

Item #4 – Status of DFC's for each of the Aquifers

John Seifert will give an annual update on the status of the Desired Future Condition of each aquifer compared to the average artesian head change for that aquifer. Slide presentation follows in this folder.

Aquifer Desired Future Conditions Update



Presented to
BVGCD Board of Directors
By
LBG-Guyton Associates

September 10, 2015



Desired Future Conditions

- ❖ Established for Sparta, Queen City, Carrizo, Calvert Bluff, Simsboro, Hooper, Yegua and Jackson aquifers
- ❖ For first GMA 12 planning cycle - Submitted to TWDB August 2010
- ❖ For first GMA 12 planning cycle - Approved by TWDB Summer 2012
- ❖ Used average artesian head decline over aquifers area as matrix for quantifying DFC

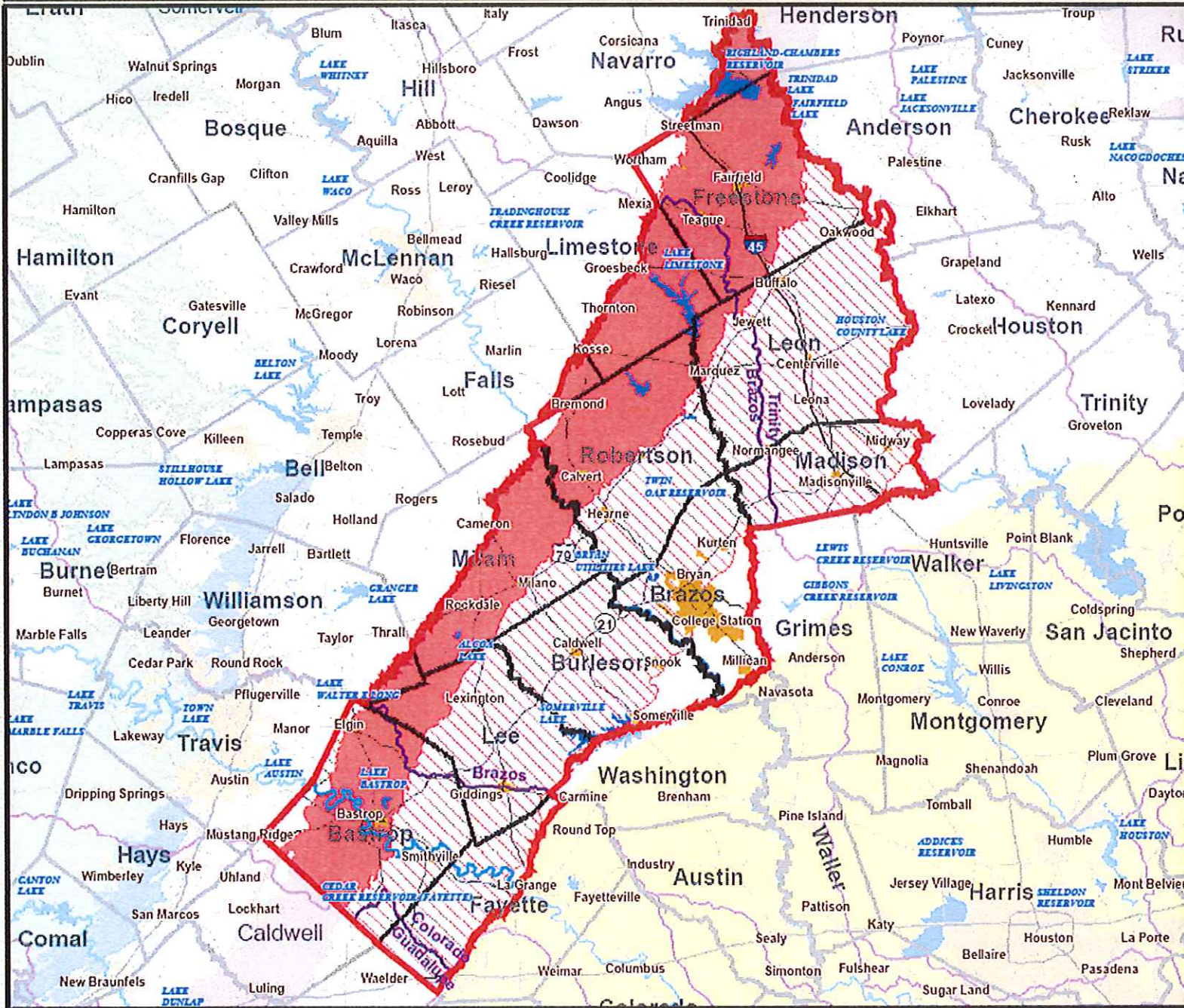
Desired Future Conditions (cont'd)

