

**UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION**

TransCanada Hydro Northeast, Inc.

Bellows Falls Project  
FERC No. 1855-045

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NEW ENGLAND FLOW, AMERICAN WHITEWATER AND THE APPALACHIAN  
MOUNTAIN CLUB'S COMMENTS AND STUDY REQUESTS  
IN RESPONSE TO THE NOTICE OF INTENT TO FILE LICENSE APPLICATION, FILING  
OF PRE-APPLICATION DOCUMENT (PAD), COMMENCEMENT OF PRE-FILING  
PROCESS, AND SCOPING: REQUEST FOR COMMENTS ON THE PAD AND SCOPING  
DOCUMENT, AND IDENTIFICATION OF ISSUES AND ASSOCIATED STUDY  
REQUESTS REGARDING THE BELLOWS FALLS HYDROELECTRIC PROJECT, FERC  
PROJECT NO. 1855-045.

New England FLOW is a regional non-profit organization whose affiliations have represented whitewater boaters, canoeists, rafters, and other river users on multiple project re-licensings throughout New England for over 25 years. American Whitewater is a national non-profit organization dedicated to protecting and restoring our nation's whitewater resources and enhancing opportunities to enjoy them safely. Since 1876, the Appalachian Mountain Club (AMC) has promoted the protection, enjoyment, and understanding of the mountains, forests, waters, and trails of the Appalachian region and is the largest conservation and recreation organization in the Northeast with more than 90,000 members. All three organizations are "steering committee" members of the Hydropower Reform Coalition based in Washington, D. C. Our members, who are primarily conservation-oriented kayakers, canoeists, and rafters living in this area of the Northeast, would enjoy this section of the Connecticut River as a weekend trip.

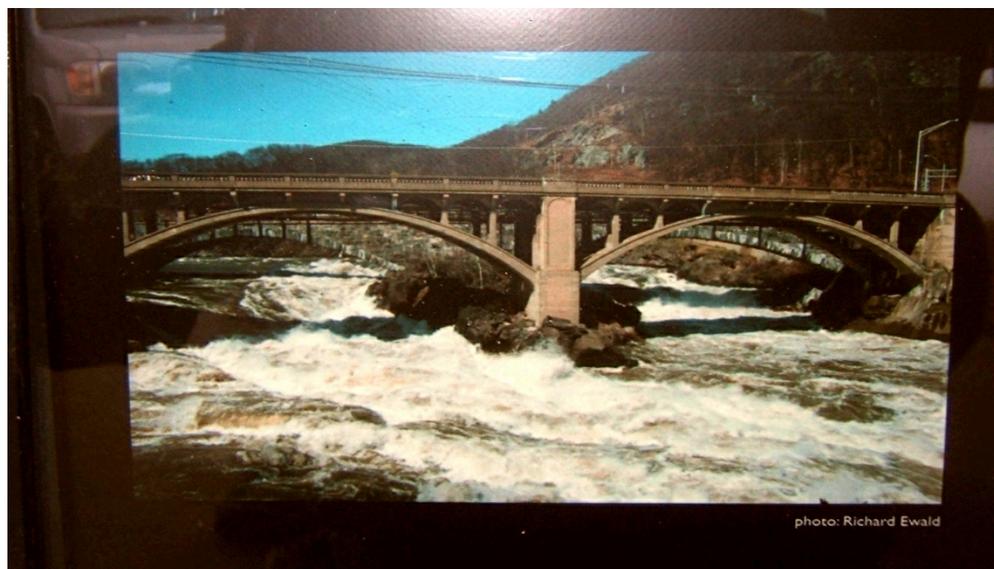
The Bellows Falls bypassed reach, the original riverbed of the Connecticut River, has the ability to offer paddling opportunities of sufficient quality through spill events. This site would be a very good location to develop a whitewater park, and at moderate flows the run could be used by canoeists and kayakers for surfing waves and for acrobatic tricks called "freestyle" paddling. All manufacturers of whitewater kayaks design boats for this purpose.

The recreational use of the resources at this project has the potential to add significant economic value to the region given its central location and its proximity to Dartmouth College, Norwich University, and the communities of Bellows Falls, Springfield, and White River Jct., Vermont, as well as Lebanon, New Hampshire. Millions of people live within a three-hour drive.

**Issue #1: Impacts of the Connecticut River flow diversion and project works on recreational paddling at the Bellows Falls bypass reach.**

The Bellows Falls project de-waters a 0.7-mile reach of the Connecticut River that has no flows except for some leakage. Any natural boatable flows are provided during spill events, and are

generally inaccessible, high, flashy, and unpredictable. The current operation of the project virtually eliminates any valuable paddling opportunities.



**Bellows Falls Bypass Reach Before Dam Construction**

In addition to the elimination of all flows through the bypass reach except for leakage, the licensee has constructed a dangerous low-head weir that further prevents boaters from using this reach during high flow spillage events.



**Low-head Weir**

The Bellows Falls Dam itself, the reservoir, the low-head weir in the reach, and the downstream impoundment, in concert with the elimination of flows severely impacts whitewater rapids and recreation.

A subset of the paddling opportunities eliminated by the project could be restored with moderate, stable, and predictable flows of sufficient volume to support whitewater recreation between late spring and early fall months. With this said, the cumulative effects of the project works and downstream impoundment render this highly impacted reach of questionable recreational value in its current state.

To mitigate for continued diversion of significant flow, and for the recreational impacts of the diversion dam and other project works, a whitewater feature or series of features (e.g., waves or rapids) could be constructed that optimize freestyle paddling opportunities at a prescribed range of flows. This could be done in concert with removal or modification of the low-head dam in a manner that meets both recreational and fish barrier goals, and eliminates an objective hazard. The Bellows Falls diversion reach, if suitable flows were provided, appears to be an ideal location for this form of mitigation. There may be other sites as well on the Connecticut River or in the watershed.

Furthermore, the construction of features, access, and the provision of flows in the Bellow's Falls diversion reach or elsewhere could serve as mitigation for comparable and even more severe impacts at the Wilder and Vernon projects.

In the PAD the Licensee proposes no flow enhancement, weir removal, or whitewater feature construction to mitigate the project's effects on whitewater recreational use.

In addition to recreation and aesthetics, we recognize that flow-related decisions also affect economic factors related to power generation, fish passage, and other environmental variables. We look forward to exploring how all flow-related values relate to one another through participation in this relicensing process.

## **Issue # 2: Public Access for whitewater boating, rafting, and canoeing is inadequate.**

Directly below the Bellows Falls Dam, there is currently no formal public access or parking for whitewater boaters or canoeists. In order to put in for access to the whitewater rapids in the bypass reach, boaters would need to descend a steep slope studded with large boulders from a heavily traveled roadway. However, there are many examples of licensees developing successful access points regardless of steep grades to reach riverbeds, including at the Kennebec River (FERC Project No. P-23229-ME) in Maine.

The run ends at the confluence of the bypass reach with the main stem Connecticut River below the powerhouse. The access road along the east side of the river is New Hampshire Route 12. Vermont Route 5 is an additional access road on the west side of the river, however there is a railroad between the road and the river. The steep riverbanks make egress at the end of the run

difficult, and boaters would have to paddle a considerable stretch of flatwater to a portage take-out downstream.

In the PAD the Licensee proposes no new river access areas.

### **Issue # 3: Camping and sanitary facilities available for multiple-day kayaking or canoe trips.**

In the PAD, the Licensee cites the Massachusetts SCORP (2006-2011), which indicated a need for “water-based” activities, and one of the goals of the New Hampshire SCORP identified the need for a variety of recreational opportunities. The Vermont SCORP (2005-2009) reveals the need for access to all types of outdoor recreation. While the applicant has itemized and described the different recreational and access points available throughout the reach from the Bellows Falls Dam to the Wilder Dam, they have not provided a qualitative analysis of these facilities.

Information provided by canoe clubs and other river recreational interests cite changing demographics and increasing use of sea kayaks to explain the high interest in flatwater paddling and multiple day canoe trips.

The applicant has itemized three camping facilities and 11 access points (not all of which are maintained by TransCanada) in the reach from the Bellows Falls Dam to the Wilder Dam; however they have not provided a qualitative analysis of these facilities. These sites are managed and/or maintained by multiple parties, and at a minimum there should be consistent standards for sanitation, safety, and control of litter or camping debris.

### **Issue #4: Economic Impacts.**

The diversion of flow around the Bellows Falls Dam has significant negative recreational impacts and related socio-economic impacts. By changing the operational scenario of the Bellows Falls Project and constructing a whitewater park, (See Appendix) the potential exists to create new tourism products for a region that is primed to capitalize on it. Retail activity, and food and lodging opportunities will be geared toward non-commercial paddlers, and thousands of people who currently travel to the region each year for rafting, kayaking and other outdoor adventure activities will discover added value to the region.

In making a public interest decision, FERC must weigh the value of water in the power canal against the value of water in the natural riverbed, and then reach a comprehensive plan for the development of the river that strikes the appropriate balance and is best adapted to the river. In many dam relicensing proceedings the values of flow restoration are largely recreational and ecological, and thus hard to evaluate in dollars. In this case, because of the significant economic potential of a whitewater park to increase recreation with increased flows, we believe FERC should also weigh the predicted economic values associated with the recreational use when looking at various alternatives.

## **Issue #5: Alternatives for off-site mitigation.**

Bellows Falls Dam sits atop a whitewater falls, after which it is named, and its reservoir drowns other whitewater drops as the river approaches the dam. Alternatives in the form of off-site mitigation could create compensatory whitewater opportunities.

