

CELNRN-EC-H / Water Management Section

Location: Cumberland River, Mile 215.7

Quad: Goodlettsville, TN
HUC: 05130202

Stream Flow = 7600 cfs

Profile Measurements

Sample			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
Alkalinity, Tot	mg/L	80	0.0	22.7	72.9	7.8	90.5	202.0	8.1	
Alkalinity, Phenol	mg/L	0								
Solids, Tot	mg/L	150								
Solids, Tot Diss	mg/L	143								
Solids, Tot Susp	mg/L	7.00								
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	0.0917								
Kjeldahl N, Tot	mg/L	0.320								
NO3+NO2, Tot	mg/L	0.103								
Phosphorus, Tot	mg/L	<0.007								
Phosphorus, Diss	mg/L	<0.007								
OrthoPhosphate, D	mg/L	<0.05								
Organic Carbon, T	mg/L	2.00								
Hardness, Tot	mg/L	91.6								
Sulfate, Tot	mg/L	26.2								
Calcium, Tot	mg/L	27.2								
Magnesium, Tot	mg/L	5.78								
Sodium, Tot	mg/L	5.64								
Potassium, Tot	mg/L	1.54								
Chloride, Tot	mg/L	6.02								
Arsenic, Tot	ug/L	0.7								
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	84.0								
Iron, Diss	ug/L	8.8								
Lead, Tot	ug/L	0.7								
Lead, Diss	ug/L	0.6								
Manganese, Tot	ug/L	79.8								
Manganese, Diss	ug/L	8.7								
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	0.9								
Zinc, Diss	ug/L	1.0								
Antimony, Tot	ug/L									
Aluminum, Tot	ug/L	36.9								
Aluminum, Diss	ug/L	<7.0								
Selenium, Tot	ug/L	0.5								
Mercury, Tot	ug/L	<0.005								

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD10050

Project: Old Hickory

Location: Drakes Creek, Mile 4.9

State: Tennessee

Latitude: 36° 19" 0'

Quad: Hendersonville, TN

County: Sumner

Longitude: 86° 36" 19'

HUC: *

Sample Date: 26 Sep 2014

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 190	0.0	20.5	68.9	8.1	90.2	496.0	7.9	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 368								
Solids, Tot Diss	mg/L 360								
Solids, Tot Susp	mg/L 8.00								
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 0.0479								
Kjeldahl N, Tot	mg/L <0.2								
NO3+NO2, Tot	mg/L 0.107								
Phosphorus, Tot	mg/L <0.007								
Phosphorus, Diss	mg/L <0.007								
OrthoPhosphate, D	mg/L 0.0763								
Organic Carbon, T	mg/L 1.50								
Hardness, Tot	mg/L 255								
Sulfate, Tot	mg/L 25.7								
Calcium, Tot	mg/L 80.5								
Magnesium, Tot	mg/L 13.1								
Sodium, Tot	mg/L 8.26								
Potassium, Tot	mg/L 1.70								
Chloride, Tot	mg/L 14.9								
Arsenic, Tot	ug/L 0.92								
Barium, Tot	ug/L								
Beryllium, Tot	ug/L								
Cadmium, Tot	ug/L								
Chromium, Tot	ug/L								
Cobalt, Tot	ug/L								
Copper, Tot	ug/L 0.78								
Iron, Tot	ug/L 81.1								
Iron, Diss	ug/L								
Lead, Tot	ug/L 0.7								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 36.0								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L								
Molybdenum, Tot	ug/L								
Nickel, Tot	ug/L 4.4								
Silver, Tot	ug/L								
Vanadium, Tot	ug/L								
Zinc, Tot	ug/L 1.0								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L								
Aluminum, Tot	ug/L 53.1								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.6								
Mercury, Tot	ug/L								

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD10054

Project: Old Hickory

Location: Bledsoe Creek, Mile 10.3

State: Tennessee

Latitude: 36° 26" 44'

Quad: Bethpage, TN

County: Sumner

Longitude: 86° 19" 55'

