Water-Data Report 2013

# 08168710 Comal Springs at New Braunfels, TX

Guadalupe Basin
Middle Guadalupe Subbasin

LOCATION.--Lat 29°42′21″, long 98°07′20″ referenced to North American Datum of 1927, Comal County, TX, Hydrologic Unit 12100202, on right bank 200 ft upstream from San Antonio Street viaduct in New Braunfels, and 1.1 mi upstream from mouth.

DRAINAGE AREA.--Not applicable. This is a spring flow station.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--Dec. 1927 to Sept. 1932 (fragmentary daily springflow discharges), Oct. 1932 to current year. Records of daily springflow discharges prior to Oct. 1995, obtained by applying modified Institute of Hydrology base-flow separation program BFI 4.02 to entire period of record of Comal River at New Braunfels (station 08169000), are available in files of the U.S. Geological Survey. Periodic discharge measurements made in 1896-1927 are available in the files of the U.S. Geological Survey (some years published as "Comal River").

GAGE.--Water-stage recorder. Prior to Jan. 7, 1928, nonrecording gage at same site. Concrete control since Oct. 3, 1955. Datum of gage is 582.80 ft above NGVD of 1929. Datum originally 0.19 ft lower was revised to current level effective Oct. 1, 1936.

REMARKS.--Records good. Some records listed in the "Period of Record" for surface water and water quality may not be available electronically. Springflow is equal to flow at Comal River at New Braunfels (station 08169000) except during periods of local runoff. Springflow is separated from runoff using modified Institute of Hydrology base-flow separation program BFI 4.14 (March 2006) (go to: http://www.usbr.gov/pmts/hydraulics_lab/twahl/bfi/texaswater95/comalsprings.html). Selected springflow values computed using the program are revised on the basis of further examination of the base-flow records. The springflow for all days with springflow separations are considered computed daily mean springflow values and only days in which the river flow was estimated, are shown as estimated. Comal Springs emerge from the Edwards and associated limestones in the Balcones Fault Zone about 1.0 mi upstream. Flow is affected at times by cleanup operations by the city of New Braunfels at Landa Park Lake. No flow June 13 to Nov. 3, 1956.

**08168710 Comal Springs at New Braunfels, TX—Continued**

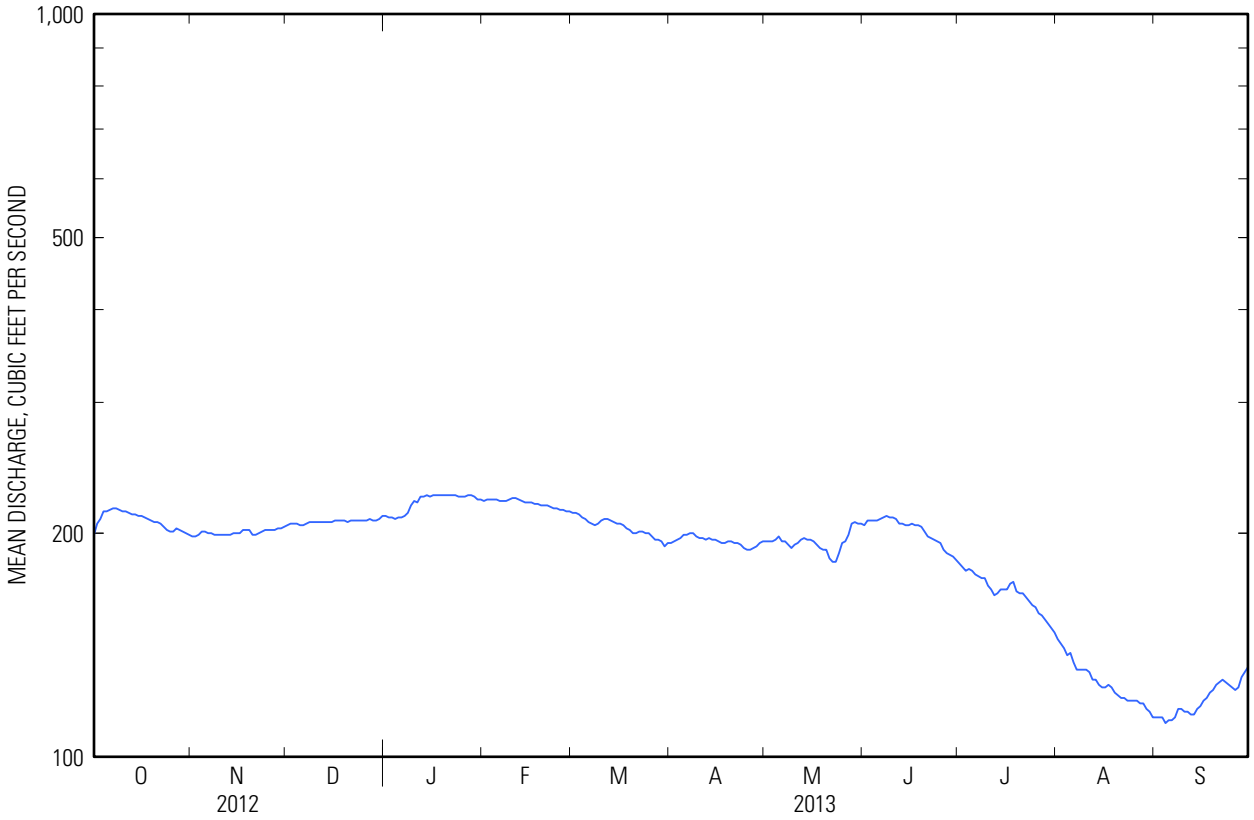
**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**
**DAILY MEAN VALUES**

