Finding solutions in the Pine River Watershed

By Julie L. Spencer
Gratiot Conservation District Administrator

The Gratiot Conservation District has been awarded a grant by the Michigan Department of Environmental Quality (MDEQ) to finish writing a watershed management plan for the Upper Pine River Watershed (upstream of the dam in Alma).

This is a huge step forward in the future health of the Pine River, which has been identified to contain high levels of several pollutants including E. coli bacteria, and sediment buildup.

The Gratiot Conservation District has applied twice for a grant to finish writing the watershed management plan. Although the proposal was recommended for funding during the summer of 2016, government dollars were not available at that time. They are now.

In July of 2017 the MDEQ announced another round of funding and the Gratiot Conservation District had already begun working on reviving last year’s proposal to be resubmitted by the deadline in September. That is no longer necessary.

Gratiot Conservation District Administrator, Julie Spencer received a phone call and later an email confirmation from Cheri Meyer of the Water Resources Division at MDEQ saying, “We received approval to fund the Pine River WMP planning proposal that was submitted last year... therefore, you do not need to submit a new proposal next month for development of the WMP plan.”

The amount requested last year was $141,670, and Meyer says that if costs are still roughly the same, that is the amount that should be expected.

Background:

The Upper Pine River Watershed Management Plan was started by Julie Spencer in 2012, but the project didn’t really take off until the winter of 2013 when community members who lived along the river got involved, most notably Jane Keon and Gary Rayburn.

Jane Keon took the framework for the plan, organized the notes and data that had been gathered, and attempted to finish writing the plan. It was close, but not yet the way DEQ wanted it submitted. That’s where the funding will make the difference.

The funding will be used to pay an independent consulting firm, Streamside Ecological Services, to finish writing the watershed management plan, submit the completed plan to the MDEQ for final approval, and apply for implementation dollars.

What’s the next step? Once the plan is written, it will be submitted to the MDEQ for final approval. The approved plan will lay out specific projects that, if implemented, will improve the water quality in the Pine River.

What kinds of projects will be included? The short answer is: anything that will help improve water quality. The ultimate goal is clean water.

There are a few basic categories of challenges to be addressed and they break down as follows:

**Sedimentation and Soil Erosion**
The largest source of pollution in Michigan streams is sediment. When soil...
washes off the land and into the water, it builds up and clogs the streams, ditches, drains, and lakes. The soil also carries with it any other pollutants that are attached, such as fertilizers, pesticides, and animal waste.

Nutrients

Anything that has been applied to the land has the potential to runoff into the streams. This includes lawn fertilizer, agricultural phosphorus and nitrogen, manure, waste from migratory birds such as geese and ducks, even salts and other chemicals that wash off the roads.

Tile Drainage Systems

Most of central Michigan was once very swampy. In order to farm and live on the land, drainage tiles are installed to pull water out of the soil and wash it downstream. Without proper tile drain management, any chemicals or nutrients in that water washes downstream as well.

Failing Septic Systems

A recent study conducted in cooperation with the Mid-Michigan District Health Department identified approximately 300 properties in the Upper Pine River Watershed where there were no records of a septic system having been installed ever, or after 1970. The life of a septic system is about 20-30 years if properly maintained. Even if a high-quality septic system was installed thirty years ago, and has been properly maintained by pumping the system every three to five years, it is likely failing and human waste is seeping into the groundwater and streams.

Many other sources of pollutants will be specifically identified in the plan including crumbling infrastructure like roads and bridges, improvements to the dam system, and dredging in the impoundment.

But identifying challenges is only the first step. Solutions must also be planned for each challenge and then those solutions must be implemented. That will require more funding and more work.

What are some solutions? One focus at the Gratiot Conservation District addresses several categories of pollutants in the watershed: conservation farming practices.

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Planting filter strips, buffer strips and grassed waterways help create a barrier between farm fields and streams, preventing soil erosion and sedimentation. Anything that has been applied to the land has the potential to runoff into the streams. Preventing the soil from reaching the stream addresses multiple challenges.

Making the transition from conventional tillage to no-till farming is another way to hold soil in place, especially if the change includes planting cover crops.

Changing farming practices takes time and money. The Gratiot Conservation District is working with partners who may have funding available to help farmers make those changes.

The ultimate goal is clean water. This project is a long way from completion, and real changes to water quality using these implementation dollars are still years away, but this is a positive step in the right direction.

The Gratiot Conservation District is committed to keep working to bring grant funding into the community to improve water quality, but this is a long-term
If you would like more information about the Upper Pine River Watershed Management Plan, the septic assistance program or funding sources to pay for changes in farming practices, please call Administrator, Julie Spencer at 989-875-3900 Ext. 3009