

**USGS Water-Year Summary**

**[11323500](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=11323500) Mokelumne River below Camanche Dam, CA**

**LOCATION** - Lat 38°13'34", long 121°01'24" referenced to North American Datum of 1983, in NE 1/4 SE 1/4 sec.06, T.4 N., R.9 E., San Joaquin County, CA, Hydrologic Unit 18040005, at foot of Camanche Dam, 0.35 mi upstream from Murphy Creek, and 4.3 mi northeast of Clements.

**DRAINAGE AREA** - 621 mi².

**SURFACE-WATER RECORDS**

**PERIOD OF RECORD** - October 1904 to current year.

**GAGE** - A series of ultrasonic flowmeters located within Camanche Reservoir at three outlet pipes becomes primary record for releases beginning October 2008. The summation of discharge from these flowmeters plus the record of spill (when it occurs) make up the total release below Camanche Reservoir. Elevation of ultrasonic flowmeters is 115.50 ft above NGVD of 1929 (provided by East Bay Municipal Utility District). Elevation of spillway gage is 235.50 ft above NGVD of 1929 (levels by East Bay Municipal Utility District). If necessary, the gage, previously published as Mokelumne River below Camanche Dam (located 1.0 mi downstream) becomes auxiliary gage for discharge determination. Auxiliary gage is water-stage recorder. Elevation of auxiliary gage is 82.71 ft above NGVD of 1929 (levels by East Bay Municipal Utility District). October 1999 to September 2001, and October 2002 to September 2003, published data from ultrasonic flowmeters on outlet pipes at Camanche Dam and water-stage recorder on spillway. See WSP 1930 for history of changes prior to Oct. 1, 1961.

**REMARKS** - Flow regulated by Camanche Reservoir (station 11322300) beginning December 1963, Salt Springs Reservoir (station 11313500) beginning March 1931, Pardee Reservoir (station 11320000) beginning March 1929, and several small reservoirs. East Bay Municipal Utility District aqueducts, maximum capacity, 511 ft³/s with Pardee Reservoir full, are the largest of several diversions upstream from the station. Beginning October 2008, specific ultrasonic flow meters, which make up total releases, are located on North Conduit, South Conduit and High Level Outlet. See schematic diagram of Mokelumne River Basin available from the California Water Science Center.

**EXTREMES FOR PERIOD OF RECORD** - Maximum discharge, 28,800 ft³/s, Nov. 21, 1950, gage height, 24.40 ft, site and datum then in use; no flow on several days in 1924. Maximum discharge since construction of Camanche Dam in 1963, 6,060 ft³/s, Feb. 19, 1986, gage height, 11.21 ft; minimum daily, 23 ft³/s, Oct. 6, 1977.ovember 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

|  |
