United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL10001 | Project: Dale Hollow | Location: Obey River, Mile 7.0

State: Tennessee | Latitude: 36º 32" 13.4' | Quad: Dale Hollow Dam, TN-KY
County: Clay | Longitude: 85º 27" 24.9' | HUC: 05130105

Sample Date: 12 Nov 2014 | Water Surface Elevation = 512.0 ft | Stream Flow = 3280 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	86	0.0	12.4	54.3	3.1	29.2	199.0	7.4	
Alkalinity, Phenol	mg/L	0								
Solids, Tot	mg/L	132								
Solids, Tot Diss	mg/L	130								
Solids, Tot Susp	mg/L	2.00								
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	0.181								
Kjeldahl N, Tot	mg/L	0.390								
NO3+NO2, Tot	mg/L	0.182								
Phosphorus, Tot	mg/L	<0.007								
Phosphorus, Diss	mg/L	<0.007								
OrthoPhosphate, D	mg/L	<0.05								
Organic Carbon, T	mg/L	1.80								
Hardness, Tot	mg/L									
Sulfate, Tot	mg/L	15.6								
Calcium, Tot	mg/L	30.1								
Magnesium, Tot	mg/L	5.21								
Sodium, Tot	mg/L	2.66								
Potassium, Tot	mg/L	1.15								
Chloride, Tot	mg/L	4.09								
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	52.7								
Iron, Diss	ug/L	<7.0								
Lead, Tot	ug/L	<0.2								
Lead, Diss	ug/L	0.6								
Manganese, Tot	ug/L	589.0								
Manganese, Diss	ug/L	528.0								
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	1.0								
Zinc, Diss	ug/L	1.7								
Antimony, Tot	ug/L									
Aluminum, Tot	ug/L	<7.0								
Aluminum, Diss	ug/L	<7.0								
Selenium, Tot	ug/L	0.35								
Mercury, Tot	ug/L	<0.01								

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL10011 | Project: Dale Hollow | Location: Wolf River, Mile 22.7

State: Tennessee | Latitude: 36º 35" 1' | Quad: Moodyville, TN-KY
County: Pickett | Longitude: 85º 7" 5' | HUC: 05130105

Sample Date: 14 Nov 2014 | Water Surface Elevation = | Stream Flow =

Results of Laboratory Analyses

Sample Depth ft		0.0
Alkalinity, Tot	mg/L	102
Alkalinity, Phenol	mg/L	0
Solids, Tot	mg/L	170
Solids, Tot Diss	mg/L	170
Solids, Tot Susp	mg/L	<1.00
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	0.0183
Kjeldahl N, Tot	mg/L	<0.2
NO3+NO2, Tot	mg/L	0.477
Phosphorus, Tot	mg/L	<0.007
Phosphorus, Diss	mg/L	<0.007
OrthoPhosphate, D	mg/L	<0.05
Organic Carbon, T	mg/L	<1.00
Hardness, Tot	mg/L	
Sulfate, Tot	mg/L	20.4
Calcium, Tot	mg/L	40.5
Magnesium, Tot	mg/L	6.56
Sodium, Tot	mg/L	3.16
Potassium, Tot	mg/L	0.884
Chloride, Tot	mg/L	4.56
Arsenic, Tot	ug/L	0.2
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	53.8
Iron, Diss	ug/L	
Lead, Tot	ug/L	0.3
Lead, Diss	ug/L	
Manganese, Tot	ug/L	6.8
Manganese, Diss	ug/L	
Thallium, Tot	ug/L	
Molybdenum, Tot	ug/L	
Nickel, Tot	ug/L	2.3
Silver, Tot	ug/L	
Vanadium, Tot	ug/L	
Zinc, Tot	ug/L	2.4
Zinc, Diss	ug/L	
Antimony, Tot	ug/L	
Aluminum, Tot	ug/L	21.3
Aluminum, Diss	ug/L	
Selenium, Tot	ug/L	0.4
Mercury, Tot	ug/L	

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	5.7	42.3	12.9	102.8	250.0	8.2	

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL10012 | Project: Dale Hollow | Location: Spring Creek, Mile 2.7

State: Kentucky | Latitude: 36º 38" 6' | Quad: Albany, KY-TN
County: Clinton | Longitude: 85º 8" 43' | HUC: 05130105

