Chapter

D

LOADING ANALYSIS INFORMATION
PORTAGE RIVER WATERSHED

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D1 Nitrate-Nitrite Loading Estimates

The following tables outline the nitrate-nitrite (NOX) nutrient modeling existing conditions that are modeled with the LSPC model. The methods used in developing the water quality model are described in Chapter 4 of the TMDL report.

Table D-1. NO_3+NO_2 existing conditions for 04100010 01 01- Rader Creek

Existing	Conc. (mg/l)	Load (kg/day)	Proportion of Total Watershed Load
Load (nonpoint source)	-	173.57	87%
Wasteload (total point sources)	-	25.06	25%
2PG00117	19.43	0.37	0%
2PB00002	16.81	24.69	12%
CSOs- 2PB00002- McComb	0.00	0.00	0%
Total watershed conditions	7.20	198.54	

Table D-2. NO_3+NO_2 existing conditions for 04100010 01 02- Needles Creek

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	191.73	97%
Wasteload (total point source)	-	2.65	1%
2PA00083	19.43	2.65	1%
Total watershed conditions	7.78	197.02	

Table D-3. NO_3+NO_2 existing conditions for 04100010 01 03- Rocky Ford

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	391.28	63%
Wasteload (total point sources)	-	92.06	15%
MS4 - Findlay	-	5.42	1%
2PR00095	19.43	0.74	0%
2PA00000	19.43	2.38	0%
2PB00033	27.58	83.52	13%
CSOs- 2PB00033-N. Balt.	0.00	0.00	0%
Total watershed conditions	9.75	621.61	

Table D-4. NO_3+NO_2 existing conditions for 04100010 01 04- Town of Rudolph-Middle Branch Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	160.50	100%
Wasteload (point source)	-	0.00	0%
Total watershed conditions	6.40	160.50	

Table D-5. NO_3+NO_2 existing conditions for 04100010 02 01- Bull Creek

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	175.20	99%
Wasteload (total point source)	-	2.21	1%
2PT00038	19.43	2.21	1%
Total watershed conditions	7.22	177.40	

Table D-6. NO_3+NO_2 existing conditions for 04100010 02 02- East Branch Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	166.14	36%
Wasteload (total point sources)	-	304.38	65%
MS4 – Fostoria	-	12.25	3%
2PD00031	9.35	292.13	63%
CSOs- 2PD00031- Fostoria	0.00	0.00	0%
Total watershed conditions	7.72	466.71	

Table D-7. NO_3+NO_2 existing conditions for 04100010 02 03- Town of Bloomdale-South Branch Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	344.42	98%
Wasteload (total point source)	-	5.88	2%
2PA00074	19.43	5.88	2%
Total watershed conditions	8.26	350.32	

Table D-8. NO_3+NO_2 existing conditions for 04100010 02 04- Rhodes Ditch-South Branch Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	294.49	99%
Wasteload (total point source)	-	3.83	1%
2PA00071	19.43	3.83	1%
Total watershed conditions	14.44	298.20	

Table D-9. NO_3+NO_2 existing conditions for 04100010 02 05- Cessna Ditch-Middle Branch Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	144.31	100%
Wasteload (point source)	-	0.00	0%
Total watershed conditions	7.12	144.31	

Table D-10. NO_3+NO_2 existing conditions for 04100010 03 01- North Branch Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	352.04	33%
Wasteload (total point sources)	-	728.97	
MS4 – Bowling Green	-	35.33	
2PD00009	18.32	693.49	
2PR00245	19.43	0.15	
CSO- 2PD00009- B.Green	0.00	0.00	
Total watershed conditions	11.69	1078.72	

Table D-11. NO_3+NO_2 existing conditions for 04100010 03 02- Town of Pemberville-Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	68.27	
Wasteload (total point source)	-	9.56	
2PA00077	19.43	9.56	
Total watershed conditions	5.88	77.78	

Table D-12. NO_3+NO_2 existing conditions for 04100010 04 01- Sugar Creek

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	334.03	
Wasteload (total point sources)	-	41.06	
2PR00190	19.43	0.29	
2PA00005*	35.30	33.41	
2PA00094	19.43	6.99	
2PR00202	19.43	0.37	
CSOs- 2PA00005- Gibsbrg.	0.00	0.00	
Total watershed conditions	8.00	374.47	

* Only half of the load from the Gibsonburg WWTP (2AP00005) discharges to Wolf Creek; therefore this load only represents half of the plants discharge.

Table D-13. NO_3+NO_2 existing conditions for 04100010 04 02- LaCarpe Creek Outlet #4-Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	92.24	
Wasteload (total point sources)	-	35.64	
2PB00012	19.43	14.71	
2PB00051	19.43	13.24	
2PY00059	19.43	0.66	
2PB00052	6.19	7.03	
CSOs- 2PB00052- Woodville	0.00	0.00	
Total watershed conditions	6.41	126.89	

Table D-14. NO_3+NO_2 existing conditions for 04100010 05 01- Little Portage River

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	217.99	
Wasteload (point source)	-	0.00	
Total watershed conditions	8.22	217.99	

Table D-15. NO_3+NO_2 existing conditions for 04100010 05 02 (Partial)- Wolf Creek

Existing	Conc. (mg/l)	Load (kg/day)	
Load (nonpoint source)	-	86.93	
Wasteload (total point sources)	-	33.41	
2PA00005*	35.30	33.41	
CSOs- 2PA00005- Gibsbrg.	0.00	0.00	
Total watershed conditions	10.45	120.34	

* Only half of the load from the Gibsonburg WWTP (2AP00005) discharges to Wolf Creek; therefore this load only represents half of the plants discharge.

D2 *E. coli* Load Duration Curves

The following figures are the load duration curves that are used to create the Portage River pathogen existing loads and TMDLs.

