

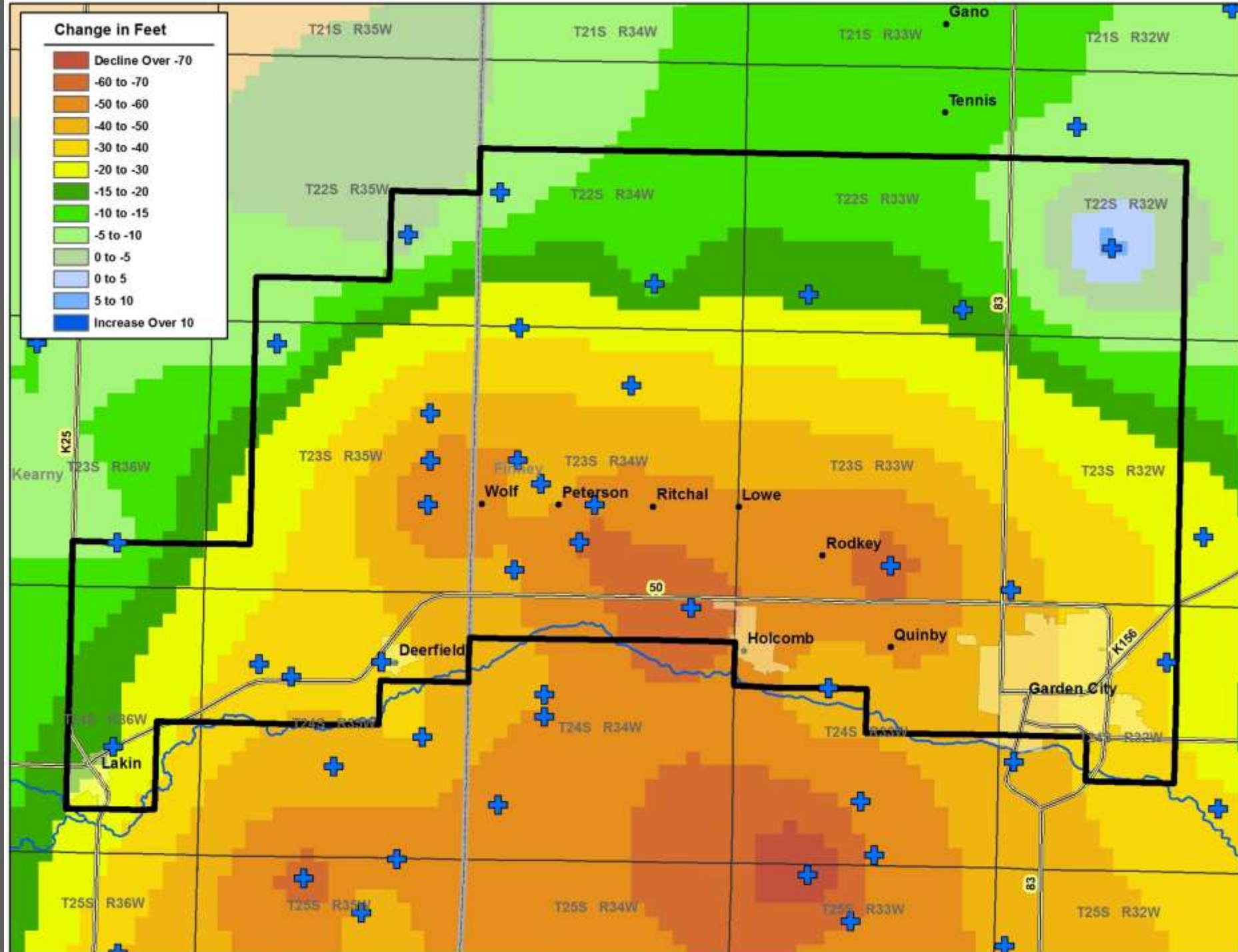
NORTHERN KEARNY FINNEY COUNTY LOCAL ENHANCED MANAGEMENT AREA (KFL)

April 4, 2017

AT THE LAST MEETING...