| --- |
| **00060, Discharge, cubic feet per second,** |
| **YEAR** | **Monthly mean in ft3/s   (Calculation Period: 1904-10-01 -> 2016-09-30)**  |
| **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |
| **1904** |  |  |  |  |  |  |  |  |  | 1,000 | 294.0 | 332.2 |
| **1905** | 422.4 | 841.8 | 1,345 | 1,841 | 2,373 | 1,580 | 172.6 | 114.0 | 122.4 | 104.6 | 82.0 | 92.8 |
| **1906** | 1,111 | 942.3 | 2,749 | 3,252 | 4,529 | 5,729 | 3,326 | 339.3 | 196.8 | 186.5 | 237.8 | 831.7 |
| **1907** | 1,011 | 2,832 | 5,479 | 4,487 | 4,275 | 4,786 | 3,390 | 718.7 | 294.0 | 309.5 | 275.2 | 363.4 |
| **1908** | 483.5 | 351.2 | 769.1 | 1,714 | 1,900 | 1,231 | 214.5 | 109.3 | 138.3 | 143.9 | 128.6 | 157.7 |
| **1909** | 3,036 | 2,256 | 1,675 | 2,811 | 3,709 | 4,309 | 824.3 | 115.2 | 77.3 | 131.5 | 951.3 | 1,343 |
| **1910** | 1,343 | 946.8 | 2,395 | 3,242 | 3,183 | 1,003 | 172.1 | 64.4 | 74.2 | 106.9 | 170.2 | 355.8 |
| **1911** | 2,396 | 2,380 | 3,159 | 4,313 | 4,258 | 5,567 | 1,907 | 267.9 | 155.6 | 142.9 | 200.5 | 136.1 |
| **1912** | 227.6 | 188.2 | 342.4 | 517.7 | 2,275 | 2,100 | 160.5 | 90.8 | 111.1 | 85.5 | 521.7 | 170.9 |
| **1913** | 368.0 | 356.1 | 351.7 | 1,409 | 2,415 | 929.7 | 171.3 | 136.3 | 106.7 | 116.4 | 135.8 | 233.5 |
| **1914** | 2,751 | 1,831 | 1,696 | 2,416 | 4,241 | 3,328 | 816.5 | 166.2 | 130.8 | 132.3 | 134.4 | 205.0 |
| **1915** | 317.7 | 1,351 | 999.4 | 2,240 | 3,547 | 3,881 | 714.9 | 92.8 | 107.3 | 111.2 | 145.6 | 322.5 |
| **1916** | 1,290 | 1,703 | 2,853 | 3,271 | 3,337 | 3,039 | 762.0 | 169.9 | 113.1 | 206.1 | 197.6 | 448.8 |
| **1917** | 326.3 | 1,253 | 967.1 | 2,251 | 3,374 | 4,437 | 765.4 | 152.0 | 95.4 | 74.7 | 85.8 | 52.5 |
| **1918** | 51.5 | 348.8 | 1,730 | 2,053 | 2,397 | 1,469 | 129.4 | 79.1 | 148.3 | 223.4 | 206.5 | 204.1 |
| **1919** | 167.5 | 847.7 | 838.0 | 2,450 | 4,010 | 568.4 | 90.4 | 80.2 | 87.0 | 76.2 | 88.5 | 192.0 |
| **1920** | 127.4 | 142.6 | 709.4 | 1,487 | 3,116 | 1,323 | 224.4 | 95.0 | 81.3 | 156.1 | 335.0 | 560.9 |
| **1921** | 1,280 | 1,104 | 1,762 | 2,056 | 3,552 | 2,988 | 331.6 | 125.5 | 96.0 | 117.4 | 76.2 | 176.5 |
| **1922** | 311.7 | 1,062 | 918.6 | 1,790 | 5,167 | 4,704 | 637.5 | 165.3 | 128.3 | 130.2 | 179.6 | 956.8 |
| **1923** | 751.5 | 600.5 | 705.0 | 2,140 | 3,657 | 1,744 | 464.5 | 148.4 | 152.4 | 153.3 | 118.9 | 112.8 |
| **1924** | 141.0 | 277.4 | 181.9 | 892.4 | 989.9 | 70.7 | 19.8 | 5.42 | 50.0 | 86.8 | 306.4 | 399.9 |
