

CELNRN-EC-H / Water Management Section

Location: Cumberland River, Mile 460.4

Quad: Wolf Creek Dam, KY  
HUC: 05130103

Stream Flow = 5330 cfs

## Profile Measurements

| Depth<br>ft | Water Temp<br>deg C | Water Temp<br>deg F | Dis Oxygen<br>mg/l | Dis Oxygen<br>% sat | Spec Cond<br>umho/cm | pH<br>units | Chloro a F<br>ug/l |
|-------------|---------------------|---------------------|--------------------|---------------------|----------------------|-------------|--------------------|
| 0.0         | 14.4                | 57.9                | 4.4                | 43.3                | 181.0                | 7.0         |                    |

United States Army Corps of Engineers

Nashville District

CELRN-EC-H / Water Management Section

Station: 3WOL10001

Project: Wolf Creek

Location: Cumberland River, Mile 460.4

State: Kentucky

Latitude: 36° 52" 19.9'

Quad: Wolf Creek Dam, KY

County: Russell

Longitude: 85° 8" 57.4'

HUC: 05130103

Sample Date: 05 Nov 2014

Water Surface Elevation = 550.4 ft

Stream Flow = 5330 cfs

## Results of Laboratory Analyses

## Profile Measurements

| Sample Depth ft    |      | 0.0    | Depth<br>ft | Water Temp<br>deg C | Water Temp<br>deg F | Dis Oxygen<br>mg/l | Dis Oxygen<br>% sat | Spec Cond<br>umho/cm | pH<br>units | Chloro a F<br>ug/l |
|--------------------|------|--------|-------------|---------------------|---------------------|--------------------|---------------------|----------------------|-------------|--------------------|
| Alkalinity, Tot    | mg/L | 60     | 0.0         | 14.6                | 58.3                | 4.5                | 44.4                | 185.0                | 7.0         |                    |
| Alkalinity, Phenol | mg/L | 0      |             |                     |                     |                    |                     |                      |             |                    |
| Solids, Tot        | mg/L | 124    |             |                     |                     |                    |                     |                      |             |                    |
| Solids, Tot Diss   | mg/L | 121    |             |                     |                     |                    |                     |                      |             |                    |
| Solids, Tot Susp   | mg/L | 3.00   |             |                     |                     |                    |                     |                      |             |                    |
| Solids, Vol        | mg/L | <1.00  |             |                     |                     |                    |                     |                      |             |                    |
| Solids, Vol Diss   | mg/L | <1.00  |             |                     |                     |                    |                     |                      |             |                    |
| Solids, Vol Susp   | mg/L | <1.00  |             |                     |                     |                    |                     |                      |             |                    |
| Ammonia N, Tot     | mg/L | 0.177  |             |                     |                     |                    |                     |                      |             |                    |
| Kjeldahl N, Tot    | mg/L | 0.510  |             |                     |                     |                    |                     |                      |             |                    |
| NO3+NO2, Tot       | mg/L | 0.302  |             |                     |                     |                    |                     |                      |             |                    |
| Phosphorus, Tot    | mg/L | <0.007 |             |                     |                     |                    |                     |                      |             |                    |
| Phosphorus, Diss   | mg/L | <0.007 |             |                     |                     |                    |                     |                      |             |                    |
| OrthoPhosphate, D  | mg/L | <0.05  |             |                     |                     |                    |                     |                      |             |                    |
| Organic Carbon, T  | mg/L | 2.20   |             |                     |                     |                    |                     |                      |             |                    |
| Hardness, Tot      | mg/L | 74.9   |             |                     |                     |                    |                     |                      |             |                    |
| Sulfate, Tot       | mg/L | 26.6   |             |                     |                     |                    |                     |                      |             |                    |
| Calcium, Tot       | mg/L | 19.8   |             |                     |                     |                    |                     |                      |             |                    |
| Magnesium, Tot     | mg/L | 6.17   |             |                     |                     |                    |                     |                      |             |                    |
| Sodium, Tot        | mg/L | 6.30   |             |                     |                     |                    |                     |                      |             |                    |
| Potassium, Tot     | mg/L | 1.60   |             |                     |                     |                    |                     |                      |             |                    |
| Chloride, Tot      | mg/L | 4.33   |             |                     |                     |                    |                     |                      |             |                    |
| Arsenic, Tot       | ug/L | 0.3    |             |                     |                     |                    |                     |                      |             |                    |
| Barium, Tot        | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Beryllium, Tot     | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Cadmium, Tot       | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Chromium, Tot      | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Cobalt, Tot        | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Copper, Tot        | ug/L | 0.8    |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Tot          | ug/L | 63.9   |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Diss         | ug/L | 60.1   |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Tot          | ug/L | 0.4    |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Diss         | ug/L | <0.2   |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Tot     | ug/L | 64.8   |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Diss    | ug/L | 3.6    |             |                     |                     |                    |                     |                      |             |                    |
| Thallium, Tot      | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Molybdenum, Tot    | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Nickel, Tot        | ug/L | 1.9    |             |                     |                     |                    |                     |                      |             |                    |
| Silver, Tot        | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Vanadium, Tot      | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Tot          | ug/L | 4.0    |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Diss         | ug/L | 3.7    |             |                     |                     |                    |                     |                      |             |                    |
| Antimony, Tot      | ug/L |        |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Tot      | ug/L | 26.5   |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Diss     | ug/L | <7.0   |             |                     |                     |                    |                     |                      |             |                    |
| Selenium, Tot      | ug/L | 0.2    |             |                     |                     |                    |                     |                      |             |                    |
| Mercury, Tot       | ug/L | <0.01  |             |                     |                     |                    |                     |                      |             |                    |



United States Army Corps of Engineers

Station: 3WOL10024

State: Kentucky

County: Cumberland

Sample Date: 05 Nov 2014

Nashville District

Project: Wolf Creek

Latitude: 36° 47" 11'

Longitude: 85° 21" 54'

