

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: 36° 32' 13.4'

Quad: Dale Hollow Dam, TN-KY

County: Clay

Longitude: 85° 27' 24.9'

HUC: 05130105

Sample Date: 03 Jun 2014

Water Surface Elevation = 508.6 ft

Stream Flow = 1530 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 84	0.0	8.7	47.7	9.2	79.2	198.0	6.8	0.5
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 122								
Solids, Tot Diss	mg/L 122								
Solids, Tot Susp	mg/L <2.00								
Solids, Vol	mg/L 55.0								
Solids, Vol Diss	mg/L 50.0								
Solids, Vol Susp	mg/L 3.00								
Ammonia N, Tot	mg/L 0.303								
Kjeldahl N, Tot	mg/L 1.40								
NO3+NO2, Tot	mg/L 0.360								
Phosphorus, Tot	mg/L								
Phosphorus, Diss	mg/L								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L 2.30								
Hardness, Tot	mg/L								
Sulfate, Tot	mg/L 17.9								
Calcium, Tot	mg/L 30.2								
Magnesium, Tot	mg/L 5.45								
Sodium, Tot	mg/L 2.82								
Potassium, Tot	mg/L 1.24								
Chloride, Tot	mg/L 4.52								
Arsenic, Tot	ug/L 0.4								
Barium, Tot	ug/L 20.5								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L 0.4								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.4								
Iron, Tot	ug/L 15.1								
Iron, Diss	ug/L <7.0								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L <0.2								
Manganese, Tot	ug/L 13.9								
Manganese, Diss	ug/L 9.0								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.4								
Nickel, Tot	ug/L 0.5								
Silver, Tot	ug/L <0.2								
Vanadium, Tot	ug/L <0.2								
Zinc, Tot	ug/L 1.3								
Zinc, Diss	ug/L 5.5								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L <7.0								
Aluminum, Diss	ug/L <7.0								
Selenium, Tot	ug/L <0.2								
Mercury, Tot	ug/L <0.005								

Water Quality Physical / Chemical Data Report

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL10011

Project: Dale Hollow

Location: Wolf River, Mile 22.7

State: Tennessee

Latitude: 36° 35" 1'

Quad: Moodyville, TN-KY

County: Pickett

Longitude: 85° 7" 5'

HUC: 05130105

Sample Date: 05 Jun 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 120	0.0	22.1	71.8	7.7	88.4	317.0	7.9	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 212								
Solids, Tot Diss	mg/L 208								
Solids, Tot Susp	mg/L 4.00								
Solids, Vol	mg/L 55.0								
Solids, Vol Diss	mg/L 40.0								
Solids, Vol Susp	mg/L 5.00								
Ammonia N, Tot	mg/L 0.0555								
Kjeldahl N, Tot	mg/L 0.770								
NO3+NO2, Tot	mg/L 0.663								
Phosphorus, Tot	mg/L								
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 39.6								
Calcium, Tot	mg/L 47.0								
Magnesium, Tot	mg/L 9.00								
Sodium, Tot	mg/L 5.41								
Potassium, Tot	mg/L 1.21								
Chloride, Tot	mg/L 8.21								
Arsenic, Tot	ug/L 0.4								
Barium, Tot	ug/L 54.3								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L 0.8								
Cobalt, Tot	ug/L 0.22								
Copper, Tot	ug/L 0.4								
Iron, Tot	ug/L 78.0								
Iron, Diss	ug/L								
Lead, Tot	ug/L 0.3								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 26.3								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.3								
Nickel, Tot	ug/L 0.6								
Silver, Tot	ug/L <0.2								
Vanadium, Tot	ug/L 0.4								
Zinc, Tot	ug/L 2.6								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 52.4								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.2								
Mercury, Tot	ug/L								

Water Quality Physical / Chemical Data Report

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL10012

Project: Dale Hollow

Location: Spring Creek, Mile 2.7

State: Kentucky

Latitude: 36° 38' 6"