| **1925** | 366.1 | 1,927 | 1,328 | 2,746 | 3,861 | 2,090 | 341.0 | 166.0 | 132.6 | 90.5 | 127.8 | 233.5 |
| **1926** | 225.2 | 687.7 | 756.4 | 2,221 | 1,372 | 254.7 | 92.1 | 93.1 | 86.5 | 47.8 | 481.1 | 531.3 |
| **1927** | 663.3 | 1,878 | 1,299 | 2,629 | 3,277 | 3,075 | 508.8 | 156.0 | 98.0 | 133.5 | 470.3 | 305.7 |
| **1928** | 356.1 | 543.6 | 2,941 | 2,267 | 2,711 | 472.4 | 105.2 | 105.0 | 110.2 | 72.5 | 76.5 | 95.2 |
| **1929** | 132.9 | 233.8 | 231.0 | 607.9 | 2,086 | 855.9 | 154.1 | 119.2 | 85.4 | 54.5 | 401.3 | 29.4 |
| **1930** | 32.3 | 30.2 | 95.8 | 337.3 | 1,601 | 1,091 | 398.5 | 427.0 | 451.5 | 460.3 | 326.9 | 255.0 |
| **1931** | 121.5 | 130.1 | 132.0 | 230.0 | 221.9 | 241.2 | 327.5 | 524.5 | 107.8 | 58.0 | 63.1 | 105.0 |
| **1932** | 281.7 | 607.4 | 648.5 | 632.7 | 1,491 | 2,625 | 622.8 | 504.4 | 526.8 | 513.3 | 545.5 | 550.5 |
| **1933** | 596.4 | 530.9 | 510.6 | 523.1 | 501.9 | 448.1 | 527.9 | 529.9 | 558.4 | 552.4 | 587.3 | 635.5 |
| **1934** | 592.8 | 683.8 | 469.6 | 450.1 | 444.9 | 266.9 | 391.2 | 398.4 | 497.8 | 445.3 | 559.7 | 194.8 |
| **1935** | 359.1 | 574.6 | 540.1 | 601.0 | 1,875 | 2,250 | 515.0 | 511.5 | 536.4 | 530.8 | 561.7 | 558.5 |
| **1936** | 808.2 | 2,250 | 1,446 | 2,568 | 2,043 | 1,910 | 557.2 | 526.5 | 556.0 | 544.3 | 565.7 | 578.9 |
| **1937** | 617.3 | 786.2 | 1,356 | 1,438 | 2,154 | 1,550 | 514.7 | 515.0 | 545.5 | 531.9 | 552.5 | 844.9 |
| **1938** | 662.0 | 2,473 | 3,155 | 3,451 | 3,951 | 2,656 | 794.8 | 513.5 | 537.4 | 669.9 | 785.4 | 635.7 |
| **1939** | 563.8 | 643.8 | 617.4 | 491.1 | 449.0 | 477.3 | 550.5 | 429.1 | 540.8 | 365.0 | 402.6 | 193.4 |
| **1940** | 418.9 | 742.2 | 1,433 | 2,822 | 2,772 | 1,453 | 510.2 | 506.8 | 537.3 | 524.5 | 555.5 | 591.9 |
| **1941** | 813.5 | 1,402 | 1,473 | 823.2 | 2,953 | 2,035 | 669.0 | 528.2 | 546.6 | 524.3 | 547.6 | 600.4 |
| **1942** | 1,923 | 2,059 | 1,060 | 1,758 | 2,907 | 2,173 | 893.0 | 532.2 | 576.4 | 652.5 | 634.9 | 831.0 |
| **1943** | 1,846 | 1,249 | 2,989 | 2,507 | 2,283 | 1,744 | 649.3 | 597.1 | 556.6 | 553.1 | 581.0 | 600.4 |
| **1944** | 485.5 | 574.6 | 514.4 | 648.9 | 581.3 | 558.9 | 423.6 | 422.6 | 446.6 | 373.1 | 534.1 | 574.0 |
| **1945** | 559.0 | 1,892 | 579.5 | 980.0 | 2,154 | 2,004 | 549.7 | 522.5 | 426.2 | 454.2 | 470.3 | 1,834 |
| **1946** | 1,437 | 641.0 | 578.9 | 1,169 | 1,808 | 1,023 | 407.8 | 409.8 | 429.1 | 425.1 | 429.1 | 535.4 |
| **1947** | 553.4 | 520.5 | 148.0 | 445.9 | 424.2 | 300.8 | 417.8 | 427.5 | 436.3 | 236.6 | 157.9 | 289.4 |
