As the Mississippi River winds its way through our community and across generations, it has absorbed many insults, but it also has benefitted from important actions we’ve taken to help it. In some areas, its health is improving thanks to critical policy measures taken in the 1970s, such as the Clean Water Act, the Endangered Species Act, and banning DDT. Those actions triggered – and are largely responsible for – trends such as improved fish health, rebounding eagle populations and the return of some mussel populations. However, there is still a lot of work to do.

Like the big river itself, Friends of the Mississippi River has been evolving. Since its founding 20 years ago, FMR has been a voice for the river in the face of rapid development, an ever-shifting political landscape, and gradual climate change. What’s around the bend for FMR? Although it’s difficult to predict every specific challenge that may arise, we have plotted a course to address some emerging trends that will affect the river in the coming decades. Here’s a look at some of the big ones.

Agricultural Pollution

Nationally and here in Minnesota, agriculture remains the largest source of pollution to our surface waters; 78 percent of nitrate pollution to the Mississippi River comes from cropland, while agricultural operations on intensively drained fields result in increased erosion and sedimentation, especially in the Minnesota River watershed. In the months and years to come, FMR will be working to raise the profile of this issue among citizens so we can generate the political will to make better, smarter and more sustainable policy choices about the health of our rivers, lakes and streams.

Minnesota Pollution Control Agency Commissioner John Linc Stine is also paying attention to the trends in river health. “The health of the Mississippi River has improved over the span of my career, but major challenges remain, most importantly the cumulative impact of landscape and watershed changes,” says Stine. “To address those, we are going to need groups like FMR that can advocate passionately for the river and play a leadership role developing solutions and building support for them.”

In addition to ag pollution, newer contaminants, such as triclosan and PAH compounds, present potential risks that we do not yet fully understand.

“The widespread use of chemical compounds like triclosan has outgrown our ability to manage their environmental and human health impacts,” says Trevor Russell, FMR’s Watershed Program Director. “It’s clear that Minnesota must take the lead on removing the most dangerous, least beneficial contaminants from the marketplace. That’s why FMR

Agricultural pollution, climate change and urbanization are trends that will affect the Mississippi for years to come.

FMR: the next 20 years of river conservation

by Sylvia Bachmann
Who will speak for the river?

by Whitney Clark, Executive Director

Twenty years ago, Friends of the Mississippi River was founded to be a voice for the river and to represent people who use the river, love it, and want it to be healthy and accessible.

While we’ve made important progress since our founding in 1993, FMR’s raison d’être remains unchanged: The great river can’t protect itself. Someone must speak for it and defend it.

As we look ahead, a few top-level issues and opportunities will be on the FMR agenda. Here is a quick preview:

• **Invasive carp.** These fish are already present in the Mississippi River in Minnesota. The recent capture of some species within the Twin Cities area are a stark reminder that we are running out of time. Urgent action is needed at both the state and federal levels to prevent the spread of Asian carp beyond Upper St. Anthony Falls, and to slow their advance further downstream.

• **Agricultural pollution.** Followers of FMR’s newsletters and social media know how important it will be to resolve the problem of agricultural pollution of the Mississippi River and its tributaries for the river to truly regain its health. FMR is significantly increasing our commitment in this area. This is perhaps our most intractable threat, but we must succeed.

• **Land protection opportunities.** For 15 years, FMR staff have been meeting with public and private landowners along the river and its tributaries, identifying opportunities to protect natural areas and restore their health. We are currently excited to be working on several high-profile projects on the main stem of the river. In the central cities, both Minneapolis and St. Paul have recently completed visionary plans for adding new parks, trails and gathering spaces along the river. These projects will require media attention, political support, and funding to come to fruition. We’ll be there working to make that happen.

• **Mississippi River Corridor Critical Area.** Thanks to legislation we worked hard to pass last session, the Minnesota DNR again has the authority to develop new rules guiding development along the river in the Twin Cities. How effective will those rules be? Once they are in place, cities and townships will be required to adopt new ordinances that are consistent with the rules. FMR will continue to speak for the river as these rules and ordinances are drafted and proceed through the public review process.

