References

- American Planning Association. (2005a). *Model Smart Land Development Regulations: Interim PAS Report*. Chicago, Illinois. Ch. 1, 1-5.
- American Planning Association. (2005b). Model Smart Land Development Regulations: Interim PAS Report. Chicago, Illinois. Ch. 2, 1-45.
- American Planning Association. (2005c). Model Smart Land Development Regulations: Interim PAS Report. Chicago, Illinois. Ch. 4, 1-112.
- Anderson, S. D. (1999). "Watershed management and nonpoint source pollution: The Massachusetts approach." *Boston College Environmental Affairs Law Review.* Issue and Dates?
- Bollens, S (1991). "Regional Planning and Land Use Localism: Can They Coexist?" *New England Journal of Public Policy*. 7(1), 55-74.
- Boston Region Metropolitan Planning Organization (2005). *Transportation Improvement Program and Air Quality Conformity Determination, Fiscal years 2006 2010*. Retrieved 3/22/2006 from http://www.bostonmpo.org/bostonmpo/resources/tip/FY2006-2010TIP.pdf.
- CDM. (2006). South Platte River, Denver Colorado: Restoring and Revitalizing and Urban Waterfront. Retrieved 3/28/2006 from http://www.cdm.com/knowledge_center/cities_of_the_future/success_ stories/urban_restoration_and_revitalization_of_the_south_platte_river.htm.
- Chase, Bradford C., Jeffrey H. Plouff, and Wayne M. Castonguay. (2002). *The Marine Resources of Salem Sound, 1997.* Massachusetts Division of Marine Fisheries. October 2002.

City of Peabody. (2003). Zoning Ordinance.

City of Salem. (1996). Master Plan Update and Action Plan.

R	Е	F	Е	R	Е	Ν	С	Е	S

City of Salem. (As amended 2005). *Zoning Ordinance*. Tallahassee, FL: Municipal Code Corporation. Clean Water Act, 33 USC Sec. 1329 U.S.C. 319 (As Amended, 2002).

- Community Preservation Coalition. (2006). Massachusetts Community Preservation Act. Retrieved 3/29/2006 from http://www.communitypreservation.org.
- Corcoran, Sean. (2 April 2004). "Drenched." The Salem News, A1.
- Executive Office of Environmental Affairs. (2005). *Massachusetts Smart Growth Toolkit*. Retrieved on 10 February 2006 from http://www.mass.gov/envir/smart_growth_toolkit.
- Goody, Clancy & Associates. (2003). *Neighborhood Master Plan for the North River Canal Corridor*. Unpublished manuscript.
- Haney, B. (2006). Environmental Notification Form. *Peabody Bikeway*. EOEA No. 13662R. Retrieved 2/1/2006 from http://www.mass.gov/envir/mepa/pdffiles/enfs/012506em/13662R.pdf.
- Hapgood, Fred. (2002). *Providential Happening*. Smithsonian Magazine. http://www.smithsonianmag.com/ issues/2002/november/interest.php?page=1.
- Herricks, E. E. (Ed.). (1995). Stormwater Runoff and Receiving Systems CRC Press, Inc.
- Laidler, J. (2004, May 16). Peabody Riverwalk Begins to Take Form. Boston Globe (North).
- Massachusetts Highway Department. (2006). *Project Development and Design Guide*. Retrieved on 4/26/06 from http://www.vhb.com/mhdGuide/mhd_GuideBook.asp.
- MassGIS. (2006). *Interactive Mapping Tool for Massachusetts*. Retrieved on 3/12/06 from www.massgis.com. Michener, James. (1974). *Centennial*. New York: RandomHouse.
- Nashua River Watershed Association. (2006). "The Past and the Future." Retrieved 4/12/2006 from http://www. nashuariverwatershed.org/.
- National Center on Secondary Education and Transition. (2005). *Essential Tools: Community Resource Mapping*. Retrieved 3/10/2006 from

http://www.ncset.org/publications/essentialtools/mapping/step1.asp.

- National Park Service, Rivers, Trails & Conservation Assistance Program. (2005). *Strategic Plan*. Retrieved 3/10/2006 from http://www.nps.gov/ncrc/programs/rtca/whatwedo/rtcastrategicplan.pdf.
- North River Neighborhood Task Force. (1993). North River Neighborhood Plan.
- Orfield, Myron (2002). *American Metropolitics: The New Suburban Reality*. Brookings Institution Press: Washington, D.C., 111-172.
- Oregon Visions Project. (1993). A Guided to Community Visioning: Hands-On Information for Local Communities. American Planning Association.
- Otto, J. & Port, A. (2001). *City of Peabody Master Plan Downtown Riverwalk & Leather City Historic Trail.* Department of Community Development & Planning.

R	E	F	Е	R	Е	Ν	С	Е	S
---	---	---	---	---	---	---	---	---	---

Partnership for Advanced Technology in Housing. (2005). *Permeable Pavement – Summary*. Retrieved 2/24/2006 from http://www.toolbase.org/techinv/techDetails.aspx?technologyID=98#benefits.

Peabody Planning Department. (2002). Master Plan.

- Protected Open Space List (MassGIS) for Commonwealth Capital (2006). Retrieved 3/28/2006 from http:// www.mass.gov/dhcd/ToolKit/hidden/permos.pdf.
- Powers, Amy. (2004). *An Evaluation of Four Place-Based Education Programs*. Journal of Environmental Education Retrieved 3/06/2006 from http://www.peecworks.org/PEEC/PEEC_Reports/002A7631007EA7AB.0/Powers%20JEE%20article.pdf.

Salem Sound 2000, Inc. et al. (2000). North Coastal Alliance Water Quality Assessment, 19-31.

Salem Sound 2000, Inc. et al. (2000). North Coastal Alliance Water Quality Assessment.

- Salem Sound Coastwatch. (2005). River Restoration and Revitalization Priority Projects Nomination form. Unpublished manuscript.
- Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601) is amended by adding at the end the following:

http://www.epa.gov/brownfields/glossary.htm.

Sierra Club. (2005). Building Better: A Guide to America's Best New Development Projects. The Sierra Club Foundation. Retrieved April 10, 2006 from

http://www.sierraclub.org/sprawl/report05/.

- Skelly, Christopher C. (2003). Preservation through Bylaws and Ordinances: Tools and Techniques for Preservation Used by Communities in Massachusetts. Massachusetts Historical Commission, 1-66. Retrieved 3/28/2006 from http://commpres.env.state.ma.us/content/publications.asp#neshow.
- Skelly, Christopher C. (2003). Preservation. U.S. Environmental Protection Agency. (2003). State-EPA NPS partnership. Retrieved 2/17/2006 from http://www.epa.gov/owow/nps/partnership.html.

