Appendix B - SWMP Activity Data

Storm Water Inventory

Household Chemical Collection Center Nine-Year Comparison

Toxics Release Inventory 2002 (SARA Title III Section 313 Reporting Facilities)

Inventory of Known Major Outfalls

Lab Analysis Sheets
Metal Analysis Data
Pesticide Data Analysis
Acid/Base Neutral Organic Analysis
Volatile Organic Analysis

Biological Assessment of Urban Streams Explanation and Rationale

STORM WATER INVENTORY

Updated 26 May, 2004

* GIS INVENTORIED area of watershed ONLY.
** Watershed area INSIDE city limits ONLY.
\+ Estimated values

	AREA					LINEAR STRUCTURES							
WATERSHEDS WITHIN CITY LIMITS	INVENTORY *+			CITYWIDE **		PIPE		BOX CULVERT		CHANNEL			
	ACRES	SQ. MI.	% OF WTRSHD	ACRES	SQ. MI.	QTY	LENGTH	QTY	LENGTH	QTY	LENGTH	*TOTAL*	*TOTAL FT*
FARMER BRANCH	0.00	0.00	0.00	422.15	0.66	0	0.00	0	0.00	0	0.00	***0***	***0***
FASSNIGHT CREEK	467.60	0.73	13.40	3,489.26	5.45	274	24,419.81	78	9,839.09	35	10,292.61	***387***	***44,552***
GALLOWAY CREEK	4,323.27	6.76	95.44	4,529.73	7.08	1,038	97,330.31	196	13,776.73	579	82,249.06	***1,813***	***193,356***
HUNT BRANCH	0.00	0.00	0.00	227.68	0.36	0	0.00	0	0.00	0	0.00	***0***	***0***
INMAN CREEK	626.45	0.98	40.16	1,560.00	2.44	324	37,075.56	27	1,564.19	180	20,898.03	***531***	***59,538***
JAMES RIVER	303.29	0.47	8.86	3,423.50	5.35	86	7,271.26	13	1,472.89	115	20,392.12	***214***	***29,136***
JORDAN CREEK	1,767.89	2.76	62.89	2,811.22	4.39	771	58,754.06	317	33,348.05	44	13,689.83	***1,132***	***105,792***
JORDAN CREEK NORTH BRANCH	1,008.89	1.58	45.54	2,215.36	3.46	212	24,017.37	98	9,971.35	105	31,341.46	***415***	***65,330***
JORDAN CREEK SOUTH BRANCH	575.81	0.90	15.65	3,679.07	5.75	229	16,662.91	87	8,543.22	55	11,021.03	***371***	***36,227***
PEA RIDGE CREEK	66.70	0.10	2.04	3,268.63	5.11	25	3,443.95	7	298.89	3	669.60	***35***	***4,412***
PIERSON CREEK	192.24	0.30	10.97	1,753.17	2.74	112	9,161.06	7	491.05	60	8,721.92	***179***	***18,374***
RAINER BRANCH	0.00	0.00	0.00	3,052.82	4.77	0	0.00	0	0.00	0	0.00	***0***	***0***
SOUTH CREEK	218.51	0.34	6.54	3,340.77	5.22	147	18,629.72	8	368.31	57	12,350.51	***212***	***31,349***
SOUTH DRY SAC	0.00	0.00	0.00	3,363.64	5.26	1	42.06	0	0.00	0	0.00	***1***	***42***
SPRING BRANCH	0.00	0.00	0.00	1,684.37	2.63	0	0.00	0	0.00	0	0.00	***0***	***0***
THOMPSON BRANCH	171.56	0.27	22.75	754.11	1.18	42	4,687.81	6	796.84	52	10,666.55	***100***	***16,151***
WARD BRANCH	1,608.88	2.51	42.03	3,828.32	5.98	838	84,148.28	122	12,366.90	356	52,004.09	***1,316***	***148,519***
WILSONS CREEK	0.00	0.00	0.00	1,577.20	2.46	0	0.00	0	0.00	0	0.00	***0***	***0***
WILSONS CREEK NORTH BRANCH	181.72	0.28	4.52	4,019.60	6.28	129	12,683.67	12	454.84	2	669.91	***143***	***13,808***
INVENTORY *													
*TOTAL AREA **	*11,331.1*	*17.7*											
PERCENTAGE OF CITY LIMITS +	*23.1*			*100.0*									
*TOTAL STRUCTURES **						*4,228*		*978*		*1,643*		***6,849***	
*TOTAL LENGTH (FT) **							*398327.8*		*93292.4*		*274966.7*		***766,586.9***
CITYWIDE +													
TOTAL AREA				*49,000.6*	*77*								
TOTAL STRUCTURES +						*18,284*		*4,229*		*7,105*		***29,618***	
TOTAL LENGTH (FT) +							*1722544.4*		*403437.1*		*1189076.8*		***3,315,058.3***

STORM WATER INVENTORY

Updated 26 May, 2004

* GIS INVENTORIED area of watershed ONLY.
** Watershed area INSIDE city limits ONLY.
\+ Estimated values