Water Surface Elevation =

CELRN-EC-H / Water Management Section

Location: Cumberland River, Mile 427.0

Quad: Burkesville, KY

HUC: 05130103

Stream Flow =

(No Laboratory Analyses)

| Profile Measurements |            |            |            |            |           |       |            |
|----------------------|------------|------------|------------|------------|-----------|-------|------------|
| Depth                | Water Temp | Water Temp | Dis Oxygen | Dis Oxygen | Spec Cond | pH    | Chloro a F |
| ft                   | deg C      | deg F      | mg/l       | % sat      | umho/cm   | units | ug/l       |
| 0.0                  | 13.2       | 55.8       | 8.5        | 81.4       | 182.0     | 7.4   |            |

CELNRN-EC-H / Water Management Section

Location: Pitman Creek, Mile 4.9

Quad: Somerset, KY  
HUC: 05130103

Stream Flow =

## Profile Measurements

|                         | Depth | Water Temp | Water Temp | Diss Oxygen | Diss Oxygen | Spec Cond | pH    | Chlorophyll a |
|-------------------------|-------|------------|------------|-------------|-------------|-----------|-------|---------------|
| Sample                  | ft    | deg C      | deg F      | mg/l        | % sat       | umho/cm   | units | Fug/l         |
| Alkalinity, Tot mg/L    | 0.0   | 12.2       | 54.0       | 10.0        | 93.6        | 342.0     | 8.0   |               |
| Alkalinity, Phenol mg/L | 0     |            |            |             |             |           |       |               |
| Solids, Tot mg/L        | 278   |            |            |             |             |           |       |               |
| Solids, Tot Diss mg/L   | 270   |            |            |             |             |           |       |               |
| Solids, Tot Susp mg/L   | 8.50  |            |            |             |             |           |       |               |
| Solids, Vol mg/L        | <1.00 |            |            |             |             |           |       |               |
| Solids, Vol Diss mg/L   | <1.00 |            |            |             |             |           |       |               |
| Solids, Vol Susp mg/L   | 3.70  |            |            |             |             |           |       |               |
| Ammonia N, Tot mg/L     | 1.84  |            |            |             |             |           |       |               |
| Kjeldahl N, Tot mg/L    | 3.33  |            |            |             |             |           |       |               |
| NO3+NO2, Tot mg/L       | 5.47  |            |            |             |             |           |       |               |
| Phosphorus, Tot mg/L    | 0.715 |            |            |             |             |           |       |               |
| Phosphorus, Diss mg/L   | 0.651 |            |            |             |             |           |       |               |
| OrthoPhosphate, D mg/L  | 0.507 |            |            |             |             |           |       |               |
| Organic Carbon, T mg/L  | 4.80  |            |            |             |             |           |       |               |
| Hardness, Tot mg/L      | 148   |            |            |             |             |           |       |               |
| Sulfate, Tot mg/L       | 23.2  |            |            |             |             |           |       |               |
| Calcium, Tot mg/L       | 48.3  |            |            |             |             |           |       |               |
| Magnesium, Tot mg/L     | 6.77  |            |            |             |             |           |       |               |
| Sodium, Tot mg/L        | 16.2  |            |            |             |             |           |       |               |
| Potassium, Tot mg/L     | 4.19  |            |            |             |             |           |       |               |
| Chloride, Tot mg/L      | 24.4  |            |            |             |             |           |       |               |
| Arsenic, Tot ug/L       | 0.5   |            |            |             |             |           |       |               |
| Barium, Tot ug/L        |       |            |            |             |             |           |       |               |
| Beryllium, Tot ug/L     |       |            |            |             |             |           |       |               |
| Cadmium, Tot ug/L       |       |            |            |             |             |           |       |               |
| Chromium, Tot ug/L      |       |            |            |             |             |           |       |               |
| Cobalt, Tot ug/L        |       |            |            |             |             |           |       |               |
| Copper, Tot ug/L        | 1.3   |            |            |             |             |           |       |               |
| Iron, Tot ug/L          | 101.0 |            |            |             |             |           |       |               |
| Iron, Diss ug/L         |       |            |            |             |             |           |       |               |
| Lead, Tot ug/L          | 0.5   |            |            |             |             |           |       |               |
| Lead, Diss ug/L         |       |            |            |             |             |           |       |               |
| Manganese, Tot ug/L     | 11.8  |            |            |             |             |           |       |               |
| Manganese, Diss ug/L    |       |            |            |             |             |           |       |               |
| Thallium, Tot ug/L      |       |            |            |             |             |           |       |               |
| Molybdenum, Tot ug/L    |       |            |            |             |             |           |       |               |
| Nickel, Tot ug/L        | 3.1   |            |            |             |             |           |       |               |
| Silver, Tot ug/L        |       |            |            |             |             |           |       |               |
| Vanadium, Tot ug/L      |       |            |            |             |             |           |       |               |
| Zinc, Tot ug/L          | 11.2  |            |            |             |             |           |       |               |
| Zinc, Diss ug/L         |       |            |            |             |             |           |       |               |
| Antimony, Tot ug/L      |       |            |            |             |             |           |       |               |
| Aluminum, Tot ug/L      | 61.1  |            |            |             |             |           |       |               |
| Aluminum, Diss ug/L     |       |            |            |             |             |           |       |               |
| Selenium, Tot ug/L      | 0.5   |            |            |             |             |           |       |               |
| Mercury, Tot ug/L       |       |            |            |             |             |           |       |               |







CELNRN-EC-H / Water Management Section

Location: Rockcastle River, Mile 24.4

Quad: Billows, KY  
HUC: 05130102

Stream Flow =

## Profile Measurements

[illegible]





United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL20002

Project: Wolf Creek

Location: Cumberland River, Mile 461.4

State: Kentucky  
County: RussellLatitude: 36° 51' 29.1"  
Longitude: 85° 8' 24.7"Quad: Wolf Creek Dam, KY  
HUC: 05130103

