

# Inorganic Nitrogen Deposition in the Central Texas Panhandle

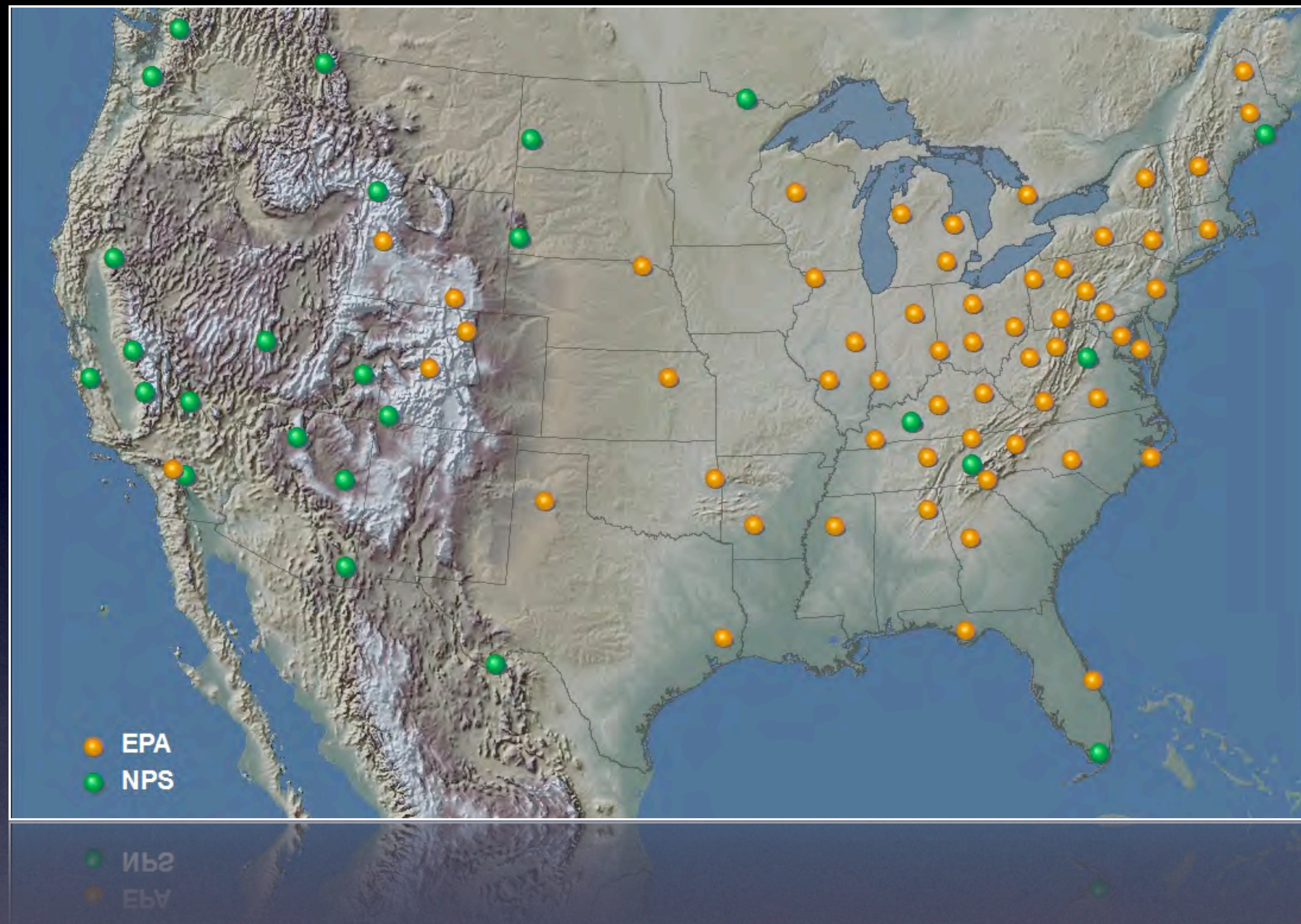
Clean Air Status and Trends Network (CASTNET)  
National Atmospheric Deposition Program (NADP)  
Texas AgriLife Research-Amarillo



