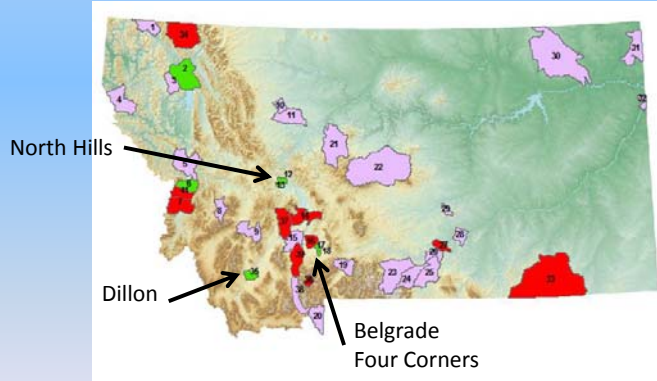


Ground Water Investigation Program (GWIP)

WPIC update January 10, 2012



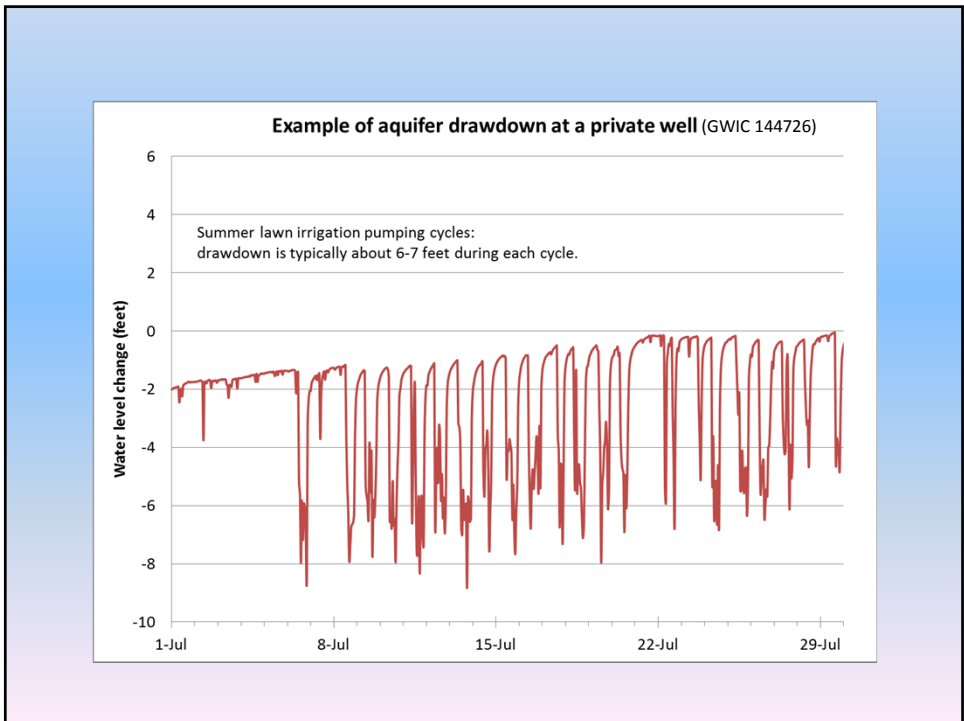
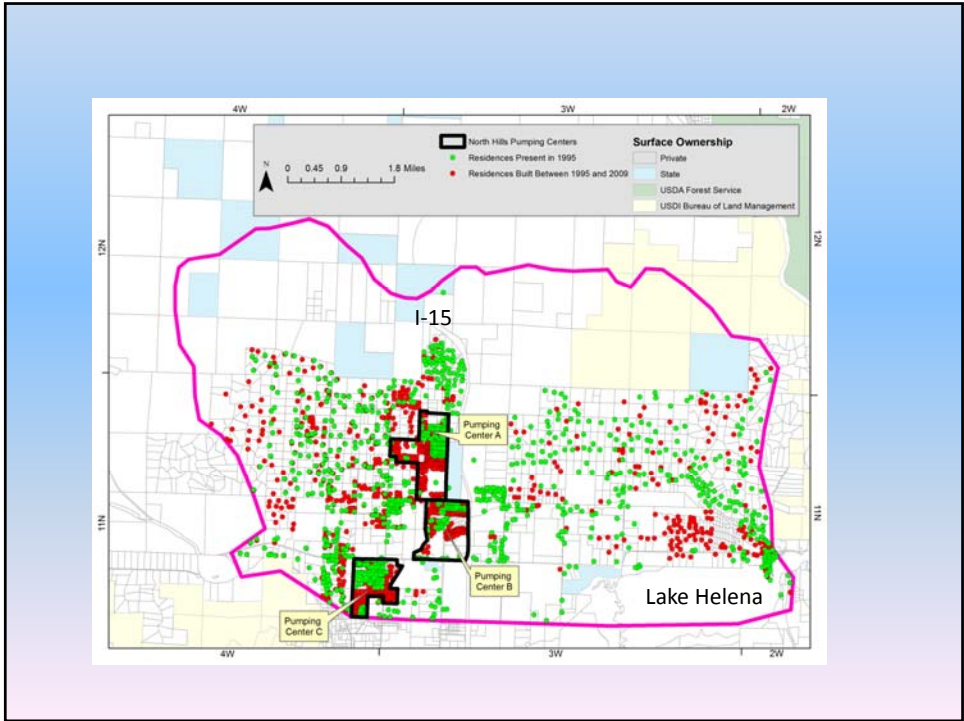
Presented by John Wheaton, MBMG