Sobel, David. (2004). Place Based Education: Connecting Classrooms & Communities, Orion Society.

- United Nations Environment Programme. (1991). *Tanneries and the Environment: A Technical Guide*. Paris: United Nations Environment Programme/Industry and Environment Office.
- U.S. Environmental Protection Agency. (2001). *What is Smart Growth?-A Smart Growth Fact Sheet*. National Center for Environmental Publications.
- U.S. Environmental Protection Agency. (1999). *Storm Water Technology Fact Sheet Vegetated Swales*. EPA #832-F-99-006.
- U.S. Environmental Protection Agency. (2005). National Management measures to control nonpoint source pollution from Urban Areas. No. EPA-841-B-05-004. EPA National Center for Environmental Publications. http://www.epa.gov/owow/nps/urbanmm/pdf/urban_guidance.pdf.

R E F E R E N C E	S
-------------------	---

- U.S. Environmental Protection Agency. (2001). *Our Built and Natural Environments* No. EPA 231-R-01-002 National Center for Environmental Publications. http://www.epa.gov/dced/pdf/built.pdf.
- Wang, C. (2005). Transportation Improvement Study for Routes 1A, 114, and 107, and Other Major Roadways in Downtown Salem. Retrieved 3/22/2006 from http://ctps.org/bostonmpo/resources/Salem/ Chap1+TitlePages.pdf.
- Webber, C.H. and W.S. Nevins. (1877). Old Naumkeag. Boston: A.A. Smith Company.
- McWilliams, Becky. (2003). "Providence Reclaims Rivers." Retrieved 3/12/2006 from http://www. architectureweek.com/2003/0709/design_2-2.html.
- Hapgood, Fred. (2002). "Providential Happening." Retrieved 3/12/2006 from http://www.smithsonianmag.com/ issues/2002/november/interest.php?page=1

INTERVIEWS

Haney, Blair. City Planner. Peabody, MA. Personal communication. 20 March 2006.

Hartford, Tania. City Planner. Salem, MA. Personal communication. 21 March 2006.

Lazares, Stewart. Member of the Community Preservation Committee and Planning Board. Peabody, MA. Personal communication. 24 March 2006.

Port, Andrew. (Former) City Planner. Peabody, MA. Personal communication. 7 March 2006.

Treadwell, Jim. Member of the Northfields Neighborhood Association. Salem, MA. Personal communication. 21 March 2006.

Warren, Barbara. Executive Director, Salem Sound Coast Watch. Salem, MA. Personal communication. 27 January 2006

Warren, Barbara. Executive Director, Salem Sound Coast Watch. Salem, MA. Personal communication. 24 April 2006

Appendices

Appendix A: Existing Conditions of Recreational Projects

NORTH RIVER CANAL CORRIDOR IMPROVEMENTS (SALEM)

Goals

The goals and objectives of the 2003 *Neighborhood Master Plan for the North River Canal Corridor* were to encourage *good* redevelopment and transportation improvements using the following methods:

- create a vision statement for the corridor;
- make connections and unlock redevelopment;
- create pedestrian paths and redevelop key sites and potential new streets;
- improve the identity, waterfront access, and connections along Franklin St;
- create an Urban Village and Gateway to downtown at Bridge St and Boston St;
- strengthen Leslie's Retreat Park as a neighborhood amenity;
- strengthen the identity of Bridge St and Park Edges; and
- enhance pedestrian access to and through the MBTA station.

A P P E N D I C E	А	Р	P E	Ν	D		С	E	S
-------------------	---	---	-----	---	---	--	---	---	---

Process

There were two phases to the interactive planning process used in creating the 2003 *Neighborhood Master Plan for the North River Canal Corridor*. The first phase was led by the North River Corridor Planning Project Working Group, which was a 20-member working group made up of business owners, residents, and volunteers appointed by Former Mayor Stan Usovicz. This working group looked at existing conditions, issues and opportunities, and developed vision statement for the master plan.

The vision statement outlined the following hopes for the North River Canal Corridor:

- to create appropriate development while preserving historic character;
- to address transportation issues for existing and new developments; and
- to enhance the public realm in keeping with unique neighborhood character by creating an accessible network of open spaces, landscape and streetscape improvements.

For the second phase of the project, the city of Salem sought the involvement of outside consultants to help develop scenarios for the North River Canal Corridor. Three types of consulting firms were brought into the process: an environmental specialist (Goody, Clancy & Associates), a transportation specialist (Earth Tech Inc.) and an economics specialist (FXM Assoc). When the initial scenarios were produced, they were presented to the North River Corridor Planning Project Working Group and the public for comments. The comments were then addressed and incorporated into the illustrative plan that followed, which went back out the working group and the public for feedback. The consultants further refined their plans per second-round remarks and created the Master Plan.

Description of Project

Some of the elements of the proposed project that pertain to recreation along the North River are as follows:

- To enhance the canal edge with trees, benches, landscaping, sidewalks, and maintenance, possibly funded by public-private partnerships.
- To provide a waterfront pathway along both the north and south banks of the North River;
- To seek opportunities to incorporate water-dependent uses;
- To provide pedestrian connections between Furlong Park, Leslie's Retreat Park and the MBTA Station and to connect these to the downtown area via the MBTA with a pedestrian pathway;
- To connect Leslie's Retreat Park to surrounding neighborhoods in order to improve safety and access to the park. The plan proposed two new pedestrian access points at Bridge St one between Flint and North Streets to connect the Federal St. neighborhood to the park and the other through the extension

А	Р	Р	Е	Ν	D	I	С	Е	S
---	---	---	---	---	---	---	---	---	---

of Commercial St to Bridge and the associated relocation of the existing entrance to the MBTA lot. In addition, they supported a safety rail along edge of canal and an additional pedestrian bridge to directly link Downtown to Mason Street;

- To improve the image of Leslie's Retreat Park by solving the park's drainage problems, creating park clean-up programs, and building relationships with business- and home-owners in the area. The Master Plan also encourages support of the Bridge Street reconstruction project to complement the park edge and to provide adequate landscaping and pedestrian connections;
- To build programming into Leslie's Retreat Park and any other parks that may be created along the River. This may include adding art exhibitions, children's play areas, and historic interpretive venues and programming.

CURRENT STATUS

Unfortunately, little has been done to fulfill the recreational aspects of the North River Canal Corridor Neighborhood Master Plan. Salem City Planner Tania Hartford attributes this to the fact that Salem has spent the last few years focusing their time and money on creating and passing their new zoning by-laws and beginning construction of the Harbor Walk (personal communication, 21 March 2006).

