CITY OF COLUMBUS STORM WATER DRAINAGE MANUAL
TYPE III STREAM PROTECTION VARIANCE

FOR

RETREAT AT SCIOTO CREEK
4646 HALL ROAD
City of Columbus, Ohio
Project # 1067
August 2022

Prepared By:

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SECTION 1:

I. Variance Introduction

This report provides information regarding a Type III Stream Protection Variance request from the City of Columbus Stormwater Drainage Manual (SWDM) for the Retreat at Scioto Creek apartment development. Per Section 1.3 of the SWDM, the purpose of the stream corridor protection zone (SCPZ) is "to allow the natural, lateral movement of open water courses, provide sufficient area for flood conveyance, protect water quality and prevent structures from being impacted by natural streambank erosion." A variance granting the preferred alternative will result in the following SWDM impacts:

1) SWDM Section 1.3.2 and 1.3.3 (Table 1-1) – Filling of approximately 297' of an unnamed (ST-006) ephemeral stream. 0.37 acres of impact to the SCPZ.

2) SWDM Section 1.3.2 and 1.3.3 (Table 1-1) – Street Crossing including pipe culvert and impact of 86' of an intermittent stream (ST-001) as a permitted use within the SCPZ under 1.3.4.7. 0.13 acres of impact to the SCPZ are caused by the street crossing.

II. Proposed Development Summary

The existing property at 4646 Hall Road is currently undeveloped and used for agricultural farming. Multiple streams cross the property and will be placed in a conservation easement based on the width of the stream corridor protection zone calculation for each stream. The total area of conservation easement due to the stream corridor protection zones is 10.62 acres, which is 30.5% of the property of 34.845 acres. See Appendix A for site schematic and stream corridor protection zone map. See below for existing site photos.

Existing site topography – Jan. 2022

Stream ST-001, facing southwest – Jan. 2022

Stream ST-006, facing south – Jan. 2022

The proposed development is bound by I-270 to the west, Hall Road to the south and residential uses to the north and east. The development includes 12 three-story garden-style apartment buildings (264 units), club house with pool and other amenity areas including: playgrounds, gaming / recreational space, grills and cooking space, picnic tables, dog park, meeting and classroom space.

The City of Columbus currently has a deficit of more than 50,000 affordable housing units and this proposed development will certainly help bridge this current deficit. While working to address this gap we have garnered support from the Greater Hilltop Area Commission (GHAC), Affordable Housing Trust for Columbus and Franklin County, Economic Development and Planning, Department of Development, Neighbors for More Neighbors (N4MN), and the Affordable Housing Alliance of Central Ohio (AHACO).

We believe the best use for this location is to support workforce affordable housing given its proximity to I-270, public transportation, jobs, and nearby retail amenities.

The existing SCPZ of stream ST-006 would force a redesign eliminating a 12-unit apartment building, 6 garages, a 2-bay utility space, and 17 surface parking spaces. The proposed 12-unit building would contain all four-bedroom units affordable at 60% Average Median Income (AMI). There has been strong support and desire from the City of Columbus and specifically the Greater Hilltop Area Commission to develop larger units to support Columbus families. In fact, a market study conducted in December 2021 showed comparable affordable housing vacancy rates of 1.6% or lower.

III. Determination of Stream Corridor Protection Zones

The existing SCPZ widths shown on Exhibit 1 of Appendix A was determined using the following equation from Section 1.3.1 of the SWDM.

SPCZ, in feet of width = $147(DA)^{0.38}$
Where DA = drainage area of the stream in square miles

Drainage areas used in the SCPZ calculations were determined using the U.S. Geological Survey (USGS) StreamStats application. See Appendix G for StreamStats calculation for ST-001. The overall tributary area for ST-006 is less than two acres. The SCPZ calculations for the two streams of interest in this report are as follows:

ST-001
Drainage Area (DA) = 0.0469 square miles (per StreamStats)
SPCZ Width = $147(0.0469)^{0.38}$ = 45.96 feet (minimum of 50 feet width per 1.3.1)

ST-006
Drainage Area (DA) = Less than 2 acres = 0.003 square miles (per topography)
SPCZ Width = $147(0.003)^{0.38}$ = 16.17 feet (minimum of 50 feet width per 1.3.1)

Both streams of interest in this report have SCPZ widths of 50 feet per the minimum requirement of section 1.3.1 of the SWDM.

IV. Impacts to Stream and Water Quality

Stream ST-001 is an intermittent stream and received an HHEI score of 34. ST-006 is an ephemeral stream and received an HHEI score of 23. See Appendix D for existing conditions HHEI scoring forms. Both streams are heavily modified and currently flow through an agricultural field with no riparian area for a majority of the flow path. The stream channels are currently entrenched, and the stream banks are eroding heavily in areas. Dominant substrates within both streams include silt and sand.

The proposed impacts to the stream centerline of ST-001 include 86 linear feet (0.005-acre) due to culvert, headwall, and rock channel protection installation to facilitate the construction of a street crossing. The proposed impacts to ST-006 include 297 linear feet (0.01-acre) due to construction and grading of apartment building, garages, association parking and related infrastructure. These proposed impacts are localized to the impacted stream reaches and are not anticipated to impact the upstream or downstream portions of the streams. The flow regime of both streams will remain intact and the substrates, bank full width, and maximum pool depth are anticipated to remain the same. Construction Best Management Practices (BMPs) should be implemented during construction, including working within the streams only during low flow periods and installing and maintaining appropriate erosion and sediment control around the streams prior to construction. Therefore, the physical habitat and HHEI scores are not anticipated to decrease following the proposed construction completion.

In addition, an approximate 0.49-acre riparian area adjacent to ST-001 will be enhanced with a floodplain seed mix, live stakes, and tree plantings. This riparian enhancement area will increase the quality of ST-001 by providing erosion control, shade and cooler water temperatures, food and habitat for aquatic macroinvertebrates, nutrient and sediment filtration, a vegetated buffer to slow water and help limit increased flows which can cause entrenchment, as well as increase adjacent floodplain/upland habitat.

V. Statement of Hardship

In conversations with the Greater Hilltop Area Commission on December 7, 2021, we understood that the lack of affordable housing has impacted this neighborhood especially hard, particularly for families seeking larger units. Avoidance of the ST-006 would result in a substantial loss of developable land and thus limit the amount of affordable housing we would be able to deliver. In addition, the loss of income would make this development infeasible to build. A large portion of the site (approximately 10.6 acres) in un-usable given the Stream Corridor Protection Zone (SCPZ) and further limitation of usable land would result in the inability to deliver affordable rents to the community. This change would be especially impactful as the Greater Hilltop Neighborhood Association has expressed their desire to see more four-bedroom units as it is becoming increasingly difficult for larger families to find safe, decent, affordable housing that fits their family composition. The elimination of Building #11 would result in all four-bedroom units being removed from the property.

Discussion of the no impact development plan, minimum impact development plan, and preferred development plan is provided below. In addition, a summary and comparison of the economic benefits of each alternative development plan is provided in Appendix B.

Scenario 1 – No Impact

As shown in Appendix A – Exhibit 3, this option eliminates building #11 along the eastern side of the desired site plan. This building is intended to house twelve four-bedroom affordable housing units at 60% AMI. Further, this option would significantly impact surface parking design, as well as the availability of garages or storage space that are in high demand currently. A reduction of 6 garages would result in loss of additional income and would also leave the development 3 garages short of the required zoning.

Finanical & Developmental Impact:

As summarized in Appendix B, implementation of a "No Impact" plan would create the following financial challenges to the development of Retreat at Scioto Creek:

- Annual rental income deficit of $182,880
- Annual garage and other income defiict of $6,738
- Total 10-year income deficit of $1,896,180
- Reduction of permenant debt allowed by $1,991,000, causing a financial gap in underwriting.

Social Implications:

In addition to financial and development related challenges outlined above, the social and community impacts of a "No Impact" approach generate the following:

- The loss of twelve (12) much needed affordable housing units during a time when the City of Columbus has an estimated deficit of over 50,000 affordable housing units. This is even more impactful as affordable, four-bedroom units are most

needed wihtin the Greater Hilltop neighborhood according to feedback received during the December 7, 2021 Area Commission Meeting.

- The loss of temporary construction jobs, estimated to be 1.16 jobs per unit according to the National Association of Homebuilders, resulting in fourteen (14) lost constrution jobs at an estimated loss of income of $400,000.

Scenario 2 – Minimum Impact

While this option allows the development to retain desired parking, it continues to impact unit count by eliminating building #11 along the eastern side of of the desired site plan, as shown in Appendix A – Exhibit 4.

Finanical & Developmental Impact:

As summarized in Appendix B, implementation of a "Minimum Impact" plan would create the following financial challenges to the development of Retreat at Scioto Creek:

- Annual rental income deficit of $182,880
- Annual garage and other income deficit of $2,058
- Total 10-year income deficit of $1,849,380
- Reduction of permenant debt allowed by $1,991,000

Social Implications:

In addition to financial and development related challenges outlined above, the social and community impacts of a "Minimum Impact" approach generate the following:

- The loss of twelve (12) much needed affordable housing units during a time when the City of Columbus has an estimated a deficit of over 50,000 affordable housing units. This is even more impactful as affordable, four-bedroom units are most needed wihtin the Greater Hilltop neighborhood according to feedback received during the December 7, 2021 Area Commission Meeting.
- The loss of temporary construction jobs, estimated to be 1.16 jobs per unit according to the National Association of Homebuilders, resulting in fourteen (14) lost constrution jobs at an estimated loss of income of $400,000.

Scenario 3 – Preferred Plan

This option is the most desired of the proposed options and allows the development to optomize unit count, parking, traffic patterns while still perseving green space and minimally disturbing streams, as shown in Appendix A – Exhibit 5.

Finanical, Developmental & Social Impact:

As summarized in Appendix B, implementation of the "Preferred" plan would create no financial challenges to the development of Retreat at Scioto Creek and would allow for the

greatest benefit from tax credits, permanent debt, and long-term income to support the viability of the development.

Additionally, the "Preferred" plan option would allow an optimal solution for residents and the community by providing much needed affordable housing and specifically units that accommodate larger families; which have been scarce in the Greater Hilltop and surrounding areas.

SECTION 2:

VI. Site Development Alternatives

a) No Impact alternative

The No Impact alternative decreases the usable site development acreage by 0.75 acres over the preferred alternative. The reduction of this area negatively impacts the financial feasibility of the project. Within this area, an additional apartment building with 12 units, 6 garage units and 17 additional parking spaces can be added. The No Impact Alternative causes the number of required garage units to be below code requirement by 3 garage units per zoning requirements. See Appendix A, Exhibit 3 for No Impact Alternative Exhibit.

b) Minimal Impact Alternative

The Minimal Impact Alternative would impact 0.25 acres of SCPZ of stream ST-006. This alternative would allow for the preferred number of garage units and surface parking spaces but would not allow for the apartment building with 12 units. Additional impacts to the SCPZ are required to design and grade the proposed building. See Appendix A, Exhibit 4 for Minimal Impact Alternative Exhibit.

c) Preferred Alternative

The Preferred Alternative would impact 0.37 acres of SCPZ of stream ST-006. The additional 0.12 acres (5,227 square feet) of impact over the Minimal Impact Alternative would allow space for the proposed 12-unit apartment building. The financial impact of this building makes the project financially feasible at a small increase in SCPZ impact. The proposed mitigation of the SCPZ will result in an increase to the ecological value of the overall SCPZ of the site. See Appendix A, Exhibit 5 for Preferred Alternative Exhibit.

VII. Comparison of Development Alternatives

As summarized in the table below, the impact to the SCPZ is necessary to meet the number of required garage units per zoning code and to provide the number of buildings/units to make the project financially feasible. The amount of SCPZ proposed to be impacted (0.37 acres) is 3.5% of the total SCPZ area (10.61 acres) that is required to be placed in conservation easement over the property. The Preferred Alternative will mitigate for all impacts and mitigation will be a net positive effect on the ecology of the property.

Summary of Alternatives					
Alternative	**Total SCPZ Impact (acres)**	**Buildings**	**Apartment Units**	**Garage Units**	**Surface Spaces**
No Impact	0.0	11	252	60*	380
Minimal Impact	0.34	11	252	66	397
Preferred	0.46	12	264	66	397

*Does not meet required number of garage units per code

SECTION 3:

VIII. Mitigation

a) Impact to SCPZ

Under the preferred alternative, the proposed apartment building, garage units, and parking area will impact 0.37 acres of stream ST-006 SCPZ. The proposed street crossing over stream ST-001 will impact 0.12 acres of SCPZ for a total SCPZ impact of 0.49 acres. These existing SCPZ areas include row crops, bare soil, or a dominance of non-native and invasive species, including thistle, autumn olive, and sweet clover.

Proposed mitigation will occur on-site with a total mitigation area of 0.61-acres surrounding ST-001, which exceeds the required 1:1 ratio. This mitigation will involve restoring the area with native vegetation. This will include the following:

- A native wetland seed mix will be planted within the newly restored ST-001 channel and floodplain;
- A native seed mix, containing wildflowers and grasses will be planted outside the channel, within the area that will become the newly restored ST-001 terrace,
- A quick cover crop seed mix will be planted throughout all areas. This seed mix will contain grasses, which establish quickly and help protect

the area from sedimentation and erosion, while the long-term native seed mix takes time to become established;

- Approximately 90 native tree species (exceeds City requirement) comprised of 10 different species (meets the 10-20-30 rule) will be planted within the mitigation area in an irregular pattern. The City requires 136 trees per acre.
- Approximately 90 native shrub species (meets the 10-20-30 rule) will be planted within the mitigation area in an irregular pattern. There is no requirement for shrub plantings per the City.

These plantings will significantly increase the ecological value within the stream corridor protection zone. This riparian enhancement area will increase the quality of ST-001 by providing erosion control, shade and cooler water temperatures, food and habitat for aquatic macroinvertebrates, nutrient and sediment filtration, a vegetated buffer to slow water and help limit increased flows which can cause entrenchment, as well as increase adjacent floodplain/upland habitat.

Once plantings are completed, a report including planting species list, locations, methods, photographs of plantings, and purchase receipts will be submitted to the City within 3 months of completion. Survival inspections will be completed intermittently between 12 and 18 months following the completion of plantings. Once species have reached adequate growth and appear healthy, tree protective measures will also be removed during this time frame. A report detailing plant survival, replacements required, and documentation (including photographs) that tree protective measures have been removed will submitted to the City within 1 month of completing survival inspection/tree protective measure removal.

b) Impact Directly to Stream

Under the preferred alternative, the proposed apartment building, garage units, and parking area will impact 86 linear feet of ST-001's stream channel and 322 linear feet of ST-006's stream channel. The stream channels of both ST-001 and ST-006 are currently low quality and disturbed. ST-006 is a highly erodible channel with a dominance of silt substrates. ST-001 is highly incised and is eroding heavily due to the inability of the stream to flood an adjacent floodplain. The proposed impacts are localized to the impacted stream reaches and are not anticipated to impact the upstream or downstream portions of the streams.

Proposed mitigation will occur on-site for the stream bed impacts. Per, the Guidelines for Stream Mitigation Banking and In-Lieu Fee Programs in Ohio, the following stream debit ratios are applicable:

- ST-001: Intermittent stream with sand/silt/muck/clay/artificial dominated substrates = 1.5:1 ratio (total of 129 linear feet of required mitigation)
- ST-006: Ephemeral stream with sand/silt/muck/clay/artificial dominated substrates = 1:1 ratio (total of 322 linear feet of required mitigation)
- Total of 451 linear feet of required mitigation

Proposed mitigation will occur on-site with approximately 470-linear feet of ST-001's channel being restored, which exceeds the required 451 linear feet. The restoration activities include the following:

- ST-001 channel will be restored using Overwide Channel/Self-Forming Stream techniques (ODNR and OSU methods).
- The restored stream channel will be able to openly flow within a floodplain area, create a designated channel, deposit material, and flood the adjacent area as needed.
- Wetland area is anticipated to form within the channel and adjacent floodplain.

EXISTING STREAM DATA -- ST-001	
HHEI Score	34.00
Aquatic Life Use	not listed
Stream Gradient (%)	3.33
Average Bankfull Width	1.00
Width to Depth Ratio	5.13
Entrenchment Ratio	1.20
Substrate D84 (mm)	7.50
Sinuosity	1.12
Rosgen Stream Type	A5
Drainage Area (sq mi)	0.04
EXISTING STREAM DATA -- ST-006	
HHEI Score	23.00
Aquatic Life Use	not listed
Stream Gradient (%)	5.33
Average Bankfull Width	0.94
Width to Depth Ratio	4.82
Entrenchment Ratio	1.17
Substrate D84 (mm)	30.50
Sinuosity	1.07
Rosgen Stream Type	A5
Drainage Area (sq mi)	0.01

Following the completion of the project, the flow regime of both streams will remain intact and the substrates are anticipated to remain the same. ST-006 is also not anticipated to see changes to the average bankfull width or pool depth. ST-001 bankfull width and pool depth are anticipated to increase, as the channel is being restored. This will increase the HHEI score from 34 to 69.

The HHEI scores for existing conditions and mitigated preferred alternative are in Appendix D and E.

IX. Conclusion

The preferred alternative design provides adequate garage space, surface parking and apartment units that make the project development financially feasible with minor impacts to the surrounding stream and surrounding environment. All disturbances will be mitigated on site in accordance with the Stormwater Drainage Manual. See Mitigation Plan in Appendix A, Exhibit 6 for details. The existing conditions of the impacted stream corridor protection zones is of low quality (bare surface and row crops) and the overall ecological impact of this variance request is minor to negligible. The proposed mitigation will enhance the overall stream corridor protection zone quality of the site.

Appendix A – Exhibits

FLOOD PLAIN INFORMATION

FLOOD DESIGNATION - ZONE X, AE
MAP NUMBER - 39049C0311K
EFFECTIVE DATE - JUNE 17, 2008
BASE FLOOD ELEV. - N/A

LEGEND

EX. CONSERVATION EASEMENT
INSTR. #: 199810080258206
DATE: 10/09/1998

STREAM CORRIDOR PROTECTION ZONE DATA

IDENTIFICATION	TRIB AREA (SQ MILES)	SCPZ WIDTH (FT)
1 (ST-001)	0.05	50*
2 (ST-002)	0.05	50*
3 (ST-003)	4.3	250*
4 (ST-004)	0.32	96
5 (ST-005)	0.13	68
6 (ST-006)	2 ACRES	50*

* MINIMUM SCPZ = 50 FT
** MAXIMUM SCPZ = 250 FT
SCPZ AREA CALCULATED USING: SCPZ = 147(DA)^0.38 = WIDTH (FT)

REVISION RECORD		
NO.	DATE	REVISION DESCRIPTION

TEBBE CIVIL ENGINEERING, LLC
4700 Lakehurst Court, Suite 135
Dublin, Ohio 43016
Phone (614) 845-5885 ● Chris@TebbeCivil.Com

SITE SCHEMATIC AND STREAM PROTECTION ZONE PLAN

RETREAT AT SCIOTO CREEK

4646 HALL ROAD
COLUMBUS, OHIO

JOB NO.	1067
DRAWN BY	MJM
DESIGN BY	JSG
CHECKED BY	CMT

SHEET

1

NOTE: THIS EXHIBIT REPRESENTS THE RIPARIAN SETBACK PER SWDM SIZING AND SHOWS ALL OPEN SPACE AREAS TO REMAIN UNUSED AT THIS TIME.

SCALE: 1" = 80'

80 40 0 80 160

LEGEND

- = RIPARIAN SETBACK, TO REMAIN (10.24 AC.)
- = RIPARIAN SETBACK, MITIGATED (0.38 AC.)
- = OPEN SPACE, TO REMAIN (5.75 AC.)

REVISION RECORD

NO.	DATE	REVISION DESCRIPTION

TEBBE CIVIL ENGINEERING, LLC
4700 Lakehurst Court, Suite 135
Dublin, Ohio 43016
Phone (614) 845-5885 ● Chris@TebbeCivil.Com

OVERALL SCPZ/OPEN SPACE MAP
RETREAT AT SCIOTO CREEK
4646 HALL ROAD
COLUMBUS, OHIO

JOB NO.	1067
DRAWN BY	MJM
DESIGN BY	JSG
CHECKED BY	CMT

SHEET

2

SITE DATA

TOTAL APARTMENT BUILDINGS	11
TOTAL RESIDENTIAL UNITS	252
ASPHALT PARKING SPACES	380
GARAGE PARKING SPACES	60

* 1 LESS APARTMENT BUILDING THAN PREFERRED
* 12 LESS RESIDENTIAL UNITS THAN PREFERRED
* 17 LESS ASPHALT PARKING SPACES THAN PREFERRED
* 6 LESS GARAGE PARKING SPACES THAN PREFERRED
* 3 LESS GARAGE PARKING SPACES THAN REQUIRED BY CODE

REVISION RECORD

NO.	DATE	REVISION DESCRIPTION

TEBBE CIVIL ENGINEERING, LLC
4700 Lakehurst Court, Suite 135
Dublin, Ohio 43016
Phone (614) 845-5885 ● Chris@TebbeCivil.Com

NO IMPACT ALTERNATIVE
RETREAT AT SCIOTO CREEK
4646 HALL ROAD
CITY OF COLUMBUS, OHIO

JOB NO.	1067
DRAWN BY	MJM
DESIGN BY	JSG
CHECKED BY	CMT

SHEET

3

I-270 (SOUTH)

I-270 (NORTH)

HALL RD.