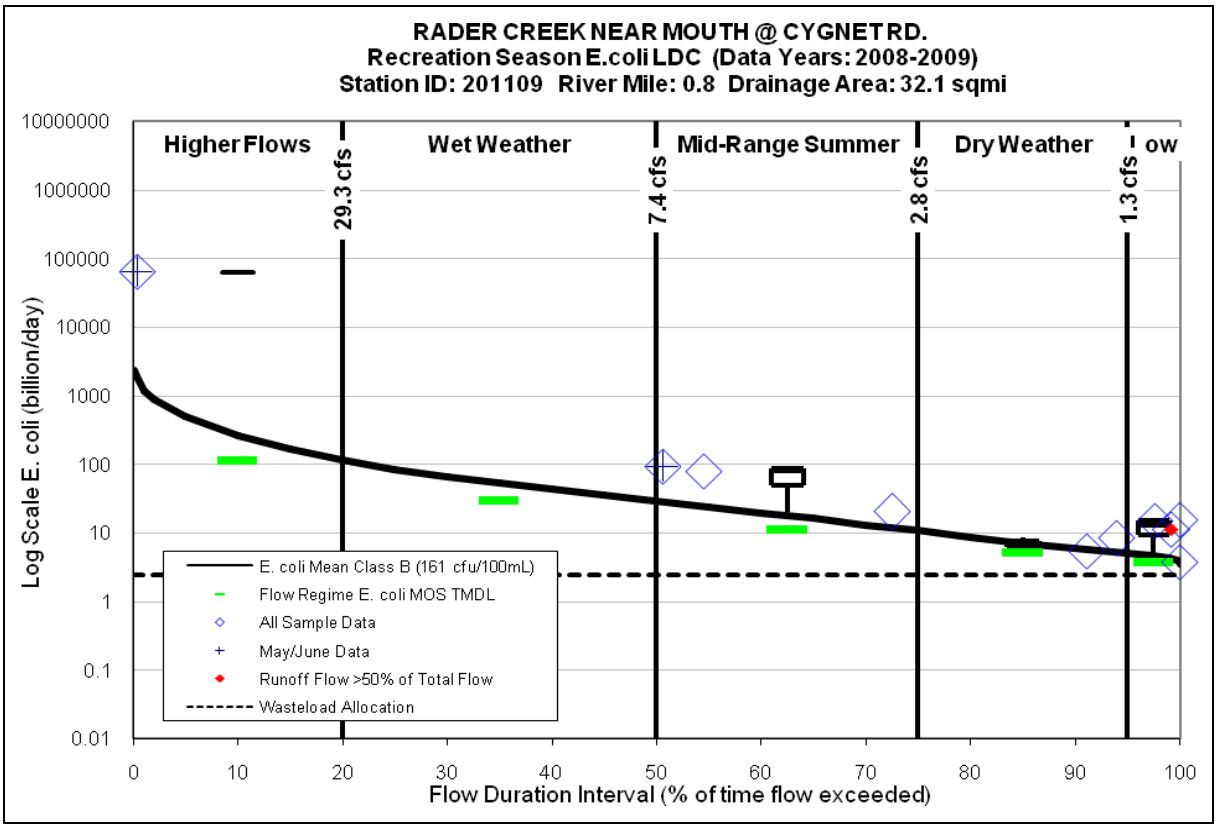

Figure D-1. Pathogen LDC for HUC 04100010 01 01 Rader Creek

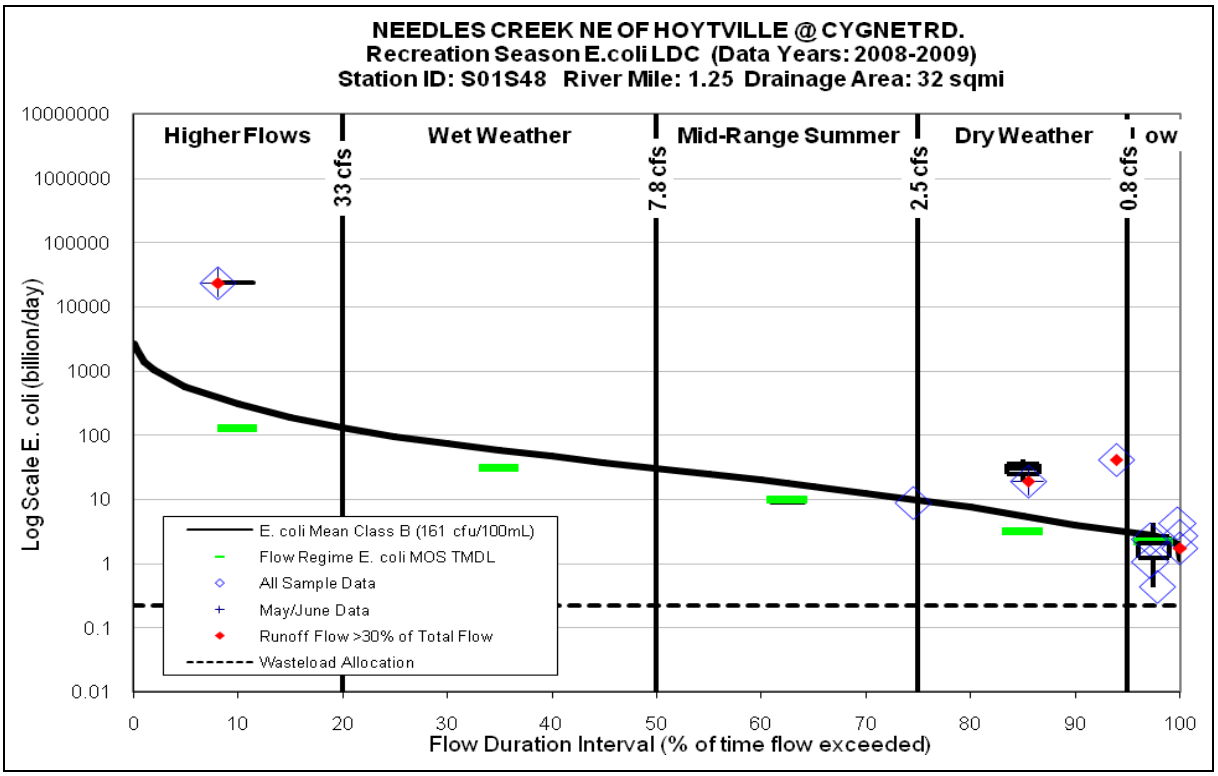

Figure D-2. Pathogen LDC for 04100010 01 02 Needles Creek

