

Nurturing Teacher-Leaders for Advancement of Place-Based Stewardship Education in Mid-Michigan

**Planning Grant for Great Lakes Stewardship Initiative
Supported by:
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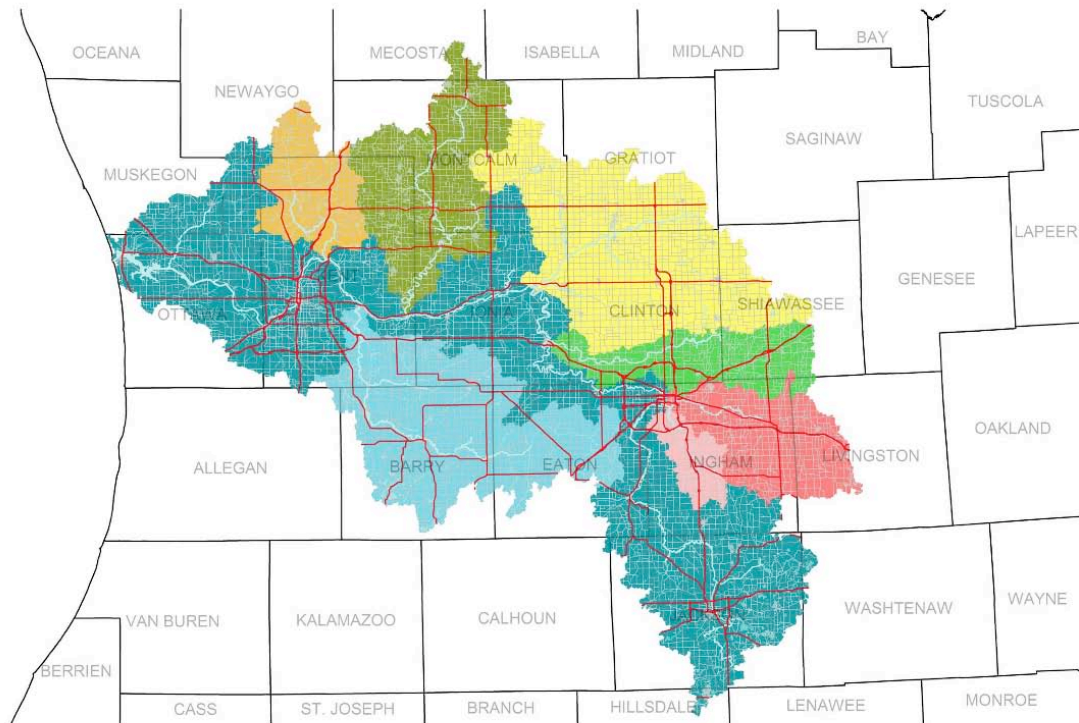
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Final Planning Report

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Special thanks to our “Grand River Watershed”

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Background

This project to plan for place-based stewardship education in the mid-Michigan, Grand River Watershed region engaged schools and community partners from four counties surrounding Lansing (Ingham, Eaton, Clinton and Shiawassee Counties). We selected 5 school districts (mainly the elementary schools), ranging from urban (Lansing's Cavanaugh and Post Oak Elementary Schools), to a suburban school (Holt), a highly resourced school (Haslett), a rapidly suburbanizing district (Bath), and a rural school (Laingsburg). It is because of the ecological, geographical, and social characteristics of the region that these schools form an ideal "hub" for establishing a new place-based stewardship education consortium here as a model for the state and Great Lakes region.

Mid-Michigan is characterized by the state's longest (260 mi), winding watershed that connects rural, upstream agricultural communities with sprawling suburban areas, diverse, industry-dotted urban zones, and Lake Michigan. The area is surrounded by both well-drained and poorly drained landforms left by Michigan's glacial heritage. The Grand River watershed consists of a "hub" of tributaries that meet in the Lansing region, including Sycamore Creek, the Red Cedar River, and the Looking Glass River. Dotted with valuable wetlands, bog ecosystems, and upland and river systems, the region boasts aquatic and terrestrial biodiversity unique among Michigan's inland areas.

Socially, the region is also diverse; urban decline, due to the economics of the manufacturing sector means that Lansing's population struggles to meet basic needs. Rural farm regions surrounding this urban core have seen pressures of economics, school performance, and complex land use issues. Although suburban areas are rich in fiscal and social resources, youth and their communities face many of the pressures for quality of life and lack of connectedness to place outlined in the research summarized in Richard Louv's book [Last Child in the Woods](#).

Sprinkled throughout the region are outstanding community assets in the form of nature centers (Woldumar, Fenner, Harris Nature Centers, and Bengel Wildlife Center); these provide valuable resources and expertise about science, nature, the ecoregion, its inhabitants and their stewardship. Woldumar provides conservation education staff, and river, pond, forest and meadow ecosystems representative of the ecoregion. Bengel provides training facilities for conservation, ecologically sensitive areas such as a large bog, and managed wildlife demonstration areas. Fenner boasts four miles of hiking trails amidst the most urban setting; Harris features river habitats. We also have plentiful state and local science content experts (MSU, DEQ, DNR, USGS, MUCC). Private sector assets include businesses with high stakes in both the environmental quality of the area, as well as quality of life for employees inhabiting these communities.

Anticipated Outcomes

We anticipated that our work would:

- engage at least 20 students and their parents, at least 20 teachers, and at least 10 community members from at least 4 schools in learning communities to envision advancement of place-based stewardship education in mid-Michigan;

- result in professional development of at least 5 advanced teacher-leaders, and 15 emerging teacher-leaders who will foster advancement of place-based education in their schools and in the region;
- result in strengthened collaborative programs that bring together work in place-based education into existing and new Annie's BIG Nature Lesson and Project FISH programs in mid-Michigan;
- produce a document and implementation proposal about planning processes, resulting plans for, and participant observations about effective place-based education.

Description of the School-Community Planning Process

Phase #1: We engaged a “core” group of at least one teacher-leader from each participating school (7 participants) who served to identify specific people and stakeholders to be involved in planning. This group functioned as a learning network. We provided the group Sobel's Beyond Ecophobia book to help us fully understand place-based education. This group identified the following for the full school-community planning meetings:

- teachers from diverse “disciplines,”
- older and newer teachers,
- teachers and administrators who are leaders for systemic change in their schools, participants from diverse gender and ethnic/racial backgrounds,
- those with and without comfort in working with experiential and outdoor learning, “nontraditional” community partners (organizations, business partners).

Questions for the Teacher-Leaders included (see Appendix, 1 Teacher Leaders' retreat agenda):

- What insights can we gain from the work of Sobel and the Rural School and Community Trust in place-based education?
- What should be the structure, content and processes we use for two planning days?
- Who would like to be or should be involved as stakeholders?
- What materials and experiences are needed for participants in this planning process?
- How would we accomplish the GLFT's objectives (Great Lakes stewardship, teacher professional development, etc.)?
- Is there opportunity for greater “connectivity” in our place-based stewardship education work between schools and the community?

Phase #2: We held a Student-Parent Think Tank, involving students and their parents who have experienced place-based education (through programs such as Annie's BIG Nature Lesson, Project FISH, school yard habitat projects, and other similar place-based education). Teacher-Leaders distributed invitations to this meeting.

Questions included (see Appendix 1 for details and agenda):

- What have you gained from place-based education?
- How have you changed?
- Have you seen change in the school/community?
- What should we all keep in mind for place-based education to enhance Great Lakes and aquatic stewardship?

Phase #3: We conducted two School-Community Planning Meetings with teachers and community partners. Planning questions included (see Appendix 1):

- What is place-based Great Lakes stewardship education?
- What are the unique aspects and issues in the Grand River watershed, and our place?

- What is teacher-leadership and its role in professional development?
- What is our vision and what are the needed “action steps” for place-based Great Lakes stewardship in mid-Michigan?

Details of the Planning Process

From August through October 2007, we convened 86 people to plan place-based Great Lakes Stewardship Education (Table 1). Our planning included these phases: 1) a teacher-leader group of 7 teachers involved in place-based stewardship education (PBSE); 2) a “think tank” of youth and their parents who have experienced PBSE; and 3) school-community partnership planning meetings for the region.

Our planning process drew upon Flora’s model of Community Capitals (e.g., social capital, natural capital). This model views communities as having both assets as well as challenges (Flora and Flora 2004). To elicit specific ideas from our planning participants, co-leaders used techniques from MSU Extension’s handbook for Strategic Visioning, since we were trained through LEADNet (MSUE’s facilitative leadership development network).

“Strategic futuring is a vision centered planning process that is customized, creative, flexible and focused on strengths, opportunities, and capacities..... A strategic futuring process focuses on why the organization exists, its opportunities for creating positive change, and its visions and dreams for future success. It is a comprehensive approach that can include some combination of these steps: reviewing history; assessing reality; envisioning the future; developing options for change; prioritizing and selecting among options; planning action. The end result should be a plan that is guided by the group’s mission, focused on the [learner], and based on the strengths and capacities of the group.” (VandenBerg, 2001, page 1-2)

We used several futuring processes outlined in this toolbox. First, in order to have teacher-leaders define and describe instances of place-based education in which they are involved, we built ownership and involved these group members in reflecting upon their past and dialoguing about their past involvement with the group (a process generally described as participatory research). Within the community planning meetings, in order to examine realities regarding the Grand River watershed in mid-Michigan, we conducted the activity called “Prouds and Sorries” (page 5-2). This activity helps groups identify things that have been done well, and things they would like to change; in addition, this discussion provides input for goal setting. Also in the community planning meeting, we asked stakeholders as well as teachers about their personal gifts; this builds a sense of community and empowerment as a group becomes aware of its collective gifts and strengths. Through this assets inventory, we were able to empower place-based education stakeholders to look broadly at the personal physical, associational, and institutional assets available to help accomplish future work for Great Lakes stewardship education. Finally, we involved all community members and teachers in an activity that develops options for change (page 5-3); we asked participants to develop a fish-shaped graphic (an activity we called “Fish Scale Planning”) to identify building blocks for future priority actions for place-based Great Lakes stewardship education in mid-Michigan.

Planning meetings took place throughout the watershed. Teacher-leaders met along the Red Cedar River at Harris Nature Center; we convened the student-parent think tank at Potter Park

Zoo on the Red Cedar. We held one school-community planning meeting on the Lansing River Boat in downtown Lansing on the Grand, and the second at Plymouth Congregational Church in a northside neighborhood near the Tollgate Wetlands stormwater management project of the Ingham County Drain Commissioner. At these meetings, we built a short learning opportunity as a way to draw participants and to enhance their understanding of the watershed. Participants who provided learning opportunities included: John Hesse (retired state ecotoxicologist and MI Salmon & Steelhead Fishermen's Assoc Education Chair), Pat Lindemann (Drain Commissioner), and Dr. Howard Tanner (retired DNR Director who introduced salmon to the Great Lakes).

Seven teacher-leaders met first and then assisted with the rest of the planning sessions. Teacher-leaders outlined issues pertaining to Great Lakes, place-based and stewardship education, as well as assets in the region. Most importantly, they identified more than 100 essential partners and stakeholders to be invited to subsequent planning meetings and our implementation project and they provided ideas for facilitated planning questions for students-parents and for the school-community meetings. At these meetings, teacher-leaders took notes and assisted with small group dialogue.

Throughout September and October, the project's Principal Investigator (Dann) was able to consult twice with Dr. Jan Eberhardt, Assistant Director of MSU's Division of Science and Mathematics Education. These consultations allowed us to collaborate with the education initiatives of MSU, including teacher professional Development. Dr. Eberhardt responded to preliminary observations of planning meetings, and provided detailed references and resources regarding current models of teacher professional development and community engagement.



Table 1. School-community involvement in planning for place-based Great Lakes Stewardship Education in mid-Michigan.

Participant Type	Planned	Invited	Attended
Phase 1: Teacher-Leaders' Meeting			
Teacher-leaders from place-based education programs	5	7	7 participants
Phase 2: Student-Parent Think Tank			
Youth	20	*	12
Teens		*	5
Adults			16
Subtotal for Student-Parent Think Tank	20		33 participants
Phase 3: Community Meetings			
K-12 Teachers	15	24	18
Pre-service teachers		9	5
K-12 Administrators		6	3
Outdoor/Watershed Organizations	10	25	6
Community Leaders, Business, Extension		28	9
Agencies, Officials		12	5
Subtotal for Community Meetings	25	111	46 participants
GRAND TOTAL NUMBER OF PARTICIPANTS			86 participants

*Estimated numbers of students and parents invited to Think Tank are not available; teacher-leaders distributed invitations.

Results

For detailed planning meeting notes, please see Appendix 1.

We learned:

- Students and parents from all areas value place-based stewardship education; parents report that place-based learning enhances students' long-term appreciation for resources as well as their academic engagement and skills.
- Participants identified watershed assets (natural capital) and community assets (social capital). Assets included headwaters areas and even urban riparian areas that have almost "wilderness" values, unique geological features (e.g., the "Ledges," eskers), organizations that have contributed significant energies toward watershed improvement, diverse nature centers (Woldumar, Harris, Fenner, Bengel), local science experts (MDEQ, MDNR, consultants, retirees), and many more. One challenge is the public image of our rivers as highly degraded, or, even worse, public apathy.
- School-community participants prioritized these actions: professional development through workshops and a summer institute focused specifically on our watershed, involving numerous additional community partners, preparing a web-based tool to access water data and resource people for schools to tap, and sharing the progress of our work with media and with local funding partners.

The largest barrier is the current climate in education that requires high stakes standardized and testing benchmarks. Participants reported that these constrain teachers who lack comfort with outdoor teaching from participating in meaningful place-based inquiry, which can take time to plan and implement. However, teacher-leaders especially noted that they have been successful

in documenting (on their own) how their place-based stewardship education can achieve state standards, benchmarks and the Grade Level Content Expectations. We envision that a major task for our project is to involve these teacher-leaders in preparing a curriculum alignment document that can be used in professional development for schools new to place-based Great Lakes stewardship education.



Our Implementation Plan for Place-Based Great Lakes Stewardship Education in Mid-Michigan through the GRAND Learning Network

Forces affecting education systems are complex in a region such as the Lansing area affected by the decline of the manufacturing economy. With the rise of the knowledge economy, and with increasing interest in local systems, new networks must emerge to support learning and K-12 schools (Institute for the Future and Knowledge Works Foundation, ifff.org). The GRAND Learning Network will provide an opportunity for decentralized leadership by a core group of teacher-leaders who thoroughly understand place-based education and Great Lakes stewardship. One theme of this implementation project is the establishment of professional networks. Key elements of professional networks are that: membership is voluntary, interactions and effective communication among members are ongoing, facilitative leadership styles are used and fostered, and members' perspectives are broadened (based on Loucks-Horsley 2003, [Designing Professional Development for Teachers of Science and Mathematics](#)). The GRAND Learning Network will function as a commons where innovative teacher-leaders will spawn change in their own schools by working with project co-leaders to provide professional development opportunities for teachers and community volunteers from the headwaters region of the Grand River and Lake Michigan watershed. Teacher-leaders from both headwaters and main river areas along the Grand are the centerpiece of this Network, representing 5 rural, suburban and urban districts. These teacher-leaders will work with project co-leaders to serve as content and practice experts and to coach teachers new to place-based stewardship education.

Professional development will build upon the work of the Northwest Center for Sustainable Education and its community-based approach to ecosystem education and stewardship. Materials from this Center and approaches used by the Rural School and Community Trust will be combined with Grand River watershed data and expertise (from partners and agency experts) to enhance existing curricula and provide for new training experiences. Short workshops that demonstrate school-community partnerships and place-specific learning will occur throughout the school year. A summer week-long GRAND Institute will feature field studies that are community-based.

