Water Conservation Efforts in Finney County

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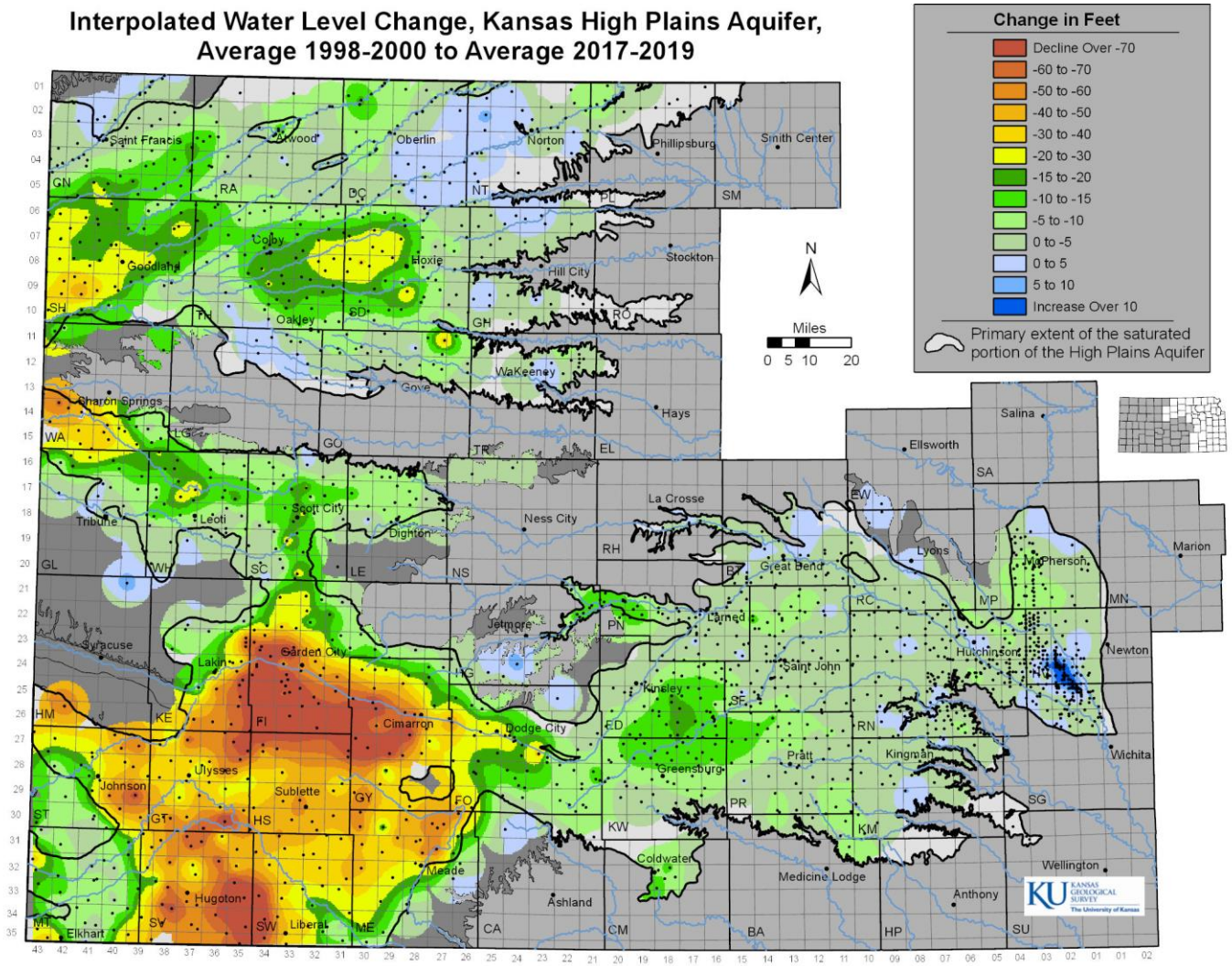
Governor's Conference on the Future of Water in Kansas

The Garden City Company…

- Established in 1905 to grow and process sugar beets
- Since 1955, the company has existed as a land holding company
- All company farm land is rented to 15 farm entities in Finney and Kearny County
- Groundwater pumping capacities range from 100 to 1,200 GPM
- Has 98 center pivot systems (owned by tenants) on company land
- Owns approximately 90% of the rights of the Great Eastern Irrigation Ditch

Interest in Water Conservation

- Declines is static water level led to declines in groundwater pumping capacity
- How do we balance short-term and long-term economic needs?