Like FERC, we prefer on-site mitigation focused on the impacted river. However, given the cumulative effect of the Bellows Falls and other Connecticut River projects on whitewater recreation, onsite mitigation may be infeasible or may not be the most cost effective alternative.

There may be mitigation opportunities elsewhere on the Connecticut River or in the Connecticut River watershed. Mitigation could come in the form of improved access, flows, or features. This concept follows the guidelines for the newly-established National Blueways System, in which the Connecticut River and Watershed has been named the first National Blueway.

### **Study Requests**

We hereby request several studies per 18 CFR 5.9(b).

#### **1. Whitewater Park Feasibility Study.**

*(1) Describe the goals and objectives of each study proposal and the information to be obtained.*

The goal of the whitewater park study is to assess the potential for mitigation in the form of the construction of one or more whitewater features, access to and viewing of those features, and the provision of suitable flows.

*(2) If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied.*

The requester is not a resource agency.

*(3) If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study.*

The Bellows Falls bypass reach offers the public an opportunity to enjoy a high quality whitewater boating resource with the development of a whitewater park. Conducting the necessary studies and implementing the necessary measures to ensure the public has access to high quality outdoor recreational resources is in the public interest. It is widely accepted that outdoor recreation has significant benefits to participants including health, well being, and quality-of-life. Outdoor recreation also has proven economic benefits for communities located near recreational resources.

Whitewater parks offer adults and youth alike an outstanding and low risk means of getting exercise outdoors and building river-running and free-style paddling skills. They often serve as a

recreational centerpiece for communities in providing opportunities for both direct participation as well as viewing.

Restoration of recreation opportunities in the Connecticut River has the potential to offer the region significant economic benefits.

***(4) Describe existing information concerning the subject of the study proposal, and need for additional information.***

In cases where on-site restoration of lost paddling opportunities proved impossible, Licensees have supported the planning and/or construction of whitewater parks as mitigation. The most notable example is the Holtwood Hydroelectric Project on the Susquehanna River (P-1881). At the Holtwood project, the Licensee is constructing two whitewater features and public access, and providing flows to optimize the whitewater features.



**Whitewater Park, Denver**



**Whitewater Park Columbus, Georgia. (Photo: McLaughlin Whitewater Design Group)**

The Bellows Falls bypassed channel has suitable gradient, constriction, and rock structure for a high quality whitewater park. The town setting is typical of the most successful parks. Further analysis by an expert would be required to scope the specific potential of the site.

***(5) Explain any nexus between Project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.***

The Project controls the entire flow in the Connecticut River with the exception of releasing the “required minimum flow of 1,083 cfs or inflow, whichever is less” into the main stem river or when generating. The bypass reach has no minimum flow, but there is leakage into the natural riverbed. The result is the virtual elimination of valuable and regionally needed summer paddling opportunities in the bypass reach. The project works directly eliminate whitewater features and create objective and artificial hazards. The Connecticut River can be a high-quality paddling resource, and since paddling is a flow-dependent activity, the project directly affects paddling on the Connecticut River. The project nexus is direct.

Results of this study may produce evidence supporting mitigating license requirements for a whitewater park and scheduled releases in the bypass reach. It should be noted the development of whitewater parks as mitigation have been part of previous FERC relicensing agreements, most notably on the Lower Chattahoochee River in Georgia and the Susquehanna River in Pennsylvania.



**Bellows Falls bypass reach 2012**

***(6) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.***

We request a feasibility study for the construction and management of a whitewater park. These studies are routine and relatively standard. The McLaughlin Whitewater Design Group and Recreational Engineering and Planning are two firms that conduct such studies. As experienced engineers, designers and hydrologists, they have worked extensively with municipalities, public utilities, the U.S. Army Corps of Engineers, and paddling groups throughout the United States. You can see examples of studies they have conducted here:

<http://www.boaterparks.com/studies.html>, and under the “portfolio” tab here:  
<http://mclaughlinwhitewater.com>

***(7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.***

The Licensee PAD proposes no whitewater park feasibility analysis. This no-action step will reveal nothing about project impacts on whitewater recreation or opportunities for protection, mitigation, or enhancement measures. A feasibility study should not be prohibitively expensive.

## **2. Public Access Study (Recreation Use and Needs).**

***(1) Describe the goals and objectives of each study proposal and the information to be obtained.***

The goal of this study is to identify and define adequate access points that provide trails and parking, at the beginning and end of the bypass reach.

***(2) If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;***

The requester is not a resource agency,

***(3) If the requester is a not resource agency, explain any relevant public interest considerations in regard to the proposed study.***

The public has an interest in healthy rivers and streams that fully support the full suite of beneficial uses and other goals of the Clean Water Act. Access to streams and rivers with adequate base flows and sufficient variability to support high quality whitewater recreational use will support other businesses within the regional economy.

The Bellows Falls bypass reach offers the public an opportunity to enjoy a high quality whitewater boating resource with the development of a whitewater park. Conducting the necessary studies and implementing the necessary measures to ensure the public has access to high-quality outdoor recreational resources is in the public interest. It is widely accepted that outdoor recreation has significant benefits to participants including health, well being, and quality-of-life. Outdoor recreation also has proven economic benefits for communities located near recreational resources.

Restoring recreation opportunities in the Connecticut River has the potential to offer the region significant economic values and coincides with the goals of the National Blueway designation for the Connecticut River and Watershed.

***(4) Describe existing information concerning the subject of the study proposal, and the need for additional information.***

There is an inconsistent body of knowledge regarding access needs in this reach, and we look forward to learning more. The PAD does not identify access points for any type of whitewater use.

***(5) Explain any nexus between Project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.***

The project eliminates or does not provide access points for whitewater use. The studies we request are vital to developing a mechanism for defining access points that can best be adapted for a whitewater park. Access would be necessary if a whitewater park were used as a mitigating license requirement.



**Access stairway at Kennebec River in Maine**

Shown above is an example of the type of access that was required as part of the Harris Dam relicensing on the Kennebec River (FERC Project P-23229-ME). Similar construction would provide adequate access to the Bellows Falls bypass reach.

***(6) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including***

*appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.*

The flows that paddlers enjoy on virtually every undammed stream are natural components of the flow regime that provide recreation and other multiple functions. Hydropower project operations often disrupt, and in this case have eliminated, access that would otherwise naturally provide these recreational values. We request sufficient analysis be conducted to understand the Project topography that would detail which sites would best provide adequate access and egress for a whitewater park. Use of Geographic Information System (GIS) may provide a general overview of potential access points within Project bounds and may be helpful.

However, given the steep topography leading to the bypass reach, this work should be completed using accepted and certified surveying methods that “ground truth” any GIS analysis. Scheduling this work should be completed during the summer field season when low seasonal flow will allow surveying activities within the bypass reach.

*(7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.*

The recommended GIS analysis is a relatively simple desktop analysis using software that is currently available and thus should require little effort or cost. Once potential access points are identified, the cost of surveying is nominal when presented in the context of other studies required by FERC or other stakeholders. No other studies would address the specificity required to identify, layout and design adequate access for this project.

### **3: Camping and sanitary facilities available for multiple-day kayaking or canoe trips (Recreation Use and Needs).**

*(1) Describe the goals and objectives of each study proposal and the information to be obtained.*

The goal of this study is to provide a quantitative and qualitative analysis of existing facilities to determine their capacity to manage the increasing number of paddlers who are making multiple-day trips on the Connecticut River. It should examine the adequacy of such facilities over the 30-50 year life of the license. This study can also identify other points on the river that would be suitable for the establishment of additional facilities if the Licensee were required to purchase the properties.

*(2) If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;*

The requester is not a resource agency.

*(3) If the requester is a not resource agency, explain any relevant public interest considerations in regard to the proposed study.*

In the PAD, the Licensee cites the Massachusetts SCORP (2006-2011), which indicated a need for “water-based” activities, and one of the goals of the New Hampshire SCORP identified the need for a variety of recreational opportunities. The Vermont SCORP (2005-2009) reveals the need for access to all types of outdoor recreation.

Several agencies have management goals that are associated with the creation of the National Blueway System (NBS) and with the Connecticut River and Watershed, which is the first National Blueway. (See study request #5 below.) In particular, the U.S. Department of the Interior has pioneered in creating the NBS.

The public has an interest in healthy rivers and streams that fully support the full suite of beneficial uses and other goals of the Clean Water Act. Access to streams and rivers with adequate base flows and sufficient variability will support high-quality recreational use. Information provided by canoe clubs and other river recreational interests cite changing demographics and a switch to sea kayaking as reasons for the high interest in flatwater paddling and multiple day canoe trips. The main obstacles to multiple-day canoe trips on the Connecticut River are the hydropower dams themselves. The applicant should be required in the license to provide adequate camping, access, and portage facilities to accommodate paddlers who want to spend more than a few hours on the river at a time.

***(4) Describe existing information concerning the subject of the study proposal, and the need for additional information.***

In the PAD, the Licensee identifies 11 sites within Project boundaries as access points to the Connecticut River, such as boat ramps or car-top access. However, none of these sites are designated for camping, nor do they have sanitary facilities. One of the better publications available to gather this information is *The Connecticut River Boating Guide: Source to the Sea*, published by the Connecticut River Watershed Council, 3<sup>rd</sup> Edition 2007. The requested study should supplement and update that information and provide a basis for license requirements.

