Valuing nature: If you love something, put a price tag on it?

by sue rich

If someone were to approach you mid-stroll along your favorite stretch of river, and ask you to put a price tag on the vistas, birds and flowing waters, how would you react? Most likely, besides thinking the interaction was rather strange, the question would feel unnatural, to say the least. But what if figuring out the dollar value of special places and clean waters is exactly what we need to do to preserve and restore them?

Recently, FMR staff have noticed a couple terms making their way from academia into more mainstream environmental conversations: “ecosystem services” and “natural capital.” These terms are part of a growing movement to integrate economic thinking into conservation biology, a movement that could help heal the age-old rift between economic development and ecological health, or perhaps recognize that the divide was never that deep to begin with.

One of the leaders in this movement is Steve Polasky, Professor of Ecological/Environmental Economics at the University of Minnesota. Polasky, who was elected to the National Academy of Sciences in April 2010, is a director of the Natural Capital Project, which develops tools for quantifying the values of “natural capital.”

Polasky’s essential premise: by promising a return of societal benefits on investments in nature — essentially tallying up the services provided by ecosystems — we can help protect it.

As many international non-governmental organizations, such as The Nature Conservancy, now embrace Polasky’s approach and consider ecosystem services in their campaigns, we decided to look at FMR’s work in the context of an ecological goods and services model.

It proved more challenging than we thought.

Valuing nature, continued on page 6
### From the Director

**Let’s take the first step and admit we have a problem**

In the well-known Twelve Step approach to recovery, the first step is to admit you have a problem. Let’s hope we’ve finally taken this first step in the struggle to recover the health of Minnesota’s rivers and streams with the recent release by the Minnesota Pollution Control Agency of the cleanup plan for a key pollutant, sediment, in the South Metro Mississippi River.

Seven years in the making and the product of robust scientific monitoring, modeling and analysis, the plan officially describes the enormous problem that we’re going to have to face if we’re actually going to clean up our rivers to meet state standards. According to the plan, returning our rivers to health will require massive reductions in sediment pollution, mostly from agricultural runoff. In the case of the state’s namesake river, the Minnesota, which joins the Mississippi at Fort Snelling, the plan calls for a sediment reduction of 50-60 percent.

Boaters, anglers and river lovers of all kinds know that the Mississippi, especially below its confluence with the Minnesota River, is terribly polluted with excess sediment and nutrients. These pollutants cloud the water, choke out aquatic life — plants, insects and native mussels, cause harmful algal blooms, fill in marinas and navigation channels and are even filling in beautiful Lake Pepin at an alarming rate.

While we’ve made important progress in cleaning up the river since the Clean Water Act’s passage in 1972, what we haven’t found is a way to bring farm-field runoff under control. Because the Clean Water Act specifically exempts row-crop agriculture from accountability we’ve spent the past 40 years offering programs that encourage farmers to voluntarily employ practices that improve water quality. While nearly all farmers today use some kind of conservation practices, it hasn’t been enough to move the needle. Our waters aren’t getting cleaner.

This is our moment of truth on water quality in Minnesota. With the public release of this cleanup plan, policymakers are faced with a stark choice: Either we continue business as usual and consign another generation of Minnesotans to polluted rivers and lakes, or we acknowledge the dimensions of the problem and put into place solutions scaled to address it.

As a voice for the river and the people who love it, FMR is playing a leadership role advocating for new policies and approaches that can restore the Mississippi and Minnesota rivers to health. Sometimes that means the message we’re delivering is hard to hear. However, the first step on the road to recovery is never an easy one. Learn more at www.fmr.org.

### State of the River report in progress

**by Trevor Russell**

Can I safely swim in the Mississippi River? Is water pollution improving? Can I eat the fish I catch?

At FMR, we hear questions like these all the time. That’s why we’re partnering with the National Park Service’s Mississippi National River & Recreation Area unit to develop the State of the River report.

Currently in progress, the report will distill a broad range of water quality and aquatic ecosystem data into a clear, concise snapshot of the health of the Mississippi River.

The groundbreaking report will focus on the status and trends of 12 key indicators of river health, highlighting the swimming, fishing, aquatic life, and emerging contamination issues facing the river, along with priority management solutions for each.

