

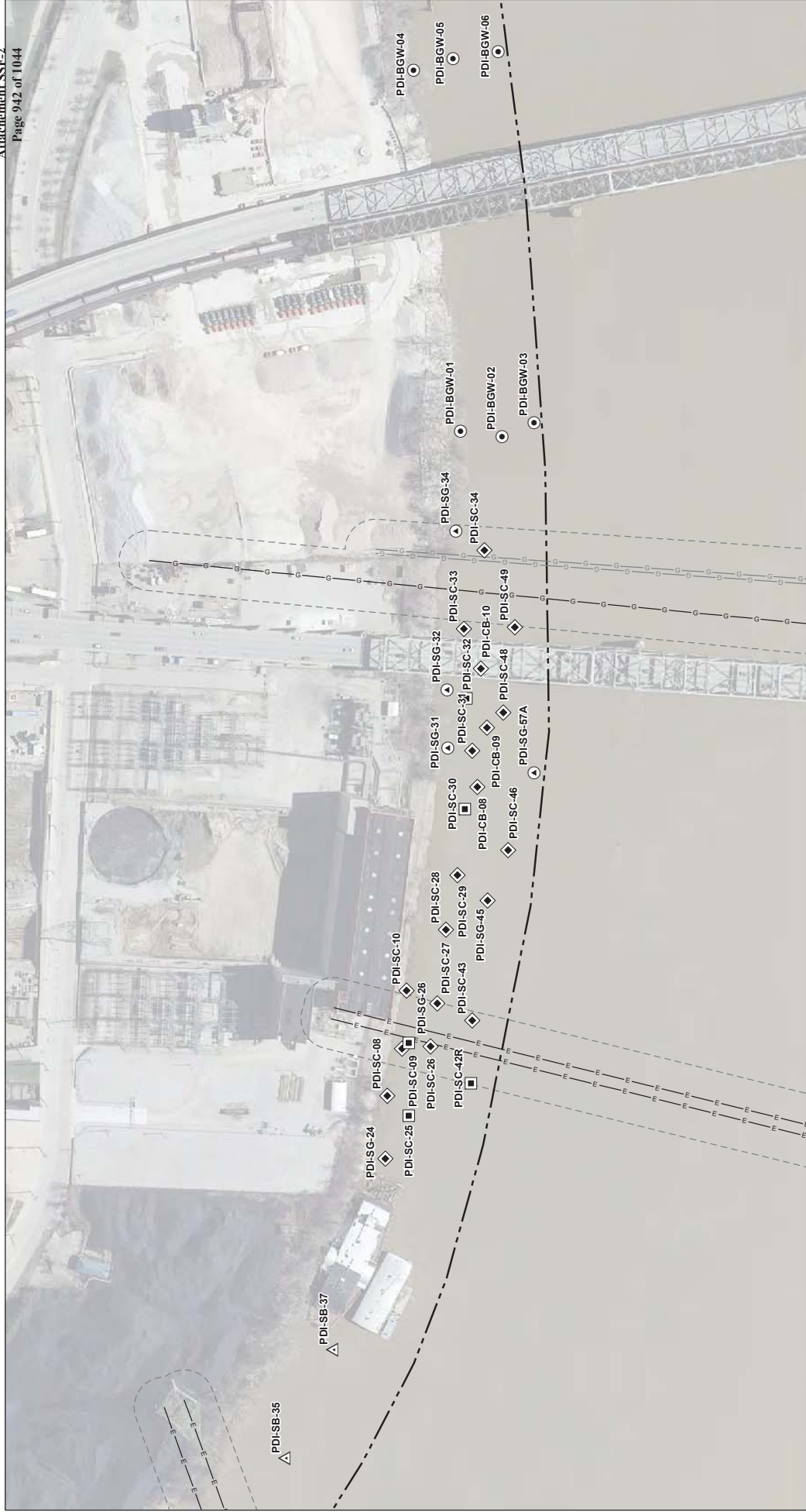
Table 4
Proposed Sediment Station Coordinates
 West End Gas Works
 Cincinnati, Ohio

| Station | Station Type | Easting NAD 1983 Ohio South | Northing NAD 1983 Ohio South | Original Planned from Work Plan | | | Latitude (decimal degrees) | Longitude (decimal degrees) | Notes |
|------------|--------------------|-----------------------------------|------------------------------------|---------------------------------|-------------------|--|-------------------------------|--------------------------------|---|
| PDI-CB-08 | PAH & Pb Protocol | 1394303.9 | 404344.4 | 39.092515495369 | -84.5232560914647 | | | | |
| PDI-CB-09 | PAH & Pb Protocol | 1394402.5 | 404328.7 | 39.0924784189322 | -84.5229075388883 | | | | |
| PDI-CB-10 | PAH & Pb Protocol | 1394500.586 | 404338.565 | 39.0925115301063 | -84.5225627999169 | | | | Team to connect with management before sampling under bridge. |
| PDI-SG-24 | PAH & Pb Protocol | 1393685.672 | 404497.917 | 39.0928987989681 | -84.525445901489 | | | | |
| PDI-SC-25 | PAH & Pb Protocol | 1393757.239 | 404458.949 | 39.0927962403979 | -84.5251907293847 | | | | |
| PDI-SG-26 | PAH & Pb Protocol | 1393878.213 | 404458.917 | 39.092803600237 | -84.5247646005979 | | | | |
| PDI-SG-31 | Pb Protocol | 1394369.014 | 404393.415 | 39.0926540007307 | -84.5230305990582 | | | | |
| PDI-SG-32 | Pb Protocol | 1394465.37 | 404394.826 | 39.0926637994446 | -84.5226913009406 | | | | |
| PDI-SG-34 | Pb Protocol | 1394729.149 | 404380.247 | 39.0926399985553 | -84.521760999409 | | | | |
| PDI-SG-57A | Pb Protocol | 1394327.735 | 404250.222 | 39.0922583994538 | -84.5231647000771 | | | | |
| PDI-SC-08 | PAH & Pb Protocol | 1393790.073 | 404494.437 | 39.0928956751578 | -84.5250778769114 | | | | Riverbank station, determine if sediment habitat before sampling |
| PDI-SC-09 | PAH & Pb Protocol | 1393868.450 | 404469.779 | 39.0928328147433 | -84.5247998477284 | | | | Riverbank station, determine if sediment habitat before sampling |
| PDI-SC-10 | PAH & Pb Protocol | 1393964.943 | 404462.299 | 39.0928182222439 | -84.5244593636826 | | | | Riverbank station, determine if sediment habitat before sampling |
| PDI-SC-26 | PAH & Pb Protocol | 1393872.085 | 404422.479 | 39.0927032018099 | -84.5247833075102 | | | | |
| PDI-SC-27 | PAH & Pb Protocol | 1393944.017 | 404411.187 | 39.0926766336165 | -84.5245290380623 | | | | |
| PDI-SC-28 | PAH & Pb Protocol | 1394066.447 | 404396.839 | 39.0926447838079 | -84.5240966493975 | | | | |
| PDI-SC-29 | PAH & Pb Protocol | 1394157.090 | 404377.890 | 39.0925983467782 | -84.5237758673851 | | | | |
| PDI-SC-30 | PAH Protocol | 1394267.167 | 404365.394 | 39.0925708179967 | -84.5233871386231 | | | | |
| PDI-SC-31 | PAH & Pb Protocol | 1394364.165 | 404352.941 | 39.0925426022971 | -84.5230444850755 | | | | |
| PDI-SC-32 | PAH Protocol | 1394450.896 | 404362.844 | 39.0925751197826 | -84.5227397600964 | | | | |
| PDI-SC-33 | PAH & Pb Protocol | 1394566.841 | 404367.203 | 39.0925942147762 | -84.522331692811 | | | | |
| PDI-SC-34 | Pb Protocol | 1394697.461 | 404332.732 | 39.092507623064 | -84.521868870678 | | | | |
| PDI-SB-35 | Deep Sonic Borings | 1393187.610 | 404666.200 | 39.0933300467084 | -84.5272136196086 | | | | review protocol in section 2.3 of Work Plan |
| PDI-SB-37 | Deep Sonic Borings | 1393368.960 | 404586.590 | 39.0931226950274 | -84.5265685210218 | | | | review protocol in section 2.3 of Work Plan |
| PDI-SC-42R | PAH Protocol | 1393810.904 | 404355.097 | 39.0925144730586 | -84.5249934914907 | | | | |
| PDI-SC-43 | PAH & Pb Protocol | 1393915.621 | 404352.94 | 39.092514998401 | -84.5246244605383 | | | | |
| PDI-SG-45 | PAH & Pb Protocol | 1394115.039 | 404327.34 | 39.0924570013395 | -84.5239199989049 | | | | |
| PDI-SC-46 | PAH & Pb Protocol | 1394198.935 | 404293.191 | 39.0923684248088 | -84.5236217826889 | | | | |
| PDI-SC-48 | PAH & Pb Protocol | 1394427.351 | 404301.286 | 39.0924046966066 | -84.5228178388754 | | | | |
| PDI-SC-49 | PAH & Pb Protocol | 1394569.336 | 404282.245 | 39.092361160881 | -84.5223162018018 | | | | |
| PDI-BGW-01 | Background | 1394895.276 | 404372.338 | 39.092628499514 | -84.5211751987639 | | | | Only need to complete 5 of the 6 Background stations, check section 2.1.8 of Work Plan for Guidance |

Table 4
Proposed Sediment Station Coordinates
 West End Gas Works
 Cincinnati, Ohio

| Station | Station Type | Easting NAD 1983 Ohio South | Northing NAD 1983 Ohio South | Latitude (decimal degrees) | Longitude (decimal degrees) | Notes |
|------------|--------------|-----------------------------------|------------------------------------|-------------------------------|--------------------------------|---|
| PDI-BGW-02 | Background | 1394886.241 | 404303.542 | 39.0924391004698 | -84.521201599317 | Only need to complete 5 of the 6 Background stations, check section 2.1.8 of Work Plan for Guidance |
| PDI-BGW-03 | Background | 1394909.490 | 404250.198 | 39.0922941009245 | -84.5211154994899 | Only need to complete 5 of the 6 Background stations, check section 2.1.8 of Work Plan for Guidance |
| PDI-BGW-04 | Background | 1395495.977 | 404450.619 | 39.0928802743374 | -84.5190654189048 | Only need to complete 5 of the 6 Background stations, check section 2.1.8 of Work Plan for Guidance |
| PDI-BGW-05 | Background | 1395514.840 | 404384.924 | 39.0927011006582 | -84.5189938000733 | Only need to complete 5 of the 6 Background stations, check section 2.1.8 of Work Plan for Guidance |
| PDI-BGW-06 | Background | 1395526.672 | 404309.759 | 39.0924955009549 | -84.5189462014478 | Only need to complete 5 of the 6 Background stations, check section 2.1.8 of Work Plan for Guidance |

FIGURES



LEGEND

- PROPOSED BACKGROUND STATION FOR BOTH PAH AND LEAD
- PROPOSED PAH AND LEAD STATION
- PROPOSED DEEP SONIC BORING
- PROPOSED PAH STATION
- PROPOSED LEAD STATION

- HIGH VOLTAGE OVERHEAD ELECTRICAL LINE
- HIGH PRESSURE GAS LINE
- ABANDONED GAS LINE
- STATE BOUNDARY
- APPROXIMATE 50-FOOT BUFFER AROUND UTILITIES

NOTES

- ONLY 5 OF 6 BACKGROUND STATIONS WILL NEED TO BE SAMPLED.
- AERIAL IMAGERY SOURCE: USGS 2012
- STATE BOUNDARY SOURCE: OHIO DNR 2012



DUKE WEST END MANUFACTURED GAS PLANT
CINCINNATI, OHIO

PROPOSED EXPLORATION
LOCATION PLAN

AUGUST 2019

FIGURE 1

Figure 2A: PAH Station - EcoRisk Field Sampling Guidance for Sediment (SED) and Pore Water (PW)

| Water (decant prior to sediment sampling) | | Sediment Volumes |
|---|---|---|
| 0 ft | Collect, cut and log 4 to 6 cores; Composite 0-1 ft intervals | The top 3 intervals will each include: 1 gal for PW; 2 gal for toxicity; 1 gal (filled halfway) for grain size, % solids and specific gravity |
| 1 ft | Composite 1-2 ft intervals | |
| 2 ft | Composite 2-3 ft intervals | |
| 3 ft | Composite 3-4 ft intervals or to the "bottom of the core" | 4-oz for PAH; 4-oz for TOC; 1 gal (filled halfway) for grain size, % solids and specific gravity |
| 4 ft | | |

| Water (decant prior to sediment sampling) | | The top 3 intervals will each include: |
|---|---|--|
| 0 ft | Collect 4 to 6 cores, drain PW prior to cutting and logging; Composite 0-1 ft intervals | PW: 250 L for PAH and DOC SED: 4-oz for PAH; |
| 1 ft | Drain PW prior to cutting and logging; Composite 1-2 ft intervals | 4-oz for TOC; 2 gal for toxicity; |
| 2 ft | Drain PW prior to cutting and logging; Composite 2-3 ft intervals | 1 gal (filled halfway) for grain size, % solids, specific gravity |
| 3 ft | Drain PW prior to cutting and logging; Composite 3-4 ft intervals | 4-oz for PAH; 4-oz for TOC; |
| 4 ft | Do not drain PW; Composite 4 ft to "bottom of core" intervals | 1 gal (filled halfway) for grain size, % solids and specific gravity |

| Water (decant prior to sediment sampling) | | Sediment Volumes |
|---|---|---|
| 0 ft | Collect, cut and log 4 to 6 cores; Composite 0-1 ft intervals | The top 3 intervals will each include: SED: 4-oz for PAH; 4-oz for TOC; 2 gal for toxicity; 1 gal (filled halfway) for grain size, % solids and specific gravity |
| 1 ft | Composite 1-2 ft intervals | |
| 2 ft | Composite 2-3 ft intervals | |
| 3 ft | Composite 3-4 ft intervals or to the "bottom of the core" | 4-oz for PAH; 4-oz for TOC; 1 gal (filled halfway) for grain size, % solids and specific gravity |
| 4 ft | | |

Option 1: Collect sediment intervals to 3 ft for extracting PW and for toxicity testing. Chem lab will centrifuge sediment for PW, then subsample sediment after centrifugation and analyze for PAH and TOC. Pore water to be analyzed for PAHs and DOC. GeoTech Lab will hold samples pending authorization for grain size, % solids and specific gravity. Tox lab will hold samples pending authorization for toxicity testing.

Option 2: Core may be at risk of losing pore water while sampling. Field team will "drain" PW from bottom of each depth interval (top to bottom, sequentially) by drilling hole(s) at bottom of each depth interval. PW and Sediment samples shipped to Chem, GeoTech and Tox labs.

Option 3: Entire core (or depth interval) does not provide sufficient water content to extract or drain PW. Only sediment is sampled.

Figure 2B: Pb Station: EcoRisk Field Sampling Guidance for SED

| 0 ft | Water (decant prior to sediment sampling) | Sediment Volumes |
|------|---|--|
| 1 ft | Collect, cut and log 4 to 6 cores; Composite 0-1 ft intervals | The top 4 intervals will each include: 4-oz Pb (rush) and microscopy; 4-oz TOC; 2 gal for toxicity; 4oz AVS/SEM |
| 2 ft | Composite 1-2 ft intervals | 1 gal (filled halfway) for grain size, % solids and specific gravity |
| 3 ft | Composite 2-3 ft intervals | |
| 4 ft | Composite 3-4 ft intervals or to the “bottom of the core” | 4-oz Pb (rush); 4-oz TOC; 1 gal (filled halfway) for grain size, % solids and specific gravity |

Field team to send Pb in as rush TAT and instruct labs on COC to hold the other analyses until our authorization which will be dependent upon receipt of Pb data.

Figure 2C: PAH and Pb Station - EcoRisk Field Sampling Guidance for SED and PW

| 0 ft | Water (decant prior to sediment sampling) | Sediment Volumes The top 3 intervals will each include: 1 gal for PW; 4-oz TOC; 4-oz Pb (rush) and microscopy; 2 gal for toxicity; 4-oz AVS/SEM; 1 gal (filled halfway) for grain size, % solids and specific gravity | Water (decant prior to sediment sampling) | The top 3 intervals will each include: PW: 250 ml for PAH and DOC SED: 4-oz for PAH; 4-oz TOC; 4-oz Pb (rush) and microscopy; 2 gal for toxicity; 4-oz AVS/SEM; 1 gal (filled halfway) for grain size, % solids and specific gravity | 0 ft | Water (decant prior to sediment sampling) | Sediment Volumes The top 3 intervals will each include: SED: 4-oz for PAH; 4-oz TOC; 4-oz Pb (rush) and microscopy; 2 gal for toxicity; 4-oz AVS/SEM; 1 gal (filled halfway) for grain size, % solids and specific gravity |
|------|---|--|---|---|------|---|---|
| 1 ft | Collect, cut and log 4 to 6 cores; Composite 0-1 ft intervals | 1 gal for PW; 4-oz TOC; 4-oz Pb (rush) and microscopy; 2 gal for toxicity; 4-oz AVS/SEM; 1 gal (filled halfway) for grain size, % solids and specific gravity | Collect 4 to 6 cores, drain PW prior to cutting and logging; Composite 0-1 ft intervals | PW: 250 ml for PAH and DOC SED: 4-oz for PAH; 4-oz TOC; 4-oz Pb (rush) and microscopy; 2 gal for toxicity; 4-oz AVS/SEM; 1 gal (filled halfway) for grain size, % solids and specific gravity | 1 ft | Composite 1-2 ft intervals | Composite 1-2 ft intervals |
| 2 ft | Composite 1-2 ft intervals | 1 gal (filled halfway) for grain size, % solids and specific gravity | Drain PW prior to cutting and logging; Composite 1-2 ft intervals | 4-oz Pb (rush) and microscopy; 2 gal for toxicity; 4-oz AVS/SEM; 1 gal (filled halfway) for grain size, % solids and specific gravity | 2 ft | Composite 2-3 ft intervals | Composite 2-3 ft intervals |
| 3 ft | Composite 2-3 ft intervals | 1 gal (filled halfway) for grain size, % solids and specific gravity | Drain PW prior to cutting and logging; Composite 2-3 ft intervals | 1 gal (filled halfway) for grain size, % solids and specific gravity | 3 ft | Composite 3-4 ft intervals or to the "bottom of the core" | Composite 3-4 ft intervals or to the "bottom of the core" |
| 4 ft | Composite 3-4 ft intervals or to the "bottom of the core" | 1 gal (filled halfway) for grain size, % solids and specific gravity | Drain PW prior to cutting and logging; Composite 3-4 ft intervals | 4-oz for PAH; 4-oz TOC; 4-oz Pb (rush) | 4 ft | | 4-oz for PAH; 4-oz TOC; 4-oz Pb (rush) |
| | | | Do not drain PW; Composite 4 ft to "bottom of core" intervals | 1 gal (filled halfway) for grain size, % solids and specific gravity | | | 1 gal (filled halfway) for grain size, % solids and specific gravity |

Option 1: Collect sediment intervals to 3 ft for extracting PW and for toxicity testing. Pb sample submitted as rush TAT at chem lab. Chem lab will centrifuge sediment for PW, then subsample sediment after centrifugation and analyze for PAHs. Pore water to be analyzed for PAHs and DOC. GeoTech lab will hold samples pending authorization for grain size, % solids and specific gravity. Tox lab will hold samples pending authorization for toxicity testing.

Option 2: Core may be at risk of losing pore water while sampling. Field team will "drain" PW from bottom of each depth interval (top to bottom, sequentially) by drilling hole(s) at bottom of each depth interval. PW and sediment samples shipped to Chem, GeoTech and Tox labs.

Option 3: Entire core (or depth interval) does not provide sufficient water content to extract or drain PW. Only sediment is sampled.