# Acknowledgments

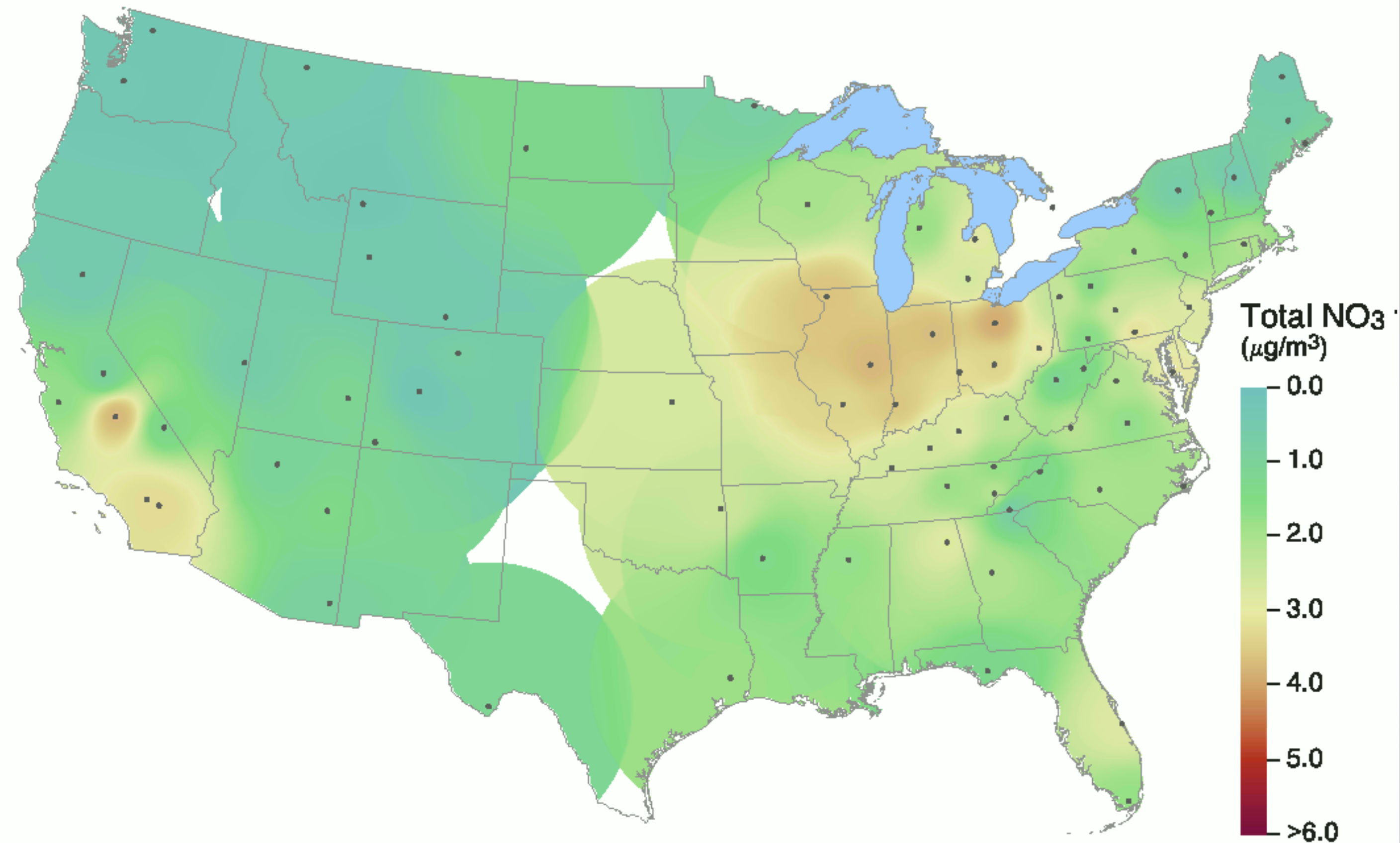
- Jack Bush, Gary Marek, Kevin Heflin, Graham Hartmann, and Brad Wilhite (site establishment)
- Lanny McDonald and Jack Bush (site operators)





# CASTNET Sites in the United States





Source: CASTNET

USEPA/CAMD 07/27/07

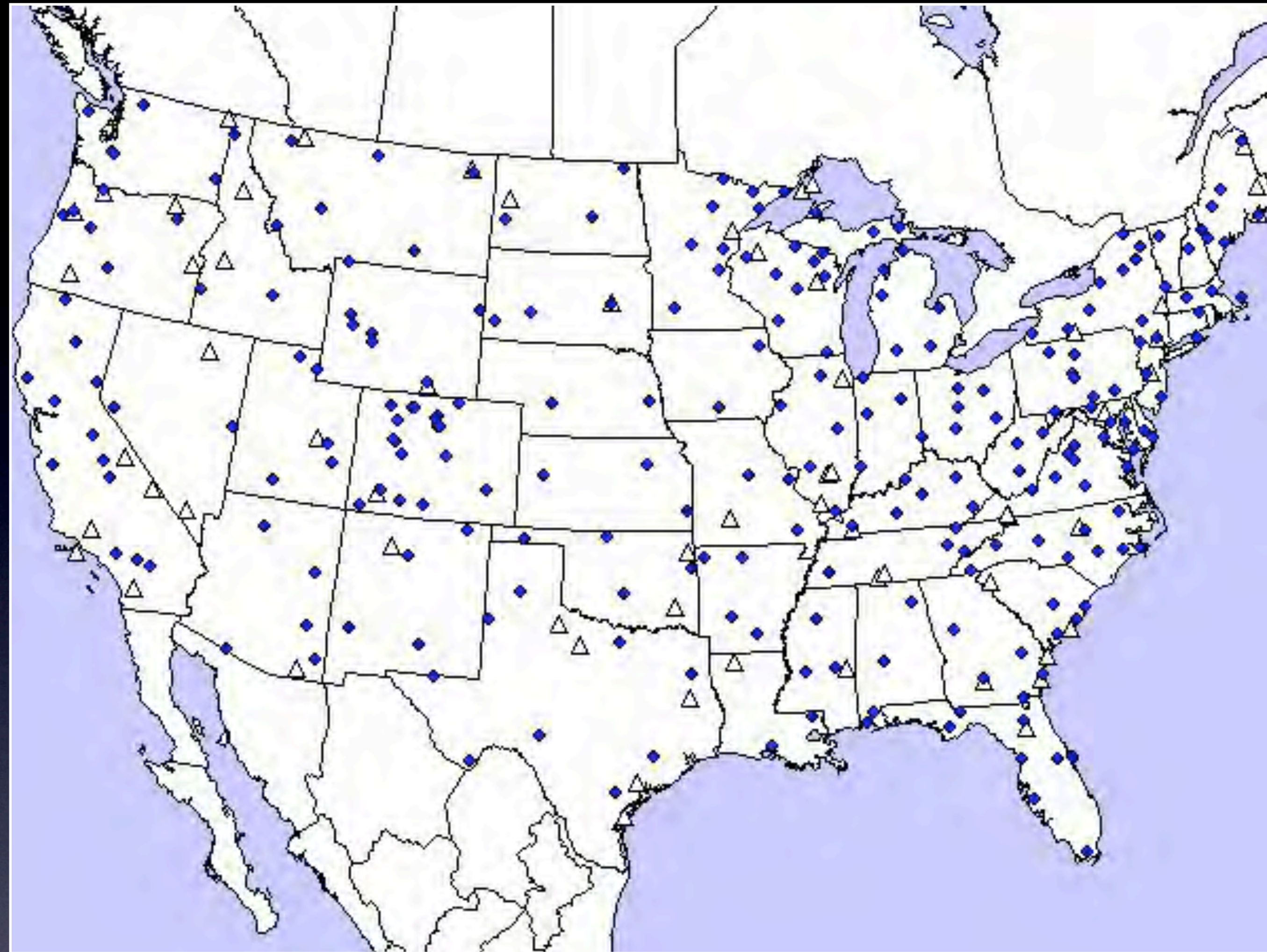
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Source: CASTNET