Sample Date: 14 Nov 2014 | Water Surface Elevation = | Stream Flow =

Results of Laboratory Analyses

Sample Depth ft		0.0
Alkalinity, Tot	mg/L	94
Alkalinity, Phenol	mg/L	2
Solids, Tot	mg/L	294
Solids, Tot Diss	mg/L	294
Solids, Tot Susp	mg/L	<1.00
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	0.0188
Kjeldahl N, Tot	mg/L	<0.2
NO3+NO2, Tot	mg/L	2.01
Phosphorus, Tot	mg/L	0.007
Phosphorus, Diss	mg/L	0.013
OrthoPhosphate, D	mg/L	<0.05
Organic Carbon, T	mg/L	<1.00
Hardness, Tot	mg/L	
Sulfate, Tot	mg/L	30.6
Calcium, Tot	mg/L	60.0
Magnesium, Tot	mg/L	9.78
Sodium, Tot	mg/L	14.3
Potassium, Tot	mg/L	1.47
Chloride, Tot	mg/L	24.8
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	0.4
Iron, Tot	ug/L	60.2
Iron, Diss	ug/L	
Lead, Tot	ug/L	0.27
Lead, Diss	ug/L	
Manganese, Tot	ug/L	7.0
Manganese, Diss	ug/L	
Thallium, Tot	ug/L	
Molybdenum, Tot	ug/L	
Nickel, Tot	ug/L	3.2
Silver, Tot	ug/L	
Vanadium, Tot	ug/L	
Zinc, Tot	ug/L	1.2
Zinc, Diss	ug/L	
Antimony, Tot	ug/L	
Aluminum, Tot	ug/L	30.2
Aluminum, Diss	ug/L	
Selenium, Tot	ug/L	0.8
Mercury, Tot	ug/L	

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	4.2	39.6	14.6	111.7	417.0	8.2	

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL10014 | Project: Dale Hollow | Location: East Fork Obey River, Mile 12.6

State: Tennessee | Latitude: 36º 25" 0' | Quad: Riverton, TN
County: Fentress | Longitude: 85º 1" 38' | HUC: 05130105

Sample Date: 13 Nov 2014 | Water Surface Elevation = | Stream Flow =

Results of Laboratory Analyses			Profile Measurements							
			Depth	Water Temp	Water Temp	Dis Oxygen	Dis Oxygen	Spec Cond	pH	Chloro a F
Sample Depth ft		0.0	ft	deg C	deg F	mg/l	% sat	umho/cm	units	ug/l
Alkalinity, Tot	mg/L	38	0.0	9.7	49.5	11.1	98.0	126.0	7.8	
Alkalinity, Phenol	mg/L	0								
Solids, Tot	mg/L	92.0								
Solids, Tot Diss	mg/L	90.0								
Solids, Tot Susp	mg/L	2.00								
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	0.0267								
Kjeldahl N, Tot	mg/L	0.360								
NO3+NO2, Tot	mg/L	0.114								
Phosphorus, Tot	mg/L	<0.007								
Phosphorus, Diss	mg/L	<0.007								
OrthoPhosphate, D	mg/L	<0.05								
Organic Carbon, T	mg/L	1.10								
Hardness, Tot	mg/L									
Sulfate, Tot	mg/L	22.5								
Calcium, Tot	mg/L	16.7								
Magnesium, Tot	mg/L	3.30								
Sodium, Tot	mg/L	2.02								
Potassium, Tot	mg/L	1.07								
Chloride, Tot	mg/L	2.53								
Arsenic, Tot	ug/L	<0.2								
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	125.0								
Iron, Diss	ug/L									
Lead, Tot	ug/L	0.3								
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	3.8								
Silver, Tot	ug/L									
Vanadium, Tot	ug/L									
Zinc, Tot	ug/L	3.9								
Zinc, Diss	ug/L									
Antimony, Tot	ug/L									
Aluminum, Tot	ug/L	225.0								
Aluminum, Diss	ug/L									
Selenium, Tot	ug/L	<0.2								
Mercury, Tot	ug/L									

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL10015 | Project: Dale Hollow | Location: West Fork Obey River, Mile 7.5

State: Tennessee | Latitude: 36º 24" 7' | Quad: Alpine, TN
County: Overton | Longitude: 85º 10" 40' | HUC: 05130105

Sample Date: 13 Nov 2014 | Water Surface Elevation = | Stream Flow =

Results of Laboratory Analyses			Profile Measurements							
			Depth	Water Temp	Water Temp	Dis Oxygen	Dis Oxygen	Spec Cond	pH	Chloro a F
Sample Depth ft		0.0	ft	deg C	deg F	mg/l	% sat	umho/cm	units	ug/l
Alkalinity, Tot	mg/L	160	0.0	7.0	44.6	11.6	95.7	423.0	8.3	
Alkalinity, Phenol	mg/L	0								
Solids, Tot	mg/L	294								
Solids, Tot Diss	mg/L	294								
Solids, Tot Susp	mg/L	<1.00								
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	0.0182								
Kjeldahl N, Tot	mg/L	<0.2								
NO3+NO2, Tot	mg/L	1.60								
Phosphorus, Tot	mg/L	<0.007								
Phosphorus, Diss	mg/L	<0.007								
OrthoPhosphate, D	mg/L	<0.05								
Organic Carbon, T	mg/L	<1.00								
Hardness, Tot	mg/L									
Sulfate, Tot	mg/L	42.9								
Calcium, Tot	mg/L	65.2								
Magnesium, Tot	mg/L	11.8								
Sodium, Tot	mg/L	7.51								
Potassium, Tot	mg/L	1.14								
Chloride, Tot	mg/L	8.90								
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	0.4								
Iron, Tot	ug/L	15.0								
Iron, Diss	ug/L									
Lead, Tot	ug/L	0.3								
Lead, Diss	ug/L									
Manganese, Tot	ug/L	4.1								
Manganese, Diss	ug/L									
Thallium, Tot	ug/L									
Molybdenum, Tot	ug/L									
Nickel, Tot	ug/L	3.6								
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	11.4								
Aluminum, Diss	ug/L									
Selenium, Tot	ug/L	0.5								
Mercury, Tot	ug/L									

