

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: 10 Oct 2012

Water Surface Elevation = 551.6 ft

Stream Flow = 10320 cfs

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	0.0	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	54	0.0	16.5	61.7	3.7	38.0	198.0	6.8	0.7
Alkalinity, Phenol mg/L	0								
Solids, Tot mg/L	99.0								
Solids, Tot Diss mg/L	99.0								
Solids, Tot Susp mg/L	<4.00								
Solids, Vol mg/L	80.0								
Solids, Vol Diss mg/L	80.0								
Solids, Vol Susp mg/L	<4.00								
Ammonia N, Tot mg/L	<0.200								
Kjeldahl N, Tot mg/L	<0.0700								
NO3+NO2, Tot mg/L	0.199								
Phosphorus, Tot mg/L	<0.0080								
Phosphorus, Diss mg/L	<0.0080								
OrthoPhosphate, D mg/L	<0.0500								
Organic Carbon, T mg/L	1.90								
Hardness, Tot mg/L	82.9								
Sulfate, Tot mg/L	38.4								
Calcium, Tot mg/L	20.8								
Magnesium, Tot mg/L	7.53								
Sodium, Tot mg/L	8.14								
Potassium, Tot mg/L	1.61								
Chloride, Tot mg/L	4.03								
Arsenic, Tot ug/L	0.4								
Barium, Tot ug/L	22.9								
Beryllium, Tot ug/L	<0.2								
Cadmium, Tot ug/L	<0.2								
Chromium, Tot ug/L	<0.2								
Cobalt, Tot ug/L	<0.2								
Copper, Tot ug/L	0.8								
Iron, Tot ug/L	78.2								
Iron, Diss ug/L	<8.0								
Lead, Tot ug/L	0.7								
Lead, Diss ug/L	0.4								
Manganese, Tot ug/L	150.0								
Manganese, Diss ug/L	121.0								
Thallium, Tot ug/L	<0.2								
Molybdenum, Tot ug/L	0.3								
Nickel, Tot ug/L	2.0								
Silver, Tot ug/L	<1.0								
Vanadium, Tot ug/L	<0.2								
Zinc, Tot ug/L	0.8								
Zinc, Diss ug/L	0.9								
Antimony, Tot ug/L	<0.2								
Aluminum, Tot ug/L	27.5								
Aluminum, Diss ug/L	<8.0								
Selenium, Tot ug/L	<0.2								
Mercury, Tot ug/L	0.005								

United States Army Corps of Engineers

Station: 3WOL10001

State: Kentucky
County: Russell

Sample Date: 10 Oct 2012

Nashville District

Project: Wolf Creek

Latitude: 36° 52" 19.9'
Longitude: 85° 8" 57.4'

Water Surface Elevation = 552.1 ft

CELRN-EC-H / Water Management Section

Location: Cumberland River, Mile 460.4

Quad: Wolf Creek Dam, KY
HUC: 05130103

Stream Flow = 10320 cfs

(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	16.6	61.9	3.1	31.9	196.0	7.0	

United States Army Corps of Engineers

Station: 3WOL10024

State: Kentucky

County: Cumberland

Sample Date: 10 Oct 2012

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	13.9	57.0	9.9	96.3	192.0	7.3	0.4

United States Army Corps of Engineers

Nashville District

CELRN-EC-H / Water Management Section

Station: 3WOL10029

Project: Wolf Creek

Location: Big South Fork Cumberland River, Mile 45.0

State: Kentucky

Latitude: 36° 40" 5'

Quad: Barthell, KY

County: McCreary

Longitude: 84° 32" 53'

HUC: 05130104

Sample Date: 11 Oct 2012

Water Surface Elevation =

Stream Flow =

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	0.0	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 26	0.0	14.9	58.8	9.9	98.4	99.0	7.7	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 60.0								
Solids, Tot Diss	mg/L 60.0								
Solids, Tot Susp	mg/L <4.00								
Solids, Vol	mg/L 50.0								
Solids, Vol Diss	mg/L 50.0								
Solids, Vol Susp	mg/L <4.00								
Ammonia N, Tot	mg/L <0.200								
Kjeldahl N, Tot	mg/L 0.350								
NO3+NO2, Tot	mg/L <0.0200								
Phosphorus, Tot	mg/L <0.0080								
Phosphorus, Diss	mg/L <0.0080								
OrthoPhosphate, D	mg/L <0.0500								
Organic Carbon, T	mg/L 2.90								
Hardness, Tot	mg/L 40.2								
Sulfate, Tot	mg/L 15.8								
Calcium, Tot	mg/L 10.1								
Magnesium, Tot	mg/L 3.62								
Sodium, Tot	mg/L 3.78								
Potassium, Tot	mg/L 1.69								
Chloride, Tot	mg/L 2.90								
Arsenic, Tot	ug/L 0.2								
Barium, Tot	ug/L 23.4								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L <0.2								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.6								
Iron, Tot	ug/L 218.0								
Iron, Diss	ug/L 146.0								
Lead, Tot	ug/L 0.3								
Lead, Diss	ug/L <1.0								
Manganese, Tot	ug/L 17.8								
Manganese, Diss	ug/L 13.7								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L <0.2								
Nickel, Tot	ug/L 1.6								
Silver, Tot	ug/L <1.0								
Vanadium, Tot	ug/L <0.2								
Zinc, Tot	ug/L 1.3								
Zinc, Diss	ug/L 2.5								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 44.8								
Aluminum, Diss	ug/L 20.6								
Selenium, Tot	ug/L <0.2								
Mercury, Tot	ug/L								

