

## Executive Summary

I. Title of Project: The Eastern Brook Trout Joint Venture

II. Applicant Information:

Jeff Waldon, Assistant Director Conservation Management Institute, Virginia Tech 1900 Kraft Dr., Suite 250 Blacksburg, VA 24061 540/231-4540 540/231-7019 Fax <a href="mailto:fwixchg@vt.edu">fwixchg@vt.edu</a> email	Stephen G. Perry, Chief Inland Fisheries Division NH Fish and Game Department 11 Hazen Drive Concord, NH 03301 (603) 271-1745 (603) 271-1438 Fax <a href="mailto:sperry@wildlife.state.nh.us">sperry@wildlife.state.nh.us</a>	Fred A. Harris, Chief Division of Inland Fisheries NC Wildlife Resources Comm. 1721 Mail Service Center Raleigh, NC 27699-1721 919/733-3391-275 919/715-7643 Fax <a href="mailto:fred.harris@ncwildlife.org">fred.harris@ncwildlife.org</a>
---	--	--

III. Project Objectives:

The objective of this project is to develop a range-wide management strategy for Eastern brook trout that demonstrates a geographic model for implementing the National Fish Habitat Initiative. Focus areas of this project include 1) collecting and integrating data on the status and trends of brook trout populations and identifying the primary threats to existing populations and restoring impaired populations; 2) using that data as the basis to develop a range-wide management strategy for Eastern brook trout; and 3) implementing management actions and educational efforts on the importance of Eastern brook trout and their habitats.

IV. Proposed Length of Project: 2 years

V. Amount of Grant Funding Requested: Year 1 \$250,781 and Year 2 \$180,810

VI. Primary NCN Addressed: *NCN 4. Actions in Support of a National Fish Habitat Initiative*

VII. Summary Statement:

In developing the strategy, available scientific information on brook trout populations will be collected from all identified sources and integrated into a unified network of range-wide GIS databases that display the status and location of all known brook trout populations by watershed. A report on the status of brook trout populations will be prepared, and additional data needs will be identified. The population data will be overlaid with information about threats to brook trout and their habitats to identify critical restoration and other management needs. Second, this information will be used to develop a range-wide conservation plan that can coordinate and set priorities for state and federal agencies, as well as other entities engaged in brook trout management and restoration. And third, the applicants will implement management and education programs aimed at informing the public about the importance of brook trout and brook trout habitat and initiating conservation efforts

This effort will develop a useful model for other regional initiatives that fit within the National Fish Habitat Initiative. We will focus on 1) science-based assessment and monitoring, 2) multi-agency coordination and conservation planning, and 3) management and outreach to the public. These three components will be essential to the success of the National Fish Habitat Initiative.

**Title:** The Eastern Brook Trout Joint Venture

**Objective:** The objective of this project is to demonstrate a possible model for the National Fish Habitat Initiative by developing an initiative to restore Eastern brook trout populations.

### **Problem Statement:**

Native populations of the Eastern brook trout appear to be declining through much of its historic range from a variety of stressors including habitat loss, acid precipitation, competition with non-native fish, and a variety of other problems. While considerable effort is being expended to recover brook trout in the East, management agencies are hindered by a lack of an effective way to share information for assessment, a lack of a coordinated plan, and a lack of resources/public support for brook trout recovery. Range-wide monitoring of progress is impossible without common data sharing protocols. Without a range-wide view of the status and trends, preparing a recovery strategy is nearly impossible, and without a recovery strategy, communicating the need for action to the public and decision-makers is very difficult.

This project addresses NCN 4. *Actions in Support of a National Fish Habitat Initiative*. This project will affect the entire nation by demonstrating the components needed for the National Fish Habitat Initiative. By addressing these needs, the proposed project will directly affect a majority of states in one US Fish and Wildlife Service Region, the Northeast, and 5 states in the Southeast.

### **Experience:**

A group of fisheries biologists, managers, nongovernmental organizations, and academics came together in 2003 to address the need for a coordinated approach to Eastern brook trout restoration. In June 2004, the group sponsored a workshop in Shepherdstown, WV where work groups were formed to address the various components of the initiative. The originating group became the steering committee. Two members of the steering committee, Fred Harris, NC Fish and Wildlife, and Steve Perry, NH Fish and Game, are co-investigators on this proposal. The steering committee will be the oversight entity for the project. The Conservation Management Institute agreed to coordinate and submit the proposal and serve as the prime contractor if the proposal is funded. The USGS National Biological Information Infrastructure (USGS) has agreed to provide matching funds and overall coordination of the information management and assessment activities. The Southern Appalachian Man and Biosphere Program (SAMAB) has agreed to assist with the GIS component of the project. Trout Unlimited is currently working on a project with funding from the National Fish and Wildlife Foundation and the Curtis and Edith Munson Foundation to prepare a preliminary database and assessment of brook trout in the East.

The Conservation Management Institute (CMI) has extensive experience both in managing large complex projects and developing information management programs for state and federal fish and wildlife agencies. We manage the Multi-State Aquatic Resource Information System, a consortium of six state fisheries agencies in the Midwest, to make fisheries information available over the world-wide-web and we have developed dozens of information management systems for state fish and wildlife agencies. We have several projects that have run for many years with total funding of several million dollars for each. We recently finished a similar project for the US Fish and Wildlife Service and the IAFWA to coordinate the development of a database protocol for Chronic Wasting Disease data among state fish and wildlife agencies. CMI employs biologists, programmers, GIS specialists, educators, and others (~ 85 positions) to address natural resource projects throughout North America. CMI will handle personnel, assist with database coordination, and support logistics of this project.

The NBII FAR <[far.nbii.gov](http://far.nbii.gov)> Node is well suited to work on projects such as the Eastern Brook Trout Joint Venture. The FAR brings broad perspective and experience in working with fisheries managers and

expertise in creating federated fisheries data systems. Using experience gained through the creation of the Multi-State Aquatic Resources Information System (MARIS), the FAR node manager will provide leadership in discovery of brook trout data sets and creation of reporting standards for brook trout information. Once the data systems have been identified and the reporting standards are agreed upon, the FAR node will create the necessary data access system to pull information from independent datasets into one data reporting system. The FAR node has experience in doing these types of projects and currently has projects such as the National Fish Strain Registry, Pennsylvania Fisheries Explorer and Chesapeake Bay Information System that are utilized by a variety of fisheries managers.

## **Approach:**

At the June 2004 Eastern Brook Trout Meeting of over 60 individuals from state and federal management agencies and nongovernmental agencies, the participants resolved to establish a three-part strategy for reversing declines in eastern brook trout (*Salvelinus fontinalis*) populations. First, the available scientific information and data on these populations will be collected from the various state agencies and integrated into a unified, geographic information system (GIS) data base. As a result of this work, a report on the status of brook trout populations will be prepared, and additional data needs and monitoring protocols will be identified. The population data will be overlaid with information about threats to brook trout and their habitat. Second, this information will be used to develop a range-wide conservation assessment and plan that can be used to coordinate and set priorities for state and federal agencies, as well as other entities, engaged in brook trout management and restoration. And third, the applicants will implement an education program aimed at informing the public about the importance of brook trout and brook trout habitat.

