

## 14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

Willamette Basin  
Clackamas Subbasin

LOCATION.--Lat 45°04'17", long 121°56'22" referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.3, T.6 S., R.7 E., Clackamas County, OR, Hydrologic Unit 17090011, Mount Hood National Forest, on left bank, 0.8 mi upstream from Spring Creek, 1.3 mi upstream from Kink Creek, 1.7 mi upstream from Portland General Electric Co. diversion dam, 24 mi southeast of Estacada and at mile 6.7.

DRAINAGE AREA.--124 mi<sup>2</sup>.

### SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as both Oak Grove Fork of Clackamas River at proposed intake, near Cazadero and Oak Grove Fork of Clackamas River at intake, near Cazadero, May 1909 to September 1910, as Oak Grove Fork of Clackamas River at intake, near Cazadero, October 1910 to September 1921, as Oak Grove Fork at Portland General Electric Power Co. intake, October 1921 to September 1929.

REVISED RECORDS.--WSP 1248:1909, 1910(M), 1916, 1918, 1923, 1932. WSP 1935: 1914, 1921.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,100 ft above NGVD of 1929, from topographic map. May 21, 1909 to Nov. 17, 1911, nonrecording gage and Mar. 26, 1912 to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi downstream, below Kink Creek, at different datum. December 1923 to September 1996, at site 0.6 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records poor. Flow regulated since 1956 by Timothy Lake (station 14208600). Low flows are affected at times by diversion to Stone Creek Hydroelectric Project.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--39 years (water years 1910-11, 1915, 1919, 1922-56), 494 ft<sup>3</sup>/s, 54.06 in/yr, 357,600 acre-ft/yr. 95 years (water years 1910-11, 1915, 1919, 1922-2012), 486 ft<sup>3</sup>/s, 352,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft<sup>3</sup>/s Jan. 7, 1923, gage height, 5.45 ft, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of peak discharge for other stations in Clackamas River basin; minimum discharge, 128 ft<sup>3</sup>/s Aug. 16, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,700 ft<sup>3</sup>/s Dec. 30, Mar. 30, gage height, 7.42 ft; minimum discharge, 251 ft<sup>3</sup>/s Dec. 15.

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**  
**DAILY MEAN VALUES**

| Day          | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1            | 458    | 481    | 529    | 695    | 804    | 746    | 1,170  | 1,210  | 586    | 464    | 383    | 372    |
| 2            | 468    | 496    | 523    | 665    | 765    | 717    | 1,070  | 1,160  | 607    | 459    | 383    | 365    |
| 3            | 420    | 502    | 514    | 669    | 732    | 763    | 1,030  | 1,230  | 613    | 459    | 383    | 365    |
| 4            | 394    | 499    | 508    | 614    | 701    | 753    | 985    | 1,210  | 653    | 443    | 382    | 365    |
| 5            | 395    | 503    | 503    | 605    | 674    | 741    | 934    | 1,150  | 716    | 433    | 381    | 365    |
| 6            | 398    | 446    | 500    | 584    | 648    | 725    | 890    | 1,100  | 682    | 430    | 381    | 383    |
| 7            | 394    | 380    | 497    | 570    | 657    | 703    | 854    | 1,070  | 668    | 426    | 381    | 448    |
| 8            | 394    | 380    | 502    | 547    | 659    | 692    | 818    | 1,060  | 670    | 425    | 380    | 448    |
| 9            | 388    | 379    | 514    | 521    | 675    | 639    | 800    | 1,050  | 665    | 424    | 380    | 449    |
| 10           | 392    | 379    | 498    | 501    | 682    | 641    | 809    | 1,000  | 615    | 420    | 378    | 454    |
| 11           | 400    | 383    | 492    | 477    | 707    | 670    | 831    | 960    | 583    | 418    | 374    | 458    |
| 12           | 379    | 389    | 451    | 452    | 677    | 673    | 841    | 925    | 580    | 417    | 373    | 450    |
| 13           | 402    | 405    | 439    | 435    | 670    | 729    | 822    | 896    | 578    | 415    | 371    | 445    |
| 14           | 471    | 429    | 438    | 425    | 663    | 700    | 812    | 900    | 549    | 414    | 372    | 463    |
| 15           | 475    | 468    | 411    | 421    | 647    | 932    | 805    | 935    | 514    | 412    | 373    | 525    |
| 16           | 473    | 506    | 361    | 414    | 559    | 1,130  | 876    | 929    | 498    | 412    | 372    | 527    |
| 17           | 418    | 549    | 334    | 423    | 642    | 1,030  | 911    | 897    | 487    | 411    | 372    | 547    |
| 18           | 397    | 513    | 334    | 500    | 666    | 946    | 910    | 857    | 492    | 410    | 372    | 573    |
| 19           | 399    | 506    | 331    | 1,190  | 637    | 889    | 927    | 806    | 490    | 413    | 373    | 572    |
| 20           | 397    | 496    | 331    | 1,260  | 660    | 920    | 998    | 777    | 478    | 411    | 371    | 570    |
| 21           | 442    | 516    | 329    | 1,180  | 821    | 866    | 1,030  | 748    | 471    | 407    | 371    | 562    |
| 22           | 519    | 648    | 319    | 963    | 1,120  | 863    | 1,080  | 807    | 476    | 406    | 370    | 556    |
| 23           | 462    | 634    | 309    | 818    | 1,070  | 832    | 1,170  | 794    | 536    | 389    | 370    | 563    |
| 24           | 465    | 594    | 309    | 843    | 969    | 814    | 1,260  | 829    | 561    | 381    | 370    | 566    |
| 25           | 464    | 582    | 314    | 1,190  | 928    | 799    | 1,240  | 803    | 539    | 389    | 369    | 565    |
| 26           | 464    | 544    | 311    | 1,240  | 858    | 767    | 1,270  | 765    | 511    | 389    | 369    | 565    |
| 27           | 463    | 552    | 323    | 1,060  | 815    | 729    | 1,210  | 730    | 468    | 389    | 368    | 566    |
| 28           | 455    | 566    | 708    | 932    | 786    | 735    | 1,150  | 690    | 468    | 387    | 367    | 565    |
| 29           | 461    | 542    | 910    | 879    | 770    | 804    | 1,120  | 654    | 463    | 386    | 378    | 564    |
| 30           | 455    | 543    | 1,360  | 940    | ---    | 1,440  | 1,220  | 616    | 462    | 386    | 368    | 564    |
| 31           | 461    | ---    | 880    | 836    | ---    | 1,360  | ---    | 590    | ---    | 385    | 364    | ---    |
| <b>Total</b> | 13,423 | 14,810 | 15,082 | 22,849 | 21,662 | 25,748 | 29,843 | 28,148 | 16,679 | 12,810 | 11,599 | 14,780 |
| <b>Mean</b>  | 433    | 494    | 487    | 737    | 747    | 831    | 995    | 908    | 556    | 413    | 374    | 493    |
| <b>Max</b>   | 519    | 648    | 1,360  | 1,260  | 1,120  | 1,440  | 1,270  | 1,230  | 716    | 464    | 383    | 573    |
| <b>Min</b>   | 379    | 379    | 309    | 414    | 559    | 639    | 800    | 590    | 462    | 381    | 364    | 365    |
| <b>Ac-ft</b> | 26,620 | 29,380 | 29,920 | 45,320 | 42,970 | 51,070 | 59,190 | 55,830 | 33,080 | 25,410 | 23,010 | 29,320 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2012, BY WATER YEAR (WY)**