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL10030

Project: Wolf Creek

Location: Cumberland River, Mile 562.4

State: Kentucky

Latitude: 36° 50" 14'

Quad: Cumberland Falls, KY

County: McCreary

Longitude: 84° 20" 39'

HUC: 05130101

Sample Date: 11 Oct 2012

Water Surface Elevation =

Stream Flow =

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	0.0	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 120	0.0	13.0	55.4	10.9	103.9	486.0	8.4	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 294								
Solids, Tot Diss	mg/L 294								
Solids, Tot Susp	mg/L <4.00								
Solids, Vol	mg/L 145								
Solids, Vol Diss	mg/L 145								
Solids, Vol Susp	mg/L <4.00								
Ammonia N, Tot	mg/L <0.200								
Kjeldahl N, Tot	mg/L 0.140								
NO3+NO2, Tot	mg/L 0.142								
Phosphorus, Tot	mg/L <0.0080								
Phosphorus, Diss	mg/L <0.0080								
OrthoPhosphate, D	mg/L <0.0500								
Organic Carbon, T	mg/L 2.70								
Hardness, Tot	mg/L 163								
Sulfate, Tot	mg/L 110								
Calcium, Tot	mg/L 35.0								
Magnesium, Tot	mg/L 18.3								
Sodium, Tot	mg/L 46.9								
Potassium, Tot	mg/L 3.59								
Chloride, Tot	mg/L 8.30								
Arsenic, Tot	ug/L 0.4								
Barium, Tot	ug/L 42.6								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L <0.2								
Cobalt, Tot	ug/L 0.2								
Copper, Tot	ug/L 1.4								
Iron, Tot	ug/L 175.0								
Iron, Diss	ug/L 49.8								
Lead, Tot	ug/L 0.4								
Lead, Diss	ug/L <1.0								
Manganese, Tot	ug/L 44.1								
Manganese, Diss	ug/L 17.0								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.3								
Nickel, Tot	ug/L 2.9								
Silver, Tot	ug/L <1.0								
Vanadium, Tot	ug/L 0.2								
Zinc, Tot	ug/L 2.3								
Zinc, Diss	ug/L 2.3								
Antimony, Tot	ug/L 0.2								
Aluminum, Tot	ug/L 97.6								
Aluminum, Diss	ug/L <8.0								
Selenium, Tot	ug/L 0.4								
Mercury, Tot	ug/L								

United States Army Corps of Engineers

Station: 3WOL10035

State: Kentucky

County: Wayne

Sample Date: 11 Oct 2012

Nashville District

Project: Wolf Creek

Latitude: 36° 48" 0'

Longitude: 84° 35" 47'

Water Surface Elevation =

CELRN-EC-H / Water Management Section

Location: Little South Fork Cumberland River, Mile 5.2

Quad: Nevelsville, KY

HUC: 05130104

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	11.4	52.5	10.1	92.8	398.0	8.2		

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL10037

Project: Wolf Creek

Location: Buck Creek, Mile 12.4

State: Kentucky

Latitude: 37° 3" 38'

Quad: Dykes, KY

County: Pulaski

Longitude: 84° 25" 35'

