2006 Study Plan for the Scioto Brush Creek Watershed

(Adams and Scioto Counties, OH)

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Monitoring Rationale

Introduction

During the 2006 field season (June thru October) chemical, physical, and biological sampling will be conducted in the Scioto Brush Creek basin to assess and characterize all of the various potential sources of water quality impairment in the watershed. As a Total Maximum Daily Load (TMDL) basin, this survey will incorporate a drainage area stratified systematic study design.

No significant point source discharges are known to exist in the basin. Thus, the sampling effort is structured to characterize non point source impacts including those from unsewered communities and from agricultural or industrial activities. Streams, locations and types of sampling scheduled for the study area are listed in Table 1. Lab effort is detailed in Table 2.

Sampling Objectives:

Evaluate all streams in the basin which drain at least 4 mi^2 to determine the status of the aquatic community.

Characterize the amount of aquatic resource degradation attributable to various land uses including agricultural or forestry practices and from rural community development.

Investigate the potential for use impairment induced by industrial activities.

Determine any potential recreational impacts from unsewered communities including McDermott, Rarden, Otway, Youngs and Owensville.

Chemical/Physical Water and Sediment Quality

Chemical sampling locations within the study area are listed in Table 1. Conventional chemical/physical water quality samples will be collected six times at locations where drainage areas are $\geq$ 8 mi^2 . Four samples will be collected at locations where drainage areas are $\approx$ 4 mi^2. Half of the samples from these sites will be submitted for mercury concentration analysis.

In support of a statewide study to assess nutrient assimilation, dissolved P, water column chlorophyll, and periphyton samples will be collected at seven sites. The sampling protocol for determination of chlorophyll a concentrations requires that these samples be collected between late July and early September following a minimum of two weeks of stable, low-flow conditions. For a given sampling event (either water column chlorophyll or periphyton), one composite sample per site will be split among three filters for later analysis. The dissolved P and water column chlorophyll samples should be collected during the same sampling event.

Nutrient sampling will occur at: Scioto Brush Creek - RM's 33.55 & 5.82, Rarden Creek - RM 3.86, South Fork Scioto Brush Creek - RM 0.65, Mill Creek - RM 0.79, Rocky Fork - RM 3.52 and Bear Creek RM 3.45.

Bacteriological water samples will be collected six times at locations where drainage areas are $\approx$

32 mi^2 or 64 mi^2 (4 locations), at reference sites (2 locations), and at sentinel sites (3 locations, one of these is also a reference site). Three samples will be collected at locations where drainage areas are $\leq$ 16 mi^2 and at Scioto Brush Creek - RM's 12.15, 3.35 & 0.27. Beyond the drainage area stratified and mainstem selected sites, six additional sites were identified to determine whether there is an excessive presence of water borne pathogens in proximity to specific communities. No aquatic life assessment is requested at these locations: Dry Run - RM 0.43, Jessie Run - RM's 0.25 & 0.65, Bloody Run - RM's 0.10 & 0.50 and Reeds Run - RM 0.10.

Organic water samples will be collected once, and sediment metal and organic samples will be collected once at locations where drainage areas are $\approx$ 32 mi^2 or 64 mi^2 (4 locations), at reference sites (2 locations), at sentinel sites (3 locations, one of these is also a reference site)., at Dunlap Creek RM - 0.65, and at Jaybird Branch - RM 0.99. Additionally, sediment sampling to assess nutrients (ammonia & total phosphorus), total organic carbon and particle size should occur at all nutrient assessment locations (4 additional locations where metal and organic concentration analysis is not requested).

Datasonde© sampling will be completed by the Modeling Unit. One deployment run is anticipated at all sites where drainage areas are $\geq$ 32 mi^2 (10 locations). Datasonde© sampling is also requested at the smaller drainage area reference or nutrient assessment locations (5 additional sites).

The Modeling Unit will calibrate discharge correlated to stream height at the three sentinel sites. These stations will be chemically sampled six times during which stream height will be recorded. Subsequently, loading calculations will be possible for these locations.

Macroinvertebrate and Fish Assemblages

Quantitative macroinvertebrate sampling methods and two fish sampling passes will be conducted at all sites where drainage areas are $\geq$ 32 mi^2 (9 locations, excludes the mainstem pathogen site Scioto Brush Creek - RM 3.35). Qualitative macroinvertebrate sampling methods and one fish sampling pass will be conducted at all sites where drainage areas are $\approx$ 4 mi^2, 8 mi^2 and 16 mi^2. (45 locations excluding the pathogen sites: Dry Run - RM 0.43, Jessie Run - RM's 0.25 & 0.65, Bloody Run - RM's 0.10 & 0.50 and Reeds Run - RM 0.10.). Habitat assessment will occur at all fish sampling locations.

Collection of fish tissue samples is anticipated at five locations: Scioto Brush Creek - RM's 26.6, 17.1, 13.4, 9.5 & 0.27.

Quality Assurance / Sampling Methods

Ohio EPA Manuals

All biological, chemical, EPA laboratory, data processing, and data analysis methods and procedures adhere to those specified in the Manual of Ohio EPA Surveillance Methods and Quality Assurance Practices (Ohio Environmental Protection Agency 2006), Biological Criteria for the Protection of Aquatic Life, Volumes II - III (Ohio Environmental Protection Agency 1987, 1989a, 1989b), The Qualitative Habitat Evaluation Index (QHEI); Rationale, Methods, and Application (Rankin 1989) for habitat assessment, and Ohio EPA Sediment Sampling Guide and Methodologies (Ohio EPA 2001).

Quality Control Samples

Ten percent of the sediment, water, and bacteria samples will be submitted to the lab as field duplicates. One Datasonde© recorder site will have two instruments placed in the river as field duplicates.

Surface Water

Surface water grab samples will be collected from the upper 12 inches of river water and sampled directly into appropriate containers. Collected water will be preserved using appropriate methods, as outlined in Parts II and III of the Manual of Ohio EPA Surveillance Methods and Quality Assurance Practices (Ohio EPA 2006) and delivered to the Ohio EPA lab for analysis. Datasonde© continuous recorders will be placed at select locations to evaluate diurnal measurements of dissolve oxygen, pH, temperature, and conductivity.

Bacteria

Water samples will be collected directly from the river into sterilized polyethylene containers, cooled to 4˚C, and transported to the Ohio EPA lab in Columbus for analysis within 6 hours of sample collection. All samples will be analyzed for fecal coliform and *E. coli* bacteria using U.S.EPA approved methods (STORET Parameter Codes 31611 and 31633). Samples may be processed in the field using standard incubation methods before delivery to the Ohio EPA lab.

Sediment

Fine grained multi-incremental sediment samples will be collected in the upper 4 inches of bottom material using either decontaminated stainless steel scoops or Ekman dredges. Collected sediment will be placed into glass jars with teflon lined lids, placed on ice (to maintain 4ºC) and delivered to the Ohio EPA lab. Sampling and decontamination protocols will follow those listed in the Ohio EPA Sediment Sampling Guide and Methodologies, November, 2001.