The following recreational spaces currently exist along the North River in Salem:

Leslie's Retreat Park: Built adjacent to Bridge St in 1999, this park was an effort to mitigate the wetlands destroyed during the construction of the new Salem-Beverly Bridge (Jim Treadwell, personal communication, 21 March 2006), not to increase recreational opportunities along the North River.

Currently, the City of Salem cannot technically take ownership of this park until a railing is built between it and the water.

Additionally, the Department of Parks and Recreation plans on turning the most Eastern part of the park into a dog park. While this will increase the use of the park, the city needs to be sure to keep plastic bags available for pet owners to clean up after their dogs. Upon my visit to the park, the receptacles that have been built for this purpose were empty. If animal waste is left on the ground, it will easily run-off into the North River



Empty Doggie-bag box.

A I	Р	Р	E	Ν	D	I	С	E	S
-----	---	---	---	---	---	---	---	---	---

and further pollute this resource.

According to a number of Salem residents, Leslie's Retreat Park is primarily used as an impromptu dog park, and occasionally people sit on the benches, and access the pedestrian bridge as they run through the park.

Currently, there have been no efforts to improve the park's drainage problem, incorporate programming into the park, improve connections to other neighborhoods, develop a park clean-up program, or build relationships with local businesses.

• **Furlong Park:** In addition to the North River Canal Corridor Neighborhood Master Plan's call for improved connections to Furlong Park, Salem's comprehensive Master Plan also calls for the extension of Furlong Park. There is currently a junkyard adjacent to the grounds of the Park and the plans to replace it with an extension of the playground have not been acted upon.

What is noticeably missing from the short list above is any mention of a waterfront walkway or waterdependent uses.

PEABODY BIKEWAY

Goals

The stated goal of the Peabody Bikeway project was to reuse an abandoned stretch of railroad track as a multiuse, recreational trail in order to occupy and largely preserve property that would otherwise be subject to continued piecemeal development over time.

Process

The City of Peabody hired Green International Affiliates, Inc., a group of consulting engineers, to design the Bikeway and to handle obtaining the necessary permits. Due to the fact that portions of the Bikeway would run through a number of residents' backyards, the City held neighborhood meetings to get feedback and input on the proposed design.

PROJECT DESCRIPTION

А	Ρ	Р	Е	Ν	D	Ι	С	Е	S

The Peabody Bikeway is one of the major elements of the City's long term open space planning (Otto & Port 2001) and it will extend 4.6 miles, from the Middleton Line to Route 128. The majority of the Bikeway will run along the Ipswich River but a section of the trail will run parallel to the Proctor Brook, which is a tributary of the North River.

The approximately \$2.75 million project will be funded by the Massachusetts Highway Department's (MassHighway) Transportation Improvement Program. In compliance with MassHighway standards, the Bikeway was scheduled to be a 10-foot bituminous concrete surface roadway with 2-foot wide crushed stone shoulders on either side, in order to accommodate emergency vehicles. As mentioned previously, an updated version of these regulations is currently in draft form, and would decrease the minimum width to 8 feet (Massachusetts Highway Department 2006).

Creation of the Bikeway will alter over 12 acres of land and add 5 acres of impervious surfaces to the area (Haney 2006). In order to mitigate the disturbances caused by the construction of the Bikeway, the City of Peabody has agreed to the following:

- To replicate wetlands at two areas along bikeway adjacent to existing wetland areas;
- To ensure that storm drainage will utilize overland sheet flow off the paved road directed away from developments (but directly into rivers and brooks);
- To re-utilize existing culvert crossings;
- To restore any protected areas that are disturbed to pre-existing conditions upon completion of the project;
- To use plantings to control sedimentation and erosion;
- To limit the amount of construction in proximity to smelt habitat

Current Status

According to Peabody City Planner Blair Haney (personal communication, 20 March 20 2006), the Bikeway is 100% designed and the City of Peabody has gained ownership and easements on the land needed to build the Bikeway. This was a relatively easy process because the ownership of land is centralized in the Massachusetts Bay Transportation Authority (MBTA) and the Guilford Rail System.

The City of Peabody is waiting for the state to complete the review of its permits and to apply for a water quality certificate before they can begin construction. The current project timeline spans two years between breaking ground and project completion.

	А	Р	Р	Е	Ν	D	I	С	Е	S
--	---	---	---	---	---	---	---	---	---	---

PEABODY RIVERWALK

Goals

According to Laidler, the Peabody Riverwalk "began in 1990 as a dream of a riverfront park that would bring new vitality to a tired industrial corridor in Peabody" (2004, 3), and in reality, this is the truth. Peabody is not easily accessible from regional transportation, making it an un-attractive location for industrial firms to move to and the thinking behind the Riverwalk is that it would create connections to make the area more accessible (Otto & Port 2001).

Some of the additional stated goals of the project were:

- To connect open space and create a park that residents can enjoy and take pride in;
- To provide a setting for exploring Peabody's history;
- To plan for future mass transit;
- To reduce congestion and energy consumption throughout downtown Peabody;
- To improve the environment by providing a landscaped corridor, which would keep surrounding properties cool in the summer and shield them from winds in the winter;
- To mitigate flooding by providing flood storage in the banks of the River and to help dilute non-point source pollution before entering the North River;
- To improve pedestrian safety with an auto-free zone for pedestrian circulation;
- To attract people to the heart of the City any time of day, any day of the week.

Process

As mentioned earlier, the Peabody Riverwalk was first envisioned in the 1990 Master Plan Update and the participatory planning process began in 1992, when residents, business-owners, and community leaders came together to develop a plan for the future of their City. The City worked with citizens groups, such as the Master Plan Task Force, the Open Space Plan Advisory Committee, and the North River Neighborhood Plan Task Force (appointed by Former Mayor Peter Torigan) to create a plan that would bring the North River into the open.

Some of their recommendations were:

- To reclaim the River as the centerpiece of a new urban park;
- To promote the North River corridor as an open space, transit-, pedestrian-, and historic-link;
- To focus on the North River and its tributaries as vehicles for redevelopment.

In 1993, the Department of Community Development and Planning sponsored a public design competition to

А	Р	Р	Е	Ν	D	I	С	Е	S

accomplish the following (Otto & Port 2001):

- To focus attention on neglected river;
- To spark the imagination of business groups and citizens;
- To highlight connections between the river, historic buildings, and rail line;
- To show how backs of buildings could be altered to take advantage of the scenery and pedestrians provided by the Riverwalk;
- To show how businesses could weave together to create an urbane outdoor area in a major urban center;
- To consider how visitors and residents could enjoy the River's edge.