This effort will develop a useful model for other regional initiatives that fit within the National Fish Habitat Initiative. We will focus on 1) science-based assessment and monitoring, 2) multi-agency coordination and conservation planning, and 3) outreach to the public. These three components will be essential to the success of the National Fish Habitat Initiative. We feel that the Eastern brook trout is a good choice for developing such a model because it has a wide geographic range, a combination of public and private lands support existing populations, it is declining but recoverable in most instances, it has both great recreational and ecological benefit to the public, and the agencies needed to accomplish significant gains on the ground have already gotten behind the idea of a range-wide assessment and recovery strategy.

### Component 1: Information Compilation

The NBII FAR program manager will work with managers from the state and federal agencies responsible for brook trout management to assess the data needed to meet their management objectives. Fisheries managers will drive the process to develop the data management tools needed for the brook trout initiative. The process will likely include data discovery, data description, assessment of data gaps, development of data reporting standards, and development of analytical tools such as Internet map servers, and data query systems.

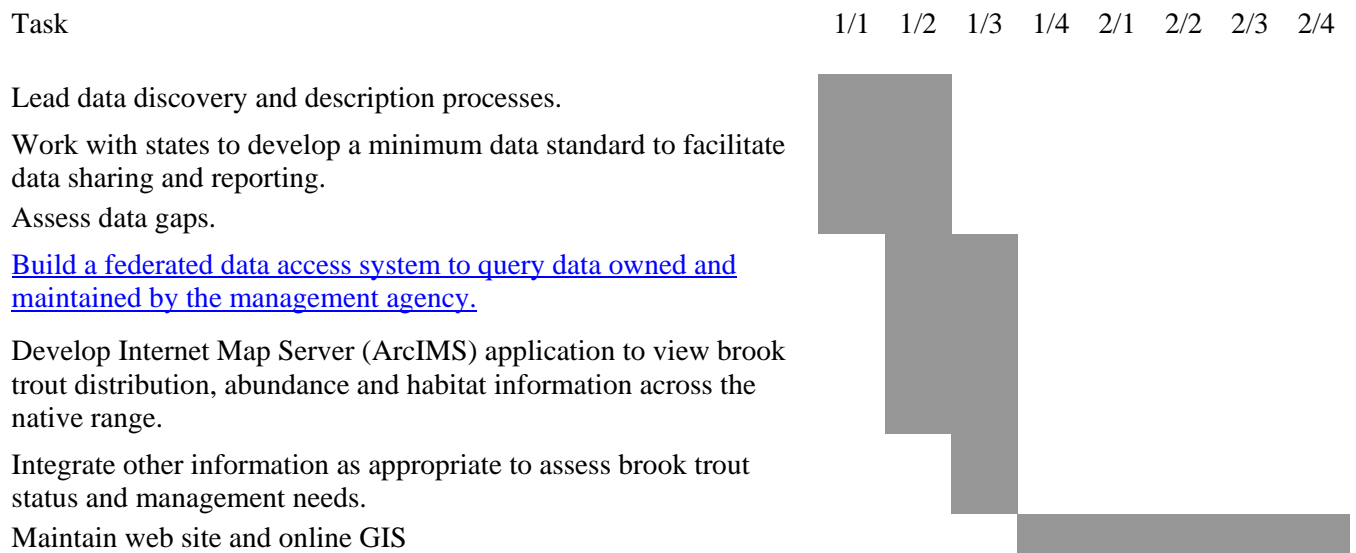
Component 1 Objective: Provide a comprehensive, federated data management system that permits all agencies with management responsibilities for native brook trout to contribute and access data supporting a range-wide native brook trout assessment.

#### Work Steps

- a. Lead data discovery and description processes.

- b. Work with states to develop a minimum data standard to facilitate data sharing and reporting. Run meetings with participating organizations to establish the standards, and provide technical support to implement the standard.
- c. Assess data gaps.
- d. Build a federated data access system to query data owned and maintained by the management agency. This would permit biologists to access other organizations' data from a central location while allowing the state and federal data owners to maintain full ownership and control of their data. (This employs the model created by the Multi-state Aquatic Resources Information System (MARIS) <[www.gis.uiuc.edu/maris](http://www.gis.uiuc.edu/maris)>).
- e. Develop Internet Map Server (ArcIMS) application to view brook trout distribution, abundance and habitat information across the native range.
- f. Integrate other information as appropriate to assess brook trout status and management needs.

Timeline



Evaluation

This component will be evaluated by it's usefulness in component two, and by the number of users and downloads we receive on the world-wide-web.

Component 2: Assessment and Planning

A key component of this project is to develop an assessment and strategic plan for the regional conservation of brook trout. This plan is absolutely necessary for coordinating multiple agencies and organizations, identifying the highest priority actions, and communicating the need for resources to Congress. After the data is pulled together and analyzed, we will gather together the steering committee for the Initiative in a workshop setting and use trained facilitators to develop a multi-agency strategy for brook trout conservation. Funding for travel will be provided to those participants that request travel grants. This assessment and strategy will be published on the world-wide-web and in hardcopy form for distribution to Congressional offices, management agencies, and other important decision-makers. A summary of the plan will be submitted to Fisheries magazine as an article.

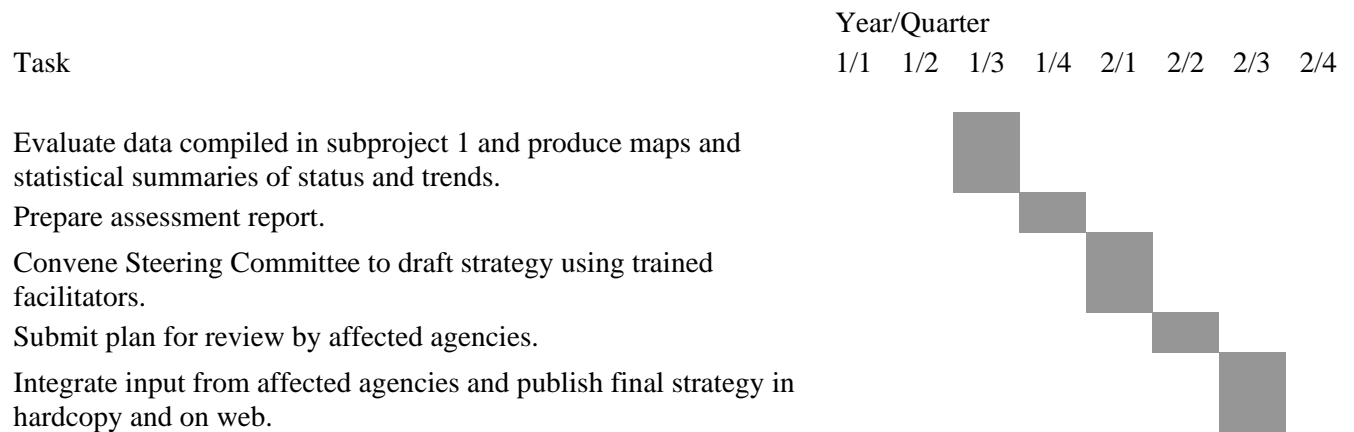
The strategy should address concrete population goals by state, suggest the means by which those goals will be attained, and include a timeframe for completion. A monitoring sub-plan will be included.

