



Texas Institute for Applied Environmental Research (TIAER) Water Quality Analysis Laboratory

TIAER’s laboratory received NELAP (National Environmental Laboratory Accreditation Program) accreditation in January 2008.

Tests done by an accredited lab qualify as legally defensible, which means the data can be used in a lawsuit. Since TIAER was established by the Texas State Legislature in 1991 to address concerns about water pollution, lab data has been essential in shaping policy and responses to both farm and City of Waco water quality issues. To become accredited, the lab had to prove that it understands and follows uniform procedures for testing environmental samples.



The TIAER lab not only follows procedures; it creates them. TIAER’s procedure for testing for low levels of phosphorus in water now is being used by several river management authorities. The lab currently is working on a procedure to identify “optical brighteners” – the chemical added to things like paper, clothes and detergent to make them whiter.

Laboratory director Mark Murphy joined Tarleton’s staff in November 14 years ago. He has bachelor’s degrees in biology and chemistry and a master’s degree in environmental science. Mark says the best part of his job is that it always is interesting. Solving problems requires his experience obtained from years in nuclear and EPA contract labs prior to joining TIAER. A challenge to operating this type of lab is staying on top of the constant change of requirements and testing when the physical lab itself does not grow in size and equipment. The lab remains dynamic in its ability to perform analyses and ready to shift personnel, resources and training to accommodate client and project needs.

Working with Mark in the lab are:

- two fulltime chemists, James Hunter and Dovie Reynolds
- one part-time chemist, Donna Cole
- one fulltime technician, Vickie Hunt
- and two part-time students, Tiffany Haynes and Calvin Sprayberry

Over 30 students have worked in the TIAER laboratory during the past 14 years, and many have gone on to scientific careers and terminal degrees.



The Lab’s job starts when field crews deliver coolers full of water samples for immediate testing.



Vickie Hunt

Cody Polak
(summer student worker)



James Hunter

Mark Murphy