Stay tuned to our e-newsletter, Mississippi Messages (sign up at fmr.org) for updates, including notice of our big State of the River presentation event this fall.
FMR, East African youth work together for Riverside Park

by Irene Jones

Cedar-Riverside is one of the most culturally diverse neighborhoods in Minneapolis and home to the largest East African immigrant community in the country. Thanks to a generous grant from the Mississippi Watershed Management Organization, FMR is excited to partner with Brian Coyle Center’s Cedar Riverside Youth Council, an elected group of 13-19 year-old community leaders, most of whom are Somali.

This spring, youth council members will participate in a series of educational service outings improving river health through pollution prevention, litter cleanups and habitat restoration work at Riverside Park. FMR and the youth council will then cosponsor a community sharing event to showcase their river improvement efforts and encourage neighborhood residents to get involved in river stewardship.

If you live or work in the Cedar-Riverside community and would like to be notified of the upcoming sharing event, please contact FMR Outreach & Volunteer Coordinator sue rich at srich@fmr.org.

One of the goals of this year’s stewardship program at Riverside Park is to reach out to the East African and other local immigrant communities and engage a more diverse audience in river and watershed protection.

Members and volunteers matter: Help us grow with $15 memberships!

by Heather Haynes

In 1993, FMR was started by our founders to be the citizen voice for the river. FMR has stayed true to that initial creed — organizing advocacy efforts, playing a key role in river conservation and restoration, and speaking out in dozens of important decision-making forums where citizens need to have a voice. With agricultural runoff, Asian carp and other issues entering high gear, FMR is facing some of our biggest challenges yet as well as the biggest opportunities the Mississippi River has encountered since the Clean Water Act. Our voice needs to be strong.

Thank you to all of our members and volunteers who have shown your support over the years — you add strength to our ability to act as the citizen voice for the river. Now, we need your help in a different way: can you help us get new members?

Now through June 1st, current FMR members can buy a special $15 gift membership and both you and the newly gifted member receive a year’s subscription to Big River magazine courtesy of Big River magazine and the McKnight Foundation. FMR volunteers who aren’t yet members can also join at the special introductory membership rate and receive the Big River subscription.

You can join via the response envelope in this newsletter or online at www.fmr.org/support/donate. Please be sure to let us know if you’d like the Big River subscription when you donate your gift! Thank you for helping raise the volume of the river’s voice.
Program Updates

The 2012 Farm Bill — conservation measures critical for the Mississippi

by Trevor Russell

As many FMR members know, pollution from large farming operations is one of the most significant water quality issues impacting the health of the Mississippi River today. Now Congress is preparing the single most influential piece of legislation affecting agricultural practices and policy in America — the 2012 Farm Bill.

Unfortunately, legislators have been quick to put programs essential to the health of our waters on the chopping block. However, conservation and sustainability groups across the country are mobilizing.

FMR and our allies will be urging Congress to support conservation programs that provide benefits to farmers who adopt agricultural practices that limit fertilizer runoff, reduce erosion and protect wetlands. This includes:

- Protecting funding for the Wetlands Reserve, Conservation Stewardship and Environmental Quality Incentives and other vital conservation programs;
- Ensuring that conservation compliance mandates are enforced and fully applied to all farmers receiving Farm Bill program benefits, payments or crop insurance;
- Carefully targeting conservation funds to those projects and landscapes that accomplish the greatest pollution reduction per taxpayer dollar; and
- Improving technical assistance to farmers and ranchers to help maximize the effectiveness of existing conservation programs.

As high commodity prices drive farmers to put more marginal lands into production, Farm Bill conservation programs have never been more important. We urge Congress to take decisive action to protect our rivers, lakes and streams for future generations, and will be in touch through our e-newsletter, Mississippi Messages (sign up at www.fmr.org), with updates and calls to action.

With ag runoff a priority pollutant, the importance of the 2012 Farm Bill to the health of the Mississippi River and its watershed cannot be overstated.

Land conservation, a public-private partnership

by Tom Lewanski

Since 1998, FMR has been diligently working to protect, restore and enhance important natural areas adjacent to the Mississippi River and some of its major tributaries in the metro area. These efforts require strong partnerships with public and private landowners, conservation organizations and funders.