USEPA/CAMD 07/27/07

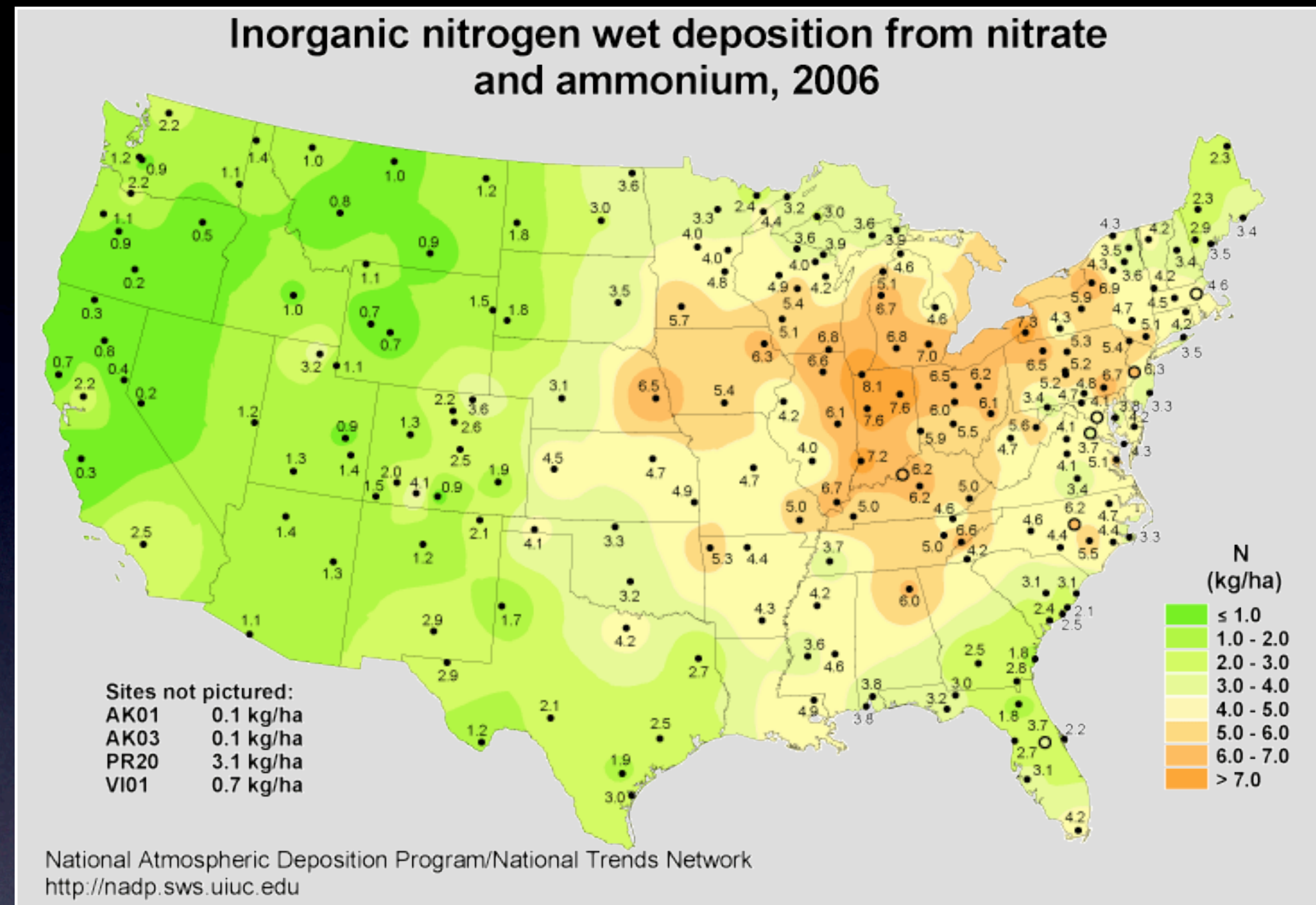
# CASTNET (2001-2006)