Quad: Albany, KY-TN

County: Clinton

Longitude: 85° 8' 43"

HUC: 05130105

Sample Date: 05 Jun 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 146	0.0	20.9	69.6	8.7	97.6	496.0	8.2	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 344								
Solids, Tot Diss	mg/L 342								
Solids, Tot Susp	mg/L 2.00								
Solids, Vol	mg/L 50.0								
Solids, Vol Diss	mg/L 45.0								
Solids, Vol Susp	mg/L 3.00								
Ammonia N, Tot	mg/L 0.0573								
Kjeldahl N, Tot	mg/L 0.860								
NO3+NO2, Tot	mg/L 2.28								
Phosphorus, Tot	mg/L								
Phosphorus, Diss	mg/L 0.044								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L <1.00								
Hardness, Tot	mg/L								
Sulfate, Tot	mg/L 53.9								
Calcium, Tot	mg/L 63.8								
Magnesium, Tot	mg/L 11.3								
Sodium, Tot	mg/L 21.1								
Potassium, Tot	mg/L 1.85								
Chloride, Tot	mg/L 37.4								
Arsenic, Tot	ug/L 0.7								
Barium, Tot	ug/L 36.7								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L 2.0								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.5								
Iron, Tot	ug/L 61.3								
Iron, Diss	ug/L								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 10.2								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.5								
Nickel, Tot	ug/L 0.64								
Silver, Tot	ug/L <0.2								
Vanadium, Tot	ug/L 0.7								
Zinc, Tot	ug/L 3.1								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 62.5								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 1.2								
Mercury, Tot	ug/L								

Water Quality Physical / Chemical Data Report

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL10014

Project: Dale Hollow

Location: East Fork Obey River, Mile 12.6

State: Tennessee

Latitude: 36° 25" 0'

Quad: Riverton, TN

County: Fentress

Longitude: 85° 1" 38'

HUC: 05130105

Sample Date: 05 Jun 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 58	0.0	18.3	64.9	8.7	92.8	198.0	7.7	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 150								
Solids, Tot Diss	mg/L 150								
Solids, Tot Susp	mg/L <2.00								
Solids, Vol	mg/L 15.0								
Solids, Vol Diss	mg/L 10.0								
Solids, Vol Susp	mg/L 5.00								
Ammonia N, Tot	mg/L 0.0432								
Kjeldahl N, Tot	mg/L 0.600								
NO3+NO2, Tot	mg/L 0.180								
Phosphorus, Tot	mg/L								
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 41.3								
Calcium, Tot	mg/L 26.9								
Magnesium, Tot	mg/L 5.40								
Sodium, Tot	mg/L 3.48								
Potassium, Tot	mg/L 1.19								
Chloride, Tot	mg/L 4.74								
Arsenic, Tot	ug/L <0.2								
Barium, Tot	ug/L 28.0								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L 0.5								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.3								
Iron, Tot	ug/L 27.3								
Iron, Diss	ug/L								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 24.9								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L <0.2								
Nickel, Tot	ug/L 1.5								
Silver, Tot	ug/L <0.2								
Vanadium, Tot	ug/L <0.2								
Zinc, Tot	ug/L 1.7								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 66.5								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.2								
Mercury, Tot	ug/L								

Water Quality Physical / Chemical Data Report

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL10015

Project: Dale Hollow

Location: West Fork Obey River, Mile 7.5

State: Tennessee

Latitude: 36° 24" 7'

Quad: Alpine, TN

County: Overton

Longitude: 85° 10" 40'