Sample Date: 05 Nov 2014

Water Surface Elevation = 706.0 ft

Secchi Disk = 3.6 m

## Results of Laboratory Analyses

| Results of Laboratory Analyses |          |        |        | Profile Measurements |          |                  |                  |                 |                  |                   |          |                 |
|--------------------------------|----------|--------|--------|----------------------|----------|------------------|------------------|-----------------|------------------|-------------------|----------|-----------------|
| Sample                         | Depth ft | 0.0    | 80.0   | 160.0                | Depth ft | Water Temp deg C | Water Temp deg F | Dis Oxygen mg/l | Dis Oxygen % sat | Spec Cond umho/cm | pH units | Chloro a F ug/l |
| Alkalinity, Tot                | mg/L     | 60     | 60     | 57                   | 0.0      | 17.4             | 63.3             | 7.6             | 79.6             | 205.0             | 7.7      | 8.6             |
| Alkalinity, Phenol             | mg/L     | 0      | 0      | 0                    | 5.0      | 17.4             | 63.3             | 7.6             | 79.6             | 205.0             | 7.7      | 9.1             |
| Solids, Tot                    | mg/L     | 128    | 132    | 116                  | 10.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.7      | 10.0            |
| Solids, Tot Diss               | mg/L     | 127    | 131    | 116                  | 15.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.7      | 9.3             |
| Solids, Tot Susp               | mg/L     | 1.00   | 1.00   | <1.00                | 20.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.6      | 9.1             |
| Solids, Vol                    | mg/L     | <1.00  | <1.00  | <1.00                | 25.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.6      | 8.8             |
| Solids, Vol Diss               | mg/L     | <1.00  | <1.00  | <1.00                | 30.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.6      | 9.0             |
| Solids, Vol Susp               | mg/L     | <1.00  | <1.00  | <1.00                | 35.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.6      | 8.5             |
| Ammonia N, Tot                 | mg/L     | 0.0533 | 0.0713 | 0.105                | 40.0     | 17.4             | 63.3             | 7.4             | 77.5             | 205.0             | 7.6      | 9.3             |
| Kjeldahl N, Tot                | mg/L     | 0.350  | 0.420  | <0.2                 | 45.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.6      | 9.8             |
| NO3+NO2, Tot                   | mg/L     | 0.109  | 0.336  | 0.451                | 50.0     | 17.4             | 63.3             | 7.5             | 78.5             | 205.0             | 7.6      | 9.0             |
| Phosphorus, Tot                | mg/L     | <0.007 | <0.007 | <0.007               | 55.0     | 17.4             | 63.3             | 7.5             | 69.1             | 205.0             | 7.6      | 8.7             |
| Phosphorus, Diss               | mg/L     | <0.007 | <0.007 | <0.007               | 60.0     | 17.3             | 63.1             | 6.6             | 34.5             | 205.0             | 7.5      | 7.8             |
| OrthoPhosphate, D              | mg/L     | <0.05  | <0.05  | <0.05                | 65.0     | 16.7             | 62.1             | 3.3             | 23.7             | 207.0             | 7.1      | 4.6             |
| Organic Carbon, T              | mg/L     | 2.10   | 2.50   | 2.00                 | 70.0     | 16.5             | 61.7             | 2.3             | 20.6             | 207.0             | 7.0      | 3.3             |
| Hardness, Tot                  | mg/L     | 79.2   | 75.8   | 77.3                 | 75.0     | 16.2             | 61.2             | 2.0             | 19.4             | 202.0             | 7.0      | 2.7             |
| Sulfate, Tot                   | mg/L     | 28.7   | 27.5   | 25.2                 | 80.0     | 16.1             | 61.0             | 1.9             | 8.2              | 202.0             | 7.0      | 2.7             |
| Calcium, Tot                   | mg/L     | 20.7   | 19.9   | 20.6                 | 85.0     | 15.3             | 59.5             | 0.8             | 5.0              | 193.0             | 6.9      | 2.2             |
| Magnesium, Tot                 | mg/L     | 6.70   | 6.34   | 6.30                 | 90.0     | 14.4             | 57.9             | 0.5             | 4.9              | 178.0             | 6.9      | 2.0             |
| Sodium, Tot                    | mg/L     | 7.20   | 6.99   | 5.46                 | 95.0     | 13.3             | 55.9             | 0.8             | 7.7              | 177.0             | 6.8      | 1.9             |
| Potassium, Tot                 | mg/L     | 1.62   | 1.89   | 1.43                 | 100.0    | 12.0             | 53.6             | 1.0             | 9.3              | 179.0             | 6.8      | 1.9             |
| Chloride, Tot                  | mg/L     | 4.50   | 4.26   | 4.79                 | 105.0    | 11.0             | 51.8             | 0.8             | 7.3              | 182.0             | 6.8      | 1.7             |
| Arsenic, Tot                   | ug/L     | 0.4    | 0.4    | 0.35                 | 110.0    | 10.6             | 51.1             | 0.6             | 5.4              | 183.0             | 6.8      | 1.7             |
| Barium, Tot                    | ug/L     |        |        |                      | 115.0    | 10.4             | 50.7             | 0.4             | 3.6              | 184.0             | 6.8      | 1.7             |
| Beryllium, Tot                 | ug/L     |        |        |                      | 120.0    | 10.1             | 50.2             | 0.4             | 3.6              | 185.0             | 6.8      | 1.6             |
| Cadmium, Tot                   | ug/L     |        |        |                      | 125.0    | 9.9              | 49.8             | 0.1             | 0.9              | 185.0             | 6.8      | 1.7             |
| Chromium, Tot                  | ug/L     |        |        |                      | 130.0    | 9.8              | 49.6             | 0.1             | 0.9              | 185.0             | 6.8      | 1.6             |
| Cobalt, Tot                    | ug/L     |        |        |                      | 135.0    | 9.5              | 49.1             | 0.1             | 0.9              | 187.0             | 6.8      | 1.6             |
| Copper, Tot                    | ug/L     | 0.7    | 0.8    | 0.5                  | 140.0    | 9.4              | 48.9             | 0.0             | 0.0              | 188.0             | 6.8      | 1.5             |
| Iron, Tot                      | ug/L     | 18.5   | 67.4   | 15.2                 | 145.0    | 9.2              | 48.6             | 0.1             | 0.9              | 190.0             | 6.8      | 1.5             |
| Iron, Diss                     | ug/L     | 33.5   | 44.3   | <7.0                 | 150.0    | 9.1              | 48.4             | 0.2             | 1.7              | 190.0             | 6.8      | 1.5             |
| Lead, Tot                      | ug/L     | <0.2   | <0.2   | <0.2                 | 155.0    | 9.1              | 48.4             | 0.1             | 0.9              | 190.0             | 6.8      | 1.5             |
| Lead, Diss                     | ug/L     | <0.2   | <0.2   | <0.2                 | 160.0    | 9.0              | 48.2             | 0.1             | 0.9              | 190.0             | 6.8      | 1.5             |
| Manganese, Tot                 | ug/L     | 6.1    | 23.4   | 254.0                | 165.0    | 9.0              | 48.2             | 0.1             | 0.9              | 190.0             | 6.8      | 1.5             |
| Manganese, Diss                | ug/L     | 0.4    | 1.7    | 1.1                  |          |                  |                  |                 |                  |                   |          |                 |
| Thallium, Tot                  | ug/L     |        |        |                      |          |                  |                  |                 |                  |                   |          |                 |
| Molybdenum, Tot                | ug/L     |        |        |                      |          |                  |                  |                 |                  |                   |          |                 |
| Nickel, Tot                    | ug/L     | 2.0    | 2.1    | 1.7                  |          |                  |                  |                 |                  |                   |          |                 |
| Silver, Tot                    | ug/L     |        |        |                      |          |                  |                  |                 |                  |                   |          |                 |
| Vanadium, Tot                  | ug/L     |        |        |                      |          |                  |                  |                 |                  |                   |          |                 |
| Zinc, Tot                      | ug/L     | 2.5    | 2.9    | 3.0                  |          |                  |                  |                 |                  |                   |          |                 |
| Zinc, Diss                     | ug/L     | 2.5    | 2.4    | 1.4                  |          |                  |                  |                 |                  |                   |          |                 |
| Antimony, Tot                  | ug/L     |        |        |                      |          |                  |                  |                 |                  |                   |          |                 |
| Aluminum, Tot                  | ug/L     | <7.0   | 16.9   | <7.0                 |          |                  |                  |                 |                  |                   |          |                 |
| Aluminum, Diss                 | ug/L     | <7.0   | <7.0   | <7.0                 |          |                  |                  |                 |                  |                   |          |                 |
| Selenium, Tot                  | ug/L     | 0.3    | 0.3    | 0.3                  |          |                  |                  |                 |                  |                   |          |                 |
| Mercury, Tot                   | ug/L     | 0.043  | 0.046  | 0.023                |          |                  |                  |                 |                  |                   |          |                 |

