BUILDING PARTNERSHIPS: Texas A&M University & Department of Defense

Fort Hood, TX &
Texas Agricultural Experiment Station

COOPERATORS:

Texas Water Resources Institute (Dr. Allan Jones)
Blackland Research & Extension Center (Dr. William Dugas)
III Corps & Garrison Command (Gen. Thomas Metz & Col. William Parry)
Fort Hood Directorate of Public Works (Col. Randall Butler)
Integrated Training Area Management (Mr. Billy Piper)
Texas Agricultural Experiment Station (Dr. Robert Whitson)

PRESENTATION PHILOSOPHY!

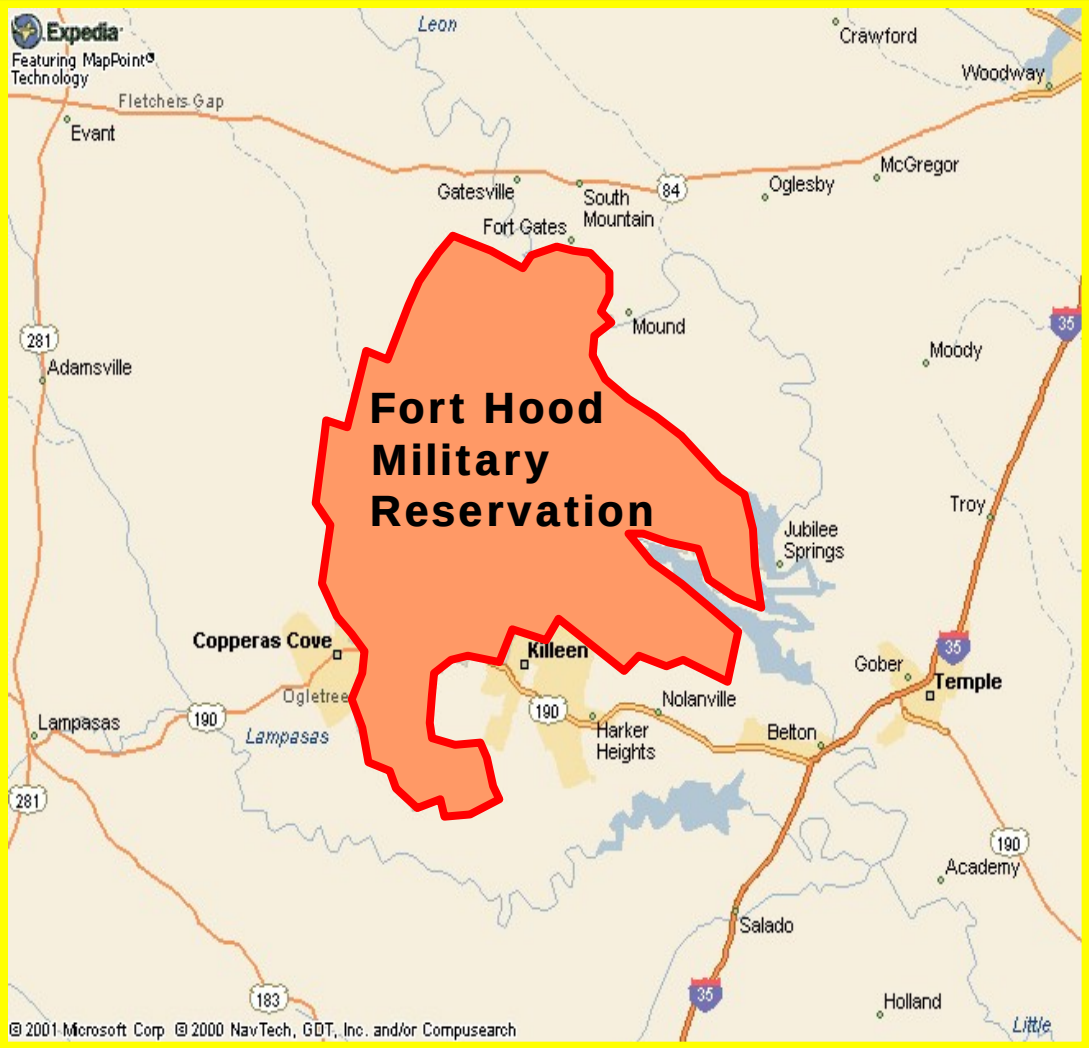
BE SINCERE!

BE BRIEF!