	AREA					POINT STRUCTURES			
WATERSHEDS WITHIN CITY LIMITS	**INVENTORY *+**			**CITYWIDE ****					
	ACRES	**SQ. MI.**	**% OF WTRSHD**	**ACRES**	**SQ. MI.**	**INLET**	**JUNCT BOX**	**DTNTN BASIN**	***TOTAL***
FARMER BRANCH	0.00	0.00	0.00	422.15	0.66	0	0	0	***0***
FASSNIGHT CREEK	467.60	0.73	13.40	3,489.26	5.45	217	28	0	***245***
GALLOWAY CREEK	4,323.27	6.76	95.44	4,529.73	7.08	753	90	35	***878***
HUNT BRANCH	0.00	0.00	0.00	227.68	0.36	0	0	0	***0***
INMAN CREEK	626.45	0.98	40.16	1,560.00	2.44	232	19	14	***265***
JAMES RIVER	303.29	0.47	8.86	3,423.50	5.35	67	3	10	***80***
JORDAN CREEK	1,767.89	2.76	62.89	2,811.22	4.39	733	96	0	***829***
JORDAN CREEK NORTH BRANCH	1,008.89	1.58	45.54	2,215.36	3.46	197	34	1	***232***
JORDAN CREEK SOUTH BRANCH	575.81	0.90	15.65	3,679.07	5.75	213	35	1	***249***
PEA RIDGE CREEK	66.70	0.10	2.04	3,268.63	5.11	25	3	1	***29***
PIERSON CREEK	192.24	0.30	10.97	1,753.17	2.74	74	16	6	***96***
RAINER BRANCH	0.00	0.00	0.00	3,052.82	4.77	0	0	0	***0***
SOUTH CREEK	218.51	0.34	6.54	3,340.77	5.22	121	19	7	***147***
SOUTH DRY SAC	0.00	0.00	0.00	3,363.64	5.26	2	0	0	***2***
SPRING BRANCH	0.00	0.00	0.00	1,684.37	2.63	0	0	0	***0***
THOMPSON BRANCH	171.56	0.27	22.75	754.11	1.18	23	7	0	***30***
WARD BRANCH	1,608.88	2.51	42.03	3,828.32	5.98	719	74	35	***828***
WILSONS CREEK	0.00	0.00	0.00	1,577.20	2.46	0	0	0	***0***
WILSONS CREEK NORTH BRANCH	181.72	0.28	4.52	4,019.60	6.28	110	2	0	***112***
INVENTORY *									
*TOTAL AREA **	*11,331.1*	*17.7*							
PERCENTAGE OF CITY LIMITS +	*23.1*			*100.0*					
*TOTAL STRUCTURES **						*3,486*	*426*	*110*	***4,022***
*TOTAL LENGTH (FT) **									
CITYWIDE +									
TOTAL AREA				*49000.6*	*76.6*				
TOTAL STRUCTURES +						*15,075*	*1,842*	*476*	***17,393***
TOTAL LENGTH (FT) +									

Household Chemical Collection Center

Nine Year Comparison

	08/13/94–07/12/95	07/13/95–07/11/96	07/12/96–07/12/97	07/13/97–06/30/98	07/01/98-06/30/99	07/01/99-06/30/00	07/01/00-06/30/01	07/01/01-06/30/02	07/01/02-06/30/03
Appointments	**2,478**	**2,567**	**2,442**	**2,286**	**2,933**	**2,714**	**2,998**	**3,380**	**2,975**
Materials Disposed of (lbs.)									
Lab Packs	10,970	11,463	13,014	10,021	18,470	14,714	13,082	17,220	19,130
Total Pounds Disposed of	**10,970**	**11,463**	**13,014**	**10,021**	**18,470**	**14,714**	**13,082**	**17,220**	**19,130**
Materials Recycled (lbs.)									
Latex Paint	25,463	24,454	21,764	20,308	28,556	28,600	24,750	29,150	35,200
Oil Base Paint	14,878	11,600	11,001	10,627	11,786	11,352	10,817	11,326	13,384
Fuels	2,354	3,617	2,748	4,212	4,428	3,586	2,872	3,156	3,473
Batteries	2,908	2,184	2,501	3,869	2,465	1,797	1,533	1,100	1,100
Fluorescent tubes								165	165
Tin	14,879	11,524	7,600	5,000	3,840	3,664	3,268	3,713	0
Cardboard	8,137	7,800	1,200	1,000	1,280	1,400	1,975	2,450	4,550
Car Batteries	5,874	4,160	3,840	4,160	3,640	3,115	2,625	2,660	3,010
Oil Filters	148	148	0	0	0	0	0	0	0
Antifreeze	1,930	1,960	1,460	2,430	2,280	2,922	2,127	3,080	3,465
Waste Oil	11,960	9,620	11,130	9,550	10,370	9,660	10,318	6,750	9,280
Misc. Materials Ex.	4,963	3,451	2,977	2,530	6,099	4,629	5,207	8,500	6,321
Total Pounds Recycled	**93,494**	**80,518**	**66,221**	**63,686**	**74,744**	**70,725**	**65,492**	**72,050**	**79,948**
Total Disposed of/Recycled	**104,464**	**91,981**	**79,235**	**73,707**	**93,214**	**85,439**	**78,574**	**89,270**	**99,078**
% Recycled	**89.5%**	**88%**	**84%**	**86%**	**80%**	**83%**	**83%**	**81%**	**80%**

City of Springfield
Public Works Department
Solid Waste Management Division
PO Box 8368
Springfield, MO 65801
Recycling Hotline: 417-864-1904

Average pounds of materials recycled per appointment – 26.9
Average pounds of materials disposed of per appointment – 5.2

9 year total in pounds – 794,962
% Recycled in 9 years – 83%

Printed on recycled paper.

