

Your region, Your water, Your voice at the table



PRWC BOD Meeting 2017

Lower Floridan Aquifer as a Non-Traditional Water Source

Wednesday November 15, 2017

Polk Regional
Water Cooperative

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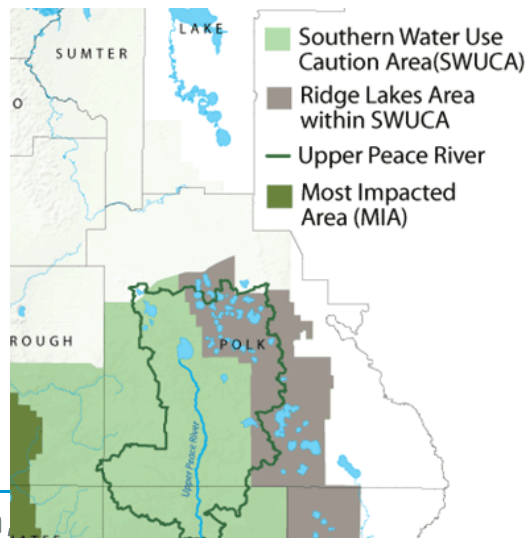
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Presentation Goal

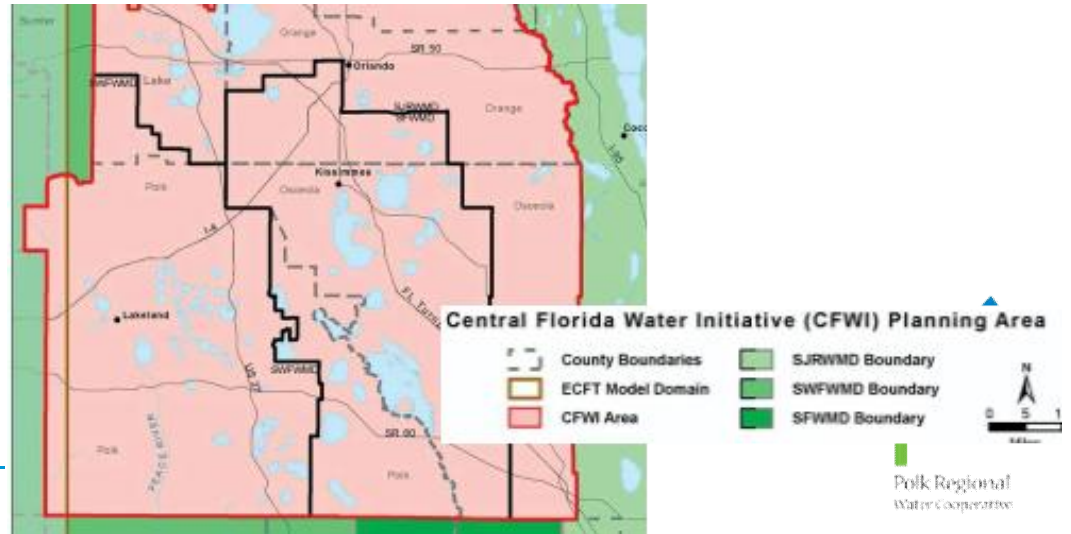
- Provide information on the lower Floridan aquifer in Polk County and its use as a non-traditional water supply.

Why even consider the lower Floridan?

- Polk County exists in both the Southern Water Use Caution Area (SWUCA) and the Central Florida Water Initiative (CFWI) Planning Area.