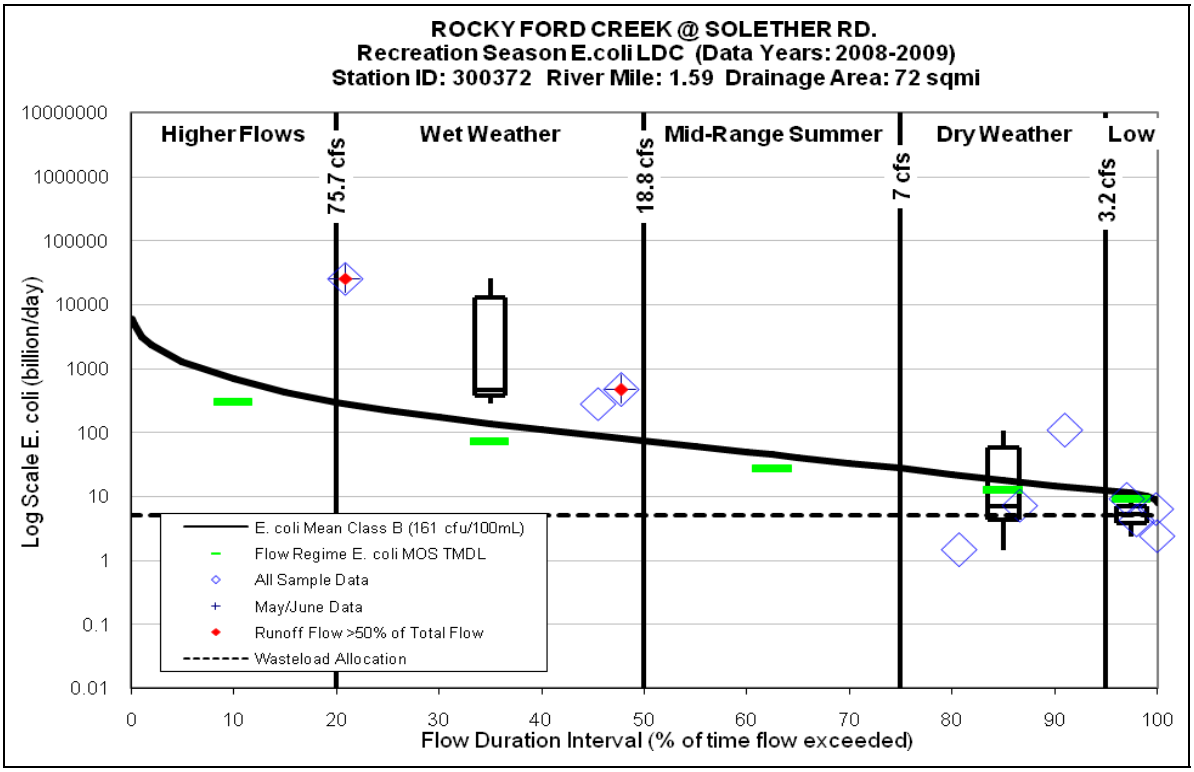

Figure D-3. Pathogen LDC for HUC 04100010 01 03 Rocky Ford

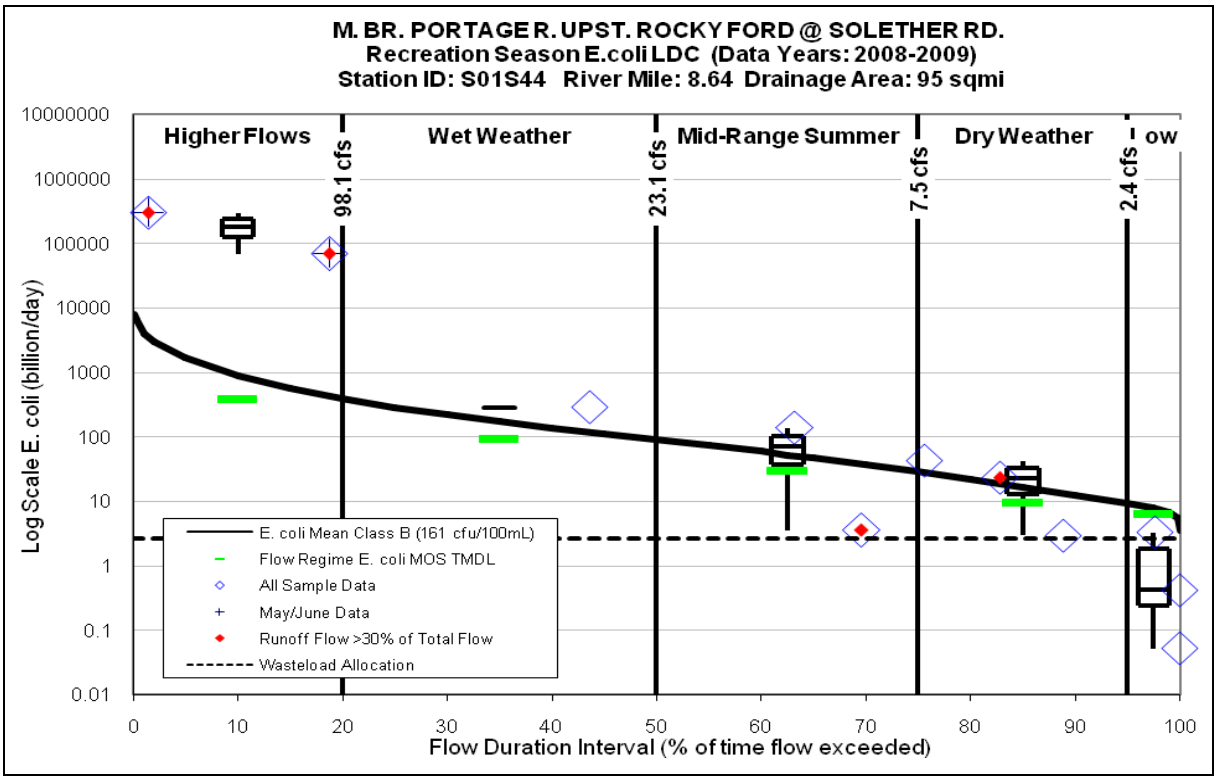

Figure D-4. Pathogen LDC for 04100010 01 04 Town of Rudolph-Middle Branch Portage River