***(5) Explain any nexus between Project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.***

This study will be the defining mechanism for identifying additional sites that can best be adapted for increasing public access and multiple-day paddling trips on the Connecticut River. The Licensee may be required to purchase additional land to accommodate the public, or to upgrade facilities to a national standard that includes toilets, trash removal, and safe put-in and take out opportunities. The study should also evaluate and make recommendations for replacing the horrible portage around the Bellows Falls Dam.

***(6) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.***

Our interest is in having sufficient information to understand what facilities exist and what, if any, improvements are necessary to manage the increasing multiple-day kayak and canoe trips on the Connecticut River. This analysis should include recommendations for the acquisition and development of additional facilities to meet the interest and needs identified in the multi-state SCORP documents cited by the Licensee in the PAD, and that are adequate for a 30-50 year license.

***(7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.***

There are multiple sites along the Connecticut River that are used as access points or have camping facilities. However, there are vast differences in the ability or capacity of these sites to handle paddling groups of varying size and numbers or sanitation needs. Because there is no comprehensive guide or text that provides updated information, visual inspection of existing sites should take place. Any needed reconstruction or rehabilitation of existing facilities should be identified.

This analysis can be completed during any spring, summer, or fall field season. Such field research needs to be matched with projections of use in the future and with standard requirements for access sites, campsites, and sanitation facilities.

#### **4: Economic analysis.**

***(1) Describe the goals and objectives of each study proposal and the information to be obtained.***

The goal of the recreational economic analysis is to establish the economic values so they can be compared to the value of power generation, along with the economic benefits of various restoration alternatives that can be provided by restoring flows to the Bellows Falls bypass reach.

***(2) If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied.***

The requester is not a resource agency.

***(3) If the requester is a not resource agency, explain any relevant public interest considerations in regard to the proposed study.***

Economic stimulus is clearly in the public interest. Many examples of whitewater parks support robust recreation economies, including those that have been constructed in Charles City, Elkader, and Iowa City, Iowa, as well as South Bend, Indiana; Springfield, Ohio; Yorkville, Illinois; and Petoskey, Michigan.

The federal agencies that are associated with the National Blueways System (NBS), including the Department of the Interior, the National Park Service, and the U. S. Army Corps of Engineers are all concerned with the health and well-being of resources in the Connecticut River watershed.

***(4) Describe existing information concerning the subject of the study proposal, and the need for additional information.***

We are unaware of existing information regarding the economic potential of the Bellows Falls bypass reach and look forward to learning more. However, Crane Associates of Burlington, Vermont, published a study in 2005; *“The Economic Impacts of Whitewater Boating on the West River, Jamaica, Vermont.”* The West River is in the Connecticut River Watershed and is included in the NBS.

***(5) Explain any nexus between Project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.***

The project has eliminated all paddling opportunities on the Bellows Falls bypass reach throughout the year except during flood stage. Many of these days could provide kayaking, instructional paddling, rafting, and canoeing, all of which have ancillary economic benefits associated with any form of tourism.

Understanding the economic values that could be provided by restoring paddling recreation to the Bellows Falls bypass reach will assist FERC and other stakeholders in balancing the trade-offs associated with lost generation. In the case of the Deerfield River the value of whitewater recreation outweighed the value of power generation by a margin of 24:1.

***(6) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.***

Since the present economic values are either unknown or zero because there is currently no recreational activity in the bypass reach, we request the study be compiled using the *“contingent valuation”* method that measures individuals’ *“willingness to pay.”* These values can then be compared to the dollar values of power generation. Economic benefits can be extrapolated to develop an understanding of how those dollars will be multiplied throughout the community as benefits associated with paddling activities. Overall visitor spending will contribute to economic significance for the immediate and adjacent region. Contingent valuation is a standard methodology used in resource economics. Such a study can be done at Bellows Falls when conditions are appropriate, such as during test runs.

***(7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.***

Primary data should be collected through survey instruments circulated through known paddling clubs throughout New England during the winter months. Individual interviews should be taken on days when the nearby West River and Deerfield River are having releases, and the survey should include kayakers, canoeists, and rafters of varying abilities. Customers of commercial

outfitters should also participate in the survey, as well as outfitters that provide tubing equipment for those individuals who enjoy just floating down the river.

## **5. Mitigation for Impacts on the Connecticut River and Loss of Whitewater Recreation below Bellows Falls Dam**

***(1) Describe the goals and objectives of each study proposal and the information to be obtained.***

The goal of this study is to assess the value of whitewater boating resources eliminated by the Project and the development of a suite of on-site and off-site mitigation options that would provide adequate compensation for the loss of whitewater recreation at the Bellows Falls Project.

***(2) If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied.***

The requester is not a resource agency.

***(3) If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study.***

The Bellows Falls Project effectively eliminates the public's opportunity to enjoy a whitewater boating resource. Conducting the necessary studies and implementing the necessary measures to ensure the public has access to whitewater recreational resources is in the public interest.

We have proposed a whitewater park feasibility study that will highlight on-site and potentially off-site mitigation options. Additional off-site mitigation options may exist nearby in the Connecticut River watershed that could include the construction of a whitewater park, enhanced flow regimes, improved river access, riparian conservation, or other opportunities.

Using off-site mitigation has historically been an acceptable practice in FERC licensing. This is evidenced in the Upper Androscoggin Settlement Agreement for the Rapid and Magalloway Rivers in Maine (FERC No. 11834-000), as well as the Canada Falls Settlement Agreement (FERC No. 2634) for the South Branch of the Penobscot River in Maine.

On May 24, 2012, Secretary of the Interior Ken Salazar designated the Connecticut River and Watershed as the nation's first National Blueway. A Memorandum of Understanding signed in August by the Departments of Interior, Agriculture, and the Army has an objective of "providing opportunities for scientific research, environmental education and outdoor recreation and access within the National Blueway to the extent compatible with agency missions." The National Blueway concept takes a watershed viewpoint and addresses the river from its source to the sea. The National Blueways System has as its goal "to advance a whole river and watershed-wide approach to conservation, outdoor recreation, education, and sustainable economic opportunities in the watersheds in which we live, work, and play." The National Blueway designation includes all the tributaries in the watershed and involves several federal agencies. These agencies include the U.S. Army Corps of Engineers, the Silvio Conte Refuge, the U.S. Fish and Wildlife Service,

the National Park Service, and the States of Connecticut, Vermont, New Hampshire, and the Commonwealth of Massachusetts, which have prioritized conservation, recreation, and restoration in the 7.2 million-acre Connecticut River Watershed.

Restoration of recreation opportunities in the watershed of the Connecticut River has the potential to offer the region significant economic benefits.

***(4) Describe existing information concerning the subject of the study proposal, and need for additional information.***

Current and historic project operations at the Bellows Falls Dam provide no consistent or meaningful information for this type of mitigation. Much more is known about regional flow, access, and conservation needs. We look forward to collaboratively exploring these opportunities with the Licensee and other stakeholders.

***(5) Explain any nexus between Project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements.***

The Project controls the entire flow in the Connecticut River. The Bellows Falls bypass reach has no minimum flow requirement. The result damages regionally needed summer paddling opportunities on the main stem. The dam itself was built on the Bellows Falls, and the reservoir drowned upstream rapids, which would be sufficient cause for off-site mitigation. The fish barrier bisects and destroys the recreational value of the reach by posing an objective hazard and altering the biggest rapid. FERC needs to balance the paddling resource and power generation under the “*Electric Consumers Protection Act*” (16 U.S. C. §797,803). The project nexus is direct.

Study results would and should develop the basis of license terms, including possible off-site mitigation, that could protect the public interest and provide the balance mandated under ECPA.

***(6) Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge.***

We have described one component of this study in a separate request for a whitewater park feasibility study. Additional analyses would include gathering information to assess the presence and quality of rivers that could be candidates for off-site mitigation. The process steps are generally 1) collaboratively identify candidate rivers and issues with the paddling community, 2) resource agency identification and feasibility assessment, and 3) inter-agency meetings with resource agencies, Licensee, and representatives of the boating community with experience with assessing existing needs of candidate rivers to determine feasibility of proposed measures.

We will work with the licensee to document the known information regarding candidate rivers. We will provide volunteers and technical support for the studies as appropriate. We hope to work collaboratively with the licensee and other agencies on this study.

*(7) Describe considerations of level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.*

We are willing to work with the Licensee on an on-site and off-site mitigation study to keep costs reasonable and the quality of information high. We believe that potential mitigation options can be easily and affordably identified through collaborative discussions. What will be subsequently needed is the integration of this information and organized meetings to study the feasibility of alternatives, and subsequently a written report.

Given the collaborative approach sought by the paddling community, including in-kind contributions of time and expertise, the Licensee and agencies should be able to complete these studies for a very reasonable cost.

The Licensee PAD proposes no whitewater recreation mitigation analysis, either on-site or off-site.

### **Conclusion:**

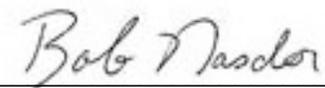
We respectfully request whitewater park feasibility, river access, camping, economic, and off-site mitigation studies that will support the dialog and analysis regarding the restoration and mitigation of recreational values associated with the Bellows Fall project. All such studies should take into consideration a projection of the public's need for water-based recreation for the 30-50 year life of the proposed license.

In addition, in these comments we offer our comments on the PAD, to better inform this relicensing process. Thank you for considering these comments.

