

2011 EDWARDS AQUIFER HYDROLOGIC DATA FACT SHEET FOR PRECIPITATION, GROUNDWATER LEVELS, AND DROUGHT CONDITIONS



Regional Precipitation

SUMMARY

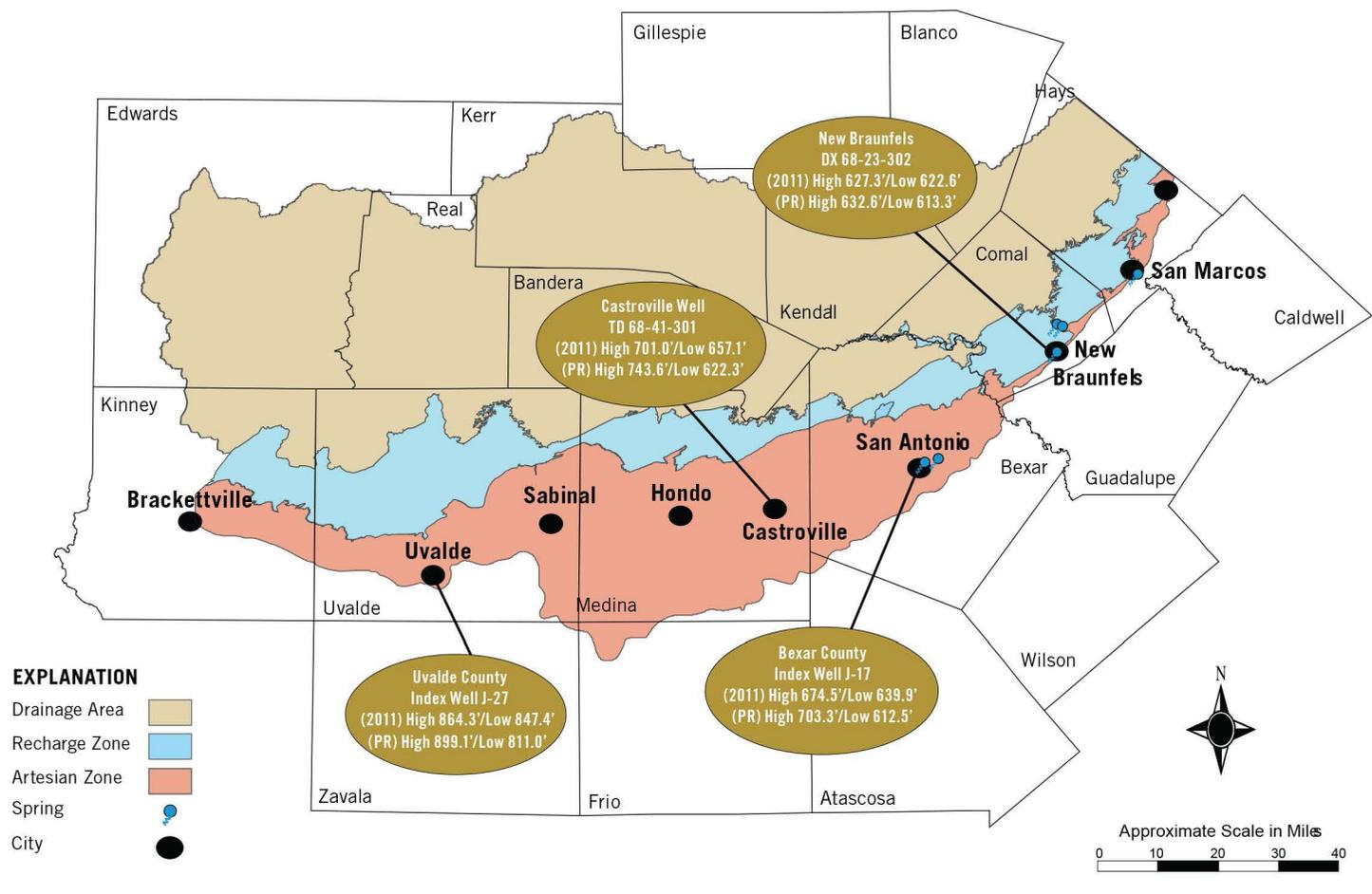
Location	2011 Total (inches)	Annual Mean (inches)	Departure from Mean (inches)
Brackettville	12.98	21.77	-8.79
Uvalde	9.91	23.21	-13.30
Sabinal	13.81	23.91	-10.10
Hondo	15.27	28.65	-13.38
San Antonio	17.58	30.24	-12.66
New Braunfels	19.25	32.84	-13.59
*San Marcos	19.39	34.01	-14.62

Source: US Department of Commerce 2012.