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL10028 | Project: Dale Hollow | Location: Big Eagle Creek, Mile 5.3

State: Tennessee | Latitude: 36º 28" 43.9' | Quad: Alpine, TN
County: Overton | Longitude: 85º 14" 29.7' | HUC: 05130105

Sample Date: 14 Nov 2014 | Water Surface Elevation = | Stream Flow =

Results of Laboratory Analyses			Profile Measurements							
			Depth	Water Temp	Water Temp	Dis Oxygen	Dis Oxygen	Spec Cond	pH	Chloro a F
Sample Depth ft		0.0	ft	deg C	deg F	mg/l	% sat	umho/cm	units	ug/l
Alkalinity, Tot	mg/L	134	0.0	3.7	38.7	14.0	105.6	335.0	8.2	
Alkalinity, Phenol	mg/L	0								
Solids, Tot	mg/L	226								
Solids, Tot Diss	mg/L	226								
Solids, Tot Susp	mg/L	<2.00								
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	0.0162								
Kjeldahl N, Tot	mg/L	<0.2								
NO3+NO2, Tot	mg/L	1.15								
Phosphorus, Tot	mg/L	0.011								
Phosphorus, Diss	mg/L	0.011								
OrthoPhosphate, D	mg/L	<0.05								
Organic Carbon, T	mg/L	1.30								
Hardness, Tot	mg/L									
Sulfate, Tot	mg/L	21.5								
Calcium, Tot	mg/L	53.7								
Magnesium, Tot	mg/L	7.49								
Sodium, Tot	mg/L	6.37								
Potassium, Tot	mg/L	1.43								
Chloride, Tot	mg/L	11.9								
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	0.4								
Iron, Tot	ug/L	30.0								
Iron, Diss	ug/L									
Lead, Tot	ug/L	0.3								
Lead, Diss	ug/L									
Manganese, Tot	ug/L	3.4								
Manganese, Diss	ug/L									
Thallium, Tot	ug/L									
Molybdenum, Tot	ug/L									
Nickel, Tot	ug/L	2.7								
Silver, Tot	ug/L									
Vanadium, Tot	ug/L									
Zinc, Tot	ug/L	1.6								
Zinc, Diss	ug/L									
Antimony, Tot	ug/L									
Aluminum, Tot	ug/L	13.7								
Aluminum, Diss	ug/L									
Selenium, Tot	ug/L	0.4								
Mercury, Tot	ug/L									

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20002 | Project: Dale Hollow | Location: Obey River, Mile 7.7

State: Tennessee | Latitude: 36º 32" 24.1' | Quad: Dale Hollow Dam, TN-KY
County: Clay | Longitude: 85º 26" 46' | HUC: 05130105