The judges were professionals in the design world and City leaders, and it is interesting to note that the North River is not mentioned once in the criteria they used when assessing entries. The entrants were required to include a continuous paved path along the half-mile length of land that stretches between Peabody Square and the Peabody-Salem line, as well as secondary paths to cultural and historic landmarks. Additionally, designs had to incorporate edges formed by fences, plantings, or walls of buildings to separate the primary path when it abuts North River and the railroad right-of-way.

A local winner, Jorge Enes, was named and while his design adhered to Peabody's existing character, he ignored potential re-use of vacant sites for parks or economic development opportunities.

According to Andrew Port, former City Planner (personal communication, 7 March 2006), the City of Peabody probably could have had more interaction with residents and members of the private sector in the planning of the Riverwalk.

PROJECT DESCRIPTION

The Peabody Riverwalk would create a greenway approximately one-mile long, from Peabody's eastern boundary with Salem to the George Peabody House Civic Center. It was also noted that a joint effort between Salem and Peabody would facilitate a connection along the River adjacent to Harmony Grove Road.

This linear park would run primarily along the North River and incorporate some of Enes' design recommendations, including a tree-lined walkway and community garden plots full of native flower and plant species. Because of lead and other soil contaminants, there should, for the time being, be no edible crops. It was also suggested that plans for the park should allow for a passenger terminal to be located near Peabody Square for future region-wide mass transit system (Otto & Port 2001).

A P P E N D I C E	S
-------------------	---

The minimum desirable width for the walkway was 20 feet and the walkways would be composed of unit pavers (brick, concrete) or scored concrete with brick edging, 4ft in width. In order to clearly define edges between segments of the corridor, it was recommended that paving edging, such as granite, be used (Otto & Port 2001).

One of the key elements of the Riverwalk is that much of the land required for the project is located in the floodplain and the floodway, meaning that it can not be intensely developed. Therefore, the creation of the Riverwalk will ultimately ensure the protection of open space. Yet, the location of the proposed Riverwalk requires the City of Peabody to acquire land and easements in order to maintain continuous corridor and this is a large portion of the project's \$1.575 million budget.

$C_{\text{URRENT}}\,S_{\text{TATUS}}$

Currently, an approximately 100-foot section of the Peabody Riverwalk has been built along Foster Street. In April 2004, a paved path (that will be 300-feet upon completion) was created along the Goldthwaite Brook (tributary of the North River) and a new "pocket park" was built, with trees, benches, and picnic tables, as well as a kiosk about the Riverwalk and historic connections. This \$62,000 stretch of the Riverwalk was funded through the Community



The Riverwalk on Foster Street in Peabody Preservation Fund, after they received approval from the City Council.

The idea is to build the Riverwalk as developers rebuild the land along the corridor. This initial section of the project was built in conjunction with the redevelopment of a brownfield site. The project met it's downfall because the land needed to develop the Riverwalk is fragmented and the City needs to purchase each parcel,

А	Ρ	Р	Е	Ν	D	I	С	Е	S

or secure an easement, from individual owners before they can build. Apparently, \$1.6 million in federal grant money has been approved for the Riverwalk but the funds will not be released until all agreements with landowners along the route are in place (Laidler 2004).

According to Blair Haney (personal communication, 20 March 2006), the Riverwalk has since taken a back seat to flood mitigation and the Bikeway due to the complications in acquiring land.

APPENDIX B: DISCUSSION OF METHODS

We have spent a lot of time synthesizing city documents and researching different opportunities available to benefit the North River within the context of these plans.

We have conducted numerous interviews with representatives from both Salem and Peabody in order to get a balanced point of view. These conversations have allowed us to look deeper into the elements of the city documents mentioned above because we are talking to people who were involved with the creation of the plans and people who live and work in our study area. Through our interviews, we have been able to ascertain information about why projects and plans have not been implemented, what the barriers to change have been in the past, and what issues are actually important to residents.

Specifically we have had and will continue to have discussions with:

- past and present planners;
- planners who specialize in regional planning;
- educators and historians;
- city mayors;
- members of the community at large

The last piece of our methodology is research on items such as funding opportunities, average costs of our recommendations, and examples of implementation of projects similar to our recommendations. We have looked at instances of regional visioning and community mapping, and integrated successful techniques into our recommendations. We have also identified other examples of river redevelopment in similar communities to get a sense of different projects and methods used to turn rivers into amenities.

APPENDIX C: BACKGROUND

ABOUT SALEM SOUND COASTWATCH

Salem Sound Coastwatch is a non-profit coastal watershed protection group. It takes a watershed approach to solving environmental problems in the Salem Sound Watershed, while seeking to work cooperatively with the public and private sectors. For the past 16 years, SSCW has been bringing people and organizations together to address the problems facing the region, such as the presence of invasive species in coastal areas, water pollution in public beach areas, degradation of anadromous fish spawning habitats and, of course, the polluted and ignored North River.

ABOUT THE NORTH RIVER AND THE PROJECT

The North River and its associated tributaries – Proctor, Goldthwaite, Tapley and Strongwater brooks – form a highly urbanized stream system that flows through the cities of Peabody and Salem, Massachusetts and into Salem Sound. The North River in the past has also been used for direct sewage discharge and tannery waste; today surface runoff during heavy rains continues to contribute to nonpoint source pollution. Indeed, the North River still does not meet federal Clean Water Act standards. Both Peabody and Salem have established long-term planning and redevelopment initiatives for the North River area, and there are projects underway in both cities concerning developments along the North River, such as a bikewalk in Peabody beginning at the Salem line. However, there is little communication between Salem and Peabody concerning the North River, and no comprehensive planning that carries the goals of the North River Watershed beyond city boundaries. For these reasons, the Salem Sound Coastwatch has asked our team to develop a series of recommendations that will encourage the communities to view the North River as an amenity.

