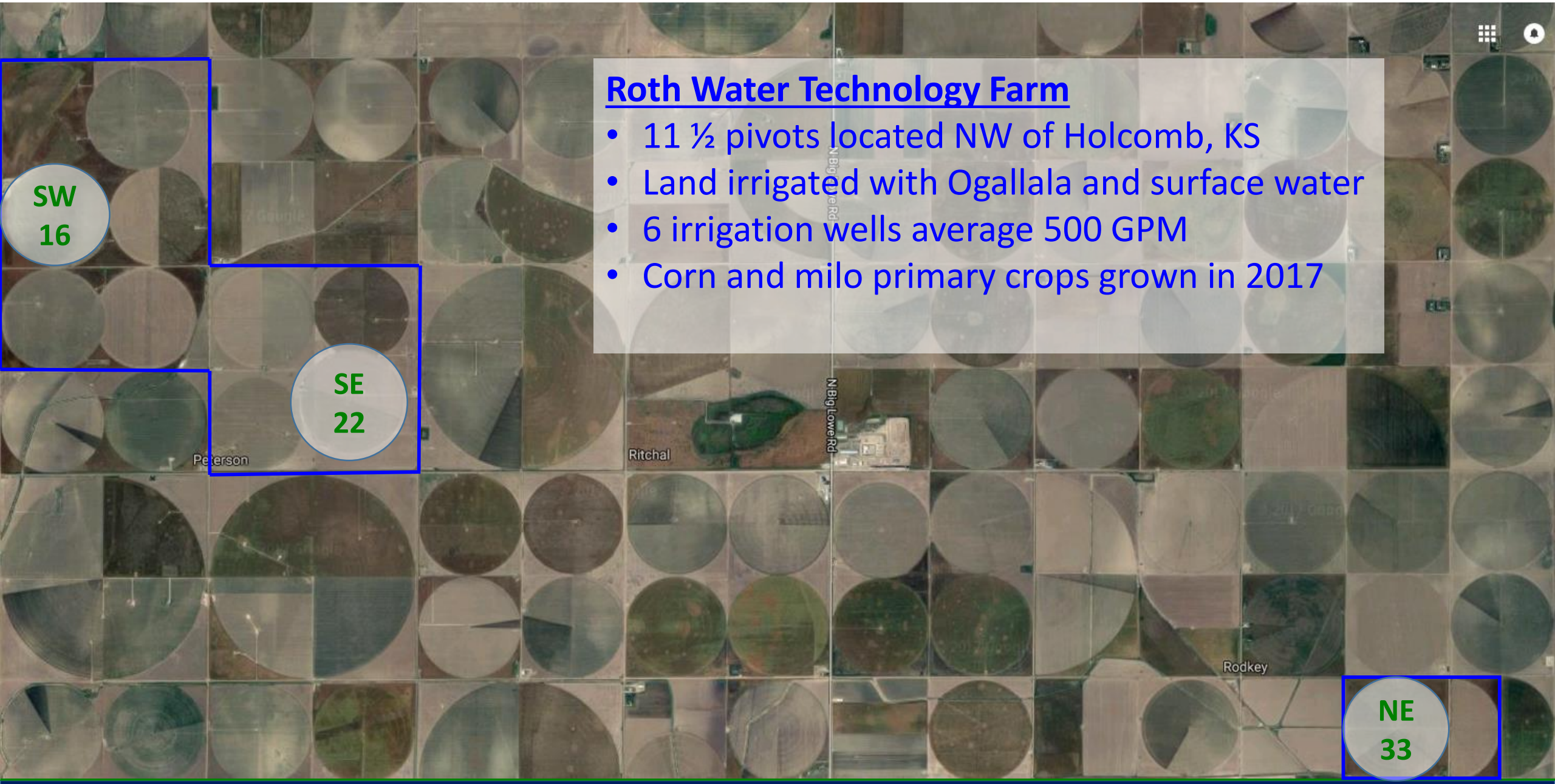
Roth Water Technology Farm…

- Started in 2016 on land owned by The Garden City Company to research new irrigation technologies
- Research objectives include:
  - Comparison of alternative center pivot water delivery packages (MDI, Bubbler, and I-Wob)
  - Use of soil moisture probes from several companies
  - Implementation of new crop rotations
  - Revising agronomic practices (fertility program, planting rates, etc.)
  - Studying water quality impact on crops
- Project has expanded to other GCC farms in 2017

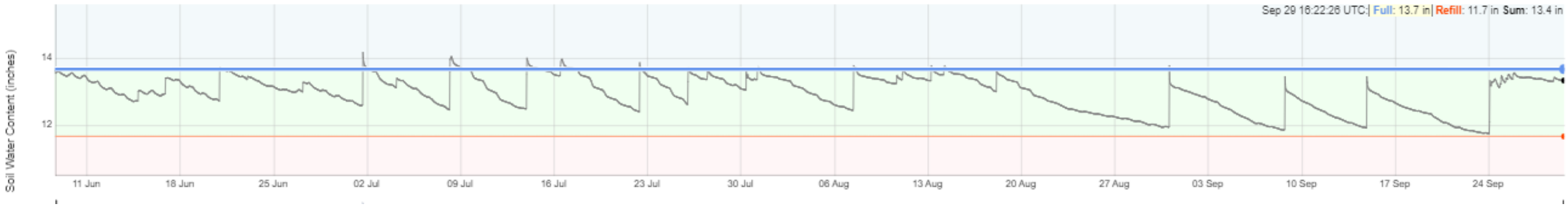
Interest in Water Conservation

- Static water levels in the Ogallala Aquifer have dropped significantly over the last 10 years
- This has impacted
  - Well pumping capacity
  - How many acres can be irrigated
  - What crops can be grown
  - The income that can be earned
- How do we balance short-term and long-term economic needs?



Roth Water Technology Farm

- 11 ½ pivots located NW of Holcomb, KS
- Land irrigated with Ogallala and surface water
- 6 irrigation wells average 500 GPM
- Corn and milo primary crops grown in 2017



SW 16.

241 bu/ac yield average

5.78” irrigation applied

CropMetrics™
Yield Optimization Technology

Sec 33.

227 bu/ac yield average

6.2” irrigation applied

CropMetrics™
Yield Optimization Technology

Supported Water Management with Technology provided……

+6.5 bu/ac Increase over Traditional Methods
7.82” less applied water than Traditional Methods
$4266.64 Saving on Irrigation Costs Only per Field
25.9 Million Fewer Gallons Applied through Irrigation per Field
71 People’s Water Need for A Year was Met per Field in Water Saving
+$21.65/ac Profit from Yield Increase
$34.97/ac Saved from Irrigation Costs
$56.62/ac Total Profit in Yield and Irrigation Savings
$45.14/ac Total Profit INCLUDING water management using supported water management technology

CropMetrics™
Yield Optimization Technology