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL20003

Project: Wolf Creek

Location: Cumberland River, Mile 469.7

State: Kentucky  
County: RussellLatitude: 36° 53" 56.5'  
Longitude: 85° 1" 13'Quad: Jamestown, KY  
HUC: 05130103

Sample Date: 05 Nov 2014

Water Surface Elevation = 706.0 ft

Secchi Disk = 3.0 m

(No Laboratory Analyses)

| Profile Measurements |            |            |            |            |           |       |            |  |
|----------------------|------------|------------|------------|------------|-----------|-------|------------|--|
| Depth                | Water Temp | Water Temp | Dis Oxygen | Dis Oxygen | Spec Cond | pH    | Chloro a F |  |
| ft                   | deg C      | deg F      | mg/l       | % sat      | umho/cm   | units | ug/l       |  |
| 0.0                  | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 7.4        |  |
| 5.0                  | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 7.5        |  |
| 10.0                 | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 8.0        |  |
| 15.0                 | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 8.2        |  |
| 20.0                 | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 8.5        |  |
| 25.0                 | 17.5       | 63.5       | 7.6        | 79.7       | 209.0     | 7.7   | 8.1        |  |
| 30.0                 | 17.5       | 63.5       | 7.6        | 79.7       | 209.0     | 7.7   | 7.9        |  |
| 35.0                 | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 7.8        |  |
| 40.0                 | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 8.1        |  |
| 45.0                 | 17.5       | 63.5       | 7.7        | 80.8       | 209.0     | 7.7   | 7.9        |  |
| 50.0                 | 17.5       | 63.5       | 7.6        | 79.7       | 209.0     | 7.6   | 7.9        |  |
| 55.0                 | 17.5       | 63.5       | 7.6        | 79.7       | 208.0     | 7.6   | 7.7        |  |
| 60.0                 | 17.5       | 63.5       | 7.6        | 79.7       | 207.0     | 7.6   | 7.3        |  |
| 65.0                 | 17.5       | 63.5       | 7.6        | 79.7       | 207.0     | 7.6   | 7.2        |  |
| 70.0                 | 17.5       | 63.5       | 7.4        | 77.6       | 207.0     | 7.6   | 6.5        |  |
| 75.0                 | 16.1       | 61.0       | 3.4        | 34.7       | 190.0     | 7.1   | 3.1        |  |
| 80.0                 | 15.4       | 59.7       | 1.4        | 14.1       | 197.0     | 6.9   | 2.4        |  |
| 85.0                 | 13.7       | 56.7       | 0.2        | 1.9        | 185.0     | 6.9   | 2.1        |  |
| 90.0                 | 12.5       | 54.5       | 0.1        | 0.9        | 182.0     | 6.8   | 1.9        |  |
| 95.0                 | 11.8       | 53.2       | 0.0        | 0.0        | 180.0     | 6.8   | 1.8        |  |
| 100.0                | 11.4       | 52.5       | 0.0        | 0.0        | 180.0     | 6.8   | 1.9        |  |
| 105.0                | 11.1       | 52.0       | 0.0        | 0.0        | 181.0     | 6.8   | 1.9        |  |
| 110.0                | 10.6       | 51.1       | 0.0        | 0.0        | 182.0     | 6.8   | 1.7        |  |
| 115.0                | 10.2       | 50.4       | 0.0        | 0.0        | 182.0     | 6.7   | 1.7        |  |
| 120.0                | 9.9        | 49.8       | 0.0        | 0.0        | 184.0     | 6.7   | 1.6        |  |
| 125.0                | 9.7        | 49.5       | 0.0        | 0.0        | 183.0     | 6.7   | 1.6        |  |
| 130.0                | 9.5        | 49.1       | 0.0        | 0.0        | 184.0     | 6.7   | 1.6        |  |
| 135.0                | 9.2        | 48.6       | 0.0        | 0.0        | 184.0     | 6.7   | 1.5        |  |
| 140.0                | 9.1        | 48.4       | 0.0        | 0.0        | 183.0     | 6.7   | 1.5        |  |
| 145.0                | 8.9        | 48.0       | 0.0        | 0.0        | 183.0     | 6.8   | 1.5        |  |
| 150.0                | 8.8        | 47.8       | 0.0        | 0.0        | 184.0     | 6.8   | 1.5        |  |
| 155.0                | 8.7        | 47.7       | 0.0        | 0.0        | 184.0     | 6.8   | 1.5        |  |
| 160.0                | 8.7        | 47.7       | 0.0        | 0.0        | 184.0     | 6.8   | 1.5        |  |
| 162.0                | 8.6        | 47.5       | 0.0        | 0.0        | 185.0     | 6.8   | 1.5        |  |



