

HDR



Comparison of 2021 Draft Non-Municipal Water Demands to the 2016 Brazos G Plan

Agenda Item 6.12

August 16, 2017



Background

- Draft non-municipal demands released on June 2, 2017
 - Mining (released with Municipal in January)
 - Steam-Electric
 - Manufacturing
 - Irrigation
 - Livestock
- New methodologies for 2021 Plan for all but Mining



Mining Water Demands

Methodology:

- Sum of individual use projections for:
 - Oil and Gas
 - Aggregates
 - Coal and lignite
 - Other
- Based on 2011 Bureau of Economic Geology Report
“Oil & Gas: Water Use in Texas: Update to the 2011 Mining Water Use Report”

Changes from 2016 Plan:

- None



Steam-Electric Water Demands

Methodology:

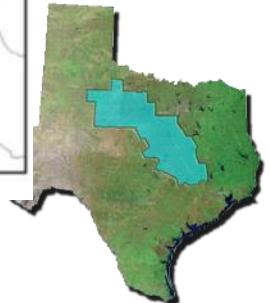
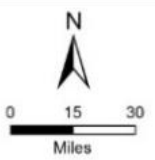
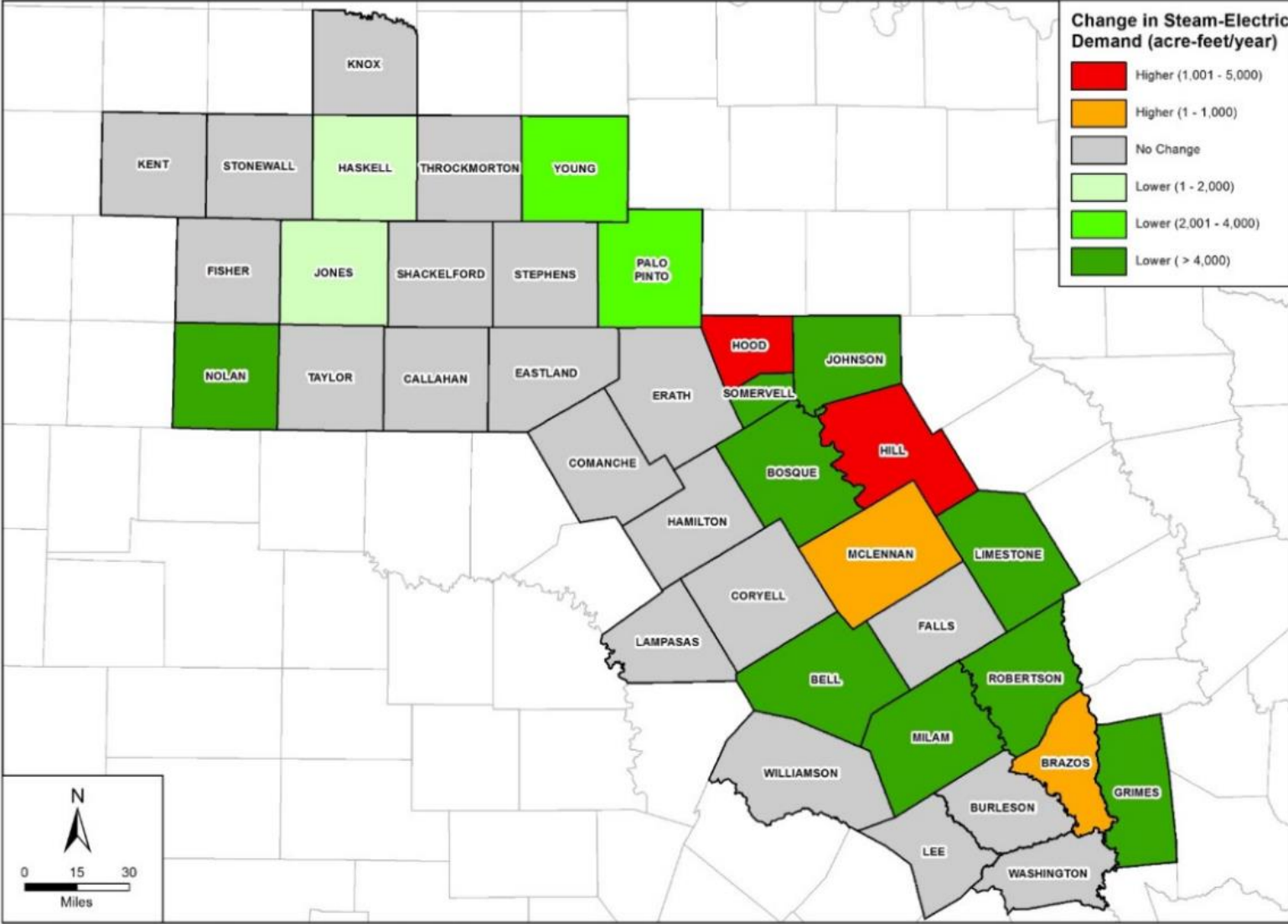
- 2020 – 2070 demands based on greatest use last 5 years (2010 – 2014)
- New facilities added
- Retired facilities subtracted (none)
- Demands held constant 2020 – 2070