table

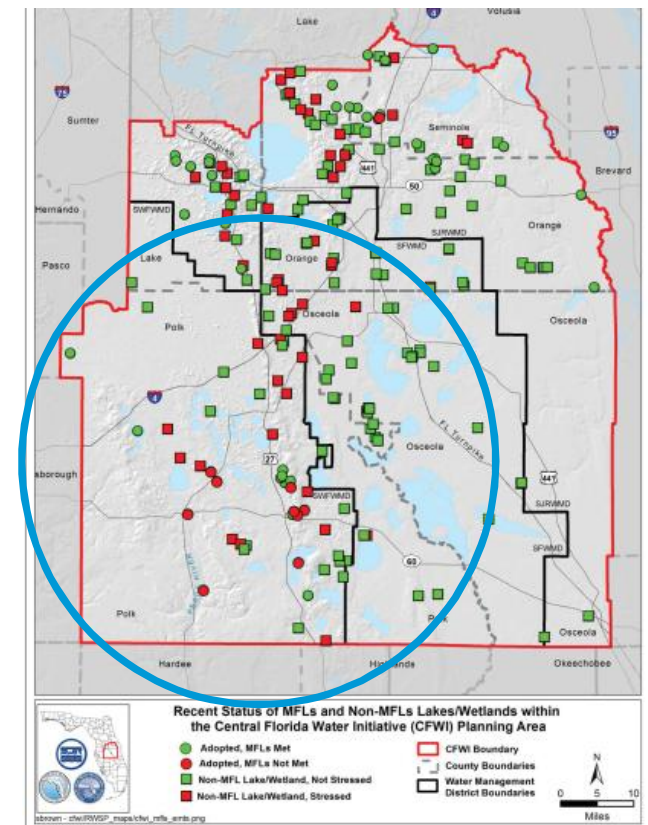


Polk County's natural systems are at stake

- SWUCA is an “area where regional action is necessary to address cumulative water withdrawals which are causing or may cause adverse impacts to the water and related natural resources or the public interest.”
- CFWI planning area is an area where... “fresh traditional groundwater resources alone cannot meet future water demands or current permitted allocations without resulting in unacceptable impacts to water resources and related natural systems.”

MFLs: regulatory means of protecting natural systems

- Minimum Flow and Level (MFL): limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area.
- SWUCA: 41 priority water bodies with MFLs
- CFWI: 46 water bodies in CFWI with MFLs



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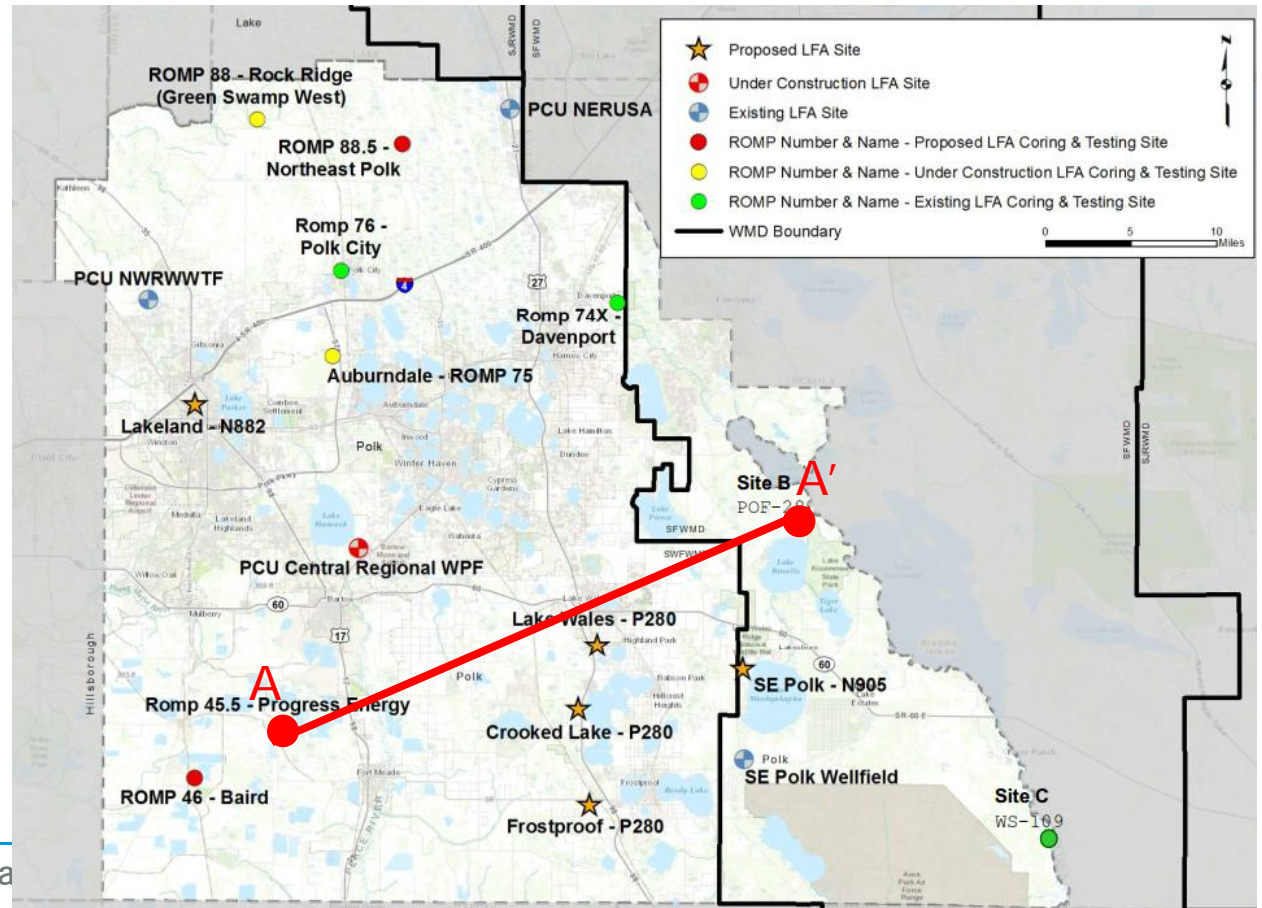
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Why Lower Floridan Aquifer (LFA)?

