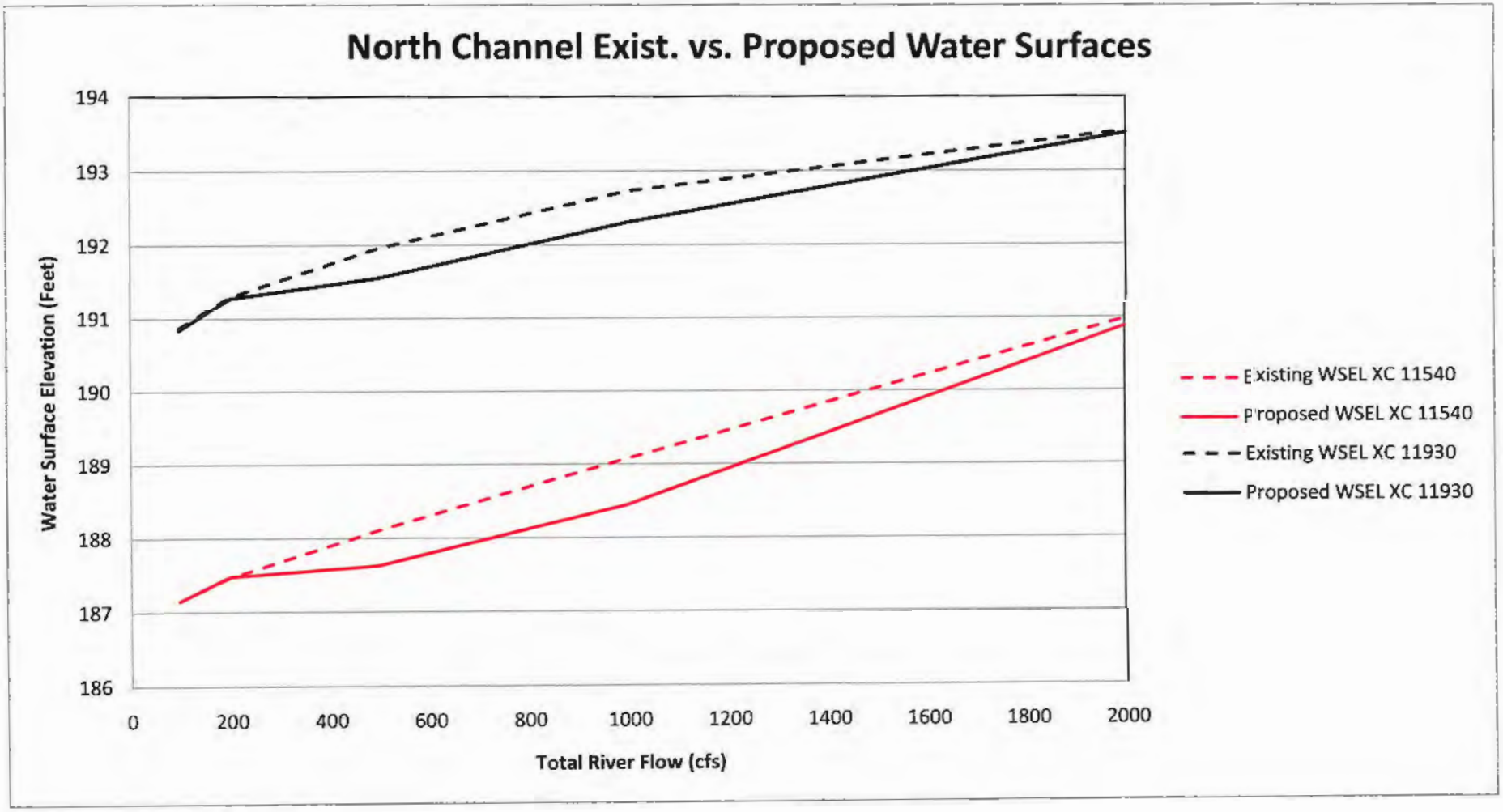
2. Utilize Native Plants – Yes.
3. Location of Trail Access Points – Trail access points will remain as decided at the previous meeting.
4. Trail to Parking Lot – A more direct connection will be added from the take-out area to the parking lot. This will require a significant amount of stairs.
5. Signage – Type and location will be determined during construction document preparation.
6. 911 Call Station – The City will explore options for emergency notification. The current system is subject to vandalism and false alarms.

Seth asked if an outdoor shower could be incorporated into the future bathroom/ changing room design. This element will be included in the future design.

Vic asked for a consensus vote on the project with the discussed revisions. The vote was 9-0 in favor of the project, with the exception of the north channel stabilization, which will be added if desired by the River Mill residents.

Meeting Wrap-up and Schedule:
This was the final Steering Committee meeting. The next scheduled meeting is the Community Meeting on November 3, 2010. Vic asked that Steering Committee members attend in show of support of the project. Tentatively, the project will be presented to Park Planning on October 27, 2010 at 1:00, prior to presentation to the PRGAB.

Attachments: Chart and sections from McLaughlin
Site Plan from Stewart


North Channel Exist. vs. Proposed Water Surfaces
Water Surface Elevation (Feet)
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193
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800
1000
1200
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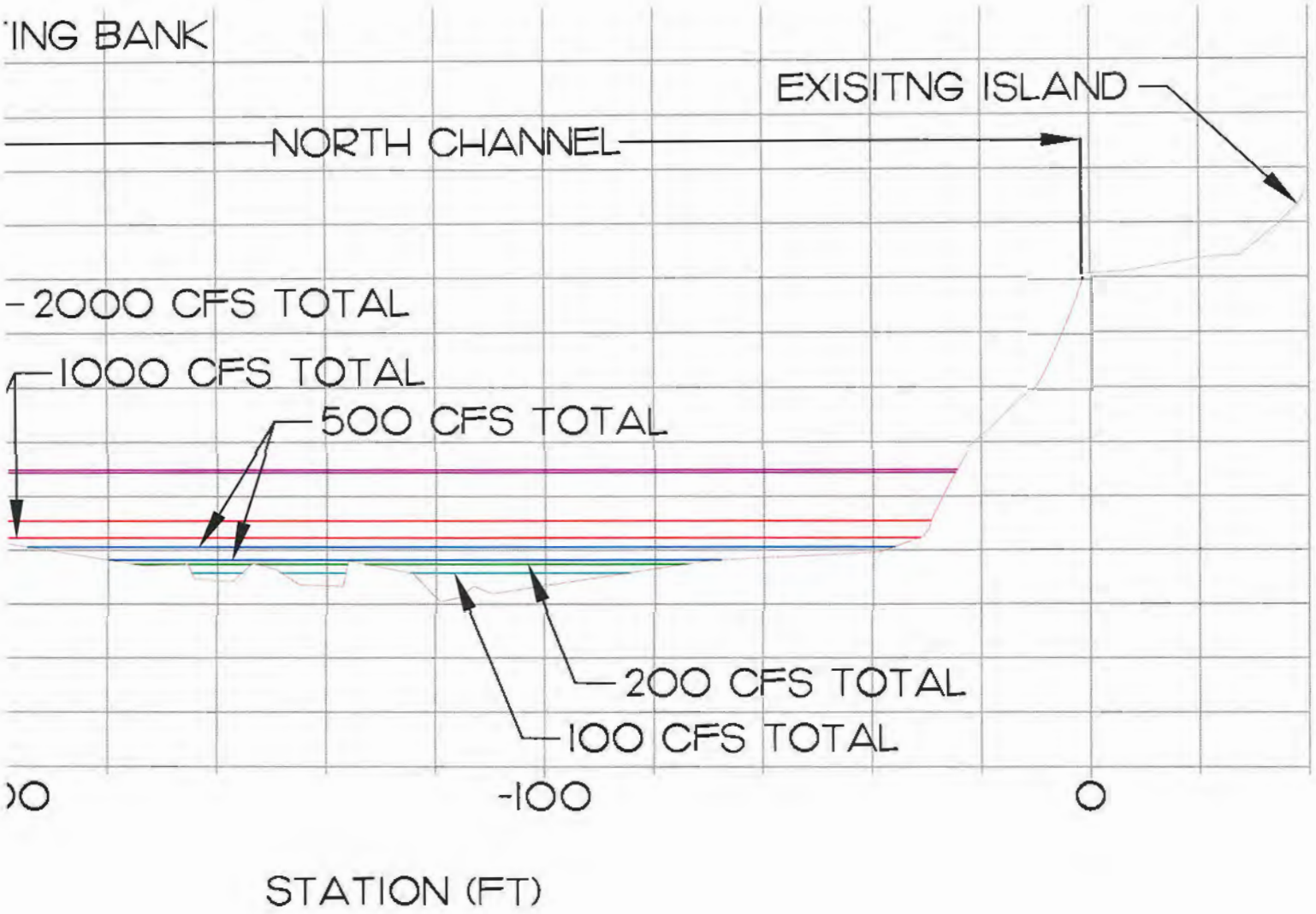
Total River Flow (cfs)
Existing WSEL XC 11540
Proposed WSEL XC 11540
Existing WSEL XC 11930
Proposed WSEL XC 11930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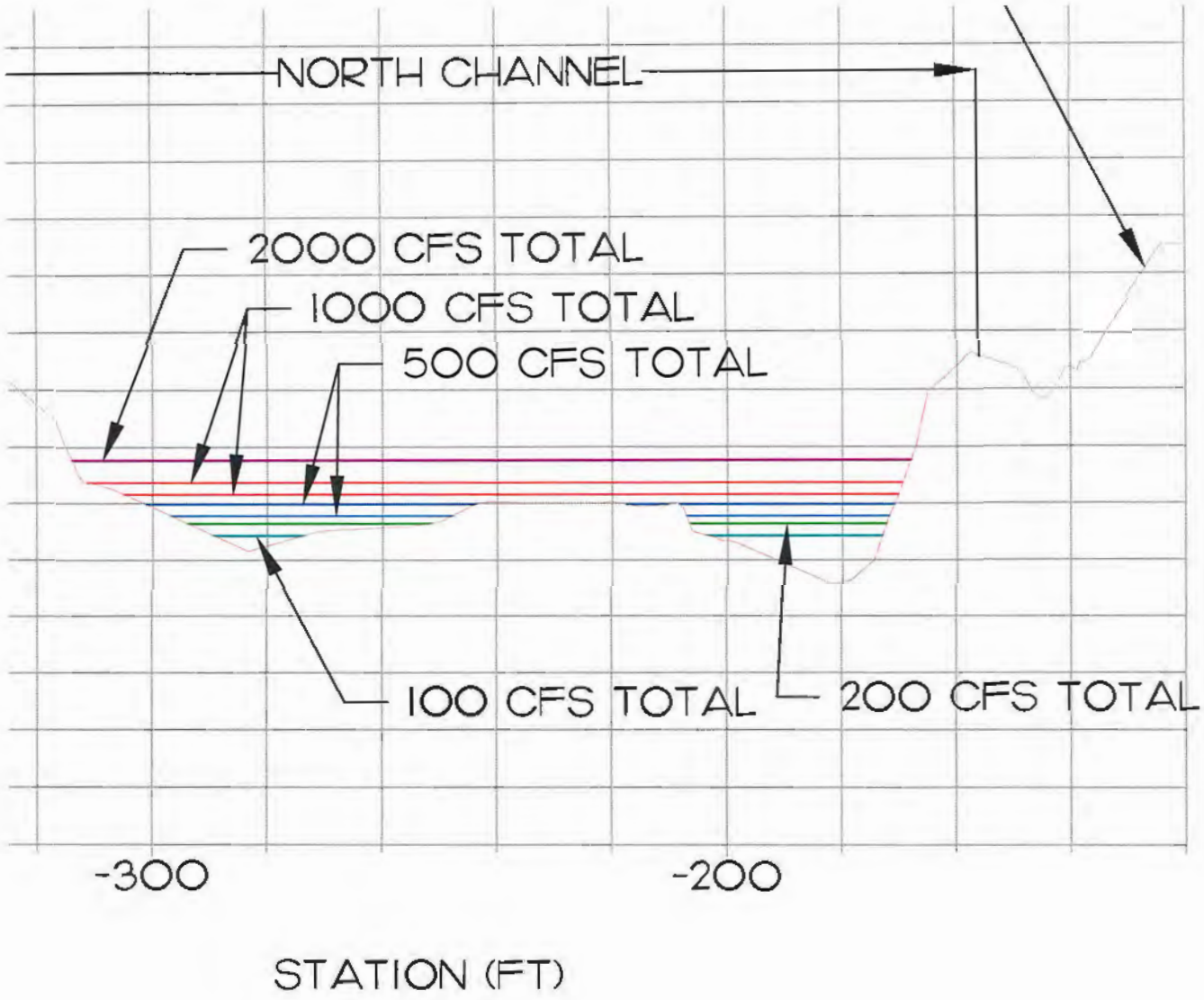
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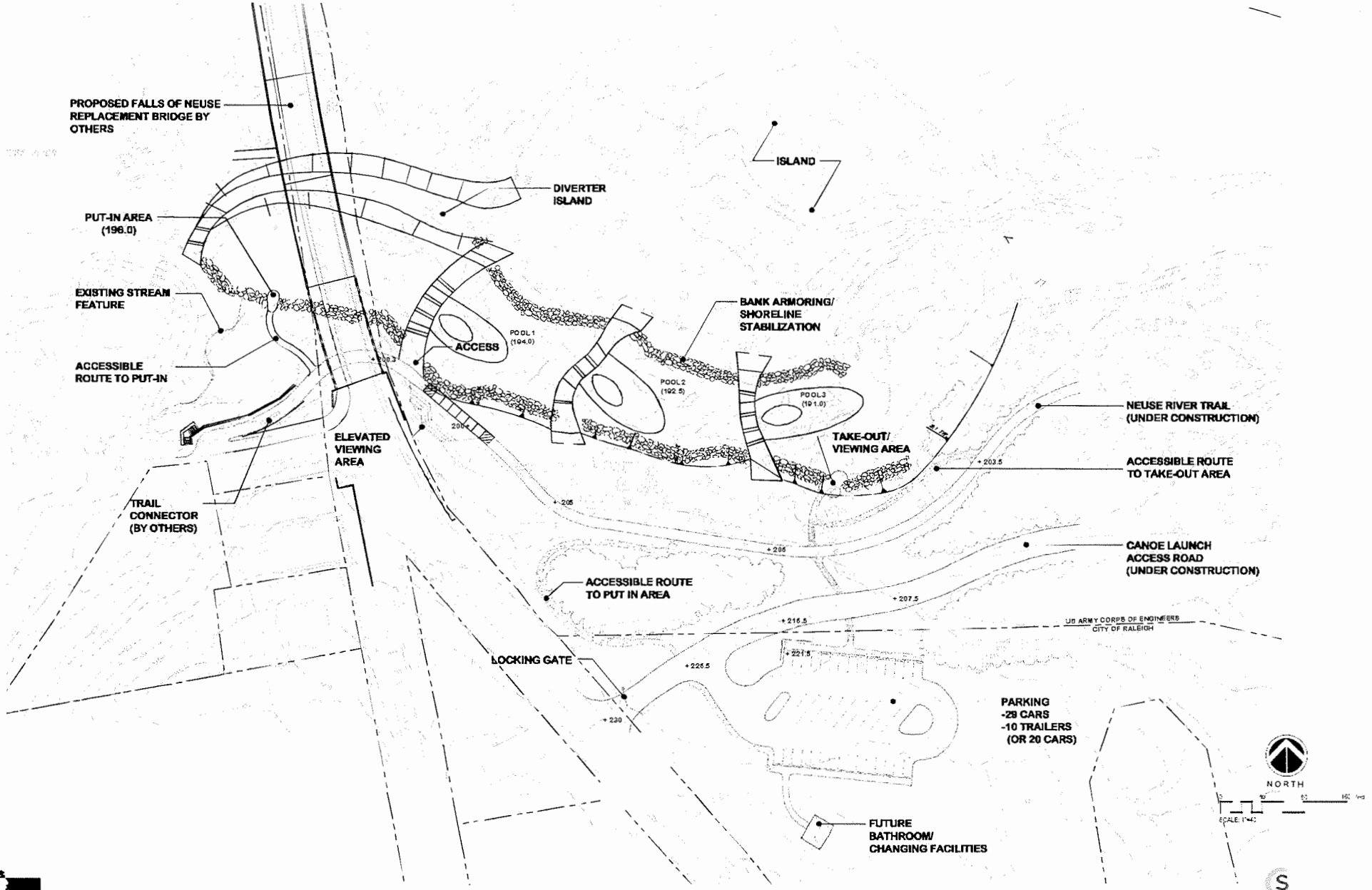

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FALLS WHITEWATER PARK

STEWART

Loughlin Whitewater

Presentation to City of Raleigh Park Planning Staff

October 27, 2010

STEWART

RALEIGH Parks and Recreation

Agenda

- Project Overview/Public Involvement Process
- Design Development Drawings
- Questions/Comments

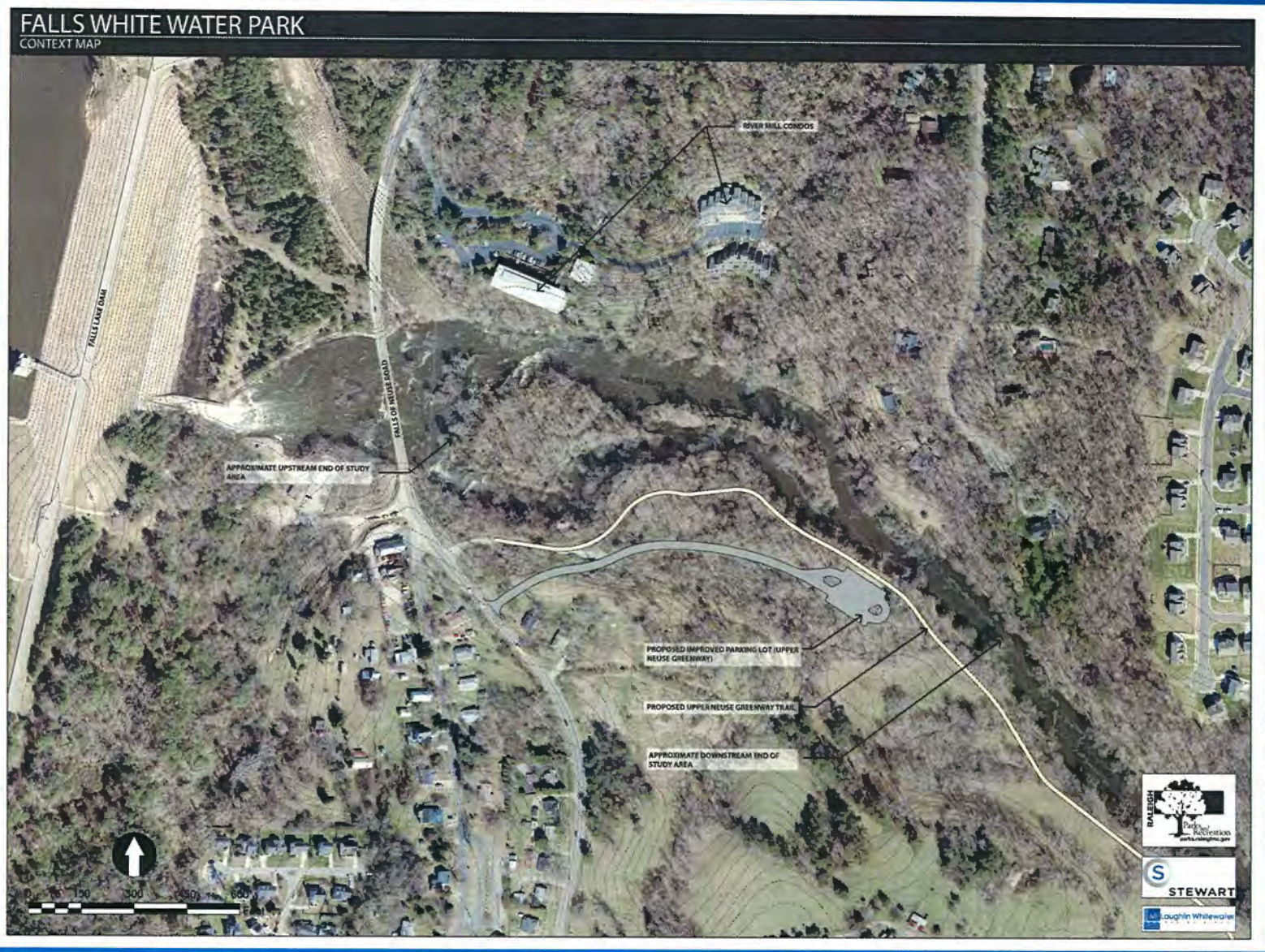
Project Schedule

Meeting #1 (Kick-Off Meeting): January 19, 2010
Data Collection/River Survey Complete: May 2010
Preparation of Conceptual Design: May to Mid-July 2010
Community Meeting #2: July 14, 2010
Design Development Stage: Late July to Mid October 2010
Community Meeting #3: November 3, 2010
Complete Design Development Drawings: Mid-November 2010
Present Plan to PRGAB: November 18, 2010

Vision Statement

- "To create a river park that provides multiple water-based recreational and educational opportunities throughout as much of the year as possible with the known historical release levels. The river and its natural habitat will be enhanced and celebrated through the creation of this project."

Project Area



Reference Images

FALLS WHITE WATER PARK
REFERENCE IMAGES


CONNECTIONS


ATHLETES


LOW FLOW CONDITIONS


VIEWING AREAS


CREATED DROP


SWIMMING

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STEWART

Loughlin Whitewater

Falls Whitewater Park Plan

FALLS WHITEWATER PARK

RALEIGH, NORTH CAROLINA

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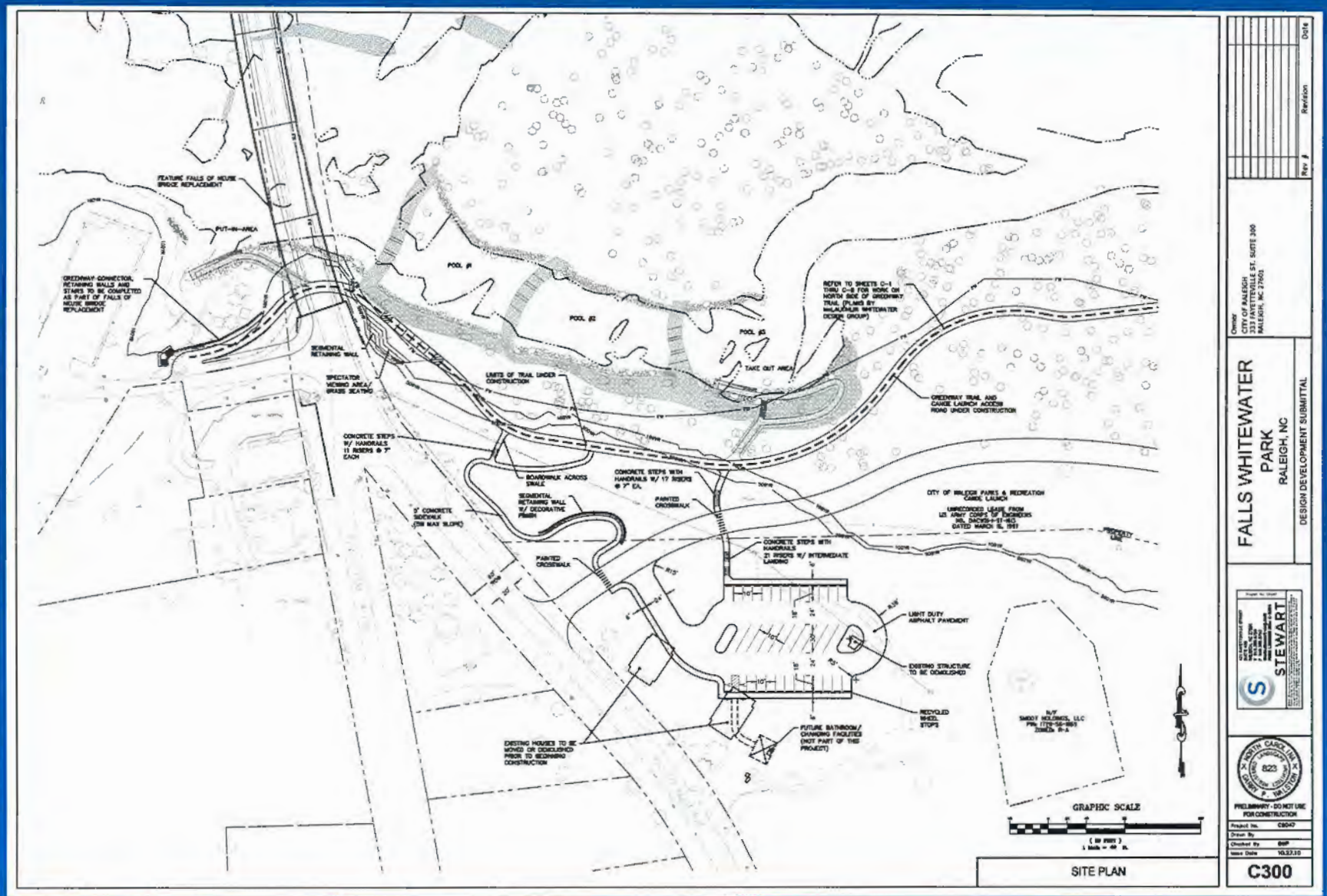
STEWART

Loughlin Whitewater

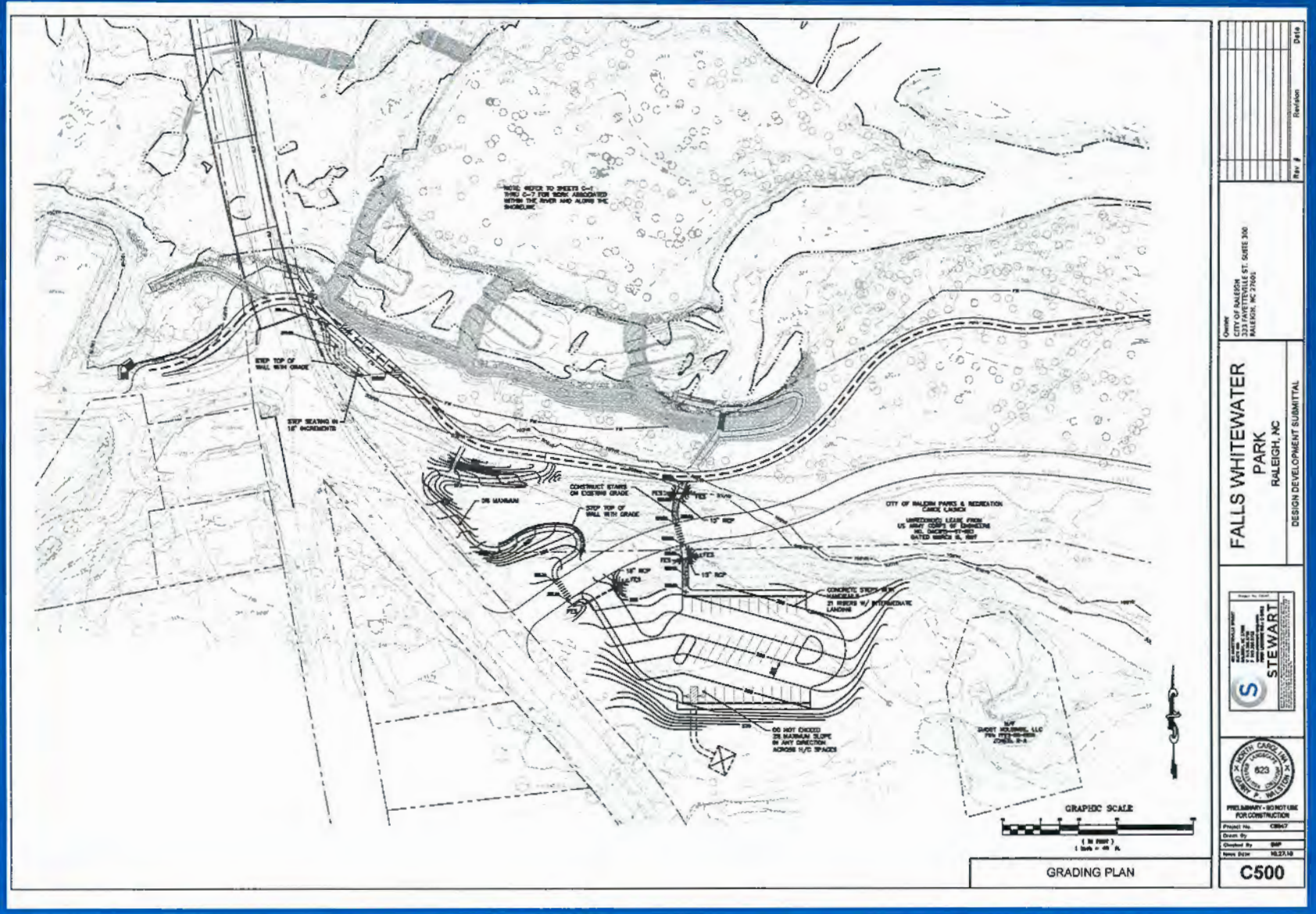
Additional Boating Days

- 48 days per year without diversion island
- 105 days with diversion island
- Average 117 percent increase

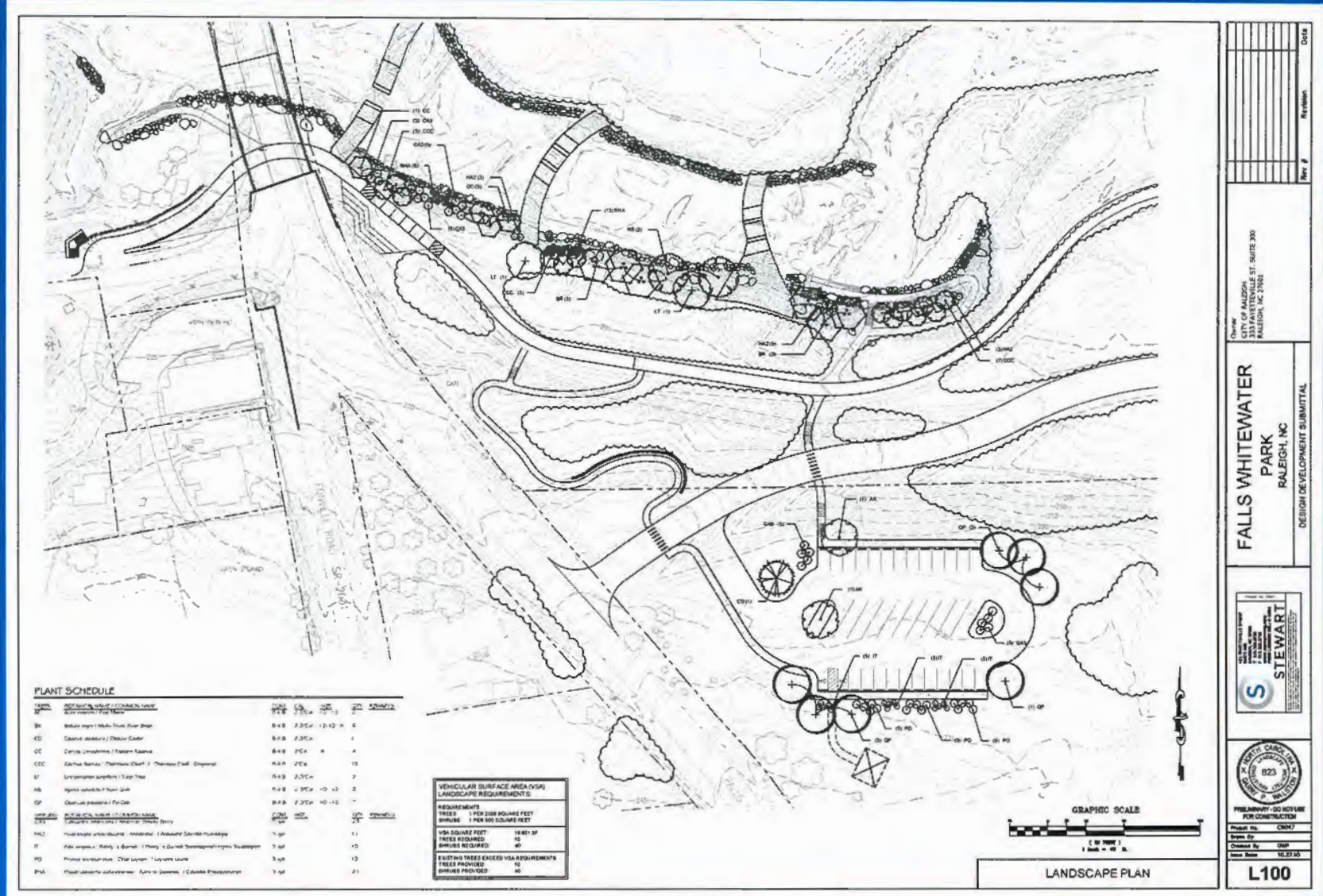
Site Plan


FALLS WHITEWATER
PARK
RALEIGH, NC
DESIGN DEVELOPMENT SUBMITTAL
STEWART
PRELIMINARY - DO NOT USE FOR CONSTRUCTION
C300
SITE PLAN
GRAPHIC SCALE

