Water Issues Impacting the Timber Industry in Tyler County

Texas' Water Plan and Legislative Actions were addressed by Dr. Matthew McBroom, Assistant Professor, Forest Hydrology, Stephen F. Austin State University.

Forest Roads. The US produces twice as much timber as any other country, and it is sustainable because of Best Management Practices (BMP's) and tree farm certification programs. In a landmark decision issued on March 20, 2013, the Supreme Court overturned the 9th Circuit Court of Appeals' decision that forest roads must be regulated as point sources, requiring a National Pollutant Discharge Elimination System (NPDES) permit from EPA for each load of logs. The reasoning was that log decks where trees are cut to length and delimbed constitute an industrial operation, and should be subject to the same regulations as roads leading to a mill. EPA meanwhile sided with the forest industry against an environmental advocacy group (NEDC) in part due to the strength of nationwide BMP's programs. BMPs are the shield to protect the industry from encroaching Federal regulation. Continued vigilance is need on this issue. NEDC in media interviews after the case vowed that "…it will pursue all available avenues, including further litigation, until permits are required for forest roads." The regulation of forest roads now rests firmly in EPA's discretionary authority. The forest industry must continue its good faith effort with scientifically valid BMPs to maintain the quality of the Nation's waters.

Texas Water Plan. While Texas' population is expected to almost double in fifty years, our water demand is expected to increase by only 27% because of less demand for agriculture irrigation, better municipal water conservation and more waste water recycling. Most of the population growth will be in the suburbs of Dallas-Fort Worth, Houston, along the I-35 corridor and in the Rio Grande Valley. Tyler County is projected to have a population increase of 25-50%. The largest water uses in Texas

are for irrigation and municipalities. Volumes of water for steam-electric generation, manufacturing, mining and livestock are minor by comparison. About 2026, Texas' water demand will exceed our water availability.

Texas has developed a 50-year water plan that is projected to cost $53 billion. Most of the capital costs, or $45.8 billion, will be for municipal use.

Our State Representative, James White, added that the 2013 session of the state legislature is advancing legislation to allocate $2 billion to initiate implementation of the state's water plan.

Since East Texas receives the heaviest rainfall and the lakes in East Texas experience the lowest evaporation levels, East Texas is a significant source of water for the State. Three of Texas' 14 proposed reservoir sites are in East Texas. They are the Marvin Nichols Reservoir in North East Texas, Lake Columbia near Jacksonville and Lake Fastrill near Palestine. The Fastrill Reservoir is presently blocked to protect a wildlife refuge. The Nichols and Columbia Reservoirs will be built, but the process will be slow.

Additionally, there are proposed projects for conveyance and transfer of water from Toledo Bend to points west. This process is complicated by the fact that significant electricity is required to move water uphill and water is required for cooling electric generation plants. Because of topography and gravity, transferring water from the proposed Marvin Nichols Reservoir will be much simpler than transferring water from Toledo Bend. Another conveyance and transfer option is to pump water into the Trinity River and let it flow to Houston.

Forestry has the potential to impact water quality, especially with clearcut harvesting and site preparation. Employing Best Management Practices (BMP's) is the most effective way to reduce these potential impacts. It is particularly important to employ BMP's for stream side management zones. Studies show that herbicides used to control competing vegetation did not degrade water quality when used with BMP's. Another study revealed that 60% removal of logging debris for biomass had negligible impact on sediment loss. Additional research on erosion and biomass harvesting is needed.

Texas forestry BMP's are the optimum means for protecting water quality from silvicultural operations.

Groundwater in Tyler County was presented by John Martin (409-381-1577), General Manager Southeast Texas Groundwater Conservation District - www.setgcd.org.

The Southeast Texas Groundwater Conservation District is composed of Tyler, Jasper, Newton and Hardin Counties.

Iron is frequently found in Tyler County Water. Ferrous iron will be in clear water; ferric iron will make the water red. Manganese is a problem similar to iron, but is dark, almost black. It is important to have well water tested. Near-by TCEQ labs include the Sabine River Authority (409-746-3780) in Orange, the Angelina and Neches River Authority (936-365-2292) in Lufkin, and the Trinity River Authority (936-633-7527) in Livingston.

Tyler County's normal annual rainfall is 58". We were significantly below that at 39.5" in 2010 and 33.5" in 2011. While we saw an improvement in 2012, we received only 47.5" of rain, giving us a 60" shortfall for 2010-2012.

The Gulf Coast Aquifer provides groundwater for Tyler County. The Gulf Coast Aquifer is one of Texas' 9 major aquifers. Here in Texas, the Gulf Coast Aquifer parallels the Gulf of Mexico coastline from the Louisiana border to the border of Mexico. It consists of several aquifers, including the Jasper, Evangeline and Chicot aquifers.

While shallow wells and springs in Tyler County dried-up during the drought until the rainfall began to return, the depth of the Gulf Coast Aquifer was not impacted by the 2010-2012 drought - even when it was most severe.

According to the Desired Future Conditions ("DFCs") for Tyler County, 38,156 acre feet of water is available to us each year. Currently Tyler County is only utilizing approximately 4,000 acre feet each year.

Constructing Ponds in Tyler County was presented by Josh Johanson (409-283-5409), USDA Natural Resources Conservation Service.

The soil in large areas of Tyler County is marginal for ponds and many ponds, which generally have water because of our heavy rainfall, went dry during our 2010-2011 droughts. Taking a five foot deep bore hole sample, Josh will can determine with 80-90% accuracy if the soil will support a pond. His office provides federal funding for engineering and constructing ponds that meet specific guidelines.

Josh also gave a quick synopsis of NRCS cost-share programs for site prep and reforestation, and herbaceous weed control, including the EQIP program, a competitive program that provides up to 75% cost-share.

Oil Drilling's Impact on Water was presented by Shauna Landsberger, Health Biologist, Evniroklean Product Development, Inc. (EPDI). EPDI removes decontamination of Naturally Occurring Radioactive Material (NORM) and Technology Enhanced Naturally Occurring Radioactive Material (TENORM). NORM's include uranium, thorium, potassium and any of their decay products, such as radium and radon. The EPA has set standards for acceptable amounts in drinking water.

The south Texas gulf coast has a history of uranium mining. The uranium metal, derived from ancient volcanoes, is found in a soluble form in aquifers. There are five aquifers in Texas, including the Gulf Coast aquifer, which contain elevated amounts of radium coming from naturally occurring uranium and thorium deposits throughout the state.

NORM's, present in very low concentrations across much of Texas, may be brought to the surface by oil and gas exploration or mining. Based on studies and analysis, there is no indication that gas and oil production has caused NORM contamination of ground water.

A small amount of radium was detected in a White Tail Ridge water well in Tyler County. The radium levels have been reduced and are continually monitored, as are all municipal, community and co-operative drinking water supplies.