Component 2 Objective: Assess the Status and Trends of native Eastern brook trout populations and develop a multi-agency conservation management strategy.

Work Steps

- a. Evaluate data compiled in subproject 1 and produce maps and statistical summaries of status and trends.
- b. Prepare assessment report.
- c. Convene Steering Committee to draft strategy using trained facilitators.
- d. Submit plan for review by affected agencies.
- e. Integrate input from affected agencies and publish final strategy in hardcopy and on web.

Timeline



Evaluation

This component will be evaluated by the quality and depth of the assessment, and the degree of acceptance by the management agencies.

Component 3: Education and Management<sup>1</sup>

At the Eastern Brook Trout Meeting, a “break out” session was held to identify and explore potential solutions and program concepts to address threats to brook trout. Much of the discussion centered on the human dimensions of natural resource impairment. It was recognized that identifying threats to brook trout was fairly straightforward; however, many solutions tended to be sociological in nature and as such were not as simple to address. A chasm is present between science held by fisheries professionals and awareness and knowledge held by the general public. In identifying mechanisms to protect brook trout, emphasis was placed on an informed and inspired public. A Promotion and Education (P & E) Committee was formed to design, implement, and manage the outreach component of the Eastern Brook Trout Conservation Initiative (EBTCI).

---

<sup>1</sup> (note: this section is amended at the end of this document starting on page 12)

Component 3 Objective: Develop, implement, and manage a comprehensive outreach plan to engage, inform, and inspire the public and decision makers within Eastern brook trout range.

#### Work Steps

The P & E Committee submits the following activities and tools for organizing and funding in the initial development of an outreach strategy:

- 1) Logo – the beauty of a brook trout naturally lends itself to using the fish as a totem; a logo will be developed to be used by all partners in all EBTCI activities and materials. The object is to “brand” the concept of healthy brook trout territory, the fringe benefits people gain from these intact ecosystems, and the positive role of the EBTCI in managing and conserving these systems for the public. Branding will involve the use of a unique and identifiable symbol as both a physical and emotional trigger to create a relationship between the public and the fish. The brand will not just be the property of the EBTCI, but belong to the public as well; people today become so close to “their brands”, they start to form communities in which they help build the brand and increase its awareness, value, etc. A brand can also become the rationale for making some choices over others (i.e. it can encourage brook trout-friendly behavior).
- 2) Cultivate celebrity spokesperson – the P & E Committee will identify a set of criteria to use in the quest and selection of a nationally recognized individual to speak on behalf of the fish and the EBTCI.
- 3) Video – a 5-10 minute informative (yet entertaining) presentation on Eastern brook trout and its place as a natural resource jewel (history, folklore, ecology, recreational value... concluding with the take-home message of its status as an indicator species). Should feature celebrity spokesperson.
- 4) Pamphlet – basic tri-fold to complement and highlight salient points of video presentation.
- 5) Public Service Announcements (PSAs) – three versions (short, shorter and shortest) with basic conservation message, the EBTCI’s role in conserving “America’s Fish”, and a general “ask” for public support.
- 6) Portable Displays – exhibits to be used at EBTCI outreach events. Incorporating wrap-around flexible panels, these are relatively easy to set-up, tear-down and mail.
- 7) Children’s Book – geared to a primary school-age reader, a kid-friendly pamphlet similar to “Russell the Mussel”.
- 8) Road Signs – standard metal signs with the EBTCI logo prominently displayed as well as verbiage recognizing healthy brook trout territory from Georgia to Maine.

Materials developed to carry a campaign message are of questionable value without mechanisms to distribute them and shepherd their use (i.e. delivery to appropriate audiences, venues, timing, etc). The P & E Committee suggests partnering with Trout Unlimited to utilize *Back the Brookie*, a campaign emphasizing grassroots advocacy and education, to move the products and “push” the message into communities within brook trout range. Specifically, TU’s *Back the Brookie* Campaign can bring the following to the table:

- 1) A professionally designed and managed strategy to publicize the initiative using appropriate media outlets (newspapers, TV, radio stations, etc). This would include a “kick off” segment as well as communication and releases at regular intervals.
- 2) [www.brookie.org](http://www.brookie.org) – the *Back the Brookie* website (under construction; due 6/04) will feature information on the fish, the issues, and the campaign, as well as school curriculums and opportunities to support the campaign (volunteering, educating decision makers, donating, etc). Materials developed through the EBTCI (pamphlets, PSAs, children’s book, etc) will be featured on [www.brookie.org](http://www.brookie.org) as well, available for the public to view and download from the site. The world’s only Southern Appalachian brook trout display at the Tennessee Aquarium (which hosts

1 million visitors each year) will be featured on the website. A line of merchandise (apparel, caps, mugs, key chains, bumper stickers, etc) will be available from the website and will feature campaign artwork and the website's address. The website will be a dynamic communication and education tool, and could be set up to further integrate activities and direct traffic between all stakeholders.

- 3) Recruitment of TU's grassroots volunteers throughout brook trout range to coordinate delivery and use of outreach materials. Volunteer staffing of the *Back the Brookie* campaign includes an Educational Chair in each participating state. These Chairs will be developing statewide networks of other TU volunteers, who can deliver the EBTCI's message and materials in their own communities (and to decision makers) within brook trout range.

The P & E committee also suggests partnering with state fish and wildlife agencies. Specifically, state fish and wildlife agencies can bring the following to the table:

- 1) Advocacy for EBTCI projects within their agencies. This may result in cost-sharing in the arenas of research funding, materials production (pamphlets, displays, signage) and stream restoration work.
- 2) Ready-made distribution channels for EBTCI educational messages through state conservation education programs. (For instance, Kentucky's conservation education program reaches 85,000 4th-6th graders annually. Plus, 5,800 primary schoolers attend a week-long "conservation camp" in that state. These types of state fish & wildlife agency activities would be natural outlets for our message and materials.)
- 3) Access to state agency regulation booklets, conservation department TV shows, radio programs and brochures. By partnering with these agencies we can get free promotion thru these mechanisms.
- 4) State agencies that already have a large promotion and education component can easily work our message in with their own. In many cases, they need specific examples of "aquatic biodiversity" or "bio-indicators." Our campaign materials could fill gaps in their own materials.