HUC: *

Sample Date: 26 Sep 2014

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 170	0.0	18.9	66.0	6.6	71.2	353.0	7.8	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 236								
Solids, Tot Diss	mg/L 231								
Solids, Tot Susp	mg/L 5.00								
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 0.0579								
Kjeldahl N, Tot	mg/L 0.220								
NO3+NO2, Tot	mg/L 0.0613								
Phosphorus, Tot	mg/L <0.007								
Phosphorus, Diss	mg/L <0.007								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L 1.90								
Hardness, Tot	mg/L 187								
Sulfate, Tot	mg/L 25.7								
Calcium, Tot	mg/L 54.9								
Magnesium, Tot	mg/L 12.1								
Sodium, Tot	mg/L 4.26								
Potassium, Tot	mg/L 1.56								
Chloride, Tot	mg/L 7.61								
Arsenic, Tot	ug/L 0.78								
Barium, Tot	ug/L								
Beryllium, Tot	ug/L								
Cadmium, Tot	ug/L								
Chromium, Tot	ug/L								
Cobalt, Tot	ug/L								
Copper, Tot	ug/L 0.9								
Iron, Tot	ug/L 57.9								
Iron, Diss	ug/L								
Lead, Tot	ug/L 0.6								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 42.9								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L								
Molybdenum, Tot	ug/L								
Nickel, Tot	ug/L 3.3								
Silver, Tot	ug/L								
Vanadium, Tot	ug/L								
Zinc, Tot	ug/L 0.9								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L								
Aluminum, Tot	ug/L 32.8								
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: 30LD10059

Project: Old Hickory

Location: Caney Fork River, Mile 7.3

State: Tennessee

Latitude: 36° 13' 6.9'

Quad: Gordonsville, TN

County: Smith

Longitude: 85° 56' 56.4'

HUC: 05130108

Sample Date: 25 Sep 2014

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 84	0.0	16.4	61.5	9.6	98.5	201.0	7.7	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 144								
Solids, Tot Diss	mg/L 140								
Solids, Tot Susp	mg/L 4.00								
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 0.0309								
Kjeldahl N, Tot	mg/L <0.2								
NO3+NO2, Tot	mg/L 0.533								
Phosphorus, Tot	mg/L <0.007								
Phosphorus, Diss	mg/L <0.007								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L 1.40								
Hardness, Tot	mg/L 95.3								
Sulfate, Tot	mg/L 18.9								
Calcium, Tot	mg/L 31.2								
Magnesium, Tot	mg/L 4.21								
Sodium, Tot	mg/L 6.32								
Potassium, Tot	mg/L 1.17								
Chloride, Tot	mg/L 4.12								
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 0.4								
Iron, Tot	ug/L 56.5								
Iron, Diss	ug/L								
Lead, Tot	ug/L 0.6								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 43.3								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L								
Molybdenum, Tot	ug/L								
Nickel, Tot	ug/L 1.8								
Silver, Tot	ug/L								
Vanadium, Tot	ug/L								
Zinc, Tot	ug/L 0.7								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L								
Aluminum, Tot	ug/L 24.3								
Aluminum, Diss	ug/L								
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: 30LD20002

Project: Old Hickory

Location: Cumberland River, Mile 216.9

State: Tennessee

Latitude: 36° 17' 29'

Quad: Goodlettsville, TN

County: Davidson

Longitude: 86° 38' 41'

