

G.R.E.A.T.

Grand River Environmental Action Team



Website: www.great-mi.org

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From River Degradation to Naturalized Habitat How Greene Park will be transformed in a drive to reduce pollution

Big changes are afoot for R.A. Greene Park, located on Lansing Avenue, north of the city. Yes, that's the park displaying a big black 1912 Baldwin locomotive with coal car. It's also where the city's Wastewater Treatment Plant is located. The park will be getting a makeover and future visitors will experience a more wildlife-friendly habitat-oriented environment, although it might not seem so to some.

As reported in the spring issue of this newsletter, an E. coli problem, created by waterfowl feces in the park's waterways now affects the Grand River. In addition, the same waterways are causing sedimentation. Both conditions are forms of pollution.

Sedimentation results from the fact that Greene Park drains a 3.8 square-mile area west of the park. Development in that basin, with all of its hard surfaces, means that the ponds can fill up rapidly with suspended particles during heavy rain. Those particles have a negative impact when transported through the park and into the river.

Reduction of sedimentation has been a goal of the Upper Grand River Watershed Alliance and of UGRIP, the Upper Grand River Implementation Project. GREAT has been involved with and supportive of the Alliance and the Project. In the past, money to address these kinds of issues has come from UGRIP grants. The grant for the proposed changes to Greene Park is being managed by JCCD Watershed Project Manager, Cecilia Govrik, and it involves federal money provided by the Clean Water Act.

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GREAT Schedules 21st Annual Grand River Clean Up!

Saturday, September 10, 2011
9:00 am—2:00 pm
Consumer's Energy Building

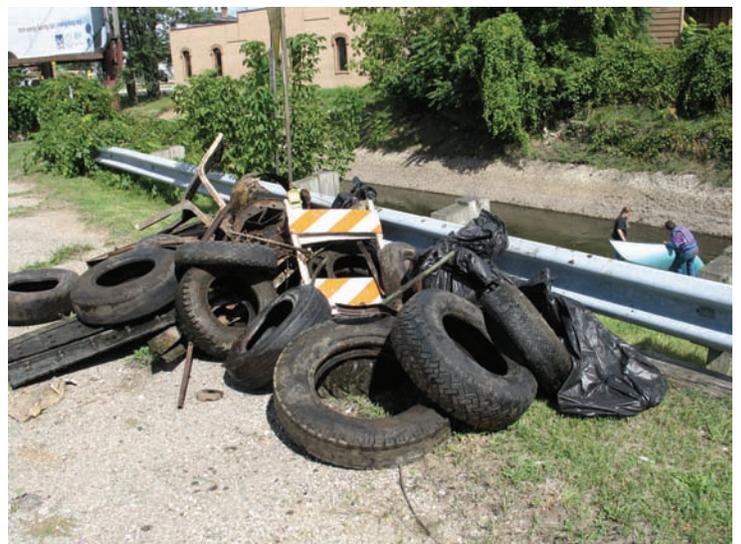
Dress for those on river duty: old jeans and shoes that can be worn in the river, hat, sunblock, and mosquito repellent.

