

Table 1.—Number of archeological sites within St. Joseph River basin, listed by valley segment and congressional township. Data from B. Mead, Office of the State Archaeologist, personal communication.

Segment and county	Township	Number of sites
Headwaters		
Hillsdale	T5S, R4W	4
Hillsdale	T6S, R2W	1
Hillsdale	T6S, R4W	1
Upper		
Branch	T5S, R5W	4
Branch	T5S, R6W	6
Branch	T5S, R7W	2
Branch	T5S, R8W	3
Branch	T6S, R5W	4
Branch	T7S, R5W	1
Branch	T6S, R6W	10
Branch	T6S, R7W	3
Branch	T6S, R8W	5
Branch	T7S, R6W	6
Cass	T4S, R7W	2
St. Joseph	T6S, R9W	44
St. Joseph	T5S, R9W	66
Middle		
Kalamazoo	T2S, R9W	1
Kalamazoo	T3S, R9W	16
St. Joseph	T5S, R10W	19
Kalamazoo	T3S, R10W	70
Kalamazoo	T4S, R9W	2
Kalamazoo	T4S, R10W	9
Kalamazoo	T4S, R11W	21
St. Joseph	T5S, R11W	7
Kalamazoo	T4S, R12W	17
St. Joseph	T5S, R12W	1
Cass	T5S, R13W	6
Cass	T6S, R13W	2
Branch	T7S, R8W	5
Branch	T8S, R13W	3
Branch	T8S, R7W	4
St. Joseph	T6S, R12W	1
St. Joseph	T7S, R9W	1
St. Joseph	T6S, R10W	4
St. Joseph	T6S, R11W	3
St. Joseph	T7S, R10W	1
St. Joseph	T7S, R11W	1
St. Joseph	T7S, R12W	1
St. Joseph	T8S, 12W	3

Table 1.–Continued.

Segment and county	Township	Number of sites
Cass	T7S, R13W	4
Cass	T8S, R13W	7
Cass	T6S, R14W	10
Cass	T7S, R14W	4
Lower		
Berrien	T8S, R17W	15
Van Buren	T4S, R13W	1
Van Buren	T4S, R14W	2
Cass	T5S, R14W	12
Cass	T5S, R15W	3
Cass	T5S, R16W	5
Cass	T6S, R16W	10
Cass	T6S, R15W	10
Cass	T7S, R15W	9
Cass	T7S, R16W	8
Cass	T8S, R15W	3
Berrien	T7S, R17W	24
Berrien	T7S, R17W	29
Berrien	T8S, R18W	9
Berrien	T6S, R17W	19
Berrien	T6S, R18W	18
Berrien	T5S, R17W	40
Berrien	T5S, R18W	25
Mouth		
Berrien	T6S, R19W	4
Berrien	T5S, R19W	14
Berrien	T4S, R17W	2
Berrien	T4S, R18W	4
Berrien	T4S, R19W	11

Table 2.—St. Joseph River and tributary average discharge summary. Watershed area corresponds to area upstream of each gauge location. Data from United States Geological Survey.

Segment and river	Location	Average discharge (cfs)	Watershed area (mi <sup>2</sup> )	Discharge per mi <sup>2</sup>
<b>Headwaters</b>				
Beebe Creek	Hillsdale	35.8	42.4	0.84
Soap Creek	Litchfield	11.9	10.9	1.09
St. Joseph	Burlington	177.0	206.0	0.86
<b>Upper</b>				
Hog Creek	Allen	43.4	48.7	0.89
Coldwater River	Hodunk	252.6	293.0	0.86
Nottawa Creek	Athens	153.0	162.0	0.94
<b>Middle</b>				
Gourdneck Canal	Schoolcraft	4.7	7.3	0.64
Portage River	Vicksburg	59.2	68.2	0.87
St. Joseph	Three Rivers	1177.0	1350.0	0.87
Prairie	Nottawa	97.3	106.0	0.92
Fawn River	White Pigeon	159.1	192.0	0.82
St. Joseph	Mottville	1643.0	1866.0	0.88
Pigeon Creek	Angola	81.9	106	0.77
Pigeon	Scott	367.0	361.0	1.02
Little Elkhart	Middlebury	102.0	97.6	1.05
Pine Creek	Elkhart	19.7	31.0	0.54
Rimmell Branch	Albion	10.8	10.7	1.01
N.B. Elkhart	Cosperville	141.0	142.0	0.99
Solomon Creek	Syracuse	36.3	36.1	1.01
Forker Creek	Burr Oak	17.9	19.2	0.93
Elkhart	Goshen	537.0	594.0	0.90
<b>Lower</b>				
Juday Creek	South Bend	22.9	38.0	0.60
St. Joseph	Niles	3403.0	3666.0	0.93
Dowagiac	Sumnerville	300.0	255.0	1.18
St. Joseph River	Berrien Springs	3928.0	4081.0	0.96
<b>Mouth</b>				
Paw Paw	Riverside	462.0	390.0	1.18
St. Joseph	Benton Harbor	4598.0	4670.0	0.98

Table 3a.—Flow stability indices in the St. Joseph River watershed, calculated from miscellaneous and short-time frame stream flow data. Numbers bolded indicate poor flow stability. Data from United States Geological Survey.

Location	Flow index*	Classification
Headwaters		
St. Joseph River @ Burlington	5.9	fair
Upper		
Hog Creek @ Allen	<b>12.2</b>	poor
Coldwater River @ Hodunk	<b>10.5</b>	poor
Nottawa Creek @ Athens	4.4	good
Middle		
Gourdneck Canal	3.6	good
St. Joseph @ Three Rivers	4.2	good
Prairie River @ Nottawa	4.4	good
St. Joseph River @ Mottville	3.9	good
Pigeon River near Scott	4.9	good
Pigeon Creek	7.6	fair
Little Elkhart River	4.3	good
Pine Creek	4.0	good
Forker Creek	<b>36.3</b>	poor
Rimmell Branch	<b>35.8</b>	poor
Solomon Creek	3.2	good
Turkey Creek	<b>23.5</b>	poor
North Branch Elkhart	7.5	fair
Elkhart River @ Goshen	6.4	fair
St. Joseph River @ Elkhart	3.8	good
Lower		
St. Joseph River @ Niles	3.5	good
Dowagiac River	2.6	good
Mouth		
Paw Paw River @ Riverside	3.0	good

\* Flow index is calculated using the ratio between mean high flow to mean low flow. The highest mean monthly flow and lowest mean monthly flow for a year are averaged for several years at a specific site to calculate the overall mean high and low flows

Table 3b.—Definition of flow stability indices using ratio of mean high flow to mean low flow. Data from P. Seelbach, Michigan Department of Natural Resources, Fisheries Division.

Flow index	Classification	Description
1.0 - 2.0	very good	typical of self sustaining trout streams
2.1-5.0	good	better warmwater rivers
5.1-10	fair	somewhat flashy warmwater rivers
>10	poor	very flashy warmwater river

Table 4.–Communities participating in the National Flood Insurance Program. Data from Federal Insurance Administration, Federal Emergency Management Agency (1991).

Segment and community name	County	Date of current map
<b>Headwaters</b>		
City of Hillsdale	Hillsdale	1988
City of Litchfield	Hillsdale	1987
Burlington Township	Calhoun	1987
<b>Upper</b>		
Coldwater Township	Branch	
City of Coldwater	Branch	
Colon Township	St. Joseph	1988
Village of Colon	St. Joseph	1988
City of Athens	Calhoun	
Eckford Township	Calhoun	1986
Fredonia Township	Calhoun	1987
Newton Township	Calhoun	1986
Leroy Township	Calhoun	1967
Mendon Township	St. Joseph	1987
<b>Middle</b>		
Oshtemo Charter Township	Kalamazoo	
Village of Vicksburg	Kalamazoo	1987
Nottawa Township	St. Joseph	1989
City of Three Rivers	St. Joseph	1990
Village of Centreville	St. Joseph	1988
Lockport Township	St. Joseph	1989
Fabius Township	St. Joseph	1988
Village of Constantine	St. Joseph	1986
Village of Vandalia	Cass	1979
Village of Edwardsburg	Cass	1979
Village of Cassopolis	Cass	1979
<b>Lower</b>		
City of Niles	Berrien	1987
Niles Township	Berrien	1986
Silver Creek Township	Cass	1988
City of Dowagiac	Cass	
LaGrange Township	Cass	1986
City of Buchanan	Berrien	1975
Buchanan Township	Berrien	1976
Village of Berrien Springs	Berrien	1986
Berrien Township	Berrien	1988
Oronoko Township	Berrien	1986
Royalton Township	Berrien	1977
Sodus Township	Berrien	1978

Table 4.–Continued.

Segment and community name	County	Date of current map
<b>Mouth</b>		
Lake Township	Berrien	1979
Lincoln Township	Berrien	1978
Almena Township	Van Buren	
Arlington Township	Van Buren	1985
Village of Paw Paw	Van Buren	1979
City of Watervliet	Berrien	1983
Watervliet Township	Berrien	1983
City of Coloma	Berrien	1980
Coloma Township	Berrien	1984
Hagar Township	Berrien	1977
City of Benton Harbor	Berrien	1978
Benton Township	Berrien	1978
City of St. Joseph	Berrien	1978
St. Joseph Township	Berrien	1980

Table 5.—Actual and expected channel widths, in feet, for gauge sites within the St. Joseph River. Numbers in bold indicate stream width is significantly smaller than expected width based on average discharge. Data from United States Geological Survey, 1995. Width and discharge (Q) measurements were used to calculate expected width as follows:

$$\text{Lower 95\% width} = 10^{(0.662895 + (0.471522 * \log(Q)))};$$

$$\text{Expected mean width} = 10^{(0.741436 + (0.498473 * \log(Q)))};$$

$$\text{Upper 95\% width} = 10^{(0.819976 + (0.525423 * \log(Q)))}.$$

Segment and river	Width (ft)	Average discharge (cfs)	Lower 95% width (ft)	Expected mean width (ft)	Upper 95% width (ft)
Headwaters					
St. Joseph	66	177.0	52.9	72.8	100.3
Upper					
Nottawa Creek	63	153.0	49.3	67.7	92.9
Hog Creek	28	43.4	27.2	36.1	47.9
Middle					
St. Joseph	180	1177.0	129.1	187.1	271.3
Prairie	56	97.3	39.8	54.0	73.2
St. Joseph	275	1643.0	151.1	221.0	323.3
Pigeon	82	251.0	61.6	85.7	119.2
<b>Pigeon Creek</b>	<b>28</b>	52.4	29.8	<b>39.7</b>	52.9
Little Elkhart	42	93.1	37.8	51.1	69.2
Pine Creek	20	14.8	15.6	20.1	25.9
<b>Forker Creek</b>	<b>15</b>	23.4	16.2	<b>21.2</b>	27.7
Rimmell Branch	9	2.5	6.5	7.9	9.8
Solomon Creek	26	37.2	24.2	31.9	42.2
Elkhart	52	121.0	42.5	58.0	79.1
Elkhart	147	664.0	90.2	128.8	184.1
St. Joseph	364	3006.0	192.2	285.8	425.0
Lower					
<b>Juday Creek</b>	<b>18</b>	21.2	19.0	<b>24.7</b>	32.2
St. Joseph	220	3403.0	212.9	317.7	473.9
<b>Dowagiac</b>	<b>48</b>	300.0	67.8	<b>94.7</b>	132.3
Mouth					
<b>Paw Paw</b>	<b>75</b>	462.0	83.1	<b>117.4</b>	166.0

Table 6.—Information on St. Joseph River dams and impoundments. Dam purpose: flood control (C), hydroelectric (H), retired hydroelectric (RH), irrigation (I), recreation (R), water supply (S), or other (O). Hazard type: 1=high, 2=significant, and 3=low. High hazard--loss of life would occur; significant hazard--large amounts of property damage would occur. Blanks indicate no data available. Data from Michigan Department of Environmental Quality, Land and Water Management Division and Indiana Department of Natural Resources, Division of Water.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Headwaters									
Baw Beese Lake Control	St. Joseph River	1837	R	City	12	11	20	1.8	2
Hillsdale College Dam	St. Joseph River		O	College	3	2	0	0.0	3
Lewis Emery County Park #2	St. Joseph River tributary	1934	O	County	8	47	150	3.2	3
Lake Bel Air Control	Beebe Creek	1966	R	Private	8	103	412	4.0	3
Jonesville Millpond Dam	St. Joseph River	1872	R	City	7	35	90	2.6	3
Litchfield Dam	St. Joseph River	1846	O	City	5	13	26	2.0	3
Loveles Dam	No Name Creek	1972	R	Private	6	1	14	14.0	3
Randall Milling Dam	St. Joseph River	1836	O	Private	5	20	40	2.0	3
Mc Gee Dam	St. Joseph River	1957		Private	5	1	0	0.0	3
Upper									
Coldwater Lake Control	Coldwater River	1962	R	County	1	1610	0	0.0	3
Rose Lake Control	Betts Drain	1959	R	County	1	355	0	0.0	3
Little Rose Lake Dam	Little Rose Lake outlet	1960	R	County	2	14	12	0.9	3
Marble Lake Dam	Coldwater River	1962	O	County	4	780	1968	2.5	3
Randalls Dam	Coldwater River	1838	R	City	5	14	50	3.6	2
Blackhawk Dam	Coldwater River	1830	R	County	13	200	1020	5.1	3
Hog Creek Dam	Hog Creek		R	County	2	386	112	0.3	3
Union Lake (Riley Dam)	St. Joseph River	1900	H	City	16	518	3240	6.3	2
Trine Dam	Otto Drain	1960	R	Private	6	2	5	2.5	3
Briskey Pond Dam	Bowen Creek	1970	R,O	Private	1	5	20	4.0	2
Hanchett Lake Control	Hanchett Lake outlet	1967	R	County	1	25	10	0.4	3
Stancer Dam	Coldwater River	1835	R	Private	3	4		0.0	3