- No water supplies have zero impact.
- Pumpage from LFA minimizes impact to nearby wetlands and lakes due to extensive confinement above LFA.
- Producing water from LFA minimizes the potential for impacts along the ridges w/in Polk County. (CFWI Solutions Plan)

Why LFA?

- To demonstrate, create a cross section using real data

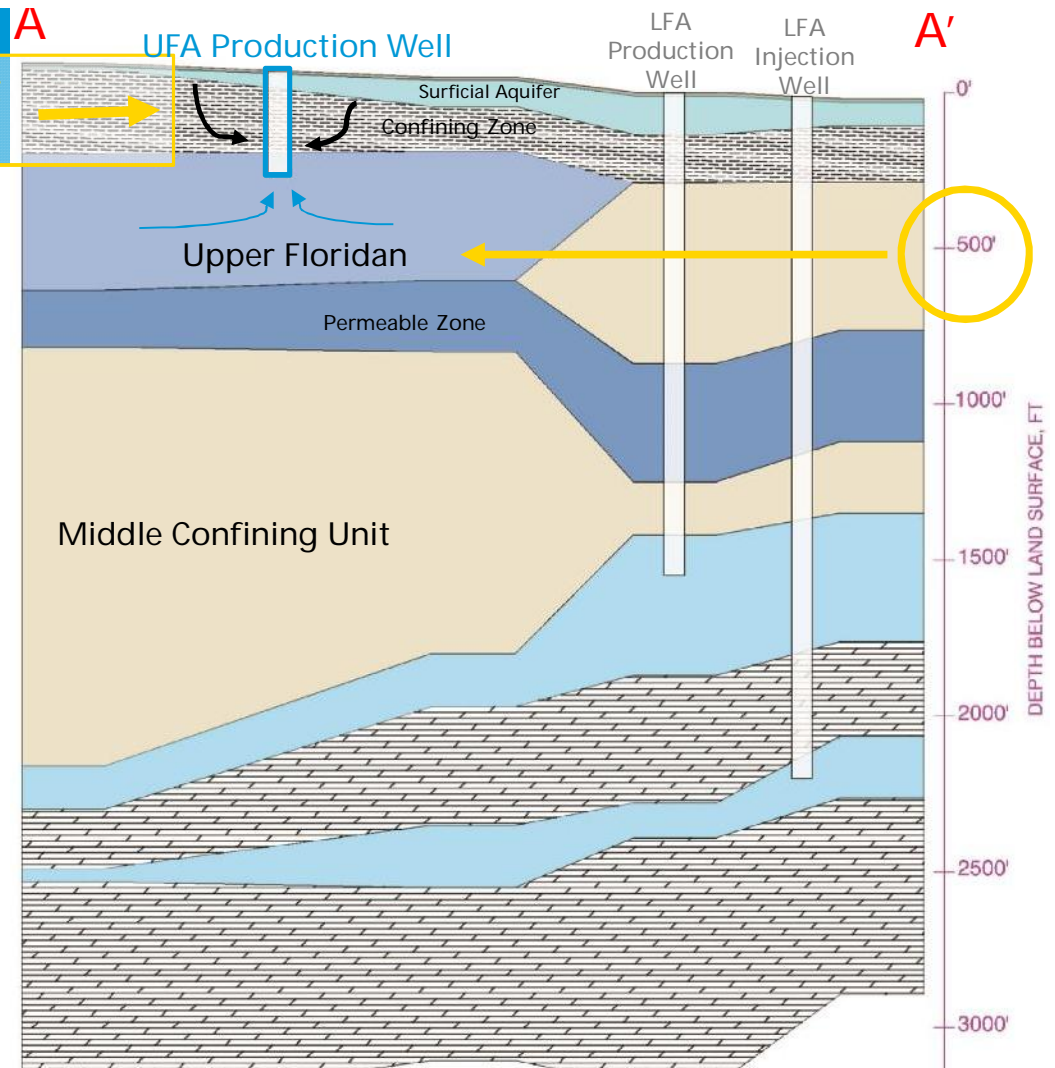


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Why LFA?