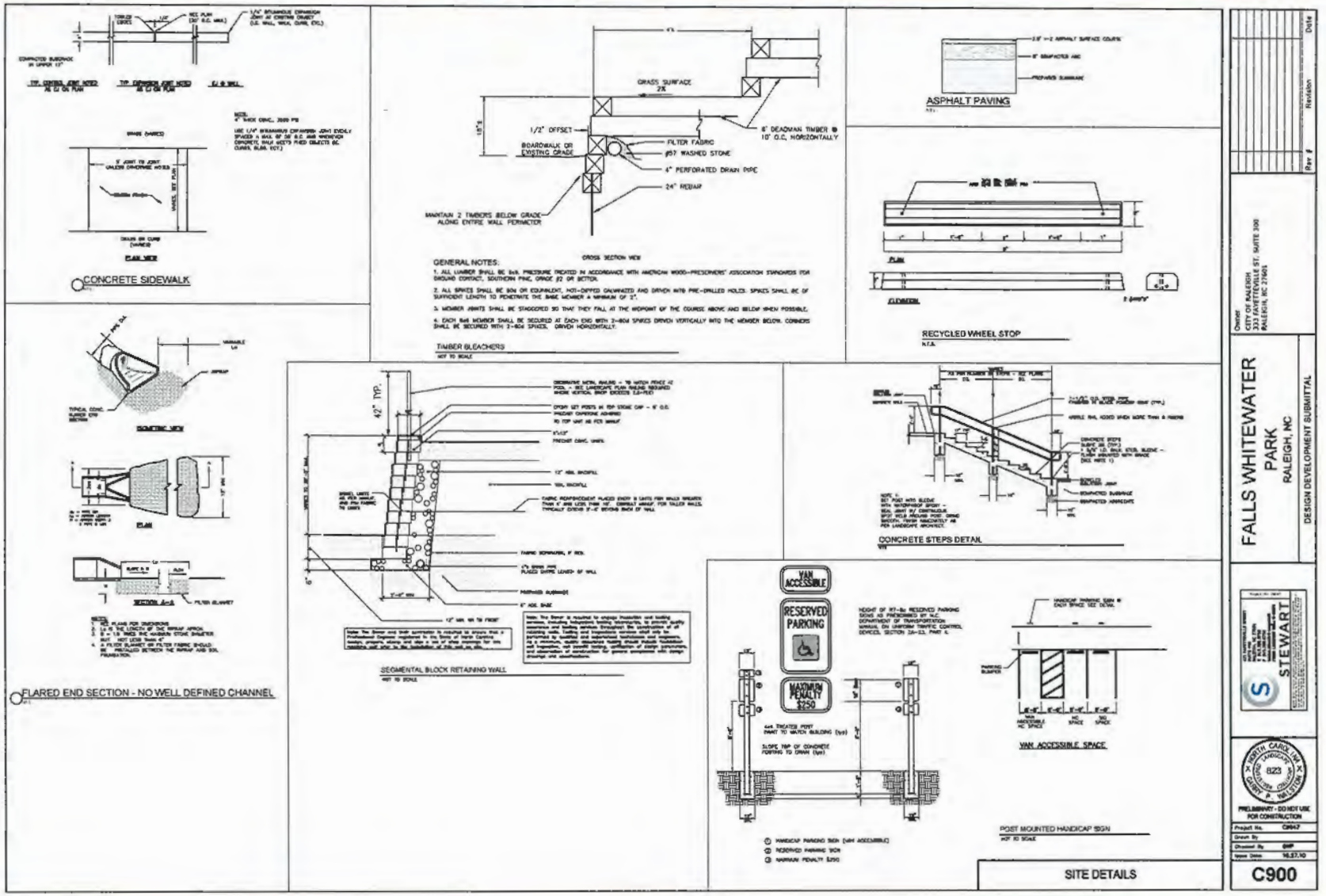
Grading Plan



Landscape Plan

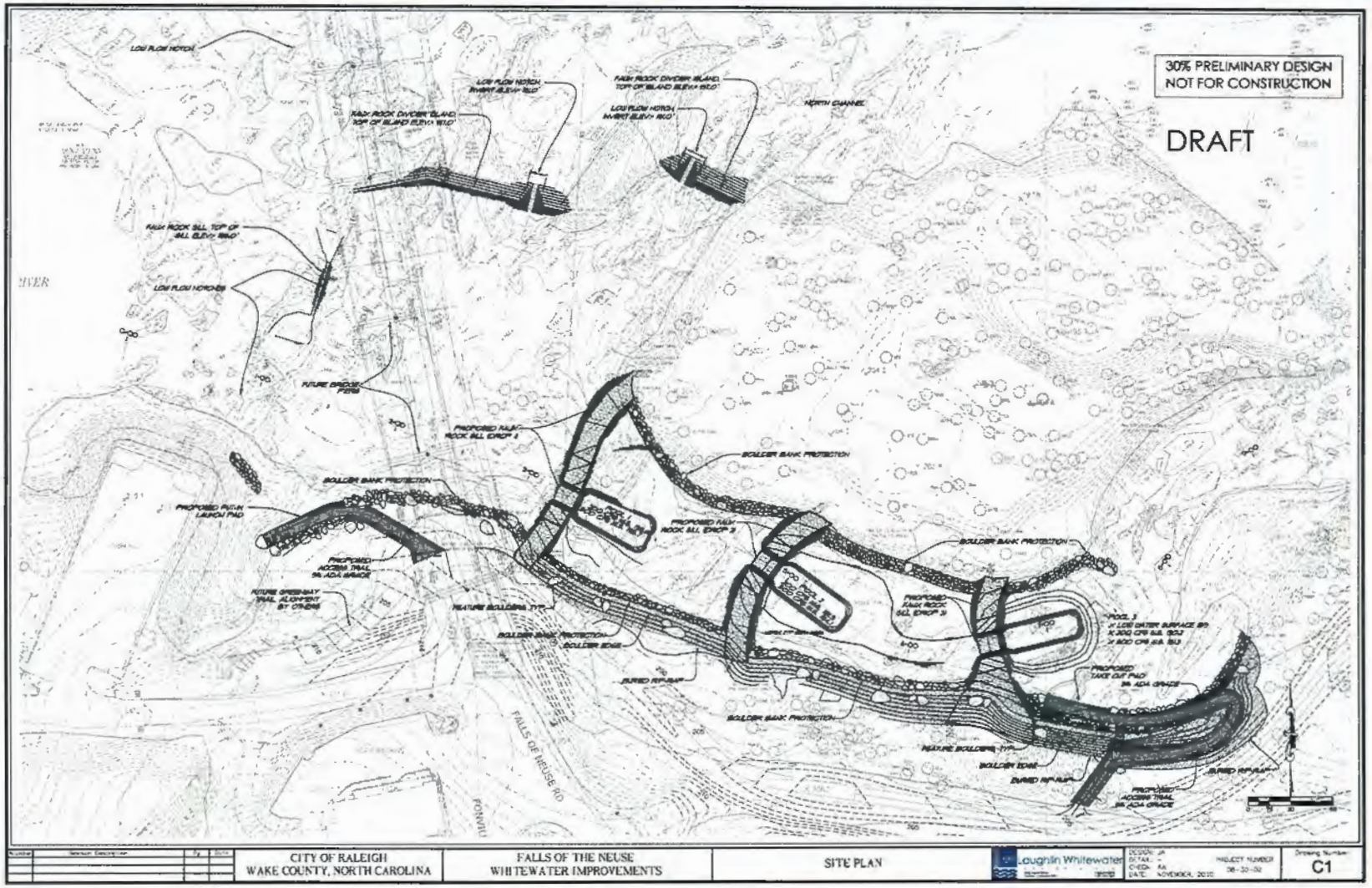


Site Details

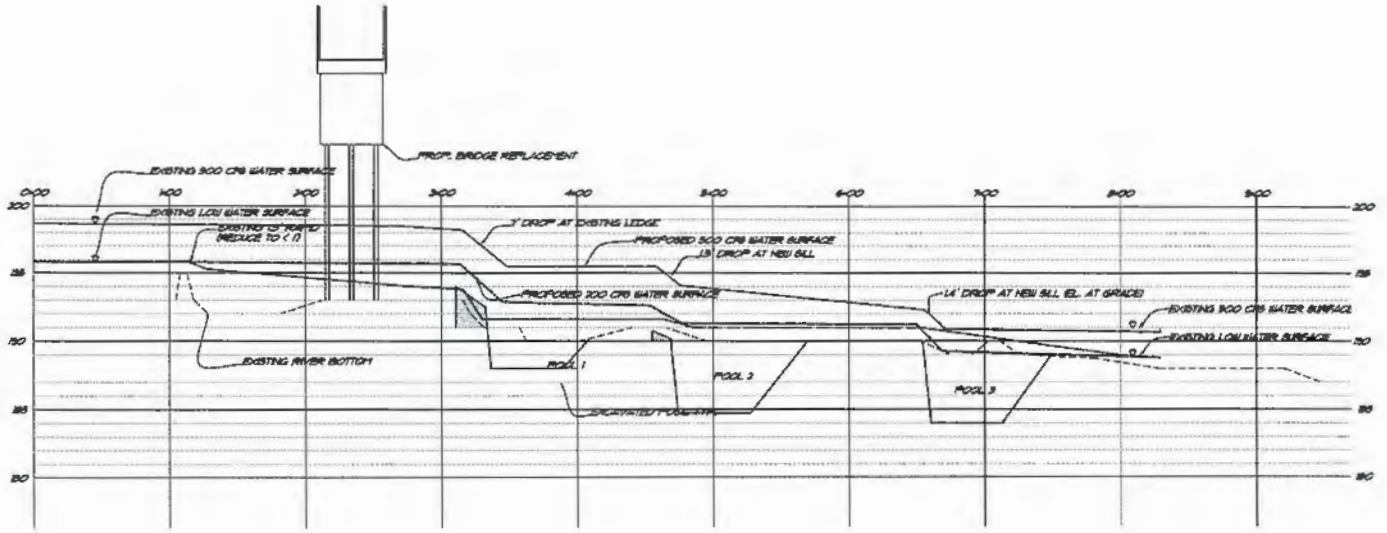


Falls Whitewater Park
Course Location

Whitewater Site Plan



Profile



DRAFT

30% PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

0 20 40 60

Number	Revision Description	By	Date

FALLS OF THE NEUSE
WHITEWATER IMPROVEMENTS

PROFILE

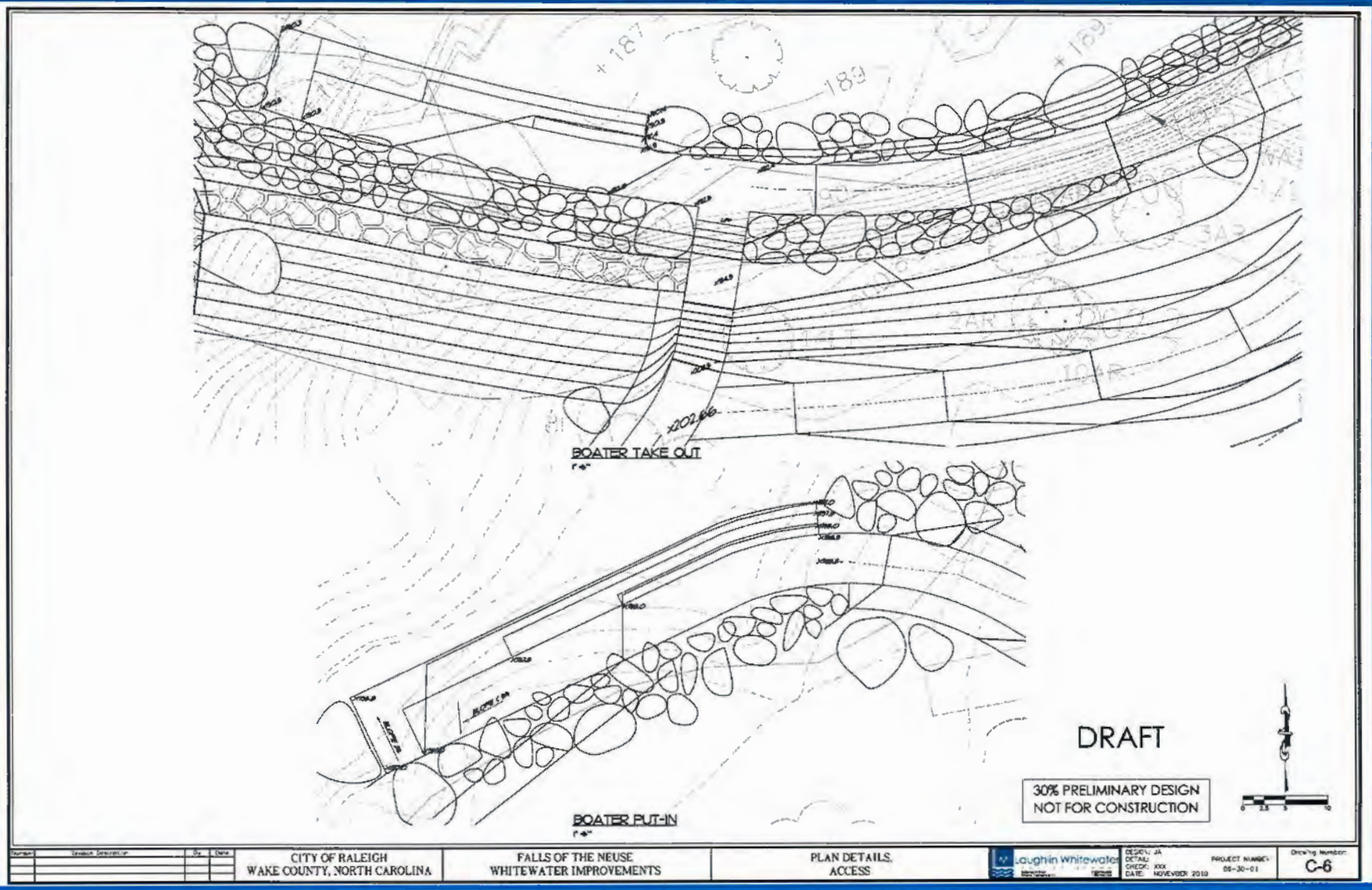
Laughlin Whitewater

DESIGN: JA
DETAIL: --
CHECK: XX
DATE: NOVEMBER, 2010

PROJECT NUMBER
06.30.2

Drawing Number:
C-2

Access Details

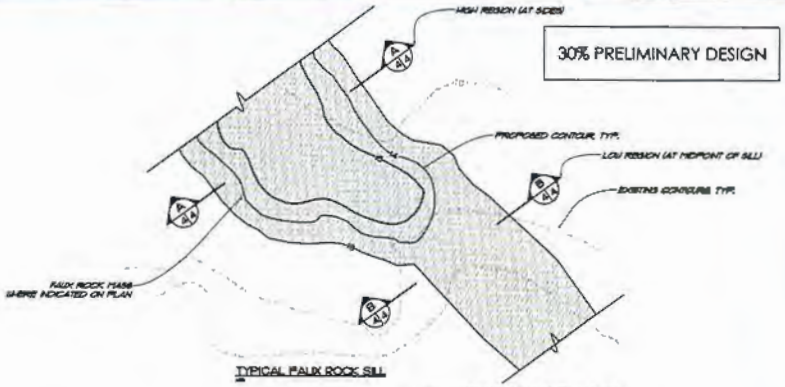


Faux Rock Details

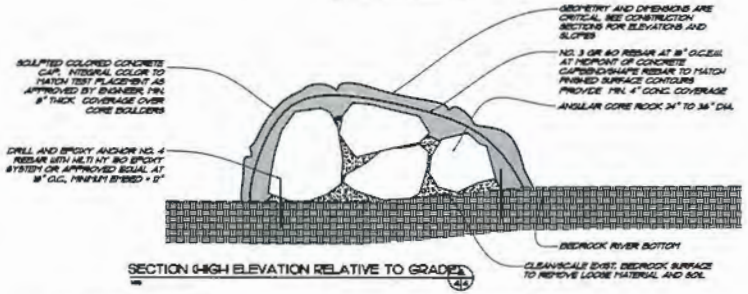
TYPICAL FAUX ROCK MASS-VIEW
NTS

TYPICAL FAUX ROCK COLOR AND SURFACE TREATMENT
NTS

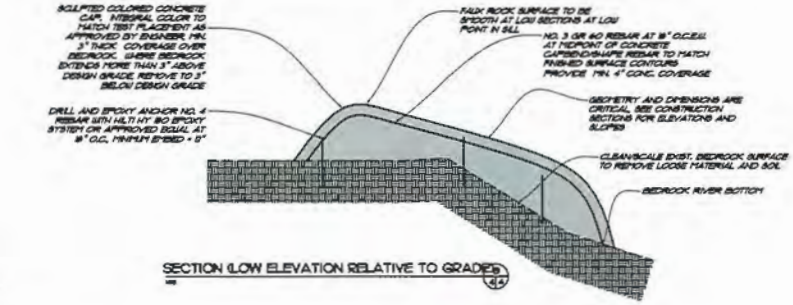
30% PRELIMINARY DESIGN



TYPICAL FAUX ROCK SILL



SECTION (HIGH ELEVATION RELATIVE TO GRADE)



SECTION (LOW ELEVATION RELATIVE TO GRADE)

Number	Revision Description	By	Date

CITY OF RALEIGH NC

FALLS OF THE NEUSE WHITEWATER PARK
WHITEWATER FEATURES DESIGN

FAUX ROCK DETAILS

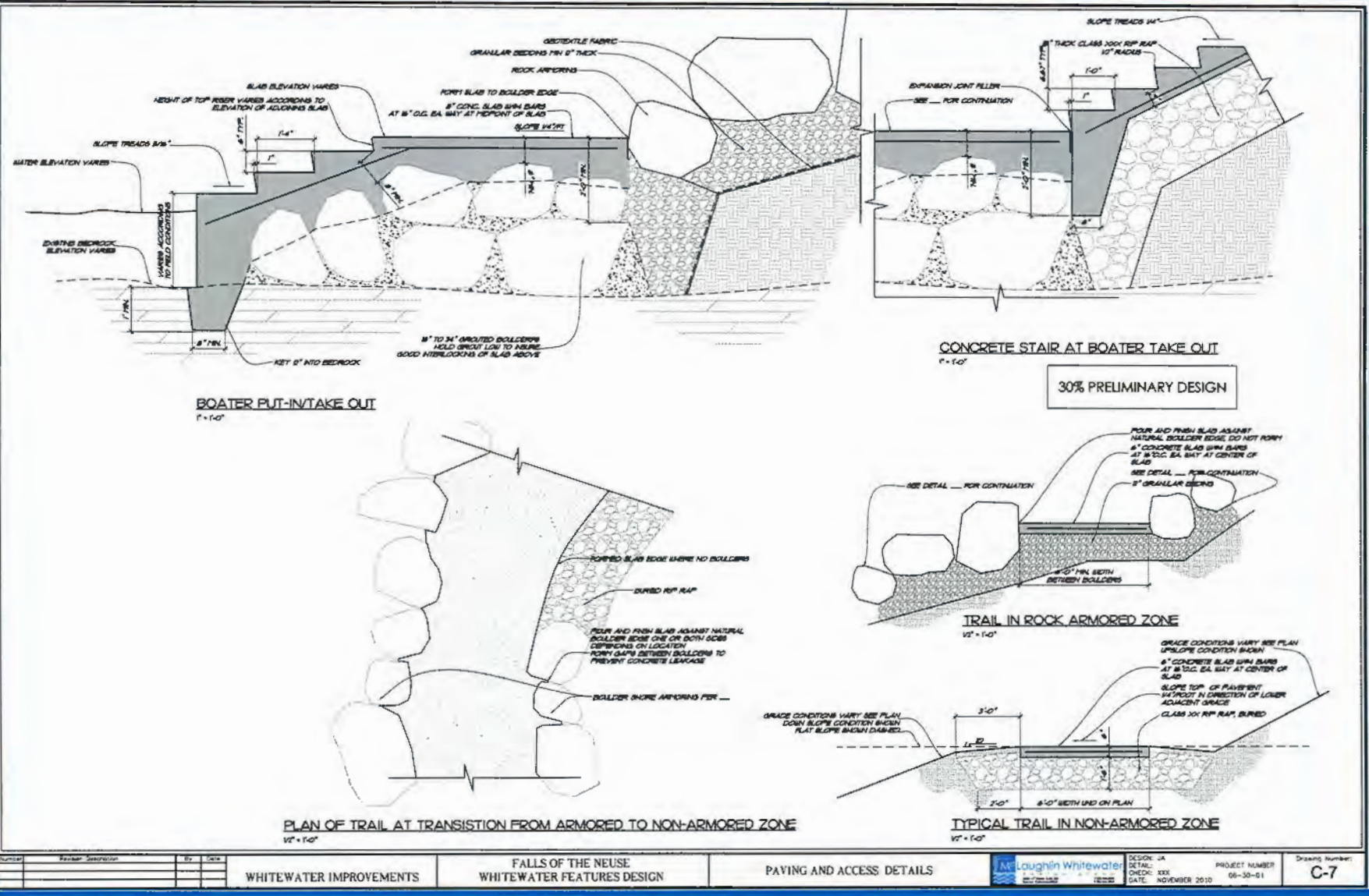
Laughlin Whitewater

DESIGN: JA
DETAIL:
CHECK: AA
DATE: November, 2010

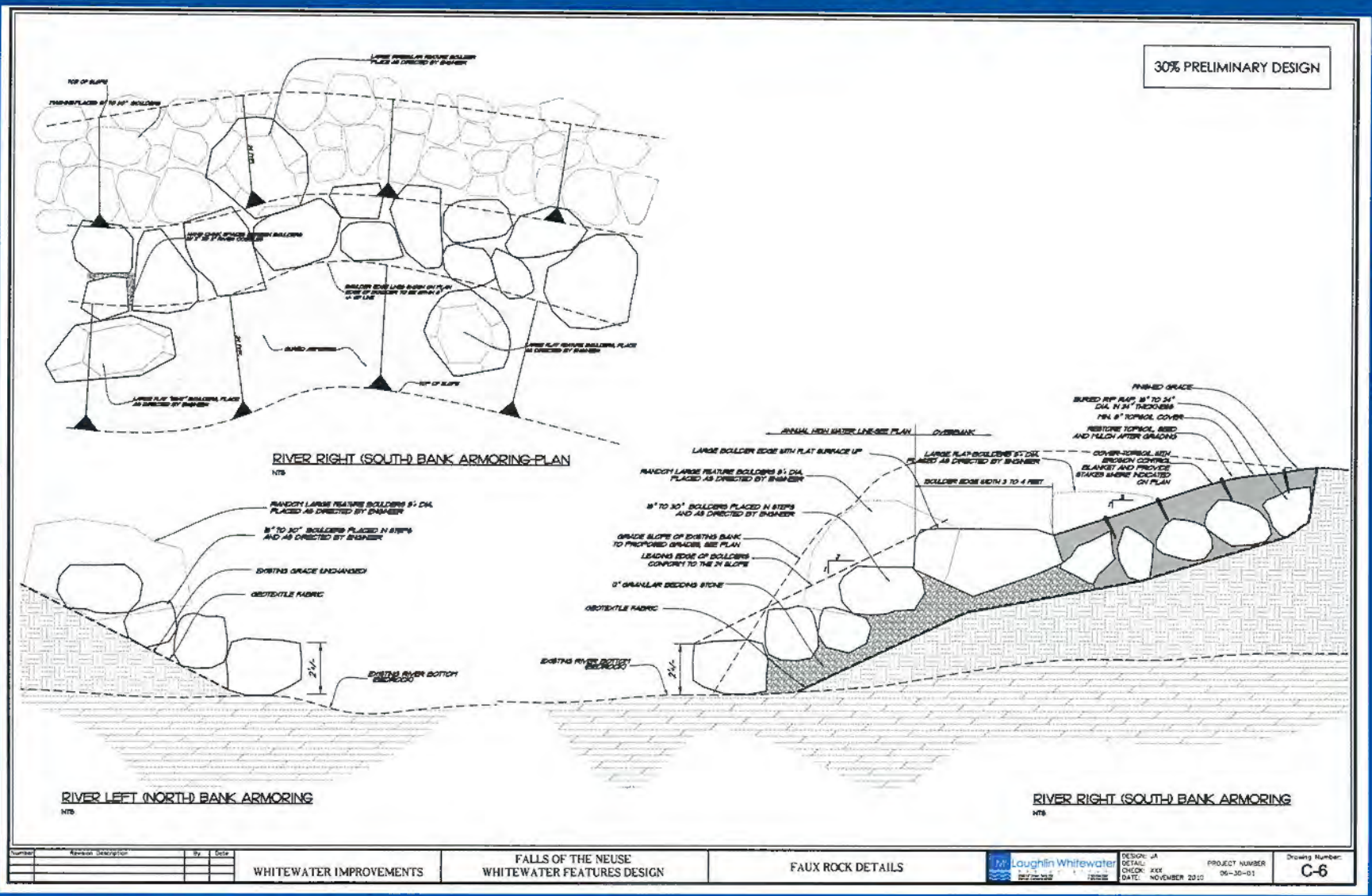
PROJECT NUMBER
06-30-01

Drawing Number:
C-5

Faux Rock Details



Bank Stabilization



Total Project Cost

- Projected Cost - $2,500,000
- Projected Cost includes:
  - Construction
  - Design Fees and other Soft Costs

Contact Information

City of Raleigh
Mr. Vic Lebsock, Project Manager
Parks & Recreation Department
333 Fayetteville Street, Suite 300
Raleigh, NC 27601
Victor.lebsock@raleighnc.gov

Design Team
Cindy Szwarckop, AICP
Stewart Engineering, Inc.
421 Fayetteville Street, Suite 400
Raleigh, NC 27601
cszwarckop@stewart-eng.com

Want to know more about the proposed Falls Whitewater Park?

Please plan to attend the Community Meeting to hear a presentation on the Falls Whitewater Park feasibility study and view the conceptual plan.

Falls Whitewater Park Community Meeting
Wednesday, November 3, 2010
7pm to 8:30pm
Campbell Lodge at Durant Nature Park
3237 Spottswood Drive, Raleigh, NC 27615

(Please enter the park from the Gresham Lake Road entrance).

If you have any questions in advance of the meeting, please contact:
Vic Lebsock at victor.lebsock@raleighnc.gov or 996-4786
Cindy Szwarckop at cszwarckop@stewart-eng.com or 866-4823

RALEIGH Parks and Recreation

Falls Whitewater Park
Community Meeting #3

November 3, 2010 – 7pm to 8:30pm
Campbell Lodge at Durant Nature Park

	NAME AND ADDRESS
1	Tessa Hunt 1500 River MILL Rd #302, Wake Forest, NC 27587
2	JASON CLARK 1500 River Mill Dr. #113, WAKE FOREST, NC 27587
3	BILL ROSE 6148 RIVERSIDE DR, WAKE FOREST, NC 27587
4	RUSS SCHEVE 504 OLIVE BRANCH RD DURHAM NC 27703
5	Diane Saver
6	ANDY MALINOWSKI 701 MONROE DR RALEIGH 27604
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Falls Whitewater Park
Community Meeting #3

November 3, 2010 – 7pm to 8:30pm
Campbell Lodge at Durant Nature Park

	NAME AND ADDRESS		
1	GENE DODD	1500 RIVERMILL #205	WF NC 27587
2	Tom WRIGHT	1500 RIVERMILL DR. #401	WF, NC 27587
3	DAN LEE	1500 RIVERMILL DR #203	WF, NC 27587
4	Carol Bonaitis	11405 Falls of Neuse Rd	Wake Forest NC 27587
5	Kathy McKee	1907 Park Dr.	Raleigh NC 27605
6	Jerry Leonard	1907 Park Dr	Raleigh NC 27605
7	Alisa & Jim King	1612 RiverMill	Wakeforest 27587
8	BOB ZARZECKI	11925 RAVEN RIDGE RD	RALEIGH NC 27614
9	Jade Wei	9113 Langwood Dr.	Raleigh, NC 27617
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RALEIGH Parks and Recreation

Falls Whitewater Park
Community Meeting #3

November 3, 2010 – 7pm to 8:30pm
Campbell Lodge at Durant Nature Park

	NAME AND ADDRESS
1	LARRY Austin - 6717 Valley Woods LN. Cary, NC. 27519
2	MARK TURNER, PRCR
3	Sharron Parker 1500 River Mill Dr. #306, Wake Forest 27587
4	Ken Parker " " "
5	Leigh Ann Cienek 9629 Fonville Rd Wake Forest NC 27587
6	Elizabeth Gardner 1806 Bickett Blvd Raleigh NC 27608
7	Julie Brown 1500 River Mill Dr #206 WF 27587
8	Charlotte Fouque 1500 River Mill Dr #205 Wake Forest 27587
9	SUSANNAH ROGER 1601 River Mill Dr. WF 27587
10	Rebecca Lanthorne 1500 River Mill Dr. #203 Wake Forest, 27587
11	Cleo Smith; P.O. Box 17127, Raleigh, NC 27619
12	Seth Yearout 2401 Wade Ave, Raleigh NC 27607
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Falls Whitewater Park Community Meeting

November 3, 2010

STEWART

McLaughlin Whitewater design group

RALEIGH Parks and Recreation

Agenda

- Project Overview
- Public Involvement Process
- Program Elements
- Project Design Presentation
- Questions/Comments

Project Area

Project Schedule

Meeting #1 (Kick-Off Meeting): January 19, 2010
Data Collection/River Survey Complete: May 2010
Preparation of Conceptual Design: May to Mid-July 2010
Community Meeting #2: July 14, 2010
Design Development Stage: Late July to Mid October 2010
Community Meeting #3: November 3, 2010
Complete Design Development Drawings: Mid-November 2010
Present Plan to PRGAB: November 18, 2010

Vision Statement

- "To create a river park that provides multiple water-based recreational and educational opportunities throughout as much of the year as possible with the known historical release levels. The river and its natural habitat will be enhanced and celebrated through the creation of this project."

Falls Whitewater Park
Course Location

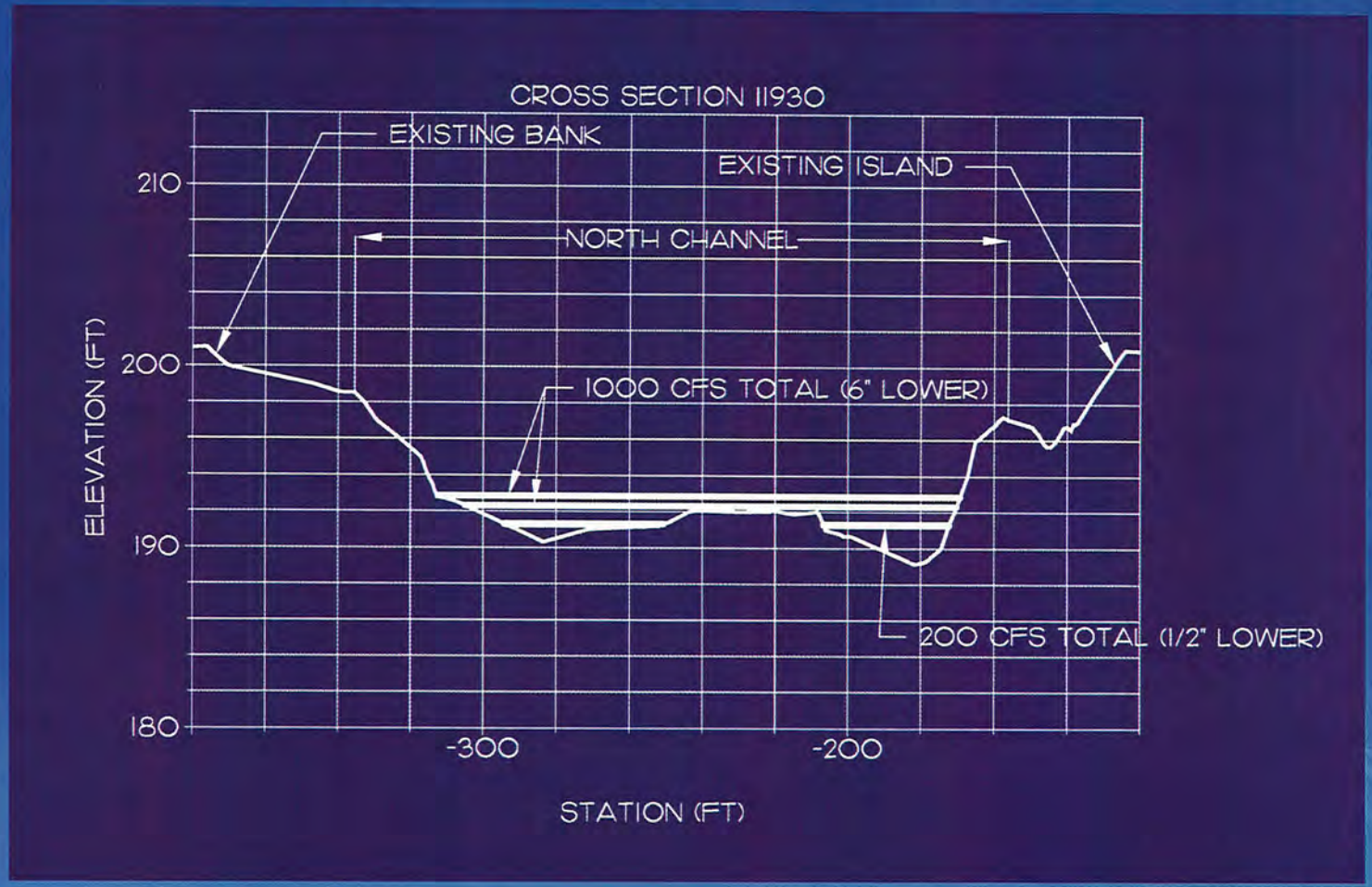
Water Based Program Elements

- Recreational whitewater course in south channel;
- Water diversion / Protect low flows in the north channel;
- Surfing waves (2 to 3);
- Pools and calm water;
- Allow multiple users (kayakers, tubers, fishermen);
- Local events and programs;
- Access improvements;
- No impact to the 100 year flood plain;
- No features upstream of the Falls of Neuse bridge;
- No boating or water access within restricted area below spillway;
- Bank stabilization;
- Consideration of fish passage upon potential removal of Milburnie Dam.
- Swiftwater rescue training.

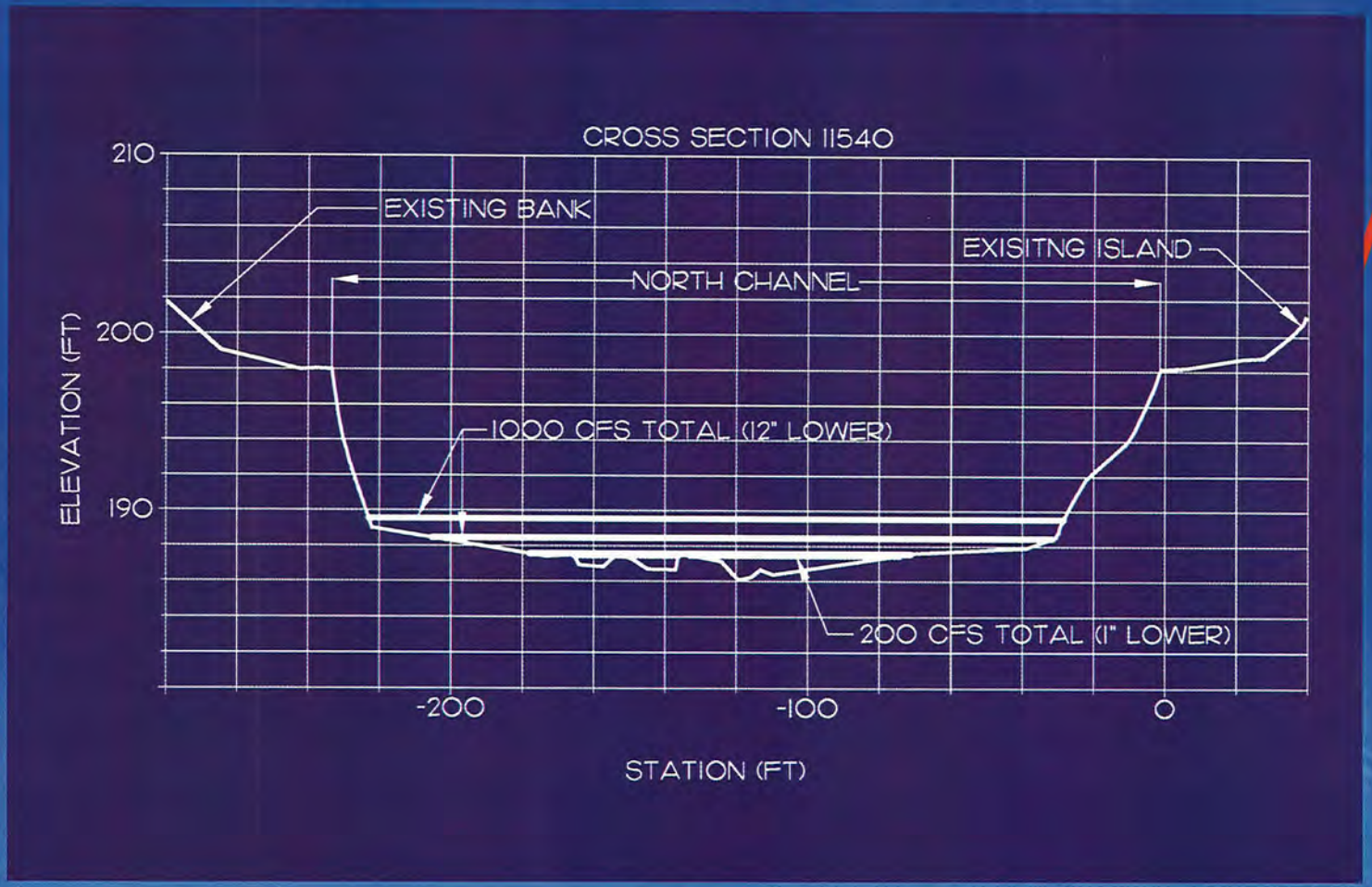
Updates

- 2D Hydraulic Analysis
  - Diversion Island is Smaller
  - Number of Boating Days
- Shore Stabilization Aesthetics
- Accessibility

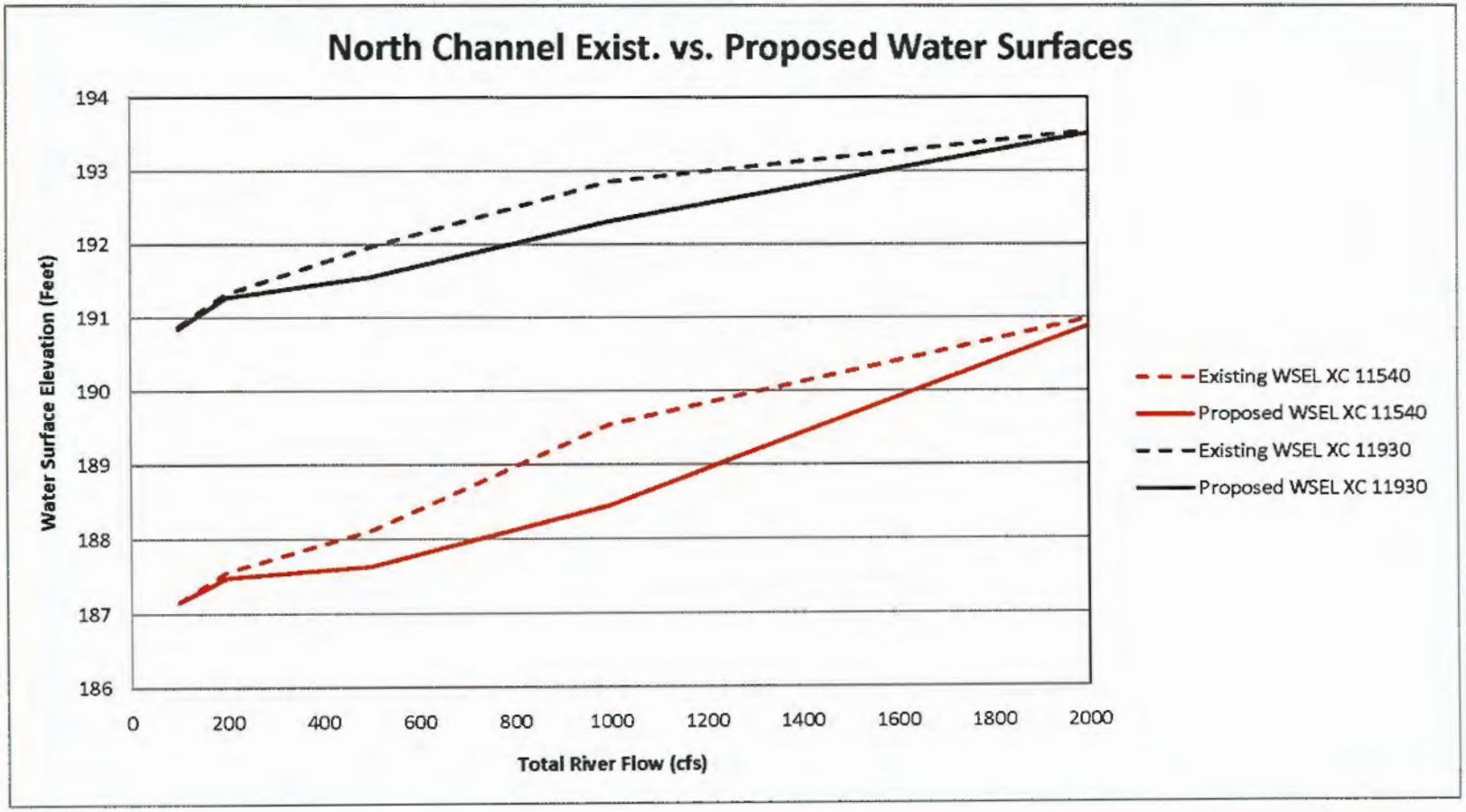
Impact of Water Diversion
Hydraulic Section 11930



Impact of Water Diversion
Hydraulic Section 11540

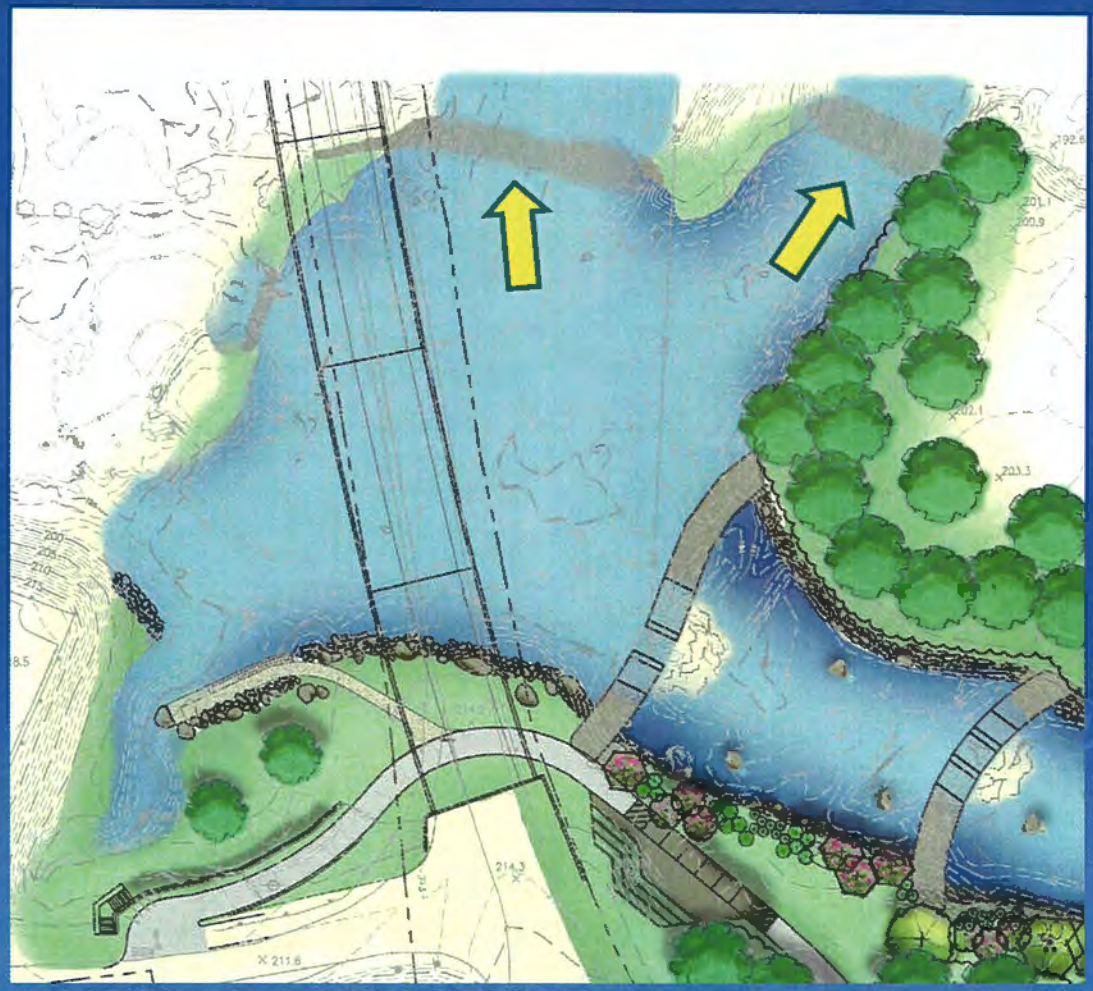


North Channel Existing vs. Proposed Water Surface Levels



Diversion Island

- Located further north.
- Minimizes height.
- Minimizes footprint.