# NADP Sites in the United States

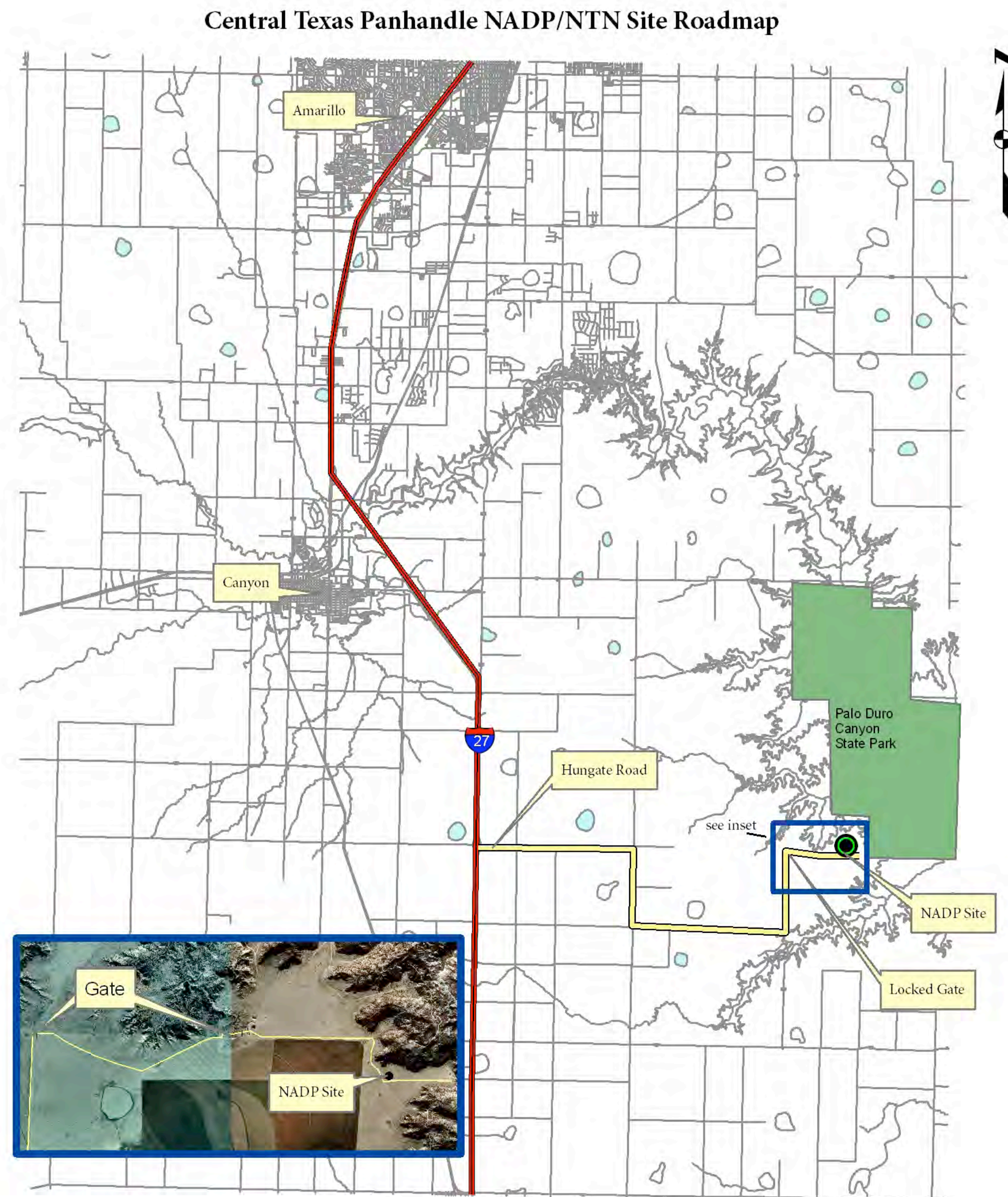




# TIN Wet Deposition, 2006



Lat 34.8803 N  
Lon 101.6649 W  
Elev 1050 m

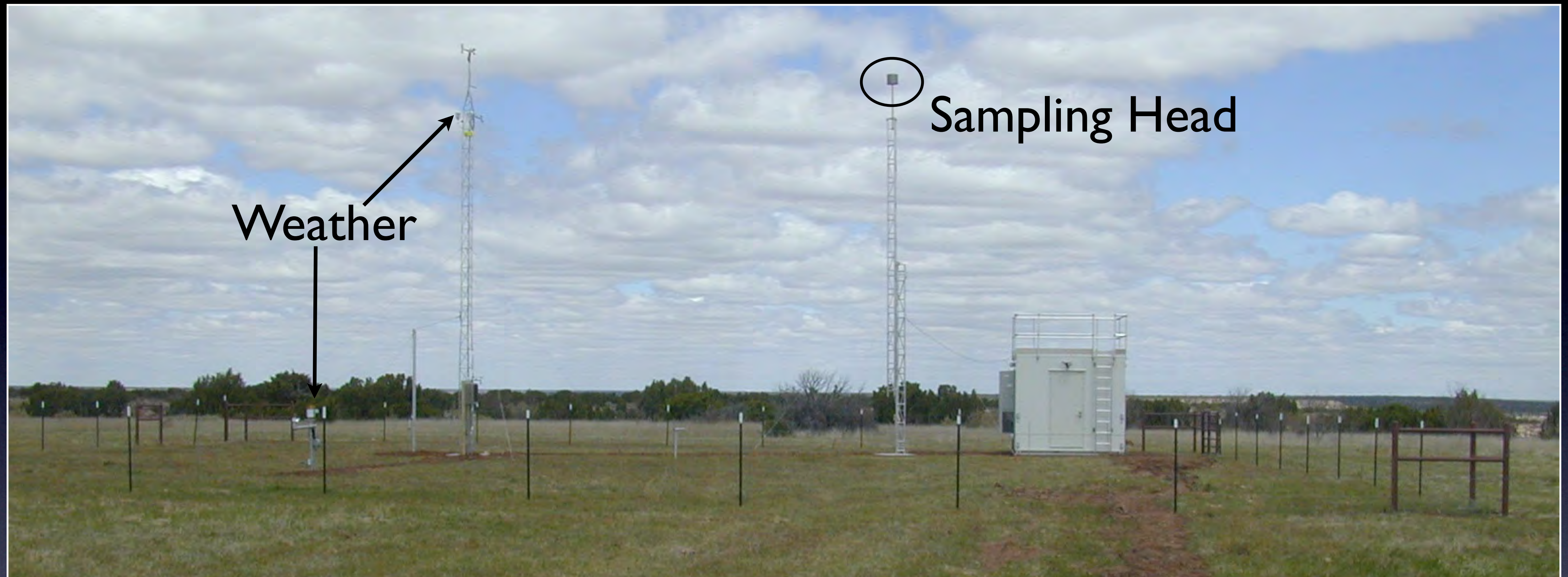






Early Site Establishment (looking N)