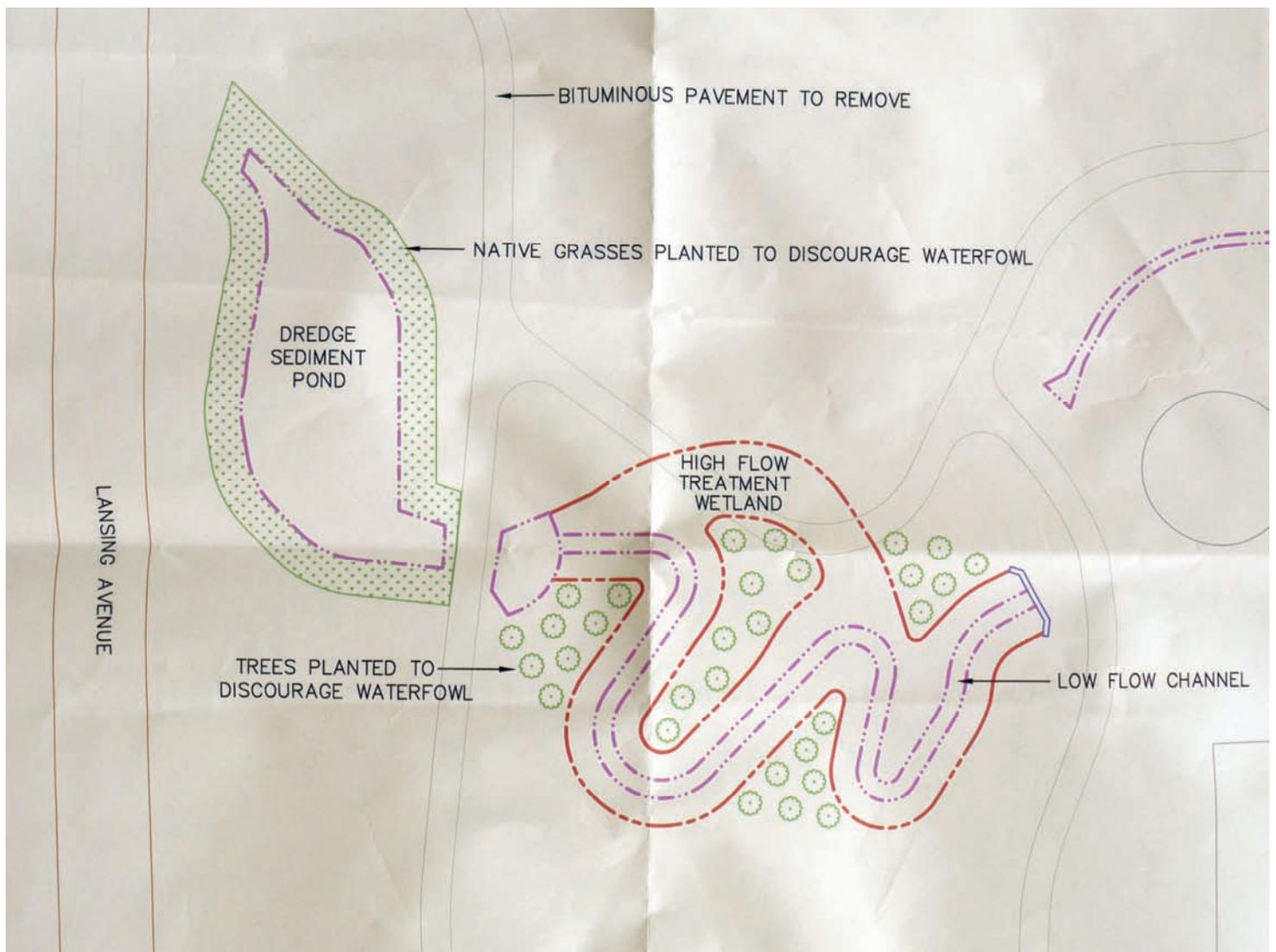
In case of bad weather, check for cancellation at
www.great-mi.org or call 517 416-4234

Lunch will be provided by GREAT

Needed: Drivers willing to transport volunteers to the clean up spots along the river, also sturdy old canoes for transporting tires and junk from the river.

Advance questions about the clean up can be directed to Jonathan Hoover at 517 782-9546 or email jonh141969@comcast.net





Even now, plans for the park's transformation are being drawn up by Jack Ripstra of Ripstra & Scheppelman, Inc., a local civil engineering firm. According to Jack, who recently joined GREAT's board, the plan has a number of laudable objectives:

- (1) to reduce the unnatural overpopulation of waterfowl within the park
- (2) to surround one pond with natural grasses
- (3) to transform the second pond into a forested wetland
- (4) to stabilize and improve the Hurd Marvin Drain leading to the river
- (5) to provide convenient canoe and kayak launch from the drain
- (6) to convert many of the park's paved roads into walking paths

If the elements of the current design are approved, water will enter the park through a culvert under Lansing Avenue.

It will flow to a newly-dredged sediment pond with margins of a gentle grade, planted with natural grasses growing to 6 feet. This natural barrier will reduce the number of waterfowl present, as ducks will be reluctant to walk into the pond and geese need a longer glide path in order to land in it. Storm water accumulating here will drop its load of sediment.

From the sediment pond water will flow over a dam into the newly-created wetland (see diagram). Trees and bog-type plants will prevent waterfowl access and create a natural environment. Tree and plant roots will help filter and clean the water, as they do in forest environments. The wetland can fill up with water in rainy weather or shrink to a low-flow channel, designed to meander through and out, connecting via a 2nd dam to the Hurd Marvin Drain, which leads to the river. As the water moves, oxygen will be added in a natural manner. Shaded by trees, the water will also maintain a cooler temperature.