ST-001
50' SCPZ

ST-002
50' SCPZ

ST-004
96' SCPZ

ST-006
50' SCPZ

0.17 AC.

0.09 AC.

0.17 AC

0.25 AC.

DETENTION BASIN

LEGEND

DISTURBED SCPZ (0.34 ACRES)

MITIGATION AREA (0.34 ACRES)

SITE DATA

TOTAL APARTMENT BUILDINGS	11
TOTAL RESIDENTIAL UNITS	252
ASPHALT PARKING SPACES	397
GARAGE PARKING SPACES	66

* 1 LESS APARTMENT BUILDING THAN PREFERRED
* 12 LESS RESIDENTIAL UNITS THAN PREFERRED

SCALE: 1" = 50'

50 25 0 50 100

REVISION RECORD

NO.	DATE	REVISION DESCRIPTION

TEBBE CIVIL ENGINEERING, LLC
4700 Lakehurst Court, Suite 135
Dublin, Ohio 43016
Phone (614) 845-5885 ● Chris@TebbeCivil.Com

MINIMAL IMPACT ALTERNATIVE
RETREAT AT SCIOTO CREEK
4646 HALL ROAD
CITY OF COLUMBUS, OHIO

JOB NO.	1067
DRAWN BY	MJM
DESIGN BY	JSG
CHECKED BY	CMT

SHEET

4

LEGEND

- DISTURBED SCPZ (0.46 ACRES)
- MITIGATION AREA (0.46 ACRES)

SITE DATA

TOTAL APARTMENT BUILDINGS	12
TOTAL RESIDENTIAL UNITS	264
ASPHALT PARKING SPACES	397
GARAGE PARKING SPACES	66

REVISION RECORD

NO.	DATE	REVISION DESCRIPTION

TEBBE CIVIL ENGINEERING, LLC
4700 Lakehurst Court, Suite 135
Dublin, Ohio 43016
Phone (614) 845-5885 • Chris@TebbeCivil.Com

PREFERRED ALTERNATIVE
RETREAT AT SCIOTO CREEK
4646 HALL ROAD
CITY OF COLUMBUS, OHIO

JOB NO.	1067
DRAWN BY	MJM
DESIGN BY	JSG
CHECKED BY	CMT

SHEET

5

LEGEND

- EXISTING CONTOUR
- CONSERVATION EASEMENT — CH —
- CENTERLINE OF STREAM — 1 —
- STREAM MITIGATION AREA
- TREE
- SHRUB

END MITIGATION AREA
STA. 9+50.00

BEGIN MITIGATION AREA
STA. 7+50.00

END MITIGATION AREA
STA. 6+70.00

BEGIN MITIGATION AREA
STA. 4+00.00

0.283 ACRE MITIGATION AREA
PLANT 45 TREES RANDOMLY SPACED
PLANT 45 SHRUBS RANDOMLY SPACED

0.329 ACRE MITIGATION AREA
PLANT 45 TREES RANDOMLY SPACED
PLANT 45 SHRUBS RANDOMLY SPACED

Exhibit 6 - Mitigation Plan

HORIZONTAL SCALE IN FEET
0 20 40

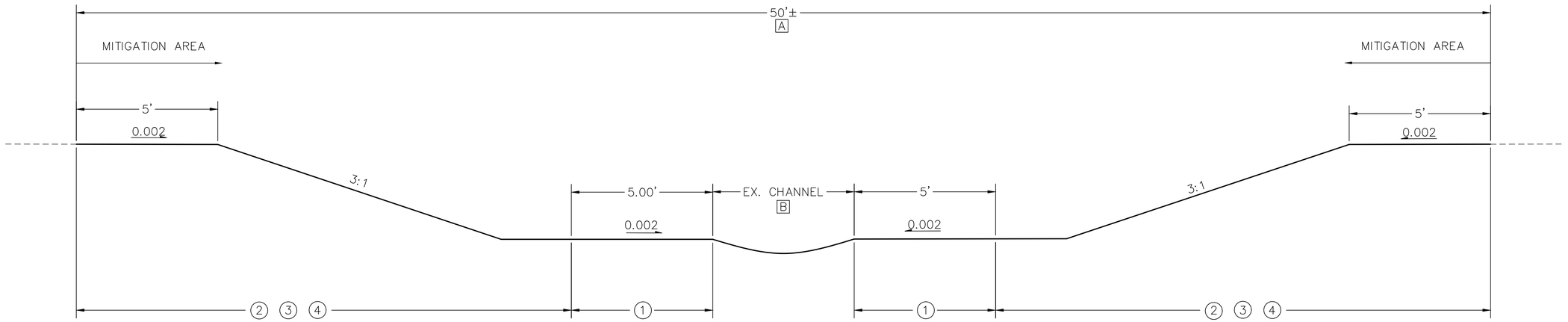
CALCULATED	DATE
KJS	07/25/22
CHECKED	PROJECT NUMBER
JMB	C1283-002-22

SITE PLAN
RETREAT AT SCIOTO CREEK

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

6

1
6



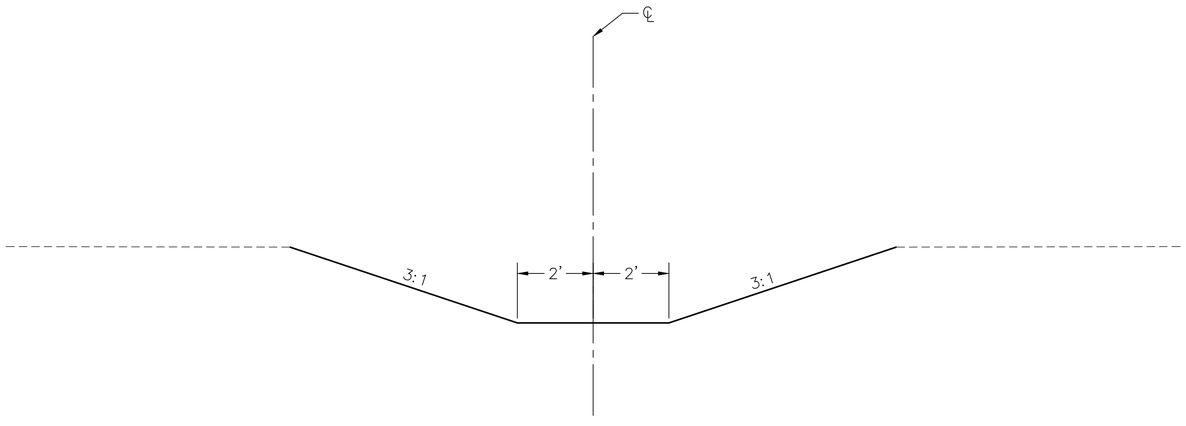
NORMAL TYPICAL SECTION

STA. 4+00 TO STA. 6+70
STA. 7+50 TO STA. 9+50

A TAPERS FROM EXISTING CROSS SECTION TO PROPOSED NORMAL TYPICAL SECTION FROM STA. 4+00 TO STA. 4+50
TAPERS FROM PROPOSED NORMAL TYPICAL SECTION TO PROPOSED CULVERT TYPICAL SECTION FROM STA. 6+50 TO STA. 6+70
TAPERS FROM PROPOSED CULVERT TYPICAL SECTION TO PROPOSED NORMAL TYPICAL SECTION FROM STA. 7 +50 TO STA. 8+00
TAPERS FROM PROPOSED NORMAL TYPICAL SECTION TO EXISTING FROM STA. 9+00 TO STA. 9+50

B WIDTH VARIES, SEE CROSS SECTIONS

1. WETLAND MIX
2. ITEM 659 – SEEDING AND MULCHING CLASS 5B
3. ITEM 659 – SEEDING AND MULCHING CLASS 7
4. TREES AND SHRUBS PER DETAILS SHEET



CULVERT TYPICAL SECTION

STA. 6+70 TO STA. 6+77.5
STA. 7+43 TO STA. 7+50

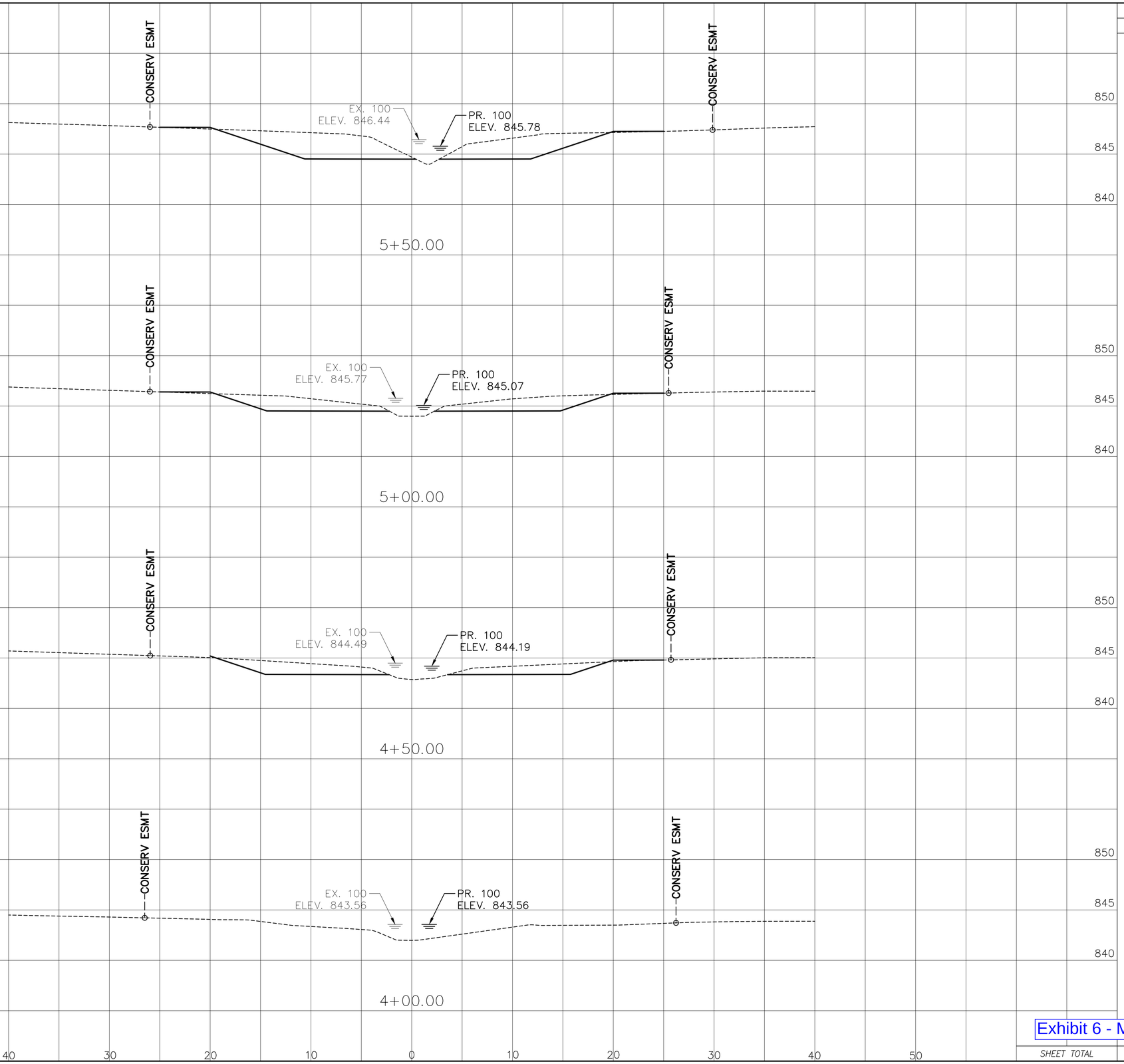
TYPICAL SECTIONS
RETREAT AT SCIOTO CREEK

CALCULATED	DATE
KJS	07-29-2022
CHECKED	PROJECT NUMBER
JB	C1283-002-22

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

Exhibit 6 - Mitigation Plan

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL



SHEET TOTAL

SHEET TOTAL

DATE 07-29-22

PROJECT NUMBER 22-1283-002

CALCULATED TF

CHECKED JB

CROSS SECTIONS
STA. 4+00.00 TO STA. 5+50.00

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

3
6

Exhibit 6 - Mitigation Plan

S:\CLIENTS\Ascent Development Group LLC\C1283-002-22 Hall Road Apartments NWP, Planting Plan, Coordination\07 Maps Plans and drawings\CAD and Survey\Plan Sheets\03_Cross_Sections.dwg 02-Aug-22 12:51 PM

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

8+00.00

CONSERV ESMT

EX. 100
ELEV. 853.71

PR. 100
ELEV. 853.7

CONSERV ESMT

7+50.00

CONSERV ESMT

EX. 100
ELEV. 853.71

PR. 100
ELEV. 853.69

CONSERV ESMT

6+70.00

CONSERV ESMT

EX. 100
ELEV. 848.55

PR. 100
ELEV. 848.16

CONSERV ESMT

6+00.00

CONSERV ESMT

EX. 100
ELEV. 847.19

PR. 100
ELEV. 846.15

CONSERV ESMT

860
855
850
845
840

SHEET TOTAL

50 40 30 20 10 0 10 20 30 40 50

SHEET TOTAL

DATE	PROJECT NUMBER
07-29-22	22-1283-002
CALCULATED TF	CHECKED JB

CROSS SECTIONS
STA. 6+00.00 TO STA. 8+00.00

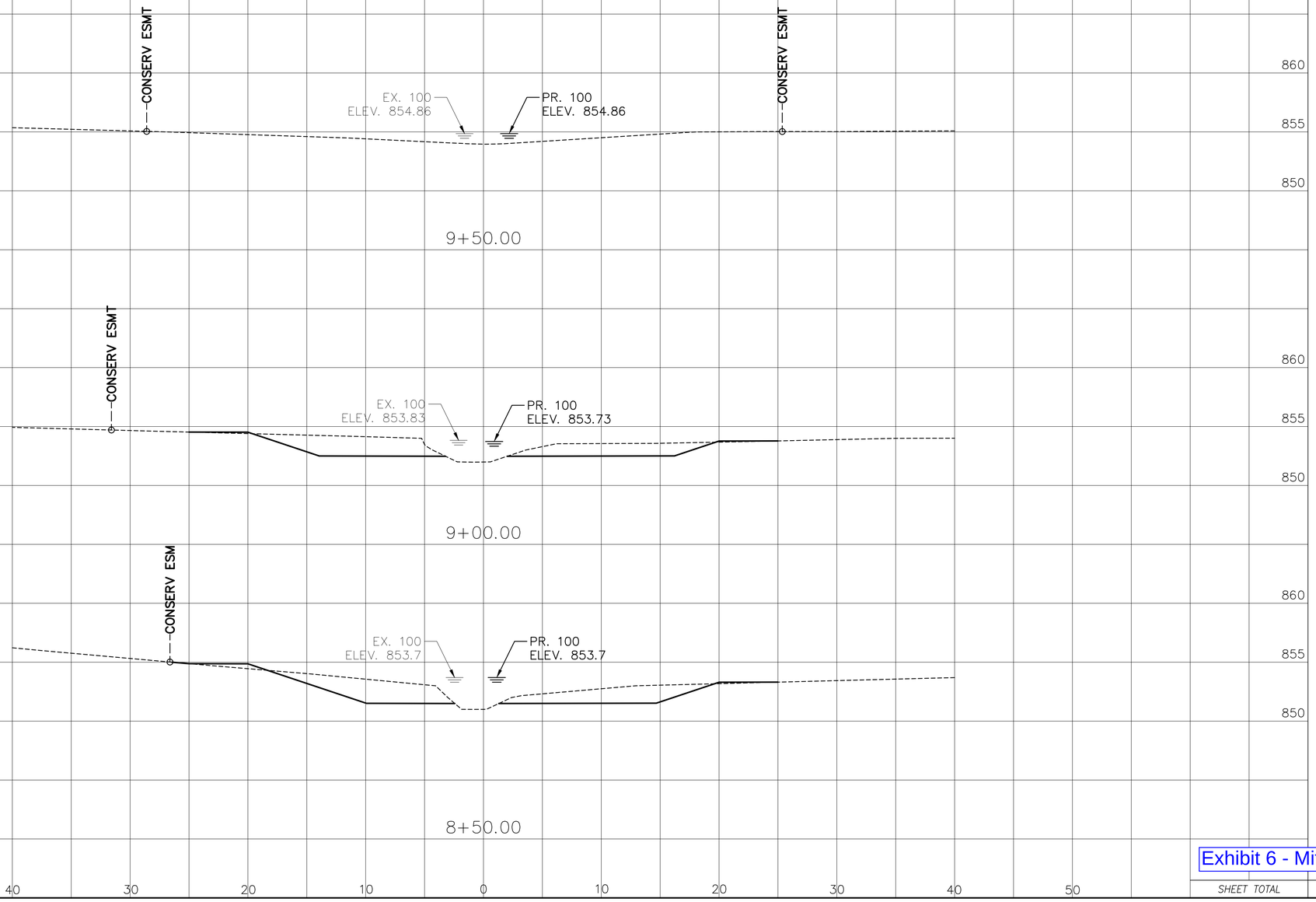
STONE
ENVIRONMENTAL, ENGINEERING & SCIENCE

Exhibit 6 - Mitigation Plan

S:\CLIENTS\Ascent Development Group LLC\C1283-002-22 Hall Road Apartments NWP, Planting Plan, Coordination\07 Maps Plans and drawings\CAD and Survey\Plan Sheets\03_Cross_Sections.dwg 02-Aug-22 11:57 AM

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



50 40 30 20 10 0 10 20 30 40 50

SHEET TOTAL

SHEET TOTAL

Exhibit 6 - Mitigation Plan

DATE	PROJECT NUMBER
07-29-22	22-1283-002
CALCULATED TF	CHECKED JB

CROSS SECTIONS
STA. 8+50.00 TO STA. 9+50.00

STONE
ENVIRONMENTAL, ENGINEERING & SCIENCE

5
6

SEEDING AND PLANTING NOTES

ESTABLISHED NON–NATIVE VEGETATION WITHIN THE MITIGATION AREA SHALL BE REMOVED PRIOR TO THE INSTALLATION OF SEED MIX AND PLANTINGS. THE MITIGATION AREA SHALL BE RESTORED BY PLACING SEEDING AND MULCHING PER ODOT ITEM 659. SEED AND MULCHING SHALL BE OHIO PRAIRIE NURSERY WETLAND NATIVE SEED MIX WITHIN THE BOTTOM OF THE RESTORED FLOODPLAIN, ADJACENT TO THE ACTIVE STREAM CHANNEL, ODOT ITEM 659 CLASS 5B ANNUAL AND PERENNIAL WILDFLOWER MIXTURE WITH CLASS 7 TEMPORARY EROSION CONTROL MIXTURE ALONG RESTORED FLOODPLAIN SLOPES AND ADJACENT TERRACE.
ALL TREES, SHRUBS AND GROUNDCOVER TO BE FERTILIZED WITH A COMMERCIAL GRADE FERTILIZER CONSISTING OF FAST AND SLOW–RELEASE NITROGEN.

ALL PLANT MATERIAL SHALL BE OF THE SIZE AND TYPE SPECIFIED. IF SUBSTITUTIONS ARE APPROVED BY THE CITY OF COLUMBUS, THE SIZE AND GRADING STANDARDS SHALL CONFORM TO THOSE OF THE AMERICAN ASSOCIATION OF NURSERYMEN. ALL PLANTED MATERIALS SHALL BE NATIVE TO OHIO AND COMMON TO CENTRAL OHIO AND SUITABLE FOR THE SOLAR EXPOSURE, HYDROLOGIC REGIME, SOIL CONDITIONS, AND OTHER RELEVANT ENVIRONMENTAL VARIABLES PRESENT ON THE SITE. ALL TREES SHALL BE DECIDUOUS UNLESS IMPACT OR REFERENCE AREAS INDICATE SUITABILITY OF NATIVE EVERGREENS.

ALL PLANTS SHALL MEET OR EXCEED STANDARDS SET IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1, CURRENT EDITION. ALL PLANTS SHALL EQUAL OR EXCEED THE MEASUREMENTS AND SIZES SPECIFIED. TREES SHALL BE MINIMUM 1–INCH CAL

CONTRACTOR MAY SLIGHTLY FIELD ADJUST PLANT LOCATIONS AS NECESSARY TO AVOID UTILITIES OR OTHER OBSTRUCTIONS.

ENSURE ALL NEWLY PLANTED ITEMS ARE SET PLUMB. ESTABLISH FINAL GRADE PRIOR TO ANY PLANTING OR SEEDING.

PLANTS MAY ONLY BE INSTALLED BETWEEN OCTOBER 1 TO NOVEMBER 30, AND PRIOR TO FROZEN GROUND CONDITIONS.

