REGION 6 EXECUTIVE SUMMARY

TOPIC: Illinois River Watershed and Lake Tenkiller Modeling

DATE: December 27, 2017 CONTACT: Richard Wooster

PURPOSE/ACTION NEEDED: For Information

BACKGROUND:
To address water quality impairments in Oklahoma and Arkansas, EPA Region 6 has developed robust, scientifically defensible water quality models of Lake Tenkiller and the upper Illinois River Watershed (IRW). State and Tribal stakeholders have been engaged with the Agency throughout the project. Two highly specialized computer models have been developed, one for the watershed and another for the lake. The models are designed to simulate water quality conditions under variable conditions over time.

CURRENT STATUS:
Within the last several weeks, Region 6 shared a revised Lake Tenkiller model with the technical workgroup. Based on workgroup feedback, the water quality models for both Lake Tenkiller and the watershed (previously endorsed by the workgroup) are deemed ready for review by a broader group of public stakeholders including municipalities and industry.

ENVIRONMENTAL/PUBLIC HEALTH CONCERNS:
- Oklahoma has established a numerical criterion for phosphorus in designated Scenic Rivers to guide restoration and provide extra protection of their high quality and unique characteristics.
- Sources of phosphorous in freshwater generally include runoff from urban development, agricultural operations, soil and stream bank erosion, and wastewater and industrial discharges.

TECHNICAL CONCERNS:
- All water quality models are simplifications of actual conditions and processes. As such, they do not include every possible detail which some reviewers might suggest. Region 6 and the technical workgroup will need to assess whether model changes may be appropriate based on any public comments.

REGULATORY/LEGAL REQUIREMENTS:
- The Clean Water Act (CWA) and its implementing regulations require that an upstream state's water quality standards be protective of downstream state water quality standards.
- NPDES regulations prohibit pollutant discharges which may cause or contribute to an in-stream excursion above water quality criteria and also require that permit effluent limits must be consistent with the assumptions and requirements of any approved waste load allocation (WLA) contained within a total maximum daily load (TMDL).

COMMUNITY CONCERNS:
- Point source dischargers in the IRW are concerned that establishment of any TMDL will require expensive controls to meet waste load allocations for nutrients.
- Non-point sources in the IRW are concerned that the establishment of a TMDL may provide pressure to accomplish non-regulatory load reductions.