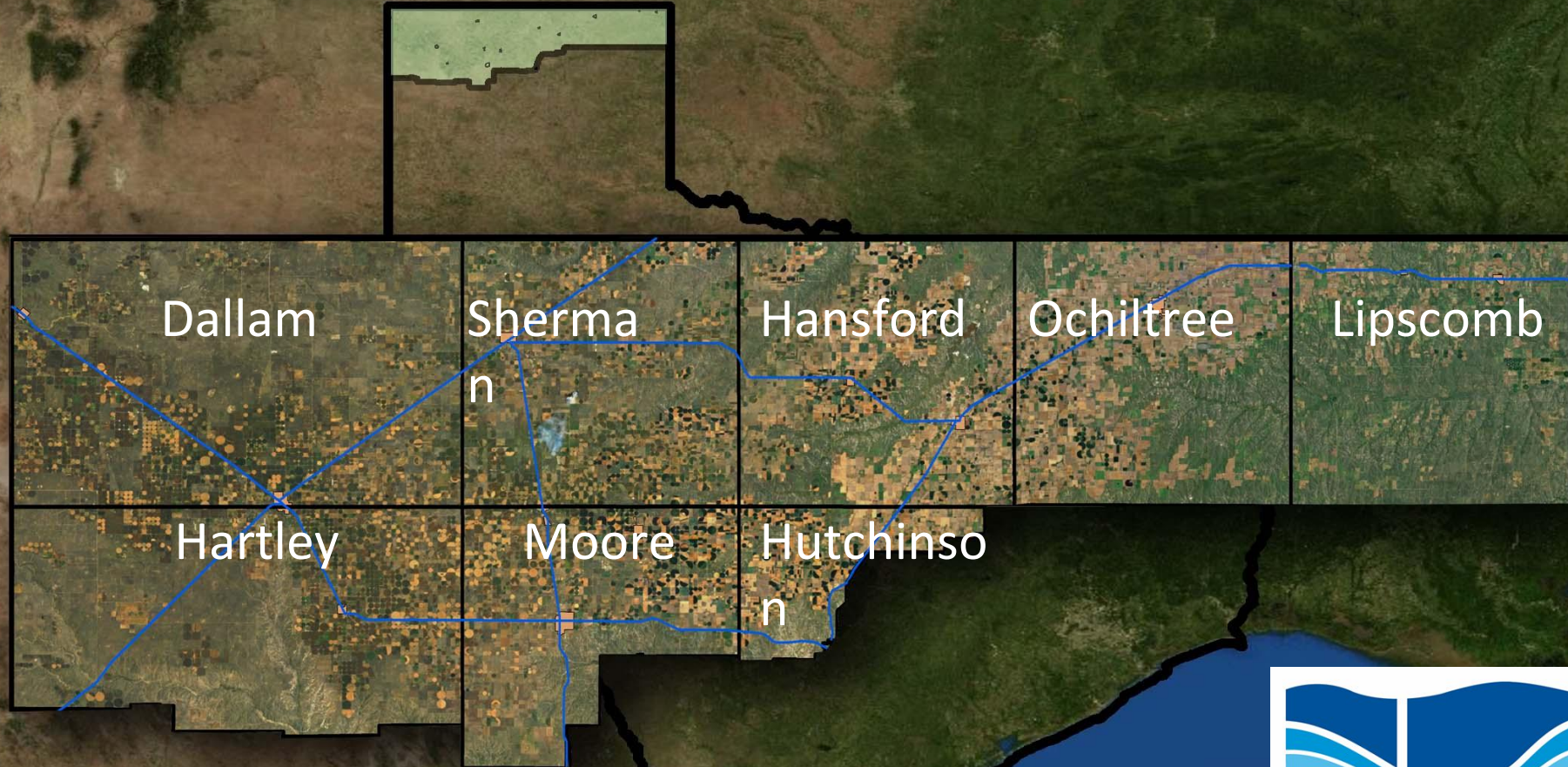


North Plains Master Irrigator Program