A P P E N D I C E	А	Р	Р	Е	Ν	D		С	Е	S
-------------------	---	---	---	---	---	---	--	---	---	---

APPENDIX D: LIST OF ACRONYMS AND ABBREVIATIONS

AMC: Appalachian Mountain Club **APA:** American Planning Association **BMP:** Best Management Practices BRAC: Brownfield Redevelopment Access to Capital CCRA: Continuing Care Retiring Communities CDBG: Community Development Block Grant CO-SEED: Community-based School Environmental Education CPA: The Community Preservation Act CPF: The Community Preservation Fund CZM: Coastal Zone Management DASA: Dearborn After School Academy EOEA: Executive Office of Environmental Affairs **EPA:** Environmental Protection Agency FEMA: Federal Emergency Management Agency FIRM: Flood Insurance Rates Maps **IMPs:** Integrated Management Practices LID: Low Impact Development MAPC: Massachusetts Area Planning Commission MASSCAP: Massachusetts Association for Community Action MassHighway: Massachusetts Highway Department MBDC: Massachusetts Business Development Corporation MBTA: Massachusetts Bay Transportation Authority MDEP: Massachusetts Department of Environment NCSET: National Center for Secondary Education and Transition NPS[•] National Park Service NRCC: North River Canal Corridor **OVP:** Oregon Visions Project RTCA: Rivers, Trails, and Conservation Assistance Program SSCW⁻ Salem Sound Coastwatch

APPENDIX E: PROGRAM GUIDELINES FOR THE NATIONAL PARK SERVICE'S RIVERS, TRAILS AND CONSERVATION ASSISTANCE PROGRAM

Rivers, Trails, and Conservation Assistance Program Community Assistance Arm of the National Park Service

National Park Service U.S. Department of the Interior

Application Guidelines

About the Program

The National Park Service (NPS) manages some of our nation's most historic sites, scenic resources, and critical natural areas. The NPS also provides assistance to communities to conserve their local natural resources and develop new close-to-home outdoor recreation opportunities through the Rivers, Trails, and Conservation Assistance (RTCA) Program. RTCA staff work in urban, rural, and suburban communities to help applicants to conserve rivers, preserve open space, and develop trails and greenways. RTCA staff help on a variety of natural resource conservation and outdoor recreation projects including multi-use trails, single-purpose trails, greenways, water trails/blueways, river corridor conservation, land protection, and park planning.

RTCA Program staff help with partnership-building to achieve community-set goals, organizational development, assessing resources, developing concept plans, public education and participation, and identifying potential sources of funding. RTCA can assist with identification of public and private funding sources but does not provide direct grants. Project partners may be federal agencies, state or local agencies, tribes, non-profit organizations, or citizens' groups. RTCA assistance is for one year and may be renewed for a second year if warranted.

RTCA's strategic plan directs our program, for the next four years, to provide more assistance on projects that create networks of trails, parks, rivers, greenways and open spaces, as well as projects that help NPS areas with gateway and adjacent natural resource conservation and outdoor recreation issues.

For further information about RTCA and the work we are doing around the country with nearly 300 community partners, please visit our national web site at <u>http://www.nps.gow/tca</u>.

Project Selection Criteria

Applications for RTCA Program assistance are competitively evaluated by our regional offices, based on how well the applications meet the following criteria:

 Initial project partners are identified and a lead project partner is designated. Note: The lead partner may be a federal agency, state or local agency, tribe, non-profit organization, or citizens' group. Federal agencies, including the National Park Service, may be the lead partner only in collaboration with a nonfederal partner.

2. Project has specific, partner- defined goals and anticipated measurable results that are clearly stated; support the <u>National</u> <u>Park Service mission and RTCA mission and strategic plan goals</u>; protect important natural resources or enhance outdoor recreation opportunities; and will have results that occur within an appropriate timeframe.

3. There is a commitment by lead project partners to significant public involvement and outreach in the project.

 Roles and contributions of initial project partners, including RTCA, are identified. There is a commitment by initial project partners to cooperate and to provide or obtain the resources necessary to implement the project.

5. There is evidence of broad support for the project.

Preference is given to a project that also:

- a. provides physical connections among resources;
- b. includes an NPS area as an actively involved project partner;
- c. includes both natural resource conservation and outdoor recreation; d. $\underline{partners}$ with a health organization.

Consultation with an RTCA staff before an application for assistance is made helps clarify RTCA roles and contributions and also helps identify how the selection criteria might apply to your conservation and outdoor recreation goals.

Projects are locally- requested and led and should include significant public involvement and outreach. Projects should also include the commitment, cooperation and cost- sharing of all partners. Assistance is for one year and may be renewed for a second year if warranted. The RTCA involvement in these partnerships requires all partners to monitor progress and measure success during and after completion of the project.

2006 RTCA Application Guidelines 1

A P P E N D I C E S

How to Apply for RTCA Program Assistance

I. Contact Information:

Please provide information about the initial project partner(s), including name of a primary contact, organization, address, phone, fax, and email. Designate a lead project partner.

- 2. Project Description and Anticipated Results:
- Provide the name of the project and project location.
- Identify what populations in your community will be served by the project.
- Describe briefly the anticipated results of the project and why the project is important.
- Identify anticipated on- the- ground results: For example resources created, conserved, enhanced or made available to the public – the number of river miles improved by restoration projects; the number of river miles conserved with enhanced protection status; the number of multi- use trail miles created; the number of acres of parkland created; the number of acres of wildlife habitat restored.
- Describe the related important natural, cultural, historic, scenic, and recreational resources within the project area.
- Describe other expected accomplishments: For example an increased community commitment to stewardship, a new conservation organization, or the development of a concept plan for a trail.
- Outline the background or prior activity on the project (if any), the current status, and a proposed schedule for completion.

3. Commitment for Public Involvement:

Describe the type and level of public involvement you anticipate during the development of this project.

4. Roles, Resources, and Contributions:

- Describe the kind of technical assistance or role you are seeking from the RTCA program.
- Describe the roles and contributions of all project partners listed in part 1 above.
- Identify other types of resources available for the implementation of your project.

5. Support for the Project

- Describe the support you anticipate from interested stakeholders, such as public agencies, nonprofit organizations, and landowners.
- Support letters from elected officials, community leaders, and cooperating organizations are strongly recommended.

Related Strategic Initiative (optional)

Describe how the project:

- provides physical connections among resources; includes an NPS area as an actively involved project partner;
- includes both natural resource conservation and outdoor recreation;
- partners with a health organization.

RTCA Program Vision A network of parks, rivers, trails, greenways and open spaces that promotes quality of life and links people to their natural and cultural heritage

RTCA Program Mission

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education and inspiration of this and future generations. The NPS cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout the country and the world.

The Rivers, Trails, and Conservation Assistance (RTCA) Program implements the natural resource conservation and outdoor recreation mission of the National Park Service in communities across America.

RTCA Strategic Plan Goals

- RTCA will help create local, regional and state networks of parks, rivers, trails, greenways and open spaces by collaborating with community partners and National Park areas in every state.
- RTCA will hold itself and project partners accountable through measures that demonstrate success and maximize the impact of program financial and human resources.
- RTCA will be recognized and sought out as the community assistance arm of the National Park Service for conservation and outdoor recreation.