Table 6.—Continued.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Maxsons Dam	Hog Creek	1875		Private	1	2	0	0.0	3
Sharpe Dam	Hog Creek	1900	O	Private	2	3	2	0.7	
Matteson Lake Control	Swan Creek	1966	R	County	2	256	245	1.0	3
Swan Creek Dam	Swan Creek			County	1	5	0	0.0	3
Palmer and Long Lake Control	Swan River	1839	RH	City	8	670	2400	3.6	3
Rearing Pond Dam	St Joseph River tributary			City	1	3	0	0.0	3
Cotton Lake Dam	Cotton Lake outlet			Private					
Athens Dam	Nottawa Creek	1956	R	City	13	1	2	2.0	3
Nottawa Lake Control	Nottawa Creek	1964	R	Private	2	138	110	0.8	3
Leonidus Roller Mill Dam	Nottawa Creek	1880	R	Private	9	1	80	80.0	3
Kings Mill Dam	Nottawa Creek	1836	R	County	8	23	110	4.8	3
Beaver Lake Control	Beaver Drain		R,O	County	2	166	43	0.3	3
Middle									
Three Rivers Dam	St. Joseph River	1917	H	Private	12	240	3650	15.2	1
Sturgis Dam	St. Joseph River	1912	H	City	26	480	6550	13.6	1
Taylor Dam	Portage River		R	Private	4	42	67	1.6	3
Scotts Dam	Scotts Creek	1859	R	County	15	8	170	21.3	2
Cooks Mill Dam	Portage River	1870	R	Private	16	100	100	1.0	2
Sunset Lake	Portage Creek	1850	S	Private	11	97	320	3.3	
Sugarloaf Lake	Sugarloaf Lake outlet	1937	O	Private	5	1	1	1.0	3
Portage Plant Dam	Portage River	1922	RH	Private	12	81	900	11.1	1
Parkville Dam	Portage River		O	Private	1	1	0	0.0	3
Pollack Dam	Pollocks Pond outlet	1920	RH	Private	6	1	0	0.0	3
No Name	Rocky River		O	Private	1	5	0	0.0	3
Streater Mill Dam	Rocky River	1840	R	Private	10	4	20	5.0	2
Pyle Dam	Shelden Creek	1960	O	Private	4	1	1	1.0	3
Fox and Bears Dam	Flowerfield Creek	1840	RH	Private	8	5	20	4.0	3

Table 6.—Continued.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Flowerfield Dam	Flowerfield Creek	1850	R	City	5	6	35	5.8	3
Corey Lake Control	Corey Lake outlet	1974	R	Private	1	567	215	0.4	3
Pleasant Lake Control	Pleasant Lake outlet	1968	R	Private	2	262	210	0.8	3
Mayes Dam	Four County Drain			Private	1	2	0	0.0	3
Kaiser Lake Control	Kaiser Lake outlet			Private	1	89	0	0.0	
Springs Mill Dam	Kerr Creek		O	Private	6	4	12	3.0	
Leverence Dam	Kerr Creek	1920	O	Private	8	5	0	0.0	
Harwood Lake Control	Harwood Lake outlet	1932	R	County	3	129	155	1.2	
Fish Lake	Unnamed			C					
Perry Dam	Omena Lake outlet	1967	R	Private	2	2	0	0.0	
Teeny Tiny Lake Dam	Spring Creek			R	Private	3	1	1.0	
Lake Templene Dam	Prairie River	1972	R	Private	14	950	5225	5.5	2
Centreville Dam	Prairie River	1890	H	Private	7	37	100	2.7	
Brown Lake Dam	Brown Lake outlet	NA	R	Private	12				
Jimmerson Lake Dam	Crooked Creek	1945	C,R	IDNR	13	305		0.0	
Crooked Lake	Crooked Lake outlet			C,R	Private				
Lake Gage	Lake Gage outlet			C,R	Private				
Lake George	Crooked Creek	1927	C,R	Private	15	538		0.0	
Fawn R. Fishery D.@ Orland	Fawn River			O	IDNR	10	2	0.0	
Mud Lake	Fawn River			R	Private	14			
Wall Lake	Fawn River			R	Private				
Greenfield Mills Dam	Fawn River	1835	H	Private	27	13		0.0	
Fawn River Mill Dam	Fawn River	1830	H	Private	5	15	55	3.7	3
Star Mill Dam	Fawn River			H	Private	6			
Klinger Lake Control	Fawn River	1969	R	Private	2	830	665	0.8	
Upper Constantine Dam	Fawn River	1948	RH	Private	9	90	404	4.5	1
Fawn River Power Company	Fawn River	1830	R	City	13	100	160	1.6	

Table 6.—Continued.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Mottville Dam	St. Joseph River	1923	H	Private	11	487	3570	7.3	1
Constantine Hydro Dam	St. Joseph River	1873	H	Private	12	555	2800	5.0	1
Hartenstene Dam	Mill Creek	1912	RH	Private	21	69	600	8.7	
Gordon T. Anderson Earthen	Pigeon Creek		S,R	Private	18	25		0.0	
Fox Lake	Pigeon Creek		C,R	Private					
Silver Lake Control Structure	Silver Lake outlet		C	IDNR					
Otter Lake (West)	Pigeon Creek		R	Private					
Lake Of The Woods	Turkey Creek		C,R	Private					
Mongo Reservoir Dam	Pigeon River	1920	R	IDNR	17	73		0.0	
Lake of The Woods	Lake of the Woods outlet								
Big Long Lake	Big Long Lake outlet		R	Private					
Pretty Lake	Pretty Lake outlet		R	IDNR					
Big Turkey Lake	Turkey Creek		R	IDNR					
Nasby Lake Dam	Pigeon River	1925	R	IDNR	17	40		0.0	
Ontario Millpond Dam	Pigeon River	1920	R	IDNR	15	100		0.0	
North Twin Lake	North Twin Lake outlet		R	Private					
Pigeon River Dam	Pigeon River		R	IDNR					
Shipshewana Lake	Page Ditch		R	IDNR					
Stone Lake	Stone Lake outlet		R	Private					
Fish Lake Nr. Scott	Fish Lake outlet		R	Private					
Adams Lake	Little Elkhart Creek	1952	R	IDNR					
Cliff Pettit Dam	Little Elkhart Creek		S	Private	8				
Little Elkhart River Dam	Little Elkhart River		H	Private					
Birch Lake Control	Birch Lake outlet	1885	R	Private	1	300	120	0.4	3
Shavehead Lake Control	Mud Creek	1960	R	County	3	93	260	2.8	3
Lower Stamp Dam	Mud Creek	1988		Private	5	2	4	2.0	3
Upper Stamp Dam	Mud Creek	1988		Private	11	1	2	2.0	

Table 6.—Continued.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Williamsville Mill Dam	Mud Creek	1885	R	Private	1	7	0	0.0	
Depa Dam	Sweets Creek	1960		Private	7	14	0	0.0	
No Name	Trout Creek		O	Private	5	16	10	0.6	3
Centenial Mill Dam	Mud Creek	1895	RH	Private	7	13	70	5.4	
Blackman Lake	Adams Lake		R	Private					
High Lake	Carrol Creek		R	Private					
Messick Lake	Elkhart River		R	IDNR					
Rivir Lake Control	Forker Creek		R	IDNR					
Oliver Lake	Oliver Lake outlet		R	IDNR					
Bear Lake	Unnamed		R	IDNR					
Bixler Lake	Bixler Lake Ditch		R	City					
Skinner Lake	Croft Ditch		R	IDNR					
Lake Barbara Dam	Elkhart River	1979	R	Private	11				
Lower Long Lake	Elkhart River		R	County					
Richard Grieger Lake	Elkhart River		R	Private					
Latta Lake	Latta Lake outlet		R	Private					
Marvin Morgan Dam	Offstr-Croft Ditch	1973	S,R	Private	18				
Lake Maxler Dam	Round Lake	1964	R	Private	20	26		0.0	
Sylvan Lake Dam	Sylvan Lake outlet	1837	R	Private	30				
Little Long Lake	Waterhouse Ditch	1969	R	Private					
Waldron Lake (West Lakes)	Elkhart River		R	IDNR					
Flatbelly Lake Dam	Flatbelly Lake outlet	1962	O	Private	17	3		0.0	
Papakeechee Lake	Papakeechee Lake	1913	R	Private	10	178		0.0	
Shock Lake Dam	Shock Lake outlet		R	IDNR	6	35		0.0	
Dewart Lake	Hammond Ditch	1965	R	Private					
Syracuse Lake	Turkey Creek		R	City					
Benton Dam	Elkhart River		R	County	4				

Table 6.—Continued.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Bainter Town Dam	Elkhart River		R	County	4				
Bainter Town Hydro Plant	Elkhart River		H	County	18				
Goshen Pond Dam	Elkhart River	1868	R	County	16	122		0.0	
Elkhart River Dam	Elkhart River		R	City	10				
Bonneyville Mill Dam	Elkhart River		R	County					
Heaton Lake Control	Puterbaugh Creek		R	Private					
Elkhart Dam	St. Joseph River	1913	H	Private	28				
Diamond Lake Dam	Christiana Creek	1968	O	Private	3	680	816	1.2	3
Adamsville Mill Dam	Christiana Creek	1865	H,R	City	8	398	1590	4.0	1
Eagle Lake Level Control	Eagle Lake outlet	1989	R	Private	2	288	230	0.8	3
Lower									
Twin Branch Plant Dam	St. Joseph River	1904	H	Private	33				
South Bend Dam	St. Joseph River	1930	C	City	12				
Warton Lake (Goodman)	Unnamed		R	Private					
Garver Lake Control	Garver Lake outlet	1959	R	Private	2	44	35	0.8	3
Niles French Paper Dam	St. Joseph River	1887	H	Private	13	80	510	6.4	1
Lake of the Woods Control	Lake of the Woods Drain	1952	R	County	1	265	105	0.4	3
Priest Lake Control	Priest Lake outlet	1974	R	Private	7	15	70	4.7	3
Magician Lake Control	Silver Creek	1964	R	Private	2	498	55	0.1	3
Meyer Dam	Dowagiac Creek	1957	I	Private		1		0.0	3
Finch Lake Control	Dowagiac Creek	1941	R	County	1	114	0	0.0	3
Gravel Lake Control	Gravel Lake outlet	1950	R	Private	2	296	235	0.8	3
Benedict Mill Dam	Dowagiac Creek	1895	R	Private	11	7	30	4.3	3
LaGrange Lake Dam	Dowagiac Creek	1835	R	Private	8	600	1920	3.2	2
Upper Mill Dam	Dowagiac Creek	1970	R	Private	11	125	700	5.6	1
Lower Mill Dam	Dowagiac Creek	1826	R	City	8	6	30	5.0	1
Arthur Dodd Roadside Dam	Dowagiac River	1980		County	4				3

Table 6.—Continued.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Graber Dam	Mud Lake Ext Drain	1990	R	Private	4	2			3
Glover Dam	Kimmerlee Creek	1965	Removed	Private	4	5	0	0.0	3
Pucker Street Dam	Dowagiac River	1928	RH	City	22	49	580	11.8	1
Neib Dam	McKinzie Creek			Private	1	18	0	0.0	3
Buchanan Dam	St. Joseph River	1902	H	Private	13	300	2000	6.7	1
Christie Dam	Madron Lake outlet	1966	R	Private	1	3	18	6.0	3
McCoy Creek Dam	McCoy Creek	1919	O	Private	4	2	3	1.5	3
Trickett Dam	Painter Creek	1969	R	Private	8	28	91	3.3	3
Berrien Springs Dam	St. Joseph River	1908	H	Private	24	600	5500	9.2	1
Fisher Dam	Farmsers Creek	1972		Private	1	1	0	0.0	3
Oronoko Lakes Dam	Lemon Creek			Private	1	20	0	0.0	3
Storick Dam	Lemon Creek	1967	I	Private	6	4	30	7.5	3
Andres Dam	Love Creek	1959	I	Private	1	1	1	1.0	3
Rowe Lake Control	Pipestone Creek	1970	R	County	3	31	37	1.2	3
Andres Dam	Pipestone Creek	1959	I	Private	8	1	1	1.0	3
Mouth									3
Wolf Lake Fish Hatchery	Campbell Creek	1930	O	MDNR	6	51	56	1.1	3
Old Masonry Dam	Hayden Creek		O	MDNR	7	0	0		2
Blocker's Pond Dam	Blocker's Pond outlet	1951	R	Town.	12	3	14	4.7	3
Brandywine Lake Control	Brandywine Creek	1971	R	Town.	1	70	30	0.4	3
Adams Dam	Paw Paw River	1946	R	Private	4	2	0	0.0	3
Maple Lake Dam	Paw Paw River	1907	RH	City	17	168	1846	11.0	3
Briggs Mill Dam	Paw Paw River	1898	H,R	City	9	24	7	0.3	2
Paw Paw Lumber Dam	Paw Paw River	1892	R	Private	12	3	15	5.0	3
Wasman Dam	Paw Paw River tributary	1860	R,O	Private	4	19	30	1.6	3
Pugsley Lake Control	Pugsley Lake outlet	1970	R	Private	3	150	180	1.2	3
Reynolds Lake Control	Red Creek	1975	R	Private	1	123	35	0.3	3

Table 6.—Continued.

Segment and dam name	Stream	Date built	Current purpose	Owner	Head (ft)	Surface acres	Storage (acre-ft)	Average depth (ft)	Hazard type
Schafer Lake Control	Schafer Lake outlet	1978	R	Private	1	81	30	0.4	3
Heuser Dam	Paw Paw River	1963	R,O	Private	1	4	28	7.0	3
Van Auken Lake Control	Paw Paw River	1959	R	County	1	244	100	0.4	3
Paw Paw Lake Control	Paw Paw Lake outlet	1979	R	County	1	900	0	0.0	3
Watervliet Dam	Paw Paw River	1849	RH	Private	8	106	340	3.2	3
Hibbard Lake Dam	Hibbard Lake outlet			Private	1	20	0	0.0	3
McCormick Dam	Paw Paw tributary			Private	1	4	0	0.0	
O'leary Dam 1	Paw Paw tributary			Private	1	3	0	0.0	3
O'leary Dam 2	Paw Paw tributary			Private	1	20	0	0.0	3
Schmuhl Dam	Paw Paw River	1958	I	Private	1	10	32	3.2	3
Yellow Creek Dam	Yellow Creek			Private	1	10	0	0.0	3

Table 7.—Land use in the St. Joseph River watershed, percent by Michigan county. Data from Michigan Department of Natural Resources, Michigan Resource Inventory System (MIRIS).