HUC: 05130103

Sample Date: 11 Oct 2012

Water Surface Elevation =

Stream Flow =

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	0.0	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 123	0.0	11.9	53.4	11.1	103.2	272.0	8.2	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 147								
Solids, Tot Diss	mg/L 147								
Solids, Tot Susp	mg/L <4.00								
Solids, Vol	mg/L 109								
Solids, Vol Diss	mg/L 109								
Solids, Vol Susp	mg/L <4.00								
Ammonia N, Tot	mg/L <0.200								
Kjeldahl N, Tot	mg/L 0.250								
NO3+NO2, Tot	mg/L 1.11								
Phosphorus, Tot	mg/L 0.0236								
Phosphorus, Diss	mg/L 0.0277								
OrthoPhosphate, D	mg/L <0.0500								
Organic Carbon, T	mg/L 2.30								
Hardness, Tot	mg/L 141								
Sulfate, Tot	mg/L 10.0								
Calcium, Tot	mg/L 43.8								
Magnesium, Tot	mg/L 7.62								
Sodium, Tot	mg/L 3.73								
Potassium, Tot	mg/L 2.36								
Chloride, Tot	mg/L 5.55								
Arsenic, Tot	ug/L 0.4								
Barium, Tot	ug/L 27.8								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L <0.2								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.6								
Iron, Tot	ug/L 71.9								
Iron, Diss	ug/L 31.4								
Lead, Tot	ug/L 0.26								
Lead, Diss	ug/L <1.0								
Manganese, Tot	ug/L 4.8								
Manganese, Diss	ug/L 3.3								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.6								
Nickel, Tot	ug/L 2.4								
Silver, Tot	ug/L <1.0								
Vanadium, Tot	ug/L 0.3								
Zinc, Tot	ug/L 4.1								
Zinc, Diss	ug/L 4.0								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 57.3								
Aluminum, Diss	ug/L 12.4								
Selenium, Tot	ug/L <0.2								
Mercury, Tot	ug/L								

United States Army Corps of Engineers

Station: 3WOL10459

State: Kentucky
County: Russell

Sample Date: 10 Oct 2012

Nashville District

Project: Wolf Creek

Latitude: 36° 53" 4.2'
Longitude: 85° 7" 46.3'

Water Surface Elevation =

CELRN-EC-H / Water Management Section

Location: Cumberland River, Mile 458.8

Quad: Creelsboro, 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	15.1	59.2	6.1	60.9	194.0	7.1	

