

Lake Texoma and Red River Watershed & Reservoir Sustainability Study & Plan

Lake Texoma Association
8/22/2013

Lake Texoma Association

- **The Lake Texoma Association (LTA is) celebrating over 50 years of promoting and protecting Lake Texoma.**
- **LTA is a nonprofit organization functioning much like a area-wide chamber of commerce promoting the entire Lake Texoma area, both Oklahoma and Texas.**
- **A good understanding of recreation and tourism's economic impacts is important for the recreation and tourism industry, government officials, and the community as a whole.**
- **The Lake Texoma Association plays a key role in promoting and branding for the Lake Texoma community, region and economy in cooperation with other organizations and businesses.**

What economic impacts does recreation and tourism have?

- **Recreation and Tourism have a variety of economic impacts. Tourists , boaters, fishermen and other outdoor recreation enthusiasts contribute to sales, profits, jobs, tax revenues, and income in the area.**
- **The recreation and tourism industry, in turn, buys goods and services from other businesses in the area, and pays out most of the income as wages and salaries to its employees. This creates secondary economic effects in the region.**
- **Lake Texoma Regional Economic Impacts**
- **Economic benefits in Tier -1 occur along the lakeshore.**
- **Economic benefits in Tier -2 occur within 30 miles of Lake Texoma and Tier -3 ranging up to 300 miles or more such as Dallas-Fort Worth, Oklahoma City, Kansas and West Texas add greatly to the economic multiplier effect.**
- **For example, numerous *Tier -3* fishermen, boaters, campers and tourists regularly visit Lake Texoma and purchase boats, engines, fishing and camping equipment, motor homes and travel trailers and spend travel funds that all contribute to the regional economy and jobs.**

Lake Texoma Economic Engine and Ecosystem

Tourism & Recreation

- Family Vacations
 - Reunions
 - Weddings
 - Company Meetings
 - Banquets
 - Rally
 - Charity Events
 - Festivals
 - Permanent & Part Time Residents
 - Retirees
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- Rest & Relaxation
 - Golfing
 - Boating
 - Swimming
 - Fishing & Tournaments
 - Water Skiing
 - Scuba Diving
 - Water Sports
 - Bicycling
 - Hunting
 - Hiking & Equestrian Trails
 - Picnics
 - Nature Trails & Appreciation
 - Nature Center
 - Bird Watching
 - Photography



Lake Texoma Project Purposes and Issues

- **Flood Control – Major floods including 2007.**
- **Hydroelectric Power - Regional Power shortages.**
- **Water Supply – Red River Basin shortages with greatly increased demands for residential, commercial and agricultural water from Lake Texoma & feeder streams.**
- **Recreation/Tourism – Major economic factor for Lake Texoma region.**
- **Ecosystem – Essential for lake health, sustainability and \$30 million plus/year fishery.**
- **All are affected by the Lake Texoma Watershed!**

Lake Texoma Watershed Issues

- ***Cumulative effects* of excessive nutrients, pollution and sediments such as phosphorous and nitrogen are being generated throughout the total Upper Red River Basin and watershed by point and non-point sources.**
- **Lake Texoma receives a significant amount of the cumulative nutrients and sediments flowing from the 48,000 square mile watershed consisting of the Upper Red River, Washita River and the Lake Texoma watersheds.**
- **Professionals have repeatedly identified excessive nutrients as the major underlying cause of many harmful Blue Green Algae blooms in Lake Texoma.**
- **Sedimentation continues to be a significant problem adversely affecting Lake Texoma project purposes of: flood control, hydroelectric power, water supply, recreation and the ecosystem.**
- **Lake access, use of large areas and the ecosystem are negatively impacted.**

Lake Texoma Blue Green Algae Impacts

- Lake Texoma averages 7 million visitors per year.
- The estimated annual revenue generated by the Lake Texoma Economic Engine is \$600 million (*Impacts of Tourism*, Michigan State University) based upon Tier 1, 2, and 3 areas.
- *2,767 Oklahoma and Texas jobs at Lake Texoma are being affected to varying degrees as well as the overall area economy. 1,245 in Oklahoma and 1,522 in Texas.*
- That's equivalent to the Toyota Truck factory in San Antonio, TX.
- The estimated revenue loss by Lake Texoma businesses from Labor Day through the end of 2011 was estimated at \$45 million due to Blue Green Algae Warnings and Advisories.
- Harmful Alga Blooms and negative impacts to recreation and water supply can occur in the future if action is not taken to reduce excessive nutrients flowing into the Lake Texoma watershed.

Sedimentation Causing Loss of Lake Surface Area and Volume

- Sedimentation continues to be a significant problem adversely affecting all Lake Texoma project purposes.
- Lake depth and volume, access, and use of large water and land areas, the regional economy and ecosystem are negatively impacted.
- The Denison Dam was completed in 1943 and several sediment surveys have been performed later on Lake Texoma.
- *The Volumetric Survey of Lake Texoma (USACE/TWDB April 2003) indicated that Lake Texoma had lost over 600,000 acre-feet of volume and 21,390 surface acres at Conservation Pool Elevation 617.0 msl.*
- Water is ankle to knee deep in several areas where large boats operated previously.
- The Red and Washita River arms as well as the rest of the lake are filling in with sedimentation.
- Action must be taken to reduce sedimentation and ensure sustainability.