The P & E Committee will be responsible for the management of the outreach campaign, as well as the development and implementation. However, input from, communication with, and oversight by the EBTCI's Steering Committee (as well as supporting committees) will be vital to a concerted, well thought-out and executed outreach campaign:

Message Development – will be the Steering Committee's responsibility, with input from all supporting committees

Materials Development – will be the P & E Committee's responsibility, with input from all committees and final approval of the Steering Committee

Campaign Implementation – will be the P & E Committee's responsibility, as will regular reports (detailing progress) to the Steering Committee

Campaign Management – overall management, including budgeting, timing, oversight of the TU grassroots educational network, partnering with state fish and wildlife agencies, and further organizational development and increased capacity building, will fall under the P & E Committee's charge

## Timeline

Development of materials is a lengthy process; the P & E Committee suggests beginning this process soon as to allow the outreach campaign to be ready when the EBTCI has its plan in place, as well as a public message developed.

Task	Year/Quarter							
	1/1	1/2	1/3	1/4	2/1	2/2	2/3	2/4
Gather baseline data on current public knowledge of brook trout and coldwater issues in select sample regions of brook trout range (i.e. Southeast, Mid-Atlantic, and Northeast)	█	█	█					
Develop criteria for celebrity spokesperson and approach/cultivate candidates		█	█					
Design campaign logo	█							
Design media strategy		█						
Develop PSAs, video, tri-fold			█					
Recruit, organize and train TU volunteer network and state fish and wildlife agency partners to deliver campaign materials to communities.	█	█	█					
<a href="http://www.brookie.org">Integrate all materials and message into www.brookie.org</a>			█					
Kick off campaign with media event and begin delivering message and materials to the public				█				
Develop and add to materials the children's book, portable exhibits, and road signs					█			
Continue media relations and TU volunteer recruitment and training						█	█	█
Continue to move materials and push message into communities within brook trout range							█	█

Evaluation

Execute follow up survey in the sample regions to measure changes in public knowledge and attitude towards brook trout and coldwater conservation

Project Leverage

Two other groups have pledged their support by leveraging existing projects. The first is a project underway by Trout Unlimited (TU) funded by the National Fish and Wildlife Foundation and the Curtis and Edith Munson Foundation (\$72,277) to do a preliminary compilation of data and a range-wide assessment of brook trout. This proposed project will dovetail with the TU project because the TU project will perform the initial data availability survey and a compilation of qualitative information about brook trout status. This proposed project will extend that work to actually establish a quantitative data network. The TU assessment will be coordinated with the proposed assessment to save money on travel and other expenses related to meetings, conference calls, etc.

The second leverage project is the Fisheries and Aquatic Resources Node of the National Biological Information Infrastructure (NBII). This group at USGS has pledged approximately \$75k to assist with establishing the data network, supporting meetings, and most importantly paying for GIS and programmer time to support the technical development of the proposed system.



## Expected Results or Benefits:

We expect multiple benefits to accrue from this project.

1. Improved data sharing and coordination will give the management agencies a way to compare brook trout populations from watershed to watershed, and provide the first assessment of trends available for the East. A clear understanding of population status, trends, and threats should help the management agencies prioritize restoration efforts.
2. Coordination of restoration efforts and sharing of success stories should improve the ability of management agencies to recover populations by utilizing lessons learned in other places.
3. An assessment and management strategy should help gain attention for restoration needs for brook trout in the East from decision-makers raising the priority level of resource requests and policy decisions affecting brook trout.
4. A better informed public should ensue from the education component that will make political decisions regarding funding allocations and land management decisions that support brook trout restoration activities easier to acquire.

## Project Costs<sup>2</sup>:

Expenses	GRANT REQUEST			Total Cost
	2005	2006	Partnership Funds	
<b>Objective 1: Information Management</b>				
Salaries	14,344	15,277	50,000	79,621
Fringe Benefits	4,985	5,308	17,375	27,668
Materials & Supplies			200	200
Equipment			2,000	2,000
Travel (transportation, lodging, meals, etc.)			5,425	5,425
Contractual (describe)	25,000	25,000		50,000
Subtotal	44,329	45,585	75,000	164,914
<b>Objective 2: Assessment and Planning</b>				
Salaries	24,471	26,002		50,473
Fringe Benefits	8,541	9,074		17,615
Materials & Supplies	1,500	250		1,750
Postage & Printing	2,500			2,500
Travel (transportation, lodging, meals, etc.)	12,500	6,000		18,500
Contractual (describe)	7,500			7,500
Other (describe):	1,200	1,200		2,400

<sup>2</sup> See Amendment 1 for revised budget for Objective 3. The component total remains the same, but line item changes are proposed.

Subtotal	58,212	42,526	0	100,738
<b>Objective 3: Management and Education</b>				
Salaries	42,581	19,500	52,277	114,358
Materials & Supplies	31,304	5,500	13,000	49,804
Travel (transportation, lodging, meals, etc.)	5,670	2,580	5,000	13,250
Distribution costs	1,900	1,200	2,000	5,100
Contractual (describe)	25,000	25,000		50,000
Other (describe):	6,585	21,500		28,085
Subtotal	113,040	75,280	72,277	260,597
Total direct costs:	215,580	163,391	147,277	526,248
Indirect Costs (27.6%...first \$25k of subcontracts)	35,201	17,419	40,648	93,268
<b>Total Expenses and Grant Request</b>	250,781	180,810	187,925	619,517

- Note 1: Subcontract in Obj. 1 is to Southern Appalachian Man and Biosphere Foundation at Univ. of TN for GIS and web support \$50,000.
- Note 2: Subcontract in Obj. 2 will be bid to acquire services of trained planning facilitators.
- Note 3: Objective 3 will be entirely subcontracted to Trout Unlimited.
- Note 4: Other expenses in Obj. 3 are related to equipment purchases necessary to support outreach and education.

NBII will cost-share \$75k/year on the data sharing/web development component. A \$73k project funded by the National Fish and Wildlife Foundation through the Bring Back the Natives Program and the Curtis and Edith Munson Foundation will also be leveraged in collaboration with Trout Unlimited. Two subcontracts are proposed, one to the Southern Appalachian Man and Biosphere Program (an NBII contractor) for assistance with the GIS and web mapping component. The other is a subcontract to Trout Unlimited to handle component 3.

**Resume:** Jeff Waldon

Work Address: Conservation Management Institute  
College of Natural Resources, Virginia Polytechnic Inst. and State Univ.  
1900 Kraft Dr. Suite 250 MS0534., Blacksburg, Virginia 24061  
(540) 231-4540, (540) 231-7019 fax, fwiexchg@vt.edu email, www.cmiweb.