HUC: 05130105

Sample Date: 05 Jun 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 130	0.0	21.2	70.2	7.9	89.1	355.0	8.0	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 292								
Solids, Tot Diss	mg/L 292								
Solids, Tot Susp	mg/L <2.00								
Solids, Vol	mg/L 25.0								
Solids, Vol Diss	mg/L 15.0								
Solids, Vol Susp	mg/L 5.00								
Ammonia N, Tot	mg/L 0.0693								
Kjeldahl N, Tot	mg/L 0.960								
NO3+NO2, Tot	mg/L 0.793								
Phosphorus, Tot	mg/L								
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 61.0								
Calcium, Tot	mg/L 55.2								
Magnesium, Tot	mg/L 10.6								
Sodium, Tot	mg/L 7.68								
Potassium, Tot	mg/L 1.26								
Chloride, Tot	mg/L 9.13								
Arsenic, Tot	ug/L 0.4								
Barium, Tot	ug/L 27.6								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L 0.9								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.9								
Iron, Tot	ug/L 35.5								
Iron, Diss	ug/L								
Lead, Tot	ug/L 0.3								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 16.4								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.3								
Nickel, Tot	ug/L 0.9								
Silver, Tot	ug/L <0.2								
Vanadium, Tot	ug/L 0.3								
Zinc, Tot	ug/L 5.3								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 84.4								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.5								
Mercury, Tot	ug/L								

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL10028

Project: Dale Hollow

Location: Big Eagle Creek, Mile 5.3

State: Tennessee

Latitude: 36° 28' 43.9'

Quad: Alpine, TN

County: Overton

Longitude: 85° 14' 29.7'

HUC: 05130105

Sample Date: 05 Jun 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 150	0.0	19.9	67.8	8.8	96.8	370.0	8.1	
Alkalinity, Phenol	mg/L 0								
Solids, Tot	mg/L 264								
Solids, Tot Diss	mg/L 264								
Solids, Tot Susp	mg/L <2.00								
Solids, Vol	mg/L 25.0								
Solids, Vol Diss	mg/L 20.0								
Solids, Vol Susp	mg/L 5.00								
Ammonia N, Tot	mg/L 0.0428								
Kjeldahl N, Tot	mg/L 0.470								
NO3+NO2, Tot	mg/L 1.22								
Phosphorus, Tot	mg/L								
Phosphorus, Diss	mg/L 0.014								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L <1.00								
Hardness, Tot	mg/L								
Sulfate, Tot	mg/L 27.2								
Calcium, Tot	mg/L 57.6								
Magnesium, Tot	mg/L 8.45								
Sodium, Tot	mg/L 6.82								
Potassium, Tot	mg/L 1.26								
Chloride, Tot	mg/L 12.0								
Arsenic, Tot	ug/L 0.4								
Barium, Tot	ug/L 29.0								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L 1.1								
Cobalt, Tot	ug/L <0.2								
Copper, Tot	ug/L 0.3								
Iron, Tot	ug/L 36.9								
Iron, Diss	ug/L								
Lead, Tot	ug/L <0.2								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 7.5								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.3								
Nickel, Tot	ug/L 0.3								
Silver, Tot	ug/L <0.2								
Vanadium, Tot	ug/L 0.5								
Zinc, Tot	ug/L 1.8								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 30.5								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.48								
Mercury, Tot	ug/L								

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL20002

Project: Dale Hollow

Location: Obey River, Mile 7.7

State: Tennessee

Latitude: 36° 32' 24.1'

Quad: Dale Hollow Dam, TN-KY

County: Clay

Longitude: 85° 26' 46'