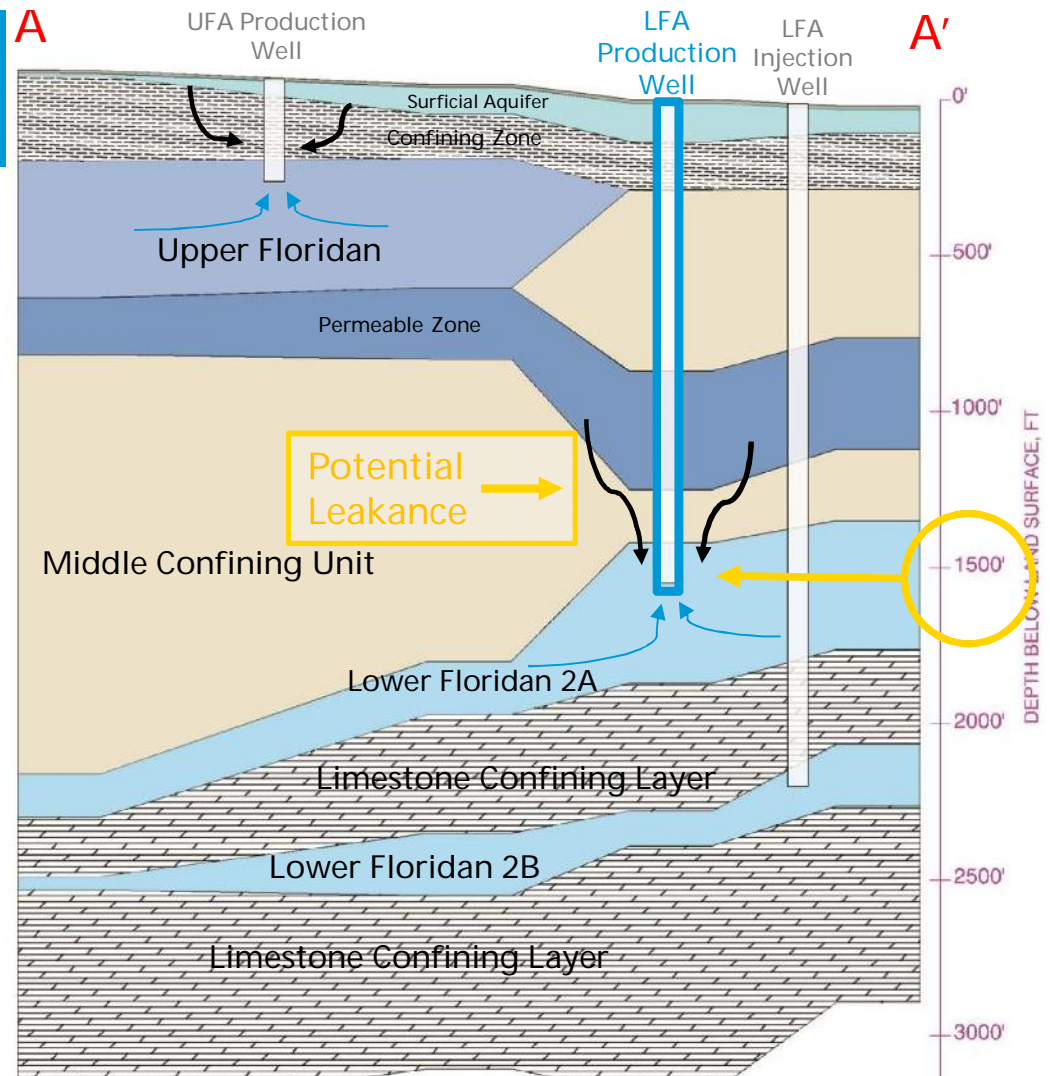
Significant
Leakance

- Pumpage typically occurs <500' in Polk County
- Confining zone exhibits variable conductivity
