



Water-Data Report 2007

01391500 SADDLE RIVER AT LODI, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 40°53'25", long 74°04'50" referenced to North American Datum of 1983, Lodi Borough, Bergen County, NJ, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi, 1.3 mi south of Rochelle Park, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--54.6 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1923 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1940(M). WSP 1552: 1929(M), 1936(M), 1938. WDR NJ-1969: 1967. WDR NJ-1970: 1968, 1969.

GAGE.--Water-stage recorder. Concrete control since Nov 2, 1938. Datum of gage is 25.00 ft above NGVD of 1929. Prior to Nov 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Diurnal fluctuations at low flow due to patterns of sewage effluent entering river upstream. Diversion upstream from station at Paramus by United Water New Jersey, for municipal supply (see 01390520). The flow past this station is affected by pumpage from wells by United Water New Jersey and others. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and (or) maximum (*):

| Date | Time | Discharge (ft ³ /s) | Gage height (ft) |
|--------|------|-----------------------------------|---------------------|
| Oct 28 | 1630 | 2,000 | 6.41 |
| Nov 8 | 2345 | 2,660 | 7.80 |
| Jan 1 | 1545 | 1,210 | 4.78 |
| Mar 2 | 1715 | 2,650 | 7.78 |
| Apr 16 | 0800 | *5,050 | *12.33 |
| Aug 8 | 0845 | 1,450 | 5.40 |