Diversion Island (continued)

- Water enters through low flow notch.
- Water enters south channel.
- Water exits to north channel.

Additional Boating Days

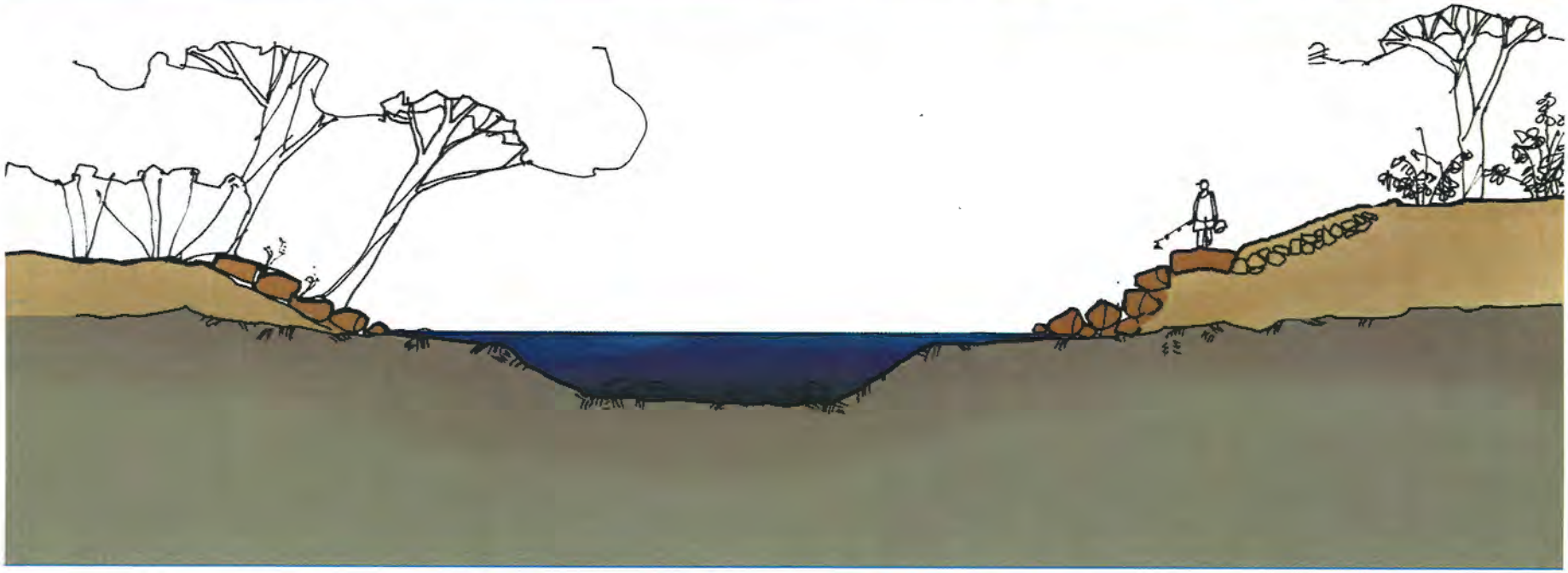
- 48 days per year without diversion island
- 105 days with diversion island
- Average 117 percent increase

Bank Stabilization

- Existing condition:
  - Bank erosion, especially on the right.
- Proposed condition will add:
  - Additional stress on right banks from water velocity.
  - Additional stress from traffic on right bank.

Bank Stabilization & Aesthetics

- Proposed stabilization
  - Energy dissipation pools
  - Boulder shore armoring to normal high water
  - Large boulder edge to handle traffic
  - Buried rip rap above normal high water



Rock Options

River Rock

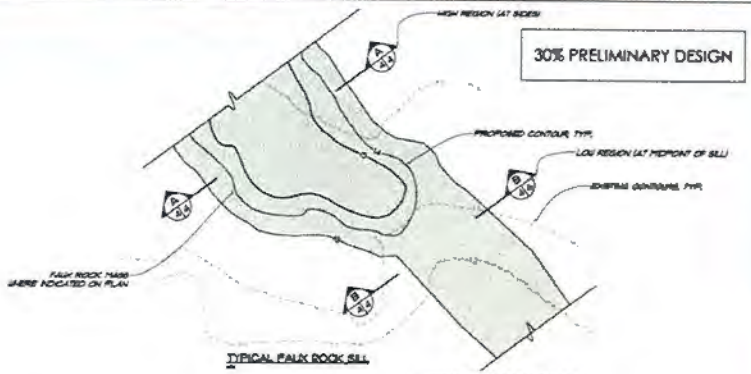
Quarried Rock

Faux Rock Details

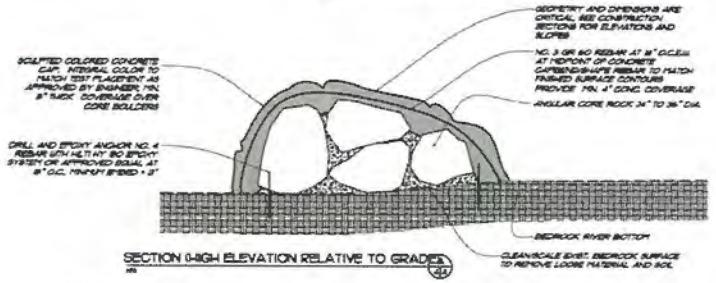
TYPICAL FAUX ROCK MASS-VIEW
NTS

TYPICAL FAUX ROCK COLOR AND SURFACE TREATMENT
NTS

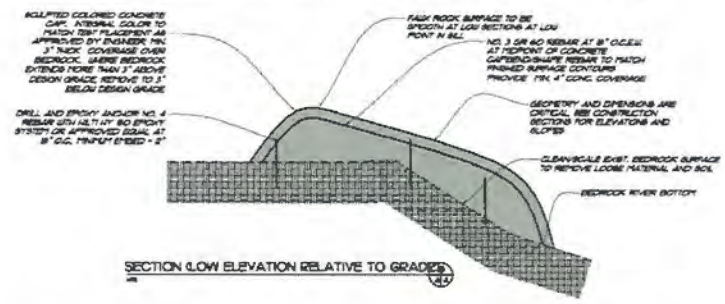
30% PRELIMINARY DESIGN



TYPICAL FAUX ROCK SILL



SECTION @ HIGH ELEVATION RELATIVE TO GRADE



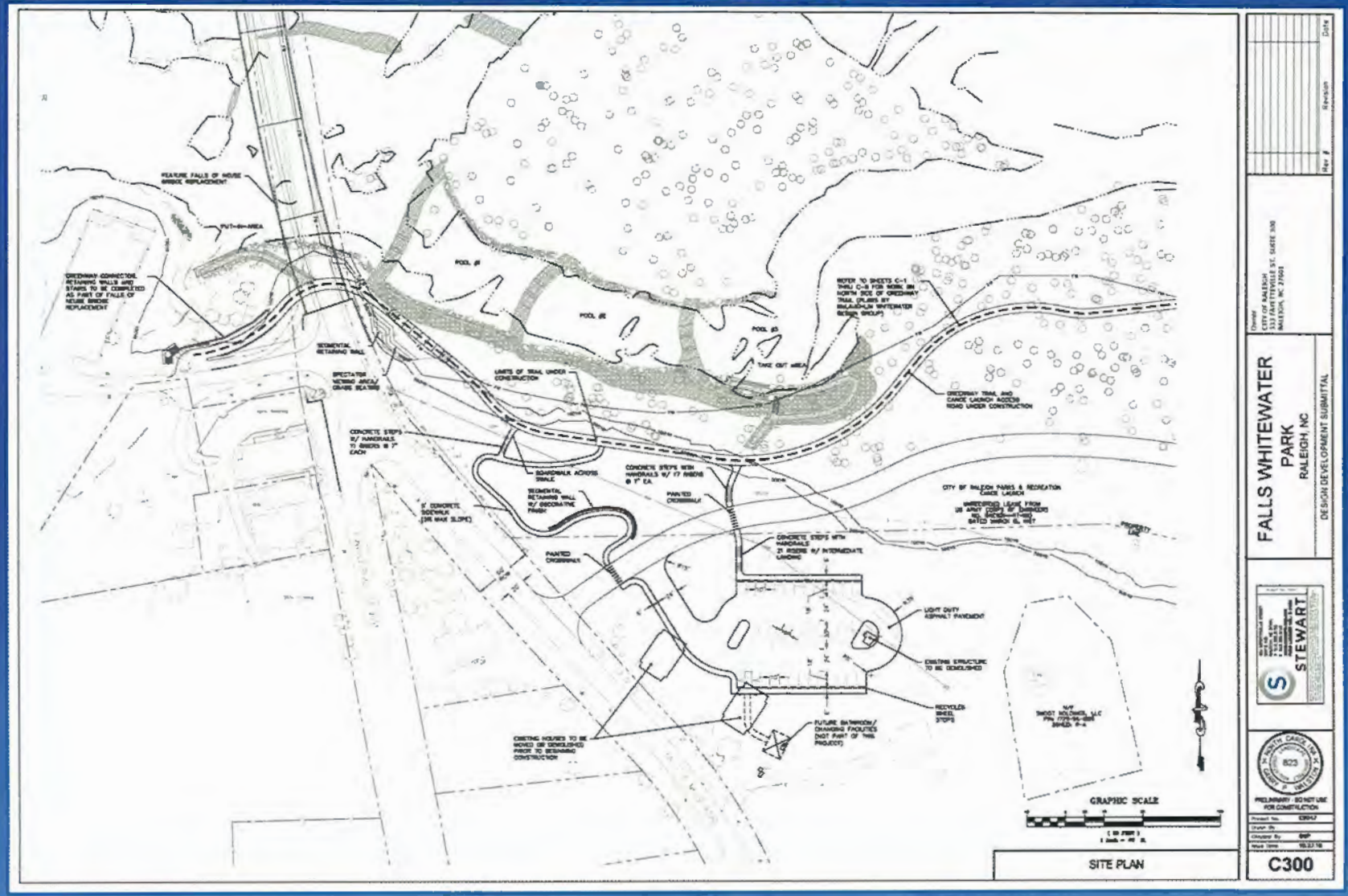
SECTION @ LOW ELEVATION RELATIVE TO GRADE

	CITY OF RALEIGH NC	FALLS OF THE NEUSE WHITEWATER PARK WHITEWATER FEATURES DESIGN	FAUX ROCK DETAILS	McLaughlin Whitewater	C-5

Land Based Program Elements

- Access improvements;
- No features upstream of the Falls of Neuse bridge;
- Vegetation;
- Parking;
- ADA accessibility;
- Bathroom/Changing Facility.

Site Plan


FALLS WHITEWATER PARK
RALEIGH, NC
DESIGN DEVELOPMENT SUBMITTAL
STEWART
SITE PLAN
C300
GRAPHIC SCALE

Falls Whitewater Park Plan

Contact Information

City of Raleigh
Mr. Vic Lebsock, Project Manager
Parks & Recreation Department
333 Fayetteville Street, Suite 300
Raleigh, NC 27601
Victor.lebsock@raleighnc.gov

Design Team
Cindy Szwarckop, AICP
Stewart Engineering, Inc.
421 Fayetteville Street, Suite 400
Raleigh, NC 27601
cszwarckop@stewart-eng.com

City Webpage:
www.raleighnc.gov
Search bar on left side of screen
Enter: Whitewater Park

STEWART

TO:	City of Raleigh Parks and Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
DATE:	1/25/2010
REFERENCE:	Falls Whitewater Steering Committee Meeting #9 January 24, 2011
STEWART PROJECT NUMBER:	C09047

Meeting Attendees:
Shari Bryant, NCWRC
Sarah King, Paddler
Elizabeth Gardner, Paddler
Jade Wei, Paddler
Bob High, Paddler
Bob Zarzecki, Paddler
Tom Wright, River Mill Home Owner
Kathy Capps, City of Raleigh
Seth Yearout, City of Raleigh
Tom Freeman, USACE Falls Lake
Carol Banaitis, USACE Falls Lake

Design Team:
Garry Walston, RLA – Stewart
Cindy Szwarckop, AICP - Stewart
John Anderson – McLaughlin Whitewater (via telephone)

Meeting Agenda:
1. Schedule and Next Steps
2. Corps of Engineers Clarification on Boating/Features Upstream of Bridge
3. Flow Clarification
4. Mechanical Weir Discussion

Cindy passed around three handouts (Powerpoint Presentation, Email from Tom Freeman, and Fish Passage Discussion).

Cindy opened the meeting and discussed the schedule:
- Final Steering Committee meeting – January 24, 2011
- Present Plan to PRGAB – March 17, 2011 (Public Comment Meeting)
- PRGAB Action Meeting – April 21, 2011
- Present Plan to City Council – May 3, 2011 (Tentative)

USACE Position on Boating/Features Upstream of Bridge
- Cindy referenced the handout containing the email from Tom Freeman on 11/9/10.

- Tom noted that the first sentence is the best summary – "the short response is the Corps proposes no change in policy regardless of the future status of the proposed park."
- There will be no additional prohibitions on paddlers to not be able to use the historic paddling areas.
- He believes that boaters will migrate to the new park and away from the existing, historic put-in areas.
- The Corps policy is 500'; the Falls policy is that Falls is a different facility and in a different location than most Corps facilities and as such paddlers and fisherman are prohibited within 150'. Carol Banaitis handed out an aerial with the 150' area delineated.
- The Corps has monitored use by the paddling community and has a speaker system to notify of changing conditions.
- At some point in the future the Corps could change restrictions; however, they do not anticipate prohibiting boating within the historically used area.
- At some point in the future a working group (Corps and paddlers) may be established. It was noted that all agree that at some release levels the area is off limits.
- Tom noted that access and boating further downstream towards the bridge would allow for favorable review by the Corps reviewers.
- Tom Wright asked why there has been a change from September and that minutes should be changed to reflect what was actually said.
- Cindy noted that this is why this topic is being discussed tonight to clear up any confusion, misunderstandings, and to clarify the Corps position if it was misinterpreted or misstated by members of the design team or City of Raleigh. The minutes of tonight's meeting will reflect the position of the Corps and will include Tom Freeman's November 2010 email.
- Tom Freeman noted that if fish up come up this way (if Milburnie Dam is removed) the area will be a more dynamic area for fishing. This could change the dynamics for paddlers because there will be a lot more fishermen in the area. Right now there is fishing, but everything will change with addition of striped bass. This could create a perfect storm and there may be a user conflict between the fisherman and paddlers, if so then the Corps may need to revisit the historical allowance.
- Bob High – does the 150' apply to boaters and fishermen?
- Tom Freeman – the 150' does not preclude bank fishing, only in-water uses. The Corps needs to make sure that they can offer something for every user.
- Kathy Capps noted that there will be other opportunities for working this out in the future via the user group.
- It was noted that we are considering a lot of "ifs."

<u>Cindy mentioned that during a call today, Tom Freeman asked if he could add an agenda item. Tom asked that Carol Banaitis lead the discussion.</u>

- Carol noted that at the November Community Meeting it was noted that the armoring/stabilization of the north shore was eliminated from the plan. She noted that the Corps liked the armoring/stabilization because it would help with the ongoing shore erosion beside River Mill.
- The Corps would like this to be revisited.
- From an agency perspective, the Corps is advising that the armoring/stabilization of the north shore make the overall project more appealing.
- Tom Wright noted that River Mill was reluctant to endorse the north shore stabilization because they want it separate from the FWWP project. They would like it to be addressed by the Wilmington office since there is already erosion.
- Tom Freeman – Regardless of who writes the check, it will still be a Corps project. The Corps will not write a blank approval check – there must be close coordination with Corps staff, perhaps utilizing a City of Raleigh design firm. There will be close scrutiny by the Corps and other resource agencies. Tom Freeman would like to impress upon the Steering Committee that it would be as close to the Federal Government doing it if it is done through this project.
- There is no money in the Corps budget to do the bank stabilization.
- This is an opportunity of a lifetime to have this done as part of the FWWP project. Need to take advantage of this opportunity now.
- Bob Zarzecki noted that we could take advantage of the fact that we will already be working in the river – can utilize creative construction techniques.

- Tom Wright noted that his community is against diversion of water from north to south channel. They understand that bank stabilization is needed, but believes that this is a quid pro quo.
- Tom Freeman noted that this is an opportunity.
- It was noted that there are erosion problems at 3,000+ cfs.
- **Elizabeth Gardner moved that to add the north shore stabilization back into the project. Bob High seconded the motion.**
- Tom Freeman noted that he or others from the Corps would be happy to meet with the River Mill HOA group to discuss and give the perspective of the budget – they can't see a future where it will be a federally funded project.
- Tom Wright – River Mill has come along way in their thinking of the project. Some residents are okay with the features in the south channel as long as there is no diversion from the north channel. He mentioned that they are concerned about their package plant.
- Sarah King – agree that the north shore stabilization would benefit the community, but if River Mill does not want it included then she will be against the motion.
- Bob Zarzecki noted that this will all be decided during permitting stage.
- Tom Wright – River Mill may end up with something that they don't like (stabilization techniques).
- Kathy Capps noted that there was a motion on the table and there has been discussion. Tom Wright noted that River Mill is concerned about erosion they just want it to be a separate issue.
- **Vote on motion to include north shore stabilization as part of the project – 7 Yes, 3 No, 1 Abstain.**

Flow Clarification

- John Anderson detailed slides 5 through 11.
- Updated Hydrologic Analysis – John noted that information was based on data from 25 years and that this information corrects earlier data calculated on 20 year data. The total number of days changed but the proportions remained the same.
- The purpose of the movable diversion weir is to alter flow back to normal during the months of fish passage (March, April, and May). The movable diversion eliminates 30 boating days (increase in boatable days decreases from 125% to 39%) because the movable diversion takes away the prime boating times.
- Slide 6 is in response to Elizabeth's request. There would be 165 days at 50 cfs. Diversion is not very effective at very low flows of 50 cfs. It is understood that at 50 cfs days you can navigate the area with canoe, kayak, tube, etc.
- Slide 7 – Red and green lines show days with diversion. Red is with the diversion island. Green is with the mechanical diversion.

Mechanical Diversion Weir Discussion

- Bob Zarzecki asked about the number of boating days and if the data included hourly data.
- John Anderson noted that the analysis looked at 200 cfs at any point in the day, no hourly data analysis. They took the daily average from the USGS website. It is acknowledged that there are times during the day when the flow changes.
- Bob Zarzecki asked if the moveable gates are passable. Yes, it is boatable. The water would flow over the gate and there would be a surfing wave.
- Cindy asked the Committee to look at the Fish Passage Discussion handout and asked the Steering Committee to remember back to November when there were motions regarding a mechanical diversion weir and fish passage sent around for consideration. Cindy read a motion that was offered by members of the Steering Committee*:* ***"It is the opinion of the NCWRC that if Milburnie Dam should be removed, diadromous fish might traverse up river to the Falls Whitewater Park. The Steering Committee is amenable to design elements if necessary that allow for the passage of diadromous fish up river, should this dam be removed. The details of which will be resolved during the environmental review and permitting process."***
- John Anderson noted that the diversion criteria did not address fish passage. The design team did not get any push back from the committee on this. There would be a net zero gain if the mechanical diversion weir is installed and then the days are taken away to accommodate fish passage.

STEWART

- John asked about altering the diversion criteria. By being less aggressive with a fixed diversion island could end up with an increase in boatable days and won't need the movable crest dam.
- Shari Bryant would like to see the numbers to review.
- John Anderson to email the new slides and information to Cindy to send out the Steering Committee. (Information emailed to Steering Committee on 1/25/11).
- John noted that it was counterproductive to go with aggressive diversion and include a mechanical weir. It would be better to go with less aggressive diversion, no crest gate, and still obtain an increase in boatable days.
- Bob Zarzecki noted that the change in diversion doesn't really change the motion. He asked John to detail the changes to the diversion weir with less aggressive diversion. Think of the weir as a bath tub with a hole in the bottom. There are two tools for designing the weir – shrink/increase the size of the hole and/or raise/lower the lip of the weir.
- Kathy Capps sees this as a potential positive – less diversion from north channel, more boatable days than with the mechanical weir, less cost, and fish passage in the north channel.
- Tom Wright noted that the comments from the NCWRC are very important.
- **Kathy Capps asked for a motion. Shari Bryant noted that she could accept the stated motion with the following addition/revision:**
    - **"It is the opinion of the NCWRC that if Milburnie Dam should be removed or other fish passage provided around Milburnie Dam, diadromous fish might traverse up river to the Falls Whitewater Park. The Steering Committee is amenable to design elements if necessary that allow for the passage of diadromous fish up river, should this dam be removed or other fish passage provided around Milburnie Dam. The details of which will be resolved during the environmental review and permitting process."**
- Tom Wright asked if the design elements should be defined now.
- **Kathy asked for a vote on the amended motion. The motion passed unanimously 11 for and 0 against.**

Meeting Wrap-up and Schedule:

- What is the schedule and role of the Steering Committee going forward after the May 3rd City Council meeting?
- Kathy noted that the Committee plays the role of public dissemination of information.
- It is important for the SC members to attend the PRGAB and City Council meetings.
- After the City Council acts on the plan, then the project moves to the next phase – the Council could: approve, approve with changes, deny, or send to committee for further study.
- After Council action the project moves to fundraising stage.
- Sarah King asked if there will be a budget? It was noted that the Master Plan will include a cost estimate.
- Will the Steering Committee still be engaged? Kathy noted that the committee work is complete. The Committee may be revisited in the future – perhaps a smaller subset or a different group of people. It will be an informal process and Stewart Engineering's contract is complete with this phase of the project.
- Bob Zarzecki asked about funding. He understood that there was a pool of money for the overall project. Is there any money left after paying Stewart and McLaughlin? What has been spent to this point?
- Could the Steering Committee use the remaining funds? Kathy noted that that would be a question for Vic.

March 17, 2011 – PRGAB Presentation – public comments will be allowed.
April 21, 2011 – PRGAB Action Meeting – no public comments allowed.
May 3, 2011 – City Council Meeting – public comments will be allowed.

The PRGAB meetings are held at the Jaycee Module. Kathy will check with Diane Sauer to see if the meeting should be moved to a larger space. The Steering Committee will be notified/reminded of the meeting times and locations.

STEWART

Attachments: 1/24/11 Powerpoint presentation
Tom Freeman email
Fish Passage Discussion
Corps of Engineers aerial
Alternative Flow Slides developed by John Anderson

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TO:	City of Raleigh Parks & Recreation Department Falls Whitewater Steering Committee
FROM:	Cindy Szwarckop, AICP
DATE:	11/10/10
REFERENCE:	Falls Whitewater Park Community Meeting #3 November 3, 2010
STEWART PROJECT NUMBER:	C09047

Meeting Location:
Durant Nature Park, Campbell Lodge

Meeting Time:
7pm to 8:30pm

Meeting Attendees:
The following 28 people signed the guest attendance log:
Tessa Hunt
Jason Clark
Bill Rose
Russ Scheve
Diane Sauer
Andy Malinowski
Gene Dodd
Tom Wright
Dan Lee
Carol Banaitis
Kathy McKee
Jerry Leonard
Alisa King
Jim King
Bob Zarzecki
Jade Wei
Larry Ausley
Mark Turner
Sharron Parker
Ken Parker
LeighAnn Cienek
Elizabeth Gardner
Julie Brown
Charlotte Fouque
Susannah Koger
Rebecca Lanthorne
Cleo Smith
Seth Yearout

City of Raleigh and Design Team Attendees:
Vic Lebsock – City of Raleigh
Kathy Capps – City of Raleigh
Garry Walston, RLA - Stewart
John Jenkins, PE - Stewart
Cindy Szwarckop, AICP – Stewart
John Anderson, McLaughlin Whitewater

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Meeting Agenda

1. Project Overview – Cindy Szwarckop
2. Public Involvement Process – Cindy Szwarckop
3. Program Elements – John Anderson and Garry Walston
4. Project Design Presentation – John Anderson and Garry Walston
5. Questions/Comments

The following questions/responses and statements were noted after the presentation:

- Would the mechanical weir be movable?
- Discussion related to the decrease in the number of boating days. The hydraulic study was explained. 150cfs is needed without the diverter to create whitewater condition.
- How will water be handed during construction?
- Is there a precedent for bank stabilization?
- What about River Mill bank stabilization? It was noted that the River Mill representative, Tom Wright, noted that River Mill was not interested in bank stabilization through this project and that it should be considered as a separate manner.
- John Anderson with McLaughlin Whitewater explained how armoring improves erosion.
- What about the grade of the parking area? Can this are be expanded if needed? The area to the east is relatively flat so this area could serve as an area for future expansion.
- Is there a put in for canoes? No, the existing canoe launch will remain.
- Will there be an EIS? A full environmental study will be required when the project is progressed to permitting stage.
- Funding? The project is not funded at this time. The paddling community offered to look for grants.
- Schedule? The earliest timeframe for the project is 2013 to 2014 to start.
- Ballpark cost estimate? $2.5 to $3 million based on current year construction cost estimates.
- What is the current river level? 100 cfs at this point. It is a low water level.
- Will there be a dry river bed? No impact at this water flow.
- Will there be a guaranteed water flow? Guaranteed not to pull under a certain CFS.
- The Corps never stops releases. 100 cfs is low release but that is the level for most of the year.
- There is a point at which there will no change in the river elevation. The flow has to reach a point to even be diverted.
- Flow at mid-rate = 12 inches. River Mill community enjoys this area at these levels at medium flow going to south channel.
- What is the threshold (flow level) for people to get in?
- Why should River Mill be in favor of this project?
- Most of the boating days are in winter and spring. Only reliable water is during these time periods.
- Tom Wright – with a diversion island with low flow does water get diverted? Think of this as a "leaky dam" – water spills through, at very low flow water will not over top and high flow the water will over top.
- There is a concern regarding the noise that kayakers will make at the park.
- There is a large non-whitewater community that uses this area for paddling – they are concerned about the cost of the project.
- Could the shape of the island be augmented/changed to make both River Mill residents and future kayakers happy? The project is adding bedrock to the channel to modify the channel.
- Could areas to the north of the island be manipulated? The WWP is sited to allow for access from public property.
- Is there anyway to increase water on the north side? Eliminate the diversion island; put drops in north of the bridge; however these may be in the USACOE restricted area. The design team has worked within the constraints given – the natural drop in the river is where the park should be built.
- What about the structures to create water features? There will be no access

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to the island. This project will not make it easier to get to the island.

- Who will maintain the park? The City of Raleigh Parks & Recreation Department.
- How many roads will access the site?
- There currently is no security at gate to the canoe launch. Is there a plan to change the security approach? The gate is there to block access to river during high flood events.
- What will the hours be? Dawn to dusk. The park will be posted with hours of operation and if people are found after-hours they will be considered as trespassers.
- There has been an enforcement dispute in the past in this area. Now the City of Raleigh police department patrols the area.
- It was noted that "no lighting" was one of the requirements of the project.
- How often would this park be used? 105 ideal usage days.
- How can you plan events when the park will only be open ¼ of the year?
- There will be no scheduled releases to facilitate events.
- It was noted that a lot of the recreational users look at the levels and make the decision to go or not to go.
- The new park could be used for classes and swiftwater rescue training.
- Why couldn't the park be put on the other side of the bridge? USACOE would not allow the park so close to the conduit.

White Water Park
Community Open House
January 19, 2010

Comment	Name	Address	Email
Define "enhance" and to what ends are we enhancing? Paddle Sports Facility. Can we get a copy of the flow chart slides and powerpoint presentation?	None Provided	None Provided	None Provided
I am against this water park. This project is only going to benefit a very small group of people and only for a small fraction of the year. The impact will be negative to the natural beauty and create eyesores to residents of the area who are here every day of the year. The environmental impact is not worth sacrificing for play for a few people. Taxpayer money would be better spent to help more people with less impact to birds, fish, and plants in the area.	Marie Guziejka	1500 River Mill Drive, #303, Wake Forest, NC 27587	mguziejka@kerrdrug.com
Potential name should encompass multiple user groups -- a suggestion could ba Falls of Neuse Recreation Area. Emphasize this is an augmentation of existing features. Project will increase user groups by including education, multi-level paddling/tubing, fishing (could be improved with riffle/pool systems) -- will not exclude current user groups. Ecological integrity of the river system (locally & downstream) is critical to all players/partners -- this includes stabilization after/during construction, keeping it as natural as possible. Very constructive meeting - thank you for setting everything up and for all the thought that obviously went into this.	Sarah King		sarahking78@gmail.com
I think the park is a great idea. It can help the soil erosion and other environment impact problems. And I am looking forward to paddling it. Thank you.	Andy Malinowski	701 Monroe Drive, Raleigh, NC 27604	malinowskiandy@yahoo.com
I oppose this project. It is fiscally irresponsible to spend an unknown amount of money to build a 600 ft. run that is only usable when the flow is high enough for such a small number of people.	Roberta Forbes	1500 River Mill Drive, #112, Wake Forest, NC 27587	robertaforbes@mac.com
This is a great idea for Raleigh. I am excited about what these improvements will bring to the area in regards to fishing, boating, and overall enjoyment of the area.	Brian Breedlove	714 Kimbrough St, Raleigh, NC 27608	brianunc@hotmail.com
The park looks great. Big plus for Raleigh. Great for families.	H H Hancock	2624 Wells Avenue, Raleigh, NC 27608	None Provided

White Water Park
Community Open House
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I am an international river, flatwater, and ocean paddler. I've been paddling the Neuse for 20 years. I am in complete opposition of this project. It is a selfish small interest group project designed to serve a very small group and the taxpayers resources for this are, frankly a complete sham. Our Sheriff just announced that deputies will probably be laid off, Wake schools are underfunded and so are many City issues that would serve a much broader range of taxpaying citizens. Furthermore, the environmental impact studies of this are are far reaching. "Diverting" or controlling water flow should be out of the question, period. Streamflow should have to remain the same to both sides of the river. The reasons are numerous. The impact on hunting grounds for animals and birds of prey would be terrible. Spawning grounds would be permanently destroyed. Bridging to an island that has been a solice for wildlife for ages should be absolutely done away with!	Rodger Shamblin	1500 River Mill Drive, #304, Wake Forest, NC 27587	neusemusic@yahoo.com
Could be an opportunity to introduce new populations to a recreational activity not available now. Since flows will not be changed, there will still be lots of days for and areas for folks who like to fish, wade or enjoy the river, not boating. Maintaining health of the river is important. Public areas are important and any enhancement to provide enjoyment for additional uses brings more benefits to the area.	None Provided	None Provided	None Provided
I feel thet the bond/taxpayers money from the City of Raleigh is being used on a project that only 100's of Raleigh citizens will use vs. projects such as swimming pools that 10's of 1,000's of Raleigh citizens will use.	Mike Davis	700 Macon Place, Raleigh, NC 27609	mikedavis17@hotmail.com
Looks great! Keep going!!	Tom Blue	400 Tinkerbell Rd, Chapel Hill, NC 27517	tom.blue@elliswinters.com
Good info shared on proposal. As a paddler, I would love any enhancements that allow more days on the water. Thanks for organizing.	Matt Daniels	500 Churchwood Ln, Pittsboro, NC	mattyd01@hotmail.com
Initial plans are good. Along with boating options I see added value for swift water training and improved fishing downstream. I would be in heaven with one bluntable wave and a loopable hole. Glad to see this coming into reality!	John Stevenson	2306 Lyon St, Raleigh, NC 27608	jt.stevenson@gmail.com
I live in the Rivermill community and am very concerned about this proposal. Right now life at the Mill is very quiet and enjoyable. At any given moment you can enjoy a leisurely stroll and see many types of wildlife. The view from my unit is breathtaking. My concerns involve the possible water diversion, the destruction to our side of the bank, the traffic along our side, the possible deterioration of the island. It seems to me this is a large amount of money for a small exclusive group. Paddlers have the right to paddle but we also have the right to our quiet life at the Mill.	Sheri Knight	1500 River Mill Dr., #303, Wake Forest, NC 27587	slknight62@yahoo.com
Everything looks great! I look forward to this being completed. It will be a big bonus for the area.	John Grimes	10312 Whitestone Road, Raleigh, NC 27615	jogremmy@yahoo.com

White Water Park
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Please put more funding toward the greenway along the river, for the many who could enjoy the beauty of this area. Scrap the white water park, which puts phony rock among the natural rock, diverts water which gives us much-loved rapids on the north side of the island & takes away our chance to put kayaks in and paddle ourselves. We love the river and live there 24/7 so this negatively impacts 51 homeowners and their families more than it can ever benefit the few who visit occasionally.	Sharron Parker	1500 River Mill Dr., #306, Wake Forest, NC 27587	parkersharron@aol.com
Comments from Vic/Cindy Station			
Parking/traffic concerns			
Diverters to divert water from the north bank adjacent to River Mill Condos. Implications to the wastewater plant.			
Why should paddlers dictate what is being done here? Why shouldn't they?			
Implications to the natural environment/ecology.			
Protect River Mill's ability to paddle/kayak from their shore.			
Pedestrian bridge to island - concern about trash. Consultant should study feasibility of the bridge.			
Feasibility issues - water releases/hydrology			
Fishing (access to fishing, etc.)			
Utilization?			
Stream bank protections			
Protection of the natural beauty			
Erosion issues			
Large impact for small group (small groups that are not there like the residents.			
Introduce the sport to a diverse population.			
Consider the "experience" from the River Mill side. View should remain the same...which means no visible street lights or barriers that mar the natural look and sufficient flows.			
At what point is this project justified? How many days?			
Local landowner - closest neighbor didn't get invite to participate on the steering committee. 1 year ago the White Water Park committee met with the River Mill HOA and were promised to be included in the process. River Mill would like a seat the steering committee table.			

