## Stormwater Basins GIS Project Presentation

By Ian Schwarzenberg

### Background

- Identifies basins best suited for retrofits
- Never built basins show developers who owe them to city
- Data sources:
  - 2009 master list for basins
  - R and Google Maps for coordinates
  - OWS geodatabase for sewer system and drainage district shapefiles
  - Google Maps for aerial imagery

#### • Steps:

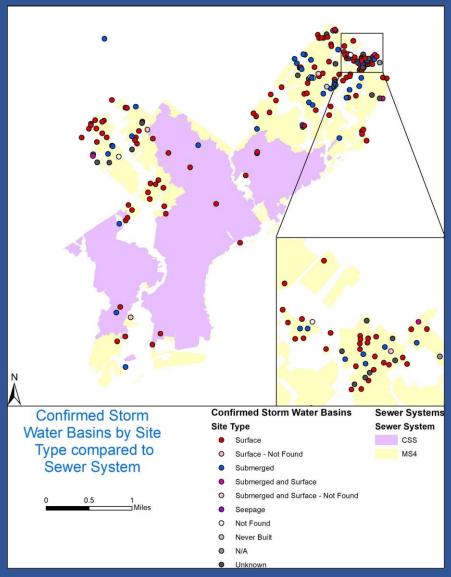
- Divided basins by existence
- Geocoded them with R
- Created basin shapefiles
- Joined shapefiles in GIS
- Organized final data in Excel

### Agenda

- Confirmed Basins by Sewer System
- CSS Basins
  - Surface basins
  - Basins non-existing
  - Other basins
- MS4 Basins
  - Surface basins
  - Basins non-existing
  - Other basins
- Appendix
  - All Basins by Drainage District

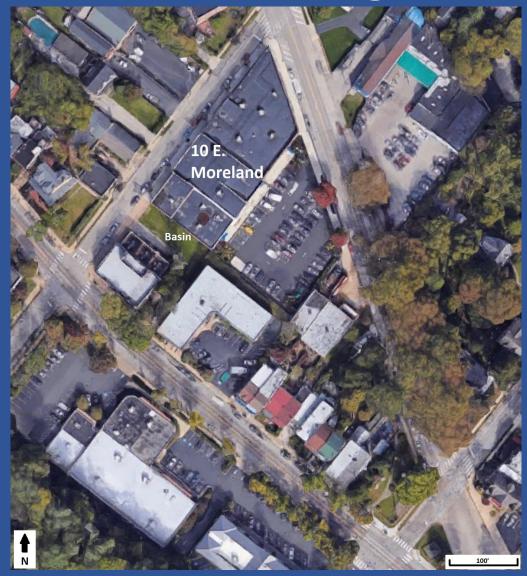
## Confirmed Basins

### Confirmed Basins by Sewer System



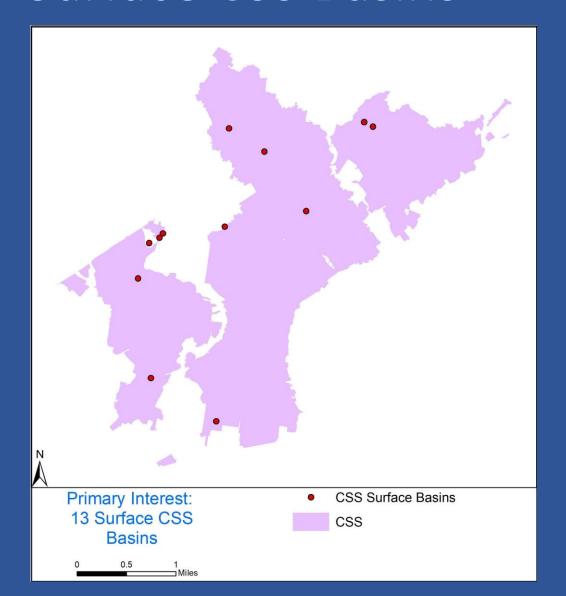
- 197 confirmed basins
- Clear majority of:
  - All basins
    - CSS basins
    - MS4 basins
    - Basins in neither system

## Confirmed Basin Aerial Image



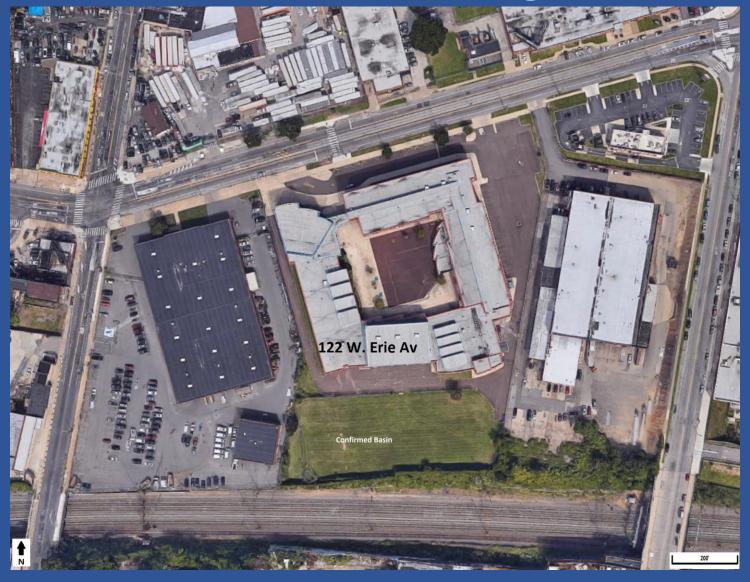
## CSS Basins

### Surface CSS Basins

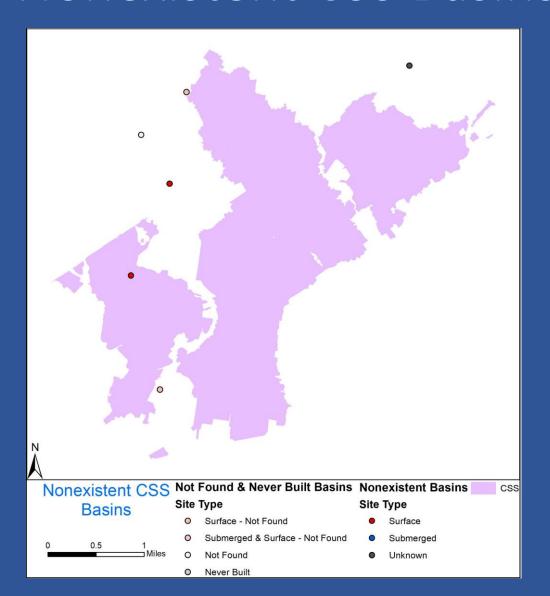


- Easiest to retrofit
- 13 surface CSS basins, slight majority of all CSS basins
- Very small minority of all basins and strictly surface ones

