

Arizona Department of Water Resources
2014/15 Water Level Measurement Sweep of The Willcox Basin
Preliminary Results (2/13/2015)

The Arizona Department of Water Resources (ADWR) has completed its water level sweep of the Willcox groundwater basin. Water level measurements were made by ADWR field staff from December 2014 through February 2015. ADWR field staff obtained over 500 depth-to-water (DTW) measurements during the recent sweep from wells located throughout the Willcox Basin (Figure 1). The wells are used for a wide variety of purposes including agricultural, domestic, stock, municipal and industrial uses. Well owner interest and cooperation were outstanding and made the survey a success.

The last water level sweep of the Willcox Basin occurred in 2005. During the 2005 water level sweep over 800 water level measurements were obtained. Combining the depth-to-water measurements from wells measured in both 2005 and 2014/15* provides a means of determining the water level changes that have occurred over that 10-year time period (Figure 2). Table 1 lists statistics obtained from the 2005 and 2014/15 water level measurement data. Review of the data shows that about 350 wells measured in both 2005 and 2014/15 showed water level declines that averaged -25 feet and 39 wells measured had water level rises that averaged 9 feet.

Water levels generally declined in most parts of the Willcox Basin except in the mountainous areas in the southeastern portion of the basin near Pine and Turkey Creeks (Figure 2). Water level declines in the area between Willcox and Bonita ranged from about -20 to -30 feet. Water level declines in the Town of Willcox were typically less than -5 feet. Water levels declines in the Cochise area were generally less than -10 feet. Water level declines in the Dragoon, Sunsites, Pearce and Sunizona areas were in the -30 to -40 feet range. Water level declines in the Kansas Settlement area were variable ranging from less than -10 feet to over -60 feet, many wells in that area showed declines of over -50 feet.

Table 1. Statistics From The 2005 and 2014/15 Water Level Sweeps of the Willcox Basin
***2014/15 Water Level Measurements Are Preliminary and Subject to Revision**

	2005 DTW (Feet)	2014/15 DTW (Feet)	2005 -2014/15 All WL Changes (Feet) (+ = WL Rise in Well) (- = WL Decline in Well)	2005 -2014/15 Positive WL Change (Feet) (+ =WL Rise in Well)	2005 -2014/15 Negative WL Change (Feet) (- = WL Decline in Well)
Number of Measurements	836	513	390	39	351
Minimum	3	2	- 105	< +1	> -1
Maximum	730	741	+30	30	-105
Average	207	241	-22	9	-25
Median	221	263	-24	7	-25

At this time ADWR staff have also concluded a water level sweep in the Douglas Basin and will complete a sweep of the San Simon Basin in March. Complete data from all the basin sweeps in southeastern Arizona will be available later this spring and described in a hydrologic monitoring report that will be published in the summer of 2015. In conclusion, ADWR wishes to thank all the well owners and concerned citizens who responded to our online well survey in the Willcox area, and also to the hundreds of well owners who granted access to their wells and provided assistance during the sweep.

If you have any questions about the water level sweeps in your area please contact:
Michelle Moreno (602-771-8530) or Frank Corkhill (602-771-8537)

2015 Depth-To-Water (Feet) Below Land Surface (BLS) In the Willcox Basin
 (2015 WL Data Are Provisional and Subject to Revision)