HUC: 05130105

Sample Date: 03 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 3.0 m

Results of Laboratory Analyses

Profile Measurements

Sample	Depth ft	0.0	70.0	140.0	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	80	84	0.0	26.8	80.2	8.5	106.1	201.0	8.5	1.4
Alkalinity, Phenol	mg/L	4	0	0	5.0	26.7	80.1	8.6	107.1	200.0	8.5	1.7
Solids, Tot	mg/L	126	132	138	10.0	24.6	76.3	10.6	127.3	198.0	8.6	2.5
Solids, Tot Diss	mg/L	126	132	138	15.0	22.1	71.8	9.1	104.4	199.0	8.3	2.8
Solids, Tot Susp	mg/L	<2.00	<2.00	<2.00	20.0	18.5	65.3	6.7	71.7	200.0	7.4	2.0
Solids, Vol	mg/L	90.0	80.0	20.0	25.0	15.3	59.5	7.9	79.2	199.0	7.3	1.3
Solids, Vol Diss	mg/L	80.0	75.0	25.0	30.0	13.3	55.9	8.8	84.4	199.0	7.2	0.8
Solids, Vol Susp	mg/L	3.00	4.00	3.00	35.0	12.4	54.3	9.1	85.6	199.0	7.2	0.6
Ammonia N, Tot	mg/L	0.0611	0.0713	0.177	40.0	11.6	52.9	9.2	84.9	198.0	7.1	0.6
Kjeldahl N, Tot	mg/L	0.910	0.930	1.50	45.0	11.0	51.8	9.1	82.8	198.0	7.1	0.6
NO3+NO2, Tot	mg/L	0.0592	0.425	0.327	50.0	10.2	50.4	9.0	80.4	198.0	7.0	0.5
Phosphorus, Tot	mg/L				55.0	9.7	49.5	8.9	78.5	198.0	6.9	0.5
Phosphorus, Diss	mg/L				60.0	9.4	48.9	8.9	78.0	198.0	6.8	0.4
OrthoPhosphate, D	mg/L	<0.05	<0.05	<0.05	65.0	9.1	48.4	8.9	77.4	198.0	6.8	0.4
Organic Carbon, T	mg/L	2.70	<1.00	2.20	70.0	8.7	47.7	8.8	75.8	198.0	6.8	0.4
Hardness, Tot	mg/L				75.0	8.6	47.5	8.8	75.6	198.0	6.8	0.4
Sulfate, Tot	mg/L	17.2	17.8	17.9	80.0	8.4	47.1	8.9	76.1	198.0	6.8	0.4
Calcium, Tot	mg/L	29.2	30.2	30.2	85.0	8.3	46.9	8.9	75.9	198.0	6.8	0.4
Magnesium, Tot	mg/L	5.16	5.35	5.47	90.0	8.1	46.6	8.8	74.7	197.0	6.8	0.4
Sodium, Tot	mg/L	2.62	2.84	2.84	95.0	7.9	46.2	8.7	73.4	197.0	6.8	0.4
Potassium, Tot	mg/L	1.18	1.22	1.27	100.0	7.7	45.9	8.5	71.4	196.0	6.8	0.3
Chloride, Tot	mg/L	4.26	4.69	4.54	105.0	7.7	45.9	8.4	70.5	197.0	6.8	0.4
Arsenic, Tot	ug/L	0.4	0.4	0.5	110.0	7.6	45.7	8.2	68.7	197.0	6.7	0.4
Barium, Tot	ug/L	18.3	20.6	22.6	115.0	7.5	45.5	8.1	67.7	197.0	6.7	0.3
Beryllium, Tot	ug/L	<0.2	<0.2	<0.2	120.0	7.4	45.3	8.0	66.7	197.0	6.7	0.3
Cadmium, Tot	ug/L	<0.2	<0.2	<0.2	125.0	7.4	45.3	7.7	64.2	196.0	6.7	0.3
Chromium, Tot	ug/L	0.5	0.5	0.5	130.0	7.4	45.3	7.6	63.3	196.0	6.7	0.3
Cobalt, Tot	ug/L	<0.2	<0.2	<0.2	135.0	7.3	45.1	7.4	61.5	197.0	6.7	0.3
Copper, Tot	ug/L	0.5	0.4	0.4	140.0	7.3	45.1	7.1	59.0	197.0	6.7	0.3
Iron, Tot	ug/L	33.2	10.7	14.0	145.0	7.3	45.1	5.9	49.0	204.0	6.9	0.3
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	3.0	5.1	208.0								
Manganese, Diss	ug/L	2.5	1.5	3.6								
Thallium, Tot	ug/L	<0.2	<0.2	<0.2								
Molybdenum, Tot	ug/L	0.6	0.3	0.3								
Nickel, Tot	ug/L	0.7	0.5	0.64								
Silver, Tot	ug/L	<0.2	<0.2	<0.2								
Vanadium, Tot	ug/L	0.3	<0.2	<0.2								
Zinc, Tot	ug/L	1.2	1.3	2.3								
Zinc, Diss	ug/L	1.2	1.6	2.0								
Antimony, Tot	ug/L	0.3	<0.2	<0.2								
Aluminum, Tot	ug/L	39.7	<7.0	<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	0.102	0.022	0.038								