• **Triclosan.** Dioxins derived from this anti-microbial agent found in many personal care products have increased by 200-300 percent in the sediment of Lake Pepin since 1963. Governor Dayton’s executive order earlier this year discontinuing State purchases of products containing triclosan was an important victory. FMR will continue the push for legislation banning the sale of these products in the upcoming legislative session.

These and many more opportunities and threats will need to be addressed in the years ahead. At City Hall or the State Capitol, in community meetings, backyards and supermarket aisles, decisions will be made that can help or hurt the river. With the support of our members, donors, partners and volunteers, we will continue to be there, working to influence those decisions.

You are the river’s voice - help us make it louder!

by Heather Haynes

As the community voice for the river, FMR weighs in on important decisions affecting your river and your community are being made. Together, we’ve leveraged the power of our collective voice in many ways, achieving great results. But there are important—perhaps monumental—decisions coming in the next several years, and our voice needs to get a LOT louder to protect the health and vitality of the river and its watershed.

We know we couldn’t do this work without your support, and we’d like to invite you to think about others who care about the river, the watershed and their community. Please pass along the giving envelope enclosed in this newsletter, or increase your own renewal by $20 to give a gift membership. You can also direct friends and family to FMR’s website and encourage convenient online donations. Until the end of 2013, the gifts will be matched by a generous FMR supporter, doubling your contribution.
The good, the bad, and the ugly carp

by Irene Jones

There’s good news and bad news in the fight to stop the spread of Asian carp into Minnesota’s treasured lakes and rivers.

First, the bad news: A second silver carp was found this summer in the Mississippi River, a short distance upstream from the first one caught near Winona last year. The silver carp, known for its ability to leap 10 feet out of the water, was found dead atop the dam, confirming fears that it can migrate past dams from one pool to the next.

Now for some good news: Congress is moving forward on authorizing closure of the Upper St. Anthony Lock in Minneapolis, the only strategy that will fully protect upstream waters from the destructive invasive carp. Once considered a political impossibility, lock closure now has the support of Democrats and Republicans in both houses of Congress. The Upper Mississippi Conservation and River Protection (CARP) Act, authored by Rep. Keith Ellison and Sen. Amy Klobuchar, has been amended to the Water Resources Development Act (WRDA) of 2013, with unanimous committee support. If WRDA passes this Fall, commercial navigation could cease in Minneapolis by the end of the 2014 season.

As Asian carp have shown up in Minnesota, the momentum for this bi-partisan action has been building. A statewide poll recently released by the Stop Carp Coalition provided clear evidence that stopping the spread of Asian Carp is an urgent priority for Minnesota voters, with 93% of respondents reporting they are concerned about an Asian Carp invasion. The poll showed that 63% of Minnesota voters support lock closure, regardless of party preference.

Meanwhile, efforts continue to explore options for protecting the Mississippi River and its tributaries downstream of Minneapolis. Protecting the St. Croix and Minnesota Rivers are no less important than protecting the Upper Miss, but the possible solutions are not nearly as simple or cost-effective as lock closure. FMR and other members of the Stop Carp Coalition are working on multiple fronts to address the threats Asian carp pose to the health of our aquatic ecosystems as well as the health of Minnesota’s economy. These include voluntary reduction in lock usage, research on barrier technology and eradication methods, aquatic habitat restoration and ongoing monitoring.

Stewardship beyond the numbers

by Sue Rich

As the 2013 season winds down, we’re extremely proud of the progress we’ve made and the thousands of volunteers who’ve contributed their hard work and enthusiasm to stewardship of the great river.

With the equivalent of three full-time staff, the FMR outreach team organizes approximately 100 events each year. Roughly half are group outings, in which we have the privilege of working with:

- Our two specialized crews: the citizen-scientist volunteers of the Stream Health Evaluation Program in the Rice Creek Watershed, and members of the River Gorge Stewards Leadership Team, our pinch-hit habitat restorers and event supporters.