United States Army Corps of Engineers

Nashville District

CELRN-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: 10 Oct 2012

Water Surface Elevation = 683.8 ft

Secchi Disk = 3.5 m

Results of Laboratory Analyses

Results of Laboratory Analyses					Profile Measurements							
Sample	Depth ft	0.0	55.0	135.0	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	58	52	56	0.0	21.3	70.3	7.9	89.3	212.0	7.7	1.1
Alkalinity, Phenol	mg/L	0	0	0	5.0	21.3	70.3	7.9	89.3	212.0	7.7	1.7
Solids, Tot	mg/L	122	109	109	10.0	21.3	70.3	7.9	89.3	212.0	7.7	1.9
Solids, Tot Diss	mg/L	122	109	109	15.0	21.4	70.5	7.8	88.3	212.0	7.7	2.0
Solids, Tot Susp	mg/L	<4.00	<4.00	<4.00	20.0	21.3	70.3	7.8	88.2	212.0	7.6	1.8
Solids, Vol	mg/L	80.0	109	139	25.0	21.3	70.3	7.8	88.2	211.0	7.6	1.7
Solids, Vol Diss	mg/L	80.0	109	139	30.0	21.3	70.3	7.8	88.2	211.0	7.6	1.7
Solids, Vol Susp	mg/L	<4.00	<4.00	<4.00	35.0	21.3	70.3	7.8	88.2	211.0	7.6	1.9
Ammonia N, Tot	mg/L	<0.200	<0.200	0.340	40.0	21.3	70.3	7.7	87.0	212.0	7.6	1.3
Kjeldahl N, Tot	mg/L	0.140	0.110	0.610	45.0	20.9	69.6	5.9	66.2	212.0	7.4	1.1
NO3+NO2, Tot	mg/L	<0.0200	0.209	0.228	50.0	18.1	64.6	0.1	1.1	201.0	6.9	0.4
Phosphorus, Tot	mg/L	<0.0080	<0.0080	0.0174	55.0	17.0	62.6	0.0	0.0	194.0	6.8	0.1
Phosphorus, Diss	mg/L	<0.0080	<0.0080	0.0117	60.0	16.0	60.8	0.1	1.0	189.0	6.7	0.3
OrthoPhosphate, D	mg/L	<0.0500	<0.0500	<0.0500	65.0	15.3	59.5	0.1	1.0	187.0	6.7	0.4
Organic Carbon, T	mg/L	2.10	1.90	2.60	70.0	14.6	58.3	0.4	4.0	185.0	6.6	0.3
Hardness, Tot	mg/L	84.9	79.3	80.0	75.0	13.7	56.7	0.5	4.8	185.0	6.6	0.2
Sulfate, Tot	mg/L	41.7	37.8	33.8	80.0	13.0	55.4	0.4	3.8	184.0	6.6	0.2
Calcium, Tot	mg/L	21.2	19.7	20.1	85.0	12.6	54.7	0.1	0.9	186.0	6.5	0.2
Magnesium, Tot	mg/L	7.75	7.29	7.22	90.0	12.1	53.8	0.1	0.9	186.0	6.5	0.2
Sodium, Tot	mg/L	9.45	8.20	6.29	95.0	12.0	53.6	0.1	0.9	186.0	6.5	0.2
Potassium, Tot	mg/L	1.72	1.57	1.53	100.0	11.9	53.4	0.1	0.9	187.0	6.5	0.2
Chloride, Tot	mg/L	4.45	4.62	3.12	105.0	11.6	52.9	0.1	0.9	187.0	6.5	0.2
Arsenic, Tot	ug/L	0.4	0.3	0.8	110.0	11.5	52.7	0.0	0.0	188.0	6.5	
Barium, Tot	ug/L	24.8	24.1	18.7	115.0	11.3	52.3	0.0	0.0	186.0	6.5	0.1
Beryllium, Tot	ug/L	<0.2	<0.2	<0.2	120.0	11.2	52.2	0.0	0.0	186.0	6.5	0.1
Cadmium, Tot	ug/L	<0.2	<0.2	<0.2	125.0	10.9	51.6	0.0	0.0	185.0	6.5	0.1
Chromium, Tot	ug/L	0.2	<0.2	<0.2	130.0	10.8	51.4	0.0	0.0	185.0	6.5	0.1
Cobalt, Tot	ug/L	<0.2	<0.2	0.2	135.0	10.8	51.4	0.0	0.0	184.0	6.5	0.1
Copper, Tot	ug/L	1.1	0.7	0.8	140.0	10.7	51.3	0.0	0.0	184.0	6.5	0.2
Iron, Tot	ug/L	13.8	41.7	138.0	143.0	10.7	51.3	0.0	0.0	184.0	6.5	0.1
Iron, Diss	ug/L	<8.0	<8.0	<8.0								
Lead, Tot	ug/L	0.8	0.4	0.4								
Lead, Diss	ug/L	0.4	0.4	0.4								
Manganese, Tot	ug/L	11.6	54.2	1210.0								
Manganese, Diss	ug/L	10.1	70.1	1230.0								
Thallium, Tot	ug/L	<0.2	<0.2	<0.2								
Molybdenum, Tot	ug/L	0.5	0.3	0.4								
Nickel, Tot	ug/L	1.9	2.1	2.0								
Silver, Tot	ug/L	<1.0	<1.0	<1.0								
Vanadium, Tot	ug/L	0.3	<0.2	<0.2								
Zinc, Tot	ug/L	1.2	1.2	1.0								
Zinc, Diss	ug/L	0.8	0.9	1.3								
Antimony, Tot	ug/L	0.4	0.2	<0.2								
Aluminum, Tot	ug/L	15.8	24.0	12.8								
Aluminum, Diss	ug/L	<8.0	<8.0	<8.0								
Selenium, Tot	ug/L	<0.2	<0.2	0.3								
Mercury, Tot	ug/L	0.012	<0.005	0.014								

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: 10 Oct 2012

Water Surface Elevation = 683.8 ft

Secchi Disk = 3.8 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	21.3	70.3	7.6	85.9	227.0	7.7	0.9	
5.0	21.3	70.3	7.5	84.8	227.0	7.6	1.0	
10.0	21.3	70.3	7.5	84.8	227.0	7.5	1.8	
15.0	21.3	70.3	7.5	84.8	227.0	7.5	1.8	
20.0	21.3	70.3	7.4	83.7	227.0	7.5	1.7	
25.0	21.3	70.3	7.5	84.8	227.0	7.5	1.7	
30.0	21.3	70.3	7.5	84.8	227.0	7.5	1.7	
35.0	21.3	70.3	7.4	83.7	227.0	7.5	1.7	
40.0	21.3	70.3	7.4	83.7	227.0	7.5	1.7	
45.0	21.3	70.3	7.4	83.7	228.0	7.5	1.6	
50.0	21.2	70.2	7.4	83.5	227.0	7.5	1.5	
55.0	21.1	70.0	5.8	65.3	230.0	7.3	1.4	
60.0	18.8	65.8	0.1	1.1	233.0	6.9	0.4	
65.0	16.5	61.7	0.0	0.0	206.0	6.8	0.2	
70.0	14.4	57.9	0.0	0.0	202.0	6.7	0.1	
75.0	13.4	56.1	0.0	0.0	197.0	6.7	0.1	
80.0	12.1	53.8	0.0	0.0	191.0	6.6	0.1	
85.0	11.8	53.2	0.0	0.0	189.0	6.6	0.2	
90.0	11.7	53.1	0.0	0.0	187.0	6.5	0.2	
95.0	11.5	52.7	0.0	0.0	187.0	6.5	0.2	
100.0	11.4	52.5	0.0	0.0	186.0	6.5	0.2	
105.0	11.3	52.3	0.0	0.0	186.0	6.5	0.2	
110.0	11.2	52.2	0.0	0.0	185.0	6.5	0.2	
115.0	11.1	52.0	0.0	0.0	184.0	6.5	0.1	
120.0	10.9	51.6	0.0	0.0	184.0	6.5	0.1	
125.0	10.9	51.6	0.0	0.0	183.0	6.5	0.1	
130.0	10.8	51.4	0.0	0.0	183.0	6.5	0.1	
135.0	10.8	51.4	0.0	0.0	183.0	6.5	0.1	
138.0	10.8	51.4	0.0	0.0	183.0	6.5	0.1	