Another theme of this Network is developing a sense of place among learners (both students and adults). Research shows that sense of place and a commitment to community/civic engagement are necessary along with science/ecological knowledge to foster Great Lakes stewardship. The best place-based Great Lakes stewardship education (as identified through our regional planning processes with schools and partners) takes time, involves intensive outdoor experiences, includes many mentors and parents in the learning process, and builds upon inquiry learning. All of these are challenging to accomplish within a K-12 system focused on high stakes testing and teaching standards. Teacher-leaders will develop an "alignment document" that shows how place-based Great Lakes stewardship education can accomplish required standards/benchmarks. We will then use this manual (along with a web-based Network tool to connect teachers with real-world Grand River and Great Lakes data) in our professional development programs.

Our major outcomes anticipated for this implementation model project are as follows:

- 10 teacher-leaders will increase in their place-based Great Lakes stewardship (PBGLS) knowledge and will use new place-based pedagogical techniques.
- 10 community members will increase their knowledge and leadership in PBGLS stewardship education through service on the School-Community Council advising this project.

- 160 teachers will increase in their knowledge of the Grand River watershed, ability to use place-based pedagogy, and their inclusion of stewardship in their K-12 teaching.
- 2000 students K-12 in targeted schools will increase in their sense of place for the Grand River watershed, will increase in science and social studies knowledge regarding the Grand River and Great Lakes, and will be involved in stewardship.
- School-community partnerships for PBGLS education featuring the Grand River will be strengthened in 5 school districts (approximately 8 school buildings).

Strategies for community-based responsiveness will be based on the work of Jon Yoder and the Northwest Center for Sustainable Education (2003). This model is centered on the concept of community-based education – students who are involved in addressing needs that the community has identified. Program themes include: community as a context for learning, education for sustainability, and ecosystem management. Students learn about and take an active part in community processes including: public domain (public trust resources), policy/decision making, and information gathering (from expert and local knowledge bases). Education is viewed as a community resource – to be tapped for ecological monitoring and positive ecosystem and community change.

In professional development workshops, we will use Yoder's booklets (Community as a Context for Learning, and Educators' Guide to Program Development in Natural Resources – Education as a community resource), and will experience (in the professional development training sessions) the strategies they can use for connecting their students, the learning activities and curriculum, and the school with real-world community issues.

As Loucks-Horsley et. al state in their book Designing Professional Development for Teachers of Science and Mathematics, supporting subcultures that value professional development is more important than simply creating more “training opportunities.” The focus of this implementation plan is to provide a subculture within the region that “values ...high quality teaching and inquiry about teaching” (Loucks-Horsley 2003). Our regular meetings monthly with teacher-leaders will explore issues of school subcultures related to professional development, and offer (through peer dialogue and connection with MSU co-leaders) strategies for successfully negotiating and even improving school cultures. In addition, as we kick off this project, an initial implementation meeting between the project co-leaders and teachers/administrators at each partnered school will assist in learning about school culture, learning about real and perceived constraints to place-based Great Lakes stewardship education, and will identify ways to negotiate through any such constraints that “fit” with school subcultures, as well as ways to advance the school subcultures in ways that offer new possibilities for professional development and community partnering. We will hold an initial meeting with each school, continued meetings with teacher-leaders, and a follow-up meeting near the end of the project period.

Throughout the implementation project, teacher-leaders and co-leaders will read about school culture issues as they relate to professional development. The teacher-leaders will play an essential role in listening to school culture, reflecting that culture to project co-leaders from MSU, and co-designing strategies to engage others in their school in place-based education that fits the school culture. Loucks-Horsley et al. call this creating “rampways” for teachers who have not participated in this form of professional development (in our case, for place-based stewardship education), but who would like to try it out on an initial limited basis. In this way, school culture is enhanced gradually, on an inside-out basis, from teachers/administrators working together and charting their way rather than outsiders (MSU) directing specific reforms from the outside-in.

Several critical elements are needed to provide for sustainability of any professional development initiative (Loucks-Horsley et al. 2003): people who can work to support teachers' continued learning/teaching (co-leaders of this project), support systems that connect professional service providers (the GRAND Learning Network), a knowledge base of professional development theory and practice (provided by MSU), supported subcultures where professional development is sustained (our targeted school-community partnerships), and resources that make professional development a central activity (funding, sponsors, donors).

Sustainability for this work is also guaranteed through anchoring our work on previously-successful programs and curriculum materials. During our planning meetings, teacher-leaders fully described the importance of branding as a way of communicating with school administrators the quality of their work in place-based stewardship education. For example, teacher-leaders described their work with Annie's BIG Nature Lesson, and the branding provided by the phrase "BIG Lesson" as having a reputation of quality, sound science, social studies and English/language arts education that meets standards and benchmarks. Furthermore, with the branding comes a reputation for long-term support through coaching of the coordinator (and the quality of the annual professional development workshops). Teachers made similar comments about Project FISH, and other well-known curriculum programs that offer such professional development and long-term coaching. Although we will anchor our work to pre-existing programs, we will not be limited by them. Planning participants were able to identify new, value-added ways of combining such programs and applying them specifically to the Grand River watershed and the Great Lakes stewardship education mission, so that place-based learning can occur in mid-Michigan. Our implementation project will take the "best of the best," will enhance, and then advance new work in the region.

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Appendix 1

Meeting Outlines and Notes

Agenda

Teacher-Leaders' Retreat for Place-Based Stewardship Education

September 10, 2007
Harris Nature Center (on the Red Cedar River)

Welcome & Introductions with a Fishy Icebreaker!

Why are we here? Why you are invited! Each of you is a "teacher-leader"

About the Great Lakes Fishery Trust's Great Lakes Stewardship Initiative and our Planning Grant – Shari Dann

What are our goals for today? – Margaret Holtschlag

- To get to know each other, and have a conversation about what we each are doing in place-based stewardship education.
- To consider....if there were no barriers, what could we do?
- To examine....where would we like to take place-based stewardship education in Mid-Michigan from here?

Some simple guidelines

What are some examples of place-based education? What are you doing, and what are others in the area (mid-Michigan) able to do? – Margaret Holtschlag will facilitate

What is in place that allows you (and others) to carry out place-based stewardship education? - Shari Dann will facilitate

What needs to change (and/or continue) at your school, in your community, and/or in partnerships with other agencies/organizations to allow you and others to do place-based stewardship education?

Dream: If these obstacles are removed what would/could you do?

What would a regional "hub" of support look like in the mid-Michigan area?

Why bother with place-based stewardship education? Why do this at all? Big Picture?

Closing and Now What? Invitations to continue learning, leading

Teacher-Leaders' Retreat for Place-Based Stewardship Education

Meeting Notes, September 10th

Note taker # 1

Present: Jan Derksen (Bath), Debbie Mosier (Haslett), Shari Dann (MSU, Laingsburg), Stephanie Knapp (Bath), Jeff Tomboulion (Lansing), Margaret Holschlagg (ANBL, Haslett), Diane Vernier (Laingsburg), Joe Cleary (Holt), Zsa Mahon (Haslett), Mark Stephens (MSU, Haslett)

Introductions

Jan –Partners with Stephanie, team-teach grades 2 – 3 long time ABNL participant, Stephanie, raising little environmentalists.

Debbie – likes the fishing part of the program at Meridian Historic Village. Helped to start a BIG History Lesson at the park so it would be easy to sell, and not be cut.

Conversation about the 1 million dollar grant possibility from the Children and Nature Foundation, comments: wow wouldn't that be nice, let's go for it, imagine what could be done.

Zsa –Made comment about daughter going through BIG Zoo developing a lifelong love for nature, interacting with the outdoors, powerful.

Joe – place based and BIG lesson, drives the point that you are teaching about and in “home”, starts locally. Gave the example of the Enviroscape is good, but it isn't actually seeing the real thing, but when put together with the real thing it becomes ingrained.

Comments – connection is deeper, more meaningful, develops a sense of ownership. Kids don't get a chance to go outside – fears of poison ivy and other things, safer at home, within reach.

Projects (Comments) - Kids have never pulled a weed before. “That little seed creates this plant?” When out doing chores pulling weeds these types of things are learned. Sense of accomplishment when working hard and “getting dirty at school.” Brings social interaction to Emotionally Impaired kids who are usually alone or not working in a group setting.

Teachers find that the kids like to come back to help or take their parents back for picnics. Ownership. High schoolers developed trails and help maintain them as community service in Bath.

The BIG or place based lessons; the teachers are designing what is being done and the training/professional development empowers them to do so. Margaret empowers them and gives them the confidence to know they can do it themselves. BIG Lesson brought to Meridian Village, chores done by kids, this is how they get lessons learned. Add a bit more each year. Third graders who went through it before are docents to younger students.

Union contracts allow for planning time and sometimes because of things taking up time, planning time gets cut. Sometimes specialist teachers fill in as substitutes to give planning time. Not usually a constraint. Creating link to the curriculum makes it easier to sell to the administration; this is what usually takes the time.

What is in place that helps to be able to accomplish PBE?

"I (we) can tie pretty much anything to the curriculum, but the rules are getting more stringent."
Teachers have to just take ownership as Joe has doing all 4 seasons at Woldumar. He now hears things like "I know this place, I don't need a map" on subsequent visits.

Seeing kids multiple times/years -- the parents' "Buy-In" makes things easier. "Talk of the program in the community makes it more acceptable to the uppers."
How do we sustain the gifts that keep us going?

Deb- Help new teachers who may be forced to do this and are out of their comfort zone, so "no whining" is being done. May have to work a bit harder at first but in the long run it helps.
Buy-in by the principal allowed for subs for planning.

This works because sometimes the objectives that are written by curriculum folks are not child friendly, so doing something like place-based education BIG, makes it more kids friendly and meets the objectives. "Kids get it because the teachers make sure they get it." It is fun for the teacher as well.

Resources: Grandparents as helpers, newspapers need to be on board, local resources for grants and support, *Can there be a unified promotional tool?* "I'm not too good at getting the word out" Uniform tools would make it easier.

Stephanie – referring to textbooks, "It's not how I teach!"

Joe mentioned that he posts his Hope Team 53 photos on Picasa (Google). It is a good product.

Comment: need a supportive environment (administration likes the BIG "brand" so it's easy to sell)

Teachers don't know what types of programs are available.

Teacher-Leaders' Retreat for Place-Based Stewardship Education
Meeting Notes, September 10th
Note taker # 2

Zsa:

BIG ZOO Lesson—kids don't forget it—daughter Kate (now HS student). The learning stays with kids all year, and we hope beyond.

Joe:

There is a connection between place and the lesson.

Drives things home for the kids

You can't clean up the Great Lakes until you clean up the river

Using Enviroscape, seeing the effects of pollution, and then looking at the Grand River firsthand.

Debbie:

Developing a deeper understanding and appreciation that you get because you're actually there...then they own it, the "Ah-ha!"

Stephanie:

Referred to Last Child in the Woods...shift their focus and narrow it down...makes a big connection for them.

Joe:

When I was a kid—poison ivy—(outside all the time)

Jan:

Kids are not going outside because of fear of poison ivy
And fear of everything.

Zsa:

Kids who never pulled a weed.

5th grader making a connection: "So this see will make that plant?!"

Special education kids (Emotional Impaired) working with social worker to have kids work in the school garden.

Jan:

Kids are not working at projects...(in school) At Bengel, kids were weeding..."What's a tap root?" Weeded for an hour—then spread chips—complaining, but later they said they felt so good about it...how good it was for them.

Zsa:

Kids begin and finish a project and see the results.

Jan:

Student Amanda—remembered Bengel years later.

Service Learning project—HS, MS, Elem worked together to develop a pond, habitat trail. Held a Community Work Day. 6th graders read to 2nd-3rd graders. 6th and 3rd grade kids wrote a brochure.

Mark:

Being outdoors kids, are learning to be social and bond with each other.

Joe:

The research piece—we all bring something to the lessons. We're not doing the same things—we are designing what we do with the kids.

Debbie:

Trying to do a BIG Lesson within our own community. Every year we've added to it. Right after spring break It's a nice way to come back to school.

Kids do "Chore Time" –Monday through Thursday, hands on chores. Hauling water, raking, candle making, archery, fishing, sewing, polishing silver, washing clothes, rug hooking, boys—sewing, girls—fishing.

The kids journal in the morning and journal after every chore (15 minutes of writing).

Brought the art teacher for sketching.

Brought music and physical education teacher for music games outside and square dancing.

Mark:

Fishing dock and bait shop soon at Meridian Township

Joe:

How do you make the connection with the special area teachers?

Zsa:

BIG Lesson needs to be a "line item" for the school budget. Anything can be tied to the curriculum, and we need to tie it in a way that is palatable to the administration.

Junior Achievement—2nd grade selling seeds (they don't have plants for curriculum, so the connections was economics and social studies).

Teachers need to be creative in how to tie it in.

Joe:

Name recognition...(Project Fish—The BIG Lesson) ... is important.

You make solid connected lessons, Life cycles in curriculum, and then teaching that in Annie's BIG Nature Lesson. Student planned a special Mother's Day picnic at Woldumar after his Annie's BIG Nature Lesson week.

Debbie:

Parent element—essential

Zsa:

We are going back to do more every year. Getting Youth Action Committee grants for getting signage in the courtyard. "This is your legacy for Murphy Elementary" any time they can contribute—they have ownership—ownership of the zoo, the parks, because they contribute.

Shari:

How do we sustain the gift for ourselves? How do we spread the gift? Grow the gift?

Debbie:

You want them to appreciate it too...New teacher at 2nd grade—we're trying to figure out how to divide her kids among us, and take the pressure off of her, and it might relieve some of the

pressure on her—might make it easier for all of us...The following year, the teacher will be ready to do more.

Jan:

Principal let me spend ½ day with the other 3rd grade teachers when they went to Bengel for their first Annie's BIG Nature Lesson week.

Stephanie:

Hands-on, they get it—at their level.

Joe:

Taking the pieces that we know work...kids, curriculum...

Stephanie:

DEQ (Brian Jeffs) dug us a well at Bengel—the kids get it...the only way he could describe the groundwater to them.

Zsa:

Mark set up hula hoop pond at Murphy—dichotomous key, etc.

Zsa:

We need a resource book of people who can help—for teaching environmental education...Who do I contact?

Joe:

And for the Community resources—they could be knocking at our doors, offering help too.

Jeff:

Explains his students are urban kids and there are management issues.

Mark:

MSU—Jim Schneider—has volunteers to help for a class like Jeff's.

Mark:

Make this a model for school districts—to change their knowledge

Joe:

BIG reputation...a brand...and so we don't have to beg (to have release time from classroom, funding, etc.)

We need a central clearinghouse or video on web—people and resources support from government agencies for my program...Grade Level Content Expectations correlations to make sure Place-Based Education fits with curriculum.

Strength in teams—almost all of the fifth grade teachers at my school are participating.

Teacher-Leaders' Retreat for Place-Based Stewardship Education
Meeting Notes, September 10th
Note taker # 3

Joe Cleary's story – teaches 5th grade; emphasis on math but teaches with a two person team (also teaches social studies). Bikes. Did BIG history the 2nd year of its existence. His teaching style is to “go with the opportunity that presents itself.” Today was his first day at Woldumar! He starts out the school year with BIG to set the tone, then follows with a 6th day in winter and a 7th in spring. Works with closest elementary (Elliott) and its garden.

Jan Derksen – graduated from FW; has done Annie's BIG Nature Lesson (ABNL) since its inception; teaches 2nd, 3rd combo-multiage class; 50 kids! Uses Bengal. Teaches a lot of math.

Zha – 5th grade, Murphy. Has courtyard at school (with mother duck in newspaper!) KATCH grant from MSU Extension paid for courtyard development, another grant for greenhouse. Enjoys “stepping beyond own school” and planting native plants, flowers, grasses in parks in township. Works for 4th grade when studying history, and plants for Meals on Wheels patrons.

