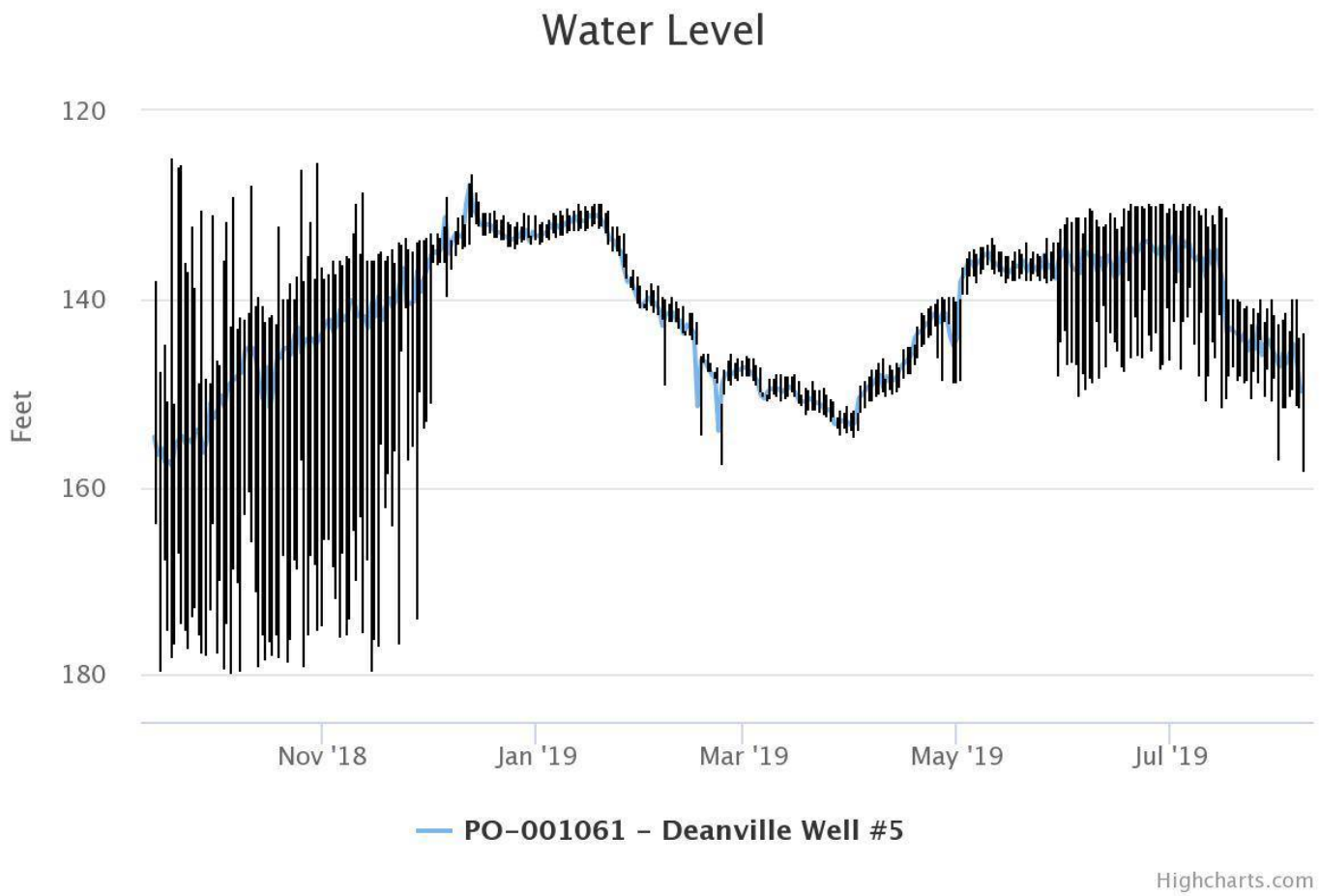
Groundwater Monitoring Update

POSGCD Board Meeting

August 6, 2019



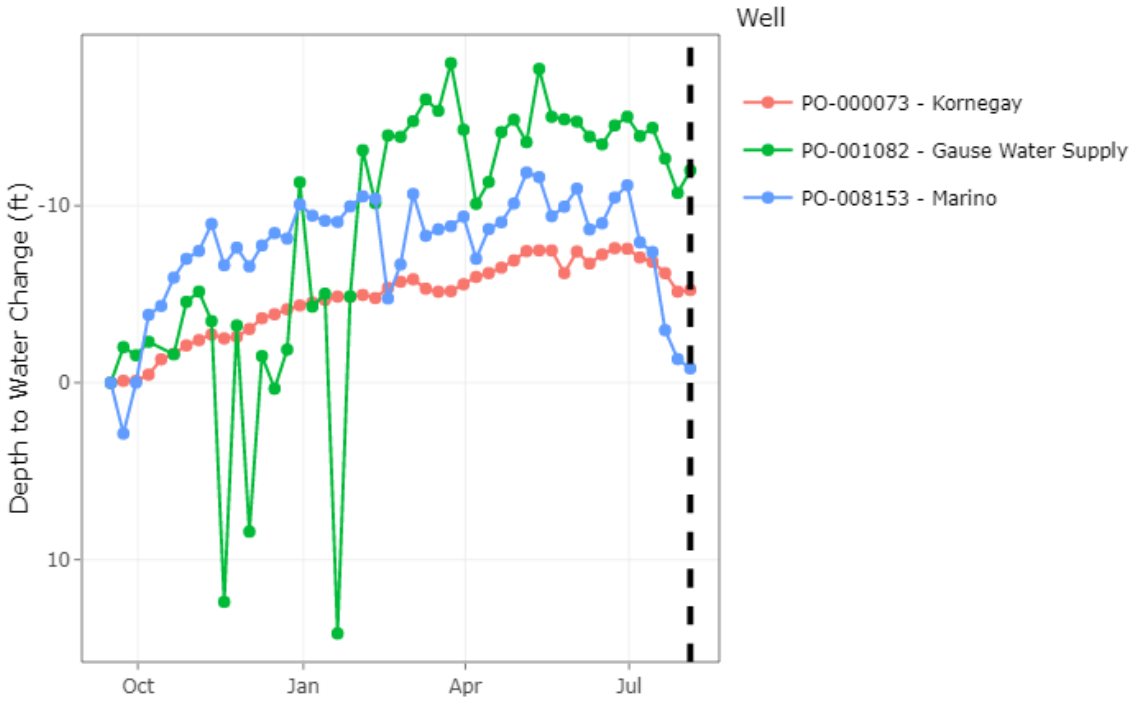
Deanville WSC

Water levels indicate no exaggerated changes as previously measured and