FMR also organizes dozens of public events a year, including: habitat restoration outings where participants work with FMR staff and various state and local agencies to complete long-term restoration plans for special urban, suburban and rural places in our watershed – from Riverside Park in Minneapolis to the Sand Coulee prairie in Hastings. We also conduct tours and presentations, such as the North & Northeast Minneapolis riverfront tours, State of the River Report roadshows, and rainbarrel-building and other workshops that help people help the river in their own backyard, be it in Apple Valley or along the light-rail in St. Paul.

While there is always more to do, we’re fortunate to work with so many people in so many ways. This work is only possible because of our generous funders, event partners, and most importantly all the individual FMR volunteers and event participants who continue to carve time from their busy lives to serve the river we all love. Thank you.
**Program Updates**

**FMR begins major expansion of ecological management projects at 3M Cottage Grove facility**

*by Karen Schik*

For the past 10 years, FMR has been working with 3M to conduct ecological management of a 25-acre sand-gravel savanna along the river at their Cottage Grove facility. A vestige of a historically much larger prairie/savanna complex, this area retains a very nice diversity of native plants. If 3M had not recognized the value of actively managing it over the last decade, the habitat would very likely have been overtaken by invasive species, especially Tartarian honeysuckle and leafy spurge. Fortunately, this has not happened and the native community is healthy.

Building on the success of the savanna project, 3M has demonstrated its commitment to ecological restoration this year by extensively expanding the project area to include most of the natural areas on their property. By taking a more comprehensive, landscape-scale view, ecological management of the site will be more integrative and much more significant. FMR’s ecologists are evaluating and prioritizing management recommendations for over 400 additional acres!

Site surveys have revealed several previously unknown native river-bluff prairie patches, as well as the discovery that a 150-acre grassland, dominated by a smorgasbord of invasive non-native species (smooth brome, spotted knapweed, absinthe wormwood and Canada thistle), also was harboring native prairie plants such as buffalo bean and silverleaf scurfpea, species less commonly found in the metro area. The grassland is providing breeding habitat for several bird species of greatest conservation need including eastern meadowlark, grasshopper sparrow, and field sparrow, as well as bell’s vireo, a MN state threatened species.

Long-term management of the diverse plant communities along the river at 3M will be a vital asset for sustaining populations of many important plants and animals.

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**Triclosan and consumer education research grant**

*by Trevor Russell*

Last spring, FMR celebrated Governor Dayton’s executive order requiring state agencies to stop buying products that contain triclosan. Triclosan used in consumer products transforms into dioxins and other carcinogens in our surface waters, and poses other risks to human and animal health.

While we applaud the administration’s executive order, we know more must be done to encourage consumer choices that minimize the environmental and public health impacts of triclosan-based products.

Over the next few months, FMR will be teaming up with the Minnesota Department of Health (MDH) and Action Media to study public attitudes and perceptions about triclosan and other contaminants of emerging concern in household and personal care products. This innovative research will gather comprehensive data on consumer attitudes and assumptions about these products, and help us develop specific educational strategies and methods that health professionals, environmental educators, and consumer groups can use in ongoing triclosan communications and public education efforts.

By developing effective public education and communications strategies, this research will help our state effectively inform consumer choices about triclosan and similar contaminants of concern. Look for the “Minnesota Triclosan Project Public Education & Communications Report” in spring 2014.

In the meantime, we encourage all river lovers who are concerned about the impacts of triclosan to use triclosan-free products whenever possible.

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*The hairy, silvery leaves of silverleaf scurfpea are a distinctive feature of this somewhat uncommon prairie plant.*

*Some common triclosan-based consumer products.*
**Critical Area rules to be adopted in 2014**

*by Irene Jones*

The long-awaited state rules for the Mississippi River Corridor Critical Area are on track to be completed within a year. Aimed at protecting the natural, scenic, cultural and recreational values of the 72-mile corridor of the Mississippi River, from Dayton to Hastings, the new rules will ensure the river’s unique and significant resources are enhanced as the region grows and development expands along the river.