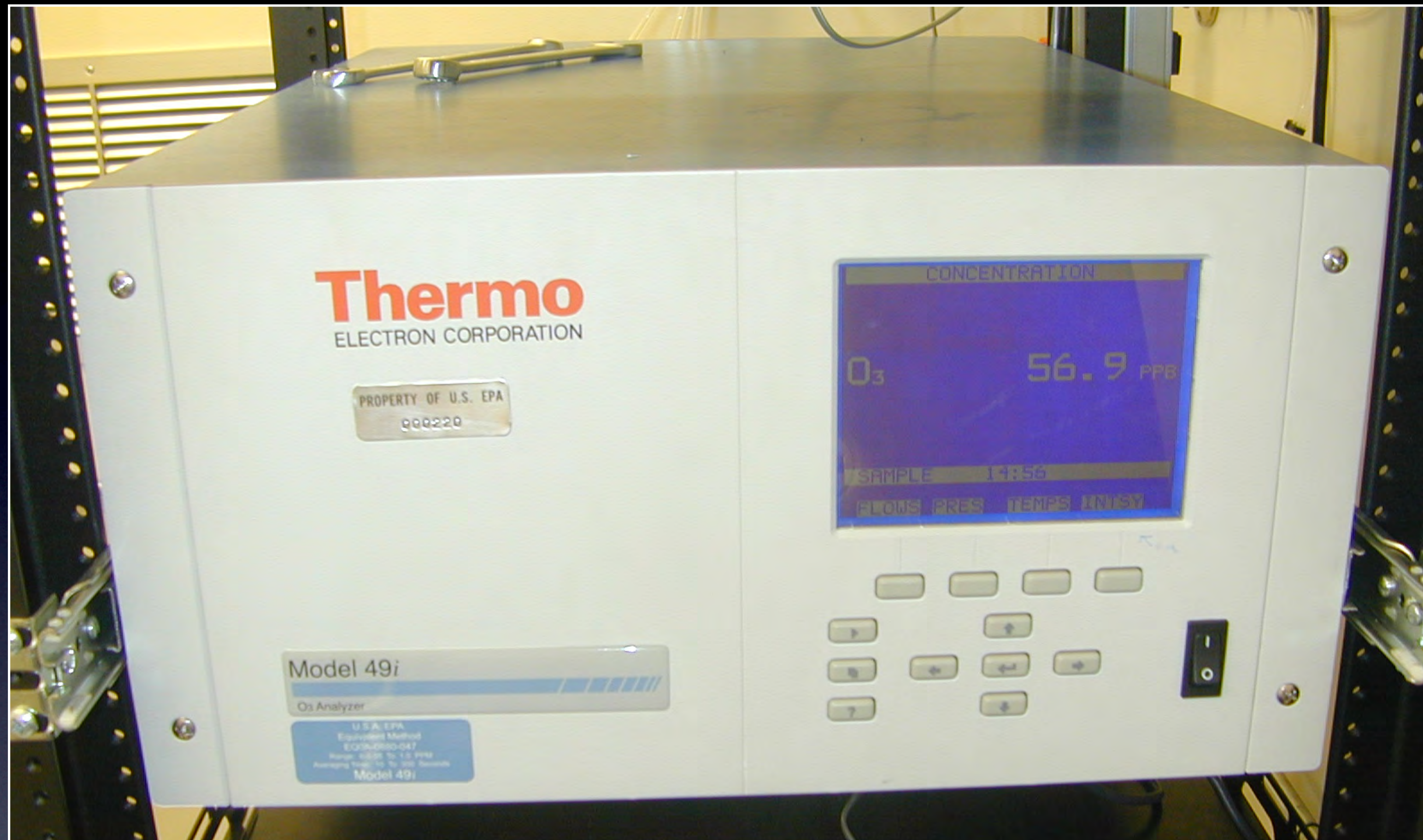
CASTNET (before NADP)