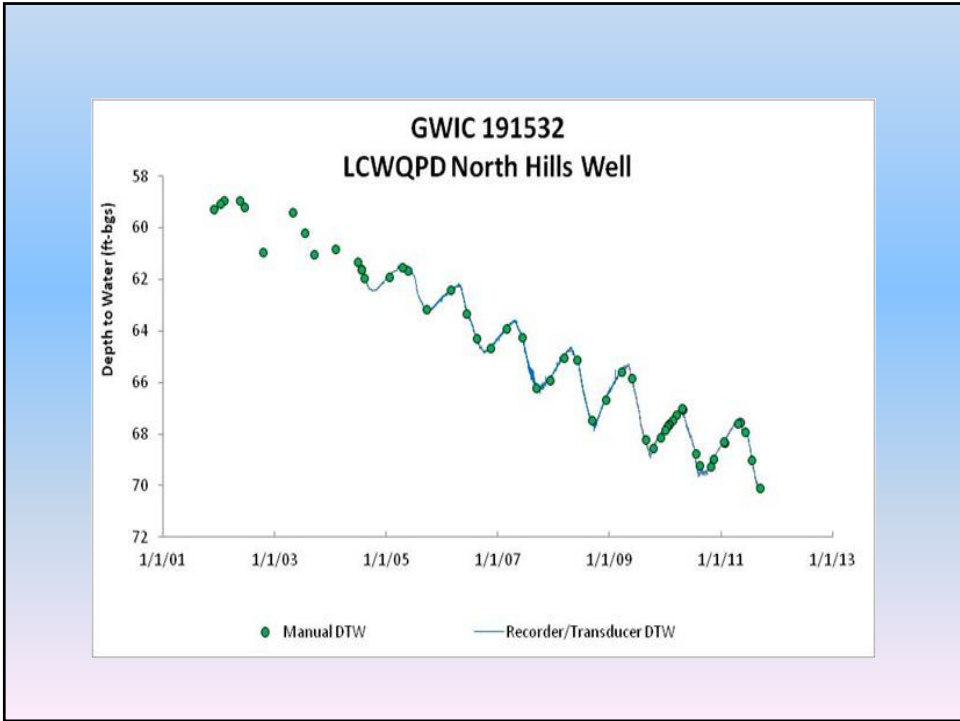
North Hills Investigation Interpretation and recommendation points

Projected drawdown and well design implications

Computer model use







North Hills Study Area - drawdown

Interpretation:

Current Development:

Expect 23 feet of drawdown at Pumping Center A by 2017
 (3 feet more than at present)
 14% of existing wells will then not be able to meet all demands

Continue development:

Additional 10 feet of drawdown at current rates through 2014
 (33 feet total drawdown)
 32% of existing wells might not meet all demands

Recommendations:

- Drill and complete well deep enough to allow for future water levels
 At least 35 feet of water above the pump is needed on new wells
- Consider the implications of limiting lawn and garden sizes
 This could save as much as 10 feet of drawdown

North Hills Study Area - drawdown

Bottom line:

Scientific tools

- Groundwater model
- Set of predictions
- Detailed hydrogeologic characterization