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As water flows downhill to the Grand, it will traverse a redesigned Hurd Marvin Drain. The drain slope will have been adjusted to keep about 12 inches of water in the channel segment where boats are launched. In this area a gentle, grassy slope will ease boat access. The dilapidated concrete surfaces will be replaced by sandstone riprap (loose pieces). The riprap cover will trap excess sediment, further aerate the water and prevent structural deterioration.



Above: The channel in its present condition

Other benefits will include grassy areas for boaters' parking; reduced maintenance costs due to the fact that many park roads will not be plowed in winter. One paved road will remain open to traffic to give access to the Wastewater Treatment Plant. Walking paths will provide occasional views into the wetland but not public access. Manicured or mowed lawn will be replaced by natural grasses. Educational signage concerning the habitat will also be part of the improvements.

A number of citizens who enjoy feeding waterfowl at the park have complained about the new park plans in letters to the editor of the Jackson Citizen Patriot. In the past they have enjoyed feeding ducks and geese. As these objectors suffer the loss of their accustomed pastime, it is hoped that an improved kind of habitat and benefits to river quality will be the positive trade off.



The park in its current state with a mowed lawn down to the pond's shoreline allows easy access for waterfowl

As for the waterfowl, most will be forced to find a more suitable home, without the meal ticket afforded by their human benefactors.

Reactions of local officials to the proposed plan have been encouraging, including those of the County Drain Commissioner, Jackson's City Manager and Wastewater Treatment Plant management staff. The plan is expected to gain approval sometime this fall. MDEQ officials will take 90 days or more in their permitting process, making construction of the new features probable for the summer or fall of 2012.

GREAT board members have been kept abreast of grant details and plan developments. President Kenny Price believes the improvements represent a "win-win" in several ways; by reducing river pollution, creating a beautiful and useful wetland, and providing a new place for paddlers to launch. Other board members are also excited at the prospect of a new place for put-in and take-out. In fact, GREAT activity north of the city has increased over the last several years, leading up to Expedition 2010 and beyond. Focus has been on an effort to keep the river north of town both navigable and cleared of trash.

This September GREAT's annual clean-up will stretch north of the city to Maple Grove Park, for the second straight year. In addition, this past August, GREAT conducted a river clean-up stretching from Maple Grove to Berry Road. Many are aware that GREAT owns a piece of property along the Grand River north of Parnall Rd. Future plans for this site may include a barn for boat trailer storage, access to the river for canoes and kayaks and, perhaps, an interpretive nature trail.

The Grand River as Habitat

On a perfect June day this past summer, with temperatures in the mid-70's and a cooling breeze, three of us paddled down the Grand River to a wetland fed by gurgling currents. Our journey was an easy effort upstream from Maple Grove Park of about two miles. Having entered the wetland, we were guided by distinctive bird cries, best described as something between a bark and a squawk. As we proceeded carefully for a short distance westward, the telltale sounds grew louder. Gazing upward, we spotted the large twig nests of a Great Blue Heron rookery where adults were raising their chicks. The rookery was comprised of up to 8 nests per tree in some 5 adjacent trees.

Fellow board members Kenny Price and Deb Bucholtz had been here before. Now we all lay back in our kayaks, craning our necks to take in the scene. The action took place about 70 feet above our heads, against a cloudless blue sky. Even at this considerable distance the nests were distinctly visible; odd formations roughly 2 feet in diameter. Inside were grass linings and the developing young. I picked out the forms of a few perching adults and then spied juvenile heads peaking out.

Kenny snapped away with a high-powered telephoto lens, managing to capture an image of an adult with three young. From time to time, other adults flew in, slowing and landing, great wings flapping, announcing their arrivals. With wingspans of 6 feet or more, they would have been hard to miss. Herons are known to be graceful and entertaining flyers.

I discovered later that parents take turns hunting for food, and feeding their chicks, during a breeding season that stretches from March to May. A clutch of from 2 to 7 eggs are laid in the twig nests and the hatchlings need constant care for two months, after which they have a chance of surviving on their own. Even so, they are vulnerable and the mortality rate is high; according to wildlife biologists 69% will die before the age of 1 year. Once established, herons may be expected to live to an average age of 15; the oldest known adult lived to be 23.

Herons are said to feed their young regurgitated fish, mice, frogs and other small aquatic or mammalian creatures. Happily, we were too far away to provide visual confirmation.