At this time, there are two state funding sources in particular we would like to recognize for their support. For a number of years FMR has received funding from the Minnesota Natural Resources Trust Fund through the Metro Conservation Corridors program, and the Outdoor Heritage Fund through the Metro Big Rivers Habitat Program. Derived from lottery proceeds and the voter-mandated Legacy Amendment, both of these funds were established to protect and enhance the natural resources in Minnesota for its citizens and FMR is proud to assist with the on-the-ground work to help the State of Minnesota pursue this goal.

Since 2000, FMR has developed management plans for and conducted habitat and restoration activities on more than a thousand acres. This work benefits the Mississippi River, the plants and animals that are found in its watershed, and the people of Minnesota. FMR hires private vendors to conduct many of the restoration activities, such as controlled burns, so our work is also good for the Minnesota economy.

We are grateful to the State of Minnesota for their support in these efforts.

We also encourage FMR friends and members to visit the Pine Bend and Sand Coulee Scientific and Natural Areas to enjoy the real-world results of these public-private partnerships. Directions and additional information are available at www.dnr.state.mn.us/snas. Or join FMR at a volunteer or education event at Pine Bend. Events are listed in the calendar at www.fmr.org, where you can also sign up for our newsletter, Mississippi Messages.
Asian carp in Minnesota: lock closure likely

by Irene Jones

Last summer, Asian carp DNA was discovered in the St. Croix River, prompting Gov. Dayton and many others to call for swift action. A few months later, DNA from this invasive species was found in the Mississippi River above Coon Rapids Dam, and alarm bells went off again. Now, two species of live Asian carp have been caught in Minnesota. So what’s being done to stop them?

In early March, the Upper Mississippi Conservation and River Protection Act, a.k.a. the Upper Mississippi CARP Act, was introduced by a bipartisan effort, led by U.S. Senators Amy Klobuchar and Al Franken and Representatives Keith Ellison, Erik Paulsen and Tim Walz. The bill is also supported by Gov. Mark Dayton and the Minnesota Department of Natural Resources. The CARP Act grants the Army Corps of Engineers authority to close the Upper St. Anthony Falls Lock if Asian Carp are found upstream of Hastings. Although this would negatively impact a handful of north Minneapolis businesses that use the lock for commercial navigation, closing a lock is the only 100 percent effective strategy for stopping Asian carp from getting into the upper watershed of the Mississippi River.

Gov. Dayton and Minnesota Legislators are also working to fund solutions such as installing sonic or electric barriers in locks or at other strategic locations, and ramping up research efforts. Millions could be included in the state’s bonding bill for Asian carp deterrent technology.

FMR is working actively with a coalition of organizations to advocate for decisive action at all levels of government to stop Asian carp. For the most up-to-date information on this important issue, please visit www.fmr.org; to get involved, contact Irene Jones, River Corridor Program Director at ijones@fmr.org or 651-222-2193 x11.

FMR helps restore prairie, oak savanna and forest in Cottage Grove

Natural Resource Management Plan completed for Gateway North Open Space Area

by Joe Walton

Imagine steep slopes home to a native remnant prairie — little bluestem, big bluestem, Indian grass, prairie dropseed, lead plant and white prairie clover thriving upon the bluff. Imagine loosely scattered, large, gnarly old bur oaks amongst a carpet of prairie grasses and wildflowers. Now, see the ridgetop vista, offering spectacular sweeping views of the Mississippi River valley below.

Welcome to the Gateway North Open Space Area in Cottage Grove.

Recently, FMR staff completed a management plan to restore and enhance this approximately 54-acre site. Located along the north side of Highway 61 between 70th and 80th Streets, the area (known amongst locals as “Camel’s Hump”) is owned by the City of Cottage Grove and permanently protected through a conservation easement held by the Minnesota Land Trust.

The property’s most notable feature is its remnant prairie; less than 1 percent of Minnesota’s original native prairie remains today. Occupying very steep slopes, the bluff prairie is dominated by native and non-native grasses and contains a fair diversity of sedges and forbs (wildflowers).