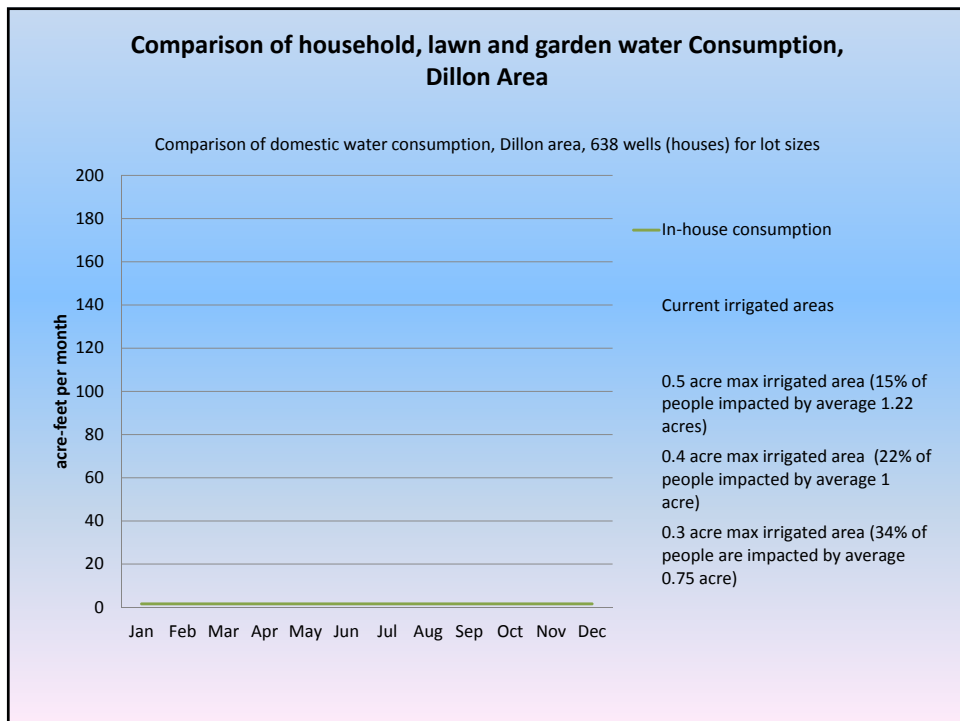
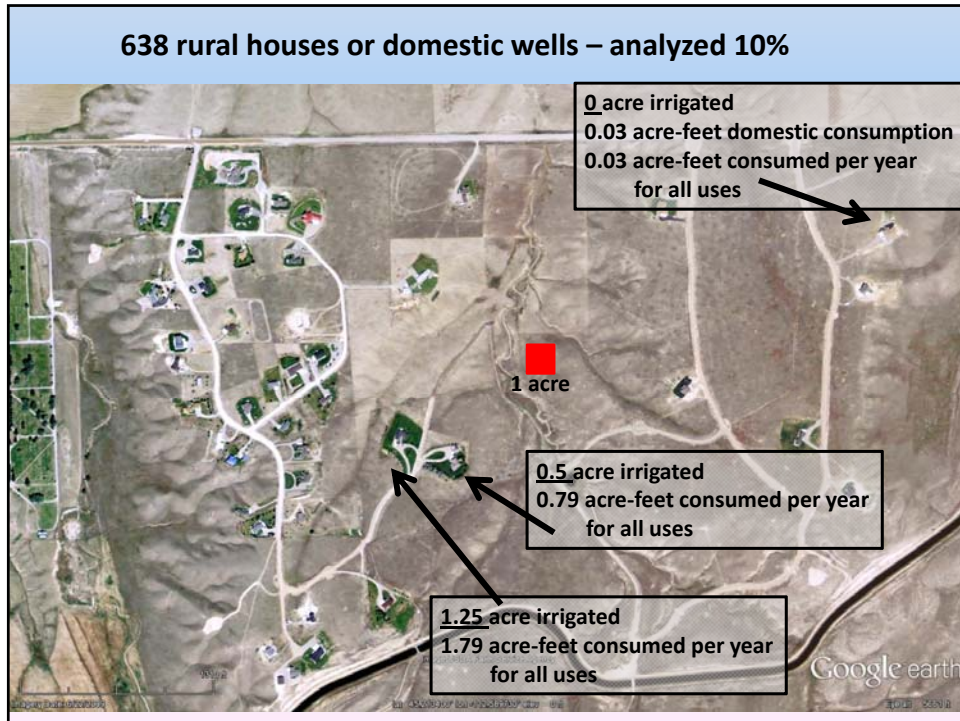
With them