PLANTING BACKFILL MIX SHALL BE BLENDED, MANUFACTURED SOIL CONSISTING OF THREE (3) PARTS TOPSOIL, ONE (1) PART COMPOST, ONE (1) PART SAND. TOPSOIL SHALL BE PER ASTM D5268, PH RANGE OF 5.5 TO 7, MINIMUM 4 PERCENT ORGANIC MATERIAL, FREE OF STONES AND SOIL CLUMPS ¾INCH AND LARGER. COMPOST SHALL BE YARD WASTE COMPOST FROM AN EPA RATED CLASS IV COMPOST FACILITY OR COM–TIL COMPOST FROM CITY OF COLUMBUS DEPARTMENT OF PUBLIC UTILITIES. SAND SHALL BE PER ITEM ASTM C33. PROPRIETARY MANUFACTURED PLANTING MIX SUCH AS KURTZ BROS. PROFESSIONAL BLEND OR JONES SUPERSOIL MAY BE USED.

CONTRACTOR SHALL THROROUGHLY WATER ALL PLANTS AT TIME OF INSTALLATION AND AS NEEDED UNTIL PROJECT ACCEPTANCE. CONTRACTOR SHALL GUARANTEE ALL PLANTS INSTALLED FOR ONE FULL YEAR FROM DATE OF ACCEPTANCE. ALL PLANTS SHALL BE ALIVE AND AT A VIGOROUS RATE OF GROWTH AT THE END OF THE GUARANTEE PERIOD.

PLANTINGS SHALL FOLLOW 10–20–30 RULE, NOT TO BE COMPRISED OF MORE THAN 10% OF ONE SINGLE SPECIES, 20% OF ONE SINGLE GENUS, OR 30% OF ONE SINGLE FAMILY.

PLANTINGS SHALL AVOID NON–RESISTANT ASH, ELM, AND OTHER SPECIES THAT ARE HIGHLY SUSCEPTIBLE TO DEATH BY CURRENT OR FORESEEN PESTS OR INFECTIONS.

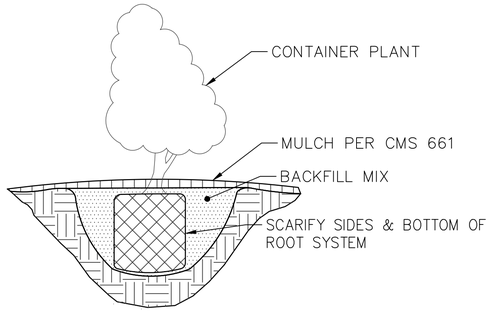
PLANTINGS WITHIN THE SCPZ MITIGATION AREA SHALL BE SINGLE–STEM, STRAIGHT NATIVE SPECIES (NOT CULTIVARS). REPLACEMENTS FOR PERMITTED ACTIVITIES MAY BE CULTIVARS OF NATIVE SPECIES BUT NOT HYBRIDS WITH NON–NATIVE SPECIES. REPLACEMENTS FOR PERMITTED ACTIVITIES MAY ALSO INCLUDE MULTI–STEM GROWTH FORMS IF THEY DON'T COMPRISE MORE THAN 25% OF THE TOTAL NUMBER OF PERMITTED–ACTIVITY PLANTINGS. MULTI–STEM TREES SHALL HAVE A CUMULATIVE CALIPER OF 1 INCH AND COUNT AS A SINGLE REPLACEMENT TREE.

ALL TREES SHALL BE PROTECTED WITH TREE GUARDS TO PREVENT DAMAGE BY MALE DEER, VOLES, AND OTHER WILDLIFE. TREE GUARDS SHOULD BE A MINIMUM OF 4–INCHES IN DIAMETER, 3–FEET IN HEIGHT (OR TO LOWEST BRANCH) AND INSTALLED WITH SECURE CONTACT TO THE GROUND.

PLANTINGS SHALL BE INSTALLED IN AN IRREGULAR MANNER THAT WILL APPEAR NATURAL (AVOID GRID– OR ROW–BASED PLANTINGS). SHRUBS MAY BE PLANTED IN GROUPINGS OR CLUSTERS IF SPACING WITHIN CLUSTERS ACCOMMODATES MATURE SHRUB SPREAD.

PLANTINGS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICES AND/OR THE MOST RECENT VERSION OF THE CITY OF COLUMBUS CONSTRUCTION & MATERIAL SPECIFICATIONS (CMS). PLANTINGS SHALL BE WATERED AS NECESSARY TO BECOME ESTABLISHED AND MEET SURVIVAL REQUIREMENTS. ALL 1–INCH CAL TREE PLANTINGS SHALL BE WARRANTIED AT A 100% SURVIVAL RATE FOR A PERIOD OF 1 YEAR. BARE ROOT STOCK AND CONTAINERIZED SHRUBS SHALL BE WARRANTIED AT A SURVIVAL RATE OF 80%.

TREES				
Scientific Name	**Common Name**	**Size**	**Root**	**Spacing**
Acer rubrum	Red Maple	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Acer negundo	Box Elder	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Aesculus glabra	Ohio Buckeye	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Asimina triloba	Paw Paw	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Cercis canadensis	Redbud	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Cornus florida	Flowering Dogwood	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Platanus occidentalis	Sycamore	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Populus deltoides	Eastern Cottonwood	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Salix nigra	Black Willow	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
Quercus alba	White Oak	1" CAL. MIN.	CONTAINER	PLANT IN IRREGULAR PATTERN
SHRUBS				
Cercis canadensis	Silky Dogwood	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Cornus amomum	Silky Dogwood	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Cornus sericea	Red Osier Dogwood	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Physocarpus opulifolius	Ninebark	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Rhus typhina	Staghorn Sumac	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Rosa setigera	Prairie Rose	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Salix exigua	Sandbar Willow	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Salix sericea	Silky Willow	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Sambucus canadensis	Common Eldberry	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS
Viburnum dentatum	Southern Arrowwood	0.5" - 1.5" CAL., 3 ft	#5 CONTAINER MIN.	PLANT IN IRREGULAR CLUSTERS



CONTAINER PLANTING
–NOT TO SCALE–

Exhibit 6 - Mitigation Plan

DATE 07–29–2022
PROJECT NUMBER C1283–002–22
CALCULATED KJS
CHECKED JB

GENERAL NOTES
RETREAT AT SCIOTO CREEK

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

6
6

I-270 SOUTH

I-270 NORTH

HALL ROAD

LEGEND

- REQUIRED STREAM CORRIDOR PROTECTION ZONE (10.30 AC.)
- * PROPOSED CONSERVATION EASEMENT AREA (12.23 AC)
- DRAINAGE/ACCESS EASEMENT
- SANITARY EASEMENT
- FUTURE ACCESS AREA OUTSIDE CONSERVATION EASEMENT (0.25 AC.)

* TO SIMPLIFY THE EASEMENT AND MARKING IN THE FIELD, THE CONSERVATION EASEMENT HAS BEEN ENLARGED TO REDUCE THE NUMBER OF LINE SEGMENTS.

SCALE: 1" = 150'

150 75 0 150

NOTE: A 60' WIDE ACCESS CORRIDOR TO REMAIN OUTSIDE OF THE PROPOSED CONSERVATION EASEMENT AT THIS TIME. THIS IS TO ALLOW THE POTENTIAL TO ACCESS THE NORTHWEST OPEN SPACE IN THE FUTURE. NOTHING IS PROPOSED AT THIS TIME FOR THAT AREA, BUT PLACING A CONSERVATION AREA HERE WOULD PREVENT FUTURE USE.

REVISION RECORD		
NO.	DATE	REVISION DESCRIPTION

TEBBE CIVIL ENGINEERING, LLC
4700 Lakehurst Court, Suite 135
Dublin, Ohio 43016
Phone (614) 845-5885 ● Chris@TebbeCivil.Com

EASEMENT EXHIBIT
HALL ROAD
4646 HALL ROAD
COLUMBUS, OHIO

JOB NO.	1067
DRAWN BY	MJM
DESIGN BY	JSG
CHECKED BY	CMT

SHEET
7

Appendix B – Financial Implications

	Scenario 1 No Impact	Scenario 2 Min Impact	Scenario 3 Preferred
Unit Count	**250**	**250**	**264**
1BR	72	72	72
2BR	126	126	126
3BR	54	54	54
4BR			12
Parking Spaces	**440**	**463**	**463**
Surface Parking	380	397	397
Garage Spaces	60	66	66
Rental Revenue			
Units	$2,989,440	$2,989,440	$3,172,320
Garages	$46,800	$51,480	$51,480
Other Income	$43,218	$43,218	$45,276
Annual Total	$3,079,458	$3,084,138	$3,269,076
10-Year	$30,794,580	$30,841,380	$32,690,760
% Reduction	5.8%	5.8%	0%
Tax Credit Equity	$23,415,021	$23,415,021	$24,367,188
NOI			
Stabalized	$944,652	$946,470	$963,741
10-Year	$16,808,843	$16,844,089	$17,951,158
% Reduction	6.4%	6.2%	0%
Perm Debt Allowed	$28,300,000	$28,300,000	$30,291,000

Appendix C – Ecological Site Survey

ENVIRONMENTAL, ENGINEERING & SCIENCE

PRELIMINARY JURISDICTIONAL WETLAND/WATERS DELINEATION REPORT

Hall Road Apartments
Columbus, Franklin County, Ohio

Prepared for:

KCG - Ascent Ventures, LLC
9311 N. Meridian Street, Suite 100
Indianapolis, Indiana 46260

Prepared by:

Stone Environmental Engineering and Science, Inc.
748 Green Crest Drive
Westerville, OH 43081

January 26, 2022
C1283-001-22

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APPENDICES

January 26, 2022
C1283-001-21

Mr. Senthil Rajakrishnan
KCG - Ascent Ventures, LLC
9311 N. Meridian Street, Suite 100
Indianapolis, Indiana 46260

Re: Preliminary Jurisdictional Wetland/Waters Delineation
Hall Road Apartments
Columbus, Franklin County, Ohio

Dear Mr. Rajakrishnan,

In accordance with your authorization, STONE has conducted a Preliminary Jurisdictional Wetland/Waters Delineation for the above-referenced project proposed for construction activity. A report of our findings is herewith submitted.

Based on our preliminary assessment, the following resources exist within the study area:

- 0.06 acres of Category 1, emergent wetland
- 517 linear feet of ephemeral stream
- 1,900 linear feet of intermittent stream
- 3,123 linear feet of perennial stream

If you have any questions about this submittal, please contact us at 614-865-1874.

Sincerely,
STONE Environmental Engineering & Science, Inc.

Teagan Loew, Cert Sr Ecologist, PWS, CESSWI
Ecologist/Natural Resources Division Manager

Taylor Gleaves
Project Ecologist

Submitted: one electronic copy (PDF), via email

PRELIMINARY JURISDICTIONAL WETLAND/WATERS DELINEATION REPORT
Hall Road Apartments
Columbus, Franklin County, OH

1. INTRODUCTION

1.1 Project Location and Description
This report presents the results of the preliminary jurisdictional wetland/waters delineation conducted by Stone Environmental Engineering and Science, Inc. (STONE) for an approximate 35-acre parcel (Franklin County Parcel 570-144455) located in Columbus, Franklin County, Ohio. The surrounding land use generally consists of residential and commercial developments, and forested area. A Project Location Map can be found in Appendix A – Figure 1.

1.2 Limitations
The conclusions presented herein are professional opinions based on the information contained in this report and are specific to the area investigated and on information provided by others. The findings of this report are applicable and representative of the conditions encountered on the date of this assessment and may not represent conditions at a later date. These conclusions represent STONE's professional opinion based on knowledge and experience with the United States Army Corps of Engineers (USACE) and Ohio Environmental Protection Agency (EPA) regulatory guidance documents and published methodology. These conclusions are subject to review and revision by the USACE and Ohio EPA.

2. REGULATORY BACKGROUND

Jurisdictional waters and wetlands are regulated by the USACE and Ohio EPA. Both Section 404 and Section 401 of the federal Clean Water Act (CWA) provide the USACE and Ohio EPA with the regulatory framework to implement these regulatory programs.

Section 404 of the CWA regulates the discharge of dredged material, placement of fill material, or certain types of excavation, which may result in more than incidental fallback material, within "Waters of the United States" (WOTUS). This Section grants the Secretary of the Army, through the Chief of Engineers, to issue permits for these actions. WOTUS are defined by the CWA as territorial seas and traditional navigable waters, intermittent and perennial tributaries, lakes, pond, and impoundments of jurisdictional waters, and adjacent wetlands. Wetlands are defined by the CWA as areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Section 401 of the CWA requires that any applicant requesting a Federal permit for activities resulting in a discharge to "Waters of the State" (State Waters) shall provide the Federal permitting agency a Certification from the State. This certification, known as a Section 401 Water Quality Certification (WQC), ensures that the Federal permit meets the State water quality standards. A Federal permit cannot be granted unless a Section 401 WQC is applied for, and received, from the State. Within the State of Ohio, the Ohio EPA Division of Surface Water 401

WQC Section is the regulatory entity for this certification. State laws and rules have been created in order to implement Section 401 and regulate impacts to State Waters, which includes isolated wetlands and ephemeral streams.

According to Section 404 of the CWA, a permit must be acquired from the USACE to authorize discharge of dredge or fill material into WOTUS. The USACE has established several Nationwide Permits (NWPs) to expedite the permitting process for common discharges which have been determined to have minimal individual or cumulative impacts on the environment. Ohio EPA Section 401 water quality certifications have been pre-approved for the NWPs. The NWP process typically requires three to six months for completion. Several criteria/limitations are associated with NWPs and can be discussed in further detail if it is determined that the on-site jurisdictional waters will be impacted by future site development. If NWP limitations are exceeded, typically an individual Section 404/401 permit must be obtained.

3. LITERATURE REVIEW

3.1 Soils

The United States Department of Agriculture (USDA) Natural Resource Conversation Service (NRCS) Soil Survey Data within the study area boundaries are listed below in Table 3-1 (Appendix A – Figure 2).

Table 3-1. Soil Map Units Within the Study Area

Soil Map Unit Symbol	Mapping Unit Name	Hydric Percentage
CeB	Celina silt loam, 2 to 6 percent slopes	1% to 32%
CeB2	Celina silt loam, 2 to 6 percent slopes, eroded	1% to 32%
Mh	Medway silt loam, occasionally flooded	1% to 32%
MlC2	Miamian silty clay loam, 6 to 12 percent slopes, eroded	1% to 32%
MmC3	Miamian clay loam, shallow to dense till substratum, 6 to 12 percent slopes, severely eroded	1% to 32%

3.2 USGS Topography

The study area is located on the United States Geological Survey (USGS) Southwest Columbus (7.5 minute) topographic map (Appendix A – Figure 1). The topography of the study area is generally uniform, ranging from 875 mean sea level (MSL) to 830 MSL. The study area drainage is divided by Scioto Big Run, with the southwestern portion of the study area draining northeast and the northeastern portion of the study area draining southwest.

3.3 National Wetlands Inventory Mapping

The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map displays riverine habitat within the study area (Appendix A – Figure 3).

3.4 USGS NHD Mapping

The USGS National Hydrography Dataset (NHD) map shows two perennial streams (Scioto Big Run and Unnamed Tributary to Scioto Big Run) within the study area and flowing to the southeast and east, respectively (Appendix A – Figure 3).

3.5 Ohio EPA Watershed & Designated Use Information

The study area is located within the Scioto Big Run Watershed (HUC 12: 050600012301). Scioto Big Run has an Ohio EPA designated use of Warmwater Habitat (WWH) and is located in the northern portion of the study area.

3.6 Floodplain Mapping

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) displays Regulatory Floodway, 100-year floodplain and 500-year floodplain within the study area (Panel 39049C0311K, effective 6/17/2008) (Appendix A – Figure 4).

4. METHODOLOGY

Taylor Gleaves (STONE) and Jordan Brennan (STONE), performed an on-site assessment of the study area on January 11, 2022. The total study area size is approximately 35 acres. A hand-held Global Positioning System (GPS) unit capable of submeter accuracy was used to gather data points and determine boundaries of the aquatic resources.

Wetland determination data points were collected in accordance with methodology outlined in the *United States Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*. Data points were collected for each wetland, including different data points per different Cowardin Habitat Classifications, and surrounding upland area. During the field review, the Ohio EPA's ORAM was used to evaluate the wetlands identified within the study area and the Primary Headwater Habitat Evaluation Index (HHEI) was used to evaluate streams with drainage areas less than one square mile and/or with pools less than 40 centimeters deep. All other streams were evaluated using the Qualitative Headwater Habitat Evaluation (QHEI).

5. RESULTS

STONE identified 0.06 acres of Category 1 emergent wetland, 517 feet of ephemeral stream, 1,900 linear feet of intermittent stream, and 3,123 linear feet of perennial stream. Details of the wetlands and streams can be found in Tables 5-1 and 5-2, respectively. Representative photographs of the wetlands and streams can be found in Appendix B. Completed ORAM forms for the wetlands and HHEI/QHEI forms for the streams are included in Appendix C.

Table 5-1. Wetlands Identified within Study Area

Wetland ID	Cowardin Habitat Classification[1]	ORAM Category (Score)	Acreage within Study Area[2]	Jurisdiction	Connection to Nearest Waterway[3]	Latitude	Longitude
WTL-001	PEM	1 (27)	0.03	WOTUS and State Water	Abuts RPW	39.932541	-83.120751
WTL-002	PEM	1 (15)	0.03	WOTUS and State Water	Abuts RPW	39.930529	-83.123158
TOTAL			**0.06 Acres**				

[1]PEM = Palustrine Emergent
[2]Note that delineated wetlands may extend outside the study area.
[3]RPW = Relatively Permanent Water

WTL-001 and WTL-002 are small, Category 1 emergent wetlands that have been directly impacted by adjacent agricultural activities. Both wetlands directly abut ST-001, a Relatively Permanent Water (RPW), and are therefore considered federally jurisdictional.

Table 5-2. Streams Identified within Study Area

Stream ID	Stream Hydrology	USACE Flow Type[1]	HHEI Class/QHEI Rating (Score)	Length within Study Area (Feet)[2]	Jurisdiction[3]	Waterway Name	Latitude	Longitude
ST-001	Intermittent	RPW	Modified Class II (34)	1,295	WOTUS and State Water	Unnnamed Tributary	39.9305	-83.1231
ST-002	Intermittent	RPW	Class II (51)	605	WOTUS and State Water	Unnnamed Tributary to Scioto Big Run	39.9325	-83.1205
ST-003	Perennial	RPW	Good (68)	1,391	WOTUS and State Water	Scioto Big Run	39.9334	-83.1213
ST-004	Perennial	RPW	Class II (63)	1,062	WOTUS and State Water	Unnnamed Tributary to Scioto Big Run	39.9335	-83.1220
ST-005	Perennial	RPW	Class II (69)	670	WOTUS and State Water	Unnnamed Tributary to Scioto Big Run	39.9339	-83.1232
ST-006	Ephemeral	NRPW	Modified Class I (23)	517	WOTUS and State Water	Unnnamed Tributary	39.9312	-83.1209
TOTAL				**5,540 Feet**				

[1] RPW = Relatively Permanent Water; NRPW Non-Relatively Permanent Water
[2] Note that the delineated streams may extend outside the study area.
[3] Streams colored gray will require the Significant Nexus Test.

All streams identified within the study area flow to ST-003 (Scioto Big Run), which is a Warmwater Habitat stream, per the Ohio EPA. ST-003 appears to contain perennial flow and received a QHEI score of 68, giving it a narrative rating of "Good". ST-004 and ST-005 are also perennial streams located within the forested area within the northern portion of the study area. Both streams enter the study area from a culvert to the west. ST-002 is an intermittent stream that flows along the eastern portion of the study area. ST-002 begins within the study area and appears to be fed by both groundwater, drainage from WTL-001, and drainage from an adjacent development. ST-001 and ST-006 both flow through an agricultural field and have been heavily modified. ST-001 is an intermittent stream that enters the study area from a culvert under I-270. ST-006 is an ephemeral stream that receives drainage from an adjacent development. This increased surface runoff is likely why ST-006 contained flow during the field review, when base flows were present. ST-006 appears to be a Non-Relatively Permanent Water (NRPW) and will therefore require the Significant Nexus Test.

6. CONCLUSIONS

STONE identified two emergent wetlands, three perennial streams, two intermittent streams, and one ephemeral stream. No other aquatic resources were observed during the on-site assessment.

Since the USACE has authority to determine and/or verify the geographical boundaries of wetlands and other WOTUS, to this point, this investigation is termed "preliminary." USACE verification (also referred to as a Jurisdictional Determination "JD") is typically required for completion of the Section 404, Section 401, and/or isolated wetland permitting process. It is the responsibility of any party that intends to discharge dredge or fill material into jurisdictional waters of the U.S. to comply with all applicable regulations.