Debbie Moshier – 2nd grade Ralya. Project FISH trained. Worked on BIG History with Meridian Twp Village. During “chores” part of experience, she leads the fishing experience. Takes her students to courtyard to sketch. Enjoys outdoors, fishing, Lake Higgins!

Stephanie Knapp – 2nd, 3rd with Jan. “I love my job, I love life!” 5 grandchildren. Believes in developing in kids empathy and knowledge. Sees that she is raising “little environmentalists.” Works with hoop house, nature trail development at school.

Margaret H. – believes in “teaching in the moment and bringing this out in kids” 1999 started BH lesson; likes technology. Believes in empowering teachers and stretching us! Co-director of LATTICE (cross-cultural education).

Our goals for tonight.....wish to identify big ideas for education, as we all talk about as much as possible our work, brainstorm, listen, and think of possibilities.

What are you doing with this type of learning (place-based learning; immersion learning, experiential learning)? What does this work mean to kids?

Zha: daughter was among first group through BIG; kids don't forget it. They remember getting them to interacting outdoors. As seniors, they talk about it. It's powerful. Things that stay with them are powerful.

Joe: There's a connection between the place and the lesson that drives points home with kids. At Woldumar, he's using the Enviroscape, so they can see what pollution is in the watershed, then they go out and see the Grand River and see things first hand, and make connections immediately.

Deb: there's a deeper understanding and appreciation for things there; they see it themselves and participate in things, then “aha!” “They own it”

The value of shifting focus with the “snapshot activity” where they look at one thing closely, they make connections.

Why aren't kids outside anymore? Fear.

Example: courtyard cleanup...kids had never pulled weeds or planted anything. In courtyard, we collect seeds. A fifth grader said, "So this seed will make that plant???"

ZHa: worked with special ed classroom (kids who have outbursts) and they do so well in the green house.

Why? "Kids get to see a process all the way from beginning to end."

Students don't get to do the long term projects much anymore. Again: example of weeding...weeding for hours straight and pulling plants with taproots is hard work! Bus driver said "They're all dirty!" Kids complained but they had a good feeling and were impressed with their own work. They worked from beginning to end and were proud, wanting to bring their families out.

Service learning grant used to connect HS, MS, elem and develop habitat trail around pond. Also had a community work day. 6th graders developed and read brochures to 3rd graders. HS Environmental science class also involved. Held an open "Grand Opening Day"

We all want to visit each others' schools!!!!

How do we become teachers of the state? Margaret is a teacher of the state!

Outdoors gives ability for kids to be social. Everybody is equal.

Teachers – we all bring something to kids. No one is doing the same thing. We all as individuals are designing what we do with kids. This is a key part of what Margaret does: asking good questions

Debbie: took the BIG concept and planted it locally. Experienced BIG Zoo lesson and thought about how to do a BIG lesson in own community, even if budgets are tight. If we got it all organized, then we couldn't be told we couldn't do it! Every year we've added something to it. Always learning. Do this with students right after spring break, which is a nice way to come back for the last few weeks of school.

What is done? Gallery time for History; Observation time – Zoo and Nature; for Meridian Twp park it's chore time: candles, water, fishing, garden, raking, rug hooking, archery, fishing, sewing, polishing silver, washing clothes.

Watching the boys with sewing....they ask: Where do you buy these hoops & thread?

How do you do journaling/reflection: take breaks from chores for about 10-15 minutes, journal, sketch, draw

3rd graders come back as docents to give the new kids the get acquainted walk

Discussion about bringing special teachers (art, music). For sketching, square dancing.

Have to butter up the principal!

If there were no barriers, what would you do?

It's a struggle bringing in other teachers.

Structure of day – physical distance.

School pays for subs.

5th grade goes to Ebersole for camp. (Haslett was Mystic Lake)

Approach limitations through Union contract – planning hours are a justification for the school bringing in the special teachers, so that class teacher gets required planning hours in.

Need to put these types of programs into line items in budget.

Biggest driver is how it is connected to curriculum; can tie anything to curriculum. Have to do in a way palatable to administration. With greenhouse, had to show how to connect with each grade level. (e.g. with Junior Achievement and economics concepts in 2nd grade). Look at each grade level to bring it in.

How/where is this explained (in documents??) Explained to administration and others when you write a grant! Some teachers/schools ask that for every field trip to write about how it fits into grade level curriculum

The idea emerged that this is a GIFT, we give ourselves, our students, etc. as a way to learn.

How do we give this GIFT to others who might choose to receive this gift?

What speaks for itself is that it's a BIG lesson. A brand name. Branding is important. Implies that the teacher has planned solid, connected lessons, and it sells itself.

Bath goes BACK a separate time for their service day. They own the place! Given they do this with a multi-age class, they get to go twice. They say to their journals, trees "Oh, hello my friend." They hear their kids say "We're planning a family Mothers Day picnic at Woldumar."

Connectivity across grade levels – siblings take part, and parents come back again to help. Getting parents involved is key to longevity of program.

YAK grants – Capital area regional foundation \$200 can be drivers! We tell kids that their service is the legacy they leave!

How to grow the gift? One teacher started the program, then was asked to spread it to all the teachers. This can be a lot of work! With new teachers, to take pressure off of everyone, let her/him observe the first year, and not have a whole lot of responsibility so they can actually EXPERIENCE it the first time. This makes it easier for all of us! It takes a good deal of time to learn this model. Get a sub, so that a new teacher can go spend a ½ day onsite to experience it.

Standards and objectives are abstract and not child-friendly...but this is hands-on and they get it!

I look at all programs and take pieces that work!!!!

A dad actually dug a well on site to get across groundwater concepts. Teachers LOVE hoola hoop activity for pond life. Enviroscope. National nature art contests, then do this at local level! Builds excitement and recognitions!

DeWitt Bath Review has given good articles. Have built a relationship with the reporter. This is how new teachers hear about this approach.

Use Big Backyard Bird count which costs nothing. WBU donates feeders. Announce winners at assembly. Pictures on school web site.

Maybe we could use a “unified force” – someone to help with this.

What is in place that allows you to do this?

The child who struggles who feels successful. They all learn differently. Example: all around the group of students, each person’s wetland observation hour journals all look different! Brings all different learners together.

Two moms made DVD of whole week for each child. Nice too in that it can be shared at parent meetings.

I post photos each night (Picasa)

DEAR reading in school natural area

Need supportive environment – schools, administrators, branding becomes part of culture of school Need point person.

Overcoming barriers?

Have a list of resources, a resource book. Who is interested in teaching what topics at each site? Central clearinghouse.

Ultimately, we dream of people who WANT to be with this.

Jeff: It takes working on procedures, especially with children from urban area. Is glad to be working with Fenner which is just around the corner from his school. He enjoys bringing children from an urban area to Fenner. Even has to teach simple procedures, like how to form a circle around something interesting to see, how to make transitions between learning activities in a calm way. Has to develop “outdoor classroom” techniques for this set of learners. Lacks much parental involvement, and it’s hard to get resource people from his set of parents or even downtown Lansing dwellers.

Overall Summary of Needs for accomplishing more place-based Great Lakes stewardship education: 1) professional development (payment for release time, visiting each others’ schools); 2) financing for participants who want to take part (bus time, etc.)

Teacher-Leaders' Retreat for Place-Based Stewardship Education ***Teacher Visioning Note Cards, September 10th***

Question: If all barriers were removed, what would a regional hub look like, offer, and what would you like to have available to you?

Card #1

- Professional Development for Staff and Administration for sure.
- If we are focusing on rivers and watersheds – how do we preserve it and protect them. What factors impact it negatively? Sites that show this.
- Follow the river experience – most kids have been on the lakes or ponds or not at all – Showing how they are all connected. Bus trip?, Canoe experiences?
- Network of experts.
- Great publicity

Card #2 (Haslett Schools - suburban)

- List of volunteers who are willing to work with students during a BIG Lesson.
- List of resource people who are experts or have experience in a specific area who would be willing to teach a big lesson.
- Money to pay for subs so teachers could be released to help with a BIG Lesson – art, gym, music
- Money and training to help teachers develop plans to teach a big lesson or Place-Based Education. Money would be used to purchase materials to do the lessons.
- Money would be used for buses to transport students.

Card # 3 (Bath Schools – rural)

- Create a list of government agencies that could assist us in our programming.
- A “committee” to help incorporate the Grade Level Content Expectations into our BIG Lessons. Since we have the same standards and benchmarks across the state we could all share this information.
- In-services

Card #4

- Professional development – need to know what to do and learn how to do it.
- Provide resources to help to the programs from a financial and physical level.
- Create communities of supportive businesses, service organizations, administration based on the actual “Place” their school/program is in.
- Create a “Center for Place –Based Learning” in the DOE or MSU to support statewide efforts.
- Create learning opportunities on the web through video lessons for PD. Show how these meet grade level content/expectations

Card #5

- Dialog groups
- Lists/listserves
- Mentors
- Coaching System
- Cross School Visits
- Connections to students, especially urban areas.
- Community partners list, people looking for us (awareness)

Card #6 (Haslett Schools – suburban)

I learned today that there is strength in teams – so if we could begin with teacher leaders and invite them to learn in an intensive PD experience --- then each of them could build a team within a school district – and then work together to connect them with community resource people to design a project that fits curriculum, place, and local community!

- Reputation
- Self Selected
- Quality program for kids
- Visiting each others sites
- “I want people knocking on my door to be with my group of kids”
- Community awareness
- PD on learning to find the common school connections.
- Kids have common sense but do they have nature sense?

Card # 7 (Holt Schools – suburban)

- Provide a foundation that is the basis for schools/teachers to create unique place-based units.
- Provide teachers with connections to groups, experts, or passionate individuals that will support their place-based units.
- Develop a PR program that can get the news to the community about what’s happening in these stewardship initiatives. Better yet, create such amazing stories that the lessons are in their own newsworthy.
- Offer PD for teachers to build place-based lessons.
- Make “IT” high reputation (i.e. BIG) so that it sells itself.

Card # 8 (Laingsburg Schools – rural)

- Community awareness of opportunities that could be available to those who have an interest in benefiting the environment i.e. parents, grandparents etc.
- In-service for educators (P.D)
- Nature sense vs. common sense

Card #9 (Lansing Schools – urban)

- Model curriculum development
connections to current benchmarks
developmental sequence; address district goals and objectives
- Program presentation at the district level; info to individuals
- Videos, videos on website
- Community partners for program implementation, DNR and other state agencies, MSU Students and Staff, Corporations

Card #10

- Website for collaboration with like-minded individuals for networking.
- Networking of resources and key people and opportunities
- An organized effort or organization of these things with PD for teachers/teacher leaders and a program to showcase within the environmental/place based educational sphere.
- BIG – Would love to have a water/fisheries/conservation based big lesson. Great Lakes BIG Lesson where students could be on the waterways, watersheds, fishing, canoeing, boating and sampling.
- Grants and access to money for education networking
- Rotation for coordination local resources.

Agenda

Parent/Student Think Tank For Outdoor Learning

Potter Park Zoo (on the Red Cedar River)
Monday, Sept. 24th, 6-8 p.m.

You've been invited to this meeting because of your interest in outdoor learning! Some of you have participated in Annie's BIG Nature Lesson, the BIG Zoo Lesson, or another outdoor learning activity like fishing, schoolyard habitats, nature trails, camps or other activities! Thanks for joining us for pizza, fun, conversation and thinking about the future!

Welcome; Introductions and Explaining Our Discussions – Shari Dann and Mark Stephens, Michigan State University Extension

PART 1

What is your most favorite memory of an outdoor learning experience in a place that is special to you? If possible, try to think of something that was a learning experience through school or through a community or youth organization, where you really got to know that place over time!

Draw a picture of the place and the experience

Parent interviews their child – write down key words!

What did you learn?

What was special about that place and experience?

Was there any other way you changed?

Did you see any change in your family, or your school or community?

PART 2 Separate discussions.....

Youth & parents who have NOT taken part yet in Annie's BIG Nature Lesson:

What do you look forward to doing?

What about this experience sounds different to you?

What are the worries you might have (if any) about this experience?

Youth & parents who have taken part:

Would you like to see more of this?

How can this kind of experience be strengthened?

Were there any challenges?

PART 3 More separate discussions.....

Youth in one group –

What do you REALLY like to do in the outdoors? If you were to dream of some outdoor activities you could do more of, what would these be?

What do you know about the watershed where we live?

What is important to you about the watershed here?

Adults in another group –

What do you know about the watershed where we live?

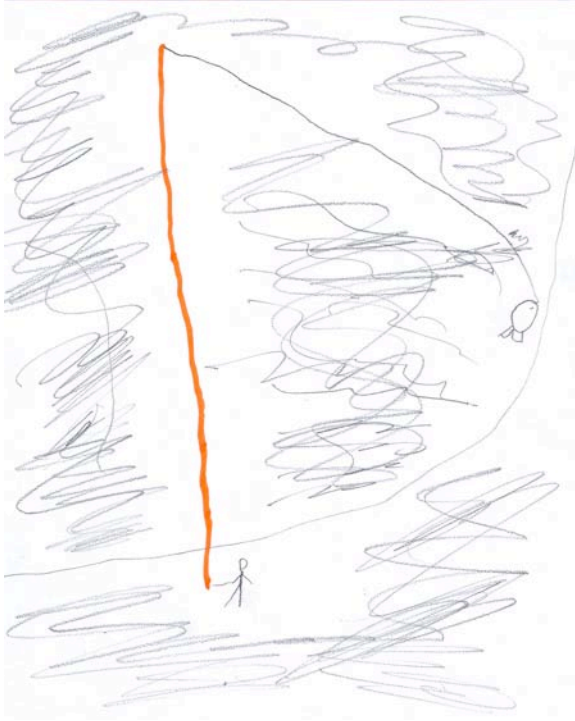
What is important to you about the watershed here?

Can you say anything more about the types of change you see your children go through when they experience an intensive, outdoor, place-based learning opportunity?

What advice do you have to encourage more place-based education that would help foster more Great Lakes stewardship, and caring for the Grand River watershed?