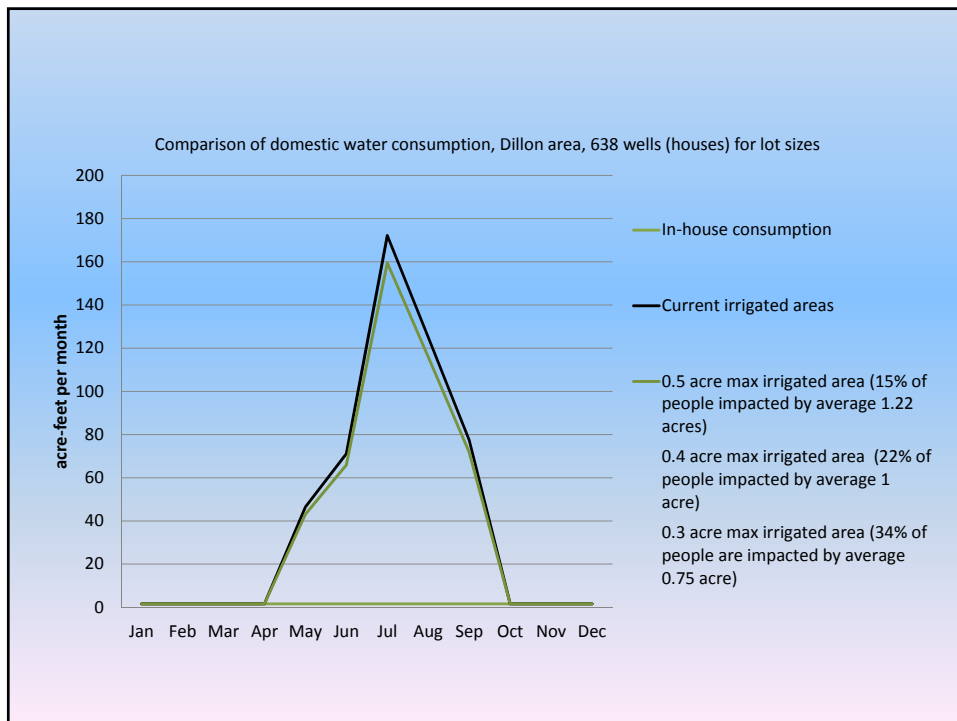
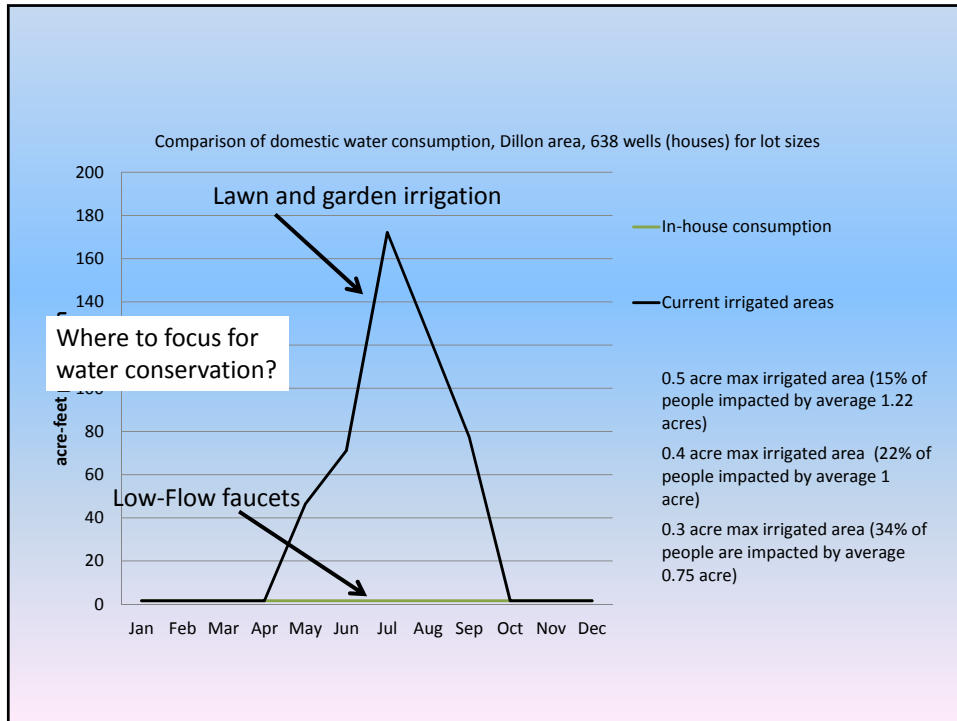
Develop a Management Plan