### Surface CSS Basins Aerial Image

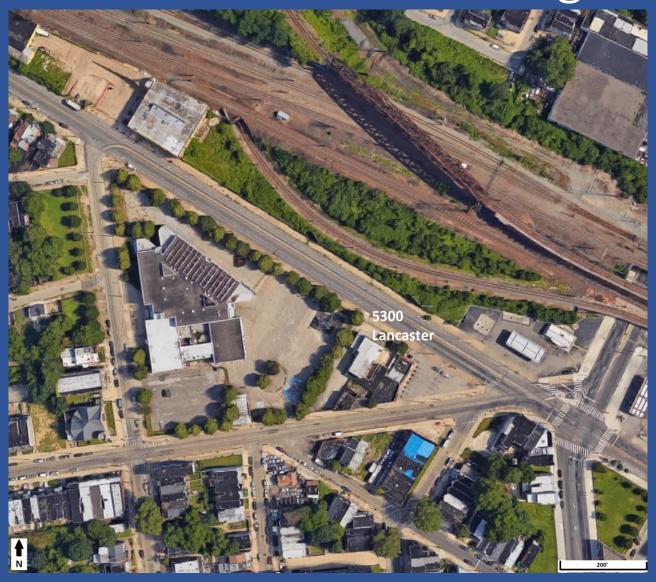


### Nonexistent CSS Basins

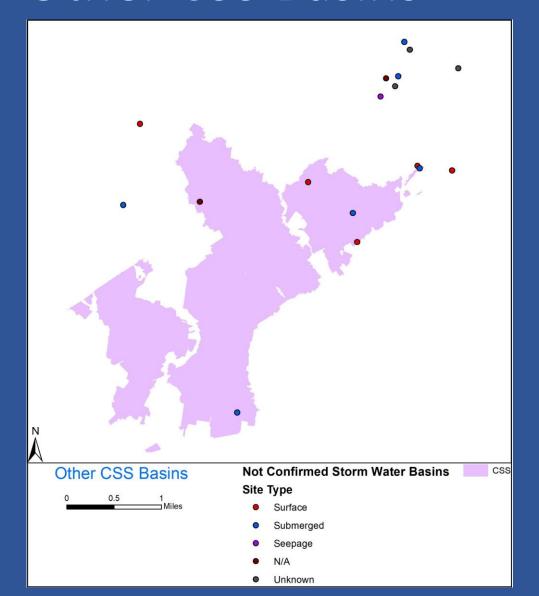


- Shows basins owed to city
- One nonexistent surface CSS basin
- No CSS basins not found or never built

### Nonexistent CSS Basin Aerial Image

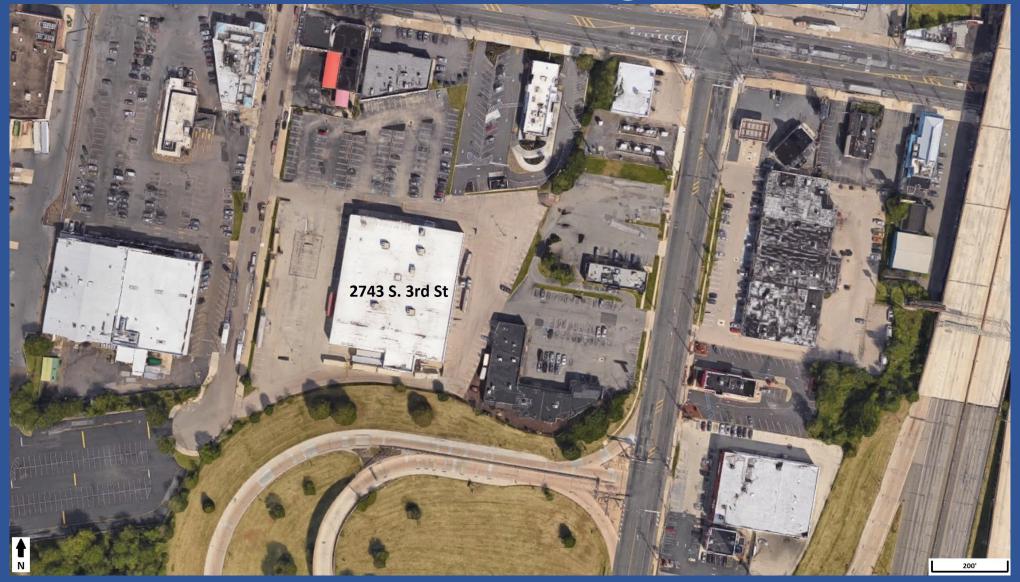


### Other CSS Basins



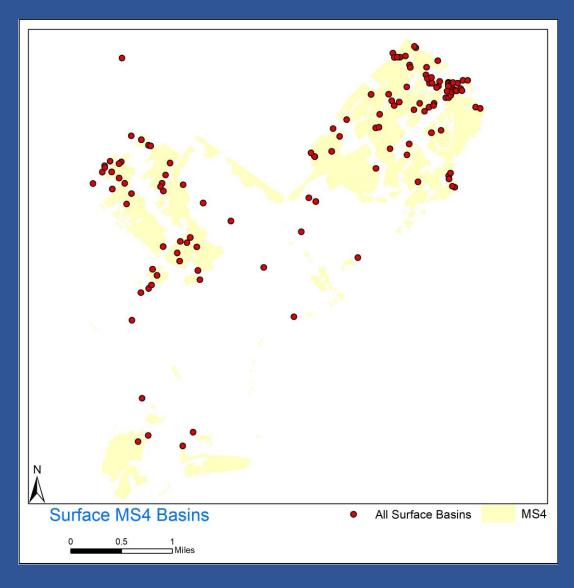
- 5 not confirmed CSS basins
  - Quarter of all not confirmed basins

