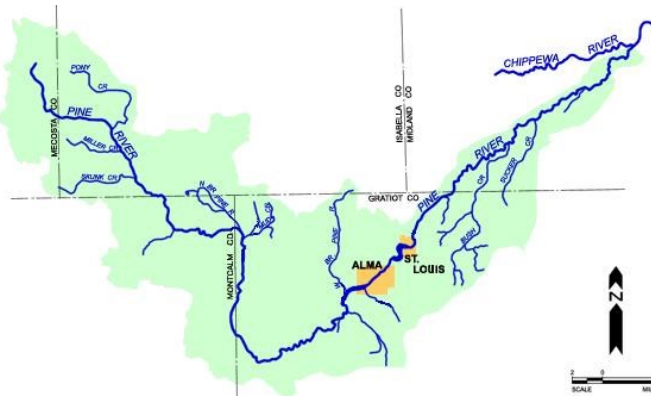


# Who is the Healthy Pine River?

**Healthy Pine River (HPR)** is a 501(c)(3) organization formed in 2015 by citizens who pledged to improve the condition of the Pine River.

## The Pine River Watershed



*Our hopes are that we can restore our river and impoundments so that...*

- Our residents can recreate on the river safely.
- The river will return to a resource that residents will be proud of.
- The appeal of the river draws further healthy development to our community which benefits both residents and businesses.
- Residents may retain their property values.
- We may gift a clean river to our future generations.

# How Can I Get Involved?

**HPR is always looking for new members to help restore the Pine River!**

**Becoming a member is easy** – sign up online at [www.healthypineriver.org](http://www.healthypineriver.org) or in person at our monthly meetings.

*Membership dues start at \$5 per year.*

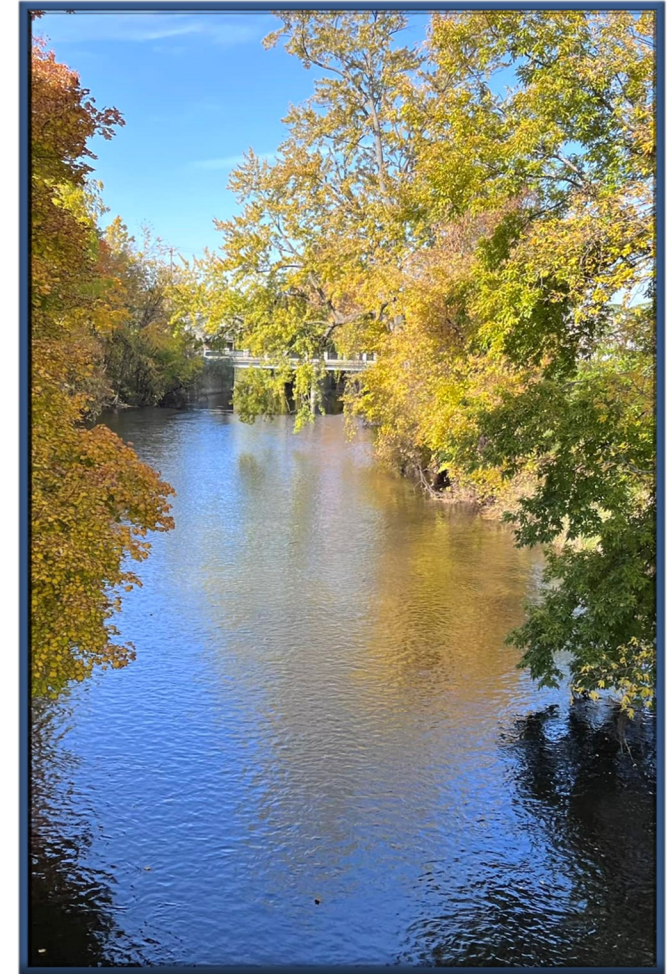
**Join us at our monthly meetings** to listen to speakers, discuss river issues, and continue to be proactive in helping the river!

**Membership Meetings are held every 2nd Thursday of the month at 7:00 P.M. at the Alma Public Library.**

Check out our website at [www.healthypineriver.org](http://www.healthypineriver.org) to view information about the Pine River and access community watershed protection resources and past organization successes.

Follow us on Facebook and Instagram **@healthypineriver** to see our upcoming events and meetings.

**Dues and donations help fuel the actions HPR takes to help better the river.**



**Helping Restore the Pine River and Its Tributaries**

# What is Wrong with the Pine River?

Water testing has shown that the Pine River is contaminated with high levels of *E. coli*, nutrients (phosphorus, nitrates/nitrites, ammonia), and sediment.

The Alma and St. Louis Dams constrain sediment and nutrients, causing the river to become shallow and warm, increasing vegetation growth, and altering fish habitat.

The Pine River used to be a coldwater trout river, but now the trout population has moved to coldwater tributaries. Minnows and sucker species are now the dominant species in the Pine River.

**These issues cause harm to the river's ecosystem and create health risks for recreational opportunities.**



# Pollution and Its Sources

## *E. coli*

There is a human health risk from partial and full body contact in the Pine River due to a high concentration of *E. coli*.

**The main sources of *E. coli* pollution are:**

- Aging and faulty septic systems in our rural communities introducing human waste into the Pine River Watershed.
- Over application of manure as fertilizer on agricultural fields.

## Nutrient Overload

Excess nutrients in our river is what causes the excess algae and vegetation growth we see in the Pine River.

**The main sources of excess nutrients are:**

- Improper manure application to cropland.
- Aging and faulty septic systems.
- Residential fertilization.

## Sediment Overload

Some sediment is natural, however too much sediment creates problems. It carries *E. coli* and excess nutrients and also shallows and warms our river.

**The main sources of sediment pollution are:**

- Cropland erosion.
- Dams.
- Gravel Roads.
- Unstable streambanks.
- Runoff from developed areas.
- County Drains.

# Making a Difference

## Are these problems solvable?

Yes, but what has taken many years to create these significant problems will take time, planning, and a community effort to restore the health of the river.

## *HPR works on many fronts to protect and restore the river :*

- Funds annual water testing.
- Provides septic system guidance by employing a septic liaison to work directly with rural residents and communities.
- Promotes and lends copies of the Upper Pine River Watershed Management Plan.
- Engages landowners, farmers, and farm agencies in promoting best management practices.
- Provides outreach to educate and inform our communities.
- Works closely with the State and Federal Agencies in seeking grant funding.
- Works closely with our community leadership, residents, and organizations to organize efforts to help restore the health of our river.