Figure 3A: PAH Station - Analysis Flow for SED and PW

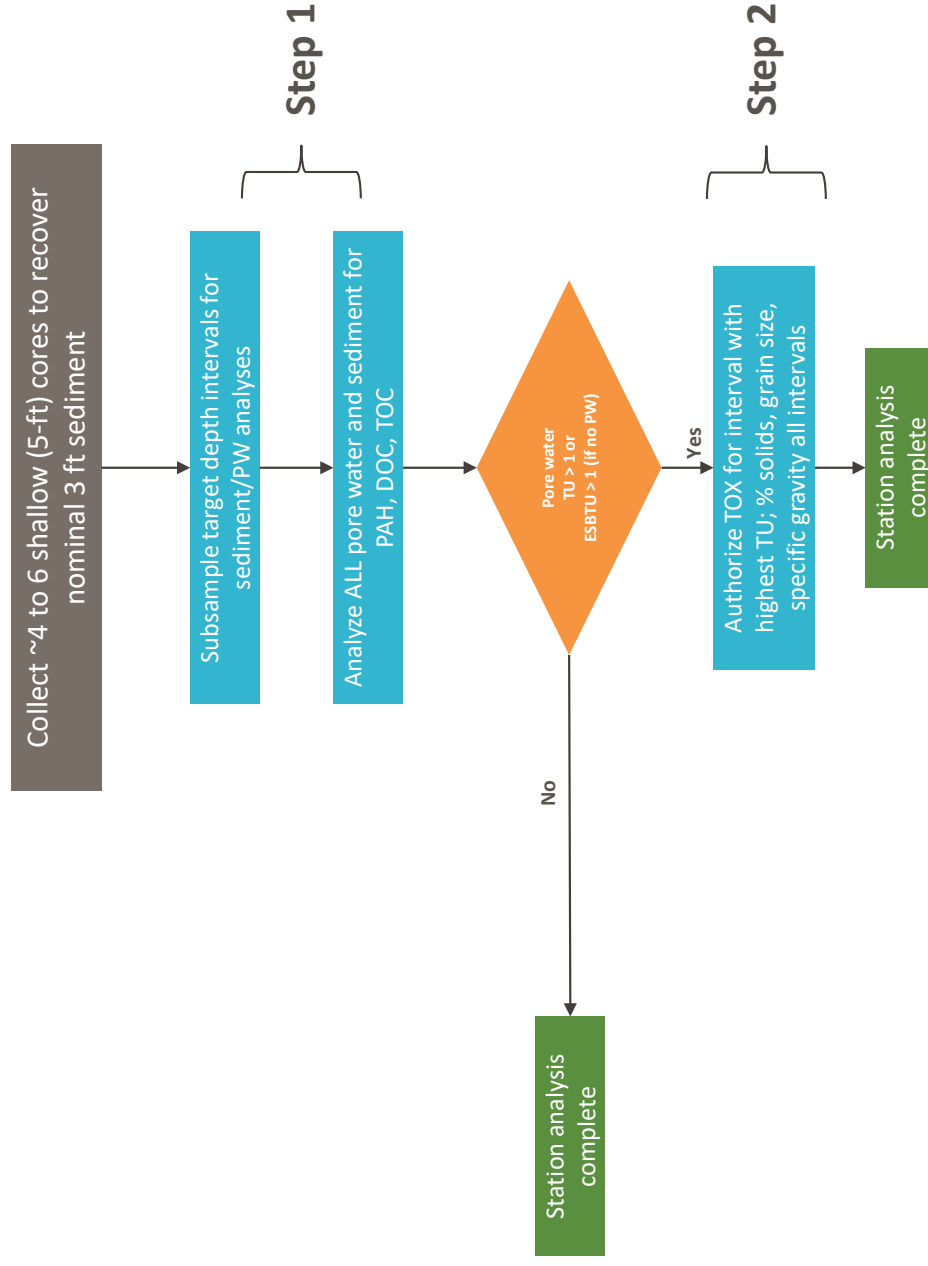


Figure 3B: Pb Station - Analysis Flow for SED

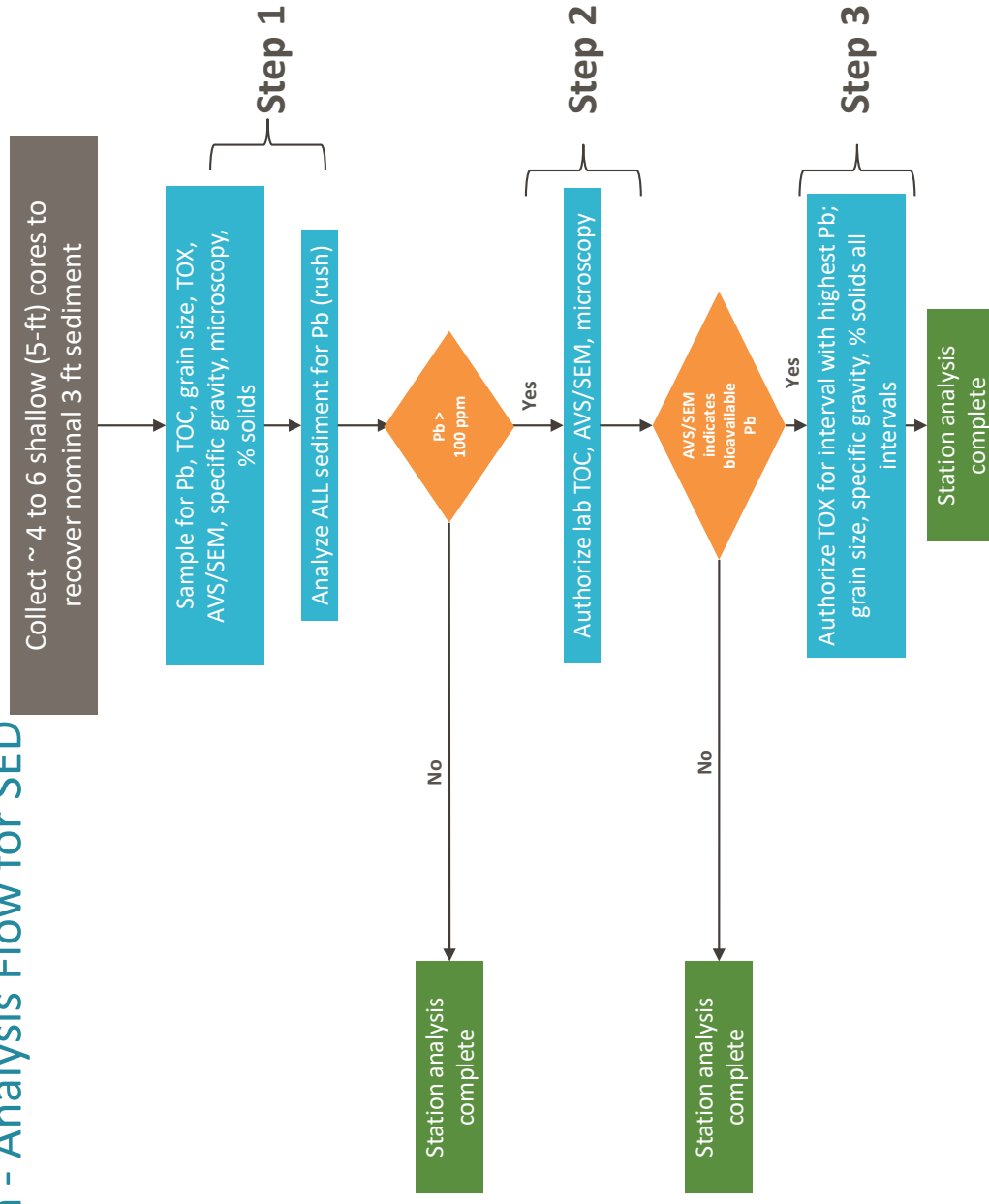


Figure 3C: PAH and Pb Station - Analysis Flow for SED and PW

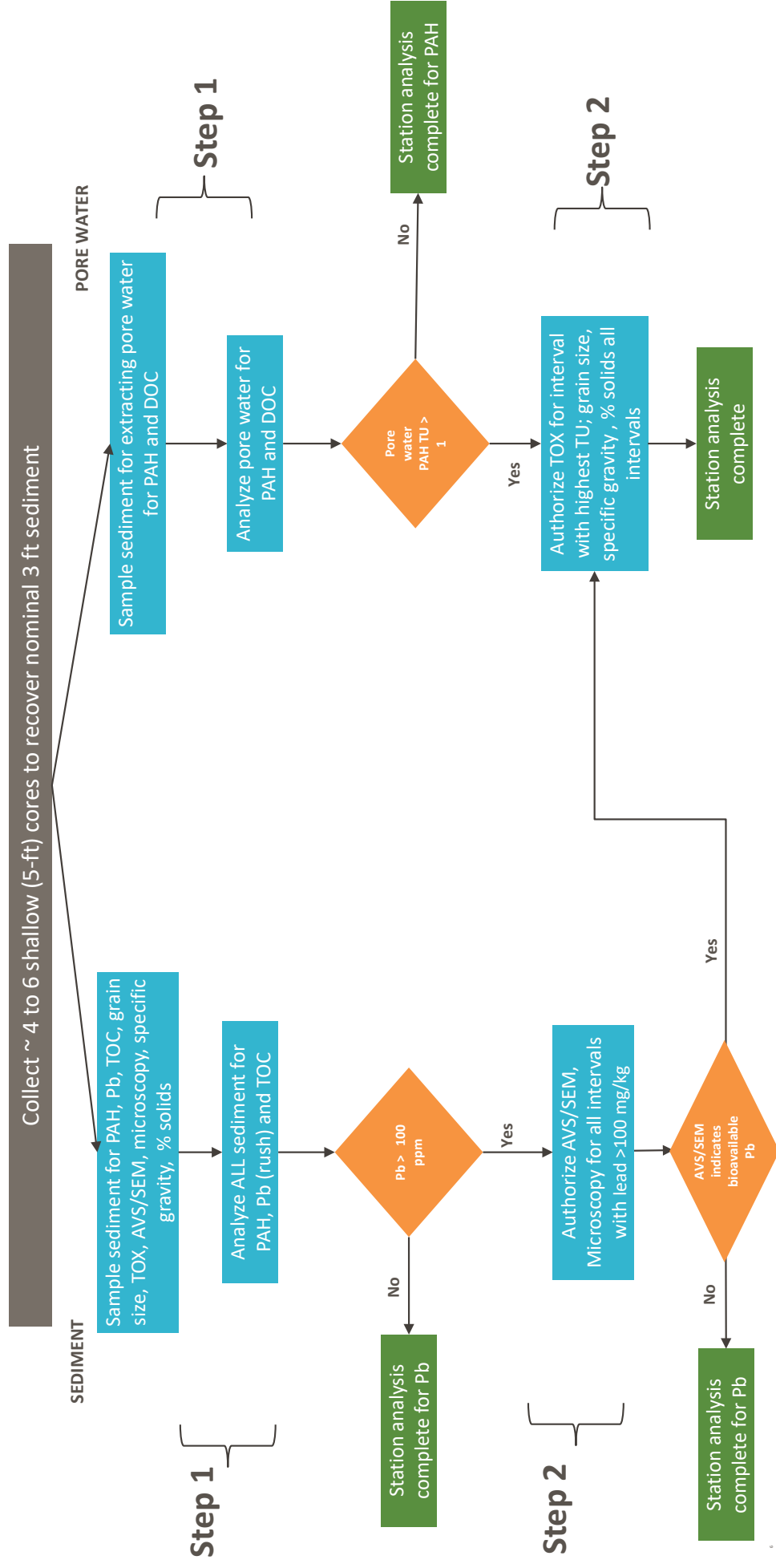
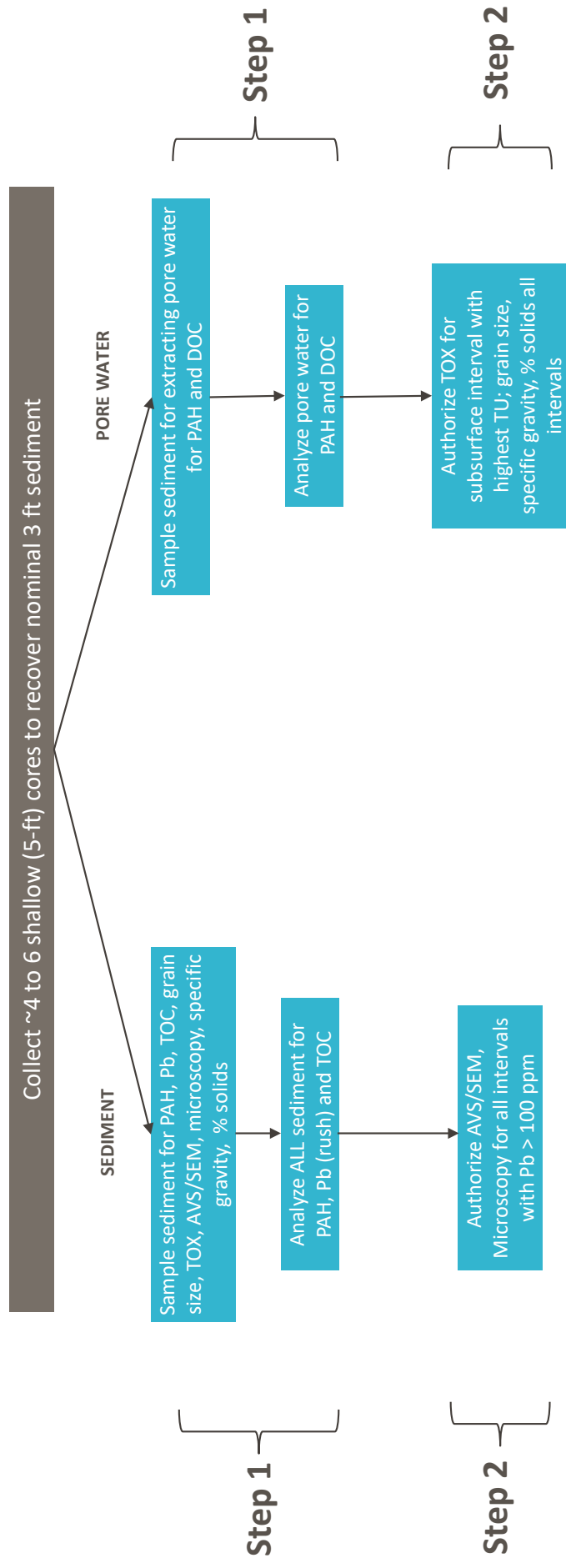


Figure 3D: Reference Background Station - Analysis Flow for SED and PW



APPENDIX A

Field Forms

| | | | | | | |
|---|--|--|---------------------------------------|--|--|---------------------------------|
| SEDIMENT CORING REPORT | | | | | | CORE ID Page 1 of |
| PROJECT WEST END FORMER MGP SEDIMENT INVESTIGATION | | | H&A FILE NO. 128718-004 | | | |
| LOCATION CINCINNATI, OHIO | | | PROJECT MGR. Kristen Wright-Ng | | | |
| CLIENT DUKE ENERGY | | | FIELD REP. Ciroos Liaghat, PG. | | | |
| CONTRACTOR CASCADE DRILLING | | | CORE COLLECTION DATE | | | |
| DRILLER | | | CORE COLLECTION TIME | | | |

| | | |
|---------------------------------------|----------------------------------|-----------------|
| WATER DEPTH (FT) | TOTAL CORE LENGTH RECOVERED (FT) | POSITION METHOD |
| WATER LEVEL HEIGHT (FT NGVD 29) | CORE RECOVERY (%) | Vessel GPS |
| MUDLINE (FT NGVD 29) | CORING TECHNIQUE | LATITUDE --- |
| TARGET CORE BARREL PENETRATION (FT) | CORE DIAMETER (IN.) 4.0 | LONGITUDE --- |
| MEASURED CORE BARREL PENETRATION (FT) | PID MODEL | NORTHING |
| | | EASTING |

| Depth (ft.) | Sample No. and Depth (ft) | Elevation (ft MLLW) | PID (ppb) | Core Length (ft) | USCS Symbol | Visual-Manual Identification & Description (GROUP NAME & SYMBOL, maximum particle size*, color, moisture, density/consistency, structure, odor, optional descriptions, geologic interpretation) |
|-------------|---------------------------|---------------------|-----------|------------------|-------------|--|
| 0.0 | | | | | | |
| 0.1 | | | | | | |
| 0.2 | | | | | | |
| 0.3 | | | | | | |
| 0.4 | | | | | | |
| 0.5 | | | | | | |
| 0.6 | | | | | | |
| 0.7 | | | | | | |
| 0.8 | | | | | | |
| 0.9 | | | | | | |
| 1.0 | | | | | | |
| 1.1 | | | | | | |
| 1.2 | | | | | | |
| 1.3 | | | | | | |
| 1.4 | | | | | | |
| 1.5 | | | | | | |
| 1.6 | | | | | | |
| 1.7 | | | | | | |
| 1.8 | | | | | | |
| 1.9 | | | | | | |
| 2.0 | | | | | | |
| 2.1 | | | | | | |
| 2.2 | | | | | | |
| 2.3 | | | | | | |
| 2.4 | | | | | | |
| 2.5 | | | | | | |
| 2.6 | | | | | | |
| 2.7 | | | | | | |
| 2.8 | | | | | | |
| 2.9 | | | | | | |
| 3.0 | | | | | | |
| 3.1 | | | | | | |
| 3.2 | | | | | | |
| 3.3 | | | | | | |
| 3.4 | | | | | | |
| 3.5 | | | | | | |
| 3.6 | | | | | | |
| 3.7 | | | | | | |
| 3.8 | | | | | | |
| 3.9 | | | | | | |
| 4.0 | | | | | | |
| 4.1 | | | | | | |
| 4.2 | | | | | | |
| 4.3 | | | | | | |
| 4.4 | | | | | | |
| 4.5 | | | | | | |
| 4.6 | | | | | | |
| 4.7 | | | | | | |
| 4.8 | | | | | | |
| 4.9 | | | | | | |
| 5.0 | | | | | | |
| 5.1 | | | | | | |
| 5.2 | | | | | | |
| 5.3 | | | | | | |
| 5.4 | | | | | | |
| 5.5 | | | | | | |
| 5.6 | | | | | | |
| 5.7 | | | | | | |
| 5.8 | | | | | | |
| 5.9 | | | | | | |
| 6.0 | | | | | | |
| 6.1 | | | | | | |
| 6.2 | | | | | | |
| 6.3 | | | | | | |
| 6.4 | | | | | | |
| 6.5 | | | | | | |
| 6.6 | | | | | | |
| 6.7 | | | | | | |
| 6.8 | | | | | | |
| 6.9 | | | | | | |
| 7.0 | | | | | | |
| 7.1 | | | | | | |
| 7.2 | | | | | | |
| 7.3 | | | | | | |
| 7.4 | | | | | | |
| 7.5 | | | | | | |

NOTES:

*NOTE: Particle Size is determined by direct observation.
 NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

CORE STATION

| | | | | | | | |
|-------------------------------|--|--|--|--|--|--------------------------------|--|
| SEDIMENT CORING REPORT | | | | | | CORE ID | |
| | | | | | | Page 2 of 3 | |
| PROJECT | | WEST END FORMER MGP SEDIMENT INVESTIGATION | | | | H&A FILE NO. 128718-004 | |
| LOCATION | | CINCINNATI, OHIO | | | | PROJECT MGR. Kristen Wright-Ng | |
| CLIENT | | DUKE ENERGY | | | | FIELD REP. Ciroos Liaghat, PG. | |
| CONTRACTOR | | CASCADE DRILLING | | | | CORE COLLECTION DATE | |
| DRILLER | | | | | | CORE COLLECTION TIME | |

| | | |
|---------------------------------------|----------------------------------|-----------------|
| WATER DEPTH (FT) | TOTAL CORE LENGTH RECOVERED (FT) | POSITION METHOD |
| WATER LEVEL HEIGHT (FT NGVD 29) | CORE RECOVERY (%) | Vessel GPS |
| MUDLINE (FT NGVD 29) | CORING TECHNIQUE | LATITUDE --- |
| TARGET CORE BARREL PENETRATION (FT) | CORE DIAMETER (IN.) 4.0 | LONGITUDE --- |
| MEASURED CORE BARREL PENETRATION (FT) | PID MODEL | NORTHING |
| | | EASTING |

| Depth (ft.) | Sample No. and Depth (ft) | Elevation (ft MLLW) | PID (ppb) | Core Length (ft) | USCS Symbol | Visual-Manual Identification & Description (GROUP NAME & SYMBOL, maximum particle size*, color, moisture, density/consistency, structure, odor, optional descriptions, geologic interpretation) |
|-------------|---------------------------|---------------------|-----------|------------------|-------------|--|
| 7.5 | | | | | | |
| 8.0 | | | | | | |
| 8.5 | | | | | | |
| 9.0 | | | | | | |
| 9.5 | | | | | | |
| 10.0 | | | | | | |
| 10.5 | | | | | | |
| 11.0 | | | | | | |
| 11.5 | | | | | | |
| 12.0 | | | | | | |
| 12.5 | | | | | | |
| 13.0 | | | | | | |
| 13.5 | | | | | | |
| 14.0 | | | | | | |
| 14.5 | | | | | | |
| 15.0 | | | | | | |

NOTES:

CORE STATION

*NOTE: Particle Size is determined by direct observation.
 NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

| | | | | | | |
|---|--|--|---------------------------------------|--|--|-----------------------------------|
| SEDIMENT CORING REPORT | | | | | | CORE ID Page 3 of 3 |
| PROJECT WEST END FORMER MGP SEDIMENT INVESTIGATION | | | H&A FILE NO. 128718-004 | | | |
| LOCATION CINCINNATI, OHIO | | | PROJECT MGR. Kristen Wright-Ng | | | |
| CLIENT DUKE ENERGY | | | FIELD REP. Ciroos Liaghat, PG. | | | |
| CONTRACTOR CASCADE DRILLING | | | CORE COLLECTION DATE | | | |
| DRILLER | | | CORE COLLECTION TIME | | | |

| | | |
|---------------------------------------|----------------------------------|-----------------|
| WATER DEPTH (FT) | TOTAL CORE LENGTH RECOVERED (FT) | POSITION METHOD |
| WATER LEVEL HEIGHT (FT NGVD 29) | CORE RECOVERY (%) | Vessel GPS |
| MUDLINE (FT NGVD 29) | CORING TECHNIQUE | LATITUDE --- |
| TARGET CORE BARREL PENETRATION (FT) | CORE DIAMETER (IN.) 4.0 | LONGITUDE --- |
| MEASURED CORE BARREL PENETRATION (FT) | PID MODEL | NORTHING |
| | | EASTING |

| Depth (ft.) | Sample No. and Depth (ft) | Elevation (ft MLLW) | PID (ppb) | Core Length (ft) | USCS Symbol | Visual-Manual Identification & Description (GROUP NAME & SYMBOL, maximum particle size*, color, moisture, density/consistency, structure, odor, optional descriptions, geologic interpretation) |
|-------------|---------------------------|---------------------|-----------|------------------|-------------|--|
| 15.0 | | | | | | |
| 15.5 | | | | | | |
| 16.0 | | | | | | |
| 16.5 | | | | | | |
| 17.0 | | | | | | |
| 17.5 | | | | | | |
| 18.0 | | | | | | |
| 18.5 | | | | | | |
| 19.0 | | | | | | |
| 19.5 | | | | | | |
| 20.0 | | | | | | |
| 20.5 | | | | | | |
| 21.0 | | | | | | |
| 21.5 | | | | | | |
| 22.0 | | | | | | |
| 22.5 | | | | | | |

NOTES:

*NOTE: Particle Size is determined by direct observation.
 NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

CORE STATION

SEDIMENT CORE COLLECTION FORM



| SITE INFORMATION | | | |
|--------------------------------|---------------|--|---------------|
| Project Name: | | West End Former MGP Sediment Collection Form | |
| Station ID: | | Date: | |
| Location: | | Project Number: | |
| Cincinnati, OH | | 128218-004- | |
| Project Depth (PD): | | Survey Vessel: | |
| 20 ft | | Barge | |
| Overdepth (OD): | | Target Northing: | |
| --- | | | |
| Z - Layer (Z): | | Target Easting: | |
| --- | | | |
| Cap Contingency Layer (CCL): | | Water Depth Measurement: | |
| --- | | Sounder / Leadline / Other | |
| Total Target Core Depth: | | Vertical Datum: | |
| 20 ft | | NGVD 29, MLLW , Other | |
| Weather: | | | |
| CORE COLLECTION | | | |
| | Attempt 1 (a) | Attempt 2 (b) | Attempt 3 (c) |
| Northing: | | | |
| Easting: | | | |
| Time: | | | |
| Measured Water Depth | | | |
| Water Level Height (NGVD 29) | | | |
| Mudline Elevation (NGVD 29) | | | |
| Target Core Barrel Penetration | | | |
| Measured Penetration | | | |
| Total Core Length Recovered | | | |
| % Recovery | | | |
| Description of Core Drive | | | |
| Refusal Encountered? | No Yes | No Yes | No Yes |
| Description of Refusal | | | |
| Core Collection Comments: | | | |
| CORE CHARACTERISTICS | | | |
| Sediment Odor | | | |
| Sediment Color | | | |
| Sediment Type | | | |
| Layering / Homogeneous | | | |
| Core Characteristic Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Core Collection Recorded By: _____

Page: 1 of 3

SEDIMENT CORE COLLECTION FORM



| SITE INFORMATION | | | |
|--------------------------------|---------------|--|---------------|
| Project Name: | | West End Former MGP Sediment Collection Form | |
| Station ID: | | Date: | |
| Location: | | Project Number: | |
| Cincinnati, OH | | 128218-004- | |
| Project Depth (PD): | | Survey Vessel: | |
| 3.5 ft | | Barge | |
| Overdepth (OD): | | Target Northing: | |
| 1.5 ft | | | |
| Z - Layer (Z): | | Target Easting: | |
| --- | | | |
| Cap Contingency Layer (CCL): | | Water Depth Measurement: | |
| --- | | Sounder / Leadline / Other | |
| Total Target Core Depth: | | Vertical Datum: | |
| 5 ft | | NGVD 29, MLLW , Other: | |
| Weather: | | | |
| CORE COLLECTION | | | |
| | Attempt 4 (d) | Attempt 5 (e) | Attempt 6 (f) |
| Northing: | | | |
| Easting: | | | |
| Time: | | | |
| Measured Water Depth | | | |
| Water Level Height (NGVD 29) | | | |
| Mudline Elevation (NGVD 29) | | | |
| Target Core Barrel Penetration | | | |
| Measured Penetration | | | |
| Total Core Length Recovered | | | |
| % Recovery | | | |
| Description of Core Drive | | | |
| Refusal Encountered? | No Yes | No Yes | No Yes |
| Description of Refusal | | | |
| Core Collection Comments: | | | |
| CORE CHARACTERISTICS | | | |
| Sediment Odor | | | |
| Sediment Color | | | |
| Sediment Type | | | |
| Layering / Homogeneous | | | |
| Core Characteristic Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Core Collection Recorded By: _____

Page: 2 of 3

SEDIMENT CORE COLLECTION FORM



| SITE INFORMATION | | | |
|--------------------------------|---------------|--|---------------|
| Project Name: | | West End Former MGP Sediment Collection Form | |
| Station ID: | | Date: | |
| Location: | | Project Number: | |
| Cincinnati, OH | | 128718-004 | |
| Project Depth (PD): | | Survey Vessel: | |
| 20 ft | | Barge | |
| Overdepth (OD): | | Target Northing: | |
| Z - Layer (Z): | | Target Easting: | |
| Cap Contingency Layer (CCL): | | Water Depth Measurement: | |
| --- | | Sounder / Leadline / Other | |
| Total Target Core Depth: | | Vertical Datum: | |
| 20 ft | | NGVD 29, MLLW , Other: | |
| Weather: | | | |
| CORE COLLECTION | | | |
| | Attempt 7 (g) | Attempt 8 (h) | Attempt 9 (i) |
| Northing: | | | |
| Easting: | | | |
| Time: | | | |
| Measured Water Depth | | | |
| Water Level Height (NGVD 29) | | | |
| Mudline Elevation (NGVD 29) | | | |
| Target Core Barrel Penetration | | | |
| Measured Penetration | | | |
| Total Core Length Recovered | | | |
| % Recovery | | | |
| Description of Core Drive | | | |
| Refusal Encountered? | No Yes | No Yes | No Yes |
| Description of Refusal | | | |
| Core Collection Comments: | | | |
| CORE CHARACTERISTICS | | | |
| Sediment Odor | | | |
| Sediment Color | | | |
| Sediment Type | | | |
| Layering / Homogeneous | | | |
| Core Characteristic Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Core Collection Recorded By: _____

Page: 3 of 3

SEDIMENT CORE COLLECTION FORM - PWS



| SITE INFORMATION | | | |
|--------------------------------|---------------|--|---------------|
| Project Name: | | West End Former MGP Sediment Investigation | |
| Station ID: | | Date: | |
| Location: | | Project Number: | |
| Cincinnati, OH | | 128718-004 | |
| Project Depth (PD): | | Survey Vessel: | |
| 3.5 ft | | Barge | |
| Overdepth (OD): | | Target Northing: | |
| 1.5 ft | | | |
| Z - Layer (Z): | | Target Easting: | |
| --- | | | |
| Cap Contingency Layer (CCL): | | Water Depth Measurement: | |
| --- | | Sounder / Leadline / Other | |
| Total Target Core Depth: | | Vertical Datum: | |
| 5 ft | | NGVD 29, MLLW , Other | |
| Weather: | | | |
| CORE COLLECTION | | | |
| | Attempt 1 (a) | Attempt 2 (b) | Attempt 3 (c) |
| Northing: | | | |
| Easting: | | | |
| Time: | | | |
| Measured Water Depth | | | |
| Water Level Height (NGVD 29) | | | |
| Mudline Elevation (NGVD 29) | | | |
| Target Core Barrel Penetration | | | |
| Measured Penetration | | | |
| Total Core Length Recovered | | | |
| % Recovery | | | |
| Description of Core Drive | | | |
| Refusal Encountered? | No Yes | No Yes | No Yes |
| Description of Refusal | | | |
| Core Collection Comments: | | | |
| CORE CHARACTERISTICS | | | |
| Sediment Odor | | | |
| Sediment Color | | | |
| Sediment Type | | | |
| Layering / Homogeneous | | | |
| Core Characteristic Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Core Collection Recorded By: _____

Page: 1 of 3

SEDIMENT CORE COLLECTION FORM - PWS



| SITE INFORMATION | | | |
|--------------------------------|---------------|--|---------------|
| Project Name: | | West End Former MGP Sediment Investigation | |
| Station ID: | | Date: | |
| Location: | | Project Number: | |
| Cincinnati, OH | | 128718-004 | |
| Project Depth (PD): | | Survey Vessel: | |
| 3.5 ft | | Barge | |
| Overdepth (OD): | | Target Northing: | |
| 1.5 ft | | | |
| Z - Layer (Z): | | Target Easting: | |
| --- | | | |
| Cap Contingency Layer (CCL): | | Water Depth Measurement: | |
| --- | | Sounder / Leadline / Other | |
| Total Target Core Depth: | | Vertical Datum: | |
| 5 ft | | NGVD 29, MLLW , Other | |
| Weather: | | | |
| CORE COLLECTION | | | |
| | Attempt 4 (d) | Attempt 5 (e) | Attempt 6 (f) |
| Northing: | | | |
| Easting: | | | |
| Time: | | | |
| Measured Water Depth | | | |
| Water Level Height (NGVD 29) | | | |
| Mudline Elevation (NGVD 29) | | | |
| Target Core Barrel Penetration | | | |
| Measured Penetration | | | |
| Total Core Length Recovered | | | |
| % Recovery | | | |
| Description of Core Drive | | | |
| Refusal Encountered? | No Yes | No Yes | No Yes |
| Description of Refusal | | | |
| Core Collection Comments: | | | |
| CORE CHARACTERISTICS | | | |
| Sediment Odor | | | |
| Sediment Color | | | |
| Sediment Type | | | |
| Layering / Homogeneous | | | |
| Core Characteristic Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Core Collection Recorded By: _____

Page: 2 of 3

SEDIMENT CORE COLLECTION FORM - PWS



| SITE INFORMATION | | | |
|--------------------------------|---------------|--|---------------|
| Project Name: | | West End Former MGP Sediment Investigation | |
| Station ID: | | Date: | |
| Location: | | Project Number: | |
| Cincinnati, OH | | 128718-004 | |
| Project Depth (PD): | | Survey Vessel: | |
| 3.5 ft | | Barge | |
| Overdepth (OD): | | Target Northing: | |
| 1.5 ft | | | |
| Z - Layer (Z): | | Target Easting: | |
| --- | | | |
| Cap Contingency Layer (CCL): | | Water Depth Measurement: | |
| --- | | Sounder / Leadline / Other | |
| Total Target Core Depth: | | Vertical Datum: | |
| 5 ft | | NGVD 29, MLLW , Other | |
| Weather: | | | |
| CORE COLLECTION | | | |
| | Attempt 7 (g) | Attempt 8 (h) | Attempt 9 (i) |
| Northing: | | | |
| Easting: | | | |
| Time: | | | |
| Measured Water Depth | | | |
| Water Level Height (NGVD 29) | | | |
| Mudline Elevation (NGVD 29) | | | |
| Target Core Barrel Penetration | | | |
| Measured Penetration | | | |
| Total Core Length Recovered | | | |
| % Recovery | | | |
| Description of Core Drive | | | |
| Refusal Encountered? | No Yes | No Yes | No Yes |
| Description of Refusal | | | |
| Core Collection Comments: | | | |
| CORE CHARACTERISTICS | | | |
| Sediment Odor | | | |
| Sediment Color | | | |
| Sediment Type | | | |
| Layering / Homogeneous | | | |
| Core Characteristic Comments: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Core Collection Recorded By: _____

Page: 3 of 3



DAILY FIELD REPORT

Page 1 of 1

| | | | | | | | |
|------------|---|---|---|--------------|----|---|-----|
| PROJECT | M | M | M | H&A FILE NO. | 12 | 1 | 004 |
| LOCATION | | | | PROJECT MGR. | | | |
| CLIENT | U | E | | REPORT NO. | | | |
| CONTRACTOR | | | | DATE | | | |
| WEATHER | | | | TEMPERATURE | | | |

[illegible]

| <u>Field Representative(s)</u> | <u>Time on site</u> | <u>Report/Travel/Other</u> | <u>Total hours</u> |
|--------------------------------|---------------------|----------------------------|--------------------|
| | | | |
| | | | |

Distribution:

Haley & Aldrich, Inc.



Page of

Form 2001 USCS p.2

APPENDIX B

Permit Approvals

From: Christopher.Bass@dot.ohio.gov
To: [Wright-Ng, Kristen](#)
Subject: RE: Permit # 08-676-17
Date: Tuesday, May 07, 2019 1:45:33 PM

CAUTION: External Email

Please attach a copy of this email to the previously issued permit, 08-676-17. This email will serve as an extension letter to the subject permit. The permit is hereby extended until December 31, 2019. All other conditions of the permit are to remain unchanged.

Thanks,

Chris Bass

Right of Way Permit Coordinator

ODOT District 8 Office of Permits

505 S. State Route 741 Lebanon, OH 45036

513-933-6577

transportation.ohio.gov

From: Wright-Ng, Kristen <KWright-Ng@haleyaldrich.com>
Sent: Monday, May 6, 2019 1:25 PM
To: Bass, Christopher <Christopher.Bass@dot.ohio.gov>
Cc: Todd Bachand <Todd.Bachand@duke-energy.com>; Wright-Ng, Kristen <KWright-Ng@haleyaldrich.com>
Subject: Permit # 08-676-17

Dear Mr. Bass,

As we discussed on the telephone on 5/6/2019, we, on behalf of Duke Energy Ohio, Inc., are planning a proposed environment sediment investigation in the Ohio River between mile markers 470 and 472 at the West End Site which extends under the Brent Spence Bridge (I-75) over pass and the Clay Wade Bailey Bridge (US-42) overpass from June through December 2019.

The proposed scope of work for the environmental sediment investigation scheduled for June through December 2019 includes in-water sampling to characterize sediment and surface water to determine if material associated with historic operations is present in the river adjacent to the upland site as depicted on plans submitted to ODOT on 24 October 2017. The proposed environmental sediment investigation will be conducted from a barge or boat which will be secured by steel spuds and/or anchors during the sampling/boring operations.

Per our discussion, we request that you extend Permit # 08-676-17 (dated 3 November 2017 with Duke Energy as the permit holder) until December 2019.

We look forward to your reply,
Kristen

Kristen M. Wright-Ng

Project Manager

Haley & Aldrich, Inc.

T: 703.336.6215

C: 860.462.4057

www.haleyaldrich.com



OHIO DEPARTMENT OF TRANSPORTATION

John R. Kasich, Governor

Attachement SSF-2

Page 966 of 1044

Jerry Wray, Director

District 8

505 S. State Route 741, Lebanon, OH 45036

513-933-6568

transportation.ohio.gov

November 3, 2017

Re: Permit # 08-676-17

Email: Imdesantis@anchoragea.com todd.bachand@duke-energy.com

Dear Permit Holder:

Thank you for your application for the above referenced permit which is hereby approved.

Please be advised that before any work is started under this permit contact Dustin Williams at the District 8 Permit Office at 513-933-6576 or 513-615-4033 between the hours of 7:30 a.m. - 4:00 p.m., Monday - Friday to inform us concerning the date and time work will begin. We suggest two working days as sufficient notice. However, if a lane closure or night time work is necessary a three working day notice is required.

When you call, please have your permit number, county and state route number available to facilitate service. Failure to inform us before commencement of work or may force our Permit Inspectors to suspend the work.

Please be advised this permit needs to be onsite when the work is being performed. If there isn't proof of the permit on the job site, the permit Inspector will suspend the work.

We appreciate your cooperation and interest in these matters of mutual concern. Should you have any further questions or comments, please do not hesitate to contact the District 8 Permit Office.

Respectfully,

Dustin Williams
District 8 Permits

Excellence in Government

ODOT is an Equal Opportunity Employer and Provider of Services

MR 509

Permit No. 08-676-17



STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
PERMIT

Attachement SSF-2

Page 967 of 1044

| | | | |
|------------------------|------|------------|------|
| County or Jurisdiction | | Hamilton | |
| Log Pt: | 0.00 | to Log Pt: | 0.00 |
| Rte: | 75 | AccCat: | |

[1] Subject to all terms, conditions, and restrictions printed, written below or attached,

Name Duke Energy
Address 290 Elwood Davis Rd. Suite 340
Liverpool, New York 13088

is hereby granted a permit under Section 5515.01 and 5515.02 of Ohio Revised Code, and permission to perform necessary work in the manner described and at the location indicated in the following or as attached to this permit. To perform Investigation work for Duke-Energy that involves in-water sampling to characterize sediments and surface water in the accordance with Ohio's voluntary program (VAP)1. The West End sediment Investigation area and West End background sampling area, extend under the Brent Spence Bridge(I-75) over pass and also Clay Wade Bailey Bridge (US-42). The purpose of the proposed project is to determine if material associated with historical operations in present in the river adjacent to the upland sites as shown on plan submitted with application and stamped by the Ohio Department of Transportation dated October 24, 2017.

All work covered under this permit shall be performed only during the State Working hours, unless prior Approval is granted by the District Office.

ALL WORK DONE UNDER THIS PERMIT SHALL BE PERFORMED ONLY DURING THE STATE WORKING HOURS, UNLESS PRIOR APPROVAL IS GRANTED BY THE DISTRICT PERMIT OFFICE

CONTINUED ON ATTACHED PAGES.

[2] This permit shall be in the possession of employees on site at all times who are in charge of the work and shall be shown, upon request, to any employee of the Department of Transportation.

[3] No work authorized by this permit shall begin until the permittee has contacted and received instructions from

ODOT District 8 Permits Office

Phone: 513-933-6577

NOTE: Any work performed by the permittee may be stopped if the above requirements are not met.

[4] To the extent applicable, this permit shall be void if the work described herein does not comply with the conditions, terms, and requirements applicable to this permit, and if the work is not completed 1/22/2018

[5] All work requiring persons or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Uniform Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[6] The permittee accepts the conditions, terms, and requirements printed, written on, or attached to this permit and understands that failure to comply fully with those conditions, terms, and requirements or any change in the use of this permit inconsistent with its terms and conditions will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation, if applicable, at the permittee's expense.

Permit dated: 10/24/2017

Surety Company _____

Effective Date _____ Expiration Date _____ Amount \$ _____

A call to OGPUPS at 1-800-925-0988 is required by the O.R.C.

2-WORKING DAYS

BEFORE YOU DIG

CALL TOLL FREE 800-362-2764

OHIO UTILITIES PROTECTION SERVICES

The ODOT Intelligent Transportation System (ITS) Infrastructure and devices are not currently listed in the Ohio Utility Protection Services (OUPS) program. Please send a copy of the OUPS ticket or locate request to the ODOT ITS Section via email to CEN.ITS.LAB@dot.ohio.gov, in order to get the ITS utility infrastructure marked.

Director: _____

Date: _____

Jay Wiley *km*
10/27/17

Rev 09/06/2011

General Provisions Applicable to All Permits

(Sections 5515.01 and 5515.02 of O.R.C.)

