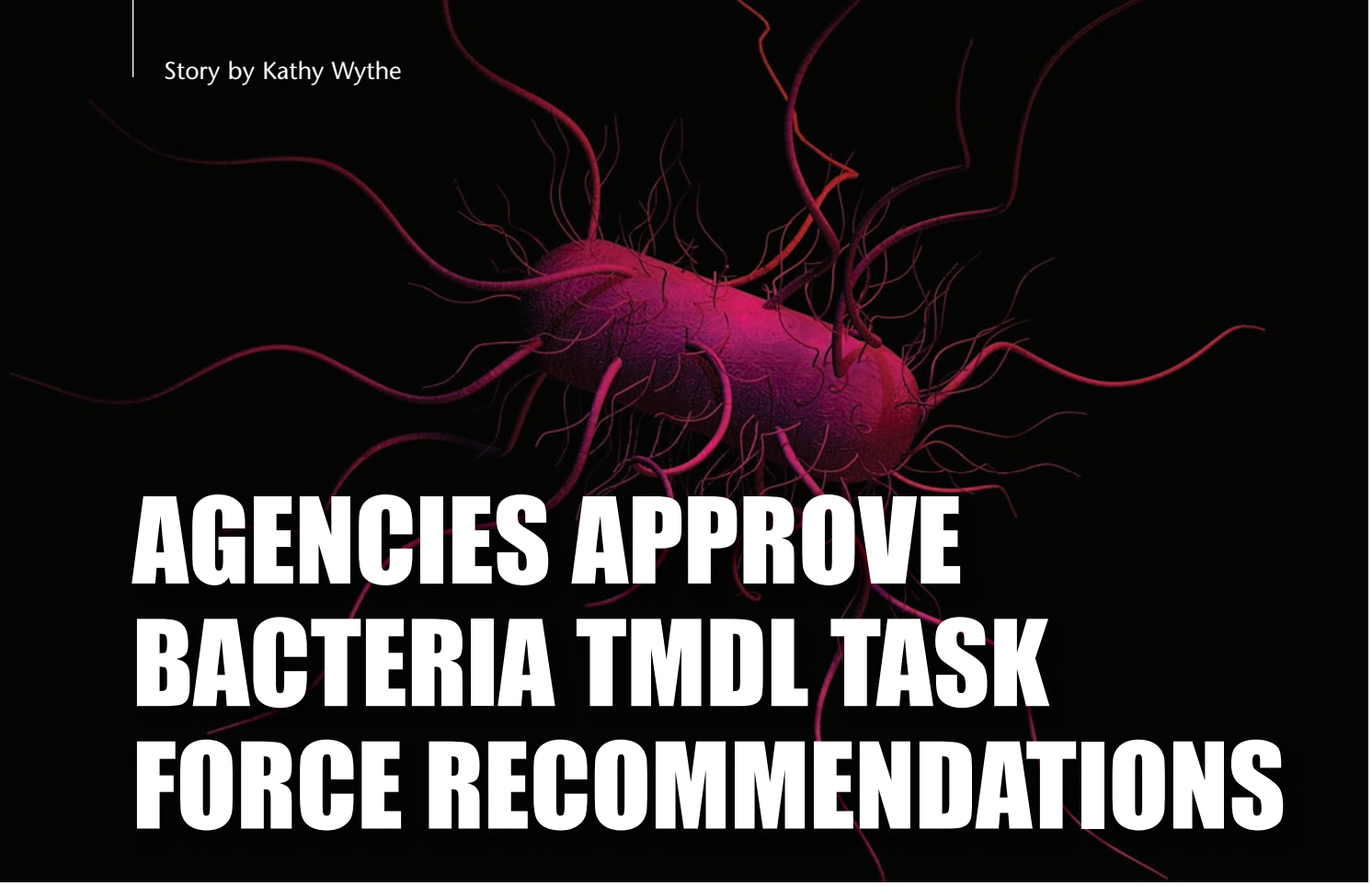
Story by Kathy Wythe



AGENCIES APPROVE BACTERIA TMDL TASK FORCE RECOMMENDATIONS

In June 2007 the Texas Commission on Environmental Quality (TCEQ) and the Texas State Soil and Water Conservation Board (TSSWCB) approved the recommendations of the Bacteria Total Maximum Daily Load (TMDL) Task Force and asked their agencies to update their TMDL guidance documents to reflect these recommendations. They also authorized establishing a multi-agency bacteria TMDL work group to examine the research and development needs identified in the task force report.

