City of Longmont
Update on Oil and Gas Drilling Under Union Reservoir

City Council Study Session

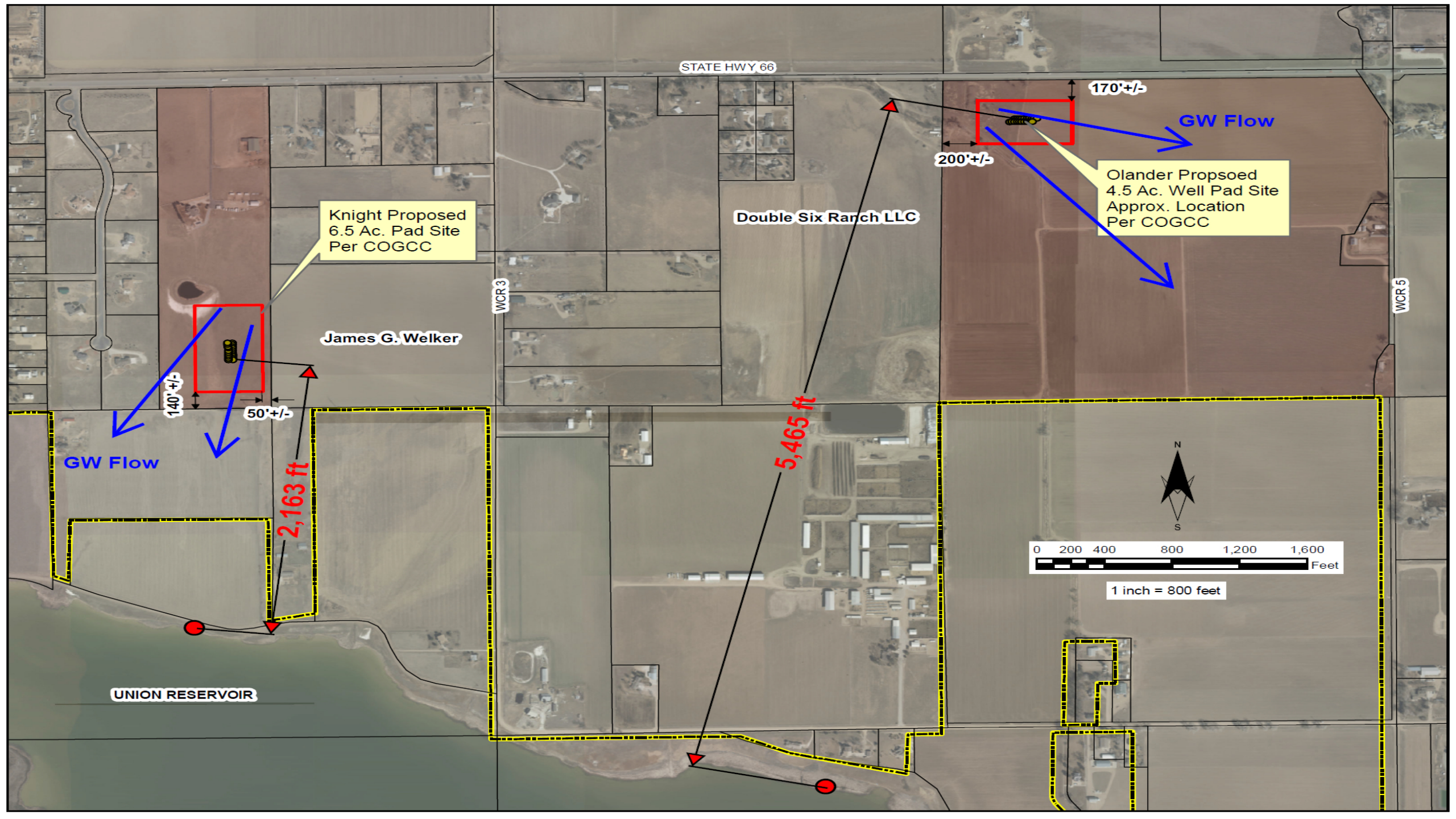
August 7, 2018

AGENDA

- Staff to report on research of existing studies
- Staff contacted multiple reservoir/ditch operators throughout northern Colorado
- Environmental consultant provided feedback about the risks and continued monitoring of Knight and Olander locations
- Staff recommendations going forward