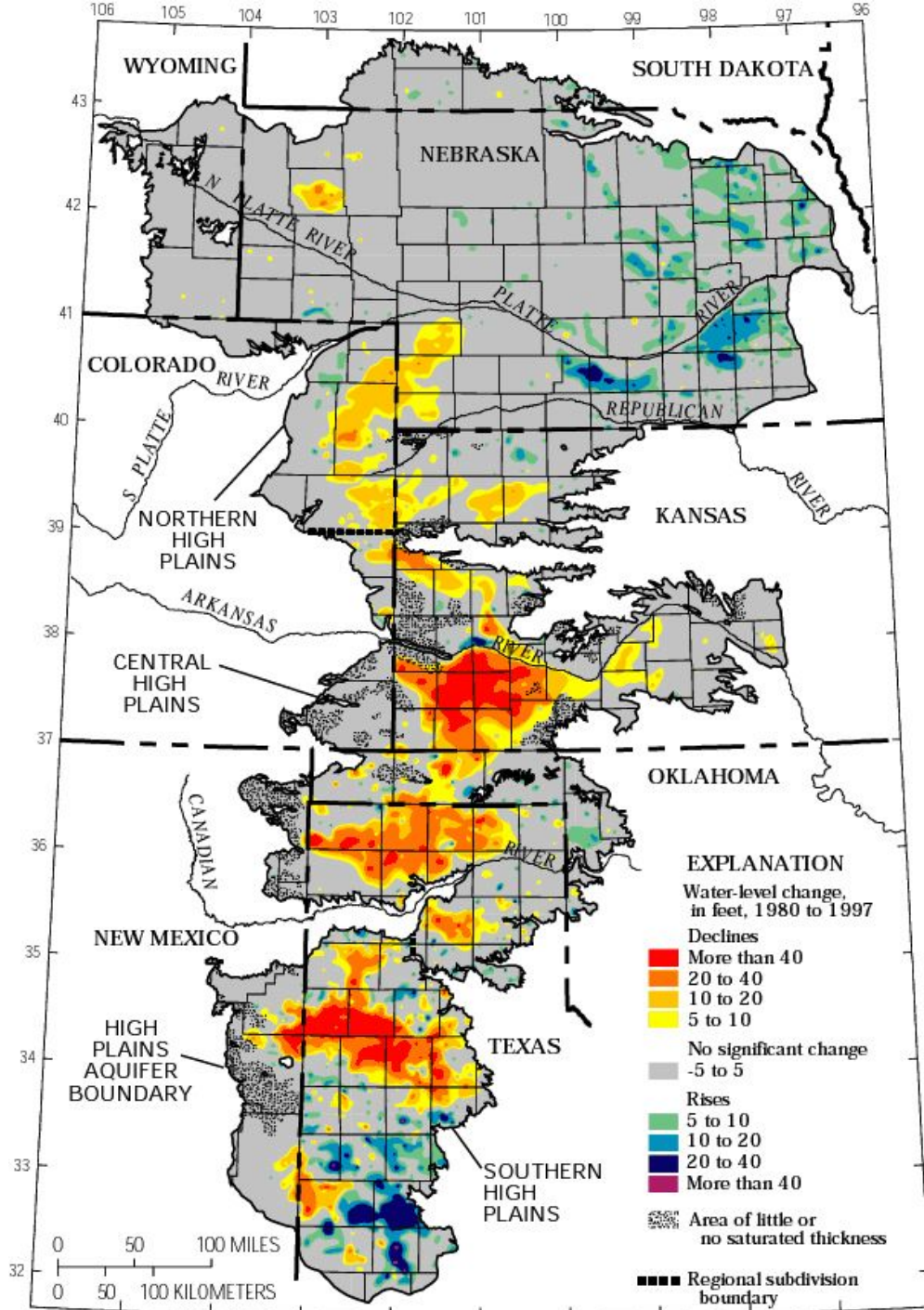
Kirk Welch
Assistant General Manager
Public Outreach