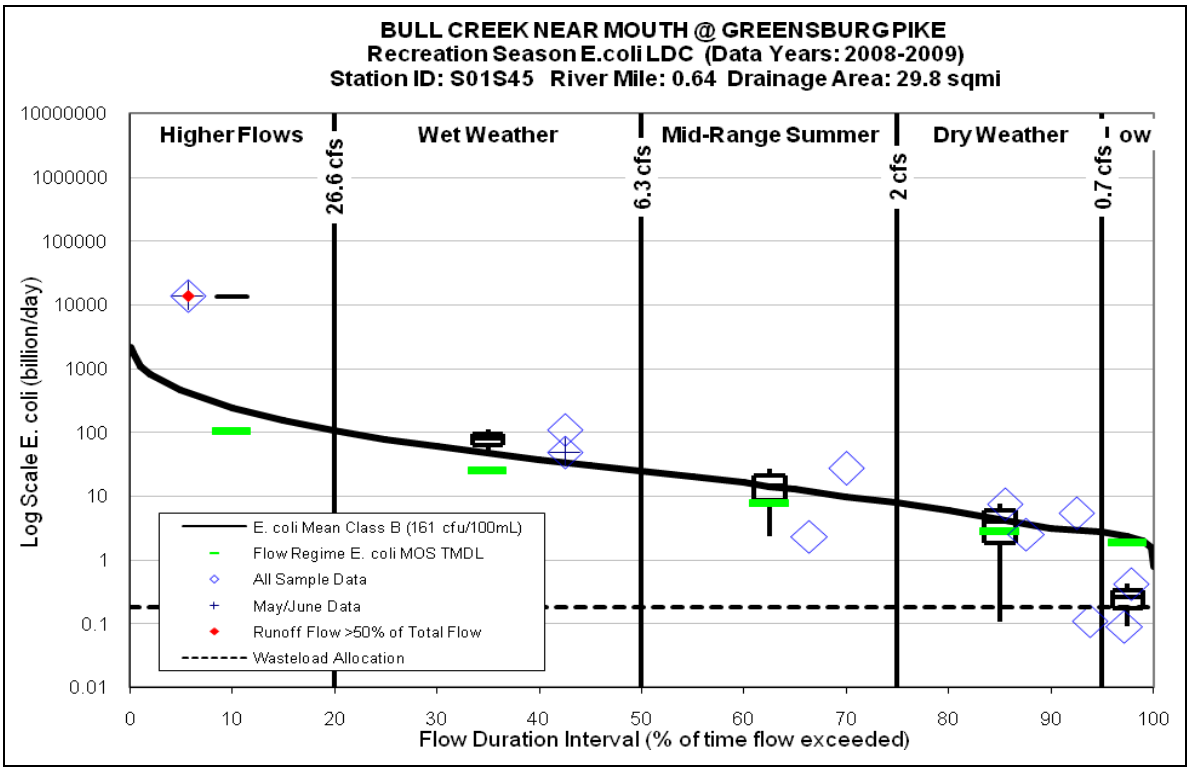

Figure D-5. Pathogen LDC for HUC HUC 04100010 02 01 Bull Creek

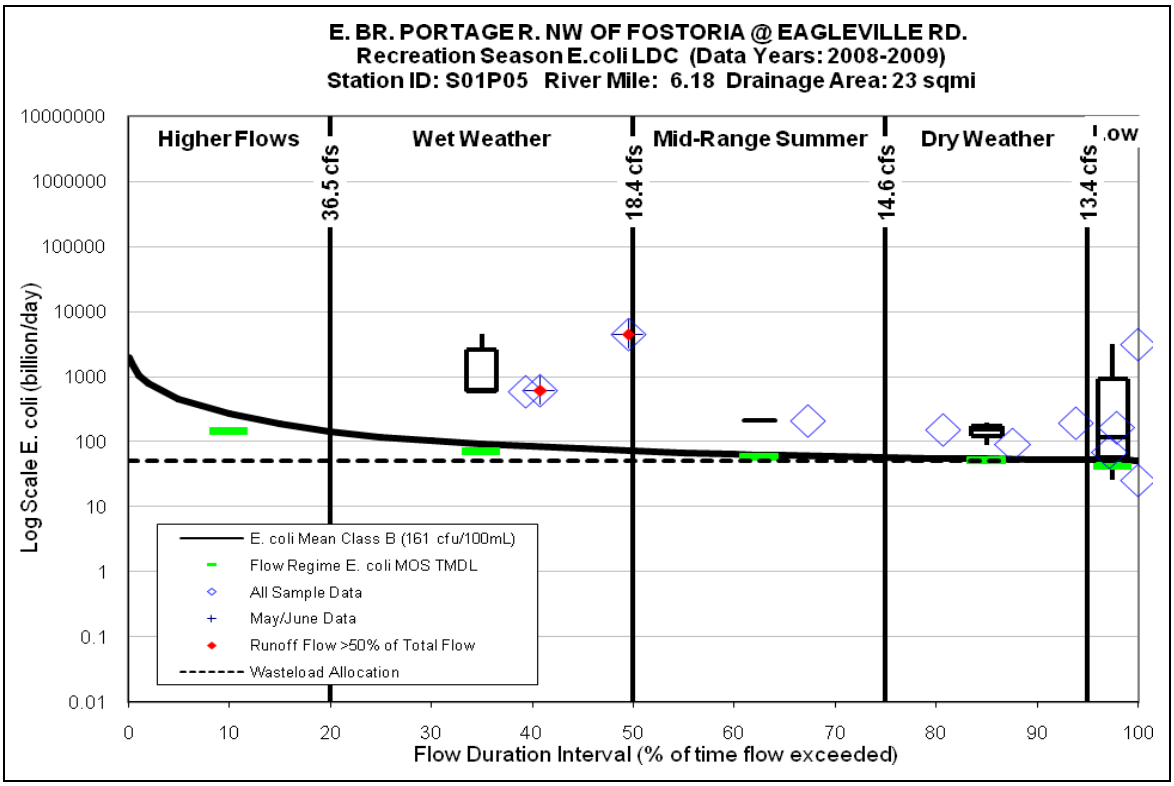

Figure D-6. Pathogen LDC for HUC 04100010 02 02 East Branch Portage River

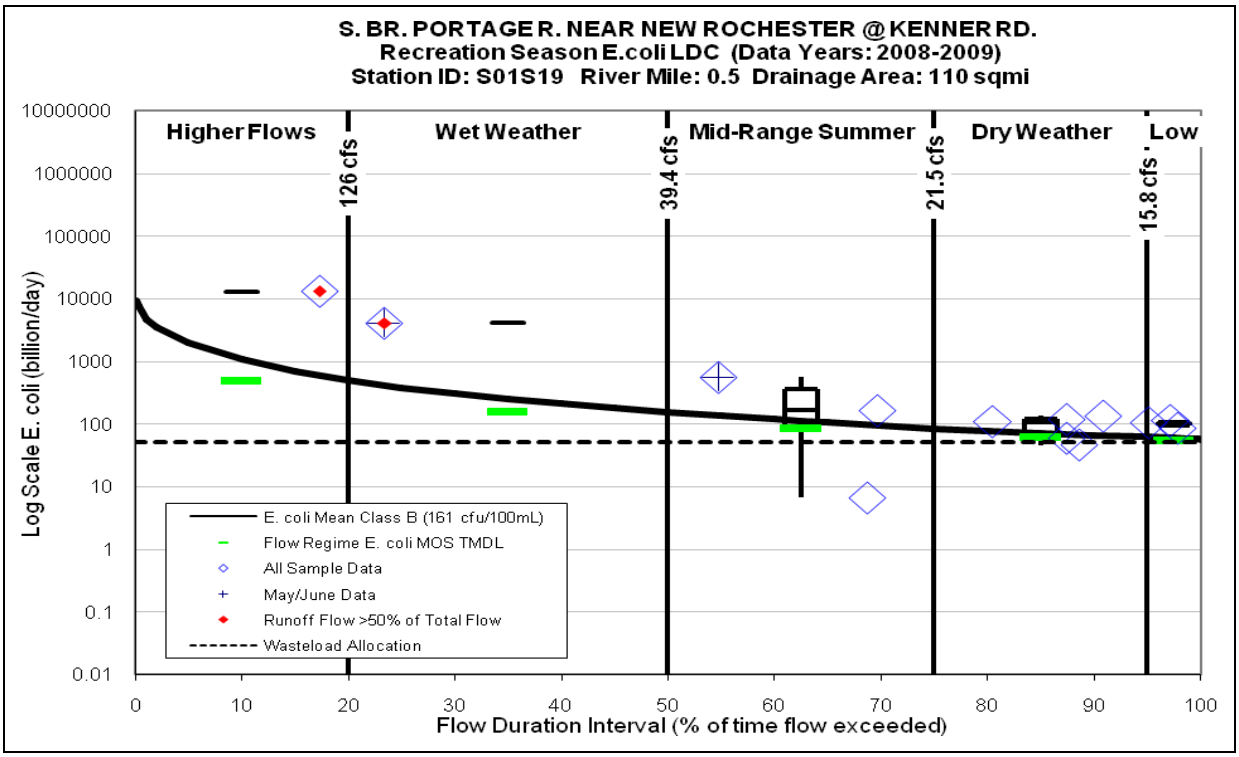

Figure D-7. Pathogen LDC for HUC 04100010 02 03 Town of Bloomdale-South Branch Portage River and 04100010 02 04 Rhodes Ditch-South Branch Portage River

