

INTRODUCTION

“And all the air is filled with pleasant noise of waters.”

--Henry Wordsworth

Listening To The River Project Beginnings

The Partners

The LTR project grew out of conversations between four organizations whose missions focus on sustaining the deep history and developing promising futures of communities



Grand Traverse Bay, Traverse City, Michigan

across the Grand Traverse region of northwest Lower Michigan: Land Information Access Association, the Great Lakes Children’s Museum, Interlochen Public Radio and the Water Studies Institute at Northwestern Michigan Community College. What emerged from the early conversations was a partnership designed to initiate, broker, and support relationships across local organizations to improve the understanding and stewardship of the Grand Traverse area watersheds.

The Vision

Leaders from the four groups explored a shared vision: teens and adults engaged in experiencing and understanding the characteristics, functions and values of their watersheds. The partners wanted a project that would emphasize a sense of place and showcase the essential character of the region. They wanted teens to go beyond just learning about the water cycle; they wanted them to gain a deeper awareness of how the rolling terrain, streams, rivers and lakes and all the resident species interconnect. They wanted young people to become more perceptive about how people and place interact.

The Resources

Grand Traverse Bay, the Boardman River, and numerous other waterways in the region are rich in natural beauty and steeped in the intersecting stories of plants, animals, people, preservation, commerce and development. These 973 square miles of river, lake, and wetlands are now home to the *Listening to the River* (LTR) project.

“Why should we worry about watersheds? Because watersheds extend beyond political boundaries, every decision and all the behaviors of people throughout the watershed affect the whole watershed and the quality of (its) river(s).”

– Marlene Fluharty, Executive Director, Americana Foundation

The newly formed partnership, called the **Coalition for Watershed Education (CWE)**, made a successful request to the National Science Foundation that resulted in the development of the \$1.4 million Informal Science Education *Listening to the River* project. The CWE later added a fifth partner, Michigan State University Extension, to link to the area's 4-H youth programs.

The Model

The *LTR* project is designed as a flexible **informal science education (ISE)** model. The model suggests ways to link organizations that can provide particular expertise or resources (e.g. watershed science, youth development, technology) and offers a set of proven activities to involve youth in their watersheds. Because watersheds cross not only geographical boundaries but political and community boundaries as well, they serve as vehicles to help people understand a wide range of science concepts, both big and small. The *LTR* premise is that this increased understanding ultimately leads to more stewardship and understanding of key attributes of local watersheds.



Field Investigation during a Discovery Hike



Beach Clean-up Day on Grand Traverse Bay

WHAT'S ISE?

Informal Science Education is learning that supports and extends STEM (science, technology, engineering, mathematics) education outside of the classroom. It is rooted in hands-on, voluntary and self-directed exploration. ISE activities focus on:

- ✓ Increasing engagement and interest in STEM;
- ✓ Changing attitudes and behaviors about science;
- ✓ Increasing content knowledge and skills in science.

Under the *LTR* project, ISE watershed science activities help to enhance the participants' awareness of their sense of place in the watershed community.





Project Development Steps

Between 2006 and 2010, the *Coalition for Watershed Education* partners took steps to develop and fine-tune a multifaceted range of program components. The CWE:

- Step 1:** Developed a partner coalition with shared goals for LTTR activities;
- Step 2:** Marketed events and recruited participants;
- Step 3:** Developed a menu of watershed discovery experiences;
- Step 4:** Designed the applications of technology for all project experiences;
- Step 5:** Published and presented watershed information through web-based multimedia maps, a traveling program information kiosk, radio broadcasts, a permanent, immersive exhibit, and video documentaries;
- Step 6:** Planned dissemination efforts via a replication site and a regional conference.

A Call to Action: Bringing LTTR into YOUR Community

LTTR offers unique opportunities to develop partnerships in your community that support jointly planned informal science education efforts to bridge nature, youth and technology: a winning combination!

Listening to the River activities actively engage teens in informal, self-directed science exploration and multi-media documentation of their area's watersheds. In turn, youths' efforts not only showcase special places in the community, but build capacity in local organizations.

LTTR is all about direct experience. The essential characteristics of watershed science (topography, community, change, movement of water) all afford options for immersion. You can: *walk* or *boat* "through" a watershed and see how water runs downhill, *look* at leaf patterns in aquatic vs. terrestrial plants, *hear* the sounds of fast water or the calls of birds and animals, or *feel* the change in landforms as you climb from a wetland up an open slope.

"This project blows away every academic project I have ever worked on. It was far more interesting and I feel I got a lot more out of the time I spent here than a month in the classroom."

-Logan D., Teen Participant

So, if your goal is to engineer a way of linking watershed science education and media technology in your own region, tap expertise and capacities that are already in place – and build a sustainable structure for ongoing projects or programs – then get started! This guidebook leads you through the process.

Support Materials*

- Introductory PowerPoint Presentation – D
- Documentary Video –D
- Informal Science Education Guiding Principles
- National Science Teachers Position Statement on ISE
- Summary of Anticipated LTTR Impacts

* The "D" after some items indicates it is only available on the accompanying disc and on the website.