- ❖ Well static water-level data utilized to help monitor aquifer response to pumping
- ❖ DFCs established based on estimates of pumping in the District and the interference drawdown effects of total pumping inside GMA 12

DFC Goals

Aquifer	MAG Pumping Within BVGCD by 2060	MAG Pumping Outside BVGCD by 2060	BVGCD-DFC, ft	Period
Sparta	9,000	13,700	15	2000 - Dec. 2059
Queen City	1,100	2,200	12	2000 - Dec. 2059
Carrizo	5,496	30,000	47	2000 - Dec. 2059
Calvert Bluff	1,755	8,800	106	2000 - Dec. 2059
Simsboro	96,185	87,000	270	2000 - Dec. 2059
Hooper	316	7,600	170	2000 - Dec. 2059
Yegua	6,100	18,800	70	2010 - 2060
Jackson			110	2010 - 2060

Groundwater Management Area #12

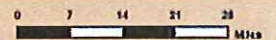
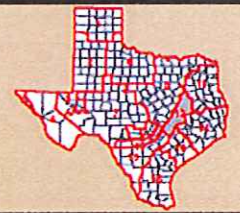


MAP LEGEND

- GMA #12
 - River
 - River Basin
 - Reservoir
 - Cities
 - Counties
- ### Major Aquifers
- Cenozoic Pecos Alluvium
 - Seymour
 - Gulf Coast
 - Carrizo - Wilcox (outcrop)
 - Carrizo - Wilcox (down dip)
 - Hueco - Mesilla Bolson
 - Ogallala
 - Edwards - Trinity Plateau (outcrop)
 - Edwards - Trinity Plateau (down dip)
 - Edwards BFZ (outcrop)
 - Edwards BFZ (down dip)
 - Trinity (outcrop)
 - Trinity (down dip)

DISCLAIMER
 No claim is made to the accuracy or completeness of the data nor its suitability for a particular use. The scale and compilation of information shown here is approximate.

Map prepared by Mark Hayes
 Texas Water Development Board
 GIS Section
 12/11/2005