CELNRN-EC-H / Water Management Section

Location: Cumberland River, Mile 509.3

Quad: Frazer, KY  
HUC: 05130103

Secchi Disk = 2.2 m

## Profile Measurements

[illegible]

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3W0L20006

Project: Wolf Creek

Location: Cumberland River, Mile 519.0

State: Kentucky

Latitude: 37° 0" 7.7'

Quad: Somerset, KY

County: Pulaski

Longitude: 84° 34" 27.8'

HUC: 05130103

Sample Date: 06 Nov 2014

Water Surface Elevation = 706.0 ft

Secchi Disk = 2.4 m

## Results of Laboratory Analyses

## Profile Measurements

| Sample Depth ft    | 40.0        | Depth<br>ft | Water Temp<br>deg C | Water Temp<br>deg F | Dis Oxygen<br>mg/l | Dis Oxygen<br>% sat | Spec Cond<br>umho/cm | pH<br>units | Chloro a F<br>ug/l |
|--------------------|-------------|-------------|---------------------|---------------------|--------------------|---------------------|----------------------|-------------|--------------------|
| Alkalinity, Tot    | mg/L 65     | 0.0         | 17.1                | 62.8                | 7.8                | 81.2                | 216.0                | 7.7         | 5.0                |
| Alkalinity, Phenol | mg/L 0      | 5.0         | 17.1                | 62.8                | 7.8                | 81.2                | 216.0                | 7.7         | 6.0                |
| Solids, Tot        | mg/L 134    | 10.0        | 17.1                | 62.8                | 7.8                | 81.2                | 216.0                | 7.7         | 5.4                |
| Solids, Tot Diss   | mg/L 134    | 15.0        | 17.1                | 62.8                | 7.8                | 81.2                | 216.0                | 7.7         | 5.3                |
| Solids, Tot Susp   | mg/L <1.00  | 20.0        | 17.1                | 62.8                | 7.8                | 81.2                | 217.0                | 7.7         | 5.3                |
| Solids, Vol        | mg/L <1.00  | 25.0        | 17.1                | 62.8                | 7.7                | 80.1                | 216.0                | 7.7         | 5.4                |
| Solids, Vol Diss   | mg/L <1.00  | 30.0        | 17.1                | 62.8                | 7.8                | 81.2                | 216.0                | 7.7         | 5.6                |
| Solids, Vol Susp   | mg/L <1.00  | 35.0        | 17.1                | 62.8                | 7.8                | 81.2                | 216.0                | 7.7         | 5.4                |
| Ammonia N, Tot     | mg/L 0.109  | 40.0        | 16.8                | 62.2                | 7.8                | 80.7                | 216.0                | 7.7         | 5.7                |
| Kjeldahl N, Tot    | mg/L 0.200  | 45.0        | 16.6                | 61.9                | 7.9                | 81.4                | 218.0                | 7.7         | 5.6                |
| NO3+NO2, Tot       | mg/L 0.194  | 50.0        | 16.5                | 61.7                | 7.9                | 81.2                | 219.0                | 7.7         | 5.5                |
| Phosphorus, Tot    | mg/L <0.007 | 55.0        | 16.3                | 61.3                | 7.9                | 80.9                | 222.0                | 7.6         | 5.4                |
| Phosphorus, Diss   | mg/L <0.007 | 60.0        | 15.7                | 60.3                | 8.0                | 80.9                | 227.0                | 7.6         | 5.2                |
| OrthoPhosphate, D  | mg/L <0.05  | 65.0        | 14.5                | 58.1                | 8.2                | 80.8                | 238.0                | 7.5         | 3.7                |
| Organic Carbon, T  | mg/L 2.60   | 70.0        | 14.0                | 57.2                | 8.1                | 78.9                | 241.0                | 7.4         | 3.2                |
| Hardness, Tot      | mg/L 81.9   | 75.0        | 13.9                | 57.0                | 8.1                | 78.8                | 241.0                | 7.4         | 3.2                |
| Sulfate, Tot       | mg/L 29.5   | 80.0        | 13.9                | 57.0                | 8.1                | 78.8                | 241.0                | 7.4         | 3.1                |
| Calcium, Tot       | mg/L 21.5   | 85.0        | 13.9                | 57.0                | 8.1                | 78.8                | 242.0                | 7.4         | 3.1                |
| Magnesium, Tot     | mg/L 6.86   | 90.0        | 13.8                | 56.8                | 8.1                | 78.6                | 241.0                | 7.4         | 3.1                |
| Sodium, Tot        | mg/L 8.12   | 95.0        | 13.8                | 56.8                | 8.1                | 78.6                | 241.0                | 7.4         | 3.1                |
| Potassium, Tot     | mg/L 1.88   |             |                     |                     |                    |                     |                      |             |                    |
| Chloride, Tot      | mg/L 4.44   |             |                     |                     |                    |                     |                      |             |                    |
| Arsenic, Tot       | ug/L 0.4    |             |                     |                     |                    |                     |                      |             |                    |
| Barium, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Beryllium, Tot     | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Cadmium, Tot       | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Chromium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Cobalt, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Copper, Tot        | ug/L 1.0    |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Tot          | ug/L 55.7   |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Tot          | ug/L 2.6    |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Tot     | ug/L 13.3   |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Diss    | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Thallium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Molybdenum, Tot    | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Nickel, Tot        | ug/L 2.2    |             |                     |                     |                    |                     |                      |             |                    |
| Silver, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Vanadium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Tot          | ug/L 4.6    |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Antimony, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Tot      | ug/L 32.4   |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Diss     | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Selenium, Tot      | ug/L 0.33   |             |                     |                     |                    |                     |                      |             |                    |
| Mercury, Tot       | ug/L        |             |                     |                     |                    |                     |                      |             |                    |