Parent/Student Think Tank For Outdoor Learning

Student Artwork of their "Favorite Outdoor Memory," September 24th





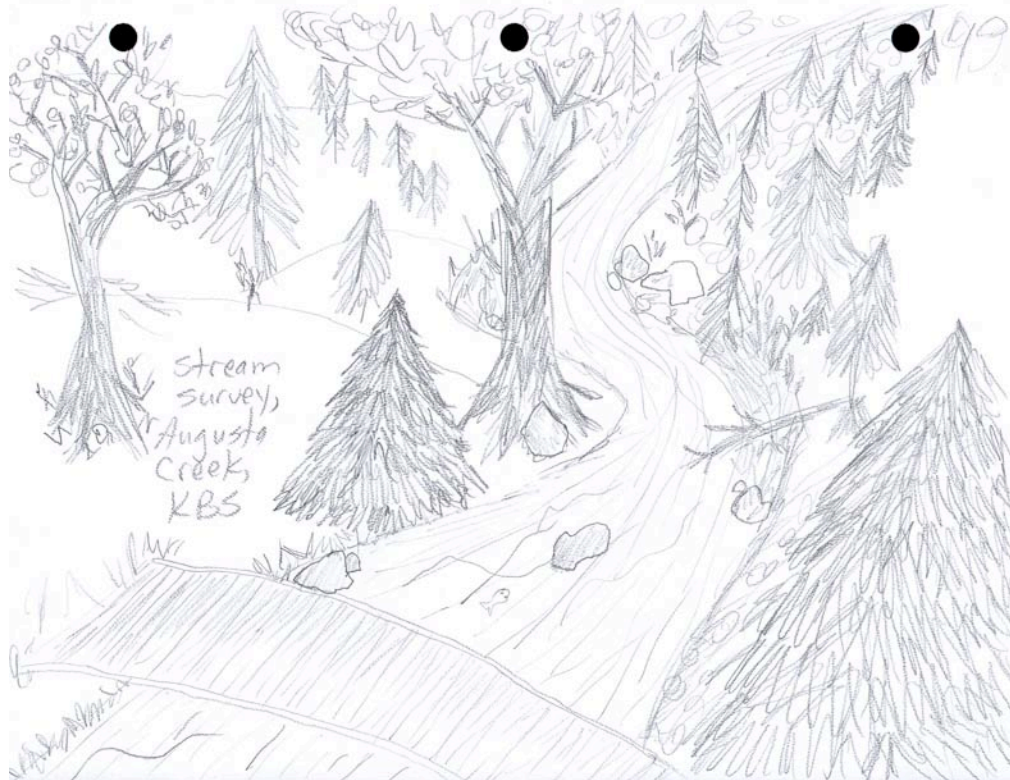
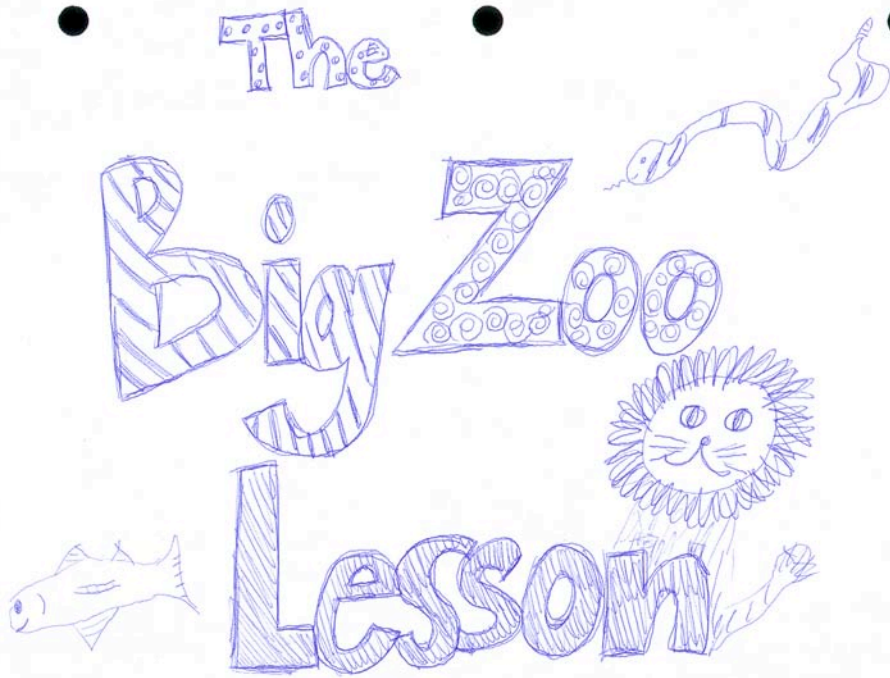
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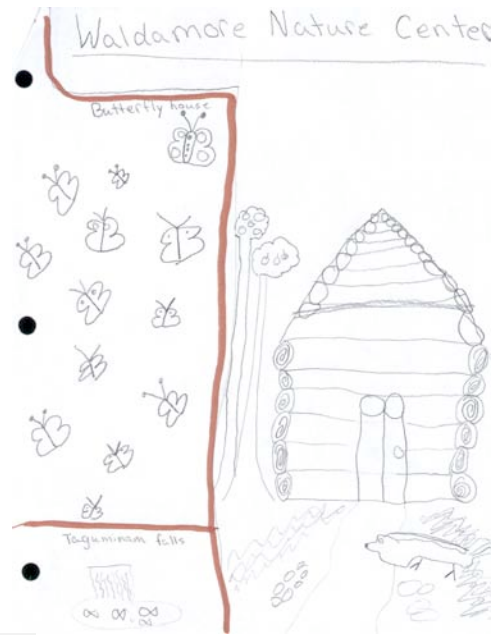


Hike through the woods at Mcgrath nature center !!



The
Big Zoo
Lesson





Annie's Big Nature lesson.
 My favorite was when went in
 groups and did a scavenger
 hunt



Parent/Student Think Tank For Outdoor Learning
Adult/Child Interview Notes About The Students' Artwork
September 24th

What did you learn? What was special about the place and experience? Was there any other way you changed? Did you see any change in your family, the school or community?

- Don't take frogs cause they need to be in their own habitat Spent a week at Bengal and learned about the bog. I saw that other classes wanted to go. We went back and laid down woodchips. My mom wanted to see what we did so I took her on the trails. Our teachers received a grant so three buildings could use a learning environment.
- I learned that beavers are larger than I thought. I thought that it was special because it reminded me of grandpa's cabin. I think that I could almost teach someone and take them on the trails at Woldumar. At our school everyone was talking about our trip for about three weeks.
- I went on a trail ride and parade for 5 days on our own horses on Mackinac Island. I learned about plant types and what they looked like i.e. Lady slippers and poison ivy and butterflies. I learned it was an island with lots of horse trails. I learned about the island, plants and became a better rider. I realized that my family liked to ride the rustic trails, nature, and we became closer.
- My favorite is when we went on scavenger hunts. I learned that nature isn't so scary and bugs don't creep me out. I learned to observe, draw and write about what I saw. It was special cause there was a lot of different places to go and sights to see. I got to see animals in their own habitat and not afraid or scared. I changed in that I can actually STAY in nature for a while. We stayed a whole week. My class team talked a lot about our field trip.
- I went to the Explorer Program at Sleepy Hollow. We pretended to be squirrels and hid starburst, and squirrels forget where they hid their caches and other animals can steal it. Mom and Katie worked there, red, grey squirrels hide it and it's a huge state park. I learned something new about squirrels. Makes her happy, makes mom and dad happy and taught us and brother about squirrels.
- We took a hike through the McGrath Nature Center. I learned many different bird calls and not many animals scare me. The place was special because it was beautiful and it had many different environments such as ponds, forests, marshes and one day we went to a bog. I respected and understand nature more and I saw that many of the other kids respected nature, too.
- At Woldumar I learned that many different birds share the same habitat and it's difficult to determine a bird's name. I learned how to observe nature better. The place was special cause it had a wide variety of habitats and the connections that I saw my students make. I gained a greater appreciation for the outdoors and I built my own confidence in taking kids.
- I went to the BIG Zoo Lesson and it was the first time I got to be close to an animal not native to Michigan. It gave me more respect for animals and more knowledge of how to not upset animals. I learned to be safe around wild animals and to not make loud noises or tap anything. People in my school were very excited about the class getting a true zoo experience by making time with the animals more personal and enjoyable. The BIG Zoo instructor showed us how to make fish balloon treats for the penguins. My grandpa was there and he made me proud when he handled the fish. It was neat to give food to the real live penguins and go under where they lived instead of just looking at them.

- I learned to fish with my dad right off shore. I learned how to fish good – one that got away.
- My son went to Fenner, last year with Cavanaugh. He came home so excited everyday that he would get a notebook and sit outside for hours just observing animals, trees, and even the wind and what it was doing and how it was affecting everything outside. He has been begging us to go back soon. I would like to see any programs that could come to school and educate them there to reduce the costs.
- We went to the butterfly house on Mackinac and Woldumar Nature Center. The temperature I remember and moisture, and at Woldumar I remember the animal skins and the skunk that we saw. I learned to be aware of nature and a butterfly landed on someone. The log cabin was preserved and I'm now more aware of butterflies.

Observations from the Student group

- Kids have a very basic knowledge of a watershed. Mark led a great discussion on watersheds. The students were very interested and Mark did a good job of pulling knowledge from the children. The students were asked about what they thought was important about watersheds
- We have a swamp with tadpoles
- We have a creek that leads to the Looking Glass River, I think.
- Rivers sometimes flood, so houses can't be too close.
- Our watershed is a weedy area and they excavated a bunch of the area.
- We have a wetland and they can't build on it!

Observations from the Annie's BIG Nature Lesson parents and student group

- Need more days
- Different seasons and different locations
- Interaction with other schools – connect with on-line journals, geo-caching scavenger hunts.
- Working to classify and ID plants instead of just going to a spot to learn. Learn along the way.
- More in-depth teaching/activities
- More time de briefing
- Overnight?
- Connect a service project to a return trip (clean out bird boxes after placing them)
- Move the dock further out - maybe use an aquascope or underwater camera.
- More time to explore
- Kids become the teachers (older kids pair with younger kids)
- Lots more community connections to make local areas more aware.
- Challenges are weather, insects, staying on task, and keeping on schedule.

Miscellaneous written thoughts about additional opportunities

- “Y” Camp at Bancroft
- Maple River Watershed, girl scout camp, Oakley
- Lake Lansing Park North
- Woldumar – Canoe and pontoon docking
- How do river get polluted?
- South side of Price Road by Sleepy Hollow
- Rose Lake
- Unstructured park activities kids just play in the creek.
- Resources through MSU, State
- Geo-caching, Aquascope, not a lot of canoeing
- Friends of the Looking Glass.
- Overflow of water pollution, Fish ladder, and Grand Ledges

Discussion with youth and parents who have NOT yet participated in Annie’s BIG Nature Lesson (but have taken part in other place-based stewardship education)

What are you looking forward to?

- Last year’s group found a TV when they did their river clean-up at the end of the week. We heard all about it! (Stories pass on from one year’s group to the next year’s BIG Lesson group!)
- Being involved in activities outdoors.
- Seeing wildlife (birds, coyote scat).
- Learning about bears, other wildlife
- Seeing furs/pelts of wildlife
- Playing games about nature
- Marshmallows and s’mores!
- Watch how animals move

Worries?

- **Poison ivy – will I know what it looks like?**
- **Are there wolves there?**
- **Missing other activities at school**

Discussion with parents only

What do you know about your watershed?

- Didn’t know about how the rivers join in the Lansing area.
- Didn’t know that rivers and streams can flow north.
- What goes in is all connected through the watershed.
- Lansing is trying to clean up the river, but I wonder about how polluted the rivers still are.
- History of watersheds (native American history and why cities developed where they did).
- Other unique places: Ledges, fish ladder, dams, water in Sleepy Hollow State Park, MSU resources (farms, Children’s Garden, students as resource people, etc.), Woldumar’s lagoon and dock/platform, trails and trail systems throughout the area, Oakley’s Old Gas Tractor Association and Farm Days, Hawk Island, Lake Lansing North, Peacock Road Tree Farm (on Vermillion Creek; has history and nature and agriculture), Van Atta’s, St. Johns Cider Mill, Maple River Flooding, Rose Lake (MDNR), Bengal

Wildlife Center, boat tours, Wacousta Girl Scouts camp area, Camp Kiwanis, YMCA's Pa-Wa-Pi camp, and a camp in Bancroft.

What types of change occur when your youth takes part in place-based education?

- Enthusiasm; excited to learn.
- Willing to share about learning experiences.
- Learning is fun!
- Awareness of what's around them.
- Retention of material, concepts.
- Hands-on experiences.
- Some kids only learn by doing, and for some, this is the first time for true learning!
- My child continued on journaling, keeping notes.
- Able to write with more description after BIG Lesson.
- Confidence-booster.
- How to get along with others (because they are in a different environment, they have to work together, and are working with new people).
- Able to learn in smaller groups, with partners; more one-on-one learning.
- See teachers in a different environment as real people! This gets students involved!
- Special guests are from the community, and they run into them in town!
- Volunteers from an older generation get to pass along their knowledge.
- Develop respect for teachers, elders, volunteers' wisdom.
- Helps parents and community members be aware of what is going on in school.

What would encourage more place-based education?

- Working in schoolyards, because it is inexpensive (no field trip costs)
- Making it a part of the regular curriculum, and parents' input and requesting it more.
- More clean-ups
- Education of parents through leaflets, fliers about what is going on for place-based education.
- Writing about the experience and what students are learning.
- Overnight experiences for families, as a follow-up to BIG Lesson experience (for example, Boy Scouts go overnight to the zoo, and they still are talking about it!)

Handout for School - Community Meetings

What is: Place-Based Great Lakes Stewardship Education?

Place-based education uses the **local community and environment** as a starting point for teaching and learning; emphasizes **hands-on, inquiry-based, real-world** experiences; and involves **direct collaboration** with community partners.

The benefits of place-based education include **powerful learning**; a **healthy, supportive school culture**; **sustainable partnerships** between schools and communities; a greater **appreciation** of the environment; and more frequent and effective **acts of stewardship**.

Source: Great Lakes Water Studies Institute at Northwestern Michigan College, for Great Lakes Fishery Trust; 2005.

Place-based education is learning that is rooted in what is local --- the unique history, environment, culture, economy, literature and art of a particular place. The community provides the context for learning, **student work focuses on community needs and interests**, and community members serve as resources and partners in every aspect of teaching and learning...this local focus has the power to engage students academically, pairing real-world relevance with intellectual rigor, while **promoting genuine citizenship and preparing people to respect and live well in any community they choose**....Place-based learning helps schools and communities get better together.

Source: The Rural School and Community Trust; www.ruraledu.org; 2007

Agenda

School – Community Meetings

VISIONING A FUTURE FOR PLACE-BASED, GREAT LAKES STEWARDSHIP EDUCATION IN Mid-MICHIGAN

Michigan Princess (on the Grand River)
Tuesday, October 2, 4:00 to 8:00 p.m.

Plymouth Congregational Church and Tollgate Wetlands
Monday, Oct 8, 4:00 to 8:00 p.m.

- | | |
|------------------|--|
| 4:00 – 4:20 | Arrive, informal visiting – meet community participants and teachers |
| 4:20 | Welcome: Mark Stephens, MSU and Margaret Holtschlag, Haslett Public Schools
Who was invited, and why! What you each contribute!
What is the Great Lakes Fishery Trust and its Great Lakes Stewardship Education Initiative
Icebreaker Introductions: Small groups and whole group
Dinner |
| 5:00 | Dinner Seminar: Our Watershed, Our Future
John Hesse – Community Leader (October 2 nd meeting)
The Tollgate Wetlands Project for Stormwater Management
Pat Lindemann, Ingham County Drain Commissioner (October 8 th meeting) |
| 5:30 – 8:00 p.m. | Guided discussions – Shari Dann, Mark Stephens & Margaret Holtschlag |
| 5:30 to 6:00 | “Prouds and Sorries” -- What places in the Grand River watershed (mid-Michigan area) are you “proud of” and which offer teaching, learning and enjoyment? What are the aspects here you are “sorry” about? (Individual worksheet; table discussions) |
| 6:00 to 6:30 | Teacher to teacher;
community member to community member |

Teachers’ Questions:

- What are examples of place-based education I’m involved with or could be involved with?
- Why bother with place-based GL stewardship education?
- What are the curriculum connections? (Examples of how you connect place-based learning to the curriculum)

Community Questions:

- What do I have to offer teachers, schools and partners involved with place-based GL stewardship education?
- Who else should be at the table?

- 6:30 to 7:00 Jig-saw: Mixed tables – to discuss the assets we bring
- 7:00 to 7:30 At mixed tables – “Fish Scale Planning”
Now, think about our future vision for place-based GL stewardship in mid-Michigan. What changes would we like to see? What activities? What is needed to support learning (for students, for teachers, for community?)
Write a few words or a phrase on each paper plate....Each plate is a scale of a fish. Which aspects of the future would you like to see by what certain point in time over the next two years? Arrange the paper plates like a fish’s scales, to grow a complete fish!
- 7:30 to 8:00 Groups report out on their “Fishy” timelines
- 8:00 Send off to new voyages – Margaret Holtschlag and Mark Stephens

School – Community Meetings

Meeting Notes From The Michigan Princess Riverboat, October 2nd

What places in the Grand River watershed (mid-Michigan area) are you “proud of” and which offer teaching, learning and enjoyment?

