

**USGS Water-Year Summary**

[**11270900**](https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=11270900) **Merced River below**

**Merced Falls Dam, near Snelling, CA**

**LOCATION** - Lat 37°31'18", long 120°19'53" referenced to North American Datum of 1927, in SE 1/4 SW 1/4 sec.04, T.5 S., R.15 E., Merced County, CA, Hydrologic Unit 18040002, on right bank, 0.1 mi south of Merced Falls, 0.2 mi downstream from Merced Falls Dam, 0.6 mi downstream from unnamed tributary, and 5.8 mi east of Snelling.

**DRAINAGE AREA** - 1,061 mi².

**SURFACE-WATER RECORDS**

**PERIOD OF RECORD** - April 1901 to current year. Records for water years 1914-16 incomplete, yearly estimates published in WSP 1315-A. Published as "near Merced Falls" 1901-13; as "at Exchequer" 1916-64.

**GAGE** - Water-stage recorder. Datum of gage is 310.55 ft above NGVD of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1964.

**COOPERATION** - Records, including end of month contents for McSwain Reservoir (station 11270600), were provided by Merced Irrigation District, and total monthly diversion for McSwain Powerplant (station 11270610), were provided by Pacific Gas and Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2179.

**REMARKS** - Merced Falls Dam diverts water to Northside Canal for irrigation downstream from station. Flow regulated by Exchequer (station 11269700), McSwain Powerplant, and Merced Falls Powerplant, Lake McClure (station 11269500) since 1926, enlarged 1967, and McSwain Reservoir since 1966, capacity, 9,200 acre-ft.

**EXTREMES FOR PERIOD OF RECORD** - (Water years 1901-13 and since 1916) Maximum discharge observed, 47,700 ft³/s, Jan. 31, 1911, gage height, 23.3 ft, site and datum then in use; no flow for part of Nov. 21, 1901. Since construction of Exchequer Dam in 1926: Maximum discharge, 46,200 ft³/s, Dec. 4, 1950, gage height, 22.6 ft, from flood marks, site and datum then in use, from rating curve extended above 16,000 ft³/s, on basis of computation of peak flow over dam; minimum daily, 3.4 ft³/s, Mar. 5, 1966.