Contact Information:

Chris Brown, NPS Rivers, Trails, and Conservation Assistance Program, 1849 C Street, NW (Org Code 2240) Washington, DC 20240-0001

Phone: (202) 354-6900

Email: chris_brown@nps.gov

Website: www.nps.gov/rtca

The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout the country and the world. Mission of the National Park Service, 1997.

(NPS 2005)

Other National Park Service Assistance Programs

Besides providing technical assistance through the Rivers, Trails, and Conservation Assistance program, the National Park Service gives targeted help in a number of related areas through the following programs:

- Hydropower Recreation Assistance Provides technical assistance on recreation access and facilities, instream flows for recreation, and riparian corridor protection to all participants in Federal Energy Regulatory Commission (FERC) hydropower licensing and relicensing proceedings. For more information, visit <u>www.nps.gov/hydro</u>.
- Land and Water Conservation Fund Provides 50% matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. For more information, visit www.nps.gov/lwcf.
- Federal Lands to Parks Helps State and local agencies acquire, at no cost, surplus Federal land and facilities for parks and recreation. For more information, visit <u>www.nps.gov/flp.</u>
- National Heritage Areas Provides assistance to National Heritage Areas designated by Congress. For more
 information, visit <u>www.cr.nps.gov/heritageareas/</u>.
- Rivers and Trails Studies Undertaken by NPS when authorized by Congress for potential additions to the Wild & Scenic Rivers System or National Trails System. For more information, visit http://planning.nps.gov
- Historic Preservation There are a variety of National Park Service programs offering assistance for a range of resources including archeological sites, battlefields, and historic landscapes. Some of these programs offer direct assistance to the public, others work through State Historic Preservation Offices. For more information, visit www.cr.nps.gov.
- Challenge Cost Share A 50:50 matching grant program to support National Park Service units and programs through partner support. For more information, visit <u>http://www.nps.gov/ccsp</u>.

2006 RTCA Application Guidelines 2

Е Ρ Ρ Ν F S D С

APPENDIX F: MAPS MAP 1



- CREATE CO-SEED PLACED BASED PROGRAMMING
- INCREASE AWARENESS OF AND ACCESS TO RIVER
- * INITIATE RIVER RESTORATION PROGRAMMING INCLUDING
- . STUDENTS COLLABORATE WITH SALEM SOUND COASTWATCH TO CREATE INTERPRETIVE SIGNS AND WATER QUALITY TESTS

RECOMMENDATIONS PRIME LOCATION FOR AN INTERCITY PARK

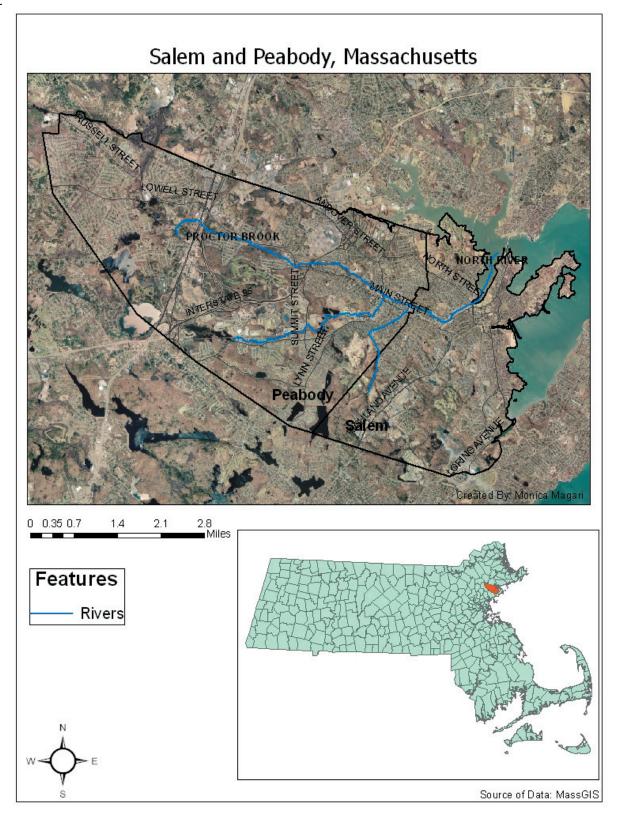
*LOCATED ON THE BORDER OF SALEM AND PEABODY * RESIDENTS OF EACH CITY PARTICIPATE IN PLANNING INCREASE AWARENESS OF AND ACCESS TO RIVER

*MOTIVATE COMMUNITY TO IMPLEMENT INDIVIDUAL PROJECTS

LESLIE'S RETREAT PARK RECOMMEDATIONS PRIME LOCATION FOR A VEGETATED BUFFER *IMPROVE WATER QUALITY * AID IN PARK DRAINAGE *INCREASE PUBLIC SAFETY

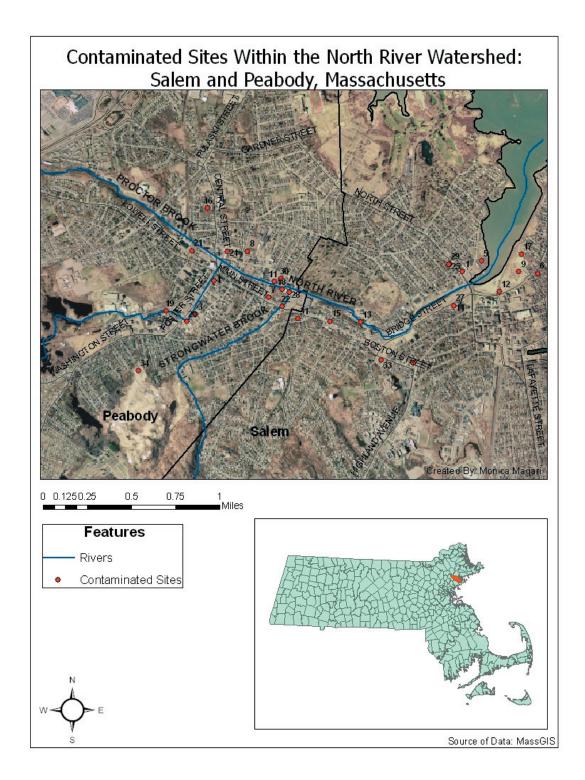
А	Ρ	Ρ	Е	Ν	D	Ι	С	Е	S
---	---	---	---	---	---	---	---	---	---