HUC: 05130201

Sample Date: 26 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.0 m

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	35.0	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 76	0.0	24.6	76.3	12.5	150.1	210.0	9.2	38.3
Alkalinity, Phenol	mg/L 0	5.0	24.6	76.3	12.7	152.5	210.0	9.2	41.6
Solids, Tot	mg/L 140	10.0	23.1	73.6	10.6	123.9	211.0	8.9	44.5
Solids, Tot Diss	mg/L 132	15.0	22.8	73.0	9.6	111.6	213.0	8.7	39.9
Solids, Tot Susp	mg/L 8.00	20.0	22.6	72.7	7.5	86.9	215.0	8.2	25.0
Solids, Vol	mg/L <1.00	25.0	22.6	72.7	7.4	85.7	214.0	8.1	25.9
Solids, Vol Diss	mg/L <1.00	30.0	22.5	72.5	7.2	83.2	213.0	8.1	24.2
Solids, Vol Susp	mg/L <1.00	35.0	22.2	72.0	7.0	80.5	213.0	8.0	15.8
Ammonia N, Tot	mg/L 0.0721	40.0	21.8	71.2	7.2	82.2	211.0	7.9	12.9
Kjeldahl N, Tot	mg/L 0.290	45.0	21.6	70.9	6.9	78.4	211.0	7.7	12.0
NO3+NO2, Tot	mg/L 0.0291	50.0	21.3	70.3	6.5	73.5	210.0	7.6	11.2
Phosphorus, Tot	mg/L <0.007	55.0	21.1	70.0	5.6	63.1	209.0	7.5	8.5
Phosphorus, Diss	mg/L <0.007	60.0	21.0	69.8	5.2	58.4	209.0	7.4	7.7
OrthoPhosphate, D	mg/L <0.05	65.0	21.0	69.8	5.2	58.4	209.0	7.4	8.1
Organic Carbon, T	mg/L 1.90	70.0	21.0	69.8	5.1	57.3	210.0	7.4	8.1
Hardness, Tot	mg/L 91.8								
Sulfate, Tot	mg/L 26.0								
Calcium, Tot	mg/L 27.2								
Magnesium, Tot	mg/L 5.82								
Sodium, Tot	mg/L 5.65								
Potassium, Tot	mg/L 1.55								
Chloride, Tot	mg/L 5.95								
Arsenic, Tot	ug/L 0.72								
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 89.1								
Iron, Diss	ug/L <7.0								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L <0.2								
Manganese, Tot	ug/L 69.0								
Manganese, Diss	ug/L 0.5								
Thallium, Tot	ug/L								
Molybdenum, Tot	ug/L								
Nickel, Tot	ug/L 1.7								
Silver, Tot	ug/L								
Vanadium, Tot	ug/L								
Zinc, Tot	ug/L 0.5								
Zinc, Diss	ug/L 0.4								
Antimony, Tot	ug/L								
Aluminum, Tot	ug/L 42.6								
Aluminum, Diss	ug/L <7.0								
Selenium, Tot	ug/L 0.4								
Mercury, Tot	ug/L 0.06								

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD20003

Project: Old Hickory

Location: Cumberland River, Mile 221.2

State: Tennessee

Latitude: 36° 14" 41'

Quad: Hermitage, TN

County: Davidson

Longitude: 86° 36" 50'

HUC: 05130201

Sample Date: 26 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.0 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	24.3	75.7	13.0	155.3	208.0	9.2	8.0
5.0	23.3	73.9	13.3	156.0	207.0	9.2	42.4
10.0	22.5	72.5	10.2	117.9	209.0	8.7	41.7
15.0	22.1	71.8	7.3	83.8	212.0	8.1	20.9
20.0	21.8	71.2	7.8	89.0	211.0	8.1	19.5
25.0	21.5	70.7	7.2	81.7	210.0	7.8	15.6
30.0	21.4	70.5	7.0	79.3	210.0	7.7	13.9
35.0	21.1	70.0	6.6	74.3	209.0	7.6	11.1
40.0	20.9	69.6	6.1	68.4	208.0	7.5	8.4
45.0	20.7	69.3	5.7	63.7	209.0	7.4	7.0
50.0	20.7	69.3	5.5	61.5	208.0	7.4	6.7
55.0	20.7	69.3	5.5	61.5	209.0	7.3	6.8
60.0	20.7	69.3	5.4	60.4	208.0	7.3	6.7
65.0	20.7	69.3	5.4	60.4	208.0	7.3	7.0
70.0	20.7	69.3	5.3	59.2	209.0	7.3	7.0

United States Army Corps of Engineers

Nashville District

CELRN-EC-H / Water Management Section

Station: 30LD20004

Project: Old Hickory

Location: Cumberland River, Mile 236.0

State: Tennessee

Latitude: 36° 18" 48'

Quad: Laguardo, TN

County: Wilson

Longitude: 86° 29" 18'