We are proud of:

* Denotes duplication.

Natural Capital

- Variety of places to enjoy the outdoors – nature centers, rivers and parks. * * * * *
- Fishery, especially bass fishery in the Grand River * * * *
- The Riverwalk * * *
- Burchfield Park – Access to fishing, canoes *
- Lots of wetlands everywhere – great places for children to explore plant insects and animals. *
- Fenner Nature Center – getting citizens excited and interested about nature. *
- Abundance of water resources and green space in the region. *
- Tollgate in Groesbeck is a cool way to deal with urban runoff. *
- Michigan Princess
- The riverwalk along MSU.
- Glacial Geology- Moraines/Eskers
- Adopt a River and The Lansing Board of Water and Light and Impression 5 Museum.
- Maple River Wetlands
- Hawk Island Park – Great family park in the middle of the city.
- Grand river west of Waverly – 9 Smallmouth bass in 50 minutes.
- Brenke Fish Ladder – Great spot to visit
- Sycamore Creek Biggie Munn Park is a hidden treasure. “Our Salmon live there now”
- Bengel Wildlife Center
- Rural farm area near Okemos – Great historical/Agriculture Heritage
- Ferguson Park in Okemos.

Social Capital

- Participation of many agencies and organizations who care about improving and take action for the environment. * * Even without adequate funding.
- All of the efforts that have been made to clean the rivers and make others aware of their importance. * Gin Clear Water
- Annie’s BIG Nature Lesson –students, parents, community leaders learning about environmental topics. *
- Fisheries and Wildlife Club – Red Cedar River Cleanup. *
- Massive potentials. * for collaboration and partnerships.
- Illicit discharge identification that is being done in the region.
- 2 great urban forests.
- Red Cedar Fly Fishermen.
- I appreciate being on the Michigan Princess to put me in touch with the Grand River; grew up in this area and knew the river as a dirty place you couldn’t swim in.
- Environmental Education Curriculum that is available in our state/region.

- Invasive species research and management (Ash Borer) doing well - needs more funding.
- Mid-MEAC and the role they play in sustainability
- Children's Water Festival 2,000 kids per year 12,00 since it began.
- Delhi sewage treatment Plant Water Festival – Kids get to release Walleye and bass fingerlings into the Grand River.
- We could teach boating skills out on the rivers.
- Watching fish jumping at Elin Parks last year in the rain.
- Tremendous job Mark Stephens has done with Project FISH
- Teachers who are willing to “make a difference” in teaching Environmental Education, we need more!
- The River is gaining respect from the locals.
- Talking with paddlers who go from Grand Ledge to Lansing.
- Proud of the Rain Garden Project and the role environmental groups played.

What are the aspects here you are “sorry” about?

We are sorry about:

Natural Capital

- Frandor Runoff into the Red Cedar – awareness needed. * Golf Course
- Lansing Board of Water and Light and GM Runoff.
- Erosion – Grand River's biggest problem.
- Continuing problem of CSO.
- Trash and runoff still dumped into the river.
- Lake Lansing E-coli problem –goose poop.
- Farthest spot in Michigan from Lake Michigan. Harder to convey that we all live in its watershed.
- The number of dams that restrict fish passage.
- Lawns that go directly into the river, no buffers.

Social Capital

- Need more support for off campus students to recycle. Lack of recycling in our area. * *
- Need for outdoor time in all schools-more outdoor exploration. *
- Lack of curriculum “used” in the region –plenty out there. *
- Need for more environmental education support/resources and contacts for new teachers.
- We have not yet reached the point where people understand and recognize the connectedness of actions and impacts on the environment. * *
- Continued bad PR about the health of the Grand.
- Frat houses littering
- Not enough fishing and access to the river for participation. * people go up north.

- High stakes testing, detailed state benchmarks limiting teachers abilities to use outdoor education. “It’s a sad day when children think food comes from a grocery store and heat comes from a furnace. “ Leopold.
- Teacher ignorance/misinformation/bias about outdoor/environmental education being passed on to our students.
- Improved land use planning to protect our natural resources.
- Need more citizen involvement in decisions that affect the watershed.
- Park Lake signs saying water has not been tested.
- Sorry that the rivers aren’t utilized more in our education, if it is it is not noticed and expanded.
- The public doesn’t realize the opportunities and potential that the rivers offer. * *
- More businesses need to be educated like dry cleaners, auto care etc.
- East Lansing waste water treatment plant.
- Local government not taking the responsibility of protecting our resources.
- No citizen involvement and bad perception. *
- River lowering hurt tourism and use of the river trail.
- We don’t have a milk carton regatta.
- Plans for commercializing parts of the river, public is not aware of.
- Brownfield sites – closed buildings, falling apart i.e. Motorwheel.
- Homeowner pesticide and fertilization.
- Children not knowing where landfills, recycling plants, farmers’ markets are – more support/awareness of where products and waste come from and go.
- Families don’t know about the opportunities the Grand River watershed offers.
- Lack of respect for our rivers and streams. *
- Sorry that Lansing hasn’t taken advantage of the Grand. We seem to be slower than other communities.
- Time money and MEAP testing limiting teachers ability to get kids to the resources.
- Pressure of commercial development – the proposed marina. River too fragile.
- Not having a high school crew program. More money needs to be spent to develop opportunities for people to enjoy the river. *
- Environmental resource protection is a low priority among competing interests. River is seen as for the industry.
- Not enough education about the flood risk from developing wetlands.
- I wish you could eat some of the fish.
- Assumption that the Grand River is polluted – Perception.
- More water quality education programs.
- No water hazards on the Frandor Golf Course – runoff is bad for the river.
- That we haven’t developed a BIG Fish or BIG River lesson to help our kids connect and appreciate and preserve this natural resource. Being in touch with their natural world is important to their development.
- We don’t have a riverside aquarium about the watershed’s aquatic habitat.
- Resistance to new innovations that would improve our watershed.
- Government resources/expertise is politicized.
- We don’t have a polar bear swim to raise money/awareness for river conservation.

School – Community Meetings ***The Michigan Princess Riverboat, October 2nd***

Teacher Questions

What are examples of Place Based Education I'm involved with or could be involved with?

- Bath – Schools are within walking distance to a trail around a pond and connecting natural areas. Middle school and the elementary are developing a guide for the trails.
- Purple loosestrife study at Holt High School.
- Not much, as so much of the curriculum is assessment oriented that literally if it is not on the test we shouldn't teach it. I want to do more with Project Citizen to encourage students to engage in authentic advocacy.
- The Ebersole Center has an Outreach Program that is available to educators in the Mid-Michigan area.
- I teach Environmental Science –Teasing local soils, effects of the wastewater treatment plant, local pond and a grand river Clean-up. I also teach Zoology – a frog study (longitudinal) and the history of the Great Lakes through Salmon in the Classroom. I teach biology as well with the Purple Loosestrife Project.
- I do Annie's BIG Nature Lesson. I'm designing a nature trail around a pond along with the high school and middle school. I want to do the BIG History and BIG Zoo lesson and start a bird feeder project.
- Annie's BIG Nature Lesson, School Gardens and a Hoop house. Blanket for Haven House (needs of the community)
- Project FISH, Fenner Nature Center – ABNL, Fisheries and Wildlife Club at MSU, Rose Lake and the Management area on campus. I could be involved with Clean Water action Fund, Local Farmers, landfill, wastewater plant and recycling plant.
- Project FISH, Salmon in the Classroom, Physical education and a Garden Project.

Why bother with place based Great Lakes Stewardship education?

- It's local and topical for kids. Can be infused throughout the school year.
- They will build a pipeline to Arizona and take our water. We need to create a new generation of Great Lakes advocates. Can students reason why or why not economics or the market is the way we set our environmental policy?
- Because it is always more relevant and thus more meaningful. Hands on minds on.
- Without knowledge, our collective ecological footprints will be our undoing (trample the world)
- It is a "genuine" learning experience. Children don't go out and get in touch with the natural world anymore- it helps them connect.
- Children today seem so far removed from their environment. Often their spare time is either inside or filled with activities. In order for them to connect, appreciate and understand the natural world, they need to be immersed in it.
- Losing outdoors –children are losing their connection to nature-important for our physical and emotional health. This makes for informed and active citizens.
- Teaches higher-level thinking and skills. Authentic learning that engages students and connects them to the community. Builds a future generation of stewards.

What are the connections to the curriculum? Examples of how you connect place based learning into the curriculum?

- We need to struggle to maintain the unique history, local history Lot of potential for cross curricular approach – Relevance to civics - teaching that through science, economics and environmental issues.
- Public policy issues related to resource management connect directly with social studies, civics curriculum. New content expectations place civics in various grade levels 4th, 6th, 7th, and 9th or 11th. Environmental issues should be used in cross-curricular units for collaboration between social studies and science teachers. Geography related to environment and watersheds using GIS.
- In almost any curriculum area that can be thought of, we need to put Environmental Education at the center as the common thread that connects all of our disciplines.
- Water and soil stewardship objects (Earth Science), ecology objectives and invasive species issues, plants mitosis, meiosis, and natural selection, and humans' effects on the environment.
- Reading informational text and picture books, Writing journals, Social Studies, history and local resources, Science , habitats, etc., and Math, grid work.
- Links to local natural and history – science plants, animals, their habitats and lives.
- Local farmers showing how food is produced. Local nature centers to discuss ecosystems , life cycles and food webs.
- Biology – Anatomy, plant life cycles, food chains, habitat threatened or endangered species, connections to conservation and the natural world.

Community Questions

What do I have to offer teachers, schools and partners involved with place based Great Lakes Stewardship education?

- Time, experience and ideas. Many hours of how-to videos from a few different outdoor television shows.
- Website promotion and an identity with the public be it good or bad.
- Children's Water Festival.
- Watershed Expertise, Education materials, guidance on how to get started, connections to existing programs to get students out to the river, abundant web, print and lesson resources, library of ideas for projects for students, grant resources.
- Perspective, existing projects, public involvement methodology, experience linking groups to create effective citizen projects, RSVP Program, Retired Engineer pool – DEQ
- My time, my love for the environment, my love for fishing and mostly my love for kids! Some experience with teaching fishing and the environment
- Help access MEECS, EE Training and materials, Access to experts for the DEQ, Web Resources for teachers, promotion of events, assist with collaborations and partnerships, and an earth day event for 1500 students.

Who else should be at the table and why?

- Leaders of Outdoor Clubs for spreading the word, volunteers and ideas and possible funding

- More teachers, principals, to understand why it is important, specifically K-12. Maybe students to get their opinion.
- Other sub-committee chairs of the Grand Vision Task Force. Users and individuals/groups passionate about the river.
- Low-income family representatives whose kids are not fortunate enough to get out to explore our parks, lakes and streams. They could speak to what they would like their kids to be able to enjoy and to learn what opportunities there are.
- Retiree organizations – especially in Lansing where there is the headquarters of the DNR, DEQ Lawmakers etc.
- Community government, funders from the business community, and more environmental groups.

Specific Activities over the next 18 months Utilizing Fish Scale Planning

Group #1

- Linking the education about the river to technology: Video blogs
- Create sustainability – find funding for long-term programming
 - Develop credits
 - Pledging
 - Work on businesses to support
- Create a watershed management vocational program similar to home building –need to create the partners and have a dual enrollment process.
- Create public involvement and participation, and education programs about our efforts.
 - Media Involvement
- Do a one-day workshop to connect the benchmark to environmental education about the Grand River Stewardship Initiative.
- Create a directory of resources/people for teachers and support these resources. “Classroom speakers list”
- Do a summer workshop or Academy to work on content training.

Group #2

TT – Teacher Training

- Identify teacher leaders
- Project WILD Training
- Project FISH Training
- Provide MEECS educational workshops
- Provide teacher training for experiential, immersion learning. Intensive training for teachers.

CR - Community Resources

- Grand River Tour/Exploration of the Grand
- Recruit and compile a list of retired environmental professionals from which to draw for youth education in the field.
- Create an extensive list of community resources. “Clearinghouse of Experts”
- Use local state parks as classrooms and DNR/DEQ environmental educators.

CE – Community Education

- Create educational opportunities for urban youth
- Expand Project FISH into as many schools as possible.
- Get teachers and kids on to the water in the community.
- Teach thinking, problem solving, and reasoning in the natural world.
- Establish a Grand Vision Recon team.
- Provide for the river experiences through community support.

PS – Public Sector

- Statewide commitment and resources for Environmental Education
- Find ongoing source of funding for Project FISH.
- Make whatever we do fun.
- Change perspective, attitudes and experiences.
- Educate legislative powers on the need for this type of education.

School – Community Meetings

Meeting Notes From Plymouth Congregational Church October 8th

What places in the Grand River watershed (mid-Michigan area) are you “proud of” and which offer teaching, learning and enjoyment?

We are proud of:

* Denotes duplication

Natural Capital

- All of our parks (Lansing City, County, Meridian Township) * * * * *
- Area Nature Centers * * * *
- Riverwalk * * * *
- Rose Lake Bog, Marsh and Fen. * * *
- Natural areas, trails, and the urban wildlife areas. * *
- Maple River Reservoir – Country river * *
- Bengal Center – Michigan Wildlife Conservancy Property * was an eyesore 20 years ago.
- Lake Lansing Park North *
- Red Cedar River Rapids in Williamston. *
- Harris Nature Center and its plans to expand along the Red Cedar River. *
- Tollgate watershed project *
- Fish Ladders *
- The clarity of the Grand River and its revived fishery. *
- Towar Neighborhood Project * Rain gardens
- City River Cleanup – Picturesque
- Hawk Island county Park – Picnic, swim, fish, hike.
- Francis Park Bluff overlooking the river.
- Fenner Arboretum is a wonderful outdoor classroom.
- The rolling hills at Woldumar’s shoreline
- The River Walks in Lansing and Grand Rapids that bring people to the river.
- MSU’s Woodlots and the Administration Building area.
- Nature trails behind Haslett Middle School.
- Wonch Park in Okemos
- Wetland and wetland projects are wonderful teaching and learning spaces.
- Potter Parks decked viewing area.
- The Looking Glass River
- Prairie Creek in Ionia
- The Gardens along the river on MSU campus.
- Glencairn’s Cattail area
- Large bodies of water being used as filters
- High Diversity of ecosystems
- Mud Lake behind the Haslett High school – student exploration
- Creation of riparian zones along the banks of the Red Cedar on Campus.
- All the life in the river communities.

Social Capital

- Stewardship Education
- Pat Lindemann
- Awesome potential for education through the areas.
- Learning potential to make Lansing's part of the Grand beautiful, economic and educational.
- Getting young people involved in stewardship
- Recent grass roots Grand River Clean up, 200 volunteer during the drawdown.
- Kayak Cross race near LCC.
- This opportunity to educate our community about the watershed with all of the community members involved.
- Resource groups that offer top speak and watch out for the resource.
- ABNL –Protecting through educating about wildlife.
- Willingness for waste treatment facilities to collaborate to determine if they are a source of pollution.
- Changing attitudes in education
- Schools teaching about water quality in their classrooms.
- MSU Environmental Education Programs
- Project FISH, WOW, and other extensions that aid the community.

What are the aspects here you are “sorry” about?

We are sorry about:

Natural Capital

- Garbage and raw sewage dumped into the river. * * *
- Poor water quality that doesn't sustain aquatic species. * * Can't swim in it.
- Drains leading directly to the river. * * Separation of sewers isn't the whole answer.
- Nothing like forests and lakes like in the rest of Michigan.
- Wet basements because of drainage problems. Red Cedar riverbanks *
- Drainage issues west of Nancy Moore Park in Meridian Twp. *
- Wetlands destroyed to make malls and subdivisions.
- Eroding shorelines of rivers in urban areas.
- Pollution Problems/situations of Lake Lansing.
- Water quality declining due to urbanization – lawn companies without controls.
- Mitigation of wetlands while destroying real ones.
- No invasive species control for those that are taking over wet areas.
- Vacant abandoned factories
- My school parking lot.
- Triangle development in downtown Lansing.
- Huge new apartment complexes on Chandler north of Lake Lansing.
- Kent/Ottawa County non-point source pollution.
- Unnecessary water consumption for lawn watering.
- Lack of parks in south Lansing.
- Destruction of the FW Research area on Farm Lane.