9/10/2015 5
 1 inch equals 26 miles



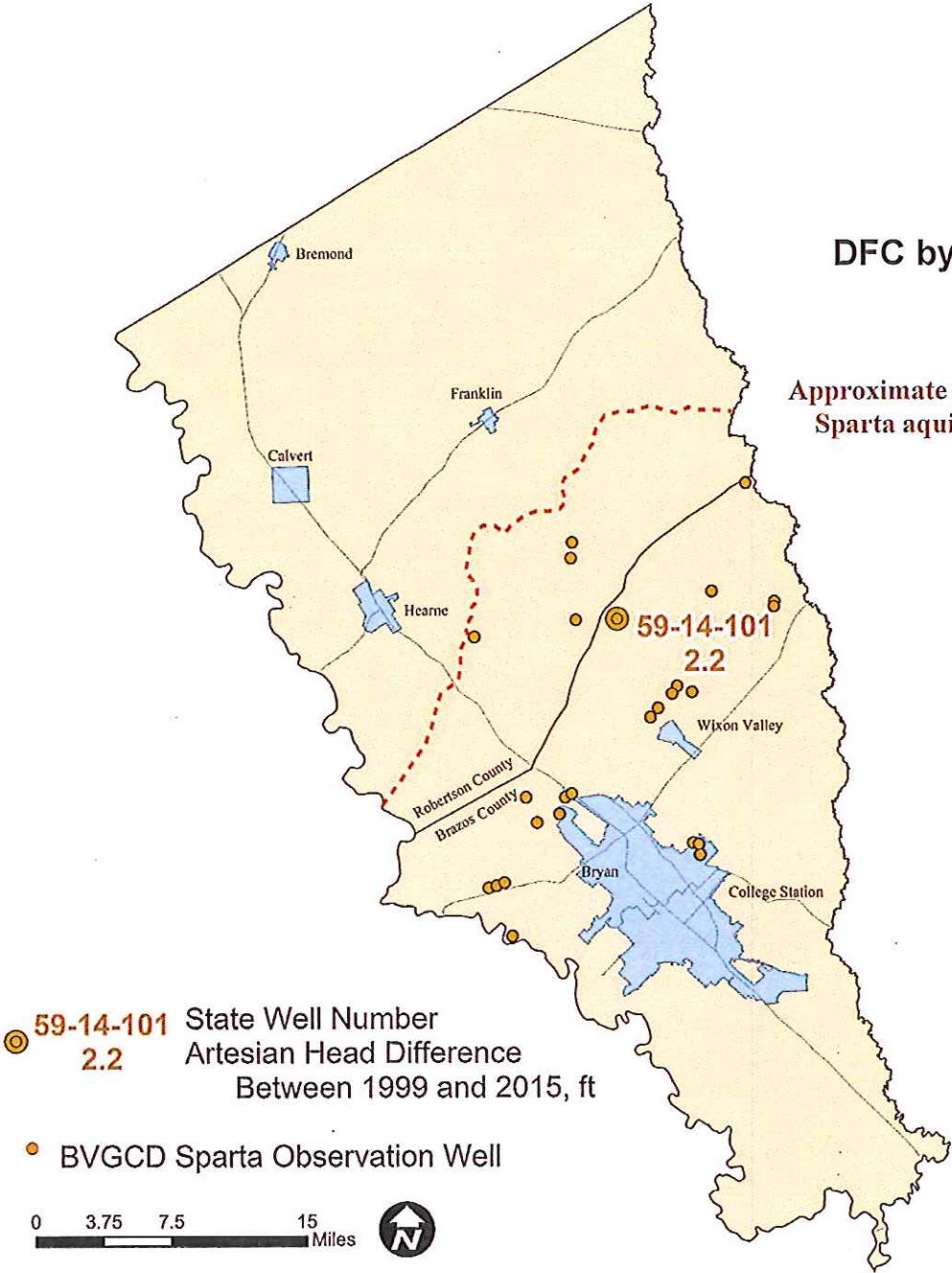
Aquifer's DFC Status

Aquifer	Status
Sparta	Limited measured artesian head decline
Queen City	Review DFC goal and monitoring network being expanded
Carrizo	Monitoring network being expanded
Calvert Bluff	Monitoring network being expanded
Simsboro	Limited measured artesian head decline
Hooper	Artesian head decline in area of pumping and not District wide
Yegua	Limited amount of artesian head decline
Jackson	Aquifer in very south part of District with limited number of wells.