- Traditional UFA wells are closer/more connected to natural systems



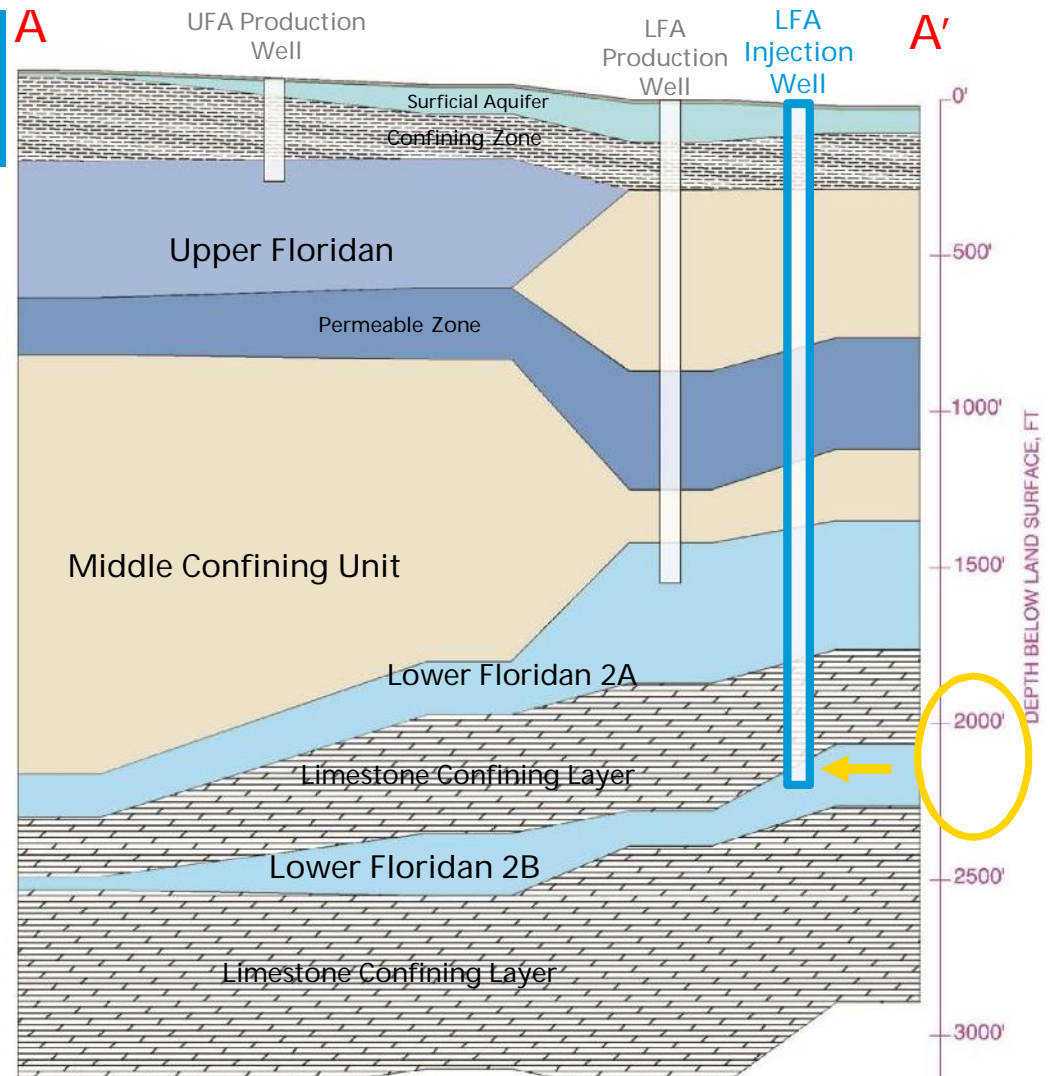
Why LFA?