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL20007

Project: Wolf Creek

Location: Big South Fork Cumberland River, Mile 2.3

State: Kentucky  
County: WayneLatitude: 36° 57" 20.5'  
Longitude: 84° 36" 21.6'Quad: Burnside, KY  
HUC: 05130104

Sample Date: 06 Nov 2014

Water Surface Elevation = 706.0 ft

Secchi Disk = 2.2 m

## Results of Laboratory Analyses

## Profile Measurements

| Sample Depth ft    | 40.0        | Depth<br>ft | Water Temp<br>deg C | Water Temp<br>deg F | Dis Oxygen<br>mg/l | Dis Oxygen<br>% sat | Spec Cond<br>umho/cm | pH<br>units | Chloro a F<br>ug/l |
|--------------------|-------------|-------------|---------------------|---------------------|--------------------|---------------------|----------------------|-------------|--------------------|
| Alkalinity, Tot    | mg/L        | 0.0         | 17.0                | 62.6                | 8.0                | 83.1                | 216.0                | 7.8         | 7.2                |
| Alkalinity, Phenol | mg/L        | 5.0         | 17.0                | 62.6                | 8.0                | 83.1                | 216.0                | 7.8         | 7.4                |
| Solids, Tot        | mg/L 132    | 10.0        | 17.0                | 62.6                | 7.9                | 82.0                | 216.0                | 7.8         | 8.0                |
| Solids, Tot Diss   | mg/L 130    | 15.0        | 17.0                | 62.6                | 7.9                | 82.0                | 216.0                | 7.7         | 7.6                |
| Solids, Tot Susp   | mg/L 2.00   | 20.0        | 17.0                | 62.6                | 7.9                | 82.0                | 216.0                | 7.7         | 6.5                |
| Solids, Vol        | mg/L <1.00  | 25.0        | 17.0                | 62.6                | 7.9                | 82.0                | 215.0                | 7.7         | 5.8                |
| Solids, Vol Diss   | mg/L <1.00  | 30.0        | 17.0                | 62.6                | 7.8                | 81.0                | 215.0                | 7.7         | 5.8                |
| Solids, Vol Susp   | mg/L <1.00  | 35.0        | 16.9                | 62.4                | 7.8                | 80.8                | 214.0                | 7.7         | 5.4                |
| Ammonia N, Tot     | mg/L 0.0600 | 40.0        | 16.8                | 62.2                | 7.7                | 79.6                | 214.0                | 7.6         | 5.5                |
| Kjeldahl N, Tot    | mg/L 0.260  | 45.0        | 16.7                | 62.1                | 7.6                | 78.4                | 211.0                | 7.6         | 4.5                |
| NO3+NO2, Tot       | mg/L 0.164  | 50.0        | 16.2                | 61.2                | 7.3                | 74.6                | 195.0                | 7.5         | 3.9                |
| Phosphorus, Tot    | mg/L <0.007 | 55.0        | 15.7                | 60.3                | 6.9                | 69.7                | 179.0                | 7.3         | 3.2                |
| Phosphorus, Diss   | mg/L <0.007 | 60.0        | 15.5                | 59.9                | 6.8                | 68.4                | 180.0                | 7.3         | 3.0                |
| OrthoPhosphate, D  | mg/L <0.05  | 65.0        | 15.4                | 59.7                | 6.6                | 66.3                | 173.0                | 7.3         | 3.1                |
| Organic Carbon, T  | mg/L 2.50   | 70.0        | 15.3                | 59.5                | 6.5                | 65.1                | 172.0                | 7.2         | 2.6                |
| Hardness, Tot      | mg/L 81.4   | 75.0        | 15.2                | 59.4                | 6.4                | 64.0                | 168.0                | 7.2         | 2.7                |
| Sulfate, Tot       | mg/L 28.1   | 80.0        | 15.1                | 59.2                | 6.0                | 59.9                | 163.0                | 7.1         | 2.6                |
| Calcium, Tot       | mg/L 22.0   | 85.0        | 15.1                | 59.2                | 5.9                | 58.9                | 162.0                | 7.1         | 2.5                |
| Magnesium, Tot     | mg/L 6.42   | 90.0        | 15.0                | 59.0                | 5.5                | 54.8                | 168.0                | 7.1         | 2.5                |
| Sodium, Tot        | mg/L 7.71   | 95.0        | 14.6                | 58.3                | 3.9                | 38.5                | 214.0                | 7.1         | 2.6                |
| Potassium, Tot     | mg/L 1.88   | 98.0        | 14.5                | 58.1                | 3.5                | 34.5                | 215.0                | 7.1         | 2.6                |
| Chloride, Tot      | mg/L 4.38   |             |                     |                     |                    |                     |                      |             |                    |
| Arsenic, Tot       | ug/L 0.4    |             |                     |                     |                    |                     |                      |             |                    |
| Barium, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Beryllium, Tot     | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Cadmium, Tot       | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Chromium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Cobalt, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Copper, Tot        | ug/L 0.7    |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Tot          | ug/L 66.7   |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Tot          | ug/L <0.2   |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Tot     | ug/L 21.2   |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Diss    | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Thallium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Molybdenum, Tot    | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Nickel, Tot        | ug/L 2.0    |             |                     |                     |                    |                     |                      |             |                    |
| Silver, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Vanadium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Tot          | ug/L 2.7    |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Antimony, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Tot      | ug/L 18.4   |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Diss     | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Selenium, Tot      | ug/L 0.3    |             |                     |                     |                    |                     |                      |             |                    |
| Mercury, Tot       | ug/L        |             |                     |                     |                    |                     |                      |             |                    |