Segment & county	Agriculture	Forest	Urban	Open	Wetlands	Water	Barren
Headwaters							
Hillsdale	68.5	15.4	5.2	5.2	4.1	1.6	0.0
Upper							
Branch	71.3	16.9	3.6	4.6	1.3	2.2	0.0
Calhoun	45.2	23.2	14.4	8.2	7.6	1.3	0.0
Middle							
Kalamazoo	52.3	21.0	8.8	9.6	5.8	2.5	0.0
St. Joseph	64.6	17.5	4.8	4.8	5.4	2.9	0.0
Lower							
Cass	58.3	21.0	5.5	6.0	6.6	2.8	0.0
Berrien	51.9	17.7	14.2	11.4	2.7	1.8	0.2
Mouth							
Van Buren	53.7	26.0	5.0	9.3	3.4	1.7	0.1
AVERAGE	58.2	19.8	7.7	7.4	4.6	2.1	0.0



Table 8.—Bridge and culvert data, by valley segment and county, for the St. Joseph River basin. Data from County Road Commissioners, Michigan Department of Transportation, and county maps. Blanks indicate no data.

Segment & county	Bridges (paved)	Bridges (gravel)	Bridges (total)	Culverts (paved)	Culverts (gravel)	Culverts (total)
Headwaters						
Hillsdale	31	16	47	71	86	157
Upper						
Branch	12		98			172
Calhoun	24	14	38	34	32	66
Middle						
Kalamazoo	19	7	26	67	13	80
St. Joseph	107	17	124			
Steuben			27			208
LaGrange			56			110
Noble			17			317
Kosciusko			32			14
Elkhart			112			230
Lower						
St. Joseph, IN			20			77
Cass			30			122
Berrien	93	2	95			
Mouth						
Van Buren	49	11	60	76	43	119
TOTAL			782			1553

Table 9.—Designated trout streams in the Michigan portion of the St. Joseph River watershed. Streams are designated upstream of the town, range, and section number unless specified otherwise.

Segment County Stream	Location
Upper	
St. Joseph	
Little Swan Creek	T6S, R9W, Sec. 22
Middle	
Kalamazoo	
Mill Creek	Upstream from impoundment (T7S, R12W, Sec. 29) to Preston Rd. (T7S, R12W, Sec. 7)
Cass	
Rocky River	Mainstem up from T5S, R13W, Sec. 24
Sheldon Creek	T5S, R13W, Sec. 24
Creamery Creek	T5S, R13W, Sec. 23
Flowerfield Creek	T4S, R12W, Sec. 36 (mainstem only)
Wilson Creek	T5S, R15W, Sec. 9
Thorpe Creek	T7S, R15W, Sec. 36
Trout Creek	Above confluence with Sweets Creek T8S, R13W, Sec. 11
St. Joseph	
Flowerfield Creek	T5S, R12W, Sec. 13 upstream to Kalamazoo County line
Rocky River	Mainstem from Bent Rd. (T5S, R12W, Sec. 21) to Cass County Line
Sherman Mills Creek	Above Thompson Lake (T7S, R10W, Sec. 28)
Spring Creek	T6S, R10W, Sec. 19 mainstem to M-66
Unnamed trib. to Spring Creek	T6S, R10W, Sec. 16
Unnamed tributary	T6S, R10W, Sec. 26
Prairie River	Mainstem from Branch County line downstream to Mckale Rd. (T7S, R9W, Sec. 8)
Curtis Creek	T7S, R12W, Sec. 7
Lower	
Van Buren	
Dowagiac River	Upstream from Cass County line to M-51 (T4S, R15W, Sec. 26)
Dowagiac Drain	T4S, R15W, Sec. 34
Cass	
Dowagiac River	Berrien Co line to Van Buren Co line
McKinzie Creek	T7S, R16W, Sec. 7
Pokagon Creek	T6S, R16W, Sec. 30
Peavine Creek	T6S, R16W, Sec. 17
Dowagiac Creek	Between Lake LaGrange and Bunker Lake
Cook Lake Drain	T5S, R16W, Sec. 24
Unnamed tributary	T5S, R15W, Sec. 18
Osborn Drain	T5S, R15W, Sec. 9
Glenwood Creek	T5S, R15W, Sec. 4

Table 9.–Continued.

Segment	
County	Location
Stream	
Lower (continued)	
Berrien	
Dowagiac River	T7S, R17W, Sec. 22; Except from the dam in T7S,R17W, Sec. 13 upstream to first bridge
Pipestone Creek	T5S, R18W, Sec. 4
Lemon Creek	T6S, R18W, Sec. 11
Puterbaugh Creek	T6S, R17W, Sec. 8
Love Creek	T6S, R17W, Sec. 7
Townsend Creek	T6S, R17W, Sec. 19
Old Bitty Creek	T7S, R18W, Sec. 23
McCoy Creek	T7S, R18W, Sec. 25
Walton Creek	T7S, R17W, Sec. 16
Glen Creek	T7S, R17W, Sec. 15
Unnamed Tributary	T8S, R17W, Sec. 10
Farmers Creek	T6S, R17W, Sec. 6
Mouth	
Van Buren	
Mill Creek	T3S & 4S, R16W, Sec. 7, 30, 31) upstream from Berrien County line
Brush Creek	T3S, R15W, Sec. 10; Except: Reynolds Lake Drain
E. Branch Paw Paw	Upstream from M-40 (T3S, R14W, Sec. 14)
W. Branch Paw Paw	Upstream from Mill Pond (T3S, R14W, Sec. 14)
N. Branch Paw Paw	Upstream from M-40
Berrien	
Sand Creek	T4S, R18W, Sec.7
Blue Creek	T4S, R18W, Sec. 4
Mill Creek	T3S, R17W, Sec. 23; Except: Ryno Drain
Hickory Creek	T4S, R19W, Sec. 35
Yellow Creek	T5S, R18W, Sec. 8

Table 10a.—Monthly maximum river temperatures allowed in selected streams. Data from Michigan Department of Environmental Quality, Surface Water Quality Division.

Stream	Month											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Cold water streams	38	38	43	54	65	68	68	68	63	56	48	40
Warm water streams except St. Joseph River	41	40	50	63	76	84	85	85	79	68	55	43
St. Joseph River	50	50	55	65	75	85	85	85	85	70	60	50

Table 10b.—Dissolved oxygen and temperature standards for designated uses of the St. Joseph River and tributaries. Temperatures represent allowable degrees of increase from the monthly river maximum. Data from Michigan Department of Environmental Quality, Surface Water Quality Division.

Designated use and state	Minimum dissolved oxygen (mg/l)	Temperature (°F)
Warmwater fish		
Michigan	5.0	5
Indiana	4.0	5
Coldwater fish		
Michigan		
Designated trout	7.0	2
Designated migratory route	5.0	5
Indiana		
Put-and-take trout	6.0	5 (must remain below 65)
Salmon fishing, spawning, rearing, or imprinting	6.0 (7.0 during spawning)	0
Migratory routes	5.0	2 (must remain below 85; below 70 during spawning)

Table 11.—Areas not attaining designated uses in the St. Joseph River watershed, by valley segment. Acronyms: BD=biological degradation, S=sedimentation, NPS=Nonpoint source pollution, PS=Point source pollution, PCB=polychlorinated biphenyl, AA=animal access, DO=dissolved oxygen, *E. coli*=bacteria associated with human and animal fecal waste. Data from IDEM (1996) and MDEQ (1996a).

Segment and stream	County	Location	Problems
<b>Headwaters</b>			
St. Joseph River	Hillsdale	City of Hillsdale to Genesee Rd. downstream of Jonesville	BD, S
<b>Upper</b>			
Fisher Creek	Branch		BD, S
Coldwater Lake	Branch	Ovid Township	Mercury
Nottawa Creek	Calhoun		BD, NPS, S
<b>Middle</b>			
Barton Lake	Kalamzoo	Schoolcraft	Mercury
Prairie River	Branch	Kinderhook Township	BD
Prairie River	Branch	Down to T7S, R8W, Sec. 19	Dredging
Fawn River	St. Joseph		BD, S, NPS
Pigeon Creek	Steuben	Angola	<i>E. coli</i>
Mud Creek	Steuben	Angola	PS, Ammonia
Ewing Ditch	Steuben	Angola	<i>E. coli</i>
Johnson Ditch	Steuben	Hudson	PS, BD, DO, Ammonia
Pigeon River	La Grange	Scott to state line	<i>E. coli</i>
Little Elkhart Ck.	La Grange	South Milford	<i>E. coli</i>
Little Elkhart Ck.	La Grange	Wolcottville	PS, <i>E. coli</i>
Little Elkhart R.	Elkhart	From Topeka to Middlebury 30mi	PS, NPS, <i>E. coli</i>
St. Joseph River	Elkhart	Bristol	<i>E. coli</i>
St. Joseph River	Elkhart	Elkhart	<i>E. coli</i>
Pine Creek	Elkhart	Bristol	<i>E. coli</i>
N. Br. Elkhart R.	Noble	Cosperville	<i>E. coli</i>
N. Br. Elkhart R.	Noble	Eddy	<i>E. coli</i>
S. Br. Elkhart R.	Noble	Albion	<i>E. coli</i>
Henderson Lk. Dr.	Noble	near Kendallville	DO
Waterhouse Ditch	Noble	Albion	BD, DO, Iron
Oviatt Ditch	Noble	Rome City	<i>E. coli</i>
Boyd Ditch	Noble	Cosperville	<i>E. coli</i>
Huston Ditch	Noble	Wawaka	<i>E. coli</i>
Forker Creek	Noble	Burr Oak	<i>E. coli</i>
Rimmell Branch	Noble	Bakertown	<i>E. coli</i>
Croft Ditch	Noble	Albion	BD, ammonia
Long Ditch	Noble	Albion	<i>E. coli</i>
Solomon Creek	Noble	Cromwell	PS, NPS
Rocky River	Cass/St. Joe	M-40 to Fabius Township	BD
Rocky River	Cass	Down stream of Pioneer Rd.	BD, S
Turkey Creek	Kosciusko	near Syracuse	<i>E. coli</i>
Turkey Creek	Kosciusko	near Milford	<i>E. coli</i>

Table 11.–Continued.

Segment and stream	County	Location	Problems
Middle (continued)			
Coopers Ditch	Kosciusko	Between Leeburg and Milford	PS, Sewage
Elkhart River	Noble	Ligonier	<i>E. coli</i>
Elkhart River	Elkhart	Goshen	<i>E. coli</i>
Wisler Ditch	Elkhart	near Wakarusa	<i>E. coli</i>
Peterbaugh Creek	Elkhart	Elkhart	<i>E. coli</i>
Crawford Ditch	Elkhart	Elkhart	<i>E. coli</i> , Metals, Oil
Auten Ditch	Elkhart	Elkhart	<i>E. coli</i> , Ammonia
Mather's Ditch	Elkhart	Middlebury	<i>E. coli</i> , DO
Christiana Creek	Cass		BD, S
Lower			
Baugo Creek	Elkhart	near Wakarusa	<i>E. coli</i>
Silver Creek	Cass	M-152 to Mouth	BD
McKinzie Creek	Cass	Barron Lake Rd to mouth	Temp., S
St. Joseph River	St. Joseph	Mishawaka	PCB
St. Joseph River	St. Joseph	South Bend	PCB
St. Joseph River	Berrien	State line down to mouth	PCB, <i>E. coli</i>
Eau Claire Drain	Berrien		BD, PS
Farmers Creek	Berrien		Untreated sewage, PS
Mouth			
Hickory Creek	Berrien	Stevensville	BD
St. Joseph River	Berrien	Below Business Loop 94	Mercury, PCB
Eagle Lake Drain	Van Buren	to confluence S. Br. Paw Paw R.	BD, S, NPS, AA
Lawton Drain	Van Buren	Trib. to S.Br Paw Paw River	BD, S, NPS, AA
Mill Creek	Van Buren		BD, S, NPS
Pine Creek	Van Buren	south to I94	BD, S, NPS
Paw Paw R. S. Br	Van Buren	to 64th Ave	BD, S, NPS
Mill Creek	Berrien		BD, S, NPS
Paw Paw River	Berrien	Riverside to St. Joe River	BD, S, copper, Zinc, Anthracene, and PCB
Ox Creek	Berrien	to Paw Paw River	BD, S, PS

Table 12.—National Pollution Discharge Elimination System permits issued in the St. Joseph River watershed by Michigan Department of Environmental Quality, Surface Water Quality Division and Indiana Department of Environmental Management.

Segment and Facility	Watercourse	City
<b>Headwaters</b>		
Hillsdale Power Plant	Baw Beese Lake	Hillsdale
Hillsdale WWTP	St. Joseph River	Hillsdale
RC Plastics Inc	St. Joseph River	Hillsdale
Hillsdale Terminal Products	St. Joseph River	Hillsdale
Camp Michindoh Ministries	Weatherwood Lake	Hillsdale
Addison Products Co	St. Joseph River	Jonesville
Litchfield WWTP	St. Joseph River	Litchfield
Mich. South Cen Power Agency	St. Joseph River	Litchfield
Tekonsha WWSL	St. Joseph River	Tekonsha
Randall Food Products	St. Joseph River	Tekonsha
<b>Upper</b>		
Coldwater WWTP	Coldwater River	Coldwater
Lear Plastics Corp.	Little Portage Creek	Mendon
Union City WWSL	St. Joseph River	Union City
Douglas Autotech	Swan Creek	Bronson
Solvay Automotive Inc	Swan Creek	Bronson
Bronson Plating Co	Swan Creek	Bronson
Bronson WWTP	Swan Creek	Coldwater
<b>Middle</b>		
MDEQ-ERD-Edwardsburg	Pleasant Lake	Edwardsburg
Marcellus WWSL	Rocky River	Marcellus
Armstrong Machine Works	Rocky River	Three Rivers
Ber Enterprises Inc	St. Joseph River	Leonidas
Mottville Downs Race Track	St. Joseph River	Three Rivers
Roys Motor Sales	St. Joseph River	Three Rivers
Engineered Stadium Systems	St. Joseph River	Three Rivers
Republic Roller Corp	St. Joseph River	Three Rivers
Three Rivers WWTP	St. Joseph River	Three Rivers
Day International	St. Joseph River	Three Rivers
Fonda Group	St. Joseph River	Three Rivers
T-H Plastics Inc	St. Joseph River	Mendon
North Adams RSD	Portage Creek	North Adams
Arco IN Corp.	Portage Creek	Schoolcraft
Constantine WWTP	St. Joseph River	Constantine
Amoco Pipeline-Constantine	St. Joseph River	Constantine
Anthony Ind-Simplex	St. Joseph River	Constantine
MMPA-Constantine Plant	St. Joseph River	Constantine
Day's Molding & Machinery Inc	St. Joseph River	Constantine
Centreville WWSL	Prairie River	Centreville

Table 12.–Continued.