FAC_NAME	FAC_ADDRESS	CHEM_NAME	AIR	LAND	WATER	TOT_ONSITE	OFFSITE_DISP	POTW_MET	POTW_NON	TOT_REL
3M COMPANY	3211 E CHESTNUT EXPY	CYCLOHEXANE	7780	0	0	7780	0	0	0	7780
3M COMPANY	3211 E CHESTNUT EXPY	METHYL ISOBUTYL KETONE	4150	0	0	4150	0	0	0	4150
3M COMPANY	3211 E CHESTNUT EXPY	TOLUENE	62890	0	0	62890	0	0	0	62890
3M COMPANY	3211 E CHESTNUT EXPY	XYLENE (MIXED ISOMERS)	240	0	0	240	0	0	0	240
3M COMPANY	3211 E CHESTNUT EXPY	METHANOL	260	0	0	260	0	0	0	260
3M COMPANY	3211 E CHESTNUT EXPY	N-HEXANE	10960	0	0	10960	0	0	0	10960
3M COMPANY	3211 E CHESTNUT EXPY	METHYL ETHYL KETONE	41910	0	0	41910	0	0	0	41910
3M COMPANY	3211 E CHESTNUT EXPY	ZINC COMPOUNDS	6870	0	0	6870	4590	0	0	11460
3M COMPANY	3211 E CHESTNUT EXPY	TOLUENE DIISOCYANATE (MIXED ISOMERS)	60	0	0	60	0	0	0	60
3M COMPANY	3211 E CHESTNUT EXPY	DI(2-ETHYLHEXYL) PHTHALATE	30	0	0	30	0	0	0	30
3M COMPANY	3211 E CHESTNUT EXPY	TETRABROMOBISPHENOL A	10	0	0	10	0	0	0	10
3M COMPANY	3211 E CHESTNUT EXPY	BUTYL ACRYLATE	10	0	0	10	0	0	0	10
3M COMPANY	3211 E CHESTNUT EXPY	DIISOCYANATES	120	0	0	120	0	0	0	120
3M COMPANY	3211 E CHESTNUT EXPY	LEAD COMPOUNDS	0	0	0	0	150	0	0	150
ACME STRUCTURAL	2101 N PACKER RD	MANGANESE COMPOUNDS	250	0	250	500	0	0	0	500
ACME STRUCTURAL	2101 N PACKER RD	NICKEL COMPOUNDS	5	0	5	10	0	0	0	10
ACME STRUCTURAL	2101 N PACKER RD	CHROMIUM COMPOUNDS	5	0	5	10	0	0	0	10
ADM ALLIANCE NUTRITION	1300 W LOCUST ST	COPPER COMPOUNDS	0	0	0	0	0	0	0	0
ADM ALLIANCE NUTRITION	1300 W LOCUST ST	MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0
ADM ALLIANCE NUTRITION	1300 W LOCUST ST	ZINC COMPOUNDS	0	0	0	0	0	0	0	0
ADM ALLIANCE NUTRITION	701 E CHESTNUT ST	MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0
ADM ALLIANCE NUTRITION	701 E CHESTNUT ST	ZINC COMPOUNDS	0	0	0	0	0	0	0	0
BRENNTAG MID-SOUTH	2235 W BATTLEFIELD RD	METHYL ISOBUTYL KETONE	0	0	0	0	0	0	0	0
BRENNTAG MID-SOUTH	2235 W BATTLEFIELD RD	TOLUENE	0	0	0	0	0	0	0	0
BRENNTAG MID-SOUTH	2235 W BATTLEFIELD RD	XYLENE (MIXED ISOMERS)	0	0	0	0	0	0	0	0
BRENNTAG MID-SOUTH	2235 W BATTLEFIELD RD	METHANOL	0	0	0	0	0	0	0	0
BRENNTAG MID-SOUTH	2235 W BATTLEFIELD RD	ETHYLENE GLYCOL	0	0	0	0	0	0	0	0
BRENNTAG MID-SOUTH	2235 W BATTLEFIELD RD	METHYL ETHYL KETONE	0	0	0	0	0	0	0	0
CARLISLE POWER TRANS PROD	2601 W BATTLEFIELD RD	DIISOCYANATES	2405	0	0	2405	0	0	0	2405

FAC_NAME	FAC_ADDRESS	CHEM_NAME	AIR	LAND	WATER	TOT_ONSITE	OFFSITE_DISP	POTW_MET	POTW_NON	TOT_REL
CARLISLE POWER TRANS PROD	2601 W BATTLEFIELD RD	TOLUENE	16400	0	0	16400	0	0	0	16400
CARLISLE POWER TRANS PROD	2601 W BATTLEFIELD RD	ZINC COMPOUNDS	3	0	0	3	45000	14	0	17
CARLISLE POWER TRANS PROD	2601 W BATTLEFIELD RD	POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0
CARLISLE POWER TRANS PROD	2601 W BATTLEFIELD RD	BENZO(G,H,I)PERYLENE	0	0	0	0	0	0	0	0
CLARIANT LSM	2460 W BENNETT ST	BROMINE	3434	0	0	3434	0	0	0	3434
CLARIANT LSM	2460 W BENNETT ST	CHLOROMETHANE	5406	0	0	5406	0	0	0	5406
CLARIANT LSM	2460 W BENNETT ST	CYANIDE COMPOUNDS	5	0	0	5	0	0	1	5
CLARIANT LSM	2460 W BENNETT ST	DICHLOROMETHANE	14157	0	0	14157	0	0	30	14157
CLARIANT LSM	2460 W BENNETT ST	DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.4865	0	0	0.4865	0	0	0.20227	0.68877
CLARIANT LSM	2460 W BENNETT ST	HYDROCHLORIC ACID ("ACID AEROSOLS" ONLY)	1937	0	0	1937	0	0	0	1937
CLARIANT LSM	2460 W BENNETT ST	METHANOL	2639	0	0	2639	0	0	7257	2639
CLARIANT LSM	2460 W BENNETT ST	N-HEXANE	2067	0	0	2067	0	0	1	2067
CLARIANT LSM	2460 W BENNETT ST	SULFURIC ACID - ("ACID AEROSOLS" ONLY)	0	0	0	0	0	0	0	0
CLARIANT LSM	2460 W BENNETT ST	TOLUENE	2268	0	0	2268	0	0	2	2268
CLARIANT LSM	2460 W BENNETT ST	CHLOROFORM	963	0	0	963	0	0	16	963
CONCRETE CO OF SPRINGFIELD	510 N SHERMAN AVE	LEAD COMPOUNDS	0.7	0	0	0.7	0	0	0	0.7
CONCRETE CO OF SPRINGFIELD	510 N SHERMAN AVE	MERCURY COMPOUNDS	0.004	0	0	0.004	0	0	0	0.004
DAIRY FARMERS OF AMERICA	800 W TAMPA ST	NITRIC ACID	0	0	0	0	0	0	0	0
GE INDUSTRIAL SYSTEMS	2401 E SUNSHINE ST	COPPER	235.09	0	0	235.09	1748	14	0	1997.09
GE INDUSTRIAL SYSTEMS	2401 E SUNSHINE ST	ZINC COMPOUNDS	0	0	0	0	182	68	0	250
GE INDUSTRIAL SYSTEMS	2401 E SUNSHINE ST	LEAD	5.9	0	0	5.9	25	1	0	31.9
GE INDUSTRIAL SYSTEMS	2401 E SUNSHINE ST	NICKEL	29	0	0	29	121	1	0	151
INTERCONNECT TECH LITTON SYSTEMS - ASSEMB	2500 AIRPORT COMMERCE RD	LEAD COMPOUNDS	2	0	0	2	0	1	0	3
JAMES RIVER POWER STATION	5701 KISSICK RD	BARIUM COMPOUNDS	510	488	2773	3771	0	0	0	3771
JAMES RIVER POWER STATION	5701 KISSICK RD	VANADIUM COMPOUNDS	254	355	32	641	0	0	0	641
JAMES RIVER POWER STATION	5701 S KISSICK RD	MERCURY COMPOUNDS	71	1	1	73	0	0	0	73

