

APPENDIX J
PRIORITIZED WATERSHED LISTING

Table J-1. Frederick County's revised prioritized list of watersheds	
Revised Rank	Revised Rank
1	Lower Bush Creek
2	Ballenger Creek
3	Lower Linganore Creek
4	Upper Linganore Creek
5	Bennett Creek
6*	Catoctin Creek
7*	Tuscarora Creek
8	Israel Creek
9	Fishing Creek
10	Glade Creek
11	Upper Bush Creek
12	Potomac Direct
13	Monocacy Direct Southwest
14	Little Catoctin Creek South
15	Hunting Creek
16	Toms Creek
17	Middle Creek
18	Owens Creek
19	Little Pipe Creek
20	Carroll Creek

***Note:** The order of prioritized watersheds has been adjusted. Originally, Tuscarora Creek watershed was listed after Bennett Creek watershed. However, the urbanized areas of Tuscarora Creek watershed have since been annexed to Frederick City and are thus out of the County's jurisdiction. As a result, Catoctin Creek watershed is now listed after Bennett Creek watershed. Catoctin Creek was chosen as the next priority watershed after Bennett Creek for two reasons: (1) Catoctin Creek was ranked lowest in biodiversity by the Maryland Department of Natural Resources (DNR) using the Maryland Biological Stream Survey (MBSS) and Stream Waders monitoring data and (2) Catoctin Creek is impacted by growing urbanization in and around Middletown, Myersville, and Jefferson.

APPENDIX K

**SUMMARY OF STREAM BIOLOGICAL AND
PHYSICAL MONITORING DATA
FOR BALLENGER, BENNETT, AND
LINGANORE CREEK SITES SAMPLED IN 2007**

Station ID	Date Sampled	Avg. Wetted Width (m)	Avg. Thalweg Depth (m)	Slope	Discharge (cfs)	Discharge (cms)	D50 (mm)	Buffer Width Left Bank (m)	Buffer Width Right Bank (m)
BALL-04	04/25/00	7.5	0.64	8.3E-05	32.27	1.055	0.1	20	>30
	06/10/03	8.1	0.99	0.003	57.17	1.619	*	50	40
	09/13/04	7.4	0.51	0.001	6.67	0.189	0.6	50	50
	03/21/05	7.4	0.48	0.002	3.34	0.095	0.8	50	50
	03/02/06	7.4	0.52	0.002	3.94	0.112	9.0	50	50
	04/18/07	6.4	0.33	0.001	4.30	0.122	12.3	50	50
BALL-07	09/13/04	7.1	0.44	0.0002	3.67	0.104	0.5	50	20
	03/21/05	7.2	0.33	0.006	34.77	0.984	10.0	50	50
	03/02/06	6.8	0.46	0.002	5.20	0.147	11.3	50	50
	04/18/07	7.8	0.45	0.001	5.97	0.169	9.32	50	50
BENN-05	04/21/06	2.7	0.14	0.006	0.82	0.025	n/a	0	0
	04/19/07	2.0	0.16	0.007	0.85	0.024	1.5	0	0
BENN-06	04/26/06	4.9	0.28	0.005	2.71	0.077	n/a	50	50
	04/19/07	5.1	0.25	0.005	2.56	0.073	19.3	50	50
LING-53	04/27/06	4.5	0.23	0.009	0.46	0.013	n/a	50	30
	04/20/07	3.4	0.16	0.011	0.47	0.013	50.54	50	35

* No pebble count performed, site was too deep.
n/a = Not Available.

Table K-2. Summary of field water quality data from sites sampled in 2007, including results from previous years.