Other CSS Basins Aerial Image



## MS4 Basins

### Surface MS4 Basins

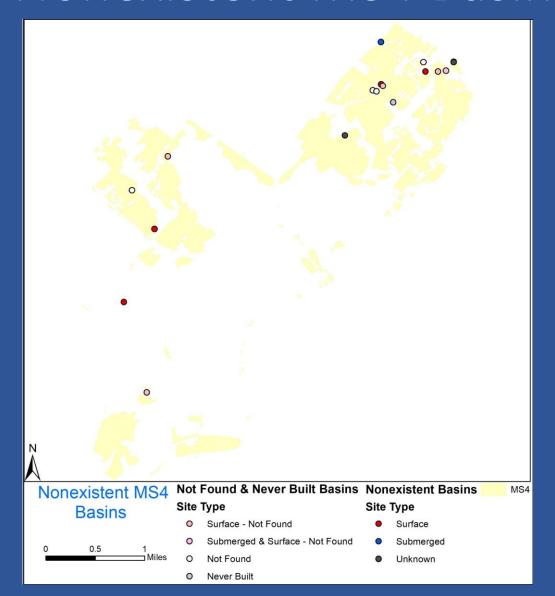


- 105 surface basins in MS4
  - Clear majority of all surface basins
  - Slight majority of all MS4 basins
  - Almost a majority of all basins

### Surface MS4 Basins Aerial Image

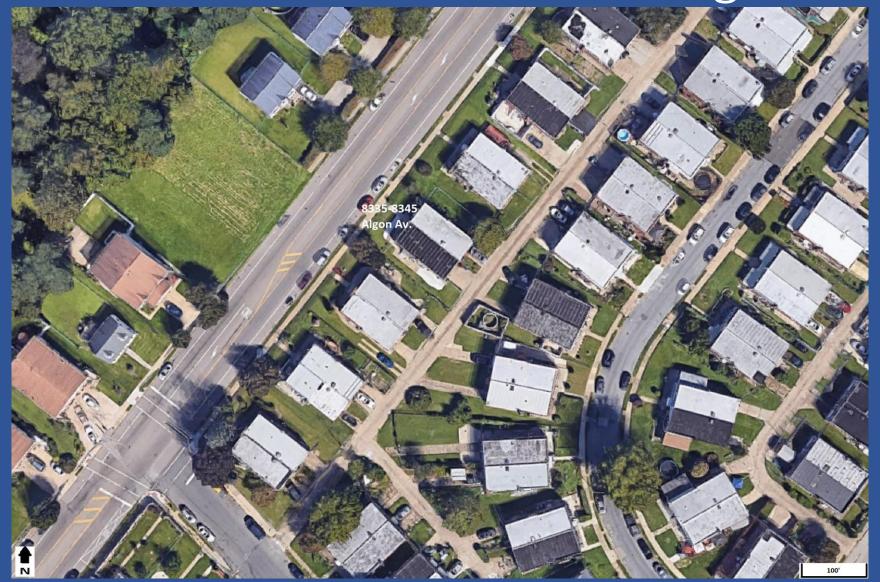


#### Nonexistent MS4 Basins

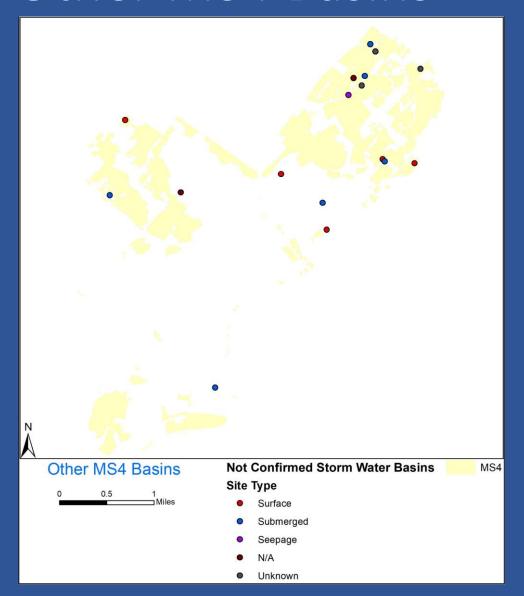


- Also shows basins owed to city
- 6 nonexistent MS4 basins
  - Clear majority of all nonexistent basins
- 7 not found or never built MS4 basins
  - Clear majority of all not found and never built basins