Water Quality Physical / Chemical Data Report

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL20003

Project: Dale Hollow

Location: Obey River, Mile 16.7

State: Tennessee

Latitude: 36° 32' 48.9'

Quad: Dale Hollow Dam, TN-KY

County: Clay

Longitude: 85° 23' 25.1'

HUC: 05130105

Sample Date: 03 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 2.9 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	27.0	80.6	8.8	110.2	200.0	8.6	0.7
5.0	26.7	80.1	8.9	110.9	200.0	8.6	1.1
10.0	26.4	79.5	8.9	110.3	200.0	8.6	1.8
15.0	21.6	70.9	9.9	112.5	195.0	8.5	3.3
20.0	18.7	65.7	7.7	82.8	197.0	7.7	4.5
25.0	15.4	59.7	7.7	77.3	197.0	7.4	3.2
30.0	14.1	57.4	8.1	79.1	198.0	7.4	2.3
35.0	12.9	55.2	8.8	83.7	199.0	7.4	1.1
40.0	11.8	53.2	8.8	81.6	199.0	7.3	0.9
45.0	11.4	52.5	8.7	79.9	198.0	7.3	0.8
50.0	10.3	50.5	8.3	74.3	197.0	7.2	0.8
55.0	9.8	49.6	8.2	72.5	197.0	7.1	0.8
60.0	9.5	49.1	8.1	71.1	197.0	7.1	0.7
65.0	9.1	48.4	8.0	69.6	197.0	7.0	0.6
70.0	8.7	47.7	7.9	68.0	196.0	7.0	0.6
75.0	8.6	47.5	7.9	67.9	196.0	7.0	0.6
80.0	8.4	47.1	8.0	68.4	197.0	7.0	0.6
85.0	8.2	46.8	8.0	68.0	197.0	7.0	0.7
90.0	8.0	46.4	7.9	66.9	197.0	7.0	0.6
95.0	8.0	46.4	7.8	66.0	197.0	6.9	0.6
100.0	7.8	46.0	7.6	64.0	197.0	6.9	0.5
105.0	7.6	45.7	7.6	63.7	197.0	6.9	0.5
110.0	7.6	45.7	7.3	61.2	198.0	6.9	0.5
115.0	7.5	45.5	7.1	59.3	198.0	6.9	0.4
120.0	7.5	45.5	7.0	58.5	198.0	6.9	0.4
125.0	7.5	45.5	7.1	59.3	197.0	6.9	0.4
130.0	7.5	45.5	7.0	58.5	197.0	6.9	0.4

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL20005

Project: Dale Hollow

Location: Obey River, Mile 33.0

State: Tennessee

Latitude: 36° 35" 46.6'

Quad: Dale Hollow Reservoir SE, TN-KY

County: Clay

Longitude: 85° 17" 1.7'