Segment and Facility	Watercourse	City
Middle (continued)		
Sturgis Foundry	Prairie River	Sturgis
Abbott Mfg Inc	Fawn River	Sturgis
White Pigeon/Klinger Lake WWTP	Fawn River	White Pigeon
Murphys Fisher Lake Grocery	Fish Lake	Three Rivers
Mendon WWTP 1 & 2	Little Portage Creek	Mendon
Sturgis Well Field	Nye Drain/Fawn River	Sturgis
Cooper-Kirsch Div-Sturgis	Nye Drain/Fawn River	Sturgis
Sturgis WWTP	Nye Drain/Fawn River	Sturgis
Sutton Tool Company Inc	Nye Drain/Fawn River	Sturgis
Rood Industries Inc	Nye Drain/Fawn River	Sturgis
Wakarusa Municipal STP	Baugo Creek	Wakarusa
Arco Ind Corp	Black Lake	Schoolcraft
Marathon Gasoline Station	Christiana Creek	Elkhart
Angola Inn	Crooked Creek	Angola
Angola 76 Truck Plaza	Crooked Creek	Angola
Pokagon State Park	Crooked Creek	Angola
Consolidated Freightways	Crooked Creek	Fremont
Fremont Municipal STP	Crooked Creek	Fremont
Western Rubber Company	Crooked Creek	Fremont
Orland Public Water Supply	Crooked Creek	Orland
Dana Corp. Weatherhead Div.	Crooked Lake	Angola
Eaton Corp.	Elkhart River	Kendallville
Kendallville Municipal STP	Elkhart River	Kendallville
Kendallville Public Water Sup.	Elkhart River	Kendallville
Albion Municipal STP	Elkhart River	Albion
Albion Wire, Inc.	Elkhart River	Albion
Chain O'Lakes Youth Camp	Elkhart River	Albion
Chain O'Lakes State Park	Elkhart River	Albion
Concord Eastside Elem. School	Elkhart River	Elkhart
Nibco-Goshen Division	Elkhart River	Goshen
Bachor Home	Elkhart River	Goshen
Benteler Industries	Elkhart River	Goshen
Dairy Farms Products Company	Elkhart River	Goshen
Fairfield Jr-Sr High School	Elkhart River	Goshen
Goshen Municipal	Elkhart River	Goshen
Johnson Controls	Elkhart River	Goshen
Perfection/Walker Manuf. Co	Elkhart River	Goshen
Sunrise Orchards, Inc.	Elkhart River	Goshen
Indian Lake Mobile Village	Elkhart River	Ligonier
Freudenberg Nok	Elkhart River	Ligonier
Ligonier Municipal STP	Elkhart River	Ligonier
Silgan Plastics Corp.	Elkhart River	Ligonier
New Paris Conservancy	Elkhart River	New Paris
Rome City Municipal STP	Elkhart River	Rome City
Topeka Municipal STP	Elkhart River	Topeka



Table 12.–Continued.

Segment and Facility	Watercourse	City
Middle (continued)		
Topeka Municipal Water Utility	Elkhart River	Topeka
East Shore Bear Lk Sub.	Elkhart River	Wolf Lake
First Baptist Church - WWTP	Elkhart R. via Howard Dr.	Elkhart
LaGrange Municipal STP	Fly Creek of Pigeon River	LaGrange
LaGrange Packing Center	Fly Creek of Pigeon River	LaGrange
Sturgis-Big Hill Road	Groundwater	Sturgis
Elkhart Mun. Airport	Groundwater	Elkhart
Elkhart Products Corp.	Groundwater	Elkhart
IDOT Products Corp.	Groundwater, By Christiana	Elkhart
Bristol Products	Little Elkhart River	Bristol
Deutsch Kase Haus, Inc.	Little Elkhart River	Middlebury
Middlebury EMS Bldg	Little Elkhart River	Middlebury
Middlebury Municipal STP	Little Elkhart River	Middlebury
Syndicate Store Fixtures, Inc.	Little Elkhart River	Middlebury
Westview School Corp.	Little Elkhart River	Topeka
Adams Lake Reg. Sewer Dist.	Little Elkhart River	Wolcottville
Wolcottville Municipal STP	Little Elkhart River	Wolcottville
American Rollform & Man. CO	Pigeon Creek	Angola
Angola Municipal STP	Pigeon Creek	Angola
Silver Lake Mobile Home Park	Pigeon Creek	Angola
Pigeon Creek Rest Area	Pigeon Creek	Angola
Ashley Municipal STP	Pigeon Creek	Ashley
Ashley Water Works	Pigeon Creek	Ashley
Service Area 7	Pigeon River	Howe
LaGrange CO. Sewer Dist.	Pigeon River	LaGrange
Shipshewana Municipal STP	Pigeon River	Shipshewana
Midway Transportation Center	Pine Creek	Elkhart
Three Oaks Mobile Manor	Pine Creek	Goshen
Cromwell Municipal STP	Solomon Creek	Cromwell
Maple Leaf Farms Hatchery	Solomon Creek	Cromwell
Turkey Creek Regional Sewer	Solomon Creek	Syracuse
Millburn Peat Co	Spring Creek	Three Rivers
Bristol Municipal STP	St. Joseph River	Bristol
Timberbrook Mobile Home Park	St. Joseph River	Bristol
Bayer Corporation	St. Joseph River	Elkhart
Consolidated Rail Corp.	St. Joseph River	Elkhart
Elkhart Municipal STP	St. Joseph River	Elkhart
Millersburg Municipal STP	Stoney Creek	Millersburg
LaGrange CO. Sewer Dist.	Taylor Lake	LaGrange
Midwest Foundry Company	Turkey Creek	Hudson
Maple Leaf Farms	Turkey Creek	Milford
Milford Junction	Turkey Creek	Milford Junction
Nappanee Municipal STP	Turkey Creek	Nappanee
Burger Dairy Company	Turkey Creek	New Paris
Sea Nymph Boats	Turkey Creek	Syracuse

Table 12.–Continued.

Segment and Facility	Watercourse	City
Middle (continued)		
Syracuse Municipal STP	Turkey Creek	Syracuse
Syracuse Rubber Products, Inc.	Turkey Creek	Syracuse
Lower		
Jimtown Schools	Baugo Creek	Elkhart
Virgil Grissom Middle School	Baugo Creek	Mishawaka
Bodine State Fish Hatchery	St. Joseph River	Mishawaka
Mishawaka Municipal STP	St. Joseph River	Mishawaka
Mishawaka Municipal Utilities	St. Joseph River	Mishawaka
Uniroyal Technology, Ensolite	St. Joseph River	Mishawaka
Westinghouse Electric Corp.	St. Joseph River	Mishawaka
Sunset Trailer Village	Bowman Creek	South Bend
Berliner & Marx, Inc.	Bowman Creek	South Bend
Clear Water Mobile Village	Bowman Creek	South Bend
Coz Terminaling Inc.	Bowman Creek	South Bend
South Bend Municipal	St. Joseph River	South Bend
St. Marys Convent & College	St. Joseph River	South Bend
Juday Creek Estates	Judy Creek	Granger
USEPA-Region V	St. Joseph River	
Jack Corbit-Keiths Garage	Stone Lake	Cassopolis
Service Oil Co	Wetlands	Cassopolis
National Copper Products	Pine Lake Creek	Dowagiac
Service Oil-Union US 12	St. Joseph River	Cassopolis
MDEQ-ERD-Niles	Brandywine Creek	Niles
Service Oil Co-Dowagiac	Dowagiac Creek	Cassopolis
Energy Oil-US 12	Pleasant Lake	Dowagiac
Westgate Oil Co-Pokagon	Pokagon Creek	Niles
Dowagiac WWTP	Dowagiac River	Dowagiac
Decatur WWSL	Dowagiac R. via Mud Lk	Decatur
Amoco Oil Co, Granger Site	Groundwater	Granger
Amoco Oil Co, Granger Terminal	Groundwater	Granger
Eau Claire Packing Co	Farmers Creek	Eau Claire
Eau Claire WWSL	Farmers Creek	Eau Claire
Hermel Die Casting Corp.	Farmers Creek	Eau Claire
Michiana Publications	Farmers Creek	Eau Claire
Suncrest Juice Inc	Farmers Creek	Eau Claire
Buchanan Ind	McCoy Creek	Buchanan
Clark Equipment	McCoy Creek	Buchanan
Jack-Post	McCoy Creek	Buchanan
Camp Rosenthal	Pipestone Creek	Dowagiac
Meadow Streams Estates	Pipestone Creek	Sodus
Mich. Fruit Cannery-Sodus	Pipestone Creek	Sodus
Sodus Hard Chrome Co	Pipestone Creek	Sodus
French Paper Co	St. Joseph River	Niles
Nat Standard-City Complex	St. Joseph River	Niles

Table 12.–Continued.

Segment and Facility	Watercourse	City
Lower (continued)		
Nat Standard-Lake St.	St. Joseph River	Niles
Niles WWTP	St. Joseph River	Niles
Citgo Corp-Niles	St. Joseph River	Niles
Marathon Petro Co-Niles	St. Joseph River	Niles
Shell Oil Co-Niles	St. Joseph River	Niles
Camp Betz WWSL	St. Joseph River	Buchanan
Riverside Estates WWTP	St. Joseph River	Buchanan
Southeast Berrien Co Landfill	St. Joseph River	Buchanan
Berrien Springs WWTP	St. Joseph River	Berrien Springs
Mouth		
Chardon Rubber Co	Hickory Creek	Stevensville
Baroda WWSL	Hickory Creek	Baroda
Southern Mich. Cold Storage	Pipestone Creek	Benton Harbor
Country Holiday Est WWSL	Woodhouse Drain	Paw Paw
Covert Public Schools	Brandywine Creek	Covert
Coca-Cola Co (Minute Maid)	Jennings Drain	Paw Paw
Welch Foods Inc	Lawton Drain	Lawton
MDNR-Wolf Lake Hatchery	N. Branch Paw Paw River	Almena
Paw Paw Lake Area WWTP	Paw Paw River	Coloma
Ravine View Estates	Paw Paw River	Coloma
Hartford WWTP	Paw Paw River	Hartford
Lawrence WWSL	Paw Paw River	Lawrence
Fletcher Paper Co-Watervliet	Paw Paw River	Watervliet
Crystal Flash	Pine Creek	Hartford
Lawton Oil	S. Branch Paw Paw River	Lawton
Lawton WWTP	S. Branch Paw Paw River	Lawton
Paw Paw WWTP	S. Branch Paw Paw River	Paw Paw
St. Julian Wine Co Inc.	S. Branch Paw Paw River	Paw Paw
Duo-Tang Inc	South Branch Paw Paw	Paw Paw
Great Lakes Concentrates	E. Branch Paw Paw River	Paw Paw
Crystal Flash Petro-Paw Paw	East Branch Paw Paw	Paw Paw
Hoffmann Die Cast Corp.	Ox Creek/ Paw Paw River	Benton Harbor
Mich. Standard Alloys	Ox Creek/Paw Paw River	Benton Harbor
Sumitec Inc	Paw Paw River	Benton Harbor
Whirlpool-Admin. Center	Paw Paw River	Benton Harbor
Whirlpool-Plts 2,5, & 6	Paw Paw River	Benton Harbor
Ameritech-Benton Harbor	St. Joseph River	Benton Harbor
New Products Corp.	St. Joseph River	Benton Harbor
Benton Harbor-St. Joseph WWTP	St. Joseph River	St. Joseph
St. Joseph CSO	St. Joseph River	St. Joseph
Whirlpool-Plt 8	St. Joseph River	St. Joseph
Alliedsignal Brake Systems	Hickory Creek	St. Joseph
Hills Haven WWTP	St. Joseph River	
Gast Mfg. Corp.-Benton Harbor	St. Joseph River	Benton Harbor

Table 13.–Industrial storm water permits issued in 1997 by Michigan Department of Environmental Quality, Surface Water Quality Division, in the St. Joseph River watershed.

Segment and stream	Facility name	Location
<b>Headwaters</b>		
St. Joseph River	Hillsdale Tool-Daisy 2&H&R	Hillsdale
St Joseph River	Hillsdale Tool- South St Plt	Hillsdale
St Joseph River	Eaton Technologies Inc	Hillsdale
St Joseph River	Kerry Ingredients	Hillsdale
St Joseph River	Bundy Corp-Tubing Div	Hillsdale
St Joseph River	Quality Industries Inc	Hillsdale
St Joseph River	Becker & Scrivens Concrete	Hillsdale
St Joseph River	Abrasive Materials Inc	Hillsdale
St Joseph River	Essex Specialty Products	Hillsdale
St Joseph River	Bailey Manufacturing	Hillsdale
St Joseph River	Alsons Corp	Hillsdale
St Joseph River	Hillsdale Tool & Mfg Jonesvill	Jonesville
St Joseph River	United Feeds Inc	Jonesville
St Joseph River	Klein Tools Inc	Jonesville
St. Joseph River	Quincy Holdings Inc	Jonesville
St Joseph River	Litchfield Grain Co	Litchfield
St Joseph River	Walker Mfg-3 Litchfield	Litchfield
Snow Creek	Finishing Touch	Litchfield
St Joseph River	Livonia Tool	Litchfield
St Joseph River	Recon Of Litchfield	Litchfield
<b>Upper</b>		
St Joseph River	Batavia Elevator Inc-Coldwater	Coldwater
Coldwater River	Coldwater Bakery Div	Coldwater
Coldwater River	Darling International Inc	Coldwater
Coldwater River	L & S Products Inc	Coldwater
Coldwater River	Coldwater Veneer Inc	Coldwater
Coldwater River	Dougs Auto Recyclers	Coldwater
Coldwater Lake	Coldwater Lake Marine	Coldwater
Coldwater Lake	Lake Drive Marine	Coldwater
Hog Creek	Arkansaw Auto Parts	Allen
South Hog Creek	Quincy Sandblasting Inc	Quincy
Little Portage Ck	Lear Plastics Corp	Mendon
St. Joseph River	St Joseph Valley Seed Co	Mendon
St. Joseph River	T-H Plastics Inc	Mendon
<b>Middle</b>		
Spring Creek	Biewer Lumber Co-Schoolcraft	Schoolcraft
Gourdneck Creek	Simpson Paper Co-Vicksburg	Vicksburg
Portage River	Consumers Concrete-5-Three Rivers	Three Rivers
St. Joseph River	Day International	Three Rivers
St. Joseph River	Dock Foundry-Three Rivers-4 St.	Three Rivers
Portage River	Johnson Corp-Three Rivers	Three Rivers
Spring Creek	Millburn Peat Co Inc	Three Rivers

Table 13.–Continued.

