

# **Upper White River Basin Project**

## **Water Quality Data Report**

**Funded by the Upper White River Basin Foundation**

**Ozarks Environmental and Water Resources Institute  
at Missouri State University**

**August 23, 2006**

## INTRODUCTION

The Upper White River Basin (UWRB), located in the Ozarks Plateaus region of southwest Missouri and northwest Arkansas, has become increasingly vulnerable to water quality degradation due to rapid population increases in the region. The UWRB ( $\approx 21,000 \text{ km}^2$ ) covers 21 counties in Missouri and Arkansas and includes the cities of Springfield, MO., Branson, MO., Ozark, MO., Nixa, MO., and Fayetteville, AR. within its boundary. These areas represent some of the fastest growing areas in the country. Moreover, the UWRB is home to three large reservoirs; Beaver, Table Rock, and Bull Shoals Reservoirs, that are key components of the areas tourism industry. Since the local economy relies on the quality of the water in the rivers and lakes, area businesses and leaders have concerns about nutrients from both urban and rural sources and have expressed the need to take steps to protect water quality.

In an effort to improve the capacity to develop watershed management plans work toward protecting water quality within the UWRB the Upper White River Basin Foundation received a Watershed Initiative grant from the Environmental Protection Agency. A component of this effort is for The Upper White River Basin Foundation along with the Ozarks Environmental and Water Resources Institute at Missouri State University in cooperation with the Arkansas Water Resources Center at the University of Arkansas to develop baseline water quality data for the UWRB that focuses on nutrients. The results of this project, along with a brief description of the sample collection and analytical methods are described in this report.

## METHODS

This section describes methods used for water quality sample collection and water quality analysis. For more details on these methods the approved QAPP and SOPs for this project are available on our website at <http://www.oewri.missouristate.edu> .

### Sample Collection

This project sampled 19 USGS gaging stations once a month between March, 2005 and February, 2006 during baseflow conditions for both nutrients and water chemistry. Water chemistry was measured at each site by a Horbia U22 multi-probe meter. Water chemistry parameters measured were temperature, dissolved oxygen, turbidity, conductivity, and pH. Grab samples were collected at each site in 500mL containers, preserved and cooled in the field.

### Nutrient Analysis

Samples were analyzed at Missouri State University Chemistry Laboratory. Total nitrogen (TN) was analyzed by a Hitachi UV-2001 Spectrophotometer and total phosphorus (TP) was analyzed by a Spectronic Genesys 20 Spectrophotometer. Average detection limits for TN was 0.2 mg/L and for TP was 3 ug/L with accuracy being + or - 20%.

## **WATER QUALITY DATA**

### **Sample Sites**

This study sampled water quality at 19 USGS gaging stations within the UWRB (Map 1). The data sheets provides the project site number, the USGS gage number, location description of the site, 8 digit HUC name/code, and historical hydrology records for that site. All discharge data are presented in cubic meters per second ( $m^3/s$ ).

### **Data by Site**

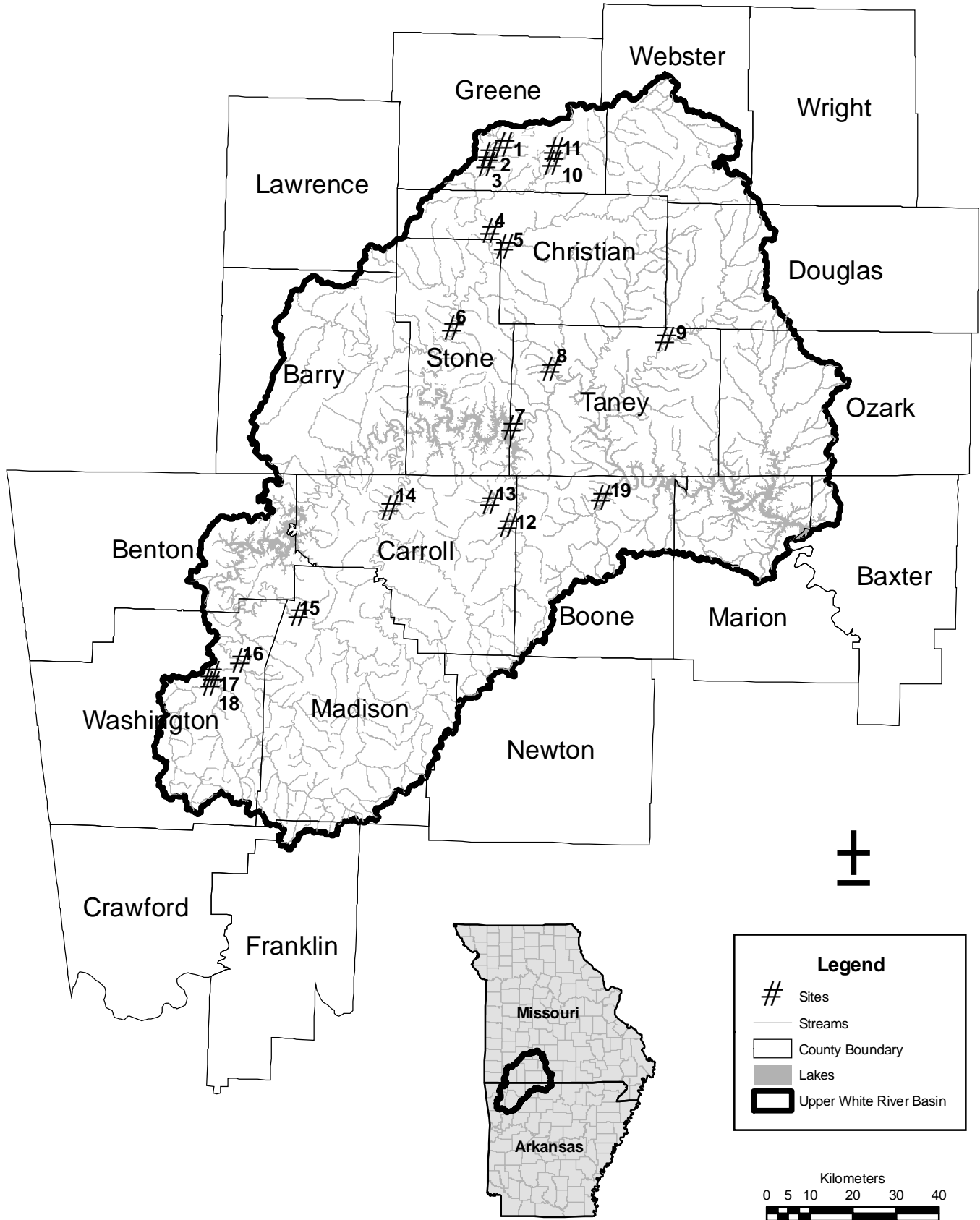
Data sheets are available for each site describing each parameter measured at that site during this study along with summary statistics. This includes the date and time the sample was collected, the data value for that parameter, and the discharge ( $m^3/s$ ) at the time the sample was collected. Data collected in the spring and fall has been highlighted for the reader to make seasonal comparisons. Viewing data by site allows the reader to compare parameter data within a site.

### **Data by Parameter**

Data sheets are available for each parameter showing all sites for each sampling date along with summary statistics. These sheets include detection limits and accuracy information for nutrient analysis. Data collected in the spring and fall has been highlighted for the reader to make seasonal comparisons. Viewing data by parameter allows the reader to compare a particular parameter between sites.

# Upper White River Basin

## Water Quality Sampling Sites



### Sample Site Descriptions with Hydrology Data

| Site # | Location                         | USGS Gage # | HUC Name              | HUC #    | A <sub>d</sub> km <sup>2</sup> | Start Year | Yrs of Record | Low Flow on Record (m <sup>3</sup> /s) | Date of Low Flow | 90% Exceeds (m <sup>3</sup> /s) | 50% Exceeds (m <sup>3</sup> /s) | Mean (m <sup>3</sup> /s) | 10% Exceeds (m <sup>3</sup> /s) | Max Flow on Record (m <sup>3</sup> /s) | Date of Max Flow |
|--------|----------------------------------|-------------|-----------------------|----------|--------------------------------|------------|---------------|--|------------------|---------------------------------|---------------------------------|--------------------------|---------------------------------|--|------------------|
| 1      | Wilson C. at Scenic Ave. MO      | 7052000     | James River           | 11010002 | 46                             | 1932       | 17            | 0.009                                  | 9/29/2004        | 0.08                            | 0.24                            | 0.52                     | 1.05                            | 191                                    | 7/12/2000        |
| 2      | Wilson C. at Co Rd. 156 MO       | 7052100     | James River           | 11010002 | 81                             | 1972       | 17            | 0.000                                  | many             | 0.00                            | 0.16                            | 0.59                     | 1.25                            | 155                                    | 7/12/2000        |
| 3      | Wilson C. below WWT plant MO     | 7052152     | James River           | 11010002 | 116                            | 2001       | 4             | 0.028                                  | 4/13/2004        | 0.96                            | 1.25                            | 1.76                     | 2.41                            | unk                                    | 5/8/2002         |
| 4      | James R. Boaz MO                 | 7052250     | James River           | 11010002 | 1,197                          | 1972       | 12            | 0.991                                  | 9/19/2002        | 1.90                            | 6.74                            | 14.39                    | 30.30                           | 615                                    | 5/8/2002         |
| 5      | Finley C. Riverdale Rd. MO       | 7052345     | James River           | 11010002 | 676                            | 2001       | 4             | 0.309                                  | 8/28/2003        | 0.68                            | 2.55                            | 5.95                     | 12.26                           | 606                                    | 5/8/2002         |
| 6      | James R. Galena MO               | 7052500     | James River           | 11010002 | 2,556                          | 1921       | 84            | 0.283                                  | 9/20/1954        | 3.43                            | 12.06                           | 27.73                    | 60.32                           | 2,073                                  | 9/25/1993        |
| 7      | Below TableRock Dam MO           | 7053400     | Beaver Reservoir      | 10010001 | 10,412                         | 1956       | 49            | na                                     | na               | na                              | na                              | na                       | na                              | na                                     | na               |
| 8      | Bull C. Walnut Shade MO          | 7053810     | Bull Shoals Reservoir | 11010003 | 495                            | 1994       | 10            | 0.004                                  | 9/13/2004        | 0.16                            | 1.90                            | 5.92                     | 12.77                           | unk                                    | 5/8/2002         |
| 9      | Beaver C. Bradleyville MO        | 7054080     | Bull Shoals Reservoir | 11010003 | 772                            | 1994       | 11            | 0.396                                  | 9/7/2001         | 0.82                            | 2.80                            | 7.53                     | 16.51                           | 589                                    | 5/8/2002         |
| 10     | James R. Kinser Bridge MO        | 7050700     | James River           | 11010002 | 637                            | 1955       | 50            | 0.003                                  | 9/16/1956        | 0.34                            | 2.07                            | 6.54                     | 14.05                           | 1,164                                  | 9/25/1993        |
| 11     | Pearson C. D Hwy. MO             | 7050690     | James River           | 11010002 | 54                             | 1999       | 6             | 0.040                                  | 9/7/2002         | 0.09                            | 0.26                            | 0.57                     | 1.13                            | 62                                     | 7/12/2000        |
| 12     | Long C. Denver AR                | 7053207     | Beaver Reservoir      | 11010001 | 269                            | 2001       | 3             | 0.088                                  | 8/11/2003        | 0.21                            | 1.22                            | 2.86                     | 4.70                            | 476                                    | 6/10/2002        |
| 13     | Yocum C. off Hwy 311 AR          | 7053250     | Beaver Reservoir      | 11010001 | 137                            | 1993       | 12            | 0.065                                  | 2/9/1998         | 0.22                            | 0.54                            | 1.28                     | 2.92                            | 266                                    | 4/24/2004        |
| 14     | Kings R. Berryville AR           | 7050500     | Beaver Reservoir      | 11010001 | 1,365                          | 1939       | 46            | 0.003                                  | 8/27/1954        | 0.59                            | 4.98                            | 16.26                    | 36.82                           | 1,869                                  | 11/19/1985       |
| 15     | War Eagle C. Hiland AR           | 7049000     | Beaver Reservoir      | 11010001 | 681                            | 1952       | 45            | 0.006                                  | 8/18/1954        | 0.28                            | 2.21                            | 7.90                     | 16.23                           | 1,388                                  | 11/19/1985       |
| 16     | Richland C. Goshen AR            | 7048800     | Beaver Reservoir      | 11010001 | 357                            | 1998       | 7             | 0.010                                  | 9/3/2005         | 0.05                            | 1.33                            | 4.87                     | 8.84                            | 2,172                                  | 4/24/2004        |
| 17     | White R. Fayetteville AR         | 7048600     | Beaver Reservoir      | 11010001 | 1,036                          | 1963       | 38            | 0.002                                  | 10/22/1991       | 0.18                            | 4.96                            | 15.58                    | 35.40                           | 3,965                                  | 4/24/2004        |
| 18     | W. Fork White R. Fayetteville AR | 7048550     | Beaver Reservoir      | 11010001 | 319                            | 2001       | 4             | 0.000                                  | 1/1/2003         | 0.10                            | 1.27                            | 5.15                     | 8.69                            | 1,696                                  | 4/24/2004        |
| 19     | Bear C. Hwy 14 Omaha AR          | 7054410     | Bull Shoals Reservoir | 11010003 | 344                            | 2001       | 3             | 0.028                                  | 8/21/2003        | 0.22                            | 1.05                            | 3.31                     | 5.66                            | 532                                    | 4/24/2004        |