Biological Community Assessment

Macroinvertebrates will be collected from artificial substrates and from the natural habitats. The artificial substrate collection provides quantitative data and consists of a composite sample of 5 modified Hester-Dendy (HD) multiple-plate samplers colonized for six weeks. At the time of the artificial substrate collection, a qualitative multihabitat composite sample is also collected. This sampling effort consists of an inventory of all observed macroinvertebrate taxa from the natural habitats at each site with no attempt to quantify populations other than notations on the

predominance of specific taxa or taxa groups within major macrohabitat types (e.g., riffle, run, pool, margin). Fish will be sampled once or twice at each sampling location with pulsed DC current. Detailed biological sampling protocols are documented in the Ohio EPA manual Biological Criteria for the Protection of Aquatic Life, Volume III (1989).

Stream Habitat Evaluation

Physical habitat is evaluated using the Qualitative Habitat Evaluation Index (QHEI) developed by the Ohio EPA for streams and rivers in Ohio (Rankin 1989). Various attributes of the available habitat are scored based on their overall importance to the establishment of viable, diverse aquatic faunas. Evaluations of type and quality of substrate, amount of instream cover, channel morphology, extent of riparian canopy, pool and riffle development and quality, and stream gradient are among the metrics used to evaluate the characteristics of a stream segment, not just the characteristics of a single sampling site. As such, individual sites may have much poorer physical habitat due to a localized disturbance yet still support aquatic communities closely resembling those sampled at adjacent sites with better habitat, provided water quality conditions are similar. QHEI scores from hundreds of segments around the state have indicated that values higher than 60 were generally conducive to the establishment of warmwater faunas while those which scored in excess of 75-80 often typify habitat conditions which have the ability to support exceptional faunas.

Use Attainment

Attainment/non-attainment of aquatic life uses will be determined by using biological criteria codified in Ohio Administrative Code (OAC) 3745-1-07, Table 7-17. Numerical biological criteria are based on multimetric biological indices including the Index of Biotic Integrity (IBI) and modified Index of Well-Being (MIwb), indices measuring the response of the fish community, and the Invertebrate Community Index (ICI), which indicates the response of the macroinvertebrate community.

Performance expectations for the basic aquatic life uses (Warmwater Habitat [WWH], Exceptional Warmwater Habitat [EWH], and Modified Warmwater Habitat [MWH] were developed using the regional reference site approach (Hughes et al. 1986; Omernik 1988). This fits the practical definition of biological integrity as the biological performance of the natural habitats within a region (Karr and Dudley 1981). Attainment of an aquatic life use is FULL if all three indices (or those available) meet the applicable criteria, PARTIAL if at least one of the indices did not attain and performance did not fall below the fair category, and NON if all indices either fail to attain or any index indicates poor or very poor performance. The results will be compared to WWH biocriteria for the Western Allegheny Plateau ecoregion.

Recreational use attainment will be determined using fecal coliform bacteria and *E. coli* bacteria. Both types of organisms are indicator organisms for the potential presence of pathogens in surface water resulting from the presence of untreated human or animal wastes, and they are the basis for recreational use water quality criteria in Rule 3745-1-07 of the Ohio Administrative Code (OAC).

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Table 1. List of sampling locations in the 2006 Scioto Brush Creek study area. Sample type acronyms and number of sites follow:

RM	Sample Type	Location / Notes	Mi^2	Map#	Lat.-Long.
Scioto Brush Creek					
38.20	c,b,m,f	Trail from Hackelshin Rd.	4.1	710	39.0004-83.3023
36.01	C,b,m,f	Bettys Creek Rd.	7.6	732	38.9695-83.3471
33.55	C,N,s,D,b,m,f	St. Rt.32 / Nutrient site	17.6	732	38.9694-83.3472
27.87	C,O,S,D,B,M,F	St. Rt. 73, Dst. Coffee Hollow / Dst. Hanson Aggretates, Tissue site	35.0	732	38.9468-83.3026
23.63	C,O,S,D,B,M,F	Rarden-Hazelbaker Rd.	74.3	733	38.9173-83.2457
17.11	C,O,S,D,B,M,F	St. Rt. 348 / Sentinal & Tissue site	94.4	753	38.8620-83.1898
12.15	C,D,b,M,F	Diehlman Rd./ Tissue site	225.0	752	38.8363-83.1381
5.82	C,N,O,S,D,B,M,F	Tatum Coe Rd. / Sentinal, Nutrient &Tissue site	260.0	754	38.8412-83.0958
3.35	C,D,b	Colley Rd. / Pathogen site	264.0	754	38.8373-83.0649
0.27	C,D,b,M,F	St. Rt. 104 / Tissue site	273.0	754	38.8372-83.0211
Bettys Creek					
1.4	c,b,m,f	Bettys Creek Rd., Opp. Conaway Rd.	4.3	710	39.0052-83.3360
Cedar Fork					
2.28	c,b,m,f	Davis Memorial Rd.	4.9	732	38.9404-83.3556
Plum Run					
0.16	c,b,m,f	Quarry road, at Hanson Aggretates	4.0	732	38.9433-83.3607
Jaybird Branch					
0.99	c,O,S,b,m,f	Beaver Pond Rd., Dst. GE Aviation	3.9	732	38.9324-83.3059
Rarden Creek					
3.86	C,N,s,D,b,m,f	Gravel lane, Ust. Adams/Scioto Co line / Nutrient site	8.0	732	38.9662-83.2701
0.27	C,b,m,f	St. Rt. 73	18.7	733	38.9234-83.2483
Straight Fork Rarden Creek					
0.31	c,b,m,f	Adj. Straight Fk. Rd., Dst. Elder Hollow Run	3.5	732	38.9731-83.273
Bull Run					
0.1	c,b,m,f	Rarden Creek Rd.	3.6	732	38.9697-83.2706
Dry Fork Rarden Creek					
0.96	c,b,m,f	Gravel lane, Dst. Kizzie Run	4.2	732	38.9527-83.239
Dunlap Creek					
1.93	c,O,S,b,m,f	Adj. private road, ust. 1st. Adams Co. trib., Dst. GE Aviation	4.3	732	38.9043-83.2783
0.65	C,b,m,f	Gravel road, Ust. confluence	8.2	732	38.9135-83.2581

Table 1. continued

RM	Sample Type	Location	Notes		
Jessie Run					
0.65	c,b	Ust. Rarden, Lane from St. Rt. 772 / Pathogen site	1.7	733	38.9252 -83.2401
0.25	c,b	Dst. Rarden, Hill Rd./ Pathogen site	1.8	733	38.9208 -83.2436
Dry Run					
2.20	c,b,m,f	Dst. Salome Run, Ust. Staley Run / Access is uncertain	4.0	733	38.9257-83.1911
0.43	c,b	Ust Youngs, Ust Sugarcamp Run / Pathogen site	5.0	733	38.9027-83.2037
0.06	C,b,m,f	Near confluence	7.1	733	38.8980-83.2061
Bloody Run					
0.5	c,b	Ust. Otway, St. Rt. 348 / Pathogen site	0.9	753	38.8677 -83.1861
0.10	c,b	Dst. Otway, at RR bridge / Pathogen site	1.0	753	38.8652 -83.19
South Fork Scioto Brush Creek					
12.4	C,O,S,D,B,M,F	Gravel lane to Hall Hollow from Blue Creek Rd.	36.4	752	38.7825-83.3220
5.88	C,O,S,D,B,M,F	Footbridge at Liston Run confluence	74.2	752	38.8393-83.2623
0.65	C,N,O,S,D,B,M,F	Adj. St. Rt. 348 / Reference , Sentinal & Nutrient site	112	752	38.8564-83.1975
Mill Creek					
2.20	c,b,m,f	Ust. Middle Branch, Adj. St. Rt. 125	3.0	752	38.7722-83.3678
0.79	C,N,O,S,D,B,m,f	Gravel lane from St. Rt. 125 / Reference Site & Nutrient site	15.9	752	38.7748-83.347
Middle Branch Mill Creek					
1.95	c,b,m,f	Ust. Hickman Run	3.5	751	38.7596-83.3900
1.8	C,b,m,f	Dst. Hickman Run	7.6	751	38.7609-83.3887
Hickman Run					
0.03	c,b,m,f	Burr Rd., Near confluence	4.1	751	38.7603-83.3889
Churn Creek					
3.9	c,b,m,f	Adj. Churn Creek Rd., Ust. Slate Fork	3.7	767	38.7345-83.3043
3.0	C,b,m,f	Adj. Churn Creek Rd., Ust. Johnson Run	7.3	767	38.7439-83.3156
0.15	C,b,m,f	St. Rt. 125	18.1	752	38.7773-83.3346