Segment and stream	Facility name	Location
Middle (continued)		
St. Joseph River	Peterson Spring-Three Rivers	Three Rivers
St. Joseph River	Surfinco Inc - Three Rivers	Three Rivers
St. Joseph River	Three Rivers Iron And Metal	Three Rivers
St. Joseph River	Weyerhaeuser Paper-Three Rivers	Three Rivers
Rocky River	American Axle & Mfg Inc	Three Rivers
Rocky River	Armstrong International	Three Rivers
Prairie River	Crocker Ltd-Centreville	Centreville
Mill Race	Shears Sawmill	Centreville
Prarie River	Viking Rv-Centreville	Centreville
Nye Drain	Abbott Labs-Ross Products Div	Sturgis
Fawn River	Acm Plastic Products	Sturgis
Fawn River	Anthony Industries-Simplex	Constantine
Fawn River	E L Nickell Co Inc	Constantine
Fawn River	Kirsch Municipal-Sturgis	Sturgis
Fawn River	Oak International-Sturgis	Sturgis
Fawn River	Rood Industries	Sturgis
Fawn River	Sturgis Foundry-W West	Sturgis
Nye Drain	Sturgis Iron & Metal Co	Sturgis
Fawn River	Sutton Tool Co Inc	Sturgis
Fawn River	Telemark Pc Forms-Sturgis	Sturgis
St. Joseph River	Mmpa-Constantine Plant	Constantine
Corey Lake	Corey Lake Marina	Three Rivers
Pigeon River	Centurion Veh-White Pigeon-131	White Pigeon
Pigeon River	Centurion-White Pigeon-Miller	White Pigeon
Pigeon River	Gray Bros-White Pigeon	White Pigeon
Pigeon River	Kysor Metal Prod-White Pigeon	White Pigeon
Pigeon River	Process Metals-Elkhart St	White Pigeon
Pigeon River	White Pigeon Paper Co	White Pigeon
Gast Ditch	Georgie Boy Mfg-Plt 1-Edwardsburg	Edwardsburg
Gast Ditch	Georgie Boy Mfg-Plt 2-3-Edwardsburg	Edwardsburg
Pleasant Lake	North American Forest Products	Edwardsburg
Diamond Lake	Diamond Lake Marina	Cassopolis
Stone Lake	Mobile Facility Engineering	Cassopolis
Juno Lake	Wallace's Salvage Yard	Cassopolis
Lower		
Brandywine Creek	B & R Oil Co Inc	Niles
Brandywine Creek	United Tech Auto Sys-Niles	Niles
Brandywine Creek	Four Flags Bath Factory	Niles
Silverbrook Ck	Jerry Tyler Memorial-Niles	Niles
Unnamed Drain	Modular And Plastic Products Inc	Niles
St. Joseph River	French Paper Co	Niles
St. Joseph River	Nat Standard-City Complex	Niles
St. Joseph River	Niles Precision Co	Niles
St. Joseph River	Niles Riverfront Park Landfill	Niles
St. Joseph River	Ozinga Bros-Niles	Niles

Table 13.–Continued.

Segment and stream	Facility name	Location
Lower (continued)		
St. Joseph River	Printco Inc-Niles	Niles
St. Joseph River	United Fixtures Co-Niles	Niles
St. Joseph River	Holts Auto Parts-Niles	Niles
Dowagiac Drain	Special-Lite-Decatur	Decatur
Dowagiac Creek	Niles Plym Park Landfill	Niles
Dowagiac Creek	Contech Div Spx Corp	Dowagiac
Dowagiac Creek	Inverness Casting Group	Dowagiac
Dowagiac Creek	Jessup Door Company	Dowagiac
Dowagiac Creek	Lyons Ind-Heddon Div	Dowagiac
Dowagiac Creek	Mennel Milling Co Of Michigan	Dowagiac
Dowagiac Creek	Mich Ang-Dowagiac	Dowagiac
Dowagiac River	Ameriwood Furniture Div	Dowagiac
Dowagiac River	Keenes Auto Sales-51027	Dowagiac
Magician Lake	Midway Recreation Inc	Dowagiac
Dowagiac River	Michiana Box & Crate	Niles
Dowagiac River	Earl Williams	Niles
Lemon Creek	Andrews University Airport	Berrien Springs
Mccoey Creek	Buchanan Metal Forming Inc	Buchanan
St. Joseph River	Electro-Voice Inc-Buchanan	Buchanan
St. Joseph River	Southeast Berrien Co Landfill	Buchanan
St. Joseph River	Premier Tool Die Cast	Berrien Springs
St. Joseph River	Ray's Auto Sales-Berrien Springs	Berrien Springs
St. Joseph River	Symonds Bros Auto Sales	Berrien Springs
Eau Claire Creek	Eau Claire Fruit Exchange	Eau Claire
Crystal Creek	Five Corners Garage Inc	Eau Claire
Farmers Creek	Hermel Die Casting Corp	Eau Claire
Farmers Creek	Hofmann Ind-Mich Tube Div	Eau Claire
Farmers Creek	Seneca Food Corp-Linn	Eau Claire
Farmers Creek	Seneca Food Corp-Pipestone	Eau Claire
Pipestone Creek	Shawnee Specialties Inc	Eau Claire
Sucker Brook	Mich Fruit Cannery-Sodus	Sodus
Mouth		
Keelo Creek	Reliable Disposal-Stevensville	Stevensville
Hickory Creek	Anstey Foundry Co	Stevensville
Hickory Creek	Bosch Braking Systems	St. Joseph
Hickory Creek	Cast-Matic Corp-Stevensville	Stevensville
Hickory Creek	Lakeshore Electro-Plate Inc	Stevensville
Hickory Creek	Leco Corp-St Joseph-Lakeview	St. Joseph
Hickory Creek	Moxness Thermoplastics	Stevensville
Hickory Creek	Shepherd Products-St Joseph	St. Joseph
Hickory Creek	Wolverine Metal Stamping	St. Joseph
Sand Creek	Southwest Mich Regional Airport	Benton Harbor
Sand Creek	Square Deal Auto-Benton Harbor	Benton Harbor
Paw Paw River	Coloma Frozen Foods	Coloma
Paw Paw River	Fletcher Paper Co-Watervliet	Watervliet

Table 13.–Continued.

Segment and stream	Facility name	Location
Mouth (continued)		
Paw Paw River	Menasha Corp-Coloma	Coloma
Ryno And Knapp Drains	Orchard Hill Lf-Watervliet	Watervliet
Paw Paw Lake	Paw Paw Sports & Marina	Coloma
Paw Paw River	Postelli Steel Fab	Coloma
Cook Inter County Drain	Chem Rex Inc-Mattawan	Mattawan
Hog Creek	Hanson Cold Storage-Hartford	Hartford
Iron Run Creek	Knouse Foods Coop Inc-Paw Paw	Paw Paw
Paw Paw River	R A Imus Inc	Paw Paw
Maple Lake	Van Denbos Inc-Paw Paw	Paw Paw
S.B. Paw Paw River	West Michigan Railroad Co	Paw Paw
Paw Paw River	Abf Freight Sys-Paw Paw	Benton Harbor
Paw Paw River	Max Casting Co Inc	Benton Harbor
Paw Paw River	Sumitec Inc	Benton Harbor
Paw Paw River	Ztar Finishing Sys-Benton Harbor	Benton Harbor
Ox Creek	Abc Precision Machining-Yore	Benton Harbor
Ox Creek	Ausco Products-St Joseph	Benton Harbor
Ox Creek	Benton Harbor Engineering	Benton Harbor
Ox Creek	Brutsche Concrete-Benton Harbor	Benton Harbor
Ox Creek	Consumers Asphalt Co	Benton Harbor
Ox Creek	Gast Mfg Corp-Remark-Benton Harbor	Benton Harbor
Ox Creek	K-O Products-Benton Harbor	Benton Harbor
Ox Creek	Kaywood Shutter Co	Benton Harbor
Ox Creek	Leco-Michigan Ceramics Div	Benton Harbor
Ox Creek	Mich Standard Alloys	Benton Harbor
Ox Creek	Modern Plastics Corp	Benton Harbor
Ox Creek	Mono Ceramics-Benton Harbor	Benton Harbor
Ox Creek	New Products Corp	Benton Harbor
Ox Creek	Old Europe Cheese Inc	Benton Harbor
Ox Creek	P R & D Casting Corp	Benton Harbor
Ox Creek	Sandvik Steel	Benton Harbor
Ox Creek	Summit Powders Inc	Benton Harbor
Ox Creek	United Die Cast Corp-Benton Harbor	Benton Harbor
Barnes & Hamilton Co. Dr	Alloy Foundry Company	Benton Harbor
St. Joseph River	Brians Marine Service	St. Joseph
St. Joseph River	Certified Metal Finishing	Benton Harbor
St. Joseph River	Comstock Michigan Fruit	Benton Harbor
St. Joseph River	Gm-Brass-Aluminum Foundry-Benton Harbor	Benton Harbor
St. Joseph River	Harbor Metal Treating Co	Benton Harbor
St. Joseph River	Riverview 1000 Inc	Benton Harbor
St. Joseph River	Whirlpool Corp	Benton Harbor
St. Joseph River	Eagle Point Harbor-St Joseph	St. Joseph
St. Joseph River	Harbor Isle Marina	St. Joseph
St. Joseph River	Leco-Pier 33-St Joseph	St. Joseph
St. Joseph River	Manchester Plastics-Hughes Division	St. Joseph
St. Joseph River	Vail Rubber Works Inc	St. Joseph

Table 14.—Contamination sites in the Michigan portion of the St. Joseph River watershed (1995), by valley segment. Data from Michigan Department of Environmental Quality, Environmental Response Division. Acronyms: BTEX=benzene, toluene, ethylbenzene, and xylene; DCA=dichloroethane; 1,1DCA=isomer of previous; DCE=dichloroethylene; 1,2 DCE=isomer of DCE; DDE=dichlorodiphenyldichloroethylene; MTBE=methyl tertiary butyl ether; DDT=dDechlorodiphenyltrichloroethane; PCB=polychlorinated biphenyl; PCE or PERC=perchloroethylene; PNAs=polynuclear aromatic hydrocarbons; TCA=trichloroethane; TCE=trichloroethylene; TPH=total petroleum hydrocarbons; LF=landfill. Blanks indicate that data were not listed.

Site location	Category	Pollutant
<b>Headwaters</b>		
<b>Hillsdale County</b>		
Former Licensed City LF	No actions taken	Domestic Comm
Litchfield Old Dump	"	Arsenic, Lead, Diethylphthalate
Lopresto Auto Body	"	Paint Thinners
Lucas LF/Jonesville Garbage Srvc	"	Chloroform, PAHs, DCA, Benzene, Methylphenol
Markle, Ralph 1-A	"	Condensate-BTEX, Crude oil
Reading Village Dump	"	Domestic Comm
Stillwell Ford Mercury	"	Paint, Paint thinners
Hillsdale Iron and Metal	Evaluation/interim response - fund <sup>a</sup>	Zinc, Copper, Lead, PCB
Jonesville Vlg Old Dump	"	PCB, DDT, TCE, AS
Kesselring, Howard 3	"	Crude Oil, BEXT
Kesselring, Howard 5	"	Crude Oil, BEXT
Kesselring, Howard 7	"	Crude Oil, BEXT
Millman & Sanderson 3	"	Crude Oil, BEXT
Millman & Sanderson 1	"	Crude Oil, BEXT
Roberts, Everett 2	"	Crude Oil, BEXT
Roberts, Everett 3	"	Crude Oil, BEXT
<b>Calhoun County</b>		
Res Well Tekonsha	Evaluation/interim response - fund <sup>a</sup>	1,1,1-TCA, TCE, PCE
Burlington Village GW Contam	Evaluation/interim response - PRP/other <sup>b</sup>	Sodium Chloride
<b>Upper</b>		
<b>Branch County</b>		
No actions taken		
B's Shop & Fly	"	Kerosene
Branch Co Rd Comm Coldwater	"	Salt, Gasoline
Coldwater Salt Storage City of	"	Salt
Gilchrest Landfill	"	Dichloroethane, Trichloroethane
Arborgast Rd GW Contamination	Evaluation/interim response - fund <sup>a</sup>	Atrazine, Alachor
Ridge Road	"	DCE, TCE
Union City GW Contam	"	Nitrates
Acorn Building Components	Evaluation/interim response - PRP/other <sup>b</sup>	Cyanide, Xylene, TCE, PCE
Board of Public Util Coldwater	"	Fuel Oil
Coldwater Regional Mental Health	"	PCBs
Douglas Components Corp	"	Waste Oils, Xylene, Trichloroethane



Table 14.–Continued.