CASTNET Raingage & Pyranometer





CASTNET O<sub>3</sub> Analyzer





# CASTNET Datalogger and MFC





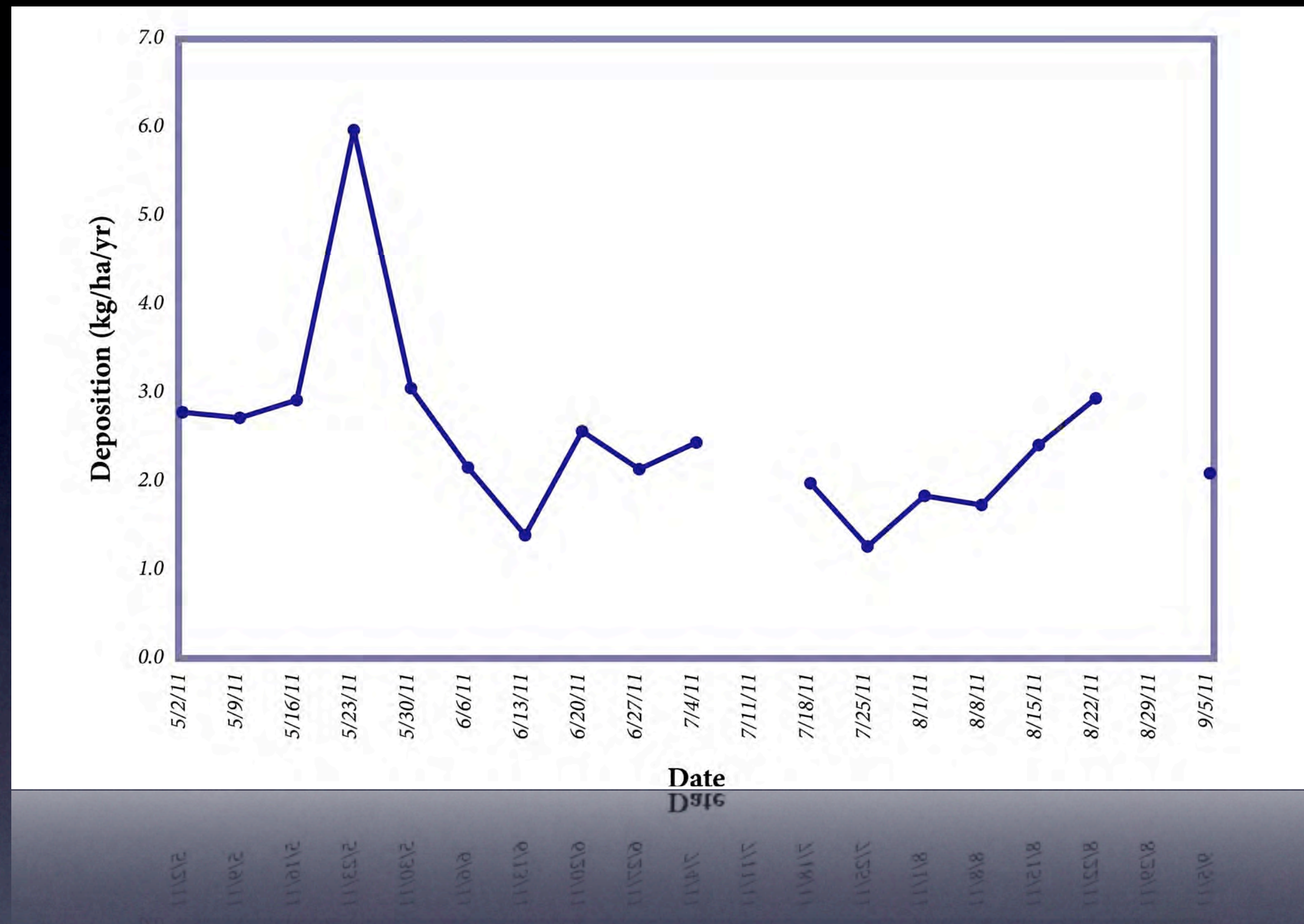
NADP Weighing Raingage