**Notes**

na = Data not applicable due to reservoir releases

unk = Unknown Q at high flows

A<sub>d</sub> = Drainage Area (km<sup>2</sup>)

Discharge Records are provided in m<sup>3</sup>/s

Conversion Factors:

1 m<sup>3</sup>/s = 35.31 ft<sup>3</sup>/s

1 m<sup>3</sup>/s = 22.83 million gallons/day

Site 1 Wilson C. at Scenic Ave. MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 11:03:32 | 2.45      | 16.8     | 7.4 | 0.73        | 7.2       | 13.1     | 9.2       | 0.18   |
| 4/15/2005  | 11:46:54 | 1.95      | 23.3     | 7.7 | 0.76        | 7.8       | 12.0     | 15.1      | 0.31   |
| 5/14/2005  | 13:46:14 | 0.98      | 60.2     | 7.8 | 0.31        | 12        | 8.7      | 19.5      | 2.92   |
| 6/4/2005   | 13:31:50 | 1.21      | 29.6     | 8.0 | 1.08        | 18        | 13.7     | 23.1      | 0.10   |
| 7/9/2005   | 10:36:36 | 1.12      | 97.3     | 7.8 | 0.76        | 5.5       | 6.1      | 22.3      | 0.05   |
| 8/1/2005   | 10:12:38 | 1.10      | 42.8     | 7.4 | 0.68        | 7.1       | 4.5      | 22.9      | 0.04   |
| 9/9/2005   | 11:29:12 | 0.91      | 79.2     | 7.6 | 0.70        | 6.8       | 6.0      | 21.4      | 0.04   |
| 10/1/2005  | 12:00:50 | 1.76      | 194.2    | 7.4 | 0.72        | 31.3      | 7.7      | 16.4      | 0.07   |
| 11/12/2005 | 10:25:14 | 0.82      | 31.0     | 7.4 | 0.87        | 5.8       | 5.2      | 11.9      | 0.91   |
| 12/17/2005 | 10:33:50 | 1.27      | 74.8     | 6.5 | 0.99        | 6.2       | 11.5     | 2.5       | 0.06   |
| 1/14/2006  | 11:25:58 | 1.23      | < 2.8    | 7.1 | 0.70        | 44.5      | 7.8      | 3.9       | 0.08   |
| 2/4/2006   | 11:11:58 | 1.54      | 21.6     | 7.0 | 0.78        | 61.1      | 8.9      | 4.1       | 0.06   |
|            | Mean     | 1.36      | 61.0     | 7.4 | 0.76        | 17.8      | 8.8      | 14.4      | 0.40   |
|            | Min      | 0.82      | 16.8     | 6.5 | 0.31        | 5.5       | 4.5      | 2.5       | 0.04   |
|            | Max      | 2.45      | 194.2    | 8.0 | 1.08        | 61.1      | 13.7     | 23.1      | 2.92   |
|            | Median   | 1.22      | 42.8     | 7.4 | 0.74        | 7.5       | 8.2      | 15.7      | 0.08   |
|            | Std-dev  | 0.48      | 51.7     | 0.4 | 0.19        | 18.3      | 3.1      | 7.9       | 0.83   |
|            | Cv%      | 35        | 85       | 5   | 25          | 103       | 36       | 55        | 206    |

Shaded areas represent spring and fall samples

Site 2 Wilson C. at Co Rd. 156 MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 11:29:00 | 2.30      | 13.0     | 8.0 | 0.67        | 6.1       | 13.6     | 9.7       | 0.001  |
| 4/15/2005  | 11:29:16 | 1.87      | 17.6     | 8.2 | 0.70        | 7.8       | 13.7     | 14.0      | 0.20   |
| 5/14/2005  | 13:28:12 | 0.96      | 72.0     | 7.9 | 0.27        | 15.3      | 8.8      | 19.6      | 2.83   |
| 6/4/2005   | 14:18:06 | 0.56      | 94.1     | 8.2 | 0.86        | 11.7      | 9.7      | 25.5      | 0.001  |
| 7/9/2005   | 10:51:52 | 2.26      | 61.1     | 8.0 | 0.35        | 15.3      | 8.1      | 21.7      | 0.001  |
| 8/1/2005   | 10:32:52 | 0.83      | 105.3    | 7.9 | 0.35        | 8.8       | 6.7      | 22.8      | 0.001  |
| 9/9/2005   | 12:05:18 | NS        | NS       | NS  | NS          | NS        | NS       | NS        | NS     |
| 10/1/2005  | 12:24:06 | 0.55      | 31.2     | 8.2 | 0.66        | 19.5      | 9.5      | 19.2      | 0.001  |
| 11/12/2005 | 10:48:28 | 0.68      | 186.0    | 7.3 | 0.90        | 6.7       | 0.0      | 10.6      | 0.31   |
| 12/17/2005 | 10:50:16 | 0.77      | 37.6     | 6.6 | 0.90        | 6.4       | 17.6     | 3.9       | 0.001  |
| 1/14/2006  | 11:43:20 | 1.12      | < 2.8    | 7.9 | 0.72        | 30.3      | 7.8      | 4.4       | 0.001  |
| 2/4/2006   | 11:32:42 | 0.88      | 32.0     | 8.2 | 0.30        | 77.9      | 11.1     | 4.1       | 0.001  |
|            | Mean     | 1.16      | 65.0     | 7.9 | 0.61        | 18.7      | 9.7      | 14.1      | 0.30   |
|            | Min      | 0.55      | 13.0     | 6.6 | 0.27        | 6.1       | 0.0      | 3.9       | 0.001  |
|            | Max      | 2.30      | 186.0    | 8.2 | 0.90        | 77.9      | 17.6     | 25.5      | 2.83   |
|            | Median   | 0.88      | 49.3     | 8.0 | 0.67        | 11.7      | 9.5      | 14.0      | 0.001  |
|            | Std-dev  | 0.66      | 52.8     | 0.5 | 0.25        | 20.9      | 4.5      | 8.1       | 0.84   |
|            | CV%      | 57        | 81       | 6   | 41          | 112       | 47       | 57        | 277    |

NS = No Sample

Shaded areas represent spring and fall samples

Site 3 Wilson C. below WWT plant MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 11:52:50 | 12.40     | 123.7    | 7.4 | 0.96        | 4.0       | 21.7     | 13.4      | 1.33   |
| 4/15/2005  | 11:05:02 | 2.49      | 80.1     | 7.4 | 0.84        | 18.4      | 17.0     | 15.2      | 1.87   |
| 5/14/2005  | 13:04:24 | 12.93     | 250.6    | 7.3 | 0.56        | 25.1      | 18.5     | 18.8      | 3.54   |
| 6/4/2005   | 14:49:16 | 7.47      | 325.2    | 8.2 | 0.47        | 18.5      | 10.1     | 25.1      | 1.10   |
| 7/9/2005   | 11:11:58 | 21.30     | 206.1    | 7.6 | 1.15        | 4.9       | 14.3     | 22.6      | 1.02   |
| 8/1/2005   | 11:01:40 | 17.67     | 223.9    | 7.5 | 0.96        | 16.9      | 15.3     | 23.2      | 1.05   |
| 9/9/2005   | 12:47:04 | 10.67     | 156.2    | 8.1 | 1.00        | 12.2      | 16.1     | 23.3      | 1.08   |
| 10/1/2005  | 12:42:48 | 13.98     | 193.4    | 7.9 | 1.10        | 16.8      | 14.0     | 23.2      | 0.91   |
| 11/12/2005 | 11:16:42 | 6.81      | 264.9    | 7.5 | 1.52        | 0.0       | 15.1     | 20.3      | 0.96   |
| 12/17/2005 | 11:03:26 | 8.00      | 138.0    | 6.7 | 1.23        | 0.3       | 20.0     | 15.1      | 0.93   |
| 1/14/2006  | 11:56:22 | 11.50     | 34.8     | 7.7 | 1.25        | 31.8      | 15.9     | 14.8      | 0.71   |
| 2/4/2006   | 11:48:26 | 15.90     | 100.0    | 7.3 | 0.90        | 29.0      | 16.3     | 14.8      | 0.91   |
|            | Mean     | 11.76     | 174.7    | 7.5 | 0.99        | 14.8      | 16.2     | 19.1      | 1.28   |
|            | Min      | 2.49      | 34.8     | 6.7 | 0.47        | 0.0       | 10.1     | 13.4      | 0.71   |
|            | Max      | 21.30     | 325.2    | 8.2 | 1.52        | 31.8      | 21.7     | 25.1      | 3.54   |
|            | Median   | 11.95     | 174.8    | 7.5 | 0.98        | 16.9      | 16.0     | 19.5      | 1.03   |
|            | Std-dev  | 5.17      | 84.6     | 0.4 | 0.29        | 10.8      | 3.0      | 4.3       | 0.77   |
|            | CV%      | 44        | 48       | 5   | 29          | 73        | 19       | 22        | 60     |

Shaded areas represent spring and fall samples



Site 4 James R. Boaz MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 13:02:22 | 2.37      | 35.1     | 8.4 | 0.60        | 5.6       | 17.0     | 13.3      | 9.94   |
| 4/15/2005  | 10:20:20 | 1.61      | 43.3     | 7.8 | 0.50        | 19.0      | 9.8      | 15.3      | 19.74  |
| 5/14/2005  | 11:14:48 | 4.21      | 172.3    | 7.9 | 0.61        | 31.2      | 8.7      | 20.4      | 9.37   |
| 6/4/2005   | 15:28:46 | 4.45      | 201.9    | 8.4 | 0.56        | 11.3      | 10.6     | 26.9      | 2.61   |
| 7/9/2005   | 18:19:30 | 14.58     | 326.9    | 8.2 | 0.92        | 9.3       | 9.0      | 28.1      | 2.04   |
| 8/1/2005   | 11:49:16 | 5.23      | 237.1    | 7.9 | 0.95        | 11.7      | 7.8      | 25.5      | 1.44   |
| 9/9/2005   | 13:23:04 | 4.12      | 184.7    | 8.1 | 0.50        | 2.8       | 9.2      | 24.1      | 1.64   |
| 10/1/2005  | 13:36:28 | 5.10      | 115.7    | 8.2 | 0.83        | 23.7      | 9.2      | 18.5      | 2.41   |
| 11/12/2005 | 12:09:26 | 9.37      | 89.9     | 7.9 | 1.11        | 6.9       | 9.2      | 12.9      | 2.24   |
| 12/17/2005 | 11:35:56 | 8.75      | 33.3     | 7.9 | 0.90        | 10.5      | 15.6     | 3.4       | 1.87   |
| 1/14/2006  | 12:35:22 | 7.35      | 12.3     | 8.2 | 1.00        | 23.7      | 9.8      | 5.6       | 2.86   |
| 2/4/2006   | 12:25:06 | 7.84      | 51.3     | 7.4 | 0.85        | 55.2      | 10.8     | 6.7       | 3.14   |
|            | Mean     | 6.25      | 125.3    | 8.0 | 0.78        | 17.6      | 10.6     | 16.7      | 4.94   |
|            | Min      | 1.61      | 12.3     | 7.4 | 0.50        | 2.8       | 7.8      | 3.4       | 1.44   |
|            | Max      | 14.58     | 326.9    | 8.4 | 1.11        | 55.2      | 17.0     | 28.1      | 19.74  |
|            | Median   | 5.16      | 102.8    | 8.0 | 0.84        | 11.5      | 9.5      | 16.9      | 2.51   |
|            | Std-dev  | 3.57      | 98.9     | 0.3 | 0.21        | 14.6      | 2.8      | 8.6       | 5.49   |
|            | CV%      | 57        | 79       | 4   | 27          | 83        | 27       | 51        | 111    |

