

2007-08 Mills Scholarship Recipients

James Applewhite, Soil and Crop Sciences

Understand how soil physical properties respond to a number of fertility treatments and vegetative mixes (Fort Hood)

Justin Baker, Agricultural Economics

Identify methods for optimizing the spatial and temporal location of agricultural and industrial production of biofuels in order to minimize the economic costs that such practices might have on regional water resources

Roberto A. Bazan, Jr., Rangeland Ecology and Management

Focus on better understanding runoff generation at the small catchment scale in the Texas Post-Oak savanna. Project is foundation of continuing and long-term monitoring program

Stephen Caster, Soil and Crop Sciences

Study the effects of urbanization in Texas on water quality, focusing on the soil solution under three types of typical turf grasses, and on the water exiting the drainage system of two sports fields

Deepti, Biological & Agricultural Engineering

Apply spatially referenced regression of contaminant transport on watershed attributes for the assessment of pathogen contamination (E.coli) in Guadalupe and San Antonio river basins in Texas

René Davina Elms, Chemical Engineering

Focus on designing and optimizing processing facilities for the production of renewable biomass-derived fuels and products in a manner that minimizes water use and discharge

Dong Suk Han, Civil Engineering

Synthesize adsorbent media using nanotechnology and apply them to removal of arsenic, mercury, and selenium from water by investigating adsorptive removal mechanism and stabilization via surface reactions at the solid-water interface

Omar Richard Harvey, Geology and Geophysics

Evaluate complexation of organic and inorganic wastewater contaminants by polymeric cyclodextrins

Kranthi K. Mandadi, Biology

Focused on improving crop species for their drought tolerance and water use efficiency capabilities, thus alleviating the problems of low or marginal crop production in regions of water deficits

Lei Meng, Geography

The Variable Infiltration Capacity (VIC) model simulated moisture data from 1915 to 2004 will be used to examine the impact of fall, winter and spring soil moisture anomalies on summer precipitation

Sivarajah Mylevaganam, Spatial Sciences Laboratory

Develop a generic, spatial-aggregation tool in GIS environment to query and delineate larger basins subsuming smaller ones based on decision makers' criteria

Suzika Pagán-Riestra, Soil and Crop Sciences

Evaluate the effect of forage condensed tannins (CT) in feed DM and P disappearance in bovines

Tim Pannkuk, Soil and Crop Sciences

Study reference ET rates to measured ET rates during establishment of turfgrass and woody plants in humid and semi-arid environments

Richard E. Rapier, Water Management & Hydrological Sciences

Research goal is to better understand the impacts of take-or-pay water supply contracts on water use in Texas

Callie Rogers, Agricultural Economics

Address the financial and economic costs of two of the water supply alternatives available to the Lower Rio Grande Valley: conventional surface-water treatment and desalination of brackish groundwater

Debabrata Sahoo, Biological and Agricultural Engineering

Quantify the regional hydrologic budget response (freshwater and urban water demands) to change in LULC in the rangeland ecosystem of the San Antonio River Watershed

De'Etra Jenra Young, Ecosystems Science and Management

Calculate the percentage of pervious and impervious surfaces in 12 watersheds part of the Brazos River using GIS; investigate the volume and chemistry of runoff on pervious concrete, impervious concrete and control plots to determine the impact of pervious surfaces on reducing storm runoff and nutrient loss

2006-07 Mills Scholarship Recipients

Kendra Johnson

Water quality research on fate and transport of pathogens

Vanessa Kelly

Inventory all wells in Brazos and Robertson County

Trevor Knight

Determine and compare the effects of biological control, chemical control, and the absence of aquatic vegetation control on the ecology of private impoundments stocked with largemouth bass and bluegill sunfish

Meredith Langille

Investigate the synergism between the combinations of the activated carbon with the electrochemical process and optimize the selected system using perchlorate contaminated water

Anna Marie Nordfelt

Gain a better understanding of the relationship between land surface conditions and the strength and timing of monsoonal precipitation

Oke Nwaneshiudu

Using the Visual MODFLOW program to assess and study fresh water availability in a Transboundary Aquifer system

Sucheta Parkhi

Investigate an innovative treatment method for the destruction of oxy-anions like perchlorate in drinking water using electrochemically induced pitting corrosion of zero-valent iron

Lisa Prcin

Investigate the seedling emergence and survival rates of several native plant species in response to soil amendments on Fort Hood

Jeremy Joseph Rice

Investigate the impact education has on water conservation, pesticide and herbicide use, and urban wildlife habitat

Nick Russo III

Quantifying the effects of illicit discharge detection and elimination on bacteria-impaired urban streams

Ronnie Schnell

Compare turf responses and water and nutrient conservation and losses among contrasting establishment methods; relate soil bulk density and organic carbon concentration to soil water content

Kati Ireland Stoddard

Investigate the perception and exposure of arsenic in private and public drinking water among households

Zach Vernon

Interested in inter-relationships between all involved variables, including both those that are natural and those related to human populations

2005-06 Mills Scholarship Recipients

Omar Amawi

Cotton Yield response to Deficit Irrigation Using LEPA in a Rotational System in the Texas High Plains