Site location	Category	Pollutant
Upper (continued)		
Former Midwest Foundry	Evaluation/interim response - PRP/other <sup>b</sup>	Benzene, Lead, PCE, Ethylbenzene, Xylene
Hawkins Furn Form Schafer Mfg	"	Chromium, Arsenic, Cyanide, Lead
MDOT Coldwater	"	Salt
Otto & Sons Marine	"	Lead, Cadmium, Benzene
Ovid Twp Dump	"	Arsenic, Cobalt
United Technologies Automotive	"	PCBs, Aluminum
W Chicago St GW Contam	"	Hydrocarbons
Calhoun County		
Manicipal Wells Athens	No actions taken	Nitrates
Douglas Corp./Hampton Bros. Prop	Evaluation/interim response - fund <sup>a</sup>	PCE, Xylene
Vincent's Industrial Panting	"	PCE, TCE
Amoco Pipeline Co	Evaluation/interim response - PRP/other <sup>b</sup>	Fuel Oil
Former Bennett Manufacturing	"	TCE, Toluene, Lead
Former Gulf Station	"	PCE, Benzene
Hawley Oil Co Amoco	"	Benzene, Ethylbenzene
House and Stable Antiques	"	Methylene, Chloride, Xylene
Keith Fransted Construction Co	"	Gasoline
St. Joseph County		
Lear Siegel Inc Mendon Twp	Evaluation/interim response - PRP/other <sup>b</sup>	Nickle, Lead, Zinc, DCE, DCA, TCE, PCE
Middle		
Kalamazoo County		
Colonial Village Laundry	No actions taken	PCE, Chloroform
Portage St & Zylam Ave Res Well	"	TCE
Newport Rd & East Milham Rd	Evaluation/interim response - fund <sup>a</sup>	PCE, TCE
Res Well Rimmel St Brady Twp	"	Trichloroethne
Res Well V Ave	"	1,2 DCA
Schoolcraft Area Organics Contam	"	Chromium, PCE, TCE
B&L Auto Center	Evaluation/interim response - PRP/other <sup>b</sup>	BTEX
Market Place Development	"	Ethylbenzene, Toluene, Xylenes
Plastic Engineering Vanderbilt	"	1,1,1 TCA, PCE, TCE
Stewart Sutherland Inc	"	1,1,1 TCA, PCE, TCE
U Ave & 12 St	"	Lead, Chromium, Cadmium, Nickel
Vicksburg Laundry & Dry Cleaners	"	Tetrachloroethylene
Branch County		
Bronson Salt Storage City of	No actions taken	Salt
Bronson Sanitary LF	"	Chromium, Lead, Manganese, Copper
Bronson Precision Products	Evaluation/interim response - PRP/other <sup>b</sup>	Waste Oils
North Bronson Industrial Area	"	Cadmium, Chromium, Lead, Nickel, Copper
Saint Joseph County		
Youngs LF	Highest priority	Chromium, Lead, Nickel, PCB, 1,1DCA
Eddy Paper Co Abandoned LF	No actions taken	Light Indust. Waste
Res Well Cooper St.	"	Fuel Oil

Table 14.–Continued.

Site location	Category	Pollutant
Middle (continued)		
Res Well Hoffman St. Former Zephyr Facility	No actions taken Evaluation/interim response - fund <sup>a</sup>	Benzene, Xylene, Dichloroethane Fuel Oil
Youngs LF Bainridge Sherman Twp	" Evaluation/interim response - PRP/other <sup>b</sup>	Chromium, Lead, Nickel, PCB, 1,1 DCA Gasoline
Constantine Municipal Well Fibre Converters	" "	111 Trichloroethane, Toluene PCE, TCE
Laundromat West of Centreville Martin Products Co	" "	Laundry Detergents, Chlorides Dichloroethane, Lead, Trichloroethane
Mottville truck Stop Sohigro	" "	Gasoline Anhydrous Ammonia
Sturgis Hospital Superamerica Payless	" "	Heating Oil Benzene, Toluene, Ethylbenzene
Three Rivers Anodizing Three Rivers Millard Court Area	" "	Copper, Chrome, Zinc, Aluminum Toluene, PCE, 1,2 DCE, TCE
Travel Accessories Victor Screw Products	" "	DCA, TCA, BTEX Tetrachloroethylene
Weyerhaeuser Amoco Pipeline Leak	" Final cleanup - PRP/ other <sup>d</sup>	Gas Components, Fuel Oil Petroleum Product
Sturgis City of LF Sturgis Municipal Wells	" "	TCE, PCE TCE, PCE
Three Rivers W Mich Ave Westside LF	" "	Diisopropyl Ether, 1,1,1 TCA, Benzene DCE, PCE, TCA, TCE, Methylene, Chloride
Cass County		
Marcellus Creamer/Dow Plating Baer Drive Area Marcellus	No actions taken Evaluation/interim response - fund <sup>a</sup>	Lead, Chromium 1,2 DCA, BTEX
Cass St Area Edwardsburg Southwest Cass Co LF	" Evaluation/interim response - PRP/other <sup>b</sup>	Benzene, TCE, PCE Paint Sludges, BTEX
Lower		
Cass County		
Sunstrand Heat Transfer Hilltop Laun and Dry Clnrs Union	Highest priority No actionstaken	TCE, Lead, Chromium Perchloroethylene
Jessco Myer Property	" "	Arsenic, Cadimum, TCE, Vinyl, Chloride Solvents
Res Well Conrad and Coulter Rd Sacred Heart No 2 Fuel Oil Spill	" "	Benzene Fuel Oil
Dowagiac LF City of Edwardsburg Industrial Park	Evaluation/interim response - fund <sup>a</sup> "	TCE, PCE, DCE, DCA, TCA TCE, TCA, DCA, PCE, DCB, Xylene
Juniper St Contam Lee Manufacturing	" "	1,1,1-TCA 1,1 DCA Toluene, PCE, 1,1,1-TCA
Dowagiac Public Services Henco Enterprises, Inc	Evaluation/interim response - PRP/other <sup>b</sup> "	Diesel Fuel Cadmium, Zinc, Nickel, Cyanide, Chromium

Table 14.–Continued.

Site location	Category	Pollutant
Lower (continued)		
Redfield Road Fuel Oil Spill	Evaluation/interim response - PRP/other <sup>b</sup>	Fuel Oil
Sunstrand Heat Transfer Terminal Rd LF	"	TCE, Lead, Chromium
Pokagon Spill	Final cleanup - PRP/other <sup>d</sup>	VOCs
U.S. Aviex	Final cleanup - fund <sup>c</sup>	Gasoline
Berrien County		
Berrien Springs Mun Well	Evaluation/interim response - fund <sup>a</sup>	TCE, TCA
Niles Municipal Well Decker St	"	TCE
Citgo Terminal Niles	Evaluation/interim response - PRP/other <sup>b</sup>	BTEX
Fifth St Niles	"	Gasoline
SE Berrien Co Sanitary Auth	"	Toluene, 1,1 DCA
Sheller Globe Corp Niles	"	Dichloroethane, Trichloroethane
Res Well Niles 3rd St	Final cleanup - fund <sup>c</sup>	TCE, PCE
Primar Petroleum, Niles Terminal	Final cleanup - PRP/other <sup>d</sup>	Benzene, Toluene, Ethylbenzene, Xylenes
Mouth		
Berrien County		
Auto Specialist Graves Street	Highest priority	Lead, Arsenic, Chromium, PCB, Benzene
Tri Township LF	"	Lead, Cyanide, Methylene Chloride
Harbor Plating	"	Chromium
Martin Brothers Mill and Foundry	"	Oils
Woodstock Manufacturing	"	PCB, Heavy Metals
Berrien Farm Bureau Oils Co	No actions taken	#2 Fuel Oil
Bridgman Printing	"	Lead, Chromium, Cooper, Zinc
Malleable Site	"	Chromium, Iron, Lead, Cyanide
Michigan Tube Div	"	Cyanide, Chromium, PCE
NW Berrien CO Sanitary Auth	"	4,4 DDT
Plaza Zephyr Station	"	Gasoline
Priebe Bros CO Truck Spill	"	Petroleum Product
Swan Oil Henry Res Allen Rd Spill	"	Fuel Oil
Us Aviex Terminal Rd	"	TCA, Toluene, Benzene, Ethylbenzene
Auto Specialties Graves St	Evaluation/interim response - fund <sup>a</sup>	Lead, Arsenic, Chromium, PCB, Benzene
Auto Specialties Riverside	"	Chromium, Lead, PCB, Mercury, Cadmium, PNAs
N Roosevelt Rd Area Stevensville	"	PCE, Methylene Chloride
Red Oak Furniture	"	Methylene Chloride, Tetrachloroethene
Res Well E Bertrand rd	"	TCE
ALRECO	Evaluation/interim response - PRP/other <sup>b</sup>	PCB, Cyanide
Amerson Bowman Oil Co	"	Benzene, Toluene
Bendix Corp/Allied Automative	"	TCE, Vinyl, Chloride, Trans-1,2-DCE
Benton Harbor Ship Canal	"	PNAs
Birchcrest Estates Mobile Hm Pk	"	Chlorides
Buckhorn Trailer Ct	"	BTEX
Enterprise Oil Tank Farm	"	Benzene, Toluene

Table 14.–Continued.

Site location	Category	Pollutant
Mouth (continued)		
Fairplain Area	Evaluation/interim response - PRP/other <sup>b</sup>	PCE, TCE, 1,1,1 TCA, Methylene, Chloride
Fairplain Plaza	"	BTEX
FMB Community Bank	"	BTEX
Ham's Home Improvement	"	TCE
Harbor Plating	"	Chromium
Hoffmann Die Cast	"	Benzene, Toluene, Ethylbenzene, Xylenes
Koch Industries	"	BTEX
Martin Brothers Mill and Foundry	"	Oils, Grease
Midwest Timer	"	Chrome, Cyanide, Zinc
New Products Production Wells	"	Vinyl, Chloride, Dichloroethane
Sodus Hard Chrome Inc	"	Chromium
Swan Oil Co Station 9	"	Gasoline, Diesel Fuel
Terminal Grounds Abandoned Tank	"	PCB
Tile Mart Site	"	Cadmium, Cyanide, Arsenic, Nickel, Lead
Travel Inn Motel	"	Fuel Oil
Cast Matic Corporation	Final cleanup-PRP/other <sup>d</sup>	Zinc
Electrovoice	"	Nickel, Chromium, TCE, Toluene
Shell Oil Niles Distrib Facility	"	Benzene, Toluene, Ethylbenzene
Sumtec Inc	"	Trichloroethylene, BTEX, TCA
Van Buren County		
Duo Tang Products	Highest priority	Trichloroethene, cis-1,2-DCE
Auto Specialties Hartford	No actions taken	Trichloroethylene, 1,1,1 TCE, Asbestos
Commercial St Storm Sewer	"	Chlorinated solvents
DeVrou Chevrolet	"	Trichloroethane, Xylene
Hartford Municipal Wells	"	PCE
Kalamazoo Lkshore & Chicago RR	"	PNAs, BTEX
Securit Metal Products	"	Oil, Grease, Nitrates
65108 Red Arrow Hwy. Hartford	Evaluation/interim response - fund <sup>a</sup>	Trichloroethylene
95th Ave Contamination	"	Tetrachloroethylene
Intersect 51st St. & 76th Ave	"	Dichloropropane
Intersect 78th Ave & 46th St	"	1,2 DCP, 1,2,3 TCP
M-51 45182	"	Carbon, Tetrachloride
Res Well Pine Grove Twp	"	Methylene, Chloride
Du Wel Metal Products	Evaluation/interim response - PRP/other <sup>b</sup>	Copper, Nickel, Chrome, Zinc
Duo Tang Products	"	Trichloroethane, cis-1,2-DCE
Intl Research Dev Corp	"	Ethylhexyl Phthalate, Metals
Lakeview Community Hospital	"	BETX, PNA
Paw Paw Plating	"	Cadmium, Chromium
Paw Paw Well No 5	"	Trichloroethylene, Dichloroethylene
Swing-Lo Scaffolding	"	Arsenic, Lead, Silver
Wolf Lake Fish Hatchery	"	Lead, Cyanide, Chromium
Burrows Sanitation	Final cleanup - PRP/other <sup>d</sup>	Chromium, Nickel, Lead

<sup>a</sup> Cleanup plan not approved by MDEQ and interim response activity has been, or is being provided, by state funds.

<sup>b</sup> Cleanup plan approved by MDEQ and interim response activity is being provided by potentially responsible party (PRP) of other funds.

<sup>c</sup> Cleanup plan approved by MDEQ and remedial actions have been or are being provided by the state.

<sup>d</sup> Cleanup plan approved by MDEQ and remedial actions have been or are being provided by potentially responsible party or other funds.

Table 15.–Summary of groundwater contamination sites in the St. Joseph and Elkhart rivers outwash plains. Data from Indiana Department of Environmental Management (1996). Acronyms: VOC=volatile organic compounds; SOV=semi-volatile organic compounds; RCRA=resource conservation and recovery act.

Source type	Number of areas listed	Contaminants
Leaking underground storage	211	VOC
High priority RCRA sites	12	VOC, SOC, metals
Underground injection wells	761	VOC, nutrients, metals, pesticides, septic, acid
State cleanup	1	VOC
Voluntary cleanup	10	VOC
Material spills	57	VOC, SOC, nutrients, metals, pesticides, hazardous materials

Table 16.–Sites within the St. Joseph River watershed listed under the Comprehensive Environmental Response, Compensation and Liability Act or CERCLA (Superfund). Acronyms: pre-remedial (DS=discovery, PA=preliminary assessment, SI=site inspection, SP=site inspection prioritization, ES=expanded site inspection, NF=final national priority list, ND=deleted from national priority list); removals (RS=removal investigation, RV=removal action); remedial (AR=administrative record, MA=management assistance, RA=remedial action, RD=remedial design); EPA=Environmental Protection Agency; RP=responsible party.

Segment and site name	City	Last action	Date	Event lead
<b>Headwaters</b>				
Card & Hillsdale Site	Hillsdale	SI	9/29/92	State
<b>Middle</b>				
Schafer Manu./Hawkins	Union City	ES	9/29/95	State
Eddy Paper Co.	White Pigeon	SP	8/31/95	EPA
North Bronson Industrial	Bronson	RS	6/9/92	EPA
Universal Components	Bronson	RV	8/21/95	EPA
Sturges FNDRY	Sturgis	SP	9/28/95	EPA
Sturgis Municipal Wells	Sturgis	MA	6/30/95	RP
General Motors Corp.	Three Rivers	PA	12/11/92	EPA
Galen Meyer's Dump	Osceola	RV	5/6/94	EPA
Holly Park Industries	Shipshewana	PA	11/2/94	State
Universal Forests Prod.	Granger	SP	6/14/95	EPA
Main Street Well Field	Elkhart	RA	6/30/95	EPA
HIMCO Dump	Elkhart	RD	4/13/95	EPA
Sycamore Street	Elkhart	PA	9/12/91	State
Conrail Railyard Elkhart	Elkhart	RD	6/14/95	RP
Solvent Release/Bisher	Elkhart	PA	7/24/96	State
ACCRA Pac Inc	Elkhart	AR	2/19/91	EPA
Lusher St. Groundwater	Elkhart	AR	11/9/90	EPA
Belmont-Huron Streets	Elkhart	RV	1/25/96	EPA
Woodlawn Industrial	Elkhart	RV	12/20/96	EPA
Gemeinhardt Co Inc	Elkhart	PA	11/1/93	EPA
Kendallville Transfer	Kedalville	DS	9/22/94	State
Ligoner Dump	Ligonier	SP	9/30/94	EPA
Spill Site (Fricks Service)	Wawaka	SI	9/29/93	State
<b>Lower</b>				
Douglas Rd Uniroyal Inc.	Mishawaka	RD	9/30/96	EPA
Wheelabrator Corp.	Mishawaka	PA	3/13/90	State
Old Mishawaka Dump	Mishawaka	SP	9/9/94	State
Mishawaka STP Landfill	Mishawaka	SP	9/9/94	EPA
Linden Road Site	South Bend	ES	9/22/95	State
Settling Pond	South Bend	SP	6/9/95	EPA
St. Joseph CO GW	South Bend	AR	9/5/95	EPA
Sands & Howell	South Bend	SI	4/6/93	EPA
South Bend Ave. Site	South Bend	SP	9/26/95	EPA
Steel Warehouse Inc.	South Bend	SP	6/16/95	EPA
JT Jennings Landfill	South Bend	PA	11/6/87	State

Table 16.—Continued.