Shaded areas represent spring and fall samples

Site 5 Finley C. Riverdale Rd. MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 13:30:02 | 1.50      | 8.2      | 8.3 | 0.41        | 3.1       | 16.1     | 10.8      | 6.46   |
| 4/15/2005  | 9:48:34  | 1.07      | 14.0     | 8.0 | 0.38        | 11.2      | 10.7     | 12.6      | 11.67  |
| 5/14/2005  | 10:40:02 | 1.05      | 47.5     | 7.9 | 0.39        | 12.6      | 8.6      | 18.1      | 6.32   |
| 6/4/2005   | 16:16:02 | 0.56      | 36.7     | 7.9 | 0.32        | 93.1      | 11.6     | 8.5       | 1.23   |
| 7/9/2005   | 18:45:18 | 1.02      | 25.7     | 8.0 | 0.50        | 6.5       | 9.2      | 27.1      | 0.49   |
| 8/1/2005   | 12:30:26 | 1.09      | 29.6     | 7.9 | 0.49        | 10.5      | 9.6      | 26.2      | 0.54   |
| 9/9/2005   | 14:00:28 | 0.69      | 50.7     | 8.6 | 0.68        | 0.0       | 10.6     | 26.3      | 0.50   |
| 10/1/2005  | 14:32:28 | 0.97      | 39.4     | 8.2 | 0.48        | 17.9      | 8.9      | 19.7      | 0.86   |
| 11/12/2005 | 13:05:58 | 1.24      | 43.8     | 7.7 | 0.61        | 2.7       | 9.0      | 13.3      | 0.81   |
| 12/17/2005 | 12:11:24 | 1.01      | 17.6     | 8.3 | 0.69        | 2.2       | 16.2     | 3.1       | 0.51   |
| 1/14/2006  | 13:03:50 | 1.37      | < 2.8    | 8.3 | 0.58        | 24.8      | 10.4     | 4.4       | 0.48   |
| 2/4/2006   | 12:55:00 | 1.08      | 22.0     | 8.1 | 0.49        | 44.1      | 11.2     | 5.5       | 0.47   |
|            | Mean     | 1.05      | 30.5     | 8.1 | 0.50        | 19.1      | 11.0     | 14.6      | 2.53   |
|            | Min      | 0.56      | 8.2      | 7.7 | 0.32        | 0.0       | 8.6      | 3.1       | 0.47   |
|            | Max      | 1.50      | 50.7     | 8.6 | 0.69        | 93.1      | 16.2     | 27.1      | 11.67  |
|            | Median   | 1.06      | 29.6     | 8.1 | 0.49        | 10.9      | 10.5     | 12.9      | 0.68   |
|            | Std-dev  | 0.26      | 14.2     | 0.3 | 0.12        | 26.4      | 2.6      | 8.8       | 3.64   |
|            | CV%      | 24        | 47       | 3   | 23          | 138       | 24       | 60        | 144    |

Shaded areas represent spring and fall samples

Site 6 James R. Galena MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 14:09:56 | 2.02      | 11.0     | 8.6 | 0.46        | 5.3       | 16.3     | 12.1      | 27.92  |
| 4/15/2005  | 9:13:46  | 1.50      | 35.4     | 7.9 | 0.43        | 13.6      | 8.6      | 13.6      | 59.18  |
| 5/14/2005  | 9:58:10  | 2.38      | 62.7     | 7.8 | 0.49        | 3.9       | 6.5      | 20.6      | 17.36  |
| 6/4/2005   | 18:33:24 | 1.40      | 91.1     | 8.3 | 0.53        | 6.7       | 8.9      | 25.6      | 5.83   |
| 7/9/2005   | 19:19:10 | 2.09      | 91.1     | 8.4 | 0.59        | 2.7       | 10.7     | 28.9      | 4.59   |
| 8/1/2005   | 13:07:50 | 4.72      | 124.6    | 8.4 | 0.73        | 2.7       | 10.1     | 28.3      | 3.71   |
| 9/9/2005   | 14:44:42 | 2.57      | 93.2     | 7.9 | 0.33        | 62.9      | 9.8      | 26.5      | 3.31   |
| 10/1/2005  | 15:56:40 | 2.93      | 81.6     | 8.5 | 0.61        | 18.1      | 9.8      | 20.7      | 4.73   |
| 11/12/2005 | 13:46:54 | 2.02      | 50.3     | 8.2 | 0.80        | 2.6       | 11.6     | 12.8      | 3.45   |
| 12/17/2005 | 12:43:14 | 1.06      | 6.9      | 8.7 | 0.97        | 2.1       | 16.9     | 2.2       | 3.37   |
| 1/14/2006  | 13:39:16 | 6.57      | 4.0      | 8.7 | 0.88        | 4.2       | 11.8     | 5.2       | 3.85   |
| 2/4/2006   | 13:37:06 | 3.89      | 20.6     | 8.6 | 0.60        | 46.2      | 12.1     | 6.8       | 5.10   |
|            | Mean     | 2.76      | 56.0     | 8.3 | 0.62        | 14.3      | 11.1     | 16.9      | 11.87  |
|            | Min      | 1.06      | 4.0      | 7.8 | 0.33        | 2.1       | 6.5      | 2.2       | 3.31   |
|            | Max      | 6.57      | 124.6    | 8.7 | 0.97        | 62.9      | 16.9     | 28.9      | 59.18  |
|            | Median   | 2.23      | 56.5     | 8.4 | 0.59        | 4.8       | 10.4     | 17.1      | 4.66   |
|            | Std-dev  | 1.59      | 40.6     | 0.3 | 0.19        | 19.8      | 3.0      | 9.4       | 16.68  |
|            | CV%      | 57        | 72       | 4   | 31          | 139       | 27       | 56        | 141    |

Shaded areas represent spring and fall samples

Site 7 Below Table Rock Dam MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 15:12:58 | 0.76      | 9.2      | 8.0 | 0.32        | 20.5      | 14.6     | 7.4       | 117.77 |
| 4/15/2005  | 8:26:20  | 0.69      | 7.2      | 7.9 | 0.32        | 11.4      | 8.6      | 8.2       | 121.14 |
| 5/14/2005  | 9:09:40  | 0.99      | 12.3     | 7.2 | 0.32        | 8.4       | 9.2      | 8.5       | 100.24 |
| 6/4/2005   | 19:16:56 | 0.67      | 7.0      | 8.2 | 0.44        | 4.6       | 8.8      | 7.3       | 86.17  |
| 7/9/2005   | 20:00:38 | 1.13      | 14.0     | 8.0 | 0.35        | 71.8      | 12.8     | 9.4       | 79.52  |
| 8/1/2005   | 14:08:32 | 1.13      | 13.1     | 7.8 | 0.32        | 71.6      | 9.5      | 9.2       | 62.31  |
| 9/9/2005   | 15:56:50 | 1.03      | 10.2     | 8.0 | 0.44        | 3.3       | 8.7      | 9.5       | 61.20  |
| 10/1/2005  | 16:50:24 | 0.99      | 8.6      | 7.8 | 0.32        | 25.5      | 7.9      | 10.5      | 52.12  |
| 11/12/2005 | 14:49:00 | 0.82      | 12.0     | 7.6 | 0.36        | 4.2       | 5.0      | 10.4      | 46.23  |
| 12/17/2005 | 13:45:54 | 0.48      | 8.3      | 8.5 | 0.41        | 3.1       | 12.1     | 9.5       | 26.22  |
| 1/14/2006  | 14:32:06 | 0.53      | 4.4      | 8.6 | 0.34        | 14.1      | 12.1     | 10.1      | 25.57  |
| 2/4/2006   | 14:45:26 | 1.00      | 24.6     | 8.6 | 0.29        | 32.8      | 12.3     | 9.7       | 26.51  |
|            | Mean     | 0.85      | 10.9     | 8.0 | 0.35        | 22.6      | 10.1     | 9.1       | 67.08  |
|            | Min      | 0.48      | 4.4      | 7.2 | 0.29        | 3.1       | 5.0      | 7.3       | 25.57  |
|            | Max      | 1.13      | 24.6     | 8.6 | 0.44        | 71.8      | 14.6     | 10.5      | 121.14 |
|            | Median   | 0.91      | 9.7      | 8.0 | 0.33        | 12.8      | 9.4      | 9.4       | 61.76  |
|            | Std-dev  | 0.23      | 5.2      | 0.4 | 0.05        | 24.8      | 2.7      | 1.1       | 34.20  |
|            | CV%      | 27        | 47       | 5   | 15          | 110       | 26       | 12        | 51     |

Shaded areas represent spring and fall samples

Site 8 Bull C. Walnut Shade MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 15:45:48 | 0.60      | 2.3      | 8.3 | 0.43        | 4.4       | 13.9     | 11.3      | 4.16   |
| 4/15/2005  | 15:39:56 | < 0.25    | < 1.2    | 8.4 | 0.45        | 10.6      | 13.9     | 15.6      | 6.51   |
| 5/14/2005  | 17:10:28 | 0.48      | 10.9     | 8.3 | 0.42        | 4.4       | 9.5      | 22.6      | 2.55   |
| 6/4/2005   | 10:49:44 | < 0.14    | < 3.2    | 7.9 | 0.49        | 11.0      | 6.4      | 22.1      | 0.62   |
| 7/10/2005  | 10:29:08 | 0.64      | 8.2      | 7.9 | 0.49        | 4.6       | 8.1      | 25.4      | 0.26   |
| 8/1/2005   | 14:39:28 | 0.31      | 10.6     | 7.9 | 0.43        | 3.4       | 7.9      | 28.3      | 0.15   |
| 9/9/2005   | 16:48:30 | < 0.23    | 11.2     | 8.4 | 0.49        | 8.0       | 8.7      | 26.7      | 0.04   |
| 10/1/2005  | 17:27:00 | 0.22      | 3.1      | 8.2 | 0.46        | 15.4      | 8.6      | 22.9      | 0.13   |
| 11/12/2005 | 15:37:00 | 0.15      | 7.4      | 7.9 | 0.57        | 0.1       | 8.4      | 12.6      | 0.25   |
| 12/17/2005 | 14:12:10 | 0.23      | 7.3      | 8.5 | 0.69        | 2.0       | 14.7     | 3.0       | 0.25   |
| 1/14/2006  | 15:13:16 | 0.17      | < 2.8    | 8.5 | 0.52        | 2.7       | 10.4     | 6.2       | 0.31   |
| 2/4/2006   | 15:15:38 | 1.09      | 11.3     | 8.3 | 0.51        | 33.9      | 11.5     | 6.8       | 1.64   |
|            | Mean     | 0.43      | 8.0      | 8.2 | 0.49        | 8.4       | 10.2     | 17.0      | 1.41   |
|            | Min      | 0.15      | 2.3      | 7.9 | 0.42        | 0.1       | 6.4      | 3.0       | 0.04   |
|            | Max      | 1.09      | 11.3     | 8.5 | 0.69        | 33.9      | 14.7     | 28.3      | 6.51   |
|            | Median   | 0.31      | 8.2      | 8.3 | 0.49        | 4.5       | 9.1      | 18.8      | 0.28   |
|            | Std-dev  | 0.31      | 3.4      | 0.2 | 0.07        | 9.2       | 2.7      | 8.8       | 2.04   |
|            | CV%      | 71        | 43       | 3   | 15          | 109       | 27       | 52        | 145    |