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL20010

Project: Wolf Creek

Location: Pitman Creek, Mile 2.1

State: Kentucky

Latitude: 37° 0" 55.3'

Quad: Somerset, KY

County: Pulaski

Longitude: 84° 36" 26.9'

HUC: 05130103

Sample Date: 06 Nov 2014

Water Surface Elevation = 706.0 ft

Secchi Disk = 2.3 m

## Results of Laboratory Analyses

## Profile Measurements

| Sample Depth ft    | 35.0        | Depth<br>ft | Water Temp<br>deg C | Water Temp<br>deg F | Dis Oxygen<br>mg/l | Dis Oxygen<br>% sat | Spec Cond<br>umho/cm | pH<br>units | Chloro a F<br>ug/l |
|--------------------|-------------|-------------|---------------------|---------------------|--------------------|---------------------|----------------------|-------------|--------------------|
| Alkalinity, Tot    | mg/L 70     | 0.0         | 17.1                | 62.8                | 7.8                | 81.2                | 227.0                | 7.7         | 6.1                |
| Alkalinity, Phenol | mg/L 0      | 5.0         | 17.1                | 62.8                | 7.8                | 81.2                | 227.0                | 7.7         | 6.6                |
| Solids, Tot        | mg/L 142    | 10.0        | 17.1                | 62.8                | 7.8                | 81.2                | 226.0                | 7.7         | 6.7                |
| Solids, Tot Diss   | mg/L 140    | 15.0        | 17.1                | 62.8                | 7.8                | 81.2                | 226.0                | 7.7         | 6.6                |
| Solids, Tot Susp   | mg/L 2.00   | 20.0        | 17.1                | 62.8                | 7.8                | 81.2                | 226.0                | 7.7         | 7.1                |
| Solids, Vol        | mg/L <1.00  | 25.0        | 17.1                | 62.8                | 7.8                | 81.2                | 226.0                | 7.7         | 7.4                |
| Solids, Vol Diss   | mg/L <1.00  | 30.0        | 17.1                | 62.8                | 7.8                | 81.2                | 226.0                | 7.7         | 7.0                |
| Solids, Vol Susp   | mg/L <1.00  | 35.0        | 17.0                | 62.6                | 7.8                | 81.0                | 232.0                | 7.7         | 8.1                |
| Ammonia N, Tot     | mg/L 0.114  | 40.0        | 17.0                | 62.6                | 7.8                | 81.0                | 233.0                | 7.7         | 6.7                |
| Kjeldahl N, Tot    | mg/L 0.310  | 45.0        | 16.8                | 62.2                | 7.8                | 80.7                | 244.0                | 7.7         | 6.5                |
| NO3+NO2, Tot       | mg/L 0.208  | 50.0        | 16.7                | 62.1                | 7.9                | 81.5                | 248.0                | 7.7         | 6.4                |
| Phosphorus, Tot    | mg/L <0.007 | 55.0        | 15.8                | 60.4                | 8.1                | 82.0                | 269.0                | 7.8         | 6.1                |
| Phosphorus, Diss   | mg/L <0.007 | 60.0        | 14.9                | 58.8                | 8.4                | 83.5                | 291.0                | 7.8         | 7.4                |
| OrthoPhosphate, D  | mg/L <0.05  | 65.0        | 14.7                | 58.5                | 8.5                | 84.1                | 297.0                | 7.8         | 6.8                |
| Organic Carbon, T  | mg/L 2.50   | 70.0        | 14.4                | 57.9                | 8.7                | 85.5                | 304.0                | 7.8         | 6.8                |
| Hardness, Tot      | mg/L 85.5   |             |                     |                     |                    |                     |                      |             |                    |
| Sulfate, Tot       | mg/L 29.7   |             |                     |                     |                    |                     |                      |             |                    |
| Calcium, Tot       | mg/L 22.6   |             |                     |                     |                    |                     |                      |             |                    |
| Magnesium, Tot     | mg/L 7.07   |             |                     |                     |                    |                     |                      |             |                    |
| Sodium, Tot        | mg/L 8.54   |             |                     |                     |                    |                     |                      |             |                    |
| Potassium, Tot     | mg/L 1.91   |             |                     |                     |                    |                     |                      |             |                    |
| Chloride, Tot      | mg/L 4.80   |             |                     |                     |                    |                     |                      |             |                    |
| Arsenic, Tot       | ug/L 0.5    |             |                     |                     |                    |                     |                      |             |                    |
| Barium, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Beryllium, Tot     | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Cadmium, Tot       | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Chromium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Cobalt, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Copper, Tot        | ug/L 0.8    |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Tot          | ug/L 54.1   |             |                     |                     |                    |                     |                      |             |                    |
| Iron, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Tot          | ug/L 0.4    |             |                     |                     |                    |                     |                      |             |                    |
| Lead, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Tot     | ug/L 11.5   |             |                     |                     |                    |                     |                      |             |                    |
| Manganese, Diss    | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Thallium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Molybdenum, Tot    | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Nickel, Tot        | ug/L 2.1    |             |                     |                     |                    |                     |                      |             |                    |
| Silver, Tot        | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Vanadium, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Tot          | ug/L 2.0    |             |                     |                     |                    |                     |                      |             |                    |
| Zinc, Diss         | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Antimony, Tot      | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Tot      | ug/L 21.0   |             |                     |                     |                    |                     |                      |             |                    |
| Aluminum, Diss     | ug/L        |             |                     |                     |                    |                     |                      |             |                    |
| Selenium, Tot      | ug/L 0.3    |             |                     |                     |                    |                     |                      |             |                    |
| Mercury, Tot       | ug/L        |             |                     |                     |                    |                     |                      |             |                    |



United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL20053

Project: Wolf Creek

Location: Wolf Creek, Mile 1.7

State: Kentucky  
County: RussellLatitude: 36° 57" 3'  
Longitude: 84° 59" 23.5'Quad: Jabez, KY  
HUC: 05130103

Sample Date: 05 Nov 2014

Water Surface Elevation = 706.0 ft

Secchi Disk = 2.7 m

(No Laboratory Analyses)