FAC_NAME	FAC_ADDRESS	CHEM_NAME	AIR	LAND	WATER	TOT_ONSITE	OFFSITE_DISP	POTW_MET	POTW_NON	TOT_REL
JAMES RIVER POWER STATION	5701 S KISSICK RD	SULFURIC ACID - ("ACID AEROSOLS" ONLY)	85145	0	0	85145	0	0	0	85145
JAMES RIVER POWER STATION	5701 S KISSICK RD	HYDROCHLORIC ACID ("ACID AEROSOLS" ONLY)	181417	0	0	181417	0	0	0	181417
JAMES RIVER POWER STATION	5701 S KISSICK RD	DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.4	0	0	0.4	0	0	0	0.4
JAMES RIVER POWER STATION	5701 S KISSICK RD	HYDROGEN FLUORIDE	65715	0	0	65715	0	0	0	65715
KERR MCGEE CHEMICAL	2800 W HIGH ST	CREOSOTE	2900	0	0	2900	0	0	0	2900
KERR MCGEE CHEMICAL	2800 W HIGH ST	POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0
KO MANUFACTURING	2720 E DIVISION ST	HYDROGEN FLUORIDE	0	0	0	0	0	0	0	0
KO MANUFACTURING	2720 E DIVISION ST	CERTAIN GLYCOL ETHERS	0	0	0	0	0	0	0	0
KRAFT FOODS	2035 E BENNETT ST	NITRIC ACID	0	0	0	0	0	0	0	0
KRAFT FOODS	2035 E BENNETT ST	NITRATE COMPOUNDS	0	0	0	0	0	0	33136	0
LIBERTY INDUSTRIES	1660 W SKYLINE ST	STYRENE	5850	0	0	5850	750	0	0	6600
LITTON SYSTEMS INC. INTERCONNECT TECHNOLOGIES DIVISION	4811 W KEARNEY ST	LEAD COMPOUNDS	20	0	6.85	26.85	0	52	0	78.85
LITTON SYSTEMS INC. INTERCONNECT TECHNOLOGIES DIVISION	4811 W KEARNEY ST	COPPER COMPOUNDS	0	0	0	0	0	250	0	250
LITTON SYSTEMS INC. INTERCONNECT TECHNOLOGIES DIVISION	4811 W KEARNEY ST	FORMALDEHYDE	1664	0	0	1664	0	0	750	1664
LITTON SYSTEMS INC. INTERCONNECT TECHNOLOGIES DIVISION	4811 W KEARNEY ST	NITRIC ACID	5	0	0	5	0	0	0	5
LOREN COOK CO.	2707 N BARNES AVE	CHROMIUM	500	0	0	500	0	0	0	500
LOREN COOK CO.	2015 E DALE ST	CHROMIUM	500	0	0	500	0	0	0	500
LOREN COOK CO.	2015 E DALE ST	COPPER	500	0	0	500	0	0	0	500
LOREN COOK CO.	2015 E DALE ST	NICKEL	500	0	0	500	0	0	0	500
LOREN COOK CO.	2707 N BARNES AVE	COPPER	500	0	0	500	0	0	0	500
LOREN COOK CO.	2707 N BARNES AVE	MANGANESE	500	0	0	500	0	0	0	500
LOREN COOK CO.	2707 N BARNES AVE	NICKEL	500	0	0	500	0	0	0	500
LOREN COOK CO.	2015 E DALE ST	MANGANESE	500	0	0	500	0	0	0	500
NORTHSTAR BATTERY CO	4000 E CONTINENTAL WAY	LEAD COMPOUNDS	0.01	0	0	0.01	0	15.25	0	15.26

FAC_NAME	FAC_ADDRESS	CHEM_NAME	AIR	LAND	WATER	TOT_ONSITE	OFFSITE_DISP	POTW_MET	POTW_NON	TOT_REL
OZARKS CULTURED MARBLE	3740 E EVERGREEN ST	STYRENE	9623	0	0	9623	0	0	0	9623
PAUL MUELLER CO.	1600 W PHELPS ST	NICKEL	500	0	250	750	750	250	0	1750
PAUL MUELLER CO.	1600 W PHELPS ST	MANGANESE	500	0	250	750	750	250	0	1750
PAUL MUELLER CO.	1600 W PHELPS ST	COPPER	500	0	250	750	250	250	0	1250
PAUL MUELLER CO.	1600 W PHELPS ST	CHROMIUM	500	0	250	750	750	250	0	1750
PAUL MUELLER CO.	1600 W PHELPS ST	ALUMINUM (FUME OR DUST)	500	0	0	500	0	0	0	500
PAUL MUELLER CO.	1600 W PHELPS ST	XYLENE (MIXED ISOMERS)	12720	0	0	12720	0	0	5	12720
PAUL MUELLER CO.	1600 W PHELPS ST	SULFURIC ACID - ("ACID AEROSOLS" ONLY)	0	0	0	0	0	0	0	0
PURE-FLO PRECISION	3300 E PYTHIAN	NICKEL	250	0	250	500	250	5	0	755
PURE-FLO PRECISION	3300 E PYTHIAN	MANGANESE	5	0	250	255	5	5	0	265
PURE-FLO PRECISION	3300 E PYTHIAN	CHROMIUM	250	0	250	500	250	5	0	755
RIDEWELL CORP.	3715 E FR 94	TOLUENE	22920	0	0	22920	0	0	0	22920
SAFETY-KLEEN SYSTEMS (619302)	734 N WEST BYPASS 66	LEAD	0	0	0	0	0	0	0	0
SAFETY-KLEEN SYSTEMS (619302)	734 N WEST BYPASS 66	POLYCYCLIC AROMATIC COMPOUNDS	0	0	0	0	0	0	0	0
SAFETY-KLEEN SYSTEMS (619302)	734 N WEST BYPASS 66	ETHYLENE GLYCOL	2	0	0	2	0	0	0	2
SOUTHWEST POWER STATION	5050 FARM ROAD 164	MERCURY COMPOUNDS	66	26	0.1	92.1	0	0	0	92.1
SOUTHWEST POWER STATION	5050 FARM ROAD 164	DIOXIN AND DIOXIN-LIKE COMPOUNDS	0.26	0	0	0.26	0	0	0	0.26
SOUTHWEST POWER STATION	5050 FARM ROAD 164	HYDROCHLORIC ACID ("ACID AEROSOLS" ONLY)	21600	0	0	21600	0	0	0	21600
SOUTHWEST POWER STATION	5050 FARM ROAD 164	HYDROGEN FLUORIDE	43521	0	0	43521	0	0	0	43521
SOUTHWEST POWER STATION	5050 FARM ROAD 164	SULFURIC ACID - ("ACID AEROSOLS" ONLY)	47472	0	0	47472	0	0	0	47472
STAINLESS FABRICATION	4455 W KEARNEY ST	CHROMIUM COMPOUNDS	0	0	0	0	0	0	0	0
STAINLESS FABRICATION	4455 W KEARNEY ST	MANGANESE COMPOUNDS	0	0	0	0	0	0	0	0
STAINLESS FABRICATION	4455 W KEARNEY ST	NICKEL COMPOUNDS	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	CERTAIN GLYCOL ETHERS	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	TOLUENE	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	XYLENE (MIXED ISOMERS)	0	0	0	0	0	0	0	0