Segment and site name	City	Last action	Date	Event lead
Lower (continued)				
Rolford	South Bend	SI	4/6/93	EPA
Whiteford Sales & Ser.	South Bend	ND	9/6/96	EPA
Sibley Machine	South Bend	PA	11/2/94	State
Former City Landfill	South Bend	SP	9/26/95	EPA
Allied Corp. Aerospace	South Bend	PA	8/2/90	State
Butternut Road Site	South Bend	SI	1/4/89	EPA
US Aviex	Niles	RS	7/7/93	EPA
Electrovoice	Buchanan	RD	11/8/95	RP
Michigan Tube Co.	Eau Claire	SP	9/28/95	EPA
Mouth				
Burrows Sanitation	Hartford TWP	RA	4/5/93	RP
Aircraft Components	Benton Harbor	NF	6/17/96	State
Auto Specialities	Benton Harbor	RV	7/31/92	EPA
Auto Specialities	Benton Harbor	PA	3/25/94	State
Benton Harbor Radiation	Benton Harbor	RV	9/1/95	EPA
Certified Metal Finishing	Benton Harbor	PA	12/9/91	EPA
Harbor Plating Works	Benton Harbor	SI	8/26/94	EPA
NW Berrien CO San Auth	Benton Harbor	SP	8/3/95	EPA
Bendix Corp/Allied	St. Joseph	RS	7/6/90	EPA
Former Whirlpool Corp.	St. Joseph	PA	1/12/94	EPA

Table 17.—July average stream temperature (°F) for the St. Joseph River and tributaries. Blanks indicate missing information.

Segment and stream	County	Site	Year	Temperature(°F)		
				Minimum	Maximum	Mean
Headwaters						
St. Joseph River	Hillsdale	Moore		67.0	83.0	75.0
Upper						
St. Joseph River	Calhoun	22 Mile Rd		62.0	78.0	70.0
St. Joseph River	Calhoun	14 Mile Rd		63.0	75.0	69.0
Coldwater River	Branch	Gerrand		68.0	79.0	74.0
St. Joseph River	Branch	Athens		73.0	84.0	79.0
Nottawa Creek	St. Joseph	Olney Rd		65.5	86.0	74.5
Middle						
Rocky River	St. Joseph	Bent Rd		65.0	76.0	71.0
Prairie River	St. Joseph	County Line Rd	1993	57.0	73.4	65.3
Prairie River	St. Joseph	Truchenmiller	1993	68.5	83.5	77.4
Prairie River	St. Joseph	Rambadt	1993	69.4	87.3	78.1
St. Joseph River	St. Joseph	Jacksonburg Rd		70.0	84.0	77.0
Curtis Creek	St. Joseph	Corey Lake Rd	1996	50.0	62.4	55.2
St. Joseph River	St. Joseph	Constantine	1991	69.8	78.8	73.0
Pigeon River	LaGrange	South Branch		53.4	68.5	60.6
Pigeon Creek	Steuben					77.2
Lower						
Brandywine Creek	Berrien	Hwy 12	1996	51.3	63.3	57.4
Brandywine Creek	Berrien	3rd Street	1996	53.1	64.4	58.8
St. Joseph River	Berrien	City of Niles		70.7	78.8	75.2
Dowagiac River	Cass	Sink Rd	1992	60.1	72.0	64.9
Dowagiac Creek	Cass	Decatur Rd	1996	55.4	75.2	65.3
Dowagiac Creek	Cass	McKenzie Rd	1996	54.7	76.6	65.7
Dowagiac Creek	Cass	Kelsey Lake Rd	1995	57.7	75.9	66.0
Dowagiac Creek	Cass	Engle at Labars	1996	55.2	75.6	66.4
Dowagiac Creek	Cass	Marcellus Hwy	1996	56.8	79.7	68.2
Dowagiac Creek	Cass	M62 N. of La Grange	1996	62.1	78.8	72.3
Dowagiac Creek	Cass	Goodenough Rd	1995	66.6	83.3	74.3
Dowagiac Creek	Cass	M62 @ Lk La Grange	1996	62.8	82.2	76.6
Dowagiac Creek	Cass	Griffis Rd	1996	53.8	75.4	64.0
Dowagiac Creek	Cass	Dutch Settlement	1996	54.0	75.6	64.9
Pokagon Creek	Cass	Old Mill Rd	1996	51.4	62.8	57.2
Pokagon Creek	Cass	Pokagon Hwy	1996	54.1	70.3	62.1
Pokagon Creek	Cass	Wood Rd	1996	55.0	69.8	63.0
McKenzie Creek	Cass	M51	1994	62.4	73.4	67.8
McKenzie Creek	Cass	Barron Lake Rd	1994	66.2	77.0	71.2
Dowagiac River	Berrien	Old US 31		60.6	79.9	69.3
St. Joseph River	Berrien	Buchanan	1991	68.0	78.8	73.9



Table 17.–Continued.

Segment and stream	County	Site	Year	Temperature(°F)		
				Minimum	Maximum	Mean
Mouth						
Campbell Creek	Van Buren	28th Street	1996	49.3	63.9	54.9
Brush Creek	Van Buren	63rd Street	1996	54.9	67.3	60.6
Brush Creek	Van Buren	75th Street	1996	54.1	69.8	62.2
Paw Paw River	Van Buren	57th Street	1992	60.1	73.8	65.1

Table 18.—Trigger levels for nine chemicals used by the Michigan Department of Community Health in establishment of fish consumption advisories (ppm = parts per million = mg/kg; ppt = parts per trillion).

Chemical	Advisory triggers
Total chlordane	0.3 ppm
Total DDT	5.0 ppm
Dieldrin	0.3 ppm
Toxic dioxin equivalents	10.0 ppt
Heptachlor	0.3 ppm
Mercury	0.5 ppm
Mirex	0.1 ppm
Total PCB	2.0 ppm
Toxaphene	5.0 ppm

Table 19.—Statutes administered by Michigan Department of Environmental Quality, Land and Water Management and Surface Water Quality divisions, that protect the aquatic resource. N.R.P. Act = Natural Resources and Environmental Protection Act (1994 PA 451).

State of Michigan Acts	Description of Acts
Public Health Code (1978 PA 386, as amended)	Aquatic Nuisance Control: regulates the use of substances for the treatment of swimmer's itch, and excessive aquatic plants and algae.
Part 13 N.R.P. Act	Floodplain Regulatory Authority: regulates activities that occupy, fill, and/or grade lands within floodplains of rivers.
Part 31 N.R.P. Act	Water Resource Protection: regulates discharges to surface waters according to set water quality standards.
Part 41 N.R.P. Act	Sewerage Systems: regulates wastewater or sewer system facilities.
Part 91 N.R.P. Act	Soil Erosion and Sedimentation Control: regulates any earth change that disturbs one or more acres, or is within 500 feet of a lake or stream.
Part 301 N.R.P. Act	Inland Lakes and Streams: This part regulates structure placement or removal, dredging, filling below the ordinary high water mark, and operating or constructing a marina in lakes and streams.
Part 303 N.R.P. Act	Wetland Protection: regulates dredging, filling, and structure placement within wetlands.
Part 307 N.R.P. Act	Inland Lake Level: regulates the establishment of legal lake levels and lake level control structures.
Part 309 N.R.P. Act	Inland Improvement: regulates the establishment of lake boards and revolving funds to protect and improve lakes.
Part 315 N.R.P. Act	Dam Safety: establishes a program to maintain a statewide inventory of dams, and provides staff to inspect dams to evaluate the integrity of the structures.
Part 323 N.R.P. Act	Shoreland Protection and Management: regulates construction activities within designated Great Lakes shoreline areas.
Part 325 N.R.P. Act	Great Lakes Submerged Lands: regulates certain activities on Great Lakes bottomlands, such as marina construction, dredging, filling and placement of shore protection structures.
Part 341 N.R.P. Act	Irrigation: regulates the use of Great Lakes water for irrigation.

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US Federal Acts

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Federal Water Pollution Control Act, Section 314 (PL 92-55)  
 Coastal Zone Management Act (PL 92-583, 1972)  
 Clean Water Act, Section 402 and 404 (PL 95-2117)  
 River and Harbor Act, Section 10 (1899)  
 Coastal Energy Impact Program (PL 92-538)

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Table 20.—Designated drains in the St. Joseph River watershed, by state (bold), county (bold), and township (italics). Information provided by each county drain office.

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**MICHIGAN**
**Van Buren County**

<i>Almena</i>	<i>Bangor (continued)</i>	<i>Decatur (continued)</i>
Brandywine Lake	Holdridge	Red Run
Covey Hill	Efting	Carney
Todd	Williams	Johnson & Nowlan
Overacker		Haefner
Watkins & Wiskey Run	<i>Bloomingdale</i>	Fountain
Olson	Clements	O'Rourke & Bennett
Hudson & Slack	North & Extensions	Shellenberger
Brown & Hipp	Sage	Isham
Shaefer	Thayer Lake	Eckard
O'Roark & Lewis	Martin Lake	Millard & Townline
Stevens	King McCoy	Sherburn
Paw Paw & Allegan Road	Hoffman & Mumford	Harris & XConrad
Dyer	McCulloch & Farnsworth	Rose & Johnson
Markley	Grove & Branch	Storms-McGuire
Brand	Lyle Lake	
Ritter	Billsborough	<i>Hamilton</i>
Armstrong, Hymes, & Paw Paw	East Branch of North	Red Lake
Lockman	Baughman & Ledrow Branch	Sherwin
	Sage & North	Eagle Lake Extension
<i>Antwerp</i>	Allen	Shoudy
Lawton		Cagney
Coldbrook	<i>Covert</i>	School Lot
Cheeseman	Branch & Derby	Fritz
Lockwood	McConnell & Olcott	Lake of the Woods
Townline	Cargill Branch	Ryan
Moon	Gering	Marsden
Cook Inter-County		Kraak
Paw Paw Outlet Drain	<i>Decatur</i>	Cady
	Lindsley & Branch	Osborn
<i>Arlington</i>	Eagle Lake Extension & Branch	Geer
Butterfield	Gates	Mead
Bierce & Section Line	Gates Extension	Dowagiac River Inter-County
Blaisdell & Lane	Swanson	Twin Lakes Road Inter-County
Nickols & Taylor	Coldbrook	Millard & Townline
Cronin	Lee & Canning	Clafflin
	Blade & Extension	Wilson & Brown
<i>Bangor</i>	Beuchner & Millard	Friendly Neighbors
Whitmore	Power	Pine Lake
Tamarack	Ives	Conway
Stowe	Jackson	
Raven	Maxwell & Branches	<i>Hartford</i>
Mud Lake	Fifield	Camp & Root
Duck Lake	Kinney	Van Auken Lake
Wilson	Dowagiac River Inter-County	Mud Lake
Duffy	Mud Lake	Sink Hole
Van Auken Lake	Latham	Williams
Sink Hole	Spring Creek	Kabel

Table 20.—Continued.

**Van Buren County** (continued)*Hartford (continued)*

Holdridge  
Doyle  
Woolsey  
Holden  
Health & Cemetery  
Sherburn  
Luke Conklin  
Shafer #1  
Lane  
Hartford  
Shafer #2  
Oaks  
Wilson Inter-County  
Stickney  
Johnson  
Hupp Inter-County  
Sherwin  
Clinton  
Howlett & Conklin  
Woolcot Branch  
Hall & Pitcher  
Gridleys

*Keeler*

Brague  
Fisher  
Phillips & Walker  
Sherwin  
Red Lake  
Mud Lake & Osborn  
Barnaby  
Center  
Vanderlyn  
Hasbein  
Woodland Point  
Howlett & Conklin

*Lawrence*

Jones  
Blaisdell & Lane  
Upton & Centerline  
Nelson Lake  
Gage  
Lawrence  
Reynolds Lake & Tucker  
Alden & Crawford  
Tuttle & Shaul  
Johnson  
Eagle Extension  
Wison & Brown  
Sherwin

*Lawerence (continued)*

Lanphear-Witter-Jennings  
Hall & Pitcher  
Branch & Fisk  
Parks & Fuller  
Baker, Richards, Cross & Law.  
Nickols & Hollund Lake  
Clark & Moffet  
Cornwall  
Mc Allister & Calvin  
Pitcher & Cronin  
Clark

*Paw Paw*

Buskirk  
Wilson & Wildey  
Moon & Allan  
Carter Creek  
Butler  
Buckley  
Cutter  
Cavanaugh  
Thomas  
Woodman & Hudson  
Howe-Webb-Labadie  
Van Blaricom  
Waite  
Three Mile Lake & Jennings  
Detmars  
Gates  
Lawrence-Martin  
Galligan  
McNeil  
Hall  
Eagle Lake  
Graham  
Dunnington Road  
Lawton  
Coldbrook  
Gooding  
Scotese  
Thompson & Harrington  
Mud Marsh  
Scott & Tuttle  
Willard, Sherman, & Gates  
Griffin & Salsbury  
Payne & Dunnington Road  
Tuttle & Tracy  
Coffman & Mumford  
Richmond

*Pine Grove*

Brandywine Lake  
Todd  
  
*Porter*  
Gates Extension  
Van Cass Inter-County  
Conklin  
Andrews & Gillette  
Four County Inter-County  
Gravel Lake & Vincent

*Waverly*

Jones & Allan  
McCulloch & Farnsworth  
Bush  
Wilson #2  
Brandywine  
North  
Allan  
Covey Hill  
Indian Run  
Valleau  
Shears & Chase  
Butterfield  
Spring Run  
Teman  
Rich & Dillon  
Carr  
Rawson & Huckleberry  
Conant  
Elm Flat  
Cleveland  
Bean  
Jordan  
Shaefer  
Swick & Smith  
Owen  
Woodman  
Paw Paw & Allegan Road  
Taylor  
Carter Creek  
Mud Marsh  
Moon & Allan  
Highway  
Longwell  
Carter Creek Ext.  
Colburn  
Buckley  
Butler  
Cole & Cutter  
Raymond

Table 20.—Continued.