7. REFERENCES

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APPENDIX A

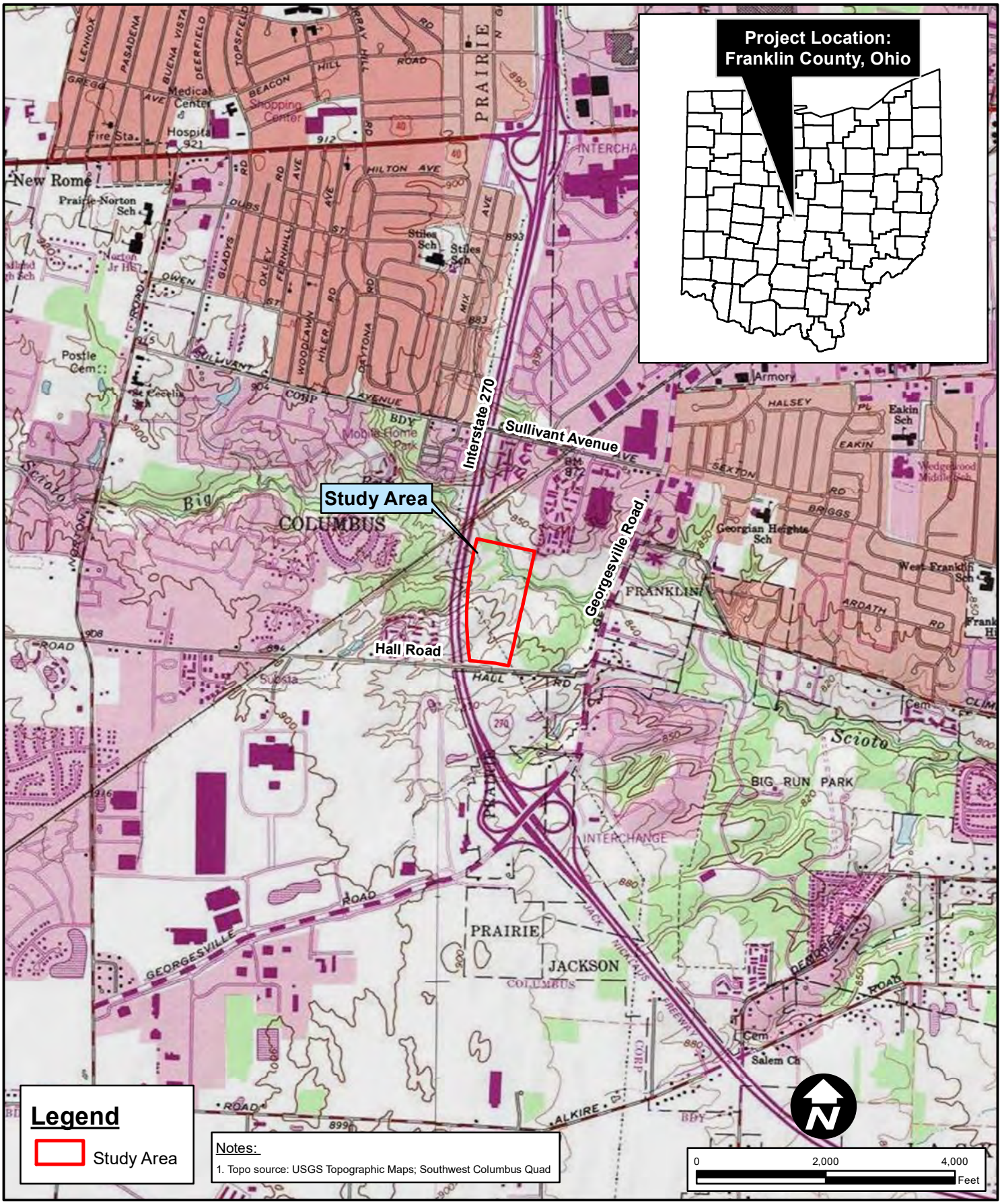


Figure 1

Drafted By: TG
Reviewed By: TL

Project: C1283-001-21

PROJECT LOCATION MAP

Hall Road Apartments

Columbus, Franklin County, Ohio

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

Date: January 10, 2022

Figure 2

Drafted By: TG
Reviewed By: TL

Project: C1283-001-21

SOIL UNIT MAP

Hall Road Apartments

Columbus, Franklin County, Ohio

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

Date: January 20, 2022

Figure 3

Drafted By: TG
Reviewed By: TL

Project: C1283-001-21

USFWS NWI AND USGS NHD MAP

Hall Road Apartments

Columbus, Franklin County, Ohio

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

Date: January 20, 2022

Figure 4	**FEMA MAP**	STONE ENVIRONMENTAL, ENGINEERING & SCIENCE
Drafted By: TG Reviewed By: TL	Hall Road Apartments	
Project: C1283-001-21	Columbus, Franklin County, Ohio	Date: January 20, 2022

Figure 5

Drafted By: TG
Reviewed By: TL

Project: C1283-001-21

DELINEATION RESULTS MAP

Hall Road Apartments

Columbus, Franklin County, Ohio

STONE ENVIRONMENTAL, ENGINEERING & SCIENCE

Date: January 20, 2022

APPENDIX B

01 - Viewing ST-001 upstream.

02 - Viewing ST-001 downstream.

03 - Viewing ST-002 upstream.

04 - Viewing ST-002 downstream.

05 - Viewing ST-003 upstream.

06 - Viewing ST-003 downstream.

07 - Viewing ST-004 upstream.

08 - Viewing ST-004 downstream

09 - Viewing ST-005 upstream.

10 - Viewing ST-005 downstream.

11 - Viewing ST-006 upstream.

12 - Viewing ST-006 downstream.

13 - Viewing east within WTL-001.

14 - Viewing west within WTL-002.

15 - Viewing across study area to the south.

16 - Viewing across study area to the east.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hall Road Apartments City/County: Columbus/Franklin Sampling Date: 1/11/2022

Applicant/Owner: Ascent Development Group State: OH Sampling Point: DP-001

Investigator(s): Taylor Gleaves, Jordan Brennan Section, Township, Range: VMD 1425

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave

Slope (%): 6 Lat: 39.9325419 Long: -83.1207512 Datum: NAD83

Soil Map Unit Name: Miamian silty clay loam, 6 to 12 percent slopes, eroded NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
WTL-001, PEM

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. *Fraxinus pennsylvanica*	5	Yes	FACW
2.			
3.			
4.			
5.			
	5 =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Cinna arundinacea*	10	No	FACW
2. *Symphyotrichum lateriflorum*	20	Yes	FACW
3. *Phleum pratense*	30	Yes	FACU
4. *Solidago canadensis*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	70 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	75 (A)		230 (B)

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-001

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	95	10YR 3/6	5	C	PL	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 1
Water Table Present?	Yes X	No ___	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 8

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hall Road Apartments | City/County: Columbus/Franklin | Sampling Date: 1/11/2022

Applicant/Owner: Ascent Development Group | State: OH | Sampling Point: DP-002

Investigator(s): Taylor Gleaves, Jordan Brennan | Section, Township, Range: VMD 1425

Landform (hillside, terrace, etc.): hillside | Local relief (concave, convex, none): convex

Slope (%): 6 | Lat: 39.9324191 | Long: -83.1206718 | Datum: NAD83

Soil Map Unit Name: Miamian silty clay loam, 6 to 12 percent slopes, eroded | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Upland for WTL-001

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. *Lonicera japonica*	90	Yes	FACU
2.			
3.			
4.			
5.			
	90 =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Solidago canadensis*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	10 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	100	x 4 =	400
UPL species	0	x 5 =	0
Column Totals:	100 (A)		400 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-002

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hall Road Apartments | City/County: Columbus/Franklin | Sampling Date: 1/11/2022

Applicant/Owner: Ascent Development Group | State: OH | Sampling Point: DP-003

Investigator(s): Taylor Gleaves, Jordan Brennan | Section, Township, Range: VMD 1425

Landform (hillside, terrace, etc.): field | Local relief (concave, convex, none): convex

Slope (%): 6 | Lat: 39.9331754 | Long: -83.1212480 | Datum: NAD83

Soil Map Unit Name: Miamian silty clay loam, 6 to 12 percent slopes, eroded | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Upland point

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.	90	Yes	
2.			
3.			
4.			
5.			
	90 =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Solidago canadensis*	10	No	FACU
2. *Setaria faberi*	40	Yes	FACU
3. *Sorghum bicolor*	40	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	50	x 4 =	200
UPL species	40	x 5 =	200
Column Totals:	90 (A)		400 (B)

Prevalence Index = B/A = 4.44

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-003

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Frozen groud

Depth (inches): 8

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hall Road Apartments | City/County: Columbus/Franklin | Sampling Date: 1/11/2022

Applicant/Owner: Ascent Development Group | State: OH | Sampling Point: DP-004

Investigator(s): Taylor Gleaves, Jordan Brennan | Section, Township, Range: VMD 1425

Landform (hillside, terrace, etc.): riverine | Local relief (concave, convex, none): concave

Slope (%): 6 | Lat: 39.9305296 | Long: -83.1231585 | Datum: NAD83

Soil Map Unit Name: Miamian silty clay loam, 6 to 12 percent slopes, eroded | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____ Hydric Soil Present? Yes X No ____ Wetland Hydrology Present? Yes X No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____

Remarks:
WTL-002, PEM

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Typha angustifolia*	100	Yes	OBL
2. *Epilobium coloratum*	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	110	x 1 =	110
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		110 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-004

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	95	10YR 3/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	X	No ___	Depth (inches):	3
Water Table Present?	Yes	X	No ___	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes	X	No ___	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hall Road Apartments | City/County: Columbus/Franklin | Sampling Date: 1/11/2022

Applicant/Owner: Ascent Development Group | State: OH | Sampling Point: DP-005

Investigator(s): Taylor Gleaves, Jordan Brennan | Section, Township, Range: VMD 1425

Landform (hillside, terrace, etc.): field | Local relief (concave, convex, none): convex

Slope (%): 6 | Lat: 39.9344564 | Long: -83.1224493 | Datum: NAD83

Soil Map Unit Name: Miamian silty clay loam, 6 to 12 percent slopes, eroded | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Upland for WTL-002

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.	90	Yes	
2.			
3.			
4.			
5.			
	90 =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Glycine max*	10	Yes	UPL
2. *Cardamine hirsuta*	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	40 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	10	x 5 =	50
Column Totals:	40 (A)		170 (B)

Prevalence Index = B/A = 4.25

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-005

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Hall Road Apartments | City/County: Columbus/Franklin | Sampling Date: 1/11/2022

Applicant/Owner: Ascent Development Group | State: OH | Sampling Point: DP-006

Investigator(s): Taylor Gleaves, Jordan Brennan | Section, Township, Range: VMD 1425

Landform (hillside, terrace, etc.): field | Local relief (concave, convex, none): convex

Slope (%): 6 | Lat: 39.9344564 | Long: -83.1224493 | Datum: NAD83

Soil Map Unit Name: Miamian silty clay loam, 6 to 12 percent slopes, eroded | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation N , Soil N , or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation N , Soil N , or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Upland for WTL-002

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. *Juniperus virginiana*	20	Yes	FACU
2.			
3.			
4.			
5.			
	20 =Total Cover		
Herb Stratum (Plot size: ____)			
1. *Solidago canadensis*	10	No	FACU
2. *Lonicera japonica*	50	Yes	FACU
3. *Daucus carota*	10	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	70 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	80	x 4 =	320
UPL species	10	x 5 =	50
Column Totals:	90 (A)		370 (B)

Prevalence Index = B/A = 4.11

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: DP-006

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/4	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Background Information

Name: Taylor Gleaves
Date: 1/11/2022
Affiliation: STONE Environmental Engineering & Science, Inc.
Address: 748 Green Crest Drive, Westerville, Ohio 43081
Phone Number: (614) 865 - 1874
e-mail address: TaylorGleaves@StoneEnvironmental.com
Name of Wetland: WTL-001
Vegetation Communit(ies): PEM
HGM Class(es): Riverine
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See PJWD Report.

Lat/Long or UTM Coordinate	See PJWD Report.
USGS Quad Name	See PJWD Report.
County	See PJWD Report.
Township	See PJWD Report.
Section and Subsection	See PJWD Report.
Hydrologic Unit Code	See PJWD Report.
Site Visit	See PJWD Report.
National Wetland Inventory Map	See PJWD Report.
Ohio Wetland Inventory Map	See PJWD Report.
Soil Survey	See PJWD Report.
Delineation report/map	See PJWD Report.

Name of Wetland: WTL-001	
Wetland Size (acres, hectares):	0.03 acre

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

See PJWD Report

Comments, Narrative Discussion, Justification of Category Changes:

Final score : 27	**Category:** 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a mitigation site, conservation site, etc.	x	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	x	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	x	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	x	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		x
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	x	

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is a legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	(NO) Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	(NO) Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	(NO) Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	(NO) Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	(NO) Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	(NO) Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	(NO) Go to Question 8a

#	Question	Circle one	
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	(NO) Go to Question 8b
8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	(NO) Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the 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?	YES Go to Question 9b	(NO) Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 9d	(NO) Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	(NO) Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	(NO) Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	(NO) Go to Question 10
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	(NO) Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	(NO) Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Hall Road Apartments		Date:	January 11, 2022
Wetlands:	WTL-001	Rater:	Taylor Gleaves

0 Subtotal | 0 Points

Metric 1. Wetland Area (size). (max 6 pts)

Select one size class and assign score.

	>50 acres (>20.2ha) (6 pts)
	25 to <50 acres (10.1 to <20.2ha) (5 pts)
	10 to <25 acres (4 to <10.1ha) (4 pts)
	3 to <10 acres (1.2 to <4ha) (3 pts)
	0.3 to <3 acres (0.12 to <1.2ha) (2pts)
	0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
X	<0.1 acres (0.04ha) (0 pts)

3 Subtotal | 3 Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)

2a. Calculate average buffer width (select one, do not double check)

	WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
	MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
X	NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
	VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

	VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
	LOW. Old field (>10 years), shrubland, young second growth forest. (5)
X	MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
X	HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

13 Subtotal | 10 Points

Metric 3. Hydrology. (max 30 pts)

3a. Sources of Water. Score all that apply.

	High pH groundwater (5)
	Other groundwater (3)
X	Precipitation (1)
X	Seasonal/Intermittent surface water (3)
	Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

	100 year floodplain (1)
	Between stream/lake and other human use (1)
	Part of wetland/upland (e.g. forest), complex (1)
X	Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

	>0.7 (27.6in) (3)
	0.4 to 0.7m (15.7 to 27.6in) (2)
X	<0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

(select one or double check & average)

	Semi- to permanently inundated/saturated (4)
	Regularly inundated/saturated (3)
X	Seasonally inundated (2)
	Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

(select one or double check & average)

	None or none apparent (12)
	Recovered (7)
X	Recovering (3)
X	Recent or no recovery (1)

Check all disturbances observed

☐ ditch	☐ point source (nonstormwater)
☐ dike	☐ filling/grading
☑ tile	☐ road bed/RR track
☐ weir	☐ dredging
☐ stormwater input	☐ other- list

24 Subtotal | 11 Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

4a. Substrate disturbance. Score one or double check and average.

	None or none apparent (4)
X	Recovered (3)
	Recovering (2)
	Recent or no recovery (1)

4b. Habitat development. Select one.

	Excellent (7)
	Very good (6)
	Good (5)
	Moderately good (4)
	Fair (3)
X	Poor to fair (2)
	Poor (1)

4c. Habitat alteration. Score one or double check and average.

	None or none apparent (9)
X	Recovered (6)
	Recovering (3)
	Recent or no recovery (1)

Check all disturbances observed

☐ mowing	☐ shrub/sapling removal
☐ grazing	☐ herbaceous/aquatic bed removal
☐ clearcutting	☐ sedimentation
☐ selective cutting	☐ dredging
☐ woody debris removal	☐ farming
☐ toxic pollutants	☑ nutrient enrichment

24 subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Hall Road Apartments	Date:	January 11, 2022
Wetland:	WTL-001	Rater:	Taylor Gleaves

24 subtotal first page

24 Subtotal | 0 Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

	Bog (10 pts)
	Fen (10 pts)
	Old Growth Forest (10 pts)
	Mature forested wetland (5 pts)
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
	Lake Plain Sand Prairies (Oak Openings) (10 pts)
	Relict Wet Prairies (10 pts)
	Known occurrence state/federal threatened or endangered species (10)
	Significant migatory songbird/waterfowl habitat or usage (10 pts)
	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

27 Subtotal | 3 Points

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

0	Aquatic bed
1	Emergent
0	Shrub
0	Forest
0	Mudflats
0	Open water
0	Other (list)

6b. Horizontal (plan view) interspersion

Select only one

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
X	Low (1)
	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.
Add or deduct points for coverage

	Extensive >75 % cover (-5)
	Moderate 25-75% cover (-3)
	Sparse 5-25% cover (-1)
	Nearly Absent <5% cover (0)
X	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

0	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp.
high	A predominance of native species, with nonnative spp. and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

27 **GRAND TOTAL (max 100 pts)** Provisional Wetland Category: Category 1

WTL-001

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted.	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	3	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.ohio.gov/dsw/401/index.aspx to determine the wetland's category based on its quantitative score	27	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

WTL-001

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	(NO)	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	(YES) Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	(NO) Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Taylor Gleaves
Date: 1/11/2022
Affiliation: STONE Environmental Engineering & Science, Inc.
Address: 748 Green Crest Drive, Westerville, Ohio 43081
Phone Number: (614) 865 - 1874
e-mail address: TaylorGleaves@StoneEnvironmental.com
Name of Wetland: WTL-002
Vegetation Communit(ies): PEM
HGM Class(es): Depression
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See PJWD Report.

Lat/Long or UTM Coordinate	See PJWD Report.
USGS Quad Name	See PJWD Report.
County	See PJWD Report.
Township	See PJWD Report.
Section and Subsection	See PJWD Report.
Hydrologic Unit Code	See PJWD Report.
Site Visit	See PJWD Report.
National Wetland Inventory Map	See PJWD Report.
Ohio Wetland Inventory Map	See PJWD Report.
Soil Survey	See PJWD Report.
Delineation report/map	See PJWD Report.

Name of Wetland: WTL-002	
Wetland Size (acres, hectares):	0.03 acre

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

See PJWD Report

Comments, Narrative Discussion, Justification of Category Changes:

Final score : 15	**Category:** 1

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland*. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Unit if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a mitigation site, conservation site, etc.	x	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	x	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	x	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	x	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		x
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	x	

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is a legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Reynoldsburg Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	(NO) Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	(NO) Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	(NO) Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	(NO) Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	(NO) Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	(NO) Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	(NO) Go to Question 8a

#	Question	Circle one	
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	(NO) Go to Question 8b
8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	(NO) Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the 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?	YES Go to Question 9b	(NO) Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 9d	(NO) Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	(NO) Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	(NO) Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	(NO) Go to Question 10
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	(NO) Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	(NO) Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	*Zygadenus elegans var. glaucus*	*Calla palustris*	*Carex cryptolepis*	*Calamagrostis canadensis*
Myriophyllum spicatum	*Cacalia plantaginea*	*Carex atlantica var. capillacea*	*Carex lasiocarpa*	*Calamogrostis stricta*
Najas minor	*Carex flava*	*Carex echinata*	*Carex stricta*	*Carex atherodes*
Phalaris arundinacea	*Carex sterilis*	*Carex oligosperma*	*Cladium mariscoides*	*Carex buxbaumii*
Phragmites australis	*Carex stricta*	*Carex trisperma*	*Calamagrostis stricta*	*Carex pellita*
Potamogeton crispus	*Deschampsia caespitosa*	*Chamaedaphne calyculata*	*Calamagrostis canadensis*	*Carex sartwellii*
Ranunculus ficaria	*Eleocharis rostellata*	*Decodon verticillatus*	*Quercus palustris*	*Gentiana andrewsii*
Rhamnus frangula	*Eriophorum viridicarinatum*	*Eriophorum virginicum*		*Helianthus grosseserratus*
Typha angustifolia	*Gentianopsis spp.*	*Larix laricina*		*Liatris spicata*
Typha xglauca	*Lobelia kalmii*	*Nemopanthus mucronatus*		*Lysimachia quadriflora*
	Parnassia glauca	*Schechzeria palustris*		*Lythrum alatum*
	Potentilla fruticosa	*Sphagnum spp.*		*Pycnanthemum virginianum*
	Rhamnus alnifolia	*Vaccinium macrocarpon*		*Silphium terebinthinaceum*
	Rhynchospora capillacea	*Vaccinium corymbosum*		*Sorghastrum nutans*
	Salix candida	*Vaccinium oxycoccos*		*Spartina pectinata*
	Salix myricoides	*Woodwardia virginica*		*Solidago riddellii*
	Salix serissima	*Xyris difformis*		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

ORAM v. 5.0 Field Form Quantitative Rating

Site: Hall Road Apartments		Date:	January 11, 2022
Wetlands:	WTL-002	Rater:	Taylor Gleaves

0 Subtotal | 0 Points

Metric 1. Wetland Area (size). (max 6 pts)

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [X] <0.1 acres (0.04ha) (0 pts)

3 Subtotal | 3 Points

Metric 2. Upland buffers and surrounding land use. (max 14 pts)

2a. Calculate average buffer width (select one, do not double check)

- [ ] WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- [ ] MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- [X] NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- [ ] VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use (select one or double check & average)

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- [X] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [X] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

12 Subtotal | 9 Points

Metric 3. Hydrology. (max 30 pts)

3a. Sources of Water. Score all that apply.

