

Elk City Lake Watershed RCPP Project

Addressing Water Quality Issues

Partners:



North Fork of the Red River Conservation District

Elk City Lake is a 240 acre lake constructed by USDA in 1970 primarily for flood control but is now operated by the City of Elk City for recreation. Land use in this 15,500 acre watershed in Beckham County is primarily range, pasture, and cropland with no permitted discharges.

Elk City Lake is officially listed as impaired by water clarity issues (turbidity). In 2014, the lake manifested significant blue-green algae blooms (Figure 1), and at least one fish kill was reported.

In 2006, the City of Elk City approached the Oklahoma Conservation Commission (OCC) about a program to address the lake's water quality problems. OCC developed a Watershed Based Plan to

address water quality concerns through conservation actions, but funding wasn't available at that time. This was a perfect scenario for a focused RCPP project.

Partners in the Elk City Lake Watershed RCPP will work with landowners in the watershed to install conservation measures that reduce delivery of pollutants (nutrients, sediment, bacteria) contributing to problems in the lake.

The OCC will work cooperatively with other partners to conduct water quality monitoring to measure the effectiveness of program actions in reducing water pollution delivered to the lake.

A total of \$3.1 million is pro-



Figure 1. Blue-green algae blooms and low water levels are evident at Elk City Lake in 2014.

jected to be spent by partners through 2020, generating a potential for 1-2 times this in impact to the local economy through installation of conservation measures.

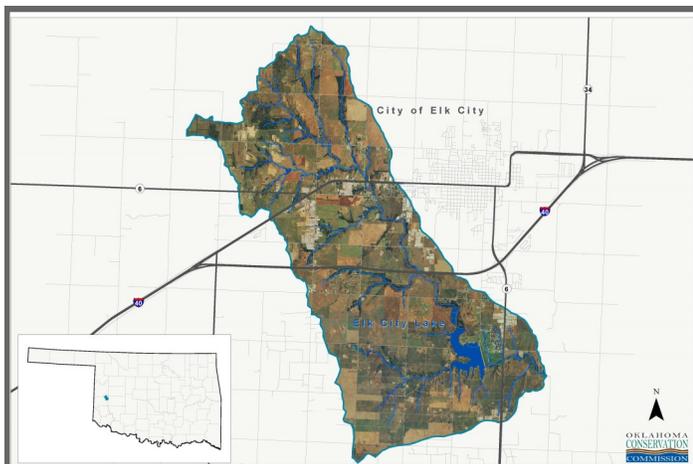


Figure 2. Elk City Lake watershed.



Figure 3. Example conservation measures, alternative water (above) and no-till (right).