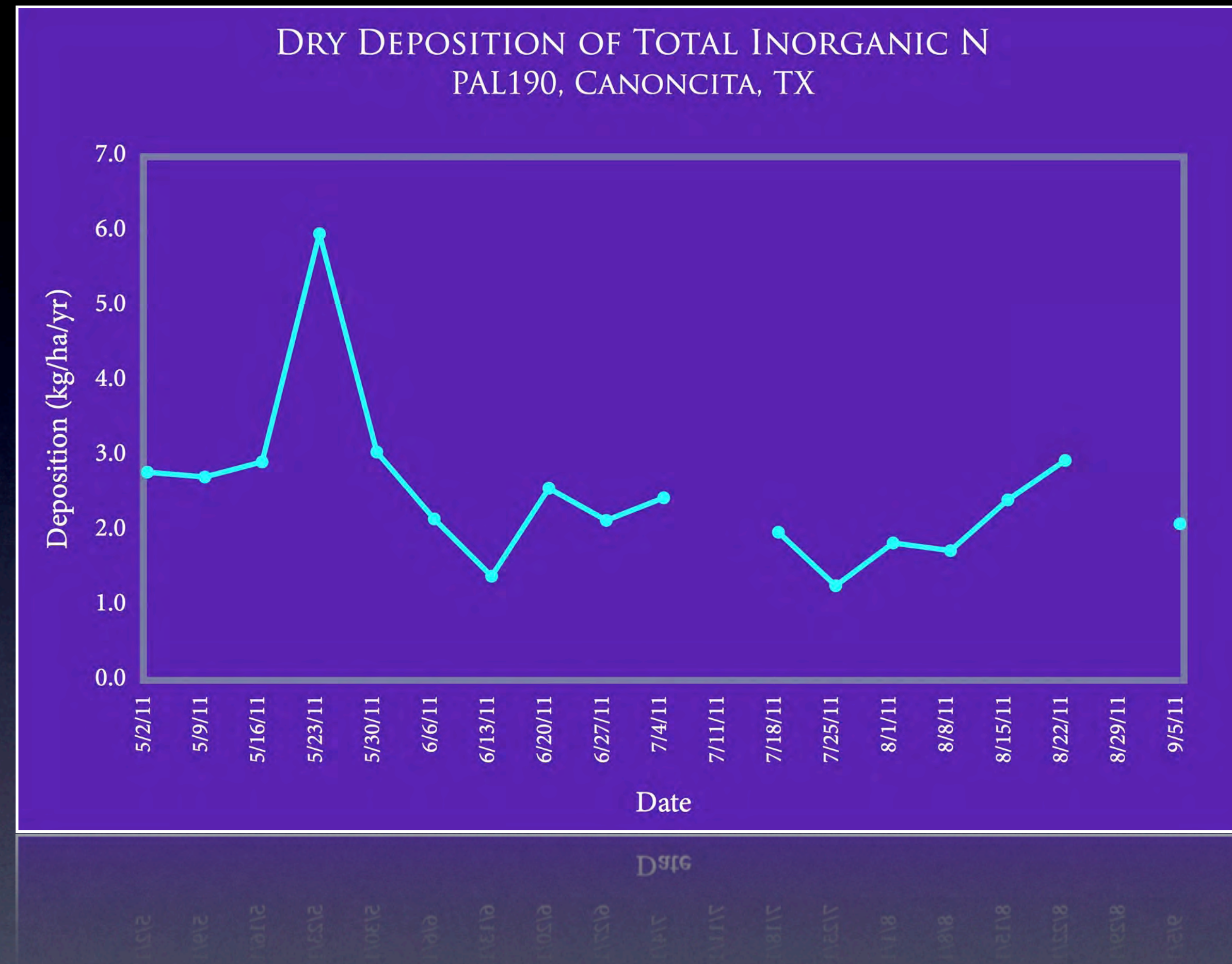
NADP Rainfall Sampler





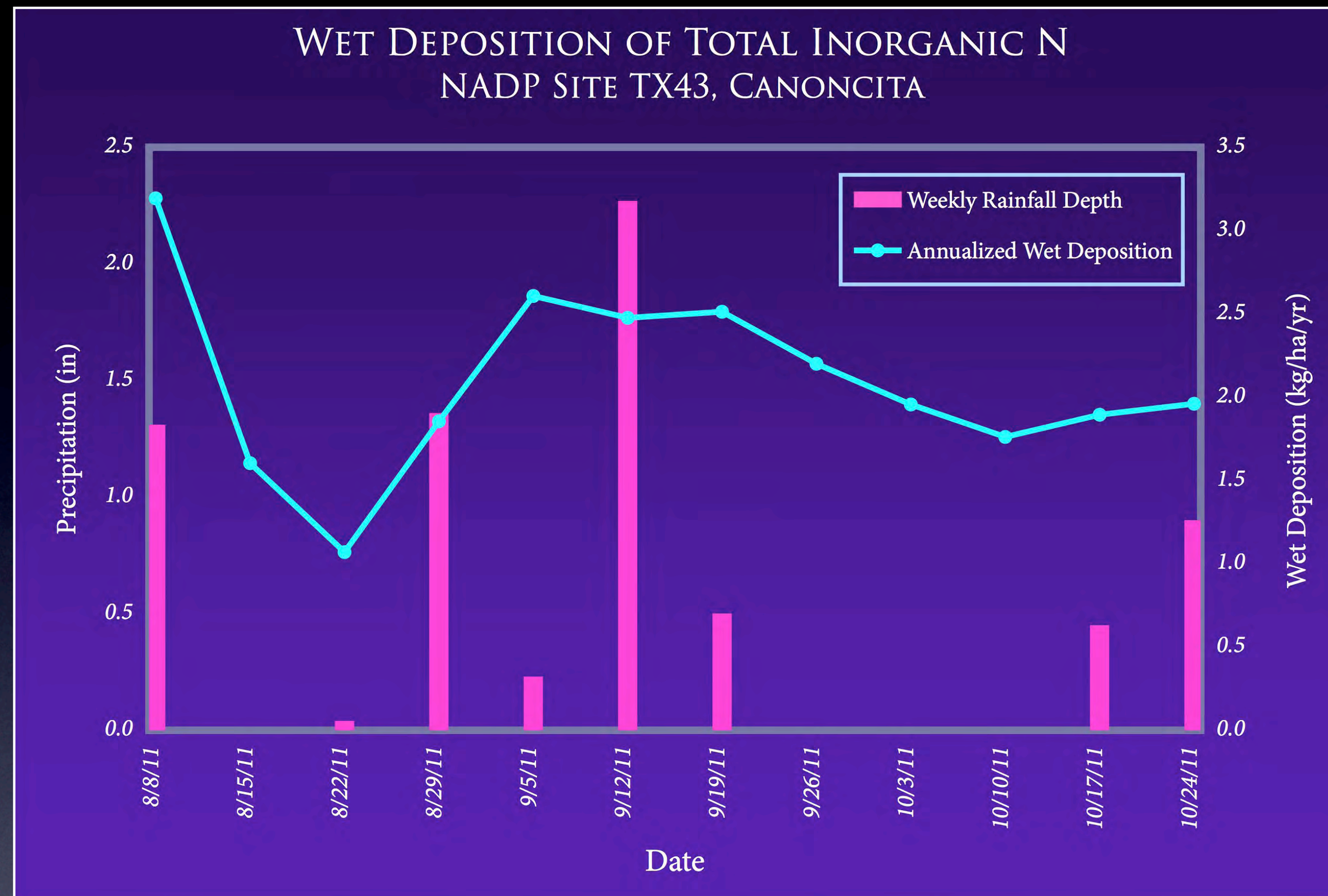
TIN Dry Deposition = 3 kg ha<sup>-1</sup> yr<sup>-1</sup>