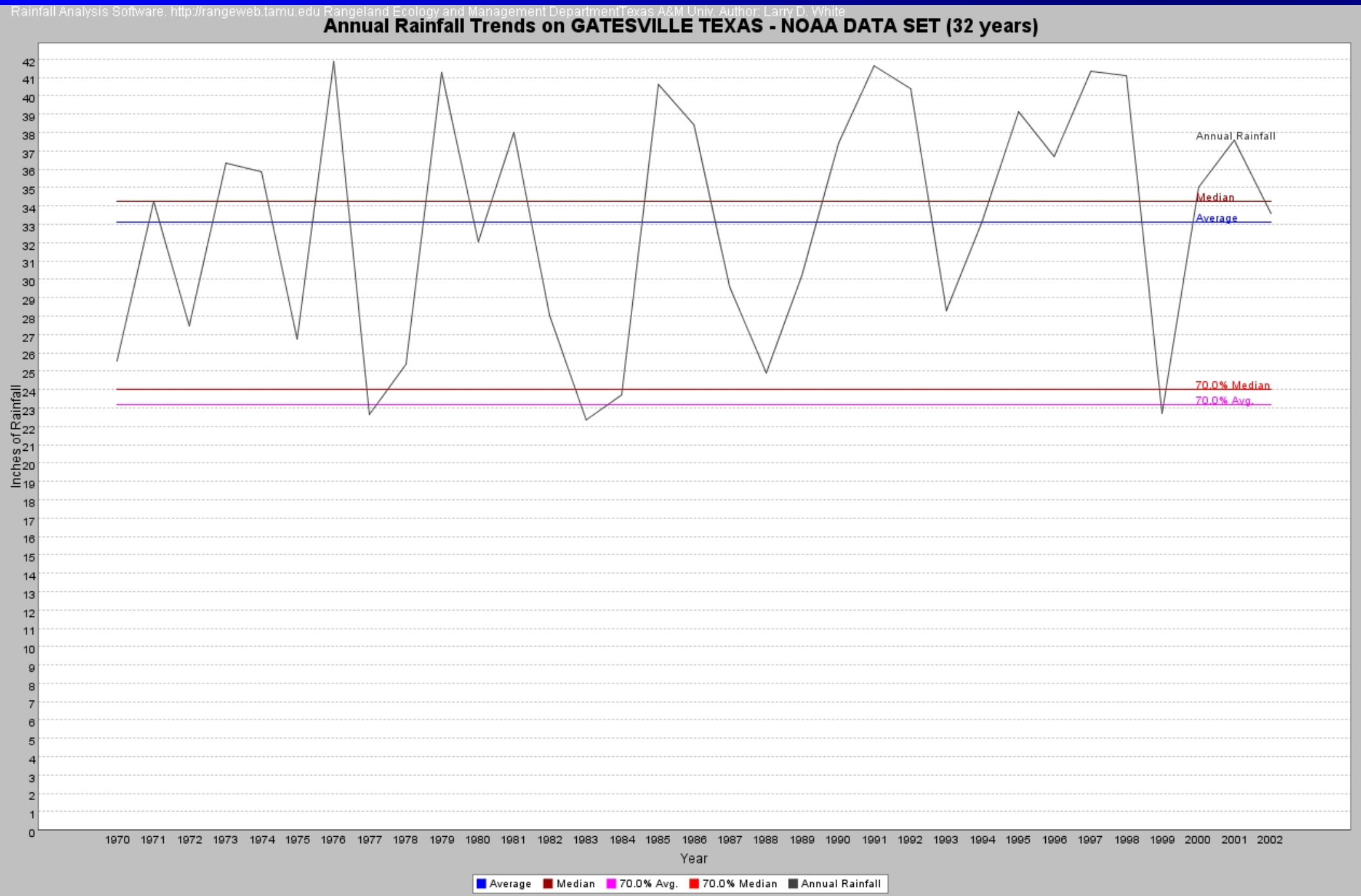
BE SEATED!

LOCATION

- Northern edge of the Texas Hill Country
- Characterized by rolling hills, shallow soils, woodlands, prairies and rocky streams.



RAINFALL


Rainfall Analysis Software. http://rangeweb.tamu.edu Rangeland Ecology and Management DepartmentTexas A&M Univ. Author: Larry D. White
Annual Rainfall Trends on GATESVILLE TEXAS - NOAA DATA SET (32 years)
Inches of Rainfall
Year
Annual Rainfall
Median
Average
70.0% Median
70.0% Avg.
Average
Median
70.0% Avg.
70.0% Median
Annual Rainfall

HISTORY

- 60 years of training activities has disturbed ecosystems
- Actions have elevated issues of soil erosion and water quality.