Water Conservation

- Roth/GCC Water Technology Farm started in 2016
  - Comparison of center pivot nozzle technologies
  - Use of soil moisture probes
  - Comparison of probes and center-pivot irrigation scheduling programs
  - Alternative crops/rotations
- Water Conservation Areas
  - Goal: reduce water use by 15% over 5 year period
  - Have averaged 62% of annual WCA allocation to date
  - Currently in good position to meet goal, but weather pattern has turned significantly drier

Irrigation Benchmarks

- Track water use by tenant
  - Tenants do not have equal well capacity and soil quality
  - Compare water use with crop rotation and pumping capacity

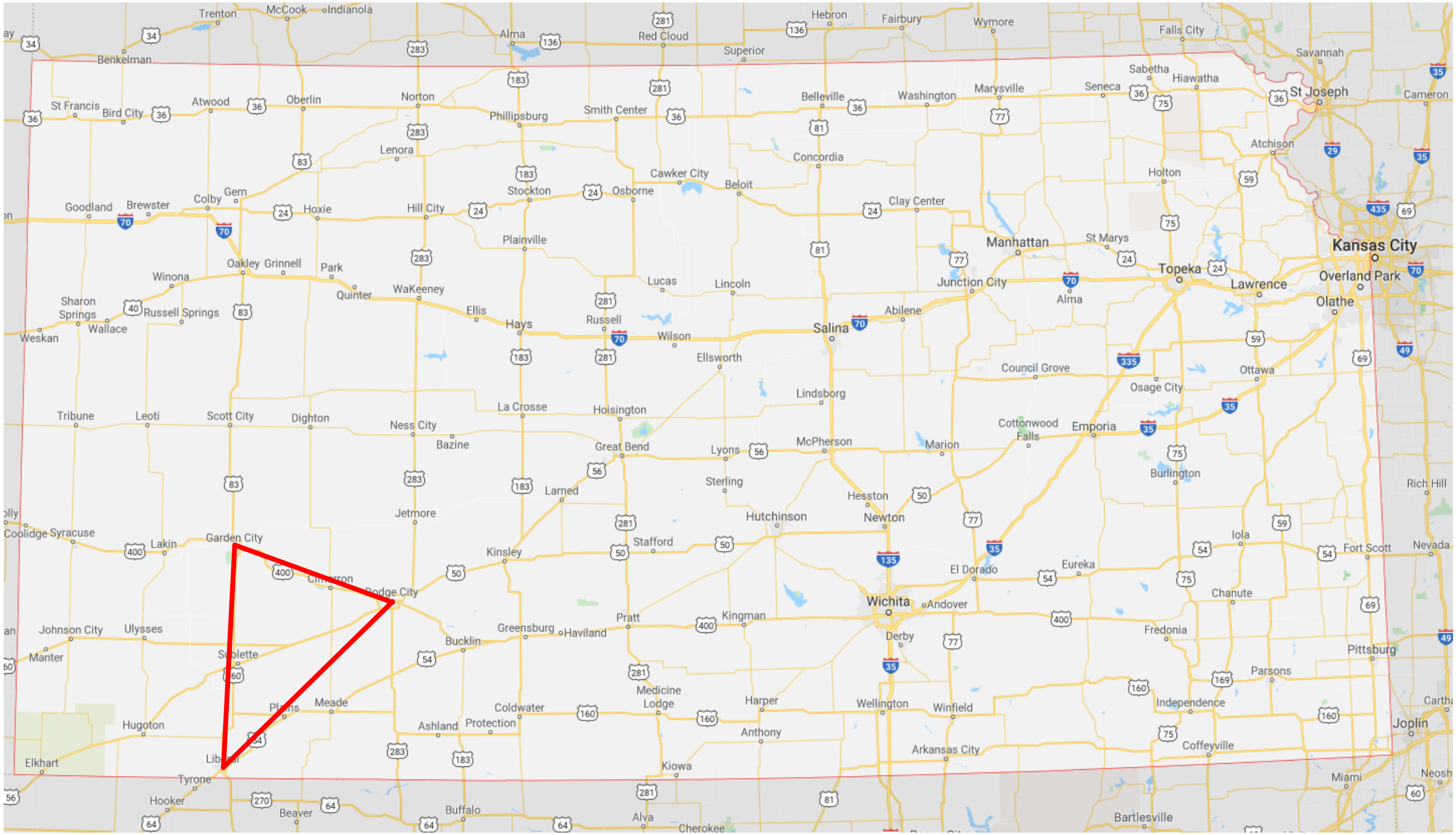
- Goal is to improve irrigation efficiency in terms of income
  - $/acre
  - $/acre-inch
  - $/GPM

Roth Farms GCC Water Use

Average Yearly Water Use (2006-15)	WCA Annual Allocation	Total 5-year WCA Allocation	Water Use (2017-19)	Remaining WCA Allocation	% of WCA Allocation Used
1,428 AF	1,214 AF	6,070 AF	1,213 AF	4,856 AF	40%

Water Quality

- Poor water quality (high salinity) has impacted crop production
- Install long-term water quality SDI plot to monitor groundwater and surface water quality and experiment with mitigation practices
- How can this water become more useable?