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| **00060, Discharge, cubic feet per second,** |
| **YEAR** | **Monthly mean in ft3/s   (Calculation Period: 1901-04-01 -> 2016-09-30)**  |
| **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |
| **1901** |  |  |  | 2,348 | 5,099 | 5,092 | 1,995 | 697.9 | 156.7 | 247.5 | 410.5 | 572.2 |
| **1902** | 220.8 | 690.8 | 1,287 | 2,212 | 3,344 | 2,796 | 491.8 | 168.7 | 61.4 | 64.5 | 230.3 | 291.9 |
| **1903** | 818.5 | 779.3 | 1,637 | 2,944 | 4,480 | 2,994 | 772.6 | 387.0 | 291.2 | 287.3 | 379.3 | 258.8 |
| **1904** | 212.5 | 1,278 | 2,320 | 2,749 | 6,451 | 3,444 | 929.5 | 363.8 | 302.2 | 1,522 | 473.5 | 333.0 |
| **1905** | 429.5 | 1,116 | 1,777 | 2,002 | 3,214 | 2,862 | 796.8 | 133.0 | 59.8 | 57.4 | 62.6 | 83.7 |
| **1906** | 1,887 | 1,034 | 4,781 | 3,387 | 6,591 | 8,225 | 5,867 | 957.5 | 254.3 | 123.8 | 136.4 | 690.4 |
| **1907** | 1,776 | 1,829 | 6,995 | 5,749 | 6,652 | 6,596 | 3,616 | 798.9 | 206.9 | 140.2 | 151.9 | 293.7 |
| **1908** | 504.0 | 479.4 | 1,070 | 1,937 | 2,074 | 1,303 | 475.7 | 194.3 | 95.9 | 96.9 | 74.8 | 107.6 |
| **1909** | 3,772 | 3,232 | 1,381 | 2,888 | 5,220 | 5,949 | 1,547 | 335.7 | 137.9 | 132.8 | 531.1 | 1,676 |
| **1910** | 2,263 | 974.3 | 1,931 | 4,008 | 4,068 | 1,359 | 391.4 | 132.0 | 191.2 | 170.6 | 189.7 | 291.0 |
| **1911** | 4,409 | 2,439 | 5,814 | 4,248 | 5,508 | 7,822 | 3,448 | 568.0 | 208.5 | 167.1 | 176.7 | 161.3 |
| **1912** | 261.9 | 254.1 | 603.7 | 774.0 | 2,505 | 2,893 | 482.3 | 155.8 | 87.2 | 66.1 | 129.9 | 88.8 |
| **1913** | 165.9 | 208.5 | 361.1 | 1,226 | 2,409 | 1,446 | 559.2 | 372.8 | 247.7 | 49.4 | 103.2 |  |
| **1915** |  |  |  |  |  |  |  |  |  |  |  | 230.0 |
| **1916** | 2,625 | 1,981 | 3,445 | 4,250 | 5,079 | 4,661 | 1,256 | 288.6 | 142.3 | 497.2 | 267.1 | 412.5 |
| **1917** | 440.6 | 2,857 | 1,071 | 2,162 | 3,802 | 5,705 | 1,203 | 295.2 | 125.0 | 77.4 | 85.8 | 101.2 |
| **1918** | 100 | 848.9 | 3,195 | 2,339 | 3,187 | 3,276 | 482.2 | 103.8 | 198.4 | 521.1 | 249.9 | 248.2 |
| **1919** | 195.9 | 854.4 | 1,139 | 2,271 | 4,906 | 1,026 | 212.5 | 61.2 | 38.6 | 55.0 | 60.5 | 189.3 |
| **1920** | 168.9 | 224.0 | 1,312 | 2,023 | 4,586 | 2,473 | 396.3 | 138.9 | 76.8 | 224.1 | 335.7 | 517.7 |
| **1921** | 1,613 | 1,419 | 1,735 | 2,388 | 3,983 | 3,614 | 749.2 | 139.5 | 70.8 | 50.7 | 58.5 | 715.2 |
| **1922** | 651.7 | 2,940 | 1,906 | 2,086 | 6,768 | 6,715 | 1,395 | 252.2 | 102.0 | 94.1 | 269.1 | 947.8 |
| **1923** | 1,066 | 903.5 | 908.0 | 2,664 | 4,684 | 2,596 | 1,085 | 217.8 | 155.5 | 214.9 | 152.3 | 128.6 |