Nonexistent MS4 Basins Aerial Image

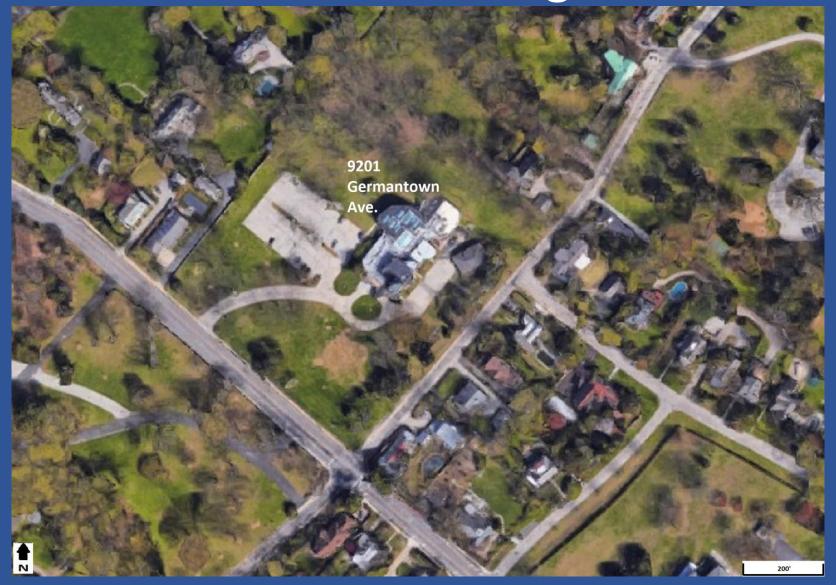


### Other MS4 Basins



- 10 not confirmed MS4 basins
  - Half of all not confirmed basins

## Other MS4 Basins Aerial Image



# Appendix

### All Basins by Drainage District

Reference Number Plat Random Number 2009 Unique ID Address Site Type Existence Drain.  140-027-PD 112 172 PP-112-0172-A lane Philadelphia pa Submerged Confirmed NE 10089 sandmeyer lane Philadelphia pa Submerged Confirmed NE 102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE 10975 Dutton road Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE 13678 Philmont ave	
140-027-PD 112 172 PP-112-0172-A lane Philadelphia pa Submerged Confirmed NE 10089 sandmeyer lane Philadelphia pa Submerged Confirmed NE 102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE 102-062-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE 161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE NE	age District
140-027-PD 112 172 PP-112-0172-A lane Philadelphia pa Submerged Confirmed NE 10089 sandmeyer lane Philadelphia pa Submerged Confirmed NE 102-062-PQB 110 158 PQ-110-0158-A Pliladelphia pa Submerged Confirmed NE 102-062-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE 161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE NE	
140-027-PD 112 172 PP-112-0172-A lane Philadelphia pa Submerged Confirmed NE  10089 sandmeyer lane Philadelphia pa Submerged Confirmed NE  102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  1010-062-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  1010-062-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  1010-062-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  1010-062-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  1100-062-PQB 114 157 PQ-114-0157-A Philadelphia pa Submerged Confirmed NE  1100-062-PQB 114 157 PQ-114-0157-A Philadelphia pa Submerged Confirmed NE  1100-062-PQB 114 157 PQ-114-0157-A Philadelphia pa Submerged Confirmed NE	
102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  10975 Dutton road Philadelphia pa Submerged Confirmed NE  13000 trina dr Philadelphia pa Submerged Confirmed NE  13000 trina dr Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  13675 Philmont ave Philadelphia pa Submerged Confirmed NE	
102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  13000 trina dr Philadelphia pa Submerged Confirmed NE  13000 trina dr Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  13675 Philmont ave Philadelphia pa Submerged Confirmed NE	
102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  13000 trina dr Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  13675 Philmont ave Philadelphia pa Submerged Confirmed NE	
102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE  161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  13000 trina dr Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  13675 Philmont ave Philadelphia pa Submerged Confirmed NE	
102-062-PQB 110 158 PQ-110-0158-A Philadelphia pa Submerged Confirmed NE 10975 Dutton road Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE	
161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE  13000 trina dr Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  13675 Philmont ave Philadelphia pa Submerged Confirmed NE	
161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
161-086-PQB 110 138 PQ-110-0138-A Philadelphia pa Submerged Confirmed NE 13000 trina dr Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 1340 Stewarts way Philadelphia pa Submerged Confirmed NE 120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
0 0 Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
0 0 Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  1340 Stewarts way Philadelphia pa Submerged Confirmed NE  120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
097-060-PQB 114 157 PQ-114-0157-A Philadelphia pa Submerged Confirmed NE 13675 Philmont ave Philadelphia pa Submerged Confirmed NE	
097-060-PQB 114 157 PQ-114-0157-A Philadelphia pa Submerged Confirmed NE  13675 Philmont ave Philadelphia pa Submerged Confirmed NE  120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
13675 Philmont ave 120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
120 135 PQ-120-0135-A Philadelphia pa Submerged Confirmed NE	
13678 Philmont ave	
148-081-PQ 0 0 Philadelphia pa Submerged Confirmed NE	
14420 Townsend rd.	
0 0 Philadelphia pa Submerged Confirmed NE	
14425 bustleton	
avenue Philadelphia	
040-023-PQ 120 119 PQ-120-0119-A pa Submerged Confirmed NE	
2015 welsh rd.	
0 0 Philadelphia pa Submerged Confirmed NE	
2072-80 red lion rd.	
109 47 PQ-109-0047-A Philadelphia pa Submerged Confirmed NE	
2101 horning road	
023-010-PQB 118 88 PQ-118-0088-A Philadelphia pa Submerged Confirmed NE	
2190 horning road	
041-024-PQB 118 110 PQ-118-0110-A Philadelphia pa Submerged Confirmed NE	

Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
							J
				225-73 Geiger road			
113-023-PD	112	167	PP-112-0167-A	Philadelphia pa	Submerged	Confirmed	NE
				2701 commerce way			
095-057-PQ	118	54	PQ-118-0054-A	Philadelphia pa	Submerged	Confirmed	NE
				1 1	Ü		
				2751 red lion rd.			
063-041-PQB	109	14	PQ-109-0014-A	Philadelphia pa	Submerged	Confirmed	NE
				2760 red lion road			
	32	163	PQ-032-0163-A	Philadelphia pa	Submerged	Confirmed	NE
				2760Â red lion road			
192-108-PQB	0	0		Philadelphia pa	Submerged	Confirmed	NE
1,2 100 1 Q2	· ·				Suomorgou	Commined	1,2
				2800 black lake			
051-030-PQ-A	118	80	PQ-118-0080-A	place Philadelphia pa	Submerged	Confirmed	NE
				2800 Southampton			
039-022-PQB	114	29	PQ-114-0029-A	Philadelphia pa	Submerged	Confirmed	NE
				2001 11 1			
079-051-PQB	110	126	PQ-110-0126-A	2801 red lion road Philadelphia pa	Submerged	Confirmed	NE
077-031-1 QB	110	120	1Q-110-0120-A	т ппассіріна ра	Submerged	Commined	NE
				2900 black lake			
179-096-PQ	114	68	PQ-114-0068-A	place Philadelphia pa	Submerged	Confirmed	NE
				3050 red lion road			
037-019-PQB	0	0		Philadelphia pa	Submerged	Confirmed	NE
	0	0		840 cottman ave Philadelphia pa	Submerged	Confirmed	NE
	0	0		8400 Roosevelt	Saomerged	Commind	1,12
				boulevard			
173-034-P	100	124	PP-100-0124-A	Philadelphia pa	Submerged	Confirmed	NE
				9250 e Roosevelt			
119-025-PW	105	120	PP-105-0120-A	Blvd. Philadelphia pa	Submerged	Confirmed	NE
					, in the second		
	100	170	DD 100 0179 A	9815 e Roosevelt	Cuhmanaad	Confirmed	NE
	109	1/8	PP-109-0178-A	Blvd. Philadelphia pa	Submerged	Confirmed	NE