HUC: 05130201

Sample Date: 26 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 0.8 m

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	20.0	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 72	0.0	23.5	74.3	11.1	130.7	211.0	8.8	24.2
Alkalinity, Phenol	mg/L 0	5.0	22.4	72.3	11.1	128.1	211.0	8.8	62.3
Solids, Tot	mg/L 160	10.0	22.1	71.8	10.0	114.7	211.0	8.5	38.0
Solids, Tot Diss	mg/L 152	15.0	21.5	70.7	9.8	111.2	210.0	8.1	30.1
Solids, Tot Susp	mg/L 8.00	20.0	20.2	68.4	8.3	91.9	206.0	7.8	16.2
Solids, Vol	mg/L <1.00	25.0	19.9	67.8	8.1	89.1	206.0	7.7	13.2
Solids, Vol Diss	mg/L <1.00	30.0	19.8	67.6	8.0	87.9	206.0	7.6	12.3
Solids, Vol Susp	mg/L 1.60	35.0	19.8	67.6	7.9	86.8	205.0	7.6	11.2
Ammonia N, Tot	mg/L 0.0777	40.0	19.7	67.5	7.8	85.5	205.0	7.6	10.2
Kjeldahl N, Tot	mg/L 0.340	45.0	19.7	67.5	7.7	84.4	205.0	7.6	10.1
NO3+NO2, Tot	mg/L 0.223	50.0	19.7	67.5	7.7	84.4	205.0	7.6	10.1
Phosphorus, Tot	mg/L <0.007	53.0	19.7	67.5	7.6	83.3	206.0	7.6	10.1
Phosphorus, Diss	mg/L <0.007								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L 1.80								
Hardness, Tot	mg/L 88.8								
Sulfate, Tot	mg/L 25.4								
Calcium, Tot	mg/L 26.2								
Magnesium, Tot	mg/L 5.70								
Sodium, Tot	mg/L 5.58								
Potassium, Tot	mg/L 1.49								
Chloride, Tot	mg/L 5.94								
Arsenic, Tot	ug/L 0.7								
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 88.6								
Iron, Diss	ug/L								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 54.0								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L								
Molybdenum, Tot	ug/L								
Nickel, Tot	ug/L 1.7								
Silver, Tot	ug/L								
Vanadium, Tot	ug/L								
Zinc, Tot	ug/L 7.0								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L								
Aluminum, Tot	ug/L 47.3								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.58								
Mercury, Tot	ug/L								

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD20005

Project: Old Hickory

Location: Cumberland River, Mile 241.0

State: Tennessee

Latitude: 36° 19" 40'

Quad: Laguardo, TN

County: Wilson

Longitude: 86° 25" 5'

HUC: 05130201

Sample Date: 26 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 0.8 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	23.3	73.9	10.5	123.2	206.0	8.5	15.9
5.0	22.2	72.0	9.8	112.7	207.0	8.3	32.0
10.0	21.1	70.0	9.1	102.5	205.0	8.0	25.3
15.0	20.7	69.3	9.0	100.6	205.0	7.9	22.6
20.0	20.1	68.2	8.8	97.2	205.0	7.8	19.2
25.0	20.0	68.0	8.8	97.0	204.0	7.8	19.6
30.0	19.9	67.8	9.0	99.0	204.0	7.9	25.5
35.0	19.7	67.5	8.8	96.5	204.0	7.8	19.2
40.0	19.6	67.3	8.6	94.1	204.0	7.7	18.1
45.0	19.6	67.3	8.5	93.0	203.0	7.7	15.7
50.0	19.6	67.3	8.5	93.0	204.0	7.7	16.2
55.0	19.6	67.3	8.4	91.9	203.0	7.7	14.9
60.0	19.6	67.3	8.4	91.9	204.0	7.7	15.3

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD20006

Project: Old Hickory

Location: Cumberland River, Mile 245.0

State: Tennessee

Latitude: 36° 19" 40'

Quad: Laguardo, TN

County: Wilson

Longitude: 86° 23" 22'

HUC: 05130201

Sample Date: 26 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.0 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	20.5	68.9	10.4	115.8	204.0	8.5	27.8
5.0	19.9	67.8	10.0	110.0	203.0	8.2	31.0
10.0	19.8	67.6	9.6	105.4	203.0	8.0	27.2
15.0	19.8	67.6	9.4	103.2	202.0	8.0	24.6
20.0	19.7	67.5	9.2	100.9	203.0	7.9	20.8
25.0	19.5	67.1	8.9	97.2	203.0	7.8	18.9
30.0	19.4	66.9	8.9	97.0	203.0	7.8	18.6
35.0	19.3	66.7	8.7	94.6	203.0	7.8	16.0
40.0	19.3	66.7	8.7	94.6	202.0	7.8	15.2
45.0	19.3	66.7	8.6	93.5	201.0	7.8	14.3
50.0	19.3	66.7	8.7	94.6	202.0	7.8	14.6
54.0	19.3	66.7	8.6	93.5	202.0	7.8	15.7