Both TCEQ and TSSWCB members complimented the task force on the report. Larry Soward, TCEQ commissioner, called the task force report "significant, very important and well done," adding that he was impressed with "how open and inclusive it [the process] was."

"I think it's a good report," said Jerry Nichols, TSSWCB chairman, thanking the task force for their time and effort.

Dr. Allan Jones, Texas Water Resources Institute director and chairman of the seven-member task force, gave an overview of the report and its recommendations at the joint meeting. Other members of the task force were Drs. George Di Giovanni, The Texas A&M University System Agricultural Research and Extension Center at El Paso; Larry Hauck, Texas Institute for Applied Environmental Research at Tarleton State University; Joanna Mott, Texas A&M University–Corpus Christi; Hanadi Rifai, University of Houston; Raghavan Srinivasan, Texas A&M University; and George Ward, The University of Texas at Austin. An expert advisory group of approximately 50 stakeholders and agency staff assisted the task force in developing the report.

Jones said the task force members had a few guiding principles when preparing the report, with the first one being the importance of stakeholder involvement. "This is a process that is not well understood by the public," Jones said. "We recommend in the report that agencies work very hard through existing organizations to get local input."

The task force report describes characteristics, strengths and weaknesses of several computer models

(both existing or under development) that assist bacteria TMDL and implementation plan (I-Plan) analysis as well as bacterial source tracking methods.

The report also recommends a three-tier approach that incorporates adaptive management, phased TMDLs and phased implementation to the extent allowable by the U.S. Environmental Protection Agency, Jones said in an interview.

"The objectives of Tiers 1 and 2 are to ensure that each TMDL is developed using a scientifically credible, cost-effective process with strong stakeholder involvement," he said.

Tier 3 is designed to develop a feasible I-Plan, and, for some complex TMDLs, expands the information available for TMDL development, he said. *(See information below for a summary of the three-tiered approach.)*

The task force concluded its report by summarizing a number of research activities needed to strengthen the scientific tools available for TMDL and I-Plan development.

The report and related documents are available at **twri.tamu.edu/bacteriatmdl/**.

Recommended Three-Tier Approach for Bacteria TMDL Development

Tier 1 Analysis (T1) (one-year)
Required for all bacteria TMDLs.

- Form TMDL stakeholder advisory group.
- Develop comprehensive GIS inventory for watershed.
- Implement source survey for watershed.
- Calculate load duration curves (LDCs).

Analyze Tier 1 data with stakeholder advisory group.

Decision 1 (D1)	Are data and analysis adequate?
Yes	Go to D2.
No	Go to T2.
Decision 2 (D2)	Are needed load reductions socially and economically attainable?
Yes	Complete and submit draft TMDL for agency approval.
No	Complete and submit a draft TMDL that includes a recommended change in designated use (i.e. Use Attainability Analysis).

Tier 2 Analysis (T2) (one-to-two years)
Implemented for most bacteria TMDLs.
May be adequate for I-Plan development for non-controversial TMDLs.

- Implement targeted monitoring to fill data gaps.
- Perform library-independent BST and limited library-dependent BST analysis.
- Develop simple LDC, GIS and/or Mass Balance Models.

Analyze Tier 2 data with stakeholder advisory group.

Decision 3 (D3)	Are data and analysis adequate?
Yes	Go to D4.
No	Initiate a "phased TMDL" and go to T3.
Decision 4 (D4)	Are needed load reductions socially and economically attainable?
Yes	Complete and submit draft TMDL (or I-Plan) for agency approval.
No	Complete and submit a draft TMDL that includes a recommended change in designated use (i.e. Use Attainability Analysis).

Tier 3 Analysis (T3) (two-to-three years)
Normally used for I-Plan development.
May be required for development of complex "phased TMDLs."

- Assure extensive stakeholder involvement.
- Implement extensive targeted monitoring.
- Perform extensive library-dependent BST analysis.
- Complete mechanistic modeling.

Analyze Tier 3 data with stakeholder advisory group.

Decision 5 (D5)	Are needed load reductions socially and economically attainable?
Yes	Complete and submit draft I-Plan (or revise "phased TMDL") for agency approval.
No	Complete and submit a draft TMDL that includes a recommended change in designated use (i.e. Use Attainability Analysis).