Work Experience:

1/00 to Present Assistant Director of the Conservation Management Institute, College of Natural Resources, Virginia Tech. The Conservation Management Institute is dedicated to addressing the needs of the conservation community for research into cutting edge technology and techniques for land management, species conservation, and planning. Duties included all aspects of program development and contract acquisition

(approximately \$4 million/year), personnel management (85 positions), interaction with sponsors and cooperating agencies (several dozen), and planning. The CMI is generally involved in 40-50 major projects at any given moment requiring extensive leadership and coordination. Projects include geographic information systems and remote sensing, information management planning, training, species information system development, national surveys, gap analysis, military base research support, field research project management, and international capacity building and development.

11/91 to 12/99 Project Leader, Fish and Wildlife Information Exchange (FWIE), Department of Fish and Wildlife Sciences, Virginia Polytechnic Institute and State University. The Fish and Wildlife Information Exchange was a clearinghouse and technical assistance center for state, federal, and nongovernmental agencies and organizations in information management and computerization. Duties included all aspects of program development and contract acquisition (approximately \$1.4 million/year), personnel management (50 positions), interaction with sponsors and cooperating agencies (several dozen), and planning.

#### Publications:

I have produced 47 publications and major professional presentations on a variety of topics related to fish and wildlife information management.

#### Relevant Professional Service and Awards:

Affiliate Member of the IAFWA Committee on Science and Research  
Special Committee on Electronic Publishing, The Wildlife Society, 2000-2002  
Organization of Fish and Wildlife Information Managers Member-At-Large 1994-1996.  
American Fisheries Society Electronic Media Committee 1995-1999.

#### Awards and Certifications:

International Association of Fish and Wildlife Agencies Excellence Award for activities related to the Virginia Teaming with Wildlife Coalition, 1997.  
Southeastern Section, The Wildlife Society For Outstanding Service as Newsletter Editor 1996-1998.  
1999 Professional Award, Virginia Chapter of The Wildlife Society.  
Certified Wildlife Biologist, The Wildlife Society.

#### **Certification:**

I certify that the Conservation Management Institute at Virginia Tech will not use the grant funds to fund, in whole or in part, any activity of the organization that promotes or encourages opposition to the regulated hunting or trapping of wildlife, or the regulated taking of fish and the grant funds will not be used in whole or in part, for any activity, project, or program that promotes or encourages opposition to the regulated hunting and trapping of wildlife or the regulated taking of fish.

## **Amendment 1:**

### Component 3: Education and Management

At the Eastern Brook Trout Meeting in June, 2004, a “break out” session was held to identify and explore potential solutions and program concepts to address threats to brook trout. Much of the discussion centered on the human dimensions of natural resource impairment. It was recognized that identifying threats to brook trout was fairly straightforward; however, many solutions tended to be sociological in nature and as such were not as simple to address. A chasm is present between science held by fisheries professionals and awareness and knowledge held by the general public. In identifying mechanisms to protect brook trout, emphasis was placed on an informed and inspired public. A Promotion and Education (P & E) workgroup was formed to design, implement, and manage the outreach component of the Eastern Brook Trout Joint Venture (EBTJV).

During this exploratory meeting of potential partners in June, 2004, some basic principles of developing a sound and effective communications plan for the Venture were agreed upon:

- It would be critically important that the Venture move sequentially through the steps of brook trout status assessment, conservation strategy development, and only then the implementation of an outreach plan as called for by the complete conservation strategy.
- Message(s) within the outreach plan should be tightly linked with the completed conservation strategy. The message(s) must be supported by sound science and could not be developed in full until after the conservation strategy was completed.
- Message(s) would need associated “calls to action”; in other words, to truly affect change, the Venture would not only need to deliver a conservation message, but also make clear what response the Venture desired as a result of calls to action.
- Multiple target audiences would most likely be identified with the completion of the conservation strategy. Although an underlying conservation message may be common throughout the outreach plan, methods of delivery and particular calls to action may vary depending on the targeted audience(s).

During the initial scoping meeting, workgroups were formed to carry out each of the Venture’s components: data analysis, assessment, conservation strategy and outreach. From these workgroups (as well as other entities including agencies and NGOs), a Steering Committee was assembled to guide the EBTJV efforts and tie together oversight and direction of the workgroups.

At its first meeting since formation (in April 2005), the Steering Committee reported out on progress made within each workgroup. Progress on data analysis, assessment, and conservation strategy has been swift since the meeting in 2004. The comprehensive data analysis and assessment will be complete by summer 2005, while the conservation strategy (which awaits critical pieces of supporting information from the assessment) will follow shortly thereafter.

At the April 2005 meeting, the P&E workgroup reported completion of the following:

- a survey of partners (mostly agencies) for existing brook trout outreach materials.
- exploration and pricing of various outreach, education, and advocacy tools.
- a one page fact sheet on EBTJV (target audience – fisheries chiefs and professionals).

In order to implement an outreach plan which is timely, relevant, and supported by science, the P&E workgroup must link its entire approach directly to the assessment and conservation strategy currently nearing completion. Additionally an outreach plan using a marketing approach (i.e. targeting smaller segments of the public that may make a difference and not necessarily a broad effort directed at the general public) may be more efficient and make best possible use of the resources available. Only upon completion of the assessment and conservation strategy will the P&E workgroup have the entire suite of information necessary – quantifiable issues and threats, potential solutions, and target audiences associated with solutions – for a comprehensive, cost-effective, and potentially successful outreach plan.

This amended proposal for the EBTJV’s communications plan is being submitted at the direction of the Steering Committee to reflect an approach that is better tailored to the needs and objectives of the EBTJV and that is designed to meet a much broader target audience with available funds than the original proposal.

Component 3 Objective: Develop, implement, and manage a comprehensive communications plan to engage, inform, and inspire targeted audiences to action, as well as build support for the EBTJV amongst for-profit and non-profit entities.

The P&E workgroup has been directed by the Steering Committee to implement a multiphase work plan which will complement (as well as work in concert with) the entire Venture and its components.

Phase I: Build a broad coalition of diverse groups to support the EBTJV

Phase II: Use the data workgroup’s assessment to initiate a range-wide media campaign

Phase III: Use the completed conservation strategy to promote specific programs and projects for brook trout conservation with target audiences, including funders.

Phase IV: Use successful experiences and partnerships in Phases I, II, and III as a foundation through which to continue to attract additional support and funding, as well as build capacity of the EBTJV.

### Work Steps and Timelines

Component 3 of the project will be performed through a subcontract to Trout Unlimited. Trout Unlimited will take responsibility for the following work steps and deliverables within the Eastern Brook Trout Joint Venture.

#### Work Steps

- a. Gather information necessary to design and implement an outreach program.
  - i. Deliverable: Survey of currently available educational materials and related to Eastern Brook Trout
  - ii. Deliverable: Sign-on letter from 25 organizations/agencies in support of the joint venture.
- b. Support the work groups of the joint venture in formulating products and preparing to communicate those products to the general public, anglers, congress, and venture partners.
  - i. TU’s brook trout outreach coordinator will participate actively in the EBTJV steering committee and will chair the outreach work group. The outreach coordinator will attend all steering committee meetings, and will receive guidance and direction from the steering committee. TU will coordinate communication among EBTJV partners.