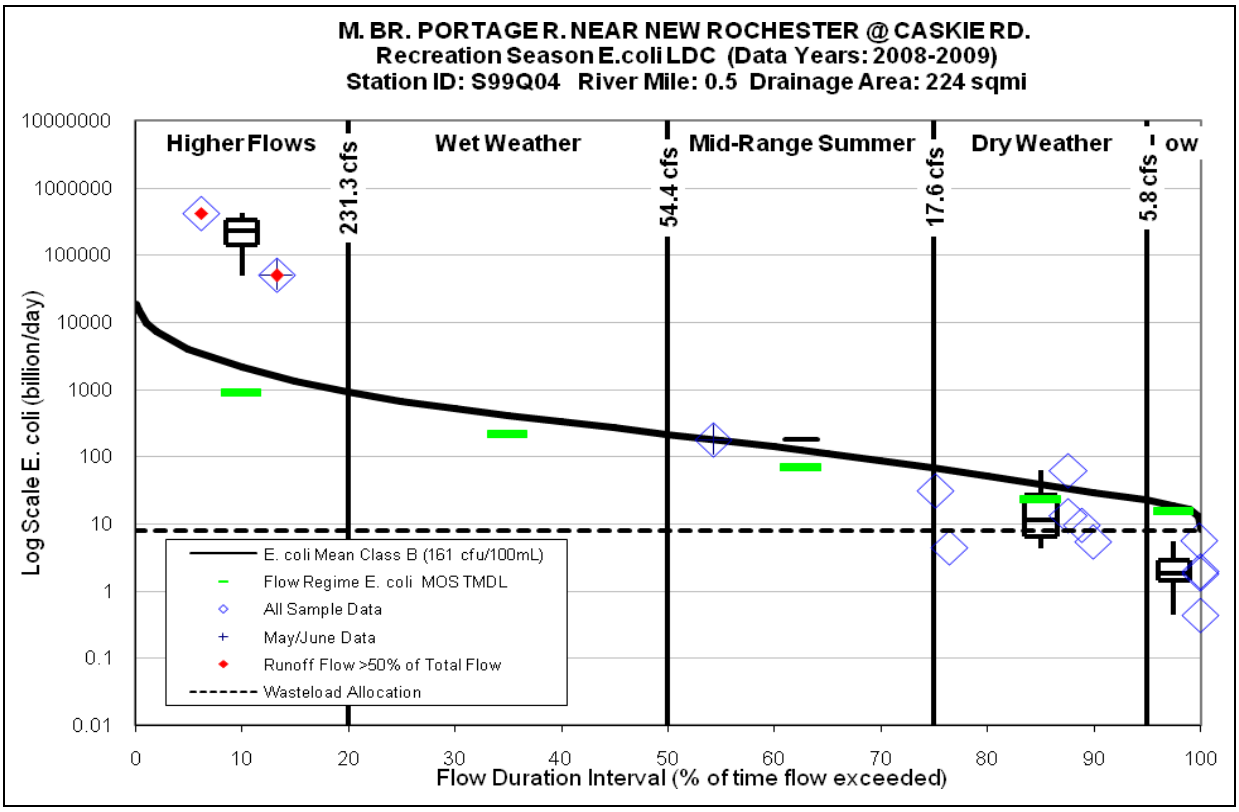

Figure D-8. Pathogen LDC for HUC HUC 04100010 02 05 Cessna Ditch-Middle Branch Portage River

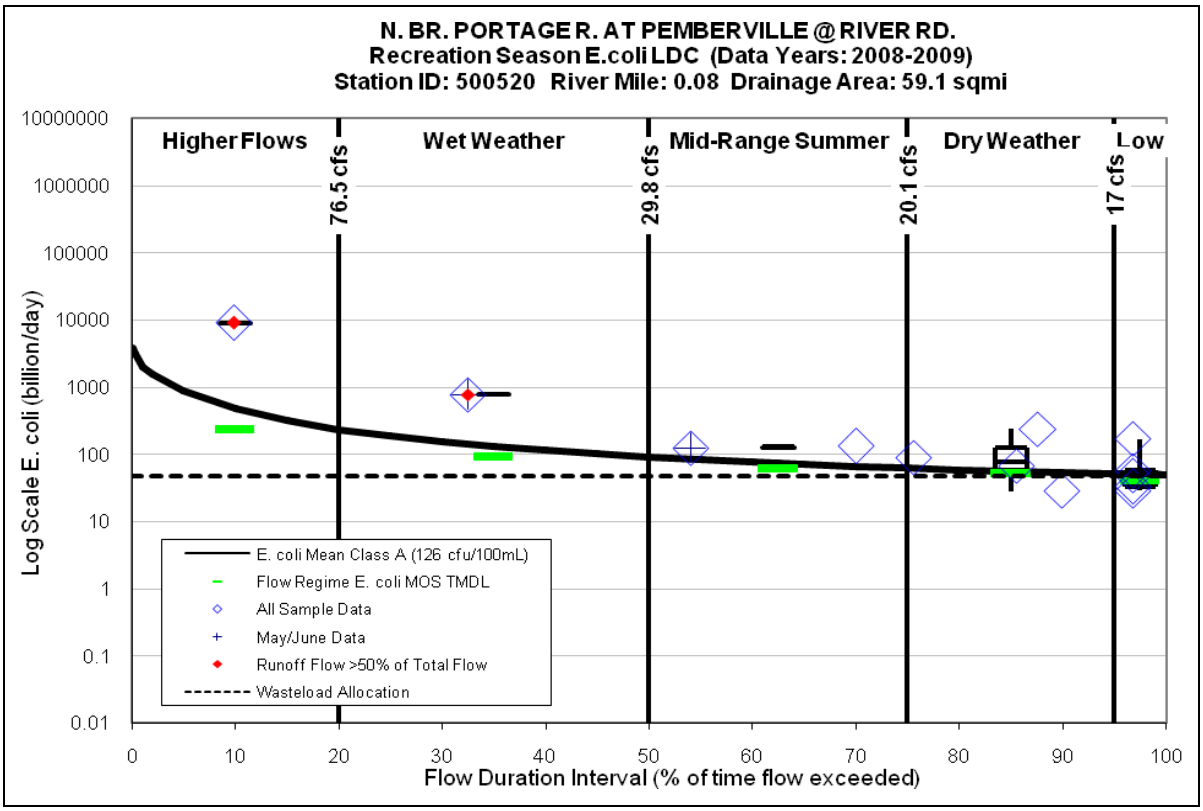

Figure D-9. Pathogen LDC for HUC 04100010 03 01 North Branch Portage R.