Table 1. continued

RM	Sample Type	Location	Notes		
Blue Creek					
2.17	c,b,m,f	Gravel road, Dst. Glen Run	3.9	767	38.7493-83.3537
Winterstein Run					
0.1	c,b,m,f	Blue Creek Rd.	3.2	752	38.7861-83.3201
Turkey Run					
0.26	c,b,m,f	Newman Rd.	4.8	752	38.8204-83.3039
Turkey Creek					
6.00	c,b,m,f	Jones Rd.	4.2	752	38.8713-83.3638
4.24	C,b,m,f	Gravel lane ust. Dry Fork	7.4	752	38.8640-83.3366
0.40	C,b,m,f	St. Rt. 781	16.6	752	38.8376-83.2804
Dry Fork					
0.18	c,b,m,f	St. Rt. 781	4.2	752	38.8627-83.3263
Beach Fork					
1.85	c,b,m,f	Beech Fork Rd. (2nd crossing Ust. confluence)	4.1	752	38.8606-83.2679
Rocky Fork					
8.78	c,b,m,f	St. Rt. 125	4.7	752	38.7560-83.2656
7.15	C,b,m,f	Footbridge, Dst. Big Run	8.4	752	38.7771-83.2573
3.52	C,N,s,D,b,m,f	Gravel lane from Rocky Fork Rd. / Nutrient site	18.0	753	38.8213-83.2383
Spruce Run					
0.1	c,b,m,f	Rocky Fork Rd.	3.4	753	38.8071-83.247
Bear Creek					
5.10	c,b,m,f	Big Spruce Rd., Dst. Left & Right Forks	4.2	753	38.7933-83.1919
3.45	C,N,s,D,b,m,f	Big Spruce Rd., near Alum Rock / Nutrient site	7.9	753	38.8100-83.1771
1.40	C,b,m,f	Adj. St. Rt. 73, Dst. Saw Pit Run	17.8	753	38.8251-83.1519
Saw Pit Run					
0.11	c,b,m,f	St. Rt. 73	4.9	753	38.8239-83.1501
McCullough Creek					
1.33	C,b,m,f	Henly Deemer Rd.	7.4	753	38.8601-83.1494
0.61	C,b,m,f	Diehlman Rd.	18.6	753	38.8525-83.1266

Table 1. continued

RM	Sample Type	Location	Notes		
East Branch McCullough Creek					
3.80	c,b,m,f	Adj. St. Rt. 348, Dst. western trib.	4.4	734	38.8916-83.1047
1.00	C,b,m,f	Ust. Conley Rd.	8.9	754	38.8500-83.1200
Duck Run					
1.52	c,b,m,f	Lane ust. Reeds Run	4.0	754	38.8509-83.0424
Reeds Run					
0.1	c,b	Dst. Owensville, Duck Run Otway Rd. / Pathogen site	0.9	754	38.8509-83.0395

Sample type acronyms and number of sites:

C - Conventional water chemistry, 6 passes - 29 sites (174 samples)
c - conventional water chemistry, 4 passes - 32 sites (128 samples)
N - Nutrient assimilation (dissolved P, water column chlorophyll, & periphyton), 1 pass - 7 sites
O - Organic water chemistry, 1 pass - 10 sites (10 samples).
S - Sediment inorganic, organic and metal concentrations, 1 pass - 10 sites (10 samples).
s - sediment inorganic (nutrient) concentrations, 1 pass - 4 sites (4 samples).
B - Bacteriological analysis, 6 passes - 7 sites (42 samples)
b - bacteriological analysis, 3 passes - 54 sites (162 samples)
D - Datasonde (areas of algal activity may require units with stirrers) 1 pass - 15 sites
M - macroinvertebrates, quantitative, 9 sites (9 samples).
m - macroinvertebrates, qualitative, 45 sites (45 samples).
F - fish, 2 pass, 9 sites (18 samples).
f - fish, 1 pass, 45 sites (45 samples).

Reference site: Data from these locations was used to derive ecoregional biological expectations. Generally, a robust sampling effort is conducted at these sites to support future calibration needs (2 sites).

Nutrient site: Ohio EPA is evaluating data from these locations toward developing nutrient concentration water quality criteria in correlation with aquatic life use performance (7 sites).

Sentinel site: Location where modeling unit will calibrate flow with stage height. Water level will be measured on each chamistry sample pass (3 sites).

Pathogen site: These locations were selected to determine whether bacteria concentrations in proximity to populated vicinities comply with recreational use criteria (7 sites).

Fish Tissue site: Fish from these locations will be analyzed to provide relative human consumption risk information (5 sites).

Table 2. Ohio EPA chemistry lab sampling effort for the 2006 Scioto Brush Creek study area (See attached mock lab report forms).

Type of sample	# DES Parameters	# Sites	# Passes	Total #
Water Chemistry				
	Conventional (Inorganic Samples)			
Demand	4	32 / 29	4 / 6	1208
oil & grease	not requested			
Nutrients	9	32 / 29	4 / 6	2718
dissolved P	1	7	1	7
Bacteria	3	54 / 7	3 / 6	612
Metals / Low Level	18	32 / 29	4 / 6	5436
mercury	1	32 / 29	2 / 3	151
	Organic Scan			
Volatiles (VOC)	1 (59 compounds)	10	1	10
Cyanazine / Herbicides	2 (13 compounds)	10	1	20
Semivolatiles (BNA)	1 (54 compounds)	10	1	10
PCBs, Pesticides	4 (27 compounds)	10	1	40
Carbamates	1 (10 compounds)	10	1	10
Glyphosate	1 (1 compound)	10	1	10
Sediment Chemistry				
	Conventional (Inorganic Samples)			
Demand	3	14	1	42
Nutrients	2	14	1	28
Metals / Low Level	17	10	1	170
mercury	1	10	1	10
	Organic Scan			
Volatiles (VOC)	1 (64 compounds)	10	1	10
Semivolatiles (BNA)	1 (86 compounds)	10	1	10
PCBs, Pesticides	4 (31 compounds)	10	1	40
Chlorophyll A				
Fluorometer test	1	7	1	7

Table 3. Ohio EPA test methods for the 2006 Scioto Brush Creek study area.