After about 30 minutes of the rookery show we returned to Maple Grove, picking up some floating trash we encountered along the way, as we often do on outings of this sort.



Replaying the sights and sounds of the herons in my mind, it seemed to me they were thriving. We had not seen any egrets but they sometimes share rookeries with herons and are also said to be expanding in southern Michigan.

I thought about the two bald eagle chicks born this year near the Portage River, a tributary of the Grand. The eagle family was the first reported in Jackson County in well over a hundred years. The news, reported in the Jackson Citizen Patriot this past spring, seemed momentous. The upper Grand River basin, with its mix of wetlands and forest, ought to be prime river habitat.

I began to wonder; are these birds telling us something about the health of the river? Is it improving? If so, how can we measure this and how can we be advocates for continued improvement?

To begin with, the bald eagle news may actually have more to do with the quality of the restored wetland where they've been found, than with the river's quality. This according to Gary Siegrist, a naturalist with the Dahlem Conservancy. Eagles have a varied diet and do not depend solely on fish.

Therefore their presence is not a test of the Grand's health, per se. Moreover, since the 1970's, certain harmful chemicals such as DDT and PCB's have been banned or tightly regulated. Many birds, originally hit hard by these substances, have been mounting a slow but steady comeback.

The herons may be a better indication of the river's health as they are expert fishers. Their presence indicates that the Grand is supporting at least a minimal

population of fish, frogs, shrimps, crayfish and other small aquatic animals.

Another source of information would be the Adopt-A-Stream program; a repeating census of aquatic creatures such as Stonefly. Volunteers periodically find and count these creatures. Careful records are kept about where, when and in what numbers the various invertebrates are found. The Upper Grand River Watershed Alliance, the Jackson County Conservation District, the Dahlem Center and GREAT all cooperate in this effort. From these data, conclusions can be drawn about the relative health of the river.

Unfortunately, the program is of recent origin and data has only been collected since the fall of 2007, according to Paul Rentschler of ASTI Environmental. Although it's difficult to project trends at this stage, Rentschler does believe there is a general improvement in river quality,



Scientists like Rentschler who concern themselves with measuring the health of the river use the technical acronym, "TMDL." It stands for Total Maximum Daily Load; that is, the upper limit on how much of something a river can safely carry before it suffers degradation. For example, how much sediment can be present in a healthy river? Too much, and the river can silt up with deposited and suspended particles, affecting water quality physically, chemically and biologically. Sedimentation can result in the clogging of streams, destruction of fish spawning beds, embedding of various wastes and nutrients and reduction in the amount of dissolved oxygen. These lay the groundwork for fish kills, pollution and ecologically dead zones. TMDL's have been set, under Michigan Department of Environmental Quality auspices, for biota, E. coli,

mercury, dissolved oxygen and other river health factors.

Going forward, the goal is to meet the TMDL targets for all pollutants by taking action, over time, to reduce any elevated numbers. The MDEQ samples Michigan waters every 5 years, budgets permitting.

If sedimentation threatens rivers like the Grand, we might ask where it comes from. A partial list would include farmer's fields, highway road banks, city storm sewers, woodlands and construction sites. These various sources suggest a number of ways to attack the problem.

For many years now farmers have become better informed about nitrogen-rich fertilizers and are now better able to calculate the proper amounts to use on their fields. This helps prevent runoff of excess nitrates into streams and rivers. Farmers are also encouraged, through agencies like the Jackson County Conservation District, to have buffer zones between their fields and watercourses. These zones help absorb or prevent harmful runoff. Informational efforts need to continue and much work still needs to be done in this area, according the JCCD Watershed Coordinator, Cecilia Govrik.

In Michigan we commonly see fabric sediment traps installed at construction sites. The required fabric is installed below ground as well as above, in order to prevent eroded soil from being washed into drainage areas.

In cities like Jackson hard surfaces, such as streets and parking lots, drain into storm sewers leading to the Grand River. This means that materials like decayed leaves, dirt, litter and leaked vehicle fluids will inevitably degrade river water. One promising new development for these areas is permeable concrete and asphalt surfaces. These new materials are said to be as durable as the traditional ones, but have the advantage of being porous and allowing rainwater to percolate through into the earth below. If these materials are widely adopted, they will not only reduce flooding and sedimentation during rainy spells, but will also help recharge underground aquifers. Jackson County communities are slowly starting to require porous materials.