- The campus water plans like the four lakes never appreciated –a learning tool lost.
- Water withdrawal from the Red Cedar.
- Massive cookie cutter developments of large houses in the last 20 years.
- Box store duplication.
- Downtown dams
- Too few spots to launch non-motorized boats on the rivers and bikes, too.
- The apartments near Bengel.
- Impacts from the energy plants that warm the water and harm the river.
- Frandor Area
- No management plan for our area of the Grand River.

Social Capital

- People's lack of understanding of their impacts on the environment. * * * *
- Lack of education * * Community support is lacking.
- Lack of attention the nature centers are receiving. *
- Not enough water lessons in current curriculum.
- Change is very difficult
- Water areas are for manufacturing or large estates and not accessible to the public.
- Unchanging attitudes about pollution, not my fault, I can't do anything about it.
- Not having a green builder develop the site next to our school and not having a runoff area for educational purposes.
- Lack of awareness of drains through neighborhoods.
- Poor foresight in planning.
- Lansing students not able to reach water areas although they live very close.
- One time events – this type of education should be a year round thing.
- We don't even appreciate our own backyards.
- Urban sprawl- reduction of water going into ground water.
- I need more education
- No support for students who want to study water areas.
- Impacts of contamination are ignored by agencies.
- Old ideas of what is o.k., to put next to a river, still exist. Livestock still have access.
- Public indifference – apathy.
- Lack of volunteerism.

School – Community Meetings **Plymouth Congregational Church, October 8th**

Teacher Questions

What are examples of Place Based Education I'm involved with or could be involved with?

- Greenhouse growing native plants, grasses for Meridian Twp. Parks. Haslett Beautification Association getting kids outdoors. We have a courtyard and ducks. The BIG Zoo Lesson. Seed harvesting/wildlife viewing. I could be using the MSU planetarium, perennial gardening, Woldumar winter trip, Annie's BIG Nature Lesson. The Youth Action Council, and Recycling. Go to other schools like Lansing Woodcreek. Use Solar ovens.
- BIG Lessons (History, Zoo and Nature), Lessons at Elliot's outdoor classroom. Teach lessons in Vahalla Park in Holt.
- Annie's BIG Nature Lesson, Mackinac Island, Encampment – Capitol – Museum. Recycling, Recycle day then go to Granger. Virtual field trips – Google Earth. Impression 5 –BIG Zoo Lesson –Annie's BIG Nature Lesson and BIG History Lesson. Hospital Visit.
- Annie's BIG Nature Lesson. Turner Dodge House. Board of Water and Light.
- BIG Lessons – Zoo, Nature and History.
- Annie's BIG Nature Lesson. ESA 435 Class Resource Guide to Fenner Nature Center.
- Fenner Nature Center. Woods behind the Natural Resources Building. New grad students to sample. 4-H Gardens. Water Festival at MSU.
- Greenhouses at MSU. Saginaw Bay.
- Developing a teacher visitor guide for Fenner Nature Center.
- Annie's BIG Nature Lesson, Arbor Day festival, Children's Water Festival, Clinton County Waste Mgmt. Potter Park Zoologists, Hoop house w/MSU Extension. Bath wetland and Granger.
- Annie's BIG Nature Lesson, Arbor Day at Potter Park.
- Annie's BIG Nature Lesson, MSU Butterfly Museum, Sparrow Hospital "Hello Hospital", Michigan Historical Society
- Annie's BIG Nature Lesson, Arbor Day festival, Children's Water Festival, Clinton county waste Mgmt. Potter Park Zoologists, Hoop house w/MSU Extension. Granger and Greenfield Village.
- Make my school greener and make them place based.
- Went to Africa and Honduras, BIG Lessons, Woldumar –water studies. Compost bins – recycling.
- The rivers themselves, sewage treatments plants, nature centers and riverwalks.
- Annie's BIG Nature Lesson.
- *Master Plan – A well organized mix of people, experiences, teaching qualities and key elements of our water systems, to build an understanding of the responsibility of stewardship.*

Why bother with place based Great Lakes Stewardship education?

- It's a critical time on our planet; kids need to grow up as stewards, and teach their parents to be stewards right now.
- Hands on or at least working in living examples.

- Hands on interactive learning is more inquiry based, more level learning. Stewardship equals responsibility for the world. Not trusting politicians.
- Students see a reason for why they are learning different parts of the curriculum. Encourages and stimulates the amount of learning each student does. Shows the students how community “experts” can be involved.
- The total immersion means so much to how much the child will keep in their memory. Changing attitudes and educating students is a key component to protecting natural resources that exist in our area or state.
- Authentic community connections, intrinsically engaging meets the diverse needs of the population, real world connections.
- Gets students and children immersed into what they should be learning, feeling connected to their area, will inspire stewardship.
- Gets kids outside, hand on education, you learn locally, and they get to see what they do, affects them and their community.
- Shows the learner up close and personal why they are doing what they do. Allows the learner to form attachments or memorable, experiential moments to take home.
- Children can actually be in a site.
- Create a habit of mind/action in learners.
- It offers hands on inquiry -based experiences. Teaches children how to be a productive member of the community and how to protect and preserve our environment. Creates lasting partnerships.
- They feel better than thoughts. They feel easier and tangible.
- Because place-based education can have a genuine short and long- term impact on our community.
- It important in our own part of heritage that is lost.
- Unique and special – Children are unaware. Children learn better hands on. They lose out, not knowing.
- More definite concrete ideas and understanding.

What are the connections to the curriculum? Examples of how you connect place based learning into the curriculum?

- Life Sciences, ecosystems/environmental science, language arts, and math.
- The study of life cycles and water cycles in natural at place based sites.
- Science, land and water or ecosystems, math, problem solving, social studies, civics, how a bill becomes a law, writing, response to prompts, forming opinions, composition and contrast, and reading fact and opinion in letter writing.
- Science, writing, math, reading. Social studies, writing, reading.
- Predicting, planning responsibilities, core democratic values, character development, and vocabulary.
- Language arts, reading, writing, fiction/non-fiction, essays in particular, JOC studies, theme of geography, writing about CDV's, and their relationship to a local issue, science in varying contexts.
- Introduces techniques and concepts and then show how it functions in real life.
- Recycling, science programs, soil, water cycle, and pollution.
- Natural science, ecology, watershed ecosystem management.
- Learning about decomposers and composting, food chains, learning how disrupting part of a food chain affects the web in a habitat. Watersheds.
- Inside and outside activities are full with connections.

- Students will push forward in different areas and seek different information to supplement curriculum.
- Scientific inquiry/hypothesis, data gathering, higher level thinking, critical analysis.
- Science content objectives related to animals. Science process objectives - observation investigation data collection and representation. Social study related to map skills. Math measurements, descriptive writing, and reading for information.

Community Questions

What do I have to offer teachers, schools and partners involved with place based Great Lakes Stewardship Education?

- As a leader within a respected conservation organization (Trout Unlimited) offer experience and education with both adults and children, demonstration projects, etc.
- As a landscape designer with expertise in using native plants, I can create outdoor classrooms on school grounds. As a Leopold facilitator, I show how to use the classroom to both teachers and students.
- My knowledge of watersheds, my love for sharing the knowledge, the hope for passing on the baton, to students for the future. My enthusiasm and even for my “geeky” interest in the out of doors. My network of allies and colleagues. My local knowledge of Michigan and the Great Lakes.
- Training in E.E. programs, outdoor sports education. Networking, model lessons for sustainability.
- Expertise and community networking.
- Education Materials such as fish I.D., habitat, ladders and weirs, fish hatcheries, dam information, lake maps.
- 300+ children being mentored each week in school. With 20+ programs. This includes 300+ adults and Senior high school mentors. I also have 300 children and mentors in community-based programs meeting weekly and monthly.
- I can teach kids about rivers and their inhabitants, fishing, needs of fish, and I can share the excitement of the natural world.
- I can offer connections to church-based programs that can share and coordinate speakers and instructors.

Who else should be at the table and why?

- The legislature - need to hold them accountable.
- Fundraising groups for financial support, public relations groups, PTA’s, principles, and maintenance supervisors.
- Funders, decision makers who “get it”, and those who are teachable, and the students themselves.
- Other land base conservation organizations, because they can influence development. Kids and adolescents, because they are going to change future ecosystems, parents, because they need to be knowledgeable, and someone from the labor department so that they can understand the training process for future workers.
- Representatives from other organizations who are involved in the Grand River Watershed, canoeing, boating clubs, birding groups.

- More community leaders, start at the top and get support from legislators and governors. Owners of canoe liveries.
- Business groups and school board members, district superintendents.
- Developers to show them to be positive instead of negative, industry, to contribute to a sustainable community, and politicians.
- The media is not well represented. WKAR, local cable, Comcast, MSU, and LCC media classes to help educate to the public.

Specific Activities over the next 18 months Utilizing Fish Scale Planning

Group #1

O – Organizational

- Make connections between teachers involved in PBE.
- Educators' Information Website.
- List of stewardship opportunities for kids.
- Coordination and communication or pre-existing programs.
- Compiled list of topics for "experts".
- Compiled list of "Experts."
- Scheduling of experts/teaching coordinator.
- Use MSU as a tool/resource

\$ - Funding

- Outdoor/environmental/sustainable field trips.
- Make the place based education at the school, like composting, gardens, Salmon in the Classroom.
- Find funding for environmental literature.

PA - Political Action

- Make politicians think of our natural resources as a critical asset.
- Put natural resources and environment as important on the radar screen.
- Change attitudes with a lobbyist.

PR - Public Relations

- Foster Awareness with a poster contest for recycling or watershed pollution.
- Outside Mile Walk at the river. Get kids outside.
- Have every MI citizen walk along a river for an hour.
- Approach community members to enter classrooms and schools.

Group #2

- Water monitoring for bugs, ecosystem, biology, chemistry and decision making.
- Solar Powered Busses.
- Better connect organizations locally, regionally, state and Midwest.
- Need Barrier Breakers.
- Water waste monitoring in schools.

- Parking Lot water calculations equals math and planning.
- Repair riverbanks working with angler groups and students.
- Water husbandry opportunities.
- An Eco-games along the Grand River.
- I'm a geek, I'd love to help teach science.
- *If cost is no problem: Take all of the students in the Lansing school District on a Charter Fishing trip on the Great Lakes. The Great Lakes is what it is all about.*

Group #3

- Constant and consistent year-to-year curriculum, building blocks.
- Hands on Tree Seed project – give everyone a seed and a box and watch the seedling develop.
- Bring community members into the classroom.
- Get more people involved as community leaders, business owners. Recruit Mentors.
- Bring kids to the university to be with the mentors, grad students etc.
- Make facilities/teachable things available in the school i.e. recycling, greenhouses, tanks.
- Use college clubs and organizations.
- Education through the media.
- Network with college, high school middle school and elementary school students.
- Be resourceful and take pride in you own place. Tap community resources.
- Integrate subjects – cross curriculum.

Group #4

- Environmental night at schools.
- Money for field trips to water treatment plants.
- Educate ISD Administrators
- Prepare a resource guide for educators.
- Interface between High School, Middle School and Elementary. Mentoring.
- Info books in school libraries about environmental issues.
- PD to insure things are taught correctly and make teachers feel comfy teaching.
- Watershed models for schools.
- Invite High School Environmental clubs to participate in this program.
- Continue to educate the community.
- Positive reinforcement for communities involved in stewardship education.
- Awareness of environmental issues from experts the entire school year.

Appendix 2

**Communication:
Invitations and Press Release**

Invitation For Parent/Student Think Tank
Special Meeting Invitation
We Need Your Input

Michigan State University's Department of Community, Agriculture, Recreation and Resource Studies, and MSU Extension have teamed up with **Annie's Big Nature/Zoo Lesson** and **MSU's Project F.I.S.H.** program to work on a Great Lakes Stewardship Initiative funded by the Great Lakes Fishery Trust. We will be bringing together, through a committee of "teacher leaders," parents and students who have experienced outdoor conservation learning. We need your input and the teacher leader listed below has requested your participation. Thank you for your consideration!

When: Monday, September 24, 2007

Time: 6:00 pm – 8:00 pm

**Where: Potter Park Zoo Education Center –
Pennsylvania Ave. between Mount Hope and Kalamazoo**

We will be providing Pizza and Drinks and having a bit of fun while "picking your brains." Your contributions to this meeting will give us the opportunity to bring a larger place-based education initiative to our area schools and your community.

Please RSVP To The Teacher Leader Listed Below!

Teacher Leader _____



Parent(s) Name _____

Childs Name _____ Current Age _____

Address _____

Phone () _____ e-mail _____

Return to Teacher Leader _____

Invitation for School-Community Planning Meetings

Michigan State University's Department of Community, Agriculture, Recreation and Resource Studies (CARRS), The BIG Lesson Program (BZL, ABNL) and The Great Lakes Fishery Trust (GLFT) offer this special invitation to YOU

Great Lakes Stewardship Initiative through Place-Based Education in Mid-Michigan Area Schools

Tuesday October 2nd, 2007 or Monday, October 8, 2007
4 PM - 8 PM (Either Evening)

"Together we'll chart the future direction of Great Lakes Stewardship Education right HERE in the Grand River Watershed"

The Great Lakes Fishery Trust has provided the resources to bring **YOU** together with other community leaders to discuss and plan for Great Lakes Stewardship Education in the Grand River Watershed. Schools teaching and students learning about PLACE and STEWARDSHIP need local partners and networks to be successful. We need your brain-power on one of these two evenings. The meeting on October 2nd, will be held on the ** Michigan Princess (Grand River Park), and the October 8th meeting will be at the Plymouth Congregational Church on Wood Street and Oakland (East side of the Groesbeck Golf Course). Ingham County Drain Commissioner Pat Lindemann will be speaking about the Tollgate Water Project at the October 8th meeting. **Both meetings include dinner and conversation.** ** Note: We will be sailing on the river and boarding is from 4:00-4:30 pm. You will not be able to join us later than 4:30 pm.

Your *Immediate* Response to this e-mail is crucial for our planning! Your RSVP to this announcement will hold your space at one of the meetings. **Space is limited. If you cannot attend, please let us know promptly so that we can extend the invitation to other participants.**

Meeting Goals:

- To initiate conversation between educators and community leaders who care about youth and the environment.
- To create a common vision for the future of Great Lakes Stewardship through community partnerships, its resources and its natural features, often referred to as place-based education.
- To identify and prioritize ways to create, sustain and strengthen educational efforts about what we teach in our own communities.
- To collect supportive information toward 2008 opportunities for students, teachers, and their communities.

RSVP Form
Great Lakes Stewardship Initiative Planning Meeting
Please, respond whether you can attend or not!