- [1] This permit is not a substitute for satisfying the rights or obligations of any other party who may have an interest in the underlying fee interest
- [2] The granting of this permit does not convey to the permittee or to the property served any rights, title or interest in state highway rights of way or in the design or operation of the state highway; or in any way abridge the right of the Director of the Department of Transportation in his jurisdiction over state highways. If, in the process of any future work or for the benefit of the traveling public, it becomes necessary, in the opinion of the Director of Transportation to order the removal, reconstruction, relocation, or repair of any of the fixtures, or work performed under this permit, said removal, reconstruction, relocation, or repair shall be wholly at the expense of the owners thereof or the permittee and be made as directed by the Director of Transportation. Such changes in the state highway design or operation, necessary for improved safety and operation or for the benefit of the traveling public, shall not require a permit modification since the permit confers no private rights to the permittee over the control of the state highway.
- [3] The District Deputy Director acts for and on behalf of the Director in issuing and carrying out the provisions of all permits. The District Deputy Director has full authority to ensure that all provisions of the permit are met and to reject any materials, design and workmanship that do not meet applicable Department standards. The District Deputy Director, at his/her discretion, may require a performance bond or certified check as a prerequisite to the issuance of a permit.
- [4] Failure on the part of the permittee to comply fully with the provisions and conditions of the permit will be cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Departmental action. By accepting the permit, the permittee agrees to comply with all conditions, terms, and restrictions printed or written on or attached to the permit. If the permittee performs any work contrary to the conditions of the permit or to the instructions of the District Deputy Director and, after due notice, fails to correct the problem, the Department of Transportation may, with or without notice, correct such work and the permittee shall reimburse the Department for the costs.
- [5] The permittee shall indemnify and hold harmless the State of Ohio, Department of Transportation, its officers, representatives and assigns, from any and all loss, liability, damages, litigation costs, and claims for injury or death to any person, property, or business caused by or resulting from any act, omission, event, consequence, or occurrence, negligent or otherwise of the permittee, his employees, or assigns as a result of the issuance of this permit.
- [6] All work authorized under the permit shall be performed to the Department's satisfaction, and the entire expense shall be borne by the permittee. No work shall be performed until the permittee has contacted the Department's appointed representative named on the permit and received instructions. The Department's representative may inspect all work covered by the permit, or the Department reserves the right, during the time any or all of the work is being performed, to appoint an inspector over the work who shall represent the interest of the State on the work and any compensation arranged for shall be paid wholly by the permit holder. Work not in compliance shall be halted and the District Deputy Director shall be notified of the cause. The permittee shall be notified of the Department's action and its causes, and given an opportunity to correct the problem.
- [7] Failure to complete all work within the time specified on the permit shall void the permit, thereby making the permit illegal and subject to appropriate Departmental action. The permittee may request an extension in writing from the District Office, explaining why the extension is necessary and when the work is expected to be completed.
- [8] All work infringing on the pavement or shoulders shall comply with applicable standards and requirements regarding traffic control devices. Failure to comply will be cause for revocation or suspension of the permit. Any closure of lanes or shoulders shall be described in terms of location, duration, time of day, etc. Such work shall not begin until all traffic control devices are in place.
- [9] If any grading, sidewalk, or other work allowed by a permit interferes with the drainage of the highway in any way, such catch basins and outlets as necessary shall be constructed to take proper care of said drainage.
- [10] Upon completion of the work, the permittee shall leave the highway clean of all rubbish, excess materials, temporary structures and equipment, and all parts of the highway shall be left in a condition acceptable to the Department. Upon satisfactory completion of the work authorized by the permit, the Department's appointed representative shall complete the Permit Inspection Certificate Form No. MR678 certifying that the permittee has complied with the terms of the permit.
- [11] Except as herein authorized, no excavation shall be made or obstacle placed within the limits of the highway so as to interfere with the travel over the road.
- [12] All pole lines are to be built in accordance with Rule 4901:3-1-08 of the Ohio Administrative Code promulgated and enforced by the Public Utilities Commission of Ohio.

Name: _____

Duke Energy Attachment SSF-2

Page 970 of 1044

Dated: 10/24/2017

Permit Number: 08 - 676 - 17

[13] The permittee shall comply with the Air Pollution requirements of Rule 3745-17-08 of the Ohio Administrative Code promulgated and enforced by the Ohio Environmental Protection Agency.

[14] The permittee certifies that he or she is fully authorized to sign this permit. This permit shall apply to and be binding upon the permittee and his/her successors in interest. No change in ownership of the underlying property or of the facility owned by the permittee shall in any way alter the permittee's obligations under this permit.

[15] The permittee(s) for herself/himself/themselves/itself, her/his/their/its successors in interest and assigns, as a part of the consideration hereof, do/does covenant and agree that:

(1) No person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of the above described property.

(2) In the construction of any improvements on, over, or under the above described property and the furnishing of services thereon, no person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination.

(3) The above described property shall be used in a manner that at all times is in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. DOT, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. DOT - Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(4) In the event that this instrument grants a lease, license, or permit and any of the above nondiscrimination covenants is breached, the State of Ohio, Department of Transportation, shall have the unfettered right to terminate the lease, license or permit and to re-enter and repossess the above-described property and hold the same as if said lease, license, or permit had never been made or issued.

(5) In the event that this instrument grants a fee or easement interest and any of the above nondiscrimination covenants is breached, the State of Ohio Department of Transportation shall have the unfettered right to re-enter the above described property, and said property will thereupon revert to and vest in and become the absolute property of the State of Ohio and its successors and assigns for the use and benefit of the Department of Transportation.

(6) In the event that this instrument grants a lease, fee, or easement interest, all of the foregoing nondiscrimination covenants shall be and are covenants running with the land.

Dated: 10/24/2017

Permit Number: 08 - 676 - 17

All work shall be performed at no cost to the State of Ohio or the Federal Highway Administration.

Loading or unloading of equipment and material from the roadway pavement will not be permitted.

Storage of pipe and material on the pavement, berms, median and/or State right-of-way will not be permitted without prior approval from the District Permit Office.

Equipment and personnel operating from the pavement shall be kept to a minimum; and, with adequate flagmen (Flagmen's Guide) and to a minimum; traffic warning devices maintained at all times.

Restoration of all areas disturbed shall be completed immediately after installation is completed.

All areas disturbed by this operation shall be restored comparable to that of the surrounding area and to the satisfaction of the State Inspector.

All walks, steps, driveways, drains, mail boxes, traffic signs, guardrail, poles, fences, etc. that are disturbed must be restored to their original condition or better.

The pavement, berms and median must be kept clean of dirt, mud and debris at all times.

All traffic shall be maintained in accordance with the Ohio Manual of Uniform Traffic Control Devices for Construction and Maintenance Operations.

Local traffic, facilities for pedestrian and vehicular ingress and egress, shall be provided at all times for the property adjacent to the work.

Two-way traffic shall be maintained at all times and all equipment used on pavement shall be rubber tired.

No vehicles, equipment, or personnel, including personal automobiles, will be permitted to park on or operate from the roadway pavement, berms, or median.

Dated: 10/24/2017

Permit Number: 08 - 676 - 17

It must be stressed, that the pavement is to be kept clean at all times from mud and material carried onto the pavement. Failure to comply with this request will result in suspending all operations on State Right-of-Way while working under this Permit.

In the event of ice, snow or rain, all work shall be suspended as directed by the State Inspector and shall remain suspended until notified by the State Inspector

All ditch areas and slopes disturbed must be reshaped to drain properly; and, seeded or sodded as directed by the State Inspector.

Proper roadside drainage shall be maintained at all times.

MR-678 Not Bonded County: Hamilton
08-676-17 FINAL INSPECTION Route: 75
PERMIT EXPIRES 1 /22/2018 Section: 0.00/0.00

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

District 8 PERMIT INSPECTION CERTIFICATION

Permittee: Duke Energy 290 Elwood Davis Rd. Suite 340 Liverpool, New York 13088

Permit Number: **08-676-17** Contact Name: Lena DeSantis

Permit Type: Special Use Contact Phone: (201) 571-0913

Issued: 10/24/2017

Description: To perform Investigation work for Duke-Energy that involves in-water sampling to characterize sediments and surface water in the accordance with Ohio's voluntary program (VAP)1. The West End sediment Investigation area and West End background sampling area, extend under the Brent Spence Bridge(I-75) over pass and also Clay Wade Bailey Bridge (US-42). The purpose of the proposed project is to determine if material associated with historical operations in present in the river adjacent to the upland sites as shown on plan submitted with application and stamped by the Ohio Department of Transportation dated October 24, 2017.

(To be filled in by Inspector)

Work Completed (Yes or No) As Authorized (Yes or No)

Variations: _____

Approved: _____ Not Approved: _____

*Comments:

Signed: _____

Contacted by: _____ Title: _____

Date: _____ Time: _____ Date: _____

*If work not approved, so advise person in charge at work site, noting his name and relationship to permittee, as well as date and time of inspection; note instructions given such person in charge, including stoppage of work if warranted. If no one at work site, so note.

1. MR 505

App No 14817

Return To: OHIO DEPARTMENT OF TRANSPORTATION

505 S. STATE ROUTE 741

LEBANON, OHIO 45036

ATTN: PERMITS DEPARTMENT

State of Ohio
Department of Transportation
Permit Application

See Reverse side for additional requirements

Attachement SSF-2

Page 974 of 1044

Office Use Only

County/

Jurisdiction _____

Rte _____

LogPt _____

AccCat _____

[1] This form must be completed by the property owner or agents working for a utility company (if applicable). Application by contractor is unacceptable.

Name Duke Energy Ohio, Inc

Address 139 East 4th Street EM740

City Cincinnati

State OH

Zip 45202 Phone (513) 287-3427

(Email Required) Todd.Bachand@duke-energy.com

[2] Type of Permit requested: _____ Commercial (See other side) _____ Residential _____ Field _____ Utility _____ Drainage
_____ Beautification (See other side) _____ Spraying, trimming, tree removal ☒ Other

[3] Briefly describe work to be performed. (Attach plans and see Instructions.)

Sediment sampling in the Ohio River under the Brent Spence Highway (I-75) Bridge and the Clay Wade Bailey (US 42) Bridge Right-of-Ways. See attached project description

[4] Location where work is to be performed. Give sufficient detail to locate the site accurately, such as the distance in miles or feet from a mile post or from some geographical feature such as an intersecting highway.

In Hamilton County (along, across) State Route _____, _____ miles or _____ feet

North _____ East _____ West _____ South _____ of _____ on the North _____ East _____ West _____ South _____ side of the road.

Work to commence on 11/6/17 and will require 15 days to complete

[5] Does the property owner own or have any interests in any adjacent property? ☒ Yes _____ No

If yes, please describe. Duke owns upland property

[6] Prior to any excavation in the highway right-of-way, the Ohio Utilities Protection Service (OUPS) must be contacted in accordance with ORC Section 3781.25 to 3781.32. OUPS can be reached at 1-800-362-2764. A call must be made to OGPUPS at 1-800-925-0988.

[7] Open cutting of pavement shall not be permitted unless no reasonable alternate method is available. Written approval of the Ohio Department of Transportation District Office must be obtained.

[8] All work requiring men or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[9] I have received a copy of the policies and regulations pertaining to the permit for which I have applied. If a permit is subsequently issued to me by the Ohio Department of Transportation, I understand that the permit will state the terms and conditions for its use, and I agree to comply with all conditions and regulations stipulated on or attached to the permit. I also understand and agree that failure to comply fully with all conditions and regulations of the permit or any change in the use of the permit inconsistent with its terms and conditions will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation at the permittee's expense.

SIGN and
PRINT here



Lena DeSantis, as agent
for Duke Energy Ohio

Signature of Property Owner or Agent for Owner

Date: 11/1/17 Daytime Phone: 201-571-0913

Office use only

Date Received _____

By _____

Date Accepted _____

By _____

Additional Requirements

1. All requests for vehicular access connections (commercial and residential driveways and field drives) are subject to the requirements and provisions of the State Highway Access Management Manual. You will find this form at <http://www.dot.state.oh.us/planning/Corridor/AccessMgmt/Manual> on the web.

2. Check with the issuing authority to determine which of the following documents and information are required and the number of copies needed to complete the review of your application. Plans should usually not be larger than 24"x 36."

(A) Map or plat showing property location, property lines, amount of frontage on state highway and on other abutting public roads, if any;

(B) Any existing access or easements of access on the property;

(C) Highway and driveway plan profile;

(D) Location of proposed access with respect to property lines and to the highway; NOTE: The proposed access location should also be physically marked on the property by a stake or other clearly visible means.

(E) Design and type of construction of the proposed access;

(F) Drainage plans showing drive culvert/pipe and impacts to the highway right of way;

(G) Subdivision, zoning, or development plan, if applicable;

(H) Maps and letters detailing utility locations before and after development in and along the right of way;

(I) Signing and striping plans;

(J) Traffic data and traffic control plan;

(K) Proof of liability insurance;

(L) Performance Bond, if required

Commercial Development

3. If you are requesting a permit for Commercial Development, complete the following. Applicants seeking permits for development generating high traffic volumes (over 100 trip ends in the peak hour) are advised to request a preliminary meeting with appropriate ODOT and/or local officials prior to submitting a formal application for access.

(3a) If the proposed access will serve residential development, what type (single family, apartment, townhouse) and number of units are in the proposed development?

| | | | |
|---------------|--|-----------------|--|
| Type of Units | | Number of Units | |
| Type of Units | | Number of Units | |

(3b) If the proposed access will serve business commercial or industrial development, what types and number of businesses are in the proposed development and what is floor area square footage of each?

| | | | |
|------------------|--|----------------|--|
| Type of Business | | Square Footage | |
| Type of Business | | Square Footage | |

(3c) Number of vehicles using the access. Indicate if estimates are ____ Peak hour = ____ or ____ Average daily volumes = ____.

| | | |
|---------------------------|------------------------|---------------------|
| Number of Passenger Cars: | Number of Multi Units: | Total All Vehicles: |
|---------------------------|------------------------|---------------------|

(3d) Consulting Firm: _____ Name of Contractor: _____
 Contact Name: _____ Contact Name: _____
 Phone Number: _____ Phone Number: _____

Beautification Permit

4. If you are applying for Beautification Permit, complete the following. Please submit proof of insurance.

Insurer's Name _____ Address _____ Phone () _____
 Number of adults (over 18) _____ under 18 _____ Total people _____



CERTIFICATE OF LIABILITY INSURANCE

Attachment SSF-2
Page 976 of 1044
DATE (MM/DD/YYYY)
10/10/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | | | |
|---|--|---|---------------|
| PRODUCER Servco Pacific Insurance 800 Fifth Ave., Suite 2400 Seattle WA 98104 | | CONTACT NAME: Certificate Department PHONE (A/C, No, Ext): 206-216-4830 FAX (A/C, No): 206-260-2903 E-MAIL: certdept@servcopacific.com ADDRESS: certdept@servcopacific.com | |
| | | INSURER(S) AFFORDING COVERAGE | NAIC # |
| INSURED Anchor QEA, LLC 720 Olive Way Suite 1900 Seattle WA 98101 | | INSURER A: Travelers Indemnity Company of Amer | 25666 |
| | | INSURER B: Travelers Property Casualty Company | 25674 |
| | | INSURER C: Lloyd's of London | 15792 |
| | | INSURER D: | |
| | | INSURER E: | |
| | | INSURER F: | |

COVERAGES **CERTIFICATE NUMBER:** 461482368 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL SUBR INSR WVD | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS |
|----------|---|--------------------|----------------------------------|--------------------------|--------------------------|---|
| A B | GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC | Y | 680-006H488049 680-006H455473 | 10/10/2017 10/10/2017 | 10/10/2018 10/10/2018 | EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$ |
| A | AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS | Y | BA5398L892 | 10/10/2017 | 10/10/2018 | COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ |
| A | <input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$10,000 | Y | CUP006D978124 | 10/10/2017 | 10/10/2018 | EACH OCCURRENCE \$1,000,000 AGGREGATE \$1,000,000 \$ |
| A | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y/N <input checked="" type="checkbox"/> N/A If yes, describe under DESCRIPTION OF OPERATIONS below | N/A | UB006J847765 | 10/10/2017 | 10/10/2018 | <input checked="" type="checkbox"/> WC STATU-TORY LIMITS <input checked="" type="checkbox"/> OTH-ER WA Stop GAP E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000 |
| C | Professional Liab. & Pollution Liab. | | W11053170801 | 10/10/2017 | 10/10/2018 | Each Claim \$1,000,000 Aggreagte \$1,000,000 Deductible \$100,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

IF CERTIFICATE IS NO LONGER REQUIRED, PLEASE NOTIFY SERVCO PACIFIC INSURANCE.

Duke Energy/Anchor QEA Contract dated June 22, 2016, Ohio River Cincinnati OH. Drilling services for Sediment investigation. Anchor QEA and Duke Energy (client) and their affiliates, directors, officers, employees and agents are additional insured's for General Liability, Auto Liability & Umbrella Liability as their interest may appear as required by written contract.

CERTIFICATE HOLDER

Duke Energy
550 S. Tryon St.
Charlotte, NC 28201

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

J. SE

© 1988-2010 ACORD CORPORATION. All rights reserved.



STATE OF WASHINGTON

Department of Labor & Industries

Certificate of Workers' Compensation Coverage

October 6, 2017

| | |
|---|--|
| WA UBI No. | 601 815 728 |
| L&I Account ID | 941,684-00 |
| Legal Business Name | ANCHOR QEA LLC |
| Doing Business As | ANCHOR QEA LLC |
| Workers' Comp Premium Status: | Account is current. |
| Estimated Workers Reported (See Description Below) | Quarter 2 of Year 2017 "Greater than 100 Workers" |
| Account Representative | Employer Services Help Line, (360) 902-4817 |
| Licensed Contractor? | No |

What does "Estimated Workers Reported" mean?

Estimated workers reported represents the number of full time position requiring at least 480 hours of work per calendar quarter. A single 480 hour position may be filled by one person, or several part time workers.

Industrial Insurance Information

Employers report and pay premiums each quarter based on hours of employee work already performed, and are liable for premiums found later to be due. Industrial insurance accounts have no policy periods, cancellation dates, limitations of coverage or waiver of subrogation (See [RCW 51.12.050](#) and [51.16.190](#)).

September 2017
Sampling Effort for the Duke Energy Ohio, Inc. East and West End Sites,
Cincinnati, Ohio



Permit Application Supplement

Prepared for

Duke Energy Ohio, Inc.
139 East Fourth Street
Cincinnati, Ohio 45202

Prepared by

Anchor QEA, LLC
290 Elwood Davis Road
Suite 340
Liverpool, NY 13088

Nature of Activity

This document provides supplementary information to support the U.S. Army Corps of Engineers (USACE) Section 404 permit application for the Sampling Effort for the Duke Energy Ohio, Inc. East and West End Sites (proposed Project) located in Cincinnati, Ohio between the Meldahl Dam (river mile 436) and the Markland Dam (river mile 531.5; Figure 1). The proposed Project involves in-water sampling to characterize sediments and surface water in accordance with Ohio's Voluntary Action Program (VAP)¹. The investigations will be performed at both Sediment Investigation Areas and Background Sampling Areas. Specifically, the East End Site is located on the Ohio River between mile markers 466 and 467 (Figures 2 and 3), and the West End Site is located between mile markers 470 and 472 (Figures 4 and 5). The West End Site extends under the Brent Spence Highway (I-75) and the Clay Wade Bailey (US 42) bridge.

Proposed Project Purpose

The purpose of the proposed Project is to determine if material associated with historical operations is present in the river adjacent to the upland sites at both locations. As shown in the figures, up to 150 sediment cores and grabs and several surface water samples will be collected from the Sediment Investigation Areas and Background Sampling Areas. Vertical hydraulic gradient (VHG) devices will also be installed at each Sediment Investigation Area to aid in characterizing the subsurface soils and sediments.

Construction

All work will be conducted from either a small boat and/or a barge staged on the Ohio River. When not sampling, the barge and/or vessel will be secured in a safe anchorage or dock, as determined by owner/operator, so as to not interfere with normal river traffic. No upland staging will be needed. Prior to any intrusive investigation activities, the state of Ohio utility mark-out protocol (Ohio Utilities Protection Service or O.U.P.S.) will be completed to identify any buried utilities within or near the Project. Identified utilities will be marked, added to Project electronic mapping, and have a buffer of at least 50 feet so no sample is targeted within 50 feet of a known utility. If a larger buffer is requested or required, they will be created on an as-needed basis and sampling locations will be moved farther away from the marked utility but still be located within the Sites.

Sampling

Sampling is expected to take approximately 15 days at the East End Site and 15 days at the West End Site. Work will occur between the hours of 7:00 a.m. and 6:00 pm, Monday through Saturday, and will include sediment surface grabs and cores, and surface water sampling.

¹ Ohio Administrative Code 3745-300, *et seq.* and R.C. Chapter 3746, *et seq.*

Surface water samples will be collected from mid-column from three locations; one sample within the upstream background sampling areas and two locations in the Sediment Investigation Areas adjacent to and as far downstream as possible of the Sites. Sediment cores will be taken, using a standard environmental drill rig, by a barge anchored in position with spuds. Each sediment core will be between 2 and 4 inches in diameter and advanced to a maximum depth of 75 feet (see Figures 6 and 7 for cross section) below the mudline or until refusal. Surface grabs from 0 to 6 inches below the mudline will be collected, via Ponar sampler or similar device, during the same mobilization as the subsurface core collection. All work will be done in open water, except for limited nearshore work to collect surface grabs, which will be collected at exposed shore via a hand auger or trowel/shovel if the area is exposed at the time of sampling.

Sampling at the East End Site will involve taking up to 45 sediment cores and up to 20 sediment grabs at the East End Sediment Investigation Area and up to 2 sediment cores and up to 15 sediment grabs at the East End Background Sampling Area. Sampling at the West End Site will involve taking up to 50 sediment cores and up to 15 sediment grabs at the West End Sediment Investigation Area and up to 2 sediment cores and up to 15 sediment grabs at the West End Background Sampling Area. Exact locations of samples are not known at this time. Table 1 provides a summary of maximum samples and the square footage of the area in which sampling could occur.