Sparta Aquifer

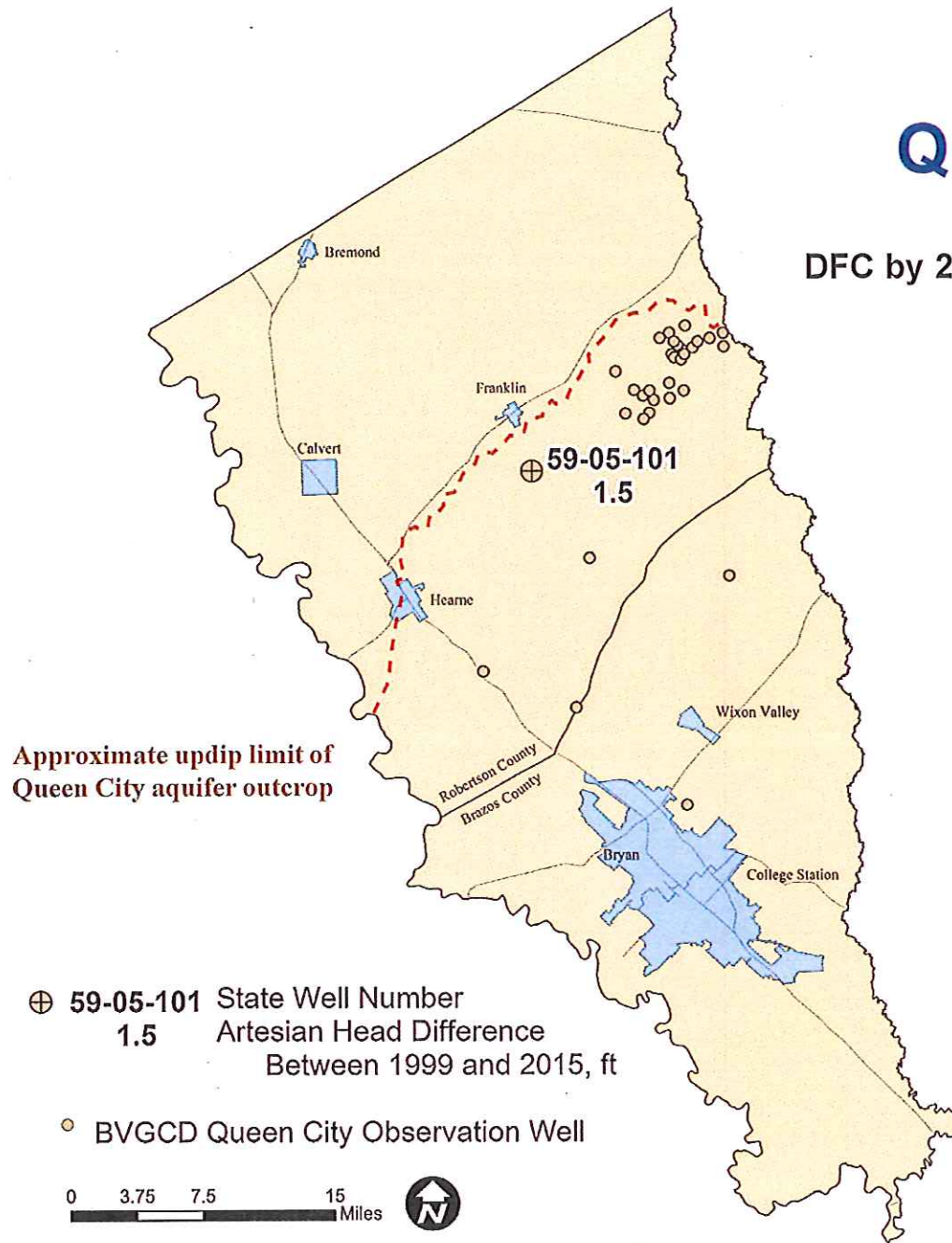
DFC by 2060 Average Artesian Head Decline 15 feet