Respectfully submitted this 28<sup>th</sup> day of February, 2013

  
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# **APPENDIX**

## ***“Chattahoochee River Restoration Market Economic Impact Analysis”***

# ***Chattahoochee River Restoration Columbus, Georgia and Phenix City, Alabama***

## **Market and Economic Impact Analysis**



Prepared by:

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## **Chattahoochee River Restoration Columbus, GA and Phenix City, AL**

### **Executive Summary**

The Chattahoochee River has served as a focal point of development of the downtown areas of Columbus, GA and Phenix City, AL. The Riverwalk, Trade Center and corresponding development of the downtown area of Columbus and the Amphitheater, Riverwalk and community development projects in Phenix City have created a focus for continuing efforts to enhance the downtown areas of both cities and create an economic center.

The “Chattahoochee River Restoration Columbus, GA and Phenix City, AL” project will provide additional economic benefits to the community. The project is expected to add to the community’s recreational base and thus to the overall quality of life in the community. The additional business activity and resulting support for employment created by the recreational use of the river will provide for further growth of existing business as well as creating opportunities for new business enterprise.

From an economic development perspective, the restoration project’s inclusion of a whitewater venue is an important feature. Based on industry surveys, whitewater activities such as kayaking and rafting have experienced significant increases in levels of participation. Over one-third of the participants in kayaking and rafting activities live in the south. While there are a number of natural whitewater opportunities within reasonable driving distance, the closest urban whitewater venue is over 200 miles away from the proposed site. The venue would also be closer for participants in Atlanta, GA and Birmingham, AL than any of the existing sites.

It is estimated that the whitewater venue will attract between 60,000 to 100,000 patrons annually. The total direct economic impact of the whitewater venue is estimated to be between \$4,202,584 and \$7,004,306 on an annual basis. By the nature of an economic system, direct spending is then multiplied through the economy and creates indirect economic impact. The economic multiplier for tourism spending at the local level is approximately 1.7. As a result the total economic impact (direct plus indirect) is estimated to be between \$7,144,392 and \$11,907,321 on an annual basis. The project is also expected to support between 154 and 257 jobs in the community.

This project is expected to positively impact real estate values in the downtown areas adjacent to the development. It is estimated that over the period from 2005 to 2011 that property values in Columbus, GA will increase by 61% and values in Phenix City, AL will increase by 37%.

## ***I. Introduction***

The Chattahoochee River has served as a focal point of development of the downtown areas of Columbus, GA and Phenix City, AL. The Riverwalk, Trade Center and corresponding development of the downtown area of Columbus and the Amphitheater, Riverwalk and community development projects in Phenix City have created a focus for continuing efforts to enhance the downtown areas of both cities and create an economic center.

The proposed project presented in the “**Chattahoochee River Restoration Columbus, Georgia and Phenix City, Alabama**” (2005) will create an opportunity for further development of the waterfront regions of the downtown areas and provide additional economic impact for the development of new and existing businesses in the affected areas. With the completion of the restoration project, the community (on both sides of the river) will have available a new tourism attraction and an enhancement to the recreational inventory for its residents. Further enhancements to the Riverwalk will add to the base of riverfront development that has helped to revitalize the downtown area.

As proposed the “River Restoration Project” includes:

- Restore the riverine conditions within the 2.3 mile reach of the Chattahoochee River impounded by the Eagle and Phenix Dam and the City Mills Dam.
- Create conditions conducive for the expansion of biological community’s characteristic of Fall Line riverine shoal habitat and the free passage of fish within the areas presently impounded by the Eagle and Phenix Dam and the City Mills Dam.
- Maximize the recreation potential of the Chattahoochee River following elimination of the impoundments created by the Eagle and Phenix Dam and City Mills Dam.
- Further enhancement to the Riverwalk to include a pedestrian bridge across the Chattahoochee River linking Columbus, GA and Phenix City, AL and their respective riverfront developments.

The River Restoration Project would create the opportunity to develop recreational use of the river and provide business opportunities and revenue generating activities. Enhancements to the Riverwalk would provide additional benefits to current community activities (festivals) and create new opportunities for community events and tourism generating projects.

The U.S. Army Corp of Engineers has published numerous reports on the environmental impact of river restoration projects. The estimated environmental benefits from a river restoration project, flowing to society as a whole, is estimated to be quite large and, by itself, might justify any such project. However, recognizing the decision making process is more localized and looks to the benefits generated to the communities involved in the project, it is the economic impact that attracts the most attention.

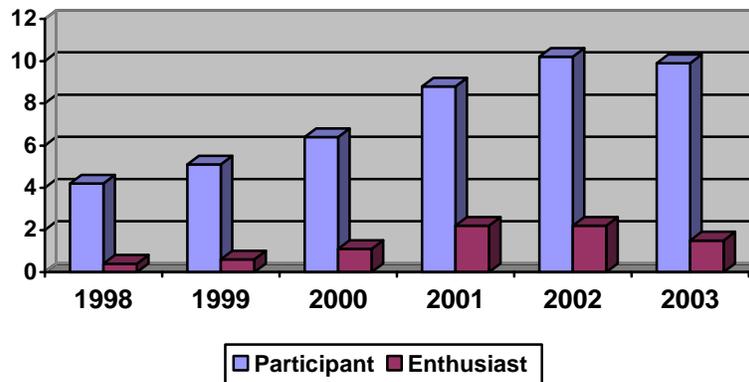
This report focuses on the economic impact of the project. The economic impact of the River Restoration Project has been analyzed in terms of traditional measures of such impact, tourism dollars and job creation, as well as projections of the real estate impact of further development of the riverfront region of the community. In an effort to fully explain the projected impact of the project this report provides a market analysis of whitewater recreation.

## ***II. Whitewater Recreation***

Outdoor activity, as measured by the Outdoor Industry Association's 2004 Participant Survey, has shown a significant increase over the period from 1998 to 2003. In 2003, nearly two-thirds of Americans 16 and older participated in at least one of the core human powered activities. Participant levels were up 8% from 1998 when 59.9 million were identified as a Participant. Commitment to human powered activities as measured by Enthusiast levels are also up since 1998. One in five (19.5% or 42.9 million) Americans 16 and older participated in at least one of the core outdoor activities in 2003 at Enthusiast levels. Comparatively, overall Enthusiast activity was reported in 1998 as 16.2% (or 34.1 million) Americans 16 and older. Participant level is defined as having at least one experience during the year, for example one kayaking trip. A person is classified as an enthusiast if they participate in a sport three or more times in a year.

The two core human powered activities most closely aligned with whitewater activities are kayaking and rafting. The Outdoor Industry Association's Participant survey shows that participation in kayaking has grown significantly since 1998 with the number of Participants and Enthusiast doubling over the period. This dramatic increase is shown in Chart 1. The survey estimates that 5.2% of the United States population age 16 and over participated in kayaking activities in 2003.

**Chart 1**  
**Participation in Kayaking**  
**(millions)**



According to the Outdoor Industry Association, the geographical profile of kayaking participants reveals that there exists a rather even distribution across the nation. Table 1 shows the national distribution of kayaking participants as well as a breakdown by kayaking formats.

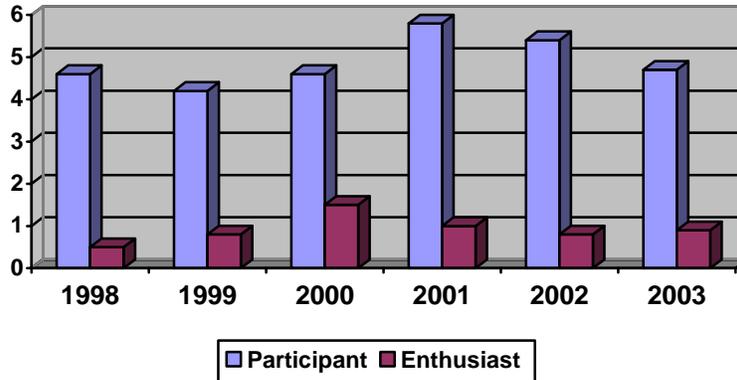
**Table 1**  
**Regional Kayaking Distribution**

Format	Northeast	South	North Central	West
Participants	27%	27%	20%	26%
- Recreation Kayaking	27%	27%	21%	26%
- Touring Kayaking	29%	22%	18%	32%
- Whitewater Kayaking	23%	35%	26%	16%
Enthusiasts	30%	22%	13%	35%

It is interesting to note that over one-third of the “whitewater kayakers” in the United States reside in the South.

The Outdoor Industry Association’s 2004 Participants survey showed a modest growth in sport of rafting. Approximately 10.3 million of the American population (4.7%) age 16 and older was classified as rafting participants in 2003. Another 2 million Americans over the age of 16 were classified as enthusiasts. Chart 2 shows the trend in rafting participation over the period from 1998 to 2003.

**Chart 2  
Participation in Rafting  
(millions)**



The geographical profile of those participating in rafting is somewhat similar to the distribution for kayaking. The profile is shown in Table 2.

**Table 2  
Regional Rafting Distribution**

Level of Rafting	Northeast	South	North Central	West
Participant	21%	35%	22%	22%
Enthusiast	30%	24%	15%	31%

As with kayaking, over one-third of those cited as participants live in the south.

The popularity of whitewater recreation has grown significantly in the United States over the last two decades. The impact of the development of whitewater venues has been the focus of numerous studies. Traditionally speaking, whitewater venues are usually thought of in association with mountains and their natural river resources. However, more recent development efforts have involved development in more urban regions.



Data compiled from the American Whitewater Association shows that there are 532 river related whitewater venues in operation. A complete listing of these whitewater river venues is provided in Appendix I. The venues are rated by class from Class I to Class VI. The international

rating system for rivers and rapids, provided by the American Whitewater Association, is as follows:

- 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 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 5.0.
- 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.

The “Class breakdown” of the venues shown in Appendix I is detailed in Table 3. In this analysis venues were assigned to the Class that was maintained the most when operational.