FAC_NAME	FAC_ADDRESS	CHEM_NAME	AIR	LAND	WATER	TOT_ONSITE	OFFSITE_DISP	POTW_MET	POTW_NON	TOT_REL
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	STYRENE	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	METHANOL	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	TETRACHLOROETHYLENE	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	TRICHLOROETHYLENE	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	1,2,4-TRIMETHYLBENZENE	0	0	0	0	0	0	0	0
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	DICHLOROMETHANE	1136	0	0	1136	250	0	0	1386
SUPERIOR SOLVENTS & CHEMICALS	2055 E BLAINE ST	METHYL ETHYL KETONE	0	0	0	0	0	0	0	0
SWEETHEART CUP	1100 N GLENSTONE	AMMONIA	1500	0	0	1500	0	0	0	1500
WEBCO INC.	711 N PRINCE LANE	TOLUENE	7884	0	0	7884	0	0	0	7884
WEBCO INC.	711 N PRINCE LANE	NICKEL	250	0	0	250	0	0	0	250
WEBCO INC.	711 N PRINCE LANE	MANGANESE	126	0	0	126	0	0	0	126
WEBCO INC.	711 N PRINCE LANE	CHROMIUM	253	0	0	253	0	0	0	253
WILLOW BROOK FOODS	501 N MAIN AVE	AMMONIA	750	0	0	750	0	0	0	750

EXPLANATION OF COLUMN ABBREVIATIONS

FAC_NAME - FACILITY NAME

FAC_ADDRESS - FACILITY ADDRESS

CHEM_NAME - CHEMICAL NAME

AIR - TOTAL CHEMICAL RELEASE (IN LBS.) TO AIR

LAND - TOTAL CHEMICAL RELEASE (IN LBS.) TO LAND

WATER - TOTAL CHEMICAL RELEASE (IN LBS.) TO SURFACE WATER

TOT_ONSITE - TOTAL ONSITE CHEMICAL RELEASE (REFERS TO ON-SITE DISCHARGES OF CHEMICALS TO AIR, WATER, AND LAND. INCLUDES PERMITTED, ACCIDENTAL AND NON-PERMITTED DISCHARGES.)

OFFSITE_DISP - OFFISTE DISPOSAL (REFERS TO CHEMICALS SENT OFF SITE FOR DISPOSAL IN PERMITTED HAZARDOUS WASTE LANDFILLS, AND WATER DISCHARGES OF METALS AND METAL COMPOUNDS TO POTWs)

POTW_MET - METALS AND METAL COMPOUNDS DISCHARGED TO POTWs (ALSO INCLUDED IN OFFSITE DISPOSAL CATEGORY DUE TO PASS THROUGH AT POTW)

POTW_NON - NON-METALS DISCHARGED TO POTWs

TOT_REL - TOTAL RELEASES (ON-SITE, POTW AND OFF-SITE DISPOSAL)

Note: For the air, land, and water releases, facilities can report range codes for releases less than 1000 lbs. The value "5" represents the range 1-10lbs. The value "250" represents the range 11-499. The value "750" represents the range 500-999.