Approximate updip limit of Sparta aquifer outcrop



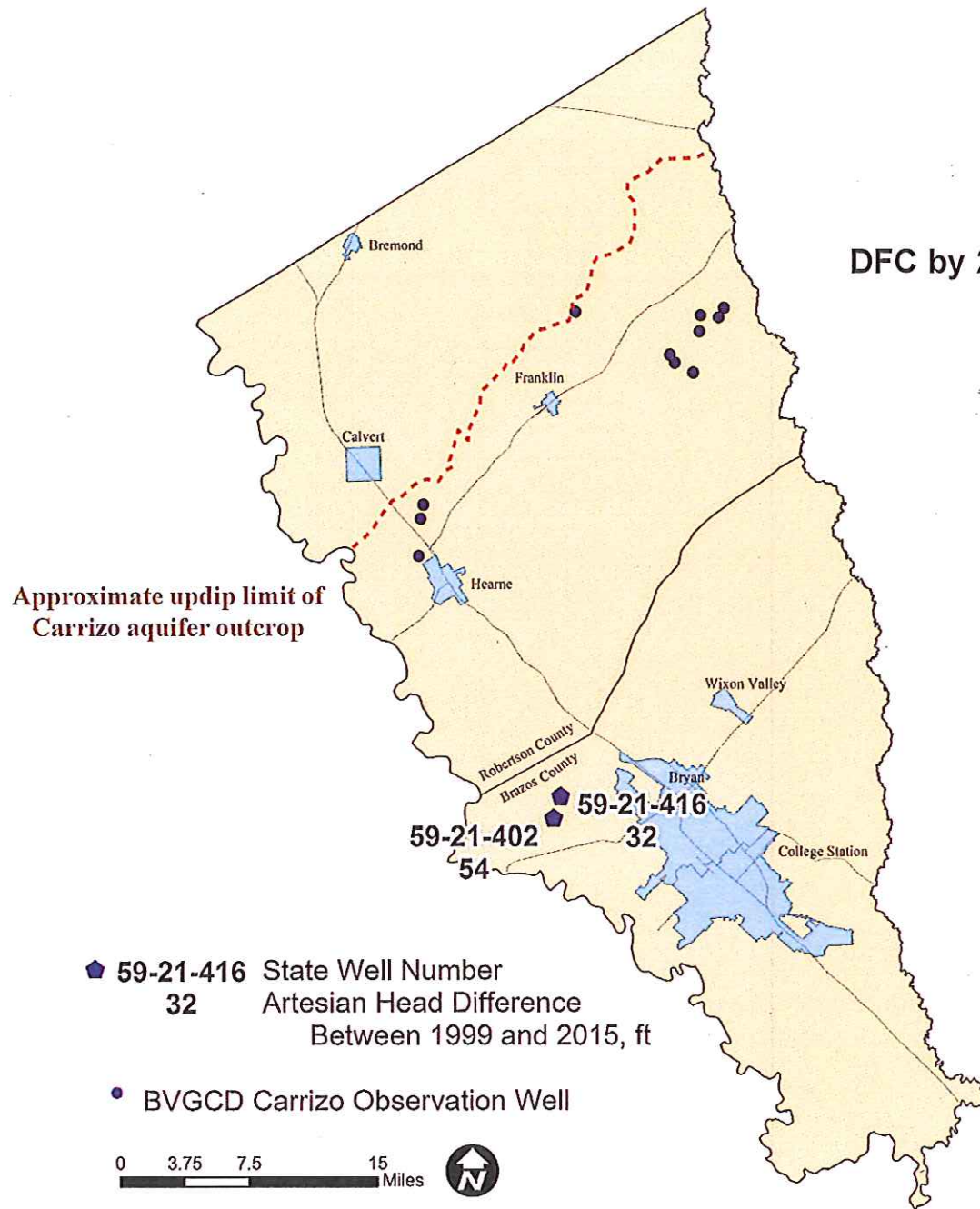
Queen City Aquifer

DFC by 2060 Average Artesian Head Decline 12 feet



Carrizo Aquifer

DFC by 2060 Average Artesian Head Decline 47 feet



Approximate updip limit of Carrizo aquifer outcrop

◆ 59-21-416 State Well Number
32 Artesian Head Difference
Between 1999 and 2015, ft