**Table 3**  
**United States Whitewater River Classification**  
**May 2005**

Class	Number
I	19
II	186
III	154
IV	95
V	78
VI	0

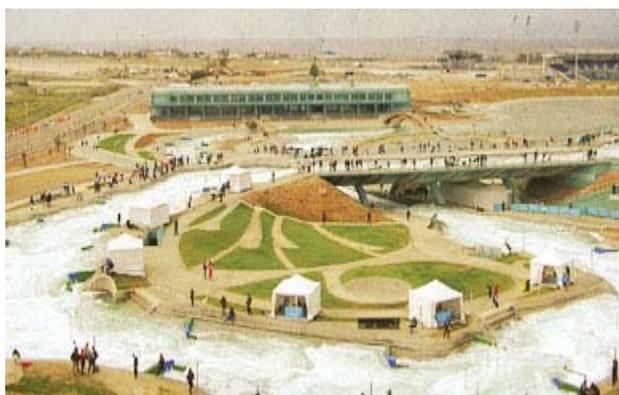
The most recent development in whitewater recreation is the creation of artificial whitewater parks. These “man-made” whitewater venues have generally been located in more urban areas and have brought the “whitewater experience” to the consumer. The vast majority of these venues are located in the western part of the country, many strategically located near the Rocky Mountains. There are only eight existing or proposed such venues east of the Mississippi River. Most of these eastern sites are located in the northern tier of states. Southern sites include the Ducktown, TN operation near the Upper Ocoee River, the National Whitewater Center in Charlotte, NC (currently under construction) and the proposed operation on the Chattahoochee River in Columbus, GA. Table 4 details a listing of some of the “whitewater parks” that are either currently in operation or are in some stage of development.

**Table 4**  
**(Source: Paddler Magazine May/June 2005)**

<b>Completed Whitewater Parks</b>			
#	Venue Name	Locale	Completion Date
1	Truckee River	Reno, Nevada	2003
2	Payette River	Horseshoe Bend, Idaho	1995
3	The Green	Green River, Wyoming	
4	North Platte River	Casper, Wyoming	2002
5	Weber River	Ogden, Utah	2002
6	Arkansas River	Buena Vista, Colorado	

7	Arkansas River	Salida, Colorado	1987
8	Fall River	Estes Park, Colorado	2003
9	Gore Creek	Vail, Colorado	2002
10	Clear Creek	Golden, Colorado	1998
11	Yampa River	Steamboat Springs, Colorado	
12	Boulder Creek	Boulder, Colorado	1990
13	South Platte River/Cherry Creek	Denver, Colorado	1974
14	St. Vrain River	Pueblo, Colorado	1990
15	Arkansas River	Pueblo, Colorado	
16	San Juan River	Pagosa Springs, Colorado	
17	Animas river	Santa Fe, New Mexico	1995
18	Animas River	Farmington, New Mexico	2000
19	Trinity River	Fort Worth, Texas	2003
20	East Race Waterway	South Bend, Indiana	1984
21	Wisconsin River	Wausau, Wisconsin	1984
22	Upper Ocoee River	Ducktown, Tennessee	1996
23	Potomac River	Dickerson, Maryland	1992
<b>Projects in the Works</b>			
24	Bear River	Evanston, Wyoming	*Planned*
25	Blue River	Silverthorne, Colorado	*Planned*
26	Gunnison River	Gunnison, Colorado	*Planned*
27	Colorado River	Grand Junction, Colorado	*Planned*
28	American River	Auburn, California	*Planned*
29	Adventure Sports Center International	McHenry, Missouri	*Planned*
30	National Whitewater Center	Charlotte, North Carolina	*Planned*
31	Chattahoochee River	Columbus, Georgia	*Planned*
32	Mississippi River	Minneapolis, Minnesota	*Planned*

The market for urban based whitewater operations has developed quickly and has resulted in the organization of the First Annual Whitewater Park Conference scheduled for October 2005. This conference is co-sponsored by the Professional Paddlers Association, a key organization in the whitewater community.



### **III. Impact Analysis**

The economic impact of developing a whitewater park is two-fold. The first portion of the impact is in the form of benefits to the local community. A

whitewater park adds to the inventory of recreational activities available in the community. Like the addition of other parks or recreational facilities, the overall quality of life is improved as the base of activities is expanded. Likewise, many studies have shown that improvements to the overall quality of life in a community provide additional benefits to the community's efforts to market itself to new businesses looking for places to locate.

A second benefit of a whitewater park is the development of the tourism industry. Such parks draw their users from the community at-large and from whitewater enthusiasts. Whitewater parks are available for both individual use by tourists, but can also be marketed for event style activities. Competitive whitewater events, like other events such as softball or soccer tournaments or even a convention, bring supporters to the host community. The direct result of the whitewater venue is that they bring more people into the community who in turn will use the services and facilities of existing businesses. As many tourism studies have shown, the infusion of tourism dollars can be significant and provide impetus to a community's efforts to stimulate economic activity.

The development of whitewater parks around the country has led to the economic impact studies of the parks. Private sector, university-based, and governmental units have analyzed the economic impact of river restoration and whitewater park development on communities across the nation.

An excellent summary of some of these studies was done by Charles Sims of the Department of Forestry, Wildlife, and Fisheries at the University of Tennessee – Knoxville. In this 2002 study, Mr. Sims reviewed a series of studies performed on the economic impact of whitewater boating activity published in the 1990's. While there was similarity in the results of the reviewed studies, Mr. Sims correctly identified that the studies tended to underestimate the full economic impact of the whitewater recreation of the subject communities.

In the Sims study, impact estimates ranged from a low of \$490,500 to a high of \$14 million. The wide range of estimates is the result of the variance in the periods of operations. Many of the whitewater venues are only operation for short periods due to weather and/or water flows.

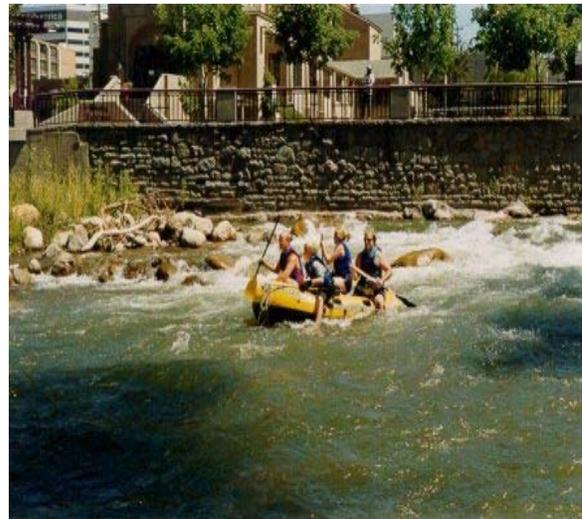
Like the studies reviewed by Sims, other studies conclude that the operation of a whitewater venue provides millions of dollars of economic impact to the host communities. The revenues generated by river use and utilization of business services in the host communities (hotels/motels, food establishments, and other retail outlets) are multiplied through the local economic systems. As a result the whitewater venue, like other tourism style attractions, provides the community with additional business activity.



The Whitewater Park opened in November of 2003. The operation of the Truckee River Whitewater Park provides for use by all levels of participants and due to consistent water flows, the facility is operational for much of the year. The facility was designed for both recreational use and competitive events. The Whitewater Park allows for use by rafters and kayak/canoes. The park is tied to other riverfront developments such as the city's river walk.

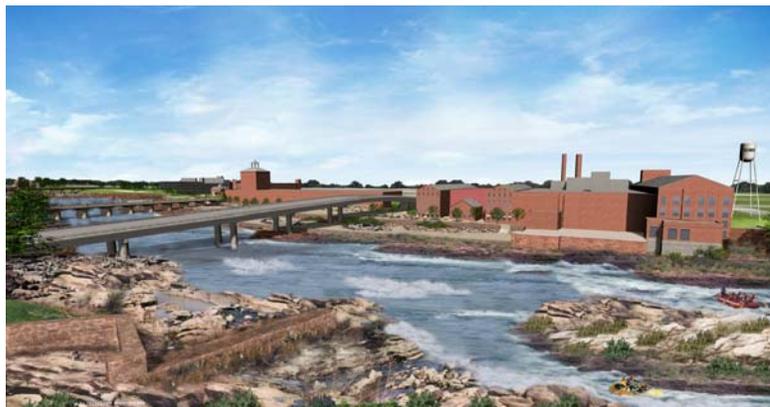
The boldest of the economic impact studies performed on a whitewater venue is the analysis performed in the U.S. National Whitewater Center in Charlotte, NC. The most recent estimate of this venue's total annual economic impact is \$36.7 million. This seemingly high estimate is the result of the nature of the venue relative to other whitewater parks. The Charlotte park is a totally enclosed structure with limited and controlled access. The impact analysis is predicated on the park's ability to generate over \$9 million in fees and offers multiple recreation opportunities beyond just water sports.

Another excellent analysis of the impact of a whitewater venue was done in conjunction with the Truckee River Whitewater Park in Reno, NV. The Whitewater Park in Reno (pictures at left) runs through the business district of the city and is part of the city's overall economic development plan. Impact estimates for this facility are \$2-4 million dollars per year.