are consistent with pumping influences at the well itself.

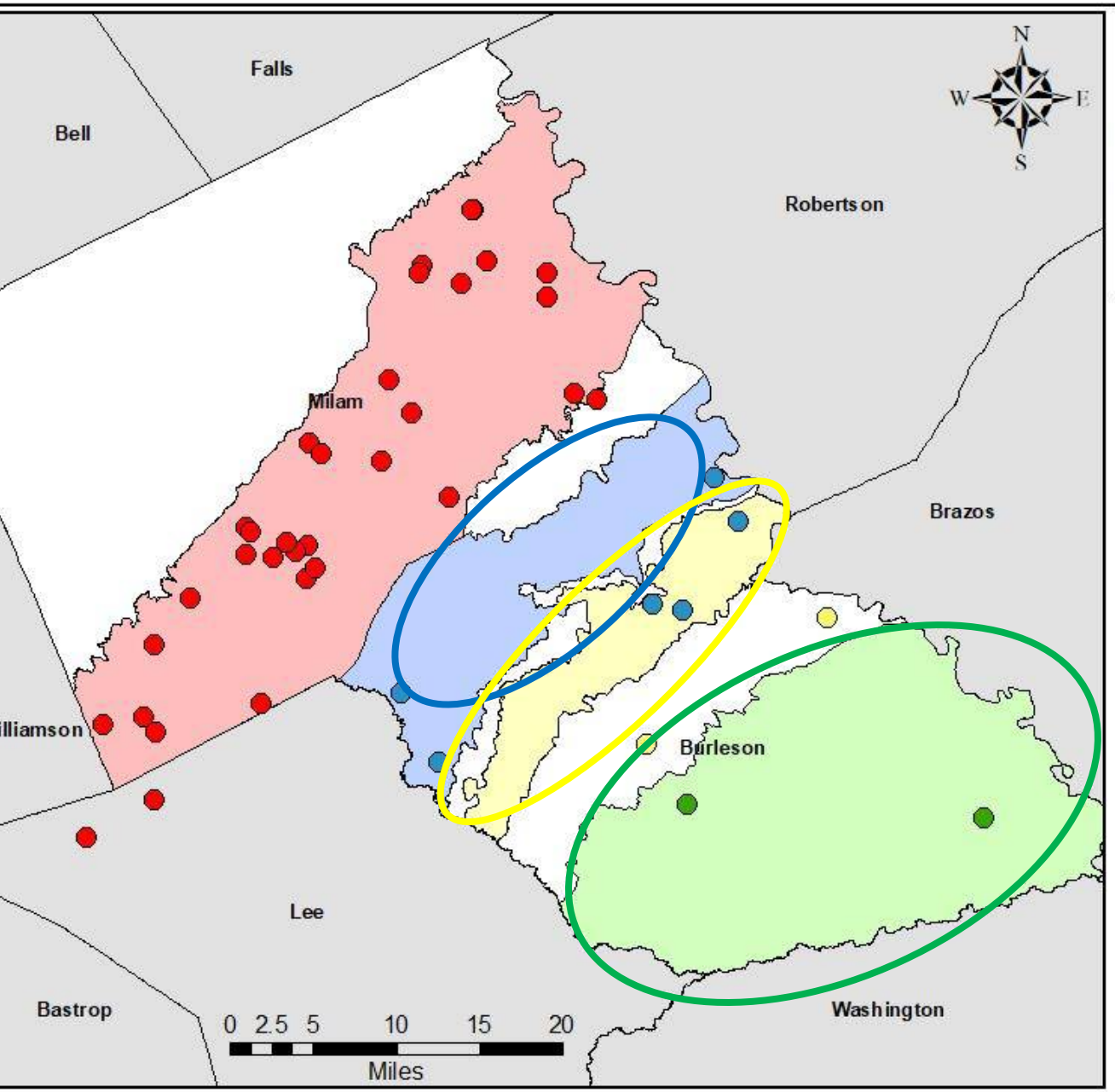
Staff will attempt to coordinate a pump test during the winter months to get a better understanding of hydrologic conditions at the location.