Lake Texoma Watershed Study and Planning

- **The study will include a database of water quality data, water quality analysis, and an engineering model that serves as a planning and automation tool applicable to the watershed above the Denison dam.**
- **Prudence is required when establishing limits and controlling phosphorous, other nutrients, sedimentation and other water chemistry components entering the Lake Texoma watershed.**
- **Nutrient, sedimentation and other abatement and reduction programs must be time phased to balance water quality improvements and positive/negative economic and ecosystem impacts.**
- **Cost-Sharing and proactive support will be required for conducting the Lake Texoma Watershed Study, follow on plan and gaining resulting benefits of a sustainable lake.**

Watershed Planning and Management can Reduce Nutrients, Harmful Alga Blooms and Sedimentation

- **The Corps estimates that the Lake Texoma sustainability study will cost \$550K since several studies and large amounts of data are already available.**
- **A watershed management plan defines and addresses existing or future water quality problems from both point sources and nonpoint sources of pollutants.**
- **Experience over the past decade has shown that effective watershed planning and management includes;**
 - **Active participation from stakeholders**
 - **Analysis and quantification of the specific causes and sources of water quality problems**
 - **Identification of measurable water quality goals and**
 - **Implementation of specific actions needed to solve those problems.**

Lake Texoma Watershed Study and Plan - Federal Stakeholders

- **Federal stakeholders can support and benefit from the Lake Texoma Watershed Study and Plan and sustainability of project purposes.**
- **U.S. Senators and Representatives (OK and TX)**
- **Corps of Engineers (USACE)**
- **U.S. Geological Survey Service (USGS)**
- **Southwestern Power Administration (SWPA)**
- **U.S. Environmental Protection Agency (EPA)**
- **National Resources Conservation Service (NRCS) and U.S. Department of Agriculture (USDA)**
- **Federal Emergency Management Agency (FEMA)**
- **U.S. Fish and Wildlife Service (FWS)**
- **U.S. Coast Guard**
- **U.S. Department of Commerce (DOC)**

Lake Texoma Watershed Study and Plan - State Agencies and Legislator Stakeholders

- **State stakeholders can support and benefit from the Lake Texoma Watershed Study and Plan and sustainability of project purposes.**
- **State Senators and Representatives (OK and TX)**
- **Oklahoma and Texas Water Boards (OWRB), (TWDB)**
- **Oklahoma and Texas Tourism/Recreation Departments.**
- **Oklahoma and Texas Departments of Agriculture**
- **Oklahoma Department of Environmental Quality (ODEQ)**
- **Texas Commission on Environmental Quality (TCEQ)**
- **Oklahoma Department of Wildlife and Conservation (ODWC)**
- **Texas Parks and Wildlife Department (TPWD)**

Lake Texoma Watershed Study and Plan - Regional and Local Stakeholders

- **Regional and local stakeholders can support and benefit directly or indirectly from the Lake Texoma Watershed Study and Plan and sustainability of project purposes.**
- **Regional Oklahoma and Texas Counties, Cities and Towns**
- **Regional Water/Sewer and Irrigation Districts**
- **Regional Chambers of Commerce, Business, and Civic Organizations**
- **Regional Businesses**
- **Individuals and land owners/operators**
- **Other stakeholders**

Next Steps to Achieve Future Lake Texoma Sustainability

- ☑ **The Corps of Engineers Lake Texoma Advisory Committee with representatives from OK, TX, AR and LA passed a resolution supporting the Lake Texoma Watershed Study-Plan on 10/2/2012.**
- ☑ **The Lake Texoma Association Board of Directors passed a supporting resolution on 10/17/2012.**
- ☑ **The Corps Tulsa District and LTA conducted OK and TX briefings.**
- ☑ **LTA conducted briefing during annual membership meeting and posted the Corps Sustainability briefing on the LTA website.**
- **Stakeholders can help by providing joint funding, passing Resolutions and/or Provide Letters of Active Support for a Lake Texoma Watershed Sustainability Study and Plan.**
- **Send resolutions or letters of support to federal/state/local officials and legislators or to LTA for forwarding to recipients.**

Next Steps to Achieve Future Lake Texoma Sustainability

- **LTA will request regional team members to promote support, joint federal, state and local funding and follow through action for the Lake Texoma Watershed Sustainability Study and Plan.**
- **Stakeholders and LTA conduct briefings, provide information and request support to gain wide public, business, legislative and agency support and funding.**
- **Fund and complete Lake Texoma Watershed Sustainability Study and Plan.**
- **Address the watershed problems in a holistic manner.**
- **The stakeholders in the watershed are actively involved in selecting the management strategies that will be implemented to solve the problems.**
- **Work together to implement the plan, sustain the future Lake Texoma regional economy, jobs and project purposes!**