KNOWN MAJOR OUTFALLS INVENTORY*

FEATURE TYPE	ADDRESS	LANDUSE
	FASSNIGHT CREEK WATERSHED	
10' X 3.5' BOX CULVERT	1451 S THELMA AV	RESIDENTIAL & COMMERCIAL
54" RCP	MAPLE PARK CEMETARY	RESIDENTIAL & COMMERCIAL
5' X 3.5' BOX CULVERT	FASSNIGHT BOX BETWEEN HOLLAND & KIMBROUGH	RESIDENTIAL
12' X 4' BOX CULVERT	KINGS AND BROOKSIDE (UNDERNEATH KINGS INTO CREEK)	RESIDENTIAL
	GALLOWAY CREEK WATERSHED	
47" X 31" BOX CULVERT	4300 BLK S LONE PINE AVE AT RAGAN CT	RESIDENTIAL
2 @ 36" CMP	3500 BLK S LONE PINE AVE, E SIDE OF RR	RESIDENTIAL
2 @ 42" RCP	W SIDE 3200 BLK S INGRAM MILL RD	COMMERCIAL & RESIDENTIAL
48" RCP	SE CORNER BARATARIA ST & CHANTILLY AVE	RESIDENTIAL
36"RCP	SE CORNER LUSTER AVE & SUNSET ST	RESIDENTIAL
42" CMP	400' S OF 2500 BLK E SUNSHINE ST, W SIDE OF RR	INDUSTRIAL
2 @ 42" CPVC & RCP PIPES	1855 S INGRAM MILL RD	COMMERCIAL
60" RCP	1855 S INGRAM MILL RD	COMMERCIAL
8.5' X 3' BOX CULVERT	SW CORNER 2620 E SUNSHINE ST	RESIDENTIAL & COMMERCIAL
48" CMP	2900 BLK E EASTMOOR DR	COMMERCIAL
2 @ 38" X 60" HECP	3103 E TOPPING CIRCLE	RESIDENTIAL
42" RCP	SE CORNER GLENSTONE AVE & SUNSET ST	RESIDENTIAL & COMMERCIAL
21 X 4 BOX CULVERT	S SIDE SUNSET ST AT BRENTWOOD AVE	RESIDENTIAL
	INMAN CREEK WATERSHED	
3@ 24" x 38" HECP	426 E MONTCLAIR ST	COMMERCIAL, RESIDENTIAL (APTS)
	JORDAN CREEK WATERSHED	
CHANNEL	NE CORNER 1200 BLK W NICHOLS & RR	COMMERCIAL, RESIDENTIAL, INDUSTRIAL
48" RCP	SE CORNER KANSAS EXPY/WALNUT ST	COMMERCIAL & INDUSTRIAL
36" RCP	N SIDE 1900 BLOCK W GRAND	COMMERCIAL
7' X 4' BOX CULVERT	S SIDE 1900 BLOCK W GRAND	COMMERCIAL
5' x 2' BOX CULVERT	E SIDE 900 BLOCK N FRANKLIN	RESIDENTIAL
2@8' X 5' BOX CULVERT	SW CORNER NICHOLS/BROADWAY	RESIDENTIAL
2@12' X 4' BOX CULVERT	S SIDE OF CHESTNUT EXPY, E OF FRANKLIN	RESIDENTIAL, COMMERCIAL
2@6' x 4' BOX CULVERT	JORDAN CREEK WEST OF GRANT AVENUE VIADUCT	INDUSTRIAL, COMMERCIAL
2@6' X 3' BOX CULVERT	319 N MAIN AV (FROM S INTO CREEK UNDER BUILDING)	INDUSTRIAL, COMMERCIAL
48" RCP	JORDAN CREEK AT BENTON VIADUCT (FROM 2 INTO CREEK)	INDUSTRIAL, COMMERCIAL
3.5' X 5.5' BOX CULVERT	JORDAN CREEK AT JEFFERSON AV (FROM S INTO CREEK)	INDUSTRIAL, COMMERCIAL
9' X 4' BOX CULVERT	JORDAN CREEK AT MAIN AV (FROM N UNDER MAIN)	INDUSTRIAL, COMMERCIAL
	JORDAN CREEK NORTH BRANCH WATERSHED	
36" RCP	NE CORNER CLAY/CENTRAL	COMMERCIAL, RESIDENTIAL
4.5' X 3' BOX CULVERT	JORDAN NB UNDER PROSPECT AV	RESIDENTIAL, COMMERCIAL
4' X 3.5' BOX CULVERT	JORDAN NB UNDER FREMONT AV	RESIDENTIAL, COMMERCIAL
43" X 27" CMP	S OF BLAINE AT NIAS	INDUSTRIAL, COMMERCIAL
6' X 2' BOX CULVERT	BLAINE/YATES (FROM N INTO CREEK)	RESIDENTIAL
	JORDAN CREEK SOUTH BRANCH WATERSHED	
42" RCP	JORDAN SB WEST OF NATIONAL AV (FROM N INTO CREEK)	COMMERCIAL
36" RCP	JORDAN SB UNDER NATIONAL AV (FROM N INTO CREEK)	COMMERCIAL
42" RCP	JORDAN SB UNDER NATIONAL AV (FROM S INTO CREEK)	COMMERCIAL
4' x 4' BOX CULVERT	N OF 1500 BLOCK W TRAFFICWAY(FROM S TO RR CHANNEL)	COMMERCIAL
4' X 6' BOX CULVERT	1630 E CHESTNUT EXPY	COMMERCIAL
3.5' X 3' BOX CULVERT	JORDAN SB UNDER GLENSTONE VIADUCT	COMMERCIAL
	PEA RIDGE CREEK WATERSHED	

6' x 4' BOX CULVERT	600 BLOCK E TURNER ST	RESIDENTIAL
2' X 2' BOX CULVERT	2244 N BOLIVAR RD	RESIDENTIAL, COMMERCIAL
6' X 4.5' BOX CULVERT	2244 N BOLIVAR RD	RESIDENTIAL, COMMERCIAL
5' X 3' BOX CULVERT	2244 N BOLIVAR RD	RESIDENTIAL
WARD BRANCH WATERSHED		
38" X 60" HECP	1062 E PENDLETON PL	RESIDENTIAL
2 @ 7' X 3' BOX CULVERT	1200 BLK E BRADFORD PKWY	COMMERCIAL
42" RCP	1465 E PRIMROSE ST	COMMERCIAL
60" RCP	1465 E PRIMROSE ST	RESIDENTIAL
2 @ 30" RCP	E SIDE 1630 E BRADFORD PKWY	COMMERCIAL
42" RCP	3700 BLK S WELLER	COMMERCIAL
36" RCP	3801 S NATIONAL AVE	COMMERCIAL
72" RCP	SW CORNER 3801 S NATIONAL AVE	COMMERCIAL
2 @ 72" RCP	1035 E REPUBLIC RD	COMMERCIAL
36" RCP	4109 S NATIONAL AVE	COMMERCIAL
WILSONS CREEK WATERSHED		
6' x 2.5' BOX CULVERT	1100 BLOCK S HILLCREST (FROM N INTO E-W CHANNEL)	RESIDENTIAL

*Major outfalls are identified as mapping of the MS4 progresses.

SOUTHWEST WASTEWATER PLANT LABORATORY
SPRINGFIELD, MISSOURI
METAL ANALYSIS DATA

SAMPLE NUMBER: 5979
SAMPLE NAME: STORM WATER 001

SAMPLE DATE: 4/7/03
DATE SUBMITTED: 4/7/03
TIME SUBMITTED: 16:45
SAMPLE TYPE: GRAB
SUBMITTED BY: LAMB
SET UP BY: LAMB

SAMPLE CODE: SE
REMOVED BY
TIME SAMPLER IN
TIME SAMPLER OUT
METER START
METER END

COMMENTS:
PCB + 603

ALL METALS METHOD EPA 200.7

MERCURY METHOD EPA 245.1

Total Metal Analysis	UG/L	**Total Recoverable Metal Analysis**	UG/L	**Total Dissolved Metal Analysis**	UG/L
CU		CU		CU	
CR	<10	CR		CR	
ZN	<5	ZN		ZN	
CD	<5	CD		CD	
PB	<20	PB		PB	
N1	<10	N1		N1	
AG	<5	AG		AG	
FE		FE		FE	
HG	<0.2	HG		HG	
MN		MN		MN	
BA		BA		BA	
SE	<20	SE		SE	
AS	<20	AS		AS	
AL		AL		AL	
SB	<20	SB		SB	
B					
CO		CO		CO	
TI		TI		TI	
BE	<20	BE		BE	
TL	<50	TL		TL	
K					
NA		NA		NA	
MO		MO		MO	
CA		CA		CA	
MG		MG		MG	
CR+6		CR+6		CR+6	
V		V		V	