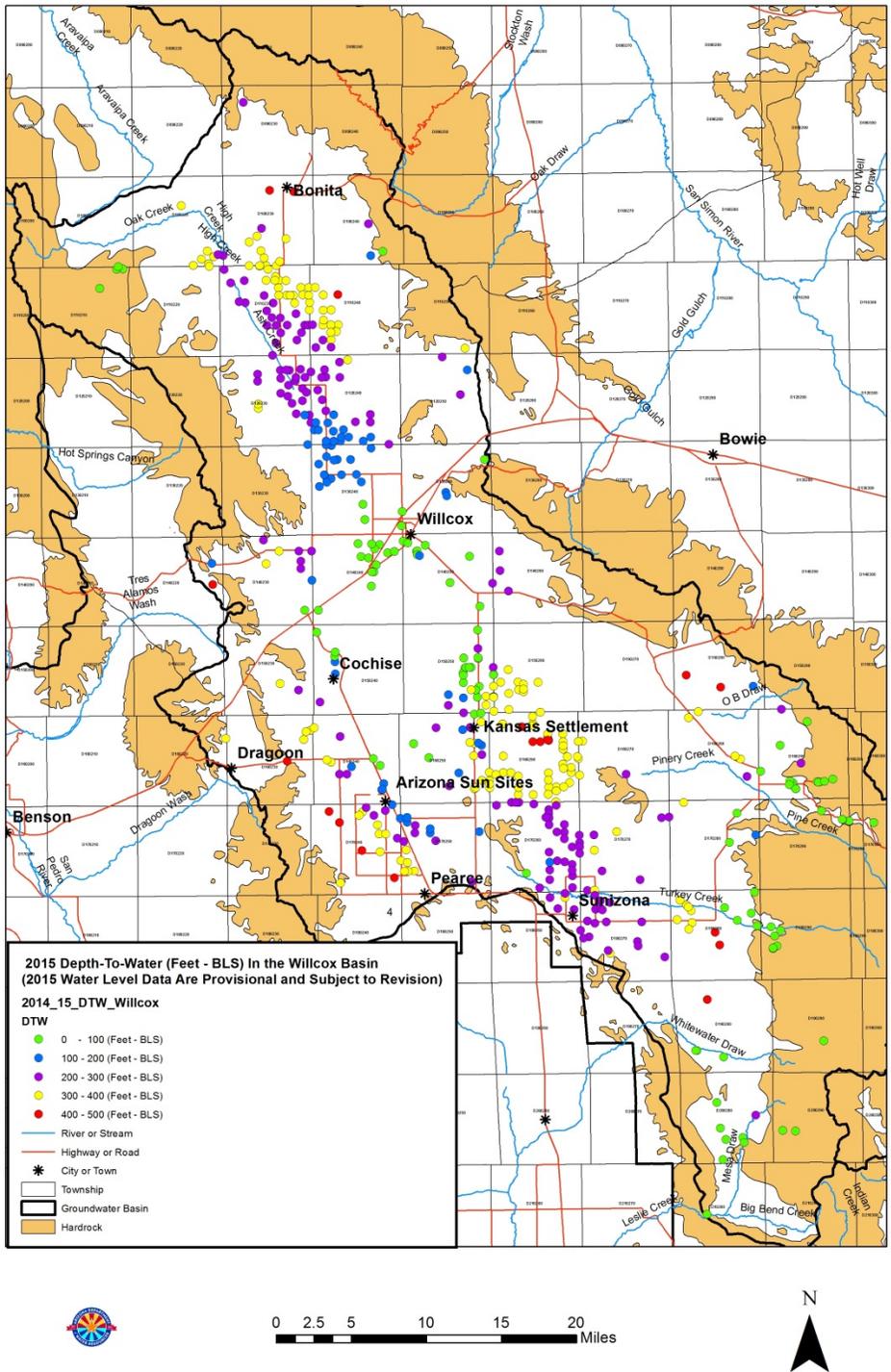


Figure 1 2015 Provisional Depth-to-Water in the Willcox Basin

2005 - 2015 Water Level Changes (Feet) In the Willcox Basin
 (2015 WL Data Are Provisional and Subject to Revision)

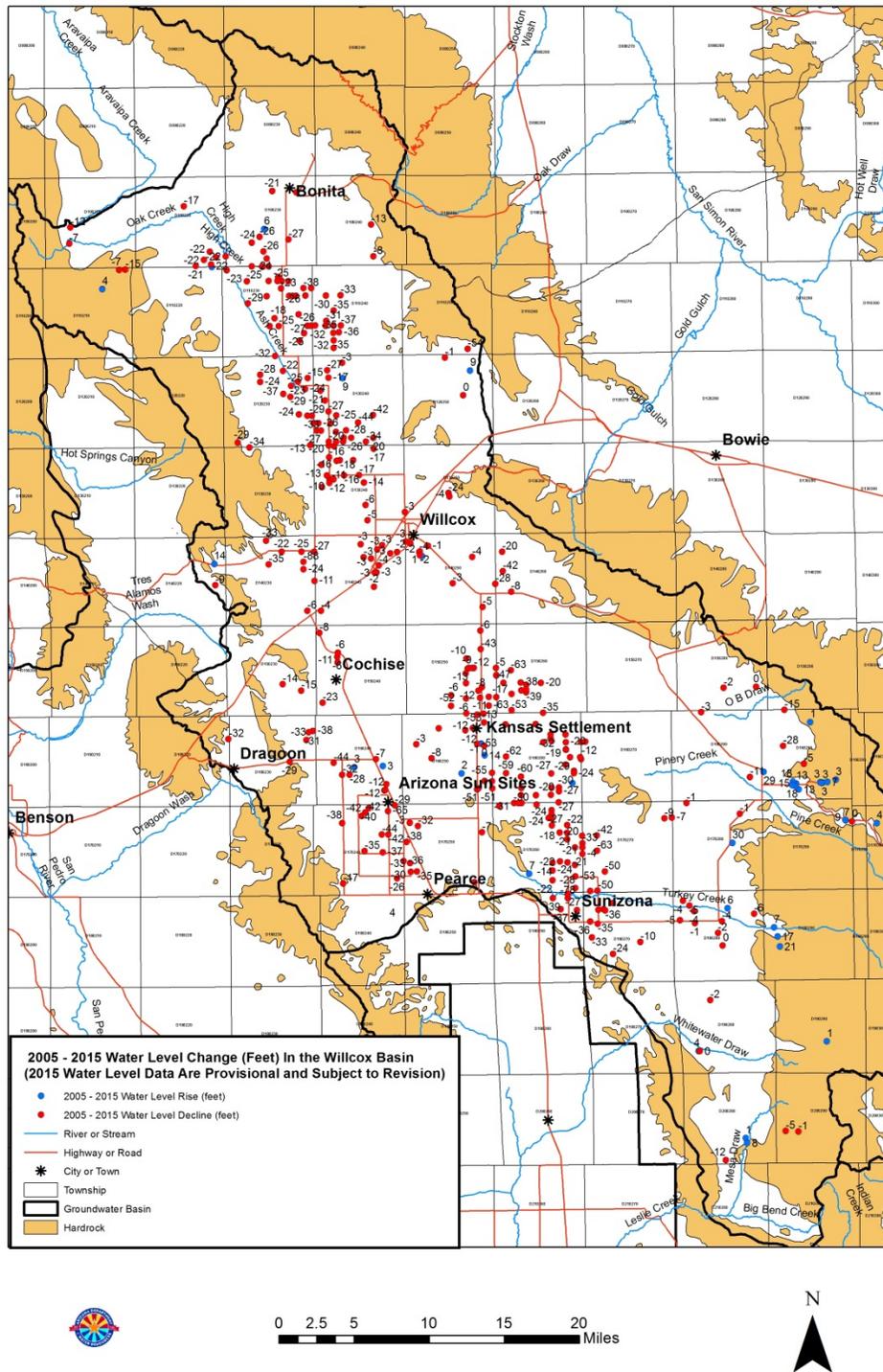


Figure 2 2005 – 2015 Provisional Water Level Changes in the Willcox Basin