HUC: 05130105

Sample Date: 03 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 4.5 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	28.0	82.4	8.6	109.5	200.0	8.5	0.6
5.0	26.9	80.4	8.7	108.8	199.0	8.5	1.1
10.0	26.2	79.2	8.6	106.2	196.0	8.4	1.7
15.0	25.1	77.2	8.7	105.4	197.0	8.4	2.3
20.0	20.9	69.6	8.3	93.1	196.0	7.9	4.8
25.0	17.4	63.3	6.5	68.1	185.0	7.3	3.0
30.0	14.9	58.8	6.2	61.6	184.0	7.1	3.0
35.0	13.6	56.5	7.0	67.6	193.0	7.1	2.4
40.0	12.4	54.3	7.5	70.5	192.0	7.1	1.7
45.0	11.6	52.9	7.5	69.2	192.0	7.0	1.4
50.0	10.3	50.5	6.4	57.3	180.0	6.8	1.3
55.0	9.7	49.5	6.1	53.8	181.0	6.7	1.2
60.0	9.3	48.7	6.0	52.4	185.0	6.7	1.0
65.0	9.2	48.6	5.9	51.4	187.0	6.7	1.1
70.0	9.1	48.4	5.7	49.6	189.0	6.7	1.0
75.0	9.0	48.2	5.5	47.7	192.0	6.7	1.2
80.0	9.0	48.2	5.4	46.9	193.0	6.7	1.1
85.0	8.9	48.0	5.3	45.9	193.0	6.7	1.0
90.0	8.8	47.8	5.3	45.8	195.0	6.7	1.1
95.0	8.7	47.7	5.3	45.6	196.0	6.7	1.2

CELNRN-EC-H / Water Management Section

Location: Obey River, Mile 41.6

Quad: Byrdstown, TN-KY
HUC: 05130105

Secchi Disk = 3.5 m

Profile Measurements

[illegible]

CELNRN-EC-H / Water Management Section

Location: Obey River, Mile 55.8

Quad: Alpine, TN
HUC: 05130105

Secchi Disk = 1.9 m

Profile Measurements

[illegible]

CELNRN-EC-H / Water Management Section

Location: Wolf River, Mile 8.7

Quad: Byrdstown, TN-KY
HUC: 05130105

Secchi Disk = 4.5 m

Profile Measurements

[illegible]

CELNRN-EC-H / Water Management Section

Location: East Fork Obey River, Mile 2.0

Quad: Riverton, TN
HUC: 05130105

Secchi Disk = 2.2 m

Profile Measurements

[illegible]

CELNRN-EC-H / Water Management Section

Location: West Fork Obey River, Mile 1.8

Quad: Alpine, TN
HUC: 05130105

Secchi Disk = 1.3 m

Profile Measurements

[illegible]

United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL20020

Project: Dale Hollow

Location: Spring Creek, Mile 0.5

State: Kentucky

Latitude: 36° 37" 54'

Quad: Albany, KY-TN

County: Clinton

Longitude: 85° 9" 28.9'