Scott Beech

Design and field testing of a prototype on site membrane filtration unit

Elizabeth Bristow

Water supply systems

Larry R. Demich

Hydraulic impacts of submerged aquatic vegetation

Reagan Errera

Algal bloom (HAB) species *Prymnesium parvum*, a golden algae

David Hansen

Contamination of groundwater has become an increasingly growing concern

Charlotte Hieke

Using molecular methods to determine if specific bacteria known to respire present in Houston ship channel

Stephen Lichlyter

Bahia Grande is a large former lagoon located within Laguna Atascosa Wildlife Refuge

Shelli Meyer

Vibrio vulnificus a waterborne pathogen

Joe Mikulas

Post-settlement lane snapper

Kimberly A. Roberts

Interactions between inorganic particles, organic colloids (or nanoparticles) and...

Linda Roehrborn

Seasonal Analysis of Abiotic Factors in the Water Column and their impacts

Danielle Rutka

Potential impacts of a proposed water diversion project on endangered whooping crane and San Antonio Guadalupe Estuary

Douglas Sassen

Aquifers that are sensitive to surface contamination

Aarin Teague

Investigate the fundamentals of bacterial transport in and over the soil profile

2004-05 Mills Scholarship Recipients

David Bell, Agricultural Economics

Modeling above and below-ground water systems in Texas in order to fully integrate water as an input in municipal and sectoral economics of Texas

Matt Berg, Rangeland Ecology and Management

Wetland restoration and ecology

Robert Eyeington, Wildlife and Fisheries Sciences

Response of amphibians to variation in landscape features and vegetation cover in the Pedernales River Basin

Lucas Gregory, Rangeland Ecology and Management

Quantifying the effects of woody plant encroachment in semi-arid landscapes on the total water budget

David Hoeinghaus, Wildlife and Fisheries Sciences

Food Web Ecology in the Parana River Basin

Jeremy Hudgeons, Entomology

Physiological effects of beetle defoliation on saltcedar trees

Euclides Jasso, Soil and Crop Sciences

Investigation of isotopic fluxes from grassland and woodland sites in the Edwards Plateau of Texas

Robert Jones, Soil and Crop Sciences

Methylated arsenic species interaction at soils - water interface

Tara Kneeshaw, Geology and Geophysics

Understanding the fate and transport of chemicals in subsurface systems

Leslie McKendrick, Agricultural Education

Perceptions and attitudes that influence how individuals value water

Heather Miller, Geology and Geophysics

Water management, soil salinity and landscape ecology in Laguna Atascosa National Wildlife Refuge

Nena Phillips, Rangeland Ecology and Management

Effect of habitat changes in and near San Antonio Bay and its effect of whooping cranes

David Rosen, Rangeland Ecology and Management

Taxonomic and ecological study of select members of the subgenus *Limnochloa* in the sedge genus *Elcharis* on the middle and lower

Karen Sell, Geology and Geophysics

The microbial responses to stressors across watershed system boundaries

Travis Waiser, Soil and Crop Sciences

Effectiveness of diffuse reflectance spectroscopy on measuring soil properties *in situ* - Bosque River Watershed in Erath County

Jennifer Waters, Horticulture

Introduction of *Arabidopsis thaliana* genes to create drought tolerant watermelons

2003-04 Mills Scholarship Recipients

Aaron Adams

Implications of the Distribution of Open Spaces and Porosity in Subsurface Rocks on Groundwater Resources

Susan Baez Cazull

Investigating the Metabolic Activities of Microorganisms That Mediate Redox Reactions Through Terminal Electron Accepting Processes

Jenny Birnbaum

Effects of Brush Control Efforts on Headwater Streams and Associated Macrofauna in the Pedernales River Basin

Rachel Butzler

Measuring Effects of Changes in Reduced Freshwater Inputs on the Vegetation Communities in the Guadalupe Estuary

Josh Bynum

Comparing the BIOTIC (Biologically-Identified Optimal Temperature Interactive Console) and CropMan Irrigation Timing Methods to Optimize Water Use Efficiency in cotton

Julianna Comacho

Development of a Process for the Simultaneous Arsenic Oxidation and Chromium Reduction, a Predictive Model for Arsenic Oxidation, Chromium Reduction, Sorption, Coagulation, and Flocculation

Marcus Crim

Characterization of the Circadian System of Alligators

Gage Dayton

Abiotic and Biotic Factors That Affect Distribution of Amphibian Species in the Big Bend National Park and the Chihuahuan Desert in Southwestern Texas

Daniel Dewey

Identifying Genes That Regulate the Drought-Tolerance of Zoysia Grasses and Other Turfgrasses

Jennifer Haye

Investigating How Levels of Colloidal Organic Matter and Dissolved Organic Matter May Affect Bivalves Along the Texas Coast

Rebecca Hobbs

Developing a Design Model Describing the Performance of Constructed Wetlands for Wastewater Treatment

Jimmy Kerns

Evaluating Biosolids as a Soil Amendment and Nutrient Resource for Turfgrass Establishment