Falls Whitewater Park
Comments Received
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Community Meeting #1
River Mill Community Meeting

This project is only going to benefit a small group of people and only for a small fraction of the year.	According to City of Raleigh instruction records, there were over 1,872 kayak participants over the past three years. This is an average of 624 per year. A whitewater facility in this location would allow the City to expand it's recreational programming. In addition, Paddle Creek sends over 4,500 people down the Neuse River each year. The Carolina Canoe Cub holds 20 novice clinics per year and three swiftwater rescue classes per year. It is anticipated that with enhanced access the Canoe Club will hold more clinics.
The environmental impact is not worth sacrificing for a few people.	If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts will be prepared.
I am in complete opposition of this project. It is a selfish interest group project designed to serve a very small group.	Comment Noted.
It seems to me this is a large amount of money for a small exclusive group.	The money allocated for this project is only for the feasibility study. No money has been allocated for construction of the project.
We love the river and live there 24/7 so this negatively impacts 51 homeowners and their families more than it can ever benefit the few who visit occasionally.	Comment noted.
Why should paddlers dictate what is being done here?	The paddling community approached the Raleigh City Council to ask that a feasibility study be completed. The Council and Wake Board of Commissioners jointly funded the study via bond money.
Why shouldn't paddlers dictate what is being done here?	The paddling community approached the Raleigh City Council to ask that a feasibility study be completed. The Council and Wake Board of Commissioners jointly funded the study via bond money.
Who is the paddling community?	Anyone who paddles in and around the area. Most often used as a term to refer to members of local paddling clubs and/or organizations who use their voices collectively to further their interest in paddling opportunities, river quality issues, fishing and more.
What is the paddling community influence?	The Falls Whitewater Committee approached the Raleigh City Council to ask that a feasibility study be completed. The Council and Wake Board of Commissioners jointly funded the study via bond money.
Large impact for small group (small groups that don't live there like the residents of River Mill).	According to City of Raleigh instruction records, there were over 1,872 kayak participants over the past three years. This is an average of 624 per year. A whitewater facility in this location would allow the City to expand it's recreational programming. In addition, Paddle Creek sends over 4,500 people down the Neuse River each year. The Carolina Canoe Cub holds 20 novice clinics per year and three swiftwater rescue classes per year. It is anticipated that with enhanced access the Canoe Club will hold more clinics.
I feel that the bond/taxpayers money from the City of Raleigh is being used on a project that only 100's of Raleigh citizens will use vs. projects such as swimming pools that 10's of 1000's of Raleigh citizens will use.	The whitewater park feasibility study was funded via the bond referendum.
I oppose this project it is fiscally irresponsible to spend an unknown amount of money to build a 600 foot run that is only usable when the flow is high enough for such a small number of people.	The whitewater park feasibility study was funded via the bond referendum.
Taxpayer money would be better spent to help more people with less impact to birds, fish, and plants in the area.	The whitewater park feasibility study was funded via the bond referendum.
The taxpayers resources for this project are frankly a sham. Our Sheriff just announced that deputies would probably be laid off Wake schools are underfunded and so are many City issues that would serve a much broader range of taxpaying citizens.	The whitewater park feasibility study was funded via the bond referendum.
Please put more funding toward the greenway along the river for the many who could enjoy the beauty of the area.	The Neuse River Trail is under construction with a project completion date of late 2012.
Why invest in a park that doesn't generate revenue?	The purpose of the Raleigh Parks & Recreation Department is to actively encourage, provide, promote and protect quality leisure, recreation and cultural opportunities, facilities and environments that are essential for the enhancement of the lives of our citizens.
Why invest in this park? Why not upgrade the area to make the area better?	Investing in a whitewater facility would upgrade the area. If the park is developed it would be done in a way that would stabilize the stream banks, protect the native vegetation and habitat, and encourage positive use of the area.
Economically, it doesn't make sense, even in this planning stage, as it would affect so few.	According to City of Raleigh instruction records, there were over 1,872 kayak participants over the past three years. This is an average of 624 per year. A whitewater facility in this location would allow the City to expand it's recreational programming. In addition, Paddle Creek sends over 4,500 people down the Neuse River each year. The Carolina Canoe Cub holds 20 novice clinics per year and three swiftwater rescue classes per year. It is anticipated that with enhanced access the Canoe Club will hold more clinics.

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What is the cost of the project?	Cost estimates will be prepared as part of the feasibility study.
Project will increase user groups by including education, multi-level paddling/tubing, fishing (could be improved with riffle/pool systems).	Yes, a variety of programs can be offered to all members of the community.
Could be an opportunity to introduce new populations to a recreational activity not available now.	Agreed.
Introduce the sport to a diverse population.	Yes, programs can be offered to all members of the community.
How many users per year are anticipated?	According to City of Raleigh records, there were over 1,872 kayak participants over the past three years. This is an average of 624 per year.
Is it family oriented? Is it safe for families?	Yes, families will be able to utilize the park but should always check the river levels, have appropriate equipment, like personal flotation devices, and take formal instruction to reduce exposure to inherent risks (these exist with every river just not play parks).
Does City have performance data to determine the number of users?	According to City of Raleigh records, there were over 1,872 kayak participants over the past three years. This is an average of 624 per year.
Does Parks & Rec keep track of paddlers in the area?	No, but the community-based Carolina Canoe Club does.
Where is the project in Parks & Rec's priority list?	Priorities are established using a variety of factors including funding, community support, permitting, etc. The City has committed funding for the evaluation and preliminary design of this park.
Look at the number of users.	According to City of Raleigh instruction records, there were over 1,872 kayak participants over the past three years. This is an average of 624 per year. A whitewater facility in this location would allow the City to expand it's recreational programming. In addition, Paddle Creek sends over 4,500 people down the Neuse River each year. The Carolina Canoe Cub holds 20 novice clinics per year and three swiftwater rescue classes per year. It is anticipated that with enhanced access the Canoe Club will hold more clinics.
Are there user surveys? What is being used to determine need for this park?	
Are there recreation surveys?	
Along with boating options, I see added value for swiftwater training.	Yes, a variety of education/training programs can be offered the community.
There are other parks & rec. issues that needs to be prioritized.	Priorities are established using a variety of factors including funding, community support, permitting, etc. The City has committed funding for the evaluation and preliminary design of this park.
Utilization?	According to City of Raleigh instruction records, there were over 1,872 kayak participants over the past three years. This is an average of 624 per year. A whitewater facility in this location would allow the City to expand it's recreational programming. In addition, Paddle Creek sends over 4,500 people down the Neuse River each year. The Carolina Canoe Cub holds 20 novice clinics per year and three swiftwater rescue classes per year. It is anticipated that with enhanced access the Canoe Club will hold more clinics.
How far into design will the project go?	The design will progress to the 30% construction drawing stage.
No one at the Mill will accept water diversion.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels.
Diverting or controlling water flow should be out of the question, period.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels.
Streamflow should have to remain the same to both sides of the river.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels.
Concern - water diversion.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels.
Diverters to divert water from the north bank adjacent to River Mill Condos. Implications to wastewater plant.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels.
How will rise not occur with diversion?	The diversion weir will be modeled to for its impact to the flood plain. If the design team can not meet the "no rise" criteria, the diversion may be dropped or the criteria could be modified to include alternate methods of diverting water.

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Diversion – concerns with the drought – prefer medium flow.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels.
Since flows will not be changed, there will still be lots of days for and areas for folks who like to fish, wade or enjoy the river, not boat.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels.
Scrap the whitewater park, which puts phony rock among the natural rock, diverts water which gives us much loved rapids on the north side of the island and takes away our chance to put kayaks in and paddle ourselves.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels. If faux rock or zoo rock is utilized in this location, the rock will be created to mimic existing native rock. It is not anticipated that this project will prohibit River Mill residents from paddling from the north bank.
We do not want faux rocks!	The Steering Committee will work with the design team to determine what elements could be included in the design. If faux rock or xoo rock is utilized in this location, the rock will be created to mimic existing native rock.The design team will investigate utilizing "pourus" rock or ungrouted natural rock.
I am also concerned about the effects on the environment from diverting the water, adding rocks.	The Steering Committee will work with the design team during the feasibility study to determine if a diversion weir should be utilized to divert flows at certain CFS levels. The use of rocks, whether faux or grouted rocks", is an accepted design practice.
Concern - possible deterioration of the island.	The island is actively eroding at the present. The project will include bank stabilization to slow or arrest this natural process.
Concern - destruction to River Mill side of the bank.	The preliminary design will include provisions to prevent damage outside the project area: 1) define a project area where construction activities and vehicle traffic cannot occur and 2) enforcement of the project area limits during construction.
Stream bank protections	The project will include bank stabilization to slow or arrest this natural process. The design team will consider a landscape design that limits the amount of understory removal and herbaceous plant removal from the stream banks. The design team also recommends that access to and from the river bank be confined to narrow corridors to prevent trampling of native plants.
What methodology will be used in shoreline design?	The project will include bank stabilization to slow or arrest this natural process. The design team will consider a landscape design that limits the amount of understory removal and herbaceous plant removal from the stream banks. The design team also recommends that access to and from the river bank be confined to narrow corridors to prevent trampling of native plants. The design team may utilize a visual preference survey of images of existing whitewater park shorelines for consideration by the Steering Committee.
Bridging to an island that has been a solice for wildlife should be absolutely done away with!	It is not anticipated that a pedestrian bridge will be part of the final design.
Pedestrian bridge to island, concerned about trash.	It is not anticipated that a pedestrian bridge will be part of the final design.
Consultant should study the feasibility of the bridge.	It is not anticipated that a pedestrian bridge will be part of the final design.
Feasibility issues - water releases/hydrology	As "special" releases of water for recreational purposes is not a possibility, a diversion weir has been proposed.
Concerned with lighting.	The whitewater park would operate on a dawn to dusk schedule and will not require any lighting.
Ecological integrity of the river system (locally & downstream) is critical to all players/partners -- this includes stabilization after/during construction, keeping it as natural as possible.	The project will include bank stabilization to slow or arrest this natural process. The design team will consider a landscape design that limits the amount of understory removal and herbaceous plant removal from the stream banks. The design team also recommends that access to and from the river bank be confined to narrow corridors to prevent trampling of native plants. With regard to downstream impacts, the design team will include hydraulic modeling of the river reach downstream in order to detect any increase in flood level or water velocity that would tend to destabilize the river.

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Define enhance and what ends we are enhancing.	The feasibility study will look at the possibility of enhancing the number of paddling days. It is anticipated that the facility will include a maximum 600 foot run starting south of the existing Falls of Neuse bridge. A component of the project that is to be considered by the Steering Committee is land-based amenities including parking, picnic areas, etc.
Protect River Mill's ability to paddle/kayak from their shore.	It is not anticipated that this project will prohibit River Mill residents from paddling from the north bank. It is anticipated that the project could contain bank stabilization measures.
Consider the "experience" from the River Mill side. View should remain the same...which means no visible street lights or barriers that mar the natural look and sufficient flows.	The whitewater facility would operate on a dawn to dusk schedule and would not include streetlights. The Steering Committee will work with the design team to determine the design criteria and to decide if a diversion weir to divert flows at certain CFS levels is an acceptable solution. The use of "faux rocks or grouted rocks" have been used in other parks around the Country and is an accepted design practice.
Public areas are important and any enhancement to provide enjoyment for additional uses brings more benefits to the area.	Comment noted.
Will paddlers use the north side?	The waters are navigable waters of the US and can not be restricted.
Will users have to cross the bridge?	It is not anticipated that paddlers would have to cross the bridge. There is the potential for a paved pathway underneath the bridge. The access and design will be further discussed by the Steering Committee and Design Team.
Why does the study not include other concerns? Traffic, parking, etc.	The purpose of the feasibility study is to determine if the whitewater facility can be designed and constructed in this location. A part of the study will include land-based elements to include parking and other amenities. Traffic is not part of the study. The design team has had discussions with the City of Raleigh Transportation Services Department and that staff believes that the future construction of the New Falls of Neuse Road bridge will greatly decrease traffic volumes in this area.
Where will the paddlers put in?	It is anticipated that the first put-in will be close to the bridge and that there will be a second location further down. The exact locations will be further discussed by the Steering Committee and Design Team.
How do paddlers get back to the top?	It is anticipated that there will be a put-in will be close to the bridge and that there will be a second location further down. The exact locations will be further discussed by the Steering Committee and Design Team.
I would be in heaven with one bluntable wave and a loopable hole.	Comment noted.
Will this project improve the paddler experience?	The feasibility study will look at the possibility of enhancing the number of paddling days and could include play elements.
Aesthetically it would detract from the character and charm of the area.	Aesthetics are important consideration in the design of the project. The Steering Committee will work with the design team to create design criteria.
At what point is this project justified? How many days?	This will be determined by the Steering Committee and ultimately considered by the PRGAB and City Council.
I am strongly against this project and think the environmental impact is not being taken into account at the level it should be. A park like this should not be placed near preserved wilderness, hiking trails, etc.	An environmental analysis has not yet been completed. If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared. This location is the only place in the City where a facility of this type could be located.
What is the parameters/effect of the Milburnie Dam removal on fish habitat?	Unknown as Milburnie Dam has not yet officially been designated for removal.
Concern - traffic along our (River Mill) side of the bank.	The purpose of the feasibility study is to determine if the whitewater facility can be designed and constructed in this location. Traffic is not part of the study. The design team has had discussions with the City of Raleigh Transportation Services Department and that staff believes that the future construction of the New Falls of Neuse Road bridge will greatly decrease traffic volumes in this area. A traffic study will only be required if NCDOT requires it in conjunction with a driveway permit.

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How will traffic be impacted? This area has a country feel.	The purpose of the feasibility study is to determine if the whitewater facility can be designed and constructed in this location. Traffic is not part of the study. The design team has had discussions with the City of Raleigh Transportation Services Department and that staff believes that the future construction of the New Falls of Neuse Road bridge will greatly decrease traffic volumes in this area. A traffic study will only be required if NCDOT requires it in conjunction with a driveway permit.
Parking/traffic concerns	The purpose of the feasibility study is to determine if the whitewater facility can be designed and constructed in this location. Traffic is not part of the study. The design team has had discussions with the City of Raleigh Transportation Services Department and that staff believes that the future construction of the New Falls of Neuse Road bridge will greatly decrease traffic volumes in this area. A traffic study will only be required if NCDOT requires it in conjunction with a driveway permit. As part of the land-based design, the design team will considere enhanced parking and amenity areas.
Implications to the natural environment/ecology.	An environmental analysis has not yet been completed. If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared.
Protection of the natural beauty	Aesthetics are important consideration in the design of the project. The Steering Committee will work with the design team to create design criteria.
Has a traffic study been done?	The purpose of the feasibility study is to determine if the whitewater facility can be designed and constructed in this location. Traffic is not part of the study. The design team has had discussions with the City of Raleigh Transportation Services Department and that staff believes that the future construction of the New Falls of Neuse Road bridge will greatly decrease traffic volumes in this area. A traffic study will only be required if NCDOT requires it in conjunction with a driveway permit.
The environmental impact studies of this area are far-reaching.	An environmental analysis has not yet been completed. If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared.
Would the NEPA document include the entire park (including 85+/- acres)?	No.
Will an environmental assessment be provided?	If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared.
When is the EA provided in the process?	If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared.
Who decides what is too much of an impact? COE?	The design will be reviewed by the US Army Corps of Engineers and if the project proceeds past the feasibility stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared and reviewed by the State and Federal resource agencies.
Will the project recommend no change or a no-action decision?	A component of every NEPA document is the consideration of a "no-action" action.
What will the broader impacts on the area be? - Roads, parking, etc.	If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared.
What are the cumulative effects to the river from the new road, bridge, and this project?	As part of the NEPA process, an indirect and cumulative impact analysis would be completed for this project and would build-upon the data collected for the other projects slated for this area.
Can help the soil erosion and other environment impact problems.	The objective is to provide positive impacts including river stabilization and enhanced aquatic habitat while avoiding negative impacts such as bank destabilization, etc.
What about impact to the river?	The project requires that the river be modified and therefore impacted. The objective is to provide positive impacts including the benefits of recreation, access, river stabilization, education and aquatic habitat; while avoiding negative impacts such as bank destabilization, reduced recreation, safety problems, etc.

Falls Whitewater Park
Comments Received
January through March 2010
Community Meeting #1
River Mill Community Meeting

Maintaining health of the river is important.	The project requires that the river be modified and therefore impacted. The objective is to provide positive impacts including the benefits of recreation, access, river stabilization, education and aquatic habitat; while avoiding negative impacts such as bank destabilization, reduced recreation, safety problems, etc.
The impact will be negative to the natural beauty and create eyesores to the residents of the area who are here every day of the year.	Aesthetics are important consideration in the design of the project. The Steering Committee will work with the design team to create design criteria.
The impact on hunting grounds of birds of prey would be terrible.	If the project progresses past the feasibility study stage, a full NEPA document detailing potential impacts and mitigation strategies will be prepared.
Spawning grounds would be permanently destroyed.	An impact analysis would be required. Typically such an analysis would: 1) identify all species present and their preferred spawning habitat, 2) survey the site for suitable spawning habitat and add up the existing "habitat units" and 3) evaluate the proposed design for any increase or decrease in habitat units.
Erosion issues	The project will include bank stabilization to slow or arrest the natural erosion of the island. The preliminary design will include provisions to limit the amount of understory removal and herbaceous plan removal from the stream banks. The design team will also recommend that acess to and from the river bank be confined to narrow corridors to prevent trampling of native plants.
Does public opinion matter?	Public opinion is a key component to all publicly funded projects. As part of this project, the City of Raleigh is holding three Community Meetings, has convened a Steering Committee, has held a small group meeting with the River Mill Community, and is developing a website for the public to track and comment on the project. In addition, all meeting minutes, comment sheets, attendance logs etc. are part of the permanent project record and will be incorporated into the NEPA document if the project progresses to that stage.
Should there be more public involvement?	Public opinion is a key component to all publicly funded projects. As part of this project, the City of Raleigh is holding three Community Meetings, has convened a Steering Committee, has held a small group meeting with the River Mill Community, and is developing a website for the public to track and comment on the project. In addition, all meeting minutes, comment sheets, attendance logs etc. are part of the permanent project record and will be incorporated into the NEPA document if the project progresses to that stage.
I live in the River Mill community and am very concerned about this proposal. Right now life at the Mill is very quiet and enjoyable. At any given moment you can enjoy a leisurely stroll and see many types of wildlife. The view from my unit is breathtaking. Paddlers have the right to paddle but we also have the right to our quiet life at the Mill.	Comment noted.
Explain the process for city approval of the project.	The City Council has directed that a preliminary concept plan for the whitewater park be developed. The plan will then be presented first to the Parks, Recreation, and Greenways Advisory Board for review and recommendation to City Council for approval. City Council will then be asked to review and make final approval. The stakeholders will seek addtl. funding for completion of the park upon final approval by City Council.
What will determine a go/no go decision?	Multiple factors: first approval by the PRGAB and City Council, level of funding, minimization and/or mitigation of environmental impacts, commitment of stakeholder group, etc.
Is the City an advocate of the project?	The City is interested in increasing access for all user groups, sustainable construction, and the ability to introduce novices to paddling, fishing, and other forms of active recreation, and increase opportunities for intermediate paddlers.
Local landowner - closest neighbor to the project didn't get an invite to participate on Steering Committee. One year ago the Falls White Water Park Committee met with the River Mill HOA and promised to be included in the process. River Mill would like a seat at the Steering Committee table.	The Falls Whitewater Park Committee is not a City of Raleigh board or commission, but a private interest group. Upon receiving this comment from the River Mill community at the Open House on January 19, 2010, a resident of River Mill was added to the Steering Committee and a special presentation was made to the community on March 2, 2010.
Describe the feasibility study and the economic impact of the project.	The City Council has directed that a preliminary feasibility study be prepared to determine if the whitewater facility could be constructed within this area. A part of the project will include progressing the design to approximately 30 percent construction level drawings. The consideration of economic impact is not part of the feasibility study.

Falls Whitewater Park
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River Mill Community Meeting

Is it connected to Forest Ridge Park? Does it tie in?	It is not connected physically, but the Forest Ridge Plan includes trail/greenway connections to the Neuse River. Also the Forest Ridge Plan envisions an adventure program emphasis of which this facility would become an important component.
Should the 85+/- acre parcel be master planned now?	Funding for planning of this parcel is not available at this time.
Has the southern parcel (85+/- acres) been planned?	Funding for planning of this parcel is not available at this time.
Why is the whitewater park not part of the 85 +/- acre park?	Planning for the whitewater park began before the City acquired the 85 +/- acre parcel. The whitewater facility will be related to both that park and Forest Ridge in the future.
Who are the users of the park – fishermen?	It is anticipated that this facility will serve beginner to intermediate river running skill instruction. Beginner playboating opportunities. Variety of instructional, educational, and recreational opportunities for user groups extending from the novice to intermediate. It also anticipated that any improvements in this area will also benefit fishermen. Additional amenities will be discussed by the Steering Committee but could include picnic areas, etc.
Can we survey River Mill residents?	Comment forms were provided to the River Mill Community during the 3/2 mtg. To date, the City has only received three comment forms back from River Mill.
Why brand the park now?	The project is being branded so that it can be given a recognizable name. If the project moves past the feasibility stage, it is anticipated that private entities will utilize the name in fundraising efforts.
How far will users travel to visit the whitewater park?	It is anticipated that users of this facility would be willing to drive up to two hours to use it. It will not be a state-wide draw.
It was noted that there are 20 paddlers that live in River Mill.	Comment noted.
Is the RFP that Stewart responded to public knowledge?	
Was it an RFP or an RFQ?	
Concerned that users of the whitewater park will park on River Mill property.	The City of Raleigh will not advocate trespassing on private property. If the project moves forward past the feasibility stage, the City could work with the River Mill HOA on signage. But the City can not enforce trespassing on non city-owned property.
River Mill residents are concerned with trespassing.	The City of Raleigh will not advocate trespassing on private property. If the project moves forward past the feasibility stage, the City could work with the River Mill HOA on signage. But the City can not enforce trespassing on non city-owned property.
Can the park compete with Charlotte?	The Charlotte park is manmade and is not comparable to the proposed project in Raleigh.
The park looks great. Big plus for Raleigh. Great for families.	Comment noted.
I think the project is a great idea.	Comment noted.
This is a great idea for Raleigh. I am excited about what these improvements will bring to the area in regards to fishing, boating, and overall enjoyment of the area.	Comment noted.
Looks great! Keep going!!	Comment noted.
Along with boating options, I see added value for fishing downstream.	Comment noted.
Fishing (access to fishing, etc.)	The project will enhance fishing access and reduce the impacts of foot traffic to the riparian zone.
Everything looks great! I look forward to this being completed. It will be a big bonus to the area.	Comment noted.
I am still opposed to this project.	Comment noted.
Just keep it as is.	Comment noted.
We already have a natural water park within the river and those who wish to have the "manmade" park should embrace what already exists.	Comment noted.
I am against this water park.	Comment noted.

Falls Whitewater Park Community Meeting #2
July 14, 2010

Public Comments
Received
7/14/10 to 8/16/10

Comment	Name	Address
This proposed park will be a big asset to the Raleigh area. There will be many teaching opporunities (ie) swiftwater rescue, intro to whitewater, kayaking, etc. It should enhance the area surrounding the tailrace and perhaps will bring more people to the river which should help to increase river stewardship.	Doug Stager	Raleigh, NC 27615
I think this is great! Great synergy with the greenway. I believe it should move forward.	Sig Hutchison	Raleigh, NC 27614
The opportunity for teaching after the park is established is great and should be developed. Not only a source of revenue, but a way to encourage use of the park. This is a good resource for novices and beginners to turn to.	Mary Stager	Raleigh, NC 27615
Taking so much water from the north channel at 500-1000cfs concerns me greatly; that's when the river looks the most beautiful, with rapids (paddlers, tubers can enjoy these now, without the engineered rapids) that we at the Mill love. When asked how many would paddle the whitewater park, the thousands who go down the river now and members of Carolina Canoe Club were listed. What if they (current paddlers) like paddling to see birds, turtles, tranquil scenery? Why wasn't the number 3-5 whitewater paddlers per day at the dam mentioned instead? Isn't that a more accurate number on the busiest days?	Sharron Parker	Wake Forest, NC 27587
Establishing usable waves/rapids at lower flow levels is an excellent initiative that will attract more beginner/novice paddlers to the river - there are far more of these than intermediate/advanced. However, the proposal to deny access to the current spillway area means that you would drive away the intermediate/advanced (your instructors). This proposal needs to be incremental to and not a replacement of current access.	Ian Pond	(I work in Wake Forest)
Great presentation!! Love the ideas of the Falls Whitewater Park.		
I already paddle at Falls Dam about 30-40 days a year. I would love to paddle even more days on the river at Falls Dam.	Jim Wei	Raleigh, NC 27617
Having been blessed to be a part of this project for the past 3 years, I feel that headway is being made toward making Raleigh a kayakers/outdoorsperson destination. I look forward to seeing the completed full design and know that the City and all those involved will deliver a world class learning environment.	Mike Keeney	Durham, NC
I am a beginning boater and really looking forward to the City park being in place so I can go practice my whitewater skills and learn to surf in the kayak. I really like that there are multiple waves so if I wash out of an upper wave I can play lower down without having to get out. I think it is great that more water will be diverted into this channel at lower flows without messing up the other channel. It seems really well thought out and a huge draw in this area. I would think a lot of people would come play in a river in the piedmont with rapids and fishing holes. I hope this happens by this fall so I can get better right away.	Camye Womble	Cary, NC
Seems like a wonderful idea adding a new dimension to the Raleigh Park Dept. I am a kayaker and have been one for 5 years. I see a definite benefit to this park as a practice opportunity to improve beginning skills and even intermediate skills. I also volunteer with Team River Runner. An all volunter organization that takes wounded veterans from the Iraq & Afghanistan wars and teaches them kayaking to aid in their physical and mental disabilities. This park would provide a very accessible opportunity for the physcially disabled veterans. Please consider the benefit for the larger good of our community than the shortsighted interest of a small percentage of homeowners who occupy their residence for a short duration of time (on average). Thank you.	Jeff Dennie	Raleigh, NC 27604

Falls Whitewater Park Community Meeting #2
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I'm so excited about this! I think that this whitewater park could really expand the opportunity for new and experienced boaters to get out an play in Raleigh! I really like the idea of the faux rock being used for the divider island. The climbing wall at NC State is faux rock and looks and feels like real rock. Thanks for all the great information!	Alexa Sawyer	NC State University Student
I'm very excited for this and support this. One thing I would like to emphasize is making it relatively simple to do multiple runs. Definitely an easy path or maybe ways to attain past the rapids. Making the diverting wall look like an old dam sounds pretty neat, but I can't imagine it very well. Faux rock would probably work fine.	Christopher Mattox	Fayetteville, NC 28304
It's very exciting to have preliminary drawings. Three features is nice compromise. It's a small park so it won't have as much impact on folks who live nearby. However it still provides paddlers with several features for variety and greater numbers of paddling days at the dam. It will be an economic draw for the area and an invaluable resource for education and rescue training.	Elizabeth Gardner	Raleigh, NC 27608
I am very excited about this project. I feel that the paddle community would appreciate this being in Raleigh. The surrounding community may have some concerns however I hope that they see the passion and commitment that the paddle community has for the river and surrounding wildlife area. Thank you Elizabeth for your time and effort! It's truly appreciated!	Jeff Francoever	Cary, NC
Hola Mr. Lebsock - I am a hardcore kayaker who loves going to the mountains to tear up the waves there. However, living so far away, I can't wait for some gnarly surf waves here in the Triangle to rip on and show up everyone. My idea of a good time is some tasty waves, a good buzz and I'm fine. When this park gets built, there is no doubt that I will be the best ripper out there...dude!	Jeff Spicolini	Ridgemont, NC
This park would be an exceptional asset to the City of Raleigh and surrounding area.	Todd Zarzecki	Raleigh, NC
I think this is a great idea! It will tie in nicely with the greenway project and provide an opportunity of adults and kids to participate in an enhanced outdoor experience. Providing the ability for fire and rescue to train is a valuable plus. The plan seems well thought out and every consideration to environmental impacts seem to be addressed. One more thing that would make the Triangle a great place to live and raise a family.	Matt Pusateri	Wake Forest, NC
Since the majority of the release days will be in the winter can you install street lights near each of the 3 features plus one street light at the put in and one street light at the take out? This will allow access to the park after dark. Great plan! I can't wait to see this park completed.	Tom Wittekind	Raleigh, NC 27613
Condo owners will actually see less traffic on the north channel, as activity will be concentrated in the south channel. Safety of fishermen (persons) and families picnicking on the banks is a concern. The way things are now vs. the proposed plans, (ie) which is more hazardous to someone falling in? It would be nice to have a place closer than the Haw for local paddlers!	Jean Dasnoit	Raleigh, NC 27604
I'm very excited about the design. I fully support all efforts and investments required to complete this project.	Karl Carr	Raleigh, NC 27609
Love it!! Takes into account a balanced approach to wildlife, recreation, and safety.	Joe Greiner	Raleigh, NC 27615
I think the plans are really good. I am looking forward to giving it a try. Thanks. I think it will really add to the quality and life in Raleigh and help with the health of the river.	Andy Malinowski	Raleigh, NC 27604
I think this is a great idea and a great use of the area with little if any environmental impact. I am excited to see more adventurous activities for youth in the area.	Tom Pusateri	Wake Forest, NC

Falls Whitewater Park Community Meeting #2
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I can't wait to see the final design for the whitewater pwrk. This will be an exciting park for boating and for spectators. The powerpoint presentation from McLaughlin helped to make it factually clear that there will be little difference in the amount of water flowing into the north channel when levels do allow for water diversion. Thanks to the FWP committee!	Reese Culbreth	Raleigh, NC 27608
Concerns of my neighbors here in the Falls area are listed below: (1) Apprehensions exist among the property owners regarding diverting all flow to the north channel during whitewater course construction should the project gain approval. Possibilities of a rain event causing flooding could occur. Both channels would need to be available for high releases from the dam. (2) Velocity and depth of flow on the north channel after introduction of diverter island. A precise answer rather than estimate. (Currently we know what the depth and flow is at a variety of release levels and the sound of the rapids is a big part of living at River Mill). (3) Residents have made a significant investment in their property and the natural elements associated with it such as scenic views and historic character is very important. If the project moves forward this should be kept in mind and our investment should be protected from anything that would detract from what we have now. (4) More precise impact data is desired. Environmental and aesthetic. (5) Availability of south channel for fishing and wading.	Tom Wright	Wake Forest, NC

Falls Whitewater Park Community Meeting #3
November 3, 2010

Public Comments
Received
11/3/10 to Present

I Endorse the Proposed FWWP	Reasons why I do/do not endorse the proposed FWWP.	Name	Address
No	Diverter island. Diversion weir.	Tom Wright	1500 River Mill Drive, #401, Wake Forest, NC 27587
No	The diversion of flow from the north channel to the south channel will reduce the rapids in our neighborhood just at levels that are most enjoyable to see and hear,all 24 hours on days those levels occur.	Ken Parker	1500 River Mill Drive, #306, Wake Forest, NC 27587
No	The large diversion of water from the north channel during medium flow days means the loss of (1) the sound and beauty of the rapids and (2) chance to launch kayaks and canoes from the River Mill area.	Sharron Parker	1500 River Mill Drive, #306, Wake Forest, NC 27587
No	Open at most 1/4 of year on an unpredictable basis, people won't show during the week. Great idea for kayak club but detrimental to everyone else. Obvious waster of money.	Gene Dodd	River Mill
Yes	The WWP would provide a safe recreational facility and safety rescue training facility as proposed during the initial planning of Falls Lake.	Bob Zarzecki	11925 Raven Ridge Road, Raleigh, NC 27614
No	I do appreciate this meeting and allowing for questions, thank you. The idea that 2.5+ million tax dollars is absurd to me particularly when there is already a natural waterway/river for all to enjoy that is free. In addition, the environmental impact (herons, fishes, etc) will be completely dismissed from their natural home. As a resident of River Mill, one of the major reasons that I live there is the natural, peaceful beauty. By building this not only will the natural surrounding be affected but the noise level will simply not be tolerable. I completely advocate proposals and growth, however a water park in this location simply doesn't make any sense financially. Simple math for an ideal season: 100 days of operation, 100 visitors per day, 10,000 x $10 per ticket = $100,000 revenue - doesn't make sense particularly when you can't plan whitewater events due to questionable water levels and drought conditions.	Tessa Hunt	1500 River Mill Road, Wake Forest, NC 27587
No	2.5 million seems like an excessive amount of money for a facility that will only be used about 3 months a year by an exclusive group of folks. I think that the City needs to consider this in the perspective of other projects including Forest Ridge Park and other planne facilities in the area. I also think that the city needs to look at the Neuse River paddle trail and paddle access as a whole - where does this fit in the priority list? The next safe access is more than 10 miles downstream. The city should provide safe and legal access at sites that can be used year-round first before considering adding this luxury. Currently with the outflow of the dam, the spillway, and north side of river provide over 4 good features. This will alter the natural features and the result will be less features, over construction of the river and a lot of city money wasted.	Leigh Ann	9629 Fonville Road, Wake Forest, NC 27587
No	(1) Concerns about the environmental impact it would make on the river and its wildlife. (2) Concern on the traffic and impact on the River Mill Community. Being a homeowner at River Mill crime is a concern, noise level from groups attending the whitewater park, etc. (3) The expense of something this expensive and the number who would benefit.	Kathy McKee	1500 River Mill, Unit 302, Wake Forest, NC 27587
Yes	The ww park will create a wonderful element of diversity in Raleigh's park system. There are few ww parks in the east and it will draw people regionally and boost the economy. It gives kids another alternative to traditional sports. It will be a gathering place for the community and foster river preservation.	Elizabeth Gardner	1806 Bickett Blvd, Raleigh, NC 27608
No	Generally, I think the plan is "okay". However, before I cannot endorse the project unless a gate is closed from dusk to dawn. This will be even a worse security situation that it is now.	Bill Rose	6148 Riverside Drive, Wake Forest, NC 27587
Yes	Impact to river seens reasonably minimal. The river is not a private water feature and should be shared by all. I think this park will significantly enhance interest in the Neuse Greenway Trail and also enhance understanding and appreciation of the Neuse River.	Mark Turner	PRGAB
No	(1) Changing historic river. (2) Environmental issues. (3) Lower value + appeal of River Mill residences.	Jerry Leonard	1907 Park Drive, Raleigh, NC 27605