However, the prairie and beautiful oak savanna are being encroached upon by woody plants, while exotic invasive plant species have become established in adjacent forested areas of the site. FMR is recommending that the initial management focus be the removal of woody brush, followed by several controlled burns.

FMR looks forward to working with the City of Cottage Grove to restore and enhance this important natural area. Volunteers will also be needed in this effort. Stay tuned to our e-newsletter, Mississippi Messages, for opportunities to restore habitat at Gateway North Open Space Area.
For simplicity’s sake, we started with one location. FMR Ecologist and Project Manager Karen Schik looked at ecosystem services provided by Pine Bend Bluffs Scientific and Natural Area, an SNA that FMR helped create in 2003 and has been restoring with professional and volunteer labor since. Located in Inver Grove Heights along the Mississippi River, this one site provides a myriad of ecological services, such as:

- **Increased local property values:** While the research in this area is evolving, Wilder Research and other institutions have found that proximity to open spaces that provide views and a more natural setting positively impact home prices in both the core cities and metro-area suburbs alike.

- **Pollinator habitat:** Native bee species, denizens of the prairie at the SNA, are important pollinators of squash, cucumber, berries, apples, melons, hazelnut, sunflower and other food crops.

- **Wildlife habitat:** While hunting is not allowed in the SNA itself, Pine Bend provides much-needed habitat for game and non-game animals. The burgeoning bird- and wildlife-watching industry is important to note; according to the U.S. Fish and Wildlife Service there are now more wildlife-watchers than hunters in America, generating just over $699 million in retail sales and supporting $415 million in related jobs in Minnesota in 2006 alone. Birds are also critical for controlling many agricultural pests.

- **Carbon sequestration:** Since plants take in the carbon dioxide produced by cars, coal plants and combustion in general, providing more areas for plant growth can slow the rate of climate change. Interestingly, U.S. Department of Energy studies show that using plants in this way — to capture and hold or sequester carbon — is most effective where there is a dense cover and diversity of native plants, as there is at Pine Bend.

There are other essential life-support services provided to us by natural areas simply through their presence. Perhaps the easiest to take for granted is oxygen production. While all plants photosynthesize, it wouldn’t be enough to simply have a yard full of plants at every home — it takes much larger tracts of land to produce the oxygen we need to breathe.

So far, preserving Pine Bend looks like a good investment — albeit a costly one. Between the purchase of its 324 acres, nine years’ restoration work and the loss of annual tax revenue, estimated total costs for Pine Bend SNA thus far are approximately $4.5 million. At this point, we can’t compare this to a specific dollar amount for the ecosystem services provided here, but taking a look at the flip

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**FMR welcomes new faces to staff, board**

**Mississippi River Challenge staff Adam Flett and Marlis Schmidt**

Friends of the Mississippi River is proud to welcome our two new Mississippi River Challenge staff, Adam Flett and Marlis Schmidt.

Adam will be handling logistics, is the first point of contact for paddlers and is also assisting with event sponsorship.

Marlis will be overseeing sponsorship, marketing and outreach, and has a few logistical duties as well.

Both come to FMR not only with experience but fresh ideas and a mission to make the 9th Annual Mississippi River Challenge the best ever!

You can reach them at aflett@fmr.org and mschmidt@fmr.org to extend a warm welcome, inquire about ways you can support the event, and offer feedback or ideas for this year’s Mississippi River Challenge. —Heather Haynes
While it is difficult to put a dollar value on the worth of Pine Bend Scientific and Natural Area, being mindful of the ecosystem services it and other natural areas provides is an important consideration for conservation efforts.

Youth Educator & Program Assistant Katie Clower

Please welcome Katie Clower, FMR’s new Youth Educator & Program Assistant! Katie will be coordinating the Storm Drain Stenciling program in St. Paul and engaging urban youth in river and watershed stewardship activities. She will also be responsible for facilitating the Stream Health Evaluation Project (SHEP) in the Rice Creek Watershed, as well as assisting with volunteer registration and event coordination for FMR’s busy schedule of public programs. (See insert or www.fmr.org for more information.)