Significant Changes from 2016 Plan:

- Demands removed from Haskell (720 acft/yr), Jones (518 acft/yr) and Nolan (23,916 acft/yr)
- New demand in Hill County (4,120 acft/yr)
- Increased demands in Hood and McLennan Counties
- Overall **reduction**: 55,802 acft/yr in 2040 and 129,492 acft/yr in 2070



Changes in Steam-Electric Water Demands (Year 2070)



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Manufacturing Water Demands

Methodology:

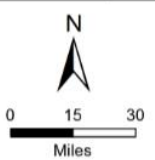
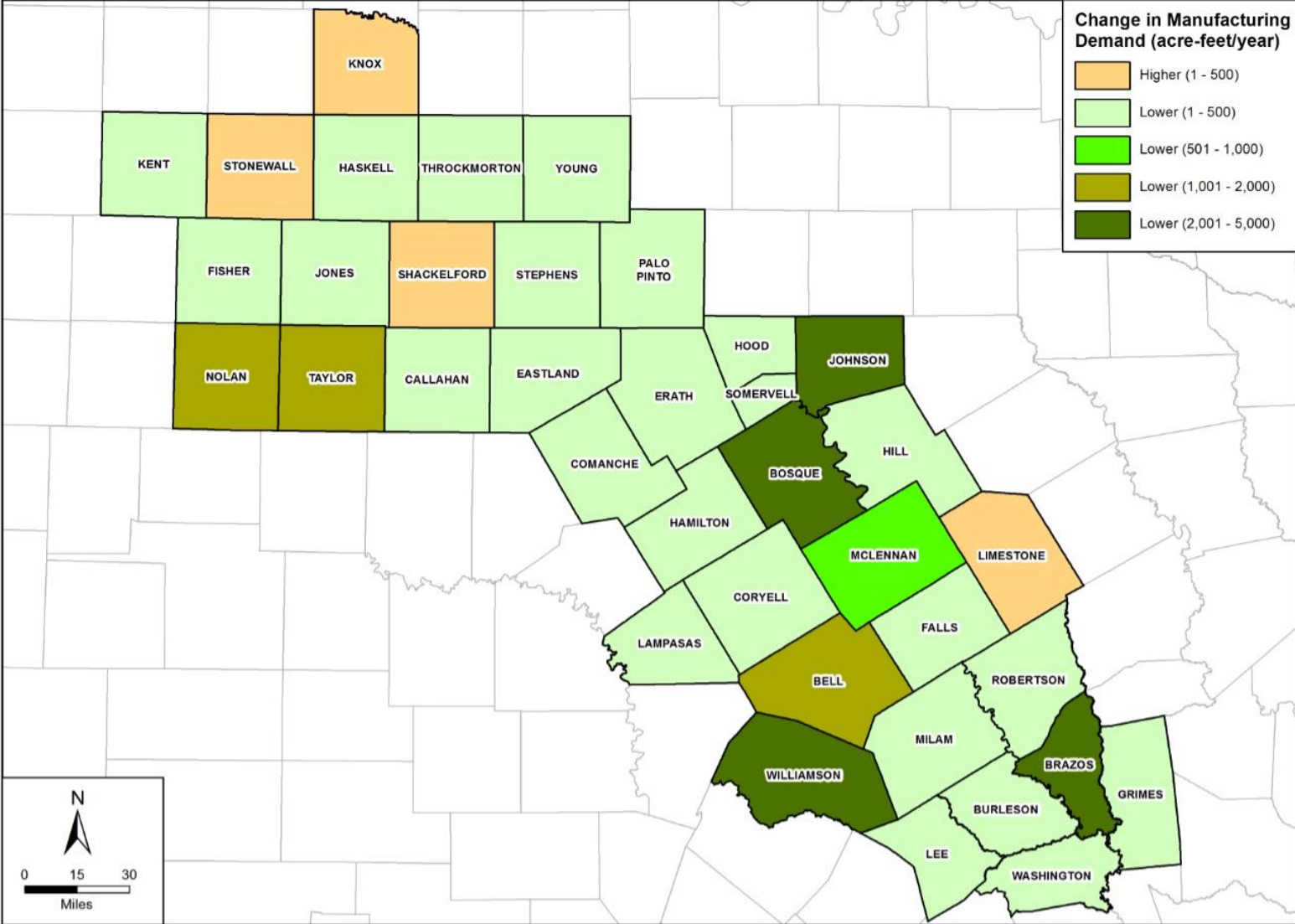
- 2020 demands based on greatest use last 5 years (2010 – 2014)
- 2030 demands based on Texas Work Force Commission employment projections, then held constant 2030 – 2070

