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***Water Board Report Confirms Algae
Problems at Eucha/Spavinaw Lakes***

OKLAHOMA CITY – Excess algae growth has been confirmed as the major threat to the quality of Tulsa’s surface water supply, according to a report officially released Thursday by the Oklahoma Water Resources Board (OWRB).

The OWRB’s report, "Water Quality Evaluation of the Eucha/Spavinaw Lake System," affirms that algae problems are directly related to the infusion, or “loading,” of nutrients, primarily nitrogen and phosphorus, from the shared watershed of the two lakes. The abundance of those nutrients, most likely the result of diffuse waste that enters area streams from numerous poultry operations in the watershed, greatly accelerates the growth and reproduction of algae. Much of the watershed area, a total of 415 square miles, exists in the State of Arkansas.

Left unchecked, algae growth can cause significant taste and odor problems in drinking water, although it is not a health risk. To date, the City of Tulsa has spent more than \$4 million to correct the situation, which increases drinking water treatment costs and could eventually result in the lakes’ demise as a source of supply. Late last year, in an attempt to halt further pollution, the City of Tulsa and Tulsa Metropolitan Utility Authority (TMUA) filed a lawsuit in U.S. District court against six out-of-state poultry companies who they believe are primarily responsible for the problem.

“For approximately six weeks in late 2000, taste and odor problems were significant enough that Tulsa was required to completely abandon the Eucha/Spavinaw supply until it cleared up,” according to Derek Smithee, Chief of the OWRB’s Water Quality Division. “Now that we have a target for mitigation, we can begin the real work of reducing nutrient loads to the lakes.”

The Water Board’s report culminates a three-year cost-share study with the City of Tulsa to quantify and address Eucha/Spavinaw water quality problems. The report points out that because most of Spavinaw’s water enters the lake through the adjoining Eucha Lake dam, remediation efforts must be directed at both reservoirs.

The lakes have been categorized as having high or excessive algae content. Excessive algae growth robs the water column of oxygen required for fish propagation. This absence of oxygen, or anoxia, results in a significant impairment of the lakes’ fish and wildlife benefits. It also encourages the growth of algae types that produce a foul taste and make Eucha and Spavinaw generally less desirable for recreation.

“This comprehensive water quality investigation, which involved substantial field work and data analysis, will greatly assist the City and state in cleaning up this invaluable water resource,” said Richard Sevenoaks, who serves on both the nine-member Water Board and TMUA.

Specific recommendations offered by the report to rectify the nutrient problems and subsequently restore lake benefits include:

- Reduce phosphorus loading to Spavinaw Lake by 45 percent,
- Reduce phosphorus loading to Eucha Lake by 70 percent,
- Implement a phosphorus management plan for the Eucha/Spavinaw watershed, and
- Track and identify sources of nutrient loads entering Eucha and Spavinaw Lakes.

“Because the report recommends actual percentile reductions in phosphorus entering the Eucha/Spavinaw Lake system, we can now effectively mitigate the taste and odor episodes,” Smithee added.

The report can be accessed and downloaded from the Technical Reports and Publications page of the OWRB’s Web site at www.owrb.state.ok.us. For additional information on the study and report, please call Derek Smithee at 405/530-8800.

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