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 199 | 198 | 205 | 211 | 221 | 213 | 194 | 195 | 205 | 182 | 144 | 113 |
| 2 | 206 | 198 | 206 | 210 | 222 | 213 | 195 | 195 | 208 | 180 | 142 | 113 |
| 3 | 209 | 199 | 206 | 210 | 222 | 212 | 196 | 195 | 208 | 178 | 140 | 113 |
| 4 | 214 | 201 | 206 | 209 | 222 | 210 | 197 | 196 | 208 | 179 | 137 | 111 |
| 5 | 214 | 201 | 205 | 210 | 222 | 209 | 199 | 198 | 208 | 178 | 138 | 112 |
| 6 | 215 | 200 | 205 | 210 | 221 | 207 | 199 | 195 | 209 | 176 | 134 | 112 |
| 7 | 216 | 200 | 206 | 211 | 221 | 206 | 200 | 195 | 210 | 175 | 131 | 113 |
| 8 | 216 | 199 | 207 | 213 | 221 | 205 | 200 | 193 | 211 | 174 | 131 | 116 |
| 9 | 215 | 199 | 207 | 218 | 222 | 206 | 198 | 191 | 210 | 174 | 131 | 116 |
| 10 | 214 | 199 | 207 | 221 | 223 | 208 | 197 | 193 | 210 | 170 | 131 | 115 |
| 11 | 214 | 199 | 207 | 220 | 223 | 209 | 197 | 194 | 209 | 168 | 130 | 115 |
| 12 | 213 | 199 | 207 | 224 | 222 | 209 | 196 | 196 | 206 | 165 | 127 | 114 |
| 13 | 212 | 199 | 207 | 224 | 221 | 208 | 197 | 197 | 206 | 166 | 127 | 114 |
| 14 | 212 | 200 | 207 | 225 | 220 | 207 | 196 | 196 | 205 | 168 | 125 | 116 |
| 15 | 211 | 200 | 207 | 224 | 220 | 206 | 196 | 196 | 205 | 168 | 124 | 117 |
| 16 | 211 | 200 | 208 | 225 | 220 | 206 | 195 | 195 | 206 | 168 | 124 | 119 |
| 17 | 210 | 202 | 208 | 225 | 219 | 205 | 194 | 193 | 205 | 171 | 125 | 120 |
| 18 | 209 | 202 | 208 | 225 | 219 | 203 | 194 | 191 | 205 | 172 | 124 | 122 |
| 19 | 208 | 202 | 208 | 225 | 218 | 202 | 195 | 190 | 204 | 167 | 122 | 123 |
| 20 | 207 | 199 | 207 | 225 | 218 | 200 | 195 | 190 | 201 | 166 | 121 | 125 |
| 21 | 207 | 199 | 208 | 225 | 218 | 200 | 194 | 185 | 198 | 166 | 120 | 126 |
| 22 | 206 | 200 | 208 | 225 | 217 | 201 | 194 | 183 | 197 | 164 | 120 | 127 |
| 23 | 204 | 201 | 208 | 225 | 216 | 201 | 193 | 183 | 196 | 162 | 119 | 126 |
| 24 | 202 | 202 | 208 | 224 | 216 | 200 | 191 | 188 | 195 | 160 | 119 | 125 |
| 25 | 201 | 202 | 208 | 224 | 215 | 200 | 190 | 194 | 194 | 159 | 119 | 124 |
| 26 | 201 | 202 | 208 | 224 | 215 | 198 | 190 | 195 | 190 | 156 | 119 | 123 |
| 27 | 203 | 202 | 209 | 225 | 214 | 196 | 191 | 199 | 188 | 155 | 118 | 124 |