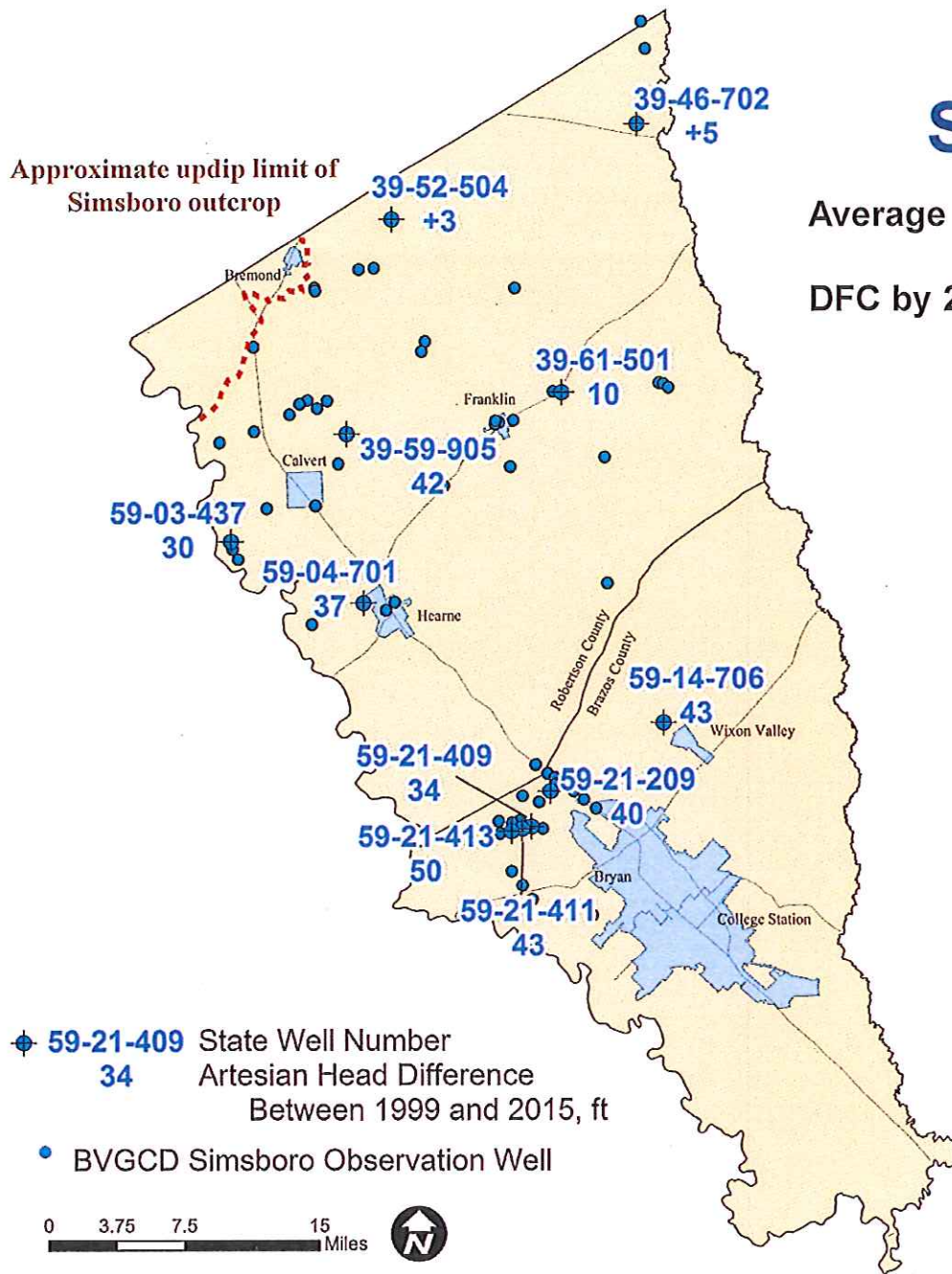
● BVGCD Carrizo Observation Well



Simsboro Aquifer

Average Artesian Head Decline = 29 feet

DFC by 2060 Average Artesian Head Decline 270 feet

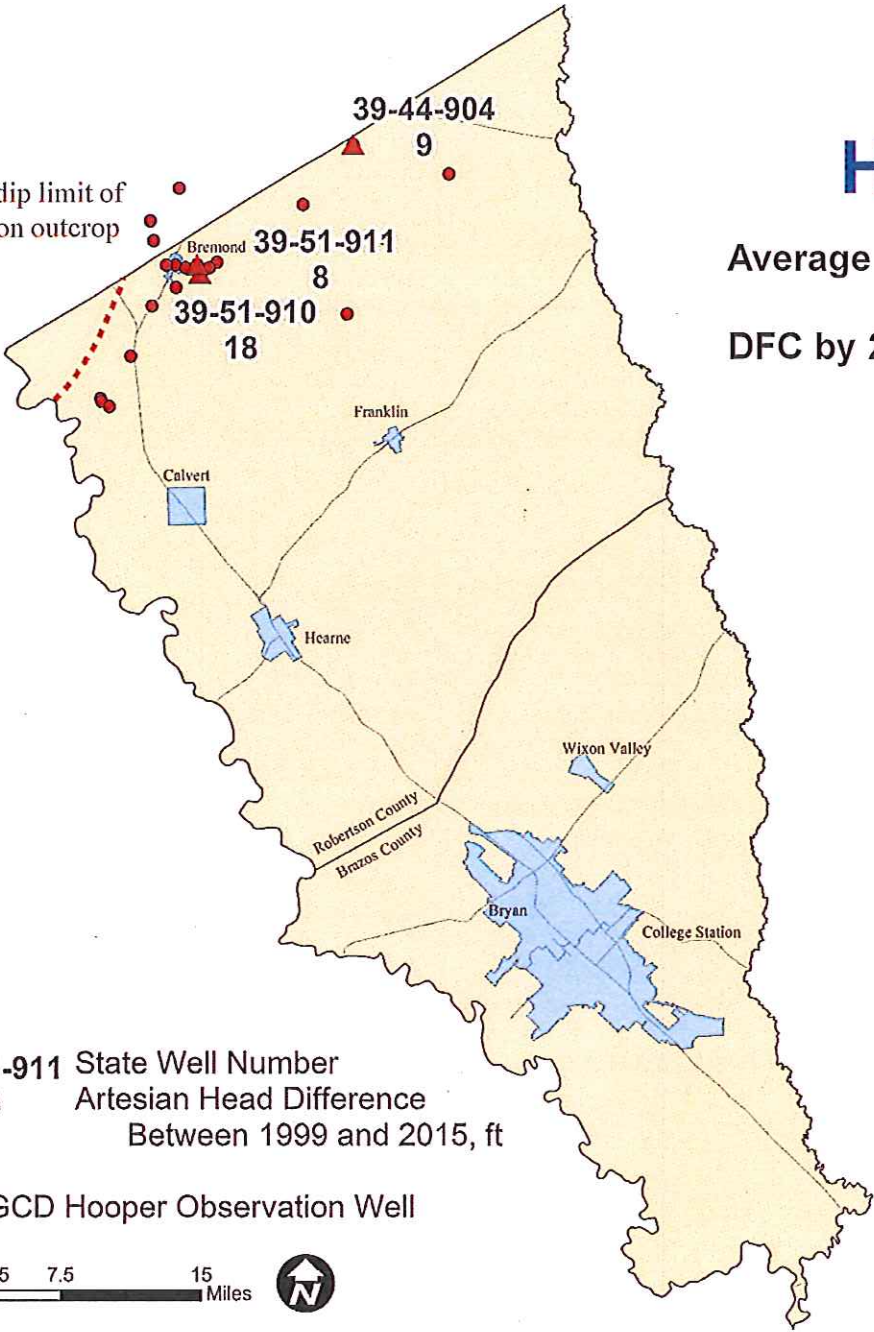


Hooper Formation

Average Artesian Head Decline = 12 feet

DFC by 2060 Average Artesian Head Decline 170 feet

Approximate updip limit of
Hooper Formation outcrop



▲ 39-51-911 State Well Number
8 Artesian Head Difference
Between 1999 and 2015, ft