It’s difficult to deny that the Mississippi River is an incredibly valuable asset in the Twin Cities. In addition to providing drinking water to a million Twin Cities residents, the river is a focal point of our region’s sense of place and the centerpiece of many planned revitalization efforts in Minneapolis, St. Paul and other riverfront cities.

Once new rules are adopted, each of the 25 cities and townships along the Mississippi River Critical Area will undergo an ordinance amendment process to ensure land along the river is zoned to meet minimal standards and guidelines set by the state rules.

**Minnesota nitrate study: agricultural pollution and river health collide**

*by Trevor Russell*

The Minnesota Pollution Control Agency recently released a long-awaited study of nitrogen pollution to Minnesota’s surface waters. Overall, the study found that concentrations of nitrate (a form of nitrogen) have steadily increased in the Mississippi River since the mid-1970s.

On average, Minnesota sends roughly 211 million pounds of excess nitrate pollution downstream via the Mississippi River each year. Not surprisingly, 78 percent of this nitrate pollution comes from cropland.

Excess nitrate pollution poses threats to aquatic life, and is the primary driver of the Gulf “dead zone.” In addition, excess nitrate in drinking water poses serious human health risks; 27 percent of monitored sites exceeded the state’s safe drinking water standard.

Statewide, the lion’s share of nitrate pollution (about 37 percent) comes from agricultural drain tile systems that use underground pipes to quickly move water (and nitrate pollution) out of the soil and into nearby surface waters. Excess nitrate leaching from farm fields into groundwater, and then moving underground until it reaches streams, is responsible for an additional 30 percent of nitrate pollution.

Overall, the report reveals that Minnesota will have to adopt more reliable approaches to reducing nitrate pollution. In-field nutrient management, tile drainage water management, and widespread landscape diversification are all essential parts of the solution. However, as the report itself acknowledges, substantial statewide reductions in nitrate pollution are not realistic with current practices and cropping systems.

FMR and our partners continue to work with legislators and the Dayton administration to develop new measures that will hold nitrate polluters accountable for clean, healthy waters in Minnesota.
supports a statewide phase-out of some consumer products that contain triclosan.”

Urbanization & Sprawl

With the economic boom of the 1990s came rapid urbanization, which destroyed habitats and paved over large areas in the watershed, degrading water quality in the Mississippi and its tributaries. Although development slowed during the economic downturn, it has begun to pick up again.

Paving large areas in a watershed robs groundwater that provides base flow—the cool, clean source of 20-40 percent of the water in most streams. Instead of filtering through the soil, more water runs off through storm drains into our streams creating a firehose effect, eroding ravines and banks and carrying huge loads of sediment and other pollutants.

“We actually have poorer index of biotic integrity (IBI) scores in the urban streams than in the rural streams,” says Russell. “Although agriculture is the major contributor to pollution in the Mississippi River, urban runoff is really hard on local streams, wetlands and lakes. The whole hydrologic cycle is disrupted. Addressing urban runoff will continue to be a focus for us.”

“Similarly, we will continue to conserve and restore important ecological landscapes along the river and its tributaries to ensure that they’re connected, functioning and healthy,” adds Tom Lewanski, FMR’s Conservation Director.

Among other projects, FMR recently embarked on an effort to protect a 320-acre site in Elk River, Minn. “The City of Elk River is excited to work with FMR to acquire this unique scenic property,” notes Michael Hecker, Parks and Recreation Director, City of Elk River. “It is a large parcel of land that includes three miles of natural untouched shoreline along the Mississippi River. We value FMR’s assistance not only in acquiring this property, but also in developing a long-term plan for its restoration.”

Invasive Species

The Mississippi River and its watershed is also threatened by multiple invasive species, both aquatic and terrestrial. Asian carp, for example, pose a serious threat that requires immediate and sustained action.