|             | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>Mean</b> | 370    | 467    | 540    | 568    | 557    | 551    | 615    | 669    | 520    | 364    | 326    | 345    |
| <b>Max</b>  | 527    | 811    | 1,047  | 1,199  | 1,433  | 1,377  | 1,024  | 1,331  | 1,329  | 743    | 485    | 619    |
| <b>(WY)</b> | (1997) | (1910) | (1965) | (1923) | (1996) | (1972) | (1997) | (1949) | (1917) | (1916) | (1916) | (1996) |
| <b>Min</b>  | 236    | 263    | 265    | 255    | 228    | 256    | 297    | 279    | 236    | 213    | 218    | 215    |
| <b>(WY)</b> | (1982) | (1931) | (1994) | (1977) | (2001) | (2001) | (2001) | (1994) | (2001) | (2005) | (1994) | (1994) |

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SUMMARY STATISTICS

|                                 | Calendar Year 2011 |        | Water Year 2012 |        | Water Years 1910 - 2012 |              |
|---------------------------------|--------------------|--------|-----------------|--------|-------------------------|--------------|
| <b>Annual total</b>             | 206,851            |        | 227,433         |        |                         |              |
| <b>Annual mean</b>              | 567                |        | 621             |        | 486                     |              |
| <b>Highest annual mean</b>      |                    |        |                 |        | 739                     | 1996         |
| <b>Lowest annual mean</b>       |                    |        |                 |        | 286                     | 2001         |
| <b>Highest daily mean</b>       | 2,230              | Jan 16 | 1,440           | Mar 30 | 4,360                   | Jan 7, 1923  |
| <b>Lowest daily mean</b>        | 309                | Dec 23 | 309             | Dec 23 | 170                     | Feb 25, 2001 |
| <b>Annual seven-day minimum</b> | 316                | Dec 21 | 316             | Dec 21 | 193                     | Mar 5, 2001  |
| <b>Annual runoff (ac-ft)</b>    | 410,300            |        | 451,100         |        | 352,000                 |              |
| <b>10 percent exceeds</b>       | 764                |        | 999             |        | 747                     |              |
| <b>50 percent exceeds</b>       | 534                |        | 544             |        | 432                     |              |
| <b>90 percent exceeds</b>       | 375                |        | 374             |        | 279                     |              |