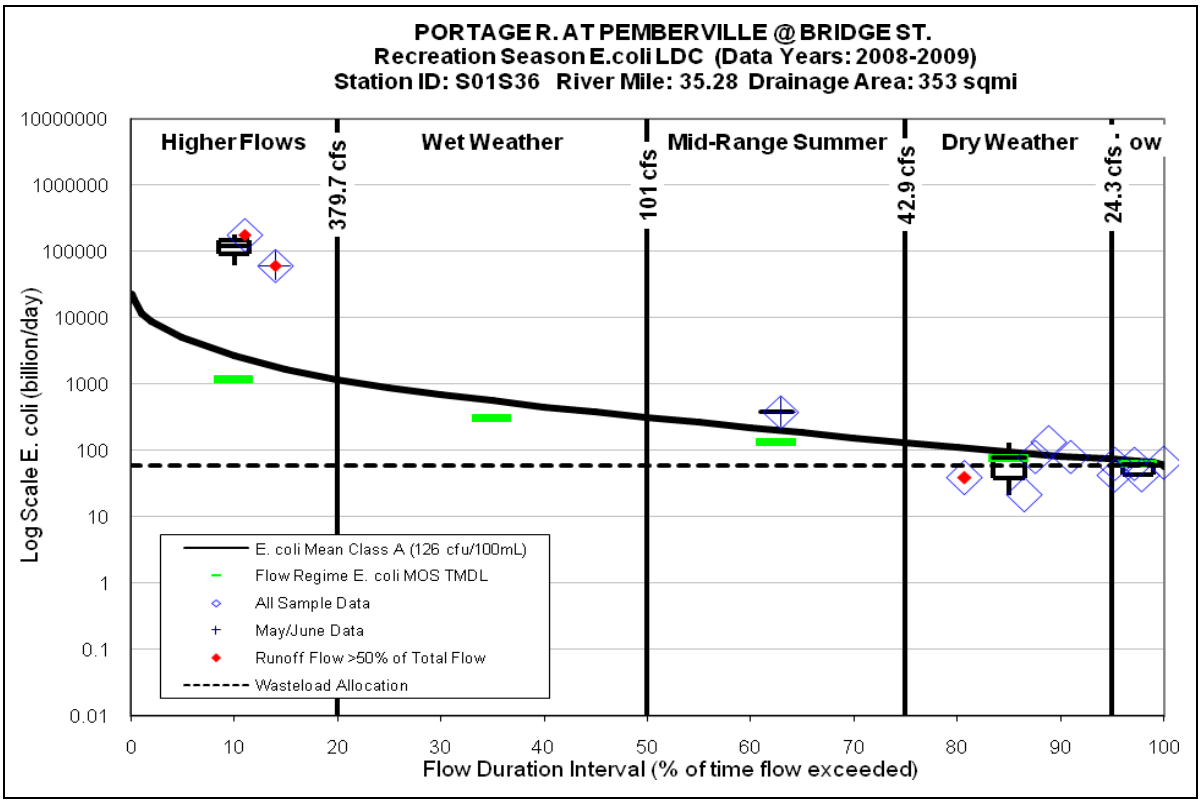

Figure D-10. Pathogen LDC for HUC 04100010 03 02 Town of Pemberville-Portage River

