

Clean Water

starts with you

The DNR tests waters throughout Iowa to make sure they are meeting state water quality standards. Those standards are in place to protect drinking water, aquatic life and recreational uses, like swimming. When a stream or lake doesn't meet those standards, the stream or lake is placed on the state's impaired waters list. The DNR then creates a plan which outlines ways Iowans can help improve the water quality in their community's lakes and streams.

DNR needs your input
Every Iowan needs the help of their fellow citizens and watershed groups to improve water quality in their community. If you or your group would like to meet with a DNR staff member to discuss water quality, please contact Chris Van Gorp at (515) 281-4791 or Chris.VanGorp@dnr.iowa.gov



For more information on water quality improvement plans, please visit <http://watershed.iowadnr.gov>

East Lake Osceola

Pollutant: Algae and turbidity

Pollution Sources: Row crop agriculture, pasture land, internal lake recycling



What's wrong with East Lake Osceola?

Excessive algae blooms and poor water clarity keep the Clarke County lake from meeting its state-designated standards.

These algae blooms and cloudy water make the lake less appealing, both visually and for recreational uses like swimming.

However, the algae blooms and cloudy water do not pose a specific human health threat.

The map to the right shows the East Lake Osceola watershed shaded in gray. A watershed is an area of land that drains into a body of water. In this case, all land shaded in gray drains into East Lake Osceola.

What is causing the problem?

Most pollution in the East Lake Osceola watershed (the area of land that drains into the lake) comes from nonpoint sources, or sources that are not easily traced back to a specific "point," like a wastewater treatment or industrial plant.

In the East Lake Osceola watershed, nonpoint sources include areas of row crop, pasture and geese.



To reduce the amount of nutrients reaching the lake, changes in land and lake management will be needed. It will take time to make these changes and to see the effects.

What can be done to improve East Lake Osceola?

The ultimate goal is to improve water quality and remove the lake from the state's impaired waters list. To do that, the levels of algae blooms need to be reduced and water clarity needs to be improved.

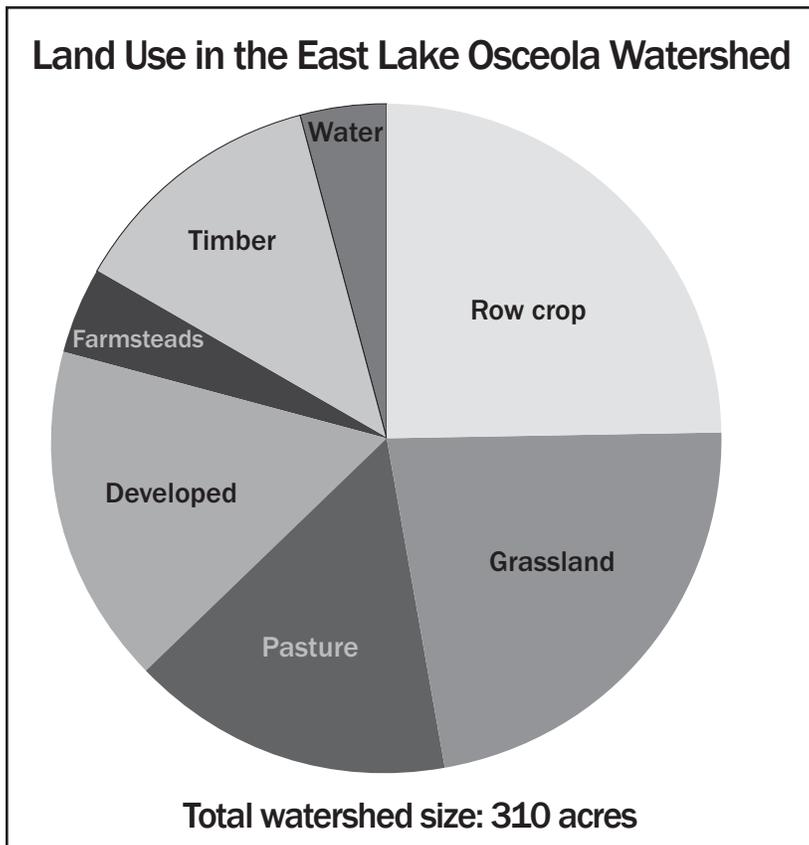
Using research results and with the help of the public, the DNR has developed a water quality improvement plan (also known as a TMDL, or total maximum daily load).

The plan will help reduce the amount of pollutants reaching East Lake Osceola. A water quality improvement plan is a suggestion to local communities on how they can improve their area's water quality.

While the DNR has done the background research and can provide some technical and funding assistance, it is ultimately up to the watershed residents and businesses to take action and clean up the lake.

Goals for East Lake Osceola

The DNR has identified goals that must be met to make a significant improvement in water quality at East Lake Osceola.



Total phosphorus must be reduced by at least 71 percent. Reducing total phosphorus will result in less algae in the lake.

The degree of water clarity is measured by a Secchi Disk reading. In East Lake Osceola, the Secchi depth must increase from 0.4 meters to at least 0.7 meters.

Installing conservation practices in the watershed can help us to achieve these goals.

The DNR suggests the following management practices for East Lake Osceola and its watershed:

Land management:

- ◆ Install terraces, ponds or other erosion and water control structures at appropriate places within the watershed to control erosion and reduce the amount of sediment and phosphorus reaching the lake.
- ◆ Continue encouraging the adoption of reduced tillage systems, especially no-till and strip tillage.
- ◆ Improve nutrient management, including incorporation of nutrients into the soil.
- ◆ Continue adoption of reduced tillage systems.

Control of internal nutrient loading in the lake:

- ◆ Manage rough fish such as carp.
- ◆ Control shoreline erosion.
- ◆ Control the effect of geese on lake.