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Yes		Jade Wei	9113 Langwood Drive, Raleigh, NC 27617
Yes	I believe this facility will provide unique access to popular paddle sports recreation and education as well as valuable training facility for Central North Carolina paddlers and water safety educators. Paddle sports are one of the largest growth outdoor activity areas and similar facilities across the world continue to prove that they are a social and economic resource to the areas that they serve. Raleigh will be proud to have this facility to enhance the diversity of parks facilities it offers.	Larry Ausley	6717 Valley Woods Lane, Cary, NC 27519
No	Unnecessary expenditure to alter a river that already has whitewater, is already used by the public, fishermen, and wildlife. Too much effort to make this area into something that it is not. It's a small area and a short amount of time it can be used. Why spend so much money on something that benefits so few people for so short a time.	Susannah Koger	1601 River Mill Drive, Wake Forest, NC 27587
No	Absolute waste of tax money. To much munipulation of the water flows. We on the n end would almost never see high flo. Noise pollution. Litter.	Jill Brown	1500 River Mill Drive, Wake Forest, NC 27587
No	105 days per year does not seem to be enough to justify this project. The cost and impact to our community are not worth the 105 days/year of operations that this park would provide.	Dan Lee	1500 River Mill Drive, #203, Wake Forest, NC 27587
I have reservations	(1) I'm concerned about the water level on the north channel. If there will be less/no water on n side I would not support the project. I've lived at Rivermill for 18 years and I use my kayak in the river. I hike and walk dogs and enjoy the wildlife. My husband fishes. I bought this property because of the natural area and the water. (2) I'm also concerned about how this project will effect the wildlife population. We currently enjoy the beaver, Great Blue Heron, Kingfisher, a variety of fish, Neuse Waterdogs, mussels, Banded Water Snakes, Ospray, etc. How will this impact animals on north side as well as channel? (3) How will all this construction and run off effect the health of the river? (4) I'm concerned about stabalization on the north side. During construction when the water is all diverted to n. side. I'm afraid of the impact to our banks. I would want a natural looking and aesthetic (not rip rap). Will there be planting along the banks?	Alisa King & Jimmy King	1612 River Mill Drive, Wake Forest, NC 27587
No	Spending 2+ million dollars in this economy is irresponsible when it benefits so few people. Do not water diverted from the north channel.	Jason Clark	1500 River Mill Drive, #113, Wake Forest, NC 27587
Yes	I fully support the park. I would love to be able to use it after work for some good exercise. I am sorry to hear it will take so long to finish. I also believe it would help protect the banks on both sides of the river. Thanks.	Andy Malinowski	701 Monroe Drive, Raleigh, NC 27604
No	Reasons why I do not endorse the proposed Falls Whitewater Park. I am a resident of River Mill and love the river views, the sound of peaceful water and the ability to launch a kayak from the banks behind our place. With a diversion island or weir we will have very little water on our side of the rive, which is unfair to property owners who bought here because of the river. The park will make our property less valuable and have a view of a river bed (basically). No fair!	Kathy DeBlasio	1611 River Mill Dr, Wake Forest, NC 27587

No	I cannot endorse the creation of a park that so drastically alters the natural environment of the Neuse River and negatively impacts wildlife who live in and around the river - all for a few residents who want to be able to use their kayaks a few more days per year. I believe that the city of Raleigh needs to value and protect this small area of wilderness. We as a city need to respect the right of wilderness to simply exist, and not view every parcel of natural, undeveloped area as a potential site for development or as a potential site for additional recreational opportunities. The more the city can protect these pockets of wilderness, the more beautiful and environmentally friendly the city will be in the long run. Those who would create this "park" seem to feel that they have the right to manipulate the environment so that they can have a better "playspace." We who live in and around the Mill building, I believe, have a right as well: to enjoy the view of the unspoiled river and to treasure our peaceful, quiet days by the river - we who have invested in and resided in this historic building for years are unified in our love for the unspoiled nature area in which we have chosen to live - and other residents of Wake County, obviously, enjoy it as well, by boating, fishing or simply walking by the river. But I do not cannot welcome people who would destroy this environment. It seems that this small group of people who happen to own kayaks feel that it is their right to intrude and reshape the river to suite their "need" to kayak here. I implore the city to take a stand against this special interest group and p the people of Raleigh who treasure this are in its unspoiled state.	Elaine Bartlett	1500 River Mill Dr, #202, Wake Forest, NC 27587
No	First please note that back in the early 1990s I used to kayak on river where the Whitewater Park is being proposed. With that being said I do not think that the Whitewater Park is warranted based on the following: (1) The limited number of individuals who would be expected to use the park. (2) The amount of funds required to build the park (even if only a portion comes from public funds). Surely we can find better uses for such funds. (3) The environmental impact that would accompany such a project (which will affect the current ecosystem).	Aaron White	1613 River Mill Dr, Wake Forest, NC 27587
No	This is an expensive and unnecessary project with a negative environmental impact. It has very negative effect on the quality of life for both humans and wildlife. I hopoe the narrow interest of the few endorsing it will not override what is in the best interest of the river, wildlife and area in general. We have been owners of #305 for 20+ years and have enjoyed the natural beauty and the wildlife of the area. We hope this unnecessary project will be stopped. With the money shortage for maintenance of the Raleigh Parks, this project seems highly questionable at best.	Diane Schaaf	5444 Deer Forest Trail, Raleigh, NC 27614-8221
No	As I understand the project, the Whitewater Park is costly, highly detrimental to the environment, and caters to the recreational whims of a fraction of the population. It is unlikely to add revenue to Raleigh's coffers and more likely to be a financial failure. It will be an eyesore that will have a negative impact on water quality, fish, birds, crustaceans, and micro-organisms. The Neuse is one of the most endangered rivers in the Country. This park will further compromise its fragile economy.	Charlotte Gross	Professor, English, NC State University
Yes	I am an area resident and I just wanted to pass along my enthusiastic support for the planner whitewater park at Neuse Lake Falls.	Alan Lovett	alan.lovett@duke.edu

Falls Whitewater Park Community Meeting #3
November 3, 2010

Public Comments
Received
11/3/10 to Present

Yes	My name is Mary Beth Harvey, and I am the Healthful Living Department chair at Broughton High School. Recently I became aware of a white water park being developed near Falls Dam. In my opinion, developing a white water park in Wake County would create more possibilities for my students, as well as the community. Wake County currently offers a class called Adventure Education. As part of the course curriculum, the class includes activities such as: canoeing/kayaking, rock climbing, hiking and orienteering, triathalon training, ropes course and team building activities. The opportunities to be creative with this course are endless. As an IB school, Broughton focuses on the importance and investigation and inquiry from all students. The IB criterion enables students to try new activities that build leadership skills, community awareness, as well as an appreciation for the environment. As a healthful living teacher, I encourage students to participate in lifetime activities and stress the importance of staying active, as this country struggles to fight childhood obesity. I also feel this park would be an engaging way to build self-esteem and self-confidence in our youth while finding ways to keep them focused and directing them towards positive, well-balanced behaviors. As an educator, I see the infinite opportunities from the currently proposed water park. I encourage your support for our entire community to promote fitness and active lifestyles.	Mary Beth Harvey	mbharvey@wcpss.net
No	I am a boater (30+ years) and I do not support the proposed Falls Whitewater Park. I do not think that there is sufficient economic justification for this type of project at this point in time. If the economy was stronger, I would have a different point of view. How can we spend public money on a whitewater park that serves a relatively small percentage of the public when we have so many other public needs that involve basic human needs like jobs, food, and shelter? The argument has been made that the money is not coming from tax dollars. But public money is public money whether the source is taxes or not. While I sympathize with the boaters, now is not the time for this Park. It sends the wrong message regarding our governments and our elected officials priorities.	Robert Rhode Resident and Taxpayer	b.rohde@earthlink.net
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make the whitewater park a reality for the people of Raleigh and surrounding areas.	LeeAnn Collins	LeeAnn.Collins@ucb.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make the whitewater park a reality for the people of Raleigh and surrounding areas.	Bridget Nudi	bridgetnudi@yahoo.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make the whitewater park a reality for the people of Raleigh and surrounding areas.	Kurt McKissick	mckissickk@nc.rr.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make the whitewater park a reality for the people of Raleigh and surrounding areas.	Cathy Schwirzke	1010 Pine Hill Road, Fayetteville, NC poetta613@aol.com

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Yes	I am writing in support of the proposed Falls whitewater park. This project will help the local economy immediately and leave a lasting legacy for future generations. With very little impact on those who live nearby, it will greatly enhance the lives of local paddlers as well as people who love the outdoors and will be able to enjoy it was spectators and walkers on the greenway. I live in Cary and have fondest hopes that this project will become a reality. Thank you very much for your consideration.	James C White	tresbianco@earthlink.net
Yes	I have been asked to submit my opinion that the Falls Whitewater Park proposal is a good idea. I can guarantee that if it is constructed I will visit it as a kayaker. I will behave myself in an exemplary manner and leave no trash. I would also guarantee that after paddling I will eat at a local restaurant to support the economy of the area. Hopefully that is a good thing for the society as a whole. I am not sure about why some of the nearby homeowners are against the plan. But if they have valid complaints then I guess the decision lies with government. In Charlotte the whitewater park is a great place to visit. Despite their financial difficulties (I think it cost $50 million to build that thing) it is a place where people can enjoy the whitewater activity or watch the action on a nice day. Hopefully your park could be as family friendly and good vibed as that one is.	Morgan Randall Chapel Hill, NC	mrandell@nc.rr.com
Yes	My names is Jennifer Fahey, a Wake County resident, and I'd like to voice my support of the Falls Whitewater Park project. As a new paddler, I can speak to the desire to have beginner-friendly options for new paddlers to practice their skills and learn water sports safety as they progress (higher, aggressive water levels at Falls Lake Dam during releases inhibits this). This is a great opportunity to expand the outdoor recreational offerings in the Raleigh area in a very nature-friendly way (no machines or unnatural looking dams). I hope you'll give your full support to this project. Thanks for your time and consideration.	Jennifer Fahey	jenguin777@earthlink.net
Yes	I would like to express my strong support of the Falls Whitewater Park, I feel this park will help to significantly increase healthy recreational opportunities within the Raleigh area. Additionally, the park will improve parking and access to the area that can ba enjoyed by visitors for years to come. When looking at the costs of the project compared to the benefits, it is an absolute bargain. It will also have a positive economic impact on the surrounding area including restaurants, gas stations, hotels, etc. I feel the park can be a real attraction and will be used by local paddlersm as well as those that travel to the area. I have been to the area several times to paddle, but would love to be able to have the whitewater park and have more consistent days to paddle there. I also feel the design of this park strikes a perfect balance between improved recreation opportunities while also keeping and protecting the natural featuras of the area. I urge you be forward thinking, consider the health and happiness of your city's residents, and support the Falls Whitewater Park project. Thank you for your time and consideration.	Eric Gardner	Leadership & Team Training Specialist Campus Recreation and Wellness East Carolina University 104 Student Recreation Center Greenville, NC 27858 gardnerer@ecu.edu 252-328-2944

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Yes	I am writing you in regards to the proposed white water park on the Neuse River. I have been kayaking for over ten years now and have been a kayak instructor for the past four years. I have kayaked on a number of white water parks out west and thoroughly enjoyed them. My home town in Farmington, NM developed a park consisting of two rapids. One rapid is better at high water, while the other is at lower water. The park is over 10 years old and has not needed any maintenance. This great resource brings visitors from all over the region and has helped to create a white water culture in an area that never really had much of one before. The local community college teaches kayaking, canoeing, rafting and swift water rescue courses on the section of the river. Fire departments and other rescue services throughout the region utilize the park for rescue training as well. I am currently an instructor and the Outdoor Adventure Program Coordinator at Duke University. We offer a kayaking PE class and a number of kayaking clinics and trips. We typically have to resort to leaving the region and driving to the mountains of western NC in order to find adequate water to teach on. I utilize the local rivers as much as possible when they are high enough to get kayakers down. The Neuse is a great resource to me especially when the dam is releasing, otherwise it is too low to teach on. With the development of this white water park I would be able to offer a number of more trips and clinics teaching the importance of safe boating as well as conservation and leave no trace principles. I would also utilize the resource to teach swift water rescue skills to all of my participants. There are a number of Outdoor Programs in the area that waste natural resources driving to the mountains in order to teach kayaking and other water based activities that would be able to minimize their environmental impact with the development of this park. Please keep this project for such a great outdoor resource moving in the correct direction. Thank you for your time and support.	Levi Dexel	Coordinator of Outdoor Adventure Education Duke University Campus Recreation 919.613.7536 ldexel@duaa.duke.edu
Yes	I am contacting you in support of the Whitewater Park on the Neuse River in Raleigh, NC. As a professional kayaker and instructor I have nothing to say but good things about whitewater parks. They provide an excellent place not only for kayakers but for all people to get out and enjoy the outdoors. The greenspaces that surround these parks are prime for joggers, walkers, picnics, outdoor events, and many other outdoor pursuits. In addition whitewater parks provide an excellent incentive for people to move to the area. There are many places I've traveled to in the United States that have had great success with whitewater parks including: Reno, Nevada; Salida, Colorado; Buena Vista, Colorado; Golden, Colorado; Charlotte, North Carolina; Auburn, California; Cascade, Idaho; Glenwood Springs, CA and many more. In each of the instances in no way did tht whitewater park have a negative impact on the surrounding community. In fact in many instances the community was actually based on the whitewater park. Moving forward I believe its very important to support things that get people outside and whitewater parks are an excellent way to do this. Thank you for your time.	Andrew Holcombe	Professional Kayak Kayak Instructor Team Dagger Kayaks 828.736.2597 aholcomb@vt.edu
Yes	Please support the Falls Whitewater Park. I feel this park will help increase healthy recreational opportunities within the greater Raleigh area. The park will serve a useful local and regional resource, allow for impromptu gatherings of families, of boaters and individuals seeking to relax and enjoy watching the boaters. The design of this park strikes a balance between improved recreation opportunities while also keeping and protecting the natural features of the area. Because of its design, through my position at East Carolina University, my program will be able to introduce people to whitewater kayaking on a year round basis. Eventually they will be paddling on their own and will return to paddle Falls Whitewater Park. I urge you be forward thinking, consider the health and happiness of your city's residents, and support the Falls Whitewater Park project. Thank you for your time and consideration.	Bradley D. Beggs	Assistant Director East Carolina University Adventure Program Campus Recreation & Wellness adventure.edu.ecu office - 252.328.1560 128 Student Recreation Center Greenville, NC 27858

Yes	I am writing to you just to voice my support of a whitewater park. My husband and I have only recently begun enjoying the greenways of Raleigh on our bikes (despite having grown up here). I think the greenways are a treasure for all who seek to get some exercise in nature. The whitewater park would provide one more marvelous opportunity for outdoor fun near our city. The park would be something we could be so proud to offer the tourists who come our way and something that would promote care and appreciation of our natural environs. Thanks for all you've done to help with this.	Autumn Cobeland	autumn.cobeland@gmail.com
Yes	This email is regarding the proposed Whitewater Park at Falls Dam. My name is Christopher Klingman, and I strongly support the proposed plans for a Whitewater Park at Falls Dam. I am an avid whitewater kayaker, as is my wife, and we consistently drive at least two hours away from Raleigh, each weekend, to seek out whitewater paddling. Our money and our time go to other counties and states. We would love to bring the sport to our home, and bring it to our neighbors. When we finish with our day of paddling, we spend a great deal of time explaining what we do to people who stopped to watch us paddle. This sport is wonderfully interesting and not just to whitewater paddlers. In addition to the attractiveness of the sport, we have the single most envied whitewater peddling community in the country, based right here in the Triangle. I am talking about the Carolina Canoe Club. Because the Club is so large and well organized, we have some of the best training and educational whitewater resources in the country at our disposal. This park will bring their expertise back to the Triangle, rather than Western NC and Eastern Tennessee; where the whitewater is plentiful and predictable. I know that this proposed Whitewater Park will be a boon to our community, and it will benefit peddlers and non-paddlers a like. I want to thank you for your time and attention to this matter. Please let me know if you have any questions or comments.	Christopher Klingman	chrisklingman@hotmail.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Keith Lewis	pyranha7@bellsouth.net
Yes	I fully support the Falls Whitewater Park. A whitewater park could serve as an active arm of Raleigh Parks and Recreation, acting as a base for youth and adult activities for paddling instruction and events. Sports like whitewater paddling have kept many thrill-seeking teens happy and out of trouble!! Also, a whitewater park would serve the citizens of Raleigh who paddle and would attract paddlers from the region, for both recreational use and competitions. With today's changing economical climate, it is difficult to spend the time and money to travel 4 hours to the mountains to find whitewater...Having a park in Raleigh. We spend tons of thousands of dollars on bike trails, walking trails, baseball fields, and community based facilities (gyms)...As a voting, tax paying citizen of Wake County it certainly seems reasonable to me that we could spend a few thousand dollars on creating this water park and fulfilling the promise made when they took away a free flowing river in favor of a water supply for the city. I understand that some people may be opposed to this project, but I also understand that the main people who are opposed have an island on the river which blocks their view of the main proposed rapids.	Sonia Johnson	mtbgyrl@gmail.com

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Yes	I would like to reiterate my support of the Whitewater Park a little more fully. I have been a whitewater paddler for 10 years and am a member of the Carolina Canoe Club and American Whitewater, both organizations that support conservation of water resources along with recreational access. My 27 year old son is also a paddler. I think that Falls Dam is a unique asset that the City of Raleigh can take advantage of for the benefit of it's citizens and the environment for the following reasons: (1) A whitewater park could serve as an important node on the Neuse River Trail greenway, encouraging greenway use and attracting additional users. The dam already serves as a focal point of activity and many people come out to watch the paddlers when the dam is releasing at higher levels. The level of activity at the Whitewater Center in Charlotte by the many non-sports people that just come to watch moving water; if managed correctly, this could be an important aspect of the value of the whitewater park to the City. (2) As a side effect of increased activity an use of the greenway, it would increase awareness, understanding, and concern of the Neuse River as an ecosystem and a valuable natural resource, hopefully leading to better policies and behavior regarding downstream and upstream runoff and pollution in the river. (3) A whitewater park could serve as an active arm of Raleigh Parks and Recreation, acting as a base for youth and adult activities for paddling instruction and events. (4) A whitewater park would serve the citizens of Raleigh who paddle and would attract paddlers from the region, for both recreational use and competitions.	Wayne Jones	Jones Architecture, PLLC 5011 Falls of Neuse Road, Suite J Raleigh, NC 27609 919.510.8186 wayne@wjonesarchitecture.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Jennifer Teague	jenslocumunc@gmail.com
Yes	I'm contacting you to relay my support for the Falls Whitewater Park. Raleigh needs an outdoor attraction like the Whitewater Park. Raleigh would be the talk of the outdoor adventure world by building this park. I mean that, any city can build softball fields, not many cities can think outside the box enough to build a natural flow whitewater park! The money spent on this park would come back to the city by the hundreds of paddlers coming to town to paddle there. Think of the publicity generatged by having a whitewater rodeo in Raleigh! Please don't let the NIMBY's stop your progressive and forward thinking plans. This park would be a regional attraction, bringing paddlers from far and wide!	Buddy Kelly	Chatham Co, NC buddy@ceparts.com
Yes	I am sending this email to voice my strong support for the proposed Falls Dam Whitewater Park. I was a Raleigh resident for 10 years and frequently paddle in the vicinity of Falls Dam. The City of Raleigh has a long history of being a leader in park planning and development that continues today. The addition of a planned whitewater park would set the City of Raleigh apart from other municipalities and would make Raleigh a paddling destination. The addition of this park will only enhance the area in which it is proposed and it will open a whole new kind of recreation to the residents of the City of Raleigh. Thank you for your time and consideration.	Shane Brown	YMCA Camp Cheerio Assistant Camp Director 336.869.0195 shane@campcheerio.org
Yes	The Falls Whitewater Park is an easy cause to get behind. Why? It will benefit paddlers, spectators, river health, local gas stations, and local residents. There is NO downside which makes it any easy decision.	C. Bortz	cbortzrun@yahoo.com

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Yes	I wanted to drop you a note and voice my support for Falls Whitewater Park. I have been paddling whitewater for 20+ years and live 3 miles from the site. I feel that this will be a worthwhile project and fulfill the promise made when the Dam was built to create a whitewater course. The design is simple and will have minimal impact on the environment and provide a recreational opportunity for boaters in this area. With today's changing economical climate, it is difficult to spend the time and money to travel 4 hours to the mountains to find whitewater. Having a park basically in my back yard will be great for me and my 12 year old son to go out and spend a few hours together. We spend tens of thousands of dollars on bike trails, walking trails, baseball fields, and community based facilities (gyms). As a voting, tax paying citizen of Wake County it certainly seems reasonable to me that we could spend a few of those dollars on creating this water park and fulfilling the promise made when they took away a free flowing river in favor of a water supply for the city. I feel sure based on my water bill that they city has collected enough for the water to pay for this. I understand that some people may be opposed to this project, but this facility has been promised since the Dam was built 30+ years ago. Anyone buying property should have known that this park was a possibility, just like when I bought my house 12 years ago near the "purposed 540 corridor"...I had no reason to complain when they started bulldozing and laying down pavement for I540. And if you are not going to through with this now, then I would like to know when the city/county is going to fulfill their promise!	Russ Condrey	8004 Woodstone Drive Raleigh, NC 27615 russ.condrey@allscripts.com
Yes	The email from Russ Condrey was sent to you earlier by a fellow Carolina Canoe Club member and whitewater kayaker. He says EXACTLY what my thoughts are regarding the proposed whitewater park. I see no reason to reinvent the wheel…I'll let Russ speak for me! I've only been paddling for three years but plan on paddling forever. I would LOVE to have a whitewater park in the local area that I could frequent rather than taking my kayak (and my recreational money) to Charlotte for practice. Please add my name to the list of those who are pro-whitewater park! Hear, hear!	Dani Baker	dbaker@thewootencompany.com
Yes	I am writing to you in support of the proposed whitewater park at the Falls of the Neuse. As an avid whitewater paddler, I have in the past enjoyed paddling at Falls of the Neuse. It already provided a great place to play at the right levels. It also provides a great place for beginning and novice boaters to learn and practice. There are currently two problems with the area: (1) There is not a good access trail along the river. Much of the river is lined in riprap, making it difficult to walk along the river to make multiple runs of the existing water features. (2) The river only has sufficient flows for a very few days during the year. The proposed whitewater park will make the most of the available river features by adding a path along the river and convenient put-in and take-out points. The design will also maximize the number of days the river has flow that facilitates use by whitewater boaters. Replacement of the current rip rap lining the rbanks with more natural appearing rock will also increase the visual appeal of the area to visitors. This area is one that with a little effort, could become a focal point for the surrounding community. I appreci consideration of this project and hope that after many years of planning, you can approve the design and implementation of this project.	Garrick Taylor	garrick.d.taylor@gmail.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Melissa Lawrence	Anson Grove Neighborhood off Durant Road lilnuget@earthlink.net
Yes	There are very few things that I connect with as much as the Falls River park area, whether it has been to simply watch my older brother enjoy a short time in the water on a Saturday afternoon or simply the ability to watch others play in the waves. I know that this is a simply use of nature and a small cost to the city to allow the paddlers of Raleigh some relaxation. My older brother does a great deal for the city, the County and ever the sutdents of the state. He has developed methods to generate energy that Raleigh takes advantage of every day, and works like a dog to make that happen. His sole relaxation is paddling, many times at Falls River. This project should continue and be supported across the board.	Gene Barlaz	1201 Rainwood Lane Raleigh, NC 27615 ecbarlaz@gmail.com

Yes	Please count me as an out of state supporter of such a facility. Many communities are viewing these as an amenity to their downtown or community. Just another positive piece to the economic puzzle that will improve the image of a community both to prospective visitors, residents, and companies/businesses looking for a progressive community to locate in. Good luck!	Brian Tungate	btungate@new.rr.com
Yes	I am strongly in favor of the planner Whitewater Park at Falls Dam, and would urge you to fully support the project. I am not a boater, but I have friends and family who are kayakers, so I speak as someone who knows a good thing as a neighbor. I live just a few miles down Falls of Neuse from the proposed site. I love watching boaters playing in the rapids. It is an athletic ballet. The Whitewater Park would be a tremendous asset to our community. Our local whitewater boaters must drive long distances to enjoy their sport, not to mention the current lack of opportunities for teaching and practicing. In addition to benefiting the boaters, current and future, I believe that observers will find it to be a wonderful family activity. I would like to tell you my opinion of the boating community. These people, both men and women, young and old, are drawn to the sport because it is unique, exciting, demanding and fun. They are careful about safety, the environment, their equipment, and public perception. Think about it compared to rock climbing. You can't participate if you are a jerk, or a drunk because no-one would join you and wouldn't love thro often draws people in high level professional jobs because it takes concentration and reduces stress. And finally, the Whitewater Parl could only benefit the local economy.	Deidre Bloch Barlaz	ddbb@mindspring.com
Yes	I am a member of the local whitewater paddling community and strongly support the planned whitewater part at Falls Dam. I have been involved in whitewater paddling since 1978 and it is the ultimate in good, clean, healthy fun. I have lived in Raleigh since 1989 and am a regular at Falls Dam. My fellow paddlers are respectful of their surroundings and only interested in having a local whitewater opportunity. I feel that a whitewater park would enhance the environment at Falls Dam and make it a more attractive place for people to hike, fish and watch the boaters in the water. I am disappointed that anyone sees this as having negative impact on the local neighborhoods as I cannot imagine this to be the case. Thanks for your consideration.	Morton A. Barlaz	mbarlaz@gmail.com
Yes	As an avid biker...and soon to be Avid WW Paddler (once I perfect my roll)...I'd like to take a minute and voice my support on the potential WW Park on Falls Dam....to be honest I'm not sure why the City/County wouldn't want such a park to be in place? The Park will get many Avid Paddlers a Place to Play And open the door to many more Paddlers like myself tha cant drive to the Mountains to paddle all the time...Imagine the income and draw it would have for Raleigh!! Not to mention getting more people out of the House and outside taking on a Healthy form of exercise...A Lot bettern than Couch Paddling!! I'm Sure By Now y'all have reviewed the Benefits of the WW park in Charlotte has given that City!! Please make the right choice and Let us Have Our WW Park Here in Raleigh!!	Camye Womble	camye13@gmail.com
Yes	I definitely support this whitewater park. I visit the area at the dam where kayakers go to play in the hydraulics (the holes and waves) that form when the dam releases. I often see other people there who are not kayakers. The Carolina Canoe Club supports this park and many CCC members live in and around the Raleigh area. Many have helped with the research, design, and concerns of creating such a park. I'm sure it will be profitable and enjoyable to many areas residents and will attract visitors from other areas as well. Thanks!	Nancy Hight	nancy.hight@duke.edu

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Yes	Greetings, I am a new member of the Raleigh community having moved recently from Pennsylvania. My wife and I are whitewater paddlers, we canoe, kayak, and raft in whitewater rivers. We are most excited with moving to a warmer climate where we'll be able to be active on the water year-round, and we are already exploring near-by streams like the Haw River. We want to voice our excited with the prospect of the construction of a whitewater park at the Falls. Numerous cities have made such investment and are now observing growing community participation in river recreation and also visitation from river recreationsists. Work for NC State's College of Natural Resources and focus our research and teaching on outdoor recreation and nature based tourism development. If you think we might be of any help in informing your decision regarding the possible development of the whitewater park, please do nto hesitate in contacting us.	Duarte B. Morais, PhD	Assoc. Professor, Parks, Rec & Tourism Mgmt NCSU Box 8004m 4008 E Biltmore Hall Raleigh, NC 27695
Yes	Falls whitewater park this sounds like a great idea for adults and youths and great family outings spot. As of now to go to a whitewater park we must drive to Charlotte, NC and why not keep to money and the fun local paddling is a great activity for young and old alike.	Don Frank	dwfrank@charter.net
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Carolyn J. Fidgeon	fidge@baybroadband.net
Yes	I wanted to voice my support for the proposed Falls Whitewater Park. As one of thousands of paddlers who live in the Triangle area, we would love to be able to visit locally for a whitewaer park instead of having to travel to Charlotte or farther for whitewater paddling.	Leon Pfeiffer	friendswithdave@yahoo.com
Yes	I have not been able to make any of the hearings because of business and family commitments but I wanted to write and give my support to the proposed Falls Whitewater Park. I have been paddling for a year now and can tell you it is an amazing outlet for a busy life. It is an great combination of excitement and relaxation. It would be a great asset to Raleigh's outdoor public resources if the park is built. Thanks for your consideration!	Rick Higgins	rickhigg@yahoo.com 919-675-9449
Yes	My name is Paul Ress and I live in Bowling Green, KY. I am writing you today to show my support for the Raleigh Whitewater Park. It will be a great financial asset for the city due to kayakers the fact that myself will drive great distances to use the park. Typically, I will spend the night in a hotel, dine at a local restaurant and fill up my gas tank in town when I visit a river. Please take this information into consideration. Please support the Raleigh Whitewater Park.	Paul Ress	pmress@gmail.com
Yes	I'm contacting you today to show my support for the Falls Whitewater Park. Raleigh needs an outdoor attraction. I live in Orange Co, but would happily come use such an "out of the box" park like this. When I come I would bring all my paddling friends from Orange and Chatham Co. We would bring our hard earned $ to spend at local businesses! This whitewater park would raise the "coolness" level of Raleigh. They would be talking about your park in Asheville! Please don't let the "NIMBY's" scuttle these plans. I'm not sure why the River Mills condo people are opposed to the park. It would seem to me that an attraction like this would only increase the value of their property, they must be yankees! Please keep up the good work. Thanks for your visionary plans!	Buddy Kelly	buddy@ceparts.com
Yes	I am writing in immense support of a Raleigh Whitewater Park on the Neuse River. Although not mainstream, whitewater paddling provides an excellent recreational opportunity for any outdoor enthusiast. I was fortunate enough to grow up in Pittsboro on the banks of the Haw River. I began paddling whitewater my senior year at Northwood High with my statistics teacher on the Lower section of the Haw before Jordan Lake. As a piedmont local and avid paddler, the benefits of a play park greatly outweigh any negatives. The community that forms around rivers is very strong. Providing accessibile paddling locatgions continues to foster this community. With the growth of a community comes a new market for paddle sports and in turn a growth in business. I strongly encourage and support an initative of this sort and look forward to paddling in Raleigh.	Justin Kleberg	Team Jackson Kayak classykleberg@gmail.com

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Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can do to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Yolanda Farmer	totlpraz@aol.com
Yes	Hello, I have been a paddler since 1993. I live outside Erwin, NC. I would drive to Falls Whitewater Park if you were to build it. I have several friends in this area that would join ma. We love to eat good food after a workout on the river. We may need to get some gas for the trip home. Thanks in advance	Gil Williams	gilrw@embarqmail.com
Yes	I would like to voice my opinion about a possible whitewater park built below the Falls of the Neuse Dam, in that I am in full support of such a park being built. As an avid whitewater paddler I believe that nothing but good things can come from a venture such as this. The proposition is taking what is already there and making it better while causing minimal or if any ecological impact. I can say that every time I myself have been at Falls dam I have seen a multitude of spectators who if more exposed to kayaking would have an opportunity to learn at such a park if it were built. This park could also create an economic impact as well, in that the increase of people at the park would generate business for the local gas stations, restaurants, and even outdoor outfitters who stock kayaking supplies. What we are taking about is nothing like the USNWC in Charlotte where all of its features are man made, this park will be as natural as it is right now considers the banks and stream beds have already been altered by the construction of the dam. I sincerely hope my voice will be heard when it comes time for the considertion of a whitewater park at the of the Neuse Dam. Thank you for your time.	Shawn W. Sheffield	sheffield42@msn.com
Yes	I am writing to say I wish you would vote in support of the proposed whitewater park at Falls Dam. I am a Raleigh based kayaker that travels many miles to find water 12 months of the year. It would be a well placed amenity that would have plenty of use by both local paddlers and regional paddlers. I am also a volunteer with Team River Runner. We are a Triangle based chapter of certified kayak instructors that are teaching wounded and disabled veterans the sport of kayaking. This park could be a great asset in our teaching of these vets. It would allow our disabled vets an easy access to the water (kind of like a disabled parking space at the mall). One of our veterans is an amputee and this would greatly help his accessibility issues. I know this park would not be used by every resident. I do not personally run at Umstead, bike the Tobacco Trail in Durham, use the fishing ramp at Lake Wheeler, swim at the beaches of Lake Jordan, but taken as a whole they offer a wondertul array of options for the citizens of this area for outdoor activity. This would be a great addition to that group. It would also be an interesting beginning to the Neuse River trail. It is a shame that such a small group of property owners could derail a project with their objection. What is the average length of their residence in these condos?	Jeff Dennie	Raleigh Resident jeff.dennie@gmail.com
Yes	I just wanted to express my support of the Falls Whitewater Park proposed near Falls Dam. This is a win/win situation for the paddling community and for the local citizens. I urge you to continue with this plan and implement it as soon as possible.	Tom Adams	paddlernc@gmail.com
Yes	I wantad to write to you and voice my support for the Falls Whitewater park which has been under consideration by the City of Raleigh for a number of years now. I believe that this would be a tremendous asset to the community. In a time when books like "Nature Deficit Disorder" are best sellers and the obesity epidemic continues out of control, creating more and better outdoor recreation for your community can only be seen in positive light. I believe that it will draw people from neighboring communities for regional tourism. Living in Greensboro, I will say that I will definitely be visiting the park as much or more as I come to visit the Durham Bills (which I already love to visit). As well, there are local concerns that this will damage the scenic view of neighboring condo owners. This is not true as the park will be out of site of the condos as they will be separated by a large island. Please help to make your community a better place.	Jeffrey C. Hatcher, MD	Conservation Chair Carolina Canoe Club jhatcher_md@yahoo.com
Yes	I've been living in Raleigh for 13 years, and been a whitewater kayaker for 11 years. I usually drive pretty far to go kayaking, up to 6 hours one way for weekend trips and cross country for longer trips. I so wish there is something closer to where I live where I can go paddling after work, or paddling a few hours on weekends and still have time to clean, mow the lawn, and go out with friends for dinner. I support the building of the Falls Whitewater Park. Thank you.	Jim Wei	jimwei@yahoo.com

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Yes	I am definitely in favor of the proposed design for the whitewater park at Falls Dam. I am a resident of the City of Raleigh and look forward to seeing the city move forward on this project for which I will use the services.	Lorraine Burnham	5912 Chivalry Court Postal Code 27612 laburnham@bellsouth.net
Yes	I am very excited about the proposed whitewater park at Falls dam. Not only will it bring in paddlers who will visit from literally hours away (we travel to Weldon to play there, which is a two hour+ drive). It's a great teaching location for those of us who are kayak instructors - and for the City's Adventure Program.	Diane Owens	dowens5820@nc.rr.com
Yes	This park will be money well spent. The biggest hardship on the Charlotte Whitewater Park is maintenance and upkeep. They have to treat the reciculated water, keep the pumps running, the concrete repaired, the conveyor belt serviced, thet adds up to high maintenance cost. The Falls Whitewater Park will be a more natural setting with none of those maintenance costs. It will be a great park that we can be proud of.	Robert Martin	robert.martin@sp.diosynth.com
Yes	I just wanted to let you know that I am in favor of the proposed whitewater park. I think it would be a greet asset to the city of Raligh and the whola river walk project. Thank you.	Andy Melinowski	701 Monroe Drive, Raleigh, NC 27604 amski@nc.rr.com
Yes	I am extremely excited about the completed design and drawings of Falls Whitewater Park! I think this water park would be a great addition to the City of Raleigh and our community. Not only would Falls Whitewater Park bring more revenue to the City of Raleigh, but also advocates a healthy lifestyle and an activity that brings families and friends together. I look forward to seeing this vision become a reality!	Kelsie Ormsby	kpormsby@email.unc.edu
Yes	I am a resident of Orange Co, NC that is totally stoked that the City of Raleigh is considering putting in a whitewater park at the base of Falls Lake Dam. I would come there to paddle, bring all my friends, and spend lots of money in your fair city. Kudos to Raleigh city officials in having the foresight and vision to dream this up. I think this raises the level of "cool" in Raleigh a thousand degrees!	Buddy Kelly	buddy@ceparts.com
Yes	This is a bargain! It will be a park that Raleigh can be proud of and it won't cost a lot of money to maintain. Unlike Charlotte's concrete ditch, this park will be in a natural setting, with no pumps, conveyor belts or purification systems to maintain. It's a win win.	R M Martin	robert.martin@sp.diosynth.com
Yes	I am writing in support of the Falls Whitewater Park. It would be a great recreation for the folks in our area, as well as bring in people from other areas and help our business'. Thank you.	June Livingston	n_j_livingston@hotmail.com
Yes	I'm sending this in support of the falls whitewater park. This would be a great thing for the area both for recreation and local business.	Dave Livingston	dlmtnsurfer@yahoo.com
No	Please consider me against this project (kayaking park), Thanks.	John Hetherington	1500 River Mill Drive, #310 Wake Forest, NC 27587 jheth73@embarqmail.com
Yes	I'd just like to extend my strong support for the Falls Whitewater Park. I think the park will be a great asset to the citizens of Raleigh and will help bring in visitors from other counties. I like the park design and how it's taken shape with input from several communities in the area. Thank you.	Matt Daniels	mattyd01@hotmail.com
Yes	I'd like to take a moment to share with you why I'm in favor of the Falls Whitewater Park. As a long-time whitewater enthusiast, I've met a LOT of kayakers and canoeists, paddlers, from all over the world. In over 18 years I've never met someone who didn't care about the rivers they paddle. There's just something about getting to enjoy a stretch of river that draws people in, but draws us into a place beyond being a consumer of recreation to be a caretaker of Creation. The river itself is likely to be even cleaner and more cared for when the paddling community is connected to it. Thinking about PRIME location for this whitewater park, it will draw people from all over Eastern North Carolina who now have to drive as much as six hours to get to a decent whitewater stream. The opportunity for very much exists for this to become a landmark spot know by people all over the state. The park would give opportunity for safety trainin and boating courses not only for whitewater enthusiasts, but also for local fire and rescue departments. A set/structured course would allow for swift water rescue training to happen in a more controlled environment, helping workers to understand the dynamics of stream flow. There are many benefits to such a park. I do hope that you will consider the wide range of opportunity that exists as the next steps are taken in the process of development.	Justin Simmons	justin@lovechapelhill.com