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD20007

Project: Old Hickory

Location: Cumberland River, Mile 263.1

State: Tennessee

Latitude: 36° 17" 57'

Quad: Hunters Point, TN

County: Wilson

Longitude: 86° 15" 49'

HUC: 05130201

Sample Date: 26 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.6 m

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	20.0	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 64	0.0	18.7	65.7	8.7	93.5	203.0	7.8	8.0
Alkalinity, Phenol	mg/L 0	5.0	18.6	65.5	8.6	92.3	203.0	7.8	18.6
Solids, Tot	mg/L 158	10.0	18.6	65.5	8.7	93.3	203.0	7.7	17.6
Solids, Tot Diss	mg/L 151	15.0	18.6	65.5	8.6	92.3	203.0	7.7	16.1
Solids, Tot Susp	mg/L 7.00	20.0	18.6	65.5	8.6	92.3	203.0	7.7	16.0
Solids, Vol	mg/L <1.00	25.0	18.6	65.5	8.6	92.3	203.0	7.7	15.8
Solids, Vol Diss	mg/L <1.00	30.0	18.6	65.5	8.5	91.2	203.0	7.7	16.3
Solids, Vol Susp	mg/L 1.40	35.0	18.6	65.5	8.5	91.2	203.0	7.7	15.5
Ammonia N, Tot	mg/L 0.0639	40.0	18.6	65.5	8.5	91.2	203.0	7.7	14.7
Kjeldahl N, Tot	mg/L 0.290	45.0	18.6	65.5	8.5	91.2	203.0	7.7	14.9
NO3+NO2, Tot	mg/L 0.364	50.0	18.6	65.5	8.5	91.2	203.0	7.7	14.7
Phosphorus, Tot	mg/L <0.007								
Phosphorus, Diss	mg/L <0.007								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L 1.60								
Hardness, Tot	mg/L 88.5								
Sulfate, Tot	mg/L 27.3								
Calcium, Tot	mg/L 25.5								
Magnesium, Tot	mg/L 6.04								
Sodium, Tot	mg/L 6.11								
Potassium, Tot	mg/L 1.50								
Chloride, Tot	mg/L 5.90								
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 0.5								
Iron, Tot	ug/L 77.4								
Iron, Diss	ug/L								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 48.5								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L								
Molybdenum, Tot	ug/L								
Nickel, Tot	ug/L 1.7								
Silver, Tot	ug/L								
Vanadium, Tot	ug/L								
Zinc, Tot	ug/L 0.5								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L								
Aluminum, Tot	ug/L 39.5								
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: 30LD20008

Project: Old Hickory

Location: Cumberland River, Mile 278.7

State: Tennessee
County: TrousdaleLatitude: 36° 22" 25'
Longitude: 86° 10" 37'Quad: Bellwood, TN
HUC: 05130201

Sample Date: 25 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.1 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	19.0	66.2	8.9	96.2	200.0	7.7	14.9
5.0	18.7	65.7	8.7	93.5	201.0	7.7	14.8
10.0	18.6	65.5	8.8	94.4	201.0	7.7	19.1
15.0	18.5	65.3	8.7	93.1	201.0	7.7	15.3
20.0	18.6	65.5	8.6	92.3	201.0	7.7	15.0
25.0	18.6	65.5	8.9	95.5	201.0	7.7	16.0
30.0	18.6	65.5	8.9	95.5	201.0	7.7	15.6
35.0	18.5	65.3	8.7	93.1	200.0	7.7	14.9
40.0	18.4	65.1	8.7	93.0	200.0	7.7	14.9

United States Army Corps of Engineers	Nashville District	CELRN-EC-H / Water Management Section
Station: 30LD20009	Project: Old Hickory	Location: Cumberland River, Mile 308.2
State: Tennessee	Latitude: 36° 14" 54'	Quad: Gordonsville, TN
County: Smith	Longitude: 85° 57" 18'	HUC: 05130201
Sample Date: 25 Sep 2014	Water Surface Elevation = 445.4 ft	Secchi Disk = 1.2 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	18.4	65.1	8.3	88.7	200.0	7.5	11.6	
5.0	18.4	65.1	8.3	88.7	199.0	7.5	12.0	
10.0	18.4	65.1	8.3	88.7	199.0	7.6	11.4	
15.0	18.4	65.1	8.3	88.7	199.0	7.5	11.5	
20.0	18.4	65.1	8.3	88.7	199.0	7.6	10.9	