COLLABORATORS

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

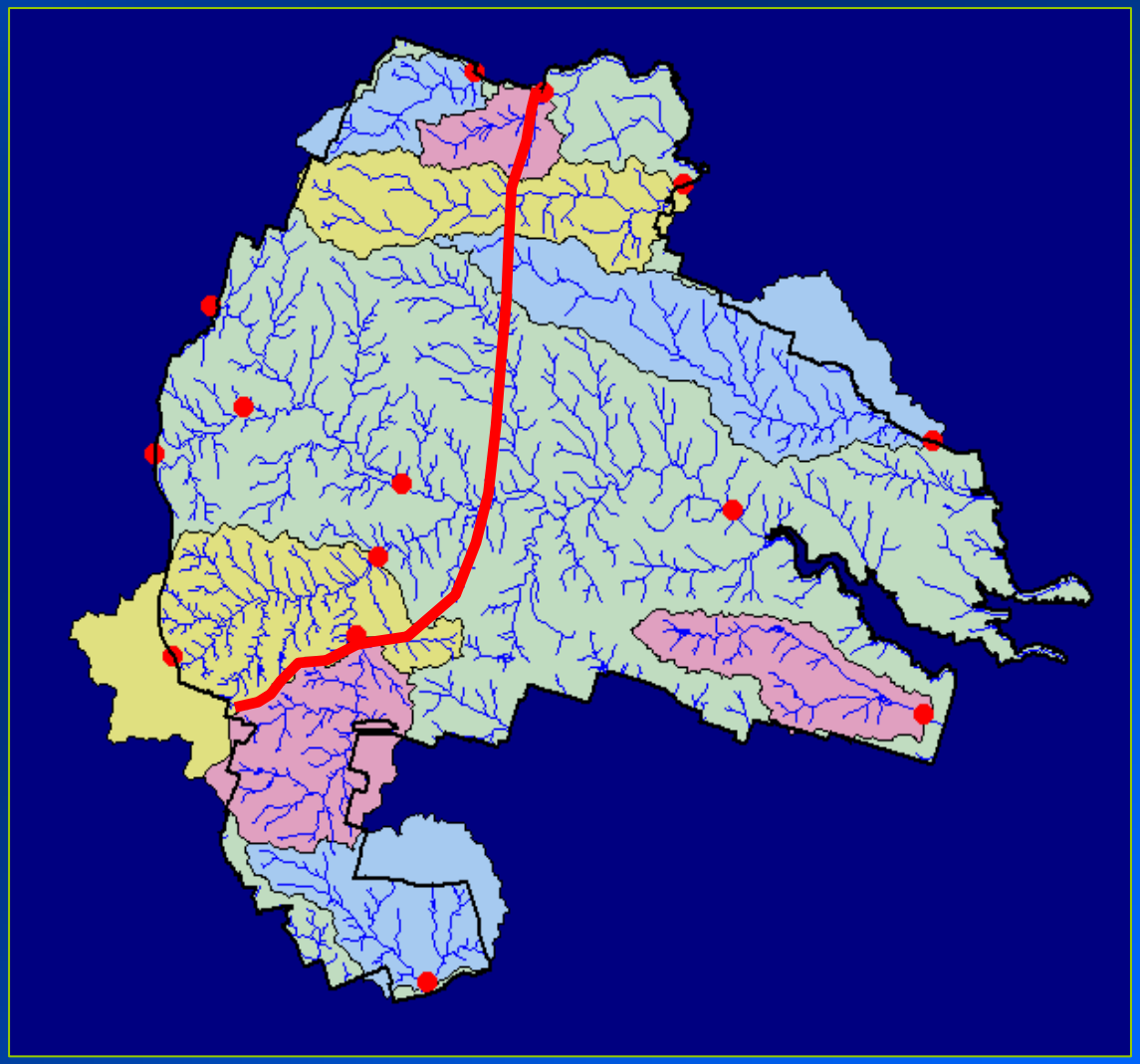
Texas Water Resources Institute
make every drop count

TAMU/FT. HOOD STUDIES

- Water Quality & Soil Erosion
  - Assessing Nutrient & Sediment Loading of Waterbodies
- Training Area Restoration
  - Soil Amendments & Seeding Activities
- Endangered Species Conservation Banking
  - Private/Public Partnership
- Vegetation Survey
  - Monitoring Vegetation Production
- Entomology Studies
- Others

FORT HOOD: WESTERN RANGE

- Composed of 67,000 acres within the military base
- Training and maneuvering area for two armored divisions.
- Restoration serves to provide a two-fold benefit:
  - 1) maintenance and improvement of the natural resource base, and
  - 2) maintenance of quality training lands for military personnel.