Gause/22 Hills Area

- The number of monitoring wells in this area has increased significantly, which will lead to a closer evaluation of water levels in the subdivision.
- A 4th Wellntel unit has now been installed in the area, and 2nd within the 22 Hills subdivision. Data is currently being calibrated and should be available soon.
- INTERA is currently working on an Aquifer Characteristic Study which will include an evaluation of the underlying soil formations.



District Monitoring Wells - Shallow (<400) Management Zone



This map illustrates the wells in the District's Monitoring Network that are identified to be in the shallow management zone set for 400 feet. The District makes an effort to make management decisions that are supported through best available science, In an effort to improve this science, more wells are needed to increase the quantity and quality of data. While the Carrizo-Wilcox has been prioritized there is a strong need for some shift towards the minor aquifers in regards to number of shallow monitoring wells. This document is for DRAFT ONLY.

Legend

Monitor Wells <400

- Carrizo-Wilcox
- Queen City
- Sparta
- Yegua - Jackson

- Carrizo-Wilcox Outcrop
- Queen City Outcrop
- Sparta Outcrop
- Yegua-Jackson Outcrop

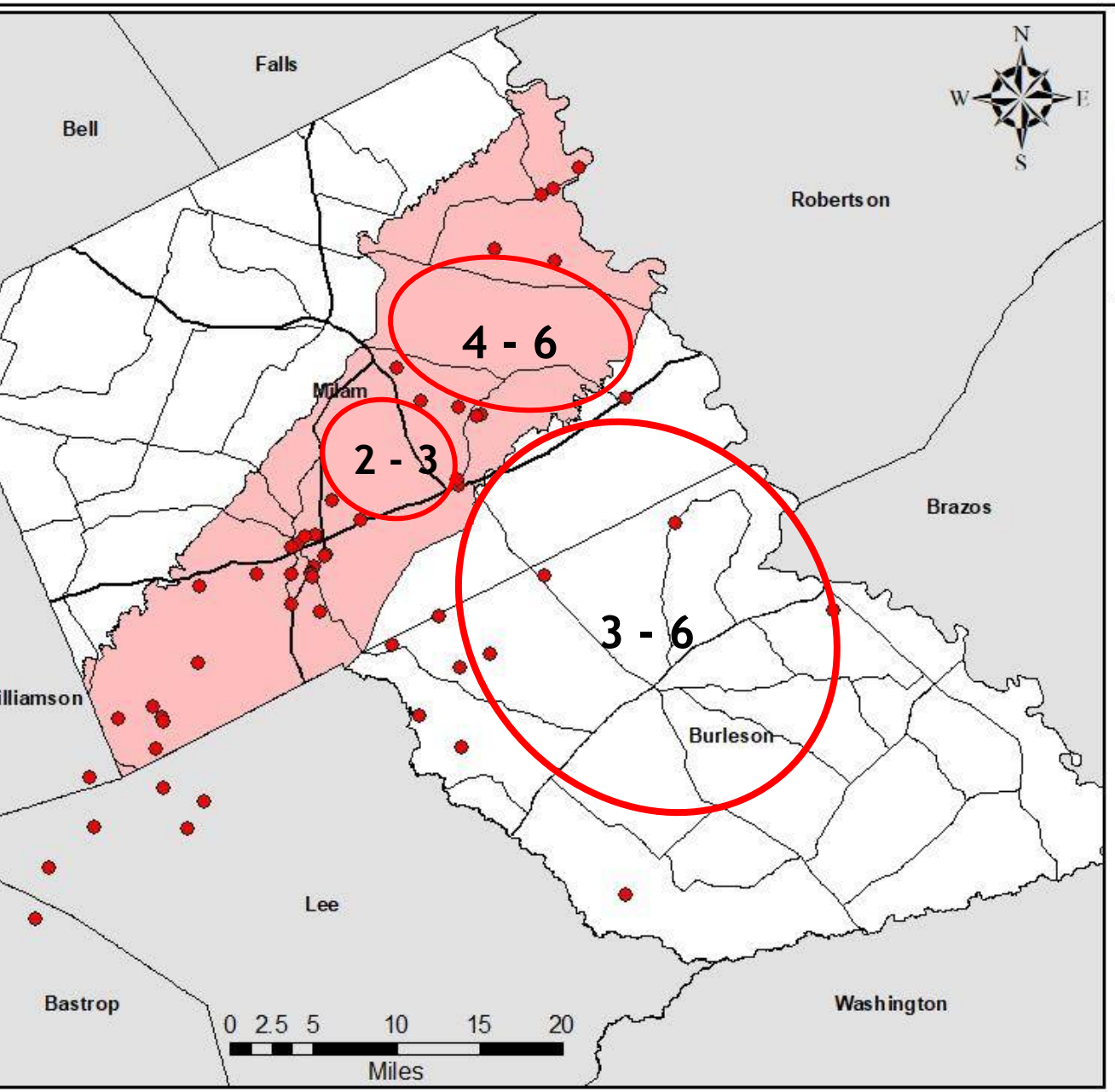
Shallow Monitoring Wells

The areas circled represent areas within the District where additional "shallow" wells (<400 ft) are needed to improve Protected Drawdown Limits (PDLs) and Modeling efforts.