- Extensive confinement has been found between UFA and LFA.
- LFA production zone expected at ~1500+ ft.
- LFA shown to draw laterally more so than vertically

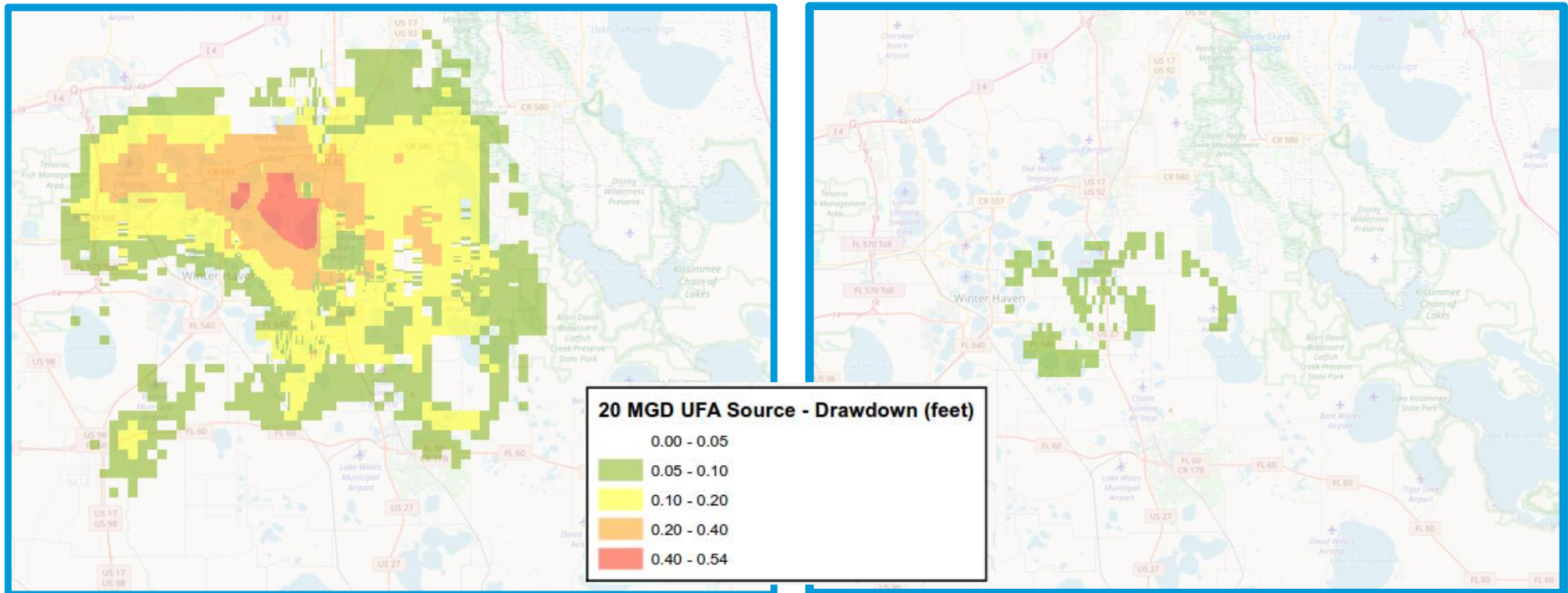


Why LFA?