Sample Date: 12 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 5.5 m

Results of Laboratory Analyses

Sample Depth ft		0.0	60.0	130.0
Alkalinity, Tot	mg/L	82	86	94
Alkalinity, Phenol	mg/L	0	0	0
Solids, Tot	mg/L	124	126	134
Solids, Tot Diss	mg/L	124	126	132
Solids, Tot Susp	mg/L	<1.00	<1.00	1.50
Solids, Vol	mg/L	<1.00	<1.00	<1.00
Solids, Vol Diss	mg/L	<1.00	<1.00	<1.00
Solids, Vol Susp	mg/L	<1.00	<1.00	<1.00
Ammonia N, Tot	mg/L	0.0904	0.0621	0.153
Kjeldahl N, Tot	mg/L	0.210	<0.2	0.290
NO3+NO2, Tot	mg/L	0.0745	0.152	0.224
Phosphorus, Tot	mg/L	<0.007	<0.007	<0.007
Phosphorus, Diss	mg/L	<0.007	<0.007	<0.007
OrthoPhosphate, D	mg/L	<0.05	<0.05	<0.05
Organic Carbon, T	mg/L	1.70	1.60	1.60
Hardness, Tot	mg/L			
Sulfate, Tot	mg/L	16.0	15.9	15.6
Calcium, Tot	mg/L	29.6	29.9	30.8
Magnesium, Tot	mg/L	5.18	5.10	5.25
Sodium, Tot	mg/L	2.63	2.63	2.75
Potassium, Tot	mg/L	1.14	1.14	1.19
Chloride, Tot	mg/L	3.96	3.96	4.21
Arsenic, Tot	ug/L	0.5	0.5	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	0.4	0.4	0.3
Iron, Tot	ug/L	10.1	15.3	23.4
Iron, Diss	ug/L	<7.0	<7.0	<7.0
Lead, Tot	ug/L	<0.2	<0.2	<0.2
Lead, Diss	ug/L	<0.2	<0.2	<0.2
Manganese, Tot	ug/L	12.7	68.9	1770.0
Manganese, Diss	ug/L	4.9	24.2	1660.0
Thallium, Tot	ug/L			
Molybdenum, Tot	ug/L			
Nickel, Tot	ug/L	2.0	2.0	2.0
Silver, Tot	ug/L			
Vanadium, Tot	ug/L			
Zinc, Tot	ug/L	0.3	0.8	0.3
Zinc, Diss	ug/L	0.6	1.0	0.6
Antimony, Tot	ug/L			
Aluminum, Tot	ug/L	<7.0	<7.0	<7.0
Aluminum, Diss	ug/L	<7.0	<7.0	<7.0
Selenium, Tot	ug/L	0.2	0.4	0.3
Mercury, Tot	ug/L	0.022	<0.01	<0.01

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	15.8	60.4	8.0	81.0	206.0	8.0	5.8
5.0	15.8	60.4	7.9	80.0	206.0	8.0	5.5
10.0	15.8	60.4	7.9	80.0	206.0	8.0	5.1
15.0	15.8	60.4	7.9	80.0	206.0	8.0	5.1
20.0	15.8	60.4	7.9	80.0	205.0	8.0	5.2
25.0	15.8	60.4	7.9	80.0	206.0	8.0	5.8
30.0	15.8	60.4	7.9	80.0	205.0	8.0	5.2
35.0	15.8	60.4	7.9	80.0	206.0	8.0	5.3
40.0	15.8	60.4	8.0	81.0	205.0	8.0	5.0
45.0	15.8	60.4	8.0	81.0	206.0	8.0	4.9
50.0	15.8	60.4	7.9	80.0	206.0	7.9	5.1
55.0	15.8	60.4	6.2	62.8	206.0	7.8	3.4
60.0	14.2	57.6	0.0	0.0	207.0	7.2	2.6
65.0	13.4	56.1	0.0	0.0	208.0	7.2	1.5
70.0	12.6	54.7	0.0	0.0	207.0	7.2	1.5
75.0	11.9	53.4	0.0	0.0	207.0	7.2	1.5
80.0	11.3	52.3	0.0	0.0	209.0	7.1	1.5
85.0	10.9	51.6	0.0	0.0	211.0	7.1	1.4
90.0	10.5	50.9	0.0	0.0	212.0	7.1	1.3
95.0	10.2	50.4	0.0	0.0	214.0	7.2	1.3
100.0	9.9	49.8	0.0	0.0	216.0	7.2	1.2
105.0	9.6	49.3	0.0	0.0	218.0	7.2	1.2
110.0	9.1	48.4	0.0	0.0	217.0	7.2	1.0
115.0	9.0	48.2	0.0	0.0	218.0	7.2	1.0
120.0	8.9	48.0	0.0	0.0	217.0	7.2	1.0
125.0	8.8	47.8	0.0	0.0	217.0	7.2	0.9
130.0	8.8	47.8	0.0	0.0	218.0	7.2	1.0
135.0	8.8	47.8	0.0	0.0	218.0	7.2	1.0
138.0	8.8	47.8	0.0	0.0	218.0	7.2	1.0

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20004 | Project: Dale Hollow | Location: Obey River, Mile 27.7

State: Tennessee | Latitude: 36º 35" 59.8' | Quad: Dale Hollow Reservoir SE, TN-KY
County: Clay | Longitude: 85º 20" 10.2' | HUC: 05130105