MAP 2



А	Р	Р	Е	Ν	D	I	С	Е	S
---	---	---	---	---	---	---	---	---	---

MAP 3



А	Р	Р	Е	Ν	D	I	С	Е	S
---	---	---	---	---	---	---	---	---	---

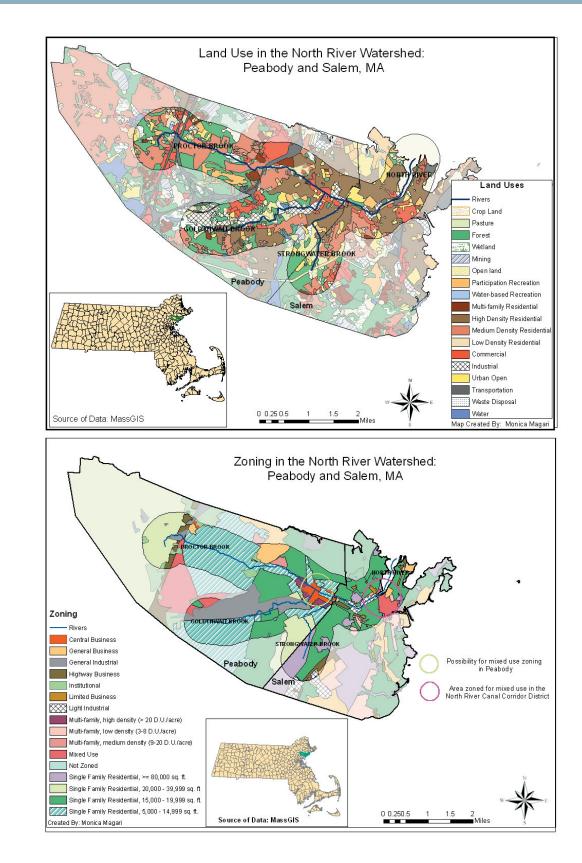
Sites	of Contamination in the North River Study Ard	ea		
ID	NAME	ADDRESS	TOWN	STATUS
1	AMERDA HESS STATION	90 NORTH ST	SALEM	TIERII
2	NO LOCATION AID	23 DOWNING RD	PEABODY	TIER1D
3	COMMERCIAL PROPERTY	3 MASON ST	PEABODY	TIER1D
4	HERITAGE INDUSTRIES	22 FOSTER ST	PEABODY	TIER1D
5	NORTH RIVER	NORTH ST SALEM HBR	SALEM	TIER1D
6	PROPERTY	5 OLIVER ST	SALEM	TIER1D
7	PEABODY FIRE	150-166 MAIN ST & 21 CALLER ST	PEABODY	TIER1D
8	VICTORY TANNING CORP FMR	23 UPTON ST	PEABODY	TIER1D
9	NO LOCATION AID	BRIDGE ST & GOODHUE ST	SALEM	TIER1D
10	LITWIN MOTORS	406 ESSEX ST	SALEM	TIER1D
11	INDUSTRIAL PROPERTY FMR	27 CALLER ST	PEABODY	TIER1D
12	COMMERCIAL PROPERTY	234 BRIDGE ST	SALEM	TIER1D
13	NO LOCATION AID	60 GROVE ST	SALEM	TIER1D
14	UNIVBERSAL STEEL	2399 BRIDGE ST	SALEM	TIER1D
15	NO LOCATION AID	70-92 BOSTON ST	SALEM	TIER1D
16	NO LOCATION AID	72 R CENTRAL ST	PEABODY	TIER1D
17	NO LOCATION AID	12 WOODBURY CT	SALEM	TIER1D
18	BOB KAT TANNING	166 MAIN ST	PEABODY	TIERII
19	NO LOCATION AID	101 REAR FOSTER ST	PEABODY	TIERII
20	GROSSMANS INC	96 FOSTER ST	PEABODY	TIERII
21	NEW AGE AUTO	34 RAILROAD AVE	PEABODY	TIERII
22	VIP SOUSA SERVICE	174 MAIN ST	PEABODY	TIERII
23	STAHL FINISHING	13 CORWIN ST	PEABODY	TIERII
24	41 HARDY ST / MASINO LEATHER	8 WALNUT ST	PEABODY	TIERII
25	SUNOCO SERVICE STATION	105 NORTH ST	SALEM	TIERII
26	CENTENNIAL PARK	CENTENNIAL DR	PEABODY	TIERII
27	UNIVERSAL STEEL & TRADING CORP	297-305 BRIDGE ST	SALEM	TIERII
28	NORTH OF MAIN ST	20-22 HOWLEY ST	PEABODY	TIERII
29	MASON ST	105 NORTH ST	SALEM	TIERII
30	CORNER CALLER & WALNUT ST	75 WALNUT ST	PEABODY	TIERII
31	RODS TOWING	171 BOSTON ST	SALEM	TIERII
32	FORMER TRANSFORMER AREA	143 LYNNFIELD ST	PEABODY	TIERII
33	FMR GAS STATION	45 BOSTON ST	SALEM	TIERII
34	NO LOCATION AID	HINGSTON ST	PEABODY	TIERII

The Tier 1D classification, as defined in accordance with 310 CMR 40.1500 (MassDEP), states that the responsible party of the contamiated site failed to provide a required submittal to DEP by a specified deadline (Ibid). The Tier II classified site is given to a site that scores below a 350 under the Numeric ranking System and/or after a Response Action Outcome Statement indicating that a Temporary or Permanent Solution has been achieved for the contaminated site.

А	Р	Р	Е	Ν	D	С	Е	S

MAP 4

MAP 5



APPENDIX G: STUDY DOCUMENTATION IRB APPROVAL



TUFTS UNIVERSITY

Dear Beck Saggese, Chris Mancini, Monica Magari, Katie Theis, Pandora Thomas,

This letter is your official notification that your research project

Salem Sound Coastwatch: Nurturing the Recovery of an Urban River

(Protocol # 0602018)

is exempt from further IRB review for the following reasons:

2. Research involving the use of educational tests, survey procedures, interview procedures, or observation of public behavior UNLESS the information is recorded in a manner in which the subject can be identified AND disclosure would place the subject at risk of criminal or civil liability or be damaging to financial standing, employability, or reputation. This does not apply where the subjects are children except where it involves passive observation of public behavior.

3. Research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior where subjects are elected or appointed officials or candidates for public office.

Please be sure to print a copy of this notification for your files.