I will be there on **October 2nd** _____ **October 8th** _____

_____ I cannot attend this meeting, either date

Name:
Affiliation:
Street Address:
City:
State:
Zip Code:
Home Phone:
Work Phone:
Fax:
E-Mail address:

Please provide us with some information about yourself or your organization as it pertains to Great Lakes Stewardship, Education, or Community Involvement. We will be offering this information to invitees and participants after this conference. Our goal is to let others know what opportunities exist in this area. Highlight programs you conduct, curriculum or materials you use, partnerships, longevity, vision etc

Insert Your Paragraph Here:

Please e-mail this form back to: Mark Stephens **NO LATER THAN Friday September 28th, 2007. Please do not reply to all, reply only to steph143@msu.edu**

Margaret Holtschlag, The Big Lesson Program, 1120 Bonanza Drive, Okemos MI 48864 517-230-8268 biglesson@gmail.com

Mark Stephens, MSU Project FISH, Room 131 Natural Resources , East Lansing MI 48824 517-432-2700 steph143@msu.edu

Dr. Shari Dann , Department of CARRS , Room 131 Natural Resources, East Lansing MI 48824 517-432-0267 sldann@msu.edu

For Immediate Release



For More Information Contact:
MSU Project FISH
Mark Stephens, Coordinator
(517) 432-2700
steph143@msu.edu
www.projectfish.org

MSU Project FISH and Partners Announce a Great Lakes Stewardship Initiative
Integrating Great Lakes Stewardship and Environmental Science into K-12 Education

EAST LANSING, Michigan—October 2, 2007—Michigan State University's Department of Community, Agriculture, Recreation and Resource Studies (CARRS), MSU's Project FISH and The BIG Lesson Program has been awarded a *planning grant* from the Great Lakes Fishery Trust under the Great Lakes Stewardship Initiative. Project coordinators, educators and community leaders have been invited to attend initial planning sessions convenient to busy schedules. Session details:

**Great Lakes Stewardship Initiative through Place-Based Education in
Mid-Michigan Area Schools**

Tuesday October 2nd, 2007 on board the Michigan Princess (sails at 4:30 pm)
(or) Monday, October 8, 2007 at Plymouth Congregational Church
Wood Street and Oakland (East side of the Groesbeck Golf Course)
4 PM - 8 PM (Either Evening)

The Great Lakes Fishery Trust has provided the resources to bring community leaders and educators together to discuss and plan to create Great Lakes Stewardship Education in the Grand River Watershed. ***This is an incredible opportunity!*** Ingham County Drain Commissioner Pat Lindemann will be speaking about the Tollgate Water Project at the October 8th meeting. Other local experts and officials are expected to participate in this dynamic forum. The initial planning meetings have limited invitation lists. Both meetings include dinner, conversation and work sessions designed to be interesting, fun while launching this project for our students. (Meetings for the general public are planned for phase two.)

Meeting Objectives:

- To initiate dialogue between educators and community leaders committed to youth and the environment.
- To create a common vision for the future of Great Lakes Stewardship through community partnerships, its resources and its natural features, often referred to as *Place-based Education*.
- To identify and prioritize ways to create, sustain and strengthen educational efforts about what we teach in our own communities.
- To collect supportive information for 2008 opportunities for students, teachers, and their communities.

DISCUSSION –

The Goal of the Great Lakes Stewardship Initiative is to increase awareness and understanding of the ecology of the Great Lakes so that Michigan residents become active stewards of the Great Lakes and advocates for strategies that support the long-term sustainability of the Great Lakes Fisheries. Through this award MSU and its partners will encourage collaboration among local community organizations and K-12 schools to advance the goal of the Great Lakes Stewardship Initiative. Nine planning grants of up to \$20,000 each were awarded

-more-

throughout the state with work to be completed by the end of October 2007. Our community will be applying for the main grant through a competitive process with other Michigan communities.

Specifically, this planning grant will be working focusing on the mid-Michigan area and the Grand River watershed that includes the Red Cedar River, Maple River and Looking Glass River and smaller tributaries that flow into these and ultimately to Lake Michigan. Schools, community organizations, and local partners from the region will be invited to come together to develop future relationships to assist in educating area youth about our natural resources through a series of community meetings and workshops.

“This is very exciting for us”, says Mark Stephens, coordinator of Project FISH for Michigan State University. “We will be building on the strength of some great, already existing programs like Annie’s BIG Nature/Zoo Lesson. These programs get kids out of the classroom and into nature to learn about what they have right in their own community. We have community partnerships with many programs in this region and together we can chart the future of Great Lakes Stewardship Education right here in the Grand River watershed”

The Great Lakes Fishery Trust (GLFT) is a private foundation established in 1996 to mitigate for fish damages caused by the Ludington Pumped Storage Hydroelectric Facility located on Lake Michigan. Since 1998, The GLFT has awarded over \$34 million dollars in grants to 154 projects designed to enhance the Great Lakes Fishery. For more information about this Initiative go to <http://www.glft.org/stewardshipinitiative> or to become a partner or for more information about our Grand river Initiative contact Mark Stephens at 517-432-2700 or steph143@msu.edu

It's For The Kids...

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Appendix 3

School-Community Meetings Participant Contact List and Information

School - Community Meetings Participant Contact List and Information

Dick Augustine
1329 Poppy Lane
Dewitt MI 48820
517-668-3761 (Hm)
augusti2@msu.edu

Trout Unlimited – Michigan Council

I've recently agreed to Chair the Education & Outreach Committee for Michigan Council of Trout Unlimited, and hope to work more closely with you in the future. We work with and promote the "Salmon-in-the-Classroom" project sponsored by MI-DNR and supported by many of our TU Chapters.

Ron Bacon
81 Agate Way
Williamston MI 48895
517-655-3209 (Hm)
Bacon.susan@acd.net

Project FISH, CMU and Harris Nature Center Foundation

I am a retired public school administrator, outdoor skills instructor with pre-schoolers through university credit courses. Original Member in the Project FISH team, Lake Michigan Sportfishing Clubs, Advisory Board for Recreation, Parks and Leisure Services Department at CMU and a member of the foundation board at the Harris Nature Center in Meridian Township.

Carol Baker
4000 Woodcreek Lane
Lansing, MI
517-755-5313 (Wk)
517-712-1413 (Cell)
517 -755-1709 (Fx)
carol.baker@lansingschools.net

*Woodcreek Elementary Magnet School for Math Science and
Engineering – Lansing Public Schools*

I have been working as the new magnet focus teacher at Woodcreek Elementary Magnet School. The magnet focus is math, science and engineering. We have a fantastic teaching staff, and are always looking for broader/deeper opportunities for learning for our students. I am personally ecologically responsible and oriented. Travel in Africa and Central America has highlighted for me the US lack of stewardship and over consumption how that impacts our international community.

Geoff Batten

5645 School Street
Haslett MI 48840
517-339-8202 (Wk)
battengd@haslett.k12.mi.us

Rayla Elementary – Haslett Public Schools

I am a teacher at Rayla Elementary in Haslett. Our school is working on a courtyard to be able to get kids outdoors and learning about our community. I am very interested in providing outdoor experiences to the kids in my classes. I had Margaret Holtshlag for 5th grade and went to MUCC youth Camp when Mark Stephens was the director, and took Shari Dann's environmental education class at State. I am trained in Project FISH.

Jim Bedford

1804 Wood Street
Lansing MI 48912
517-484-5178 (Hm)
gairdneri@comcast.net

Trout Unlimited & MI Salmon and Steelhead Fishermen's Association

Mostly involved in work on improving tributary habitat for fish and educating children and adults on fishing and the resource. I teach a fishing class at LCC each year and am currently the president of the Lansing Chapter of Trout Unlimited.

Betty Bonney

2251 Cedarbend Drive
Holt MI 48842
517-694-3364 (Hm)
517-699-7371 (Wk)
bbonney48842@yahoo.com

Washington Woods-Holt Public Schools

I am a 5th grade science teacher at Washington Woods School in Holt. I am also the building science coordinator. Within our unit this year my co-teacher and I have started a "Community Connections" project in which we hold bi-weekly meetings to go out into the community to help, or invite speakers into our building to create awareness for students on how they are an important part of the community and future of the communities they live within.

Pete Bosheff

Ellen Beal
225 Custer
Lansing MI 48912
517-487-6873 (Hm)

***Experience Outdoors Group, Community Leader
Gardner Middle School Assistant Principal – Lansing Public Schools***

517-325-6540 (Wk) Ellen
517-202-1053 (Cell)
pbosheff@comcast.net
ellen.beal@lansingschools.net

We are both Lansing natives, Lansing School District alumni and continue to advocate for high impact facilities and programs for neighborhood parks and the school district. We are founding members of the Lansing Area Skate, Bike and Recreation Foundation with numerous legacy action sports projects in Central Michigan. We are now focused on environmental, fishing, boating and backcountry projects as well as girl's and women's sports. We have participated in Project FISH, national Hooked On Fishing, Not On Drugs and Salmon in the Classroom and want to provide more of these opportunities to Gardner Middle School and other schools in the district by utilizing our community driven initiatives, our professional network and dedication to education and natural resources. We are both excited about this great opportunity.

Kelly Byrne

MSU Student – Pre Service Teacher

252 River Street Apt 204
East Lansing MI 48823
248-495-5691 (Hm)

I am interested in getting to know more members in the community who carry similar interests. Also, to learn more about what our community plans on doing in the future with regards to the environment.

Erin Campbell

Tri-County Regional Planning Commission

913 W. Holmes Rd. Suite 201
Lansing MI 48910
517-852-1909 (Hm)
517-393-0342 (Wk)
517-393-4424 (Fx)
ecampbell@mitcrpc.org

I am the coordinator for the Greater Lansing Regional Committee for Stormwater Management (GLRC), the local phase II stormwater group. I coordinate the implementation of the Urban Grand River Watershed Management Plan here in the Greater Lansing Area. One of our greatest challenges is to engage local school districts in environmental education efforts. While many local school districts are required to meet the phase II stormwater requirements, our outreach efforts have been extremely challenged and met with little enthusiasm. The GLRC is striving to educate the youth population about pollution prevention and overall environmental awareness. The GLRC is currently creating a web page specifically for educators; the page serves as a resource guide or toolbox for school districts to gather ideas about many different

aspects of environmental education. These include but are not limited to environmental curriculums, project ideas, case studies and examples, web resources, print resources, local resources, and MDEQ and EPA resources. The GLRC is hoping to partner with local school districts regarding many different facets of environmental education. To review this information, including contact information visit our website at www.mywatersheds.org.

Joe Cleary
2020 Park Lane
Holt MI 48842
517-351-7490 (Hm)
517-699-7604 (Wk)
jcleary@hpsk12.net

Hope 5/6 School – Holt Public Schools

I am a participant in the BIG History Lesson, the BIG Zoo Lesson, and a 3-year participant in Annie's BIG Nature Lesson. I think getting kids out into the real world allows them to think critically about where they live, about what they would like to do later in life and it at least will open their minds to new and different things than they are used to.

Dr. Shari Dann
Room 131 Natural Resources
East Lansing MI 48824
989-834-2333 (Hm)
517- 432-0267 (Wk)
sldann@msu.edu

*MSU Dept. of Community Agriculture Recreation
and Resource Studies Associate Professor*

I do research on place-based conservation education for youth development and adult learners,. I also teach conservation education classes for pre-service teachers, and work with outreach programs at MSU, and do community engagement work internationally.

Jan Derksen and Stephanie Knapp
13073 Angle Rd.
Bath MI 48808
517-641-6435 (Hm) Jan
517-641-6771 (Wk)
jderksen@bath.k12.mi.us , sknapp@bath.k12.mi.us

Bath Elementary - Bath Public Schools

We are teachers at Bath Elementary. We teach in a 2nd/3rd, multiage classroom and have participated in Annie's Big Nature Lesson since its beginning. We are very interested in the Great Lakes Stewardship Initiative. Jan has a degree in Environmental Education and has worked as a naturalist. Along with teachers from Bath HS and MS, we recently designed and developed a pond habitat trail. We involved students and community members in all aspects of the project. Our students designed a brochure to the trail along with 6th grade students.

William Draper
513 Woodand Drive
East Lansing MI 48823
517-361-4632 (Hm)
517-410-3471 (Cell)
517-332-6261 (Fx)
draperw@msu.edu

Plymouth Congregational Church – Assistant Chair of Trustees

As the former chair of deacons, and assistant chair of trustees, I have participated in discussions as to how Plymouth Congregational Church and the neighborhood are impacted by the Tollgate Water Project as well as for our concern for Michigan's environment and the well being of our citizens.

Julie Fick
1013 S. US 27, Suite A
St. Johns MI 48879
989- 224-6831 ext.316 (Wk)
989- 224-9574 (Fx)
julie@casmcenter.org

Capital Area Science and Math Center

The Capital Area Science and Math Center is one of the 33 regional centers in the Michigan Mathematics and Science Centers Network. These centers provide leadership, curriculum support, professional development, and student services to educators in local school districts. The centers also serve as a resource clearinghouse for educational materials and information, and work to foster community involvement in the areas of math and science. The Michigan Mathematics and Science Centers Network support the delivery of high quality mathematics and science education for the students of Michigan. CASM's mission is to provide leadership, professional development, and resources to improve science and mathematics education in central Michigan. The Capital Area Science and Math Center is a working consortium with Clinton, Eaton, Ingham, Ionia, and Shiawassee county education agencies, and Lansing Community College. CASM services all public schools -- including Public School Academies - private schools, and home schools in the five county region.

Ed Hagan
1235-A Center Street
Lansing MI 48906
517-372-0160 (Wk)
517-372-3130 (Fx)
edward.hagan@bbbs.org

Big Brothers Big Sisters – Michigan Capitol Region

Big Brothers Big Sisters Michigan Capital Region serves 900-1000 kids each year in Clinton, Eaton, Ingham, Ionia and Shiawassee counties. About 40% of these kids are served through school-based programs. In the school-based programs the volunteer Big Brothers and Big Sisters meet with their "Littles" once per week at school. Some programs are lunch hour

programs; others are after school programs. The Bigs include adult volunteers, college students, and in some cases programs, high school juniors and seniors. For this school year, we expect to be involved in at least 20 elementary and middle schools, and eight high schools. Matches in the programs engage in a variety of one-to-one activities. They may go to the library, gym, or playground; play games; work on homework in difficult subject areas; do arts and crafts; etc. Occasional group activities are also planned as appropriate. The program is not "tutoring" but is socially-based. Although some matches readily find activities and have more to do than time allows, others often need help or assistance in deciding how to spend their time together--especially if the match is new. If there were suitable materials available, the matches could do projects or worksheets together on specific "place" and "stewardship" issues. Given a variety of interesting topics, matches could explore a variety of issues throughout the year. Another alternative would be to have each match explore one issue, with one week set aside for each match to report to the rest of the group what they learned.

Although our program is held in the school, the matches do not meet during regular class time. Ideally, the matches could use these materials as a fun way to build on the curriculum being offered in that school.

John L. Hesse
13551 Wright Road
Eagle MI 48822
517-626-6194 (Hm)
hessej@msu.edu

*Michigan Salmon and Steelhead Fishermen's
Association, Mid-Michigan Chapter*

Since retirement from the State of Michigan, I have become involved with educational programs of Project F.I.S.H., Mid-Michigan Chapter of the Steelhead and Salmon Fishermen's Association, MSU Bailey Scholars, and the Izaak Walton League. I frequently volunteer to teach Fish Science Lessons to youth in various settings. I am an aquatic biologist by training. I have fairly good knowledge in the area of entomology also.

Denny Higlmeier
4550 Olds Rd.
Onondaga MI 49264
517-628-8085 (Hm)
517-242-5287 (Cell)
lyndj@voyager.net

*Michigan Salmon and Steelhead Fisherman's Association
Mid-Michigan Chapter, Michigan Charter Boat Association*

I am a Charter Captain with the Michigan Charter Boat Association and the Education Chair for the Michigan Salmon and Steelhead Fisherman's Association. I worked with the Salmon in the Classroom project at Gardner Middle school and want to continue our relationship with or schools in the Lansing area.

Bill Hodges
5885 W. Holt Rd.
Holt MI 48842
517-272-2365 (Hm)
517-699-7441 (Wk)
whodges@hpsk12.net

Holt High School – Holt Public Schools

I'm a teacher at Holt High School. I teach a trimester-long course in environmental science which focuses on water issues. We do a groundwater unit with groundwater models and phyto-remediation, a soil analysis unit focused on runoff of chemicals, and then a lake and river unit that looks at water chemistry and its affect on life.