| **1948** | 190.1 | 77.6 | 231.7 | 916.8 | 1,665 | 2,519 | 483.1 | 419.9 | 435.9 | 427.7 | 450.7 | 442.8 |
| **1949** | 155.4 | 165.0 | 600.0 | 1,150 | 905.0 | 1,104 | 495.2 | 420.4 | 442.2 | 440.7 | 460.7 | 462.5 |
| **1950** | 194.4 | 702.7 | 676.0 | 1,543 | 2,235 | 1,967 | 543.1 | 425.7 | 436.8 | 433.7 | 3,188 | 4,568 |
| **1951** | 1,803 | 1,957 | 1,545 | 1,133 | 1,748 | 788.9 | 354.7 | 357.5 | 488.5 | 589.4 | 634.6 | 972.4 |
| **1952** | 1,754 | 1,380 | 1,626 | 3,143 | 4,217 | 3,164 | 1,194 | 494.1 | 515.4 | 515.7 | 551.0 | 554.7 |
| **1953** | 913.7 | 609.1 | 557.8 | 575.8 | 919.1 | 1,913 | 623.0 | 484.0 | 523.3 | 537.5 | 573.5 | 599.5 |
| **1954** | 587.9 | 524.6 | 521.4 | 1,022 | 1,150 | 529.2 | 521.6 | 539.5 | 581.7 | 594.7 | 608.8 | 675.2 |
| **1955** | 681.3 | 614.5 | 258.1 | 243.1 | 360.6 | 401.8 | 379.6 | 372.3 | 381.4 | 371.2 | 343.7 | 2,608 |
| **1956** | 3,529 | 1,619 | 1,336 | 1,426 | 2,915 | 2,482 | 778.1 | 476.7 | 495.7 | 561.6 | 681.1 | 703.5 |
| **1957** | 345.9 | 146.4 | 917.4 | 694.9 | 789.6 | 1,769 | 529.8 | 531.2 | 498.6 | 436.2 | 445.8 | 432.8 |
| **1958** | 631.3 | 1,061 | 1,934 | 2,744 | 2,598 | 2,936 | 848.3 | 683.4 | 677.7 | 637.0 | 375.3 | 253.4 |
| **1959** | 126.2 | 435.8 | 610.5 | 213.9 | 285.5 | 351.7 | 334.0 | 311.4 | 270.0 | 175.4 | 108.2 | 95.6 |
| **1960** | 112.9 | 121.3 | 199.9 | 203.9 | 330.3 | 596.4 | 418.8 | 426.2 | 331.1 | 214.3 | 184.9 | 225.4 |
| **1961** | 233.5 | 165.7 | 134.9 | 136.0 | 179.1 | 339.4 | 296.3 | 267.4 | 267.0 | 171.4 | 113.8 | 96.2 |
| **1962** | 111.9 | 315.1 | 683.8 | 759.1 | 754.1 | 1,700 | 705.8 | 691.0 | 333.8 | 332.3 | 324.2 | 338.1 |
| **1963** | 573.3 | 1,468 | 630.6 | 1,919 | 2,997 | 1,831 | 539.2 | 479.4 | 380.2 | 293.3 | 318.8 | 202.1 |
| **1964** | 381.4 | 325.2 | 209.8 | 240.8 | 257.1 | 389.2 | 325.9 | 333.3 | 269.2 | 237.4 | 153.8 | 406.4 |
| **1965** | 2,160 | 978.9 | 752.9 | 1,782 | 1,885 | 1,912 | 644.3 | 452.0 | 662.7 | 2,061 | 1,758 | 538.5 |
| **1966** | 612.0 | 778.0 | 519.5 | 360.7 | 499.6 | 526.5 | 510.6 | 456.5 | 311.9 | 256.0 | 103.2 | 78.7 |
| **1967** | 83.6 | 60.8 | 100.2 | 1,275 | 3,091 | 1,811 | 1,203 | 1,236 | 1,343 | 1,529 | 328.8 | 119.1 |
| **1968** | 194.3 | 413.6 | 528.0 | 362.5 | 454.0 | 479.0 | 508.1 | 467.1 | 348.6 | 232.0 | 110.8 | 114.0 |
| **1969** | 1,619 | 2,651 | 2,305 | 2,586 | 2,845 | 1,409 | 1,142 | 1,045 | 1,014 | 1,174 | 382.2 | 232.0 |
| **1970** | 2,449 | 2,652 | 936.9 | 426.8 | 495.8 | 547.1 | 775.4 | 713.5 | 607.3 | 565.6 | 441.5 | 1,059 |