01391500 SADDLE RIVER AT LODI, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[*e*, estimated]

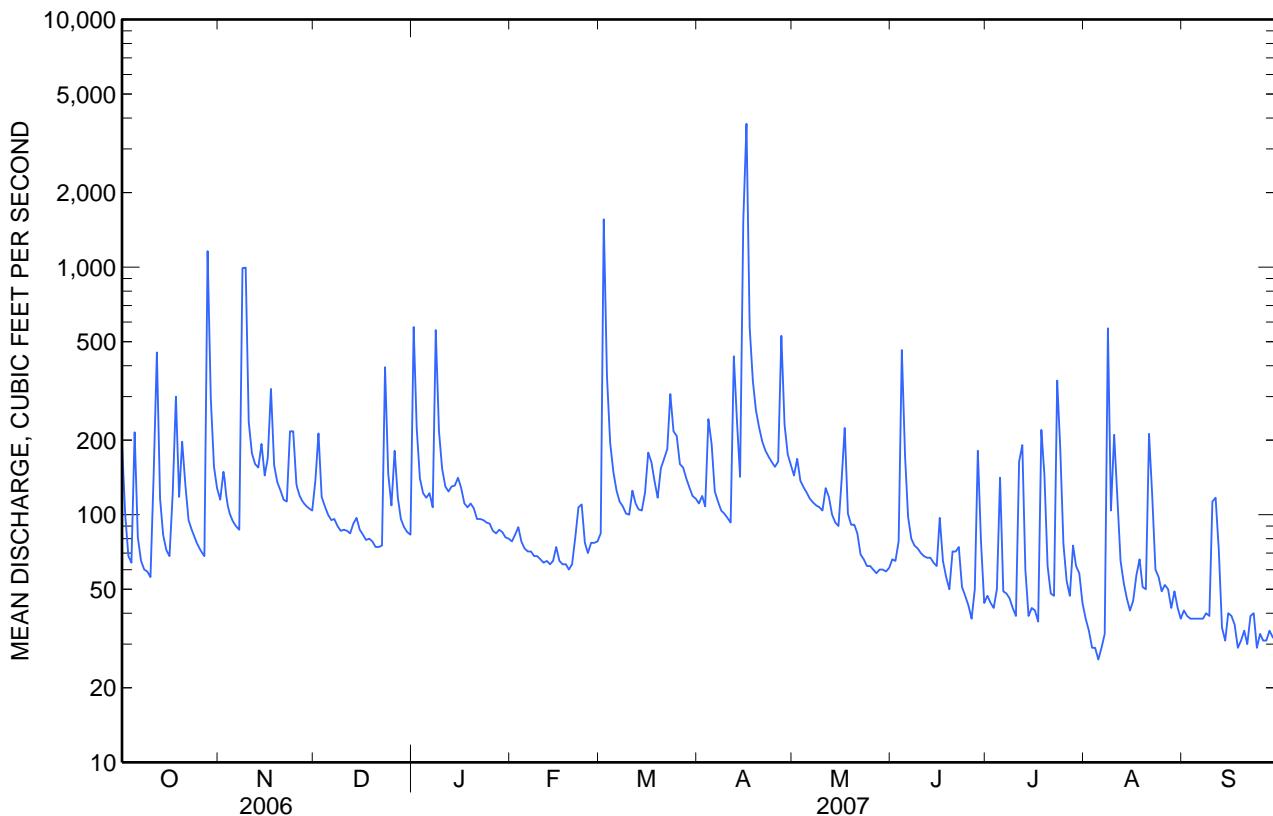
| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 1 | 195 | 115 | 138 | 573 | 78 | 84 | 111 | 144 | 66 | 47 | 38 | 41 |
| 2 | 100 | 149 | 213 | 223 | 83 | 1,560 | 119 | 168 | 65 | 44 | 34 | 39 |
| 3 | 68 | 116 | 118 | 140 | 89 | 363 | 108 | 137 | 78 | 42 | e29 | 38 |
| 4 | 64 | 101 | 108 | 122 | 78 | 195 | 243 | 129 | 462 | 50 | e29 | 38 |
| 5 | 215 | 94 | 100 | 117 | 73 | 149 | 193 | 123 | 173 | 141 | e26 | 38 |
| 6 | 81 | 90 | 95 | 122 | 71 | 125 | 124 | 116 | 98 | 49 | e29 | 38 |
| 7 | 65 | 87 | 96 | 107 | 71 | 113 | 113 | 112 | 80 | 48 | 33 | 38 |
| 8 | 60 | 991 | 90 | 557 | 68 | 108 | 104 | 109 | 75 | 46 | 566 | 40 |
| 9 | 59 | 995 | 86 | 218 | 68 | 101 | 101 | 107 | 73 | 42 | 104 | 39 |
| 10 | 56 | 237 | 87 | 153 | 66 | 100 | 97 | 104 | 70 | 39 | 210 | 113 |
| 11 | 146 | 177 | 86 | 130 | 64 | 125 | 93 | 128 | 68 | 164 | 117 | 117 |
| 12 | 452 | 160 | 84 | 124 | 65 | 111 | 436 | 118 | 67 | 191 | 65 | 72 |
| 13 | 116 | 155 | 92 | 130 | 63 | 105 | 236 | 100 | 67 | 60 | 53 | 35 |
| 14 | 83 | 193 | 97 | 131 | 65 | 104 | 142 | 93 | 64 | 39 | 46 | 31 |
| 15 | 72 | 144 | 87 | 141 | 74 | 123 | e1,530 | 90 | 62 | 42 | 41 | 40 |
| 16 | 68 | 169 | 83 | 128 | 65 | 178 | e3,790 | 136 | 97 | 41 | 45 | 39 |
| 17 | 122 | 322 | 79 | 111 | 63 | 163 | 570 | 224 | 65 | 37 | 57 | 36 |
| 18 | 300 | 158 | 80 | 107 | 63 | 137 | 346 | 101 | 56 | e220 | 66 | 29 |
| 19 | 118 | 135 | 78 | 111 | 60 | 117 | 264 | 91 | 50 | 145 | 51 | 31 |
| 20 | 197 | 125 | 74 | 106 | 63 | 154 | 225 | 91 | 71 | 62 | 50 | 34 |
| 21 | 132 | 115 | 74 | 96 | 81 | 168 | 197 | 84 | 71 | 48 | 212 | 30 |
| 22 | 95 | 113 | 75 | 96 | 107 | 184 | 181 | e69 | 74 | 47 | 119 | 39 |
| 23 | 87 | 217 | 394 | 95 | 110 | 307 | 171 | e66 | 51 | 348 | 60 | 40 |
| 24 | 80 | 217 | 146 | 93 | 77 | 217 | 163 | e62 | 47 | 186 | 56 | 29 |
| 25 | 75 | 133 | 109 | 92 | 70 | 208 | 156 | e62 | 43 | 76 | 49 | 33 |
| 26 | 71 | 120 | 181 | 86 | 77 | 160 | 164 | e60 | 38 | 54 | 52 | 31 |
| 27 | 68 | 113 | 117 | 84 | 77 | 155 | 528 | e58 | 50 | 47 | 50 | 31 |
| 28 | 1,160 | 109 | 96 | 87 | 78 | 140 | 231 | e60 | 181 | 75 | 42 | 34 |
| 29 | 295 | 106 | 89 | 85 | --- | 129 | 175 | e60 | 77 | 62 | 49 | 32 |
| 30 | 156 | 104 | 85 | 81 | --- | 119 | 159 | e59 | 44 | 58 | 42 | 31 |
| 31 | 128 | --- | 83 | 80 | --- | 116 | --- | e61 | --- | 44 | 38 | --- |
| Total | 4,984 | 6,060 | 3,420 | 4,526 | 2,067 | 6,118 | 11,070 | 3,122 | 2,583 | 2,594 | 2,458 | 1,256 |
| Mean | 161 | 202 | 110 | 146 | 73.8 | 197 | 369 | 101 | 86.1 | 83.7 | 79.3 | 41.9 |
| Max | 1,160 | 995 | 394 | 573 | 110 | 1,560 | 3,790 | 224 | 462 | 348 | 566 | 117 |
| Min | 56 | 87 | 74 | 80 | 60 | 84 | 93 | 58 | 38 | 37 | 26 | 29 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2007, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Mean | 70.7 | 90.7 | 102 | 108 | 117 | 153 | 156 | 116 | 88.9 | 73.3 | 69.0 | 71.2 |
| Max | 352 | 284 | 301 | 331 | 258 | 333 | 457 | 315 | 336 | 371 | 225 | 256 |
| (WY) | (2006) | (1978) | (1984) | (1979) | (1973) | (1953) | (1983) | (1984) | (1972) | (1945) | (1955) | (1971) |
| Min | 16.5 | 25.5 | 17.0 | 12.1 | 26.0 | 40.1 | 32.9 | 44.9 | 25.5 | 12.9 | 15.1 | 11.4 |
| (WY) | (1936) | (1982) | (1981) | (1981) | (2002) | (1981) | (1985) | (1941) | (1999) | (1999) | (1966) | (1932) |