DISTRICT 08
PERMIT DEPARTMENT
OCT 24 2017
OHIO DEPARTMENT
OF TRANSPORTATION

Table 1
Summary of Sampling Area and Numbers

| Site | Sampling Area (square feet) | Maximum Number of Sediment Cores and Grabs |
|--------------------------------------|--------------------------------|---|
| East End Sediment Investigation Area | 664,811 | 45 cores; 20 grabs |
| East End Background Sampling Area | 613,728 | 2 cores; 15 grabs |
| West End Sediment Investigation Area | 371,292 | 50 cores; 15 grabs |
| West End Background Sampling Area | 372,048 | 2 cores; 15 grabs |

Vertical Hydraulic Gradient Installation and Removal

The VHG devices will be installed within the sediment at the two Sediment Investigation Areas. Each VHG device will consist of two sealed pressure transducers, which will be programmed to record pressure and temperature at a set interval for several weeks at a time. The two pressure transducers will be secured within a housing built of 1- to 2-inch-diameter pipe with perforations so the pressure in the sediment can be recorded at two different elevations. The VHG devices will be driven into the sediment at the approximate locations shown on Figures 2 and 4—one at the West End Sediment Investigation Area and up to three at the East End Sediment Investigation Area. The devices (Figure 8) will be driven via a drill rig mounted to a barge or may be driven manually by divers. The final installation depth of the VHG devices will be determined based on field conditions; however, no

device is planned to go beyond 35 feet below the mudline. Once installed, the very top of the device will be visible at the mudline only; the structure will not extend into the water column. The position will be noted via GPS, marked with an anchor, and line tied to the top of the device for post-monitoring retrieval. Periodically, the devices will be removed so the pressure transducers can be retrieved and the information downloaded. Once the information is downloaded, the pressure transducers will be placed back in the VHG device and re-installed to the same depth in the sediment. It is anticipated the VHG devices will collect data for 6 months. Periodic and final removal of the VHG devices may be conducted using divers or mechanical equipment mounted on a barge.

Potential Environmental Effects

Due to high regional turbidity, submerged aquatic vegetation impacts are not expected in sampling areas. There are no known cultural or historic resources in the Project areas. Because the proposed Project does not involve dredging, it is unlikely sampling would disturb any potential cultural or historic resources. The proposed Project is located outside the Coastal Zone; therefore, the proposed Project does not require a Coastal Use Permit or Coastal Zone Permit.

There are a number of state-and federally listed endangered mussel species in the Ohio River, with known occurrences in Hamilton County, including the pink mucket (*Lampsilis orbiculate*), sheepsnose (*Plethobasus cyphus*), and *Epioblasma triquetra*. Conversations with the U.S. Fish and Wildlife Service indicated a pre-sampling mussel survey may be required for both Sites, but a formal determination will be made through the permit process. No other state-or federally listed endangered or threatened species would be affected by the proposed Project.

Because the proposed Project includes in-water work, a notice to mariners will be necessary. Work will be staged to avoid vessel traffic to the extent possible.

Description of Avoidance and Minimization Measures

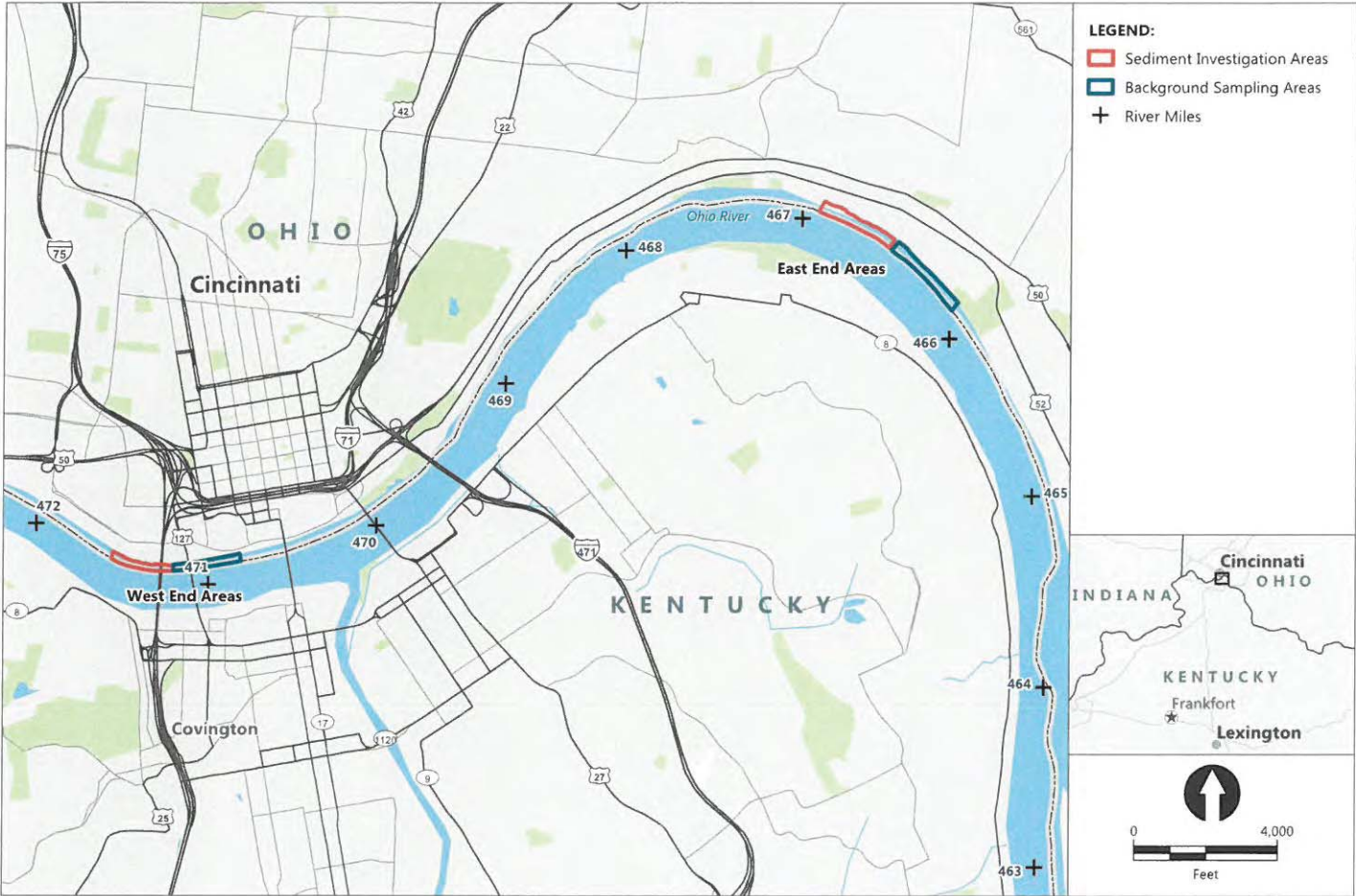
The following design and construction best management plans will be implemented:

- Navigational lights on the barge and any sampling vessels will remain on during the day to be clearly visible to all marine vessels.
- Barge and any sampling vessels will be equipped with marine radios to monitor for traffic calls and/or coordination with nearby or passing commercial vessels.
- The heights of all equipment transported by barge or sampling vessels will be recorded and checked against bridge clearances.
- At the end of working days, the barge and any sampling vessels will be moved to a permissible anchoring or dock area and secured for the night to ensure river traffic is not obstructed.
- Barge and sampling vessels will be equipped with spill kits.

DISTRICT 08
 PERMIT DEPARTMENT

OCT 24 2017

OHIO DEPARTMENT
 OF TRANSPORTATION



Publish Date: 2017/09/14 9:51 AM | User: ckiblinger
 Filepath: \\vncas\gis\Jobs\Duke_Energy_1290\West_End_Site\Maps\SamplingPlan\AQ_SiteLocation_EastEnd_WestEnd_8pt5x11L.mxd

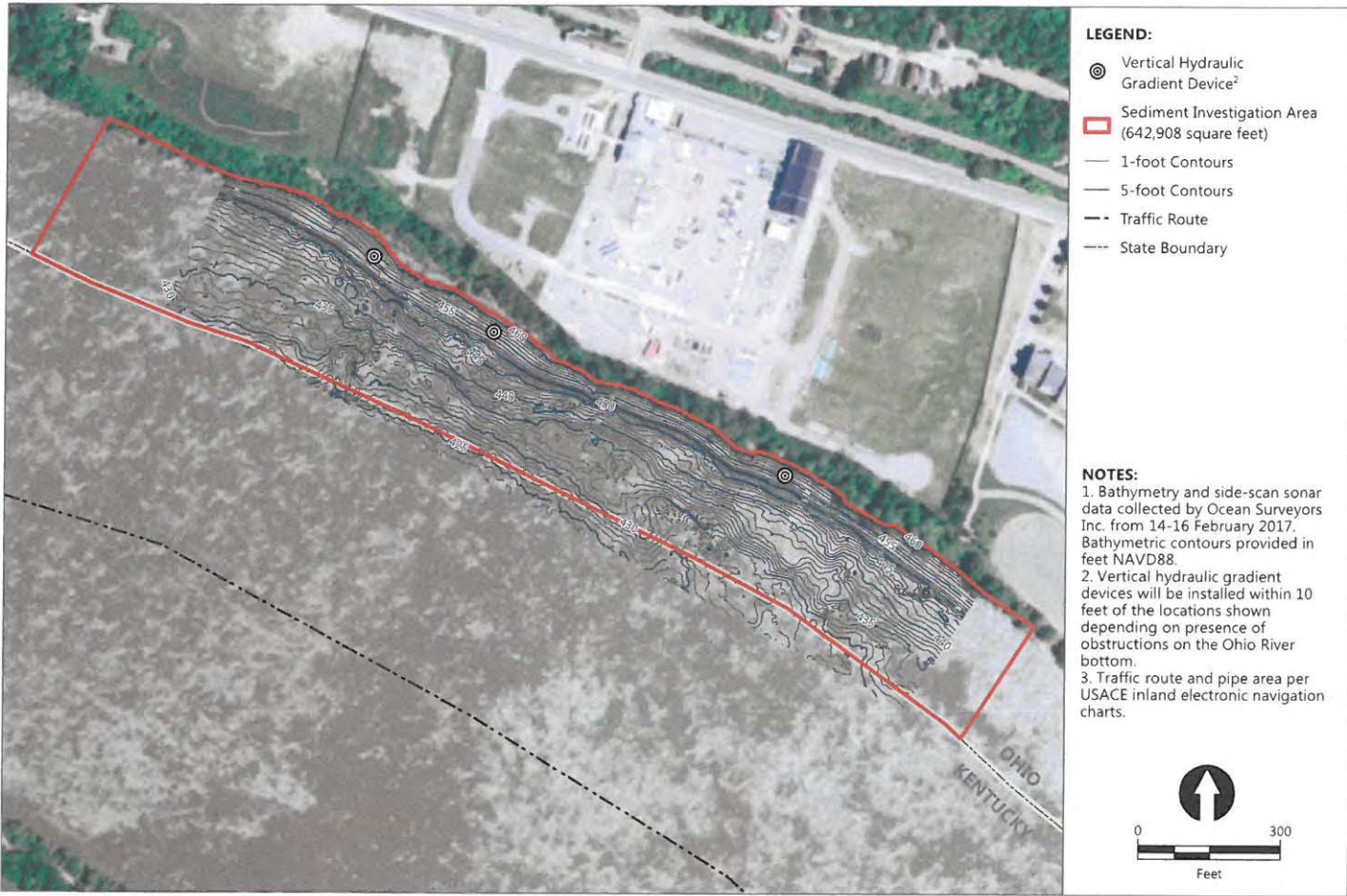


Figure 1
 Site Location
 Permit Application Supplement
 East End and West End Sites

DISTRICT 08
 PERMIT DEPARTMENT

 OCT 24 2017

 OHIO DEPARTMENT
 OF TRANSPORTATION



Publish Date: 2017/09/14, 10:42 AM | User: ckoblinger
 Filepath: \\orcas\gis\Jobs\Duke_Energy_1290\East_End_Site\Maps\SamplingPlan\AQ_SedimentInvestigationArea_EastEnd_8pt5x11L.mxd



Figure 2
 East End Sediment Investigation Area
 Permit Application Supplement
 East End and West End Sites

DRAFT



Publish Date: 2017/09/14, 10:44 AM | User: ckoblinger
 Filepath: \\orcas\gis\Jobs\Duke_Energy_1290\East_End_Site\Maps\SamplingPlan\AQ_BackgroundSampling_EastEnd_8ptsx11L.mxd



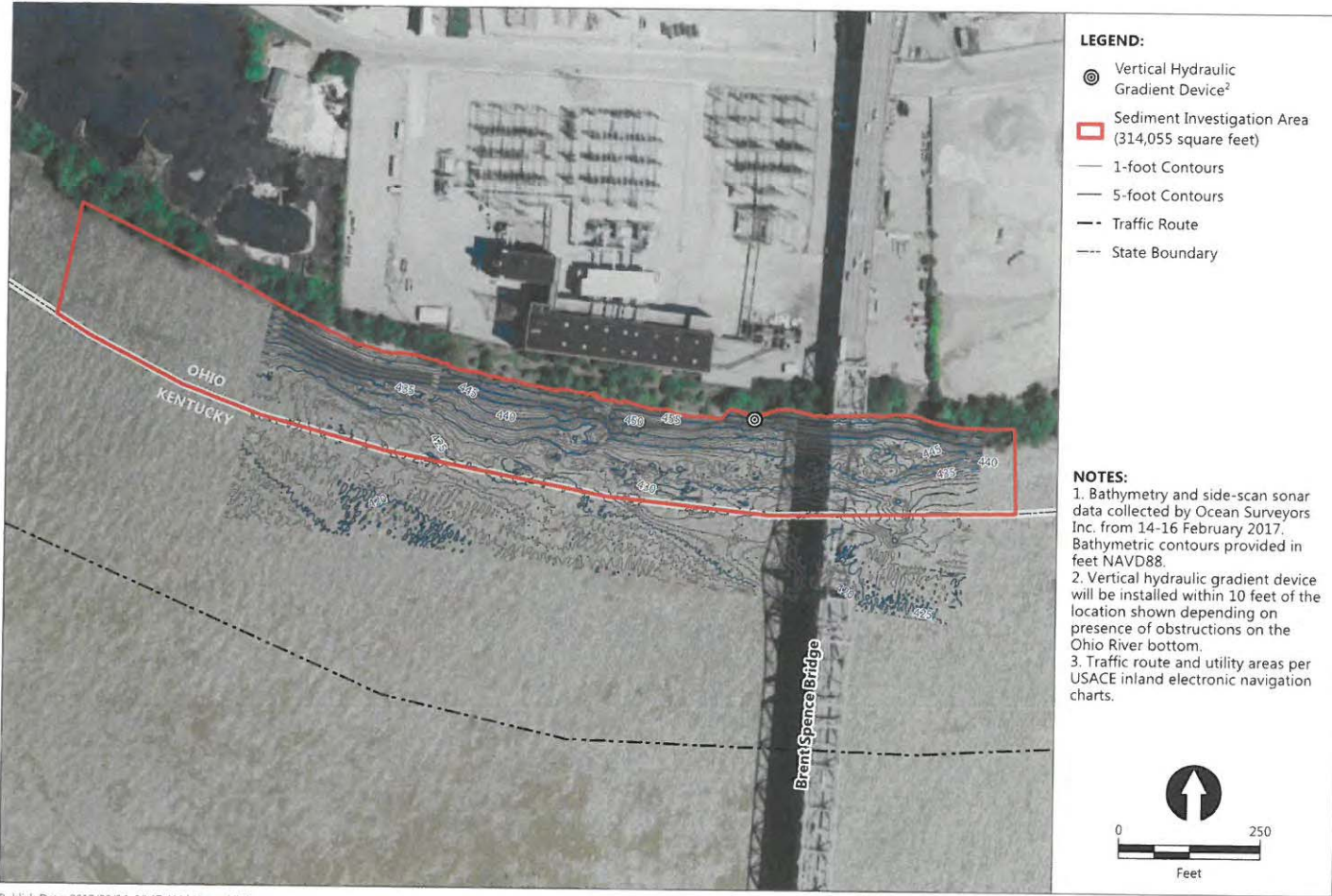
DISTRICT 08
 PERMIT DEPARTMENT

OCT 24 2017

OHIO DEPARTMENT
 OF TRANSPORTATION

Figure 3
 East End Background Sampling Area
 Permit Application Supplement
 East End and West End Sites

DRAFT

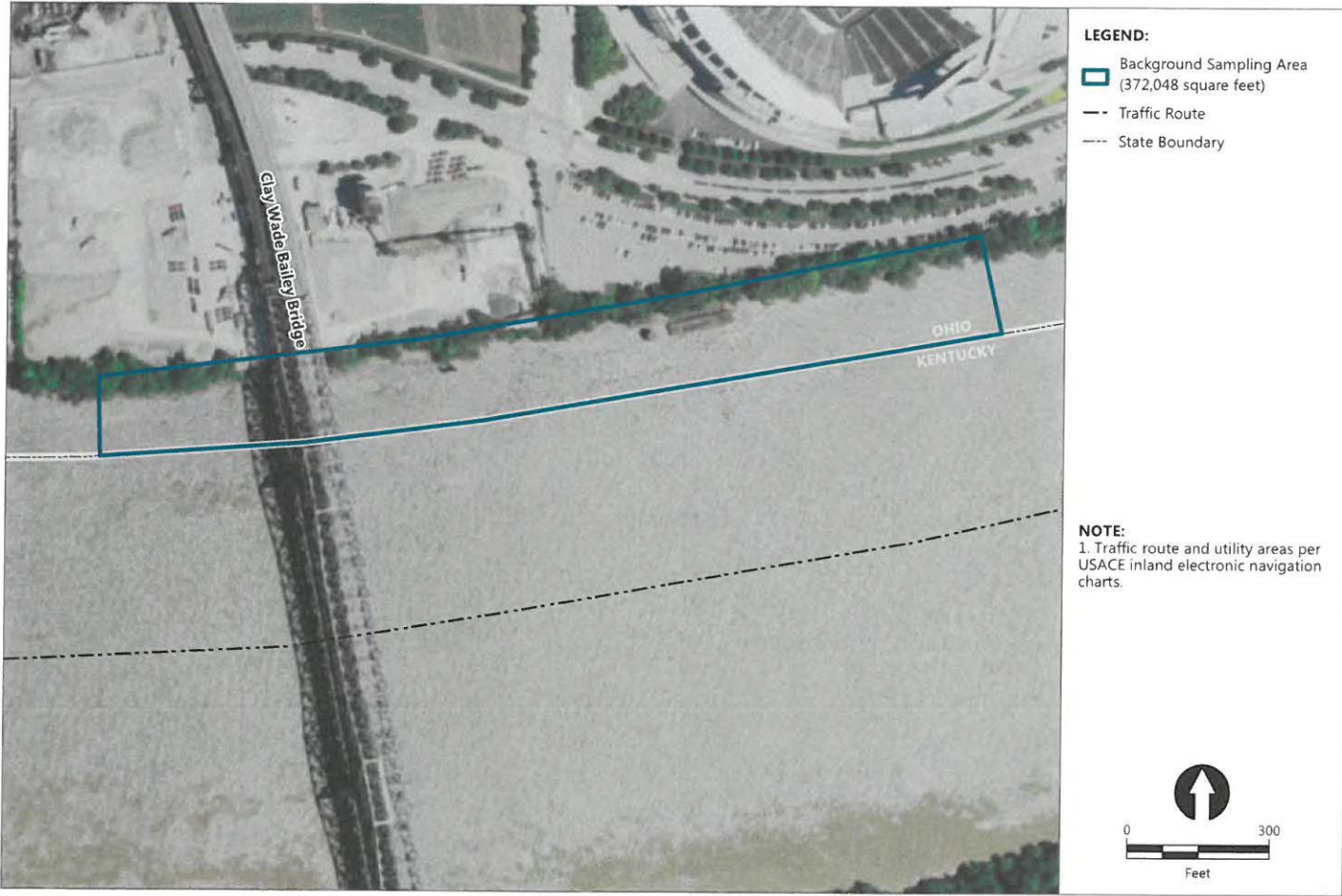


Publish Date: 2017/09/14, 10:47 AM | User: ckbilinger
 Filepath: \\orcas\gis\Jobs\Duke_Energy_1290\West_End_Site\Maps\SamplingPlan\AQ_SedimentInvestigationArea_WestEnd_8pt5x11L.mxd