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Yes	Raleigh City Council, I am an outdoor enthusiast and love the water. Since my amputation 24 years ago, water activities have been where I can be on a level playing field with able body athletes. My passion for the water led me to get my certification as a saa kayak instructor 12 years ago, and most recently, I started whitewater kayaking. Through my experiences, I have seen how the sport of kayaking can positively impact people who try it out. Raleigh has a great opportunity to offer a safe arena for current and future paddlers to enjoy the sport of kayaking; in addition, the project would improve this stretch of river aesthetically and create possible business opportunities for shops and restaurants. I hope you support this opportunity to better serve the residents of the Raleigh Area. Have a good day.	Wes Hall	weshall2001@hotmail.com
Yes	I am writing in support of the proposed Falls Whitewater Park. I recently relocated from Charlotte and really enjoyed having a whitewater park nearby. Even as someone who is not an avid paddler, the park would be a great place to spend an afternoon, especially with kids. It stands to reason that the existence of the park would draw others to the area, especially given the lack of comparable whitewater areas in the region. Finally, the park would offer an inexpensive form of recreation to area residents in these difficult economic times. Please support the park.	John Gardner	john.gardner@klgates.com
Yes	I would like to give my support to the Falls Whitewater Park, and hope that it becomes a reality. As an avid paddler for over 25 years, I would love to have a park in my home town. Thank you.	Michael S. Williams	michael.williams@firstcitizens.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make the whitewater park a reality for the people of Raleigh and surrounding areas.	Lynne Stevens	lynne.stevens@ucb.com
Yes	I support the Falls Whitewater Park. I believe a whitewater park would be a great addition to the City of Raleigh not only for boaters but as an additional resource for first responders to provide the training their members need to better serve our and other communities.	Luke Osborne	lukeosborne@earthlink.net
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Tom Wittekind	Raleigh, NC bigh2o@gmail.com
Yes	I am writing to express my support to the city building a whitewater park at Falls Dam. I would love to have a recreational choice, such as this, closer to me than tha current option of driving to the mountains. I think that it would add interest, income, and training facilities to our area. Development that increases the quality of life for the citizens of our city, gets a big vote in my eyes.	Lisa Wood	lisaveronicawood@gmail.com
Yes	I am in favor of the water park at Falls lake for the following reasons: it is a unique form of recreation in our area; it will bring additional money to the area; rescue personnel can do swift water rescue training there; it will be a fun place to spend an afternoon watching paddlers, wading, tubing, walking, picnicking; I'd like to learn to paddle and it's a shorter drive than heading to the mountains. Thank you for your time.	Jen Suchanec	jsuchanec@yahoo.com
Yes	I am writing to voice my support for the Falls Whitewater Park. I live in Wintson-Salem, NC and would value this as a nearby place to practice whitewater kayaking skills.	Keith Adkins	902 Aspen Trail. Winston-Salem, NC 27106 keithadkins@hotmail.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Adam Eckhardt	404 Columbia Dr. Raleigh, NC 27604 spasticplastic@gmail.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Andrew Nixon	Duke University Medical Center 309 MSRB Building Research Drive Durham, NC 27710 anixon@duke.edu

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Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Richard D. McAnulty	rmcanulty@carolina.rr.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Tom Howard	tom.howard@bravematters.com
Yes	I support the proposed whitewater park, and believe it could be a very valuable resource for the city of Raleigh.	Todd Martin	wtm0907@gmail.com
Yes	I am writing to express my support for the proposed whitewater park at Falls Dam in north Raleigh. As a longtime Raleigh resident, kayaker and lover of outdoor activities I am very excited about the possibility of this park being developed. The park would provide a very nice alternative to traditional outdoor activities and exposure to the great sport of kayaking for Raleigh residents. Further, it will provide a place to safely teach kayaking skills to the next generation of kayakers. I sincerely hope that you will vote in favor of the Falls Whitewater Park.	Kevin Cox	kcox@biolex.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Sarah Harris	sarahbeth308@yahoo.com
Yes	I just want to say that this is a great idea for boaters and even non-boaters. I can't wait to be able to take my 16 month old daughter to a great spot so close to home. I want to show her all the fun she can have learning about green shape and outdoor activity. Falls Whitewater Park will be a destination stop. I hope the city approves of this once in a lifetime opportunity.	Jill Fidgeon & Family	Wake Forest, NC jndinsdale@gmail.com
Yes	I am writing to voice my support for the construction of the Falls Whitewater Park. This would be a tremendous benefit to the City of Raleigh. It would offer another quality of life benefit to show people Raleigh is more than the suburban sprawl that mostly characterizes Raleigh now. I am an avid whitewater kayaker who would enjoy the park very much. I also have a wife and children who do not paddle but would benefit from the other amenities of the park. The proposed area for the park is now unmaintained, and frequently full of trash. There is a misconception by the residents of the Mill Rive Condominiums that the Falls Whitewater Park would increase the trash and become an eyesore. This is completely false. The park will be located on the other side of the river and hidden by the islands in the middle of the river. It will be situated on land that they do not own. Its layout will allow the land to be maintained in a cleaner safer environment than is possible now. To allow such a small minority of residents to derail something so beneficial would be a travesty. Please place your full support for the construction of this park. Ev from it, even the vocal minority of those opposed to it.	John H. Grimes, Jr.	10312 Whitestone Road Raleigh, NC 27615-1234 jogremmy@yahoo.com
Yes	I'm writing to you both in support of bringing a Whitewater Park to the Falls Dam. As a beginner whitewater kayaker, I have to either drive to Charlotte and learn at the US Whitewater Center or drive to the mountains of North Carolina/Tennessee. Bringing this park to the Raleigh-Durham area would bring with it several things: a unique form of recreation in our area, it would bring additional money to our area, and quite frankly it would be a fun place to spend an afternoon watching paddlers or wading, tubing, walking, picnicking. As a native of Durham and a current resident of Chapel Hill, I am only beginning to learn of all the natural beauty of Wake County. I recently discovered Beaver Dam State Recreation Area and Falls Lake single-track hiking trail. This would provide yet another reason for me to come over to Wake County to find otu and explore all it's offerings. Thank you for the consideration.	Gary Galloway	ggalloway@cbcnewmedia.com
Yes	I just wanted to express my support for a whitewater park on the Neuse in Raleigh. My sister and her family have lived in the area for years and it would be nice to have the park for my visits. It would bring to your area more often now that I have that and family there. I know of many paddlers that would make the trip there and they will spend money while there.	Bryan Kyle	bsk10@windstream.net

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Yes	Just a quick note to express my support for the white water park in Raleigh. I think it would be a great asset to the area. Also by is use by boaters and public viewing it will bring attention to any possible pollution/erosion problems that are experienced in Ralaigh and down stream. I hope to see it built and able to use it soon.	Andy Malinowski	701 Monroe Drive Raleigh, NC 27604 828.3676 amski@nc.rr.com
Yes	I'd like to voice my support for the Falls Whitewater Park project. Although I'm a Cary resident, I would still view the park as a valuable addition to Raleigh's many high quality recreational facilities. Kayaking is a family friendly activity and generally facilitates a sense of environmental stewardship among it's enthusiasts.	Chris Nack	chris.nack@gmail.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Brian Dickinson	brian.dickinson@quintiles.com
Yes	I cannot see how this Park will have any impact on River Mills Condos. The whitewater section will be on the opposite side of the river blocked by an island. No one will be trespassing on their property, all of the activity will be on the opposite side of the river. They may still see a few fishermen, the area below the dame offers excellent fishing. The whitewater park will only improve the fishing. This place offers a wonderful opportunity for Wake County and Raleigh. A ready made whitawater park in a natural setting. This will not be an extreme whitewater run, it will be a gentle fun run for all to enjoy safely.	RM Martin	robert.martin@sp.diosynth.com
Yes	I just wanted to take a moment and let you know that I am in support of the proposed Falls Water Park. I am part of the kayak community, and find that this community supports the larger community in supporting businesses, healthier lifestyle, and recreational opportunitias to all who are drawn to the sport. I thank you for considering the proposal.	Paul Kovolew	pkovolew@yahoo.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Reese Culbreth	1806 Bickett Blvd, Raleigh, NC 27608 919-623-1907 tripptripp@earthlink.net
Yes	I have a strong interest in the Whitewater park being developed on the Neuse. I am from Eastern Tn and this would give me a reason to travel over that way to paddle. It is a great idea and I look forward to being able to spend time boating in Raleigh.	Tommy Clapp	clappt@gmail.com
Yes	I wanted to drop you a short note in support of moving forward with the new whitewater park on the Neuse River. As an avid paddler myself, I can speak firsthand to the passion that the paddling community has. Not only for their sport, but for being good stewards of rivers, environmental issues in general, and supporting paddling related causes. The group I paddle with goes out of their way to being part of positive solutions to a wide variety of causes. I believe they are exactly the type of people that you would want visiting your community. I also believe this park could be a big economic boost to the Raleigh community. That passion I mentioned for our sport drives many of us here in Central Virginia to other states in search of paddling opportunities. I would not hesitate for a second to come to Raleigh to paddle and support not only this park, but other businesses in the area. I thank you for your time and consideration. I wish you the best of success, and look forward to learning more about this project in the near future.	Steve Saylor	Monroe, VA allsky7@yahoo.com
Yes	I learned this morning that plans are being considered for a whitewater park naar Raleigh. As a member of three diffarent paddling clubs in the South East, I am excited about this possibility. Development of this facility would cause me to spend several weekends/overnights in the Raleigh area. While I would paddle, my wife would shop. The paddling community would truly welcome this, and the park would serve as a draw from throughout the entire region. -- Just wanted to communicate my enthusiasm.	Rick Regenfudd	Elizabethton, TN rick.regenfuss@sti-distribution.com
Yes	I'm a Raleigh resident that would love to sea the Falls Whitewater Park completed. I only started paddling 2 years ago with my wife and children and would appreciate the opportunity to share that experience so close to home. I believe the Falls Whitewater Prk would be a great asset to the City of Raleigh.	Chris Grindstaff	27613 chris@gstaff.com

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Yes	I am mother of a ten year resident of North Raleigh and can not wait to share this great experience with my daughter. I support will all my heart the Falls White Water Park. The opportunities this park will create to expose her to sport and green space at the same time is unprecedented. I would hate to have to go all the way to Charlotte to get a similar experience, when we could go right in our own back yard. Please don't let Raleigh lost this once if a life time opportunity.	Jill Fidgeon & Family	indinsdale@gmail.com
Yes	Please support the construction of a whitewater park at the base of Falls Lake dam. I have visited this location for general recreation and boating for a number of years. This enhancement of the park would be a benefit to the Triangle and to Raleigh. I am sure that local businesses would benefit from the park.	Bob Morris	106 Reton Court, Cary, NC 27513 roblmorris@gmail.com
Yes	Although we do not live in NC, we sponed quite a bit of time there in our RV enjoying your beautiful area (and whitewater). This park would certainly be an asset and draw many visitors (and there $$$) to the area.	Jack Conrad	Aracadia, FL & wherever our RV is parked jconrad@busnut.com
Yes	I am a kayaker and an instructor. I would love to see Raleigh develop a whitewater park so that the citizens would have a safe and reliable place to plan and teach. Raleigh's Adventure Program would benefit from the park, as there are few places to take beginner kayakers. Most rivers are very rain dependant to be navigable. Having scheduled releasas would make it easy for the Parks to offer it's programs on a regular basis.	Diane Owens	dowens5820@nc.rr.com
Yes	I would like to voice my vocal support of the Falls Whitewater Park. This is a genuine positive for the city and virtually no downsides. The better cities in this country have unique features such as this that make it an attractive vibrant place to live. The Triangle area would greatly benefit from this Park.	Jeff Sailus	jsailus@gmail.com
No	I am writing you to express my strong disagreement to the proposed whitewater park below Falls Lake Dam. I am opposed for several reasons. At the Mill we have many kayakers and canoeists who use the north channel of the river that is our home. People come from all around town to use the put-ins that are already in place, but the truth is that no one is closer to the river than us. We spend hours every day down by the river. We are familiar with its wildlife and its flow cycles. We pick up the trash on the banks that will incraase if a park is built, and yet our collective voice had been ignored. Although our concerns have been voiced repeatedly the park proposals have only become more invasive. Not only are we still facing islands of artificial rocks are dredging of the south channel, we are now looking at a mechanical weir to be placed in the middle of the river. The redirection of water to the south channel may well put an end to the whitewater in the north channel that paople now enjoy and place and eyesore in the middle of our beautiful river. Sadly, this is the least of my worries. These measures are proposed in order to make a park that will be useable at most only 105 days per year. I am positive that on most of those days few people will not even use the facilities because most people are working 5 days per week. I know this because there are not many people on the river presently in the middle of the work week! Subtracting the weekdays, the number of days that people are likely to turn out in numbers dwindles to 30 weekend days a year. The rest of the time the place will sit empty. How then can this project be justified? How can it even be worth the upkeep? Who will patrol the abandonded park 9 months a year when there are existing jurisdictional disputes about patrolling Falls Lake Dam after dark? Please remember that we are so concerned because this is our neighborhood at stake. I am aware that a small minority of paddlers in the area are vocal about their desire for a park, and I am sure the occasional whitewater tournament would be great fun to to go, but to forfeit the natural beauty of the river so that a handful of kayakers can have a park that is utterly usesless for at least two-thirds of the year is a crying shame and a big waste of money. The part that most concerns me is the ecological impact to both channel of the river. This park could potentially ruin the small wildlife enclave that now exists, whose days I fear are already numbered with the inevitable expansion of both Raleigh and Wake Forest. From my front windo I observe daily the geese, mallards, a great blue heron, and a reclusive night heron that all congregate directly where the proposed pooling area just above the first whitewater drop is to be. I do not want these animals to be disturbed and I am extramely upset that they might disappear altogether. Their nests will be ripped up and paved over with artificial rocks if the park planners have their way. Not only will we have an empty park most of the time, but the wildlife will be gone too. And on the rare days the park is actually used, the crowds will surely bring litter with them.	Gene Dodd	River Mill #205 everettdodd@gmail.com

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No	There is enough trash already in the river. I know this because I and everyone else at the Mill pick it off the riverbank in front of my living room window. I am also concerned about noise pollution. Many of the kayakers who use the river are already discourteous with their yelling, which starts early in the morning and continues until late afternoon on release days. I am referring to constant call-and-response type yelling, for hours. They disregard the people that live here completely. I would normally enjoy seeing anyone take advantage of our beautiful public river, but as so few of the people seem to care that this is also our home, I simply cannot welcome further encroachment. I am convinced that the proposed park would be detrimental to the wildlife and the natural rapids in both channels of the river and bring with it more garbase and more noise. For the majority of the year the empty unlit parking lot and trails could even pose a public nuisance to the surrounding neighborhood. Thank you for your understanding; I hope you will help us do the right thing here.	Gene Dodd	River Mill #205 everettdodd@gmail.com
Yes	I'm taking a moment to drop you a note as a non-paddler but in support of the proposed whitewater park at Fall Dam. As a mountain biker, I enjoy and count on local parking and private land where I can ride without driving to the actual mountains. People who enjoy traditional sports may take this sort of thing for granted. There are tennis and basketball courts in every park, baseball and soccer fields on every street. These sports can also be enjoyed in driveways and backyards while most "nontraditional" sports don't share this luxury. Without local support in perfect locations, water sports enthusiasts have to travel great distances to enjoy their sport. A runner can put on trainers and hit the sidewalk, but a paddler has to pack the kids, pack the car, pay for a hotel or camp site and spend an entire weekend away from home for a few hours of recreation. Also, you will find in the kayak workd what I see in my mountain bike community; upwardly mobile people with disposable income. This means you have a group of people that know that you have to take care of your environment and equipment; trash gets picked up, consideration is given to neighbors and those that live close to our parks, etc. Neither group is your typical 'bad neighbor' who would vandalize or even tolerate bad elements such as illegal drugs. Stereotypically we are white collar or well paid blue collar people who want to enjoy the beauty of nature, not take it for granted and abuse it. Currently, the Falls Dam area is little more than a bridge over a creek. With a whitewater park it could be a community area, a destination, a glowing example of all that our city has to offer to its citizens. As a mountain biker, I try to imagine my life without Umstead, or Lake Crabtree, Harris Lake Park, etc and all that I see in my minds eye is concrete and soccer fields. I might as well stay indoors or move to another city. Let's help our friends who paddle enjoy the same luxury as amateur soccer and basketball players. Your support for this park is support for a better Raleigh, a more forward thinking modern world where the out of doors isn't just something you see from your office window.	Stephen A.Miller	stmiller@lenovo.com
	I am writing you to voice my full support of the City of Raleigh's Falls Whitewater Park being considered for Falls Lake dam on the Neuse River. As a paddler, this is one of the best ideas that I've seen since moving to Raleigh in 1998. Raleigh has established itself as a great place to live for outdoor enthusiasts, thanks to the forward thinking actions of the city, and the addition of the park would be a superb contribution to this overall effort. As you know, there is a large community of paddlers in Raleigh, and the events held by Raleigh Parks and Recreation, such as the winter roll sessions, Rollapalooza, and kayak classes, are well attended. The nearest regular whitewater opportunities are 3-4 hours away, so having a whitewater park right here in Raleigh would greatly increase paddling opportunities for local whitewater enthusiasts like myself. In addition, it would attract people from surrounding areas to Raleigh. Finally, it would be a great boost to Raleigh Parks and Recreation in its outdoor programs. In short, I am in strong support of the Falls Whitewater Park. It would provide much needed recreational opportunities to myself and Raleigh, and would help strengthen the already great outdoor programs offered by Raleigh Parks and Recreation. I urge you to help see that this park become a reality in the near future.	Edward Vargo	4108 Picardy Drive, Raleigh, NC 27612

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Yes	My entire extended family of appx twenty members that all live in this county fully support the development of the falls whitewater park. The benefits grossly outweigh the negatives, no contest. For almost 90 years, the most commonly asked question to the BBB and the board of tourism in south bend, Indiana was: where is or how do we get to the university of Notre dame? The current most asked question is how do we get to the new whitewater park. How amazing is it that a "simple" water feature can replace one of this country'smost beloved institutions in the amount of interest by the public. Try to focus on the big picture, we have poured hundreds of millions of dollars into trying to revive downtown, build skateboard parks, dog parks, jogging trails, and community centers - throw the rest of us (those of us who prefer the great outdoors to the high rise and asphalt) a bone. I humbly ask you to consider the objections, then using logic, deductive reasoning, and common sense, make the best decision and move forward with this project. Please remember, it's our tax money too, not yours. The Raleigh city council has already approved fundi for streamside improvements in this specific area three times in the past without spending the allocated money. This will be one of the premier stops along the mountains to seas trail for hikers when it is completed. Their will never be anover better time than right now, these improvements will only increase in cost. My wife and I spend tens of thousands of dollars a year on kayaking related trips and gear. It would be nice to spend more of that money at home and have our friends from out of state bring their dollars here to our area for a change. God knows our economy can use the influx of cash. Thank you for your consideration.	J Mark Hoffman	aquaticmammal@nc.rr.com
Yes	I would like to take this opportunity to let you know that I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I have been a whitewater kayaker for 16 years now and am an instructor for the Raleigh Parks and Rec Adventure program as well as a volunteer instructor for the Carolina Canoe Club. A whitewater park as proposed in the design would be a tremendous teaching resource for both the city and the club. It would also give families a nice place to go and enjoy the outdoors and relax and experience something new. I have been a hiker and outdoor enthusiast for my entire life We have plenty of hiking and mountain bike trails, parks and venues for all type of sports here in Raleigh and I dream of the day that the citizens of Raleigh can experience something as wonderful and different and special as a whitewater park. It would show an even greater diversity to have a whitewater park added to this list of wonderful resources. Having a resource such as this in Raleigh, will allow me (as well as many other) to stay home and do more things in this area along a sport that I love, but usually have to drive 3 to 6 hours away to enjoy elsewhere. I know that the addition of this whitewater park v park a reality for the people of Raleigh and surrounding areas.	Lisa Birskovich	1895 Bellwood Drive, Raleigh, NC 27605 lbirsko@yahoo.com
Yes	I see nothing but good coming out a project like this. The opportunity it presents for the community is endless, disadvantaged kids being able to enjoy the sport of kayaking. I work with TRR an organization for Vets who want to learn to paddle. This park will give a venue in which to work with them without having to wait for rain or driving 4 hours. Plus it will to maintain a cleaner environment at the dam which will make it a nice area for all.	William Poorboy	wpoorboy@yahoo.com

Falls Whitewater Park Community Meeting #3
November 3, 2010

Public Comments
Received
11/3/10 to Present

Yes	I am writing in support of the Falls Whitewater Park and ask that you vote in favor of this project. The Triangle area has one of the largest whitewater paddking clubs in the southeast, with members leaving Raleigh to travel to western NC and neighboring states each weekend. The Carolina Canoe Club began in the 1970s and has continued to be an active club for 30+ years. In addition to paddling, club members participate in river cleanups each year (including the Neuse River) and hold safety training sessions for club members as well as emergency response personnel who want to take a swift water rescue class. The Park would allow paddlers to stay close to home and support local businesses (gas stations, restaurants, and outfitters). The designers of the Falls Whitewater Park have carefully considered the concerns of the individuals who live in the River Mills condos and oppose the Park. The whitewater course is designed on the oppostie side of the river from the condos, with a very large island blocking the view of the course from the condos. Unlike the whitewater park in Charlotte, the Falls Whitewater Park is designed to blend into th setting. In addition to protecting the privacy of the condo owners as much as can be accommodated on a public waterway, the design carefully considered how to protect wildlife by keeping flow to all parts of the river. Falls dam is an area that draws people. The City of Raleigh is already acquiring land just downstream of the Falls dam and plans to extend the greenway system to the dam. Every time I have been to the dam, there are people fishing, picnicking, walking, and just enjoying seeing the water. This is a public resource for the City of Raleigh, a City that has developed recreational resources for many different groups. The Falls Whitewater Park could offer additional recreational opportunities and give the City another resource to market. Please vote yes for the Falls Whitewater Park.	Nancy Guthrie	nancy.guthrie@gmail.com
Yes	I am in favor of the proposed design for the whitewater park to be built on the south channel of the Neuse River below the dam at Falls Lake. I know that the addition of this whitewater park will greatly benefit the public and can generate income for local businesses. Please do all that you can to make this whitewater park a reality for the people of Raleigh and surrounding areas.	Brent Summerfield	bsummerfield@bellsouth.net
Yes	Raleigh is such a neat place to live for so many reasons, but for the outdoor enthusiasts there is something missing. Kayaking is a wonderful sport for ages 6 through at least 60. There are no good rivers in the area that run with any consistency. There are many people like us who live in the area and would really benefit from a whitewater park. Not to mention the way that whitewater kayaking can benefit the community. It would undoubtedly bring people in from across the country. Rafting, kayaking, you can hold events that would benefit all of the area businesses. Groups like Team River Runner that adis wounded vets getting on the water and learning to compensate and paddle anyway. I have seen the way that kayaking benefits youth. Giving them a way to challenge their bodies and believe in themselves not to mention that they learn the skill of making decisions for the sake of safety. I have seen this have a maturing effect on teens. A whitewater park would benefit countless Raleigh residents in many different ways. I am a huge supporter of this effort. Please, please, help us make this happen! Peace.	Braden Henry	braden@endlessriveradventures.com
Yes	Positives for the park: (1) Keep boaters in Raleigh instead of us going out of town. (2) Concerns of homeowners have been met, this is a public river with long history of changes. The activities are out of their view. (3) Flows have been designed for wildlife (fish, other aquatic life). (4) Could be a bragging point for Raleigh - WW Park with greenway and amenities already being developed in that area.	Nancy Guthrie	6717 Valley Woods Lane, Cary, NC 27519
Yes	I support the whitewater park.	Jenis Grindstaff	1206 Merrion Park Ln, Morrisville, NC
Yes	I support the whitewater park.	Chris Grindstaff	9408 Does Run Ct, Raleigh, NC 27613
Yes	Obstacles in the path of boats need to be natural not brillo concrete. Suggest take activities of north flow at the proposed normal flow. To the best of my knowledge, in the Colorado courses, the shore features are designed to withstand flooding. How features to be maintained (like after flood)?	Paul Mobus	1617 Wedgeland Dr, Raleigh, NC 27615
Yes	A whitewater park in Raleigh would give me reason to visit here rather than Charlotte or Western NC. Please make this happen.	Ron Miller	2164 School St, Winston-Salem, NC
Yes	I support the Falls Whitewater Park. It will provide recreational opportunities and be an asset to our area.	Ruth Mead	203 Thorn Hollow Dr, Apex, NC 27523

Falls Whitewater Park Community Meeting #3
November 3, 2010

Public Comments
Received
11/3/10 to Present

Yes	I support the Falls Whitewater Park. It mitigates for river recreation lost when Falls Dam was built, fulfilling a need the Corps identified but never implemented. It offers eonomic benefits for local retailers of outdoor gear and marketing Raleigh as a good place to live. More use by paddlers will result in less trash, because paddlers clean up rivers. Also more people will reduce undesirable behavior - which occurs when people are not around. Park of my work includes hydraulic modeling and the project should be able to be designed such that effects on flows and water levels in the north channel can be predicted and limited.	Jim Mead	203 Thorn Hollow Dr, Apex, NC 27523
Yes	Please support the Whitewater Park in Raleigh. I live and work in Raleigh and would like to spend my spare time in Raleigh rather than drive an hour to Pittsboro to paddle on the Haw. Thank you.	Andy Malinowski	701 Monroe Drive, Raleigh, NC 27604
Yes	I feel strongly that the Falls Whitewater Park would be a tremendous positive addition to the Raleigh Parks and Rec program, providing an incredible opportunity to the citizens of Raleigh as well as surrounding areas.	Sonia Johnson	606 Broad Leaf Circle, Raleigh, NC 27613
Yes	I support the Park and feel it would be a temendous asset to the City of Raleigh and the surrounding area. This park would draw attention to the Neuse River and Falls Lake which should help with keeping the river and its surrounding area clean and free of miscreants.	Doug Stager	7508 Drayton Ct, Raleigh, NC 27615
Yes	I support the whitewater park - it would be another gem in the Raleigh parks network.	Mary Stager	7508 Drayton Ct, Raleigh, NC 27615
Yes	I support the Whitewater Park on the Neuse River. Currently I drive to the mountains and also to Weldo to paddle during most of the year. Having a close by park would be a great asset for outdoor recreation in this area. I would paddle there often. I would also spend money in Raleigh on meals and gasoline while there. People from as far west as Winston-Salem and as far east at the coastal counties would paddle there. Please build the whitewater park.	Sharon Myers	121 Viburnum Way, Carrboro, NC 27510
Yes	I strongly support the proposed Whitewater park. The park would be a huge asset to the Raleigh parks system and an economic driving force (related to paddle sports).	Wendy Krause	543 E.Jones St, Raleigh, NC 27601
Yes	I am a whitewater paddler and strongly support the construction of a whitewater park at Falls Dam.	Wayne Jones	720 Pebblebrook Dr, Raleigh, NC 27609
Yes	I wish to voice my support of the proposed ww park at Falls Dam. I think these would be unique and outstanding resource for both local residents as well as tourists. I also feel it would be a great resource for swift water rescue training for fire depts across the state.	Randy Welch	1124 Toppe Ridge Ct, Raleigh, NC 27615
Yes	I support the future whitewater park near Falls Dam. As a kayak nature conservationist, and member of the Carolina Canoe Club, I know that we would ensure the maintenance and beauty of the area. It would be a wonderful addition to our community.	Kurt McKissick	109 Newell St, Chapel Hill, NC 27516
Yes	We would love to spend some days at this park. If you build it, we will come!	Morgan, Tonya & Brenda Randell	701 Rosswood Rd, Chapel Hill, NC 27516
Yes	We support the idea of a whitewater park in Raleigh. We travel extensively to boat at other locations. With a whitewater park in Raleigh, we would stay in town more often and spend our money locally. In addition, many people from other parts of the state and region would see Raleigh as a travel/weekend destination if we had a whitewater park.	Mark & Dana Hoffman	811 Winter Hill Dr, Apex, NC 27502
Yes	I support the whitewater park projedt. I've been a resident of Raleigh for 23 years and have seen the vast improvement in our public amenities. We need a river park! Thanks!	Rick Higgins	618 Smedes Place, Raleigh, NC 27605
Yes	I strongly support the whitewater park. The members of the Carolina Canoe Club, who will probably be major users, are an environmentally conscious group and advocate good relations with the public - esp. landowners!	Lynn Wright	206 Dublin Woods Dr, Cary, NC 27513
Yes	As a resident of the piedmont triad and an outdoor enthusiast, I am excited about the new whitewater park. This will be a great addition to the community. It will be a fantastic draw for local as well as regioinal tourism. It will be something that the City can be proud of, that will distinguih it regionally and nationally. As well it will help to improve the health and happiness of the residents of Raleigh.	Jeff Hatcher	401 W. Bessemer, Greensboro, NC 27401
Yes	Enjoy catching the current features when I'm in town. Very much look fwd to playing @ the new park!	Todd Demianych	11 Yellowstone Dr, Greenville, NC 29617
Yes	I support the plans for the Falls Whitewater Park.	Amy	5500 Fortunes Ridge Dr, Durham, NC

Yes	I'm writing to voice my support for the Falls Whitewater Park. Access to parks, open space and recreational opportunities is a vital resource for all and I believe Falls Whitewater Park will be avaluable addition. While it's true, I am a whitewater enthusiast, and am indeed biased, I do believe that the park will benefit more than just the paddlers who are already invested in the sport. For all paddlers, advanced or inexperienced byt interested, the park will be invaluable. It will provide a safe environment. At optimal flows, characteristics such as retention can be controlled. Control of depth of water and the shape of objects creating the features can reduce impacts when paddlers are flipped. Also, with the additional features that will be available at lower flows, those learning the sport will likely have an abundance of peers who can provide assistance if needed. Additionally, the predictability and accessibility of the Falls whitewater park will be a boon, twofold. The feasibility of paddling at flows lower than otherwise required will mean increased opportunities AND they will be local. On such occasions, drives from 90 minutes to 5 hours will not be necess Whitewater parks in general also provide opportunities for friends, family and passersby an opportunity to share the experience, which is often not possible due to the remote nature of paddling rivers. Such will be the case with the Falls whitewater park. The park will give those hiking the Mountains-to-Sea Trail and Neuse River Trail a chance to pause and (in the summer months) cool off in the designated viewing areas. I realize that such a park is specialized, but this is true of many parks, which is another supporting argument for Falls whitewater Park. It is just as important to provide specialized recreational opportunities as it is to provide multi-use spaces. The fact that the park will act as a greenway connection (with the Mountains-to-Sea Trail nearby and the Neuse River Trail being constructed) should not be overlooked either. Greenways tend to be widely utilized open spaces due to their simplicity. Lastly, I also recognize that building the Falls Whitewater Park will come at a sacrifice by others, whose generosity will be appreciated. The proposed design is aimed to minimize the impact the park will have on them. Hopefully they will come to realize that paddlers are no different than any other interest group out there - as a whole, responsible, respectful individuals. Thank you, I appreciate the time and effort.	Curtis Belyea	Biologist/GIS Analyst NCSU cbelyea@ncsu.edu

Yes	I know that you are currently evaluating whether or not to support making a whitewater park below the Falls Lake Dam. I am writing this letter in support of this park. I am a member and instructor for the Carolina Canoe Club. The following is my justification for the park. The Raleigh area is a mecca for whitewater kayaking and canoeing. We have about 800 active members in the Carolina Canoe Club, and most of them are based in the Triangle area. This park can be very beneficial for advancing whitewater skills, teaching river safety, as well as providing local whitewater recreational entertainment. Furthermore, I know that whitewater is a fun sport to watch for those who are not involved in the sport. Currently, most members of the Triangle must drive to the mountains to run whitewater rivers or to sharpen their skills. This traveling costs money and lots of gas. Having a local training and recreational area will be very welcome to the club and the park will certainly be used. Furthermore, having the members skills honed by frequent training by having a readily available park will also draw spectators who enjoy watching whitewater activities. I can envision that this park could also be used for Swift-water training by both club members and local emergency agencies. I understand the concerns of the people who live near the park about noise and river traffic. I too enjoy privacy and quietude where I live. However, from what I saw of the current park design and from my experience of paddling this stretch of the river, it appears that the park will not challenge the nerves of the people who live near the river. The park will be opposite side of the river bank and channel of the condo. Also, the park appears to be blocked by an island. The noise will also be mostly drowned out by the "gray noise" produced by whitewater. Finally, I find that the club members are mostly a respectful and quiet group and they will be good citizens while in the park. In summary, I believe that (a) the design plans will minimize any distractions to local residence, (b) that the park will be used by the many members of the local paddling club, and (c) will make better and safer paddlers, and (d) that the park will be enjoyed by non-paddlers as well. I understand that for every decision that is made, it will impact some people in a positive and other people in a negative way. In this case, I think the park will create a more signficant positive impact than negative impact. I would not support this park if it were not to be used, or if it were to hurt local residence or the community. Thank you for your time and consideration in reading this message.	Greg Runyon	shreddogr@yahoo.com

Yes	I wanted to write in support of the proposed Whitewater park that is being considered for construction at Falls Dam. Pesonally, I think that the park would be a tremendous asset to the Raleigh area, offering yet another recreational outlet in the already rich RTP area. Below I have noted just a few of the reasons that I support this completely. 1. It could serve as an important node on the Neuse River Trail greenway, encouraging greenway use and attracting additional users. The dam already serves as a focal point of activity and many people come out to watch the paddlers when the dam is releasing at higher levels. The level of activity at the Whitewater Center in Charlotte by the many non-sports people that just come to watch gives an idea of the attractiveness of an active water feature. People like to watch moving water; if managed correctly, this could be an important aspect of the value of the whitewater park to the City. 2. As as side ffect of increased activity and use of the greenway, it would increase awareness, understanding and concern of the Neuse River as an ecosystem and a valuable natural resource, hopefully leading to better policies and behavior regarding downstr 3. A whitewater park could serve as an active arm of Raleigh Parks and Recreation, acting as a base for youth and adult activities 4. A whitewater park would serve the citizens of Raleigh who paddle and would attract paddlers from the region, for both recreatio 5. Environmentally, the awareness this would create for the valuable resource this river is to the area would increase tremendousl I truely hope you will consider all sides to this very unique opportunity of having something like this in the Raleigh area. The overall goal here is to act on the opportunity to create a public space that many could enjoy, a space that would attract users of multiple demographics and locations, while having minimal impact to the natural setting surrounding this site.	Tiffany MacKinnon	tiffgringa@gmail.com
Yes	My name is Amy Fox. I am a triangle resident, homeowner, and outdoor enthisiast. I am writing to voice my strong support of the Falls Whitewater Park project. Since moving to the Triangle in 2000 from Western Canada, I have been impressed with everything that the area has to offer. From world class universities to ample employment opportunities, vibrant arts scene, strong property values and a reasonable cost of living; I was eager to call the Triangle home and purchase property last year. The only element lacking from an otherwise ideal place to live is opportunity for outdoor recreation. I look around me and see city parks...and a great deal of potential. We have lakes and rivers that have been utilized and engineered to support our economic growht, why not take the opportunity to utilize these same resources for recreational enjoyment (and further economic stimulus) as well? I would like to say that I was not always a fan of the Whitewater park idea. Having visited the USNWC in Charlotte and man-made parks in Europe, I was at first not excited to imagine a gargantuan concrete structure siphoning natural and monetary resources from the City of Raleigh. Upon a detailed review of the projects drawings, objectives and visits to the site however, my mind changed 100%! What a tremendous opportunity we have to *enhance* a natural resource for the enjoyment of our community. This project has the potential to put Raleigh on the map for paddling enthusiasts, as well as create an attractive outdoor destination for area residents. It does this in an environmentally sensitive way, creating the potential to lead the way for whitewater parks in the future. I would be eager to own property in the vicinity of the site, as I believe the impact will contribute to beautification and erosion control as well. I urge you to strongly consider and support the plans for the Falls Whitewater Park. Thank you for your consideration and service.	Amy Fox	amyraefox@gmail.com

Yes	I am writing to express my strong support for the proposed Falls Whitewater Park below the Falls Lake Dam. My entire family are avid kayakers, and have been quietly following this project for several years with fingers crossed. I see that we are so close to realizing this vision, and the right decision is clear - approve the proposed plans and begin the work necessary to create this unique and wonderful resource as soon as possible. A park facility such as this will undoubtedly provide a unique and wonderful resource and many-fold return on any investments and efforts to complete this project. Since moving to NC in 1997 and taking up paddling activities, I have been incredibly impressed by the local, NC, and regional kayak and canoe community. Without exception, these are the most passionate, considerate, and community-environmentally-oriented, and wonderful people I know. We come from all walks of life, including doctors and police, teachers and business people, men and women, retirees and children. Nearly every week there are grass-roots efforts to get out to enjoy the local lakes and streams while picking up trash, often with dozens of paddlers participating. We go out of our way to make sure that we "leave I do understand that, as with any new project, there are those who will oppose this project for fear that it will somehow adversely impact them. However, I cannot imagine how the proposed project will have any negative impacts on the area - in fact, I am certain that opposite will be the case. This project will have a positive affect on the environment through careful design with minimial environmental impact, and ongoing efforts of the paddling community to "patrol" the area to prevent and clean up any trash that inevitable finds its ways into our waterways. Kayaks and canoes produce no polluon - no water, air, or noise pollution. It will be visually attractive and appear natural, but not obvious or even visible to neighbors. It will not require significant ongoing investment in infrastructure or services. As designed it will be safe - certainly preferable to the current practice of jumping into our kayaks to paddle the local streams after storms (this is the only current option to paddle in moving water in the area).This project will have a positive affect on local businesses, including hotels, restaurants, retailers, etc. But the long-term value to the region in terms of providing a unique attraction to bring businesses and jobs to the area is the true opportunity. It will provide family-friendly, healthy, positive leisure activities for the people of the Raleigh/Wake and surrounding areas, something that is currently not available.I can't stress enough how excited and hopeful I am that this amazing vision may soon become a reality. This is simply the right thing to do, and now is the right time to do it.	Tom, Kim, Emily & Matthew Burke	10 Upton Court, Durham, NC 27713
No	I could not more strenuously object to the proposed whitewater park adjacent to the River Mill Complex where I live. This park will damage the natural habitat for fish and wildlife preventing the herons from nesting in our area and the river from supporting the spawning of fish and as they have done for as long as the river has been in existence. It appears that this whitewater park will put an artificial payground in our front yard. I have to ask you, would you want to look out onto fake boulders and drive river bed in your front yard? I work quite a distance from my home at River Mill but come back every weekend to enjoy the peaceful quiet and stillness. Putting in this water park that would only be effectively used 1/3 of the year is a tremendous waste of money, would damage the environment, and make a peaceful setting where we all live and eyesore and a toxic environment. Please reconsider what you are doing to a truly beautiful region. Thanks.	Ann Estabrooks	catapulta@ipass.net

1806 Bickett Blvd.
Raleigh, NC 27608

January 6, 2011

City of Raleigh
333 Hargett St.
Raleigh, NC 27601

Dear Park Planners,

The Falls Whitewater Park Committee developed a website to help dissiminate information about the park to the public. We included a petition for visitors to sign and to date have 418 signatures. Most people who signed the petition are from the Triangle area. However, the presence of signatures from the surrounding area shows that the park will draw people from other locations bringing money to Raleigh's enonomy. The park will anchor the greenway at the base of Falls Dam and create a gathering place for people to enjoy the river. People can swim, fish, wade, tube and paddle at the park. It will also be a valuable resource for the Parks and Recreation Department's kayak and canoe classes. Emergency responders will be able to practice swiftwater rescue in the park's features.