- Injection to occur at ~2200+
- Confinement between LFA 2A and 2B
- Increasingly brackish



Traditional UFA versus LFA Pumpage



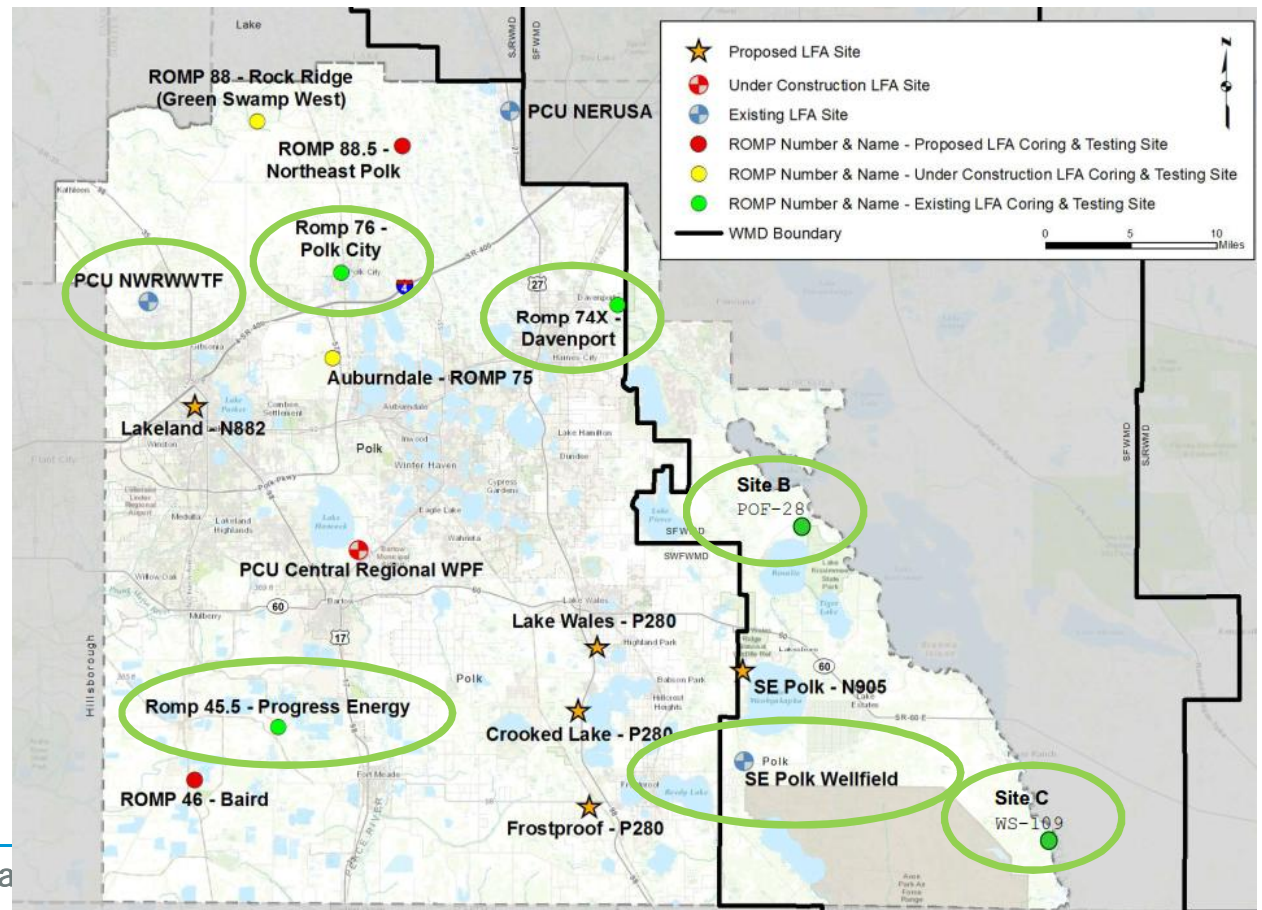
20 MGD Pumpage in UFA

20 MGD Pumpage in LFA

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But we need to know more.