DISTRICT 08
 PERMIT DEPARTMENT
 OCT 24 2017
 OHIO DEPARTMENT
 OF TRANSPORTATION

Figure 4
 West End Sediment Investigation Area
 Permit Application Supplement
 East End and West End Sites



Publish Date: 2017/09/14, 10:44 AM | User: ckiblinger
 Filepath: \\orcas\gis\Jobs\Duke_Energy_1290\West_End_Site\Maps\SamplingPlan\AQ_BackgroundSampling_WestEnd_8pt5x11L.mxd

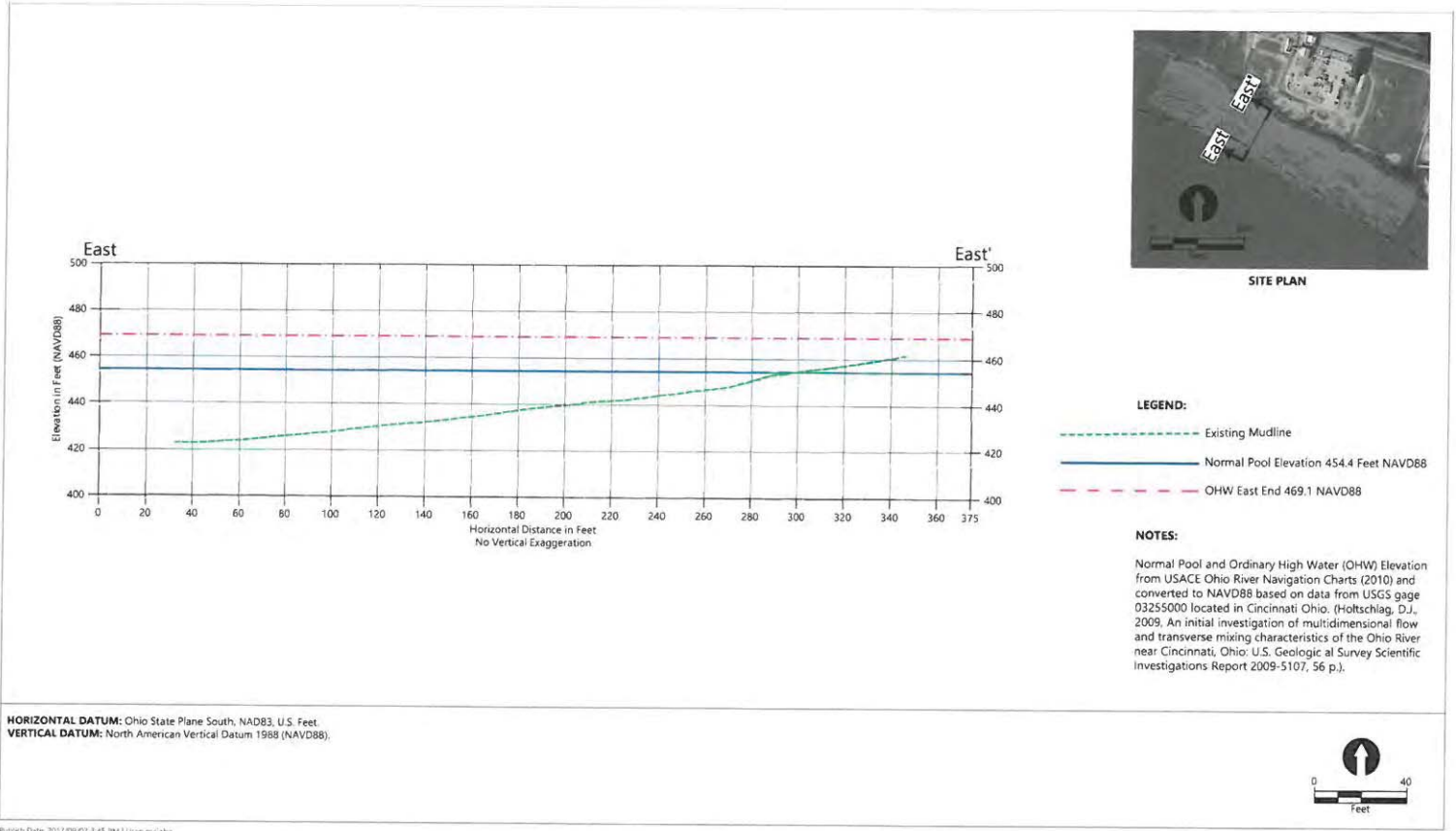


DISTRICT 08
 PERMIT DEPARTMENT

 OCT 24 2017

 OHIO DEPARTMENT
 OF TRANSPORTATION

Figure 5
 West End Background Sampling Area
 Permit Application Supplement
 East End and West End Sites



DISTRICT 08
 PERMIT DEPARTMENT
 OCT 24 2017
 OHIO DEPARTMENT
 OF TRANSPORTATION

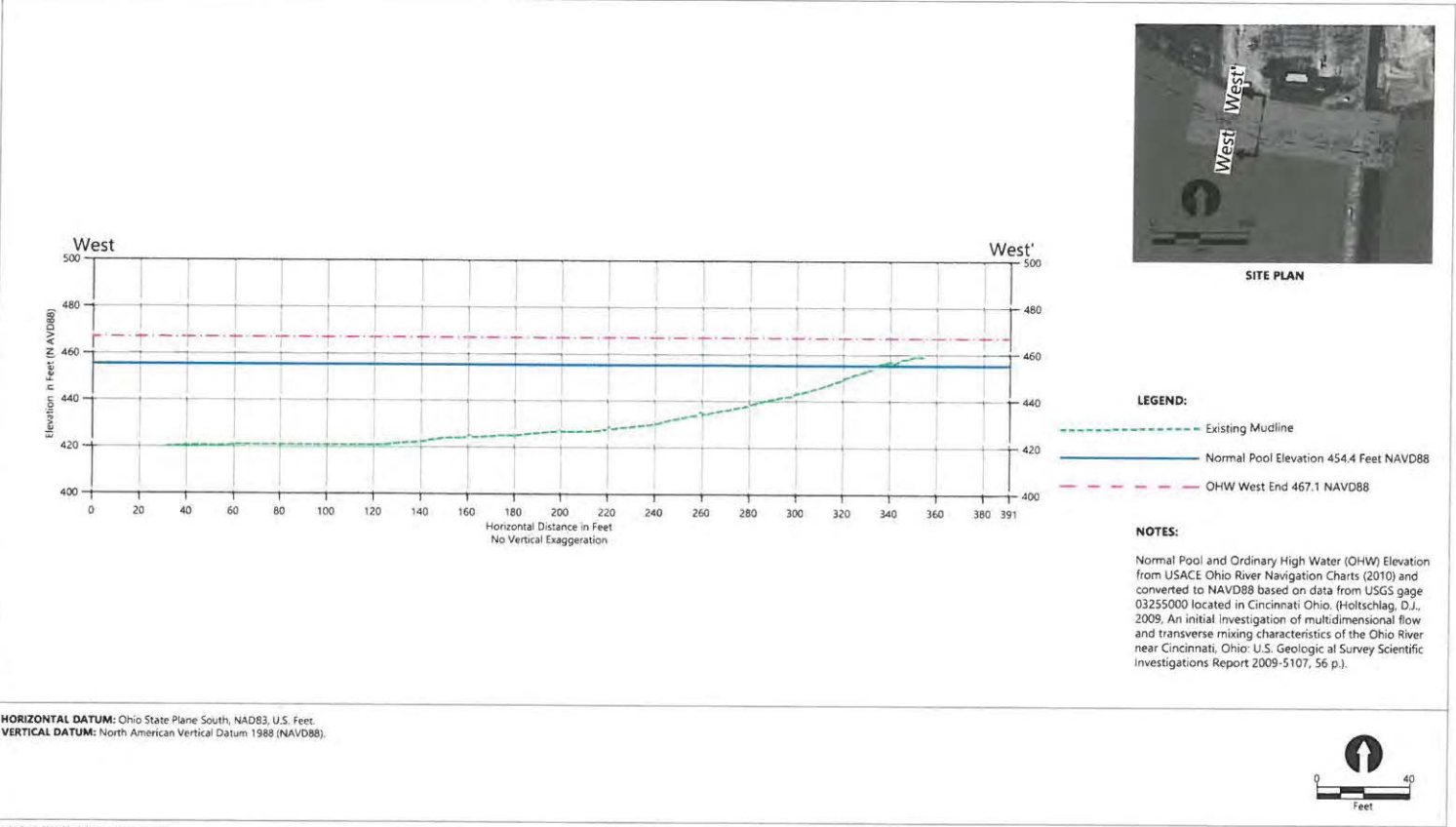
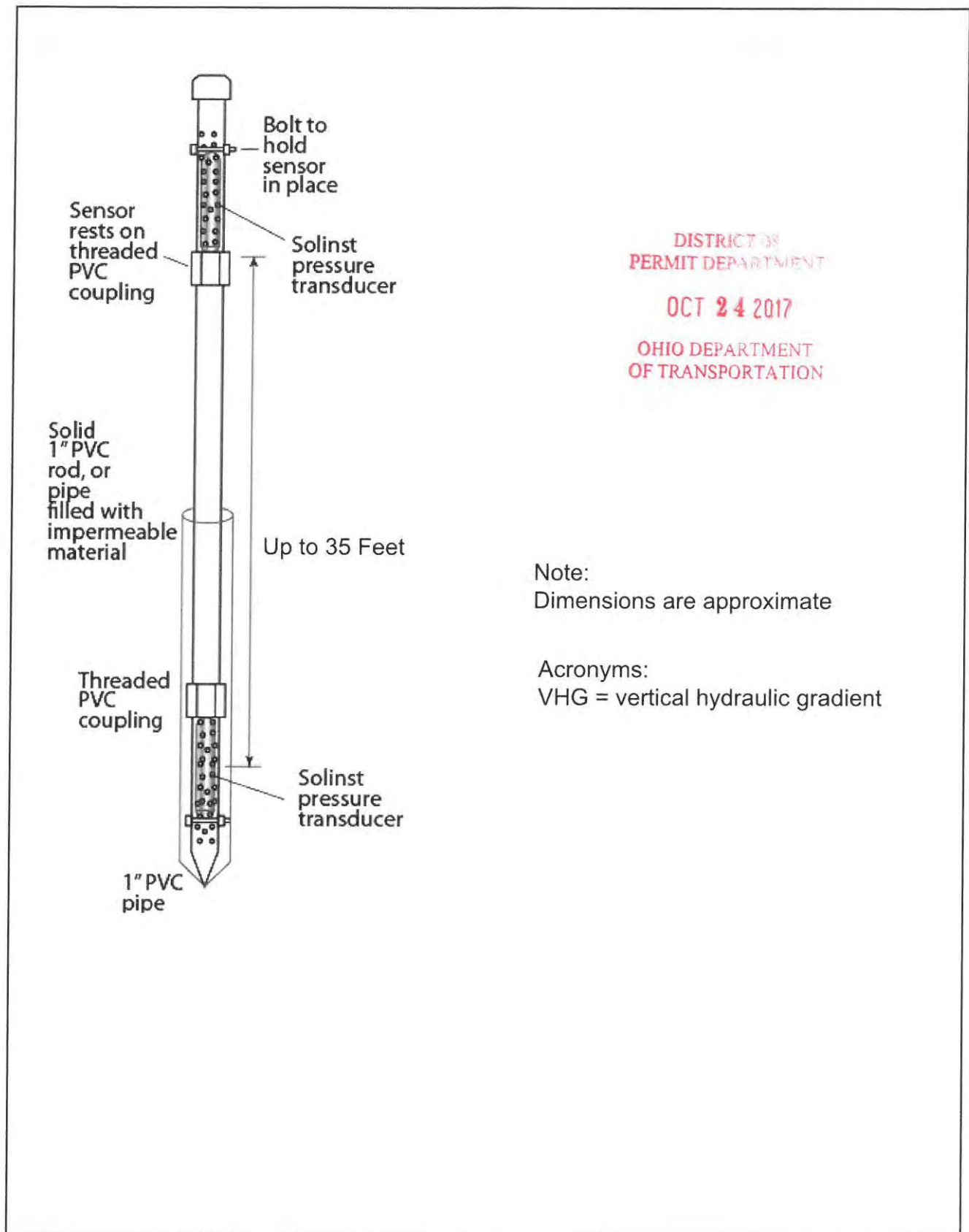


Figure 7
 West End Cross Section
 Permit Application Supplement
 East End and West End Sites

DISTRICT 08
 PERMIT DEPARTMENT
 OCT 24 2017
 OHIO DEPARTMENT
 OF TRANSPORTATION



West End and East End Sediment Investigation Areas and Background Sampling Areas (sites) located between mile markers 470 and 472 (Figure 1). As shown on Figures 2 and 3, two of the four sites, the West End Sediment Investigation Area and West End Background Sampling Area, extend under the Brent Spence Highway (I-75) and Clay Wade Bailey (US 42) bridges. Work at the East End areas is outside of Ohio Department of Transportation's right-of-way.

The purpose of the proposed project is to determine if material associated with historical operations is present in the river adjacent to the upland sites. As discussed in the attached Permit Supplement, up to 52 sediment cores and 30 grabs and several surface water samples will be collected from the West End Sediment Investigation Areas and Background Sampling Areas. Vertical hydraulic gradient devices will also be installed at the Sediment Investigation Area to aid in characterizing the subsurface soils and sediments.

Anchor QEA will conduct and lead the sampling effort. Sediment samples will be collected underneath and on both sides of the Brent Spence and Clay Wade Bailey bridges. All work will be conducted from a small boat and/or a barge staged on the Ohio River and adjacent to an upland property at 655 Mehring Way, Cincinnati, Ohio, which is owned by Duke Energy. When not sampling, the barge and/or vessel will be secured in a safe anchorage or dock, as determined by owner/operator, so as to not interfere with normal river traffic. No upland staging will be needed, and the State of Ohio right-of-way will not be used for site access.

Utility Clearance

Prior to any intrusive investigation activities, the State of Ohio utility mark-out protocol (Ohio Utilities Protection Service or O.U.P.S.) will be completed to identify any buried utilities within or near the project. Identified utilities will be marked, added to project electronic mapping, and have a buffer of at least 50 feet so no sample is targeted within 50 feet of a known utility. If a larger buffer is requested or required, it will be created on an as-needed basis and sampling locations will be moved farther away from the marked utility but still be located within the sites.

Other Permits

Other appropriate permits will be obtained prior to execution of the proposed work. Below is a summary of required project approvals:

- U.S. Army Corps of Engineers (USACE), Louisville District; Section 404 Approval:(application submitted):
 - Kentucky Department of Fish and Wildlife Resources state-listed sensitive species coordination
 - Ohio Department of Natural Resources state-listed sensitive species coordination
- USACE Notice to Navigation Interests:
 - U.S. Coast Guard navigation coordination (via the Notice to Navigation Interests)

From: [Loeffler, Pamela J CIV USARMY CELRL \(US\)](#)
To: [Wright-Ng, Kristen](#)
Cc: [Todd Bachand](#)
Subject: RE: LRL-2017-960 (UNCLASSIFIED)
Date: Tuesday, May 07, 2019 8:22:25 AM

CAUTION: External Email

CLASSIFICATION: UNCLASSIFIED

Dear Ms. Wright-Ng,

This is to confirm that the work outlined below is covered under the Nationwide Permit verification letter No. LRL-2017-960, dated December 14, 2017. This letter verified the proposed activities under Nationwide Permits No. 5, Scientific Measurement Devices and No. 6, Survey Activities, as published in the Federal Register dated January 6, 2017. According to the letter, only notice to navigation interests is required prior to the work. No additional information is required.

If you have any further questions, please do not hesitate to contact me.

Respectfully,

Pam Loeffler
Regulatory Specialist
Regulatory Division
U.S. Army Corps of Engineers, Louisville
502-315-6693

Please visit our website at <http://www.lrl.usace.army.mil> Click on "How do I...Obtain a permit"

Please comment on our service. Our National Customer Service Survey is located at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey

-----Original Message-----

From: Wright-Ng, Kristen [mailto:KWright-Ng@haleyaldrich.com]
Sent: Monday, May 6, 2019 11:13 AM
To: Loeffler, Pamela J CIV USARMY CELRL (US) <Pamela.J.Loeffler@usace.army.mil>
Cc: Todd Bachand <Todd.Bachand@duke-energy.com>; Wright-Ng, Kristen <KWright-Ng@haleyaldrich.com>
Subject: [Non-DoD Source] LRL-2017-960

Dear Ms. Loeffler,

As we discussed on the telephone on 4/30/2019, we, on behalf of Duke Energy Ohio, Inc., are

planning a proposed environment sediment investigation in the Ohio River between mile markers 466 and 467 for the East End Site and between mile markers 470 and 472 at the West End Site in June, July, and August 2019.

The proposed scope of work for the environmental sediment investigation scheduled for the summer 2019 includes sediment borings via sonic drilling, direct push probing using a remote sensor tool called TarGOST, and the collection of samples for analytical testing. The proposed environmental sediment investigation will be conducted from a barge or boat which will be secured by steel spuds and/or anchors during the boring operations. A Notice to Navigation Interests will be provided to the Corps of Engineers two weeks prior to commencement of the work with the required information listed in the existing authorization.

Per our discussion, please confirm that the existing authorization LRL-2017-960 (dated 14 December 2017, valid until 18 March 2022) under the provision of 33 CFR 330 A Nationwide Permit No. 5 Scientific Measurement Devices and No. 6 Survey Activities is valid for our proposed activities and environmental sediment investigation. Further, please let us know if there is any additional information you need outside of the Notice to Navigation Interests.

We look forward to your reply,

Kristen

Kristen M. Wright-Ng

Project Manager

Haley & Aldrich, Inc.

T: 703.336.6215

C: 860.462.4057

Blockedwww.haleyaldrich.com <Blocked<http://www.haleyaldrich.com/>>

CLASSIFICATION: UNCLASSIFIED



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE KY 40201-0059

REPLY TO
ATTENTION OF:

December 14, 2017

Regulatory Division
North Branch
ID No. LRL-2017-960-jea

Mr. Todd Bachand
Duke Energy Ohio, Inc.
139 E. 4th Street
Cincinnati, Ohio 45202

Dear Mr. Bachand:

This is in regard to your request for authorization concerning the proposed geotechnical borings on the Ohio River between Miles 466 and 467 for the East End Site located at Section 23, Township 1 North Range 4 East in Hamilton County, Ohio. Additionally, you plan to temporarily install VHG devices within the sediment to collect data for approximately 6 months. The work would be conducted from a barge or boat which would be secured by steel spuds and/or by anchors during the boring operations. The limited near shore work to collect surface grabs at the exposed shore would be conducted via a hand auger or trowel/shovel if the area is exposed at the time of sampling. Periodic and final removal of the VHG devices would be conducted using divers or mechanical equipment mounted on a barge or small boat. The information supplied by you was reviewed to determine whether a Department of the Army (DA) permit will be required under the provisions of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.

A review of the proposal indicates the work would be authorized under the provisions of 33 CFR 330 A. Nationwide Permit (NWP) No. 5, Scientific Measurement Devices and No. 6, Survey Activities, as published in the Federal Register January 6, 2017. Under the provisions of this authorization you must comply with the enclosed Terms and General Conditions for Nationwide Permit No. 5 and No. 6, and the following Special Conditions:

1. In order to inform all necessary interests (Notice to Navigation Interests) in a timely manner, you must furnish the Corps of Engineers, ATTN: CELRL-OP-TM, a written notice 2 weeks prior to commencement of the work. This written notice should include the following information: name, type and number of equipment, duration of project, hours of operation, location of equipment during non-work hours, any marine radios available, contact person and phone number, and any other pertinent data.
2. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized

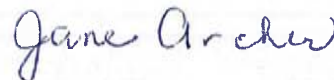
representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

You must also comply with the enclosed Water Quality Certification (WQC) Conditions for Nationwide Permit No. 5 and No. 6, dated March 17, 2017, issued by the Ohio Environmental Agency (OEPA). Once you obtain your certification, or if no application was required, you may proceed with the project without further contact or verification from us.

This verification is valid until **March 18, 2022**. The enclosed Compliance Certification must be submitted to the District Engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later. Note that we also perform periodic inspections to ensure compliance with our permit conditions and applicable Federal laws. A copy of this letter is being sent to your agent and the coordinating agencies (see enclosure for addresses).

If you have any questions, please contact this office by writing to the above address, ATTN: CELRL-RDN, or by calling me at (502) 315-6682. All correspondence pertaining to this matter should refer to our ID No. LRL-2017-960-jea.

Sincerely,

A handwritten signature in blue ink that reads "Jane Archer".