Shaded areas represent spring and fall samples

Site 9 Beaver C. Bradleyville MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 16:32:04 | 0.62      | 4.8      | 8.4 | 0.49        | 3.0       | 14.6     | 12.1      | 6.99   |
| 4/15/2005  | 14:49:54 | 0.69      | 9.0      | 8.3 | 0.47        | 7.3       | 13.4     | 15.5      | 17.61  |
| 5/14/2005  | 16:09:24 | 0.32      | 11.3     | 8.4 | 0.49        | 2.0       | 10.8     | 22.4      | 4.45   |
| 6/4/2005   | 10:33:34 | 0.40      | 8.9      | 8.1 | 0.58        | 22.1      | 8.8      | 19.5      | 2.01   |
| 7/10/2005  | 9:46:02  | 0.66      | 6.9      | 8.2 | 0.54        | 1.4       | 9.6      | 24.7      | 1.39   |
| 8/1/2005   | 15:29:50 | 0.22      | 14.6     | 8.4 | 0.49        | 5.7       | 9.8      | 29.3      | 0.82   |
| 9/9/2005   | 18:15:36 | < 0.23    | 24.7     | 7.9 | 0.53        | 13.7      | 8.6      | 23.0      | 0.71   |
| 10/1/2005  | 18:21:42 | 0.24      | 3.4      | 8.3 | 0.48        | 20.0      | 8.6      | 20.6      | 1.27   |
| 11/12/2005 | 16:29:48 | 0.15      | 10.6     | 8.1 | 0.57        | 7.3       | 10.1     | 14.0      | 0.79   |
| 12/17/2005 | 14:52:20 | 0.42      | 9.4      | 8.6 | 0.66        | 1.0       | 15.7     | 4.3       | 1.25   |
| 1/14/2006  | 15:54:10 | 0.45      | < 2.8    | 8.6 | 0.57        | 16.0      | 11.0     | 7.0       | 1.02   |
| 2/4/2006   | 15:58:04 | 0.88      | 13.6     | 8.3 | 0.53        | 25.2      | 12.0     | 7.6       | 2.21   |
|            | Mean     | 0.46      | 10.6     | 8.3 | 0.53        | 10.4      | 11.1     | 16.7      | 3.38   |
|            | Min      | 0.15      | 3.4      | 7.9 | 0.47        | 1.0       | 8.6      | 4.3       | 0.71   |
|            | Max      | 0.88      | 24.7     | 8.6 | 0.66        | 25.2      | 15.7     | 29.3      | 17.61  |
|            | Median   | 0.42      | 9.4      | 8.3 | 0.53        | 7.3       | 10.4     | 17.5      | 1.33   |
|            | Std-dev  | 0.23      | 5.7      | 0.2 | 0.06        | 8.7       | 2.4      | 7.9       | 4.85   |
|            | CV%      | 50        | 54       | 3   | 10          | 83        | 22       | 47        | 144    |

Shaded areas represent spring and fall samples

Site 10 James R. Kinser Bridge MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 17:36:18 | 0.56      | 6.1      | 8.3 | 0.42        | 7.1       | 15.3     | 10.4      | 3.26   |
| 4/15/2005  | 13:28:38 | 1.01      | 12.9     | 8.1 | 0.40        | 9.0       | 13.2     | 13.9      | 7.08   |
| 5/14/2005  | 15:04:12 | 1.00      | 24.4     | 7.9 | 0.45        | 8.4       | 9.1      | 19.6      | 2.12   |
| 6/4/2005   | 13:08:14 | 1.09      | 24.4     | 9.0 | 0.32        | 68.4      | 16.1     | 23.9      | 0.76   |
| 7/9/2005   | 9:59:08  | 1.08      | 35.7     | 7.8 | 0.53        | 6.9       | 7.3      | 23.3      | 0.42   |
| 8/1/2005   | 16:34:12 | 1.03      | 13.9     | 7.9 | 0.57        | 19.4      | 9.4      | 25.3      | 0.16   |
| 9/9/2005   | 18:31:36 | 0.83      | 33.2     | 8.1 | 0.60        | 17.1      | 10.6     | 21.2      | 0.17   |
| 10/2/2005  | 9:12:48  | 1.14      | 21.6     | 7.9 | 0.61        | 20.6      | 8.0      | 17.3      | 0.45   |
| 11/12/2005 | 17:39:28 | 0.45      | 20.3     | 7.6 | 0.59        | 7.6       | 6.6      | 12.6      | 0.19   |
| 12/17/2005 | 15:52:14 | 0.69      | 8.7      | 8.5 | 0.67        | 3.8       | 15.7     | 3.9       | 0.23   |
| 1/14/2006  | 16:55:34 | 0.78      | < 2.8    | 8.2 | 0.57        | 1.3       | 9.7      | 6.7       | 0.17   |
| 2/4/2006   | 17:03:20 | 1.00      | 15.6     | 8.1 | 0.49        | 14.1      | 11.3     | 5.7       | 0.76   |
|            | Mean     | 0.89      | 19.7     | 8.1 | 0.52        | 15.3      | 11.0     | 15.3      | 1.32   |
|            | Min      | 0.45      | 6.1      | 7.6 | 0.32        | 1.3       | 6.6      | 3.9       | 0.16   |
|            | Max      | 1.14      | 35.7     | 9.0 | 0.67        | 68.4      | 16.1     | 25.3      | 7.08   |
|            | Median   | 1.00      | 20.3     | 8.1 | 0.55        | 8.7       | 10.1     | 15.6      | 0.44   |
|            | Std-dev  | 0.22      | 9.4      | 0.4 | 0.10        | 17.8      | 3.3      | 7.5       | 2.05   |
|            | CV%      | 25        | 48       | 4   | 20          | 116       | 30       | 49        | 156    |

Shaded areas represent spring and fall samples

Site 11 Pearson C. D Hwy. MO

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/5/2005   | 17:52:54 | 2.75      | < 1.6    | 8.0 | 0.54        | 5.0       | 14.3     | 11.6      | 0.51   |
| 4/15/2005  | 13:09:24 | 2.44      | 10.8     | 7.8 | 0.58        | 16.3      | 14.1     | 13.9      | 0.82   |
| 5/14/2005  | 14:45:02 | 2.40      | 29.2     | 7.9 | 0.58        | 6.0       | 10.2     | 17.8      | 0.45   |
| 6/4/2005   | 11:22:42 | 2.41      | 35.6     | 7.9 | 0.74        | 6.7       | 7.2      | 21.8      | 0.12   |
| 7/9/2005   | 9:40:26  | 2.05      | 13.2     | 7.4 | 0.61        | 13.2      | 8.1      | 19.1      | 0.10   |
| 8/1/2005   | 16:48:20 | 2.02      | 43.1     | 8.0 | 0.58        | 25.1      | 10.3     | 23.7      | 0.07   |
| 9/10/2005  | 11:46:30 | 1.85      | 310.2    | 7.7 | 0.46        | 8.1       | 7.1      | 20.8      | 0.12   |
| 10/2/2005  | 9:31:22  | 2.12      | 26.4     | 7.7 | 0.52        | 22.6      | 7.5      | 18.3      | 0.12   |
| 11/12/2005 | 18:00:32 | 1.74      | 34.5     | 7.8 | 0.42        | 155.0     | 8.4      | 14.5      | 0.06   |
| 12/17/2005 | 16:07:04 | 2.09      | 12.3     | 8.5 | 0.77        | 98.0      | 16.7     | 7.1       | 0.05   |
| 1/14/2006  | 17:10:50 | 2.13      | 3.7      | 8.5 | 0.65        | NS        | 10.7     | 9.2       | 0.03   |
| 2/4/2006   | 17:17:54 | 2.35      | 20.6     | 8.3 | 0.62        | 14.7      | 11.9     | 8.1       | 0.04   |
|            | Mean     | 2.20      | 49.0     | 8.0 | 0.59        | 33.7      | 10.5     | 15.5      | 0.21   |
|            | Min      | 1.74      | 3.7      | 7.4 | 0.42        | 5.0       | 7.1      | 7.1       | 0.03   |
|            | Max      | 2.75      | 310.2    | 8.5 | 0.77        | 155.0     | 16.7     | 23.7      | 0.82   |
|            | Median   | 2.12      | 26.4     | 7.9 | 0.58        | 14.7      | 10.2     | 16.2      | 0.11   |
|            | Std-dev  | 0.28      | 87.5     | 0.3 | 0.10        | 48.1      | 3.2      | 5.6       | 0.25   |
|            | CV%      | 13        | 178      | 4   | 17          | 143       | 30       | 36        | 120    |

Shaded areas represent spring and fall samples



Site 12 Long C. Denver AR

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/6/2005   | 11:55:12 | 1.42      | 14.1     | 8.1 | 0.45        | 6.5       | 15.0     | 11.4      | 2.07   |
| 4/16/2005  | 10:19:44 | 1.21      | 53.3     | 8.2 | 0.43        | 9.0       | 13.6     | 13.7      | 3.79   |
| 5/15/2005  | 10:44:28 | 1.56      | 53.3     | 7.8 | 0.41        | 5.2       | 9.3      | 17.8      | 1.16   |
| 6/5/2005   | 10:42:04 | 1.49      | 69.6     | 7.7 | 0.42        | 9.0       | 8.4      | 21.4      | 0.51   |
| 7/10/2005  | 11:37:32 | 1.39      | 63.2     | 7.7 | 0.45        | 6.8       | 10.0     | 23.2      | 0.40   |
| 8/2/2005   | 11:27:04 | 1.20      | 106.4    | 7.6 | 0.47        | 13.9      | 9.5      | 22.1      | 0.37   |
| 9/10/2005  | 12:13:44 | 1.18      | 22.7     | 8.0 | 0.44        | 4.9       | 9.1      | 22.8      | 0.71   |
| 10/2/2005  | 11:01:10 | 2.33      | 146.4    | 7.7 | 0.40        | 21.3      | 7.4      | 19.9      | 0.48   |
| 11/13/2005 | 10:37:30 | 1.36      | 433.1    | 7.3 | 0.58        | 6.0       | 6.4      | 14.2      | 0.45   |
| 12/18/2005 | 12:50:02 | 2.33      | 591.9    | 7.5 | 0.54        | 45.9      | 10.5     | 7.3       | 0.31   |
| 1/15/2006  | 10:54:24 | 2.45      | 373.3    | 7.8 | 0.59        | 32.1      | 9.7      | 7.8       | 0.36   |
| 2/5/2006   | 11:32:48 | 2.01      | 205.6    | 7.9 | 0.51        | 96.0      | 9.9      | 6.2       | 0.39   |
|            | Mean     | 1.66      | 177.7    | 7.8 | 0.47        | 21.4      | 9.9      | 15.6      | 0.92   |
|            | Min      | 1.18      | 14.1     | 7.3 | 0.40        | 4.9       | 6.4      | 6.2       | 0.31   |
|            | Max      | 2.45      | 591.9    | 8.2 | 0.59        | 96.0      | 15.0     | 23.2      | 3.79   |
|            | Median   | 1.45      | 88.0     | 7.7 | 0.45        | 9.0       | 9.6      | 16.0      | 0.47   |
|            | Std-dev  | 0.48      | 187.9    | 0.3 | 0.07        | 26.7      | 2.4      | 6.4       | 1.04   |
|            | CV%      | 29        | 106      | 3   | 14          | 125       | 24       | 41        | 113    |

Shaded areas represent spring and fall samples

Site 13 Yocum C. off Hwy 311 AR

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/6/2005   | 11:04:48 | 5.59      | 24.1     | 7.8 | 0.37        | 6.5       | 14.7     | 10.6      | 1.08   |
| 4/16/2005  | 9:51:34  | 17.43     | 16.5     | 7.9 | 0.33        | 11.0      | 12.9     | 13.8      | 2.27   |
| 5/15/2005  | 11:08:02 | 4.09      | 65.4     | 8.0 | 0.46        | 4.7       | 9.9      | 17.5      | 0.37   |
| 6/5/2005   | 11:11:18 | 4.06      | 55.9     | 8.0 | 0.46        | 6.5       | 9.6      | 20.5      | 0.11   |
| 7/10/2005  | 12:00:52 | 3.21      | 34.4     | 8.0 | 0.49        | 4.5       | 10.3     | 22.8      | 0.24   |
| 8/2/2005   | 11:53:08 | 2.72      | 46.7     | 7.9 | 0.45        | 8.0       | 10.3     | 24.1      | 0.34   |
| 9/10/2005  | 13:02:00 | 2.12      | 52.2     | 8.6 | 0.43        | 5.9       | 9.4      | 28.2      | 0.11   |
| 10/2/2005  | 11:31:20 | 1.28      | 37.5     | 8.0 | 0.44        | 20.6      | 8.1      | 21.1      | 0.11   |
| 11/13/2005 | 11:07:52 | 2.52      | 45.3     | 7.8 | 0.51        | 2.5       | 10.2     | 14.6      | 0.11   |
| 12/18/2005 | 13:36:58 | 2.78      | 12.3     | 8.4 | 0.52        | 56.0      | 12.0     | 4.3       | 0.10   |
| 1/15/2006  | 11:17:02 | 2.82      | < 2.8    | 8.2 | 0.51        | 8.3       | 11.6     | 7.5       | 0.11   |
| 2/5/2006   | 12:02:18 | 2.99      | 29.3     | 8.2 | 0.46        | 82.4      | 12.3     | 6.8       | 0.11   |
|            | Mean     | 4.30      | 38.1     | 8.1 | 0.45        | 18.1      | 11.0     | 16.0      | 0.42   |
|            | Min      | 1.28      | 12.3     | 7.8 | 0.33        | 2.5       | 8.1      | 4.3       | 0.10   |
|            | Max      | 17.43     | 65.4     | 8.6 | 0.52        | 82.4      | 14.7     | 28.2      | 2.27   |
|            | Median   | 2.90      | 37.5     | 8.0 | 0.46        | 7.3       | 10.3     | 16.0      | 0.11   |
|            | Std-dev  | 4.28      | 16.8     | 0.2 | 0.06        | 25.0      | 1.8      | 7.6       | 0.64   |
|            | CV%      | 99        | 44       | 3   | 13          | 138       | 17       | 48        | 154    |