HUC: 05130105

Sample Date: 03 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 1.7 m

Results of Laboratory Analyses

Profile Measurements

Sample Depth ft	10.0	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 102	0.0	28.5	83.3	12.2	156.7	231.0	8.9	8.8
Alkalinity, Phenol	mg/L 2	5.0	27.6	81.7	12.8	161.9	231.0	8.9	21.8
Solids, Tot	mg/L 184	10.0	25.9	78.6	7.2	88.5	300.0	7.8	9.4
Solids, Tot Diss	mg/L 177	15.0	23.4	74.1	5.0	58.8	400.0	7.6	6.0
Solids, Tot Susp	mg/L 7.00	17.0	23.2	73.8	4.2	49.2	414.0	7.5	5.8
Solids, Vol	mg/L 110								
Solids, Vol Diss	mg/L 100								
Solids, Vol Susp	mg/L 7.00								
Ammonia N, Tot	mg/L 0.175								
Kjeldahl N, Tot	mg/L 1.20								
NO3+NO2, Tot	mg/L 0.306								
Phosphorus, Tot	mg/L								
Phosphorus, Diss	mg/L <0.007								
OrthoPhosphate, D	mg/L <0.05								
Organic Carbon, T	mg/L 2.70								
Hardness, Tot	mg/L								
Sulfate, Tot	mg/L 21.7								
Calcium, Tot	mg/L 36.4								
Magnesium, Tot	mg/L 6.40								
Sodium, Tot	mg/L 5.66								
Potassium, Tot	mg/L 1.28								
Chloride, Tot	mg/L 10.1								
Arsenic, Tot	ug/L 0.9								
Barium, Tot	ug/L 30.6								
Beryllium, Tot	ug/L <0.2								
Cadmium, Tot	ug/L <0.2								
Chromium, Tot	ug/L 0.7								
Cobalt, Tot	ug/L 0.3								
Copper, Tot	ug/L 0.5								
Iron, Tot	ug/L 124.0								
Iron, Diss	ug/L								
Lead, Tot	ug/L 0.4								
Lead, Diss	ug/L								
Manganese, Tot	ug/L 98.6								
Manganese, Diss	ug/L								
Thallium, Tot	ug/L <0.2								
Molybdenum, Tot	ug/L 0.3								
Nickel, Tot	ug/L 0.7								
Silver, Tot	ug/L <0.2								
Vanadium, Tot	ug/L 0.5								
Zinc, Tot	ug/L 1.7								
Zinc, Diss	ug/L								
Antimony, Tot	ug/L <0.2								
Aluminum, Tot	ug/L 51.2								
Aluminum, Diss	ug/L								
Selenium, Tot	ug/L 0.3								
Mercury, Tot	ug/L								

Water Quality Physical / Chemical Data Report

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL20066

Project: Dale Hollow

Location: Mitchell Creek, Mile 1.6

State: Tennessee

Latitude: 36° 31" 50.9'

Quad: Dale Hollow Dam, TN-KY

County: Clay

Longitude: 85° 23" 28.1'

HUC: 05130105

Sample Date: 03 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 3.1 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	26.8	80.2	8.6	107.3	204.0	8.5	1.0
5.0	26.4	79.5	8.7	107.8	203.0	8.5	1.5
10.0	25.6	78.1	9.3	113.7	201.0	8.6	2.0
15.0	21.1	70.0	8.2	92.3	201.0	8.0	4.4
20.0	19.5	67.1	6.2	67.7	201.0	7.6	2.9
25.0	16.1	61.0	5.8	59.1	200.0	7.3	2.0
30.0	14.2	57.6	7.9	77.3	200.0	7.3	1.2
35.0	12.9	55.2	8.4	79.9	200.0	7.4	0.8
40.0	11.9	53.4	8.7	80.9	199.0	7.4	0.7
45.0	11.0	51.8	8.6	78.3	199.0	7.3	0.6
50.0	10.3	50.5	8.5	76.1	198.0	7.2	0.6
55.0	9.9	49.8	8.5	75.4	198.0	7.2	0.6
60.0	9.4	48.9	8.5	74.5	198.0	7.2	0.5
65.0	9.1	48.4	8.5	73.9	198.0	7.1	0.5
70.0	8.8	47.8	8.5	73.4	197.0	7.1	0.5
75.0	8.6	47.5	8.5	73.0	197.0	7.1	0.4
80.0	8.5	47.3	8.3	71.1	198.0	7.1	0.4
85.0	8.3	46.9	8.1	69.1	198.0	7.1	0.5
90.0	8.1	46.6	7.9	67.0	198.0	7.0	0.5
95.0	7.8	46.0	6.5	54.7	199.0	7.0	0.5
100.0	7.7	45.9	6.7	56.3	198.0	6.9	0.4
104.0	7.7	45.9	6.7	56.3	198.0	6.9	0.5

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL20067

Project: Dale Hollow

Location: Obey River, Mile 50.0

State: Tennessee

Latitude: 36° 30" 49.8'

Quad: Byrdstown, TN-KY

County: Pickett

Longitude: 85° 9" 28.3'