Trenton
McCook
Indianola
Benkelman
Alma
Red Cloud
Superior
Hebron
Fairbury
Wymore
Falls City
Savannah
St Joseph
Cameron
Sabetha
Hiawatha
Seneca
Marysville
Washington
Belleville
Smith Center
Phillipsburg
Norton
Oberlin
Atwood
Bird City
St Francis
Lenora
Concordia
Cawker City
Beloit
Stockton
Osborne
Atchison
Holton
Goodland
Brewster
Colby
Gem
Hoxie
Hill City
Clay Center
Plainville
Manhattan
St Marys
Kansas City
Oakley
Grinnell
Park
Winona
Quinter
WaKeeney
Lucas
Lincoln
Junction City
Topeka
Lawrence
Overland Park
Olathe
Sharon Springs
Russell Springs
Wallace
Weskan
Ellis
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Russell
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Salina
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Great Bend
Lyons
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Emporia
Burlington
Rich Hill
Larned
Sterling
Hesston
Newton
Hutchinson
Jetmore
Coolidge
Syracuse
Lakin
Garden City
Stafford
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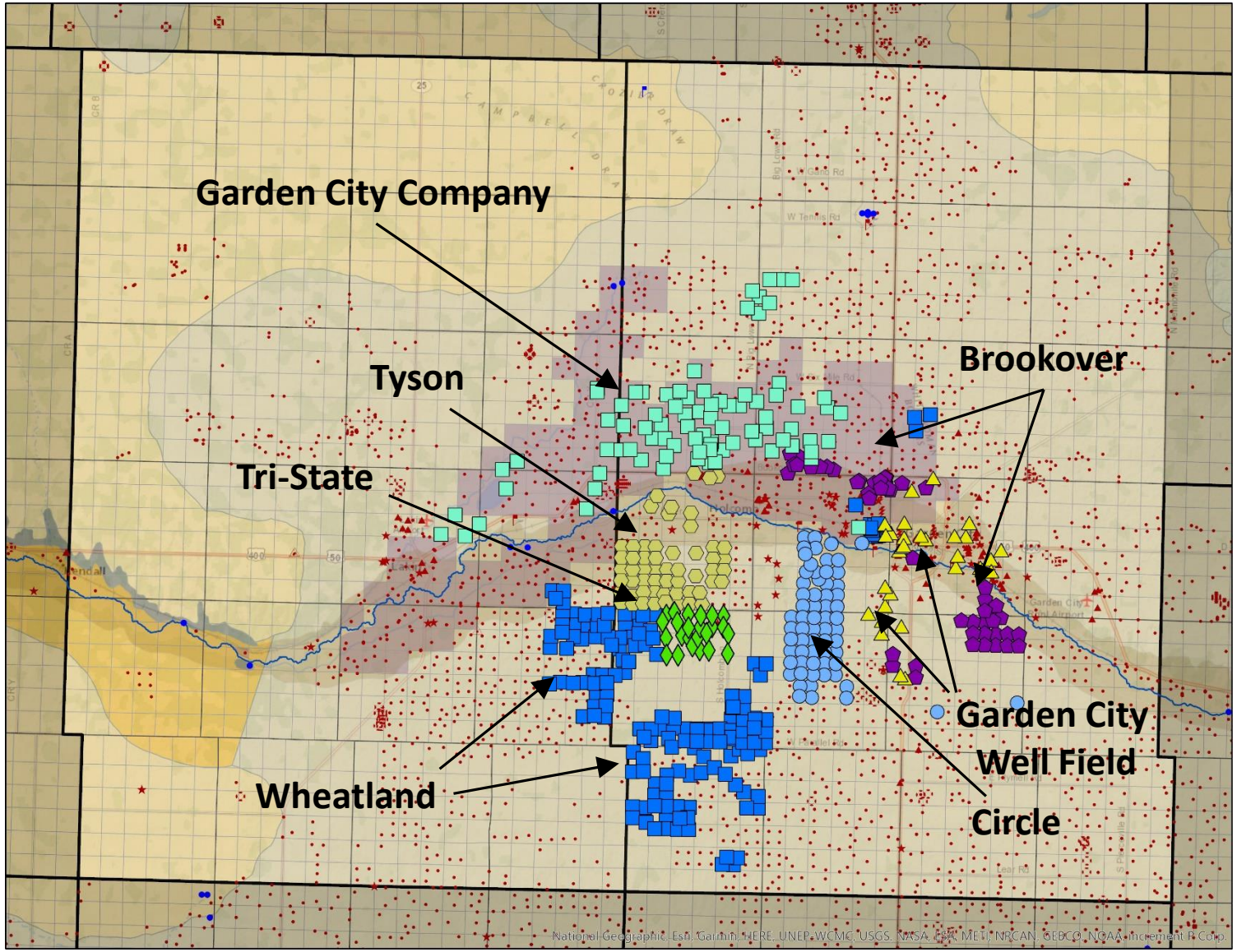
Water Right Development



THE BURDEN LEFT FOR FUTURE FARMERS WHEN A PAST GENERATION DOESN'T PLAN

YOU'VE WORKED SO HARD TO BUILD YOUR OPERATION – MAKE SURE YOU ARE PROTECTING IT.

By Mary Jo Irmen
4/5/2019

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