INDICATORS OF IMPACT

Delta formation on Cowhouse Creek, 1995

Delta formation on Cowhouse Creek, 1999

IMPACTS

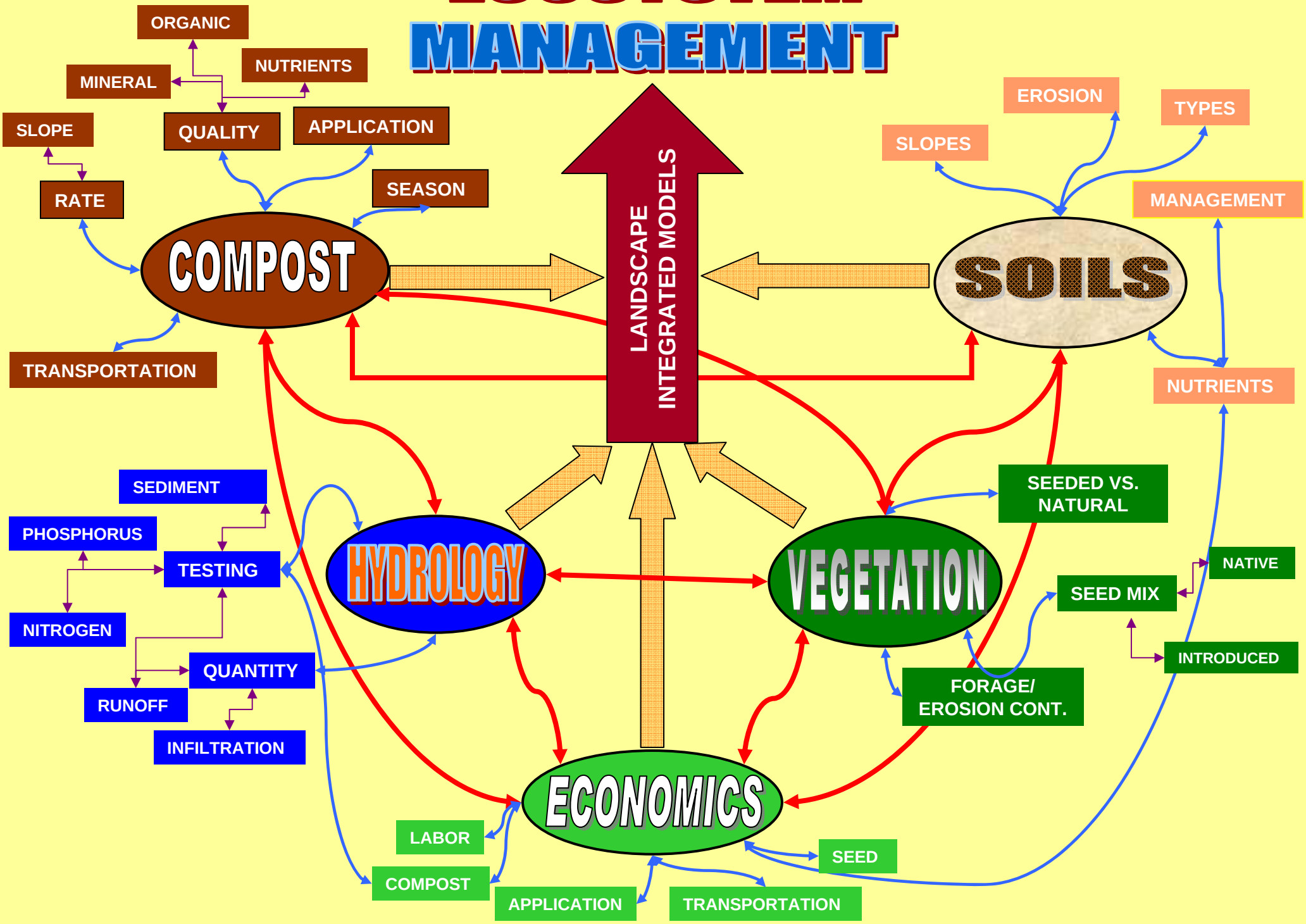
Rangeland Restoration Pilot Project

- Through the leadership of Congressman Chet Edwards, the Rangeland Restoration Pilot Project was funded and is currently in progress

- RRPP Goal: Develop, implement, and evaluate Best Management Practices (BMPs) appropriate to restoring damaged Fort Hood training areas while limiting interference with military training functions and activities.