EPA Study Results & Recommendations

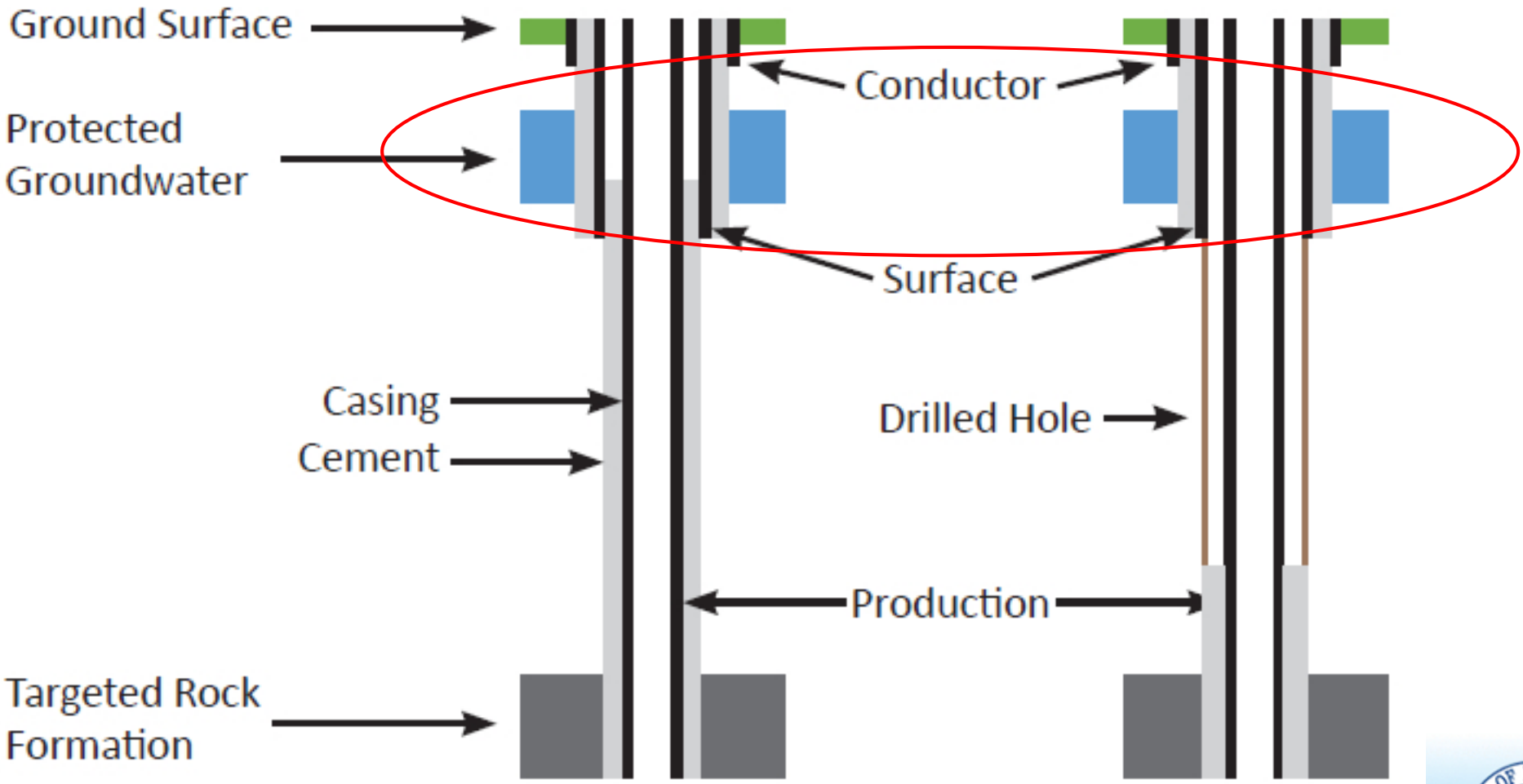
- In 2016, EPA released: ***Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States***
- Complete study is available on EPA website: https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990
- Staff reviewed the conclusions and recommendations included in the Executive Summary
- The prevailing finding of the study is that there is no widespread impacts of hydraulic fracturing, study conclusions identified that level of risk to surface reservoirs is minimal


STATE HWY 66
Knight Proposed
6.5 Ac. Pad Site
Per COGCC
James G. Welker
Double Six Ranch LLC
WCR 3
WCR 5
140' +/-
50'+/-
GW Flow
2,163 ft
5,465 ft
170'+/-
200'+/-
GW Flow
Olander Propsoed
4.5 Ac. Well Pad Site
Approx. Location
Per COGCC
UNION RESERVOIR
N
S
0 200 400 800 1,200 1,600
Feet
1 inch = 800 feet