Sample Date: 12 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 3.5 m

Results of Laboratory Analyses

Sample Depth ft		0.0	90.0
Alkalinity, Tot	mg/L	82	94
Alkalinity, Phenol	mg/L	0	0
Solids, Tot	mg/L	130	142
Solids, Tot Diss	mg/L	130	140
Solids, Tot Susp	mg/L	<1.00	2.00
Solids, Vol	mg/L	<1.00	<1.00
Solids, Vol Diss	mg/L	<1.00	<1.00
Solids, Vol Susp	mg/L	<1.00	<1.00
Ammonia N, Tot	mg/L	0.0560	0.379
Kjeldahl N, Tot	mg/L	0.800	1.19
NO3+NO2, Tot	mg/L	0.0555	0.0139
Phosphorus, Tot	mg/L	<0.007	0.012
Phosphorus, Diss	mg/L	<0.007	0.011
OrthoPhosphate, D	mg/L	<0.05	<0.05
Organic Carbon, T	mg/L	1.70	1.80
Hardness, Tot	mg/L		
Sulfate, Tot	mg/L	16.4	12.9
Calcium, Tot	mg/L	29.3	31.0
Magnesium, Tot	mg/L	5.22	5.07
Sodium, Tot	mg/L	2.90	2.67
Potassium, Tot	mg/L	1.18	1.19
Chloride, Tot	mg/L	4.39	4.11
Arsenic, Tot	ug/L	0.6	3.8
Barium, Tot	ug/L		
Beryllium, Tot	ug/L		
Cadmium, Tot	ug/L		
Chromium, Tot	ug/L		
Cobalt, Tot	ug/L		
Copper, Tot	ug/L	3.5	0.3
Iron, Tot	ug/L	27.4	1190.0
Iron, Diss	ug/L		
Lead, Tot	ug/L	<0.2	<0.2
Lead, Diss	ug/L		
Manganese, Tot	ug/L	52.0	2200.0
Manganese, Diss	ug/L		
Thallium, Tot	ug/L		
Molybdenum, Tot	ug/L		
Nickel, Tot	ug/L	2.1	1.9
Silver, Tot	ug/L		
Vanadium, Tot	ug/L		
Zinc, Tot	ug/L	4.1	0.37
Zinc, Diss	ug/L		
Antimony, Tot	ug/L		
Aluminum, Tot	ug/L	<7.0	11.6
Aluminum, Diss	ug/L		
Selenium, Tot	ug/L	0.3	0.24
Mercury, Tot	ug/L		

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	15.4	59.7	8.2	82.4	207.0	7.9	6.1
5.0	15.4	59.7	8.2	82.4	207.0	7.9	6.0
10.0	15.4	59.7	8.2	82.4	207.0	7.9	6.9
15.0	15.4	59.7	8.2	82.4	208.0	7.9	8.2
20.0	15.4	59.7	8.1	81.4	208.0	7.9	6.6
25.0	15.4	59.7	8.1	81.4	207.0	7.9	6.8
30.0	15.4	59.7	8.1	81.4	208.0	7.9	6.4
35.0	15.4	59.7	8.1	81.4	208.0	7.9	5.9
40.0	15.4	59.7	8.1	81.4	208.0	7.9	5.9
45.0	15.4	59.7	8.1	81.4	207.0	7.9	6.3
50.0	15.4	59.7	8.1	81.4	208.0	7.9	5.8
55.0	15.4	59.7	7.9	79.3	210.0	7.8	5.1
60.0	15.4	59.7	7.4	74.3	211.0	7.8	4.4
65.0	14.7	58.5	5.0	49.5	228.0	7.6	3.9
70.0	12.4	54.3	0.0	0.0	223.0	7.2	2.5
75.0	11.8	53.2	0.0	0.0	222.0	7.2	2.3
80.0	11.5	52.7	0.0	0.0	223.0	7.2	2.1
85.0	11.1	52.0	0.0	0.0	223.0	7.2	1.9
90.0	10.8	51.4	0.0	0.0	223.0	7.2	1.8
95.0	10.5	50.9	0.0	0.0	223.0	7.2	1.7
100.0	10.4	50.7	0.0	0.0	224.0	7.2	1.7

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20006 | Project: Dale Hollow | Location: Obey River, Mile 41.6

State: Tennessee | Latitude: 36° 32" 32.5' | Quad: Byrdstown, TN-KY
County: Pickett | Longitude: 85° 12" 31' | HUC: 05130105

Sample Date: 13 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 2.6 m

Results of Laboratory Analyses

Sample Depth ft		30.0
Alkalinity, Tot	mg/L	84
Alkalinity, Phenol	mg/L	0
Solids, Tot	mg/L	128
Solids, Tot Diss	mg/L	127
Solids, Tot Susp	mg/L	1.00
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	0.0752
Kjeldahl N, Tot	mg/L	<0.2
NO3+NO2, Tot	mg/L	0.0915
Phosphorus, Tot	mg/L	<0.007
Phosphorus, Diss	mg/L	<0.007
OrthoPhosphate, D	mg/L	<0.05
Organic Carbon, T	mg/L	1.80
Hardness, Tot	mg/L	
Sulfate, Tot	mg/L	18.6
Calcium, Tot	mg/L	28.9
Magnesium, Tot	mg/L	5.24
Sodium, Tot	mg/L	2.84
Potassium, Tot	mg/L	1.24
Chloride, Tot	mg/L	4.00
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	0.3
Iron, Tot	ug/L	50.3
Iron, Diss	ug/L	
Lead, Tot	ug/L	<0.2
Lead, Diss	ug/L	
Manganese, Tot	ug/L	19.6
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	0.4
Zinc, Diss	ug/L	
Antimony, Tot	ug/L	
Aluminum, Tot	ug/L	34.9
Aluminum, Diss	ug/L	
Selenium, Tot	ug/L	0.3
Mercury, Tot	ug/L	