County Drain Commissioner Geoffrey Snyder often recommends the use of permeable materials in his permitting process, resulting in their use on new projects. Additionally, businesses and property owners are encouraged to develop green sod roofs, so-called "rain gardens," and the use of cisterns or barrels

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Rivermaster Q & A

Kathy Kulchinsky has been a GREAT board member and Rivermaster for the last four years. She is well known by many in the Jackson area for her devotion to environmental causes and her enthusiasm for paddling. Last year she became the owner of Quiet World Sports LLC, which offers kayak instruction. Her support for the health and increased use of the Grand River has been unswerving and inspirational.



How did you get started with GREAT?

Back in 2007 Jim Seitz started a GREAT blog. I entered a comment about a trashy site I had noticed along the river, south of town, where people seemed to be using the river bank as a dump. We did a paddle to view this site. Jim, who had recently assumed the presidency, asked me to join the board. I did so and became Rivermaster that same year. By the way, the trashy site got cleaned up, thanks to Jim. He worked successfully with people living in the area to change their disposal practices. They even participated in our next river clean-up by getting rid of the dump.

How did you get interested in canoeing?

I grew up in Vandercook Lake and, as a kid, I canoed on Vandercook Lake, Brown's Lake and the Grand River in the Ella Sharp area. My dad bought me a canoe.

How did you get back into paddling as an adult?

I remember driving past Sports Connection every day, about 12 years ago, and they had a display kayak out front. I began to want one. First I bought a used kayak and then a new one. The new one was a Swift, model: Osprey. It is an ultra-light (40#) so I can carry it myself.

I also use a special paddle given to me as a Christmas gift by my husband, Mike. It is a Bending Branches Viper paddle. It has a double bend in it for better ergonomics and the design is said to allow better continuous contact with the water, thus enabling greater speed.

How did you get to know the Grand so well?

Over the last 12 years, since buying my kayaks, I have done a lot of recreational paddling. I would paddle near my house, at first, and then in different locations. Eventually I could claim to have paddled the Grand from the headwaters on Grand Lake all the way to the northern county line. After participating in Expedition 2010, I can now claim to have paddled the entire Grand River, all the way to Lake Michigan.

Is there a time during the year you don't paddle?

Yes, when the river is frozen solid. There were about 3 weeks in January this year that I couldn't paddle. I go out in all seasons even if there is no one to go with me. In cold weather I wear a dry suit which I put on over my clothing. It is fitted with footies and gaskets at the wrists and neck, so in case of a spill, I will stay warm. Of course, I wear a PFD over the dry suit. In cold weather I will also wear a neoprene hood, hat or wool cap.



Kathy outfitted with her dry suit for cold weather paddling

What about the process of doing pre-paddles for GREAT outings?

It's my responsibility to survey the paddle route ahead of time to lop branches which are in the way or move floating logs that block passage. Others help me do this. I will also make note of any river blockages. The chain-saw crew is then notified and they cut six-foot openings where needed. Having cleared the way, we save our participants from unnecessary or dangerous portages. The pre-paddles often make the actual paddle an anti-climax, for me at least, since I've already paddled the route 2 or 3 times.

Do you have an outstanding memory during your tenure as Rivermaster?

Yes. It would be stating my wish that the entire Grand River in Jackson County would be kept passable for boaters. Four years ago you could not even paddle through the city of Jackson because there were so many blockages. Since that time city workers have helped clear much of this. City officials still respond to reports of specific barriers (usually logs) in the river. In addition, Jim Seitz helped make my wish a reality. He organized a number of chain-saw crews who went out for 4 to 8 hours at a time, cutting passages through barriers. They worked very hard throughout the year leading up to Expedition 2010, clearing the entire county. They deserve a lot of credit. It is tricky work with the chain saw because you are less stable when standing in the river or sitting in a canoe.

Isn't keeping the river open an ongoing battle?

Yes. Trees continually fall. Logs and branches are carried up against fallen trees by the current. Even on the first day of Expedition 2010, we had to clear and cut through two barriers.

How did you become the owner of Quiet World Sports?

Last summer owner Bruce Clevenger asked me if I would join him in giving kayaking instruction. I was glad to say yes. At the end of the summer he asked if I wanted to buy the business. There was no way I could afford it and I told him so, but he made me an offer I couldn't refuse. In addition, Bruce offered to spend a year working by my side to help in the transition. Buying Q.W.S. was also a timely development, since my work for Smile Michigan Mobile Dental was a school year only job and leaves my summers free for paddling and instruction.