Christopher Markley

Arsenate Uptake by a Freshwater Cyanobacterium

Kristin Millenbach

Investigating the Spatial and Behavioral Ecology of Whooping Cranes on the Wintering Grounds at the Aransas National Wildlife Refuge

Anne Narayan

Foraging Distances and Forager Population Sizes of the Desert Termite

Wendy Patzewitsch

Examining Changing Practices and Perceptions of Water Use in Texas from 1830 to the Present Time

Melissa Romigh

Quantifying the Carbon Exchange Between the Water Column and Soils in a Tidally Influenced Riverine Mangrove Wetland in Shark River, Florida

Jason Schubert

Protecting and Preserving Water Resources through Planning Initiatives

Virginia Shervette

Assessment of Essential Fish Habitat as Nurseries for Economically Important Fishes-- Tools for Management and Conservation

Sara Thornton

Investigate the Potential to Restore Wetlands in Urban Settings

Jeffrey Ullman

Investigating the Extent to Which Livestock and Poultry Confined Animal Feeding Operations May Introduce Hormones Into the Environment

David Waidler

Tracking the Activity of Mammals at the Lewisville Lake Environmental Learning Center, and Creating Educational Opportunities at This Site

Carrie Whitcher

Preventing Phosphorus leaching in commercial horticulture operations

Steven Zeug

Influence of Hydrologic Variability and Floodplain Connectivity on Fish Populations in the Brazos River Basin

2002-03 Mills Scholarship Recipients

Jason Afinowicz

Utilization of the SWAT Model and Remote Sensing to Demonstrate the Effects of Brush Control on a Small Watershed

Kimberly Crumpler

Developing Geographic Information System Data Sets About Wetlands, Water Quality, and Habitat Issues in the Galveston Bay Region

Jeremiah Dye

Biological Control of Salvinia Species

Lance Fontaine

Examining How Estuarine Habitat Quality Affects Red Drum and Brown Shrimp Populations, and How It May Influence Predator and Prey Interaction between these Species

Nels Hansen

Quantifying Organic and Inorganic Phosphorus and Nitrogen Levels In Composted Dairy Manure Before and After Application to Turfgrasses and Roadsides

Roger Havlak

Predicting Water Use In Urban Residential Landscapes

April Hennebeck Schonrock

A Survey of Private Impoundment Owners and Managers

Libbie Johnson

Evaluating the Use of Subsurface Drip Irrigation (with Mulch) and Pivot Irrigation (without Mulch) to Reduce Water Use by Bell Peppers

Jason Krutz

Effectiveness of Buffalograss Filter Strips in Removing Dissolved Metolachlor and Metolachlor Metabolites from Surface Runoff

Brian Langerhans

Conservation Biology of Gambusia and Other Endemic and Endangered Livebearing Fish of Texas

Joshua Peschel

Development of a Computerized Classification Method to Create Land Cover and Land Use Input Grids for the Soil and Water Assessment Tool Model

John Pitt

Predicting the fate of Applied Phosphorus in the Environment, and Evaluating the Potential Immobilization of Phosphorus Fertilizer in Texas Soils

Chad Richards

Identifying the Best Sites to Grow Turfgrass with Composted Dairy Manure in the Upper North Bosque Watershed

Josh Sorenson

Use of a Rainfall Simulator to Study the Hydrologic Impacts of Removing Juniper Stands and other Brush Species

Michael Sterling

Developing a Model to Determine the Suitability of Chemical Dispersants as Oil Spill Response Tools for Coastal and Estuarine Ecosystems

April Torres-Conkey

Evaluating a sample of Section 404 Permit Mitigation Plans to Restore Wetlands along the Upper Texas Coast

Amy Wentz

Investigating Alternative Water Harvesting and Seedbed Preparation Technologies to Increase Plant-Available Soil Moisture and to Restore West Texas Rangelands

2001-02 Mills Scholarship Recipients

Mary Bhuthimethee

Evaluating the Efficiency of Metazoan Fish Parasites as Water Quality Indicators

Christine Burgess

Studying the Effects of Physically Altering Riverine Habitats in Sulphur River on Fish Populations

F. John Hay

Growing Turfgrass with Composted Dairy Manure and Exporting it to Urban Areas

Richard Hoffpauir

Incorporating Salinity Considerations into the Water Rights Analysis Program (WRAP) Computer Simulation Model

Graciela Lake

Investigating Arsenic Levels in South Texas Streams

Raymond Li

Assessing the Potential Ecological Impact of the Allens Creek Reservoir Project in the Brazos River Basin

Brooke Moore

Examining Ways to Expand the City of College Station Wastewater System

Amanda Richmond

Comparing the Performance of Constructed Wetlands that Use Tire Chips and Gravel Media for On-Site Wastewater Treatment Systems

Melissa Roberts

Examining Whether Wetlands Can Lessen Arsenic Levels in South Texas Waters

Matt Wagner

Investigating Policies to Preserve Habitats and to Encourage Groundwater Marketing

Vance Weynand

Evaluating the Use of Drip Irrigation for Wastewater Disposal