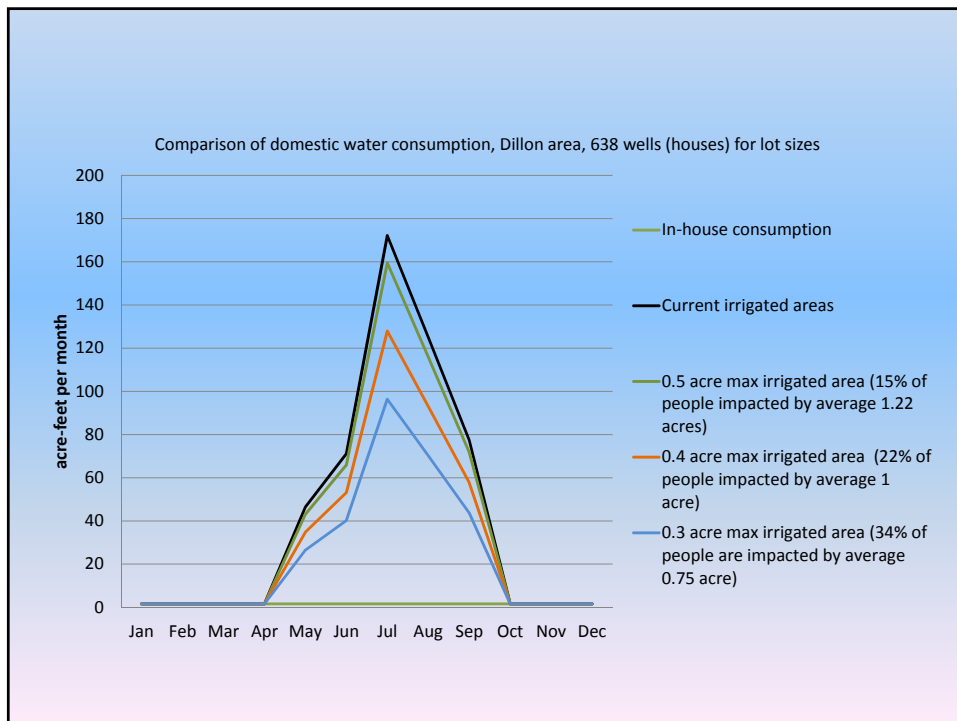
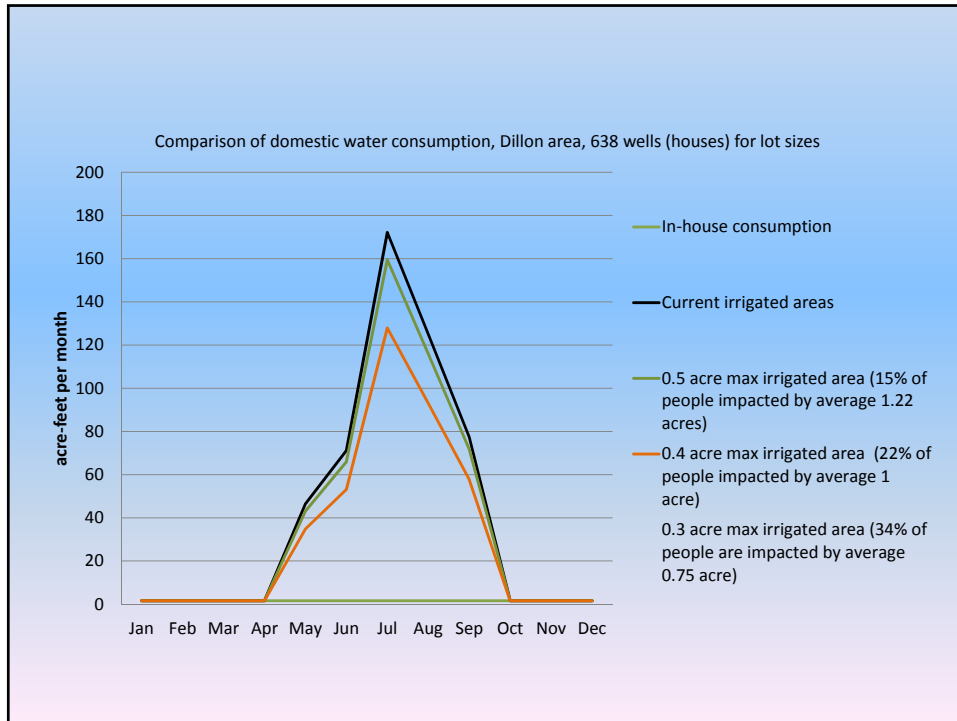
- Establish target groundwater levels
- Test water management approaches using the model
- Implement the plan and insure goals are met