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [X] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] Perennial surface water (lake or stream) (5)

3b. Connectivity. Score all that apply.

- [ ] 100 year floodplain (1)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [X] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select only 1.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [X] <0.4m (<15.7in) (1)

3d. Duration inundation/saturation.

(select one or double check & average)

- [ ] Semi- to permanently inundated/saturated (4)
- [X] Regularly inundated/saturated (3)
- [ ] Seasonally inundated (2)
- [ ] Seasonally saturated in upper 30cm (12in) (1)

3e. Modifications to natural hydrologic regime.

(select one or double check & average)

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [X] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [✓] ditch
- [ ] dike
- [✓] tile
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [✓] road bed/RR track
- [ ] dredging
- [ ] other- list

19 Subtotal | 7 Points

Metric 4. Habitat Alteration and Development. (max 20 pts.)

4a. Substrate disturbance. Score one or double check and average.

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [X] Recovering (2)
- [ ] Recent or no recovery (1)

4b. Habitat development. Select one.

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [X] Poor to fair (2)
- [ ] Poor (1)

4c. Habitat alteration. Score one or double check and average.

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [X] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [✓] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [✓] nutrient enrichment

19 subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Site:	Hall Road Apartments	Date:	January 11, 2022
Wetland:	WTL-002	Rater:	Taylor Gleaves

19 subtotal first page

19 Subtotal | 0 Points

Metric 5. Special Wetlands. (max 10 pts.)

Check all that apply and score as indicated

	Bog (10 pts)
	Fen (10 pts)
	Old Growth Forest (10 pts)
	Mature forested wetland (5 pts)
	Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
	Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
	Lake Plain Sand Prairies (Oak Openings) (10 pts)
	Relict Wet Prairies (10 pts)
	Known occurrence state/federal threatened or endangered species (10)
	Significant migatory songbird/waterfowl habitat or usage (10 pts)
	Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

15 Subtotal | -4 Points

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale

0	Aquatic bed
1	Emergent
0	Shrub
0	Forest
0	Mudflats
0	Open water
0	Other (list)

6b. Horizontal (plan view) interspersion

Select only one

	High (5)
	Moderately high (4)
	Moderate (3)
	Moderately low (2)
	Low (1)
X	None (0)

6c. Coverage of invasive plants.

Refer to Table 1 ORAM long form for list.
Add or deduct points for coverage

X	Extensive >75 % cover (-5)
	Moderate 25-75% cover (-3)
	Sparse 5-25% cover (-1)
	Nearly Absent <5% cover (0)
	Absent (1)

6d. Microtopography

Score all present using 0 to 3 scale

0	Vegetated hummocks/tussocks
0	Coarse woody debris >15 cm (6")
0	Standing dead > 25 cm (10") dbh
0	Amphibian breeding pools

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp.
high	A predominance of native species, with nonnative spp. and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

15 **GRAND TOTAL (max 100 pts)** Provisional Wetland Category: Category 1

WTL-002

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted.	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	3	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-4	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.ohio.gov/dsw/401/index.aspx to determine the wetland's category based on its quantitative score	15	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

WTL-002

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	(NO)	Is quantitative rating score *less* than the Category 2 scoring threshold (*excluding* gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been over-categorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	(NO)	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	(NO)	Is quantitative rating score *greater* than the Category 2 scoring threshold *(including* any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	(YES) Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on an quantitative score.
Does the quantitative score fall with the *"gray zone"* for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	(NO)	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit *moderate OR superior* hydrologic OR habitat, OR recreational functions AND the wetland was *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	(NO) Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 34

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-001 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi^2): 0.04

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93057 LONG.: -83.12319 RIVER CODE: N/A RIVER MILE: N/A

DATE: 01/11/22 SCORER: T. Gleaves COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	35%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	0%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	15%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	10%	☐	MUCK [0 pts]	0%
☑	SAND (<2 mm) [6 pts]	35%	☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 15.00% (A)

Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points

Substrate Max = 40: 14

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☑	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☐	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 7

Pool Depth Max = 30: 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

☐	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☑	≤ 1.0 m (<=3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.67

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☑	☑	Open Pasture, Row Crop
☑	☑	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑	Stream Flowing	☐	Moist Channel, isolated pools, no flow (Intermittent)
☐	Subsurface flow with isolated pools (Interstitial)	☐	Dry channel, no water (Ephemeral)

COMMENTS: Intermittent Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐	None	☐	1.0	☐	2.0	☐	3.0
☐	0.5	☐	1.5	☑	2.5	☐	>3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: **Scioto Big Run** Distance from Evaluated Stream **325.00**

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Columbus** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Franklin** Township / City: **Columbus**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **01/09/22** Quantity: **0.58**

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **100%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

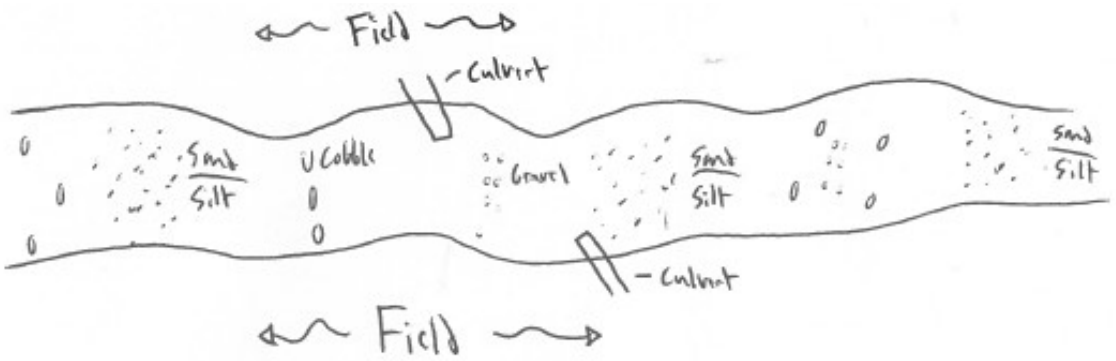
Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW →



Save as pdf Reset Form

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 51

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-002 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi^2): 0.05

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93258 LONG.: -83.12055 RIVER CODE: 02-092 RIVER MILE: N/A

DATE: 01/11/22 SCORER: T. Gleaves COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☑ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☐	SILT [3 pt]	15%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	5%	☐	CLAY or HARDPAN [0 pt]	5%
☑	GRAVEL (2-64 mm) [9 pts]	30%	☐	MUCK [0 pts]	0%
☐	SAND (<2 mm) [6 pts]	35%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 5.00% (A)

Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

HHEI Metric Points

Substrate Max = 40: 21

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☑	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☐	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 8

Pool Depth Max = 30: 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

☐	> 4.0 meters (> 13') [30 pts]	☑	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☐	≤ 1.0 m (<=3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 1.00

Bankfull Width Max=30: 15

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☑	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑ Stream Flowing ☐ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS: Intermittent Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None	☐ 1.0	☐ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☑ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: **Scioto Big Run** Distance from Evaluated Stream **0.00**

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Columbus** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Franklin** Township / City: **Columbus**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **01/09/22** Quantity: **0.58**

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **15%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C)_____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

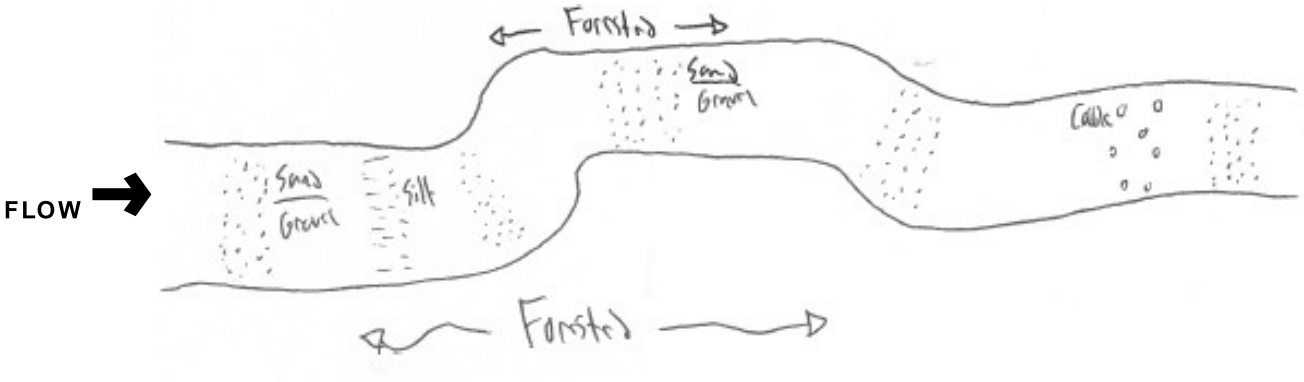
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Save as pdf Reset Form

Report ID: ST-003

Ohio EPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 68.00

Stream & Location: Scioto Big Run **RM:** 19 4.3 **Date:** 01/11/22

pH: **Scorers Full Name & Affiliation:** Taylor Gleaves (STONE) Jordan Brennan (STONE)

River Code: 000-002-092 **STORET #:** _____ **Lat./ Long.:** (NAD 83 - decimal °) 39.9334 / 83.1213 Office verified location ■

1] SUBSTRATE

Check *ONLY* **Two** substrate *TYPE BOXES*; estimate % or note every type present

Check ONE (*Or 2 & average*)

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR /SLABS [10]			☐☐ HARDPAN [4]		
☐☐ BOULDER [9]			☐☐ DETRITUS [3]		
■☐ COBBLE [8]	20%	40%	☐☐ MUCK [2]		
☐■ GRAVEL [7]	25%	30%	☐☐ SILT [2]	15%	10%
☐☐ SAND [6]	30%	15%	☐☐ ARTIFICIAL [0]	10%	5%
☐☐ BEDROCK [5]					

(Score natural substrates; ignore sludge from point-sources)

NUMBER OF BEST TYPES: ☐ 4 or more [2] ■ 3 or less [0]

ORIGIN	EMBEDDEDNESS	QUALITY
☐ LIMESTONE [1]	SILT	☐ HEAVY [-2]
■ TILLS [1]		☐ MODERATE [-1]
☐ WETLANDS [0]		■ NORMAL [0]
☐ HARDPAN [0]		☐ FREE [1]
☐ SANDSTONE [0]		☐ EXTENSIVE [-2]
☐ RIP/RAP [0]		☐ MODERATE [-1]
☐ LACUSTURINE [0]		■ NORMAL [0]
☐ SHALE [-1]		☐ NONE [1]
☐ COAL FINES [-2]		

Substrate **16.0** *Maximum 20*

Comments

2] INSTREAM COVER

Indicate presence 0 to 3: **0**-Absent; **1**-Very small amounts or if more common of marginal quality; **2**-Moderate amounts, but not of highest quality or in small amounts of highest quality; **3**-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

1 UNDERCUT BANKS [1]	2 POOLS > 70cm [2]	____ OXBOWS, BACKWATERS [1]
1 OVERHANGING VEGETATION [1]	____ ROOTWADS [1]	____ AQUATIC MACROPHYTES [1]
____ SHALLOWS (IN SLOW WATER) [1]	____ BOULDERS [1]	1 LOGS OR WOODY DEBRIS [1]
1 ROOTMATS [1]		

AMOUNT

Check ONE (*Or 2 & average*)

☐ EXTENSIVE >75% [11]
■ MODERATE 25-75% [7]
☐ SPARSE 5-<25% [3]
☐ NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20 **13**

3] CHANNEL MORPHOLOGY

Check ONE in each category (*Or 2 & average*)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☐ HIGH [3]
■ MODERATE [3]	■ GOOD [5]	■ RECOVERED [4]	■ MODERATE [2]
☐ LOW [2]	☐ FAIR [3]	☐ RECOVERING [3]	☐ LOW [1]
☐ NONE [1]	☐ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20 **14.0**

4] BANK EROSION AND RIPARIAN ZONE

Check **ONE** in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

L	R	EROSION
☐	☐	NONE / LITTLE [3]
■	■	MODERATE [2]
☐	☐	HEAVY / SEVERE [1]

L	R	RIPARIAN WIDTH
☐	■	WIDE > 50m [4]
☐	☐	MODERATE 10-50m [3]
■	☐	NARROW 5-10m [2]
☐	☐	VERY NARROW < 5m [1]
☐	☐	NONE [0]

L	R	FLOOD PLAIN QUALITY
☐	☐	FOREST, SWAMP [3]
■	■	SHRUB OR OLD FIELD [2]
☐	☐	RESIDENTIAL, PARK, NEW FIELD [1]
☐	☐	FENCED PASTURE [1]
☐	☐	OPEN PASTURE, ROWCROP [0]

L	R	
☐	☐	CONSERVATION TILLAGE [1]
☐	☐	URBAN OR INDUSTRIAL [0]
☐	☐	MINING / CONSTRUCTION [0]

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10 **7.00**

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH (Check **ONE** (*ONLY!*))

☐ > 1m [6]
■ 0.7-<1m [4]
☐ 0.4-<0.7m [2]
☐ 0.2-<0.4m [1]
☐ < 0.2m [0]

CHANNEL WIDTH (Check ONE (*Or 2 & average*))

■ POOL WIDTH > RIFFLE WIDTH [2]
☐ POOL WIDTH = RIFFLE WIDTH [1]
☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY (Check ALL that apply)

☐ TORRENTIAL [-1]	☐ SLOW [1]
☐ VERY FAST [1]	☐ INTERSTITIAL [-1]
☐ FAST [1]	☐ INTERMITTENT [-2]
■ MODERATE [1]	☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current Maximum 12 **7.0**

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*). ☐ NO RIFFLE [metric=0]

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS > 10cm [2]	☐ MAXIMUM > 50cm [2]	☐ STABLE (e.g., Cobble, Boulder) [2]	☐ NONE [2]
■ BEST AREAS 5-10cm [1]	■ MAXIMUM < 50cm [1]	■ MOD. STABLE (e.g., Large Gravel) [1]	☐ LOW [1]
☐ BEST AREAS < 5cm [metric=0]		☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	■ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8 **3.0**

6] GRADIENT

(14.00 ft/mi)

DRAINAGE AREA

(4.30 mi²)

☐ VERY LOW - LOW [2-4]
■ MODERATE [6-10]
☐ HIGH - VERY HIGH [10-6]

%POOL: 25 **%GLIDE:** 30 **%RUN:** 30 **%RIFFLE:** 15

Gradient Maximum 10 **8**

A] SAMPLED REACH

Check ALL that apply

METHOD

- ☐ BOAT
- ■ WADE
- ☐ L. LINE
- ☐ OTHER

DISTANCE

- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ■ OTHER

0.61 meters

CANOPY

- ☐ > 85%- OPEN
- ☐ 55%-<85%
- ☐ 30%-<55%
- ■ 10%-<30%
- ☐ <10%- CLOSED

STAGE

1st -sample pass-		2nd
☐	HIGH	☐
☐	UP	☐
■	NORMAL	■
☐	LOW	☐
☐	DRY	☐

CLARITY

1st --sample pass--		2nd
☐	< 20 cm	☐
☐	20-<40 cm	☐
☐	40-70 cm	☐
■	> 70 cm/ CTB	☐
☐	SECCHI DEPTH	☐

1st pass _____ cm

2nd _____ cm

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

Comment RE: Reach consistency/ Is reach typical of steam?*, Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ■ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

D] MAINTENANCE

Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION-OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD-STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] ISSUES

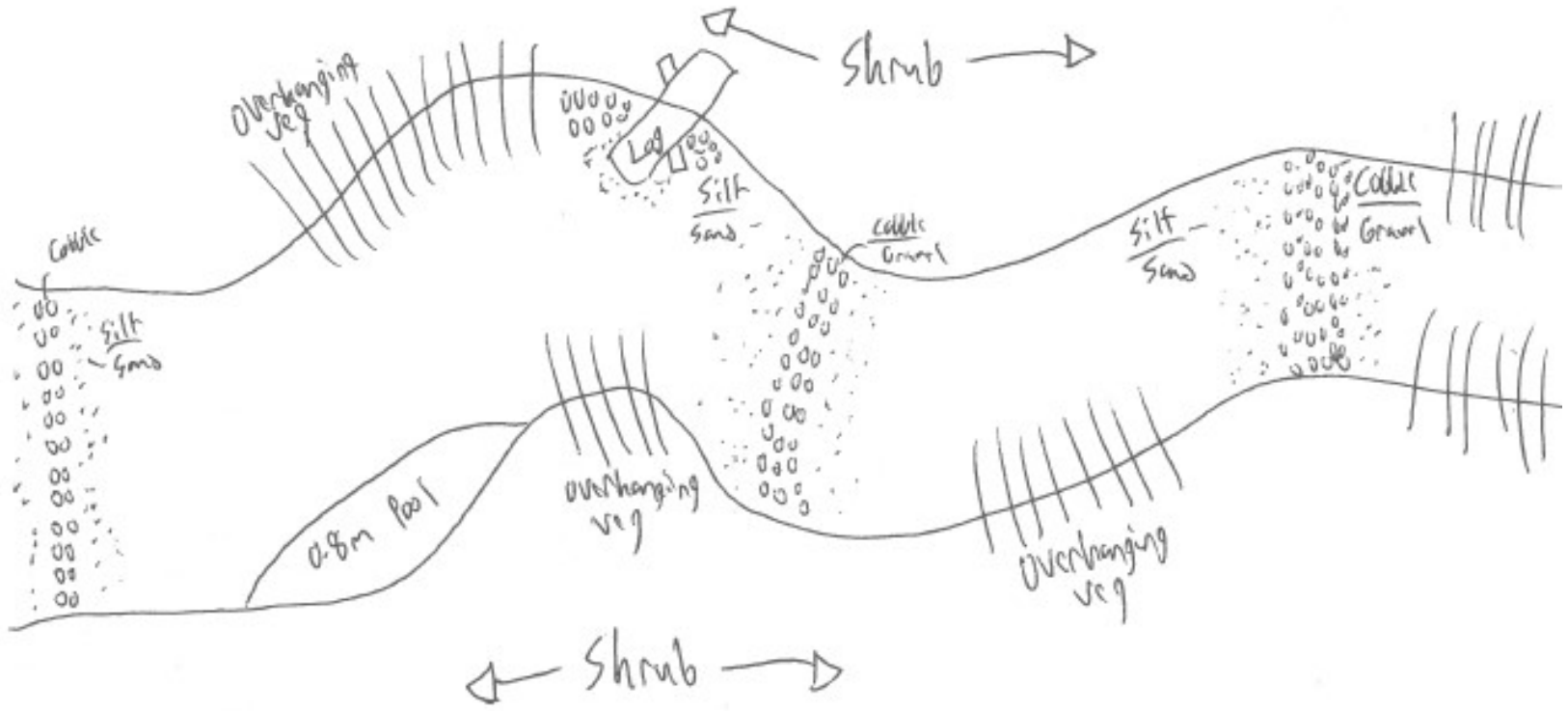
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- $\bar{x}$ width
- $\bar{x}$ depth
- max. depth
- $\bar{x}$ bankfull width
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Legacy Tree:

Stream Drawing:



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 63

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-004 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi^2): 0.05

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93390 LONG.: -83.12235 RIVER CODE: 02-092 RIVER MILE: N/A

DATE: 01/11/22 SCORER: T. Gleaves COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS [16 pts]	0%	☐ ☐	SILT [3 pt]	10%
☐ ☐	BOULDER (>256 mm) [16 pts]	0%	☐ ☐	LEAF PACK/WOODY DEBRIS [3 pts]	0%
☐ ☐	BEDROCK [16 pt]	0%	☐ ☐	FINE DETRITUS [3 pts]	0%
☐ ☑	COBBLE (65-256 mm) [12 pts]	30%	☐ ☐	CLAY or HARDPAN [0 pt]	0%
☐ ☐	GRAVEL (2-64 mm) [9 pts]	15%	☐ ☐	MUCK [0 pts]	0%
☑ ☐	SAND (<2 mm) [6 pts]	40%	☐ ☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 30.00% (A)

Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 18 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points

Substrate Max = 40: 23

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☑ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 18

Pool Depth Max = 30: 20

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☑ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 2.50

Bankfull Width Max=30: 20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☑	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS: Perennial Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☑ 2.0
- ☐ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: **Scioto Big Run** Distance from Evaluated Stream **0.00**

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Columbus** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Franklin** Township / City: **Columbus**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **01/09/22** Quantity: **0.58**

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **15%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C)_____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

