

# Ecological Risk Planning

## Sponsors



Sponsored by the Texas Commission on Environmental Quality (TCEQ) and the Department of Energy, TCAT scientists teamed with ecological risk experts at West Texas A&M to develop a risk planning tool that provides the Department of Energy with a quick and accurate assessment of the ecological risk for wildlife and plants within a particular habitat. The model uses mathematical expressions of uptake factors, food chain multipliers, uncertainty factors and mortality rates to develop default protective concentration levels (PCLs) for ecological receptors.

The user chooses a habitat, a species, and a chemical. The tool then determines if a full ecological risk assessment will be needed. It is estimated that this tool will save millions of dollars by reducing the need for a full and site specific ecological risk assessment each time an alteration to land or construction occurs.

This model was peer reviewed by the Environmental Protection Agency Region IV, the TCEQ, the Fish and Wildlife Service, Texas Parks and Wildlife, and industry experts.

**WTAMU**

Select COC:  
common name

4,4-DDT (1,1-bis(chlorophenyl)-2,2,2-trichloroethane)	CAS#
4-amino-2,6-dinitrotoluene (DNT)	72-54-8
9,10-anthracenedione (or anthraquinone)	72-55-9
acetone	50-29-3
anthracene	1346-51-0
antimony	84-65-1
antimony (as antimony potassium tartrate)(11)	67-64-1
arsenic	120-12-7
	7440-36-0

OR

Select Wildlife Species:  
common name

Slider
Texas Horned Lizard
Woodhouse toad
Yellow mud turtle
Black-tailed jackrabbit
coyote
Deer mouse
Eastern Cottontail
Mule deer
Raccoon



Search PCL      Clear Data

results

PCL = 20.6926, TRV = 0.08568, BAF = 0.06828

Save

## TEXAS CENTER FOR APPLIED TECHNOLOGY

There are many problems that require the careful and proper integration of applied technologies to find solutions. The Texas Center for Applied Technology (TCAT) was created to focus on these specific problems and to develop effective and efficient solutions. TCAT's core competency is the innovative application of existing technologies and advanced research to solve complex real-world problems.

TCAT's primary objective is to apply and test technologies to address targeted problems and engage basic research as required. TCAT has employees in a variety of locations with the ability to perform research that cuts across multiple technologies, disciplines, and cultures. The Center's employees are knowledgeable regarding customers' requirements and are ready to respond effectively to provide the best value for the customers' needs including expertise in technology insertion, technology assessments, and test and evaluation.

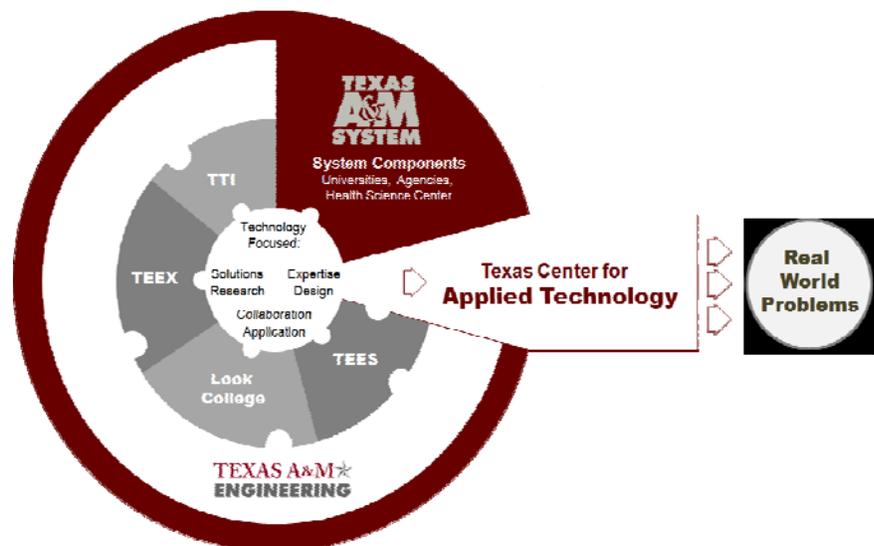
TCAT is part of the Texas A&M Engineering Experiment Station (TEES), a member of The Texas A&M University System. The A&M System is one of the largest and most comprehensive systems of higher education in the United States. Through a statewide network of eleven university campuses, seven state agencies, and a comprehensive health science center, the A&M System educates more than 120,000 students on its university campuses, conducts more than \$780 million in research, and reaches another 22 million people through service each year. TEES is an engineering research agency for the state of Texas and conducts over \$147 million in research annually. Because of the Center's position within the Texas A&M Engineering program, TCAT's expertise can easily be extended by rounding out its team with world class faculty researchers, as appropriate. TCAT is in an excellent position for collaboration not only with The Texas A&M University System components and their customers but with other universities, institutions, centers, and industry.

## TCAT'S CORE COMPETENCIES

Energy Sustainability ★ Environmental Sustainability  
Manufacturing & Systems Engineering ★ Information Technology ★ Modeling & Simulation  
Technology Insertion ★ Test & Evaluation

## TEXAS A&M ENGINEERING

Texas A&M Engineering consists of the Dwight Look College of Engineering, and three engineering agencies, including TEES: Texas A&M Transportation Institute (TTI) conducts research and professional education in all modes of transportation. The Texas A&M Engineering Extension Service (TEEX) works to develop a highly skilled and educated workforce and enhances public safety through training, continuing education, and technical assistance.



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