Jane Archer
Regulatory Specialist
Regulatory Branch

Enclosures

Terms for Nationwide Permit No. 5
Scientific Measurement Devices

Devices, whose purpose is to measure and record scientific data, such as staff gages, tide and current gages, meteorological stations, water recording and biological observation devices, water quality testing and improvement devices, and similar structures. Small weirs and flumes constructed primarily to record water quantity and velocity are also authorized provided the discharge is limited to 25 cubic yards. Upon completion of the use of the device to measure and record scientific data, the measuring device and any other structures or fills associated with that device (e.g., foundations, anchors, buoys, lines, etc.) must be removed to the maximum extent practicable and the site restored to pre-construction elevations. (Authorities: Sections 10 and 404)

Terms for Nationwide Permit No. 6 – Survey Activities

Survey activities, such as core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, sample plots or transects for wetland delineations, and historic resources surveys. For the purposes of this NWP, the term “exploratory trenching” means mechanical land clearing of the upper soil profile to expose bedrock or substrate, for the purpose of mapping or sampling the exposed material. The area in which the exploratory trench is dug must be restored to its pre- construction elevation upon completion of the work and must not drain a water of the United States. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. This NWP authorizes the construction of temporary pads, provided the discharge does not exceed 1/10-acre in waters of the U.S. Discharges and structures associated with the recovery of historic resources are not authorized by this NWP. Drilling and the discharge of excavated material from test wells for oil and gas exploration are not authorized by this NWP; the plugging of such wells is authorized. Fill placed for roads and other similar activities is not authorized by this NWP. The NWP does not authorize any permanent structures. The discharge of drilling mud and cuttings may require a permit under section 402 of the Clean Water Act. (Authorities: Sections 10 and 404)



**US Army Corps
of Engineers**
Louisville District

2017 Nationwide Permit General Conditions

The following General Conditions must be followed in order for any authorization by NWP to be valid:

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.
(b) Any safety lights and signals prescribed by the US Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody; including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.
9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open water management activities, and each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).
10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.
13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.
14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.
15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.
16. Wild and Scenic Rivers. (a) No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.
(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.
(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>
17. Tribal Rights. No activity may impair tribal rights (including treaty rights), protected tribal resources, or tribal lands.
18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on the listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.
(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification (PCN) to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the PCN must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" on listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete PCN. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from Corps.

(d) As a result of formal or informal consultation with the USFWS or NMFS the district engineer may add species-specific permit conditions to the NWP's.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will review the ESA section 10(a)(1)(B) permit, and if he or she determines that it covers the proposed NWP activity, including any incidental take of listed species that might occur as a result of conducting the proposed NWP activity, the district engineer does not need to conduct a separate section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete PCN whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.nmfs.noaa.gov/pr/species/esa> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those

requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause an effect on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, and adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the US are not authorized by NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWP's 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWP's only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g. conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on the both sides of a stream or if the waterbody is a lake or coastal waters. Then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g. riparian areas and/or wetlands compensation) based on what is best for the aquatic environmental on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWP's, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation if the use of mitigation bank or in-lieu fee program credits is not appropriate and practicable.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWP's. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the minimal impact requirement for the NWP's.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality

Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or USEPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(f)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the work and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally

authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires Section 408 permission is not authorized by the NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification (PCN). (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification. The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed activity;
- (3) Identify the specific NWP or NWPs the prospective permittee wants to use to authorize the proposed activity;
- (4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres; linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWPs(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other water for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an

illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that may be affected by the proposed activity. For any NWP activity that requires pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. Federal permittees must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) Form of PCN Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require preconstruction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line or ordinary high water mark.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural

resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of PCN notifications to expedite agency coordination.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

March 17, 2017

The Chief of Engineers
HQUSACE
Attn: CECW-OR
Washington, D.C. 20314-1000

By: [Signature] Date: 3/17/17

Ohio EPA MAR 17 '17
Entered Directors Journal

Re: All Counties, Cities and Townships in Ohio
Grant of Clean Water Act Section 401 Water Quality Certification
Authorization of discharge of dredged or fill material to various waters of the State for the following Nationwide Permits as published in the January 6, 2017, *Federal Register* (Volume 82, Number 4)
Ohio EPA ID Number 165184

Dear Stakeholder:

Pursuant to section 401 of the Federal Water Pollution Control Act, 33 U.S.C. section 1341; Ohio Revised Code chapters 119 and 6111; Ohio Administrative Code chapters 3745-1, 3745-32 and 3745-49; and, the proposed United States Army Corps of Engineers (the Corps) regional conditions public noticed on June 14, 2016, I hereby certify that the Nationwide Permits (NWP) described herein as issued in the January 6, 2017 *Federal Register* and as listed below will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act. These certifications are specifically limited to Section 401 Water Quality Certifications (401 WQC) with respect to water pollution and do not relieve the applicant of further certifications or permits as may be necessary under applicable state and federal laws and/or local ordinances. The Corps Civil Works Projects in the State of Ohio are subject to the general and special limitations and conditions of this certification.

I have determined that any lowering of water quality in various waters of the state as authorized by these certifications is necessary. I have considered the technical, social and economic factors concerning these applications and their impact on waters of the state. These certifications are issued for impacts to waters of the state that may occur pursuant to activities authorized by the NWPs, as listed below, provided the specified certification conditions are satisfied.

Nationwide Permits

1. Aids to Navigation (Section 10 Only - No 401 WQC Required)
2. Structures in Artificial Canals (Section 10 Only - No 401 WQC Required)
3. Maintenance
4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities
5. Scientific Measurement Devices
6. Survey Activities

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 2 of 41

7. Outfall Structures and Associated Intake Structures
8. Oil and Gas Structures on the Outer Continental Shelf (Section 10 Only - No 401 WQC Required)
9. Structures in Fleeting and Anchorage Areas (Section 10 Only - No 401 WQC Required)
10. Mooring Buoys (Section 10 Only - No 401 WQC Required)
11. Temporary Recreational Structures (Section 10 Only - No 401 WQC Required)
12. Utility Line Activities
13. Bank Stabilization
14. Linear Transportation Projects
15. U.S. Coast Guard Approved Bridges
16. Return Water From Upland Contained Disposal Areas
17. Hydropower Projects (Individual 401 WQC Required)
18. Minor Discharges
19. Minor Dredging
20. Response Operations for Oil or Hazardous Substances
21. Surface Coal Mining Activities (Individual 401 WQC Required)
22. Removal of Vessels
23. Approved Categorical Exclusions
24. Indian Tribe or State Administered Section 404 Programs (Section 10 Only - No 401 WQC Required)
25. Structural Discharges
26. [Reserved]
27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities
28. Modifications of Existing Marinas (Section 10 Only - No 401 WQC Required)
29. Residential Developments
30. Moist Soil Management for Wildlife
31. Maintenance of Existing Flood Control Facilities
32. Completed Enforcement Actions
33. Temporary Construction, Access, and Dewatering
34. Cranberry Production Activities
35. Maintenance Dredging of Existing Basins (Section 10 Only - 401 WQC Required)
36. Boat Ramps
37. Emergency Watershed Protection and Rehabilitation
38. Cleanup of Hazardous and Toxic Waste
39. Commercial and Institutional Developments
40. Agricultural Activities
41. Reshaping Existing Drainage Ditches
42. Recreational Facilities
43. Stormwater Management Facilities
44. Mining Activities (Individual 401 WQC Required)
45. Repair of Uplands Damaged by Discrete Events
46. Discharges in Ditches (Individual 401 WQC Required)
47. [Reserved]

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 3 of 41

- 48. Commercial Shellfish Aquaculture Activities (Individual 401 WQC Required)
- 49. Coal Remining Activities
- 50. Underground Coal Mining Activities (Individual 401 WQC Required)
- 51. Land-Based Renewable Energy Generation Facilities
- 52. Water-Based Renewable Energy Generation Pilot Projects (Individual 401 WQC Required)
- 53. Removal of Low-Head Dams
- 54. Living Shorelines

**PART ONE: GENERAL LIMITATIONS AND CONDITIONS FOR ALL OHIO EPA
CERTIFIED NATIONWIDE PERMITS**

A. CULVERTS

For intermittent and perennial streams:

- 1. When practicable, bottomless or buried culverts are required when culvert size is greater than 36" in diameter. This condition does not apply if the culverts have a gradient of greater than -1% grade or installed on bedrock. A buried culvert means that the bottom 10% by dimension shall be buried below the existing stream bed elevation.
- 2. The culvert shall be designed and sized to accommodate bankfull discharge and match the existing depth of flow to facilitate the passage of aquatic organisms.
- 3. When practicable, culverts shall be installed at the existing streambed slope, to allow for the natural movement of bedload and aquatic organisms.

B. BEST MANAGEMENT PRACTICES

- 1. Unless subject to a more specific storm water National Pollutant Discharge Elimination System (NPDES) permit, all best management practices for storm water management shall be designed and implemented in accordance with the most current edition of the NPDES construction general permit available at: <http://www.epa.ohio.gov/dsw/storm/index.aspx>, or any watershed specific construction general permit.
- 2. Sediment and erosion control measures and best management practices must be designed, installed, and maintained in effective operating condition at all times during construction activities as required by applicable NPDES permits. Proper maintenance ensures corrective measures will be implemented for failed controls within 48 hours of discovery.
- 3. For perennial and intermittent streams, in-stream sediment control measures shall not be utilized, with the exception of turbidity curtains parallel to the stream

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 4 of 41

bank, for the purpose of sediment collection. All sediment and erosion control measures shall be entirely removed and the natural grade of the site restored once construction is completed.

4. All avoided water resources and associated buffers/riparian areas shall be demarcated in the field and protected with suitable materials (e.g., silt fencing, snow fencing, signage, etc.) prior to site disturbance. These materials shall remain in place and be maintained throughout the construction process and shall be entirely removed once construction is completed.
5. Disturbance and removal of vegetation from the project construction area is to be avoided where possible and minimized to the maximum extent practicable. Entry to surface waters shall be through a single point of access to the maximum extent practicable to minimize disturbance to riparian habitat. Unavoidable temporary impacts to forested riparian habitat shall be restored as soon as practicable after in-water work is complete using tree and shrub species native to the specific ecoregion where the project is located.
6. All dredged material placed at an upland site shall be controlled so that sediment runoff to adjacent surface waters is minimized to the maximum extent practicable.
7. Straw bales shall not be used as a form of sediment control unless used in conjunction with another structural control such as silt fencing. Straw bales may be utilized for purposes of erosion control such as ditch checks.
8. Heavy equipment shall not be placed below the ordinary high water mark of any surface water, except when no other alternative is practicable.
9. Temporary fill for purposes of access or staging shall consist of suitable non-erodible material and shall be maintained to minimize erosion.
10. Chromated copper arsenate (CCA) and creosote treated lumber shall not be used in structures that come into contact with waters of the state.
11. All dewatering activities must be conducted in such a manner that does NOT result in a violation of water quality standards.
12. All areas of final grade must be protected from erosion within seven days.
13. All disturbed areas which remain dormant in excess of fourteen days must be protected from erosion within seven days from the last earth disturbing activity.
14. In the event of authorized in-stream activities, provisions must be established to redirect the stream flow around or through active areas of construction in a stabilized, non-erosive manner to the maximum extent possible.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 5 of 41

C. MITIGATION

1. Compensatory mitigation is required for the discharge of dredged or fill material into wetlands for permanent impacts exceeding 0.10 acres.
2. When required, compensatory mitigation shall be provided in accordance with chapters 3745-1 and 3745-32 of the Ohio Administrative Code.
3. When compensatory mitigation will be provided wholly or in part at a mitigation bank or through an in-lieu fee program, credit purchase shall only be authorized at those banks or in-lieu fee programs approved by the Interagency Review Team (IRT) and have an active instrument signed by the director of Ohio EPA.
4. Compensatory mitigation for stream impacts, if required, shall be conducted in accordance with the requirements in the applicable Nationwide Permit.

D. DIRECTOR'S AUTHORIZATION

1. In accordance with the procedures outlined in Appendix A, Ohio EPA may grant coverage under this certification for any project that does not meet one or more of the terms and conditions for eligibility of this certification or where the district engineer has been granted authority to waive certain requirements. Coverage may be granted when Ohio EPA determines, consistent with the special limitations and conditions for each certification, and after considering comments received on the requested director's authorization, that a project will have such a minimal impact on water quality that an individual 401 WQC is not necessary provided all other terms and conditions of this certification have been met. If a director's authorization is not granted, an individual 401 WQC must be obtained. In no case may a director's authorization issued under this certification exceed an impact threshold authorized by the Corps' Nationwide Permit.

E. NOTIFICATION TO OHIO EPA

1. For any activity proposed to be authorized under NWPs 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 18, 22, 23, 25, 27, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 45, 49, 51, 53, and 54, when a PCN is not required by the Corps, notification to Ohio EPA is required for impacts to the following resources:
 - a. category 3 wetlands;
 - b. ≥ 0.10 acres of wetland.
2. Notifications required by E.1 should contain all information required by Nationwide Permit General Condition 32(b) and (c), Regional General Condition 6, and Appendix B.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 6 of 41

3. For any activity proposed to be authorized under NWP's 4, 6, 7, 12, 13, 14, 15, 16, 18, 22, 23, 25, 29, 30, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 45, 51, 53, and 54, when a PCN is not required by the Corps, notification to Ohio EPA is required for impacts to streams located in possibly eligible areas as depicted in the GIS NWP's Stream Eligibility Map.
4. Notifications required by E.3 should contain all information required by Nationwide Permit General Condition 32(b) and (c), Regional General Condition 6, and Appendix C.
5. When notification to Ohio EPA is required by conditions E.1 and E.3 above, the applicant shall not begin the activity until either:
 - a. He or she is notified in writing by Ohio EPA that the activity may proceed under the 401 WQC for the NWP; or
 - b. 45 calendar days have passed from Ohio EPA's receipt of the notification and the applicant has not received written notice from Ohio EPA that additional information is necessary or that an individual 401 WQC is required.

F. MISCELLANEOUS

1. Authorization under this certification does not relieve the certification holder from the responsibility of obtaining any other federal, state or local permits, approvals or authorizations.
2. For purposes of this certification the Corps' definition of single and complete linear and non-linear projects shall be applied to all conditions regarding impacts, mitigation, and director's authorizations. If a project includes impacts that are ineligible under this certification, an applicant must apply for an individual 401 WQC or a director's authorization for those impacts to resources that do not meet one or more of the terms and conditions within this certification.
3. For purposes of this certification temporary impact means temporary activities which facilitate the nature of the activity or aid in the access, staging, or development of construction that are short term in nature and which are expected, upon removal of the temporary impact, to result in the surface water returning to conditions which support pre-impact biological function with minimal or no human intervention within 12 months following the completion of the temporary impact. Examples of temporary impacts include, but are not limited to access roads, work pads, staging areas, and stream crossings, including utility corridors. Activities that result in a wetland conversion (e.g. forested to non-forested) are not considered temporary impacts.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 7 of 41

4. In the event that the issuance of a nationwide permit by the Corps requires individual 401 WQC for an activity that constitutes an emergency as defined in 33 CFR 325.2(e)(4), the limitation and/or condition requiring the individual 401 WQC is not applicable and the project may proceed upon approval by the Corps provided all other terms of this certification, including mitigation, are met.
5. Representatives from Ohio EPA, Division of Surface Water will be allowed to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of this certification. This includes, but is not limited to, access to and copies of any records that must be kept under the conditions of this certification; and, authorization to sample and/or monitor any discharge activity or mitigation site. Ohio EPA will make a reasonable attempt to notify the applicant of its intention to inspect the site in advance of that inspection.
6. Impacts as referenced in this certification consist of waters of the state directly impacted by the placement of fill or dredged material.
7. In accordance with the procedures outlined in Appendix B, and where specifically required in the special limitations and conditions of this certification, an applicant proposing to impact a wetland shall perform a wetland characterization analysis consistent with the Ohio Rapid Assessment Method (ORAM) to demonstrate wetland category for all projects requiring a PCN to the Corps or notification to Ohio EPA.
8. In accordance with the procedures outlined in Appendix C, and where specifically required in the special limitations and conditions of this certification, an applicant proposing to impact a stream shall determine the eligibility of the stream proposed for impact for all projects requiring a PCN to the Corps or notification to Ohio EPA.

**PART TWO: SPECIAL LIMITATIONS AND CONDITIONS FOR OHIO EPA
CERTIFIED NATIONWIDE PERMITS**

Nationwide Permit 1 (Aids to Navigation)

No 401 WQC required.

Nationwide Permit 2 (Structures in Artificial Canals)

No 401 WQC required.

Nationwide Permit 3 (Maintenance)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 8 of 41

2. Temporary or permanent impacts to category 3 wetlands are limited to less than 0.1 acres for activities involving the repair, maintenance, replacement, or safety upgrades to existing infrastructure that meets the definition of public need. Ohio EPA will make the determination if a project meets public need during the ORAM verification process.
3. Temporary or permanent impacts to category 1 and category 2 wetlands are limited to 0.50 acres.
4. This certification does not authorize the replacement of existing structures that are open to the flow of water with structures that are not open to the flow of water.
5. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.
6. Replacement vertical bulkheads shall not be placed more than an average of one foot waterward of the intersection of the ordinary high water mark of the waterbody and the existing shoreline.
7. Removal of accumulated sediment shall occur only once per year and shall be limited to low-flow conditions, except in cases of emergency situations that threaten life or property.
8. For projects which involve temporary impacts to wetlands: upon the cessation of earth moving activities, any hydric topsoil removed from a wetland shall be separated and saved for later placement as the topmost backfill layer when the wetland is restored to grade.

Nationwide Permit 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP's Stream Eligibility Map, Appendix C;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 9 of 41

- d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 5 (Scientific Measurement Devices)

- 1. Ohio state certification general limitations and conditions apply to this nationwide permit.
- 2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. state wild and scenic rivers;
 - d. national wild and scenic rivers; and
 - e. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
- 3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 6 (Survey Activities)

- 1. Ohio state certification general limitations and conditions apply to this nationwide permit.
- 2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts, other than the backfilling of exploratory-type bore holes

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 10 of 41

less than or equal to 12 inches in diameter, are proposed on or in any of the following waters:

- a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 7 (Outfall Structures and Associated Intake Structures)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Except for maintenance activities authorized under this nationwide permit, individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 11 of 41

- e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 8 (Oil and Gas Structures on the Outer Continental Shelf)
No 401 WQC required.

Nationwide Permit 9 (Structures in Fleeting and Anchorage Areas)
No 401 WQC required.

Nationwide Permit 10 (Mooring Buoys)
No 401 WQC required.

Nationwide Permit 11 (Temporary Recreational Structures)
No 401 WQC required.

Nationwide Permit 12 (Utility Line Activities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Except for maintenance activities authorized under this nationwide permit, individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 1 or 2 wetlands when impacts exceed 0.50 acres;
 - b. streams located in ineligible areas as depicted in the GIS NWP's Stream Eligibility Map, Appendix C;
 - c. streams located in possibly eligible areas as depicted in the GIS NWP's Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - d. state wild and scenic rivers;
 - e. national wild and scenic rivers; and

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 12 of 41

- f. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
- 3. Temporary or permanent impacts to category 3 wetlands are limited to less than 0.1 acres for activities involving the repair, maintenance, replacement, or safety upgrades to existing infrastructure that meets the definition of public need. Ohio EPA will make the determination if a project meets public need during the ORAM verification process.
- 4. Temporary or permanent impacts as a result of stream crossings shall not exceed a total of three per stream mile per stream.
- 5. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.
- 6. All hydric soils up to 12 inches in depth within wetlands shall be stockpiled and replaced as the topmost backfill layer. Best management practices, such as silt fencing and soil stabilization, shall be implemented to reduce erosion and sediment run-off into adjacent wetlands.
- 7. Buried utility lines shall be installed at a 90-degree angle to the stream bank to the maximum extent practicable. When a 90-degree angle is not possible, the length of any buried utility line within any single water body shall not exceed twice the width of that water body at the location of the crossing.
- 8. The total width of any excavation, grading or mechanized clearing of vegetation and soil shall not exceed a maximum of 50 feet.

Nationwide Permit 13 (Bank Stabilization)

- 1. Ohio state certification general limitations and conditions apply to this nationwide permit.
- 2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 13 of 41

- d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
- 3. Bioengineering techniques shall be utilized, if practicable.
 - 4. Material used for bank stabilization shall be free from toxic contaminants in other than trace quantities, free of exposed rebar, and free of asphalt, tires, and debris.
 - 5. Material used for bank stabilization may consist of rock, stone, vegetative erosion control measures, broken concrete rubble, and clean soil.
 - 6. Vertical bulkheads shall not be placed more than one foot waterward of the intersection of the ordinary high water mark of the water body and the existing shoreline. Toe stone shall be placed at the base of the vertical bulkhead except in areas where the original shoreline is composed of bedrock and slopes are predominantly greater than 75 percent or where the placement of toe stone will interfere with shipping activity. When required, toe stone shall be placed at an average rate of one-third the total height of the exposed face of the vertical bulkhead at a 2:1 slope.