- ii. Deliverable: approximately 100 copies of a one-page fact sheet about the joint venture and mailing.
  - iii. Deliverable: Two Power Point presentations relating to the brook trout conservation and the EBTJV. One version will be designed for public audiences (anglers, schools, public meetings, etc.), and the other will be designed for professional audiences (public officials, conferences, fish and wildlife professionals). Both presentations will be made available on the world-wide-web. TU will distribute the presentations to TU volunteers and professionals. TU will also provide support and assistance to other EBTJV partners, including agency personnel, engaged in outreach activities related to the EBTJV and brook trout conservation.
  - iv. Deliverable: A full color report summarizing the assessment results of the data work group. The report will include GIS maps of the entire range of Appalachian brook trout, and a short overall narrative of the fish's population status in its native range. The report will also include short (either one or two page) summaries for each of 17 Appalachian states. Each state summary will include short text, GIS maps, and other graphics illustrating the population status of brook trout in that state. The report will be intended for multiple audiences. First, it will be the primary outreach tool for the earned media campaign listed under section 3 below, and will be distributed to reporters, magazines, and other media outlets. Second, it will be used as an education and outreach tool for the angling community and other members of the public. Finally, it will be used with agency officials, legislators, and other leaders as part of an integrated effort to educate decision-makers about the importance of brook trout and to support the overall goals and strategies of the EBTJV and its members. Twenty thousand copies of the report will be printed, approximately 5,000 of which will be distributed in the initial outreach campaign, and the remainder will be saved for ongoing distribution as part of the EBTJV's activities. The report will also be made available in the Trout Unlimited website, the Back the Brookie website, and may be made available electronically by other EBTJV partners.
  - v. Deliverable: A series of one-page fact sheets and maps for each of the 17 individual states included in the report outlined above designed in pamphlet format. One side of these maps will feature brook trout population assessment information, and the flip-side will include text on the threats to the brook trout. TU will print an average of 3,000 of each of 17 state pamphlets (more for larger states, fewer for smaller). They will be used as part of the earned media campaign described below, and for ongoing outreach, primarily to anglers.
  - vi. Deliverable: EBTJV will provide a model for other aquatic based regional and national conservation efforts. Trout Unlimited will document the actions and progress of the EBTJV so that subsequent conservation initiatives can review the history and process behind the nation's first project under the National Fish Habitat Initiative. Trout Unlimited will provide this report to Steering Committee members and others as requested.
- c. Design and implement an earned media campaign.
- i. Deliverable: TU will implement an earned media campaign, described more fully below, designed to generate approximately 100 newspapers, magazine, and broadcast media pieces regarding the status of brook trout or the EBTJV. This earned media campaign will focus on the release of the public report of the status assessment conducted by the data work group. TU will work closely with its volunteer network, and other EBTJV partners, in implementing this campaign. It is anticipated that other participants in the EBTJV, including agency personnel, will be fully engaged in this campaign.
- d. Conduct outreach in connection with conservation strategy.

- i. Deliverable: TU will produce summary materials regarding the conservation strategy for Appalachian brook trout that the EBTJV anticipates producing in 2006. Those materials will include a short (approximately 10-15 page) summary brochure, an even shorter fact sheet, and fact sheets for each state.
- ii. Deliverable: TU will distribute these materials and engage in an earned media campaign similar to that for the release of the assessment. The exact scope of this campaign will be crafted based on the results of the outreach efforts conducted to that date, and will focus on the most likely avenues for public dissemination of the conservation strategy.

Timeline:

Task	Year/Quarter							
	1/1	1/2	1/3	1/4	2/1	2/2	2/3	2/4
1a. Report compiling information regarding organizations that currently conduct outreach and education programs related Eastern Brook Trout			X					
1b. Formalize coalition and levels and types of support through a sign- Sign-on letter from 25 organizations/agencies in support of the joint venture								X
2a. Attend meetings of joint venture steering committee and appropriate work group meetings to give input on outreach and education.	X	X	X	X	X	X	X	X
2b. Approximately 100 copies of a one-page fact sheet about the joint venture.			X					
2c. Power Point presentations describing the issues, the EBTJV, and its approach to addressing the issues available on the world-wide-web with narration to include various audiences. Provide support to outreach efforts of EBTJV partners		X	X	X	X	X		
2d. A full-color report (designed for public consumption) featuring maps illustrating the population status of the Eastern brook trout along the spine of the Appalachian Mountains.				X				
2e. A series of one-page fact sheets and maps for each of the individual states included in the report outlined above, essentially designed as a pamphlet.				X				
2f. EBTJV will provide a model for other aquatic based regional and national conservation efforts. Trout Unlimited will document the actions and progress of the EBTJV so that subsequent Ventures can review the history and process behind the nation's first project under the National Fish Habitat Initiative.							X	X
3a. Earned media campaign with the goal of generating approximately 100 newspaper, television, magazine, or broadcast o pieces regarding the joint venture.					X			
4a. Produce summary materials related to conservation strategy.							X	
4b. Conduct outreach and media campaign related to conservation strategy.							X	X

## **Project Description**

1) Gather information necessary to design and implement an outreach program.

a. Survey of existing materials. Trout Unlimited will contact state agencies and NGO's in states with native populations of Appalachian brook trout (the 17 state EBTJV area) and survey public education materials and activities related to Eastern brook trout. TU will contact agencies and NGOs by telephone, and follow up with a series of written questions. TU will contact approximately 25 representatives of state agencies, federal agencies, fishing groups, and conservation organizations. Once it has received responses from these entities, TU will summarize its findings, and maintain a file of any such educational materials it has located, in the event existing efforts can be used in conjunction with or complement the efforts of the EBTJV.

9) Support the work groups of the joint venture in formulating products and preparing to communicate those products to the general public, anglers, congress, and venture partners.

b. Fact Sheet. TU will draft a fact sheet describing the EBTJV, and mail it to approximately 100 current or potential partners in the project. Recipients will include heads of state and federal agencies participating in the EBTJV, in order to elevate the project, and the importance of brook trout conservation generally, with these agencies. Before sending the fact sheet, TU will circulate it to the steering committee and integrate any comments of the steering committee of the EBTJV. The fact sheet will describe the genesis of the EBTJV, its goals, its participants, and its short and long-term plans.

c. Power Point Presentations. An important part of the outreach effort will be efforts to educate the public, and in particular anglers, about the importance of brook trout conservation efforts. Another important audience will be agency personnel, legislators and their staff, conservation professionals, private funders, corporations and other businesses, and community leaders. TU will be active in making presentations to such groups, and will also provide support to other EBTJV partners engaged in such outreach efforts. To assist in these efforts, TU will create two Power Point presentations. One will be intended for general public audiences, including anglers and fishing groups. The other will be intended for professional audiences, including legislators, agency personnel, funders, and conferences. The version for the general public will also be made available in the internet, with narration. Both presentations will be updated periodically, and will be modifiable to tailor them to specific audiences. The goals of each will be to educate the intended audience about the importance of brook trout conservation generally, and of the efforts of the EBTJV in particular.