#### ***IV. The Chattahoochee River Restoration Project***

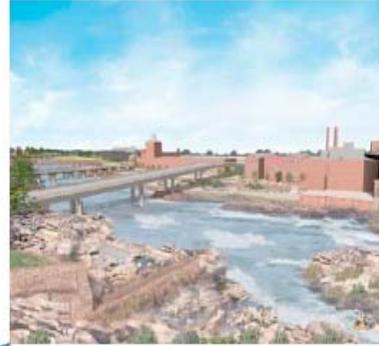
The proposed restoration of the Chattahoochee River in the downtown areas of Columbus, GA and Phenix City, AL will create an opportunity to develop a whitewater venue in the heart of the business district and add to the inventory of recreational activities of the



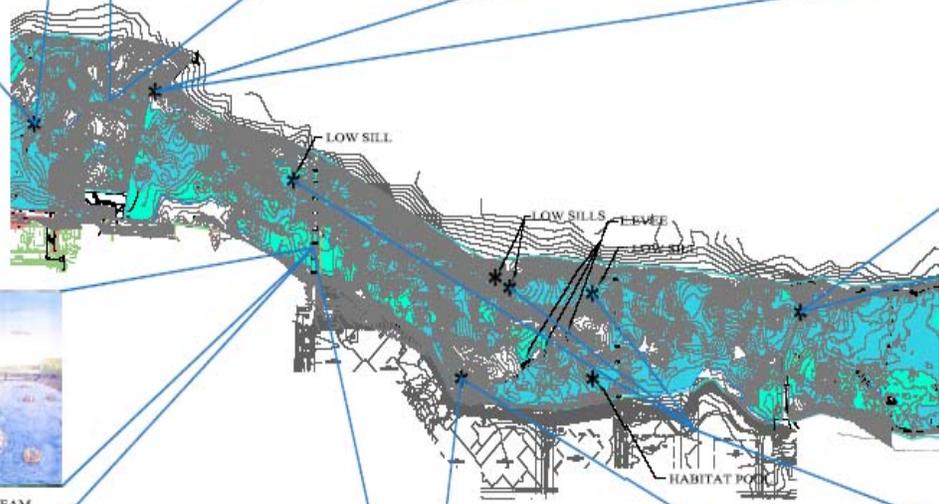


"BIG WATER" CREATED BY DAM REMOVAL  
BELOW EAGLE PHENIX DAM

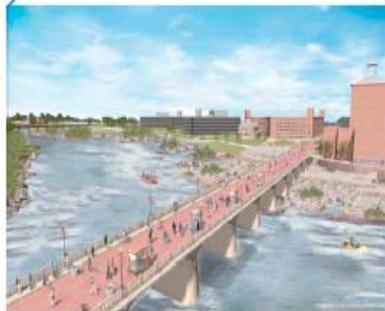
REMOVE EAGLE PHENIX DAM AND  
EXPOSE HISTORIC COWETA FALLS



LOW SILLS WILL  
LENGTHEN RAPID



NEW TERRACE DOWNSTREAM  
OF 14TH STREET BRIDGE



OVERVIEW OF PEDESTRIAN BRIDGE AT  
EXISTING 14TH STREET BRIDGE



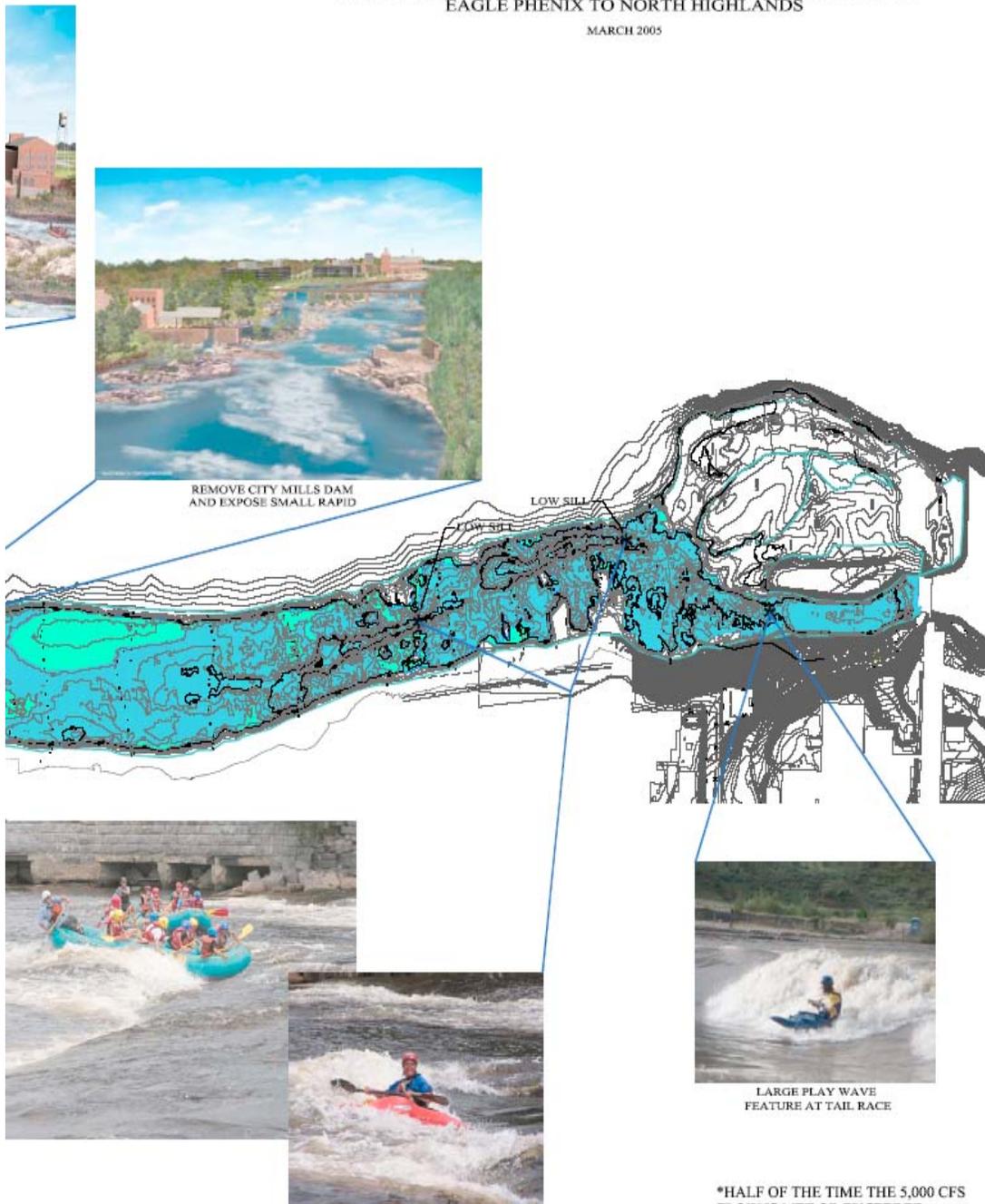
TRAINING AND RECREATION COURSE

# CHATTAHOOCHEE RIVER RESTORATION

## WATER SURFACE PLAN - DAMS REMOVED, 800 CFS VS. 5000 CFS

### EAGLE PHENIX TO NORTH HIGHLANDS

MARCH 2005



REMOVE CITY MILLS DAM AND EXPOSE SMALL RAPID

LOW SILL

TOW SILL

LARGE PLAY WAVE FEATURE AT TAIL RACE

TYPICAL HYDRAULICS CREATED BY PROPOSED SILL FEATURES

\*HALF OF THE TIME THE 5,000 CFS FLOW IS MET OR EXCEEDED.

LEGEND

- WATER SURFACE 800 CFS
- WATER SURFACE 5000 CFS
- RIPARIAN ENVIRONMENT ABOVE 5,000 CFS WATER LINE



community. In addition, the whitewater venue would provide additional resources to the further development of the tourism industry in the area. The nature basis of such a venue ties in well with other tourism activities of the region that include Callaway Gardens, and Providence Canyon. A graphic detail of the project is included on the preceding pages.

The "River Restoration Project" includes the restoration of riverine conditions on the Chattahoochee River, the reestablishment of the river's biological habitat and community, maximizing the recreational use of the Chattahoochee River along the project, and enhancing both Columbus and Phenix City's riverfront development strategic plans. The starting point for the project entails the restoration of the riverine conditions within the 2.3 mile reach of the Chattahoochee River impounded by the Eagle and Phenix Dam and the City Mills Dam. The structures are cracking and starting major deterioration. The initial uses of the dams facilitated business operations and electrical power generation but now without businesses to utilize the dams' generated power, eliminating them will restore the river to its original swiftwater habitat.

The restoration project will create conditions conducive for the expansion of biological community's characteristic of Fall Line riverine shoal habitat and the free passage of fish within the areas presently impounded by the Eagle and Phenix Dam and the City Mills Dam. The removal of the Eagle and Phenix Dam and the City Mills dam will once again assist in the restoration of the natural habitat of various species of aquatic life along the Fall Line. Since over the years the multiple dams reduced approximately 97% of the Chattahoochee's natural flow, the river habitat's reduction lowered the number of shoal bass and fresh water mussels and other species unique to the area. The removal of the dams will increase the sport fishing activity for swiftwater conditions. Since the river drops approximately 35 feet over the course of this project, restoring the river's natural flow reestablishes additional historical and recreational opportunities for the west central Georgia and east Alabama communities.

In order to maximize the recreation potential of the Chattahoochee River, the elimination of the impoundments created by the Eagle and Phenix Dam and City Mills Dam will restore the natural swiftwater flow to the river. With the closest whitewater and kayaking venues hundreds of miles away, the restoration project will provide the Columbus/Phenix City metropolitan area a reliable fast water source for these activities. With whitewater rafting and boating one of the fastest growing sports in the U.S., the growth in these activities provide unique opportunities to the market. As discussed earlier, other increases in recreational use such as increased swiftwater fishing, kayaking and competitive water tournaments will all add to the increased river access created by the project.