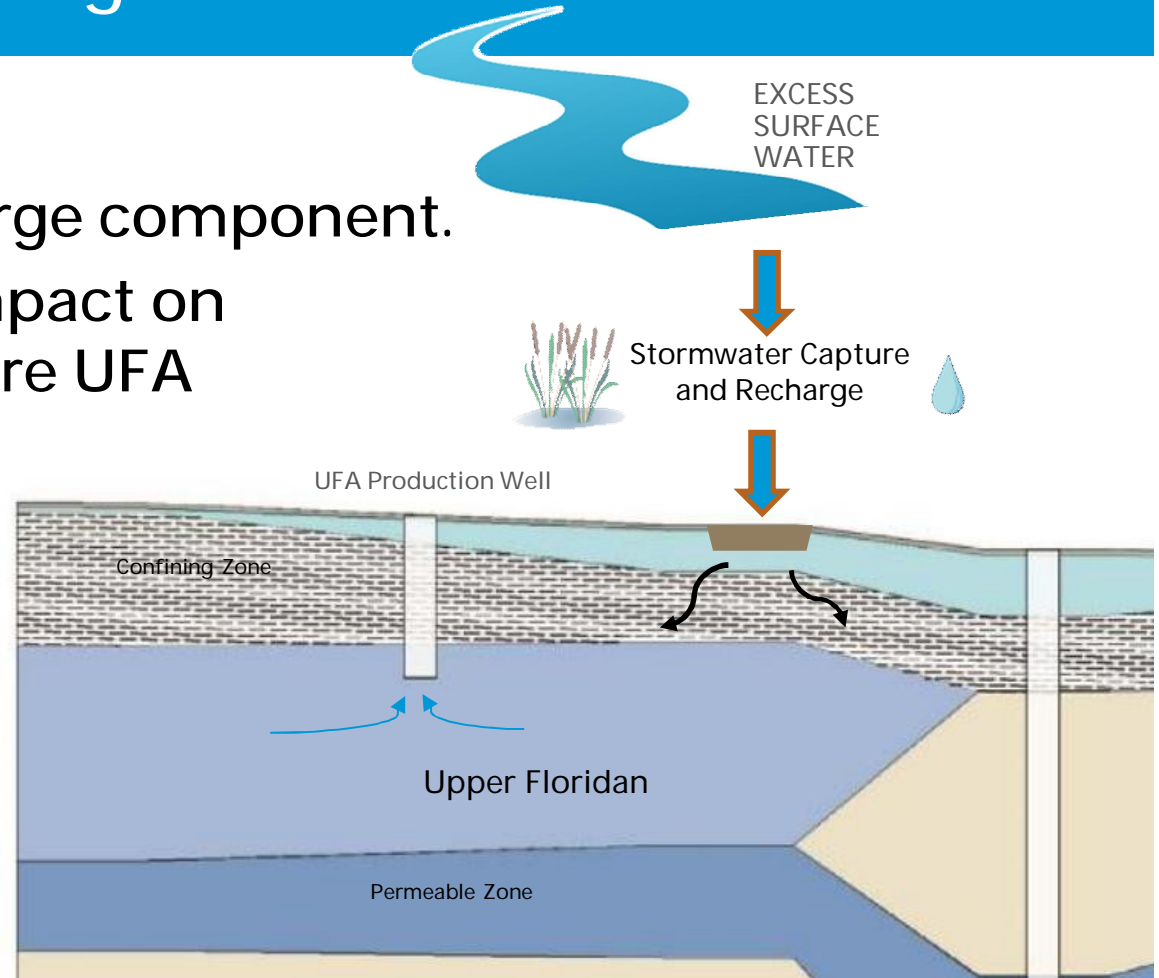
- Few LFA wells in Polk County.
- Extensive testing will be done.
- Permitting process requires certain assurances:
 - Water resource availability
 - Minimal impact to existing legal users
 - Minimal saline intrusion
 - Minimal wetland harm



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Don't forget Peace Creek

- PCIWSP has a recharge component.
- Will have positive impact on surficial, and therefore UFA



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