Shaded areas represent spring and fall samples

Site 14 Kings R. Berryville AR

| DATE       | TIME     | TN (mg/L) | TP (µ/L) | pH  | COND(mS/cm) | TURB(NTU) | DO(mg/L) | Temp (C°) | Q m³/s |
|------------|----------|-----------|----------|-----|-------------|-----------|----------|-----------|--------|
| 3/6/2005   | 18:12:40 | 0.57      | 2.3      | 8.8 | 0.30        | 17.7      | 17.2     | 11.4      | 12.52  |
| 4/16/2005  | 11:48:54 | 0.35      | 23.6     | 8.4 | 0.28        | 12.4      | 13.4     | 14.9      | 19.85  |
| 5/15/2005  | 11:58:16 | 0.73      | 144.4    | 8.3 | 0.34        | 3.0       | 9.6      | 21.3      | 13.42  |
| 6/5/2005   | 11:59:46 | 0.47      | 122.6    | 8.3 | 0.34        | 10.2      | 8.8      | 25.0      | 3.43   |
| 7/10/2005  | 13:34:14 | 0.30      | < 1.4    | 8.5 | 0.40        | 4.8       | 9.4      | 28.1      | 1.19   |
| 8/2/2005   | 13:09:24 | 0.44      | 144.6    | 8.5 | 0.49        | 10.7      | 10.2     | 31.0      | 0.54   |
| 9/10/2005  | 13:52:32 | < 0.23    | 160.7    | 8.1 | 0.41        | 13.4      | 8.9      | 25.5      | 0.51   |
| 10/2/2005  | 13:18:58 | 0.34      | 118.3    | 8.4 | 0.41        | 20.5      | 8.2      | 23.9      | 1.27   |
| 11/13/2005 | 11:56:04 | 0.22      | 108.8    | 8.0 | 0.53        | 8.0       | 9.9      | 14.8      | 0.96   |
| 12/18/2005 | 14:27:24 | < 0.19    | 29.8     | 8.3 | 0.47        | 46.9      | 12.0     | 3.9       | 0.88   |
| 1/15/2006  | 12:01:14 | 0.14      | < 2.8    | 8.5 | 0.51        | 11.0      | 10.7     | 6.2       | 0.68   |
| 2/5/2006   | 12:45:44 | 0.76      | 65.3     | 8.4 | 0.36        | 83.0      | 11.4     | 5.3       | 2.61   |
|            | Mean     | 0.43      | 92.0     | 8.4 | 0.40        | 20.1      | 10.8     | 17.6      | 4.82   |
|            | Min      | 0.14      | 2.3      | 8.0 | 0.28        | 3.0       | 8.2      | 3.9       | 0.51   |
|            | Max      | 0.76      | 160.7    | 8.8 | 0.53        | 83.0      | 17.2     | 31.0      | 19.85  |
|            | Median   | 0.39      | 113.5    | 8.4 | 0.40        | 11.7      | 10.0     | 18.1      | 1.23   |
|            | Std-dev  | 0.21      | 57.2     | 0.2 | 0.08        | 22.8      | 2.5      | 9.5       | 6.58   |
|            | CV%      | 48        | 62       | 2   | 21          | 113       | 23       | 54        | 136    |

Shaded areas represent spring and fall samples













**Phosphorus, Total (ug/L)**

| Site #             | Location                         | Mar-05 | Apr-05 | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 | Jan-06 | Feb-06 | Mean  | Med   | Min  | Max   | SD    | CV% |
|--------------------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|------|-------|-------|-----|
| 1                  | Wilson C. at Scenic Ave. MO      | 16.8   | 23.3   | 60.2   | 29.6   | 97.3   | 42.8   | 79.2   | 194.2  | 31.0   | 74.8   | < 2.8  | 21.6   | 61.0  | 42.8  | 16.8 | 194.2 | 51.7  | 85  |
| 2                  | Wilson C. at Co Rd. 156 MO       | 13.0   | 17.6   | 72.0   | 94.1   | 61.1   | 105.3  | NS*    | 31.2   | 186.0  | 37.6   | < 2.8  | 32.0   | 65.0  | 49.3  | 13.0 | 186.0 | 52.8  | 81  |
| 3                  | Wilson C. below WWT plant MO     | 123.7  | 80.1   | 250.6  | 325.2  | 206.1  | 223.9  | 156.2  | 193.4  | 264.9  | 138.0  | 34.8   | 100.0  | 174.7 | 174.8 | 34.8 | 325.2 | 84.6  | 48  |
| 4                  | James R. Boaz MO                 | 35.1   | 43.3   | 172.3  | 201.9  | 326.9  | 237.1  | 184.7  | 115.7  | 89.9   | 33.3   | 12.3   | 51.3   | 125.3 | 102.8 | 12.3 | 326.9 | 98.9  | 79  |
| 5                  | Finley C. Riverdale Rd. MO       | 8.2    | 14.0   | 47.5   | 36.7   | 25.7   | 29.6   | 50.7   | 39.4   | 43.8   | 17.6   | < 2.8  | 22.0   | 30.5  | 29.6  | 8.2  | 50.7  | 14.2  | 47  |
| 6                  | James R. Galena MO               | 11.0   | 35.4   | 62.7   | 91.1   | 91.1   | 124.6  | 93.2   | 81.6   | 50.3   | 6.9    | 4.0    | 20.6   | 56.0  | 56.5  | 4.0  | 124.6 | 40.6  | 72  |
| 7                  | Below TableRock Dam MO           | 9.2    | 7.2    | 12.3   | 7.0    | 14.0   | 13.1   | 10.2   | 8.6    | 12.0   | 8.3    | 4.4    | 24.6   | 10.9  | 9.7   | 4.4  | 24.6  | 5.2   | 47  |
| 8                  | Bull C. Walnut Shade MO          | 2.3    | < 1.2  | 10.9   | < 3.2  | 8.2    | 10.6   | 11.2   | 3.1    | 7.4    | 7.3    | < 2.8  | 11.3   | 8.0   | 8.2   | 2.3  | 11.3  | 3.4   | 43  |
| 9                  | Beaver C. Bradleyville MO        | 4.8    | 9.0    | 11.3   | 8.9    | 6.9    | 14.6   | 24.7   | 3.4    | 10.6   | 9.4    | < 2.8  | 13.6   | 10.6  | 9.4   | 3.4  | 24.7  | 5.7   | 54  |
| 10                 | James R. Kinser Bridge MO        | 6.1    | 12.9   | 24.4   | 24.4   | 35.7   | 13.9   | 33.2   | 21.6   | 20.3   | 8.7    | < 2.8  | 15.6   | 19.7  | 20.3  | 6.1  | 35.7  | 9.4   | 48  |
| 11                 | Pearson C. D Hwy. MO             | < 1.6  | 10.8   | 29.2   | 35.6   | 13.2   | 43.1   | 310.2  | 26.4   | 34.5   | 12.3   | 3.7    | 20.6   | 49.0  | 26.4  | 3.7  | 310.2 | 87.5  | 178 |
| 12                 | Long C. Denver AR                | 14.1   | 53.3   | 53.3   | 69.6   | 63.2   | 106.4  | 22.7   | 146.4  | 433.1  | 591.9  | 373.3  | 205.6  | 177.7 | 88.0  | 14.1 | 591.9 | 187.9 | 106 |
| 13                 | Yocum C. off Hwy 311 AR          | 24.1   | 16.5   | 65.4   | 55.9   | 34.4   | 46.7   | 52.2   | 37.5   | 45.3   | 12.3   | < 2.8  | 29.3   | 38.1  | 37.5  | 12.3 | 65.4  | 16.8  | 44  |
| 14                 | Kings R. Berryville AR           | 2.3    | 23.6   | 144.4  | 122.6  | < 1.4  | 144.6  | 160.7  | 118.3  | 108.8  | 29.8   | < 2.8  | 65.3   | 92.0  | 113.5 | 2.3  | 160.7 | 57.2  | 62  |
| 15                 | War Eagle C. Hiland AR           | 1.7    | 22.6   | 53.3   | 48.1   | 13.6   | 14.6   | 24.2   | 31.6   | 67.8   | 41.2   | 56.9   | 98.6   | 39.5  | 36.4  | 1.7  | 98.6  | 27.3  | 69  |
| 16                 | Richland C. Goshen AR            | < 1.6  | 7.2    | 14.4   | 3.7    | 17.3   | 12.8   | 23.7   | 12.3   | 15.6   | 10.1   | 4.8    | 16.0   | 12.5  | 12.8  | 3.7  | 23.7  | 5.9   | 47  |
| 17                 | White R. Fayetteville AR         | 2.3    | 7.2    | 16.8   | 3.3    | 31.5   | 19.6   | 31.2   | 15.7   | 24.2   | 17.3   | 13.3   | 39.0   | 18.4  | 17.0  | 2.3  | 39.0  | 11.4  | 62  |
| 18                 | W. Fork White R. Fayetteville AR | < 1.6  | 9.0    | 17.5   | 13.7   | 28.6   | 19.6   | 48.2   | 20.5   | 26.7   | 13.0   | 13.7   | 25.6   | 21.4  | 19.6  | 9.0  | 48.2  | 10.8  | 51  |
| 19                 | Bear C. Hwy 14 Omaha AR          | < 1.6  | 3.6    | < 7.0  | 25.9   | 14.0   | < 8.5  | 35.7   | 3.8    | 12.0   | 5.8    | < 2.8  | 11.6   | 14.1  | 11.8  | 3.6  | 35.7  | 11.3  | 81  |
| Detection Limit ** |                                  | 1.6    | 1.2    | 7.0    | 3.2    | 1.4    | 8.5    | 3.8    | 1.4    | 1.5    | 0.6    | 2.8    | 1.0    | 2.8   | 1.5   | 0.6  | 8.5   | 2.5   | 88  |
| Accuracy ***       |                                  | 91     | 114    | 106    | 92     | 107    | 94     | 129    | 102    | 101    | 90     | 94     | 94     | 101   | 98    | 90   | 129   | 12    | 11  |

Notes:

\* NS = No Sample

\*\* Detection Limit = Reagent Blank Concentration (ug/L) X 3

\*\*\* Accuracy = Average amount of reference sample (100 ug/L) recovered by percentage