EPA Study Results & Recommendations

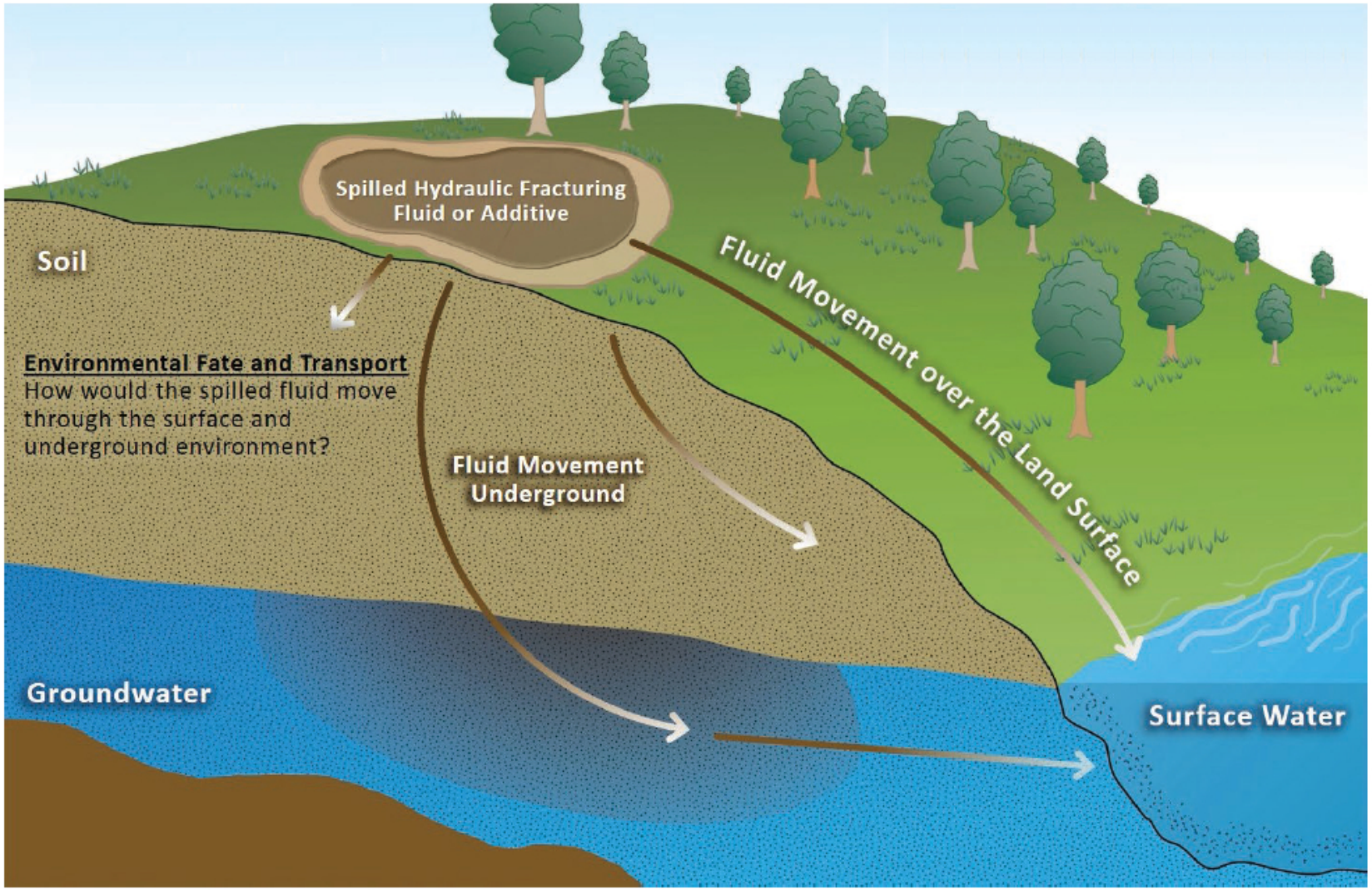
- Most likely and severe impacts identified in the study:
  - Water withdrawals for hydraulic fracturing
  - Disposal of inadequately treated fracturing wastewater to surface waters
  - Disposal or storage of fracturing wastewater in unlined pits
  - *Injection of fracturing fluids in wells resulting from a failure of wellbore integrity*
  - *Surface spills during hydraulic fracturing that result in high volume and/or concentrations*
- Staff recommends establishment of baseline conditions at Union Reservoir, and continued monitoring for the duration of oil and gas operations