| **1924** | 166.2 | 261.2 | 313.7 | 1,131 | 1,478 | 211.5 | 61.3 | 29.9 | 20.5 | 75.8 | 361.3 | 369.6 |
| **1925** | 345.1 | 1,898 | 1,258 | 3,027 | 4,247 | 2,475 | 796.1 | 247.6 | 76.8 | 129.0 | 137.4 | 191.3 |
| **1926** | 154.8 | 1,133 | 895.0 | 2,869 | 1,339 | 1,452 | 1,177 | 622.3 | 33.7 | 34.5 | 63.4 | 356.2 |
| **1927** | 75.2 | 723.6 | 1,058 | 1,729 | 4,844 | 3,298 | 1,630 | 1,365 | 1,188 | 501.6 | 191.9 | 485.5 |
| **1928** | 494.6 | 514.0 | 687.2 | 1,384 | 3,218 | 1,765 | 1,474 | 1,260 | 949.0 | 263.5 | 32.9 | 45.8 |
| **1929** | 66.0 | 285.0 | 547.9 | 1,064 | 1,632 | 1,331 | 1,575 | 1,353 | 282.7 | 40.8 | 37.3 | 44.6 |
| **1930** | 57.8 | 56.2 | 80.9 | 1,311 | 1,433 | 1,705 | 1,632 | 1,375 | 642.0 | 51.4 | 38.9 | 39.4 |
| **1931** | 48.3 | 39.1 | 132.5 | 1,161 | 1,252 | 1,152 | 210.4 | 173.4 | 17.2 | 20.8 | 25.2 | 44.0 |
| **1932** | 924.5 | 1,140 | 1,255 | 1,597 | 3,276 | 4,183 | 1,760 | 1,500 | 1,111 | 460.7 | 42.4 | 39.0 |
| **1933** | 33.0 | 819.8 | 452.3 | 1,290 | 1,310 | 1,484 | 1,569 | 1,495 | 890.3 | 44.4 | 34.1 | 26.0 |
| **1934** | 26.8 | 42.5 | 335.1 | 1,522 | 1,204 | 1,090 | 1,289 | 193.0 | 118.3 | 34.8 | 28.9 | 34.2 |
| **1935** | 125.2 | 503.2 | 1,124 | 2,973 | 5,104 | 3,879 | 1,640 | 1,384 | 1,059 | 395.0 | 41.0 | 41.8 |
| **1936** | 32.5 | 2,025 | 1,658 | 3,691 | 4,546 | 2,393 | 1,685 | 1,495 | 1,053 | 410.9 | 40.4 | 39.2 |
| **1937** | 65.0 | 1,534 | 2,227 | 2,454 | 6,223 | 2,930 | 1,770 | 1,547 | 1,013 | 317.9 | 36.0 | 409.6 |
| **1938** | 1,111 | 3,155 | 5,375 | 3,863 | 6,175 | 7,426 | 2,384 | 1,564 | 1,129 | 445.3 | 55.8 | 44.2 |
| **1939** | 692.5 | 995.5 | 357.1 | 1,137 | 1,395 | 1,485 | 1,581 | 1,374 | 766.7 | 50.8 | 44.9 | 47.7 |
| **1940** | 20.7 | 956.0 | 1,870 | 3,310 | 4,328 | 2,488 | 1,739 | 1,463 | 1,060 | 424.0 | 40.3 | 26.0 |
| **1941** | 361.1 | 1,205 | 2,464 | 2,746 | 5,751 | 4,784 | 2,165 | 1,417 | 1,072 | 441.6 | 54.0 | 35.4 |
| **1942** | 1,067 | 1,211 | 1,468 | 3,229 | 4,412 | 4,856 | 2,097 | 1,492 | 1,054 | 545.2 | 50.7 | 28.4 |
| **1943** | 895.7 | 1,786 | 3,979 | 3,676 | 3,959 | 2,630 | 1,642 | 1,455 | 1,154 | 602.7 | 68.8 | 44.0 |
| **1944** | 43.8 | 44.3 | 837.6 | 1,437 | 1,963 | 2,268 | 1,698 | 1,496 | 1,229 | 637.8 | 40.5 | 40.2 |
| **1945** | 40.0 | 1,091 | 1,664 | 2,136 | 4,176 | 3,299 | 1,899 | 1,601 | 1,289 | 468.9 | 42.2 | 115.6 |
| **1946** | 1,130 | 1,140 | 865.0 | 2,249 | 3,525 | 2,162 | 1,844 | 1,585 | 1,231 | 142.8 | 74.2 | 44.7 |
| **1947** | 46.0 | 46.6 | 224.7 | 1,361 | 1,899 | 1,613 | 1,752 | 1,461 | 711.0 | 47.1 | 52.1 | 44.3 |