*incomplete data set for current year, not representative of annual values

REGIONAL GROUNDWATER LEVELS

Compared to the Period of Record (PR) Regional Groundwater Levels



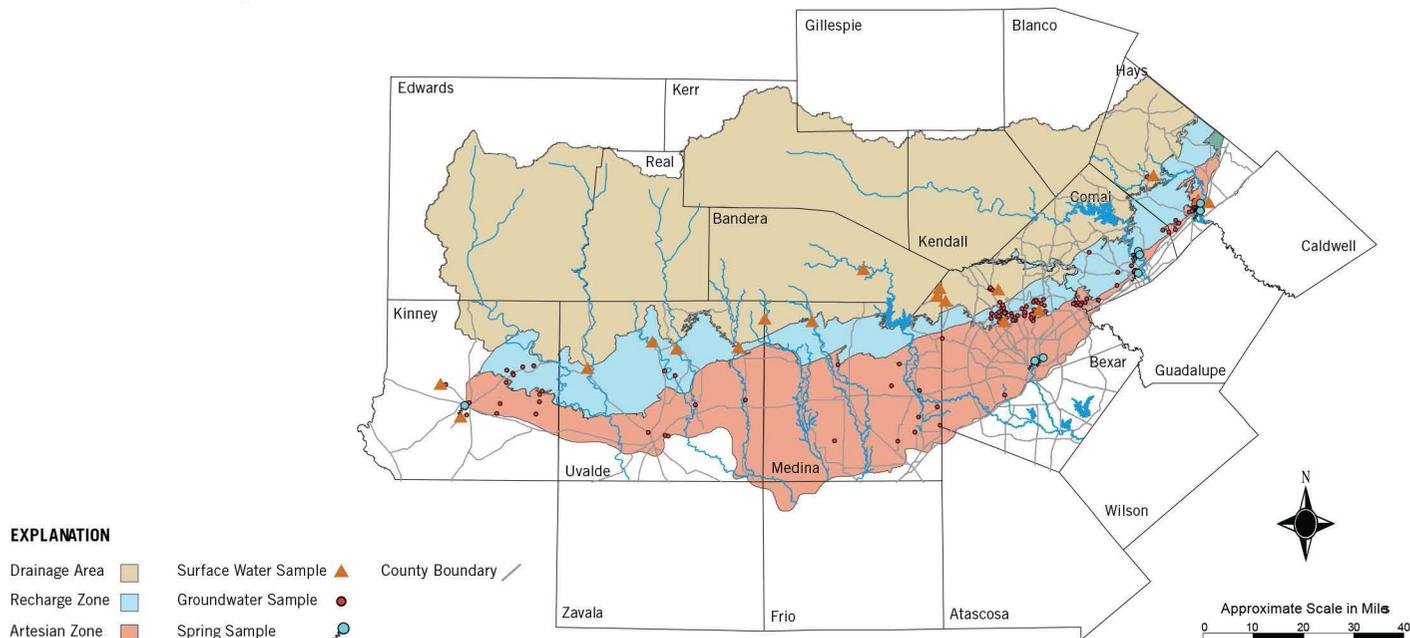
Water Quality Sampling Locations Calendar Year 2011

A total of 71 wells, six spring groups, and 10 streams were sampled under the EAA water quality sampling program in 2011. Many of the wells and springs were sampled multiple times, to evaluate temporal changes in water quality at select locations. The EAA water quality program included testing for many different types of compounds. While not all sample points were tested for each of the analyses listed below, the cumulative results of the annual testing program are intended to be representative of general water quality across the region. Analytical testing for the following compounds was performed: bacteria; nutrients; volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs); metals; pesticides; herbicides; polychlorinated bi-phenyls (PCBs); and limited analyses for personal care and pharmaceutical products (PPCPs). While most sample results did not indicate anthropogenic impacts at the sample point, some compounds of concern were detected in various wells and springs and one surface water sample. In well samples, 27 VOC detections were noted at 13 different wells; 19-percent of the 69 wells sampled. Tetrachloroethene (PCE) and chloroform account for over 50-percent of the VOC detections. However, none of the detections were at concentrations in excess of the applicable regulatory standards for drinking water. Samples collected for pesticide and herbicide analyses resulted in seven detections. Two elevated nitrate (nutrient) detections were noted in wells also. Again, none of the detections were in excess of the applicable regulatory standards.

Samples collected at springs indicated detections of VOCs, SVOCs, pesticides, herbicides, metals, and one PCB. Although at least one pesticide sample set was verified as a laboratory artifact (at Comal Springs), other sample results indicate the possibility of anthropogenic impacts. Significant detections include one PCB compound in a sample from Comal Springs, at a concentration above the regulatory limit. Comal Springs was sampled monthly, at three locations during the year. Four VOC detections were noted out of 78 spring samples (five-percent), and seven pesticide detections in 77 samples (nine-percent). Arsenic was detected above the regulatory limit in one Comal Springs sample, as was antimony in a Blanco River sample.

Personal care and pharmaceutical products sampling performed in 2011 provided some insight to the presence of these compounds in groundwater. In the five wells and one spring sampled, only one well was non-detect with regard to these compounds. Unlike other analytical results previously discussed, PPCP analyses are performed such that these compounds are detected at the nanogram per liter (ng/l) concentration, or parts per trillion. Therefore, the detections noted were all at very low concentrations. The types of PPCP compounds detected were: Estrogen hormones (one well and at Comal Springs), antibiotics (four wells), antibacterial soap ingredient (one well), and nicotine metabolite (one well). It should be noted that at the time of testing for these compounds no regulatory standards exist for their presence in drinking water. Concentrations for detected PPCP compounds ranged from 0.31 to 6.9 ng/l.

While the majority of analytical testing indicates the Edwards Aquifer to contain high quality water the results do indicate that low level anthropogenic impacts exist in some areas of the system. The EAA will continue monitoring the water quality in the system. For detailed information on the data discussed herein, the annual Hydrologic Data Report for 2011 provides a comprehensive listing of data collected for the year.



Each year, the Edwards Aquifer Authority (EAA) publishes a comprehensive Hydrologic Data Report offering an extensive compilation of data on the Edwards Aquifer. This fact sheet is a sampling of the information that can be found in that report. Upon publication, the full Hydrologic Data Report is available as a PDF on the Authority's website at: www.edwardsaquifer.org