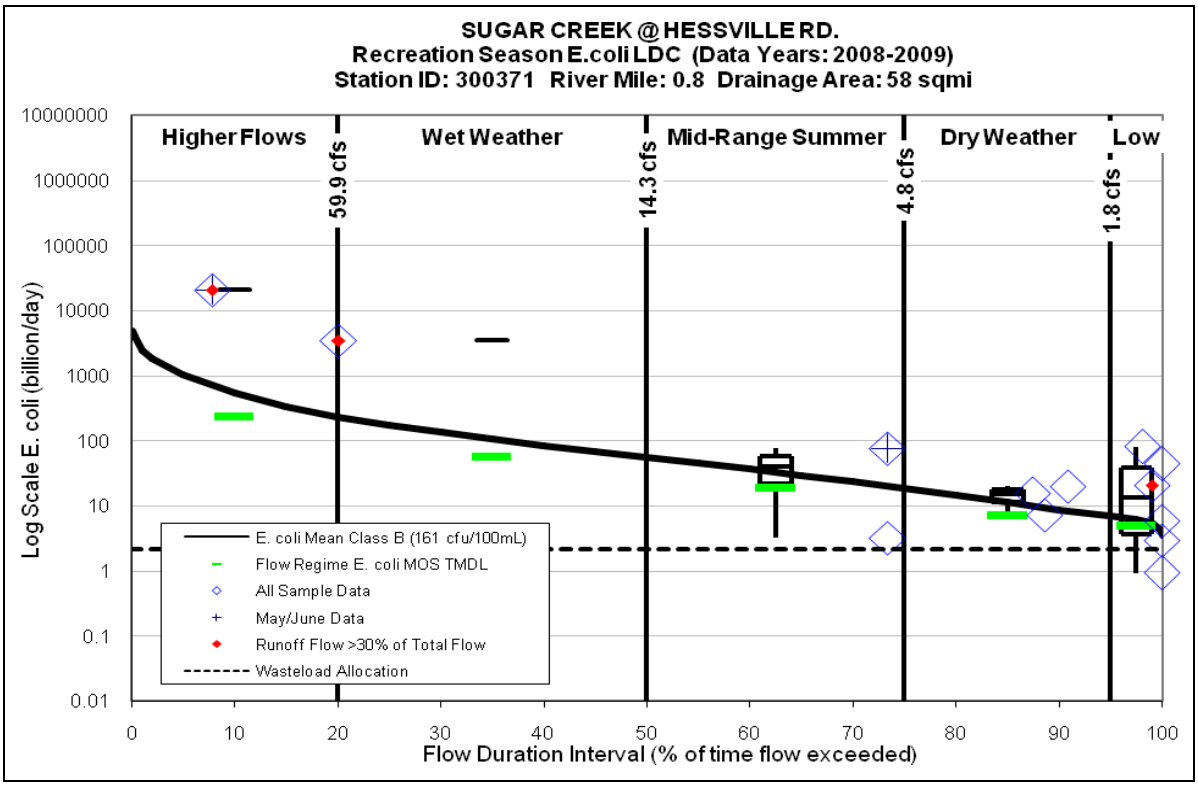

Figure D-11. Pathogen LDC for HUC HUC 04100010 04 01 Sugar Creek

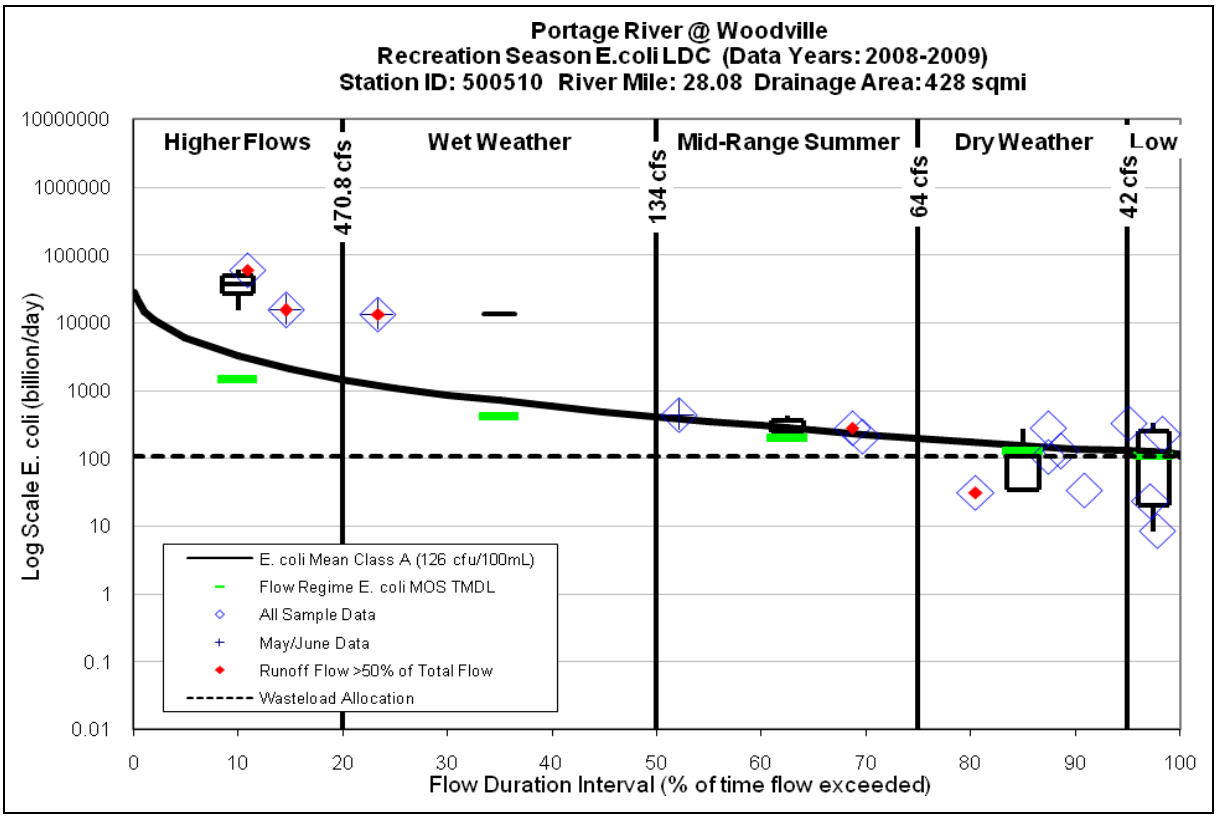