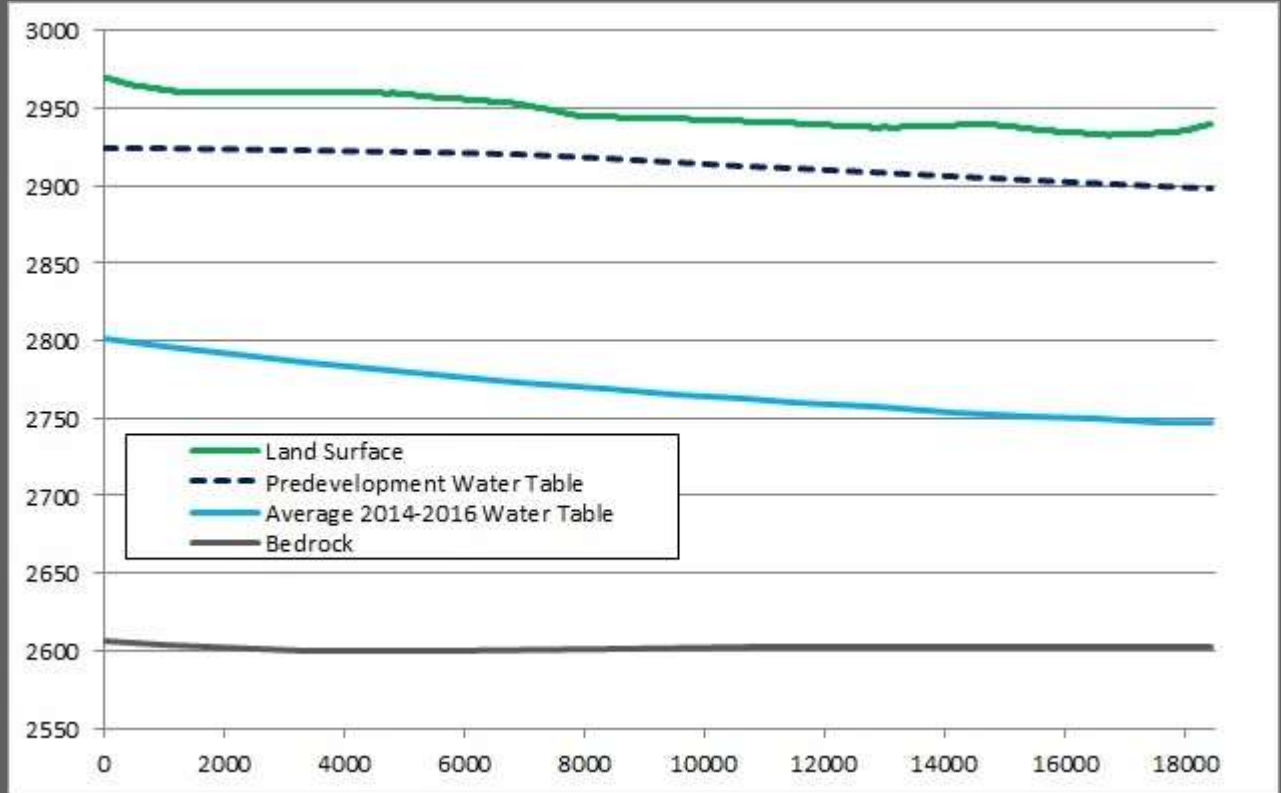
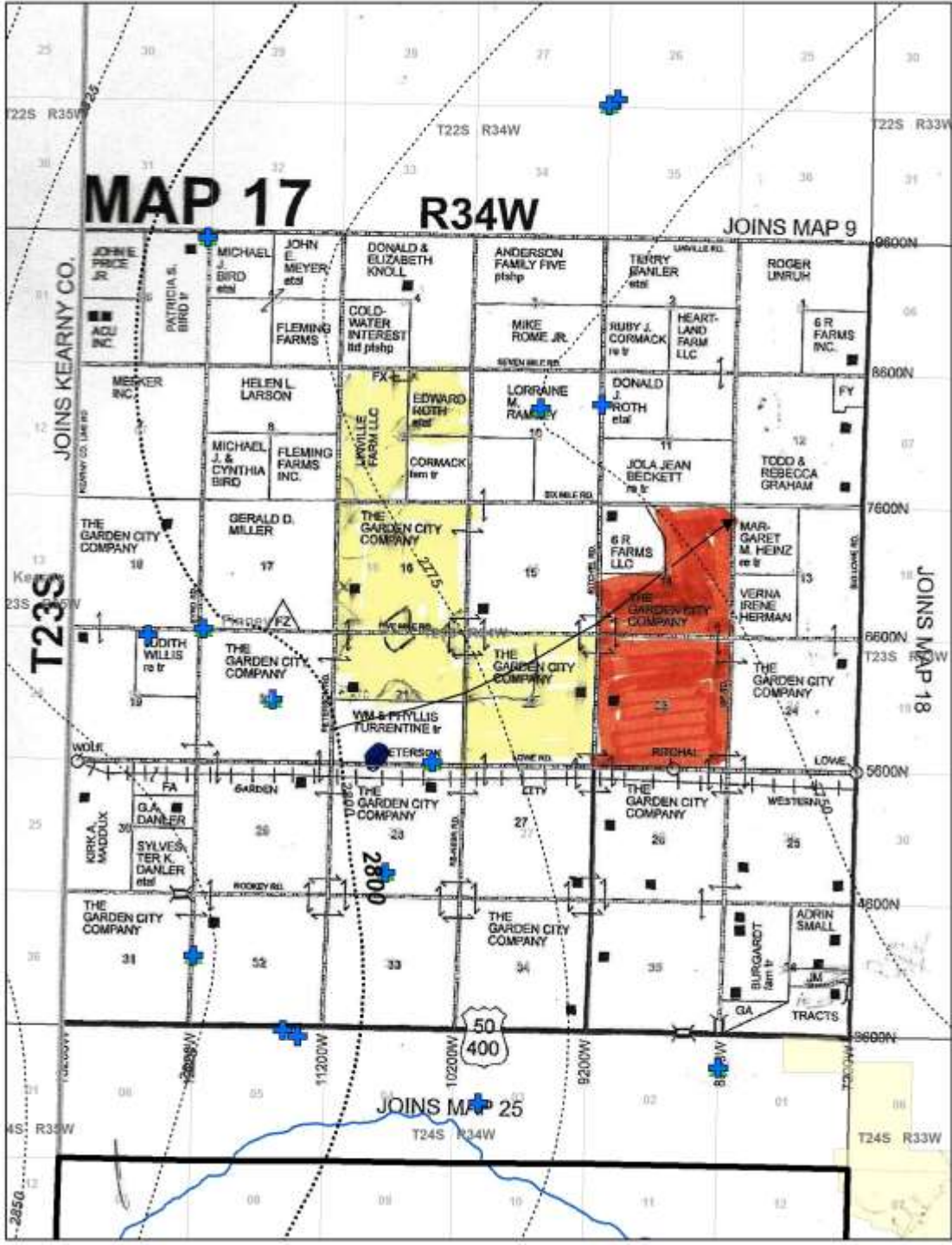
- Discussed 15% reduction proposal and associated flexibilities
- Review Draft LEMA Proposal Document
- Discussed public outreach and providing additional information about the KFL discussions