Margaret Holtschlag
1120 Bonanza Drive
Okemos, MI 48864
517-230-8268 (Cell)
biglesson@gmail.com

*Director of the BIG Lesson Programs
Haslett Public Schools*

I am the director of the BIG lessons (Annie's Nature, History, Science and Zoo) and a technology teacher at Rayla Elementary in Haslett. I love to work with teachers and students with authentic learning opportunities offered to us by the resources we have right here in our Mid-Michigan community.

Rita Jack
109 E. Grand River Avenue
Lansing, MI 48906
517-484-2372 (Wk)
rita.jack@sierraclub.org

Water Sentinels Project Director, Sierra Club Michigan Chapter

The Sierra Club Michigan Chapter is a nonprofit membership environmental advocacy organization. We just celebrated our 40th anniversary of exploring, protecting, and enjoying Michigan's outdoor heritage, while the Sierra Club first began by taking people into the outdoors in 1892. Our website is located at www.michigan.sierraclub.org, where readers can find information about Michigan members' conservation priorities, and the work that we're doing. I am the Water Sentinel Project Director at the Michigan Sierra Club. Our office is in Lansing's Old Town, very near the Grand River. I teach volunteers to conduct water quality monitoring, I began working with Sierra Club in 2001 to monitor and advocate for cleanup in Gratiot County's Pine River. One of our projects is in Michigan's Thumb where Bad Axe High School's Biology Club has been monitoring the Pinnebog River for 3 ½ years. We monitor streams in Michigan's rural areas that are polluted by livestock waste, and we help to organize river trash cleanups. We recently partnered with Lansing community leaders to help organize the Drawdown Cleanup this past August 18, where 200 volunteers helped clean 30 tons of trash from Lansing's Grand River. In addition, we help formulate policies to help protect and clean up Michigan's waters.

Lauren Kunyszla
3042 N. Ashland, Apt. #1
Chicago IL 60657
kunyszla@msu.edu

MSU Fisheries and Wildlife Student

I am a senior at Michigan State graduating in December. My area of interest is Fisheries and Wildlife. I intend to use the information gained in this partnership to help me in working to provide outreach to the public.

Pat Lindemann
707 Buhl
Mason MI 48854
517- 676-8395 (Wk)
icdclindemann@mac.com

Ingham County Drain Commissioner

As commissioner, I provide for construction, maintenance and improvement of county public storm drains. I'm also responsible for the legal establishment and administration of drainage districts and assess benefited property owners to pay for costs of the drain. My other responsibilities include lake level control, soil erosion control (through the issuance of permits). I act as the County Board of Public Works and am responsible for the review of proposed subdivision plats.

Zsuzsanna Mahon
1875 Lake Lansing Road
Haslett MI 48840
517-675-5210 (Hm)
517-339-8253 ext. 310 (Wk)
mahonzk@haslett.k12.mi.us

Murphy Elementary School – Haslett Public Schools

My name is Zsuzsanna Mahon and I am an elementary school teacher at Murphy Elementary School in Haslett. I teach all subjects including science to two classrooms of students. I am very interested in place-based education and engaging students in science with relevant, hands-on educational activities as well as reaching out to our surrounding community for expertise and support. I am my building's science chairperson and try to bring new ideas and opportunities in science to our staff and students.

Barbara Mansfield
2630 Loon Lane
Okemos MI 48864
barbara_mansfield@sbcglobal.net

Attwood Elementary – Lansing Public Schools

I am a first grade teacher in the Lansing School District and I have participated in Annie's BIG Nature Lessons. It is very nice to see that groups are getting together to bring more of this hands-on learning to our schools, especially in Lansing.

Rachel McNinch, M.S.
STE 301 Manly Miles
1405 S. Harrison
East Lansing, MI 48824
517-353-9858 (Wk)
517-353-9807 (Fx)
mcninchr@msu.edu

Center for Water Sciences, Michigan State University

I grew up in Haslett and my 5th grade teacher was Mrs. Holtschlag. My father and I have been trained in Project FISH and volunteer on occasion to work on projects that come up in the community.

Shannon Moore
1225 S. Wilson
East Lansing MI 48067
248-276-0670 (Cell)
moores26@msu.edu

MSU Student – Pre- Service Teacher

I am currently a student at MSU majoring in Elementary Education with an Environmental Science/Geography Minor.

Thomas M. Occhipinti
Environmental Education Coordinator
P.O. Box 30473
Lansing, Michigan 48909-7973
(Constitution Hall, 525 West Allegan, 6 South, Lansing 48933)
517-373-2379 (Wk)
517- 241-7401 (Fx)
occhipintit@michigan.gov

Michigan Department of Environmental Quality

As the Environmental Education Coordinator for the Department of Environmental Quality, I can facilitate access to the Michigan Environmental Education Curriculum Support (MEECS),

the environmental education curriculum for Michigan's 4th through 9th grades. I can assist with Internships, possible job shadows. I can assist with environmental speakers and other resources for teachers and classrooms. I can help with partnerships as appropriate.

Tim Russ

Hill Career Academy – Lansing Public Schools

426 S. Fairview Ave.

Lansing MI 48912

517-579-7345 (Wk)

517-755-4156 (Hm)

tim.russ@lansingschools.net

I work with students on community, policy involvement, and community. Using the environment allows for, creative thinking to happen and responsible action to take place. I am also trained in Project FISH.

Jessica Schaap

Pre-Service Teacher –Michigan State University

3040 Baker Park Dr. SE

Grand Rapids MI 49508

schaapj2@msu.edu

I am majoring in Elementary Education with a minor in Environmental Science/Geography. I am interested in teaching environmental and outdoor education with an emphasis on wildlife and geography. I've been profoundly impacted by my conservation trip to Kenya, Africa in 2001 and my 6th grade class at the John Ball Zoo. I will be interning with Lansing schools in 2008-09.

John Schimmel

*Chair of the Ebersole Environmental Education Center
Foundation, Lansing Public Schools*

3400 Second Street

Wayland MI 49348

517- 881-8883 (Hm)

jschimme07@yahoo.com

I have been involved with the Ebersole Environmental Education and Conference Center since its inception over 30 years ago. The Center is owned and operated by the Lansing School District but is available to school districts throughout mid-Michigan and west Michigan area as a residential environmental education school providing "hands on" environmental education in one of the most unique natural settings found in Michigan. We offer custom designed programs as well as "off the shelf" programs for educators to chose from, school visitations and more. For additional information, please visit our website: <http://ebersole.lansingschool.net>

Susan Seyfarth
340 Northlawn
East Lansing MI 48823
517-699-7321 (Wk)
seyfarth@hpsk12.net

Wilcox Elementary School –Holt Public Schools

I am a third grade teacher at Wilcox Elementary School in Holt Michigan. I have been involved with the BIG History lesson with my class and had a wonderful out of school/in-community experience.

Shikha Singh MSc.
Dept. Fisheries and Wildlife
Room 13 Natural Resources
East Lansing MI 48824
517-775-7526 (Wk)
singhsh6@msu.edu

Water and Sediment Quality, Michigan State University

I work specifically with water and sediment quality in the Grand River and the surrounding watershed/tributaries. I am trained in Project FISH and volunteer when needed.

Ken Slater
519 W. Kalamazoo
Lansing, MI 48933
517-755-1022 (Wk)
ken.slater@lansingaschools.net

Liaison to the Lansing Schools Board Of Education

As the liaison to the Lansing Public Schools Board of Education we are in favor of our urban kids getting opportunities that are not normally offered in our schools. Community partnerships can only provide value to accomplishing this goal. We are excited to be part of this endeavor.

Mark Stephens
Room 131 Natural Resources
East Lansing MI 48824
517- 339-0159 (Hm)
517- 432-2700 (Wk)
steph143@msu.edu
www.projectfish.org

MSU Project FISH Coordinator

Project FISH (Friends Involved in Sportfishing Heritage) is a program that is mentor-based, train-the-trainer, and community supported effort focusing on youth development through aquatic resource education and fishing. With over 700 trained and supported adults and teens, we've reached over 70,000 kids all over Michigan. How can I help your programs?

Vern Stephens
9874 Chadwick
Laingsburg MI 48848
517-651-6504 (Hm)
517-641-4903 Ex. 257 (Wk)
stephenv@michigan.gov

Department of Natural Resources, Designs by Nature, LLC

I am a grassland specialist and LIP Biologist for the Department of Natural Resources, Private Lands Office and my wife and I own a business that grows and sells native Michigan Wildflowers. I've worked in partnership with schools, Michigan State University's Conservation Stewards Program, Conservation Districts, libraries and businesses all over the state.

Howard and Helen Tanner
5755 Green Rd
Haslett MI 48840
517-339-2461 (Hm)
thowardhelent@comcast.net

Community Leaders

We want to make nature and the outdoors more available to the children. Howard is an adjunct professor for fisheries at Michigan State University and former director of the Natural Resources Department at MSU and former Fisheries Chief and Director for the Michigan Department of Natural Resources. He is known as the "father of the Michigan salmon fishery." Helen is a member of many community organizations and created the Meridian Garden Club and is on the vice president for Board of Directors for the Harris Nature Center Foundation.

Lynne Thoma
530 W. Allegan St.
Lansing MI 48909
517-373-1280 (Wk)
517-373-0381 (Fx)
thomal@michigan.gov

Department of Natural Resources, Fisheries Division

I have 12 years of experience working in the Education & Information Unit of the division. Some of my duties include writing the Weekly Fishing Report, updating publications, show coordinator, fish mounts inventory, Free Fishing Weekend coordinator. I also put together information packets for teachers, scout troops, lake associations and more. It is our goal to aid anyone that has an interest in teaching others the sport of fishing. A day spent fishing can offer the opportunity for one generation to pass on their experience with a new generation of anglers. Research shows that young people today do not have access to the fishing opportunities that many of us once enjoyed. Some of the reasons: living in urban or suburban areas where fishing

access is not readily available, competition for time by an ever-increasing schedule of special activities, and too little time for unstructured leisure.

The Fisheries Division offers the following:

Free Fishing Weekend, including a list of events statewide.

A Kids Activity Book to teach kids about fishing.

Fishing Guides to teach them about the regulations that govern fishing in Michigan.

The DNR web site offers information on fish identification, fish ladders and weirs, hatcheries, fish disease and dams. We also have a site called MRBIS (Michigan Recreational Boating Information System), which will help you find a place to fish.

Jeff Tomboulia

Cavanaugh Elementary – Lansing Public Schools

2381 Mt. Hope

Okemos MI 48864

517-347-1301

517-755-1250 ext. 4905 (Wk)

jtomboul@att.net

I teach second grade at Cavanaugh in Lansing and I participate in Annie's BIG Nature Lesson with my kids.

Zachary Trost

Outdoor-Michigan.com

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East Lansing MI 48823

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517-410-8589 (Wk)

517-482-1751 (Fx)

zachary@outdoor-michigan.com

I am a former co-host of the Practical Sportsman Television Show and I launched a Website Outdoor-Michigan.com in October 2005. The site contains history and facts about Michigan. This winter if funding comes through plans are to resume weekly Snowmobile/Outdoor conditions from around the state of Michigan. Each weeks report includes names and contact information for the sources. The site over the past year has seen over 100,000 visitors. In the coming months, videos and interviews will be added to the site and there are plans to develop a television show.

For more information contact Kim Trost 517-339-5052 kimtrost@outdoor-michigan.com

Jo Trumble***Lyons Avenue Elementary – Lansing Public Schools***

2901 Lyons Ave.

Lansing MI 48910

517-648-7521 (Hm)

517-755-5628 (Wk)

jo.trumble@lansingschools.net

I have been a Lansing teacher for 17 years. I like to reach out to the community and find programs that will enrich my students. I belong to the Greater Lansing Historical Society and have hosted some of its members to come and pilot chapters of their books in my room. Likewise, I have involved Linda Peckham, LCC personnel, to walk with my class through the Mt. Hope cemetery to learn about Lansing history. She recently contacted me for possible inclusion in a grant proposal. I have been fortunate enough to participate in the BIG Zoo Lesson which led to being a representative in the BIG Zoo Party. I helped to plan, implement, and attended the only session (so far) of the Governor's Residence Education Program. My school has also hosted MSU professors as well as LCC professors to help broaden the science for the staff. I started a school garden 2 years ago and have been able to utilize input from MSU's Extension and horticulture departments, Van Atta's, and the Governor's Residence. I was a part of the children's committee back when Lansing had a Riverfest. This past summer, I was also a naturalist at Pretty Lake Vacation Camp outside of Kalamazoo.

Diana Vernier***Laingsburg Elementary School – Laingsburg Public Schools***

117 Prospect St

Laingsburg MI 48848

989-743-3410 (Hm)

517-651-5067 (Wk)

vernier@laingsburg.k12.mi.us

I am a teacher at Laingsburg Elementary in Laingsburg, and I have enjoyed participating in Annie's BIG Nature Lessons. This will be my second year involved. I have a love for kids and a passion to help out when and where I can to improve our environment. I hope to get involved next summer in the Owosso area to help improve the Shiawassee River. I feel we are all stewards of the Earth, and should do our part no matter how big or small it may be.

Sarah Wagman***Woodcreek Magnet School – Lansing Public Schools***

4000 Woodcreek

Lansing MI 48910

517 316-7158 (Hm)

sarah.wagman@lansingschools.net

I am a 4th grade teacher at Woodcreek Magnet School which focuses on Math, Science and Engineering. I love to have volunteers from my area come in to the classroom and help teach about Lansing.

Dr. T. C. Wallace, Jr.
Superintendent of Lansing Public Schools
519 W. Kalamazoo St.
Lansing 48933
517-755-1010
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tc.wallace@lansingschools.net

Lansing School District

This project will provide a new way for our students to learn about Michigan's natural resources while linking their educational experiences to a variety of academic and professional disciplines. This partnership will also provide countless opportunities for the students of the Lansing School District students to work directly with local scientists, educators, community leaders, writers and even professional fishing guides on projects relevant to learning, their future and ours. The Lansing School District is pleased to be a participant.

Dwight Washington
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Lansing MI 48906
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Michigan State University Graduate Student

I am a friend, student, teacher, community member, and passionate steward of the environment. I interested in helping Michigan, especially the Lansing area, to realize its sustainability potential. I've completed training in a number of environmental education programs, although I consider my talent for capturing "teachable moments" and ability to facilitate a natural "sense of wonder" to be my important assets. Other interests; "nature deficit disorder," St. Lawrence Watershed, sports and the environment, reading nature fiction, and eating eco-licious meals.

Cathie Wood, Andrea Hartlund
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517-641-6771 (Wk)
517-641-7288 (Fx)
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Bath Elementary School – Bath Public Schools

We are elementary teachers at Bath Elementary School. Last year was our first year to participate in Annie's BIG Nature Lesson held at Bengel Wildlife Center in Bath, MI. Experts in the areas of animal habitats, food chains, and plants came to the center daily to share their expertise with the students. We are interested in securing partnerships with other local experts to continue the program and awareness of environmental issues and human interaction among students at Bath Elementary.

Unable to Attend (unforeseen circumstances)

Tom Huggler

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HugglerTom@cs.com

Freelance Outdoor Writer

I've worked a lot with schools and outdoor programs around the state and see the benefits of getting kids outdoors to experience what life is really all about!

Jessica Pless

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517-545-7561 (Hm)
517-325-6540 (Wk)
jnjpless@sbcglobal.net

Gardner Middle School – Lansing Public Schools

I am a 6th grade science teacher at Gardner Middle School in Lansing, Michigan. I am interested in what you have to offer and am willing to offer my assistance where needed. I was recently trained at a workshop offered by the Future Fisherman Foundation and will be incorporating portions of this information into my school curriculum.