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	14.2	57.6	8.8	86.1	207.0	8.0	3.9
5.0	14.2	57.6	8.8	86.1	207.0	8.0	6.4
10.0	14.2	57.6	8.8	86.1	207.0	8.0	8.1
15.0	14.2	57.6	8.8	86.1	207.0	8.0	8.7
20.0	14.3	57.7	8.7	85.3	207.0	8.0	8.4
25.0	14.3	57.7	8.8	86.3	207.0	8.0	9.3
30.0	14.3	57.7	8.7	85.3	207.0	8.0	8.7
35.0	14.3	57.7	8.7	85.3	207.0	8.0	8.8
40.0	14.3	57.7	8.7	85.3	207.0	8.0	9.1
45.0	14.3	57.7	8.8	86.3	207.0	8.0	8.0
50.0	13.2	55.8	7.8	74.7	168.0	7.6	3.6
55.0	13.1	55.6	7.7	73.5	163.0	7.6	3.6
60.0	12.9	55.2	7.7	73.2	158.0	7.5	3.6
65.0	12.9	55.2	7.6	72.3	157.0	7.5	3.5
70.0	12.9	55.2	7.6	72.3	157.0	7.5	3.5

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20007 | Project: Dale Hollow | Location: Obey River, Mile 55.8

State: Tennessee | Latitude: 36° 28" 21.3' | Quad: Alpine, TN
County: Pickett | Longitude: 85° 8" 6.8' | HUC: 05130105

Sample Date: 13 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 1.2 m

Results of Laboratory Analyses

Sample Depth ft		15.0
Alkalinity, Tot	mg/L	64
Alkalinity, Phenol	mg/L	0
Solids, Tot	mg/L	108
Solids, Tot Diss	mg/L	104
Solids, Tot Susp	mg/L	3.50
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	0.0623
Kjeldahl N, Tot	mg/L	0.310
NO3+NO2, Tot	mg/L	0.283
Phosphorus, Tot	mg/L	<0.007
Phosphorus, Diss	mg/L	<0.007
OrthoPhosphate, D	mg/L	<0.05
Organic Carbon, T	mg/L	1.20
Hardness, Tot	mg/L	
Sulfate, Tot	mg/L	17.4
Calcium, Tot	mg/L	23.5
Magnesium, Tot	mg/L	4.03
Sodium, Tot	mg/L	1.97
Potassium, Tot	mg/L	1.05
Chloride, Tot	mg/L	2.65
Arsenic, Tot	ug/L	0.2
Barium, Tot	ug/L	
Beryllium, Tot	ug/L	
Cadmium, Tot	ug/L	
Chromium, Tot	ug/L	
Cobalt, Tot	ug/L	
Copper, Tot	ug/L	0.47
Iron, Tot	ug/L	187.0
Iron, Diss	ug/L	
Lead, Tot	ug/L	<0.2
Lead, Diss	ug/L	
Manganese, Tot	ug/L	86.1
Manganese, Diss	ug/L	
Thallium, Tot	ug/L	
Molybdenum, Tot	ug/L	
Nickel, Tot	ug/L	2.6
Silver, Tot	ug/L	
Vanadium, Tot	ug/L	
Zinc, Tot	ug/L	2.4
Zinc, Diss	ug/L	
Antimony, Tot	ug/L	
Aluminum, Tot	ug/L	188.0
Aluminum, Diss	ug/L	
Selenium, Tot	ug/L	0.2
Mercury, Tot	ug/L	

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	10.6	51.1	9.6	86.6	167.0	7.7	2.4
5.0	10.6	51.1	9.6	86.6	167.0	7.7	1.9
10.0	10.6	51.1	9.6	86.6	168.0	7.7	2.1
15.0	10.6	51.1	9.6	86.6	168.0	7.7	2.1
20.0	10.6	51.1	9.6	86.6	167.0	7.7	2.0
25.0	10.6	51.1	9.6	86.6	167.0	7.7	1.9
30.0	10.6	51.1	9.5	85.7	167.0	7.7	2.0
35.0	10.6	51.1	9.6	86.6	167.0	7.7	2.1
37.0	10.5	50.9	9.4	84.6	165.0	7.6	2.1

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20008 | Project: Dale Hollow | Location: Wolf River, Mile 8.7

State: Tennessee | Latitude: 36º 36" 56.1' | Quad: Byrdstown, TN-KY
County: Pickett | Longitude: 85º 13" 35.5' | HUC: 05130105

