

## UPPER MISSISSIPPI RIVER MAIN STEM--Continued

05287890 ELM CREEK NEAR CHAMPLIN, MN—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1988 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

| Date      | Time | Sample type      | Gage height, feet (00065) | Instantaneous discharge, cfs (00061) | Barometric pressure, mm Hg (00025) | Dissolved oxygen, mg/L (00300) | Disolved oxygen, percent of saturation (00301) | pH, water, unfltrd field, std units (00400) | Spec. conductance, wat unf 25 degC (00095) uS/cm (00095) | Temperature, air, deg C (00020) | Temperature, water, deg C (00010) | Chloride, water, fltrd, mg/L (00940) |
|-----------|------|------------------|---------------------------|--------------------------------------|------------------------------------|--------------------------------|--|---|--|---------------------------------|-----------------------------------|--------------------------------------|
| OCT 30... | 1030 | Environmental    | 6.24                      | 100                                  | 748                                | 9.3                            | 74   | 7.7   | 438  | 5.0                             | 4.5                               | 30.8                                 |
| NOV 14... | 1030 | Environmental    | 4.95                      | 52                                   | 745                                | 11.0                           | 81   | 7.7   | 456  | -2.0                            | 1.6                               | 34.2                                 |
| DEC 31... | 1010 | Environmental    | 3.84                      | 7.0                                  | 743                                | 11.1                           | 78   | 7.7   | 686  | 6.0                             | -0.2                              | 42.2                                 |
| JAN 16... | 0930 | Environmental    | 3.62                      | 6.9                                  | 749                                | 8.9                            | 62   | 7.4   | 734  | -8.0                            | -0.2                              | 32.0                                 |
| FEB 13... | 1055 | Environmental    | 3.38                      | 2.5                                  | 746                                | 9.2                            | 64   | 7.6   | 709  | 1.0                             | -0.2                              | 21.8                                 |
| MAR 21... | 1030 | Environmental    | 5.72                      | 92                                   | 734                                | 10.2                           | 73   | 7.5   | 424  | 2.0                             | 0.2                               | 57.7                                 |
| APR 07... | 1100 | Environmental    | 4.42                      | 30                                   | 750                                | 11.7                           | 87   | 7.8   | 512  | 7.0                             | 2.0                               | 54.5                                 |
| APR 16-18 | 0123 | Composite (time) | 7.58                      | --                                   | --                                 | --                             | --   | 8.1   | 557  | --                              | --                                | 68.6                                 |
| MAY 05... | 1320 | Environmental    | 4.78                      | 44                                   | 730                                | 8.8                            | 82   | 7.8   | 574  | 10.0                            | 10.1                              | 56.0                                 |
| MAY 11-12 | 0100 | Composite (time) | 7.08                      | --                                   | --                                 | --                             | --   | 7.2   | 526  | --                              | --                                | 59.8                                 |
| JUN 20... | 0920 | Environmental    | 3.92                      | 15                                   | 742                                | 7.0                            | 76   | 7.8   | 569  | 26.0                            | 18.0                              | 41.3                                 |
| JUN 25-27 | 0100 | Composite (time) | --                        | --                                   | --                                 | --                             | --   | 7.4   | 312  | --                              | --                                | 28.5                                 |
| JUL 21... | 0940 | Environmental    | 4.60                      | 37                                   | 739                                | 5.2                            | 61   | 7.3   | 451  | 22.0                            | 21.1                              | 30.1                                 |
| AUG 04... | 1220 | Environmental    | 3.71                      | 8.2                                  | 742                                | 6.5                            | 70   | 7.9   | 523  | 21.0                            | 17.9                              | 27.1                                 |
| SEP 25... | 1130 | Environmental    | 3.42                      | 3.5                                  | 745                                | 7.6                            | 69   | 7.7   | 660  | 12.0                            | 9.5                               | 19.2                                 |

| Date      | Residue total at 105 deg. C, suspended, mg/L (00530) | Residue volatile, suspended, mg/L (00535) | Ammonia + org-N, water, unfltrd mg/L as N (00625) | Ammonia water, fltrd, mg/L as N (00608) | Nitrite + nitrate water fltrd, mg/L as N (00631) | Nitrite water, fltrd, mg/L as N (00613) | Phosphorus, water, fltrd, mg/L (00666) | Phosphorus, water, unfltrd mg/L (00665) | COD, high level, water, unfltrd mg/L (00340) |
|-----------|--|---|---|---|--|---|--|---|--|
| OCT 30... | <10  | <10                                       | 0.83  | <0.04                                   | 0.32   | 0.009                                   | 0.05                                   | 0.06                                    | 20   |
| NOV 14... | <10  | <10                                       | 1.0   | E.03                                    | 0.18   | E.005                                   | E.04                                   | 0.06                                    | 30   |
| DEC 31... | <10  | <10                                       | 0.99  | 0.19                                    | 0.13   | E.004                                   | E.03                                   | 0.09                                    | 20   |
| JAN 16... | <10  | <10                                       | 0.91  | 0.21                                    | 0.08   | <0.008                                  | E.02                                   | 0.06                                    | 20   |
| FEB 13... | <10  | <10                                       | 0.75  | 0.41                                    | 0.07   | <0.008                                  | E.03                                   | E.04                                    | --   |
| MAR 21... | 16   | <10                                       | 4.0   | 1.51                                    | 1.54   | 0.086                                   | 0.35                                   | 0.51                                    | 60   |
| APR 07... | 15   | <10                                       | 1.9   | 0.56                                    | 0.39   | 0.021                                   | 0.05                                   | 0.17                                    | 40   |
| APR 16-18 | 24   | --  | 1.7   | <0.04                                   | 0.80   | 0.030                                   | 0.08                                   | 0.18                                    | 50   |
| MAY 05... | <10  | <10                                       | 1.4   | 0.09                                    | E.04   | E.006                                   | 0.07                                   | 0.14                                    | 40   |
| MAY 11-12 | 29   | --  | 1.4   | E.04                                    | 0.49   | 0.013                                   | 0.08                                   | 0.16                                    | 50   |
| JUN 20... | <10  | <10                                       | 1.3   | 0.07                                    | 0.10   | E.007                                   | 0.20                                   | 0.27                                    | 50   |
| JUN 25-27 | 128  | --  | 1.8   | E.03                                    | 1.33   | 0.075                                   | 0.22                                   | 0.45                                    | 60   |
| JUL 21... | 14   | <10                                       | 1.4   | E.04                                    | 0.17   | 0.034                                   | 0.22                                   | 0.34                                    | 40   |
| AUG 04... | <10  | <10                                       | 1.1   | <0.04                                   | <0.06  | <0.008                                  | 0.17                                   | 0.23                                    | 60   |
| SEP 25... | <10  | <10                                       | 0.53  | 0.04                                    | E.04   | E.004                                   | 0.05                                   | 0.11                                    | 20   |

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