Each Minor aquifer within the District, except Brazos Alluvium, are lacking sufficient shallow monitoring wells.

Efforts are also continuing in the Carrizo-Wilcox to locate shallower wells in order to compress the "Shallow" management zone down to closer represent the unconfined aquifer.

District Monitoring Wells - Simsboro Management Zone



This map illustrates the wells in the District's Monitoring Network that are identified to be in the Simsboro Management Zone. The District makes an effort to make management decisions that are supported through best available science, In an effort to improve this science, more wells are needed to increase the quantity and quality of data. While the Carrizo-Wilcox has been prioritized there is a strong need for some shift towards the minor aquifers in regards to number of shallow monitoring wells. This document is for DRAFT ONLY.

Legend

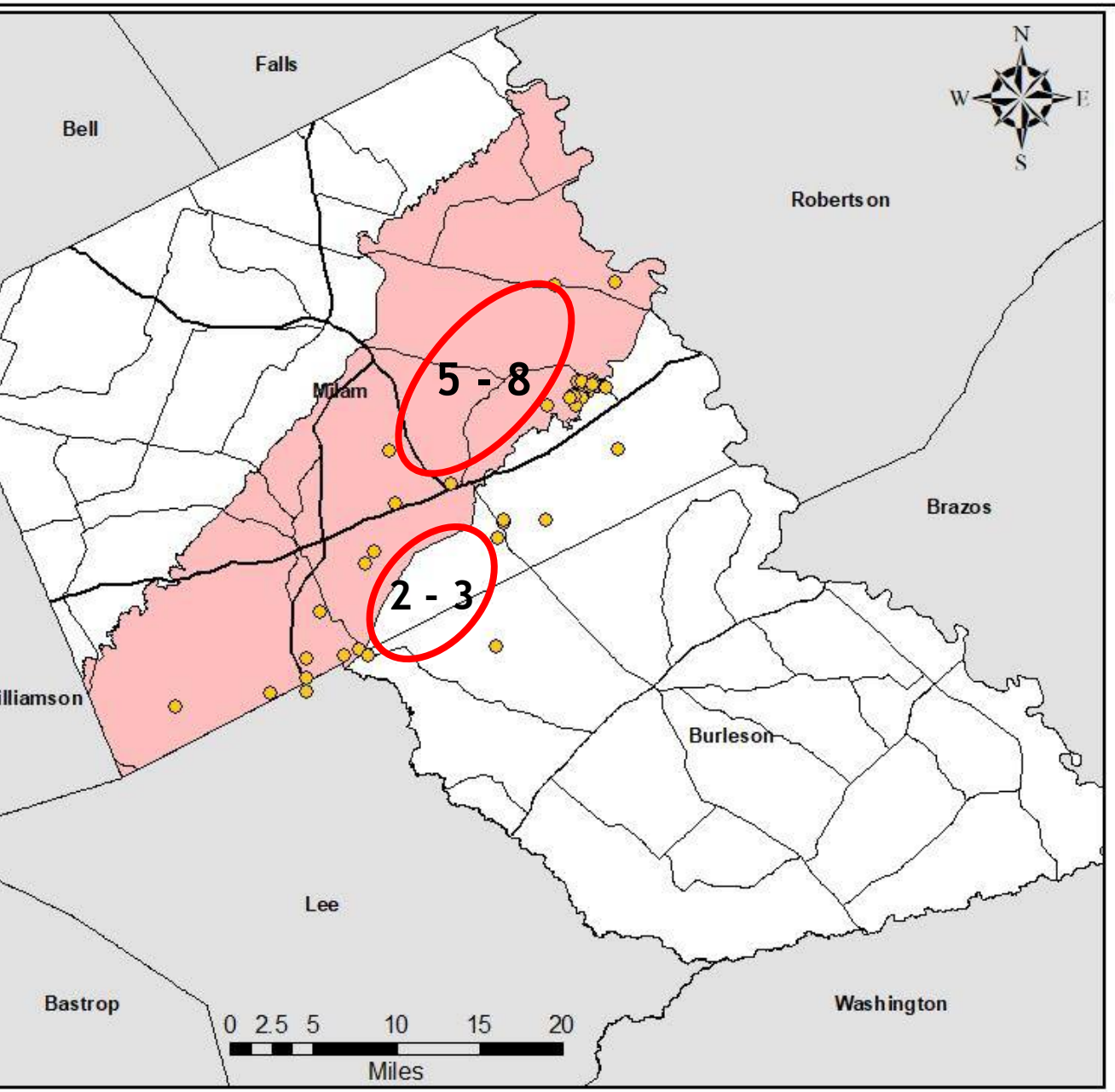
Aquifer

- Simsboro
- Carrizo-Wilcox Outcrop

Simsboro Management Zone

The "circled" areas indicate locations within the District that are need of additional monitoring wells within this particular formation.