Parameters	Water column field test method	Water column lab test method	Sediment lab test method
Percent Solids			SM 2540G
BOD, 5-Day		USEPA 405.1, SM 5210B	
Conductivity	Hanna HI9811 meter	USEPA 120.1	
Particle Size			OEPA 160.1
pH	Hanna HI9811 meter		
Solids, Dissolved (TDS)		USEPA 160.1	
Solids, Suspended (TSS)		USEPA 160.2	
Total Organic Carbon (TOC)			OEPA 335.2
Acidity, Total CaCO3		USEPA 305.1	
Alkalinity, Total CaCO3		USEPA 310.1	
Chloride, Cl		USEPA 325.1	
COD		USEPA 410.4	
Nitrite		USEPA 354.1	
Ammonia		USEPA 350.1	SM 4500 -NH3 B&E
Nitrate+Nitrite		USEPA 353.1	
Phosphorus, Dissolved		USEPA 365.4	
Sulfate		USEPA 375.4	
TKN (Total Kjeldahl Nitrogen)		USEPA 351.2	
Phosphorus, Total		USEPA 365.4	USEPA 365.4
E.coli		USEPA 1103.1/ 640.1	
Fecal coliform		SM 9222 D/ 610.1	
Total Coliform		SM 9222 B	
ICP 1 (Al,Ba,Ca,Cr,Cu,Fe, Mg, Mn, Na, Ni, K, Sr, Zn, Hardness)		USEPA 200.7	
ICP 3 (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Pb)			USEPA 200.7
GFAA/SIMA 1 (As,Cd,Pb,Se)		USEPA 200.9, SM 3113B	
GFAA/SIMA 2 (As, Cd, Se)			USEPA 200.9, SM 3113B
Mercury, Total		USEPA 245.1,7470A	USEPA 7471A
Chlorophyll A		USEPA 445	
Dissolved Oxygen	YSI 55 meter		
Temperature	YSI 55 meter		
VOCs		USEPA 624	USEPA 8260B
Cyanazine (Bladex)		USEPA 525.2	
Herbicides (Atrazine, etc.)		USEPA 525.2	
BNA Organics (SVOCs)		USEPA 625	USEPA 8270C
Pesticides/ PCBs/ Chlordane		USEPA 608	USEPA 8081A, 8082
Carbamates (Sevin)		USEPA 531.1	
Glyphosate (Roundup)		USEPA 547	

Ohio EPA — Division of Environmental Services

Inorganic Sample Submission Form

DW Certification #4105

DES Use Only

Sample # _____

MM DD YY

Date Received ___/___/___

Sample Information (INSTRUCTIONS ON BACK)

Client (Bill to) _____

Special Project Identity _____
(project identity **requires prior approval**)

Division(check one)

DAPC	○
DDAGW	○
DERR	○
DHWM	○
DSW	●
DSIWM	○
Other	_____

OEPA District(check one)

CO	○
CDO	○
NEDO	○
NWDO	○
SEDO	●
SWDO	○
Other	_____

Sample Type(check one)

Ambient	○
Complaint	○
Compliance	○
Litigation	○
NPS	○
Survey	●
Raw	○
Plant	○
Distribution	○
(DW only)	
Other	_____

Matrix(check one)

Air Filter	○
Drinking water	○
Ground water	○
Sediment	○
Soil	○
Surface water	●
Waste water	○
Reagent Water	○
Other	_____

Collection Date MM / DD / YY HH MM

Grab ○ ___/___/___ ___/___

(or)

Composite ○ Begin ___/___/___ ___/___

End ___/___/___ ___/___

Frequency & Duration of Composite Sample:

Container Information

Qty.	Type	Pres.
	Air Filter	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/P
	Cubitainer	N/P_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
	Sed	Frozen
	Sed	
	Bacteria	Sterile

Field QC (Check one)

Field Duplicate	○
Field/Equip/Acid Blank	○
MSD	○

Collected By _____

_____

Customer ID # _____

Referred By _____

Station ID # _____

Sample Location

County:

Parameters

Template Scioto Brush Creek TMDL Water Column

Demand

- ○ ------ % Solids, *Sed only*
- ○ ------ BOD-20 day
- ● ------ BOD-5 day
- ○ ------ BOD-Ultimate
- ○ ------ CBOD-20 day
- ○ ------ CBOD-5 day
- ○ ------ CBOD-Ultimate
- ● ------ Conductivity
- ○ ------ Flashpoint
- ○ ------ Oil&Grease
- ○ ------ Particle Size, *Sed only*
- ○ ------ pH
- ● ------ Solids_Diss(filt)
- ● ------ Solids_Suspd(nonfilt)
- ○ ------ Solids_Total
- ○ ------ Solids_Total Volatile
- ○ ------ TOC

Nutrients

- ● ------ Acidity,Total $CaCO_3$
- ● ------ AlkalinityTotal $CaCO_3$
- ○ ------ Bicarbonate
- ● ------ Chloride
- ● ------ COD
- ○ ------ Chromium, Hexavalent (N/P_Filt)
- ○ ------ Cyanide_Free (WAD)
- ○ ------ Cyanide_Total
- ○ ------ Fluoride
- ● ------ Nitrite
- ● ------ Ammonia/Nitrate+nitrite
- ○ ------ Phenolics, Total w/man dist.
- ○ ------ Phosphorus, Dissolved (Filt)
- ● ------ Sulfate
- ● ------ TKN / Phosphorous, Total

Microbiology

- ○ ------ E. coli
- ○ ------ Fecal Coliform
- ○ ------ Fecal Streptococcus
- ○ ------ MMO-MUG
- ○ ------ Total Coliform

Misc.

- ○ ------ Turbidity
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____

Metals

- ● ------ **ICP 1**, *Water only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Hardness)
- ○ ------ **ICP 2**, *Water only* (Ca,Mg,Hardness)
- ○ ------ **ICP 3**, *Sediment only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Pb)
- ○ ------ **ICP 4**, *SW846 only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,V,Cd,Co,Ti,Be,Hardness)
- ○ ------ **ICP 5**, *SW846 SED only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Pb,Sr,Zn,V,Co,Ti,Be)
- ○ ------ **ICP 6**, *Air Filters only* (Cr,Ni,Pb,Zn,Mn)
- ○ ------ Vanadium
- ○ ------ Titanium

Single ICP Metals Or SIMA - Please list only if **not** using Metals packages above

- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____

Metals- Low Level

- ● ------ **SIMA 1**, *Water only* (As,Cd,Pb,Se), L L
- ○ ------ **SIMA 2**, *Sed only* (As,Cd,Se), L L
- ○ ------ **SIMA 3**, *Air only* (As,Cd), L L
- ○ ------ Arsenic, *SW846 only*, L L
- ○ ------ Cadmium, *SW846 only*, L L (Sed only)
- ○ ------ Lead, *SW846 only*, L L
- ○ ------ Selenium, *SW846 only*, L L

The following require **prior notification** to DES before submittal:

- ○ ------ Antimony,L L
- ○ ------ Beryllium, L L, *Water,Sed,&Air only*
- ○ ------ Cobalt, L L, *Water,Sed,&Air only*
- ○ ------ Copper, L L, *Water only*
- ○ ------ Silver, L L
- ○ ------ Thallium, L L
- ○ ------ Tin, L L
- ● ------ Mercury