Katie recently completed a Masters in Conservation Biology from the University of Minnesota-Twin Cities and has a great deal of valuable work experience teaching environmental education, developing curriculum, leading wilderness trips and supervising youth volunteers. Katie is eager to put her array of experiences and skills to work — collaborating with various groups, volunteers and partner organizations — and will be a great addition to the FMR team! —Irene Jones

Jeff Evans joins the Board of Directors

FMR is pleased to welcome Jeff Evans to its Board of Directors. Jeff brings many years of experience advocating for the protection of Minnesota’s natural treasures, having served for more than two decades on the board of Friends of the Boundary Waters Wilderness. Jeff is a Certified Public Accountant and adjunct professor of accounting at Macalester College in St. Paul. He’s also an avid paddler and wilderness explorer whose most recent adventure took him to Hudson Bay via the Owl River. —Whitney Clark

Although industrial agricultural practices are primarily responsible for the excess sedimentation and its impacts on other aspects of our economy, farmers are exempt from Clean Water Act regulations related to this type of pollution. Thus Minnesota cities and their residents are being forced to bear a disproportionate share of the costs of clean-up — $843 million according to an estimate by the Minnesota Pollution Control Agency.

For more information

Natural Capital Project www.naturalcapitalproject.org
U.S. Forest Service www.fs.fed.us/ecosystemservices

This basic process is interrupted whenever we alter our landscape, be it through paving or transforming our lands for use as intensive row-crop agriculture. This leads us to another key area of FMR’s work: reducing agricultural pollution.

Across many of Minnesota’s agricultural watersheds we have installed subsurface drain tiles and an extensive network of ditches to keep soils dry enough to grow crops. “By treating water as a problem rather than an asset,” explains FMR Executive Director Whitney Clark, “we’ve altered hydrologic functions at a very large, landscape scale.”

With this significant loss in ecosystem services comes a host of downstream damage — floods, water pollution — which degrades the health of fisheries for recreation/tourism as well as commercial fishing, and the sedimentation of rivers and harbors, which in turn creates problems for shipping and commercial navigation.

From Pine Bend to farm policy

Backings up a moment, when rain falls on natural landscapes such as the prairies or woodlands of Pine Bend, the water soaks into the soil. Some of it is taken up or transpired by trees and plants, whose roots also stabilize the soil and reduce erosion. That water is then released back or evaporated into the atmosphere. Depending on the amount of rainfall, most of the remaining water then slowly percolates through the soil where it can recharge groundwater, which then feeds local streams and lakes. This cool, clean and steady source of water to our streams and rivers is known as “baseflow,” and it is the reason healthy streams have water in them even in a drought.

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The bottom line?

While we are far from delivering a simple chart or balance sheet detailing the return on FMR’s investments, so to speak, we’re encouraged by the signs of potential high return, especially when considering the long-term cost-savings. In the end, it was an interesting and ultimately humbling experience, a valuable chance to see things in a different light and be overwhelmed by the complexity within even a relatively small system. Come to think of it, that doesn’t sound all that different from the experience of a good long stroll along the river.
Join the 2012 Mississippi River Challenge — Now with a half-day option!

by Heather Haynes

Friends of the Mississippi River celebrates the 9th Annual Mississippi River Challenge, July 28-29, 2012!

Some of you have paddled this event every year, some of you have volunteered every year, and some of you alternate volunteering with paddling.

Some of you paddle both days, some of you paddle one — and for those of you who wanted a third option, we are now proud to introduce a new half-day option, a particularly great fit for those paddling with kids!

Whether you choose to paddle the half-, one- or two-day route, you’re invited to join the festivities at Fort Snelling — featuring great food, live music and camaraderie — and spend the night at the historic Fort.

When you paddle the Mississippi River Challenge you help FMR engage citizens to protect, restore and enhance the Mississippi River and its watershed in the Twin Cities.

For more information about paddling, or to sign up as a volunteer for the Riverfront Support Crew, visit www.MississippiRiverChallenge.org. If you have questions about paddling, please contact Adam Flett at 651-222-2193 x30.

This summer, have an adventure right here in the Twin Cities!

Join us for Earth Day and beyond!

FMR offers dozens of conveniently scheduled events to help you learn about, restore and protect the Mississippi River and its watershed. Be sure to check out the enclosed events bulletin, or view our full calendar at www.fmr.org!