EPA Study Results & Recommendations

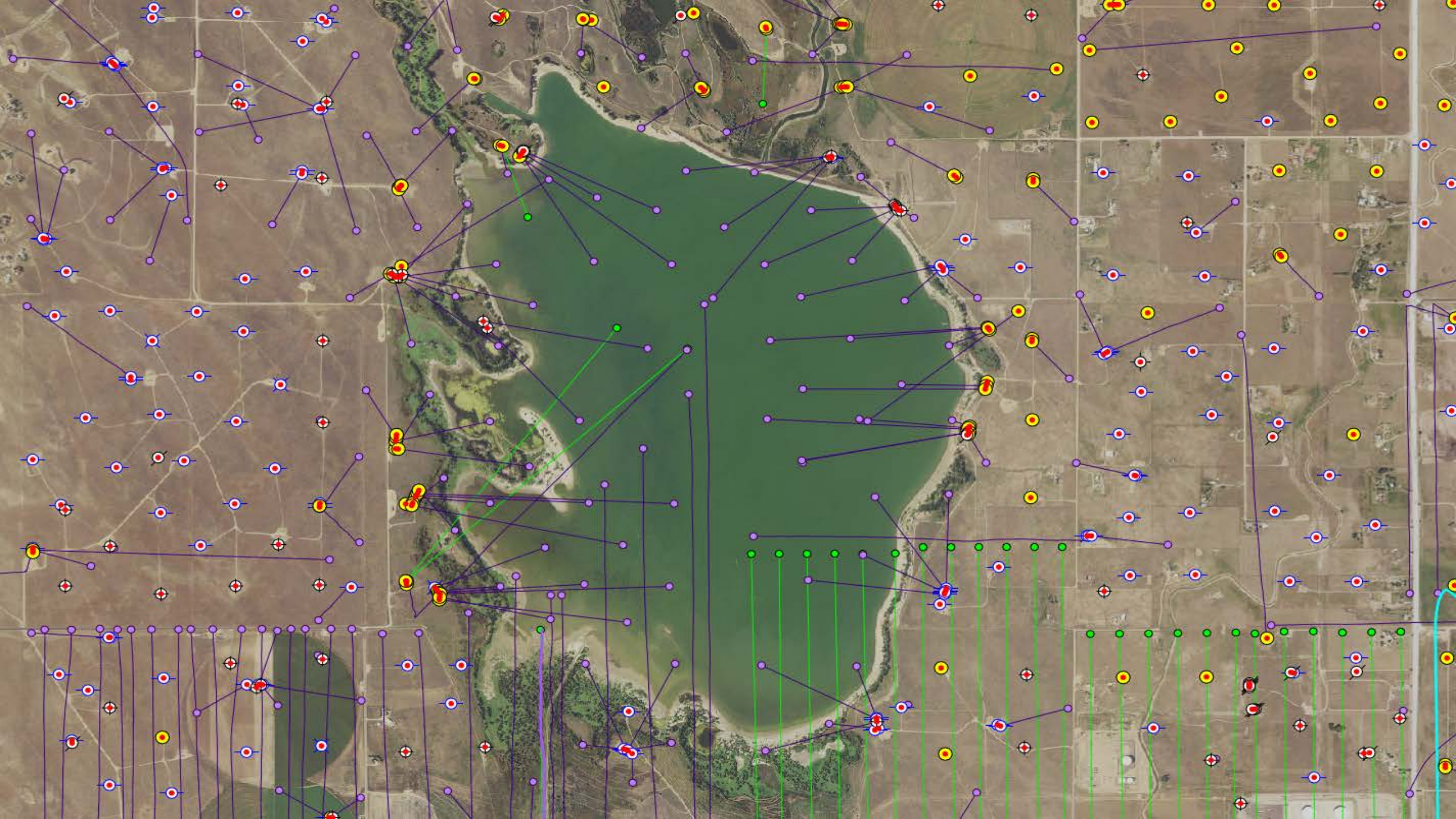


Conductor, surface, and production casings

EPA Study Results & Recommendations



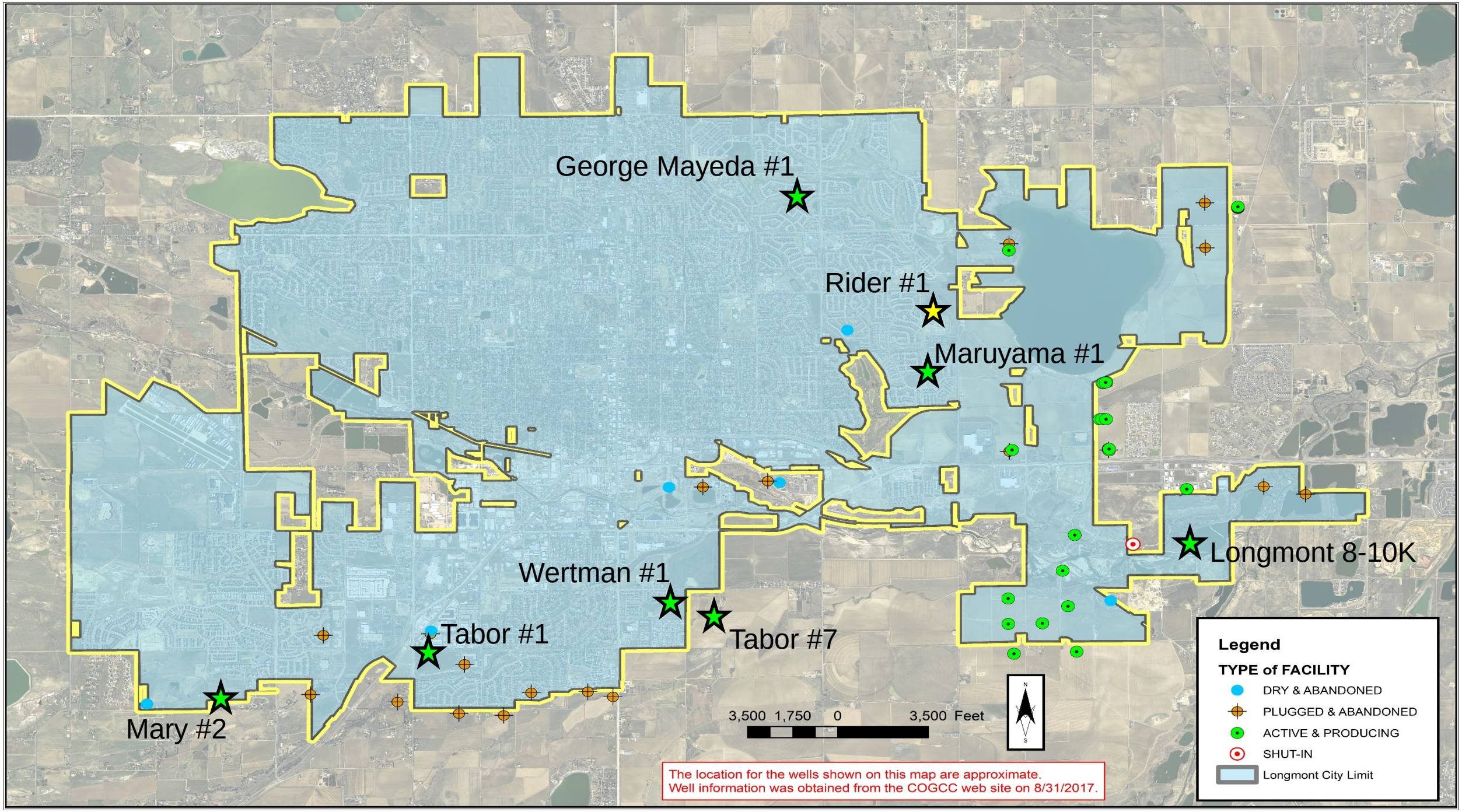
Milton Reservoir



Foster Reservoir

Baseline & Ongoing Investigation Elements

- Continued Bac-T testing at swim beach
- Pull and analyze multiple samples from Union Reservoir
- After substantial storm events, pull and analyze samples from Oligarchy Ditch and Union Reservoir Drainage Basin
- Perform initial investigation at drill sites before mobilization
- Options for ongoing monitoring and evaluation


George Mayeda #1
Rider #1
Maruyama #1
Longmont 8-10K
Wertman #1
Tabor #1
Tabor #7
Mary #2
3,500 1,750 0 3,500 Feet
N
S
The location for the wells shown on this map are approximate.
Well information was obtained from the COGCC web site on 8/31/2017.
Legend
TYPE of FACILITY
DRY & ABANDONED
PLUGGED & ABANDONED
ACTIVE & PRODUCING
SHUT-IN
Longmont City Limit

QUESTIONS?