CELNRN-EC-H / Water Management Section

Location: Cumberland River, Mile 519.0

Quad: Somerset, KY
HUC: 05130103

Secchi Disk = 2.4 m

Profile Measurements

[illegible]

CELNRN-EC-H / Water Management Section

Location: Big South Fork Cumberland River, Mile 2.3

Quad: Burnside, KY
HUC: 05130104

Secchi Disk = 2.4 m

Profile Measurements

Sample Depth				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
Sample	Depth ft	0.0	70.0								
Alkalinity, Tot	mg/L	66	80	0.0	21.0	69.8	7.8	87.7	240.0	7.8	0.7
Alkalinity, Phenol	mg/L	0	0	5.0	20.8	69.4	7.8	87.3	240.0	7.6	2.4
Solids, Tot	mg/L	126	125	10.0	20.5	68.9	7.6	84.6	239.0	7.6	2.8
Solids, Tot Diss	mg/L	126	116.2	15.0	20.4	68.7	7.5	83.3	239.0	7.5	1.8
Solids, Tot Susp	mg/L	<4.00	8.80	20.0	20.4	68.7	7.4	82.2	240.0	7.5	1.5
Solids, Vol	mg/L	71.0	196	25.0	20.4	68.7	7.4	82.2	240.0	7.5	1.7
Solids, Vol Diss	mg/L	71.0	196	30.0	20.3	68.5	7.4	82.1	240.0	7.5	1.4
Solids, Vol Susp	mg/L	<4.00	<4.00	35.0	20.3	68.5	7.4	82.1	240.0	7.5	1.4
Ammonia N, Tot	mg/L	<0.200	0.340	40.0	20.3	68.5	7.5	83.2	240.0	7.5	1.6
Kjeldahl N, Tot	mg/L	0.190	0.570	45.0	20.3	68.5	7.3	81.0	240.0	7.5	1.2
NO3+NO2, Tot	mg/L	0.113	0.378	50.0	19.2	66.6	2.9	31.5	183.0	6.9	0.6
Phosphorus, Tot	mg/L	<0.0080	0.0244	55.0	18.9	66.0	4.0	43.2	250.0	7.0	0.6
Phosphorus, Diss	mg/L	<0.0080	0.0080	60.0	18.3	64.9	5.3	56.5	233.0	7.1	0.7
Orthophosphate, D	mg/L	<0.0500	<0.0500	65.0	18.0	64.4	4.8	50.9	233.0	7.1	0.7
Organic Carbon, T	mg/L	2.70	3.30	70.0	17.3	63.1	0.6	6.3	237.0	6.9	0.6
Hardness, Tot	mg/L	95.8	103	74.0	14.3	57.7	0.1	1.0	222.0	6.7	0.9
Sulfate, Tot	mg/L	38.3	33.0								
Calcium, Tot	mg/L	25.0	28.3								
Magnesium, Tot	mg/L	8.12	7.79								
Sodium, Tot	mg/L	11.4	8.19								
Potassium, Tot	mg/L	2.02	2.36								
Chloride, Tot	mg/L	4.01	3.85								
Arsenic, Tot	ug/L	0.5	0.6								
Barium, Tot	ug/L	28.5	34.0								
Beryllium, Tot	ug/L	<0.2	<0.2								
Cadmium, Tot	ug/L	<0.2	<0.2								
Chromium, Tot	ug/L	<0.2	<0.2								
Cobalt, Tot	ug/L	<0.2	0.7								
Copper, Tot	ug/L	1.0	1.2								
Iron, Tot	ug/L	67.0	327.0								
Iron, Diss	ug/L	18.7	66.6								
Lead, Tot	ug/L	0.5	0.8								
Lead, Diss	ug/L	<1.0	<1.0								
Manganese, Tot	ug/L	24.3	918.0								
Manganese, Diss	ug/L	25.2	746.0								
Thallium, Tot	ug/L	<0.2	<0.2								
Molybdenum, Tot	ug/L	0.4	0.3								
Nickel, Tot	ug/L	2.2	3.1								
Silver, Tot	ug/L	<1.0	<1.0								
Vanadium, Tot	ug/L	0.2	0.5								
Zinc, Tot	ug/L	0.8	2.0								
Zinc, Diss	ug/L	1.1	<1.0								
Antimony, Tot	ug/L	<0.2	<0.2								
Aluminum, Tot	ug/L	48.6	171.0								
Aluminum, Diss	ug/L	19.0	27.7								
Selenium, Tot	ug/L	0.4	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: 11 Oct 2012