District Monitoring Wells - Calvert Bluff Management Zone



This map illustrates the wells in the District's Monitoring Network that are identified to be in the Calvert Bluff Management Zone. The District makes an effort to make management decisions that are supported through best available science, In an effort to improve this science, more wells are needed to increase the quantity and quality of data. While the Carrizo-Wilcox has been prioritized there is a strong need for some shift towards the minor aquifers in regards to number of shallow monitoring wells. This document is for DRAFT ONLY.

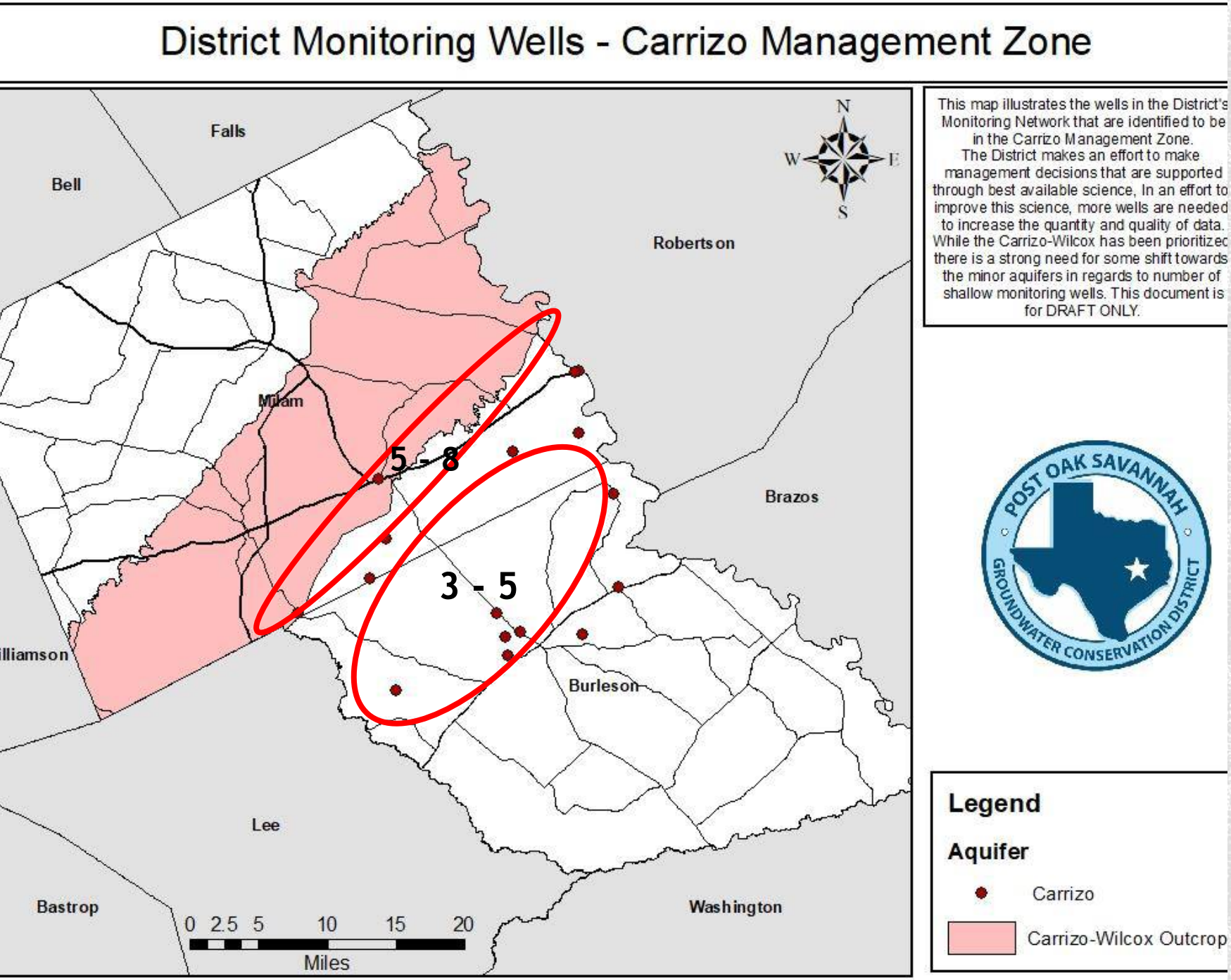
Legend

Aquifer

- Calvert Bluff
- Carrizo-Wilcox Outcrop

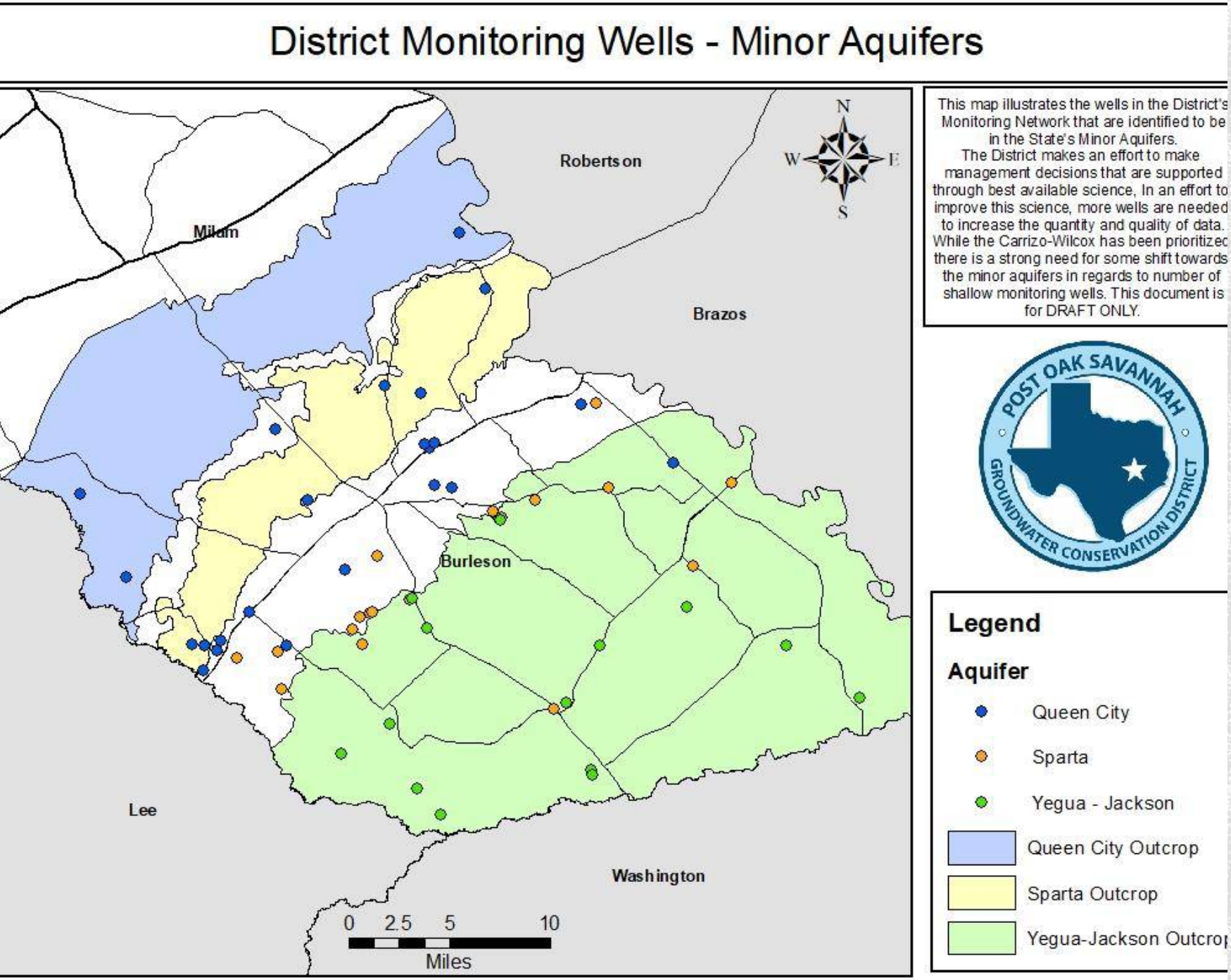
Calvert Bluff Management Zone

The "circled" areas indicate locations within the District that are need of additional monitoring wells within this particular formation.