We appreciate the opportunity to work with the city to bring this project to fruition. There is a great deal of excitement within the paddling community about the whitewater park. We believe it will also bring new people to the sport and give our area a unique alternative to traditional sports. Thank you for considering the huge amount of support indicated by this petition.

Sincerely,

Elizabeth Gardner
Falls Whitewater Park Committee

FROM THE ONLINE PETITION: http://www.petitiononline.com/fallswwp/petition.html (as of 1/5/11)

To: City of Raleigh

We, the undersigned, support and petition the City of Raleigh to develop a recreational and educational facility suitable for a variety of whitewater paddling skill levels and interests including a variety of features like waves/holes, rapids, eddies, features suitable for training beginner and novice paddlers, features suitable for instruction of swiftwater rescue techniques, a competition-friendly length and landscaping features that will make the area attractive to spectators and casual visitors.

While the site has already been significantly altered by the construction and presence of Falls of the Neuse Road and the Falls dam and Lake themselves and continued construction in replacing the Falls of the Neuse Road bridge in the near future will already create additional disturbance, we believe the Park project can co-exist with current features and uses and can even help mitigate erosive conditions already existing on-site.

Sincerely,

#	Name	Email	City	State	Comments
1	Larry Ausley	lausley@gmail.com	Cary	NC	
2	Mark Antonik		Raleigh	NC	
3	Adam M. Eckhardt	spasticplastic@gmail.com	Raleigh	NC	I support the Falls Whitewater Park.
4	Jenis Grindstaff		Raleigh	NC	
5	Edward Harvey	eaharvey@bellsouth.net	Raleigh	NC	
6	roger peterson	pud51301@gmail.com	Raleigh	NC	
7	Dennis Cobb		Whitsett	NC	
8	John McDonald		Durham	NC	
9	Jeremiah Cress	jcress77@aol.com	Asheville	NC	
10	John Mattox		Fayetteville	NC	
11	Brian Hedrick		Raleigh	NC	
12	Chris Grindstaff		Raleigh	NC	
13	Rick Steeves		Durham	NC	
14	Danielle Baker		Raleigh	NC	
15	Wendell Lawrence		Pittsboro	NC	
16	Michael S. Williams		Fuquay-Varina	NC	
17	Jill Fidgeon		Raleigh	NC	
18	Marc Harkness		Washington	DC	
19	Steve Bruno		Durham	NC	

20	Paul Scrutton	paul@paulscrutton.com	Durham	NC	Please make this park happen.
21	John Stevenson		Raleigh	NC	Falls Whitewater Park will only increase the value of the surrounding area and will drastically improve erosion in surrounding areas. This is a win-win and I'm not sure why people cant see this.
22	Garrick Taylor		Sanford	NC	
23	Larry Stewart		Knoxville	TN	I feel the park will add beauty and a source of recreation and entertainment to the area. That location is already being used in a similar fashion.
24	Elmer Eddy	elmer@whiteoakstewards.org	Trenton	NC	it will bring in people and money to the triangle
25	Thomas Womble	tfwomble@rocketmail.com	Arlington	TN	military, NCSU grad, intend on returning to NC
26	Wayne Jones	wayne@wjonesarchitecture.com	Raleigh	NC	I strongly support development of the whitewater park as a healthy and environmentally beneficial attraction for the City of Raleigh
27	Jacob Selander		Davis	CA	
28	Stefan Schmidt		Cary	NC	I believe the Falls Whitewater Park would be a great opportunity to increase the attractiveness of the area to the citizens. Also it would give the youth the opportunity for a interesting outdoor activities!
29	John Brunner		Yardley	PA	
30	Charles W Hunley Jr		Apex	NC	As a whitewater kayak instructor, I support the Falls Whitewater Park. This park will be beneficial in bringing year round instruction and paddlesports opporunities to the Raleigh area and provide economic benefit to local businesses.
31	Bret Harrison	beharrison@nc.rr.com	Clayton	NC	
32	Brian Breedlove		Raleigh	NC	I fully support the Falls Whitewater Park
33	Camille Warren		Raleigh	NC	The value of the Whitewater Park will extend beyond the whitewater paddling community. At lower water levels the proposed park will also be a great place for flat water paddlers to improve their maneuvering skills. Paddle sports is one of the fastest growing outdoor sports and the Triangle has a very large active paddling community. Having such a park locally will also benefit disadvantaged groups who will have an opportunity to be exposed to the sport and begin develop their skills without the expense of traveling longer distances to reach whitewater. Those

					who enjoy fishing will also benefit as the park will create conditions that many types of fish love. Even non-paddlers and non-fishermen will have the opportunity to enjoy the park as spectators. The Triangle is a great place to live, work and recreate. The proposed Whitewater Park is an example of the types of recreational opportunities that set the Triangle apart . The proposed park as currently envisioned would have minimal adverse impact.
34	Mastafa Springston		Chapel Hill	NC	
35	Jim Wei		Raleigh	NC	
36	Carl Laird		Durham	NC	
37	Cal Coetzee		Durham	NC	
38	Linda Huff	lhuff1@mindspring.com	Rougemont	NC	
39	Kevin Kizer		Apex	NC	
40	Scott Driscoll		Goldsboro	NC	I support the Whitewater Park
41	Corrine Voils		Cary	NC	
42	WES DODSON		PITTSBORO	NC	
43	Rebecca Carter	recarter003@yahoo.com	BRYSON CITY	NC	
44	Zachary Miller		Raleigh	NC	
45	Luke Osborne	lukeosborne@earthlink.net	Raleigh	NC	
46	Roger E. Nott		Gainesville	GA	
47	Chris Creech	creech@unc.edu	Raleigh	NC	I am 110\% for this park happening!
48	Joe Berry		Greensboro	NC	I travel from Greensboro to paddle at Falls Dam. It will be a nice park for Raleigh. What a great city project.
49	Chip Lee		West End	NC	
50	David W. Adcock, Jr.	daveadcock@hotmail.com	Fuquay-Varina	NC	
51	MOrgan RAndell	mrandell@nc.rr.com	Chapel Hill	NC	go outside!
52	Brent Settlemyre		Wilmington	NC	
53	Dan Cox		Raleigh	NC	Lets make this park happen! I don't want to be to old and decrepit to paddle by the time this park rolls around!
54	Bethany Cox		Raleigh	NC	I am tired of hearing about this from my husband. Lets get it done city!
55	John Grimes		Raleigh	NC	
56	Annie Elmer		Madison	WI	
57	Delphia Weissert		Newport Beach	CA	
58	Daniell DiFrancesca		Youngsville	NC	
59	stanley stutts		Pittsboro	NC	
60	Kate Kelleher		Raleigh	NC	Ê
61	Lorraine Burnham		Raleigh	NC	

62	brett kaconas	jbkaconas@earthlink.net	Oxford	NC	This project will benefit anyone that enjoys the outdoors,not only paddlers but fishermen,day hikers,bird watchers & students alike.
63	Maggie Yearout		Raleigh	NC	
64	Marilyn Bonnett		Wake Forest	NC	
65	Bryan Stewart		Fayetteville	NC	
66	Jeffrey C. Hatcher, MD	jhatcher_md@yahoo.com	Mcleansville	NC	
67	ann patterson		Wake Forest	NC	It is a shame to not take advantage of having the most out of water you can get.
68	Sarah Ruhlen		Bristol	TN	
69	Reese Culbreth		Raleigh	NA	I fully support the Falls Whitewater Park project.
70	Shannon McGuigan		Cornelius	NC	
71	Jade Wei		Raleigh	NC	It's a great thing to have a whitewater park in Raleigh
72	Nancy Guthrie		Cary	NC	
73	Morton Barlaz		Raleigh	NC	this is great for the city
74	matthew daniels		Pittsboro	NC	
75	Jeff Sailus	jsailus@gmail.com	Durham	NC	
76	Eric Stuart	ericstuart70@yahoo.com	High Point	NC	Raleigh NEEDS a public recreational resource such as this.
77	Robert L Morris	rmorris@pobox.com	Cary	NC	
78	eva klein		Raleigh	NC	
79	Trent Fentress		Stoneville	NC	Support of Falls Whitewater Park
80	Steven Eckard	m18se@yahoo.com	Raleigh	NC	There are hundreds of avid paddlers in this area. The area in question is often used as a fishin' and drinkin' spot. The drinkers are sometimes underage and often leave their trash. A whitewater park is a much better use. Paddlers are very eco conscious.
81	Kyle Weinel		Wake Forest	NC	
82	Elizabeth Gardner		Raleigh	NC	
83	Tom Burke		Durham	NC	
84	Edie Dickinson	nchmmngbrd@aol.com	Raleigh	NC	
85	Trevyn Leighton		Cary	NC	
86	Buddy Kelly	buddy@ceparts.com	Chapel Hill	NC	Raleigh needs an outdoor destination !
87	Buddy Kelly	buddy@ceparts.com	Chapel Hill	NC	Raleigh needs an outdoor destination !
88	Eric Gardner		Greenville	NC	
89	Chris Gemma		Raleigh	NC	
90	Michael Keeney		Durham	NC	

91	Grant Howard	j.grant.howard@gmail.com	Raleigh	NC	
92	Gary Cozzolino		Cary	NC	
93	Dana Lapple		Durham	NC	
94	Ashley Mckenzie		Asheville	NC	Have have spent as much time at the falls tailwaters as anyone. This will be a great resource for the triangle!
95	Derek Coombs		Raleigh	NC	
96	Kurt A. McKissick	mckissickk@NC.rr.com	Chapel Hill	NC	this park would be a valuable asset to the area
97	sajin valiyaveetil		Cary	NC	
98	Jim Simpson		Raleigh	NC	Please!
99	Christopher Klingman	chrisklingman@gmail.com	Youngsville	NC	
100	Russ Condrey	RussCondrey@nc.rr.com	Raleigh	NC	This was promised when Falls Dam was built - time to "Get er Done!"
101	Janyne Kizer		Apex	NC	I fully support this facility
102	Wendy Krause	wekrause@bellsouth.net	Raleigh	NC	
103	Hunter Lane	lane.hunter@gmail.com	Raleigh	NC	This would be great for the City of Raleigh
104	Nick Honeycutt		Wake Forest	NC	
105	Randy Welch		Raleigh	NC	
106	Stuart Rose		Cary	NC	
107	Ken Peschell	WarEagleNC@embarqmail.com	Fuquay Varina	NC	
108	Marcus Norris		Raleigh	NC	I'm a fellow whitewater kayaker, and I would love to see this whitewater park project come to fruition.
109	Juliet Thomas		St Albans	England	
110	Michael Aycock		Cary	NC	
111	Peter A. Kuryla	kuryla@frontiernet.net	Canandaigua	NY	
112	April L Peschell		Fuquay Varina	NC	
113	Ann Poorboy	aempoorboy@yahoo.com	Durham	NC	
114	Del Huntsinger	k1fun@hotmail.com	Raleigh	NC	The Park would be a great addition to the park system
115	Shane Brown		High Point	NC	I lived in Raleigh for nine years and wish this park could have been completed while I lived there. I voted for the bond money to support it and would like to see it finished.
116	Russell Scheve		Durham	NC	As a Swiftwater Rescue instructor, teaching Wake, Durham and Orange County rescue squads and paddlers, this park will be a valuable local resource.
117	rao punnani		Durham	NC	
118	Pat Jennette		Raleigh	NC	What a great asset to North Raleigh

119	Amy Fox	amydancerfx@hotmail.com	Durham	NC	
120	tina carico		Raleigh	NC	
121	Joe Barkley		Bryson City	NC	
122	Walton C. Jennette		Raleigh	NC	
123	Jennifer Fahey		Morrisville	NC	
124	David Cunningham	dpc0809@gmail.com	Benson	NC	
125	William Seeley	will@getoutdoors.us	Greensboro	NC	
126	Sarah King		Raleigh	NC	A great opportunity for the City to expand the recreational and educational opportunities on the river.
127	Jenn Beck		Asheville	NC	
128	Craig Harms	craig_harms@ncsu.edu	Morehead City	NC	
129	Nathan Russell		Greensboro	NC	Great opportunity!
130	Dale Swanson	swanson.dale@gmail.com	Danbury	NC	A whitewater park would be an amazing asset for the local Parks & Rec
131	John Cope		Fuquay-Varina	NC	
132	Allison Cope		Fuquay Varina	NC	
133	Eric Teal		Raleigh	NC	
134	Jeff Francoeur		Raleigh	NC	
135	Paul Kovolew		Raleigh	NC	I wholeheartedly support the Falls Whitewater Park project
136	Al Overby		Oxford	NC	
137	Bernie Amero	neilc1233@hotmail.com	Gloucester	MA	
138	Daniel McPeake		Lynchburg	VA	
139	Pam Maynard		Greensboro	NC	
140	Tommy Pickeral		Gretna	VA	Closer than Charlotte
141	Jan Bolen	janbolen@yahoo.com	Chapel Hill	NC	
142	Robert High		Raleigh	NC	
143	chris oblinger	obie@liquidlogickayaks.com	Asheville	NC	we need it in Raleigh.
144	matthew clark		Raleigh	NC	
145	Garvin Deters		Asheville	NC	Our state capital needs great places to enjoy nature!
146	Katherine Chesnutt	kmchesnutt@gmail.com	Boone	NC	
147	Tyler hoover	Dthoover52@yahoo.com	Greenville	SC	
148	Matthew Mabe		Wake Forest	NC	
149	Ethan King	eking7@carolina.rr.com	Charlotte	NC	I support the Falls Whitewater Park.
150	don weber	don82much@lycos.com	Wrightsville Beach		NC
151	William D Sartin		Winston-Salem	NC	
152	Steve Mang	vmi84@earthlink.net	Raleigh	NC	
153	Nash Redwine		Oxford	NC	
154	David Kleiss		Cary	NC	
155	camye womble		Cary	NC	please provide funding for the Falls White Water Park

					there is pleny of demand and support for such a park !! Why not give people a fun outlet in these hard times !!
156	Nicole King		Charlotte	NC	
157	david peacock	dpeacockjr@gmail.com	Raleigh	NC	go paddle!!!!!!
158	Seema Parmar-Sturkie		Durham	NC	
159	Kenny Eichler		Raleigh	NC	
160	Marianne Taylor		Raleigh	NC	
161	clay carmichael		Selma	AL	
162	William Pittman		Raleigh	NC	This will be a great asset to Raleigh!
163	Lucie & Elliott Hazen		Beaufort	NC	
164	Maureen Prosser		Raleigh	NC	
165	Richard Elliott		Ridgeway	VA	
166	Andrew Ritter		Raleigh	NC	
167	Damian Guido		Winston-Salem	NC	
168	Keith Chesnutt	rkchesnu@ncsu.edu	Raleigh	NC	I think this would be a great idea! There are plenty of paddlers around that would get real excited about this.
169	Natalie Freeman		Raleigh	NC	
170	Rebecca Redwine		Raleigh	NC	
171	Venitta Reeves		Wrightsville Beach		NC
172	Terence Dash		Raleigh	NC	
173	Barrett Brewer		Raleigh	NC	
174	Tom Adams		Asheville	NC	
175	Karl Carr	carr.casey@gmail.com	Raleigh	NC	
176	John Eaddy		Chapel Hill	NC	
177	Ian Pond	iandavid33@hotmail.com	Durham	NC	Kayakers are protective of the environment and leave it cleaner than they find it. This is not only a healthy initiative for the local community but good for the health of Neuse River too.
178	marilyn rodriguez		Cary	NC	
179	Cynthia Womble	tfwomble4@comcast.net	Arlington	TN	This has been in the works for decades. Please finish it so my son can paddle there with his father.
180	Bozo Smith		Apex	NC	
181	Deva Carmichael		Tuscaloosa	AL	
182	Paul Ferguson		Raleigh	NC	
183	Keith Adkins		Winston Salem	NC	
184	Amos ivey		Morganton	NC	
185	Mike McConeghy	mikem@comprint.com	Raleigh	NC	
186	Spencer Redmond		Raleigh	NC	
187	James Tanner		Raleigh	NC	

188	Patrick Smith	psmith18@nc.rr.com	Raleigh	NC	
189	William Pierce		Winston Salem	NC	none
190	Dan Welch	danwelch@nc.rr.com	Apex	NC	
191	Doug Stager		Raleigh	NC	Please lets build this. It will be a tremendous asset for the City of Raleigh and surrounding areas. We voted for this in a bond issue years ago.
192	Jenny Fogleman		Raleigh	NC	
193	Stuart Davis		Raleigh	NC	
194	Ed Edens		Raleigh	NC	I fully support the proposed whitewater park. I feel that most of the issues and concerns relayed by local neighbors to the project can be mitigated and will be significantly lessened by the Falls of Neuse Road Realignment Project, especially the traffic concerns. The whitewater park will dovetail nicely as an amenity in conjunction with the City of Raleigh's proposed Park on the old Leonard Tract and connectivity can be enhanced to both venues by the Upper Neuse Greenway. I look forward to enjoying this facility sometime in the future. It, along with the other recreational opportunities in this pocket of the City, are one of the reasons I moved to this area of Raleigh (about 1 mile from the site).
195	HH Hancock		Raleigh	NC	What a unique and great addition to the city of Raleigh
196	Gary Mason		Pittsboro	NC	
197	Jeanne Pierce		Walnut Cove	NC	
198	freddie lewis		Fayetteville	NC	drill here, drill now
199	Chris Borden		Fayetteville	NC	
200	Joe Greiner	joekayak@worldnet.att.net	Raleigh	NC	Usage already there. Minimum impact on existing facilities and/or traffic. Whitewater folk just need simple streambed modifications to make it usable over more flows. Education, safety training, fun,. What is a park for? Ths is it!!
201	William Poorboy		Durham	NC	
202	Andy Felton	andy@neuwavesystems.com	Raleigh	NC	
203	Will O'Connor		Macon	GA	
204	Kevin Ingram		Apex	NC	
205	Laura Evans		Chapel Hill	NC	The proposed facility would be a fabulous addition to the Parks system. It would add greatly to the recreation/education/training of citizens, as well as a draw for others. It will add variety to the range of opportunities making the Triangle area even more progressive and

					desirable than it already is.
206	Lisa Birskovich		Raleigh	NC	
207	Jim White		Cary	NC	
208	Charles Landreth		Mayodan	NC	
209	Curtis Belyea	curtisbelyea@aol.com	Garner	NC	
210	Karen Hughes Goldstein		Durham	NC	
211	emily grimes		Raleigh	NC	
212	Tina Glover		Raleigh	NC	
213	Robert M. Zarzecki, Sr.		Raleigh	NC	I SUPPORT THE FALLS WWP
214	Jill Marlowe		Raleigh	NC	
215	Tina R. Zarzecki		Raleigh	NC	
216	Laurie Peel		Raleigh	NC	
217	Todd Zarzecki		Raleigh	NC	
218	Robert Richardson	rrichardson@co.wake.nc.us	Raleigh	NC	Please help cultivate this local natural resource. Sincerely, Rob Richardson
219	Jesma Reynolds		Raleigh	NC	
220	Jimmy C.		Raleigh	NC	
221	George Ploghoft	ploghoft@earthlink.net	Durham	NC	
222	Sallie Glover		Raleigh	NC	
223	Scott Swickle	sswickle@charter.net	Old Fort	NC	
224	Rebecca Hancock		Raleigh	NC	
225	Patricia Owens		Summerfield	NC	
226	Brian McPherson		Raleigh	NC	
227	andy malinowski	amski@nc.rr.com	Raleigh	NC	I am looking forward to using it.
228	Julie Caviness		Raleigh	NC	This would be fantastic! Something my kids and I would love!!!!
229	Tricia LeCarpentier		Raleigh	NC	we need a great park
230	Ariel		Fort Collins	CO	
231	Kyle Hovermale		Asheville	NC	This would be a great resource for the entire Piedmont outdoor enthusiast community!
232	william k pierce		Gainesville	FL	
233	Will Selle		Boone	NC	Used to surf there during college. Great play feature, would love to see this area embraced by not only local paddlers, but the entire community.
234	Amy Walters		Asheville	NC	Please consider the benefits of the park for the city!
235	Will Leverette	managerisk@charter.net	Swannanoa	NC	I support this idea.
236	Ashley McDonald		Asheville	NC	
237	kim abney	kim@abneyart.com	Knoxville	TN	
238	Jason Biggs		Cary	NC	

239	jason burke		Asheville	NC	
240	Derek Turno	DTurno@diamondbrand.com	Asheville	NC	For the WW park and the economy it provides.
241	Matthew Witt		Brevard	NC	Think about how much a basketball stadium costs. This will allow paddlers and prospective enthusiasts to enjoy this amazing sport.
242	Jared Dowler	jareddowler@hotmail.com	Asheville	NC	An outstanding opportunity to increase beneficial "traffic" to the area, not to mention the potential for additional water safety training for those seeking it.
243	James Trombley		Asheville	NC	If the opposition to this project could give one example of a project like this that went wrong, I would listen.
244	Lin Peterson		Raleigh	NC	
245	Walter Raines		Raleigh	NC	
246	Ryan Dodd	drdodd@ncsu.edu	Raleigh	NC	As a displaced WNC mountain resident I dearly need a white water park here in Raleigh for my mental and physical health!
247	Corey Scheip		Raleigh	NC	Outdoor recreation is underserved in Raleigh, help us out!
248	Danny Dodd	dannyd07@charter.net	Raleigh	NC	
249	James Kehler		Raleigh	NC	
250	Paul D. May	Ptmay.nc@gmail.com	Rolesville	NC	The Neuse River is a great resource for recreation and water quality education. The more people that see and use the river will be more people concerned about its quality.
251	Stacy Lynch		Raleigh	NC	
252	marc robinson		Raleigh	NC	this is a great plus for our community and should be supported
253	Charlie Mason		Mebane	NC	This would be a great addition to the area
254	James McManus	jmpmcmanus@yahoo.com	Durham	NC	Great idea!!
255	Stephan Herzog		Middlesex	NC	
256	Charlie & Kim Harding		Wendell	NC	Gas engines and other powercraft are allowed on other area waterways and cause pollution; a small whitewater park will have minimal impact
257	Brent Laurenz		Raleigh	NC	
258	kathy iverson		Durham	NC	anything cool like this adds to our desireablity
259	John Pugh	john@sourcetosea.net	Raleigh	NC	
260	Robert Birdsall		Raleigh	NC	
261	Robin Oppenlander	skydesigns7@gmail.com	Cary	NC	wishing you the best of luck
262	Stephen Wilkers		Winston-Salem	NC	I travel to Raleigh a lot and would love to see the park go

					in!
263	kevin Anderson		Raleigh	NC	
264	William Service	wservice3@gmail.com	Raleigh	NC	Paddler and fisherman that loves this resource and supports responsible development of the park
265	Dwon Foye	ddfoye@hotmail.com	Raleigh	NC	This is long overdue in my opinion.
266	Marcus Reynolds		Chapel Hill	NC	At a time when obesity is a growing problem in our state, and television and computer/video games continue to draw our youth inside, a whitewater park would prove to be another valuable resource to draw people off of the couch and into the great outdoors. The park would promote and make more accessible to the people of the triangle another outdoor, athletic pursuit that promotes fitness and health.
267	ken cox	kcox37@triad.rr.com	Greensboro	NC	Need a more local natural paddling spot in the area. Got all of our support
268	Stephen Thomas		Raleigh	NC	Just Do It!
269	nate brissette	nbrissette1@yahoo.com	Raleigh	NC	this could bring many people to Raleigh, which Raleigh could thrive from and make more money.
270	Joshua Burton		Raleigh	NC	I would love to have this in Raleigh. I have family in Charlotte and recently moved to Raleigh from Kansas City. I had friends in KC that flew to Charlotte to visit the National Whitewater park. It celebrates our natural history and would generate tourism in the area.
271	shawn	spgoredo@gmail.com	Raleigh	NC	
272	Saul		Winston-Salem	NC	
273	Bailey		Winston Salem	NC	
274	James Pflaum		Raleigh	NC	
275	Chad Garrett		Fuquay Varina	NC	Please help this dream become reality!
276	Eric Miller	hookitforsafety@gmail.com	Raleigh	NC	I've been paddling at the falls for 11 years and I strongly support the push for a Whitewater Park! It would be a unique and wonderful addition to the Raleigh Parks network.
277	Chris Phelps		Lexington	NC	
278	William D. Young	youngwillyd@gmail.com	Ararat	VA	Looks like a very good idea.
279	Jack Conrad	jconrad@rvbus.net	Arcadia	FL	I frequent the Raleigh area for kayaking
280	Wendy Arthur		Waynesville	NC	
281	Ruth Steele		York	SC	

282	Ian Johnson	ian-johnson@earthlink.net	Charlotte	NC	
283	Justin Culbertson		Winston-Salem	NC	This would a great recreation area. It would provide an opportunity for swift water rescue training for emergency personnel and locals too.
284	Dennis Johnson		Durham	NC	
285	Martha James		Doswell	VA	
286	Duarte B. Morais		Raleigh	NC	
287	Susanne Dubrouillet		Raleigh	NC	
288	Eric Moye	eric.moye@hotmail.com	Greensboro	NC	I would likely travel from Greensboro 2-3 times a month to visit this park. Please make it happen.
289	Daniel Parks		Wake Forest	NC	
290	Chris Green		West End	NC	
291	Brandon Peacock	jbpeacock09@gmail.com	Raleigh	NC	I support the Falls White Water Park plan. I live 1500 feet from the proposed park.
292	Duke Taylor		Wake Forest	NC	
293	chris grubb	ctgrubb@hotmail.com	Charlotte	NC	Raleigh needs whitewater!!!!!!
294	Stephanie Cruthis	Cruthiss@yahoo.com	High Point	NC	This would be great for all paddlers to improve there skills and could save lives with swr classes
295	Charles Landreth	cblandreth@gmail.com	Mayodan	NC	we need a good water park that is also one that novice and intermediatte friendly
296	Craig Wood		Eden	NC	
297	Craig Rowe	crowe@hikeclimbsurfrun.com	Raleigh	NC	Please let me know how I can help. I know a lot about PR and love the outdoors. hikeclimbsurfrun.com
298	Adam Henderson		Indian Trail	NC	
299	jon oakley		greensboro	NC	please please. lets do it!
300	Alexa Sawyer		Raleigh	NC	I'm super excited about this!
301	Tess Mangum Ocana		Durham	NC	this would bring so many tourism dollars to the city!
302	Aaron Kesterson		Raleigh	NC	
303	Karissa Sampson	ks0097950@lmc.edu	Rolesville	NC	Paddler living in Boone, but from the Raleigh area
304	Jeffrey Hatcher	jhatcher_md@yahoo.com	McLeansville	NC	please develop this site to be the great public resource it can be
305	Rusty McLamb	rrmclamb2001@yahoo.com	Clayton	NC	
306	Evan Pattishall		Durham	NC	
307	Doug Cubbage		Raleigh	NC	
308	Steven Brooks	kayakin2surf@att.net	Raleigh	NC	I have been paddling at the Falls Dam since 1998 and have waited for a park for the majority of the time...
309	Göran Svensson	gs5709@telia.com	Eskilstuna	Sweden	Long live heroes

310	Robert C. Myers		Sellersville	PA	Summer Home Local
311	Kristine Jackson	Kristine@jacksonkayak.com	Rock Island	TN	
312	Nicholas Troutman		Rock Island	TN	I would love to see this project come from a dream all the way to the finish
313	Emily Jackson		Rock Island	TN	
314	Matthew Mauzy	mauzy@sorescue.org	Chapel Hill	NC	As a swiftwater rescue instructor for fire/rescue/ems agencies, I 110\% support the Falls Whitewater Park as a recreation area and as a premier safety training site.
315	Scott Owens	Tarheelemt@gmail.com	Chapel Hill	NC	This would be a fantastic resource for swiftwater rescue groups to train on as well as a great park.
316	Mike Davidson		Raleigh	NC	It will also be a benefit for the training of Emergency Responders
317	Jonathan Pozner		Chapel Hill	NC	
318	Brandon Kanupp		Chapel Hill	NC	
319	Renee Burton		Raleigh	NC	
320	Bennie Ellis	benniee@aol.com	Wake Forest	NC	
321	Leah Tilden		Haw River	NC	
322	Betsy Brooks		Raleigh	NC	This project has been too long coming, let's take it to fruition!
323	David Livingston		Raleigh	NC	
324	bill whiting	textux@bellsouth.net	mauldin	SC	This would be a huge benefit to Raleigh
325	Benjamin Peters		Mauldin	SC	The whitewater park is a fantastic idea and makes use of a beatiful natural resource. It will attract people from all over the Carolinas.
326	Richard Higgins	rickhigg@yahoo.com	Raleigh	NC	I support the waterpark!
327	Rebecca Powell		Cary	NC	
328	Wes Hall		Raleigh	NC	
329	Kevin Cox		Raleigh	NC	
330	Lynn Dickey		Cary	NC	
331	Will Summer		Raleigh	NC	
332	Deirdre Barlaz	ddbb@mindspring.com	Raleigh	NC	
333	Sylvia DuRant		Smithsburg	MD	Even through I live in Maryland, I hope to be living in Raleigh soon. I strongly support this petition. Thanks for your consideration.
334	Lynne Attix		Raleigh	NC	
335	Naomi Barlaz		Raleigh	NC	PLEASE support Falls Whitewater Park
336	Mj May		Raleigh	NC	
337	Barbara Biederman		Raleigh	NC	
338	Brad Hessel		Raleigh	NC	We need more soccer fields, too.

339	Gina Massel-Castater	gcastater@nc.rr.com	Raleigh	NC	
340	Lucia		Chapel Hill	NC	great plan!
341	Lucia		Chapel Hill	NC	great plan! (DUPLICATE)
342	barbara gitman		Raleigh	NC	this will be great
343	Andrew Knell		Fayetteville	NC	
344	Sarah Machinist		Myrtle Beach	SC	
345	Ronna Freeman		Durham	NC	
346	Jack Conrad		Arcadia	FL	As a RVer, we travel to Whitewater destinations (and spend $$ in those4 areas)
347	Levi Dexel	ldexel@duaa.duke.edu	Carrboro	NC	As a kayak instructor and instructor at Duke, I feel that this white water park would be a great resources for many outdoor education centers in the area enabling us to enlist many more individuals in the conservation of the wonderful natural resources that our region has to offer.
348	Melissa Lawrence	Lilnuget@earthlink.net	Raleigh	NC	
349	Paul Harraka		Durham	NC	
350	Avery Berkowitz	avery.berkowitz@gmail.com	Durham	NC	Wonderful Idea
351	Gergely Nemeth		Durham	NC	
352	Larsa Al-Omaishi		Durham	NC	This would really add to the appeal of the triangle area and provide a healthy outlet for young and old alike to take part in outdoor adventures. Please please consider making it a reality. Thanks!
353	andrew		durham	NC	
354	Grant Oakley		Durham	NC	
355	Lim Xuan hong		Durham	NC	
356	Angela Moras		Raleigh	NC	Strongly in favor!
357	Rachel Krasich		Durham	NC	
358	Alice Taylor		Durham	NC	I would definitely make use of the park!
359	Forrest Sheldon		Durham	NC	
360	Tom Mercer		Durham	NC	
361	Katherine Morris		Durham	NC	
362	Josh Moore		Durham	NC	
363	Gregory Liggett		Durham	NC	
364	Pete Zseleczky		Durham	NC	
365	Matthew Keshian		Durham	NC	
366	Evan Mayfield		Durham	NC	
367	Ryan Stoa		Durham	NC	
368	Justin Bart		Durham	NC	I'm so excited!
369	Julie Rivo		Durham	NC	
370	Taylor Pospisil	tgp4@duke.edu	Durham	NC	

371	Matt Seehausen		DURHAM	NC	Providing another resource for paddlers like the USNWC is a great step to promoting one of NC's lesser known draws, whitewater.
372	Jiawen Cheong		Durham	NC	
373	John Temple		Durham	NC	Whitewater Park Please!
374	Michael Curtis		Burlington	NC	
375	Margaret Spini		Durham	NC	
376	Thomas Elliott Nailen Jr.	ten6@duke.edu	Fairview	NC	about time
377	Lewis		Durham	NC	
378	Ian Zhang		durham	NC	
379	Katie Biernacki		Durham	NC	this would be awesome! i would definitely go!
380	Matthew Thiery		Durham	NC	
381	John Holloway		Chocowinity	NC	I kayak the Tar River in Greenville at least 20 times a year. I also support the restaurants and Harris Teeter when I do.
382	Watts Mangum II		Durham	NC	Duke outpost fully supports This Recreational Park
383	Sven Schoenwasser		Durham	NC	
384	Joseph Howe		Boone	NC	
385	Fulton Byrne		Chapel Hill	NC	
386	Rob Stewart		Durham	NC	
387	J Reed Gilbert	reed.gilbert@duke.edu	Durham	NC	I am tremendously supportive of building a whitewater park at the falls. I have paddled there many times, and taught many fellow students at Duke how to kayak there. It is a phenomenally beautiful place, and I am convinced that this park would lead to better appreciation and greater enjoyment of the falls area. I also think that the park could provide a strongly needed solution to the bankside erosion problem, which ought to be addressed.
388	Philip Srebrev		Durham	NC	
389	Elizabeth Hester		Asheville	NC	PLEASE!
390	Ashley Tsai		Durham	NC	
391	Kelly Schuering		Durham	NC	
392	Lisa David		Durham	NC	
393	Kishan Shah		Carmel	IN	
394	Caroline Seng		Durham	NC	
395	Phillips Hogan		Durham	NC	
396	Yumian Deng		DURHAM	NC	
397	Amanda Tuck		Burlington	NC	
398	Stuart Webb		Durham	NC	
399	Kyle Slosek	kyle.slosek@gmail.com	Chapel Hill	NC	

400	Jessica		Gatlinburg	TN	witnessing the flood here in Nashville made me realize that our reSCue personal don't always know the best way to help a person out in the water. Having a park where the professionals trained would be a benefit to the community
401	Eliza Gentzler		Durham	NC	
402	Torrey Fourrier		Baton Rouge	LA	
403	Jordan Montgomery	jordanmontgomery@hotmail.com	Durham	NC	
404	Nathaniel Keating		Weehawken	NJ	I LOVE WATERRRRRRR!!!!!
405	Vinalia Tjong	pingue_vin@hotmail.com	Durham	NC	
406	Richard M. Zablocki	riversedge1@suddenlink.net	Washington	NC	Whitewater excitement may help steer young people away from less desireable, even illegal, "adventures." My Grandkids and I do a Whitewater adventure every year.
407	Lisa Kara	lisakara@gmail.com	Harpers Ferry	WV	I support the Falls Whitewater Park.
408	Tina Rossi	tinamrossi@gmail.com	Raleigh	NC	
409	Jason Pier	jason.pier@gmail.com	Raleigh	NC	
410	Matthew Hellmers		Cockeysville	MD	
411	Katy Millberg		Wendell	NC	As a new paddler, this would give a great close-to-home option to gain great experience!
412	Tammy Creech		Raleigh	NC	
413	Emily Wellman		Carrboro	NC	
414	Kaitlin Pattishall		Durham	NC	
415	Jacob Matheny	Jakematheny@hotmail.com	burlington	NC	This park is an amazing idea, and will be sure to bring in tourist and business for the area.
416	Josiah Johnson		Asheville	NC	
417	Eric Barcley	EBarcley84@aol.com	New Bern	NC	I would happily drive from New Bern to Raleigh for the opportunity to paddle at the whitewater park.
418	Nicole Hampsten		Chapel Hill	NC	

Appendix II
International Scale of River Difficulty

APPENDIX II - INTERNATIONAL SCALE OF RIVER DIFFICULTY

Class I: Easy. Fast moving water with riffles and small waves. Few obstructions, all obvious and easily missed with little training. Risk to swimmers is slight; self-rescue is easy.