Only 2 or 3 samples per site need Hg analysis

Bioassay ○

Field Comments

Lab Comments

Chlorine,mg/l	Cond,umho/cm	DO,mg/l	Flow,cfs	Gage Ht, ft	pH, su	% Sat	Temp,oC	Corr.Cond, umho/cm
P50060	P94	P299	P61	P65	P400		P10	P94

EPA 4709 (1/05) White-Original(DES) Green-DES Yellow-Field Records

Remove yellow copy of form for your records prior to submitting form to DES

All Rush Samples require prior approval

OhioEPA **Division of Environmental Services**

Organic Sample Submission Form

DW Certification #4105

DES Use Only
Sample # _____
MM DD YY
Date Received ___/___/___

Sample Information (INSTRUCTIONS ON BACK)

Client (Bill to) _____

Special Project Identity _____
(project identity **requires prior approval**)

Division(check one)

DAPC	○
DDAGW	○
DERR	○
DHWM	○
DSW	●
DSIWM	○
Other	_____

OEPA District(check one)

CO	○
CDO	○
NEDO	○
NWDO	○
SEDO	●
SWDO	○
Other	_____

Sample Type(check one)

Ambient	○
Complaint	○
Compliance	○
Litigation	○
NPS	○
Survey	●
Raw	○
Plant	○
Distribution	○
Other	_____

} DW only

Matrix(check one)

Air Canister	○
Drinking water	○
Ground water	○
Oil Wipe	○
Sediment	○
Soil	○
Surface water	●
Waste water	○
Reagent water	○
Other	_____

Collection Date

	MM	DD	YY	HH	MM
Grab ○					
(or)					
Composite ○ Begin					
End					

Frequency & Duration of Composite Sample:

Container Information

Qty.	Type	Pres.
	Air Canister	
	Amber, 525	N/P
	Amber, 525	HCl & Na_2SO_3
	Amber, 515	HCl & Na_2SO_3
	Amber, BNA	N/P
	Amber, BNA	$Na_2S_2O_3$
	Amber, P/P	N/P
	Amber, P/P	$Na_2S_2O_3$
	Vial, VOC	HCl / $Na_2S_2O_3$
	Vial, VOC	
	Vial, 504	$Na_2S_2O_3$
	Vial, 505	$Na_2S_2O_3$
	Jar, Oil Wipe	
	Encore Sampler	

Field QC (Check one)

Field Duplicate	○
Field/Equip/Acid Blank	○
Trip Blank	○
MSD	○

Collected By _____

_____

Customer ID # _____

Referred By _____

Station ID # _____

Sample Location

County:

Parameters

Template Scioto Brush Creek TMDL Water Column 1

○ ------ % Solids, Sed only

Volatiles
- ○ ------ VOC, 524.2 } Drinking Water Analysis
- ● ------ VOC, 624 } Waste Water Analysis
- ○ ------ VOC, 8260 } SW846 Analysis

Semivolatiles / Herbicides
- ● ------ Cyanazine, 525.2
- ● ------ Herbicides, 525.2

} Drinking Water Analysis

- ● ------ BNA, 625
- ○ ------ BN (PAHs) only, 625
- ○ ------ Acids (Phenols) only, 625

} Waste Water Analysis

- ○ ------ BNA, 8270
- ○ ------ BN (PAHs) only, 8270
- ○ ------ Acids (Phenols) only, 8270

} SW846 Analysis

- ○ ------ SAS-305
- ○ ------ SAS-310

Pesticides / PCBs / Herbicides
- ○ ------ Pesticides. 505
- ○ ------ PCBs, 508 (508A)
- ○ ------ Chlordane, 505
- ○ ------ Toxaphene, 505
- ○ ------ EDB/DBCP, 504
- ○ ------ Acid Herbicides, 515

} Drinking Water Analysis

- ● ------ Pesticides, 608
- ● ------ PCBs, 608
- ● ------ Chlordane, 608
- ● ------ Toxaphene, 608

} Waste Water Analysis

- ○ ------ Pesticides, 8081
- ○ ------ PCBs, 8082
- ○ ------ Chlordane, 8081
- ○ ------ Toxaphene, 8081
- ○ ------ PCBs, Oil Wipe

} SW846 Analysis

Air Canister
- ○ ------ TO-14A
- ○ ------ Canister Cleaning, Only

} Air Analysis

Other
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____

Field Comments

Lab Comments

Chlorine,mg/l P50060	Cond,umho/cm P94	DO,mg/l P299	Flow,cfs P61	Gage Ht, ft P65	pH, su P400	% Sat	Temp,oC P10	Corr.Cond, umho/cm P94

EPA 4708 (1/03) White-Original(DES) Green-DES Yellow-Field Records

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OhioEPA **Division of Environmental Services**

Organic Sample Submission Form

DW Certification #4105

DES Use Only

Sample # _____

MM DD YY

Date Received ___/___/___

Sample Information (INSTRUCTIONS ON BACK)

Client (Bill to) _____

Special Project Identity _____

(project identity **requires prior approval**)

Division(check one)		**OEPA District**(check one)	
DAPC	○	CO	○
DDAGW	○	CDO	○
DERR	○	NEDO	○
DHWM	○	NWDO	○
DSW	●	SEDO	●
DSIWM	○	SWDO	○
Other		Other	

Sample Type(check one)			**Matrix**(check one)	
Ambient	○		Air Canister	○
Complaint	○		Drinking water	○
Compliance	○		Ground water	○
Litigation	○		Oil Wipe	○
NPS	○		Sediment	○
Survey	●		Soil	○
Raw	○	DW only	Surface water	●
Plant	○	DW only	Waste water	○
Distribution	○	DW only	Reagent water	○
Other			Other	

Collection Date

	MM	DD	YY	HH	MM
Grab ○					
(or)					
Composite ○ Begin					
End					

Frequency & Duration of Composite Sample:

Container Information

Qty.	Type	Pres.
	Air Canister	
	Amber, 525	N/P
	Amber, 525	HCl & Na_2SO_3
	Amber, 515	HCl & Na_2SO_3
	Amber, BNA	N/P
	Amber, BNA	$Na_2S_2O_3$
	Amber, P/P	N/P
	Amber, P/P	$Na_2S_2O_3$
	Vial, VOC	HCl / $Na_2S_2O_3$
	Vial, VOC	
	Vial, 504	$Na_2S_2O_3$
	Vial, 505	$Na_2S_2O_3$
	Jar, Oil Wipe	
	Encore Sampler	

Field QC (Check one)

Field Duplicate	○
Field/Equip/Acid Blank	○
Trip Blank	○
MSD	○

Collected By _____

_____

Customer ID # _____

Referred By _____

Station ID # _____

Sample Location

County:

Parameters

Template Scioto Brush Creek TMDL Water Column 2

○ ------ % Solids, Sed only

Volatiles

○ ------ VOC, 524.2 } Drinking Water Analysis

○ ------ VOC, 624 } Waste Water Analysis

○ ------ VOC, 8260 } SW846 Analysis

Semivolatiles / Herbicides

○ ------ Cyanazine, 525.2 } Drinking Water Analysis

○ ------ Herbicides, 525.2

○ ------ BNA, 625

○ ------ BN (PAHs) only, 625 } Waste Water Analysis

○ ------ Acids (Phenols) only, 625

○ ------ BNA, 8270

○ ------ BN (PAHs) only, 8270 } SW846 Analysis

○ ------ Acids (Phenols) only, 8270

○ ------ SAS-305

○ ------ SAS-310

Pesticides / PCBs / Herbicides

○ ------ Pesticides. 505

○ ------ PCBs, 508 (508A)