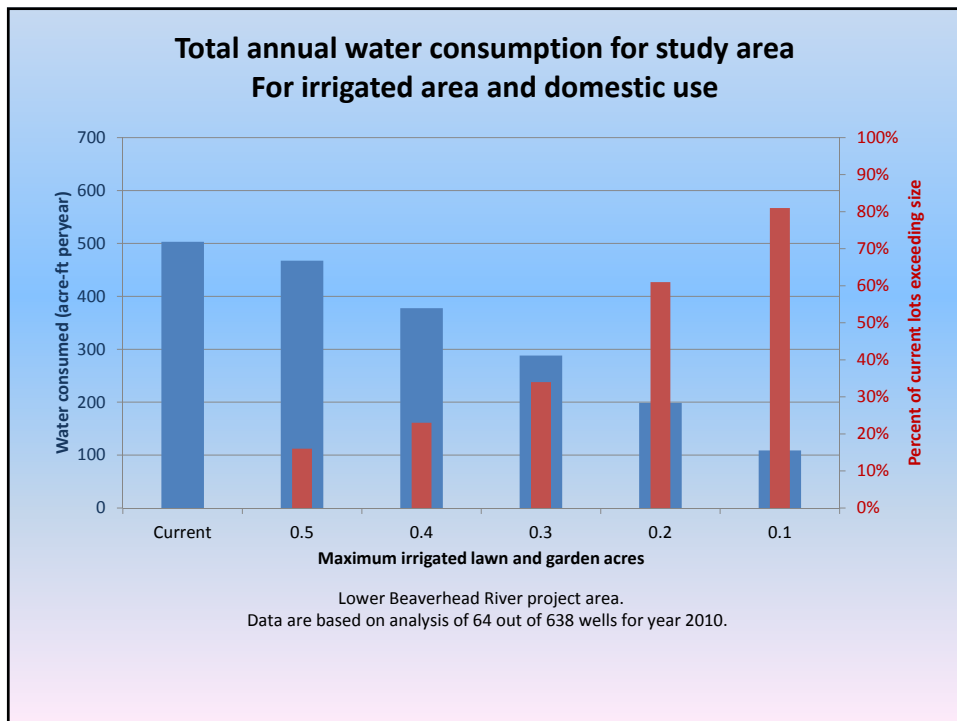
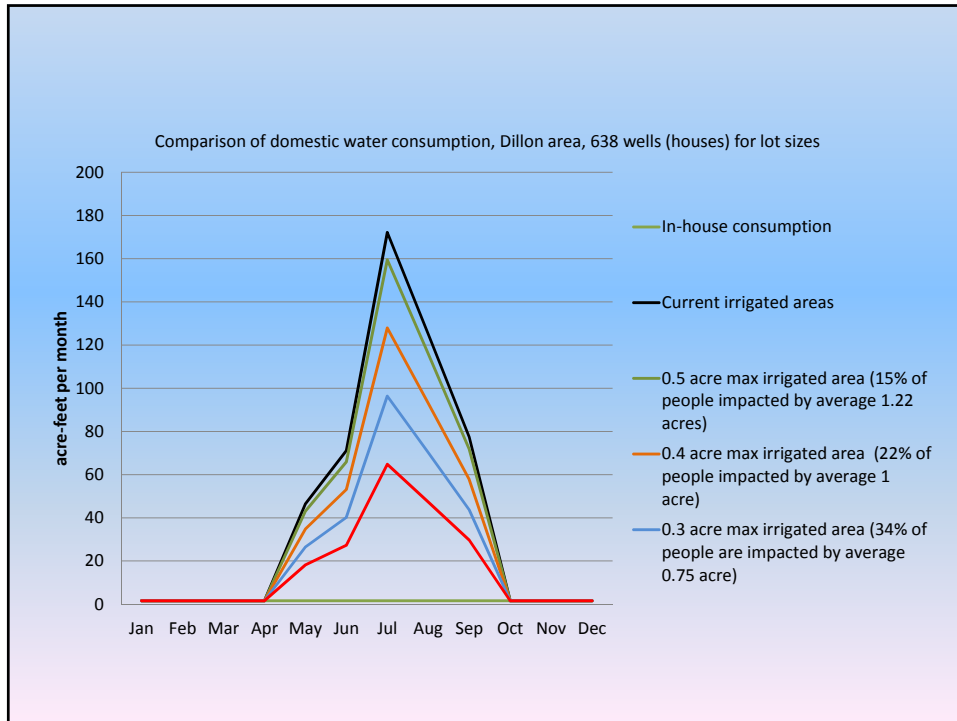
Domestic well water consumption Part of the GWIP water budget analysis **Dillon Area**

