pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PAI130094**
Facility Type	**MS4**	APS ID	**1111910**
Permit Type	**Individual**	Authorization ID	**1481250**

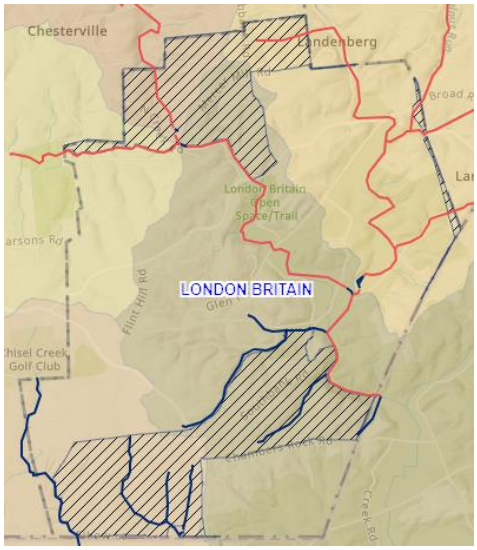
NPDES PERMIT FACT SHEET
MS4s

Applicant and Facility Information

Applicant Name	**London Britain Township Chester County**	Facility Name	**London Britain Township MS4 UA**
Applicant Address	PO Box 215	Facility Address	81 Good Hope Road
	Kemblesville, PA 19347-0215		Landenberg, PA 19350
Applicant Contact	Carolyn Matalon	Facility Contact	Carolyn Matalon
Applicant Phone	(610) 255-0388	Facility Phone	(610) 255-0388
Client ID	114194	Site ID	617083
SIC Code	9199	Municipality	London Britain Township
SIC Description	Public Admin. - Genral Government, Nec	County	Chester
Date Application Received	April 12, 2024		
Date Application Accepted			
Purpose of Application	Permit Renewal		

Internal Review and Recommendations

In the interest of issuing this permit in a timely manner, DEP has made the decision to issue this permit with a compliance schedule.



Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
x		Carrie Konnovitch Carrie M Konnovitch, P.E. / Environmental Engineer Trainee	August 27, 2024
x		Elizabeth Mahoney Elizabeth A Mahoney / Environmental Program Manager	10/18/2024

Internal Review and Recommendations

LONDON BRITAIN TWP	PAG130062	Upper Christina River	Christina River Basin Nutrients, Christina River Basin Sediment	TMDL Plan-Nutrients, Organic Enrichment/Low D.O., Siltation, Suspended Solids
		East Branch White Clay Creek, Middle Branch White Clay Creek, Upper White Clay Creek, West Branch White Clay Creek	Broad Run, Christina River Basin Nutrients, Christina River Basin Sediment, East Branch White Clay Creek, Middle Branch White Clay Creek, Walnut Run, West Branch White Clay Creek, White Clay Creek	Appendix B-Pathogens, TMDL Plan-Nutrients, Organic Enrichment/Low D.O., Siltation, Suspended Solids

	Sediment (tons/year)				Total Nitrogen (kg/day)				Total Phosphorus (kg/day)			
White Clay Creek Watershed	Baseline MS4 Load[1d]	MS4 Load Allocation[1d]	MS4 Load Reduction[1e]	% Reduction[1d]	Baseline MS4 Load[2l]	MS4 Allocation[2c]	MS4 Load Reduction[2m]	% Reduction[2m]	Baseline MS4 Load[2l]	MS4 Allocation[2t]	MS4 Load Reduction[2m]	% Reduction[2m]
AVONDALE BORO	463.65	140.02	323.63	69.80%	9.16	4.58	4.58	50.00%	0.322	0.135	0.187	58.07%
FRANKLIN TWP	4220.43	2,305.87	1914.56	45.36%	122.01	61.01	61	50.00%	15.219	5.557	9.662	63.49%
KENNETT TWP					2.17	2.17	0.00	0.00%	0.055	0.055	0	0.00%
LONDON BRITAIN TWP	2634.66	1,620.44	1014.22	38.50%	96.47	49.9	46.57	48.27%	15.732	7.333	8.399	53.39%

Table 3 - 1995 Land Use Baseline Load Calculations.