Carrizo Management Zone

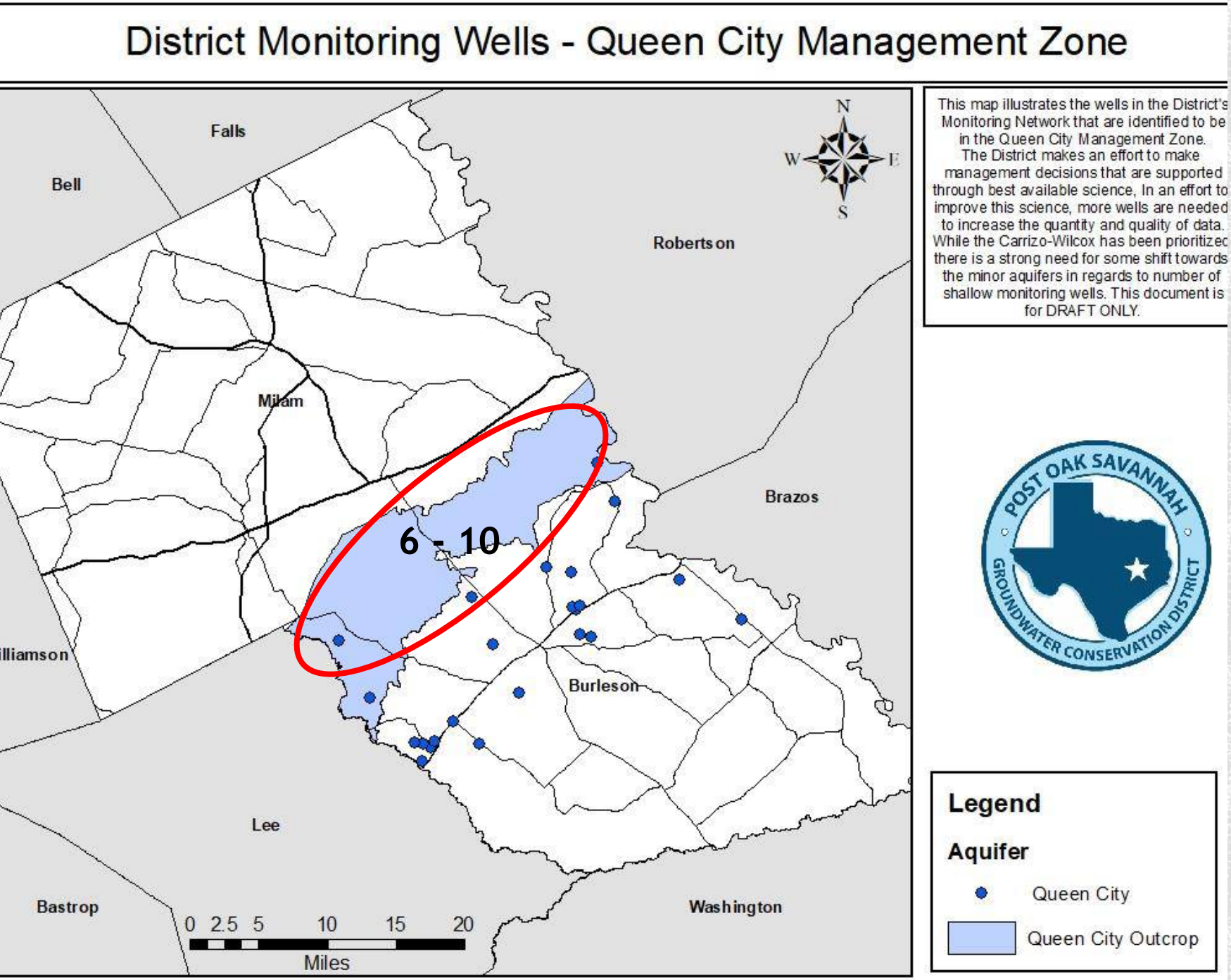
The "circled" areas indicate locations within the District that are need of additional monitoring wells within this particular formation.



Minor Aquifers

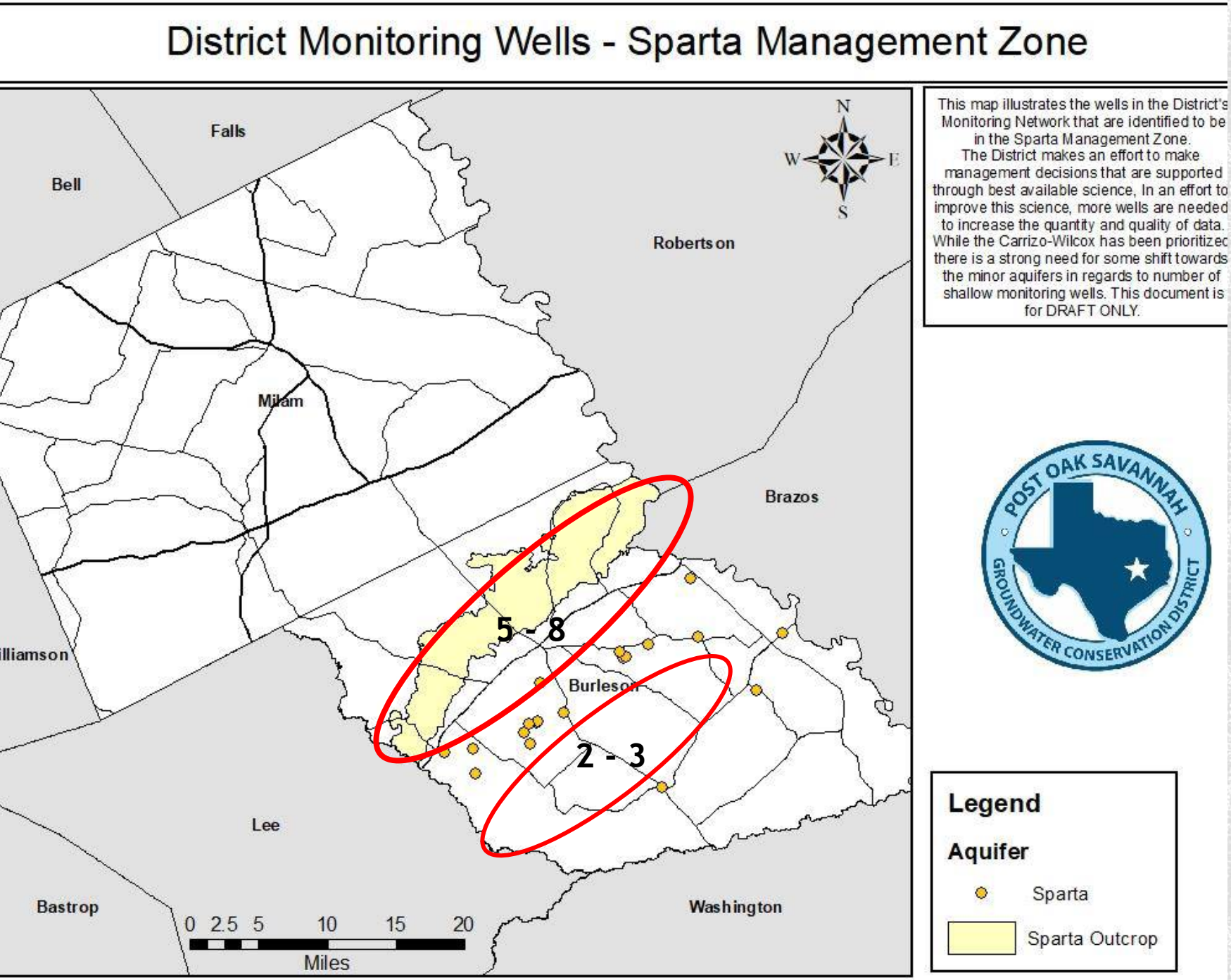
This map depicts the distribution of monitoring wells in the Minor Aquifers within the District.