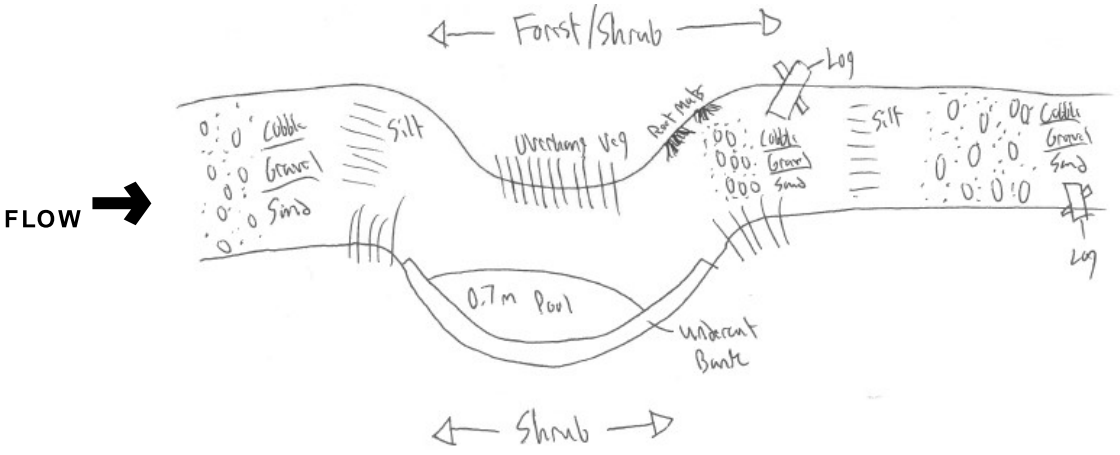
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Save as pdf Reset Form

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 69

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-005 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi^2): 0.05

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93396 LONG.: -83.12329 RIVER CODE: 02-092 RIVER MILE: N/A

DATE: 01/11/22 SCORER: T. Gleaves COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☑ NONE / NATURAL CHANNEL ☐ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☐	SILT [3 pt]	15%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	5%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☑	COBBLE (65-256 mm) [12 pts]	20%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	15%	☐	MUCK [0 pts]	0%
☑	SAND (<2 mm) [6 pts]	40%	☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 20.00% (A)

Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 18 **TOTAL NUMBER OF SUBSTRATE TYPES:** 6

HHEI Metric Points

Substrate Max = 40: 24

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☑ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 18

Pool Depth Max = 30: 25

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☑ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 2.00

Bankfull Width Max=30: 20

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☑	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS: Perennial Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None	☐ 1.0	☑ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: **Scioto Big Run** Distance from Evaluated Stream **0.00**

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Columbus** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Franklin** Township / City: **Columbus**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **01/09/22** Quantity: **0.58**

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **15%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C)_____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

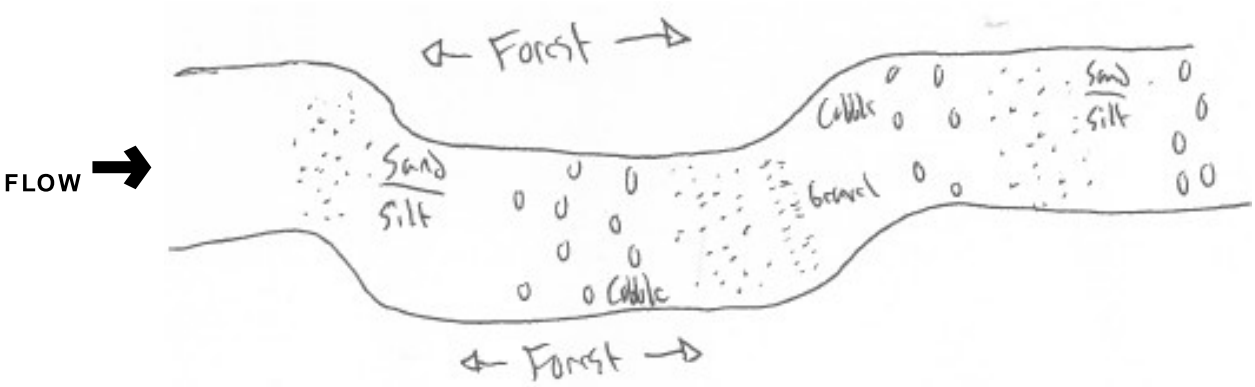
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Save as pdf Reset Form

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 23

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-006 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi^2): 0.01

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93122 LONG.: -83.12095 RIVER CODE: N/A RIVER MILE: N/A

DATE: 01/11/22 SCORER: T. Gleaves COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	40%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	0%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	10%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	10%	☐	MUCK [0 pts]	0%
☑	SAND (<2 mm) [6 pts]	40%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 10.00% (A) Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 4

HHEI Metric Points

Substrate Max = 40: 13

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 3

Pool Depth Max = 30: 5

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.55

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☑	☐	Open Pasture, Row Crop
☑	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS: Ephemeral Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None	☐ 1.0	☑ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Columbus NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Columbus

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 01/09/22 Quantity: 0.58

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 50%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

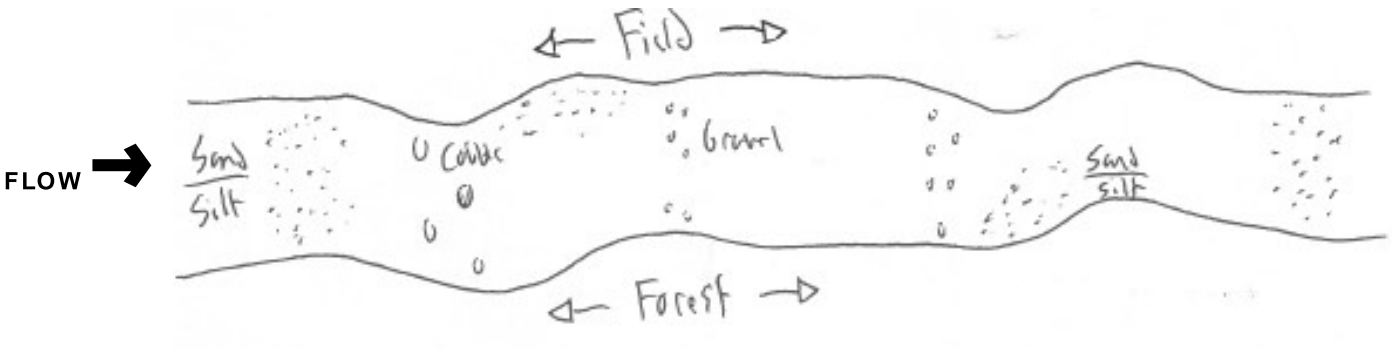
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



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Appendix D – Existing Conditions Stream HHEI Scores

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 34

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-001 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi^2): 0.04

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93057 LONG.: -83.12319 RIVER CODE: N/A RIVER MILE: N/A

DATE: 01/11/22 SCORER: T. Gleaves COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	35%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	0%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	15%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	10%	☐	MUCK [0 pts]	0%
☑	SAND (<2 mm) [6 pts]	35%	☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 15.00% (A)

Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points

Substrate Max = 40: 14

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☑	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☐	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 7

Pool Depth Max = 30: 15

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

☐	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☑	≤ 1.0 m (<=3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.67

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☐	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☑	☑	Open Pasture, Row Crop
☑	☑	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑	Stream Flowing	☐	Moist Channel, isolated pools, no flow (Intermittent)
☐	Subsurface flow with isolated pools (Interstitial)	☐	Dry channel, no water (Ephemeral)

COMMENTS: Intermittent Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐	None	☐	1.0	☐	2.0	☐	3.0
☐	0.5	☐	1.5	☑	2.5	☐	>3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: **Scioto Big Run** Distance from Evaluated Stream **325.00**

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Columbus** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Franklin** Township / City: **Columbus**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **01/09/22** Quantity: **0.58**

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **100%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

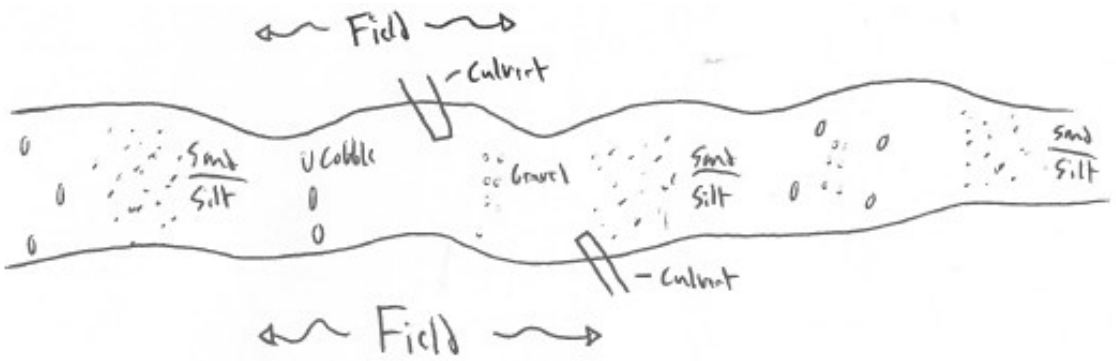
Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW →



Save as pdf Reset Form

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 23

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-006 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi^2): 0.01

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93122 LONG.: -83.12095 RIVER CODE: N/A RIVER MILE: N/A

DATE: 01/11/22 SCORER: T. Gleaves COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	40%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	0%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	10%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	10%	☐	MUCK [0 pts]	0%
☑	SAND (<2 mm) [6 pts]	40%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 10.00% (A) Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 4

HHEI Metric Points

Substrate Max = 40: 13

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☐ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☑ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 3

Pool Depth Max = 30: 5

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

- ☐ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☑ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.55

Bankfull Width Max=30: 5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☐	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☑	☐	Open Pasture, Row Crop
☑	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS: Ephemeral Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None	☐ 1.0	☑ 2.0	☐ 3.0
☐ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Columbus NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Columbus

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: 01/09/22 Quantity: 0.58

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 50%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

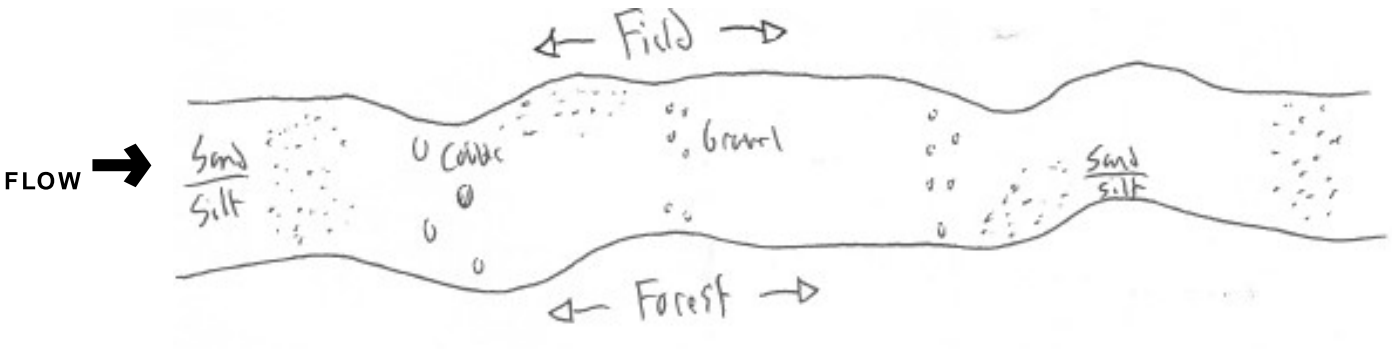
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



Save as pdf Reset Form

Appendix E – Mitigation Conditions Stream HHEI Scores

Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 69

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-001 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi²): 0.04

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93057 LONG.: -83.12319 RIVER CODE: N/A RIVER MILE: N/A

DATE: SCORER: T.Loew COMMENTS: Anticipated HHEI for post construction

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☑ RECOVERED ☐ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	35%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	0%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	15%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	10%	☐	MUCK [0 pts]	5%
☑	SAND (<2 mm) [6 pts]	35%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 15.00% (A) Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 5

HHEI Metric Points

Substrate Max = 40: 14

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

- ☐ > 30 centimeters [20 pts]
- ☐ > 22.5 - 30 cm [30 pts]
- ☑ > 10 - 22.5 cm [25 pts]
- ☐ > 5 cm - 10 cm [15 pts]
- ☐ < 5 cm [5 pts]
- ☐ NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 20

Pool Depth Max = 30: 25

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check *ONLY* one box):

- ☑ > 4.0 meters (> 13') [30 pts]
- ☐ > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]
- ☐ > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]
- ☐ > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
- ☐ ≤ 1.0 m (<=3' 3") [5 pts]

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 13.00

Bankfull Width Max=30: 30

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☑	☑	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☑	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☐	☐	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS: Mitigation area surrounds portion of stream (scrub-shrub, young forest, wetland)

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (Interstitial)
- ☐ Moist Channel, isolated pools, no flow (Intermittent)
- ☐ Dry channel, no water (Ephemeral)

COMMENTS: Intermittent Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

- ☐ None
- ☐ 0.5
- ☐ 1.0
- ☐ 1.5
- ☐ 2.0
- ☑ 2.5
- ☐ 3.0
- ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: Scioto Big Run Distance from Evaluated Stream 325.00

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: Columbus NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: Franklin Township / City: Columbus

MISCELLANEOUS

Base Flow Conditions? (Y/N): Y Date of last precipitation: _____ Quantity: _____

Photograph Information: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 10%

Were samples collected for water chemistry? (Y/N): N (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C)_____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): N (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

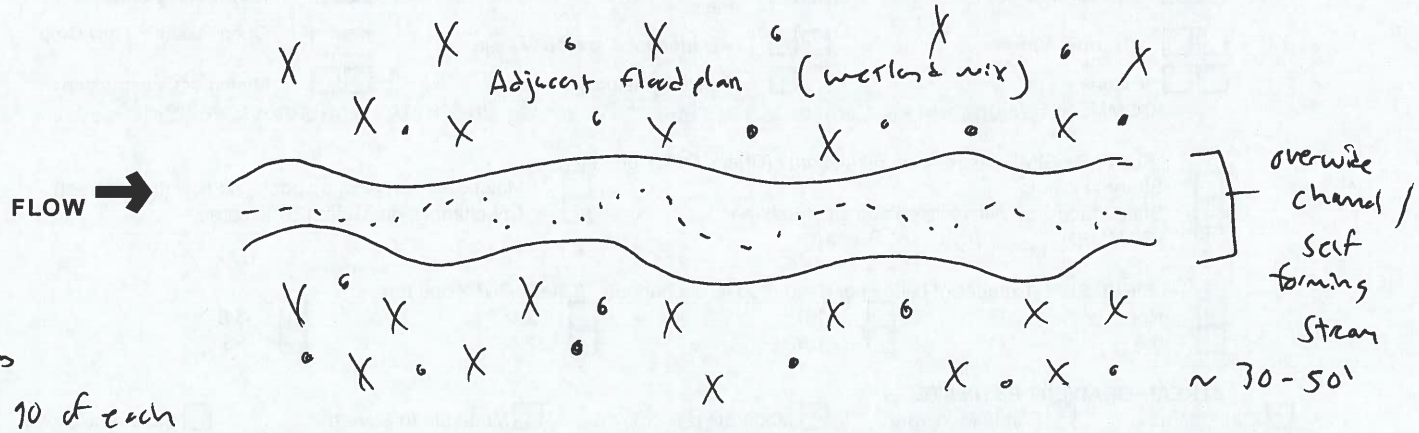
Fish Observed? (Y/N) N Voucher? (Y/N) N Salamanders Observed? (Y/N) N Voucher? (Y/N) N

Frogs or Tadpoles Observed? (Y/N) N Voucher? (Y/N) N Aquatic Macroinvertebrates Observed? (Y/N) N Voucher? (Y/N) N

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



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Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **23**

SITE NAME/LOCATION: Hall Road Apartments, Columbus, Franklin County, Ohio

SITE NUMBER: ST-006 RIVER BASIN: Upper Scioto DRAINAGE AREA (mi²): 0.01

LENGTH OF STREAM REACH (ft): 200 LAT.: 39.93225 LONG.: -83.12089 RIVER CODE: N/A RIVER MILE: N/A

DATE: SCORER: T. Loew COMMENTS: Anticipated HHEI for post construction

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	40%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	0%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	10%	☐	CLAY or HARDPAN [0 pt]	0%
☐	GRAVEL (2-64 mm) [9 pts]	10%	☐	MUCK [0 pts]	0%
☑	SAND (<2 mm) [6 pts]	40%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 10.00% (A) Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 **TOTAL NUMBER OF SUBSTRATE TYPES:** 4

HHEI Metric Points

Substrate Max = 40

13

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☐	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☑	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

COMMENTS: **MAXIMUM POOL DEPTH (centimeters):** 3

Pool Depth Max = 30

5

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

☐	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☑	≤ 1.0 m (<=3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		

COMMENTS: **AVERAGE BANKFULL WIDTH (meters):** 0.55

Bankfull Width Max=30

5

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH L	R (Per Bank)	FLOODPLAIN QUALITY L	R (Most Predominant per Bank)	L	R	
☐	☑ Wide >10m	☐	☐ Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐ Moderate 5-10m	☐	☑ Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐ Narrow <5m	☑	☐ Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☑	☐ None	☐	☐ Fenced Pasture	☐	☐	Mining or Construction

COMMENTS: Remaining young forest and new residential development.

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS: Ephemeral Stream

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None ☐ 0.5 ☐ 1.0 ☐ 1.5 ☑ 2.0 ☐ 2.5 ☐ 3.0 ☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☑ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☐ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☑ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Columbus** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Franklin** Township / City: **Columbus**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: _____ Quantity: _____

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **50%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

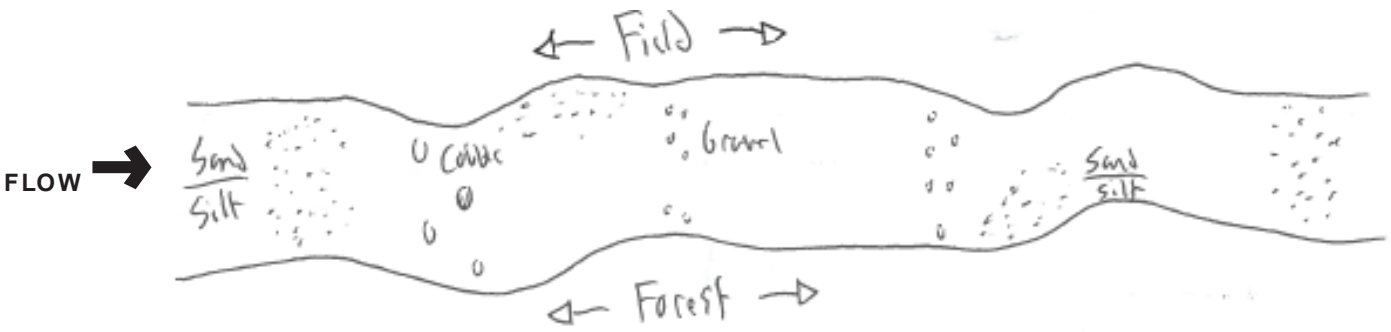
Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location



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Appendix F – Nationwide Permit

NATIONWIDE PERMITS FOR THE STATE OF OHIO

U.S. ARMY CORPS OF ENGINEERS (CORPS) REGULATORY PROGRAM REISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS WITH OHIO DEPARTMENT OF NATURAL RESOURCES CONSISTENCY DETERMINATION UNDER THE COASTAL ZONE MANAGEMENT ACT AND WAIVED OHIO EPA 401 WATER QUALITY CERTIFICATION

Final rule published in the *Federal Register* (86 FR 2744) on January 13, 2021

NWP 29

NWP 29. *Residential Developments*. Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of a single residence, a multiple unit residential development, or a residential subdivision. This NWP authorizes the construction of building foundations and building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development). The discharge must not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters.

Subdivisions: For residential subdivisions, the aggregate total loss of waters of United States authorized by this NWP cannot exceed 1/2-acre. This includes any loss of waters of the United States associated with development of individual subdivision lots.

***Notification*:** The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity. (See general condition 32.) (Authorities: Sections 10 and 404)

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note

especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. **Navigation.**

    a. No activity may cause more than a minimal adverse effect on navigation.
    b. Any safety lights and signals prescribed by the U.S. 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 or her 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. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

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 preconstruction course, condition, capacity, and location of open waters must be maintained for 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 preconstruction 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 Structures and Fills.** Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction 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 NWP 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
b. 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.
c. 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. Permittees 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.
d. 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 or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

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
b. species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which ‘‘may affect’’ a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of ‘‘effects of the action’’ for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further

explanation under ESA section 7 regarding ‘‘activities that are reasonably certain to occur’’ and ‘‘consequences caused by the proposed action.’’

c. Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). 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.

d. Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, 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 species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity ‘‘may affect’’ or will have ‘‘no effect’’ to 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 pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) 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 that the proposed activity will have ‘‘no effect’’ on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference 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 the Corps.

e. As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

f. Authorization of an activity by an 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 FWS 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.

g. 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 coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA 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 pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP

h. activity or whether additional ESA section 7 consultation is required.

i. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS 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 that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects 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. No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places 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 (see 33 CFR 330.4(g)(1)). If preconstruction 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 preconstruction notification must state which historic properties might have the potential to be affected by the proposed NWP 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 commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or 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 effects 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, or adverse effect.

d. Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so 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. 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 permitted activity on historic properties.