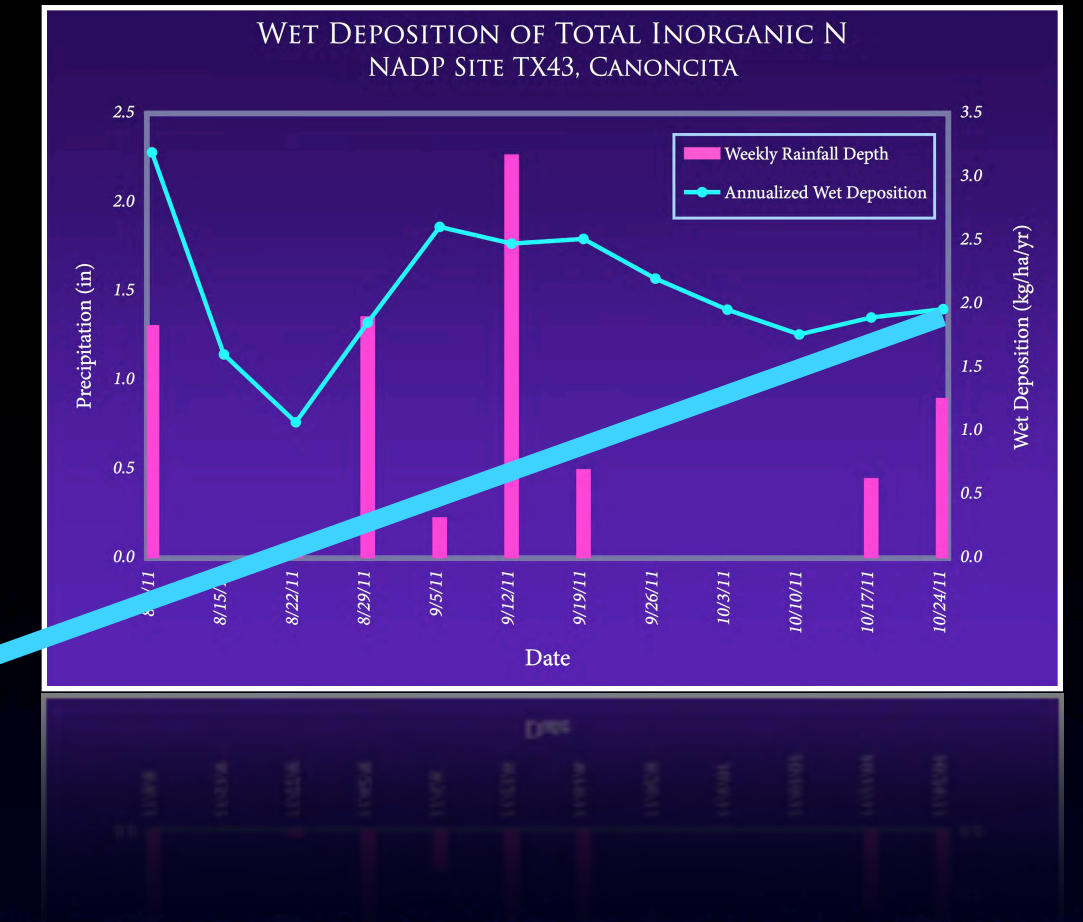
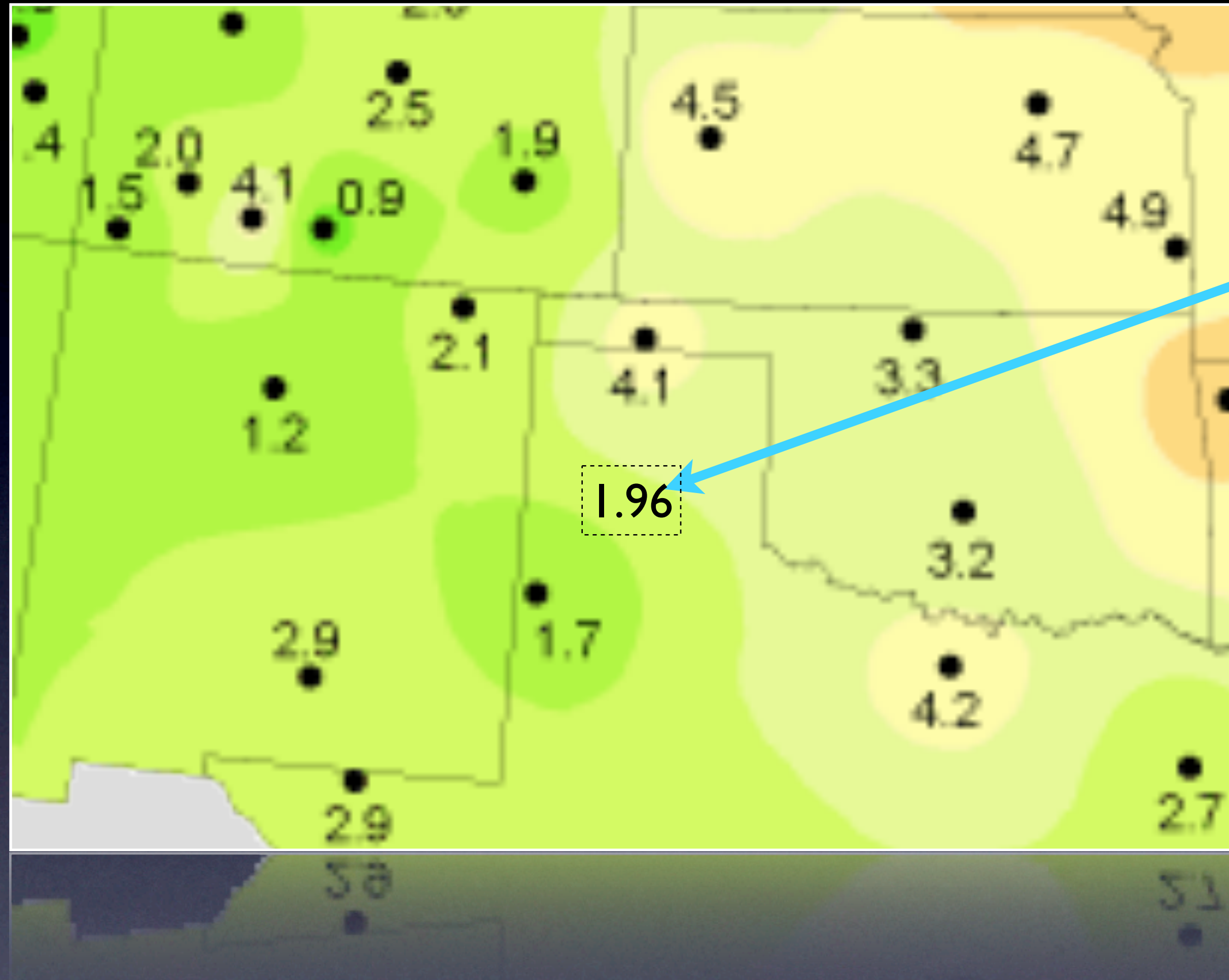
TIN Dry Deposition = 3 kg ha<sup>-1</sup> yr<sup>-1</sup>





Wet Deposition = 2 kg N ha<sup>-1</sup> yr<sup>-1</sup>





# TIN Wet Deposition, 2006



TIN Deposition, 2007 (est.)  
(Dry + Wet) = 5 kg N ha<sup>-1</sup> yr<sup>-1</sup>

(Europe = 17 kg N ha<sup>-1</sup> yr<sup>-1</sup>)\*

(U.S. = 5.1 kg N ha<sup>-1</sup> yr<sup>-1</sup>)\*\*

\*Stevens et al., "Impact of Nitrogen Deposition on the Species Richness of Grasslands," *Science* 303(2004):1876-1879.

\*\*Holland et al., "Nitrogen Deposition onto the United States and Western Europe: Synthesis of Observations and Models," *Ecological Applications* 15(2005):38-57.