What kind of business is Q.W.S.?

We offer kayak lessons (sorry, no canoe instruction at this time). They are given several set times per week and sometimes by appointment. I'm a licensed kayak instructor, certified by the American Canoe Association. People can sign up for lessons on our website, quiet-worldsports.com, or they can call us at (517) 879-8981.

Do you enjoy the work?

It is great to have a business that involves my passion for kayaking. Contrary to what some believe, there is a good deal of technique involved and some initial fears to overcome. What I enjoy most is how fast people learn. They often come to class afraid of rolling over and getting stuck in their kayak. We show them that gravity and their PFD (personal flotation device) will bring them to the surface. After that we teach proper technique which involves gaining good power by keeping the shoulders steady and turning the upper body. By the end of the first lesson, people seem happy about their progress and excited to continue. We have people come to us from as far away as Toledo, Indianapolis, Canton and Grand Rapids. Another thing I enjoy is the chance to work with my husband, Mike, who retired in January. I call him my "CEO." He does whatever needs doing, whether it is running errands, hauling boats, spotting me on the river, etc. I should mention Rick Berry, also. He's an ex-GREAT board member who assists me with safety when my classes are large.

What do you stress in your teaching?

Safety, safety, safety. Always wear your PFD. Use the buddy system. Don't go beyond your known abilities. Our students can learn about different styles of kayaks, since we use a variety of models. This is an advantage for those looking to buy. We do not sell kayaks, but believe in supporting the local economy, which is why we are a demo center for Peregrine Kayaks. These boats are custom-order only and Michigan-made. There are two excellent models; both well-constructed and light weight.

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for rainwater collection, all of which have the effect of reducing storm water runoff. With 20% of the world's fresh water bound up in the Great Lakes and with the Grand being Michigan's longest river, Snyder believes it is important to safeguard the health of its headwaters. "If we in Jackson County cannot manage this task, then those downstream from us will surely not succeed either," he says.

Certainly the Grand is much better off now than a century ago, before wastewater treatment. It's much cleaner than in the 1970's, when trash was the norm on the river. I believe we can say that the Grand River, as habitat, is improving. GREAT members and the larger community can take pride in such progress. But our optimism is tempered by the knowledge that there is still much to do to improve river quality and a long battle ahead. But at the end of that road is an objective worth having; a river that enables nature in all of its vitality and diversity.

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Does your work with GREAT overlap with your teaching in Q.W.S.?

Any exposure boaters have to the Grand River helps with the mission of GREAT. Recreational paddling is one way that people can make use of the river and come to appreciate its unique value. In March of this year, Q.W.S. held the Reel Paddling Film Festival at the Michigan Theater. We showed films of various lengths all day long to spur an interest in canoeing and kayaking. It was well received and plans are to repeat it next year.

GREAT Newsletter

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GREAT is a tax deductible 501c3 non-profit organization.

Remaining Paddling Events

Saturday, September 10 -- 9 AM to 2 PM

Annual Grand River Clean-up

CMS Energy Band shell off Cooper St. in
Downtown Jackson.

Parking available in ramp.

Feel free to bring your own canoe, but no
kayaks. No need to reserve a boat as GREAT
canoes will be available.

Lunch provided Greene Park (Lansing Ave.)

Sunday, October 16 -- 12 Noon

Grand River

Joint Trip: GREAT hosts Dahlem Nature Center

Tompkins DNR access site

(Tompkins Rd., north of village)

to Baldwin County Park (Onondaga Rd.)

Picnic at park, afterwards; no charge

For more information, visit our website at:

<http://www.great-mi.org>

Meet at Put-in locations at listed time. At the put-in, we create car pools for take-out placements. If needed, Call 517 416-4234 to reserve a GREAT canoe/kayak. Outings cancelled due to weather will be posted on the home page and a phone message (call 517 416-4234). They will be postponed until the following weekend, same time and location.

2011 GREAT Board

Kenny Price, President
Don Nelson, Vice President
Jim Seitz, Secretary
Debra Bucholtz, Treasurer
Kathy Kulchinski, Rivermaster
Emily Curry, Recording Secretary
Jonathan Hoover (Past President), Historian
Jack Ripstra, Trustee
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Special Assignments:

Louise Hefka, Publicity
Todd Zeller, River Consultant
Bill Kantor, Financial Statements
Jeff Grund, Tax Statements