“The presence of Asian carp will profoundly affect how people experience the Mississippi River and potentially other waters in Minnesota unless we act decisively to intervene,” says Irene Jones, River Corridor Program Director. “We’re on the verge of being able to do that by closing the lock at Upper St. Anthony Falls, but downstream of that, the carp will be more difficult to control.”

Terrestrial invasive species such as buckthorn, honeysuckle and garlic mustard also take their toll and require diligence to eradicate. These species tend to be more prevalent in proximity to population centers. While urbanization plays a role in the propagation of invasive species, they can prosper in any disturbed area, such as forests that have been grazed or fields that have been cropped. Ongoing maintenance, including prescribed burning, is key to restoring the health of native plant communities in natural areas.

Climate Change

While climate change is a global trend that is challenging to address, FMR has a role to play in anticipating its impact on the environment and offering adaptive solutions. For example, we can expect to see more extreme weather patterns, including storms of higher intensity coupled with longer periods of drought. Our growing season is getting longer, which affects animal migrations in addition to the introduction of new non-native plant species and insects.

Adapting to these changes will require new precipitation models, upgraded stormwater management systems, greater erosion control measures, increased habitat protection for native species, and stronger policies to protect water quality, among other strategies.

Technological Advances

Fortunately, we have a whole new generation of technological tools and practices for both rural and urban areas to help meet these challenges.

In terms of understanding the problems, our scientific tools have advanced greatly. For example, with recent advances in water resource science, we can now create sophisticated computer models of watersheds to better understand how pollutants move through the landscape. This allows us to more easily track the sources of pollution. We also have the ability to “fingerprint” sediment particles to determine if a sediment originated from a stream bank, a ravine, or an agricultural field. To address the impact of urbanization on water quality, low-impact development strategies are now possible using decentralized infiltration to mimic the natural hydrology of a site after development. For example, if a site naturally soaks up or infiltrates a one-inch storm prior to development, it can be engineered to do the same post-development. For rural areas, new cropping systems and practices such as conservation drainage make it possible...
to reduce agricultural pollution if we can find the policy tools to make sure these technologies are widely adopted.

In short, more advanced science is yielding better observational and management tools for dealing with the issues we face.

**Critical Area Rules**

Another area of focus for FMR is the set of rules governing the Mississippi River Corridor Critical Area. The rules for the Critical Area are currently under development by the Minnesota DNR. Following adoption of the new rules, cities and townships in the corridor will be required to develop new ordinances, which will set the framework for how the next generation experiences the Mississippi.

Important questions will need to be answered. How do our communities build out their riverfronts, or do they? How do we improve public access to the river? How do we provide space dedicated to parks, natural areas and trails along the river? How do we make sure scenic views along the river are considered as we continue to grow as a region? FMR will continue to be a voice for the river as these questions are answered.

**Strength and Support**

Since 1993, FMR has worked to raise awareness of the factors that impact river health, and to take steps to protect and restore the river and its watersheds. We’ve advised development efforts and advocated for increasingly stricter waste water permit restrictions. We also have built a solid infrastructure for tackling key issues as we move forward.

“It’s encouraging to see signs of improvement in the health of the Mississippi River,” says former U.S. Vice President and Minnesota native Walter Mondale, who has tirelessly advocated for the river’s protection and restoration. “These improvements are no accident. They are the result of lots of people and great organizations like Friends of the Mississippi River working to change public policy and influence the decisions of both elected officials and ordinary citizens to improve the river. It’s very important that they remain strong in order continue this work.”

**Farewell Bob Spaulding**

*by Irene Jones*

After six years of contributing to FMR’s river planning, policy and advocacy work, Bob Spaulding left FMR this summer for a position with Toole Design Group in Minneapolis, a national planning, engineering and landscape architecture firm specializing in bicycle and pedestrian transportation.