SOURCE	AREA	TOTAL SEDIMENT LOADING RATE	TOTAL SEDIMENT	TOTAL NITROGEN LOADING RATE	TOTAL NITROGEN	TOTAL PHOSPHORUS LOADING RATE	TOTAL PHOSPHORUS
UNITS	ACRES	LBS/ACRE	LBS	LBS/ACRE	LBS	LBS/ACRE	LBS
Hay/Pasture	0.0	182	2	1	0	0	0
Cropland	163.7	1,499	245,495	6	976	2	257
Forest	77.4	111	8,620	0	12	0	3
Water/Wetland	0.2	98	17	0	0	0	0
Disturbed	0.0	141	0	0	0	0	0
Turfgrass	0.0	0	0	0	0	0	0
Open Land	0.1	231	16	0	0	0	0
Bare Rock	0.0	0	0	0	0	0	0
Sandy Areas	0.0	0	0	0	0	0	0
Unpaved Roads	0.0	0	0	0	0	0	0
Ld Mixed	0.0	601	0	1	0	0	0
Md Mixed	0.0	1,451	0	6	0	1	0
Hd Mixed	0.0	2,056	0	7	0	1	0
Ld Residential	439.2	616	270,649	2	720	0	110
Md Residential	0.0	1,464	0	7	0	1	0
Hd Residential	0.0	2,068	0	7	0	1	0
TOTAL	**681**		**524,799**		**1,708**		**370**

Table 4 - 2012 Land Use Load Calculations.

SOURCE	AREA	TOTAL SEDIMENT LOADING RATE	TOTAL SEDIMENT	TOTAL NITROGEN LOADING RATE	TOTAL NITROGEN	TOTAL PHOSPHORUS LOADING RATE	TOTAL PHOSPHORUS
UNITS	ACRES	LBS/ACRE	LBS	LBS/ACRE	LBS	LBS/ACRE	LBS
Hay/Pasture	0.0	183	0	1	0	0	0
Cropland	95.2	1,492	142,020	6	556	2	143
Forest	77.4	163	12,633	0	13	0	4
Water/Wetland	1.8	149	269	0	1	0	0
Disturbed	19.5	226	4,391	0	5	0	2
Turfgrass	0.0	186	0	0	0	1	0
Open Land	0.0	303	0	1	0	0	0
Bare Rock	0.0	0	0	0	0	0	0
Sandy Areas	0.0	0	0	0	0	0	0
Unpaved Roads	0.0	0	0	0	0	0	0
Ld Mixed	0.0	595	0	1	0	0	0
Md Mixed	0.0	1,354	0	7	0	1	0
Hd Mixed	0.0	1,906	0	8	0	1	0
Ld Residential	487.1	600	292,479	2	765	0	117
Md Residential	0.0	1,348	0	6	0	1	0
Hd Residential	0.0	1,906	0	7	0	1	0
TOTAL	**681**		**451,793**		**1,340**		**266**

Internal Review and Recommendations

Table 5 – Revised Load Reduction Calculation.

Required Reduction	Revised (1995) TMDL Baseline Load	Reduction Based on the Revised (1995) Baseline Load	2012 Load	Reduction Due to Land Use Changes
	a		b	(a-b)
Percent	lbs./yr.	lbs./yrs.	lbs./yr.	lbs./yr.
38.50%	524,799	202,048	451,793	73,007

Table 6 – Existing BMP Type and Location Coordinates

Ss-ID	BMP ID	Lat	Long	Owner	UPI #	Type	Installation Date	NPDES Permit No.	Functions as designed	Frequency of O&M
Ss-30a	B-11	39.730018	-75.808096	Flint Hill Crossing HOA	73-5-34.2	Infiltration Basin	2002	PAR10-G430	Yes	Annual
Ss-30b	B-8	39.728532	-75.809342	Flint Hill Crossing HOA	73-5-34.2	Wet Pond	2002	PAR10-G430	Yes	Annual
Ss-31	B-12	39.731111	-75.802221	Flint Hill Crossing HOA	73-5-34.1	Detention Basin	2002	PAR10-G430	Yes	Annual
Ss-32	B-15	39.728369	-75.803496	Flint Hill Crossing HOA	73-5-34.1	Detention Basin	2002	PAR10-G430	Yes	Annual
Ss-33	B-16	39.726292	-75.803318	Daniel Doherty	73-5-45-22	Detention Basin	2007		Yes	Annual
Rd-42a	B-17	39.729659	-75.811331	London Britain Twp.	73-5-34.5	Bio-retention Basin	2011		Yes	Annual
Rd-43a	B-18	39.731338	75.807976	London Britain Twp.	73-5-34.6	Tree Planting	2011		Yes	Annual

Table 7 – Existing BMP Load Reduction Calculations.