Nationwide Permit 14 (Linear Transportation Projects)

- 1. Ohio state certification general limitations and conditions apply to this nationwide permit.
- 2. Except for maintenance activities authorized under this nationwide permit, individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 1 and category 2 wetlands when impacts exceed 0.50 acres.
 - b. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 14 of 41

- c. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - d. state wild and scenic rivers;
 - e. national wild and scenic rivers; and
 - f. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. Temporary or permanent impacts to category 3 wetlands are limited to less than 0.1 acres for activities involving the repair, maintenance, replacement, or safety upgrades to existing infrastructure that meets the definition of public need. Ohio EPA will make the determination if a project meets public need during the ORAM verification process.
4. Temporary or permanent impacts as a result of stream crossings shall not exceed a total of three per stream mile per stream.
5. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 15 (U.S. Coast Guard Approved Bridges)

- 1. Ohio state certification general limitations and conditions apply to this nationwide permit.
- 2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 15 of 41

- f. national wild and scenic rivers; and
- g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

Nationwide Permit 16 (Return Water from Upland Contained Disposal Areas)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in the any of following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. This nationwide permit shall be limited to the authorization of the disposal of materials dredged from sites where there are no known areas of contaminated sediments, provided best management practices are used to minimize adverse impacts to water quality.

Nationwide Permit 17 (Hydropower Projects)

Individual 401 WQC is required for the use of this nationwide permit.

Nationwide Permit 18 (Minor Discharges)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 16 of 41

- a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.1 acre;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. This nationwide permit shall not authorize disposal of dredged material into Lake Erie where that is the primary project purpose.

Nationwide Permit 19 (Minor Dredging)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.

Nationwide Permit 20 (Response Operations for Oil and Hazardous Substances)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. This certification does not authorize impacts, temporary or permanent, to wetlands for the purpose of spill response training exercises.

Nationwide Permit 21 (Surface Coal Mining Activities)

Individual 401 WQC is required for the use of this nationwide permit.

Nationwide Permit 22 (Removal of Vessels)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 17 of 41

- a. category 3 wetlands;
- b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
- c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
- d. streams located in possibly eligible areas as depicted in the GIS NWP's Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
- e. state wild and scenic rivers; and
- f. national wild and scenic rivers.

Nationwide Permit 23 (Approved Categorical Exclusions)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. This certification only authorizes activities described in 23 CFR Part 771.117 of the Federal Highway Administration regulations.
3. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in potentially eligible areas as depicted in the GIS NWP's Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 18 of 41

Nationwide Permit 24 (Indian Tribe or State Administered Section 404 Program)
No 401 WQC required.

Nationwide Permit 25 (Structural Discharges)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

Nationwide Permit 26 [Reserved]

Nationwide Permit 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. This certification does not authorize projects where the primary purpose of the project is not the restoration, enhancement and establishment of tidal and non-tidal wetlands and riparian areas and the restoration and enhancement of non-tidal streams and other non-tidal open waters.
3. Bank stabilization activities authorized under this nationwide permit must utilize bioengineering techniques.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 19 of 41

4. This certification does not authorize impacts to more than 0.50 acres of category 2 forested wetlands associated with the construction of a wetland mitigation bank unless Ohio EPA is a signatory to an Interagency Review Team (IRT) instrument which addresses the impact.
5. Temporary and permanent impacts to category 3 wetlands are not authorized under this certification except for impacts to Lake Erie coastal wetlands¹, which are category 3 wetlands for the following reasons:
 - a. the wetland scores less than 60 on the Quantitative Rating of the ORAM, is "hydrologically unrestricted" and contains a predominance of native species within vegetation communities (i.e., they are category 3 wetlands using the Narrative Rating of ORAM), but the wetland has been drained, farmed, or degraded and is unvegetated or sparsely vegetated with wetland annuals or is vegetated with one or several of the following species: *Butomus umbellatus*, *Lythrum salicaria*, *Myriophyllum spicatum*, *Najas minor*, *Phalaris arundinacea*, *Phragmites australis*, *Potamogeton crispus*, and/or *Typha angustifolia*; or
 - b. the wetland is diked and managed ("hydrologically restricted"), scores less than 60 on the Quantitative Rating of ORAM, is a category 3 wetland using the Narrative Rating of ORAM because of the presence of state or federally threatened or endangered species, and/or because of the documented presence of significant breeding or non-breeding bird concentration areas, and the proposed activities will not destroy, jeopardize or adversely affect, either directly or indirectly, *the continued existence of the threatened or endangered species*.
6. Impacts to Lake Erie coastal wetlands described above that are authorized under this NWP are as follows (no other impacts to category 3 wetlands except those described below that occur at Lake Erie coastal wetlands are authorized by this certification):
 - a. *Tile alteration*. Removing, altering, disabling drain tile or replacing perforated drain tile with non-perforated drain tile.
 - b. *De-leveling*. Re-grading for the purposes of microtopography to enhance hydrologic diversity, including the creation of shallow scrapes, channels, submerged islands and interconnected areas of deeper water is authorized. Final grade of any excavation, following topsoil replacement if applicable, shall not exceed 60-cm (approximately two feet).

¹ "Lake Erie coastal wetland" means a wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation or along a tributary to Lake Erie that is accessible to fish.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 20 of 41

Replacement of the original excavated topsoil is required for all de-leveling activities except when the seed bank is dominated by invasive vegetation. In these cases, the area must be seeded by using a seed mix of native Ohio vegetation indigenous to the area/region where the project is located and appropriate for the hydrological regime present in the area. Excess spoils that are not able to be incorporated into the re-grading activities shall be deposited in adjacent non-wetland areas, used in other restoration activities listed in this paragraph or trucked to an upland area off-site.

- c. *Ditch plugs and ditch fills.* Ditch plugs and water control structures: Disabling surface drains by filling lengths, provided that the surface drains originate on the property of the project sponsors and have no base flow or installing water control structures (e.g., riser structures, flap gates, fixed weirs, trickle tubes). Ditch plugs may include an emergency spillway to safely route flows back into the ditch below the plug.
- d. *Earthen embankments.* Earthen fill structures that do not exceed 1.8 m (six feet) in height with side slopes of 3:1 or greater with less than 50 acre-feet of storage. The embankments may include rock or vegetated overflow structures to pass base-flow as needed.
- e. *Interior dikes.* Earthen fill structures constructed within the interior of an existing diked and managed wetland for the purpose of improving management of hydrology in the diked wetland in order to facilitate control of invasive plant species, exclude or control invasive animal species, improve habitat features, etc.

Nationwide Permit 28 (Modifications of Existing Marinas)
No 401 WQC required.

Nationwide Permit 29 (Residential Developments)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 21 of 41

- d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 30 (Moist Soil Management for Wildlife)

- 1. Ohio state certification general limitations and conditions apply to this nationwide permit.
- 2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

Nationwide Permit 31 (Maintenance of Existing Flood Control Facilities)

- 1. Ohio state certification general limitations and conditions apply to this nationwide permit.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 22 of 41

2. This certification shall only authorize projects constructed by the Corps and maintained by the Corps or transferred by the Corps to a local sponsor.

Nationwide Permit 32 (Completed Enforcement Actions)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. This certification does not authorize any project with impacts to category 3 wetlands; impacts to category 1 and category 2 wetlands that exceed three acres; or impacts to any stream in excess of 500 linear feet unless Ohio EPA has been informed, in writing, of each specific project that exceeds these criteria and based on this information, has not chosen to issue a State Administrative Order or Consent Order resulting from a State enforcement action.

Nationwide Permit 33 (Temporary Construction, Access and Dewatering)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 23 of 41

4. This certification does not authorize construction or maintenance or modification of marina basins;
5. This nationwide permit shall not authorize temporary construction access and dewatering associated with mining activities.

Nationwide Permit 34 (Cranberry Production Activities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

Nationwide Permit 35 (Maintenance Dredging of Existing Basins)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Temporary or permanent impacts to category 3 wetlands are not authorized under this certification.
3. Temporary or permanent impacts to category 1 and category 2 wetlands are limited to 0.50 acres.

Nationwide Permit 36 (Boat Ramps)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 24 of 41

2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. This nationwide permit shall not authorize boat ramps where dredging is required to establish and maintain water depths necessary for boat launching.

Nationwide Permit 37 (Emergency Watershed Protection and Rehabilitation)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Unless authorized under procedures established in Part One: General Conditions F.4., above, individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 25 of 41

- e. state wild and scenic rivers;
- f. national wild and scenic rivers; and
- g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

Nationwide Permit 38 (Cleanup of Hazardous and Toxic Waste)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Except for emergency response actions required to address immediate threats to public health or the environment, an individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. This certification shall only authorize projects that are performed, ordered or sponsored by state or federal government agency with established legal or regulatory authority.

Nationwide Permit 39 (Commercial and Institutional Developments)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 26 of 41

2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 40 (Agricultural Activities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWP Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 27 of 41

- f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.
 4. This certification shall be used only once per farm. For the purposes of this condition, farm shall be defined to include all individual farm tracts, whether or not such tracts are contiguous, that are owned by the applicant.
 5. This certification does not authorize the construction of farm ponds in streams or wetlands (i.e., non-tidal waters of the United States).

Nationwide Permit 41 (Reshaping Existing Drainage Ditches)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. This certification only authorizes impacts to existing maintained and channelized water conveyances that have been created or previously modified and

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 28 of 41

maintained for the purpose of draining abutting existing agricultural land or existing roadways and meet the following criteria:

- a. the ditch was man-made and is existing; or
 - b. the stream/ditch has existing entrenchment ratios that are less than 1.4 and the proposed dredging impacts do not reduce the sinuosity of the stream/ditch channel.
4. Prior to the commencement of the project, all drainage ditch reshaping projects must be certified in writing by either the Natural Resources Conservation Service or Soil and Water Conservation District or County Engineer in the county where the project occurs, or by a certified professional engineer, that the project complies with the above criteria. In order to be authorized under this paragraph, such certification shall be maintained by the person or entity engaged in the project and a copy shall be sent to: Ohio EPA, Division of Surface Water, Section 401 Unit, P.O. Box 1049, Columbus, Ohio 43216-1049.

Nationwide Permit 42 (Recreational Facilities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 29 of 41

3. This certification does not authorize the construction, modification or expansion of golf courses or ski areas.

Nationwide Permit 43 (Stormwater Management Facilities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.

Nationwide Permit 44 (Mining Activities)

Individual 401 WQC is required for the use of this nationwide permit.

Nationwide Permit 45 (Repair of Uplands Damaged by Discrete Events)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 30 of 41

- b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
- c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
- d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
- e. state wild and scenic rivers;
- f. national wild and scenic rivers; and
- g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

Nationwide Permit 46 (Discharges in Ditches)

Individual 401 WQC is required for the use of this nationwide permit.

Nationwide Permit 47 [Reserved]

Nationwide Permit 48 (Commercial Shellfish Aquaculture Activities)

Individual 401 WQC is required for the use of this nationwide permit.

Nationwide Permit 49 (Coal Remining Activities)

Water quality certification is provided for stream, wetland and open water impacts for surface coal mining within previously mined areas, conducted under a permit issued by the Ohio Department of Natural Resources, Division of Mineral Resources Management (DMRM) with the following conditions:

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. state wild and scenic rivers;
 - c. national wild and scenic rivers; and
 - d. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 31 of 41

3. Impacts to previously-mined stream reaches (ephemeral, intermittent, or perennial) as a result of re-mining and subsequent reclamation will require no further mitigation.

Nationwide Permit 50 (Underground Coal Mining Activities)

Individual 401 WQC is required for the use of this nationwide permit.

Nationwide Permit 51 (Land-Based Renewable Energy Generation Facilities)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.
3. For an individual stream, while the repair or replacement of an existing culvert of any length is not limited by this certification, any culvert extension shall not exceed 300 linear feet.
4. Temporary or permanent impacts as a result of stream crossings shall not exceed a total of three per stream mile per stream.
5. All hydric soils up to 12 inches in depth within wetlands shall be stockpiled and replaced as the topmost backfill layer. Best management practices, such as silt fencing and soil stabilization, shall be implemented to reduce erosion and sediment run-off into adjacent wetlands.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 32 of 41

6. The stockpiling of side cast dredged material in excess of three months requires individual 401 WQC.
7. Buried utility lines shall be installed at a 90-degree angle to the stream bank to the maximum extent practicable. When a 90-degree angle is not possible, the length of any buried utility line within any single water body shall not exceed twice the width of that water body at the location of the crossing.

Nationwide Permit 52 (Water-Based Renewable Energy Generation Pilot Projects)

Individual 401 WQC is required for the use of this nationwide permit.

Nationwide Permit 53 (Removal of Low-Head Dams)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;
 - b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
 - c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
 - d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
 - e. state wild and scenic rivers;
 - f. national wild and scenic rivers; and
 - g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

Nationwide Permit 54 (Living Shorelines)

1. Ohio state certification general limitations and conditions apply to this nationwide permit.
2. Individual 401 WQC is required for use of this nationwide permit when temporary or permanent impacts are proposed on or in any of the following waters:
 - a. category 3 wetlands;

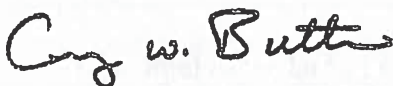
2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 33 of 41

- b. category 1 and category 2 wetlands when impacts exceed 0.50 acres;
- c. streams located in ineligible areas as depicted in the GIS NWP Stream Eligibility Map, Appendix C;
- d. streams located in possibly eligible areas as depicted in the GIS NWPs Stream Eligibility Map determined to be high quality through one of the NWP eligibility flowcharts, Appendix C;
- e. state wild and scenic rivers;
- f. national wild and scenic rivers; and
- g. general high quality water bodies which harbor federally and state listed threatened or endangered aquatic species.

You are hereby notified that this action of the director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within 30 days after notice of the director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the director within three days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

Sincerely,



Craig W. Butler
Director

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 34 of 41

cc: Mike Hatten, Department of the Army, Huntington District, USACE
Scott Hans, Department of the Army, Pittsburgh District, USACE
Diane Kozlowski, Department of the Army, Buffalo District, USACE
Lee Anne Devine, Department of the Army, Louisville District, USACE
Norma Condra, Department of the Army, Louisville District, USACE
Suzanne Chubb, Department of the Army, LRD, USACE
Peter Swenson, United States Environmental Protection Agency, Region V
Dan Everson, Department of the Interior, United States Fish & Wildlife Service
John Kessler, ODNR, Office of Real Estate
Steve Holland, ODNR, Office of Coastal Management
Dave Snyder, Ohio Historical Preservation Office

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 35 of 41

Appendix A
Director's Authorization Process

1. To apply for a director's authorization for coverage under this certification, the applicant must provide to Ohio EPA the following:
 - a. A completed Director's Authorization Request Form available on the "Director's Authorization" tab located at: <http://www.epa.ohio.gov/dsw/401/permitting.aspx>;
 - b. A copy of the pre-construction notification submitted to the Corps including all attachments;
 - c. A copy of the provisional nationwide permit authorization letter issued by the Corps including all attachments and special conditions, if any;
 - d. A copy of the mitigation plan as approved by the Corps, if applicable;
 - e. A detailed description of the conditions within this certification that are not being met;
 - f. A detailed description of any NWP terms and conditions, including impact limits that the Corps district engineer has waived for the project, if applicable;
 - g. A rationale of how the applicant believes the project will minimally impact water quality for those impacts to resources that do not meet one or more of the terms and conditions within this certification, including reason(s) why the resources are unable to be avoided;
 - h. Comments received from the Ohio Department of Natural Resources and United States Fish and Wildlife Service regarding threatened and endangered species or comments from an applicant that has been authorized by these entities to make threatened and endangered species determinations;
 - i. A one-time review fee of \$2000 for the project;
 - j. A detailed description of how the project meets public need, as defined in OAC 3745-1-50, for impacts to category 3 wetlands;
 - k. Documentation as required under Appendix B and C;
 - l. Any other documentation as may be required under this certification.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 36 of 41

2. Upon receipt of the director's authorization request containing items a. through o. outlined above, excluding item c., the director will post the materials on the Ohio EPA, DSW webpage and invite public comment on the request for 15 days. The director will review and consider the comments received during the public comment period before making a decision on the director's authorization.

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 37 of 41



Appendix B
ORAM Verification Process

The ORAM results shall be included with the pre-construction notification (PCN) or notification to Ohio EPA if a PCN is not required by the Corps.

For each wetland proposed for impact the applicant must provide the following information for review in accordance with the ORAM verification procedure:

- a. Complete ORAM forms prepared in accordance with the current ORAM manual;
- b. Wetland delineation prepared in accordance with the current method required by the Corps;
- c. A minimum of four high resolution color photographs taken while facing each of the four cardinal directions of each wetland proposed for impact. Photographs must accurately depict the quality of the wetland and may not include a majority of dying or dead vegetation or excessive cover due to seasonal conditions that vegetation and substrates cannot be observed, such as leaf litter, snow, or ice. Photographs deemed to be insufficient of representing the wetland will be required to be retaken once seasonal conditions are appropriate. Photographs shall be clearly labeled with the wetland name, direction, and date;
- d. USGS topographical map, National Wetlands Inventory map, Soil Survey map and aerial images (both historical and current) which clearly outline the entire wetland boundary; and
- e. Coordination letter from the Ohio Department of Natural Resources (ODNR), Natural Heritage Database indicating the presence or absence of state listed threatened or endangered species or comments from an applicant that has been authorized by ODNR to make threatened and endangered species determinations.

Appendix C
Stream Eligibility Determination Process

1. The stream eligibility results shall be included with the PCN or notification to Ohio EPA if a PCN is not required by the Corps. For each single and complete project with potential impacts to streams, where it is specifically required in the special limitations and conditions of this certification, the applicant shall determine if the streams proposed for impact are eligible for coverage under the 401 WQC for the Nationwide Permits using the following procedure:
 - a. Navigate to the Ohio EPA 401 website at:
<http://www.epa.ohio.gov/dsw/401/permitting.aspx>
 - b. Click on the "Nationwide Permits" tab and then click on the "Stream Eligibility Web Map" link. To download the shapefile from the web map, click on the  in the upper right hand corner of the webpage and select download. To draw project boundaries directly on the web map, click on the  in the upper left hand corner of the webpage.
 - c. Using a GIS program, overlay the project boundary, streams proposed for impact, current aerial imagery, and the stream eligibility layer. If the applicant does not have access to a GIS program, the project boundary should be drawn on the web map and a copy of the map can be printed from the webpage;
 - i. If any stream proposed for impact within the project area falls within an ineligible area, impacts to that stream are not eligible for coverage under the 401 WQC for the Nationwide Permits, and the applicant shall apply for an individual 401 WQC or a director's authorization.
 - ii. If any stream proposed for impact within the project area falls within a possibly eligible area, the applicant shall take pH values, when applicable, and perform a Qualitative Assessment Habitat Evaluation Index (QHEI) or Headwater Habitat Evaluation Index (HHEI) assessment for the stream. Using the flow charts provided below, the applicant shall determine if impacts to that stream are eligible for coverage under the 401 WQC for the Nationwide Permits or if an individual 401 WQC is required.
 - iii. If all streams proposed for impact within the project area are located within the eligible area, impacts to that stream are eligible for coverage under the 401 WQC for the Nationwide Permits and no further assessment is necessary.
 - d. The applicant shall submit the following information with the PCN or notification to Ohio EPA:

2017 Nationwide Permit Reauthorization
Ohio State Water Quality Certification
Page 39 of 41

- i. Color map(s), no smaller than 8"x10", which clearly shows the project boundary, streams proposed for impact, current aerial imagery, and the stream eligibility GIS layer;
- ii. For each stream located in possibly eligible areas;
 - (1) A minimum of three high resolution color photographs taken of the proposed impact area, including one facing upstream, one facing downstream, and a close up which clearly depicts the substrate composition and size for each stream proposed for impact. Photographs must accurately depict the quality of the stream and may not include excessive cover due to seasonal conditions that substrates cannot be observed such as snow or ice. Photographs deemed to be insufficient of representing the stream will be required to be retaken once seasonal conditions are appropriate. Photographs shall be clearly labeled with the stream name, direction, and date;
 - (2) pH values for each stream proposed for impact taken within the proposed project area, where applicable;
 - (3) Complete QHEI or HHEI sheets prepared in accordance with the current manuals; and
 - (4) Statement of whether the streams proposed for impact within the project area are eligible for coverage under the 401 WQC for the Nationwide Permits or if an individual 401 WQC or a director's authorization is required.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

4/1/2020 4:31:06 PM

in

Case No(s). 20-0053-GA-RDR, 20-0054-GA-ATA

Summary: Testimony Shawn Fiore SSF-2 Attachment (Part 5-2) electronically filed by Mrs. Debbie L Gates on behalf of Duke Energy Ohio Inc. and D'Ascenzo, Rocco O. Mr. and Kingery, Jeanne W and Vaysman, Larisa