Bob had a tremendous influence on FMR and our efforts to improve the health of the river. Some of Bob’s key accomplishments included extensive research, writing and analysis of the Mississippi River Critical Area program; local riverfront plans and ordinances; and state rulemaking for the corridor, which will be completed in 2014. He also played a constructive role in numerous planning efforts to expand and improve riverfront parks in the Twin Cities, including St. Paul’s Great River Passage, Minneapolis’ Above the Falls Plan, Lilydale Park Master Plan, and many others.

Bob also took on the majority of FMR’s graphic design work during the past two years, creating beautiful maps, fact sheets, displays, flyers, and invitations, a fresh look for the Mississippi River Challenge, and the 2012 State of the River Report.

Bob and his good work will be missed at FMR, and we wish him all the best in all that he endeavors to achieve.

**FMR welcomes Valerie Were to its Board of Directors**

FMR is pleased to announce the addition of Valerie Were to its Board of Directors. Valerie brings additional expertise to the organization in the area of natural resource science and management. A Kenya native, Valerie is completing her PhD at the University of Minnesota this fall.

FMR’s work in the area of reducing pollution to the river is something Valerie knows a lot about. For her master’s degree, she studied water resources science. Her thesis was on the topic of monitoring non-point source pollution in the Minnesota River Basin. “It is easy to take the river for granted,” she says. “Serving on the FMR Board is one way to keep me connected to the river. I also have the fabulous opportunity to lend my voice toward shaping an organization whose sole mission it is to protect this valuable resource.”

With graduate school nearly complete, Valerie is excited to be starting a new job with the Office of the Legislative Auditor as a Program Evaluation Specialist. Welcome, Valerie!
To honor our current donors who have provided significant financial resources to ensure FMR’s protect-restore-enhance mission over the past 20 years, FMR formally recognizes all donors who give $1,000 or more in annual operating contributions as “Mississippi Riverkeepers.” Mississippi Riverkeepers are investors in the protection of our treasured Mississippi River and its watershed in the Twin Cities region. Members enjoy special benefits at various giving levels, including the satisfaction that their gift is used to realize practical solutions that improve local water quality, protect and restore critical land and habitat, and enhance the beauty of the river for all of us today and for generations to come. To learn more about becoming a Mississippi Riverkeeper, please contact Jeanine Holden at jholden@fmr.org or 651-222-2193 x 22.

A successful evening Celebrating the Mississippi River

by Heather Haynes

On September 24th, at the beautiful, historic home of Dick and Nancy Nicholson, FMR celebrated our 20th anniversary with more than 200 friends of the river. We introduced a few new highlights to our annual Evening Celebrating the Mississippi River this year – a live auction, a few words from FMR members Sue Vento and Dave Durenberger, and a guest speaker: Garrison Keillor. Laughter was as frequent as the poignant moments, and we are grateful for the chance to build stronger friendships with new and returning members. We also are grateful for the more than $94,000 raised to support FMR’s work moving forward, giving us additional capacity to tackle important outreach and advocacy goals. Thank you to everyone who helped make the evening a great success!

Invest in your river: Join the Mississippi Riverkeepers!

To honor our current donors who have provided significant financial resources to ensure FMR’s protect-restore-enhance mission over the past 20 years, FMR formally recognizes all donors who give $1,000 or more in annual operating contributions as “Mississippi Riverkeepers.” Mississippi Riverkeepers are investors in the protection of our treasured Mississippi River and its watershed in the Twin Cities region. Members enjoy special benefits at various giving levels, including the satisfaction that their gift is used to realize practical solutions that improve local water quality, protect and restore critical land and habitat, and enhance the beauty of the river for all of us today and for generations to come. To learn more about becoming a Mississippi Riverkeeper, please contact Jeanine Holden at jholden@fmr.org or 651-222-2193 x 22.

Giving Levels:
- $1,000 - $4,999 River Enthusiast
- $5,000 - $9,999 River Guardian
- $10,000 - $14,999 River Protector
- $15,000 - $19,999 River Defender
- $20,000+ River Conservationist

FMR meets all the accountability standards of the Charities Review Council of Minnesota