	Location	BMP Type	Sewershed	Sediment Load	BMP Effectiveness	Load Redcution
B-11	Flint Hill Crossing	Infiltration Basin	Ss-30a	5,852	95%	5,559
B-8	Flint Hill Crossing	Wet Pond	Ss-30b	8,778	60%	5,267
B-12	Flint Hill Crossing	Detention Basin	Ss-31	6,613	10%	661
B-15	Flint Hill Crossing	Detention Basin	Ss-32	6,086	10%	609
					Total Redcution	**12,095**

Table 8 – Revised Required Load Reduction Calculation

Required Reduction	Revised (1995) TMDL Baseline Load	Reduction Based on the Revised (1995) Baseline Load	2012 Load	Reduction Due to Land Use Changes	Existing Load	Reduction Due to Existing BMPs	Remaining TMDL Load Reduction Required
	a		b	(a-b)	c	(b-c)	
Percent	lbs./yr.	lbs./yrs.	lbs./yr.	lbs./yr.	lbs./yr.	lbs./yr.	
38.50%	524,799	202,048	451,793	73,007	439,698	12,095	116,946

Step 12 Summary of Calculations –

A. Revised 1995 Baseline Load = 524,799 lbs./yr. sediment
B. TMDL Load Reduction Required = 202,048 lbs./yr.
C. Existing Load = 439,698 lbs./yr.
D. Remaining TMDL Load Reduction Required = 116,946 lbs./yr.
E. TMDL Reduction Required in this 5-year period = 116,946 lbs./yr. Or, if that cannot be achieved, then 10% of the existing load = 43,970 lbs./yr. sediment

Internal Review and Recommendations

Table 9 – Waste Load Allocation Comparison.

Waste Load Allocation Analysis					
	Baseline MS4 Load	Baseline MS4 Load	MS4 Load Allocation	MS4 Load Reduction	Reduction
	(lbs./yr.)	(tons/yr.)	(tons/yr.)	(tons/yr.)	%
PADEP/EPA TMDL	5,269,320.00	2,634.66	1,620.44	1,014.22	38.50
London Britain TMDL	524,799.00	262.40	161.38	101.02	38.50

F. Analysis of TMDL Objectives.

1. Long-Term Reduction – According to the section above (D.) which presents details regarding existing load calculations (baseline load), land conversion reduction (1995 – 2012 land use) and existing BMP credit, the long-term reduction requirement equals **116,946 lbs./yr.**

2. Short-Term Reduction – London Britain Township may decide to reduce existing load by 10% (sediment) using the presumptive approach to assume that sediment reduction will

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satisfy TP reduction requirements. The required reduction, with credit for existing BMPs, for this initial five (5) year permit cycle is ten percent (10%) of the Existing TMDL load reduction requirement (439,698) or **43,970 lbs./yr**.

Table 10 – Proposed BMP Estimated Load Reduction.

	Location	BMP Type	Sewershed	Sediment Load	BMP Effectiveness	Load Reduction
SR	Flint Hill Crossing	Stream Restoration	Multiple	600 feet	115 lbs./ft./yr.	69,000
B-12	Flint Hill Crossing	Infiltration Basin*	Ss-31	6,613	85%	5,621
B-15	Flint Hill Crossing	Infiltration Basin*	Ss-32	6,086	85%	5,173
B-20	London Britain Twp.	Veg. Swale**	Rd-43a & b	1,125	50%	562
*Retrofit ** New Construction					**Total**	**80,356**

Implementation Schedule:

It is anticipated that the Township would install the stream restoration during the first year of the permit cycle. The vegetated swale basins will be expected to be installed during years 2-3 of the permit cycle, and the basin retrofits are anticipated to be designed and constructed during years 3-5 of the permit cycle. The basin retrofit effectiveness values are reduced from 95% to account for 10% reduction taken during existing load calculations.