			<b>U</b>				
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
043-009-PP	109	118	PP-109-0118-A	9945-49 Norwalk rd. Philadelphia pa	Submerged	Confirmed	NE
043-009-FF	109	110	FF-109-0116-A	rimaucipina pa	Submerged	Commiled	NE
				9954 gardenia lane			
186-036-PD	112	136	DR-112-0136-A	Philadelphia pa	Submerged	Confirmed	NE
				1 crown way			
149-082-PQB	114	58	PQ-114-0058-A	Philadelphia pa	Surface	Confirmed	NE
				10102 Jamison ave			
065-042-PQB	113	39	PQ-113-0039-A	Philadelphia pa	Surface	Confirmed	NE
				10125 verree road			
111-021-PP	113	94	PP-113-0094-A	Philadelphia pa	Surface	Confirmed	NE
				10300 Drummond			
	0	0		rd. Philadelphia pa	Surface	Confirmed	NE
106-063-PQB	110	83	PQ-110-0083-A	10975 academy road Philadelphia pa	Surface	Confirmed	NE
152-085-PQB	109	111	PQ-109-0111-A	11311 Roosevelt Blvd. Philadelphia pa	Surface	Confirmed	NE
132 003 T QB	107	111	10 10 0111 11	11400 northeast	Burrace	Commined	TAL
				avenue Philadelphia	~ .		
033-017-PQB	113	49	PQ-113-0049-A	pa	Surface	Confirmed	NE
				11501 Roosevelt			
	0	0		Blvd. Philadelphia pa	Surface	Confirmed	NE
				11600 norcom road			
080-052-PQB	114	92	PQ-114-0092-A	Philadelphia pa	Surface	Confirmed	NE
				12260 Townsend			
056-035-PQB	114	176	PQ-114-0176-A	road Philadelphia pa	Surface	Confirmed	NE
				12273 Townsend			
096-059-PQB	114	168	PQ-114-0168-A	road Philadelphia pa	Surface	Confirmed	NE
				12300 mcnulty road			
038-021-PQ	118	25	PQ-118-0025-A	Philadelphia pa	Surface	Confirmed	NE

				<b>,</b>				
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District	
038-020-PO	118	24	PQ-118-0024-A	12300 mcnulty road Philadelphia pa	Surface	Confirmed	NE	
050 020 1 Q	110		1 2 110 002 111		Burrace	Commune	1,2	
TOWNS-CLVT	119	187	PQ-119-0187-A	12301 McNulty Rd Philadelphia pa	Surface	Confirmed	NE	
TOWNS-CEVT	11)	107	1Q-115-0107-A	т ппацегрппа ра	Surface	Commica	NL	
021 015 PO	114	10	DO 114 0010 A	12401 mcnulty road	G. C	C C 1	NIC	
031-015-PQ	114	18	PQ-114-0018-A	Philadelphia pa	Surface	Confirmed	NE	
400 0 c c <b>P</b> O		445	DO 111 0115 1	12601 Townsend				
109-066-PQ	114	146	PQ-114-0146-A	road Philadelphia pa	Surface	Confirmed	NE	
0.50.045.70			DO 444 00 57 4	12700 Townsend		G		
069-046-PQ	114	67	PQ-114-0067-A	road Philadelphia pa	Surface	Confirmed	NE	
4.50.000.70		100	DO 444 0420 4	12800 Townsend				
169-090-PQ	114	130	PQ-114-0130-A	road Philadelphia pa	Surface	Confirmed	NE	
				12802 galdi ln		~		
067-043-PQ	115	103	PQ-115-0103-A	Philadelphia pa	Surface	Confirmed	NE	
				12901 Townsend				
053-075-PQ	115	50	PQ-115-0050-A	road Philadelphia pa	Surface	Confirmed	NE	
				12901 Townsend				
053-032-PQ	114	53	PQ-114-0053-A	road Philadelphia pa	Surface	Confirmed	NE	
				13451 damar drive				
	118	186	PQ-118-0186-A	Philadelphia pa	Surface	Confirmed	NE	
				14002 mcnulty rd.				
	119	156	PQ-119-0156-A	Philadelphia pa	Surface	Confirmed	NE	
				14002 mcnulty road				
140002	119	155	PQ-119-0155-A	Philadelphia pa	Surface	Confirmed	NE	
				14005 menulty rd.				
122-069-PQ	119	96	PQ-119-0096-A	Philadelphia pa	Surface	Confirmed	NE	
				14300 Townsend rd.				
150-083-PQ	119	71	PQ-119-0071-A	Philadelphia pa	Surface	Confirmed	NE	

	, , , , , , , , , , , , , , , , , , ,						
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
	0	0		15000 poquessing creek ln Philadelphia pa	Surface	Confirmed	NE
	0	0		1630 welsh rd. Philadelphia pa	Surface	Confirmed	NE
	0	0		1701 grant avenue Philadelphia pa	Surface	Confirmed	NE
	109	84	PP-109-0084-A	1901 Reilly road Philadelphia pa	Surface	Confirmed	NE
117-068-PQB	118	55	PQ-118-0055-A	2000 kubach road Philadelphia pa	Surface	Confirmed	NE
181-098-PQB	118	145	PQ-118-0145-A	2100 horning road Philadelphia pa	Surface	Confirmed	NE
094-056-PQB	118	10	PQ-118-0010-A	2100 kubach road Philadelphia pa	Surface	Confirmed	NE
024-011-PQB	118	125	PQ-118-0125-A	2180 horning road Philadelphia pa	Surface	Confirmed	NE
046-027-PQB	118	144	PQ-118-0144-A	2191 horning road Philadelphia pa	Surface	Confirmed	NE
045-026-PQ	118	165	PQ-118-0165-A	2704 black lake pl Philadelphia pa	Surface	Confirmed	NE
085-054-PQ	118	31	PQ-118-0031-A	2705 black lake pl Philadelphia pa	Surface	Confirmed	NE
054-033-PQ	118	174	PQ-118-0174-A	2706 black lake pl Philadelphia pa	Surface	Confirmed	NE
089-055-PQ	118	65	PQ-118-0065-A	2707 black lake pl Philadelphia pa	Surface	Confirmed	NE
	118	15	PQ-118-0015-A	2709 commerce way Philadelphia pa	Surface	Confirmed	NE

Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
180-097-PQ	118	161	PQ-118-0161-A	2722 commerce way Philadelphia pa	Surface	Confirmed	NE
030-014-PQB	0	0		2800 norcom rd. Philadelphia pa	Surface	Confirmed	NE
	0	0		2811 charter road Philadelphia pa	Surface	Confirmed	NE
136-074-PQ	114	143	PQ-114-0143-A	2825-45 Southampton road Philadelphia pa	Surface	Confirmed	NE
	0	0		2900 comly rd. Philadelphia pa	Surface	Confirmed	NE
015-003-PW	105	85	PP-105-0085-A	2901 grant avenue Philadelphia pa	Surface	Confirmed	NE
	119	20	PQ-119-0020-A	3000 meeting house road Philadelphia pa	Surface	Confirmed	NE
019-006-PQ (1)	120	36	PQ-120-0036-A	301 Byberry road Philadelphia pa	Surface	Confirmed	NE
	0	0		301 Byberry Road, Philadelphia PA	Surface	Confirmed	NE
020-084-PQ	102	89	PQ-102-0089-A	4701 grant ave Philadelphia pa	Surface	Confirmed	NE
151-030-P	104	87	PP-104-0087-A	501 ridgerun la Philadelphia pa	Surface	Confirmed	NE
014-001-T	98	76	TF-098-0076-A	7500 central ave Philadelphia pa	Surface	Confirmed	NE
	0	0		7600 central avenue Philadelphia pa 7701r burholme	Surface	Confirmed	NE
014-008-T	98	75	TF-098-0075-A	avenue Philadelphia pa	Surface	Confirmed	NE