Shaded areas represent spring and fall samples

**Nitrogen, Total (mg/L)**

| Site #             | Location                         | Mar-05 | Apr-05 | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 | Jan-06 | Feb-06 | Mean  | Med   | Min  | Max   | SD   | CV% |
|--------------------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|------|-------|------|-----|
| 1                  | Wilson C. at Scenic Ave. MO      | 2.45   | 1.95   | 0.98   | 1.21   | 1.12   | 1.10   | 0.91   | 1.76   | 0.82   | 1.27   | 1.23   | 1.54   | 1.36  | 1.22  | 0.82 | 2.45  | 0.48 | 35  |
| 2                  | Wilson C. at Co Rd. 156 MO       | 2.30   | 1.87   | 0.96   | 0.56   | 2.26   | 0.83   | NS*    | 0.55   | 0.68   | 0.77   | 1.12   | 0.88   | 1.16  | 0.88  | 0.55 | 2.30  | 0.66 | 57  |
| 3                  | Wilson C. below WWT plant MO     | 12.40  | 2.49   | 12.93  | 7.47   | 21.30  | 17.67  | 10.67  | 13.98  | 6.81   | 8.00   | 11.50  | 15.90  | 11.76 | 11.95 | 2.49 | 21.30 | 5.17 | 44  |
| 4                  | James R. Boaz MO                 | 2.37   | 1.61   | 4.21   | 4.45   | 14.58  | 5.23   | 4.12   | 5.10   | 9.37   | 8.75   | 7.35   | 7.84   | 6.25  | 5.16  | 1.61 | 14.58 | 3.57 | 57  |
| 5                  | Finley C. Riverdale Rd. MO       | 1.50   | 1.07   | 1.05   | 0.56   | 1.02   | 1.09   | 0.69   | 0.97   | 1.24   | 1.01   | 1.37   | 1.08   | 1.05  | 1.06  | 0.56 | 1.50  | 0.26 | 24  |
| 6                  | James R. Galena MO               | 2.02   | 1.50   | 2.38   | 1.40   | 2.09   | 4.72   | 2.57   | 2.93   | 2.02   | 1.06   | 6.57   | 3.89   | 2.76  | 2.23  | 1.06 | 6.57  | 1.59 | 57  |
| 7                  | Below TableRock Dam MO           | 0.76   | 0.69   | 0.99   | 0.67   | 1.13   | 1.13   | 1.03   | 0.99   | 0.82   | 0.48   | 0.53   | 1.00   | 0.85  | 0.91  | 0.48 | 1.13  | 0.23 | 27  |
| 8                  | Bull C. Walnut Shade MO          | 0.60   | < 0.25 | 0.48   | < 0.14 | 0.64   | 0.31   | < 0.23 | 0.22   | 0.15   | 0.23   | 0.17   | 1.09   | 0.43  | 0.31  | 0.15 | 1.09  | 0.31 | 71  |
| 9                  | Beaver C. Bradleyville MO        | 0.62   | 0.69   | 0.32   | 0.40   | 0.66   | 0.22   | < 0.23 | 0.24   | 0.15   | 0.42   | 0.45   | 0.88   | 0.46  | 0.42  | 0.15 | 0.88  | 0.23 | 50  |
| 10                 | James R. Kinser Bridge MO        | 0.56   | 1.01   | 1.00   | 1.09   | 1.08   | 1.03   | 0.83   | 1.14   | 0.45   | 0.69   | 0.78   | 1.00   | 0.89  | 1.00  | 0.45 | 1.14  | 0.22 | 25  |
| 11                 | Pearson C. D Hwy. MO             | 2.75   | 2.44   | 2.40   | 2.41   | 2.05   | 2.02   | 1.85   | 2.12   | 1.74   | 2.09   | 2.13   | 2.35   | 2.20  | 2.12  | 1.74 | 2.75  | 0.28 | 13  |
| 12                 | Long C. Denver AR                | 1.42   | 1.21   | 1.56   | 1.49   | 1.39   | 1.20   | 1.18   | 2.33   | 1.36   | 2.33   | 2.45   | 2.01   | 1.66  | 1.45  | 1.18 | 2.45  | 0.48 | 29  |
| 13                 | Yocum C. off Hwy 311 AR          | 5.59   | 17.43  | 4.09   | 4.06   | 3.21   | 2.72   | 2.12   | 1.28   | 2.52   | 2.78   | 2.82   | 2.99   | 4.30  | 2.90  | 1.28 | 17.43 | 4.28 | 99  |
| 14                 | Kings R. Berryville AR           | 0.57   | 0.35   | 0.73   | 0.47   | 0.30   | 0.44   | < 0.23 | 0.34   | 0.22   | < 0.19 | 0.14   | 0.76   | 0.43  | 0.39  | 0.14 | 0.76  | 0.21 | 48  |
| 15                 | War Eagle C. Hiland AR           | 0.96   | 0.55   | 1.25   | 1.13   | 1.08   | 0.84   | 0.38   | 0.94   | 0.97   | 1.06   | 1.40   | 1.17   | 0.98  | 1.02  | 0.38 | 1.40  | 0.29 | 29  |
| 16                 | Richland C. Goshen AR            | 0.65   | 0.36   | 0.89   | 0.57   | 0.20   | 0.50   | < 0.23 | 0.21   | 0.25   | < 0.19 | 0.08   | 0.96   | 0.47  | 0.43  | 0.08 | 0.96  | 0.30 | 64  |
| 17                 | White R. Fayetteville AR         | 0.43   | 0.36   | 0.42   | 0.22   | 0.41   | 0.56   | < 0.23 | 0.54   | 0.41   | 0.35   | 0.31   | 0.87   | 0.44  | 0.41  | 0.22 | 0.87  | 0.17 | 38  |
| 18                 | W. Fork White R. Fayetteville AR | 0.64   | 0.35   | 0.92   | 0.23   | 0.54   | 0.38   | 0.37   | 0.60   | 0.25   | < 0.19 | 0.23   | 0.89   | 0.49  | 0.38  | 0.23 | 0.92  | 0.25 | 51  |
| 19                 | Bear C. Hwy 14 Omaha AR          | 0.98   | 0.89   | 0.70   | 2.84   | 0.38   | 0.33   | < 0.23 | 0.26   | 13.84  | 0.23   | 0.20   | 0.93   | 1.96  | 0.70  | 0.20 | 13.84 | 4.01 | 204 |
| Detection Limit ** |                                  | 0.06   | 0.25   | 0.07   | 0.14   | 0.06   | 0.12   | 0.23   | 0.19   | 0.11   | 0.19   | 0.02   | 0.04   | 0.12  | 0.12  | 0.02 | 0.25  | 0.08 | 62  |
| Accuracy ***       |                                  | 92     | 96     | 97     | 103    | 100    | 108    | 93     | 105    | 97     | 95     | 112    | 100    | 100   | 99    | 92   | 112   | 6    | 6   |

Notes:

\* NS = No Sample

\*\* Detection Limit = Reagent Blank Concentration (mg/L) X 3

\*\*\* Accuracy = Average amount of reference sample (1 mg/L) recovered by percentage

Shaded areas represent spring and fall samples

Temperature (C°)

| Site # | Location                         | Mar-05 | Apr-05 | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 | Jan-06 | Feb-06 | Mean | Med  | Min  | Max  | SD  | CV% |
|--------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|------|-----|-----|
| 1      | Wilson C. at Scenic Ave. MO      | 9.2    | 15.1   | 19.5   | 23.1   | 22.3   | 22.9   | 21.4   | 16.4   | 11.9   | 2.5    | 3.9    | 4.1    | 14.4 | 15.7 | 2.5  | 23.1 | 7.9 | 55  |
| 2      | Wilson C. at Co Rd. 156 MO       | 9.7    | 14.0   | 19.6   | 25.5   | 21.7   | 22.8   | NS     | 19.2   | 10.6   | 3.9    | 4.4    | 4.1    | 14.1 | 14.0 | 3.9  | 25.5 | 8.1 | 57  |
| 3      | Wilson C. below WWT plant MO     | 13.4   | 15.2   | 18.8   | 25.1   | 22.6   | 23.2   | 23.3   | 23.2   | 20.3   | 15.1   | 14.8   | 14.8   | 19.1 | 19.5 | 13.4 | 25.1 | 4.3 | 22  |
| 4      | James R. Boaz MO                 | 13.3   | 15.3   | 20.4   | 26.9   | 28.1   | 25.5   | 24.1   | 18.5   | 12.9   | 3.4    | 5.6    | 6.7    | 16.7 | 16.9 | 3.4  | 28.1 | 8.6 | 51  |
| 5      | Finley C. Riverdale Rd. MO       | 10.8   | 12.6   | 18.1   | 8.5    | 27.1   | 26.2   | 26.3   | 19.7   | 13.3   | 3.1    | 4.4    | 5.5    | 14.6 | 12.9 | 3.1  | 27.1 | 8.8 | 60  |
| 6      | James R. Galena MO               | 12.1   | 13.6   | 20.6   | 25.6   | 28.9   | 28.3   | 26.5   | 20.7   | 12.8   | 2.2    | 5.2    | 6.8    | 17.9 | 17.1 | 2.2  | 28.9 | 9.4 | 53  |
| 7      | Below TableRock Dam MO           | 7.4    | 8.2    | 8.5    | 7.3    | 9.4    | 9.2    | 9.5    | 10.5   | 10.4   | 9.5    | 10.1   | 9.7    | 9.1  | 9.4  | 7.3  | 10.5 | 1.1 | 12  |
| 8      | Bull C. Walnut Shade MO          | 11.3   | 15.6   | 22.6   | 22.1   | 25.4   | 28.3   | 26.7   | 22.9   | 12.6   | 3.0    | 6.2    | 6.8    | 17.0 | 18.8 | 3.0  | 28.3 | 8.8 | 52  |
| 9      | Beaver C. Bradleyville MO        | 12.1   | 15.5   | 22.4   | 19.5   | 24.7   | 29.3   | 23.0   | 20.6   | 14.0   | 4.3    | 7.0    | 7.6    | 16.7 | 17.5 | 4.3  | 29.3 | 7.9 | 47  |
| 10     | James R. Kinser Bridge MO        | 10.4   | 13.9   | 19.6   | 23.9   | 23.3   | 25.3   | 21.2   | 17.3   | 12.6   | 3.9    | 6.7    | 5.7    | 15.3 | 15.6 | 3.9  | 25.3 | 7.5 | 49  |
| 11     | Pearson C. D Hwy. MO             | 11.6   | 13.9   | 17.8   | 21.8   | 19.1   | 23.7   | 20.8   | 18.3   | 14.5   | 7.1    | 9.2    | 8.1    | 15.5 | 16.2 | 7.1  | 23.7 | 5.6 | 36  |
| 12     | Long C. Denver AR                | 11.4   | 13.7   | 17.8   | 21.4   | 23.2   | 22.1   | 22.8   | 19.9   | 14.2   | 7.3    | 7.8    | 6.2    | 15.6 | 16.0 | 6.2  | 23.2 | 6.4 | 41  |
| 13     | Yocum C. off Hwy 311 AR          | 10.6   | 13.8   | 17.5   | 20.5   | 22.8   | 24.1   | 28.2   | 21.1   | 14.6   | 4.3    | 7.5    | 6.8    | 16.0 | 16.0 | 4.3  | 28.2 | 7.6 | 48  |
| 14     | Kings R. Berryville AR           | 11.4   | 14.9   | 21.3   | 25.0   | 28.1   | 31.0   | 25.5   | 23.9   | 14.8   | 3.9    | 6.2    | 5.3    | 18.7 | 18.1 | 3.9  | 31.0 | 9.5 | 51  |
| 15     | War Eagle C. Hiland AR           | 10.2   | 15.6   | 19.8   | 23.0   | 26.0   | 27.6   | 27.1   | 21.3   | 13.9   | 6.2    | 5.4    | 4.8    | 16.7 | 17.7 | 4.8  | 27.6 | 8.6 | 51  |
| 16     | Richland C. Goshen AR            | 13.1   | 17.4   | 19.3   | 25.2   | 29.9   | 32.2   | 25.7   | 26.7   | 17.0   | 4.6    | 8.6    | 6.0    | 18.8 | 18.4 | 4.6  | 32.2 | 9.4 | 50  |
| 17     | White R. Fayetteville AR         | 11.2   | 16.9   | 22.7   | 25.3   | 27.9   | 29.1   | 30.5   | 24.0   | 15.1   | 4.2    | 7.2    | 7.2    | 18.4 | 19.8 | 4.2  | 30.5 | 9.4 | 51  |
| 18     | W. Fork White R. Fayetteville AR | 11.4   | 17.1   | 21.3   | 24.6   | 27.9   | 29.9   | 32.4   | 23.3   | 14.8   | 5.1    | 6.6    | 5.6    | 18.3 | 19.2 | 5.1  | 32.4 | 9.7 | 53  |
| 19     | Bear C. Hwy 14 Omaha AR          | 12.1   | 18.0   | 20.0   | 19.7   | 27.1   | 30.1   | 27.0   | 24.6   | 16.2   | 7.8    | 8.2    | 6.8    | 18.1 | 18.9 | 6.8  | 30.1 | 8.1 | 45  |