Water Surface Elevation = 683.8 ft

Secchi Disk = 2.4 m

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	25.0	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 74	0.0	21.4	70.5	8.8	99.7	261.0	8.4	2.2
Alkalinity, Phenol	mg/L 0	5.0	21.3	70.3	8.8	99.5	261.0	8.0	5.1
Solids, Tot	mg/L 140	10.0	21.2	70.2	8.8	99.3	261.0	8.0	6.2
Solids, Tot Diss	mg/L 140	15.0	20.8	69.4	8.5	95.2	261.0	7.9	3.7
Solids, Tot Susp	mg/L <4.00	20.0	20.7	69.3	8.3	92.8	261.0	7.8	3.5
Solids, Vol	mg/L 80.0	25.0	20.6	69.1	8.2	91.5	261.0	7.8	2.2
Solids, Vol Diss	mg/L 80.0	30.0	20.6	69.1	8.2	91.5	263.0	7.8	2.2
Solids, Vol Susp	mg/L <4.00	35.0	20.5	68.9	8.2	91.3	264.0	7.8	2.1
Ammonia N, Tot	mg/L <0.200	40.0	20.3	68.5	8.2	90.9	266.0	7.8	1.8
Kjeldahl N, Tot	mg/L 0.270	45.0	20.1	68.2	8.2	90.6	268.0	7.8	1.5
NO3+NO2, Tot	mg/L 0.152	50.0	17.2	63.0	8.3	86.6	300.0	7.7	1.6
Phosphorus, Tot	mg/L <0.0080	53.0	16.9	62.4	8.2	85.0	313.0	7.7	1.9
Phosphorus, Diss	mg/L <0.0080								
OrthoPhosphate, D	mg/L <0.0500								
Organic Carbon, T	mg/L 2.70								
Hardness, Tot	mg/L 104								
Sulfate, Tot	mg/L 51.3								
Calcium, Tot	mg/L 26.8								
Magnesium, Tot	mg/L 8.95								
Sodium, Tot	mg/L 13.1								
Potassium, Tot	mg/L 2.17								
Chloride, Tot	mg/L 4.48								
Arsenic, Tot	ug/L 0.7								
Barium, Tot	ug/L 29.9								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L <0.2								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.9								
Iron, Tot	ug/L 43.5								
Iron, Diss	ug/L <8.0								
Lead, Tot	ug/L 0.6								
Lead, Diss	ug/L <1.0								
Manganese, Tot	ug/L 7.8								
Manganese, Diss	ug/L <1.0								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.5								
Nickel, Tot	ug/L 1.6								
Silver, Tot	ug/L <1.0								
Vanadium, Tot	ug/L 0.3								
Zinc, Tot	ug/L 1.5								
Zinc, Diss	ug/L <1.0								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 38.9								
Aluminum, Diss	ug/L 15.0								
Selenium, Tot	ug/L 0.2								
Mercury, Tot	ug/L								