## Profile Measurements

| Depth<br>ft | Water Temp<br>deg C | Water Temp<br>deg F | Dis Oxygen<br>mg/l | Dis Oxygen<br>% sat | Spec Cond<br>umho/cm | pH<br>units | Chloro a F<br>ug/l |
|-------------|---------------------|---------------------|--------------------|---------------------|----------------------|-------------|--------------------|
| 0.0         | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 8.9                |
| 5.0         | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 9.1                |
| 10.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 8.9                |
| 15.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 9.1                |
| 20.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 9.4                |
| 25.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 9.1                |
| 30.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 9.1                |
| 35.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 9.1                |
| 40.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 10.2               |
| 45.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 10.1               |
| 50.0        | 17.5                | 63.5                | 7.4                | 77.6                | 207.0                | 7.6         | 9.5                |
| 55.0        | 17.5                | 63.5                | 7.3                | 76.6                | 207.0                | 7.6         | 9.2                |
| 60.0        | 17.4                | 63.3                | 6.2                | 64.9                | 205.0                | 7.4         | 7.1                |
| 65.0        | 17.0                | 62.6                | 5.1                | 53.0                | 201.0                | 7.3         | 5.7                |
| 70.0        | 16.7                | 62.1                | 4.2                | 43.4                | 200.0                | 7.2         | 5.2                |
| 75.0        | 16.3                | 61.3                | 3.2                | 32.8                | 198.0                | 7.1         | 3.9                |
| 80.0        | 15.7                | 60.3                | 1.0                | 10.1                | 192.0                | 6.9         | 3.1                |
| 85.0        | 15.3                | 59.5                | 0.2                | 2.0                 | 184.0                | 6.9         | 2.9                |
| 90.0        | 14.1                | 57.4                | 0.0                | 0.0                 | 182.0                | 6.8         | 2.4                |
| 95.0        | 13.5                | 56.3                | 0.0                | 0.0                 | 182.0                | 6.8         | 2.2                |
| 100.0       | 12.3                | 54.1                | 0.0                | 0.0                 | 179.0                | 6.8         | 2.2                |
| 105.0       | 11.4                | 52.5                | 0.0                | 0.0                 | 180.0                | 6.8         | 2.0                |
| 110.0       | 11.1                | 52.0                | 0.0                | 0.0                 | 181.0                | 6.8         | 2.1                |
| 115.0       | 10.4                | 50.7                | 0.0                | 0.0                 | 188.0                | 6.8         | 2.1                |
| 120.0       | 10.0                | 50.0                | 0.0                | 0.0                 | 190.0                | 6.9         | 2.1                |

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL20055

Project: Wolf Creek

Location: Fishing Creek, Mile 2.3

State: Kentucky  
County: PulaskiLatitude: 37° 0" 21.5'  
Longitude: 84° 42" 21.5'Quad: Delmer, KY  
HUC: 05130103

Sample Date: 06 Nov 2014

Water Surface Elevation = 706.0 ft

Secchi Disk = 2.5 m

(No Laboratory Analyses)

## Profile Measurements

| Depth<br>ft | Water Temp<br>deg C | Water Temp<br>deg F | Dis Oxygen<br>mg/l | Dis Oxygen<br>% sat | Spec Cond<br>umho/cm | pH<br>units | Chloro a F<br>ug/l |
|-------------|---------------------|---------------------|--------------------|---------------------|----------------------|-------------|--------------------|
| 0.0         | 17.0                | 62.6                | 7.1                | 73.7                | 230.0                | 7.6         | 7.7                |
| 5.0         | 17.0                | 62.6                | 7.0                | 72.7                | 230.0                | 7.6         | 8.1                |
| 10.0        | 17.0                | 62.6                | 7.0                | 72.7                | 230.0                | 7.6         | 8.3                |
| 15.0        | 17.0                | 62.6                | 6.9                | 71.7                | 230.0                | 7.6         | 8.8                |
| 20.0        | 17.0                | 62.6                | 6.9                | 71.7                | 230.0                | 7.6         | 8.8                |
| 25.0        | 17.0                | 62.6                | 6.9                | 71.7                | 230.0                | 7.6         | 9.9                |
| 30.0        | 17.0                | 62.6                | 6.8                | 70.6                | 230.0                | 7.6         | 9.2                |
| 35.0        | 17.0                | 62.6                | 6.8                | 70.6                | 230.0                | 7.6         | 9.1                |
| 40.0        | 17.0                | 62.6                | 6.8                | 70.6                | 230.0                | 7.6         | 8.5                |
| 45.0        | 17.0                | 62.6                | 6.8                | 66.5                | 230.0                | 7.6         | 8.1                |
| 50.0        | 16.9                | 62.4                | 6.4                | 65.3                | 230.0                | 7.5         | 7.7                |
| 55.0        | 16.8                | 62.2                | 6.3                | 60.0                | 230.0                | 7.5         | 6.5                |
| 60.0        | 16.6                | 61.9                | 5.8                | 52.5                | 227.0                | 7.4         | 5.8                |
| 65.0        | 16.2                | 61.2                | 5.1                | 52.1                | 224.0                | 7.4         | 5.6                |
| 70.0        | 16.0                | 60.8                | 5.1                | 17.3                | 223.0                | 7.3         | 5.1                |
| 75.0        | 15.4                | 59.7                | 1.7                | 23.1                | 209.0                | 7.1         | 3.6                |
| 80.0        | 15.1                | 59.2                | 2.3                | 36.9                | 196.0                | 7.0         | 2.9                |
| 85.0        | 14.8                | 58.6                | 3.7                | 15.9                | 192.0                | 7.0         | 2.5                |
| 90.0        | 14.6                | 58.3                | 1.6                | 6.9                 | 194.0                | 6.9         | 2.5                |
| 95.0        | 14.5                | 58.1                | 0.7                | 0.0                 | 199.0                | 6.9         | 2.5                |
| 100.0       | 14.3                | 57.7                | 0.0                | 0.0                 | 235.0                | 7.1         | 3.3                |
| 105.0       | 13.8                | 56.8                | 0.0                | 0.0                 | 252.0                | 7.2         | 3.3                |