Class II: Novice. Straightforward rapids with wide, clear channels which are evident without scouting. Occasional maneuvering may be required, but rocks and medium sized waves are easily missed by trained paddlers. Swimmers are seldom injured and group assistance, while helpful, is seldom needed. Rapids that are at the upper end of this difficulty range are designated "Class II+".

Class III: Intermediate. Rapids with moderate, irregular waves which may be difficult to avoid and which can swamp an open canoe. Complex maneuvers in fast current and good boat control in tight passages or around ledges are often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims. Rapids that are at the lower or upper end of this difficulty range are designated "Class III-" or "Class III+" respectively.

Class IV: Advanced. Intense, powerful but predictable rapids requiring precise boat handling in turbulent water. Depending on the character of the river, it may feature large, unavoidable waves and holes or constricted passages demanding fast maneuvers under pressure. A fast, reliable eddy turn may be needed to initiate maneuvers, scout rapids, or rest. Rapids may require “must'' moves above dangerous hazards. Scouting may be necessary the first time down. Risk of injury to swimmers is moderate to high, and water conditions may make self-rescue difficult. Group assistance for rescue is often essential but requires practiced skills. A strong Eskimo roll is highly recommended. Rapids that are at the upper end of this difficulty range are designated "Class IV-" or "Class IV+" respectively.

Class V: Expert. Extremely long, obstructed, or very violent rapids which expose a paddler to added risk. Drops may contain large, unavoidable waves and holes or steep, congested chutes with complex, demanding routes. Rapids may continue for long distances between pools, demanding a high level of fitness. What eddies exist may be small, turbulent, or difficult to reach. At the high end of the scale, several of these factors may be combined. Scouting is recommended but may be difficult. Swims are dangerous, and rescue is often difficult even for experts. A very reliable Eskimo roll, proper equipment, extensive experience, and practiced rescue skills are essential. Because of the large range of difficulty that exists beyond Class IV, Class V is an open ended, multiple level scale designated by Class 5.0, 5.1, 5.2, etc... Each of these levels is an order of magnitude more difficult than the last. Example: Increasing difficulty from Class 5.0 to class 5.1 is a similar order of magnitude as increasing from Class IV to Class V.

Class VI: Extreme and Exploratory. These runs have almost never been attempted and often exemplify the extremes of difficulty, unpredictability and danger. The consequences of errors are very severe and rescue may be impossible. For teams of experts only, at favorable water levels, after close personal inspection and taking all precautions. After a Class VI rapids has been run many times, the rating may be changed to an appropriate Class 5.x rating.

Developed by American Whitewater for rating of rivers for private (non commercial) boating. Does not necessarily apply to professionally guided rafting.

Appendix III
Hydrologic Impacts of Project

Appendix III - Hydrologic Impacts of Project

Flood Impacts

The project lies within a regulated flood plain and therefore the project must meet a zero rise criteria. The certified FEMA regulatory model (HEC-RAS) for the Falls of the Neuse River was obtained and used for the project[1]. The main structures of concern within the project reach include the Falls of Neuse Road Bridge and the River Mills Condominiums on the north bank of the river. The FEMA existing conditions model was modified to include cross sections at the proposed river features as well as critical locations such as high bedrock areas or adjacent to the structures of concern. The model was executed and baseline existing hydraulic conditions were established. The existing conditions model was modified to reflect the proposed whitewater course features and run to determine the impacts to the flood plain. As shown in the following table the proposed improvements result in zero rise to the regulatory floodplain, as measured in tenths of a foot. Further refinements to the whitewater course should be modeled during final design to determine ultimate impacts to the regulatory floodplain and structures of concern. The additional modeling and supporting documentation will likely be required as a portion of a floodplain development permit application. While it is not likely that a substantial increase in flood elevations will occur as a result of the project, the impact once final design is completed should be discussed with the local floodplain administrator to determine if a floodplain development permit will be required or if a revision to the base flood elevations via the CLOMR/LOMR FEMA process will be required.

[1] There is a new model which incorporates the proposed Falls of the Neuse Road Bridge, however it has not been certified by FEMA and was not available for design at the time of this study.

Proposed Conditions			Existing Conditions			Difference
River Sta	Q Total (cfs)	W.S. Elev (ft)	River Sta	Q Total (cfs)	W.S. Elev (ft)	(ft)
12350	11100	205.19	12350	11100	205.16	0.03
12300	11100	205.21	12300	11100	205.18	0.03
12230	11100	205.22	12230	11100	205.19	0.03
12190	11100	205.18	12190	11100	205.14	0.04
12170	Bridge		12170	Bridge		0
12150	11100	205.16	12150	11100	205.13	0.03
12100	11100	205.17	12100	11100	205.14	0.03
12060	11100	205.17	12060	11100	205.14	0.03
12010	11100	205.13	12010	11100	205.12	0.01
12009	11100	205.13				
12008	11100	205.15				
11931	11100	205.1				
11930	11100	205.09	11930	11100	205.1	-0.01
11929	11100	205.09				
11860	11100	205.09	11860	11100	205.08	0.01
11801	11100	205.06				
11800	11100	205.06	11800	11100	205.06	0
11799	11100	205.06				
11710	11100	205.07	11710	11100	205.07	0
11590	11100	205.07	11590	11100	205.07	0
11540	11100	205.06	11540	11100	205.06	0
11470	11100	205.05	11470	11100	205.05	0
11370	11100	205.02	11370	11100	205.02	0
11270	11100	204.99	11270	11100	204.99	0
11170	11100	204.97	11170	11100	204.97	0
11080	11100	204.97	11080	11100	204.97	0
10980	11100	204.95	10980	11100	204.95	0
10890	11100	204.91	10890	11100	204.91	0
10800	11100	204.86	10800	11100	204.86	0
10710	11100	204.83	10710	11100	204.83	0
10590	11100	204.82	10590	11100	204.82	0
10490	11100	204.76	10490	11100	204.76	0
10400	11100	204.73	10400	11100	204.73	0
10290	11100	204.69	10290	11100	204.69	0
10200	11100	204.69	10200	11100	204.69	0
10100	11100	204.63	10100	11100	204.63	0
10000	11100	204.62	10000	11100	204.62	0
67	11100	202.1	67	11100	202.1	0

Tabular data from model run at 11,100 cfs flow.

Impacts of Diversion to South Channel

The Diversion Option 1 reduces available water was analyzed for impacts to depth and flow in the North Channel. A similar analysis was not done for Option 3, but should be performed if it is considered further.

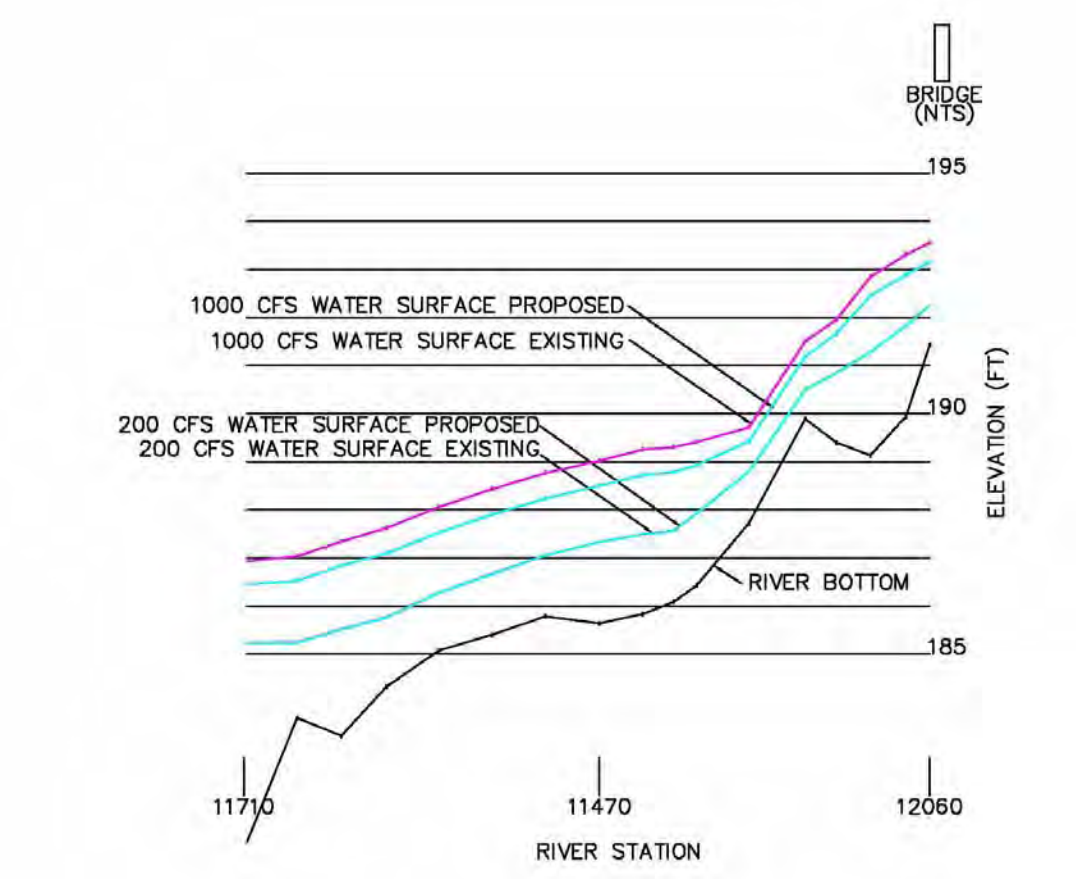
The existing and proposed conditions in the North Channel were modeled in Hec Ras using the flow split from the 2D modeling. The flows 200 and 1,000 cfs net in the river were used. The resulting flows as modeled below are:

Total River Flow	Proposed Conditions North Channel	Existing Conditions North Channel
200 cfs	150 cfs	152 cfs
1000 cfs	600 cfs	868 cfs

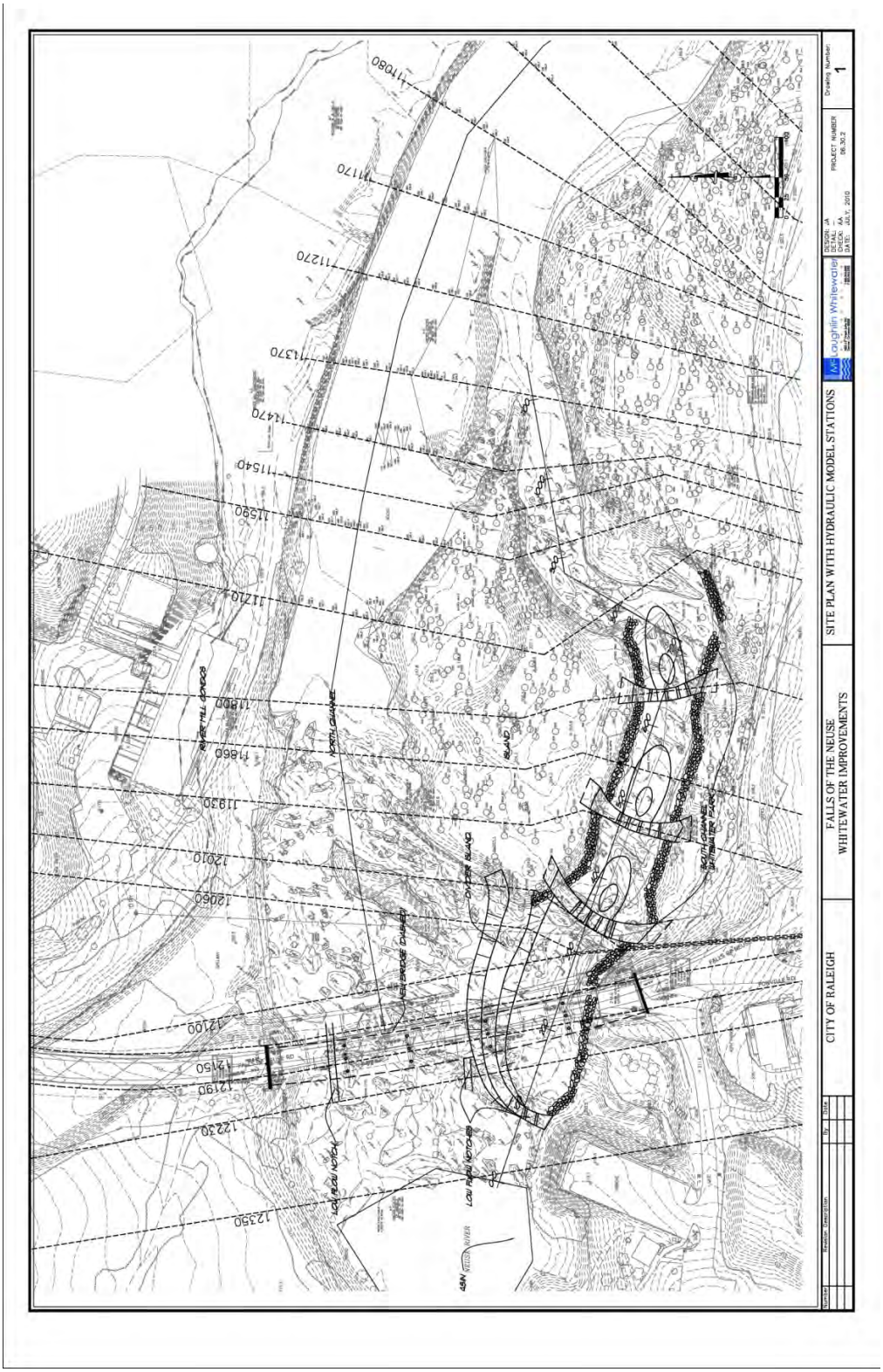
Proposed Conditions Model - Fixed Crest North Channel						Existing Conditions Model Output - North Channel						Comparative Table		
HEC-RAS Plan: Plan 01 River: Neuse Reach: North Split						HEC-RAS Plan: Plan 01 River: Neuse Reach: North Split								
Reach	River Sta	Q Total	W.S. Elev	Vel Chnl	Top Width	Reach	River Sta	Q Total	W.S. Elev	Vel Chnl	Top Width	WSEL Difference	Velocity Diff.	Width Diff.
		(cfs)	(ft)	(ft/s)	(ft)			(cfs)	(ft)	(ft/s)	(ft)	(ft)	(ft/s)	(ft)
North Split	12060	150	192.24	2.77	127.53	North Split	12060	152	192.25	2.78	127.66	-0.01	-0.01	-0.13
North Split	12060	600	193.15	2.61	251.46	North Split	12060	868	193.55	2.58	268.58	-0.40	0.03	-17.12
North Split	12010	150	191.81	1.98	111.08	North Split	12010	152	191.82	1.99	111.24	-0.01	-0.01	-0.16
North Split	12010	600	192.88	2.79	152.86	North Split	12010	868	193.3	2.99	199.74	-0.42	-0.2	-46.88
North Split	11930	150	191.27	2.61	76.16	North Split	11930	152	191.28	2.61	76.54	-0.01	0	-0.38
North Split	11930	600	192.45	3.33	136.48	North Split	11930	868	192.84	3.7	143.14	-0.39	-0.37	-6.66
North Split	11860	150	190.84	2.52	55.77	North Split	11860	152	190.84	2.53	55.86	0.00	-0.01	-0.09
North Split	11860	600	191.66	4.58	103.09	North Split	11860	868	191.95	5.34	113.71	-0.29	-0.76	-10.62
North Split	11800	150	190.49	1.9	152.48	North Split	11800	152	190.49	1.92	152.5	0.00	-0.02	-0.02
North Split	11800	600	191.19	3.2	158.66	North Split	11800	868	191.49	3.67	161.62	-0.30	-0.47	-2.96
North Split	11710	150	188.78	3.52	98.6	North Split	11710	152	188.79	3.5	98.69	-0.01	0.02	-0.09
North Split	11710	600	189.41	5.62	106.28	North Split	11710	868	189.71	6.22	111.25	-0.30	-0.6	-4.97
North Split	11590	150	187.93	1.73	126.73	North Split	11590	152	187.93	1.75	126.82	0.00	-0.02	-0.09
North Split	11590	600	188.95	2.43	173.69	North Split	11590	868	189.42	2.63	180.58	-0.47	-0.2	-6.89
North Split	11560	Lat Struct				North Split	11560	Lat Struct						
North Split	11540	150	187.55	2.55	104.77	North Split	11540	152	187.56	2.55	105.51	-0.01	0	-0.74
North Split	11540	600	188.8	2.36	186.23	North Split	11540	868	189.31	2.47	193.69	-0.51	-0.11	-7.46
North Split	11470	150	187.49	0.93	171.52	North Split	11470	152	187.49	0.94	171.79	0.00	-0.01	-0.27
North Split	11470	600	188.75	1.5	201.37	North Split	11470	868	189.26	1.72	205.96	-0.51	-0.22	-4.59
North Split	11370	150	187.33	1.79	84.05	North Split	11370	152	187.33	1.8	84.44	0.00	-0.01	-0.39
North Split	11370	600	188.54	2.75	122.39	North Split	11370	868	189.03	3.11	127.64	-0.49	-0.36	-5.25
North Split	11270	150	187.05	1.52	117.84	North Split	11270	152	187.05	1.53	117.88	0.00	-0.01	-0.04
North Split	11270	600	188.3	2.41	121.89	North Split	11270	868	188.78	2.82	123.02	-0.48	-0.41	-1.13
North Split	11170	150	186.66	1.99	92.65	North Split	11170	152	186.67	2	92.75	-0.01	-0.01	-0.1
North Split	11170	600	188.01	2.9	100.63	North Split	11170	868	188.45	3.44	101.47	-0.44	-0.54	-0.84
North Split	11080	150	186.26	1.9	79.98	North Split	11080	152	186.27	1.91	80.12	-0.01	-0.01	-0.14
North Split	11080	600	187.72	2.95	88.01	North Split	11080	868	188.09	3.67	88.86	-0.37	-0.72	-0.85
North Split	10980	150	185.8	2.33	76.47	North Split	10980	152	185.8	2.34	76.53	0.00	-0.01	-0.06
North Split	10980	600	187.46	2.99	85.36	North Split	10980	868	187.71	3.91	85.85	-0.25	-0.92	-0.49
North Split	10890	150	185.61	1.51	74.12	North Split	10890	152	185.61	1.52	74.16	0.00	-0.01	-0.04
North Split	10890	600	187.32	2.55	82.95	North Split	10890	868	187.47	3.52	83.3	-0.15	-0.97	-0.35
North Split	10800	150	185.42	1.85	78.62	North Split	10800	152	185.42	1.88	78.64	0.00	-0.03	-0.02
North Split	10800	600	187.2	2.43	102.76	North Split	10800	868	187.23	3.47	103.04	-0.03	-1.04	-0.28
North Split	10710	150	185.41	0.74	87.65	North Split	10710	152	185.41	0.75	87.67	0.00	-0.01	-0.02
North Split	10710	600	187.16	1.61	99.06	North Split	10710	868	187.15	2.34	99.04	0.01	-0.73	0.02

Hydraulic Profile of North Channel, Existing and Proposed

Per the preceding tabular data the 200 cfs profile is nearly identical.



Site plan Showing Locations of Hydraulic Modeling Stations



Appendix IV
Memorandum from
North Carolina Wildlife Resources Commission

North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

TO: Cindy Szwarckop, Senior Planner
Stewart Engineering

Kathy Capps, Risk and Grants Manager
City of Raleigh Parks and Recreation Department

FROM: Shari L. Bryant, Piedmont Region Coordinator
Habitat Conservation Program

DATE: 5 April 2010

SUBJECT: Falls Whitewater Park

Biologists with the North Carolina Wildlife Resources Commission conducted a site visit of the proposed whitewater course on March 22, 2010. At the time of our site visit approximately 2,500 cfs was being discharged from the Falls Lake Dam. There were several anglers fishing within the proposed whitewater course. The purpose of our site visit was to evaluate existing aquatic habitat, and to identify potential impacts and/or benefits of the proposed project to stream geomorphology, instream flow, resident fish and freshwater mussel species, migratory fish species, and angling opportunities. We offer the following observations, comments, and suggestions:

Stream Geomorphology, Instream Flow, and Aquatic Habitat

Flow was very high during the site visit and it was difficult to see aquatic habitat within the south channel. However, we observed several bedrock features and a forested riparian buffer. Also, crappie (*Pomoxis* sp.) and white perch (*Morone americana*) were caught by several anglers fishing in the south channel. During the last meeting it was indicated that a substantial amount of rock would be needed to construct the whitewater course. The consultants indicated the south channel would need to be 8 to 12 feet wide for flow to be sufficient for whitewater paddling. However, it is unclear whether the entire south channel would need to be 8 to 12 feet wide or if only the features would be this width. The south channel appears fairly wide and this would take a substantial amount of rock to narrow the channel to 8 to 12 feet. Also, it was indicated that the river bank would need to be stabilized to allow foot traffic. Based on our observations, and the information provided at the previous meeting, we ask that the following be considered in the development of the whitewater course.

- Any rock added to the south channel will need to be sufficiently anchored to prevent downstream movement. Very high downstream flows can result from water releases from Falls Dam particularly during high rainfall events.

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- Installation of rock within the south channel should not create flow conditions that result in stream bank erosion or channel degradation upstream, within, or downstream of the whitewater course. Also, by reducing channel width and increasing the amount of water in the channel during certain flows, water elevations will increase. Bank slopes may need to be stabilized for water elevations at different discharge levels.
- Installation of additional rock structures within the south channel should work with the natural geomorphology and flow patterns of the stream. Also, effects of sediment transport should be considered in the design of the whitewater course.
- Hardened structures (e.g., rip rap) should be avoided, or at least minimized, for bank stabilization. If any hardening structures are needed, then these should be installed to avoid creating flow conditions that result in downstream bank erosion or channel degradation.
- Protect existing vegetation and trees within the riparian buffer to maximum extent possible; however, management of invasive species would be appropriate.
- Consider minimizing longitudinal access to the stream bank by providing a trail located away from the stream bank and selected viewing platforms for the whitewater features and/or course. To further minimize pedestrian access along the stream bank, consider planting shrub species along the stream bank to provide stream bank stabilization and to make the stream bank less friendly for pedestrian use.

Fish Passage

The whitewater course should be designed to allow passage of American shad and striped bass adults, eggs and larvae. Other species to be considered for passage include white perch and resident species such as crappie and largemouth bass.

Diversion Weir

We could not determine the location of the proposed diversion weir. The following information would be helpful in evaluating the effects of a diversion weir on stream flow and aquatic habitat in the river.

- Where the diversion weir would be installed.
- How large the diversion weir will be.
- Whether there will be any dewatered areas of the river during any period of the year as a result of construction of the diversion weir.
- Impacts to flow in the north channel. While the presentation included impacts to flow in the north channel from a percentage basis, it is unclear how the diversion weir will affect the flow pattern, wetted area, water depth, and subsequently the aquatic habitat in the north channel.

Angling Opportunities

Several anglers were fishing the south channel during our site visit. There is the potential for conflict between paddlers and anglers, particularly if the width of the south channel is significantly lessened. To minimize conflicts with anglers within the proposed whitewater course, we offer the following suggestions.

- One of the reasons angling may be popular in the south channel is the easy access and good aquatic habitat. Creating or improving angler access along the south channel downstream of the proposed whitewater course, or providing additional angler access to the north channel

either from the island or north channel stream bank could minimize conflicts between these two user groups.

- The presentation shows construction of a pedestrian bridge to the island. This would provide access to the north channel. If a pedestrian bridge is constructed, we suggest improving angler access along the north channel stream bank on the island.
- It is unclear whether there is public access for fishing on the east/north side of Neuse River. If public access is available, then improving the pedestrian crossing along Falls of Neuse Road bridge would allow anglers to safely cross the river and fish on the east/north side of Neuse River and the north channel. Also, if public access is available on the east/north side of Neuse River, improving angler access in this area would provide additional areas for anglers to fish.

Thank you for the opportunity to participate on the Whitewater Park Steering Committee and to provide comments regarding the development of the proposed Falls Whitewater Park. If we can be of further assistance, please contact our office at (336) 449-7625.

ec: Bennett Wynne, WRC

North Carolina Wildlife Resources Commission

Gordon Myers, Executive Director

MEMORANDUM

TO: Cindy Szwarckop, Senior Planner
Stewart Engineering

FROM: Shari L. Bryant, Piedmont Region Coordinator
Habitat Conservation Program

DATE: 20 September 2010

SUBJECT: Falls Whitewater Park – Conceptual Course Design

On September 10, 2010, staff with the N.C. Wildlife Resources Commission and U.S. Fish and Wildlife Service met to discuss the proposed whitewater course conceptual design and its potential impact on aquatic resources, particularly diadromous species in Neuse River. Diadromous species include anadromous species such as American shad and striped bass that live in saltwater and spawn in freshwater, and catadromous species such as American eel that live in freshwater and spawn in saltwater.

Aquatic Resources in Neuse River

Aquatic resources in this section of Neuse River include resident fish species such as sunfish (*Lepomis* sp.), largemouth bass (*Micropterus salmoides*), crappie (*Pomoxis* spp.), and white perch (*Morone americana*). Diadromous species such as American eel (*Anguilla rostrata*), American shad (*Alosa sapidissima*), and striped bass (*Morone saxatilis*) historically have used this section of Neuse River. Freshwater mussel species such as the state threatened triangle floater (*Alasmidonta undulata*) have been documented in the south channel where the whitewater course is proposed to be constructed. Also, there are records for the state threatened Eastern lampmussel (*Lampsilis radiata*) and Carolina fatmucket (*Lampsilis radiata conspicua*), and historic records for the federal and state endangered dwarf wedgemussel (*Alasmidonta heterodon*), the federal species of concern and state threatened Carolina madtom (*Noturus furiosus*), the state threatened Roanoke slabshell (*Elliptio roanokensis*) and the state special concern Neuse River waterdog (*Necturus lewisi*) and notched rainbow (*Villosa constricta*) in Neuse River upstream of the confluence with Crabtree Creek.

Whitewater Park Conceptual Design and Fish Passage

On June 8, 2010, the N.C. Wildlife Resources Commission provided recommendations to address fish passage within the whitewater course in the south channel. We recommended developing a holistic approach to fish passage. This would have required measurements to be collected of the existing habitat (line transect type data) under low flow conditions. Then, we recommended that each characteristic (water velocity, water depth, passage width, abrupt drop) not be modified by more than 10%. So, for example, if the existing habitat has 40% of the stream width with water depths between 1 and 2 feet, (at

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some reference gage height), then between 30-50% of the channel should have these water depths after any stream bed modifications are made. This would maintain the habitat diversity needed by the existing fish community within this section of the Neuse River, but allow for some modification of the streambed to meet the objectives of developing a whitewater park.

On June 25, 2010, the N.C. Wildlife Resources Commission participated in a conference call with the design engineer, Mr. John Anderson, to discuss the potential to incorporate the above recommendations into the whitewater course design. Mr. Anderson indicated that adhering to our recommendations would not meet the objectives for the whitewater course. We tentatively agreed with Mr. Anderson's proposed conceptual design, but indicated we had concerns regarding the diversion weir/divider island and asked if that could be eliminated from the design. We were informed that while the whitewater course did not require a diversion weir/divider island, this was a design requirement by the project proponents. We indicated more information was needed on the effect of the diversion weir/divider island on flows in the north channel. It was clear diadromous fish would not be able to pass through the south channel due to physical barriers of the proposed whitewater course design, but if the diversion weir/divider island did not significantly affect flows in the north channel, then there may be the potential for diadromous fish to pass through the north channel.

Information and data were provided on the effect of the diversion weir/divider island on flows in the north channel. The data showed the greatest impact to flow would occur between 300 and 1,000 cfs; this is the flow range that is critical for diadromous fish passage. A cursory review of flow data from Falls dam showed that flows in the range of 300 to 1,000 cfs could be reduced up to 13% of the days between March 1 and May 31 in the north channel following construction of the whitewater course and diversion weir/divider island. At this point, we were concerned the whitewater course design would not allow for fish passage in the south channel, and reductions in flow could significantly affect fish passage in the north channel.

During the August 16, 2010 meeting, we shared these concerns with the Steering Committee members. Several questions were asked, and we agreed to further review the Neuse River hydrograph, and respond to the questions that were asked.

A review of the Neuse River hydrograph between 1971 and 2010 shows construction of the dam itself affected the frequency of flows in the 300-1,000 range; however, the proposed diversion weir/divider island would further reduce the frequency of flows in this range (Figure 1). At this time, we feel the project as proposed could be a migration barrier to diadromous species in the Neuse River by providing a physical barrier in the south channel and a flow barrier in the north channel.

<u>Steering Committee Members' Questions</u>

Question: With Milburnie dam still in place do we need to be concerned about anadromous fish passage?

Answer: Yes. Although Milburnie dam is still in place, there is currently a proposal to remove it. Even if it is not removed, there is the potential for fish passage around the dam to be provided at some point in the future.

Question: If the dam is removed will anadromous fish be able to get to Falls dam? How often?

Answer: Yes, diadromous fish will be able to get to Falls dam. There are historical records of diadromous species reaching the Eno River and Flat River upstream of Falls dam. American eel, American shad, and striped bass are expected to be able to reach Falls dam. It is anticipated American eels will reach Falls dam annually. How often American shad and striped bass get to Falls dam will

depend on flows. We know it takes 500 cfs for American shad and striped bass to migrate to Milburnie dam and currently these species are able to get to Milburnie dam four out of every five years.

Question: What is the flow that anadromous fish need to pass through the north channel?

Answer: It is unknown at this time. At the previous meeting, we indicated 500 cfs as a conservative estimate for our cursory review of the Falls dam flow data since we know it takes 500 cfs for American shad and striped bass to reach Milburnie dam. Currently, we are reviewing Habitat Suitability Index (HSI) data for American eel, American shad, and striped bass to see if these data can provide better estimates of what the flow needs may be for each of these species. However, it is likely that we will not know definitively until fish have access to this section of the river.

Question: How many days of flow are needed for anadromous fish passage?

Answer: Adequate flows are needed between March 1 and June 1.

Question: Is habitat in the north channel suitable for anadromous fish?

Answer: It is unknown at this time. Again, currently we are reviewing Habitat Suitability Index (HSI) data for American eel, American shad, and striped bass to determine whether habitat in the north channel is suitable for these species.

Question: Do the fish have to come to the dam?

Answer: Yes. A diadromous fish restoration plan has not been developed for the Neuse River yet. However, the goal of the U.S. Fish and Wildlife Service, National Marine Fisheries Service, N.C. Division of Marine Fisheries, and N.C. Wildlife Resources Commission is to maintain all options for upstream migration of diadromous species above Falls dam. There is restoration potential for American eel above Falls dam. At this time, it is unclear whether there are restoration opportunities for American shad or striped bass above Falls dam. Therefore, to pass diadromous species above Falls dam these species would need to be able to get to the dam.

Question: Could the habitat be enhanced for anadromous fish downstream of where the north and south channels confluence?

Answer: No. As stated above, one goal of the resource agencies is to maintain all options for upstream migration of diadromous species above Falls dam. Therefore, to pass diadromous species above Falls dam, these species would need to be able to get to the dam.

Question: Could habitat in the north channel be modified to provide more desirable flows to pass anadromous fish?

Answer: It is unlikely that streambed modifications will improve habitat in the north channel because spawning success is also related to stream discharge. However, we are reviewing the Habitat Suitability Index (HSI) data to see if there is a potential.

Question: Can the whitewater design, particularly the side channels, be modified to pass anadromous fish?

Answer: Possibly. We are working with migratory fish experts to see if there is a possibility for modification that would allow for fish passage within the proposed conceptual design of the whitewater course.

Other Issues

- As discussed above in the section Aquatic Resources in Neuse River, there are historical records for several listed aquatic species in Neuse River. It has come to our attention that the Carolina madtom and Neuse River waterdog are under consideration for possible listing by the U.S. Fish and Wildlife Service. If either of these species is listed prior to project permitting, the U.S. Fish and Wildlife Service would require a Section 7 review.
- Restoration of freshwater mussel species that historically occurred in this section of Neuse River may depend on diadromous fish species. At this time, it is unknown whether any of the diadromous species in Neuse River serve as hosts for any of the mussel species. Therefore, any freshwater mussel restoration may be dependent on ensuring diadromous fish passage.
- It appears all three of the natural low flow notches in the river may be modified. It was our understanding the southern most low flow notch may be modified during construction of the whitewater course and diversion weir/divider island. We have concerns about modifications to the other natural low flow notches in the river. More detailed information on the proposed modification of these low flow notches and the possible impact to flows and aquatic habitat needs to be presented.
- In Mr. Zarzecki's correspondence dated August 16, 2010, he stated "I have seen documentation and studies from WRC on rip-rap banks at the coast improving habitat and documenting greater diversity and species of fish, etc." We would like to clarify that our preference is for natural bank stabilization, whenever feasible. However, if natural bank stabilization is not an option, then we prefer rip-rap over other hardening structures (e.g., seawall) because rip-rap provides better aquatic habitat than other hardening structures.

Alternatives

The primary goal of the resource agencies is to retain the utility of this section Neuse River to provide spawning and migration pathways for resident fish species, diadromous species, and freshwater mussel species. At this time, we feel the proposed conceptual design could be a migration barrier to diadromous species in the Neuse River by providing a physical barrier in the south channel and a flow barrier in the north channel. We have several alternatives for consideration by the Steering Committee. These include:

- Design a whitewater course that does not require a diversion weir/divider island, but could be retrofitted with a diversion weir/divider island at a later date. Once diadromous species have access to this section of the river, more data will be available on how these species (i.e., American eel, American shad, and striped bass) will use the area. Once this data is available, discussions regarding the possibility of retrofitting the whitewater course to include a diversion weir/divider island could take place.

- Include an adjustable weir in the project design. During critical migration periods (i.e., March 1 to June 1), the weir could be adjusted to provide sufficient flows to the north channel to allow for upstream migration of diadromous species. We understand the Committee members do not want an adjustable weir, but this would resolve many of the resource agencies concerns regarding the proposed conceptual design.

- Conduct an Instream Flow Incremental Methodology (IFIM) study to evaluate the effect to flow and habitat in the north channel with and without the project.

Thank you for the opportunity to participate on the Whitewater Park Steering Committee and to provide comments regarding the development of the proposed Falls Whitewater Park. If we can be of further assistance, please contact our office at (336) 449-7625.

ec: Bennett Wynne, WRC