01391500 SADDLE RIVER AT LODI, NJ—Continued**SUMMARY STATISTICS**

| | Calendar Year 2006 | Water Year 2007 | | Water Years 1924 - 2007 | |
|---------------------------------|---------------------------|------------------------|--------------------|--------------------------------|---------------------------------|
| Annual total | 49,156 | | 50,258 | | |
| Annual mean | 135 | | 138 | | 101 |
| Highest annual mean | | | | 187 | 1984 |
| Lowest annual mean | | | | 45.2 | 1981 |
| Highest daily mean | 1,160 | Oct 28 | ^a 3,790 | Apr 16 | 3,790 Apr 16, 2007 |
| Lowest daily mean | 30 | Aug 18 | ^a 26 | Aug 5 | 4.9 Sep 15, 1995 |
| Annual seven-day minimum | 32 | Aug 17 | 31 | Aug 1 | 7.1 Sep 10, 1995 |
| Maximum peak flow | | | 5,050 | Apr 16 | 5,330 Sep 17, 1999 |
| Maximum peak stage | | | ^b 12.33 | Apr 16 | ^c 13.94 Sep 17, 1999 |
| Instantaneous low flow | | | 22 | Sep 24 | 1.0 May 25, 1935 |
| 10 percent exceeds | 245 | | 214 | | 191 |
| 50 percent exceeds | 92 | | 92 | | 70 |
| 90 percent exceeds | 57 | | 40 | | 26 |

^a Estimated.^b From high-water mark outside gage house.^c From high-water mark in gage house.

01391500 SADDLE RIVER AT LODI, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1962 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of filtered ammonia-plus-organic nitrogen (00623), filtered nitrite-plus-nitrate nitrogen (00631), and total particulate nitrogen (49570). Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 4.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 3

[Remark codes: <, less than; E, estimated.]