| **1971** | 793.5 | 882.1 | 697.8 | 615.8 | 599.3 | 884.2 | 945.0 | 522.9 | 867.9 | 1,128 | 298.8 | 134.7 |
| **1972** | 312.6 | 116.3 | 261.0 | 383.7 | 446.4 | 525.9 | 549.4 | 501.2 | 333.6 | 180.3 | 115.7 | 217.0 |
| **1973** | 1,298 | 1,293 | 943.3 | 575.6 | 778.1 | 1,084 | 872.2 | 742.2 | 508.8 | 507.5 | 1,482 | 940.6 |
| **1974** | 1,821 | 413.4 | 1,263 | 1,467 | 1,246 | 1,373 | 831.3 | 875.5 | 873.5 | 827.8 | 473.0 | 221.0 |
| **1975** | 109.9 | 115.9 | 584.7 | 1,186 | 1,281 | 1,263 | 910.3 | 902.7 | 856.7 | 938.5 | 789.2 | 302.4 |
| **1976** | 106.5 | 107.3 | 211.9 | 231.4 | 305.4 | 350.3 | 320.5 | 288.7 | 215.8 | 167.3 | 110.4 | 108.1 |
| **1977** | 87.6 | 136.6 | 225.3 | 236.8 | 184.5 | 253.9 | 282.4 | 240.4 | 173.5 | 33.3 | 86.1 | 96.3 |
| **1978** | 88.1 | 87.4 | 167.7 | 714.1 | 1,034 | 731.2 | 499.3 | 1,118 | 1,143 | 847.0 | 464.3 | 314.3 |
| **1979** | 364.5 | 728.5 | 764.0 | 500.6 | 732.5 | 1,174 | 811.9 | 805.5 | 693.2 | 714.5 | 643.0 | 431.6 |
| **1980** | 2,680 | 2,518 | 2,317 | 1,015 | 1,407 | 1,585 | 889.5 | 608.0 | 612.2 | 509.4 | 609.4 | 283.1 |
| **1981** | 125.2 | 108.9 | 128.4 | 199.5 | 343.2 | 461.9 | 520.8 | 427.4 | 295.2 | 166.5 | 147.7 | 1,257 |
| **1982** | 2,294 | 2,208 | 2,495 | 3,311 | 3,889 | 2,074 | 1,409 | 962.2 | 698.8 | 1,254 | 1,825 | 2,252 |
| **1983** | 1,628 | 2,814 | 3,920 | 3,726 | 2,662 | 3,197 | 2,788 | 1,412 | 1,377 | 1,508 | 2,157 | 2,938 |
| **1984** | 2,414 | 935.2 | 1,024 | 642.2 | 581.0 | 778.6 | 826.4 | 830.1 | 825.4 | 726.5 | 731.3 | 829.0 |
| **1985** | 237.5 | 111.3 | 127.1 | 252.7 | 402.9 | 435.8 | 478.2 | 390.7 | 290.4 | 208.3 | 191.4 | 196.6 |
| **1986** | 222.6 | 2,629 | 5,117 | 2,453 | 1,578 | 1,058 | 705.2 | 699.2 | 690.0 | 791.6 | 624.7 | 491.4 |
| **1987** | 342.3 | 147.1 | 149.5 | 220.9 | 317.6 | 359.6 | 367.3 | 331.5 | 278.2 | 133.2 | 87.4 | 88.5 |
| **1988** | 89.0 | 86.5 | 162.4 | 190.1 | 170.1 | 271.5 | 324.5 | 251.7 | 211.0 | 98.0 | 83.6 | 82.2 |
| **1989** | 85.8 | 75.6 | 77.9 | 174.4 | 287.7 | 331.8 | 343.9 | 306.9 | 214.8 | 127.1 | 158.4 | 81.5 |
| **1990** | 90.6 | 91.3 | 110.8 | 214.1 | 259.8 | 283.0 | 306.1 | 266.5 | 183.6 | 234.8 | 204.6 | 99.4 |
| **1991** | 95.5 | 91.9 | 111.6 | 125.2 | 207.3 | 312.7 | 248.8 | 235.4 | 151.4 | 89.5 | 285.3 | 170.6 |
| **1992** | 158.8 | 191.2 | 191.9 | 239.0 | 265.5 | 287.0 | 298.7 | 264.1 | 123.3 | 210.5 | 200.2 | 184.7 |
| **1993** | 194.1 | 232.1 | 577.7 | 968.6 | 1,295 | 1,317 | 1,307 | 1,055 | 376.6 | 536.7 | 380.8 | 318.9 |
| **1994** | 233.8 | 194.0 | 191.2 | 294.3 | 306.4 | 326.2 | 279.4 | 262.7 | 144.6 | 158.4 | 227.0 | 240.3 |