Sample Date: 12 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 2.2 m

Results of Laboratory Analyses

Sample Depth ft		30.0
Alkalinity, Tot	mg/L	82
Alkalinity, Phenol	mg/L	0
Solids, Tot	mg/L	142
Solids, Tot Diss	mg/L	140
Solids, Tot Susp	mg/L	1.88
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	0.0316
Kjeldahl N, Tot	mg/L	0.330
NO3+NO2, Tot	mg/L	0.0823
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	
Sulfate, Tot	mg/L	18.7
Calcium, Tot	mg/L	31.9
Magnesium, Tot	mg/L	5.70
Sodium, Tot	mg/L	3.67
Potassium, Tot	mg/L	1.31
Chloride, Tot	mg/L	5.78
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	0.3
Iron, Tot	ug/L	43.5
Iron, Diss	ug/L	
Lead, Tot	ug/L	<0.2
Lead, Diss	ug/L	
Manganese, Tot	ug/L	8.4
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	0.36
Zinc, Diss	ug/L	
Antimony, Tot	ug/L	
Aluminum, Tot	ug/L	11.4
Aluminum, Diss	ug/L	
Selenium, Tot	ug/L	0.3
Mercury, Tot	ug/L	

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	15.1	59.2	9.3	92.8	227.0	8.3	18.7
5.0	15.2	59.4	9.3	93.0	227.0	8.3	17.5
10.0	15.2	59.4	9.2	92.0	227.0	8.3	17.3
15.0	15.2	59.4	9.2	92.0	228.0	8.3	18.1
20.0	15.2	59.4	9.2	92.0	227.0	8.3	17.9
25.0	15.1	59.2	9.3	92.8	228.0	8.3	18.7
30.0	15.1	59.2	9.2	91.8	230.0	8.3	17.7
35.0	14.5	58.1	8.7	85.7	241.0	8.2	15.4
40.0	13.8	56.8	8.7	84.4	246.0	8.2	15.1
45.0	13.4	56.1	8.4	80.8	249.0	8.1	14.2
50.0	13.0	55.4	8.6	82.0	249.0	8.1	16.7
55.0	12.7	54.9	8.6	81.4	252.0	8.1	19.9
57.0	12.7	54.9	8.4	79.5	251.0	8.0	24.5

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20009 | Project: Dale Hollow | Location: East Fork Obey River, Mile 2.0

State: Tennessee | Latitude: 36° 27" 6.9' | Quad: Riverton, TN
County: Pickett | Longitude: 85° 5" 38.5' | HUC: 05130105

Sample Date: 13 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 2.9 m

Results of Laboratory Analyses

Sample Depth ft		10.0
Alkalinity, Tot	mg/L	46
Alkalinity, Phenol	mg/L	0
Solids, Tot	mg/L	102
Solids, Tot Diss	mg/L	101
Solids, Tot Susp	mg/L	1.00
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	0.0281
Kjeldahl N, Tot	mg/L	0.330
NO3+NO2, Tot	mg/L	0.173
Phosphorus, Tot	mg/L	<0.007
Phosphorus, Diss	mg/L	<0.007
OrthoPhosphate, D	mg/L	<0.05
Organic Carbon, T	mg/L	<1.00
Hardness, Tot	mg/L	
Sulfate, Tot	mg/L	21.1
Calcium, Tot	mg/L	19.6
Magnesium, Tot	mg/L	3.70
Sodium, Tot	mg/L	2.12
Potassium, Tot	mg/L	1.02
Chloride, Tot	mg/L	2.76
Arsenic, Tot	ug/L	<0.2
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	86.7
Iron, Diss	ug/L	
Lead, Tot	ug/L	<0.2
Lead, Diss	ug/L	
Manganese, Tot	ug/L	40.0
Manganese, Diss	ug/L	
Thallium, Tot	ug/L	
Molybdenum, Tot	ug/L	
Nickel, Tot	ug/L	2.9
Silver, Tot	ug/L	
Vanadium, Tot	ug/L	
Zinc, Tot	ug/L	1.7
Zinc, Diss	ug/L	
Antimony, Tot	ug/L	
Aluminum, Tot	ug/L	121.0
Aluminum, Diss	ug/L	
Selenium, Tot	ug/L	<0.2
Mercury, Tot	ug/L	

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	9.4	48.9	10.5	92.0	149.0	7.7	0.9
5.0	9.4	48.9	10.4	91.1	149.0	7.7	0.9
10.0	9.4	48.9	10.5	92.0	149.0	7.7	0.9
15.0	9.4	48.9	10.5	92.0	149.0	7.7	0.9
20.0	9.4	48.9	10.5	92.0	150.0	7.7	0.9
23.0	9.5	49.1	10.5	92.2	149.0	7.7	0.9

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20010 | Project: Dale Hollow | Location: West Fork Obey River, Mile 1.8

State: Tennessee | Latitude: 36° 26" 49.3' | Quad: Alpine, TN
County: Overton | Longitude: 85° 9" 8.9' | HUC: 05130105