· · · · · · · · · · · · · · · · · · ·							
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
165-088-PQB	117	69	PQ-117-0069-A	780 Byberry road Philadelphia pa	Surface	Confirmed	NE
174-035-P	99	56	PP-099-0056-A	8001 verree road Philadelphia pa	Surface	Confirmed	NE
155-031-P	100	70	PP-100-0070-A	8401 Roosevelt Blvd. Philadelphia pa	Surface	Confirmed	NE
	104	57	PP-104-0057-A	8540 veree rd. Philadelphia pa	Surface	Confirmed	NE
	0	0		9200 blue grass road Philadelphia pa	Surface	Confirmed	NE
	0	0		9200 blue grass road Philadelphia pa	Surface	Confirmed	NE
	0	0		9600 Milnor st Philadelphia pa	Surface	Confirmed	NE
028-012-PQ	102	66	PQ-102-0066-A	9621 Eden hall la Philadelphia pa	Surface	Confirmed	NE
011-001-PP	109	59	PP-109-0059-A	9741 krewstown road Philadelphia pa	Surface	Confirmed	NE
086-013-PD	112	113	PP-112-0113-A	9947 global rd. Philadelphia pa	Surface	Confirmed	NE
053-076-PQ	115	51	PQ-115-0051-A	12901 Townsend road Philadelphia pa	Surface & Submerged	Confirmed	NE
032-016-PQ	119	107	PQ-119-0107-A	14400 mcnulty rd. Philadelphia pa	Surface & Submerged	Confirmed	NE
021-008-PQ	111	77	PQ-111-0077-A	4338 Byberry rd. Philadelphia pa	Surface & Submerged	Confirmed	NE
047-028-PQ	118	131	PQ-118-0131-A	13000 Townsend road Philadelphia pa	Surface & Submerged not found	Confirmed	NE

				and the second of the second o				
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District	
116-067-POB	111	26	PO-111-0026-A	11082 knights road Philadelphia pa	Unknown	Confirmed	NE	
110-007-1 QB	111	20	TQ-111-0020-A	т ппацегрппа ра	Clikilowii	Commined	NE	
000 017 PP	100	115	PD 100 0115 A	1225 Norwalk rd.	** 1	G 5 1	N.E.	
098-017-PP	109	115	PP-109-0115-A	Philadelphia pa	Unknown	Confirmed	NE	
				12270 Townsend rd.				
	114	1	PQ-114-0001-A	Philadelphia pa	Unknown	Confirmed	NE	
				12285 menulty rd.				
018-005-PQB	114	129	PQ-114-0129-A	Philadelphia pa	Unknown	Confirmed	NE	
				12301 mcnulty road				
072-048-PQ	0	0		Philadelphia pa	Unknown	Confirmed	NE	
				12600 Townsend				
050-029-PQ	114	8	PQ-114-0008-A	road Philadelphia pa	Unknown	Confirmed	NE	
				12901 Townsend				
053-077-PQ	114	52	PQ-114-0052-A	road Philadelphia pa	Unknown	Confirmed	NE	
				13500 Philmont				
	120	35	PQ-120-0035-A	avenue Philadelphia	Unknown	Confirmed	NE	
	120	33	PQ-120-0055-A	pa 14001 Townsend	Ulikilowii	Commined	NE	
				road Philadelphia				
052-031-PQ	119	61	PQ-119-0061-A	pa	Unknown	Confirmed	NE	
				2040 Bennett road				
168-089-PQB	113	123	PQ-113-0123-A	Philadelphia pa	Unknown	Confirmed	NE	
				268 Geiger road				
115-024-PD	112	139	PP-112-0139-A	Philadelphia pa	Unknown	Confirmed	NE	
				2701 red lion road				
	109	140	PQ-109-0140-A	Philadelphia pa	Unknown	Confirmed	NE	
				2701 Southampton				
	118	64	PQ-118-0064-A	rd. Philadelphia pa	Unknown	Confirmed	NE	
				2770 red lion road				
	32	162	PQ-032-0162-A	Philadelphia pa	Unknown	Confirmed	NE	

	,				· · · · · · · · · · · · · · · · · · ·				
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District		
036-018-PQ	114	62	PQ-114-0062-A	2905 Southampton road Philadelphia pa	Unknown	Confirmed	NE		
	0	0		800 Gina dr Philadelphia pa	Unknown	Confirmed	NE		
	100	23	PP-100-0023-A	8351 e Roosevelt Blvd. Philadelphia pa	Unknown	Confirmed	NE		
177-094-PQB	113	27	PQ-113-0027-A	9998-9964 Northeast Ave Philadelphia PA	Surface	Nonexistent	NE		
176-093-PQ	119	97	PQ-119-0097-A	14400 Townsend Rd Philadelphia PA	Unknown	Nonexistent	NE		
141-028-P	99	43	PP-099-0043-A	8335-8345 Algon Ave Philadelphia PA	Unknown	Nonexistent	NE		
013-002-PP	113	41	PP-113-0041-A	10113-15 Verree Rd Philadelphia PA	N/A	Not Confirmed	NE		
147-029-PP	109	106	PP-109-0106-A	68 Marple Drive Philadelphia PA	Seepage	Not Confirmed	NE		
027-005-PP	113	164	PP-113-0164-A	10204 Northeast Ave Philadelphia PA	Submerged	Not Confirmed	NE		
146-80-PQ	120	152	PQ-120-0152-A	13040 Depue Ave Philadelphia PA	Submerged	Not Confirmed	NE		
107-020-P	92	60	PP-092-0060-A	3324 Willits Road Philadelphia PA	Surface	Not Confirmed	NE		
	101	72	DR-101-0072-A	5100 Fitler Street Philadelphia PA	Surface	Not Confirmed	NE		
145-079-PQ	119	33	PQ-119-0033-A	13200 Townsend Road Philadelphia PA	Unknown	Not Confirmed	NE		
	117	184	PQ-117-0184-A	752 Byberry Rd Philadelphia PA	Unknown	Not Confirmed	NE		