21. **Discovery of Previously Unknown Remains and Artifacts.** Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they 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 a 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 United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
(b) For NWPs 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 by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines 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 preconstruction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1⁄10-acre or less that require preconstruction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.
d. Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3⁄100-acre and require preconstruction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3⁄100-acre or less that require preconstruction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required

to ensure that the activity results in only 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. If restoring riparian areas involves planting vegetation, only native species should be planted. 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 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 environment 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 NWPs, 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
    2. district engineer may approve the use of permittee-responsible mitigation.
    3. 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).)

4. 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
5. considered for permittee-responsible mitigation.
6. 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)). If permittee responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.
7. If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).
8. 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 (see 33 CFR 332.4(c)(1)(ii)).

g. Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity 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 no more than minimal impact requirement for the NWPs.
h. (h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or 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 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 or federal, 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.**

a. Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.
b. If the NWP activity requires preconstruction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.
c. The district engineer or certifying authority 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)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. 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 U.S. EPA in its CWA 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 authorized, subject to the following restrictions:

a. If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot 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.
b. If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 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 activity 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(l)(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 activity 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 review by, or 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 and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. **Pre-Construction Notification.**

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. The request must specify the information needed 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 are in the vicinity of the activity, 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. 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 NWP(s) the prospective permittee wants to use to authorize the proposed activity;
    4.
        i. 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 NWP(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.

ii. For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

iii. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker

iv. 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 and intermittent 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 or 3/100-acre of stream bed 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 species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require 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. For NWP activities that require pre-construction notification, 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 NWP activity that requires permission from, or review by, 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, or review by, the Corps office having jurisdiction over that USACE project.

c. **Form of Pre-Construction Notification:** The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. 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 activity's adverse environmental effects so that they are no more than minimal.
2. Agency coordination is required for:
    i. All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States;
    ii. 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
    iii. 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 in tidal waters or the ordinary high water mark in the Great Lakes.
3. When agency coordination is required, the district engineer will immediately provide (e.g., via email, 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 email 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 preconstruction 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 that 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 preconstruction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences 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. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary

conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

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).

Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural. Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term ‘‘discharge’’ means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat

type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Nontidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of ‘‘open waters’’ include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The

request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Preconstruction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where preconstruction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Reestablishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: Reestablishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or

individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term ‘‘single and complete project’’ is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term ‘‘single and complete project’’ is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of ‘‘independent utility’’). Single and complete non-linear projects may not be ‘‘piecemealed’’ to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin,

weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or individual; or (2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a ‘‘water of the United States.’’ If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

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).

Nationwide Permits Regional General Conditions For the State of Ohio

1. NWPs shall not authorize any regulated activity which negatively impacts bogs and/or fens.

2. NWPs shall not authorize any requlated activity in Lake Erie which would result in diversion of water from the Great Lakes.

3. NWPs shall not authorize any regulated activity which has an adverse impact on littoral transport within Lake Erie.

4. **In-Water Work Exclusion Dates:** Any work associated with a regulated activity under a nationwide permit cannot take place during the restricted period of the following Ohio Department of Natural Resources (ODNR), Division of Wildlife (DOW) In-Water Work Restrictions, unless the applicant receives advanced written approval from the DOW, notifies the District Engineer in accordance with Nationwide Permit General Condition 32 and Regional General Condition 6, and receives written approval from the Corps:

Statewide In-Water Work Restriction Periods and Locations

1. Salmonid Locations Restriction Period: September 15 – June 30

Arcola Creek (entire reach)
Ashtabula Harbor
Ashtabula River (Hadlock Rd. to mouth)
Aurora Branch (Chagrin River (RM 0.38 to mouth))
Big Creek (Grand River (Girdled Road to mouth))
Black River (entire reach)
Chagrin River (Chagrin Falls to mouth)
Cold Creek (entire reach)
Conneaut Creek (entire reach)
Conneaut Harbor
Corporation Creek (Chagrin River (entire reach))
Cowles Creek (entire reach)
Ellison Creek (Grand River (entire reach))
Euclid Creek (entire reach)
Fairport Harbor
Grand River (Dam at Harpersfield Covered Bridge Park to mouth)
Gulley Brook (Chagrin River (entire reach))
Huron River (East Branch-West Branch confluence to mouth)
Indian Creek (entire reach)
Kellogg Creek (Grand River (entire reach))
Mill Creek (Grand River (entire reach))
Paine Creek (Grand River (Paine Falls to mouth))

Rocky River (East Branch-West Branch confluence to mouth)
Smokey Run (Conneaut Creek (entire reach))
Turkey Creek (entire reach)
Vermilion River (dam at Wakeman upstream of the US 20/SR 60 bridge to mouth)
Ward Creek (Chagrin River (entire reach))
Wheeler Creek (entire reach)
Whitman Creek (entire reach)

2. Other Locations Restriction Period: March 15 – June 30

All other perennial streams not listed above as salmonid.
Also includes Lake Erie and bays not listed above as salmonid.

Note: This condition does not apply to Ohio Department of Transportation projects that are covered under the "Memorandum of Agreement Between The Ohio Department of Transportation, The Ohio Department of Natural Resources, and The United States Fish and Wildlife Service For Interagency Coordination For Projects Which Require Consultation Under the Endangered Species Act, Impact State Listed Species, and/or Modify Jurisdictional Waters 2016 Agreement Number: 19394" or subsequent amendments to this Ohio Department of Transportation memorandum of agreement.

5. **Waters of Special Concern**: PCN in accordance with NWP General Condition 32 and Regional General Condition 6 is required for regulated activities in the following resources:

a. **Threatened and Endangered Species**: Due to the potential presence of federally threatened or endangered species or their habitats, PCN in accordance with NWP General Conditions 18 and 32 and Regional General Condition 6 is required for any regulated activity under the NWPs in Ohio that includes:

   i. The removal of trees ≥ three (3) inches diameter at breast height. These trees may provide suitable roosting, foraging, or traveling habitat for the federally listed endangered Indiana bat and the federally-listed threatened northern long-eared bat; and/or
   ii. Regulated activities that impact a sand, gravel, and/or cobble beach (landform between the low and high water marks affected by waves) and/or mud flat (areas affected by natural seiche effect) on the Lake Erie shoreline; and/or
   iii. Regulated activities in the waterway or township of the corresponding counties listed in Appendix 1.

   Note 1: Applicants must ensure they are referencing the latest version of Appendix 1 by contacting their nearest U.S. Army Corps of Engineers district office and visiting the online resources identified in General Condition 18(f) of these NWPs, since federally listed species are continuously listed, proposed for listing, and/or de-listed.

Note 2: As mentioned in General Condition 18, federal applicants should follow their own procedures for complying with the requirements of the Endangered Species Act (ESA). Federal applicants, including applicants that have received federal funding, must provide the District Engineer with the appropriate documentation to demonstrate compliance with ESA requirements.

b. **Critical Resource Waters:**

   i. In Ohio, two (2) areas have been designated critical habitat for the piping plover (*Charadrius melodus*) and are defined as lands 0.62 mile inland from normal high water line. Unit OH-1 extends from the mouth of Sawmill Creek to the western property boundary of Sheldon Marsh State Natural Area, Erie County, encompassing approximately two (2) miles. Unit OH-2 extends from the eastern boundary line of Headland Dunes Nature Preserve to the western boundary of the Nature Preserve and Headland Dunes State Park, Lake County, encompassing approximately 0.5 mile.

   ii. In Ohio three (3) areas have been designated critical habitat for the rabbitsfoot mussel (*Quadrula cylindrica cylindrica*). Unit RF26 includes 17.5 river kilometers (rkm) (10.9 river miles [rimi]) of the Walhonding River from the convergence of the Kokosing and Mohican Rivers downstream to Ohio Highway 60 near Warsaw, Coshocton County, Ohio. Unit RF27 includes 33.3 rkm (20.7 rmi) of Little Darby Creek from Ohio Highway 161 near Chuckery, Union County, Ohio, downstream to U.S. Highway 40 near West Jefferson, Madison County, Ohio. Unit RF29 includes 7.7 rkm (4.8 rmi) of Fish Creek from the Indiana and Ohio State line northwest of Edgerton, Ohio, downstream to its confluence with the St. Joseph's River north of Edgerton, Williams County, Ohio.

   iii. Old Woman Creek National Estuarine Research Preserve.

c. **Oak Openings:** Wetland activities conducted in the Oak Openings Region of Northwest Ohio located in Lucas, Henry and Fulton Counties. For a map of the Oak Openings Region, visit https://www.google.com/maps/d/viewer?mid=1JADupaZXJzO6AUDvnUaV18GVjG7yfBim&usp=sharing

d. **Category 3 Wetlands:** As determined through use of the latest approved version of the Ohio Environmental Protection Agency's Ohio Rapid Assessment Method wetland evaluation form.

e. **Ohio Stream Designations:** Exceptional Warmwater Habitat, Cold Water Habitat, Seasonal Salmonid, or any equivalent designation; or water bodies with an antidegradation category of Superior High Quality Water, Outstanding National Resource Water, or Outstanding State Waters as determined by the Ohio Environmental Protection Agency except for NWP 1, 2, 3, 9, 10, 11, 27, 28, 32, and 35 or maintenance activities covered under NWPs 7 and 12. The current

list of these rivers and tributaries can be found on the Ohio Environmental Protection Agency web-site at: http://www.epa.ohio.gov/dsw/rules/3745_1.aspx. These designations can be found under the aquatic life use of the rivers and tributaries within its basin and under the "Anti-deg Rule #05."

6. **PCN Submittals**: In addition to the information required under NWP General Condition 32, the following information must be provided with the PCN:

    a. **Threatened and Endangered Species:** Section 7(a)(2) of the Endangered Species Act (ESA) states that each federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Section 7 of the ESA, called "Interagency Cooperation," is the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the continued existence of any federally or proposed federally listed species. Consistent with NWP General Condition 18, information for federally threatened and endangered species must be provided in the PCN to determine the proposed activity's compliance with NWP General Condition 18 and to facilitate project-specific coordination with the USFWS. All relevant information obtained from the USFWS must be submitted with the PCN.

    b. **Cultural Resources**: Under the National Historic Preservation Act (NHPA), the Corps must ensure no federal undertaking, including a Corps permit action, which may affect historic resources, is commenced before the impacts of such action are considered and the Advisory Council on Historic Preservation and the State Historic Preservation Office (SHPO) are provided an opportunity to comment as required by the NHPA, 36 CFR 800, and 33 CFR 325, Appendix C. Consistent with NWP General Condition 20, historic properties information must be provided in the PCN if the proposed undertaking 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. All relevant information obtained from the SHPO must be submitted with the PCN.

    c. **National Wild and Scenic Rivers**: The following waterways are components of the National Wild and Scenic River System and require PCN to the Corps:

        Big and Little Darby Creeks

        - Big Darby Creek from Champaign-Union County line downstream to the Conrail railroad trestle and from the confluence with the Little Darby Creek downstream to the Scioto River;
        - Little Darby Creek from the Lafayette-Plain City Road bridge downstream to within 0.8 mile from the confluence with Big Darby

Creek; and
- Total designation is approximately 82 miles.

Little Beaver Creek
- Little Beaver Creek main stem, from the confluence of West Fork with Middle Fork near Williamsport to mouth;
- North Fork from confluence of Brush Run and North Fork to confluence of North Fork with main stem at Fredericktown;
- Middle Fork from vicinity of Co. Rd. 901 (Elkton Road) bridge crossing to confluence of Middle Fork with West Fork near Williamsport;
- West Fork from vicinity of Co. Rd. 914 (Y-Camp Road) bridge crossing east to confluence of West Fork with Middle Fork near Williamsport; and
- Total designation is 33 miles.

Little Miami River
- Little Miami River - St. Rt. 72 at Clifton to the Ohio River;
- Caesar Creek - lower two (2) miles of Caesars Creek; and
- Total designation is 94 miles.

d. **Temporary Fills or Structures:** When a PCN is required for temporary fills or structures, the PCN must specify how long the temporary fills or structures will remain and include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-construction contours and elevations. Native, non-invasive vegetation must be used unless otherwise authorized by a Corps NWP verification.

7. **Invasive Species:** No area for which grading has been completed will be unseeded or unmulched for longer than 14 days. All disturbed areas will be seeded and/or revegetated with native species and approved seed mixes (where practicable) after completion of construction activities for stabilization and to help preclude the establishment of non-native invasive species.

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
County	**Waterway**	**Township**
Adams	Ohio River, Scioto Brush Creek, South Fork Scioto Brush Creek	
Ashtabula	Grand River, Pymatuning Creek	Andover, Austinburg, Cherry Valley, Colebrook, Dorset, Hartsgrove, Harpersfield, Morgan, New Lyme, Orwell, Richmond, Rome, Trumbull, Wayne, Williamsfield, Windsor
Athens	Ohio River	

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
County	**Waterway**	**Township**
Brown	East Fork Little Miami River, Ohio River	
Butler	Great Miami River	Lemon, Liberty
Champaign		Mad River, Union, Urbana
Clark	Little Miami River	Bethel, Moorfield, Pleasant, Springfield
Clermont	East Fork Little Miami River, Little Miami River, Ohio River	
Clinton		Chester, Richland, Wayne
Columbiana		Butler, Fairfield, Hanover, Knox, Unity
Coshocton	Killbuck Creek, Muskingum River, Walhonding River	
Crawford		Auburn, Bucyrus, Cranberry, Dallas, Holmes, Whetstone
Darke	Stillwater River	
Defiance	St. Joseph River	Milford
Delaware	Mill Creek, Olentangy River	
Erie		Margaretta
Fairfield		Walnut
Fayette		Concord, Green, Jasper, Union
Franklin	Big Darby Creek, Little Darby Creek, Scioto River	
Fulton	Swan Creek	
Gallia	Ohio River	
Greene	Little Miami River	Bath, Beaver Creek, Spring Valley, Sugar Creek
Hamilton	Great Miami River, Little Miami River, Ohio River	
Hancock	Blanchard River	
Hardin	Blanchard River	Blanchard, Dudley, Hale, Jackson, McDonald, Roundhead
Hocking		Benton, Laurel
Holmes		All townships
Huron		New Haven, Richmond
Lake	Grand River	Madison
Lawrence	Ohio River	
Licking		Licking, Union
Logan	Great Miami River	Perry, Richland, Stokes, Washington, Zane

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
County	**Waterway**	**Township**
Lucas	Swan Creek	All townships
Madison	Big Darby Creek, Little Darby Creek	
Mahoning		Beaver, Boardman, Canfield, Green, Poland, Springfield
Marion	Tymochtee Creek	Big Island, Bowling Green, Grand, Green Camp, Montgomery, Salt Rock
Meigs	Ohio River	
Miami	Great Miami River, Stillwater River	
Montgomery	Great Miami River, Stillwater River	Mad River, Wayne
Morgan	Muskingum River	
Muskingum	Muskingum River	
Ottawa		All townships
Perry		Thorn
Pickaway	Big Darby Creek, Scioto River	
Pike	Scioto River	
Portage		Aurora, Atwater, Charlestown, Deerfield, Edinburg, Franklin, Freedom, Mantua, Nelson, Palmyra, Paris, Randolph, Ravenna, Rootstown, Streetsboro
Preble		Dixon, Gasper, Israel, Jackson, Lanier, Monroe, Somers, Twin, Washington
Richland		Plymouth
Ross	Salt Creek, Scioto River	
Sandusky		All townships
Scioto	Ohio River, Scioto Brush Creek, Scioto River, South Fork Scioto Brush Creek	Nile, Rush, Union
Shelby	Great Miami River	
Stark		Lexington, Marlboro
Summit		Hudson, Tallmadge, Twinsburg
Trumbull	Pymatuning Creek	All townships
Union	Big Darby Creek, Little Darby Creek, Mill Creek, Treacle Creek	Allen, Darby, Washington
Warren	Great Miami River, Little Miami River	Clear Creek, Deerfield, Massie, Turtle Creek, Union, Washington, Wayne
Washington	Muskingum River, Ohio River	

APPENDIX 1 TO REGIONAL GENERAL CONDITION 5 (a)		
County	**Waterway**	**Township**
Wayne		All townships
Williams	Fish Creek, St. Joseph River	Bridgewater, Center, Florence, Jefferson, Madison, Northwest, St. Joseph, Superior
Wyandot	Tymochtee Creek	Antrim, Marseilles, Mifflin, Pitt

HELPFUL INFORMATION FOR COMPLIANCE WITH THE NWP GENERAL CONDITIONS:

DISCLAIMER: The below information is intended to provide helpful contact information and other submittal recommendations. Contact the appropriate local, state, or federal agency for the most updated links to ensure compliance with the NWP General Conditions.

General Condition 1 (Navigation)

List of Section 10 Navigable Waters of the U.S.:

Buffalo District – https://www.lrb.usace.army.mil/Portals/45/docs/regulatory/DistrictInfo/waterway_oh.pdf

Huntington District – https://www.lrh.usace.army.mil/Missions/Regulatory/Section-10-Streams/

Louisville District – https://www.lrl.usace.army.mil/Portals/64/docs/Regulatory/Public%20Notices/Limits%20of%20Jurisdiction%20Public%20Notice-revised.pdf?ver=2013-02-13-120705-203

Pittsburgh District – https://www.lrp.usace.army.mil/Portals/72/docs/regulatory/RegulatoryBoundaries/PN12-2.pdf

Navigation Charts:

Buffalo District – https://www.lrb.usace.army.mil/Library/Maps-and-Charts/

Huntington District – https://www.lrh.usace.army.mil/Missions/Regulatory/Section-10-Streams/

Louisville District – https://www.lrl.usace.army.mil/Portals/64/docs/Ops/Navigation/Charts/Ohio/OhioRiverC

harts102-122.pdf

Pittsburgh District – https://www.lrp.usace.army.mil/Missions/Navigation/Navigation-Charts/

Locks and Dams:

Buffalo District – https://www.lrb.usace.army.mil/Library/Maps-and-Charts/

Huntington District – https://www.lrh.usace.army.mil/Missions/Civil-Works/Locks-and-Dams/

Louisville District – https://www.lrl.usae.army.mil/Missions/Civil-Works/Navigation/Locks-and-Dams/

Pittsburgh District – https://www.lrp.usace.army.mil/Missions/Navigation/Locks-and-Dams/#:~:text=Locks%20and%20Dams%20%20%20Allegheny%20River%20,Locks%20%26%20Dam%20%205%20more%20rows%20

Notice to Navigation Interests Request Sheets:

Huntington District – https://www.lrh.usace.army.mil/Portals/38/docs/navigation/Notice%20Info%20sheet.pdf

Louisville – https://www.lrl.usace.army.mil/Portals/64/docs/Regulatory/Forms/Notice%20to%20Navigation%20Interests%20Data%20Form%202019.pdf?ver=2019-07-22-101251-297

Pittsburgh District – https://www.lrp.usace.army.mil/Portals/72/docs/regulatory/NavNoticeRequestForm.pdf

General Condition 5 (Shellfish Beds)

Shellfish beds in Ohio include concentrations of freshwater mussels. All native mussels are protected in the State of Ohio (Section 1533.324 of the Ohio Revised Code). In addition, 10 federally listed species occur in the state and are protected by the ESA (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). All rivers and tributaries that contain mussels or potential mussel habitat must be surveyed prior to any proposed streambed disturbance. Currently accepted protocol and supporting materials can be found on the Ohio Department of Natural Resources' website: https://ohiodnr.gov/wps/portal/gov/odnr/buy-and-apply/special-use-permits/collecting-research/ohio-mussel-surveyor

General Condition 7 (Water Supply Intakes)

Locations of drinking water source protection areas associated with public water supply intakes, including the name of the public water supply, can be found at the following link:
https://oepa.maps.arcgis.com/apps/webappviewer/index.html?id=3b39e11ba7fc43c3b41801e3580e6d21

Contact information for public water suppliers can be obtained from Ohio EPA by contacting the Division of Drinking and Ground Waters at whp@epa.ohio.gov or 614-644-2752.

General Condition 10 (Fills Within 100-year Floodplains)

The following website provides a statewide listing of Floodplain Managers in Ohio:
https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/water-resources/floodplains/

General Condition 16 (Wild and Scenic Rivers)

Prior to submitting a PCN for work in a National Wild and Scenic River System, it is recommended that the applicant contact the National Park Service Regional Wild and Scenic Rivers Specialist, at the Midwest Regional Office, 601 Riverfront Drive, Omaha, Nebraska 68102, for assistance in complying with NWP General Condition 16. Any determination provided by the National Park Service should be submitted with the PCN. The following website provides information on National Wild and Scenic Rivers within Ohio:

https://www.rivers.gov/ohio.php

General Condition 18 (Endangered Species)

To obtain the most up to date information on federally threatened and endangered species applicants are encouraged to utilize the USFWS's Information for Planning and Consultation System (IPaC) found at https://ecos.fws.gov/ipac/

Prior to the submittal of a PCN, applicants may also contact the USFWS, Ohio Ecological Services Field Office at:

Address: 4625 Morse Road, Suite 104
Columbus, Ohio 43230

Email: ohio@fws.gov

Phone: (614) 416-8993

The Ohio Mussel Survey Protocol may be found at the following link:

https://ohiodnr.gov/wps/portal/gov/odnr/buy-and-apply/special-use-permits/collecting-research/ohio-mussel-surveyor

General Condition 4 (Migratory Bird Breeding Areas) and General Condition 19 (Migratory Birds and Bald and Golden Eagles)

Prior to the submittal of a PCN, information to assist in complying with NWP General Conditions 4 and 19 may be obtained from the USFWS, Ohio Ecological Services Field Office at:

Address: 4625 Morse Road, Suite 104
Columbus, Ohio 43230

Email: ohio@fws.gov

Phone: (614) 416-8993

The Ohio Division of Natural Resources Division of Wildlife may be contacted at (800) 945-3543.