CELNRN-EC-H / Water Management Section

Location: Drakes Creek, Mile 1.9

Quad: Hendersonville, TN
HUC: 05130201

Secchi Disk = 0.8 m

Profile Measurements

[illegible]

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD20016

Project: Old Hickory

Location: Cumberland River, Mile 292.4

State: Tennessee

Latitude: 36° 15' 51'

Quad: Dixon Springs, TN

County: Smith

Longitude: 86° 4' 12'

HUC: 05130201

Sample Date: 25 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.1 m

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	15.0	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 61	0.0	18.6	65.5	9.1	97.6	200.0	7.7	12.9
Alkalinity, Phenol	mg/L 0	5.0	18.6	65.5	9.0	96.5	200.0	7.7	14.0
Solids, Tot	mg/L 162	10.0	18.6	65.5	9.1	97.6	200.0	7.6	14.6
Solids, Tot Diss	mg/L 155	15.0	18.6	65.5	9.1	97.6	199.0	7.6	14.0
Solids, Tot Susp	mg/L 7.00	20.0	18.6	65.5	9.1	97.6	200.0	7.6	14.4
Solids, Vol	mg/L <1.00	25.0	18.6	65.5	9.1	97.6	199.0	7.6	14.4
Solids, Vol Diss	mg/L <1.00	29.0	18.6	65.5	9.1	97.6	200.0	7.6	13.1
Solids, Vol Susp	mg/L <1.00								
Ammonia N, Tot	mg/L 0.0456								
Kjeldahl N, Tot	mg/L 0.230								
NO3+NO2, Tot	mg/L 0.358								
Phosphorus, Tot	mg/L <0.007								
Phosphorus, Diss	mg/L <0.007								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L 1.70								
Hardness, Tot	mg/L 85.9								
Sulfate, Tot	mg/L 29.9								
Calcium, Tot	mg/L 23.9								
Magnesium, Tot	mg/L 6.36								
Sodium, Tot	mg/L 6.21								
Potassium, Tot	mg/L 1.53								
Chloride, Tot	mg/L 5.79								
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 0.51								
Iron, Tot	ug/L 88.0								
Iron, Diss	ug/L								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 53.4								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L								
Molybdenum, Tot	ug/L								
Nickel, Tot	ug/L 1.7								
Silver, Tot	ug/L								
Vanadium, Tot	ug/L								
Zinc, Tot	ug/L 0.8								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L								
Aluminum, Tot	ug/L 45.4								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.3								
Mercury, Tot	ug/L								

United States Army Corps of Engineers

Nashville District

CELRN-EC-H / Water Management Section

Station: 30LD20019

Project: Old Hickory

Location: Gallatin Fossil Plant Discharge, Mile 0.3

State: Tennessee

Latitude: 36° 18" 50.6'

Quad: Laguardo, TN

County: Sumner

Longitude: 86° 24" 12.8'

HUC: 05130201

Sample Date: 26 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.0 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	25.4	77.7	8.4	102.3	207.0	7.8	11.9
5.0	25.4	77.7	8.4	102.3	207.0	7.8	13.1
10.0	25.4	77.7	8.4	102.3	207.0	7.8	14.1
15.0	25.4	77.7	8.4	102.3	207.0	7.8	14.4

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 30LD20026

Project: Old Hickory

Location: Cumberland River, Mile 301.8

State: Tennessee
County: SmithLatitude: 36° 17" 54.6'
Longitude: 86° 0" 13'Quad: Dixon Springs, TN
HUC: 05130201

Sample Date: 25 Sep 2014

Water Surface Elevation = 445.4 ft

Secchi Disk = 1.1 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	17.5	63.5	8.4	88.1	198.0	7.6	7.6
5.0	17.5	63.5	8.4	88.1	197.0	7.6	7.9
10.0	17.4	63.3	8.4	88.0	197.0	7.6	7.7
15.0	17.4	63.3	8.4	88.0	197.0	7.6	7.6
20.0	17.4	63.3	8.4	88.0	198.0	7.6	7.2
23.0	17.4	63.3	8.4	88.0	198.0	7.6	7.3