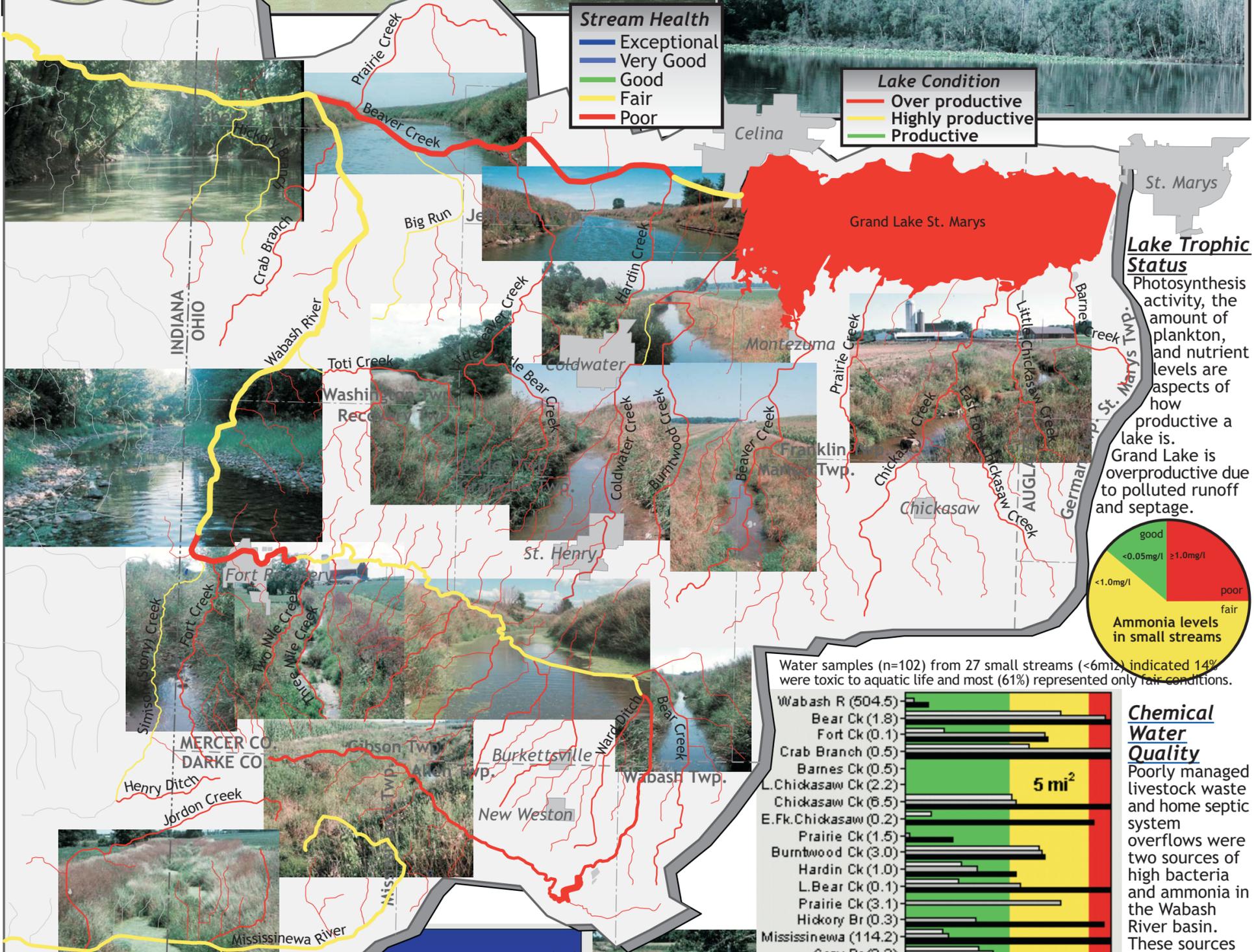


In 1999 the Ohio Environmental Protection Agency evaluated the biological health and water quality of the Wabash River basin within Ohio. Fish and aquatic insect communities, water chemistry, stream sediments, and habitat types were studied at 90 sites. The Wabash River watershed is Ohio's most degraded watershed. Poor conditions exist in most of the basin. Starting as agricultural drainage ditches, most small streams were hurt by polluted farm runoff. Few wooded areas exist next to these streams. Without buffer strips to trap soil eroded from fields, rocks and other stream bottom substrates were usually smothered with silt. Excessive nutrient and high bacteria levels were also commonly faulted for poor water quality conditions.

