In January’s newsletter, I wrote about improving water quality by maintaining and/or establishing native plant buffers along your water. I left off with…”So, what’s a person to do? What can be done? Along your water, establish native plant buffers, apply minimal fertilizers and pesticides if needed (native plants don’t) and sit back and enjoy the colors, bees and wildlife that thrive in native landscapes. It’s time to make a difference in water quality!”

To assist and get a better idea of the buffer you’re considering, look at the before and after photos below (14 weeks post planting) of a native plant buffer, established on Lake Cadillac (Photos courtesy of MI Natural Shoreline Partnership). The natural plant buffer provides additional wave energy protection, habitat for wildlife, filtering of runoff from the manicured lawn and nutrient uptake of lawn fertilizers that migrate to the water. Plants can be selected for mature height to maintain the view of the water as well.

The following photo really displays a well, planned buffer, providing scenic beauty as well as habitat cover for many species of wildlife.

Below are a number of website links for additional resources to get you started in considering and planning your natural shoreline. Note: there are a number of professionals available to assist with planning, as well as consultants to establish these precious filters to improve water quality and habitat.

Michigan Natural Shoreline Partnership:
https://sites.google.com/site/mishorelinepartnership/home

Landscaping for Water Quality - Garden Designs for Homeowners:

Natural Shorelines for Inland Lakes:

Natural Shoreline Landscapes on Michigan’s Inland Lakes ($25 @ MSU Bookstore):
http://shop.msu.edu/product_p/bulletin-e3145.htm

Understanding, Living with and Controlling Shoreline Erosion – A Guidebook for Shoreline Property Owners (Tip of the Mitt Watershed Council)

Michigan Inland Lake Shorelines (MSU Web Site):
http://www.shoreline.msu.edu/
Spring has finally come! After the long cold winter, I’m happy to see the green sprouts starting to spring up from the ground. Of course, some of these sprouts we don’t want to see.

I have learned that most good things have bad things associated with them. We plant our flower and vegetable gardens but have to contend with the weeds that grow with our plants. We mow our yards only to find dandelions and other weeds growing faster than we can mow. Then, we have dry spells that make our yards brown.

So what DOES a person do? We normally use herbicides, pesticides, fertilizers and other chemicals to counteract the “bad” that we contend with. But these chemicals have consequences to our waterways.

So what CAN a person do? We can use native plants in our flowerbeds. Native plants are those plants that have been here since before settlement time. Native plants are accustomed to our climate so they don’t need fertilizers and irrigation. They supply food for our native birds and insects. Take milkweed and lupine for example; they are actually necessary for the reproduction cycle of Monarch and Karner Blue butterflies.

We can use native grass for our yards. The University of Michigan has developed a list of alternative grasses that are slow-growing and can give you the lush, durable green lawn you want without fertilizing and irrigating. You can view their list at: www.lsa.umich.edu/mbg/files/DIY_Alternative_Lawns.pdf/

If you must use a fertilizer, make sure it contains no phosphorus. Phosphorus is a primary water quality concern in Michigan. Beginning on January 1, 2012, the Michigan Fertilizer Law took effect which restricts phosphorus from being applied on lawns, including athletic fields and golf courses. For more information, please read the article on page 4.

Man has changed our landscape a great deal since settling in Michigan. Some of it hasn’t been for the best. Michigan’s future depends upon our actions.
**Higgins Lake Evaluation project**—Due to researchers’ limited time, we have asked for an extension to allow time to complete the final reports. The extension will be the end of June 2015. Keep watch on our website for further details.

**Upper Watershed Management Plan**—The MRWA has asked for an extension for our Upper Watershed project so edits to the watershed management plan can be completed by GVSU Annis Water Resources Institute. An August 31, 2015 extension has been granted by the DEQ.

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**Come paddle with us!**

The MRWA Voyage of Discovery Committee is planning a paddling trip down Tamarack Creek in Montcalm and Newaygo Counties on June 5 and 6. Keep watch at our website for more information or email the MRWA at mrwa@ferris.edu.

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**Join the Muskegon River Water Monitoring Program**

Find out what those bugs in your stream mean, by joining the Muskegon River Monitoring Program. Monitor a stream near you each spring and fall. The information collected will be used by the MRWA and forwarded to the State of Michigan to be used in water resources management and protection programs.

The MRWA is seeking volunteers who are interested in the water quality of the Muskegon River Watershed and who would like to be trained to collect and identify the insects in their local stream.

If you are interested in collecting macroinvertebrates in Muskegon River tributaries, please contact Project Manager Dixie Ward at 231-591-2320 or email projectmgr@ferris.edu. Join now and help protect and improve the water quality of streams in the Muskegon River Watershed!
Have you ever purchased fertilizer and wondered about those three numbers on the bag? Those numbers indicate the percentage of different nutrients contained in the bag. The first number indicates the nitrogen content, the second refers to phosphorus, and the third to potash or potassium. So, in a 50 pound bag that has 16-4-8 printed on the side, 16 percent of the fertilizer is nitrogen, four percent is phosphorus, and eight percent is potassium.

Each of these nutrients has a different effect on plants. Nitrogen boosts rapid growth and increases seed and fruit production. Phosphorus also produces rapid growth, transforms solar energy into chemical energy, and encourages root growth and blooms. Potassium helps with fruit production and disease resistance.

So why should we be concerned? Fertilizer can be transferred to our waterways during rain events and melting snow. These same nutrients that boost growth in terrestrial plants also boost growth in aquatic plants. Aquatic plants can deplete oxygen in the water and cause dead zones where fish and other animals cannot exist. Nutrients can also feed non-native aquatic plants thereby crowding out native plants that our wildlife needs for food and shelter. Additionally soil scientists have determined that Michigan soil typically has enough phosphorus to maintain a normal lawn area.