HUC: 05130105

Sample Date: 04 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 2.7 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	27.2	81.0	8.9	111.8	181.0	8.5	1.3
5.0	27.2	81.0	8.9	111.8	181.0	8.5	1.3
10.0	23.8	74.8	9.2	108.9	184.0	8.2	4.0
15.0	22.0	71.6	8.0	91.6	185.0	7.8	5.3
20.0	20.2	68.4	6.0	66.4	193.0	7.3	3.3
25.0	17.4	63.3	4.5	47.1	196.0	7.1	1.7
30.0	15.3	59.5	3.9	39.1	180.0	7.0	1.1
35.0	13.2	55.8	4.0	38.3	162.0	6.9	1.0
40.0	12.3	54.1	3.2	30.0	163.0	6.8	0.9
45.0	11.6	52.9	2.3	21.2	165.0	6.7	1.0
50.0	10.9	51.6	1.6	14.5	168.0	6.7	0.9
55.0	10.4	50.7	1.5	13.5	169.0	6.7	0.8
60.0	10.2	50.4	1.5	13.4	170.0	6.7	0.8

United States Army Corps of Engineers

Nashville District

CELRN-EC-H / Water Management Section

Station: 3DAL20069

Project: Dale Hollow

Location: Sulphur Creek, Mile 2.7

State: Kentucky
County: CumberlandLatitude: 36° 38" 32.6'
Longitude: 85° 19" 13.5'Quad: Frogue, KY-TN
HUC: 05130105

Sample Date: 03 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 2.7 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	26.8	80.2	8.4	104.8	201.0	8.5	1.1
5.0	26.7	80.1	8.5	105.9	201.0	8.4	1.2
10.0	26.3	79.3	8.5	105.2	201.0	8.5	1.8
15.0	26.2	79.2	8.4	103.7	201.0	8.4	2.2
20.0	19.8	67.6	4.4	48.3	207.0	7.3	5.9
25.0	15.8	60.4	4.5	45.6	196.0	7.1	3.9
30.0	14.3	57.7	5.1	50.0	196.0	7.1	2.3
35.0	13.0	55.4	5.9	56.2	198.0	7.1	1.6
40.0	12.1	53.8	4.6	43.0	199.0	6.9	1.4
45.0	11.5	52.7	4.6	42.4	199.0	6.9	1.3
50.0	11.0	51.8	3.9	35.5	201.0	6.8	1.3
55.0	9.9	49.8	4.1	36.4	201.0	6.8	1.2
60.0	9.6	49.3	4.3	37.9	200.0	6.8	1.7
62.0	9.4	48.9	4.3	37.7	200.0	6.8	1.6

Water Quality Physical / Chemical Data Report

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United States Army Corps of Engineers

Nashville District

CELNRN-EC-H / Water Management Section

Station: 3DAL20070

Project: Dale Hollow

Location: Big Eagle Creek, Mile 1.2

State: Tennessee

Latitude: 36° 30" 15.3'

Quad: Byrdstown, TN-KY

County: Pickett

Longitude: 85° 11" 46.7'

HUC: 05130105

Sample Date: 04 Jun 2014

Water Surface Elevation = 650.1 ft

Secchi Disk = 4.4 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	25.9	78.6	8.7	106.9	191.0	8.4	0.8
5.0	25.7	78.3	8.6	105.3	190.0	8.3	1.0
10.0	25.1	77.2	8.8	106.6	189.0	8.3	1.8
15.0	25.0	77.0	8.7	105.2	188.0	8.3	1.6
20.0	20.8	69.4	6.1	68.3	208.0	7.5	4.9
25.0	18.2	64.8	4.8	51.1	198.0	7.2	1.9
30.0	14.8	58.6	4.6	45.6	183.0	7.0	2.8
35.0	12.9	55.2	3.8	36.1	180.0	6.9	1.8
40.0	12.2	54.0	3.3	30.9	179.0	6.8	1.6
45.0	10.7	51.3	1.9	17.2	178.0	6.6	1.0
50.0	10.3	50.5	1.9	17.0	177.0	6.6	1.0