NS = No Sample

Shaded areas represent spring and fall samples

pH

| Site # | Location                         | Mar-05 | Apr-05 | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 | Jan-06 | Feb-06 | Mean | Med | Min | Max | SD  | CV% |
|--------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|-----|-----|-----|-----|-----|
| 1      | Wilson C. at Scenic Ave. MO      | 7.4    | 7.7    | 7.8    | 8.0    | 7.8    | 7.4    | 7.6    | 7.4    | 7.4    | 6.5    | 7.1    | 7.0    | 7.4  | 7.4 | 6.5 | 8.0 | 0.4 | 5   |
| 2      | Wilson C. at Co Rd. 156 MO       | 8.0    | 8.2    | 7.9    | 8.2    | 8.0    | 7.9    | NS     | 8.2    | 7.3    | 6.6    | 7.9    | 8.2    | 7.9  | 8.0 | 6.6 | 8.2 | 0.5 | 6   |
| 3      | Wilson C. below WWT plant MO     | 7.4    | 7.4    | 7.3    | 8.2    | 7.6    | 7.5    | 8.1    | 7.9    | 7.5    | 6.7    | 7.7    | 7.3    | 7.5  | 7.5 | 6.7 | 8.2 | 0.4 | 5   |
| 4      | James R. Boaz MO                 | 8.4    | 7.8    | 7.9    | 8.4    | 8.2    | 7.9    | 8.1    | 8.2    | 7.9    | 7.9    | 8.2    | 7.4    | 8.0  | 8.0 | 7.4 | 8.4 | 0.3 | 4   |
| 5      | Finley C. Riverdale Rd. MO       | 8.3    | 8.0    | 7.9    | 7.9    | 8.0    | 7.9    | 8.6    | 8.2    | 7.7    | 8.3    | 8.3    | 8.1    | 8.1  | 8.1 | 7.7 | 8.6 | 0.3 | 3   |
| 6      | James R. Galena MO               | 8.6    | 7.9    | 7.8    | 8.3    | 8.4    | 8.4    | 7.9    | 8.5    | 8.2    | 8.7    | 8.7    | 8.6    | 8.3  | 8.4 | 7.8 | 8.7 | 0.3 | 4   |
| 7      | Below TableRock Dam MO           | 8.0    | 7.9    | 7.2    | 8.2    | 8.0    | 7.8    | 8.0    | 7.8    | 7.6    | 8.5    | 8.6    | 8.6    | 8.0  | 8.0 | 7.2 | 8.6 | 0.4 | 5   |
| 8      | Bull C. Walnut Shade MO          | 8.3    | 8.4    | 8.3    | 7.9    | 7.9    | 7.9    | 8.4    | 8.2    | 7.9    | 8.5    | 8.5    | 8.3    | 8.2  | 8.3 | 7.9 | 8.5 | 0.2 | 3   |
| 9      | Beaver C. Bradleyville MO        | 8.4    | 8.3    | 8.4    | 8.1    | 8.2    | 8.4    | 7.9    | 8.3    | 8.1    | 8.6    | 8.6    | 8.3    | 8.3  | 8.3 | 7.9 | 8.6 | 0.2 | 3   |
| 10     | James R. Kinser Bridge MO        | 8.3    | 8.1    | 7.9    | 9.0    | 7.8    | 7.9    | 8.1    | 7.9    | 7.6    | 8.5    | 8.2    | 8.1    | 8.1  | 8.1 | 7.6 | 9.0 | 0.4 | 4   |
| 11     | Pearson C. D Hwy. MO             | 8.0    | 7.8    | 7.9    | 7.9    | 7.4    | 8.0    | 7.7    | 7.7    | 7.8    | 8.5    | 8.5    | 8.3    | 8.0  | 7.9 | 7.4 | 8.5 | 0.3 | 4   |
| 12     | Long C. Denver AR                | 8.1    | 8.2    | 7.8    | 7.7    | 7.7    | 7.6    | 8.0    | 7.7    | 7.3    | 7.5    | 7.8    | 7.9    | 7.8  | 7.7 | 7.3 | 8.2 | 0.3 | 3   |
| 13     | Yocum C. off Hwy 311 AR          | 7.8    | 7.9    | 8.0    | 8.0    | 8.0    | 7.9    | 8.6    | 8.0    | 7.8    | 8.4    | 8.2    | 8.2    | 8.1  | 8.0 | 7.8 | 8.6 | 0.2 | 3   |
| 14     | Kings R. Berryville AR           | 8.8    | 8.4    | 8.3    | 8.3    | 8.5    | 8.5    | 8.1    | 8.4    | 8.0    | 8.3    | 8.5    | 8.4    | 8.4  | 8.4 | 8.0 | 8.8 | 0.2 | 2   |
| 15     | War Eagle C. Hiland AR           | 8.3    | 8.0    | 7.9    | 7.7    | 8.0    | 8.1    | 8.6    | 7.9    | 7.7    | 8.2    | 8.5    | 7.9    | 8.1  | 8.0 | 7.7 | 8.6 | 0.3 | 4   |
| 16     | Richland C. Goshen AR            | 9.1    | 8.6    | 8.3    | 8.3    | 8.4    | 8.5    | 8.8    | 8.6    | 7.9    | 8.1    | 8.5    | 8.0    | 8.4  | 8.5 | 7.9 | 9.1 | 0.3 | 4   |
| 17     | White R. Fayetteville AR         | 8.2    | 7.9    | 7.9    | 7.9    | 8.3    | 8.2    | 7.7    | 8.0    | 7.4    | 8.1    | 8.3    | 8.1    | 8.0  | 8.0 | 7.4 | 8.3 | 0.3 | 3   |
| 18     | W. Fork White R. Fayetteville AR | 7.9    | 8.0    | 7.7    | 7.8    | 7.6    | 7.6    | 7.5    | 7.5    | 7.2    | 6.6    | 8.3    | 7.9    | 7.6  | 7.7 | 6.6 | 8.3 | 0.4 | 6   |
| 19     | Bear C. Hwy 14 Omaha AR          | 8.2    | 8.3    | 8.3    | 7.7    | 8.1    | 8.1    | 7.9    | 8.2    | 8.0    | 6.8    | 8.5    | 8.1    | 8.0  | 8.1 | 6.8 | 8.5 | 0.4 | 5   |

NS = No Sample

Shaded areas represent spring and fall samples

**Dissolved Oxygen (mg/L)**

| Site # | Location                         | Mar-05 | Apr-05 | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 | Jan-06 | Feb-06 | Mean | Med  | Min  | Max  | SD  | CV% |
|--------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|------|-----|-----|
| 1      | Wilson C. at Scenic Ave. MO      | 13.1   | 12.0   | 8.7    | 13.7   | 6.1    | 4.5    | 4.5    | 7.7    | 5.2    | 11.5   | 7.8    | 8.9    | 8.6  | 8.2  | 4.5  | 13.7 | 3.3 | 38  |
| 2      | Wilson C. at Co Rd. 156 MO       | 13.6   | 13.7   | 8.8    | 9.7    | 8.1    | 6.7    | 6.7    | 9.5    | NS     | 17.6   | 7.8    | 11.1   | 10.3 | 9.5  | 6.7  | 17.6 | 3.4 | 33  |
| 3      | Wilson C. below WWT plant MO     | 21.7   | 17.0   | 18.5   | 10.1   | 14.3   | 15.3   | 15.3   | 14.0   | 15.1   | 20.0   | 15.9   | 16.3   | 16.1 | 15.6 | 10.1 | 21.7 | 3.0 | 19  |
| 4      | James R. Boaz MO                 | 17.0   | 9.8    | 8.7    | 10.6   | 9.0    | 7.8    | 7.8    | 9.2    | 9.2    | 15.6   | 9.8    | 10.8   | 10.4 | 9.5  | 7.8  | 17.0 | 2.9 | 28  |
| 5      | Finley C. Riverdale Rd. MO       | 16.1   | 10.7   | 8.6    | 11.6   | 9.2    | 9.6    | 9.6    | 8.9    | 9.0    | 16.2   | 10.4   | 11.2   | 10.9 | 10.0 | 8.6  | 16.2 | 2.6 | 24  |
| 6      | James R. Galena MO               | 16.3   | 8.6    | 6.5    | 8.9    | 10.7   | 10.1   | 10.1   | 9.8    | 11.6   | 16.9   | 11.8   | 12.1   | 11.0 | 10.4 | 6.5  | 16.9 | 3.0 | 27  |
| 7      | Below TableRock Dam MO           | 14.6   | 8.6    | 9.2    | 8.8    | 12.8   | 9.5    | 9.5    | 7.9    | 5.0    | 12.1   | 12.1   | 12.3   | 10.2 | 9.5  | 5.0  | 14.6 | 2.6 | 26  |
| 8      | Bull C. Walnut Shade MO          | 13.9   | 13.9   | 9.5    | 6.4    | 8.1    | 7.9    | 7.9    | 8.6    | 8.4    | 14.7   | 10.4   | 11.5   | 10.1 | 9.1  | 6.4  | 14.7 | 2.8 | 27  |
| 9      | Beaver C. Bradleyville MO        | 14.6   | 13.4   | 10.8   | 8.8    | 9.6    | 9.8    | 9.8    | 8.6    | 10.1   | 15.7   | 11.0   | 12.0   | 11.2 | 10.4 | 8.6  | 15.7 | 2.3 | 21  |
| 10     | James R. Kinser Bridge MO        | 15.3   | 13.2   | 9.1    | 16.1   | 7.3    | 9.4    | 9.4    | 8.0    | 6.6    | 15.7   | 9.7    | 11.3   | 10.9 | 9.6  | 6.6  | 16.1 | 3.4 | 31  |
| 11     | Pearson C. D Hwy. MO             | 14.3   | 14.1   | 10.2   | 7.2    | 8.1    | 10.3   | 10.3   | 7.5    | 8.4    | 16.7   | 10.7   | 11.9   | 10.8 | 10.3 | 7.2  | 16.7 | 3.0 | 28  |
| 12     | Long C. Denver AR                | 15.0   | 13.6   | 9.3    | 8.4    | 10.0   | 9.5    | 9.5    | 7.4    | 6.4    | 10.5   | 9.7    | 9.9    | 9.9  | 9.6  | 6.4  | 15.0 | 2.4 | 24  |
| 13     | Yocum C. off Hwy 311 AR          | 14.7   | 12.9   | 9.9    | 9.6    | 10.3   | 10.3   | 10.3   | 8.1    | 10.2   | 12.0   | 11.6   | 12.3   | 11.0 | 10.3 | 8.1  | 14.7 | 1.8 | 16  |
| 14     | Kings R. Berryville AR           | 17.2   | 13.4   | 9.6    | 8.8    | 9.4    | 10.2   | 10.2   | 8.2    | 9.9    | 12.0   | 10.7   | 11.4   | 10.9 | 10.2 | 8.2  | 17.2 | 2.4 | 22  |
| 15     | War Eagle C. Hiland AR           | 15.6   | 12.9   | 9.7    | 7.4    | 8.7    | 9.9    | 9.9    | 8.0    | 9.4    | 10.2   | 11.3   | 10.9   | 10.3 | 9.9  | 7.4  | 15.6 | 2.2 | 21  |
| 16     | Richland C. Goshen AR            | 17.6   | 13.4   | 11.7   | 10.0   | 10.9   | 10.9   | 10.9   | 9.6    | 10.4   | 9.9    | 11.1   | 11.0   | 11.4 | 10.9 | 9.6  | 17.6 | 2.2 | 19  |
| 17     | White R. Fayetteville AR         | 14.7   | 12.1   | 9.0    | 8.6    | 10.4   | 9.8    | 9.8    | 8.4    | 5.4    | 10.3   | 9.9    | 10.9   | 9.9  | 9.8  | 5.4  | 14.7 | 2.2 | 22  |
| 18     | W. Fork White R. Fayetteville AR | 14.6   | 12.2   | 8.9    | 7.9    | 8.2    | 8.5    | 8.5    | 5.4    | 4.5    | 9.7    | 9.9    | 11.0   | 9.1  | 8.7  | 4.5  | 14.6 | 2.7 | 30  |
| 19     | Bear C. Hwy 14 Omaha AR          | 13.5   | 12.1   | 9.9    | 7.4    | 8.8    | 9.5    | 9.5    | 8.8    | 10.0   | 9.6    | 11.5   | 11.3   | 10.2 | 9.7  | 7.4  | 13.5 | 1.7 | 16  |