CELNRN-EC-H / Water Management Section

Location: Beaver Creek, Mile 5.3

Quad: Cumberland City, KY
HUC: 05130103

Secchi Disk = 3.1 m

Profile Measurements

Sample				Depth	Water Temp	Water Temp	Dis Oxygen	Dis Oxygen	Spec Cond	pH	Chloro a F
Sample	Depth	ft		ft	deg C	deg F	mg/l	% sat	umho/cm	units	ug/l
Alkalinity, Tot	mg/L	60	76	0.0	21.3	70.3	7.6	85.9	213.0	7.6	1.5
Alkalinity, Phenol	mg/L	0	0	5.0	21.3	70.3	7.5	84.8	213.0	7.6	2.0
Solids, Tot	mg/L	122	133	10.0	21.3	70.3	7.5	84.8	213.0	7.6	1.8
Solids, Tot Diss	mg/L	122	133	15.0	21.3	70.3	7.5	84.8	214.0	7.6	2.0
Solids, Tot Susp	mg/L	<4.00	<4.00	20.0	21.3	70.3	7.5	84.8	213.0	7.6	2.1
Solids, Vol	mg/L	51.0	100	25.0	21.3	70.3	7.5	84.8	213.0	7.6	2.0
Solids, Vol Diss	mg/L	51.0	100	30.0	21.3	70.3	7.5	84.8	213.0	7.6	1.7
Solids, Vol Susp	mg/L	<4.00	<4.00	35.0	21.3	70.3	7.5	84.8	213.0	7.6	2.3
Ammonia N, Tot	mg/L	<0.200	0.330	40.0	21.3	70.3	7.5	84.8	213.0	7.6	2.0
Kjeldahl N, Tot	mg/L	0.140	0.410	45.0	21.3	70.3	7.5	84.8	213.0	7.6	2.0
NO3+NO2, Tot	mg/L	0.0446	0.0694	50.0	21.0	69.8	6.1	68.6	217.0	7.4	1.1
Phosphorus, Tot	mg/L	0.0118	0.0234	55.0	19.2	66.6	1.0	10.9	232.0	7.0	4.5
Phosphorus, Diss	mg/L	<0.0080	<0.0080	60.0	17.8	64.0	0.1	1.1	208.0	6.9	0.5
OrthoPhosphate, D	mg/L	<0.0500	<0.0500	65.0	15.9	60.6	0.0	0.0	199.0	6.8	0.3
Organic Carbon, T	mg/L	2.10	2.10	70.0	14.9	58.8	0.0	0.0	201.0	6.7	0.3
Hardness, Tot	mg/L	90.3	97.4	75.0	14.1	57.4	0.0	0.0	208.0	6.7	0.3
Sulfate, Tot	mg/L	37.2	24.7	80.0	13.4	56.1	0.0	0.0	207.0	6.7	0.2
Calcium, Tot	mg/L	23.8	27.9	85.0	12.5	54.5	0.0	0.0	207.0	6.6	0.2
Magnesium, Tot	mg/L	7.53	6.75	90.0	11.8	53.2	0.0	0.0	204.0	6.6	0.2
Sodium, Tot	mg/L	8.27	5.35								
Potassium, Tot	mg/L	1.67	1.44								
Chloride, Tot	mg/L	4.27	3.33								
Arsenic, Tot	ug/L	0.5	2.1								
Barium, Tot	ug/L	22.3	25.1								
Beryllium, Tot	ug/L	<0.2	<0.2								
Cadmium, Tot	ug/L	<0.2	<0.2								
Chromium, Tot	ug/L	<0.2	<0.2								
Cobalt, Tot	ug/L	<0.2	0.4								
Copper, Tot	ug/L	0.8	0.6								
Iron, Tot	ug/L	19.7	489.0								
Iron, Diss	ug/L	<8.0	34.5								
Lead, Tot	ug/L	0.4	0.4								
Lead, Diss	ug/L	<1.0	<1.0								
Manganese, Tot	ug/L	11.9	611.0								
Manganese, Diss	ug/L	17.3	572.0								
Thallium, Tot	ug/L	<0.2	<0.2								
Molybdenum, Tot	ug/L	0.4	0.3								
Nickel, Tot	ug/L	2.0	2.3								
Silver, Tot	ug/L	<1.0	<1.0								
Vanadium, Tot	ug/L	0.3	<0.2								
Zinc, Tot	ug/L	1.2	1.0								
Zinc, Diss	ug/L	<1.0	<1.0								
Antimony, Tot	ug/L	<0.2	<0.2								
Aluminum, Tot	ug/L	19.0	25.6								
Aluminum, Diss	ug/L	<8.0	<8.0								
Selenium, Tot	ug/L	<0.2	<0.2								
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: 10 Oct 2012

Water Surface Elevation = 683.8 ft

Secchi Disk = 3.9 m

(No Laboratory Analyses)