	<u> </u>						
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
				6225 oxford ave			
042-003-D	80	122	DR-080-0122-A	Philadelphia pa	Submerged	Confirmed	NE
					Ŭ		
				6302 old York rd.			
	0	0		Philadelphia pa	Submerged	Confirmed	NE
				9099 Frankford			
	0	0		avenue Philadelphia	Cl	Confirmed	NE
	U	U		pa	Submerged	Confirmed	NE
				122 w Erie ave			
	0	0		Philadelphia pa	Surface	Confirmed	NE
004.004.77		00	TT 0 50 0000 4	1701 lindley ave	a . c		
084-004-T	69	99	TF-069-0099-A	Philadelphia pa	Surface	Confirmed	NE
				332 e walnut ln			
	0	0		Philadelphia pa	Surface	Confirmed	NE
				6301-93 oxford ave			
166-007-D	80	101	DR-080-0101-A	Philadelphia pa	Surface	Confirmed	NE
				5818 Germantown			
	68	40	PQ-068-0040-A	Avenue Philadelphia PA	N/A	Not Confirmed	NE
	08	40	FQ-006-0040-A	ГА	IV/A	Not Commined	NE
				6302 Frankford Ave,			
	0	0		Philadelphia PA	Submerged	Not Confirmed	NE
				9090 Frankford			
				Avenue Philadelphia			
	92	128	PP-092-0128-A	PA	Submerged	Not Confirmed	NE
				699-681 Robbins St			
	80	185	DR-080-0185-A	Philadelphia PA	Surface	Not Confirmed	NE
		100		4799-4581			
				Stevenson St			
020-007-PQ	0	0		Philadelphia pa	Surface	Confirmed	NE
				0145 H ' D I			
		0	DO A	8145 Hornig Rd	Cumfaga	Confirmed	NE
	0	0	PQA	Philadelphia pa	Surface	Commined	NE
				9000 Jennifer terrace			
	0	0		Philadelphia pa	Surface	Confirmed	NE

	, , , , , , , , , , , , , , , , , , ,						
Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
				3138 Mechanicsville			
	0	0		road Philadelphia pa	N/A	Confirmed	NE
				1209-1217 Norwalk			
098-033-PP	109	116	PP-109-0116-A	road Philadelphia pa	not found	Confirmed	NE
				2198 hornig road			
172-091-PQB	118	17	PQ-118-0017-A	Philadelphia pa	not found	Confirmed	NE
				9400 ashton rd.			
	105	48	PP-105-0048-A	Philadelphia pa	Surface	Confirmed	NE
00 00 00 4 PP	440	•	DD 110 0000 1	920 red lion rd.		G	
026-004-PP	113	28	PP-113-0028-A	Philadelphia pa	Surface not found	Confirmed	NE
048-007-PP	109	19	PP-109-0019-A	1200 Serota place Philadelphia pa	Unknown	Confirmed	NE
040-007-11	109	19	11-109-0019-A		Chrilown	Commined	INE
074-049-PQ	111	102	PQ-111-0102-A	4292-4298 Whiting Rd Philadelphia pa	Unknown	Confirmed	NE
	117	177	PQ-117-0177-A	102R Byberry Rd Philadelphia PA	Submerged	Nonexistent	NE
				5801 Tacony Street			
	64	30	DR-064-0030-A	Philadelphia PA	Surface	Not Confirmed	NE
				2000 Red Lion Road			
105-019-PP	113	9	PP-113-0009-A	Philadelphia PA	Unknown	Not Confirmed	NE
				9892 bustleton ave			
	0	0		Philadelphia pa	not found	Confirmed	NE
042.006.00			DD 100 0115 1	9945-49 Norwalk rd.			
043-006-PP	109	117	PP-109-0117-A	Philadelphia pa	Seepage	Confirmed	NE
	113	151	PP-113-0151-A	10049 sandmeyer la Philadelphia pa	Submerged	Confirmed	NE
	113	131	11 113-0131-74	9901 e Roosevelt	Buomerged	Commined	1112
125-070-PQB	110	114	PQ-110-0114-A	boulevard Philadelphia pa	never built	Confirmed	NE
120 010 I QD	110	117	. 2 110 011 71	- maceipina pa	tor built	Commind	L

Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District	
				12872 knights road		~ ~ .		
067-044-PQ	115	104	PQ-115-0104-A	Philadelphia pa	Surface	Confirmed	NE	
				15501 bustleton ave				
	0	0		Philadelphia pa	Surface	Confirmed	NE	
				2004 71 4				
134-006-D	43	142	PP-043-0142-A	2801 Richmond st Philadelphia pa	Surface	Confirmed	NE	
134-000-D	73	142	11-043-0142-A	т ппацегрина ра	Burrace	Commined	NL	
				290 Byberry Road,				
	0	0		Philadelphia PA	Surface	Confirmed	NE	
				420 Laura lane				
075-050-PQ	120	100	PQ-120-0100-A	Philadelphia pa	Surface	Confirmed	NE	
				4641 D 1:				
055-007-T	71	78	TF-071-0078-A	4641 Roosevelt Blvd. Philadelphia pa	Surface	Confirmed	NE	
033-007-1	/1	76	11-0/1-00/6-A	Biva. i illiadeipilia pa	Surface	Commined	NE	
				7714 Moreland circle				
	76	4	WS-076-0004-A	Philadelphia pa	Submerged	Confirmed	SE	
				10 e Moreland ave				
	118	179	PQ-118-0179-A	Philadelphia pa	Surface	Confirmed	SE	
				2000				
	52	109	SR-052-0109-A	2900 queen lane Philadelphia pa	Surface	Confirmed	SE	
	32	109	5R 032 0107-R	т ппасстріпа ра	Barrace	Commined	<u> </u>	
				540 telner street				
	76	3	WS-076-0003-A	Philadelphia pa	Surface	Confirmed	SE	
				6950 Germantown				
	77	82	WS-077-0082-A	ave Philadelphia pa	Surface	Confirmed	SE	
				7611 st martins lane				
	76	7	WS-076-0007-A	Philadelphia pa	Surface	Confirmed	SE	
	70				Sarrace	Commined		
	<b>a</b> -	100	WG 076 0400 4	7614 mccallum st	G. C	G C 1	GE.	
	76	180	WS-076-0180-A	Philadelphia pa	Surface	Confirmed	SE	
				8835 Germantown				
	75	166	WS-075-0166-A	Ave Philadelphia pa	Surface	Confirmed	SE	

Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
	0	0		8855 Germantown avenue Philadelphia pa 7406 Germantown	Surface	Confirmed	SE
	77	112	WS-077-0112-A	avenue Philadelphia pa	SurfaceNot Found	Confirmed	SE
156-029-W	60	12	WS-060-0012-A	2967 w school house lane Philadelphia pa 7700 Germantown	Unknown	Confirmed	SE
	86	45	WS-086-0045-A	avenue Philadelphia pa	Unknown	Confirmed	SE
	95	181	WS-095-0181-A	9201 Germantown Ave Philadelphia PA	Surface	Not Confirmed	SE
	16	169	DR-016-0169-A	2743 S 3RD ST Philadelphia PA	Submerged	Not Confirmed	SE
	0	0		8600 prospect ave Philadelphia pa	Submerged	Confirmed	SE
	76	5	WS-076-0005-A	620 st Georges road Philadelphia pa	Surface	Confirmed	SE
059-006-WC	67	86	WS-067-0086-A	800 St Georges Rd Philadelphia pa	Unknown	Confirmed	SE
	0	0		2100 n 49th st Philadelphia pa	Submerged	Confirmed	SW
	75	141	SR-075-0141-A	475 spring ln Philadelphia pa	Submerged	Confirmed	SW
	0	0		5800 woodland ave Philadelphia pa	Surface	Confirmed	SW
	33	147	SR-033-0147-A	5300 Lancaster Ave, Philadelphia PA	Surface	Nonexistent	SW
082-010-W	67	42	WS-067-0042-A	561 fairthorme avenue Philadelphia pa	not found	Confirmed	SW

Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
	66	90	SR-066-0090-A	201-27 shawmont avenue Philadelphia pa	Submerged	Confirmed	SW
	0	0		700 valley green ct Philadelphia pa	Submerged	Confirmed	SW
078-009-W	84	34	WS-084-0034-A	120-122 Caledonia street Philadelphia pa	Surface	Confirmed	SW
	0	0		3000 w school house In Philadelphia pa	Surface	Confirmed	SW
	0	0		3200 s 70th st Philadelphia pa	Surface	Confirmed	SW
035-008-S	60	133	WS-060-0133-A	3243 w school house In Philadelphia pa	Surface	Confirmed	SW
035-016-W	52	132	SR-052-0132-A	3464 w school house In Philadelphia pa	Surface	Confirmed	SW
	0	0		3610 Midvale ave Philadelphia pa	Surface	Confirmed	SW
164-021-S	46	148	SR-046-0148-A	3955 Conshohocken avenue Philadelphia pa	Surface	Confirmed	SW
170-023-S	75	154	SR-075-0154-A	513 Lantern Ln Philadelphia pa	Surface	Confirmed	SW
	0	0		518 port royal ave Philadelphia pa	Surface	Confirmed	SW
170-022-S	75	153	SR-075-0153-A	525 Greenhill ln Philadelphia pa	Surface	Confirmed	SW
	67	170	WS-067-0170-A	619 wigard ave Philadelphia pa	Surface	Confirmed	SW
	75	160	WS-075-0160-A	683 summit avenue Philadelphia pa	Surface	Confirmed	SW

Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
		0		7219 ridge avenue	g . c	G 6 1	CATA .
	0	0		Philadelphia pa	Surface	Confirmed	SW
				814 Caledonia road			
049-005-W	75	46	WS-075-0046-A	Philadelphia pa	Surface	Confirmed	SW
				9038 arydale crescent Philadelphia			
	84	22	SR-084-0022-A	pa	Surface	Confirmed	SW
				200	C		
	0	0		300 autumn river run Philadelphia pa	Surface & Submerged	Confirmed	SW
093-012-S	59	2	SR-059-0002-A	290 parker avenue Philadelphia pa	Unknown	Confirmed	SW
093-012-3	59	2	3K-U39-UUUZ-A	ғинасырна ра	Ulikilowii	Commined	S ₩
				257-273 Osborne St			
	52	121	SR-052-0121-A	Philadelphia PA	Surface	Nonexistent	SW
				100 Parker Ave			
	59	126	SR-059-0126-A	Philadelphia PA	Submerged	Not Confirmed	SW
				2231 s 62 st			
077-010-S	19	105	SR-019-0105-A	Philadelphia pa	Submerged	Confirmed	SW
					ű		
135-017-S	39	95	SR-039-0095-A	2100 n 49th street Philadelphia pa	Surface	Confirmed	SW
133-017-3	3)	75	5K-037-0073-A	2101 Belmont	Burrace	Commined	ווט
				avenue Philadelphia			
	0	0		pa	Surface	Confirmed	SW
				3349-3301 Penrose Ferry Rd			
142-019-S	5	137	SR-005-0137-A	Philadelphia pa	Surface	Confirmed	SW
	0	0	SA	4300 Monument Rd Philadelphia pa	Surface	Confirmed	SW
	U	U	JA	i imadeipina pa	Buildet	Commined	J II
	20	4.50	an 000 0150 1	4300 monument road	g . c	a a .	a
	39	150	SR-039-0150-A	Philadelphia pa	Surface	Confirmed	SW
				8200 enterprise ave			
SWTP-01-D	5	182	DR-005-0182-A	Philadelphia pa	Submerged	Confirmed	SW

Reference Number	Plat	Random Number	2009 Unique ID	Address	Site Type	Existence	Drainage District
001-002-W	75	38	WS-075-0038-A	130 spring lane Philadelphia pa	Surface	Confirmed	SW
001-002-W	13	36	WS-075-0036-A	т ппацегрппа ра	Surface	Commined	5 **
	0	0		3700 s 26th st Philadelphia pa	Surface	Confirmed	SW
	14	6	SR-014-0006-A	6700 Essington ave Philadelphia pa	Surface	Confirmed	SW
				7860 Eva street			
034-007-S	66	79	SR-066-0079-A	Philadelphia pa	Surface	Confirmed	SW
001-001-W	75	37	WS-075-0037-A	8700 ridge avenue Philadelphia pa	Surface	Confirmed	SW
	94	44	WS-094-0044-A	9701 Germantown avenue Philadelphia	Surface	Confirmed	SW
	94	44	WS-094-0044-A	pa	Surface	Commined	SW
076-009-S	14	63	SR-014-0063-A	3107 s 61st Philadelphia pa	Surface Not found	Confirmed	SW
				7200 Umbria st			
	58	173	SR-058-0173-A	Philadelphia pa	Unknown	Confirmed	SW
				2800 meetinghouse rd philadelphia pa	Surface	Confirmed	N/A