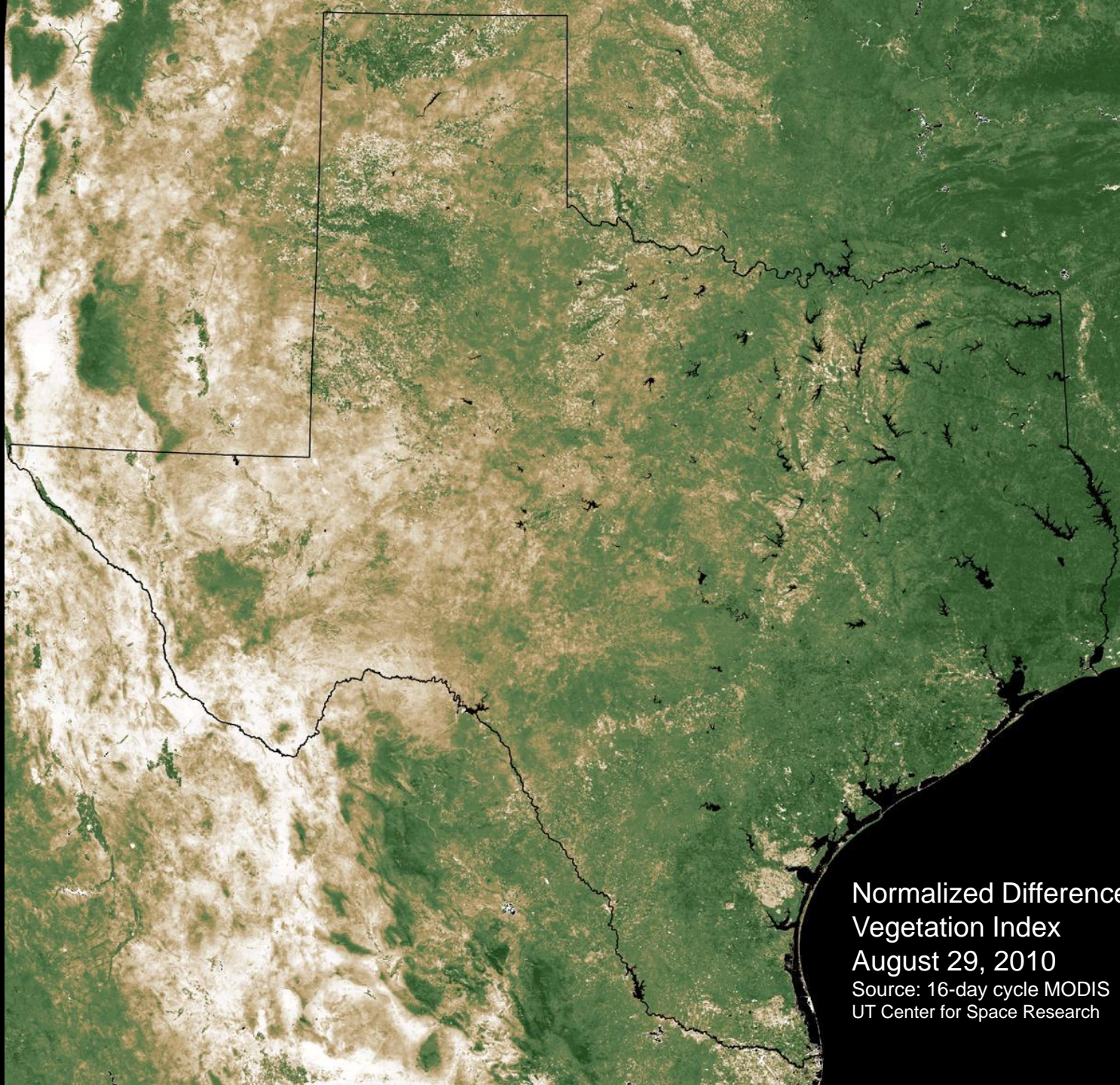


21st Century Barton Springs

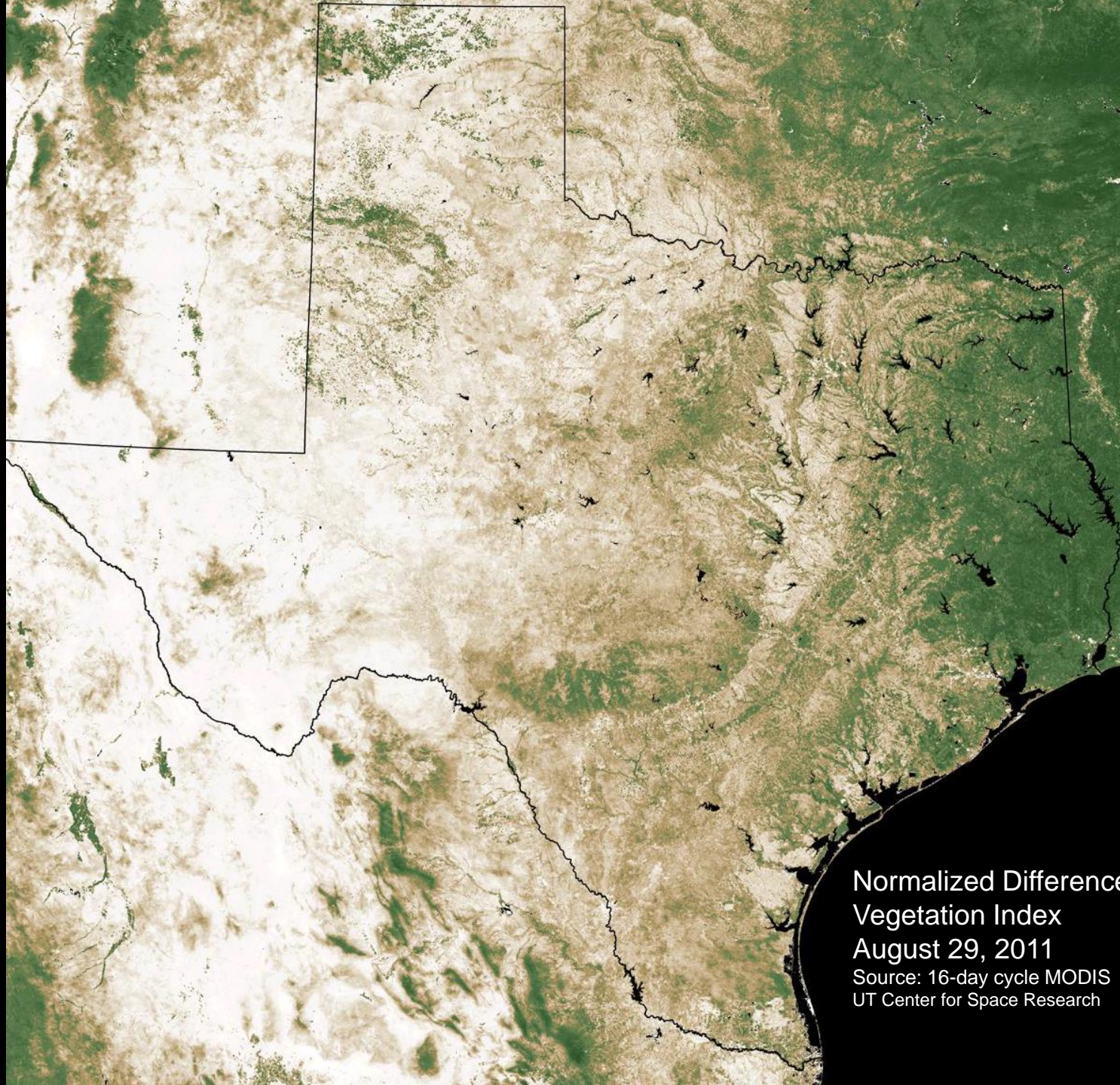
Jay L. Banner
Jackson School of Geosciences
Environmental Science Institute
University of Texas at Austin

Barton Springs University

September 20, 2022



Normalized Difference
Vegetation Index
August 29, 2010
Source: 16-day cycle MODIS
UT Center for Space Research