Mission Statement

*Maintaining our way of life
through conservation,
protection, and preservation
of our groundwater
resources.*



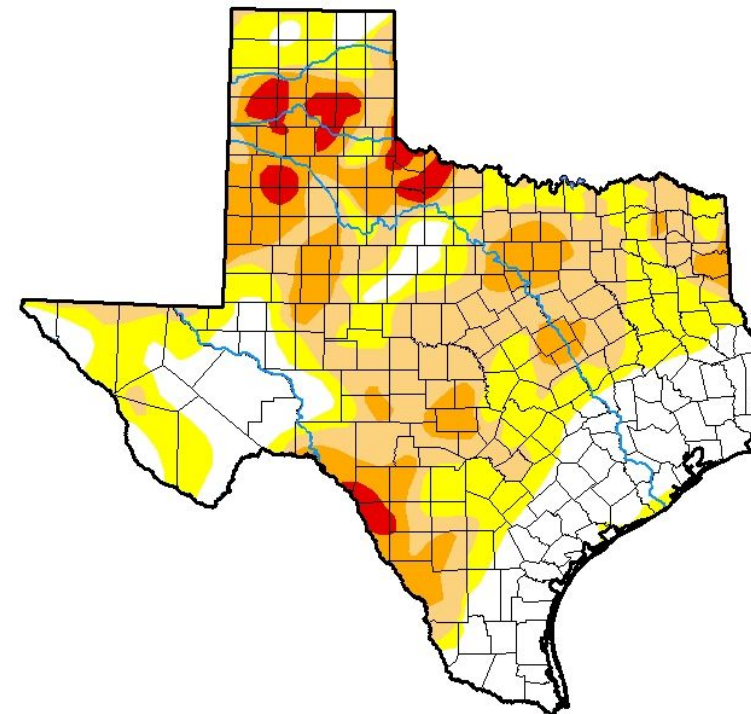


U.S. Drought Monitor Texas

July 17, 2018

(Released Thursday, Jul. 19, 2018)

Valid 8 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Curtis Riganti
 National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