The restoration project also includes further enhancement to the Riverwalk includes a pedestrian bridge across the Chattahoochee River linking Columbus, GA and Phenix City, AL. This pedestrian bridge will link the two cities and their

respective riverfront developments. Both governments of Columbus and Phenix City are fully behind the cooperative efforts of the Chattahoochee River Governance Subcommittee, Uptown Columbus and the East Alabama Riverfront Development (EARD) entities. The pedestrian bridge will strengthen these entities' efforts by further safely connecting pedestrian traffic between the two cities. Connection of the two development areas will provide ease of access for residents and visitors of each side of the river to cross and add to the economic well being of both locales. The pedestrian bridge will also serve as a great location for viewing any competitive whitewater events. It will assist the two cities in providing opportunities for joint festivals, celebrations, and ventures promoting the two cities.

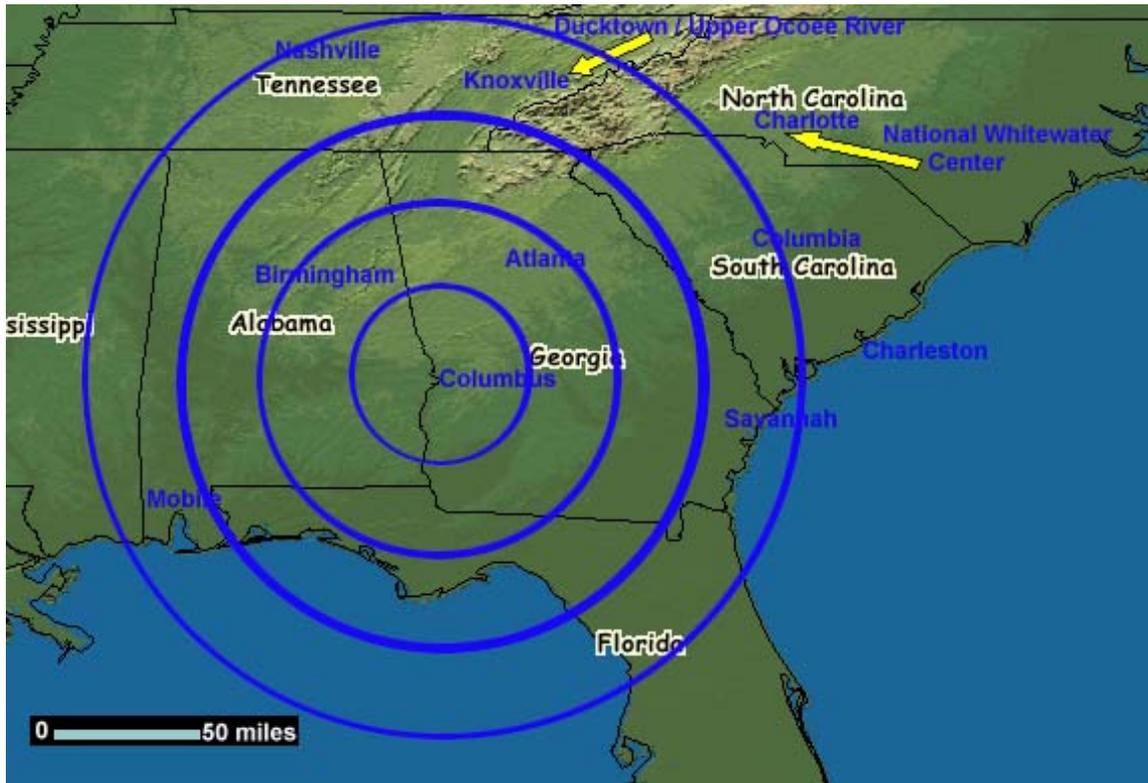
## ***V. Economic Impact of the Chattahoochee Restoration Project***

In analyzing the economic impact of the restoration project it was assumed that the full project would be completed. As such, after the dams were removed, the whitewater venue would be created and operational. The recreational development is expected to meet national and international competitive standards for whitewater venues. The analysis dealt with two different aspects of the economic impact. The first aspect was the economic impact resulting from the whitewater venue. The second portion of the analysis focused on the real estate impact of these developments along the river.

### **A. Whitewater Impact**

A whitewater venue on the Chattahoochee River located in the business districts of Columbus, GA and Phenix City, AL would provide an economic benefit to the community's economic system. Due to geographical location of the proposed development, the whitewater venue would be operational on a year-round basis and serve as draw to kayakers and rafters who are currently going to other facilities. There are other whitewater operations in the mountains of north Georgia, eastern Tennessee, and the western part of the Carolinas. However, the closest urban based whitewater facilities are the operations in Charlotte (under construction) and in Ducktown, TN. Map 1 illustrates the openness of the whitewater market in the southern region that the proposed Chattahoochee River project faces.

**Map 1  
Southeast Region**



The proposed venue would draw whitewater participants and enthusiasts from a number of large urban markets such as Atlanta, GA and Birmingham, AL. Due to the geographical location of the venue and the expectation that it will meet competitive standards, the whitewater venue could be used as a host site for major regional and/or national competitions.

The creation of a whitewater venue in Columbus, GA / Phenix City, AL would also enhance the community's efforts to attract convention business and other events such as softball and soccer tournaments. The "whitewater experience" would be an added attraction to the community and serve as a marketing tool for convention and visitors planners.

After a review of impact studies done on other whitewater venues and projected and actual utilization statistics of similar facilities, projections were made for the number of patrons that would be expected to use the proposed whitewater venue on the Chattahoochee River. The patron market was viewed as a two-segment market based on the assumption that the project would draw both competitive whitewater enthusiasts and casual whitewater participants. For the purposes of estimating the dollars of economic impact that would be anticipated from the project, it was assumed that:

- The whitewater operation would be open year-round and outfitters would be licensed to provide both rafting and kayaking opportunities.
- The community would host two competitive events each year.
- The whitewater venue would be utilized during existing community events (such as the annual “Thunder on the Hooch” event).

Utilizing these assumptions, usage figures were established. Based on other such operations it is estimated that the local venue would be able to attract between 60,000 to 100,000 participants per year. Table 5 details the breakdown of participants by source.

**Table 5**  
**Chattahoochee River Whitewater Utilization**

Participant Level	Market		Source	
	Local	Out-of-town	Events	Regular Use
60,000	33,000	27,000	6,000	54,000
100,000	55,000	45,000	10,000	90,000

“Event patrons” include competitive events and festivals and represent both those actually using the river and patrons viewing the event.

Using information from the Georgia Department of Tourism, the out-of-town patrons of the whitewater project were identified as either persons who would be staying overnight or classified as single-day visitors. The overnight visitors are also divided between those who would utilize local hotel and motels and persons staying with family/friends in the area. Therefore, in total, the out-of-town patrons are expected to be dispersed into three categories. This distribution is shown in Table 6.

**Table 6**  
**Distribution of Out-of-town Whitewater Visitors**

Participant Level	Out-of-Town	Staying in Local Facilities	Staying with family/friends	Day Visitors
60,000	27,000	15,390	5,400	6,210
100,000	45,000	25,650	9,000	10,350

Expenditures estimates provide by the Georgia Department of Tourism show that visitors who stay over night in a local establishment spend approximately \$110 per day per person. For the other classes of visitors, those

staying with family/friends and day visitors, the average daily expenditure is \$65 per person. The direct economic impact of the whitewater venue was estimated utilizing these average daily expenditures. The results of this analysis, detailed by category of spending are shown in Table 7 and Table 8.

**Table 7**  
**Direct Economic Impact of Whitewater Visitors**  
**(Usage level = 60,000)**

Expenditure Category	Staying in Local Facilities	Staying with family/friends	Day Visitors
Accommodations	\$584,051	\$0	\$0
Food/Drink	\$454,262	\$106,224	\$61,079
Entertainment	\$194,684	\$63,734	\$36,647
Retail	\$389,367	\$127,468	\$73,294
Transportation	\$194,684	\$63,734	\$36,647
Miscellaneous	\$129,789	\$42,489	\$24,431
<b>Total Spending</b>	<b>\$1,946,835</b>	<b>\$403,650</b>	<b>\$232,099</b>

**Table 8**  
**Direct Economic Impact of Whitewater Visitors**  
**(Usage level = 100,000)**

Expenditure Category	Staying in Local Facilities	Staying with family/friends	Day Visitors
Accommodations	\$973,418	\$0	\$0
Food/Drink	\$757,103	\$177,039	\$101,798
Entertainment	\$324,473	\$106,224	\$61,079
Retail	\$648,945	\$212,447	\$122,157
Transportation	\$324,473	\$106,224	\$61,079
Miscellaneous	\$216,315	\$70,816	\$40,719
<b>Total Spending</b>	<b>\$3,244,725</b>	<b>\$672,750</b>	<b>\$386,831</b>

Usage fees represent an additional amount of spending to be added to the above sums. It is estimated that the whitewater operation will result in approximately \$1,620,000 in usage fees for 60,000 participants and \$2,700,000 for 100,000 participants. Therefore the total direct economic impact of the whitewater venue is estimated to be \$4,202,584 on an annual basis for 60,000 participants and \$7,004,306 for 100,000 participants.

By the nature of an economic system, direct spending is then multiplied through the economy and creates indirect economic impact. The economic multiplier for tourism spending at the local level is approximately 1.7. As a result the total economic impact (direct plus indirect) is estimated to be \$7,144,392 on an annual basis at the 60,000 participant level and \$11,907,321 for 100,000 participants.