○ ------ Chlordane, 505 } Drinking Water Analysis

○ ------ Toxaphene, 505

○ ------ EDB/DBCP, 504

○ ------ Acid Herbicides, 515

○ ------ Pesticides, 608

○ ------ PCBs, 608

○ ------ Chlordane, 608 } Waste Water Analysis

○ ------ Toxaphene, 608

○ ------ Pesticides, 8081

○ ------ PCBs, 8082

○ ------ Chlordane, 8081 } SW846 Analysis

○ ------ Toxaphene, 8081

○ ------ PCBs, Oil Wipe

Air Canister

○ ------ TO-14A } Air Analysis

○ ------ Canister Cleaning, Only

Other

● ------ Glyphosate 547

● ------ Carbamates 531.1

○ ------ _____

○ ------ _____

○ ------ _____

Field Comments

Lab Comments

Chlorine,mg/l	Cond,umho/cm	DO,mg/l	Flow,cfs	Gage Ht, ft	pH, su	% Sat	Temp,oC	Corr.Cond, umho/cm
P50060	P94	P299	P61	P65	P400		P10	P94

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Ohio EPA — Division of Environmental Services

Inorganic Sample Submission Form

DW Certification #4105

DES Use Only

Sample # _____

MM DD YY

Date Received ___/___/___

Sample Information (INSTRUCTIONS ON BACK)

Client (Bill to) _____

Special Project Identity _____
(project identity **requires prior approval**)

Division(check one)

DAPC	○
DDAGW	○
DERR	○
DHWM	○
DSW	●
DSIWM	○
Other	_____

OEPA District(check one)

CO	○
CDO	○
NEDO	○
NWDO	○
SEDO	●
SWDO	○
Other	_____

Sample Type(check one)

Ambient	○
Complaint	○
Compliance	○
Litigation	○
NPS	○
Survey	●
Raw	○
Plant	○
Distribution	○
(DW only)	
Other	_____

Matrix(check one)

Air Filter	○
Drinking water	○
Ground water	○
Sediment	●
Soil	○
Surface water	○
Waste water	○
Reagent Water	○
Other	_____

Collection Date MM DD YY HH MM

Grab ○ ___/___/___ ___/___

(or)

Composite ○ Begin ___/___/___ ___/___

End ___/___/___ ___/___

Frequency & Duration of Composite Sample:

Container Information

Qty.	Type	Pres.
	Air Filter	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/P
	Cubitainer	N/P_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
	Sed	Frozen
	Sed	
	Bacteria	Sterile

Field QC (Check one)

Field Duplicate	○
Field/Equip/Acid Blank	○
MSD	○

Collected By _____

_____

Customer ID # _____

Referred By _____

Station ID # _____

Sample Location

County:

Parameters

Template Scioto Brush Creek Sediment

Demand

- ● ------ % Solids, *Sed only*
- ○ ------ BOD-20 day
- ○ ------ BOD-5 day
- ○ ------ BOD-Ultimate
- ○ ------ CBOD-20 day
- ○ ------ CBOD-5 day
- ○ ------ CBOD-Ultimate
- ○ ------ Conductivity
- ○ ------ Flashpoint
- ○ ------ Oil&Grease
- ● ------ Particle Size, *Sed only*
- ○ ------ pH
- ○ ------ Solids_Diss(filt)
- ○ ------ Solids_Suspd(nonfilt)
- ○ ------ Solids_Total
- ○ ------ Solids_Total Volatile
- ● ------ TOC

Nutrients

- ○ ------ Acidity,Total $CaCO_3$
- ○ ------ AlkalinityTotal $CaCO_3$
- ○ ------ Bicarbonate
- ○ ------ Chloride
- ○ ------ COD
- ○ ------ Chromium, Hexavalent (N/P_Filt)
- ○ ------ Cyanide_Free (WAD)
- ○ ------ Cyanide_Total
- ○ ------ Fluoride
- ○ ------ Nitrite
- ● ------ Ammonia/Nitrate+nitrite
- ○ ------ Phenolics, Total w/man dist.
- ○ ------ Phosphorus, Dissolved (Filt)
- ○ ------ Sulfate
- ● ------ TKN / Phosphorous, Total

Microbiology

- ○ ------ E. coli
- ○ ------ Fecal Coliform
- ○ ------ Fecal Streptococcus
- ○ ------ MMO-MUG
- ○ ------ Total Coliform

Misc.

- ○ ------ Turbidity
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____

Metals

- ○ ------ **ICP 1**, *Water only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Hardness)
- ● ------ **ICP 2**, *Water only* (Ca,Mg,Hardness)
- ○ ------ **ICP 3**, *Sediment only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Pb)
- ○ ------ **ICP 4**, *SW846 only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,V,Cd,Co,Ti,Be,Hardness)
- ○ ------ **ICP 5**, *SW846 SED only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Pb,Sr,Zn,V,Co,Ti,Be)
- ○ ------ **ICP 6**, *Air Filters only* (Cr,Ni,Pb,Zn,Mn)
- ○ ------ Vanadium
- ○ ------ Titanium

Single ICP Metals Or SIMA - Please list only if **not** using Metals packages above

- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____

Metals- Low Level

- ○ ------ **SIMA 1**, *Water only* (As,Cd,Pb,Se), L L
- ● ------ **SIMA 2**, *Sed only* (As,Cd,Se), L L
- ○ ------ **SIMA 3**, *Air only* (As,Cd), L L
- ○ ------ Arsenic, *SW846 only*, L L
- ○ ------ Cadmium, *SW846 only*, L L (Sed only)
- ○ ------ Lead, *SW846 only*, L L
- ○ ------ Selenium, *SW846 only*, L L

The following require **prior notification** to DES before submittal:

- ○ ------ Antimony,L L
- ○ ------ Beryllium, L L, *Water,Sed,&Air only*
- ○ ------ Cobalt, L L, *Water,Sed,&Air only*
- ○ ------ Copper, L L, *Water only*
- ○ ------ Silver, L L
- ○ ------ Thallium, L L
- ○ ------ Tin, L L
- ● ------ Mercury

Bioassay ○

Field Comments

Lab Comments

Chlorine,mg/l	Cond,umho/cm	DO,mg/l	Flow,cfs	Gage Ht, ft	pH, su	% Sat	Temp,oC	Corr.Cond, umho/cm
P50060	P94	P299	P61	P65	P400		P10	P94

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OhioEPA — Division of Environmental Services

Organic Sample Submission Form

DW Certification #4105

DES Use Only

Sample # _____

MM DD YY

Date Received ___/___/___

Sample Information (INSTRUCTIONS ON BACK)

Client (Bill to) _____

Special Project Identity _____

(project identity **requires prior approval**)

Division(check one)		**OEPA District**(check one)	
DAPC	○	CO	○
DDAGW	○	CDO	○
DERR	○	NEDO	○
DHWM	○	NWDO	○
DSW	●	SEDO	●
DSIWM	○	SWDO	○
Other		Other	