Conservation Steps

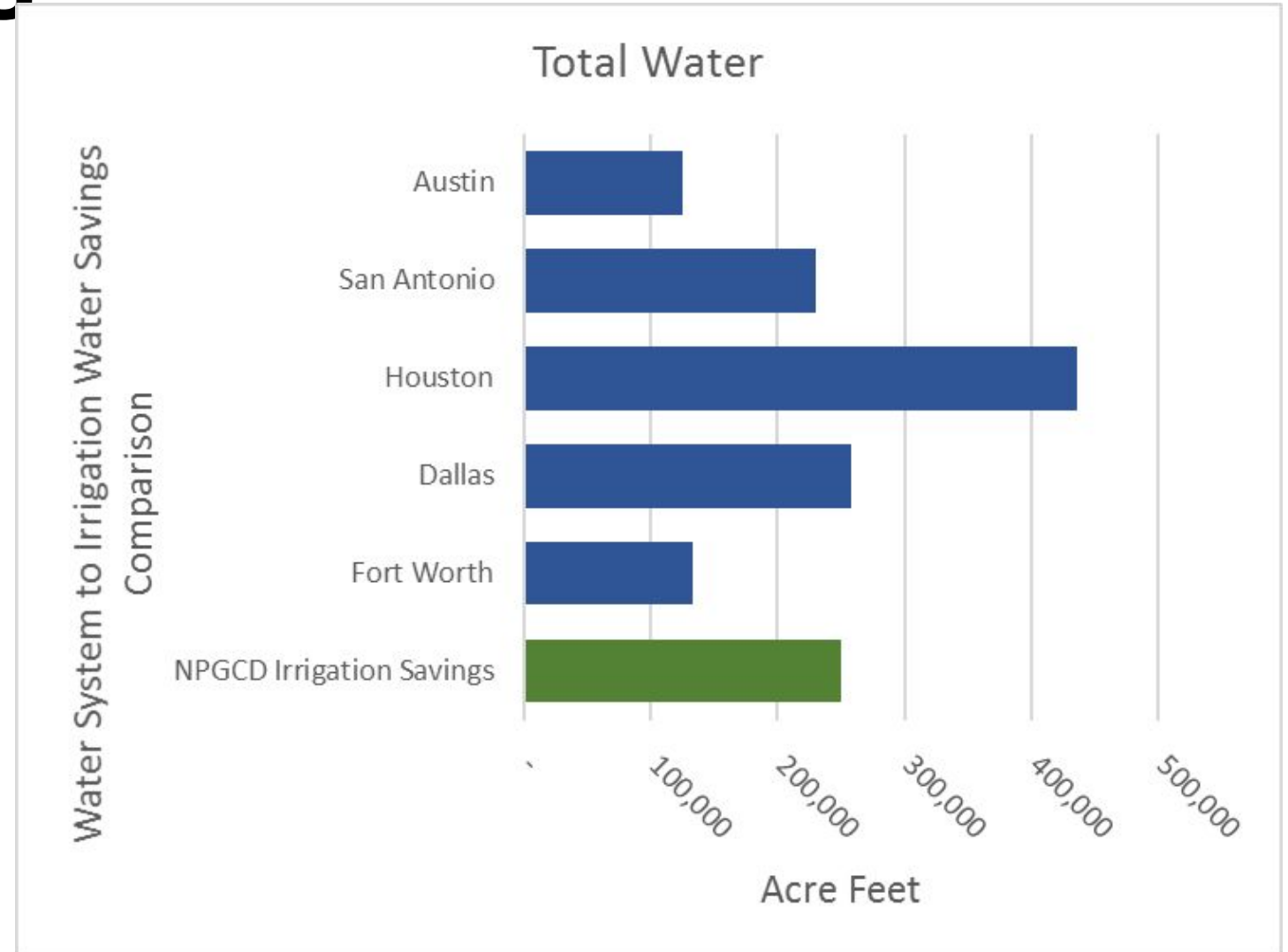
- Gradually reduced allowable production limits from 2 AF/Acre to 1.5 AF/Acre (25% reduction)
- Develop agriculture conservation education programs
- Continue to promote water conservation across all water user groups

Conservation Education

- **200-12 Reduced Irrigation Corn Demonstration Project**
- **The Texas High Plains Initiative For Strategic and Innovative Irrigation Management and Conservation**
- **Efficient Profitable Irrigation In Corn**
- **3-4-5 GPM Gallon Production Maximization Corn Demonstration Project**
- **Master Irrigator**
- **4th Grade Water Conservation Festivals**
- **5th Grade Water Wise**
- **In-class programs**
- **Summer Showers**
- **Civic group and Industry presentations.**
- **North Plains Water Conservation Center.**

Irrigation Math

Irrigated Acres
1,000,000
Reduced
Irrigation
X 3" or 0.25'
**Irrigation Savings
= 250,000 AF**



Agriculture Conservation Demonstrations





The Master IRRIGATOR

TEXAS A&M
AGRI LIFE
RESEARCH



**NORTH PLAINS
GROUNDWATER**
Conservation District



United States Department of Agriculture
Natural Resources Conservation Service

Master Irrigator Project Advisory Committee

- Agronomics
- Irrigation Scheduling
- Systems
- Special Topics (Cool Stuff)



Agronomics

- Soil Health, Infiltration and Residue Management
- Economics of Soil Health and Residue Management
- Fertility Management
- Using Cover Crops to Improve Soil Health
- Producer Panel: Soil Health and Residue Management