In 2012, Michigan passed a law that people can only apply fertilizer containing phosphorus (the second number on the fertilizer bag) when 1) a soil test indicates phosphorus is needed, 2) establishing new turf, 3) using a biosolid, natural fertilizer, or manipulated manure (some limitations apply). Golf course managers who have completed an approved training program are also allowed to apply phosphorous. Finally, there are exemptions in the law for agriculture, gardens, trees, and shrubs.

The most significant problem with the law is that stores are still allowed to sell fertilizer containing phosphorus. Many of us are purchase fertilizer with phosphorus, unaware that we are breaking the Michigan Fertilizer Law.

So think twice about fertilizing your yard and the next time you go to the store to purchase fertilizer, take a look at the bag. Make sure there is a “0” in the second numbered position.
There is a famous anecdote about President Calvin Coolidge’s nickname which was “Silent Cal”. One Sunday, his wife wasn’t feeling well, so the President went to church without her. When he returned home, his wife asked, “What did the pastor preach about, Calvin?” He replied, “Sin.” After a lengthy pause, Mrs. Coolidge asked, “What did the pastor say about sin?” The President replied, “He’s against it.”

The MRWA’s agenda is clear in our mission statement: To “preserve, protect, and restore” the Muskegon River. We support things that do this, and if something prevents this, we’re “against it.” Our board of Directors have decided that, as in the case of President Coolidge, it might be good to be a bit more specific. MRWA At Large members were tasked with researching timely watershed issues, the first of which follows:

A Board member reports finding a mattress dumped in a ditch which feeds Ryan Creek, a Muskegon River tributary in Mecosta County. For decades, mattresses and furniture were required to be treated with fire retardant, which is usually made from polybrominated diphenyl eithers (PBDEs) or chlorinated tris (TDCIPPs). These chemicals have since been identified as endocrine disruptors.

All animals, ourselves included, have endocrine systems that distribute hormones like adrenalin, insulin, and estrogen through our bodies. These hormones regulate growth, metabolism, cognition, and reproduction. Disruptors can impair any animal’s functions, but are especially dangerous to growing youngsters. Over time, foam padding in mattresses, furniture, changing table pads, pillows, and carpet padding breaks down, releasing these chemicals into the air, soil, and water. Eagles have recently been found to have very high levels of these chemicals in their bodies. Since eagles aren’t known to eat furniture, these chemicals must be coming from things like that mattress in the ditch.

These chemicals are being phased out, but exposure can be minimized by using a HEPA filter vacuum, handling old furniture and carpet padding with caution, and carefully reading the labels on baby products. An excellent study by Yale—New Haven Teachers’ Institute entitled “Endocrine Disruptors in our Drinking Water,” is available at http://yale.edu/ynhti/curriculum/units/2009/5/09.05.07.x.html.

By the way, a sanitary engineer (a good guy) removed the mattress at our Board member's request.
Invasives Watch - Phragmites

Phragmites have become more and more prevalent in our watershed in the past decade. A few years ago, a group of us walked down to Bear Lake from North Muskegon Schools in Muskegon County. When we got there, we could not see the lake through the phragmites!

Phragmites was introduced on the east coast sometime in the late 1700s and early 1800s. It is prevalent in Europe and many other continents but it is unclear exactly where it originated.

As with many non-native plants, Phragmites outgrow and displace many of our native plant species. They also can grow up to 18 feet tall and of thick density. They also provide little food for wildlife.

The spread of Phragmites can occur by seed distribution through wind, birds, and other animals. They also spread by horizontal, above the ground and underground stems, and can expand 30 feet per year!

We do have native Phragmites in Michigan so be sure to have an expert identify the plant before you attempt to eradicate it. Many methods have been tried to eradicate Phragmites and continuing research is being done using biological control. Currently, using specific herbicides by licensed applicators has proven most effective in controlling and eradicating Phragmites.

Photo courtesy of USFWS
Yes, I would like to help the MRWA by contributing the following:

Membership fees (per year) are:

- $10—Students
- $20—Individuals (non-student)
- $300—Individuals (non-student) lifetime
- $30—Organizations (community based/nonprofit)
- $50—Townships/Cities/Villages
- $100—Counties
- $50—Small business (20 employees or less)
- $100—Business/Industry/Agencies
- $100 per county—Regional (multiple counties) Entities/Tribes

☐ MRWA donation in the amount of $__________
☐ *Endowment contribution in the amount of $__________

☐ Muskegon River Book—$10-members $13 non-members (plus $5 shipping)  
Check written to “MRWA”

Name: ___________________________ Organization: ___________________________
Street and Mailing Address: ___________________________________________________
City, State, Zip: __________________________________________________________________________
Phone: __________________ Fax: __________________ E-mail: ____________________________
Comments/Questions: ____________________________

☐ Please send me a copy of the 2014 MRWA Annual Report when it becomes available.

Please return to: Muskegon River Watershed Assembly, @FSU, 1009 Campus Drive JOH303, Big Rapids, MI 49307-2280
MRWA Calendar of Events

***See page 6 for more activities***

MRWA Resource Committee
May 6—5:00 PM Muskegon State Game Area

MRWA Voyage of Discovery
June 5 & 6—Tamarack Creek
See page 3 for more information

MRWA Executive Board meetings
MRWA Executive Board meetings are open to the public and usually held on the third Monday of each month with some meetings being held via conference calls. Please check the MRWA website for last-minute changes of meeting schedules or call 231-591-2324.

“The Muskegon River Watershed Assembly is dedicated to the preservation, protection, restoration, and sustainable use of the Muskegon River, the land it drains, and the life it supports, through educational, scientific and conservation initiatives.”