CALCULATED HARDNESS MG EQ CACO3/L

SOUTHWEST WASTEWATER PLANT LABORATORY
SPRINGFIELD, MISSOURI
PESTICIDE DATA ANALYSIS

SAMPLE NUMBER: 5979
SAMPLE NAME: STORM WATER 001

SAMPLE DATE: 4/7/03
SAMPLE CODE: SE

SAMPLE TYPE: GRAB
SUBMITTED BY: LAMB

ORGANIC COMMENTS:

PESTICIDE EPA METHOD: 624

PESTICIDE CONC UNITS: UG/L

COMPOUND		COMPOUND	
ALDRIN	<0.005	ENDRIN	<0.005
ALPHA-BHC	<0.005	ENDRIN ALDEHYDE	<0.005
BETA-BHC	<0.005	HEPTACHLOR	<0.005
GAMMA-BHC (LINDANE)	<0.005	HEPTACHLOR EPOXIDE	<0.005
DELTA-BHC	<0.005	PCB-1242	<20
CHLORDANE	<0.005	PCB-1254	<20
4,4-DDT	<0.005	PCB-1221	<10
4,4-DDE	<0.005	PCB-1232	<10
4,4-DDD	<0.005	PCB-1248	<20
DIELDRIN	<0.005	PCB-1260	<20
ALPHA-ENDOSULFAN	<0.005	PCB-1016	<20
BETA-ENDOSULFAN	<0.005	TOXAPHENE	<0.025
ENDOSULFAN SULFATE	<0.005		

NR = NOT RUN

SOUTHWEST WASTEWATER PLANT LABORATORY
SPRINGFIELD, MISSOURI
ACID/BASE NEUTRAL ORGANIC ANALYSIS

SAMPLE NUMBER: 5979
SAMPLE NAME: STORM WATER 001

SAMPLE DATE: 4/7/03
SAMPLE CODE: SE

SAMPLE TYPE: GRAB
SUBMITTED BY: LAMB

ORGANIC COMMENTS:

B/NEPA METHOD 625 **B/NCONC UNITS** UG/L **ACIDS EPA METHOD** 625 **ACIDS CONC UNITS** UG/L

BASE NEUTRAL ORGANIC COMPOUNDS

N-NITROSODIMETHYLAMINE	<l0
BIS(2-CHLOROETHYL) ETHER	<10
1.3-DICHLOROBENZENE	<l0
1.4-DICHLOROBENZENE (BN)	<10
1,2-DICHLOROBENZENE (BN)	<10
BIS 2-CHLOROISOPROPYLE ETHER	<10
HEXACHLOROETHANE	<10
N-NITROSODI-N-PROPYLAMINE	<10
NITROBENZENE	<10
ISOPHORONE	<10
BIS 2-CHLOROETHOXY METHANE	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
HEXACHLOROBUTADIENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2-CHLORONAPHTHALENE	<10
DIMETHYLPHTHALATE	<10
ACENAPHTHYLENE	<10
2,6-DINITROTOLUENE	<10
ACENAPHTHENE	<10
2,4-DINITROTOLUENE	<10
DIETHYLPHTHALATE	<l0
FLUORENE	<l0
4-CHLOROPHENYL PHENYL ETHER	<10
N-NITROSODIPHENYLAMINE	<10
1,2-DIPHENYLHYDRAZINE	<10
4-BROMOPHENYL PHENYL ETHER	<l0
HEXACHLOROBENZENE	<10
PHENANTHRENE	<10
ANTHRACENE	<10

BASE NEUTRAL ORGANIC COMPOUNDS

DI-N-BUTYLPHTHALATE	<l0
FLUORANTHENE	<10
BENZIDINE	<10
PYRENE	<l0
BUTYLBENZYLPHTHALATE	<10
BENZO(A) ANTHRACENE	<l0
3,3-DICHLOROBENZIDINE	<l0
CHRYSENE	<10
B1S(2-ETHYLHEXYL) PHTHALATE	<10
DI-N-OXTYLPHTHALATE	<l0
BENZO(B) FLUORANTHENE	<10
BENZO(K) FLUORANTHENE	<l0
BENZO(A) PYRENE	<10
INDENO(1,2,3-C,D) PYRENE	< 10
DIBENZO(A,H) ANTHRACENE	<10
BENZO(B,H,I) PERYLENE	<10
2,3,7,8 TCDD (DIOXIN)	< 10
BROMOMETHOXYNAPHTHALENE	<10

ACID ORGANIC COMPOUNDS

PHENOL	<10
2-CHLOROPHENOL	<10
2-NITROPHENOL	<20
2,4-DIMETHYLPHENOL	<10
2,4-DICHLOROPHENOL	<l0
P-CHLORO-M-CRESOL	<10
2,4,6-TRICHLOROPHENOL	<10
2,4-DINITROPHENOL	<25
4,6-DINITRO-O-CRESOL	<25
PENTACHLOROPHENOL	<25
4-NITROPHENOL	<25

nR = NOT RUN

SOUTHWEST WASTEWATER PLANT LABORATORY
SPRINGFIELD, MISSOURI
VOLATILE ORGANIC ANALYSIS

SAMPLE NUMBER: 5979
SAMPLE NAME: STORM WATER 001

SAMPLE DATE: 4/7/03
SAMPLE CODE: SE

SAMPLE TYPE: GRAB
SUBMITTED BY: LAMB

ORGANIC COMMENTS:

VOLATILE EPA METHOD: 624

VOLATILE CONC UNITS: UG/L

COMPOUND		COMPOUND	
CHLOROMETHANE:	<10	TRANS 1,3-DICHLOROPROPENE:	<1
VINYL CHLORIDE:	<10	TRICHLOROETHYLENE:	<1
CHLOROETHANE:	<10	BENZENE:	<5
BROMOMETHANE:	<10	CIS 1,3-DICHLOROPROPENE:	<1
ACROLEIN:	<12	1,1,2-TRICHLOROETHANE:	<1
ACRYLONITRILE:	<22	DIBROMOCHLOROMETHANE:	<1
METHYLENE CHLORIDE:	<5	BROMOFORM:	<1
TRICHLOROFLUOROMETHANE:	<10	1,1,2,2-TETRACHLOROETHYLENE:	<1
1,1-DICHLOROETHYLENE:	<1	1,1,2,2-TETRACHLOROETHANE:	<1
1.1-DICHLOROETHANE:	<1	TOLUENE:	<5
TRANS1.2-DICHLOROETHYLENE:	<1	CHLOROBEN2ENE:	<5
CHLOROFORM:	<1	ETHYLBENZENE:	<5
1.2-DICHLOROETHANE:	<1	2-CHLOROETHYL VINYL ETHER:	<10
1,1,1-TRICHLOROETHANE:	<1	DICHLORODIFLUOROMETHANE:	<10
CARBON TETRACHLORIDE:	<1	BIS(CHLOROMETHYL) ETHER:	<10
BROMODICHLOROMETHANE:	<1	XYLENE:	<10
1,2-DICHLOROPROPANE:	<1		

NR = NOT RUN

Biological Assessment of Urban Streams
Explanation and Rationale

Principal Investigator: Daniel W. Beckman
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Graduate Assistant: Michael Kromrey

Southwest Missouri State University, Springfield, Missouri 65804

Project Goals

The goal of this project is to collect data from the fish, benthic macroinvertebrate, and periphyton communities and use the Index of Biotic Integrity (IBI) for each community to assess the ecological health of the associated sites. In addition to overall ecological health, biomass estimates of periphyton and physical habitat measurements will be conducted. The protocol for this project will be conducted according to the Second Edition of Rapid Bioassessment Protocols for Use in Wadeable Streams and Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, (EPA RBPs) published by the U.S. Environmental Protection Agency.

Methodology

The sample sites selected are Galloway Creek at James River Freeway and Jordan Creek at Bennett Street, Springfield, Missouri. A 100-meter stretch of stream will be sampled, according to the EPA RBPs (EPA 2002), upstream from the bridges at each site to minimize the bridge's effect on stream velocity, depth, and habitat quality. Local research suggests bridges can show different fish IBIs relative to the rest of the stream (Keener 2003), encouraging the choice of an upstream location to achieve the most representative results.

The information gathered by sampling each community will be used to calculate an Index of Biotic Integrity (IBI). More specifically, the organisms caught are identified, tallied, sorted into metrics, and the numbers used to calculate a metric value. The metric is a number that indicates the health of that community in comparison to a regional reference. Protocols for sampling each community will follow the EPA RBP guidelines. The following paragraphs summarize the methodology of the EPA RBPs.

Periphytion Sampling

"Multihabitat sampling best characterizes the benthic algae in the reach," (EPA, 2002) and should provide a big picture view of the periphyton community. Using the multihabitat approach, the size of the periphyton site is suggested to be 30 to 40 stream widths. Our periphyton sample site overlaps the sample sites for Benthic Macroinvertebrates and Fish. The actual sampling consists of collecting samples from all available substrates to compose a single composite sample representative of that reach of stream. For reference, the details to achieve this are found in steps 1 through 9 of the EPA RBPs on pages 6-2 through 6-4. Periphyton sampling will be conducted in September 2004 and February 2005.

Algal biomass is assessed using the Field-Based Rapid Periphyton Survey. This approach encompasses a larger area, is faster and more cost effective, and requires lab processing only for verifying identification**.** The details of the technique to be used are found in steps 1-6 of the EPA RBPs on pages 6-18 and 6-19**.** In summary, the sampling involves selecting transects, and using a grid to try to quantify algal biomass at points along each transect. Algal biomass will be sampled using this method in September 2004 during a period of base-flow and warm temperatures that should represent an approximate maximum for the year. Algal biomass sampling will be conducted again in February 2005. Depending on the experience of using the field-based method in September

2004, another sampling method may be considered in February 2005. With the field-based method it may be difficult to produce consistent, quantitative results on a long term study.

Benthic Macroinvertebrate Sampling

Sampling of benthic macroinvertebrates will take place according to the EPA RBP Field Sampling Procedures for Multi-habitats. This approach is designed for a 100-meter stretch with representative habitats. A sketched map of the stretch of stream is made, indicating habitat types. The collection is then taken with a kick seine and a D-frame dip net, according to the habitat. The amount of each habitat sampled is in approximate proportion to their representation. The details of this technique are found on pages 7-7 to 7-13 of the EPA RBP manual.

The first round of sampling at both sites will occur in September 2004. The specimens will be identified, labeled and archived by the next round of sampling in February 2005.

Fish Sampling

The Missouri Department of Conservation has used the EPA RBP as a framework for a statewide bioassessment initiative. The MDC protocol is appropriate for this project because it includes appropriate site size, and specifies local fish species in the metrics. Another benefit of this protocol is that this study can be compared to the other fish IBI work done in the area, and across the state. The only major difference is that the sites chosen for this study have not been randomly selected.

To conduct this sampling, the sample length is determined, measured, and then isolated with block nets. A team of four to six individuals collects with electrofishing gear and seines, and identifies and counts fishes. All fish over 20 cm are included. If there is any question of the identity, specimens are returned to the laboratory.

Sampling will be conducted in August 2004 and February 2005. After any necessary lab identifications are completed, IBIs will be calculated.

Physical Habitat Assessment

The physical habitat assessment will be carried out to offer clues to the cause of biotic characteristics, as well as provide valuable baseline information to assess change over time. The habitat assessment will be modeled after the EPA RBPs and include measures of stream widths and depths, and characterization of habitat types, substrate, and riparian zone characteristics.

References

MDC. 2001. Resource assessment and monitoring program standard operation procedures – fish sampling. Missouri Department of Conservation Fisheries Division.

U.S. Environmental Protection Agency (EPA). 2002. Rapid Bioassessment Protocols for use in wadeable Streams and Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, 2nd Edition. EPA Office of Water. Monitoring Water Quality.
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Keener, M. 2003. The Effect of Bridge Crossings on the Index of Biotic Integrety of Fish. Masters Thesis, Southwest Missouri State University. Springfield, Missouri. 2003.