Figure D-12. Pathogen LDC for HUC 04100010 04 02 Larcarpe Creek Outlet #4-Portage River

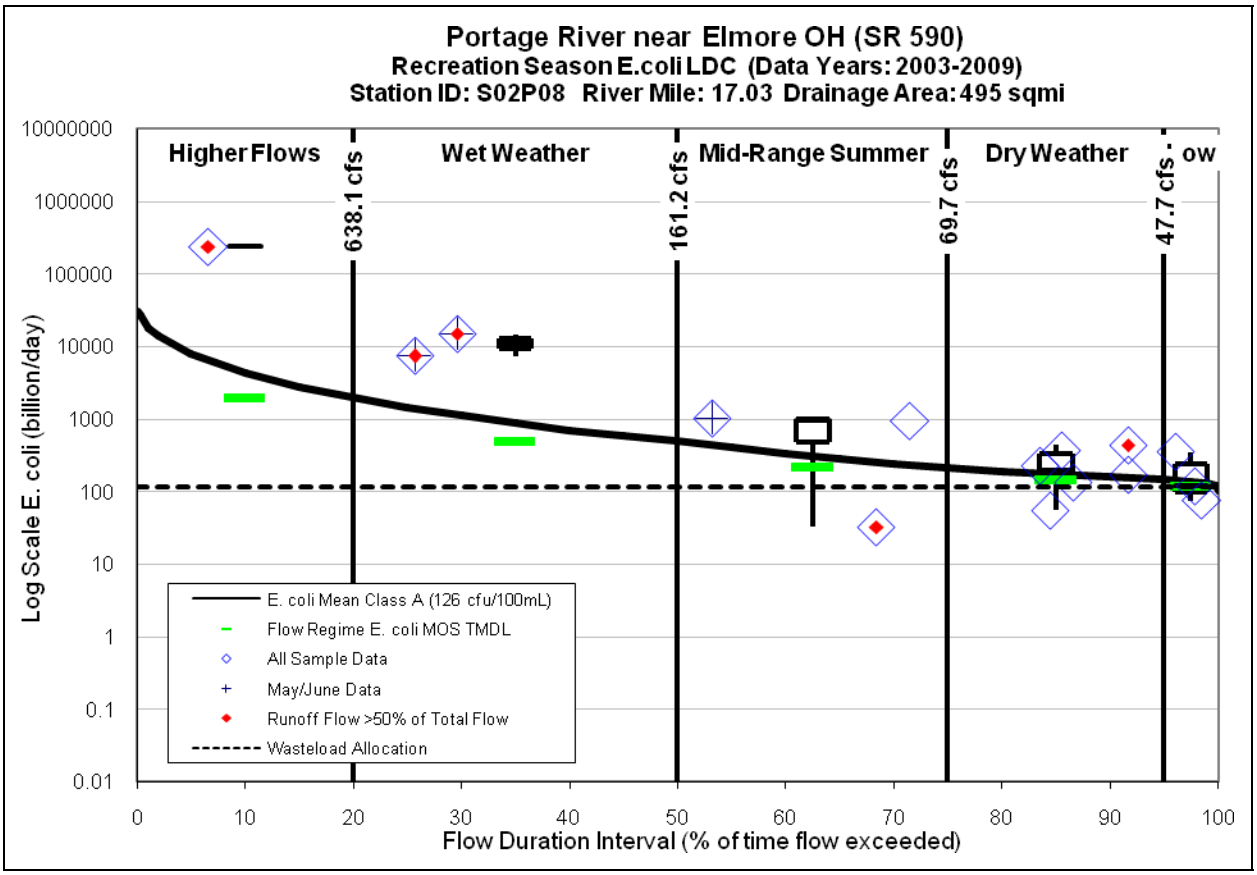

Figure D-13. Pathogen LDC for HUC 04100010 05 02 Portage River