| **1948** | 42.3 | 36.1 | 33.3 | 275.0 | 1,933 | 3,608 | 1,921 | 1,609 | 1,277 | 35.8 | 42.3 | 44.1 |
| **1949** | 40.9 | 39.0 | 459.0 | 1,361 | 2,084 | 2,312 | 1,863 | 1,500 | 900.0 | 50.1 | 40.0 | 37.1 |
| **1950** | 36.0 | 447.9 | 609.4 | 1,301 | 2,380 | 2,433 | 1,855 | 1,550 | 963.3 | 46.8 | 385.0 | 4,698 |
| **1951** | 1,377 | 1,385 | 1,293 | 1,576 | 2,728 | 1,938 | 1,784 | 1,586 | 1,224 | 53.1 | 59.0 | 45.2 |
| **1952** | 1,021 | 1,197 | 1,245 | 3,251 | 7,249 | 4,989 | 1,926 | 1,707 | 1,313 | 400.7 | 26.1 | 547.6 |
| **1953** | 1,056 | 250.6 | 665.6 | 1,173 | 1,222 | 1,440 | 1,871 | 1,632 | 1,250 | 49.0 | 45.7 | 47.0 |
| **1954** | 51.6 | 48.4 | 484.5 | 1,458 | 3,143 | 1,823 | 1,919 | 1,688 | 443.0 | 76.7 | 57.3 | 50.4 |
| **1955** | 52.2 | 50.9 | 319.4 | 1,120 | 1,049 | 1,765 | 1,775 | 1,664 | 739.9 | 48.5 | 42.0 | 2,203 |
| **1956** | 3,869 | 1,478 | 1,375 | 1,656 | 5,232 | 4,647 | 1,968 | 1,586 | 1,220 | 493.9 | 37.2 | 38.2 |
| **1957** | 38.3 | 39.0 | 592.2 | 1,618 | 1,748 | 3,032 | 1,861 | 1,613 | 1,264 | 90.1 | 41.7 | 42.4 |
| **1958** | 44.1 | 61.5 | 1,441 | 3,876 | 6,600 | 4,326 | 2,130 | 1,628 | 1,144 | 453.0 | 43.7 | 93.5 |
| **1959** | 45.1 | 44.1 | 788.6 | 1,188 | 1,337 | 1,736 | 1,842 | 1,344 | 68.5 | 36.5 | 47.7 | 49.3 |
| **1960** | 54.4 | 35.1 | 323.5 | 1,162 | 1,420 | 1,862 | 1,917 | 1,129 | 64.0 | 36.2 | 38.6 | 41.0 |
| **1961** | 38.3 | 36.9 | 36.7 | 798.3 | 1,474 | 1,737 | 618.5 | 170.9 | 79.7 | 48.5 | 42.5 | 38.5 |
| **1962** | 40.2 | 606.5 | 1,234 | 1,764 | 2,661 | 3,307 | 1,980 | 1,702 | 1,257 | 49.6 | 46.0 | 42.8 |
| **1963** | 43.9 | 1,224 | 605.6 | 1,589 | 4,029 | 3,225 | 1,932 | 1,713 | 1,278 | 118.1 | 65.6 | 58.0 |
| **1964** | 56.2 | 51.8 | 55.2 | 1,401 | 1,533 | 1,598 | 1,882 | 1,349 | 75.5 | 40.4 | 335.3 | 86.4 |
| **1965** | 2,259 | 1,038 | 2,649 | 2,151 | 3,454 | 3,305 | 2,035 | 1,666 | 1,282 | 43.7 | 530.2 | 1,271 |
| **1966** | 209.3 | 42.4 | 117.5 | 1,335 | 1,376 | 1,532 | 1,218 | 154.1 | 45.5 | 46.9 | 34.7 | 35.6 |
| **1967** | 43.4 | 37.2 | 142.6 | 1,591 | 4,326 | 4,912 | 4,745 | 2,471 | 1,682 | 1,041 | 339.1 | 585.5 |
| **1968** | 403.6 | 413.4 | 640.7 | 1,350 | 1,517 | 1,695 | 1,831 | 1,475 | 1,073 | 411.7 | 117.5 | 120.3 |
| **1969** | 182.9 | 3,805 | 3,769 | 3,541 | 5,283 | 5,145 | 2,597 | 2,446 | 2,089 | 1,564 | 1,396 | 1,307 |
| **1970** | 468.9 | 1,471 | 1,130 | 1,565 | 1,557 | 1,719 | 1,867 | 1,738 | 1,277 | 392.0 | 171.8 | 597.4 |
| **1971** | 493.9 | 487.3 | 832.0 | 931.4 | 1,011 | 1,458 | 1,859 | 1,549 | 1,165 | 431.0 | 230.6 | 199.4 |