Water Level Changes (2005-2016)



Average 2014-2016 water table elevations

- Groundwater velocities moving along that natural gradient average around 0.42 feet or roughly **5 inches per day**
- If the present day flow direction remained constant, it would take **118 years for water to flow** from the western edge of 21-23S-34W to the NE corner of 14-23S-34W
- Changes to the hydrologic gradient can locally alter the flow directions and velocities
- **Index well** will help refine understanding of these dynamics



DEFINITION OF CONSERVATION

Northern Kearny Finney County
Local Enhanced Management Area (KFL)

CONSERVATION

Paragraph IV.a.5 states “Due consideration will be given for past conservation. If water rights are or have been enrolled in conservation programs, have implemented past conservation measures and/or have no usage history or incomplete usage history during the Comparison Years, establishment of the KFL Allocation will follow the guidelines set forth in Attachment F.”

Example:

Enrolled in EQIP with nonuse 2006-2008

Use in 2009-2015 = 150 AF/yr

Authorized Quantity = 200 AF

Pumping Test = 250 gpm

Allocation may be determined by:

1. Actual historic use – 1050 AF/10 years
= 105 AF x 0.85 x 5 = 446.25 AF
2. Average use without zeros – 150 AF x 0.85 x 5 = 637.50 AF
3. Flow Test = 250 gpm x 1440 x 120/325,851 = 133 AF for missing years
= 615.28 AF

Appeal to Advisory Board

Recommendation to GMD

GMD Decision

Deadline for appeal decision before first application of water

HISTORICAL USAGE PROPOSAL

Northern Kearny Finney County
Local Enhanced Management Area (KFL)

HISTORICAL USAGE PROPOSAL

- If water right's historical usage is 100% of annual authorized quantity then it would be reduced by the full conservation factor
- If water right's historical usage is less than 100% of annual authorized quantity then the conservation factor would be reduced by the percent "saved"
- For example:

Water Right A

Historical Usage = 2 AF

Authorized Quantity = 2 AF

$24 \text{ in} \times 15\% = 3.6 \text{ in}$

$24 \text{ in} - 3.6 \text{ in} = 20.4 \text{ in}$

$20.4 \times 5 \text{ years} = 102 \text{ in} = \text{KFL Allocation}$

Water Right B

Historical Usage = 1 AF

Authorized Quantity = 2 AF

$12 \text{ in} \div 24 \text{ in} = 50\% \text{ (saved)}$

$50\% \text{ of } 15\% = 7.5\% \text{ conservation factor}$

$12 \text{ in} \times 7.5\% = 0.9 \text{ in}$

$12 \text{ in} - 0.9 \text{ in} = 11.1 \text{ in}$

$11.1 \times 5 \text{ years} = 55.5 \text{ in} = \text{KFL Allocation}$

WATER ALLOCATOR

Northern Kearny Finney County
Local Enhanced Management Area (KFL)

WATER ALLOCATOR

average water use = 107957.42	
% Reduction Factor =	15
Base =	24
Include Vested? (Y or N)	N
Total LEMA Allocation =	97587.949
Percentage Reduction =	9.6051477

Enter a percent reduction factor into the “% Reduction Factor” box

Enter a base use (24 inches)

Enter “Y” or “N” to include or exclude vested water rights

Assumes vested rights the average use over the past 10 years, rather than their authorized use

Effective reduction in use

OUTREACH

- April 19th at 9:00am – Stakeholder Informational Meeting (Garden City Coop Community Building)
- Post card mailed to all water right owners within the proposed KFL boundary
- Website with information about the proposal – www.kfl2017.weebly.com
- Radio, Newspapers?

NEXT MEETINGS?

- April 12th – GMD#3 Board Meeting
- April 19th – Stakeholder Informational Meeting