The economic impact of the whitewater venue will translate into additional employment opportunities in the local economy. Based on the expenditure patterns detailed in Table 7 and the total impact estimate the whitewater venue is expected to support 154 jobs in the community with a patron level of 60,000 and 257 with 100,000 patrons. The distribution of these employment positions is shown in Table 9.

**Table 9**  
**Jobs Supported by the Whitewater Venue**

Employment Category	Number of Jobs (60,000 participants)	Number of Jobs (100,000 participants)
Accommodations	22	37
Food/Drink	21	35
Entertainment	12	20
Retail	20	33
Transportation	7	11
Miscellaneous	7	11
Whitewater Operations	66	110
<b>Total</b>	<b>154</b>	<b>257</b>

## **B. Real Estate Impact**

A real estate market analysis was performed to estimate the impact of further development and utilization of the river in the downtown Columbus, GA and Phenix City, AL on property values in the affected area. Prior developments along the both sides of the river provide an excellent basis for anticipating the impact of future projects.

Prior to and in the period following the 1996 Summer Olympic Games significant investments were made to improve and develop use of the riverfront. The Riverwalk was created, parks developed and an Amphitheater was built to focus activity towards the river. The result was an increase in amounts of traffic and economic activity in and around the downtown area closely aligned with the river.

A survey of property values in Columbus and Phenix City in the areas adjacent to the riverfront improvements was conducted. The analysis looked at property values in the area over the period from 1990 to 2004. The area surveyed included:

- For Columbus, GA: properties in the area from Bay Ave east to First Ave from 8<sup>th</sup> Street to 13<sup>th</sup> Street.

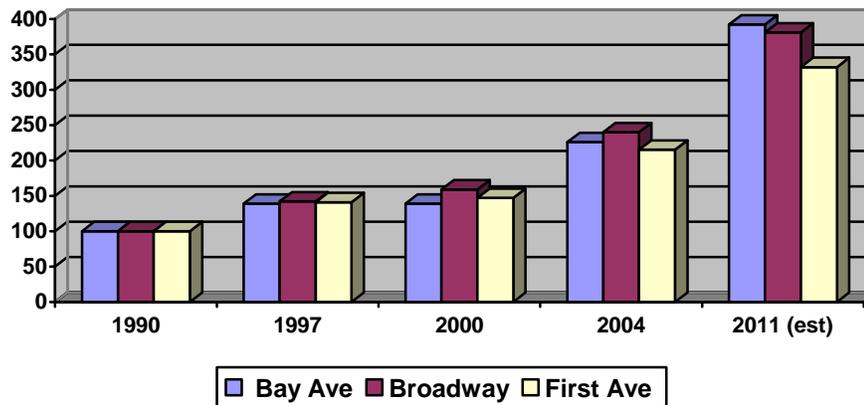
- For Phenix City, AL: properties in the area from Broad Ave and Third Ave from 8<sup>th</sup> to 15<sup>th</sup> Street.

The basis of the model was to identify the trend in property values over the period. Prior to this analysis it was hypothesized that in the period from 1990 to 1997 that property values would have increased at a somewhat rapid pace. It was further expected that in the period after 1997 that the rate of increase would slow from the earlier experience.

As expected, the value of property in and around the area affected by the improvement to the riverfront experienced rapid increases in the period from 1990 to 1997. Likewise, in the period from 1997 to 2000 these rates of increase slowed significantly. However, the data also show another period of rapid increases in value in the 2000 to 2004 period.

To demonstrate the results of the analysis property values were indexed to their 1990 value (i.e. 1990 value = 100). For subsequent years the index was adjusted based on the change in the value of the property. Charts 3 and 4 show the historical rates of change in property values in the surveyed area. From this analysis a projection of the impact of the proposed developments were made under the assumption that the project begins in the near future (2006-7) and is completed by 2011.

**Chart 3**  
**Property Value Analysis for Columbus, GA**  
(Index: 1990 = 100)

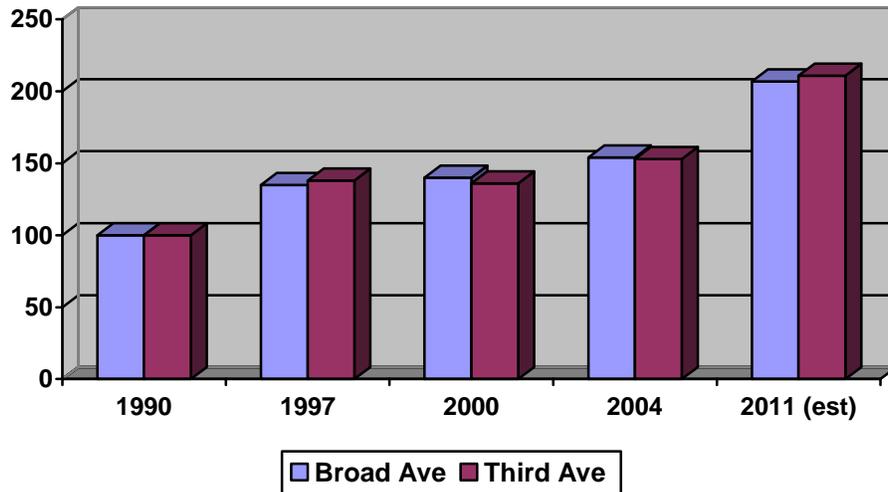


In the Columbus analysis, property value increases were initially higher along Broadway and First Ave. Values along Bay Ave. began catching up in the 2000-2004 period and are projected to match changes along Broadway and exceed those along First Ave. with the completion of the new project.

The Phenix City analysis shows somewhat similar results. However, it is expected that values for property in the area adjacent to the river development will increase in somewhat parallel fashion. Though not shown in Chart 5 due to

limited available data, property values along Second and Fifth Avenues have shown increases in line with those for Broad and Third Ave in the 2000-04 time frames.

**Chart 4**  
**Property Value Analysis for Phenix City, AL**  
 (Index: 1990 = 100)



The scope of the proposed River Restoration Project and the resulting growth of business development are on a larger scale than earlier river improvements. As a result, the total impact of this project is expected to exceed earlier experience. The proposed project covers a longer stretch of the river and will involve properties that are currently not part of the main central business districts on either side of the river. Therefore on a per property basis, the potential impact on real estate values will be slightly less than earlier experience. On a conservative side it is projected that property values will increase 61% in Columbus and 37% in Phenix City over the period from 2005 to 2011.

## ***VI. Conclusions***

The “Chattahoochee River Restoration Columbus, GA and Phenix City, AL” project will provide additional economic benefits to the community. The project is expected to add to the community’s recreational base and thus to the overall quality of life in the community. The additional business activity and resulting support for employment created by the recreational use of the river will provide for further growth of existing business as well as creating opportunities for new business enterprise.

The creation of a whitewater venue as a result of river restoration places the community in a solid recreational market. It will provide these cities with the opportunity to draw visitor dollars from throughout the southern region since similar venues are relative far away. Further, the ability to operate on a year-

round basis further enhances the potential increase in economic activity resulting from the whitewater venue.



Furthering the process of riverfront development will also continue the on-going revitalization of each community's downtown business districts. This process of revitalization has been proceeding for more than a decade and will gain added impetus through this project. Additional pedestrian traffic, new events, new business, and increase value of downtown investment are all benefits expected to result from the River Restoration Project. Improvements to

the existing Riverwalk areas on both sides of the river are also part of this process. Enhancements to the community's infrastructure and the strengthening of the community ties between Columbus and Phenix City are key benefits to this project.

As this analysis has shown, the overall project will allow the community to take advantage of one of its natural resources and create a viable addition to its business and recreational base. The strength of kayaking and rafting markets, as demonstrated by industry surveys and the geographical location of the community provides an ideal combination for business development. With an estimated annual impact of over \$3.3 million and the creation and support for over seventy jobs, the project provides the community the opportunity to expand the local economy.

Another important element of the economic impact of this project is the resulting increases in property values in the affected area. Increasing values attract new investment and encourage current owners to maintain or improve their existing holding. As such, the downtown community should continue to improve.

Overall this project has all the elements of a sound venture. It provides for improved infrastructure and restoration of the river, expanded business activity and employment, enhanced value of property, and more closing aligning the economic development efforts of the communities involved.

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**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

TransCanada Hydro Northeast, Inc.

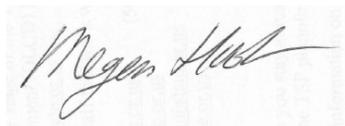
Bellows Falls Project  
FERC No. 1855-045

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**CERTIFICATE OF SERVICE**

Pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, I hereby certify that I have this day caused the foregoing NEW ENGLAND FLOW, AMERICAN WHITEWATER AND THE APPALACHIAN MOUNTAIN CLUB'S COMMENTS AND STUDY REQUESTS IN RESPONSE TO THE NOTICE OF INTENT TO FILE LICENSE APPLICATION, FILING OF PRE-APPLICATION DOCUMENT (PAD), COMMENCEMENT OF PRE-FILING PROCESS, AND SCOPING: REQUEST FOR COMMENTS ON THE PAD AND SCOPING DOCUMENT, AND IDENTIFICATION OF ISSUES AND ASSOCIATED STUDY REQUESTS REGARDING THE BELLOWS FALLS HYDROELECTRIC PROJECT, FERC PROJECT NO. 1855-045 to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 28<sup>th</sup> day of February, 2013.



Megan Hooker  
American Whitewater  
Bend, Oregon

Document Content(s)

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