| **1972** | 851.0 | 526.7 | 1,299 | 1,047 | 1,348 | 1,789 | 1,926 | 1,683 | 2,276 | 378.4 | 198.9 | 201.3 |
| **1973** | 208.1 | 232.4 | 222.1 | 1,088 | 1,912 | 1,980 | 2,009 | 1,853 | 1,328 | 647.4 | 719.4 | 832.8 |
| **1974** | 1,506 | 722.2 | 874.9 | 1,271 | 2,458 | 2,804 | 2,163 | 2,005 | 1,457 | 642.6 | 679.1 | 580.6 |
| **1975** | 497.5 | 977.8 | 844.6 | 1,539 | 2,535 | 3,683 | 2,166 | 2,053 | 2,099 | 1,239 | 507.1 | 494.2 |
| **1976** | 356.6 | 200.6 | 893.6 | 1,059 | 1,562 | 1,546 | 1,740 | 1,400 | 785.6 | 112.6 | 186.1 | 184.2 |
| **1977** | 133.3 | 112.9 | 139.2 | 484.9 | 527.8 | 813.2 | 921.7 | 635.5 | 83.1 | 76.4 | 191.4 | 189.9 |
| **1978** | 157.7 | 146.9 | 828.2 | 2,438 | 3,099 | 3,449 | 2,199 | 2,193 | 2,227 | 2,231 | 909.9 | 382.0 |
| **1979** | 424.3 | 1,336 | 1,713 | 1,274 | 2,261 | 2,411 | 2,131 | 1,939 | 1,663 | 803.6 | 454.7 | 423.5 |
| **1980** | 2,933 | 2,581 | 4,245 | 2,746 | 3,119 | 2,312 | 2,122 | 2,192 | 2,172 | 998.4 | 642.8 | 503.3 |
| **1981** | 272.0 | 210.3 | 193.3 | 989.3 | 1,958 | 2,031 | 2,097 | 1,853 | 1,326 | 135.3 | 190.4 | 197.6 |
| **1982** | 207.5 | 1,222 | 1,687 | 5,229 | 5,701 | 3,012 | 2,633 | 2,222 | 2,225 | 2,636 | 873.2 | 2,451 |
| **1983** | 2,271 | 4,247 | 4,680 | 5,278 | 5,029 | 6,975 | 5,177 | 2,761 | 3,049 | 3,143 | 482.9 | 2,229 |
| **1984** | 2,936 | 1,043 | 1,216 | 1,635 | 1,957 | 2,042 | 2,069 | 1,775 | 1,393 | 846.5 | 570.1 | 1,176 |
| **1985** | 539.4 | 198.9 | 839.4 | 1,420 | 1,776 | 1,858 | 1,968 | 1,531 | 1,224 | 196.5 | 197.2 | 250.0 |
| **1986** | 167.2 | 284.1 | 2,517 | 3,547 | 3,199 | 2,277 | 2,011 | 1,755 | 1,379 | 807.7 | 195.3 | 171.9 |
| **1987** | 171.9 | 172.0 | 195.8 | 1,237 | 1,705 | 1,742 | 1,741 | 1,535 | 1,001 | 132.8 | 200.2 | 198.2 |
| **1988** | 207.7 | 208.7 | 895.3 | 831.1 | 1,117 | 1,256 | 1,508 | 1,376 | 523.9 | 99.6 | 186.1 | 184.9 |
| **1989** | 187.2 | 182.6 | 210.4 | 1,198 | 1,337 | 1,406 | 1,405 | 1,212 | 517.1 | 106.1 | 194.4 | 192.5 |
| **1990** | 191.2 | 198.2 | 314.6 | 901.2 | 962.8 | 975.9 | 1,129 | 913.7 | 170.1 | 112.3 | 197.5 | 189.7 |
| **1991** | 140.8 | 124.0 | 212.2 | 393.6 | 847.7 | 1,025 | 1,313 | 1,292 | 873.8 | 498.2 | 228.5 | 236.1 |
| **1992** | 239.3 | 240.2 | 238.9 | 689.9 | 1,207 | 1,237 | 1,216 | 1,226 | 641.1 | 276.8 | 257.6 | 216.4 |
| **1993** | 247.2 | 224.8 | 367.4 | 1,750 | 2,130 | 1,998 | 2,097 | 2,076 | 1,533 | 1,516 | 210.3 | 224.8 |
| **1994** | 227.4 | 233.1 | 787.6 | 1,243 | 1,239 | 1,676 | 2,039 | 1,569 | 938.3 | 925.9 | 249.0 | 240.8 |