Sample Type(check one)			**Matrix**(check one)	
Ambient	○		Air Canister	○
Complaint	○		Drinking water	○
Compliance	○		Ground water	○
Litigation	○		Oil Wipe	○
NPS	○		Sediment	●
Survey	●		Soil	○
Raw	○	DW only	Surface water	○
Plant	○	DW only	Waste water	○
Distribution	○	DW only	Reagent water	○
Other			Other	

Collection Date

	MM	DD	YY	HH	MM
Grab ○					
(or)					
Composite ○ Begin					
End					

Frequency & Duration of Composite Sample:

Container Information

Qty.	Type	Pres.
	Air Canister	
	Amber, 525	N/P
	Amber, 525	HCl & Na_2SO_3
	Amber, 515	HCl & Na_2SO_3
	Amber, BNA	N/P
	Amber, BNA	$Na_2S_2O_3$
	Amber, P/P	N/P
	Amber, P/P	$Na_2S_2O_3$
	Vial, VOC	HCl / $Na_2S_2O_3$
	Vial, VOC	
	Vial, 504	$Na_2S_2O_3$
	Vial, 505	$Na_2S_2O_3$
	Jar, Oil Wipe	
	Encore Sampler	

Field QC (Check one)

Field Duplicate	○
Field/Equip/Acid Blank	○
Trip Blank	○
MSD	○

Collected By _____

_____

Customer ID # _____

Referred By _____

Station ID # _____

Sample Location

County:

Parameters

Template Scioto Brush Creek TMDL Sediment

○ ------ % Solids, Sed only

Volatiles

○ ------ VOC, 524.2 } Drinking Water Analysis

○ ------ VOC, 624 } Waste Water Analysis

● ------ VOC, 8260 } SW846 Analysis

Semivolatiles / Herbicides

○ ------ Cyanazine, 525.2 } Drinking Water Analysis

○ ------ Herbicides, 525.2 }

○ ------ BNA, 625 } Waste Water Analysis

○ ------ BN (PAHs) only, 625 }

○ ------ Acids (Phenols) only, 625 }

● ------ BNA, 8270 } SW846 Analysis

○ ------ BN (PAHs) only, 8270 }

○ ------ Acids (Phenols) only, 8270 }

○ ------ SAS-305

○ ------ SAS-310

Pesticides / PCBs / Herbicides

○ ------ Pesticides. 505 } Drinking Water Analysis

○ ------ PCBs, 508 (508A) }

○ ------ Chlordane, 505 }

○ ------ Toxaphene, 505 }

○ ------ EDB/DBCP, 504 }

○ ------ Acid Herbicides, 515 }

○ ------ Pesticides, 608 } Waste Water Analysis

○ ------ PCBs, 608 }

○ ------ Chlordane, 608 }

○ ------ Toxaphene, 608 }

● ------ Pesticides, 8081 } SW846 Analysis

● ------ PCBs, 8082 }

● ------ Chlordane, 8081 }

● ------ Toxaphene, 8081 }

○ ------ PCBs, Oil Wipe }

Air Canister

○ ------ TO-14A } Air Analysis

○ ------ Canister Cleaning, Only }

Other

○ ------ _____

○ ------ _____

○ ------ _____

○ ------ _____

○ ------ _____

Field Comments

Lab Comments

Chlorine,mg/l P50060	Cond,umho/cm P94	DO,mg/l P299	Flow,cfs P61	Gage Ht, ft P65	pH, su P400	% Sat	Temp,oC P10	Corr.Cond, umho/cm P94

EPA 4708 (1/03) White-Original(DES) Green-DES Yellow-Field Records

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Ohio EPA — Division of Environmental Services

Inorganic Sample Submission Form

DW Certification #4105

DES Use Only

Sample # _____

MM DD YY

Date Received ___/___/___

Sample Information (INSTRUCTIONS ON BACK)

Client (Bill to) _____

Special Project Identity _____
(project identity **requires prior approval**)

Division(check one)

DAPC	○
DDAGW	○
DERR	○
DHWM	○
DSW	●
DSIWM	○
Other	_____

OEPA District(check one)

CO	○
CDO	○
NEDO	○
NWDO	○
SEDO	●
SWDO	○
Other	_____

Sample Type(check one)

Ambient	○
Complaint	○
Compliance	○
Litigation	○
NPS	○
Survey	●
Raw	○
Plant	○
Distribution	○
(DW only)	
Other	_____

Matrix(check one)

Air Filter	○
Drinking water	○
Ground water	○
Sediment	○
Soil	○
Surface water	●
Waste water	○
Reagent Water	○
Other	_____

Collection Date MM / DD / YY HH MM

Grab ○ ___/___/___ ___/___

(or)

Composite ○ Begin ___/___/___ ___/___

End ___/___/___ ___/___

Frequency & Duration of Composite Sample:

Container Information

Qty.	Type	Pres.
	Air Filter	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/P
	Cubitainer	N/P_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
	Sed	Frozen
	Sed	
	Bacteria	Sterile

Field QC (Check one)

Field Duplicate	○
Field/Equip/Acid Blank	○
MSD	○

Collected By _____

_____

Customer ID # _____

Referred By _____

Station ID # _____

Sample Location

County:

Parameters

Template Scioto Brush Creek Nutrient Sites Water Column

Demand

- ○ % Solids, *Sed only*
- ○ BOD-20 day
- ● BOD-5 day
- ○ BOD-Ultimate
- ○ CBOD-20 day
- ○ CBOD-5 day
- ○ CBOD-Ultimate
- ● Conductivity
- ○ Flashpoint
- ○ Oil&Grease
- ○ Particle Size, *Sed only*
- ○ pH
- ● Solids_Diss(filt)
- ● Solids_Suspd(nonfilt)
- ○ Solids_Total
- ○ Solids_Total Volatile
- ○ TOC

Nutrients

- ● Acidity,Total $CaCO_3$
- ● AlkalinityTotal $CaCO_3$
- ○ Bicarbonate
- ● Chloride
- ● COD
- ○ Chromium, Hexavalent (N/P_Filt)
- ○ Cyanide_Free (WAD)
- ○ Cyanide_Total
- ○ Fluoride
- ● Nitrite
- ● Ammonia/Nitrate+nitrite
- ○ Phenolics, Total w/man dist.
- ● Phosphorus, Dissolved (Filt)
- ● Sulfate
- ● TKN / Phosphorous, Total

Microbiology

- ○ E. coli
- ○ Fecal Coliform
- ○ Fecal Streptococcus
- ○ MMO-MUG
- ○ Total Coliform

Misc.