Sample Date: 13 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 1.8 m

Results of Laboratory Analyses

Sample Depth ft		10.0
Alkalinity, Tot	mg/L	110
Alkalinity, Phenol	mg/L	0
Solids, Tot	mg/L	168
Solids, Tot Diss	mg/L	168
Solids, Tot Susp	mg/L	<1.00
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	0.0354
Kjeldahl N, Tot	mg/L	<0.2
NO3+NO2, Tot	mg/L	0.523
Phosphorus, Tot	mg/L	<0.007
Phosphorus, Diss	mg/L	<0.007
OrthoPhosphate, D	mg/L	<0.05
Organic Carbon, T	mg/L	<1.00
Hardness, Tot	mg/L	
Sulfate, Tot	mg/L	22.9
Calcium, Tot	mg/L	40.0
Magnesium, Tot	mg/L	6.53
Sodium, Tot	mg/L	2.99
Potassium, Tot	mg/L	1.04
Chloride, Tot	mg/L	4.29
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	0.4
Iron, Tot	ug/L	88.8
Iron, Diss	ug/L	
Lead, Tot	ug/L	<0.2
Lead, Diss	ug/L	
Manganese, Tot	ug/L	32.0
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	1.2
Zinc, Diss	ug/L	
Antimony, Tot	ug/L	
Aluminum, Tot	ug/L	168.0
Aluminum, Diss	ug/L	
Selenium, Tot	ug/L	0.3
Mercury, Tot	ug/L	

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	10.2	50.4	10.2	91.1	267.0	8.1	1.0
5.0	10.3	50.5	10.2	91.3	267.0	8.1	1.1
10.0	10.3	50.5	10.2	91.3	267.0	8.1	1.1
15.0	10.2	50.4	10.2	91.1	266.0	8.1	1.1
18.0	10.2	50.4	10.2	91.1	267.0	8.1	1.1

United States Army Corps of Engineers | Nashville District | CELRN-EC-H / Water Management Section

Station: 3DAL20020 | Project: Dale Hollow | Location: Spring Creek, Mile 0.5

State: Kentucky | Latitude: 36º 37" 54' | Quad: Albany, KY-TN
County: Clinton | Longitude: 85º 9" 28.9' | HUC: 05130105

Sample Date: 12 Nov 2014 | Water Surface Elevation = 643.6 ft | Secchi Disk = 1.0 m

Results of Laboratory Analyses			Profile Measurements							
			Depth	Water Temp	Water Temp	Dis Oxygen	Dis Oxygen	Spec Cond	pH	Chloro a F
Sample Depth ft		5.0	ft	deg C	deg F	mg/l	% sat	umho/cm	units	ug/l
Alkalinity, Tot	mg/L	122	0.0	12.0	53.6	10.8	100.6	331.0	8.6	34.9
Alkalinity, Phenol	mg/L	0	5.0	12.0	53.6	10.3	96.0	352.0	8.6	24.2
Solids, Tot	mg/L	222	10.0	12.1	53.8	9.9	92.4	373.0	8.4	15.3
Solids, Tot Diss	mg/L	216								
Solids, Tot Susp	mg/L	5.50								
Solids, Vol	mg/L	<1.00								
Solids, Vol Diss	mg/L	<1.00								
Solids, Vol Susp	mg/L	1.80								
Ammonia N, Tot	mg/L	0.0357								
Kjeldahl N, Tot	mg/L	0.480								
NO3+NO2, Tot	mg/L	1.13								
Phosphorus, Tot	mg/L	0.009								
Phosphorus, Diss	mg/L	<0.007								
OrthoPhosphate, D	mg/L	<0.05								
Organic Carbon, T	mg/L	1.50								
Hardness, Tot	mg/L									
Sulfate, Tot	mg/L	24.1								
Calcium, Tot	mg/L	46.7								
Magnesium, Tot	mg/L	7.67								
Sodium, Tot	mg/L	8.38								
Potassium, Tot	mg/L	1.50								
Chloride, Tot	mg/L	14.8								
Arsenic, Tot	ug/L	0.6								
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	110.0								
Iron, Diss	ug/L									
Lead, Tot	ug/L	<0.2								
Lead, Diss	ug/L									
Manganese, Tot	ug/L	24.6								
Manganese, Diss	ug/L									
Thallium, Tot	ug/L									
Molybdenum, Tot	ug/L									
Nickel, Tot	ug/L	2.7								
Silver, Tot	ug/L									
Vanadium, Tot	ug/L									
Zinc, Tot	ug/L	1.4								
Zinc, Diss	ug/L									
Antimony, Tot	ug/L									
Aluminum, Tot	ug/L	60.2								
Aluminum, Diss	ug/L									
Selenium, Tot	ug/L	0.6								
Mercury, Tot	ug/L									