WEST RANGE LANDSCAPE

ECOSYSTEM MANAGEMENT

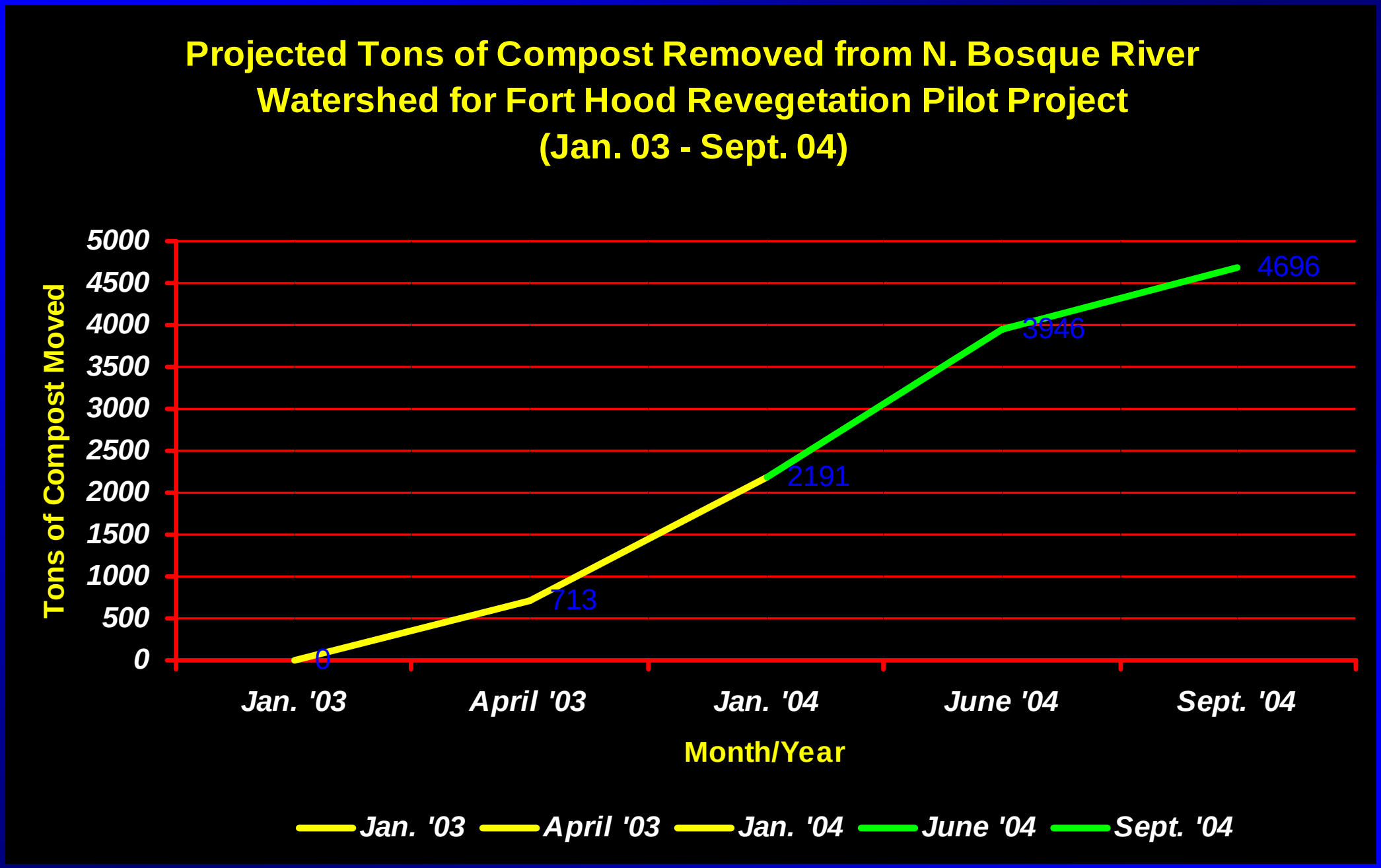


ACTIONS

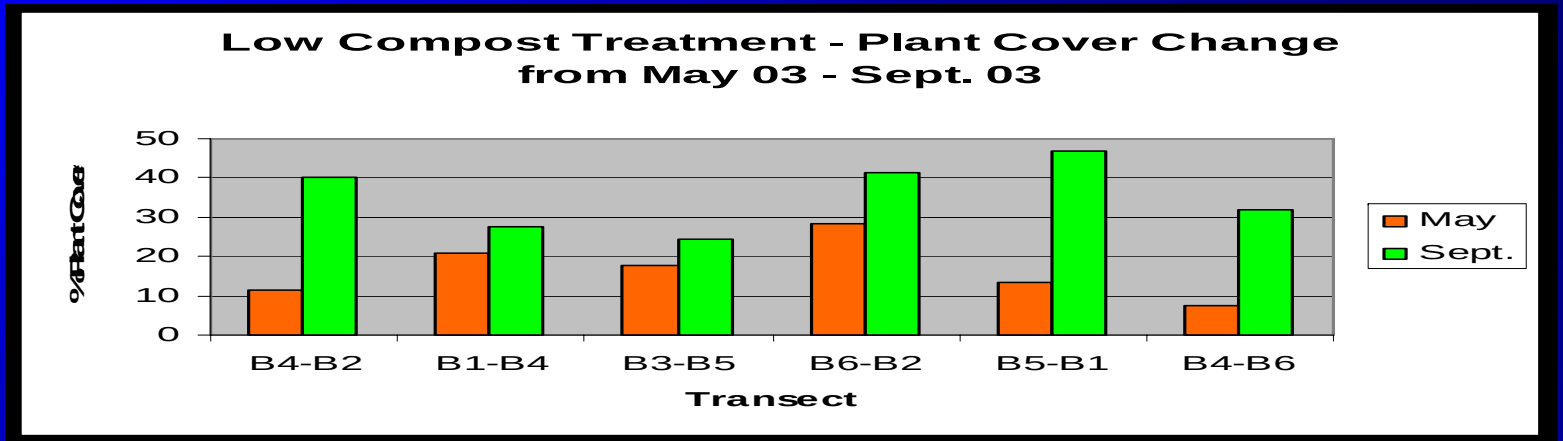
Project Managers

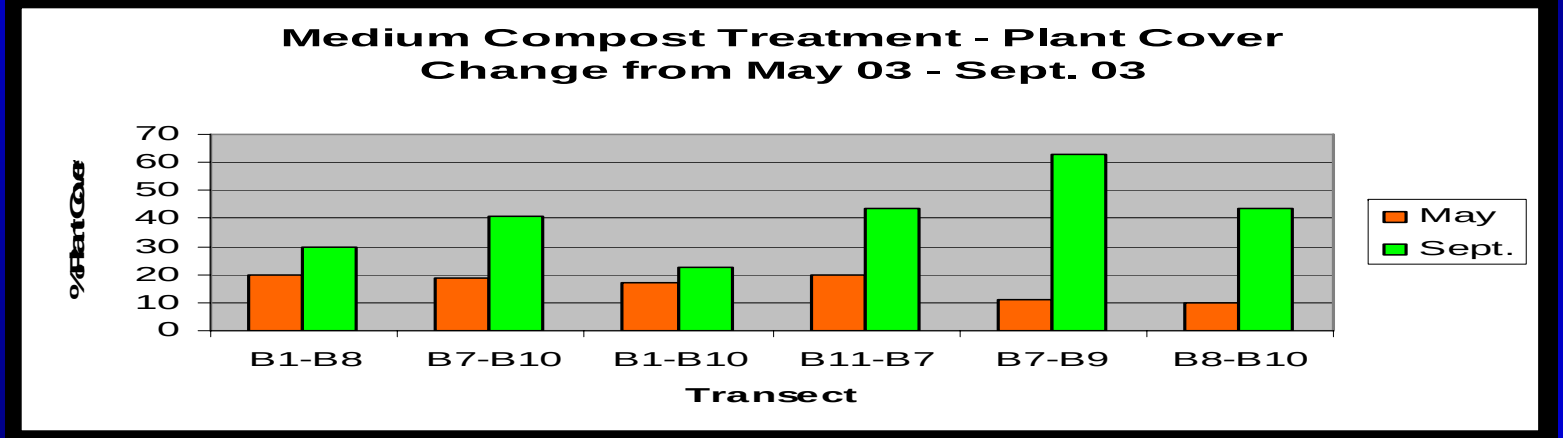
Dr. William Fox