- ○ Turbidity
- ● Chlorophyll A, 445
- ○ _____
- ○ _____
- ○ _____

Metals

- ● **ICP 1**, *Water only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Hardness)
- ○ **ICP 2**, *Water only* (Ca,Mg,Hardness)
- ○ **ICP 3**, *Sediment only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Pb)
- ○ **ICP 4**, *SW846 only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,V,Cd,Co,Ti,Be,Hardness)
- ○ **ICP 5**, *SW846 SED only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Pb,Sr,Zn,V,Co,Ti,Be)
- ○ **ICP 6**, *Air Filters only* (Cr,Ni,Pb,Zn,Mn)
- ○ Vanadium
- ○ Titanium

Single ICP Metals Or SIMA - Please list only if **not** using Metals packages above

- ○ _____ ○ _____
- ○ _____ ○ _____
- ○ _____ ○ _____
- ○ _____ ○ _____

Metals- Low Level

- ● **SIMA 1**, *Water only* (As,Cd,Pb,Se), L L
- ○ **SIMA 2**, *Sed only* (As,Cd,Se), L L
- ○ **SIMA 3**, *Air only* (As,Cd), L L
- ○ Arsenic, *SW846 only*, L L
- ○ Cadmium, *SW846 only*, L L (Sed only)
- ○ Lead, *SW846 only*, L L
- ○ Selenium, *SW846 only*, L L

The following require **prior notification** to DES before submittal:

- ○ Antimony,L L
- ○ Beryllium, L L, *Water,Sed,&Air only*
- ○ Cobalt, L L, *Water,Sed,&Air only*
- ○ Copper, L L, *Water only*
- ○ Silver, L L
- ○ Thallium, L L
- ○ Tin, L L
- ● Mercury

Only 3 samples per site need Hg analysis

Bioassay ○

Field Comments

Lab Comments

Chlorine,mg/l	Cond,umho/cm	DO,mg/l	Flow,cfs	Gage Ht, ft	pH, su	% Sat	Temp,oC	Corr.Cond, umho/cm
P50060	P94	P299	P61	P65	P400		P10	P94

EPA 4709 (1/05) White-Original(DES) Green-DES Yellow-Field Records

Remove yellow copy of form for your records prior to submitting form to DES

All Rush Samples require prior approval

Ohio EPA — Division of Environmental Services

Inorganic Sample Submission Form

DW Certification #4105

DES Use Only

Sample # _____

MM DD YY

Date Received ___/___/___

Sample Information (INSTRUCTIONS ON BACK)

Client (Bill to) _____

Special Project Identity _____
(project identity **requires prior approval**)

Division(check one)

DAPC	○
DDAGW	○
DERR	○
DHWM	○
DSW	●
DSIWM	○
Other	_____

OEPA District(check one)

CO	○
CDO	○
NEDO	○
NWDO	○
SEDO	●
SWDO	○
Other	_____

Sample Type(check one)

Ambient	○
Complaint	○
Compliance	○
Litigation	○
NPS	○
Survey	●
Raw	○
Plant	○
Distribution	○
(DW only)	
Other	_____

Matrix(check one)

Air Filter	○
Drinking water	○
Ground water	○
Sediment	●
Soil	○
Surface water	○
Waste water	○
Reagent Water	○
Other	_____

Collection Date MM DD YY HH MM

Grab ○ ___/___/___ ___/___

(or)

Composite ○ Begin ___/___/___ ___/___

End ___/___/___ ___/___

Frequency & Duration of Composite Sample:

Container Information

Qty.	Type	Pres.
	Air Filter	
	Cubitainer	NaOH
	Cubitainer	HNO_3
	Cubitainer	HNO_3_Filt
	Cubitainer	H_2SO_4
	Cubitainer	H_2SO_4_Filt
	Cubitainer	N/P
	Cubitainer	N/P_Filt
	Jar	H_2SO_4_Phenol
	Jar	H_2SO_4_O&G
	Sed	Frozen
	Sed	
	Bacteria	Sterile

Field QC (Check one)

Field Duplicate	○
Field/Equip/Acid Blank	○
MSD	○

Collected By _____

_____

Customer ID # _____

Referred By _____

Station ID # _____

Sample Location

County:

Parameters

Template Scioto Brush Creek Nutrient Sites Sediment

Demand

- ● ------ % Solids, *Sed only*
- ○ ------ BOD-20 day
- ○ ------ BOD-5 day
- ○ ------ BOD-Ultimate
- ○ ------ CBOD-20 day
- ○ ------ CBOD-5 day
- ○ ------ CBOD-Ultimate
- ○ ------ Conductivity
- ○ ------ Flashpoint
- ○ ------ Oil&Grease
- ● ------ Particle Size, *Sed only*
- ○ ------ pH
- ○ ------ Solids_Diss(filt)
- ○ ------ Solids_Suspd(nonfilt)
- ○ ------ Solids_Total
- ○ ------ Solids_Total Volatile
- ● ------ TOC

Nutrients

- ○ ------ Acidity,Total $CaCO_3$
- ○ ------ AlkalinityTotal $CaCO_3$
- ○ ------ Bicarbonate
- ○ ------ Chloride
- ○ ------ COD
- ○ ------ Chromium, Hexavalent (N/P_Filt)
- ○ ------ Cyanide_Free (WAD)
- ○ ------ Cyanide_Total
- ○ ------ Fluoride
- ○ ------ Nitrite
- ● ------ Ammonia/Nitrate+nitrite
- ○ ------ Phenolics, Total w/man dist.
- ○ ------ Phosphorus, Dissolved (Filt)
- ○ ------ Sulfate
- ● ------ TKN / Phosphorous, Total

Microbiology

- ○ ------ E. coli
- ○ ------ Fecal Coliform
- ○ ------ Fecal Streptococcus
- ○ ------ MMO-MUG
- ○ ------ Total Coliform

Misc.

- ○ ------ Turbidity
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____

Metals

- ○ ------ **ICP 1**, *Water only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Hardness)
- ○ ------ **ICP 2**, *Water only* (Ca,Mg,Hardness)
- ○ ------ **ICP 3**, *Sediment only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,Pb)
- ○ ------ **ICP 4**, *SW846 only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Sr,Zn,V,Cd,Co,Ti,Be,Hardness)
- ○ ------ **ICP 5**, *SW846 SED only* (Al,Ba,Ca,Cr,Cu,Fe,Mg,Mn,Na,Ni,K,Pb,Sr,Zn,V,Co,Ti,Be)
- ○ ------ **ICP 6**, *Air Filters only* (Cr,Ni,Pb,Zn,Mn)
- ○ ------ Vanadium
- ○ ------ Titanium

Single ICP Metals Or SIMA - Please list only if **not** using Metals packages above

- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____
- ○ ------ _____

Metals- Low Level

- ○ ------ **SIMA 1**, *Water only* (As,Cd,Pb,Se), L L
- ○ ------ **SIMA 2**, *Sed only* (As,Cd,Se), L L
- ○ ------ **SIMA 3**, *Air only* (As,Cd), L L
- ○ ------ Arsenic, *SW846 only*, L L
- ○ ------ Cadmium, *SW846 only*, L L (Sed only)
- ○ ------ Lead, *SW846 only*, L L
- ○ ------ Selenium, *SW846 only*, L L

The following require **prior notification** to DES before submittal:

- ○ ------ Antimony,L L
- ○ ------ Beryllium, L L, *Water,Sed,&Air only*
- ○ ------ Cobalt, L L, *Water,Sed,&Air only*
- ○ ------ Copper, L L, *Water only*
- ○ ------ Silver, L L
- ○ ------ Thallium, L L
- ○ ------ Tin, L L
- ○ ------ Mercury

Bioassay ○

Field Comments

Lab Comments

Chlorine,mg/l	Cond,umho/cm	DO,mg/l	Flow,cfs	Gage Ht, ft	pH, su	% Sat	Temp,oC	Corr.Cond, umho/cm
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All Rush Samples require prior approval

c.c. TMDL Study Team Members
J. DeShon
D. Mishne
M. Silagy
M. Smith