Juca Gag-

Helen A. Page

February 28, 2006

IRB Administrator

Date of Email Notification

Helen A. Page, Ed.D. Associate Director of Research Administration Office of the Vice Provost for Research 20 Professors Row Tufts University Medford, MA 02155 Phone: 617-627-5187 FAX 617-627-3673 Email: helen.page@tufts.edu



Memorandum of Understanding between Tufts University Field Projects Team No. 6 and the Salem Sound Coastwatch (SSCW)

I. Introduction

Project (i.e., team) number: 6 Project title: Nurturing the Recovery of an Urban River

This Memorandum of Understanding (the "MOU") summarizes the scope of work, work product(s) and deliverables, timeline, work processes and methods, and lines of authority, supervision and communication relating to the Field Project identified above (the "Project"), as agreed to between (i) the candidates for the Master of Arts degree enrolled during the spring 2005 semester in the Field Projects and Planning course (UEP-255) (the "Course") offered by the Tufts University Department of Urban and Environmental Policy and Planning (UEP) who are identified in Paragraph (1) below (the "Field Projects Team"); (ii) Salem Sound Coastwatch (SSCW) , further identified in Paragraph (2) below (the "Client"); and (iii) a Tufts faculty member directly involved in teaching the Course during the spring 2005 semester.

II. Specific Provisions

(1) The Field Projects Team working on the Project consists of the following individuals:

- 1. Becky Saggese email address: Elizabeth.Saggese@tufts.edu
- 2. Chris Mancini email address: Christopher.mancini@tufts.edu
- 3. Katie Theis email address: Catherine.theis@tufts.edu
- 4. Monica Magari email address: Monica.magari@tufts.edu
- 5. Pandora Thomas email address: Pandora.thomas@tufts.edu

А	Р	Р	Е	Ν	D	I	С	Е	S
---	---	---	---	---	---	---	---	---	---

(2) The Client's contact information is as follows:

Key contact/supervisor: Barbara Warren Email address: barbara.warren@salemsound.org Telephone number: (978) 741-7900 FAX number: Client name: Salem Sound Coastwatch Address: 201 Washington St, Suite 9 Salem, MA 01970 Web site: www.salemsound.org

(3) The goal/goals of the Project is/are:

Our goals are to:

- Gain a better understanding of the North River and its potential to bring the watershed together to create a sense of watershed identity.
- Assess the opportunities available to the North River watershed region, in order to encourage the community to view the River as an amenity and not a liability.
- Synthesize the current information and ongoing projects into a more regional approach.

(4) The work processes and methods by which the Field Projects Team intends to achieve this goal/these goals is/are:

- Review case studies to analyze success of similar projects.
 - e.g. WaterFire project in Providence, RI; Revitalization of the Connecticut River (Hartford); Creating a Sense of Regional Identity in the Hudson River Valley
- Assess maps of brownfields, open space, public vs. private land, developed vs. to be developed land, etc.
- Use the Salem Sound Coastwatch staff and Board of Directors as resources and experts.
- Talk to local officials in Peabody and Salem (e.g. mayors), Peabody and Salem Planning Boards.
- Assess public opinions, using public meeting notes, op ed pieces, public opinion databases, etc.
- Assess financial implications costs of projects, how to raise money for the projects, availability of grants, etc.
- Review existing master plans and current development in Peabody and Salem.
- Attend local meetings conservation commissions, planning board, etc.
- Identify and interview community members and stakeholders from Peabody and Salem to assess public perception of the issue and history of the issue.
- Assess local media coverage of the North River, using local papers and local television reports.

(5) The Project work products and deliverables are:

We hope to create a regional plan for North River watershed, with a focus on:

a. Introduction:

- We will present a brief history of the issue.

А	Р	Р	Е	Ν	D	I	С	Е	S

- We will present a brief history of the North River watershed, its communities and its natural history.
- We will compile a list of stakeholders.

b. Recreational Opportunities:

- Specifically, we will look at the Riverwalk and North River Canal Corridor.
- We will analyze and synthesize current information and plans developed by Peabody and Salem.
- We will provide a recommendation on how the North River watershed region should proceed.
- c. Development Opportunities:
 - Specifically, we will look at the Zoning and Planning Regulations for Peabody and Salem.
 - We will analyze and synthesize current regulations for Peabody and Salem.
 - We will provide a recommendation on how the North River watershed region should proceed.

d. Ecological Opportunities

- Specifically, we will address Flood Mitigation and Water Quality.
- We will analyze and synthesize current regulations and plans for Peabody and Salem.
- We will provide a recommendation on how the North River watershed region should proceed.
- e. Education & Awareness:
 - We will make recommendations on how to create a sense of place and stewardship for the North River Corridor.
 - We will provide recommendations for programs, events, etc. to increase community awareness and the presence of the North River in their everyday lives.

(6) **The anticipated Project timeline is:**

Signed MOUs due
Initial project outline due
Draft report due
Presentation, 8:45 – 11:30 am
** This date and time has not been confirmed but we will let
Barbara and SSCW know as soon as we have scheduled our
final presentation. Final reports due

(7) The lines of authority, supervision and communication between the Client and the Field Project Team are:

Becky Saggese will act as the primary contact for the Field Project Team and the team will be under the supervision of Barbara Warren at Salem Sound Coastwatch.

А	Р	Р	Е	Ν	D		С	Е	S
---	---	---	---	---	---	--	---	---	---

(8) The understanding with regard to payment/reimbursement by the client to the Field Projects Team of any Project-related expenses is:

III. Additional Representations and Understandings

- A. The Field Projects Team is undertaking the Course and the Project for academic credit and therefore compensation (other than reimbursement of Project-related expenses) may not be provided to team members.
- B. Because the Course and the Project itself are part of a larger academic context, it is understood that the final work product and deliverables of the Project (the "Work Product") either in whole or in part may and most likely will be shared with others inside and beyond the Tufts community. This may include, without limitation, the distribution of the Work Product to other students, faculty and staff, release to community groups or public agencies, general publication, and posting on the Web. Tufts University and the Field Project Team may seek and secure grant funds or similar payment to defray the cost of any such distribution or publication. It is expected that any issues involving Client confidentiality or proprietary information that arise in connection with a Project will be narrow ones that can be resolved by discussion among the Client, the Field Projects Team and a Tufts instructor directly responsible for the Course (or his or her designee).

C. It is understood that this Project may require the approval (either through full review or by exemption) of the Tufts University Institutional Review Board (IRB). This process is not expected to interfere with timely completion of the project

А	Р	Р	Е	Ν	D	I	С	Е	S

MOU SIGNATURE PAGE

Signatures IV.

Darbara Weiner

For Barbara Warren, Salem Sound Coastwatch

Representative of the Field Projects Team Elizabeth Saga SC By: [PRINTED NAME - only one team member's signature is necessary] Date: 2/6_____ 2006

Tufts UEP Faculty Representative By: [PRINTED NAME] RUSTY RUSSER Date: FEB. 6, 2006

Tufts Field Projects MOU

spring 2006