Station ID	Date Sampled	Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH	Specific Conductivity (mS/cm)	Turbidity (NTU)
BALL-04	04/25/00	11.3	8.9	6.81	0.362	12.2
	10/05/00	16.1	5.8	7.96	0.485	5.0
	03/25/03	12.9	15.8	7.52	0.418	*
	04/28/04	9.6	14.2	7.42	0.403	*
	09/13/04	17.0	10.4	7.03	0.518	16.2
	03/21/05	7.1	10.4	7.25	0.168	49.1
	08/16/05	20.3	5.7	7.66	0.545	12.8
	03/02/06	6.5	11.0	7.41	0.435	4.2
	06/14/06	16.9	8.4	7.45	0.514	24.7
	04/18/07	8.3	12.6	6.50	0.644	3.9
	06/25/07	18.2	8.1	6.63	0.464	21.0
BALL-07	04/28/04	10.3	19.4	7.54	0.401	*
	09/13/04	20.5	13.1	7.51	0.476	9.5
	03/21/05	6.8	10.6	7.38	0.240	61.1
	09/21/05	17.1	6.4	7.42	0.514	9.4
	03/02/06	6.6	11.5	7.73	0.433	4.8
	06/14/06	18.9	9.9	7.58	0.509	13.1
	04/18/07	9.3	13.8	6.74	0.638	3.9
	06/25/07	19.8	9.8	7.07	0.517	8.6
BENN-05	04/21/06	14.4	11.8	8.41	0.247	12.2
	06/08/06	16.5	9.8	7.55	0.288	49.0
	04/19/07	10.4	13.7	6.71	0.505	4.0
	08/08/07	22.4	10.9	7.83	0.303	8.4
BENN-06	04/26/06	11.8	11.4	7.60	0.180	7.0
	06/13/06	15.1	11.1	7.74	0.183	15.4
	04/19/07	9.0	13.5	5.79	0.484	8.0
	07/10/07	23.0	10.3	7.76	0.209	21.0
LING-53	04/27/06	9.7	9.17	7.52	0.487	18.5
	06/13/06	19.5	9.9	7.53	0.395	18.5
	04/20/07	7.8	12.5	5.98	0.574	8.6
	07/10/07	23.7	9.9	7.43	0.423	49.8

* Data not available.

Table K-3. Summary of benthic macroinvertebrate results from sites sampled in 2007, including results from previous years.

Station	Date Sampled	Number of Taxa	Benthic IBI Score	Benthic IBI Rating
BALL-04	03/25/03	27	2.00	Poor
	04/28/04	24	2.50	Poor
	03/21/05	27	2.75	Poor
	03/02/06	33	2.50	Poor
	04/18/07	31	2.25	Poor
BALL-07	04/28/04	22	1.75	Very Poor
	03/21/05	24	2.25	Poor
	03/02/06	38	3.00	Fair
	04/18/07	27	2.25	Poor
BENN-05	04/21/06	38	3.00	Fair
	04/19/07	35	2.75	Poor
BENN-06	04/26/06	29	2.75	Poor
	04/19/01	28	3.00	Fair
LING-53	04/27/06	27	2.25	Poor
	04/20/07	28	2.50	Poor

Table K-4. Summary of fish results from sites sampled in 2007, including results from previous years.						
Station ID	Date Sampled	Number of Taxa	Number of Fish Caught	Percent of Tolerant Individuals	Fish IBI Score	Fish IBI Rating
BALL-04	10/05/00	15	290	23%	3.33	Fair
	08/20/02	9	371	46%	3.67	Fair
	09/13/04	12	553	43%	4.33	Good
	08/16/05	15	619	43%	4.67	Good
	06/14/06	13	572	50%	4.67	Good
	06/25/07	12	388	45%	4.67	Good
BALL-07	09/13/04	12	669	35%	4.67	Good
	09/21/05	15	1329	33%	5.00	Good
	06/14/06	12	816	33%	4.67	Good
	06/25/07	16	405	32%	4.67	Good
BENN-05	06/08/06	10	1281	64%	3.67	Fair
	08/08/07	9	1372	78%	3.67	Fair
BENN-06	06/13/06	15	1641	60%	4.00	Good
	07/10/07	15	811	46%	4.67	Good
LING-53	06/13/06	11	1317	64%	3.67	Fair
	07/10/07	10	642	69%	3.67	Fair

Table K-5. Qualitative habitat scores using MBSS protocols for sites sampled in 2007, including results from previous years.

Site	Date	Instream habitat (0-20)	Epifaunal substrate (0-20)	Velocity-depth diversity (0-20)	Pool-glide quality (0-20)	Riffle-run quality (0-20)	Embeddedness	Shading
BALL-04	08/20/02	10	7	14	17	8	30%	90%
	09/13/04	10	8	14	13	11	100%	65%
	08/16/05	14	8	12	14	13	80%	70%
	06/14/06	11	5	14	17	14	75%	55%
	06/25/07	11	9	14	18	11	70%	70%
BALL-07	09/13/04	11	7	13	14	14	80%	55%
	09/21/05	12	7	13	16	12	75%	30%
	06/14/06	12	5	14	16	13	60%	40%
	06/25/07	9	6	13	13	11	75%	40%
BENN-05	06/08/06	11	7	9	10	9	50%	10%
	08/08/07	10	7	7	8	8	50%	20%
BENN-06	06/13/06	18	16	10	9	14	40%	60%
	07/10/07	14	12	13	9	13	50%	60%
LING-53	06/13/06	18	19	14	13	12	35%	60%
	07/10/07	16	14	13	13	11	40%	65%