| **1995** | 248.1 | 214.2 | 2,340 | 3,904 | 4,781 | 4,847 | 4,804 | 2,180 | 2,112 | 2,601 | 550.5 | 551.5 |
| **1996** | 286.3 | 2,450 | 3,043 | 1,794 | 2,600 | 2,062 | 2,057 | 1,869 | 1,332 | 1,198 | 300.5 | 2,180 |
| **1997** | 7,368 | 6,686 | 2,270 | 1,667 | 1,984 | 1,775 | 1,816 | 1,540 | 1,070 | 802.4 | 235.6 | 209.5 |
| **1998** | 677.9 | 4,140 | 2,479 | 3,073 | 3,584 | 3,940 | 3,905 | 2,484 | 2,424 | 1,792 | 305.9 | 433.7 |
| **1999** | 783.5 | 1,551 | 1,110 | 1,881 | 1,948 | 1,650 | 1,820 | 1,488 | 1,021 | 852.7 | 262.5 | 256.4 |
| **2000** | 258.4 | 1,535 | 2,143 | 1,779 | 1,688 | 1,862 | 1,896 | 1,647 | 1,083 | 990.8 | 517.1 | 316.7 |
| **2001** | 267.3 | 260.4 | 442.8 | 1,323 | 2,043 | 1,814 | 1,804 | 1,453 | 747.8 | 868.3 | 492.3 | 406.7 |
| **2002** | 250.1 | 244.9 | 529.6 | 1,307 | 1,815 | 1,707 | 1,746 | 1,343 | 856.0 | 710.6 | 248.6 | 215.9 |
| **2003** | 201.5 | 246.6 | 685.2 | 1,087 | 1,689 | 1,773 | 1,783 | 1,416 | 885.1 | 1,483 | 356.5 | 311.9 |
| **2004** | 302.5 | 296.8 | 497.6 | 1,546 | 2,100 | 1,714 | 1,804 | 1,399 | 904.0 | 544.6 | 252.3 | 255.4 |
| **2005** | 277.4 | 271.2 | 1,144 | 3,250 | 3,625 | 3,362 | 2,707 | 2,314 | 1,680 | 947.3 | 288.5 | 905.7 |
| **2006** | 2,378 | 818.2 | 2,906 | 4,389 | 5,200 | 3,958 | 2,345 | 2,168 | 1,660 | 1,483 | 322.4 | 306.3 |
| **2007** | 311.8 | 304.0 | 1,040 | 1,251 | 1,840 | 1,955 | 1,802 | 1,321 | 861.9 | 467.6 | 651.7 | 451.9 |
| **2008** | 335.4 | 362.4 | 500.2 | 1,320 | 1,643 | 1,327 | 1,446 | 1,071 | 674.6 | 380.6 | 354.9 | 315.7 |
| **2009** | 289.4 | 292.4 | 527.4 | 894.4 | 1,606 | 1,664 | 1,761 | 1,438 | 1,069 | 724.2 | 290.2 | 272.3 |
| **2010** | 275.7 | 275.2 | 420.7 | 882.8 | 1,710 | 2,074 | 2,098 | 1,826 | 1,735 | 1,040 | 322.6 | 1,270 |
| **2011** | 1,353 | 3,641 | 3,514 | 5,114 | 4,066 | 2,830 | 3,389 | 2,629 | 1,649 | 1,614 | 435.3 | 331.4 |
| **2012** | 284.3 | 326.7 | 701.4 | 593.6 | 1,744 | 1,550 | 1,776 | 1,536 | 947.4 | 859.9 | 343.0 | 325.6 |
| **2013** | 320.5 | 305.8 | 644.9 | 812.4 | 1,129 | 1,204 | 1,509 | 1,063 | 1,017 | 680.3 | 261.5 | 252.3 |
| **2014** | 260.8 | 235.9 | 224.2 | 464.8 | 619.3 | 905.4 | 1,054 | 859.4 | 582.1 | 482.6 | 236.3 | 227.8 |
| **2015** | 243.0 | 193.7 | 221.7 | 237.2 | 236.2 | 256.1 | 447.7 | 213.5 | 143.8 | 330.5 | 263.2 | 255.7 |
| **2016** | 257.7 | 245.5 | 238.7 | 495.2 | 1,191 | 1,495 | 1,665 | 1,282 | 866.0 |  |  |  |
| **Mean ofmonthlyDischarge** | 671 | 919 | 1,320 | 1,990 | 2,960 | 2,690 | 1,790 | 1,280 | 892 | 504 | 234 | 401 |