| 28 | 202 | 203 | 208 | 225 | 214 | 196 | 192 | 206 | 187 | 153 | 118 | 128 |
| 29 | 201 | 203 | 208 | 224 | --- | 195 | 194 | 207 | 186 | 151 | 116 | 130 |
| 30 | 200 | 204 | 209 | 222 | --- | 192 | 195 | 206 | 184 | 149 | 115 | 132 |
| 31 | 199 | --- | 211 | 222 | --- | 194 | --- | 206 | --- | 147 | 113 | --- |
| Total | 6,451 | 6,014 | 6,427 | 6,830 | 6,142 | 6,317 | 5,854 | 6,036 | 6,054 | 5,167 | 3,904 | 3,584 |
| Mean | 208 | 200 | 207 | 220 | 219 | 204 | 195 | 195 | 202 | 167 | 126 | 119 |
| Max | 216 | 204 | 211 | 225 | 223 | 213 | 200 | 207 | 211 | 182 | 144 | 132 |
| Min | 199 | 198 | 205 | 209 | 214 | 192 | 190 | 183 | 184 | 147 | 113 | 111 |
| Ac-ft | 12,800 | 11,930 | 12,750 | 13,550 | 12,180 | 12,530 | 11,610 | 11,970 | 12,010 | 10,250 | 7,740 | 7,110 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2013, BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 280 | 292 | 302 | 306 | 307 | 305 | 300 | 295 | 285 | 271 | 257 | 264 |
| Max | 465 | 455 | 459 | 448 | 448 | 477 | 474 | 456 | 481 | 465 | 465 | 444 |
| (WY) | (1974) | (2005) | (2005) | (2003) | (2005) | (1992) | (1992) | (1992) | (1992) | (1992) | (1992) | (2007) |
| Min | 0.00 | 21.5 | 35.6 | 51.1 | 49.5 | 65.4 | 41.5 | 27.8 | 3.67 | 0.00 | 0.00 | 0.00 |
| (WY) | (1957) | (1957) | (1957) | (1957) | (1957) | (1957) | (1956) | (1956) | (1956) | (1956) | (1956) | (1956) |

**08168710 Comal Springs at New Braunfels, TX—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2012 | | Water Year 2013 | | Water Years 1933 - 2013 | |
|---|---|---|---|---|---|---|
| **Annual total** | 79,658 | | 68,780 | | | |
| **Annual mean** | 218 | | 188 | | 289 | |
| **Highest annual mean** | | | | | 418 | 2005 |
| **Lowest annual mean** | | | | | 45.5 | 1956 |
| **Highest daily mean** | 287 | Apr 2 | 225 | Jan 14 | 534 | Oct 14, 1973 |
| **Lowest daily mean** | 155 | Sep 13 | 111 | Sep 4 | 0.00 | Jun 13, 1956 |
| **Annual seven-day minimum** | 156 | Sep 7 | 112 | Aug 31 | 0.00 | Jun 13, 1956 |
| **Annual runoff (ac-ft)** | 158,000 | | 136,400 | | 209,100 | |
| **10 percent exceeds** | 263 | | 220 | | 390 | |
| **50 percent exceeds** | 211 | | 200 | | 304 | |
| **90 percent exceeds** | 174 | | 124 | | 174 | |