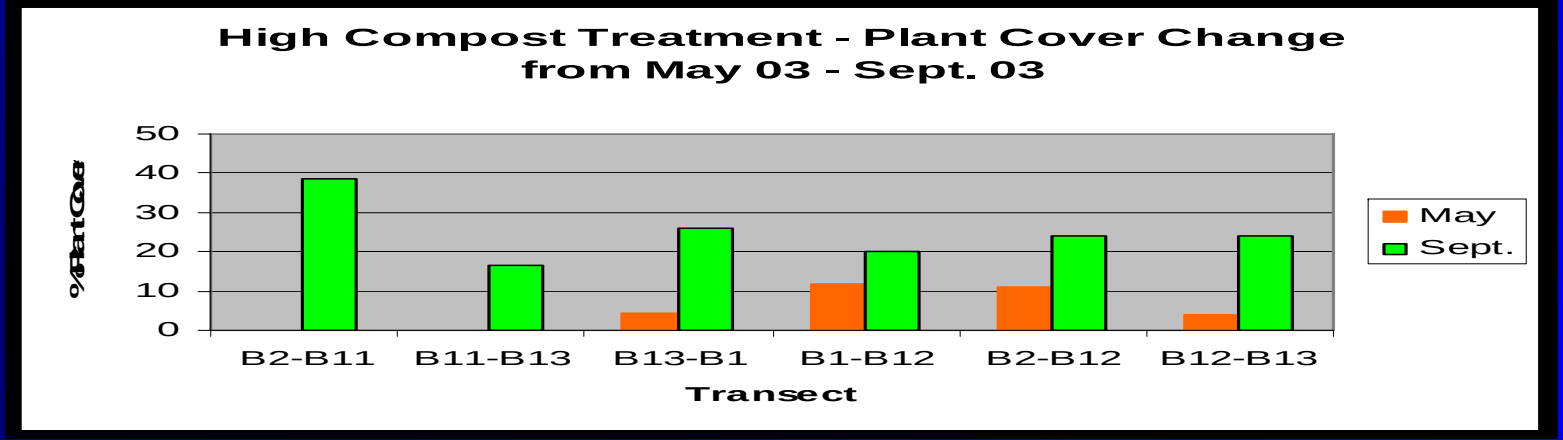
Dr. Dennis Hoffman

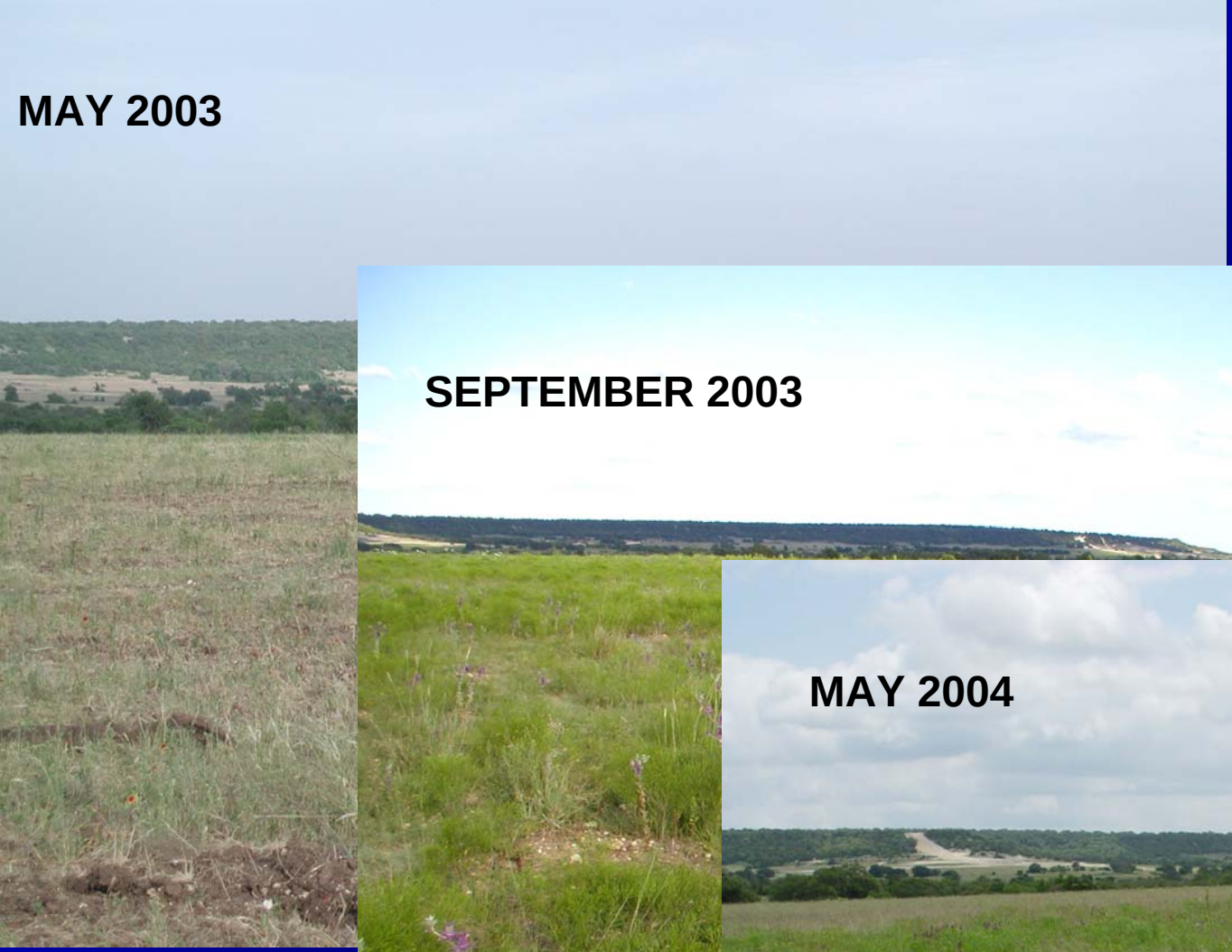

Projected Tons of Compost Removed from N. Bosque River Watershed for Fort Hood Revegetation Pilot Project (Jan. 03 - Sept. 04)
Tons of Compost Moved
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0
713
2191
3946
4696
Jan. '03
April '03
Jan. '04
June '04
Sept. '04
Month/Year
Jan. '03
April '03
Jan. '04
June '04
Sept. '04