| Date | Time | Turbdty white light, det ang 90+/-30 dis- charge, corrctd | UV absorb- ance, 254 nm, wat flt units | UV absorb- ance, 280 nm, wat flt units | Baro- metric pres- sure, mm Hg (61726) | Dis- solved oxygen, mg/L (00025) | Dis- solved oxygen, percent of sat- uration (00301) | pH, water, unfltrd field, std units | Specif- ic conduc- tance, μS/cm (00400) | Temper- ature, wat unf μS/cm (25 degC (00095) | Temper- ature, air, deg C (00020) | Temper- ature, water, deg C (00010) | Hard- ness, water, mg/L as CaCO ₃ (00900) |
|--------------|------|--------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------|
| Nov 30... | 0930 | 98 | 2.4 | .100 | .078 | 768 | 9.1 | 85 | 7.7 | 791 | 17.5 | 12.7 | 210 |
| Feb 01... | 1000 | 79 | 2.0 | .070 | .054 | 762 | 11.9 | 89 | -- | 830 | 5.4 | 3.2 | 210 |
| May 10... | 1000 | 99 | 2.3 | .090 | .068 | 762 | 7.5 | 79 | 7.5 | 823 | 21.0 | 17.0 | 200 |
| Aug 02... | 1000 | 32 | 2.4 | .104 | .078 | 762 | 6.6 | 78 | 7.8 | 948 | 24.3 | 23.1 | 220 |

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 3

[Remark codes: <, less than; E, estimated.]

| Date | Calcium water, filtrd, mg/L (00915) | Magnes- ium, water, filtrd, mg/L (00925) | Potas- sium, water, filtrd, mg/L (00935) | Sodium, water, filtrd, mg/L (00930) | ANC, wat unf fixed end pt, lab, mg/L as CaCO ₃ (90410) | Chlor- ide, water, filtrd, mg/L (00940) | Fluor- ide, water, filtrd, mg/L (00950) | Silica, water, filtrd, mg/L (00955) | Sulfate water, filtrd, mg/L (00945) | Residue water, filtrd, sum of consti- tuents mg/L (70301) | Residue on evap. at 180degC wat flt mg/L (70300) | Residue total non- filter- able, mg/L (00530) | Ammonia + org-N, water, filtrd, mg/L as N (00623) |
|--------------|-------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------|
| Nov 30... | 60.2 | 14.4 | 3.80 | 66.2 | 128 | 131 | E.06 | 13.8 | 24.1 | 414 | 420 | 10 | .69 |
| Feb 01... | 58.1 | 15.1 | 4.02 | 71.1 | 134 | 140 | E.09 | 11.0 | 27.0 | 436 | 458 | 5 | .75 |
| May 10... | 57.9 | 14.3 | 3.61 | 74.1 | 125 | 146 | E.07 | 10.2 | 24.7 | 425 | 449 | 2 | .60 |
| Aug 02... | 63.0 | 15.9 | 5.26 | 83.1 | 135 | 160 | .11 | 11.4 | 28.1 | 475 | 534 | 3 | .50 |

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 3

[Remark codes: <, less than; E, estimated.]

| Date | Nitrate | Partic- | Ortho- | | | | Total | Inor- | Organic | Organic | Boron, | | |
|-----------|-----------|---------|--------|---------|------------|---------|---------|---------|---------|---------|--------|-----|-----|
| | + nitrite | ulate | Total | nitro- | phosphate, | Phos- | carbon, | carbon, | carbon, | | | | |
| Ammonia | water, | nitro- | nitro- | water, | water, | phorus, | suspnd | suspnd | suspnd | water, | | | |
| water, | fltrd, | gen, | gen, | water, | fltrd, | phorus, | total, | total, | total, | fltrd, | | | |
| mg/L | mg/L | susp, | water, | mg/L | unfltrd | mg/L | mg/L | mg/L | mg/L | fltrd, | | | |
| | | | | | | | | | | | | | |
| Date | as N | (00608) | as N | (00631) | mg/L | (49570) | mg/L | (00602) | mg/L | (00600) | mg/L | | |
| Nov 30... | .195 | 4.96 | .07 | 5.6 | 5.7 | .487 | .51 | .56 | .6 | <.1 | .6 | 3.2 | 73 |
| Feb 01... | .268 | 6.02 | .05 | 6.8 | 6.8 | .602 | .64 | .67 | .4 | <.1 | .4 | 2.6 | 73 |
| May 10... | .075 | 4.20 | .09 | 4.8 | 4.9 | .430 | .44 | .48 | .6 | <.1 | .6 | 3.3 | 68 |
| Aug 02... | .022 | 5.57 | .06 | 6.1 | 6.1 | .948 | .96 | 1.00 | .5 | <.1 | .5 | 3.3 | 106 |