Profile Measurements

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
0.0	21.3	70.3	7.6	85.9	223.0	7.9	1.1
5.0	21.3	70.3	7.5	84.8	223.0	7.6	1.3
10.0	21.3	70.3	7.4	83.7	223.0	7.5	2.7
15.0	21.3	70.3	7.4	83.7	223.0	7.5	2.4
20.0	21.3	70.3	7.4	83.7	223.0	7.5	2.3
25.0	21.3	70.3	7.4	83.7	223.0	7.5	2.3
30.0	21.3	70.3	7.4	83.7	222.0	7.5	2.3
35.0	21.3	70.3	7.3	82.5	221.0	7.5	2.2
40.0	21.3	70.3	7.3	82.5	220.0	7.5	2.2
45.0	21.3	70.3	7.3	82.5	220.0	7.5	2.9
50.0	21.3	70.3	7.2	81.4	220.0	7.5	2.3
55.0	20.2	68.4	0.7	7.8	234.0	6.9	1.4
60.0	18.0	64.4	0.1	1.1	214.0	6.8	0.5
65.0	16.2	61.2	0.0	0.0	196.0	6.7	0.3
70.0	14.6	58.3	0.0	0.0	190.0	6.6	0.2
75.0	13.8	56.8	0.0	0.0	184.0	6.6	0.2
80.0	12.7	54.9	0.0	0.0	179.0	6.6	0.3
85.0	12.3	54.1	0.0	0.0	180.0	6.5	0.3
90.0	11.9	53.4	0.0	0.0	180.0	6.5	0.3
93.0	11.8	53.2	0.0	0.0	181.0	6.5	0.3

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: 11 Oct 2012

Water Surface Elevation = 683.8 ft

Secchi Disk = 2.4 m

(No Laboratory Analyses)

Profile Measurements

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
0.0	21.2	70.2	7.4	83.5	250.0	8.2	2.5
5.0	20.8	69.4	7.5	84.0	250.0	7.5	4.5
10.0	20.5	68.9	7.1	79.0	250.0	7.4	4.1
15.0	20.5	68.9	6.8	75.7	250.0	7.4	3.3
20.0	20.5	68.9	6.6	73.5	249.0	7.4	2.8
25.0	20.5	68.9	6.6	73.5	249.0	7.4	2.5
30.0	20.4	68.7	6.6	73.3	249.0	7.4	2.7
35.0	20.4	68.7	6.6	73.3	248.0	7.4	2.6
40.0	20.4	68.7	6.5	72.2	248.0	7.4	2.3
45.0	19.8	67.6	3.6	39.5	241.0	7.1	1.5
50.0	19.4	66.9	1.0	10.9	236.0	6.9	1.2
55.0	19.0	66.2	0.1	1.1	239.0	6.8	1.3
60.0	18.7	65.7	0.1	1.1	247.0	6.8	1.1
65.0	18.0	64.4	0.0	0.0	252.0	6.8	0.7
70.0	16.9	62.4	0.1	1.0	251.0	6.7	0.9
75.0	13.6	56.5	0.1	1.0	225.0	6.7	1.0
80.0	12.8	55.0	0.0	0.0	215.0	6.7	0.8

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3WOL20056

Project: Wolf Creek

Location: Indian Creek, Mile 1.5

State: Kentucky
County: RussellLatitude: 36° 50" 34.1'
Longitude: 85° 7" 44.8'Quad: Wolf Creek Dam, KY
HUC: 05130103

Sample Date: 10 Oct 2012

Water Surface Elevation = 683.8 ft

Secchi Disk = 4.3 m

(No Laboratory Analyses)

Profile Measurements

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
0.0	21.2	70.2	7.6	85.7	206.0	7.6	1.3
5.0	21.3	70.3	7.6	85.9	205.0	7.5	2.0
10.0	21.3	70.3	7.5	84.8	206.0	7.5	2.2
15.0	21.3	70.3	7.6	85.9	205.0	7.5	2.3
20.0	21.3	70.3	7.5	84.8	205.0	7.5	2.7
25.0	21.3	70.3	7.5	84.8	205.0	7.5	2.5
30.0	21.3	70.3	7.6	85.9	205.0	7.5	2.1
35.0	21.3	70.3	7.5	84.8	205.0	7.5	2.2
40.0	21.3	70.3	7.5	84.8	205.0	7.5	2.5
45.0	21.3	70.3	7.4	83.7	205.0	7.5	2.0
50.0	19.2	66.6	0.0	0.0	215.0	6.8	0.7
55.0	17.5	63.5	0.0	0.0	192.0	6.7	0.5
60.0	16.2	61.2	0.0	0.0	187.0	6.6	0.4
65.0	15.1	59.2	0.1	1.0	184.0	6.6	0.4
70.0	14.1	57.4	0.6	5.9	183.0	6.6	0.2
75.0	13.4	56.1	0.3	2.9	186.0	6.5	0.3
80.0	12.7	54.9	0.7	6.6	179.0	6.5	0.2
85.0	12.1	53.8	0.5	4.7	177.0	6.5	0.1
90.0	11.8	53.2	0.3	2.8	177.0	6.4	0.1
95.0	11.4	52.5	0.1	0.9	176.0	6.4	0.2
100.0	11.3	52.3	0.0	0.0	176.0	6.4	0.1
105.0	11.2	52.2	0.0	0.0	177.0	6.4	0.1