Wabash River



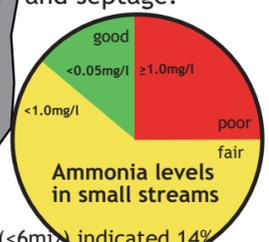
Stream Health

- Exceptional (Blue)
- Very Good (Light Blue)
- Good (Green)
- Fair (Yellow)
- Poor (Red)

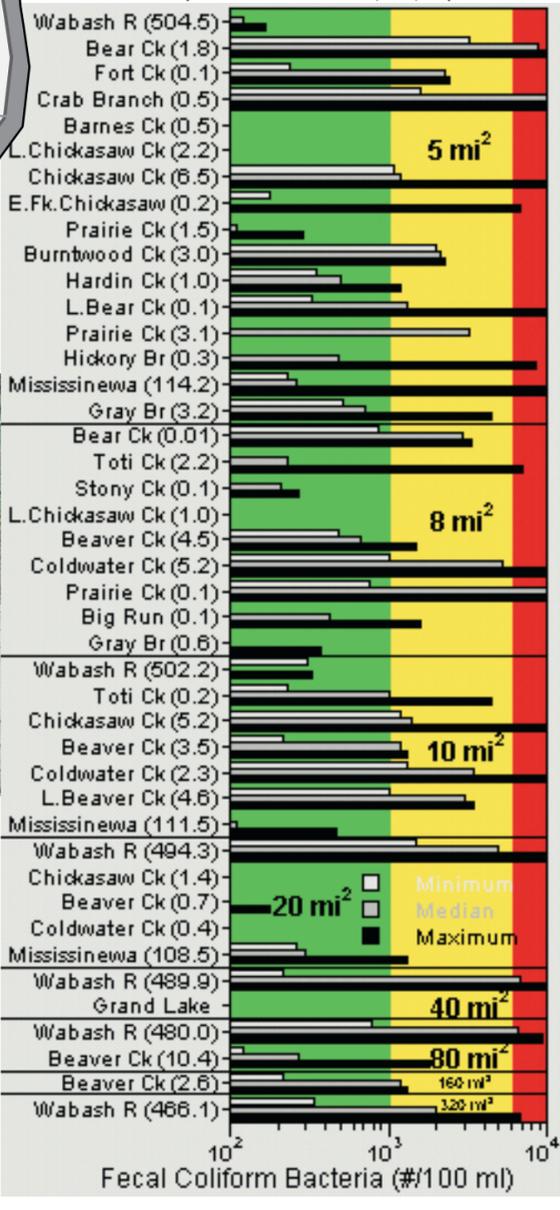
Lake Condition

- Over productive (Red)
- Highly productive (Yellow)
- Productive (Green)

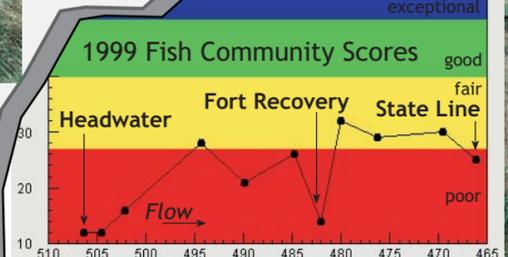
Lake Trophic Status
Photosynthesis activity, the amount of plankton, and nutrient levels are aspects of how productive a lake is. Grand Lake is overproductive due to polluted runoff and seepage.



Water samples (n=102) from 27 small streams (<6mi²) indicated 14% were toxic to aquatic life and most (61%) represented only fair conditions.



Chemical Water Quality
Poorly managed livestock waste and home septic system overflows were two sources of high bacteria and ammonia in the Wabash River basin. These sources along with farm fertilizer runoff and some municipal wastewater contributed to high nutrient concentrations throughout the basin. High nutrient levels in most small streams prohibited normal aquatic life to live in them. Poor water quality created toxic conditions at many sites in the basin. The lack of good habitat made these conditions worse.



Biological Integrity
Ohio EPA calculates a biological integrity grade for each sampling site. Types and numbers of aquatic animals, eating and breeding patterns, and the ability to survive in polluted conditions are factored in this score. The Wabash River basin was inhabited by simple aquatic communities with few pollution sensitive species. Smallmouth bass were absent from the basin. Like a "canary in a coal mine," the loss of this fish occurs as water quality declines.

Most Wabash basin streams have been turned into ditches. This effort prevents natural stream functions. It is unlikely that the Wabash will ever support healthy aquatic communities.

Wabash River:
Length: 41 miles in Ohio
Gradient: 5.3 ft/mi
Drainage Area: 323 sq mi
Fish Species: 45
Aquatic Insect Types: 212
Fish Consumption Advisories: None