● BVGCD Hooper Observation Well

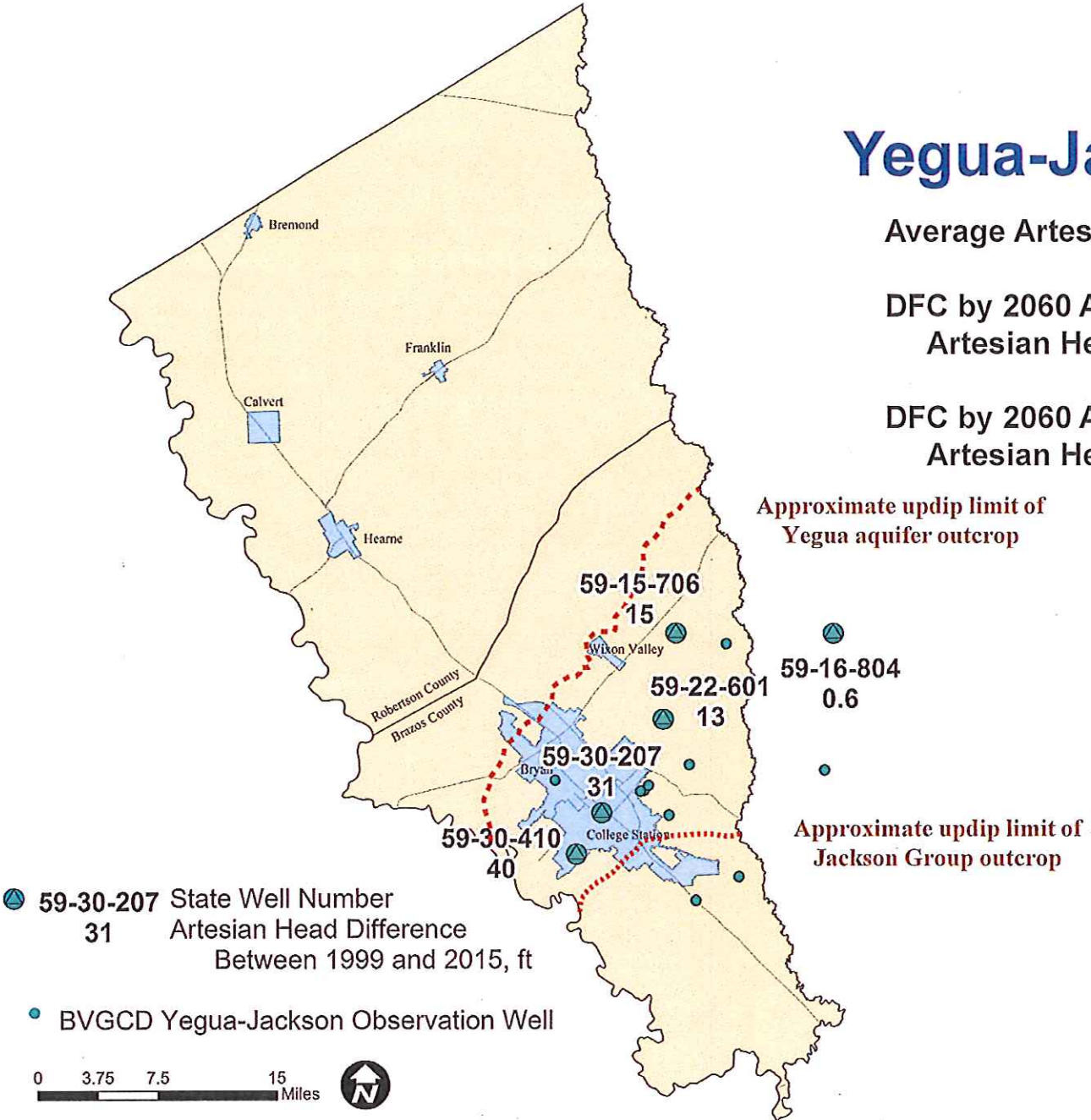


Yegua-Jackson Aquifer

Average Artesian Head Decline = 20 feet

DFC by 2060 Average
Artesian Head Decline 70 feet (Yegua)

DFC by 2060 Average
Artesian Head Decline 110 feet (Jackson)



● 59-30-207 State Well Number
31 Artesian Head Difference
Between 1999 and 2015, ft

● BVGCD Yegua-Jackson Observation Well





??Questions??

Thank you!

06/2015