| **1995** | 421.4 | 862.8 | 2,249 | 2,923 | 3,155 | 3,847 | 2,183 | 1,328 | 1,447 | 638.6 | 279.8 | 274.1 |
| **1996** | 304.2 | 2,158 | 2,725 | 1,317 | 1,071 | 1,175 | 1,279 | 807.4 | 492.0 | 316.1 | 368.2 | 1,991 |
| **1997** | 4,978 | 4,315 | 1,692 | 803.7 | 540.5 | 591.5 | 332.3 | 258.3 | 264.4 | 323.2 | 372.1 | 571.0 |
| **1998** | 781.7 | 3,076 | 2,385 | 1,591 | 1,845 | 2,446 | 2,932 | 1,770 | 319.7 | 320.3 | 327.7 | 566.8 |
| **1999** | 569.1 | 2,410 | 1,733 | 1,222 | 1,238 | 1,074 | 816.1 | 619.0 | 329.3 | 330.6 | 331.8 | 331.3 |
| **2000** | 367.2 | 1,499 | 1,708 | 511.4 | 680.5 | 752.8 | 613.5 | 393.3 | 365.4 | 332.9 | 331.2 | 334.3 |
| **2001** | 331.8 | 331.4 | 330.4 | 282.7 | 422.9 | 377.6 | 320.7 | 258.1 | 219.8 | 243.4 | 229.9 | 234.5 |
| **2002** | 242.2 | 238.9 | 257.8 | 346.1 | 476.4 | 526.8 | 365.5 | 312.6 | 279.1 | 282.2 | 256.1 | 256.7 |
| **2003** | 254.5 | 252.5 | 282.5 | 299.9 | 516.7 | 1,099 | 890.3 | 642.4 | 366.3 | 358.5 | 352.4 | 355.0 |
| **2004** | 357.5 | 373.0 | 358.0 | 481.9 | 806.0 | 530.7 | 374.6 | 353.3 | 274.1 | 277.4 | 278.9 | 281.6 |
| **2005** | 307.1 | 721.5 | 1,315 | 1,669 | 2,113 | 2,105 | 1,331 | 1,000 | 829.2 | 335.1 | 339.5 | 492.9 |
| **2006** | 3,050 | 1,318 | 920.2 | 4,572 | 3,935 | 2,459 | 1,328 | 663.4 | 744.3 | 450.3 | 345.6 | 350.2 |
| **2007** | 352.2 | 351.4 | 354.1 | 320.4 | 365.2 | 336.7 | 351.5 | 342.7 | 334.6 | 234.1 | 231.8 | 238.6 |
| **2008** | 249.0 | 237.1 | 232.1 | 376.0 | 394.6 | 253.3 | 254.0 | 317.9 | 255.0 | 225.1 | 225.2 | 224.8 |
| **2009** | 225.3 | 226.3 | 237.3 | 332.1 | 384.5 | 409.4 | 334.3 | 338.0 | 372.5 | 701.5 | 347.7 | 330.6 |
| **2010** | 330.7 | 331.6 | 342.2 | 503.1 | 1,223 | 962.1 | 897.6 | 416.8 | 421.2 | 1,196 | 736.2 | 1,802 |
| **2011** | 1,445 | 600.3 | 2,017 | 3,158 | 2,243 | 1,923 | 2,187 | 1,073 | 736.2 | 1,235 | 583.0 | 331.1 |
| **2012** | 330.7 | 330.8 | 257.2 | 254.4 | 337.6 | 245.3 | 297.3 | 312.9 | 277.0 | 326.0 | 274.1 | 430.5 |
| **2013** | 342.2 | 270.1 | 269.4 | 315.1 | 384.9 | 270.9 | 313.2 | 285.0 | 275.4 | 325.2 | 265.9 | 255.2 |
| **2014** | 255.2 | 253.8 | 206.6 | 295.6 | 347.3 | 284.0 | 256.5 | 260.6 | 235.4 | 289.7 | 250.6 | 228.9 |
| **2015** | 225.7 | 225.0 | 241.1 | 230.8 | 221.5 | 610.9 | 255.7 | 227.7 | 145.2 | 176.6 | 212.0 | 186.1 |
| **2016** | 180.0 | 164.0 | 244.5 | 364.7 | 440.6 | 488.3 | 324.8 | 294.1 | 222.3 |  |  |  |
| **Mean ofmonthlyDischarge** | 746 | 900 | 1,040 | 1,300 | 1,670 | 1,440 | 676 | 459 | 400 | 414 | 422 | 512 |