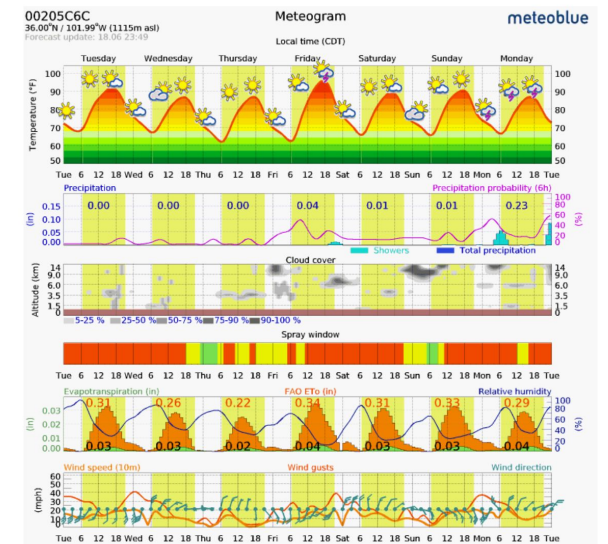
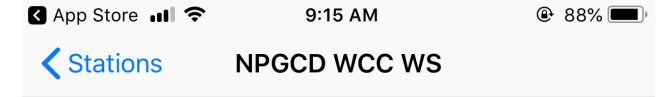
Soil Health



Importance of cover crops and crop rotation

Irrigation Scheduling

- Economics of Irrigation Scheduling
- Pre-Water and Planting Dates
- Monitoring Moisture Stress and Plant Growth in Irrigated Crops
- Irrigation Scheduling with Aquaplanner
- Measuring Crop Water Use
- Data Interpretation & Strategic Irrigation Management
- Producer Panel: Irrigation Scheduling





**Soil
moisture
probes

&

Crop stress
monitors**



Weather stations and custom irrigation scheduling



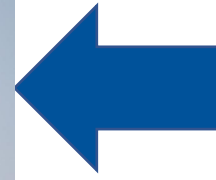
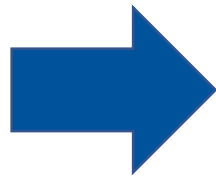
Systems

- Economics of Irrigation Systems
- Systems and Application Efficiency
- Genset: A potential alternative for converting natural gas to electric powered irrigation
- Pivot Shutoff, Track Management, Variable Rate Irrigation and Remote Monitoring
- Producer Panel: Center Pivot Irrigation





Center pivot
systems and
monitoring



Subsurface drip
irrigation





← LEPA – low energy precision application



PMDI – precision mobile drip irrigation ↑

Systems & Special Topics

- 2018 Crop Profitability Analyzer
- Variable Frequency Drives Benefits in Agriculture
- Remote Sensing uses in Agriculture
- How I use Satellite Imagery & Drones in Our Operation
- Subsurface Drip Irrigation Systems
- Producer Panel: SDI and Remote Sensing



Drones and remote sensing





2018 Master Irrigator Graduates

Dustin Borden

Janet Reinart

Clinton Born

Colt Reynolds

Paul Breland

Eddy Riggins

Ann Burton

Justin Ritchey

Dorland Burton

Dustin Sargent

Glen Green

Everett Timmons

Dennis Holubec

Nathan Webb

Mark Howard

Willie Wieck

Ridgel Koehn

Linda Williams

Kenton Laubhan

Misty Williams



2018
TEXAS ENVIRONMENTAL
EXCELLENCE AWARDS

WINNER
www.teea.org

A PROGRAM OF THE
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY



Nongovernmental Contributors and Sponsors (That Public-Private-Partnership Thing)



- Growers
- AquaSpy
- METOS
- Servi-Tech
- Better Harvest, Inc
- PivoTrac Monitoring, LLC
- Lindsay Corporation
- Yaskawa America Inc.
- Crop Quest
- Professional Water Management Associates



Discussion

Kirk Welch Assistant General Manager

kwelch@northplainsgcd.org

806-935-6401