PLANT COVER CHANGE
MAY ' 03 - SEPTEMBER '03



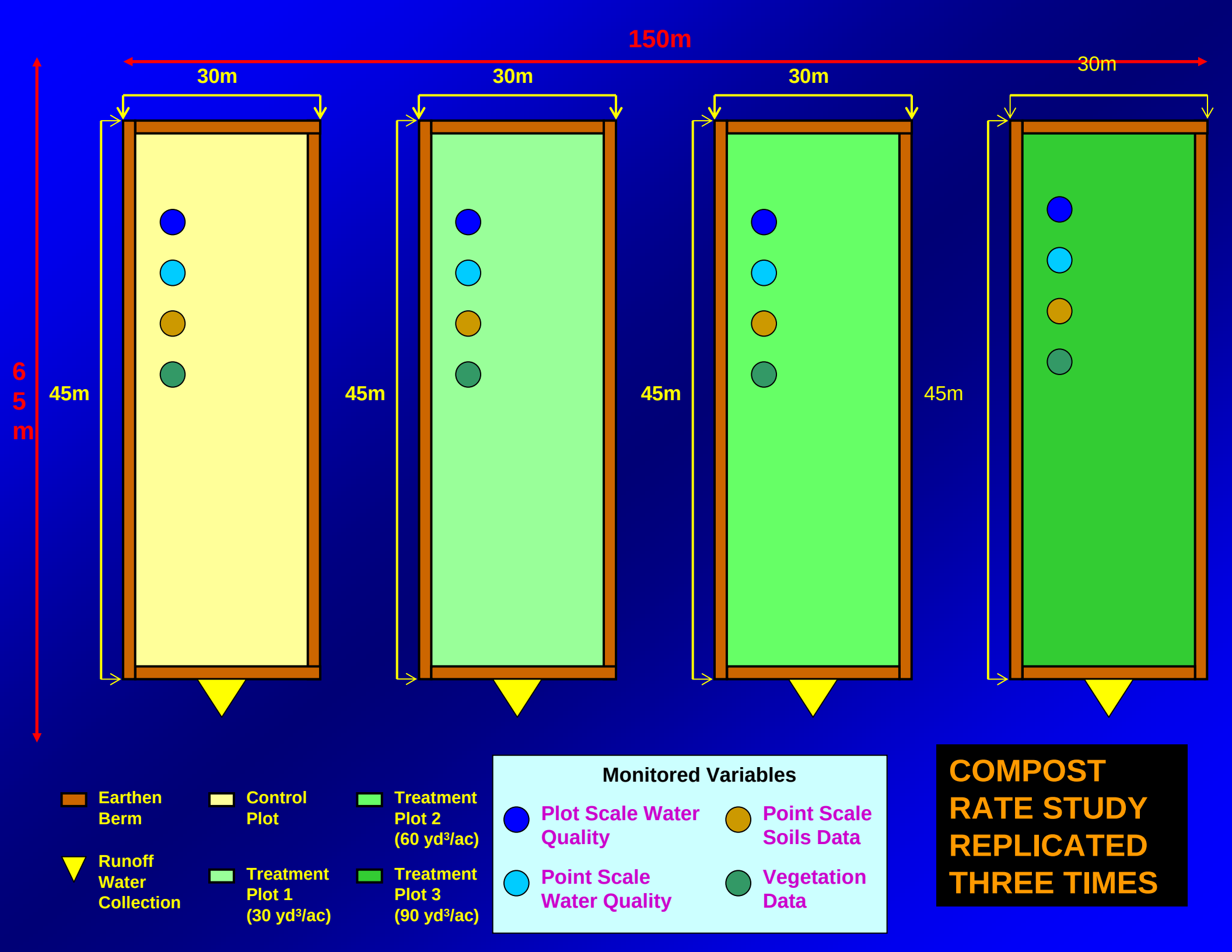





MAY 2003

SEPTEMBER 2003

MAY 2004


150m
30m
30m
30m
30m
65m
45m
45m
45m
45m
Earthen Berm
Control Plot
Treatment Plot 2 (60 yd³/ac)
Runoff Water Collection
Treatment Plot 1 (30 yd³/ac)
Treatment Plot 3 (90 yd³/ac)
Monitored Variables
Plot Scale Water Quality
Point Scale Soils Data
Point Scale Water Quality
Vegetation Data
COMPOST RATE STUDY REPLICATED THREE TIMES

BUILDING THE PARTNERSHIP

- BRINGING THE PARTNERS TOGETHER
- DEVLEOPING A HOLISTIC STRATEGY
- INTEGRATING PRACTICES
- EVALUATING THE OUTCOMES
- IMPLEMENTING THE PROGRAMS

FUNDING

- **Funding Provided for Rangeland Restoration Pilot Project through federal earmark provided by Congressman Edwards and administered by:**

NRCS
Natural Resources
Conservation Service
United States Department of Agriculture

THANK YOU!