Illustrated is the difficulty of locating shallow wells within these formations due to well owner's priority of locating "drinkable" water when drilling.



Queen City Management Zone

The “circled” areas indicate locations within the District that are need of additional monitoring wells within this particular formation.



Sparta Management Zone

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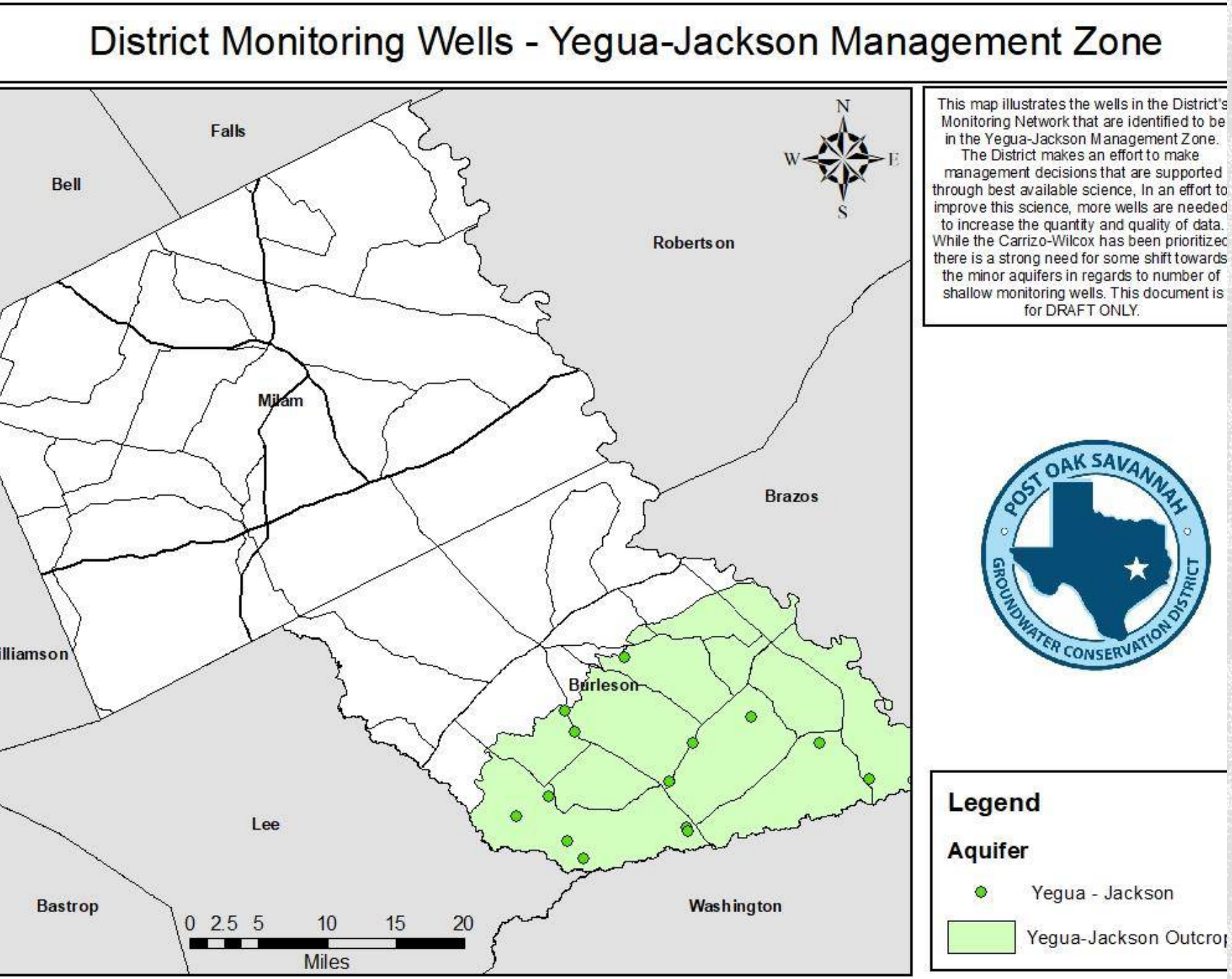

Yegua-Jackson Management Zone

The priority for this management zone is to locate wells throughout the formation due to the inconsistent nature of the aquifer.