d. Full Color Report. The Assessment Working Group of the EBTJV has spent much of the last six months collecting data from state fish and game agencies and other entities about the status of brook trout populations and threats to those populations in 17 states along the Appalachian Mountains from Georgia to Maine. The work group is currently in the process of producing a scientific report, including a significant GIS component, detailing where brook trout populations are, where they have been extirpated, what the threats are to extant populations, and what human activities correlate with depressed or extirpated populations. Working with the Steering Committee, TU will produce a glossy, full color, report summarizing this assessment for non-technical audiences, including the public, the media, funders, community leaders, and legislators. The report will consist of an overall summary, including GIS maps, of the 17 state regions, and a series of short summaries of each of the 17 states in the region. Each state's section will include text summarizing information concerning that state's brook trout populations, a color GIS map summarizing the status of brook trout in that state, and other relevant graphics. We anticipate



that one or two pages will be devoted to each state, and that the overall report will be approximately 25 pages long. TU will print 20,000 copies of this report. The report will be released to the media as part of the earned media campaign described above, and its initial intended audience will be the media, the general public, and anglers. However, over the longer term, the report will be distributed by TU and other EBTJV partners to a variety of audiences, including legislators, private funders, local community leaders, fishing and other sporting groups, and a variety of other audiences that can assist in the goals of the EBTJV. The report will thus serve the initial goal of expanding public awareness of brook trout, brook trout conservation, and the EBTJV, and then in the long-term become the basic tool that the EBTJV can use in ongoing efforts to promote brook conservation and the activities of the joint venture itself. The report will also be made available on the web through the TU and Back the Brookie websites. Finally, the data generated by the assessment is going to be made available in GIS format through the internet by the USGS.

e. State-by-state fact sheets. In conjunction with the full color report described above, TU will also produce a one page, folding pamphlet for each state. These sheets will include the GIS map summarizing brook trout status in that state, and will include a short summary of threats to brook trout. These will also be full color and graphically compelling. They will be used in conjunction with the earned media campaign described below, and also for wider distribution among anglers in that state in order to increase awareness of wild brook trout and the threats they face.

f. Documentation. At all stages of the outreach effort, TU will document its work, and the work of EBTJV partners. Among other issues, TU will track and collect all media hits, and what strategies produced which media hits, in order to assess the cost effectiveness of different aspects of its campaign. All of this information will be compiled in such a format so that future major outreach efforts associated with conservation strategies can learn from the outreach efforts of the EBTJV.

3. Earned Media Campaign. TU will engage in an earned media campaign to promote awareness of brook trout, the importance of brook trout conservation, and the efforts and goals of the EBTJV. TU will use its extensive volunteer network in each state to conduct a focused campaign in each of the 17 states, and will also target national media outlets, including national newspapers like the New York Times, conservation publications, and sporting magazines. Prior to the campaign, TU media relations and public affairs staff will conduct training for TU volunteers and staff of EBTJV partners so that they can participate actively in the campaign. The primary focus of the campaign will be the release of the full color version of the status assessment. TU will gain media attention to the report by portraying it as a significant advance in knowledge about brook trout, and as the first step in a major effort to protect and restore brook trout. In each state, the campaign will include the following activities:

- a. The outreach work group, working with TU staff and volunteers, will identify national, regional, state, and local media outlets with a potential interest in the story.
- b. Volunteers and staff will call and e-mail reporters personally in advance of the report's release to interest reporters in the story.
- c. Where appropriate, TU will send advanced copies (pursuant to a press embargo until the date of release) of the report, the individual state pamphlet, and press releases to reporters.
- d. Before and after release of the report, TU volunteers and staff, and other EBTJV partners, will meet with reporters and editorial boards, either in their offices or in the field, to brief them on the report, the EBTJV, and brook trout conservation generally. Where appropriate, reporters will be taken to local brook trout streams for photo and video opportunities.

- e. On the date of the report's release, TU will "blast fax" a press release to potential media outlets that have been identified. Tailored versions of the press release will go out to state focused media in each state.
  - f. On and after the date of the release, staff and volunteer will make follow-up calls and visits to reporters and editorial boards.
  - g. On and after the date of the report's release, TU will track and collect stories published or broadcast.
4. Outreach in Connection with the Conservation Strategy. It is anticipated that during 2006 the EBTJV will produce a conservation strategy setting out and prioritizing opportunities for conserving and restoring brook trout populations in different parts of the Appalachian region. The strategy will be a blueprint for obtaining and prioritizing funding, and for obtaining resources to assist states in their brook trout restoration efforts. TU will engage in outreach to educate the public about the conservation strategy. The effort will be somewhat more narrowly focused than the outreach campaign related to the release of the assessment, primarily because news outlets most likely to publish stories about the strategy will have been identified in the outreach effort for the assessment. As part of this outreach campaign, TU will:
- a. Produce outreach materials, include a 10-15 summary with color graphics, short fact sheets, and press releases related to the conservation strategy; and
  - b. Seek to place stories about the conservation strategy in various media outlets. TU believes that approximately 50 stories is a reasonable goal for this effort.

### **Project Leverage**

A \$73k project funded by the National Fish and Wildlife Foundation through the Bring Back the Natives Program and the Curtis and Edith Munson Foundation will also be leveraged in collaboration with Trout Unlimited. Trout Unlimited will use *Back the Brookie* where possible, a Trout Unlimited campaign emphasizing grassroots advocacy and education, to assist in the distribution of campaign materials and bring the EBTJV's message(s) to target audiences and decision makers when and where appropriate. TU's website resources, including [www.tu.org](http://www.tu.org) and the Back-the-Brookie website ([www.brookie.org](http://www.brookie.org)) will be used to publicize the EBTJV. Stories about the EBTJV will be posted, and all venture related materials will also be made available on the websites. On both websites, the EBTJV will be presented as the first major effort to conserve and restore Appalachian brook trout, and information about the EBTJV will be updated frequently on these websites. TU will also post links to the USGS's data resources relating to brook trout.

**Amended Budget**

<b>Objective 3: Management and Education</b>	2005	2006	Partnership Funds	Total Cost
Salaries	38,790	39,280	52,277	130,347
Full color report	30,000		13,000	43,000
State-based maps	18,275		5,000	23,275
Report and map mailing	2,500		2,000	4,500
Media training for volunteers and agency personnel	4,475			4,475
Other costs of earned media campaign (drafting of press releases, “blast” faxing of press releases, and production and distribution of press kits).	4,500	4,500		9,000
Printing of outreach materials related to conservation strategy and media outreach associated with release of conservation strategy.		30,000		30,000
Website administration			2,000	2,000
Travel (transportation, lodging, meals associated with grassroots media effort and other work within the EBTJV)	6,000	10,000		16,000
Subtotal	103,540	84,780	74,277	262,597

## **Amendment 2:**

### *Component 3: Education and Management*

**Component 3 Objective:** To develop, implement, and manage a comprehensive communications plan to engage, inform, and inspire targeted audiences to action, as well as build support for the EBTJV amongst for-profit and non-profit entities.