Normalized Difference
Vegetation Index

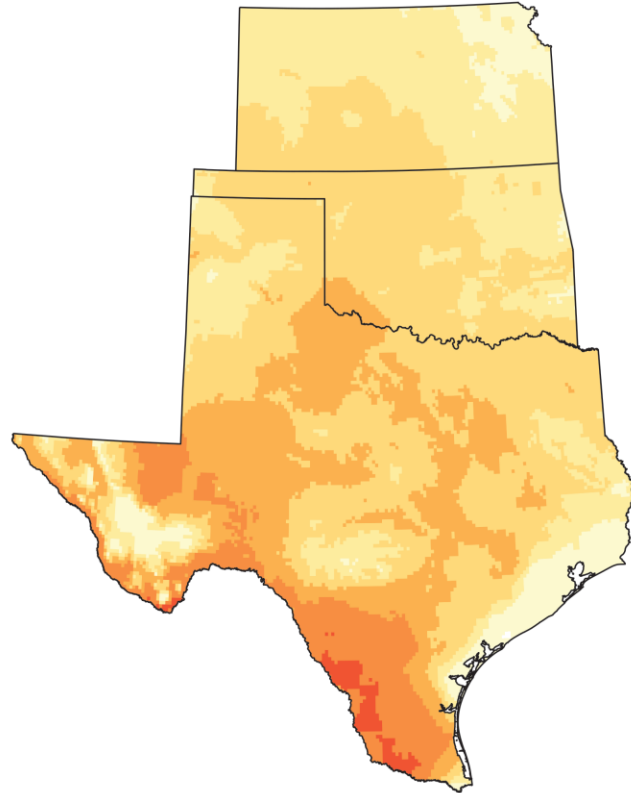
August 29, 2011

Source: 16-day cycle MODIS
UT Center for Space Research

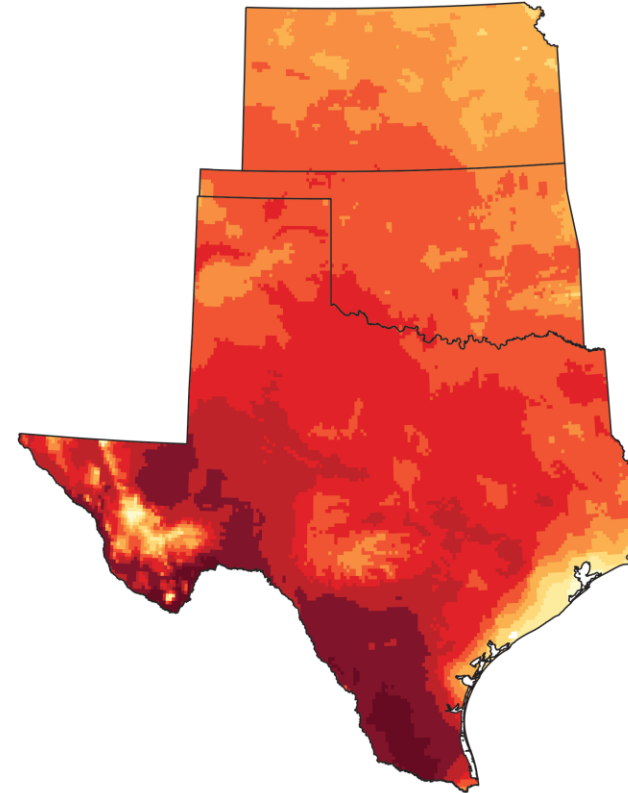
Model projections: Late 21st century (2070-2099)

(Fourth National Climate Assessment, 2018)

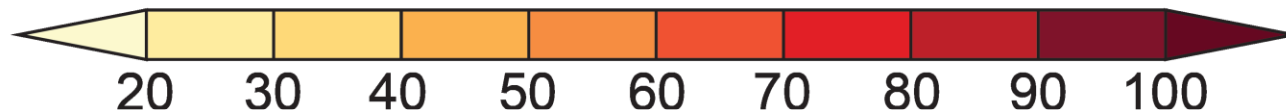
Low carbon emissions scenario



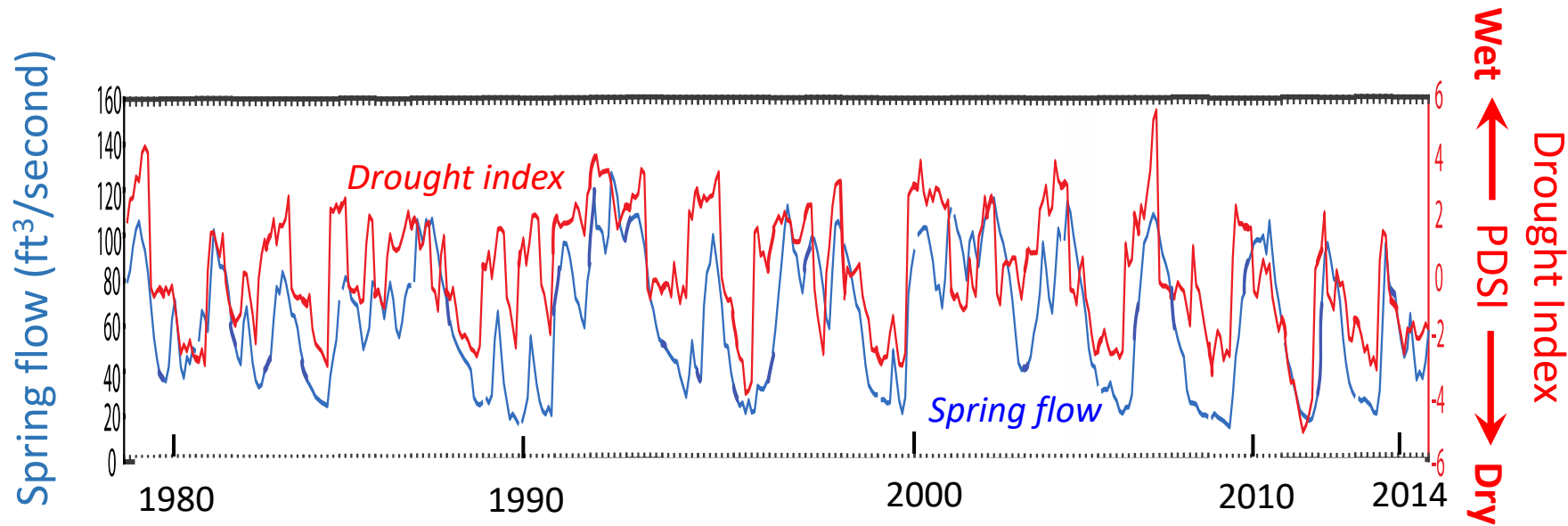
High carbon emissions scenario
aka "Business as usual" scenario



Change in number of 100-degree days



Climate change and spring flow at Barton Springs over 30 years



Wong et al. (2012)

Vulnerability of shallow, karst aquifers to drought

How do these impacts change when we urbanize the region?

Water quantity vs. water quality

What will be the impact of a 21st century megadrought on water resources?
Example: Barton Springs, Austin, TX, in the Edwards karst aquifer