NS = No Sample

Shaded areas represent spring and fall samples

### Conductivity (mS/cm)

| Site # | Location                         | Mar-05 | Apr-05 | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 | Jan-06 | Feb-06 | Mean | Med  | Min  | Max  | SD   | CV% |
|--------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|------|------|-----|
| 1      | Wilson C. at Scenic Ave. MO      | 0.73   | 0.76   | 0.31   | 1.08   | 0.76   | 0.68   | 0.70   | 0.72   | 0.87   | 1.00   | 0.70   | 0.78   | 0.76 | 0.74 | 0.31 | 1.08 | 0.19 | 25  |
| 2      | Wilson C. at Co Rd. 156 MO       | 0.67   | 0.70   | 0.27   | 0.86   | 0.35   | 0.35   | NS     | 0.66   | 0.90   | 0.90   | 0.72   | 0.30   | 0.61 | 0.67 | 0.27 | 0.90 | 0.25 | 41  |
| 3      | Wilson C. below WWT plant MO     | 0.96   | 0.84   | 0.56   | 0.47   | 1.15   | 0.96   | 1.00   | 1.10   | 1.52   | 1.23   | 1.25   | 0.90   | 0.99 | 0.98 | 0.47 | 1.52 | 0.29 | 29  |
| 4      | James R. Boaz MO                 | 0.60   | 0.50   | 0.61   | 0.56   | 0.92   | 0.95   | 0.50   | 0.83   | 1.11   | 0.90   | 1.00   | 0.85   | 0.78 | 0.84 | 0.50 | 1.11 | 0.21 | 27  |
| 5      | Finley C. Riverdale Rd. MO       | 0.41   | 0.38   | 0.39   | 0.32   | 0.50   | 0.49   | 0.68   | 0.48   | 0.61   | 0.69   | 0.58   | 0.49   | 0.50 | 0.49 | 0.32 | 0.69 | 0.12 | 23  |
| 6      | James R. Galena MO               | 0.46   | 0.43   | 0.49   | 0.53   | 0.59   | 0.73   | 0.33   | 0.61   | 0.80   | 0.97   | 0.88   | 0.60   | 0.62 | 0.59 | 0.33 | 0.97 | 0.19 | 31  |
| 7      | Below TableRock Dam MO           | 0.32   | 0.32   | 0.32   | 0.44   | 0.35   | 0.32   | 0.44   | 0.32   | 0.36   | 0.41   | 0.34   | 0.29   | 0.35 | 0.33 | 0.29 | 0.44 | 0.05 | 15  |
| 8      | Bull C. Walnut Shade MO          | 0.43   | 0.45   | 0.42   | 0.49   | 0.49   | 0.43   | 0.49   | 0.46   | 0.57   | 0.69   | 0.52   | 0.51   | 0.49 | 0.49 | 0.42 | 0.69 | 0.07 | 15  |
| 9      | Beaver C. Bradleyville MO        | 0.49   | 0.47   | 0.49   | 0.58   | 0.54   | 0.49   | 0.53   | 0.48   | 0.57   | 0.66   | 0.57   | 0.53   | 0.53 | 0.53 | 0.47 | 0.66 | 0.06 | 10  |
| 10     | James R. Kinser Bridge MO        | 0.42   | 0.40   | 0.45   | 0.32   | 0.53   | 0.57   | 0.60   | 0.61   | 0.59   | 0.67   | 0.57   | 0.49   | 0.52 | 0.55 | 0.32 | 0.67 | 0.10 | 20  |
| 11     | Pearson C. D Hwy. MO             | 0.54   | 0.58   | 0.58   | 0.74   | 0.61   | 0.58   | 0.46   | 0.52   | 0.42   | 0.77   | 0.65   | 0.62   | 0.59 | 0.58 | 0.42 | 0.77 | 0.10 | 17  |
| 12     | Long C. Denver AR                | 0.45   | 0.43   | 0.41   | 0.42   | 0.45   | 0.47   | 0.44   | 0.40   | 0.58   | 0.54   | 0.59   | 0.51   | 0.47 | 0.45 | 0.40 | 0.59 | 0.07 | 14  |
| 13     | Yocum C. off Hwy 311 AR          | 0.37   | 0.33   | 0.46   | 0.46   | 0.49   | 0.45   | 0.43   | 0.44   | 0.51   | 0.52   | 0.51   | 0.46   | 0.45 | 0.46 | 0.33 | 0.52 | 0.06 | 13  |
| 14     | Kings R. Berryville AR           | 0.30   | 0.28   | 0.34   | 0.34   | 0.40   | 0.49   | 0.41   | 0.41   | 0.53   | 0.47   | 0.51   | 0.36   | 0.41 | 0.40 | 0.28 | 0.53 | 0.08 | 21  |
| 15     | War Eagle C. Hiland AR           | 0.21   | 0.18   | 0.27   | 0.30   | 0.40   | 0.37   | 0.28   | 0.45   | 0.56   | 0.38   | 0.54   | 0.28   | 0.35 | 0.33 | 0.18 | 0.56 | 0.12 | 34  |
| 16     | Richland C. Goshen AR            | 0.17   | 0.15   | 0.24   | 0.24   | 0.31   | 0.27   | 0.25   | 0.28   | 0.39   | 0.45   | 0.38   | 0.36   | 0.29 | 0.27 | 0.15 | 0.45 | 0.09 | 31  |
| 17     | White R. Fayetteville AR         | 0.14   | 0.12   | 0.14   | 0.20   | 0.26   | 0.30   | 0.33   | 0.30   | 0.37   | 0.49   | 0.38   | 0.14   | 0.26 | 0.28 | 0.12 | 0.49 | 0.12 | 45  |
| 18     | W. Fork White R. Fayetteville AR | 0.22   | 0.21   | 0.22   | 0.26   | 0.40   | 0.44   | 0.24   | 0.32   | 0.40   | 0.65   | 0.50   | 0.40   | 0.36 | 0.36 | 0.21 | 0.65 | 0.14 | 38  |
| 19     | Bear C. Hwy 14 Omaha AR          | 0.49   | 0.49   | 0.46   | 0.53   | 0.46   | 0.42   | 0.43   | 0.43   | 0.51   | 0.61   | 0.52   | 0.49   | 0.49 | 0.49 | 0.42 | 0.61 | 0.05 | 11  |

NS = No Sample

Shaded areas represent spring and fall samples

### Turbidity (NTU)

| Site # | Location                         | Mar-05 | Apr-05 | May-05 | Jun-05 | Jul-05 | Aug-05 | Sep-05 | Oct-05 | Nov-05 | Dec-05 | Jan-06 | Feb-06 | Mean | Med  | Min  | Max   | SD   | CV% |
|--------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|-------|------|-----|
| 1      | Wilson C. at Scenic Ave. MO      | 7.2    | 7.8    | 12.0   | 17.7   | 5.5    | 7.1    | 6.8    | 31.3   | 5.8    | 6.2    | 44.5   | 61.1   | 17.8 | 7.5  | 5.5  | 61.1  | 18.3 | 103 |
| 2      | Wilson C. at Co Rd. 156 MO       | 6.1    | 7.8    | 15.3   | 11.7   | 15.3   | 8.8    | NS     | 19.5   | 6.7    | 6.4    | 30.3   | 77.9   | 18.7 | 11.7 | 6.1  | 77.9  | 20.9 | 112 |
| 3      | Wilson C. below WWT plant MO     | 4.0    | 18.4   | 25.1   | 18.5   | 4.9    | 16.9   | 12.2   | 16.8   | 0.0    | 0.3    | 31.8   | 29.0   | 14.8 | 16.9 | 0.0  | 31.8  | 10.8 | 73  |
| 4      | James R. Boaz MO                 | 5.6    | 19.0   | 31.2   | 11.3   | 9.3    | 11.7   | 2.8    | 23.7   | 6.9    | 10.5   | 23.7   | 55.2   | 17.6 | 11.5 | 2.8  | 55.2  | 14.6 | 83  |
| 5      | Finley C. Riverdale Rd. MO       | 3.1    | 11.2   | 12.6   | 93.1   | 6.5    | 10.5   | 0.0    | 17.9   | 2.7    | 2.2    | 24.8   | 44.1   | 19.1 | 10.9 | 0.0  | 93.1  | 26.4 | 138 |
| 6      | James R. Galena MO               | 5.3    | 13.6   | 3.9    | 6.7    | 2.7    | 2.7    | 62.9   | 18.1   | 2.6    | 2.1    | 4.2    | 46.2   | 11.3 | 4.8  | 2.1  | 62.9  | 19.8 | 174 |
| 7      | Below TableRock Dam MO           | 20.5   | 11.4   | 8.4    | 4.6    | 71.8   | 71.6   | 3.3    | 25.5   | 4.2    | 3.1    | 14.1   | 32.8   | 22.6 | 12.8 | 3.1  | 71.8  | 24.8 | 110 |
| 8      | Bull C. Walnut Shade MO          | 4.4    | 10.6   | 4.4    | 11.0   | 4.6    | 3.4    | 8.0    | 15.4   | 0.1    | 2.0    | 2.7    | 33.9   | 8.4  | 4.5  | 0.1  | 33.9  | 9.2  | 109 |
| 9      | Beaver C. Bradleyville MO        | 3.0    | 7.3    | 2.0    | 22.1   | 1.4    | 5.7    | 13.7   | 20.0   | 7.3    | 1.0    | 16.0   | 25.2   | 10.4 | 7.3  | 1.0  | 25.2  | 8.7  | 83  |
| 10     | James R. Kinser Bridge MO        | 7.1    | 9.0    | 8.4    | 68.4   | 6.9    | 19.4   | 17.1   | 20.6   | 7.6    | 3.8    | 1.3    | 14.1   | 15.3 | 8.7  | 1.3  | 68.4  | 17.8 | 116 |
| 11     | Pearson C. D Hwy. MO             | 5.0    | 16.3   | 6.0    | 6.7    | 13.2   | 25.1   | 8.1    | 22.6   | 155.0  | 98.0   | 0.0    | 14.7   | 30.9 | 14.0 | 0.0  | 155.0 | 46.9 | 152 |
| 12     | Long C. Denver AR                | 6.5    | 9.0    | 5.2    | 9.0    | 6.8    | 13.9   | 4.9    | 21.3   | 6.0    | 45.9   | 32.1   | 96.0   | 21.4 | 9.0  | 4.9  | 96.0  | 26.7 | 125 |
| 13     | Yocum C. off Hwy 311 AR          | 6.5    | 11.0   | 4.7    | 6.5    | 4.5    | 8.0    | 5.9    | 20.6   | 2.5    | 56.0   | 8.3    | 82.4   | 18.1 | 7.3  | 2.5  | 82.4  | 25.0 | 138 |
| 14     | Kings R. Berryville AR           | 17.7   | 12.4   | 3.0    | 10.2   | 4.8    | 10.7   | 13.4   | 20.5   | 8.0    | 46.9   | 11.0   | 83.0   | 14.4 | 11.7 | 3.0  | 83.0  | 22.8 | 158 |
| 15     | War Eagle C. Hiland AR           | 13.1   | 22.2   | 6.0    | 14.8   | 26.7   | 9.6    | 9.4    | 36.1   | 11.5   | 24.9   | 9.0    | 88.4   | 22.6 | 14.0 | 6.0  | 88.4  | 22.6 | 100 |
| 16     | Richland C. Goshen AR            | 5.0    | 15.3   | 7.5    | 8.3    | 10.6   | 11.6   | 23.1   | 23.4   | 2.8    | 38.5   | 12.5   | 78.1   | 19.7 | 12.1 | 2.8  | 78.1  | 20.9 | 106 |
| 17     | White R. Fayetteville AR         | 16.8   | 19.1   | 10.5   | 23.9   | 13.1   | 20.2   | 13.6   | 38.0   | 12.1   | 28.4   | 21.0   | 101.0  | 26.5 | 19.7 | 10.5 | 101.0 | 24.7 | 93  |
| 18     | W. Fork White R. Fayetteville AR | 14.5   | 24.9   | 17.8   | 35.6   | 8.6    | 13.8   | 12.3   | 32.3   | 9.4    | 87.0   | 18.1   | 95.9   | 30.9 | 18.0 | 8.6  | 95.9  | 29.6 | 96  |
| 19     | Bear C. Hwy 14 Omaha AR          | 4.7    | 6.3    | 2.7    | 10.2   | 1.9    | 3.6    | 4.6    | 17.0   | 1.6    | 52.0   | 0.0    | 29.0   | 11.1 | 4.7  | 0.0  | 52.0  | 15.3 | 137 |

NS = No Sample

Shaded areas represent spring and fall samples