At the Eastern Brook Trout Meeting in June, 2004, a “break out” session was held to identify and explore potential solutions and program concepts to address threats to brook trout. Much of the discussion centered on the human dimensions of natural resource impairment. It was recognized that identifying threats to brook trout was fairly straightforward; however, many solutions tended to be sociological in nature and as such were not as simple to address. A chasm is present between science held by fisheries professionals and awareness and knowledge held by the general public. In identifying mechanisms to protect brook trout, emphasis was placed on an informed and inspired public. A Promotion and Education (P & E) workgroup was formed to design, implement, and manage the outreach component of the Eastern Brook Trout Joint Venture (EBTJV).

During this exploratory meeting of potential partners in June, 2004, some basic principles of developing a sound and effective communications plan for the Venture were agreed upon:

- It would be critically important that the Venture move sequentially through the steps of brook trout status assessment, conservation strategy development, and only then the implementation of an outreach plan as called for by the complete conservation strategy.
- Message(s) within the outreach plan should be tightly linked with the completed conservation strategy. The message(s) must be supported by sound science and could not be developed in full until after the conservation strategy was completed.
- Message(s) would need associated “calls to action”; in other words, to truly affect change, the Venture would not only need to deliver a conservation message, but also make clear what response the Venture desired as a result of calls to action.
- Multiple target audiences would most likely be identified with the completion of the conservation strategy. Although an underlying conservation message may be common throughout the outreach plan, methods of delivery and particular calls to action may vary depending on the targeted audience(s).

In order to implement an outreach plan which is timely, relevant, and supported by science, the P&E workgroup must link its entire approach directly to the products of the other work groups. The first media campaign corresponded to the release of the Threats Assessment document. The second media campaign will center around the Conservation Strategy, which is currently nearing completion.

This amended proposal for the EBTJV’s communications plan is being submitted by CMI at the direction of Federal Aid to reflect changes to the deliverables in Amendment 1, specifically, the reduction in number of reports and pamphlets printed. The amendment has been approved by CMI and the Steering Committee to improve the outreach effort and make the best use of remaining funds to meet the objectives of Component 3.

## Work Steps and Timelines

In order to better meet stated outreach objectives of the joint venture and to address evolving needs, the outreach deliverables for Component 3 have changed from Amendment 1 (pg 12). This second amendment reflects changes to the deliverables and describes remaining deliverables. Specifically, this second amendment reflects that only 10,000 of the anticipated 20,000 reports were printed, and only 21,000 instead of 51,000 state pamphlets were printed. The reduction in number was due to increased design costs, a longer report than anticipated, and a decision to print high quality documents to promote the EBTJV by the Steering Committee of the EBTJV.

Remaining funds will be used to promote the Conservation Strategy and further spotlight the EBTJV. In an effort to reach more people and provide a resource for communication among partners, an EBTJV website is being added as a deliverable.

## Work Steps

While organized slightly differently, all deliverables from Amendment 1 remain the same, except that an additional deliverable of an EBTJV website is included. For reference, Amendment 1 deliverable numbers are included (taken from page 15).

### 1. Outreach related to the release of the Threats Assessment/Data Report

A full-scale media effort will be conducted to highlight the results of the data collection and threats assessment. As part of this effort a full-color summary report (2d) and individual state pamphlets will be created (2e). An earned media campaign consisting of press releases and follow-up contacts of the media by volunteers will be conducted. Numerous print, radio, and TV spots are expected to be generated by this effort (3a). Partners will be invited to be fully engaged in this media effort to highlight the EBTJV and spotlight local Brook Trout issues.

### 2. Outreach related to the release of the Conservation Strategy.

This effort will be similar to that of the release of the Threats Assessment. A summary report will be created for the general public (4a). If completed by individual states, separate state conservation strategy fact sheets will be created (4a). An earned media campaign will also be conducted, which will include press releases in an effort to generate print, radio, and TV spots about the EBTJV and the brook trout conservation strategy (4b). Partners will be invited and encouraged to participate in a coordinated outreach effort.

### 3. General, ongoing outreach

A survey of existing brook trout outreach materials will be conducted (1a) to evaluate currently available materials on Brook Trout. New outreach materials will be created to highlight the EBTJV. These materials will include fact sheets (2b), PowerPoint presentations (2c), posters, and an EBTJV website (new deliverable). These materials will be produced as needed to promote the EBTJV. The EBTJV website will explain the venture, list partners, provide access to the data collected and maps generated, make available all grant deliverables (i.e., documents, PowerPoint presentations, etc.), and provide a valuable information sharing location for venture partners. CMI will design and maintain the website.

### 4. EBTJV documentation

The evolution of the EBTJV will be documented so that it is available for reference by other joint ventures (2f). An MOU will also be drafted and circulated for partner sign-on (1b).

Timeline:

Task	Year/Quarter							
	1/1	1/2	1/3	1/4	2/1	2/2	2/3	2/4
1. Outreach connected to the Status and Threats Assessment					X	X		
2. Outreach connected to the Conservation Strategy							X	X
3. General, ongoing outreach	X	X	X	X	X	X	X	X
4. Documentation of the EBTJV						X	X	X

**Project Leverage**

A \$73k project funded by the National Fish and Wildlife Foundation through the Bring Back the Natives Program and the Curtis and Edith Munson Foundation will also be leveraged in collaboration with Trout Unlimited. Trout Unlimited will use *Back the Brookie* where possible, a Trout Unlimited campaign emphasizing grassroots advocacy and education, to assist in the distribution of campaign materials and bring the EBTJV’s message(s) to target audiences and decision makers when and where appropriate. TU’s website resources, including [www.tu.org](http://www.tu.org) and the Back-the-Brookie website ([www.brookie.org](http://www.brookie.org)) will be used to publicize the EBTJV. Stories about the EBTJV will be posted, and all venture related materials will also be made available on the websites. On both websites, the EBTJV will be presented as the first major effort to conserve and restore Appalachian brook trout, and information about the EBTJV will be updated frequently on these websites. TU will also post links to the USGS’s data resources relating to brook trout.

**Amended Budget**

<b>Objective 3: Management and Education</b>	2005	2006	Partnership Funds	Total Cost
Salaries	38,790	39,280	72,277	150,347
Status and Threats Assessment Outreach		55,275		55,275
Conservation Strategy Outreach		34,500		34,500
General, ongoing outreach & website	2,000	10,000		12,000
Media training for volunteers and agency personnel	4,475			4,475
Travel (transportation, lodging, meals associated with grassroots media effort and other work within the EBTJV)	3,000	3,000		6,000
EBTJV documentation				0
Subtotal	48,265	142,055	72,277	262,597