General Condition 20 (Historic Properties)

The Ohio National Register of Historic Places can be found at the following link: https://www.ohiohistory.org/preserve/state-historic-preservation-office/nationalregister

When reviewing a PCN, the Corps will scope appropriate historic property identification efforts and, if applicable, work with the applicant to take into account the effect of the proposed activity on historic properties. In these instances, information and coordination may include:

- Requesting comments directly from the Ohio History Connection SHPO on the effect the proposed regulated activity may have on historic properties. The Ohio History Connection SHPO may be contacted at:

  Address: Ohio History Center
  800 E. 17th Ave., Columbus, Ohio 43211
  Phone: (614) 297-2300
  Email: info@ohiohistory.org

- To identify potential historic properties that may be affected by a proposed project, the following information may be reviewed and/or provided with the PCN when applicable:
  - A detailed description of the project site in its current condition (i.e. prior to construction activities) including information on the terrain and

topography of the site, the acreage of the site, the proximity of the site to major waterways, and any known disturbances within the site.
    - A detailed description of past land uses in the project site.
    - Photographs and mapping showing the site conditions and all buildings or structures within the project site and on adjacent parcels are useful. Photographs and maps supporting past land uses should be provided as available.
    - Information regarding any past cultural resource studies or coordination pertinent to the project area, if available.
    - U.S. Geological Survey (USGS) 7.5' series topographic maps;
    - Ohio History Connection SHPO files including:
        - Ohio Archaeological Inventory (OAI) files;
        - Ohio Historic Inventory files (OHI);
        - Ohio SHPO Cultural Resources Management (CRM)/contract archaeology files;
        - NRHP files including Historic Districts; and
        - County atlases, histories and historic USGS 15' series topographic map(s).

- When needed to evaluate effects to historic properties, the applicant is encouraged to consult with professionals meeting the Professional Qualification Standards as set forth in the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) during this data gathering process. These professionals can assist with compiling the project information discussed above and should provide recommendations as to whether the proposal has the potential to affect historic properties and if further effort is needed to identify or assess potential effects to historic properties. These professionals can also compile preliminary review information to submit to the District Engineer as part of the PCN.

General Condition 23 (Mitigation)

Information pertaining to mitigation can be found at the following link:
https://www.lrh.usace.army.mil/Missions/Regulatory/Mitigation.aspx

General Condition 25 (Water Quality)

The Ohio Environmental Protection Agency may be contacted at:

Address: Lazarus Government Center
50 W Town St. Suite 700
Columbus, Ohio 43215

Phone: (614) 644-2001

Information pertaining to the Ohio Environmental Protection Agency water quality certification (WQC) program, including the Section 401 Clean Water Act WQC application form, can be obtained at the following link: https://www.epa.state.oh.us/dsw/#113292723-programs

General Condition 32 (Pre-Construction Notification)

The nationwide permit pre-construction notification form (Form ENG 6082) may be obtained at the following link:

https://www.publications.usace.army.mil/Portals/76/Eng_Form_6082_2019Oct.pdf?ver=2019-10-22-081550-710/

A checklist of information that must be provided in a pre-construction notification can be obtained at the following link:

https://www.lrh.usace.army.mil/Missions/Regulatory/How-to-Apply-for-a-Permit/Nationwide-Permits/

Electronic Submittal:

- PCNs should be saved as a PDF document, and then submitted as an attachment in an email to the appropriate Regulatory Office:

  Buffalo District – LRB.Ohio.RegActions@usace.army.mil
  Huntington District – LRH.permits@usace.army.mil
  Louisville District – CELRL.Door.To.The.Corps@usace.army.mil
  Pittsburgh District – Regulatory.Permits@usace.army.mil

- Electronic documents must have sufficient resolution to show project details. The PCN and supporting documents submitted electronically must not exceed 10 megabytes (10MB) per email. Multiple emails may be required to transmit documents to ensure the 10MB limit is not exceeded. Alternatively, use of the Department of Defense Secure Access File Exchange (DoD SAFE) service to transfer large files may be requested in your email.

- For tracking and processing purposes, the email should include the following:

  - **Email Subject Line:** include the name of the applicant, type of PCN request, and location (County and State). Example: RE: Doe, John, PCN and Section 401 WQC Request, Summit County, Ohio;
  - **Email Body:** 1) Brief description of the proposed project, 2) contact information (phone number, mailing address, and email address) for the applicant and/or their agent, and 3) the project location: Address and Latitude/Longitude in decimal degrees (e.g. 42.92788° N, 88.36257° W).

- If you do not have internet access, information may be submitted through the U.S. Postal Service to the appropriate Regulatory Office:

U.S. Army Corps of Engineers, Buffalo District
ATTN: Regulatory Branch
1776 Niagara Street
Buffalo, New York 14207
Phone: (716) 879-4330
Fax: (716) 879-4310

U.S. Army Corps of Engineers, Huntington District
ATTN: Regulatory Division
502 Eighth Street
Huntington, West Virginia 25701-2070
Phone: (304) 399-5210
Fax: (304) 399-5805

U.S. Army Corps of Engineers, Pittsburgh District
ATTN: Regulatory Division
William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222-4186
Phone: (412) 395-7155
Fax: (412) 644-4211

U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-RD, Room 752
600 Dr. Martin Luther King Jr. Place
Louisville, Kentucky 40202-0059
Phone: (502) 315-6733
Fax: (502) 315-6677

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD)

FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 7 March 2022

B. NAME AND ADDRESS OF PERSON REQUESTING PJD:

Mr. Michael Rodriguez
KCG Ascent Ventures, LLC
9311 N. Meridian Street, Suite 100
Indianapolis, Indiana 43260

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:
Huntington District, Retreat at Scioto Creek, LRH-2020-191-SCR-Unnamed Tributary Big Run

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)
State: Ohio County/parish/borough: Franklin City: Columbus
Coordinates of site (lat/long in degree decimal format):
Lat.: 39.931284 Long.: -83.122317
Universal Transverse Mercator:
Name of nearest waterbody: Unnamed Tributary Scioto Big Run

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
■ Office (Desk) Determination. Date: 1 June 2022
☐ Field Determination. Date:

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
WTL-001	39.932541	-83.120751	0.03 acre	Wetland	Section 404
WTL-002	39.930529	-83.123158	0.03 acre	Wetland	Section 404
ST-001	39.9305	-83.1231	1,295 linear feet	Non-wetland	Section 404
ST-002	39.9325	-83.1205	605 linear feet	Non-wetland	Section 404
ST-003	39.9334	-83.1213	1,391 linear feet	Non-wetland	Section 404

ST-004	39.9335	-83.1220	1,602 linear feet	Non-wetland	Section 404
ST-005	39.9339	-83.1232	670 linear feet	Non-wetland	Section 404
ST-006	39.9312	-83.1209	517 linear feet	Non-wetland	Section 404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items: *Preliminary Jurisdictional Wetland/Waters Delineation Report for Hall Road Apartments* dated 26 January 2022 and completed by Stone Environmental, Engineering, and Science, Inc.

■ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor: Appendix A- Delineation Results Map (JD, Jan 2022)

■ Data sheets prepared/submitted by or on behalf of the PJD requestor.
■ Office concurs with data sheets/delineation report.

☐ Office does not concur with data sheets/delineation report. Rationale:

☐ Data sheets prepared by the Corps:_____.

☐ Corps navigable waters' study:_____.

☐ U.S. Geological Survey Hydrologic Atlas:_____.
☐ USGS NHD data
☐ USGS 8 and 12 digit HUC maps.

■ U.S. Geological Survey map(s). Cite scale & quad name: Appendix A- Project Location Map; Southwest Columbus Quad

■ Natural Resources Conservation Service Soil Survey. Citation: Appendix A- Soil Unit Map (JD, Jan 2022)

■ National wetlands inventory map(s). Cite name: Appendix A- USFWS NWI and USGS NHD Map (JD, Jan 2022)

☐ State/local wetland inventory map(s):_____.

■ FEMA/FIRM maps: Appendix A- FEMA Map (JD, Jan 2022)

☐ 100-year Floodplain Elevation is:_____.(National Geodetic Vertical Datum of 1929)

■ Photographs: ■ Aerial (Name & Date): Appendix A-Delineation Results Map (JD, Jan 2022)
or ■ Other (Name & Date): Appendix B- Photos 1-16 dated 11 January 2022 (JD, Jan 2022)

☐ Previous determination(s). File no. and date of response letter:_____.

☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Katie C Samples 1 June 2022

Signature and date of Regulatory staff member completing PJD

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume

concurrence and no additional follow up is necessary prior to finalizing an action.

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO ATTENTION OF

June 1, 2022

Regulatory Division
North Branch
LRH-2022-191-SCR-Unnamed Tributary Scioto Big Run

PRELIMINARY JURISDICTIONAL DETERMINATION AND NATIONWIDE PERMIT NO. 29 VERIFICATION

Mr. Michael Rodriguez
KCG Ascent Ventures, LLC
9311 N. Meridian Street, Suite 100
Indianapolis, Indiana 43260

Dear Mr. Rodriguez:

I refer to the pre-construction notification (PCN) received in this office on March 7, 2022, concerning the Retreat at Scioto Creek residential development project. The proposed project is located north of Hall Road and east of Interstate 270 in the City of Columbus, Franklin County, Ohio (39.931284 latitude, -83.122317 longitude). We have assigned the following file number to your PCN: LRH-2022-191-SCR-Unnamed Tributary Scioto Big Run. Please reference this file number on all future correspondence related to this subject proposal.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a DA permit be obtained prior to discharging dredged and/or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

Preliminary Jurisdictional Determination

Based upon a review of the submitted information, this office has determined that 5,540 linear feet of six (6) streams and 0.06 acre of two (2) wetlands are located within the jurisdictional determination (JD) review area and may be waters of the United States in accordance with the Regulatory Guidance Letter for JDs issued by the Corps on October 31, 2016 (Regulatory Guidance Letter No. 16-01). As indicated in the guidance, this preliminary JD is non-binding and cannot be appealed (33 CFR 331.2) and only provides a written indication that waters of the United States, including wetlands, may be present on-site.

You have declined to exercise the option to obtain an approved JD in this instance and at this time for these aquatic resources. However, for the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the above aquatic resources will be evaluated as if they are waters of the United States.

Enclosed please find a copy of the preliminary JD form (Enclosure 1). If you agree with the findings of this preliminary JD and understand your options regarding the same, please sign and date a copy of the preliminary JD form and return it to this office within 30 days of receipt of this letter. You should submit the signed copy via email or to the following address:

United States Army Corps of Engineers
Huntington District Attn: North Branch
LRH-2022-191-SCR-Unnamed Tributary Scioto Big Run
502 Eighth Street
Huntington, West Virginia 25701

Nationwide Permit Verification

The proposed project, as described in the submitted information, has been reviewed in accordance with Section 404 and Section 10. Based on your description of the proposed work, it has been determined that this project would involve the discharge of dredged and/or fill material into waters of the United States and is subject to the requirements of Section 404.

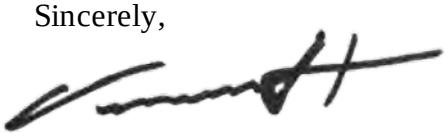
In the submitted PCN materials received in this office on March 7, 2022, you have requested a DA authorization to discharge dredged and/or fill material into 408 linear feet (0.02 acre) of two (2) streams in conjunction with the construction of a multi-family residential development and its attendant features. All work will be conducted in accordance with the PCN received in this office on March 7, 2022.

Based on your description of the proposed work, and other information available to us, it has been determined the proposed discharge of dredged and/or fill material into waters of the United States in conjunction with the proposed project meets the criteria for Nationwide Permit (NWP) No. 29 (enclosed) under the January 13, 2021 Federal Register, Reissuance of NWPs (86 FR 2744) provided you comply with all terms and conditions of the enclosed material and the enclosed special conditions. Please be aware this NWP verification does not obviate the requirement to obtain any other federal, state, or local assent required by law for the activities. This letter does not grant any property rights or exclusive privileges or authorize any injury to the property or rights of others.

This verification is valid until the expiration date of the NWPs, unless the NWP authorization is modified, suspended, or revoked. The verification will remain valid if the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization. The 2021 NWPs published January 13, 2021 in the Federal Register (86 FR 2744), are scheduled to be modified, reissued, or revoked on March 14, 2026. Prior to this date, it is not necessary to contact this office for re-verification of your project unless the plans for the proposed activity are modified. Furthermore, if you commence or under contract to commence this activity before March 14, 2026, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

A copy of the NWPs and this verification letter must be kept at the site during construction. Upon completion of the activities authorized by this NWP verification, the enclosed certification must be signed and returned to this office. If you have any questions concerning the above, please contact Ms. Katie Samples of the North Branch at 304-399-6933, by mail at the above address, or by email at katie.e.samples@usace.army.mil.

Sincerely,



Andrew J. Wendt
Regulatory Project Manager
North Branch

Enclosures

cc (by email):

Mr. Teagan Lowe (Stone Environmental)

SPECIAL CONDITIONS FOR NATIONWIDE PERMIT 29 VERIFICATION
RETREAT AT SCIOTO CREEK PROJECT
LRH-2022-191-SCR-UNNAMED TRIBUTARY SCIOTO BIG RUN
PAGE 1 OF 2

1. All work will be conducted in accordance with the submitted pre-construction notification for the Retreat at Scioto Creek project dated March 7, 2022.

2. Enclosed is a copy of Nationwide Permit 29, which will be kept at the site during construction. A copy of the nationwide permit verification, special conditions, and the submitted construction plans must be kept at the site during construction. The permittee will supply a copy of these documents to their project engineer responsible for construction activities.

3. Work activities will be performed during low flow conditions to the greatest extent practicable. Additionally, appropriate site specific best management practices for sediment and erosion control will be fully implemented during construction activities at the site.

4. No area for which grading has been completed will be unseeded or unmulched for longer than 14 days. All disturbed areas will be seeded and/or revegetated with native species and approved seed mixes (where practicable) after completion of construction activities for stabilization and to help preclude the establishment of non-native invasive species.

5. Should new information regarding the scope and/or impacts of the project become available that was not submitted to this office during our review of the proposal, the permittee will submit written information concerning proposed modification(s) to this office for review and evaluation, as soon as practicable.

6. In the event any previously unknown historic or archaeological sites or human remains are uncovered while accomplishing the activity authorized by this nationwide permit authorization, the permittee must cease all work in waters of the United States immediately and contact local, state and county law enforcement offices (only contact law enforcement on findings of human remains), the Corps at 304-399-5210 and Ohio State Historic Preservation Office at 614-298-2000. The Corps will initiate the Federal, state and tribal coordination required to comply with the National Historic Preservation Act and applicable state and local laws and regulations. Federally recognized tribes are afforded a government-to-government status as sovereign nations and consultation is required under Executive Order 13175 and 36 CFR Part 800.

7. The project site lies within the range of the Indiana bat (*Myotis sodalis*), a federally-listed endangered species and the northern long-eared bat (*Myotis septentrionalis*), a federally-listed threatened species. Several factors have contributed to the two (2) species decline, including habitat loss, fragmentation of habitat and the disease White Nose Syndrome. During winter, the two (2) bat species hibernate in caves and abandoned mines. Suitable summer habitat for the Indiana bats and the northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded

SPECIAL CONDITIONS FOR NATIONWIDE PERMIT 29 VERIFICATION
RETREAT AT SCIOTO CREEK PROJECT
LRH-2022-191-SCR-UNNAMED TRIBUTARY SCIOTO BIG RUN
PAGE 2 OF 2

areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. The permittee will preserve wooded/forested habitats exhibiting any of the characteristics listed above wherever possible. Should suitable habitat be present that cannot be saved during construction activities, any trees ≥3 inches dbh will only be cut between October 1 – March 31.

8. Section 7 obligations under Endangered Species Act must be reconsidered if new information reveals impacts of the project that may affect federally listed species or critical habitat in a manner not previously considered, the proposed project is subsequently modified to include activities which were not considered during Section 7 consultation with the United States Fish and Wildlife Service, or new species are listed or critical habitat designated that might be affected by the subject project.

COMPLETION OF WORK FORM

Permit: LRH-2022-191-SCR-Unnamed Tributary Scioto Big Run
Retreat at Scioto Creek Residential Development Project
Project Manager: Katie Samples

Name of Permittee: Mr. Michael Rodriguez
KCG Ascent Ventures, LLC
9311 N. Meridian Street, Suite 100
Indianapolis, Indiana 43260

Date of Issue: 1 June 2022

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

Huntington District
U.S. Army Corps of Engineers
502 8th Street
Huntington, WV 25701-2070
Attn: RD-N

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

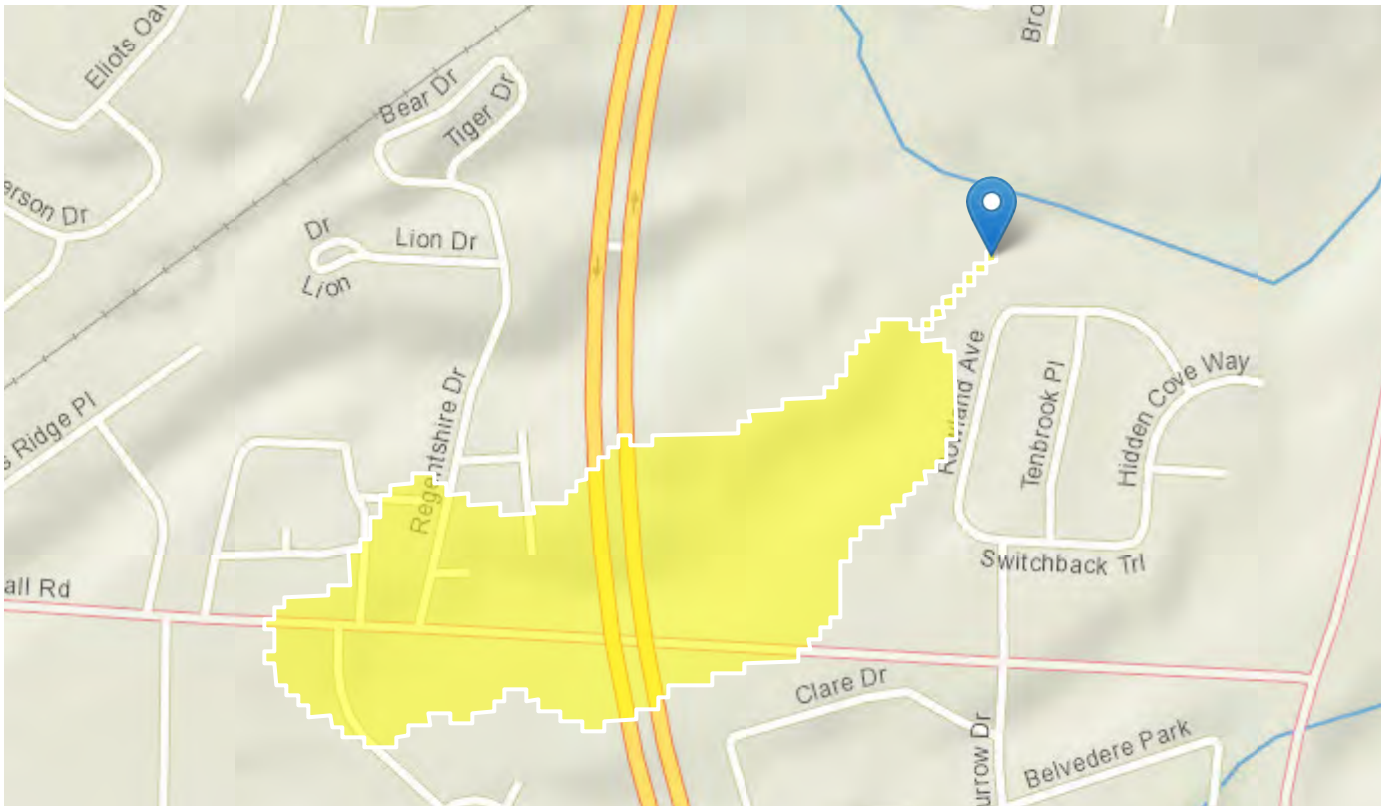
_____

Signature of Permittee Date

Appendix G – StreamStats Data (ST-001)

StreamStats Report

Region ID: OH
Workspace ID: OH20220406170736881000
Clicked Point (Latitude, Longitude): 39.93329, -83.11996
Time: 2022-04-06 13:07:57 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.0471	square miles

Application Version: 4.8.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2