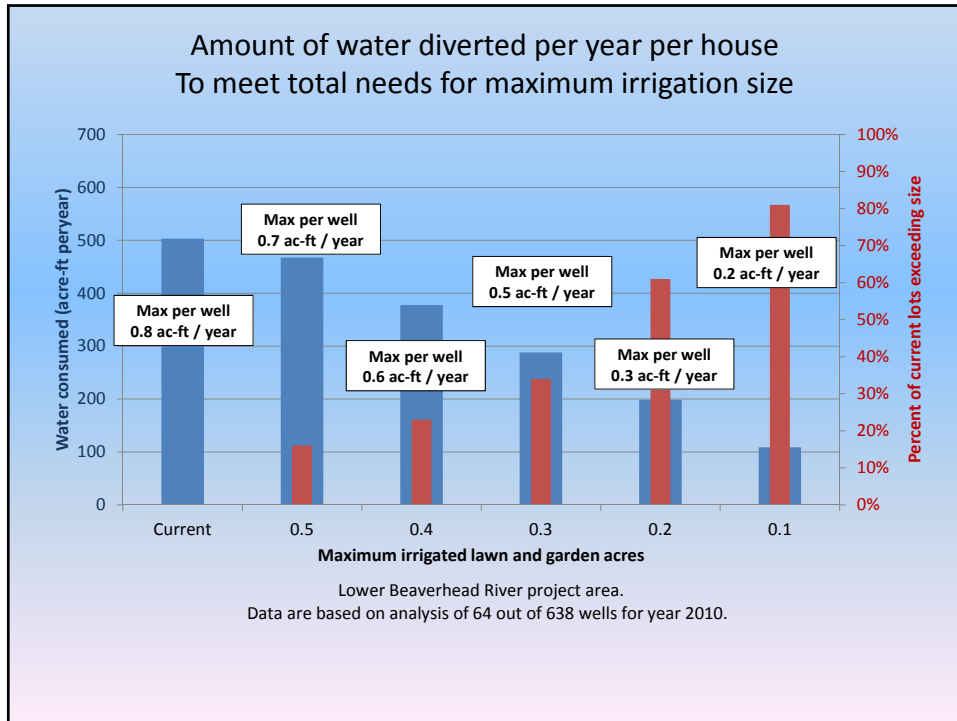


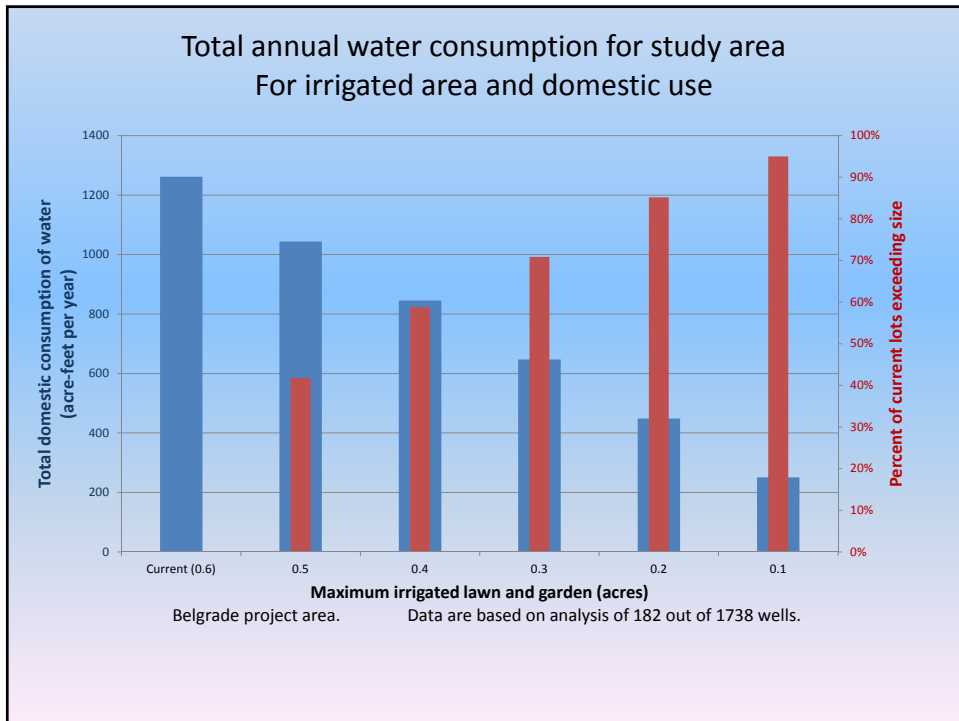
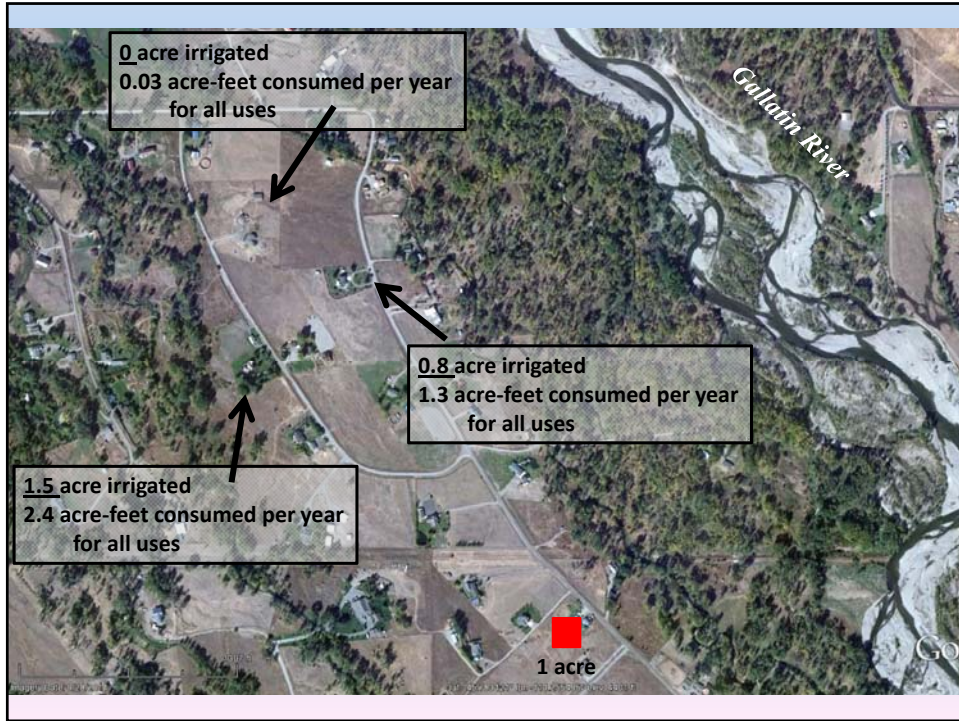