Significant Changes from 2016 Plan:

- Overall **reduction**: 11,095 ac-ft/yr in 2040 and 18,802 acft/yr in 2070
- > 1,300 acft/yr reductions in Bell, Bosque, Brazos, Johnson, Nolan, Taylor and Williamson



Changes in Manufacturing Water Demands (Year 2070)



Irrigation Water Demands

Methodology:

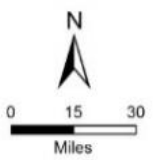
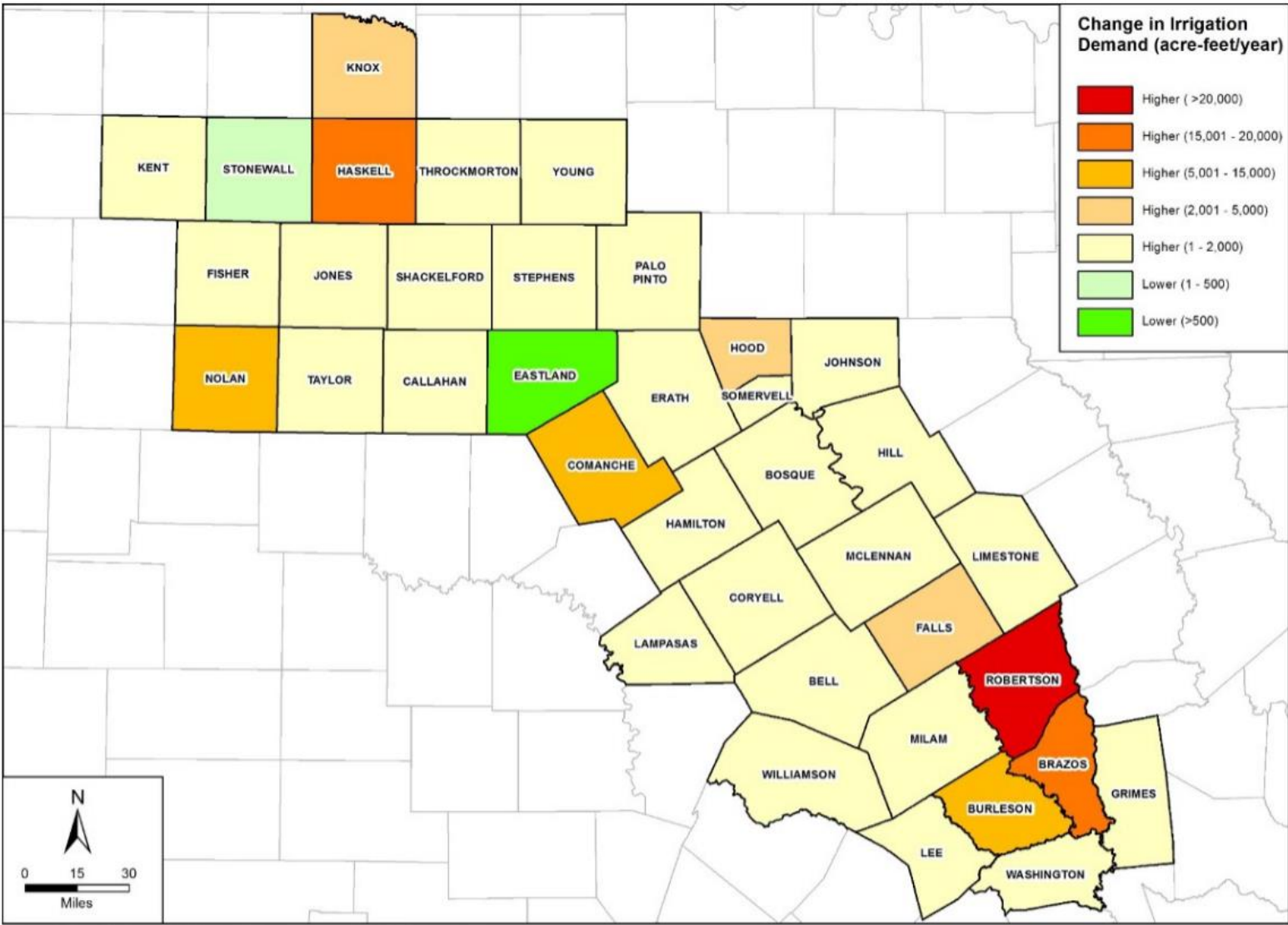
- Baseline – average of last 5 years water use (2010 – 2014), held constant 2020 – 2070
- If GW portion of demand exceeds the MAG, then Irrigation demands will parallel MAG pattern
 - Eastland, Haskell, Knox, Nolan, Palo Pinto, Robertson

Significant Changes from 2016 Plan:

- Overall **increase**: 76,849 acft/yr in 2040 and 99,911 acft/yr in 2070
- Only 2 counties **decrease**: Eastland (-1,819 acft/yr) and Stonewall (-36 acft/yr)
- Significant increases (> 1,000 acft/yr in 2070):
 - Bosque (1,609 acft/yr)
 - Falls (3,790 acft/yr)
 - Knox (4,135 acft/yr)
 - **Brazos (18,805 acft/yr)**
 - **Haskell (16,074 acft/yr)**
 - Milam (1,627 acft/yr)
 - Burleson (8,335 acft/yr)
 - Hill (1,187 acft/yr)
 - Nolan (5,067 acft/yr)
 - Erath (1,093 acft/yr)
 - Hood (2,489 acft/yr)
 - **Robertson (25,043 acft/yr)**



Changes in Irrigation Water Demands (Year 2070)



Livestock Water Demands

Methodology:

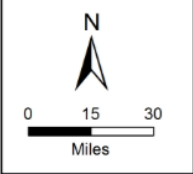
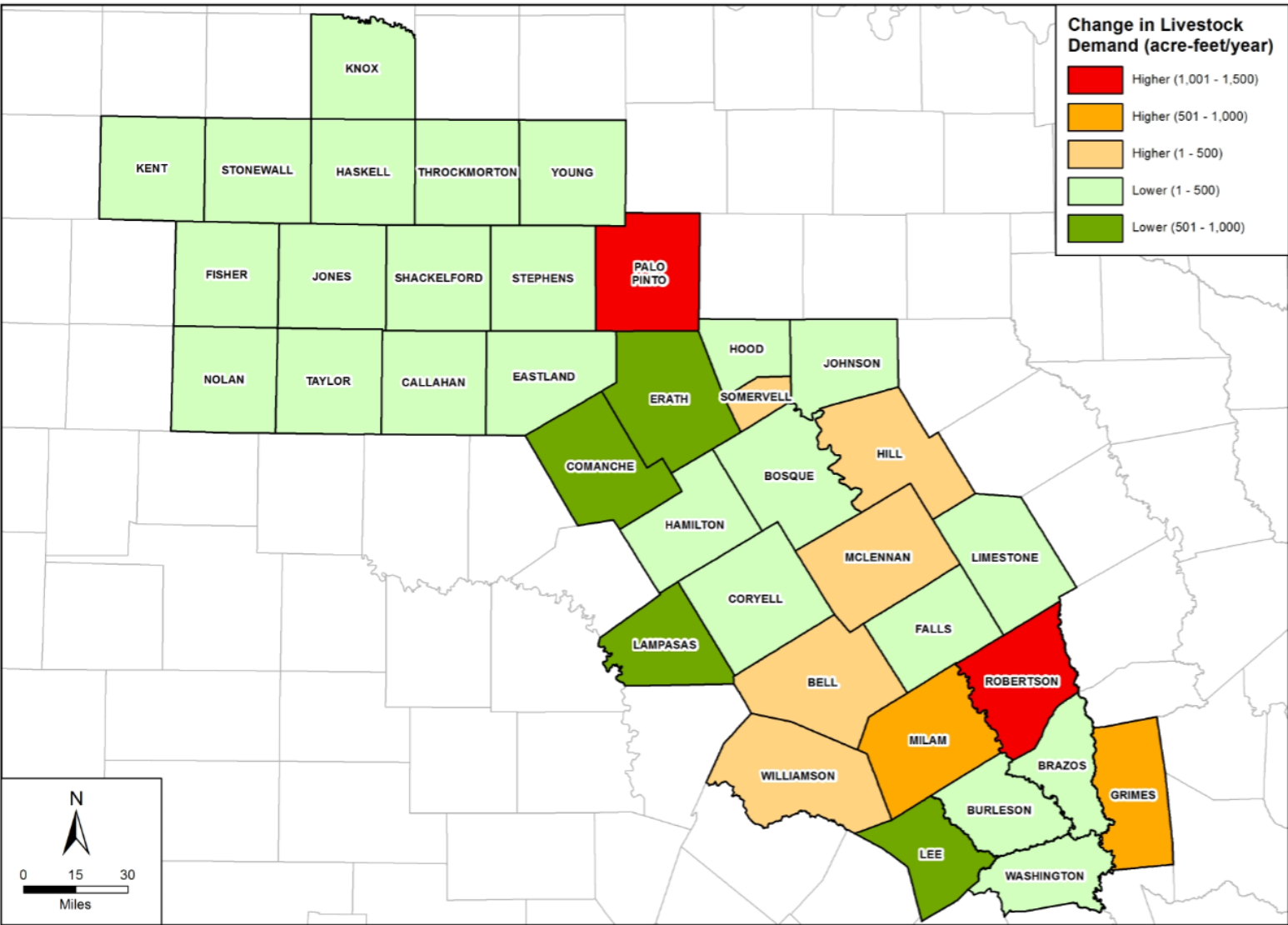
- 2020 demands based on average use last 5 years (2010 – 2014)
- New data on poultry per-head water use
- Growth trend parallels 2016 Plan (zero growth for Brazos G)

Significant Changes from 2016 Plan:

- Overall **decrease**: 1,711 acft/yr in all decades
- Most counties decrease from 2016 Plan
- Significant increases:
 - Palo Pinto (1,014 acft/yr)
 - Robertson (1,436 acft/yr)



Changes in Livestock Water Demands (Year 2070)



Questions?



HDR