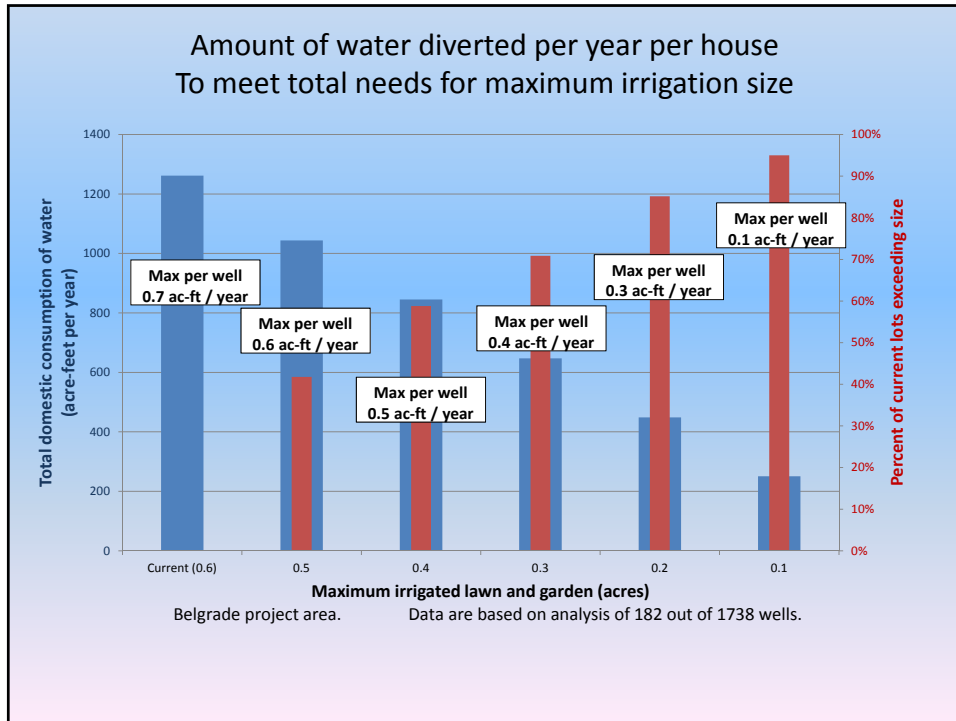












Summary

North Hills –

Begin planning now for predicted drawdown in impacted areas

Not all areas are currently impacted

Use the Groundwater Flow model for water management

Exempt wells

Focus water conversation on lawn and garden consumptive use

Exempt wells are just one part of the complete water budget