**Van Buren County** (continued)

*Waverly (continued)*

Brandywine Lake  
Mather & Nowlin  
Randall-Anton-Smith Rd  
Armstrong-Brown & Allegan

**Kalamazoo County**

*Climax*

No. 7  
Cook  
No. 19  
Lafever Lake  
Eldred  
Willow Swamp  
Bush  
Pierce  
No. 14  
Longman  
Sager & Enler Bear Creek  
Osborn  
Jones  
Johnson North  
Johnson South  
Johnson  
Ford  
Ford Branch  
Brown  
Wakeshma  
Proctor  
Four Towns

*Pavilion*

Mather  
Hamilton  
Big Marsh  
Adams  
Briggs  
Knapp  
Cook  
Moore  
Mathews  
Hass  
Nash

*Wakeshma*

N. Parker  
Hendrixson  
Snyder & Snyder  
Carter & Bower  
Sager & Enler Bear Creek  
Fulton  
Comp & Holland

*Wakeshma (continued)*

Little Portage Creek  
Snake  
*Brady*  
Northam  
Indian Lake  
Henry  
Grovenburg  
Reinbold  
Murray  
Parker  
Martin  
Burdick  
Crouchy  
Bear Creek Extension  
Prolo  
Axtell  
Annis  
Seminar  
Falcon  
Honeysett  
Mayer  
Fisher  
Vicksburg  
Shick  
Strome  
Section Line  
Mattis

*Schoolcraft*

Follmer  
Roberts

*Prairie*

Andrews & Gillet  
Calvert  
Buell & Murray  
Lee Clark

**Hillsdale County**

*Adams*

Adams 3  
Adams Hwy  
Broomcorn  
Broomcorn Extension  
Lake Adams  
Big Hog  
Reynolds

*Allen*

Sand Creek  
Soap Creek

*Allen (continued)*

Donnelly  
McConnell  
Swaney  
Allen #3

*Fayette*

Emery

*Hillsdale*

Emery Br 1  
DuBois  
Frankhauser  
Phillips  
Carleton

*Litchfield*

Doty Chamberlain  
Sand Creek  
Fairbanks-Adams  
Lindsey  
Booream  
Jennings  
Litchfield  
Soap Creek  
Perry Thompson  
Bowen Creek  
Small

*Reading*

Murray  
Null  
Gaye  
Morning Glory  
West Reading Road

*Wheatland*

Shull  
Church  
Otto

**Cass County**

*Calvin*

Chess  
East  
Goodwin  
Goose and Mud Lake  
Northrup  
Long Marsh  
Section Ten

Table 20.—Continued.

**Cass County** (continued)*Howard*

Bame and Huntley  
 Brandywine  
 Dibble  
 Dodd and Doane  
 Knowlton and Miller  
 Mud Lake  
 Mud Lake Extension  
 Ely Creek  
 Mays-Martin

*Jefferson*

Emmons and Moran  
 Goose and Mud Lake  
 Mud Lake Extension  
 Pleasant Lake  
 Adams-Simpson

*La Grange*

Kingsbury  
 Park Shore #1  
 Park Shore #2

*Marcellus*

Van-Cass  
 Eggleston  
 Four County & Calvert  
 Hayes  
 Mud and Pine Lake  
 Nottingham and Jones  
 Red Run and Extension  
 Swift Lk & Prairie Ronde  
 Bartlett  
 Hoover-Kelly

*Mason*

Mud Lake-Mason Consolidated  
 Long Marsh  
 Firestone  
 Burema Beach

*Milton*

Brandywine  
 Brandywine East Branch  
 Brandywine West Branch  
 Knowlton & Miller  
 Peter Truitt  
 Lacey  
 Mud Lake  
 Bame & Huntley

*Newberg*

Colton and Brown  
 Hartman  
 Kirk Lake  
 Russey  
 Lilly Lake  
 Poe  
 Draper Miller  
 Jones  
 Harwood Lake Dam  
 Long Lake Level Control

*Ontwa*

Pleasant Lake  
 Beaver Dam & State Line  
 Garver Lake  
 Garver Lake Level Control  
 Eagle Lake Control  
 Lawndale  
 French's Landing

*Penn*

Big Huckleberry Marsh  
 Big Huckleberry Extension  
 Jones and Thompson  
 Kirk Lake  
 Youngs Prairie Marsh  
 Hilderbride

*Pokagon*

Dowagiac River  
 Cleary  
 Frantz  
 Groat & Wyant  
 Johnson Street  
 Owen and McCoy  
 Peavine North Branch  
 Smith Lake  
 Stock Farm  
 Swamp & Rapp  
 Miller & Roberson

*Wayne*

Dowagiac River  
 Gard & Pendergrass  
 Pine Lake  
 Pine Lake Branch  
 Pitcher  
 Lawrence and Maxon  
 Lee & Hungerford  
 Garland  
 Ruple

*Wayne (continued)*

Osborne (Wilson)  
 Twin Lakes Water Level  
 Twin Lakes Road Branch

*Porter*

Henderson  
 Draper & Miller  
 Shavehead Lake Dam  
 Union & State Line

*Silver Creek*

Dowagiac River  
 Hays  
 Jerue & Flynn  
 Lyle & Daily  
 Owen & McCoy  
 Parks & Jones  
 Patrick Hamilton  
 Pine Lake  
 Salts  
 Reed  
 Clark  
 Mann  
 California  
 Magician Lake

*Volinia*

Gould  
 Robinson  
 Swift Lk & L. Prairie Rhonde  
 Roy  
 Red Run  
 Whitaker  
 Whitaker NE Extension  
 Whitaker Branch B  
 Whitaker Branch C  
 Finch Lake Dam  
 McLillan Dam

**Saint Joseph County***Burr Oak*

Findley  
 Brooks  
 Eberhard  
 Needham  
 Saddawasser  
 Hog Creek Lake Drain  
 Sandorn and Hog Creek  
 Dry Lake  
 Lawrence & Reed  
 Johnson Kelly

Table 20.—Continued.

**Saint Joseph County** (continued)

*Burr Oak (continued)*

Wood & Watson  
 Moore Betts  
 Shaw Acker  
 Skirvin  
 Stewart Lake  
 Reed & Hagan  
 Plum  
 Graves  
 Seilkins  
 Gordon  
 Gillette

*Colon*

Gorton  
 Benedict Lake  
 Ames  
 Bear Creek  
 Yeatter  
 Beaver Marsh  
 Thornton  
 Bartholomew Spring Creek  
 Colon #1  
 Keightly  
 Davis  
 Little Swan Creek  
 Copenhafer Extension  
 Marvin  
 Freeman  
 Brooks

*Constantine*

Mill Creek Sec. #4 & #5  
 Kiser  
 Berkley and Reed  
 Hassinger  
 Thomas

*Fabius*

Semberling  
 Gill and Try  
 Goose Lake  
 Corey Lake  
 Profile Lake

*Fawn River*

Graves  
 Gillette  
 St. Joseph & Branch Iter-Co  
 Sweet Lake  
 Moe  
 Plum

*Fawn River (continued)*

Bristol  
 Himebaugh  
 Fawn River

*Florence*

Harrison East  
 Harrison West  
 Cook  
 Hepner  
 Kiser Bickel  
 Moore & Burgener  
 Hull Gaul  
 Hallwood  
 Branch No 2  
 Moore & Wordleman  
 Mandigo  
 Kehoe & Meert  
 Meert  
 Fillams  
 Branch No 1

*Flowerfield*

Dent  
 Four County  
 Staphweather  
 Casten  
 Hoover Kelly  
 Hartman Casile  
 Park & Flowerfield  
 Gill Fry  
 Cooper  
 Miller  
 Cranberry  
 Section 36

*Leonidas*

Carter  
 Silas Kline  
 Snake  
 Wakeshma  
 Smith Woodworth  
 Portage Creek  
 Metty Rice  
 Yaple  
 Watkins  
 Clarks  
 Outwater  
 Plug Extension  
 Town Line  
 Plug  
 Tutewiter

*Leonidas (continued)*

Farnham  
 Ainsley  
 Shannon & Guthrie  
 Bennett Birch  
 Mc Cauley  
 Benedict Lake

*Lockport*

Handshaw  
 Oldorf  
 Lockport & Nottawa

*Mendon*

Cole & Darling  
 Bear Creek  
 Section Line  
 Leon., Mendon, & L. Portage  
 Metty  
 Smith & Tyler  
 Portage Lake  
 Garman Foster  
 Fletcher  
 Section 28  
 Laird, Thompson & Doan

*Nottawa*

Nottawa No 1  
 Wilcox  
 Colon No 1  
 Wabepi  
 Simpson  
 Hasbrook Mumby  
 Klady  
 Warren  
 Mc Kercher

*Park*

Section 7  
 Hill  
 Park  
 Felker  
 Moorepark  
 Garman Foster  
*Sherman*  
 Fowler  
 Reed  
 Sacawasser  
 Carl



Table 20.—Continued.

**Saint Joseph County** (continued)*Sturgis*

Nye

Section 16

Winger

*White Pigeon*

Marl Lake

Stevenson

**Calhoun County***Leroy*

Shu-Pixen

Allen &amp; Davis

Dog-Town

*Athens*

Dog-Town

Waterman

Athens-Indian Creek

Histand

Nottowa Creek

Taylor

Snyder

Brokaw

Rowe &amp; Wallace

Section 35

*Newton*

Root

Laupp

Stylers

Goff

Fanning

Woodward Extension

Branch

Smith &amp; Hyde

Yost &amp; Francisco

Rocho

Mud Creek &amp; Fanning

Phillips

Houghton

Porter

Alder Creek

*Fredonia*

Smith &amp; Hyde

Thwing &amp; Hutchins

Kidney &amp; Snyder

Nottowa Creek

Pine, Long, &amp; Fish Lakes

Gleason

Goodrich &amp; Nottowa

*Fredonia (continued)*

E.F. Goodrich

Herron &amp; Nottowa

East-Nottowa Creek

*Homer*

Brewer

Dryer

*Burlington*

Barnes

John Wood

Cronkhite

Alder

Kemler

Buell

Miller &amp; Melody

French

Nottowa Creek

Pulman &amp; Knapp

Tonciet

Hudson

Lucas

Rowe Wallace

Clay

Fox Extension

Parks

Summit

*Tekonsha*

Heath &amp; Bartlett

Bach &amp; Ellis

Black Lake

Boston

Werner

Acker

Acker Extension

Mitchel

Hartson

Len Dean

Brown &amp; Osborn

Failing

Dorris &amp; Schaffer

Hill &amp; Granger

Hill

Tamarack Creek

Tekonsha Creek

J.C. Blake

Still

Union &amp; Tekonsha

Wagner

*Clarendon*

Goose Pond

Andrews

Keeney

Clarendon &amp; Eckford

Ball

Drain No 3

Hess

Bolton

Hoeness

Dryer

Sloan

Lawrence &amp; Brooks

Drain No 1

Drain No 2

Sweet

Goodrich

Rams Horn

Ford

Shilling

Powers

Tekonsha Creek

Pritchard

Tamarack Creek

Doolittle

Eldred

**Branch County***Alganssee*

Swaney

Ransom

Hermance

Pridgeon &amp; Warner

Townline

Archer

Gray

Stone Creek

Alganssee No 81

Hendriks

Hendriks Branch 1

Hendriks Branch 2

Schultz

Wilmarth

Alganssee No 89

Purdy

Southworth

Tal

George

Calvin

Stowe

Briggs

County No 51

Table 20.—Continued.

**Branch County** (continued)*Algansee(continued)*

Bradley Joint  
Price  
Braman  
Algansee No 14  
Tallahassee Creek  
Hall  
Algansee No 66  
Algansee No 60  
Clark

*Batavia*

Joint No 3  
Joint No 19  
Union & Batavia No 18 & 20  
Union & Batavia No 10  
County No 5  
Batavia No 15  
Batavia No 3  
Batavia No 4  
Batavia No 1 & 7  
Batavia No 6  
Batavia No 2  
Batavia No 16  
County No 20  
Batavia No 32  
Batavia No 78  
Batavia No 8  
Batavia No 11  
Benton & Batavia No 7  
Batavia No 17  
County No 47  
Bethel No 16

*Bethel*

County No 47  
Bethel No 18  
Sylver  
Bethel No 12  
Swan Creek  
County No 14  
Bethel No 34  
Bethel No 83  
Bethel No 35  
Bethel No 36  
Bethel No 13  
Bethel No 30  
Bethel No 84  
Bethel No 27  
Bethel No 23  
County No 6 & 3  
Betney & Bronson No 451

*Bethel (continued)*

Bethel No 22  
Bethel No 20  
Bethel No 28  
Bethel No 91  
Bethel No 3  
Bethel No 15  
Hog Creek No 40  
Branch 81 of Co 851  
Bethel No 24  
Bethel No 29  
Bethel & Ovid No 8

*Bronson*

Swan Creek  
Monroe  
County No 30  
Branch No 3 of Co 30  
Bronson No 11  
County No 21  
Holmes  
County No 56  
Sackett  
Earl No 1  
County No 1  
Bronson No 6  
Bronson No 7  
Bronson No 1  
Branch No 3 of Co 1  
Adams No 19  
Dunn No 20  
County No 10  
Bronson No 9  
Bronson No 13  
County No 41  
Bronson No 12  
Bronson No 5  
Bethel & Bronson No 4 & 1  
Hog Creek No 5  
Hog Creek No 4  
County No 25  
Bronson No 6  
Snippy  
Bronson No 14  
Sutter & Pinney  
Havens No 19  
Daley No 35  
County No 25

*Butler*

Drinkwater  
County No 50  
Powers  
Tekonsha Creek  
County No 30  
Vicory & Bursley No 10  
Soap Crek No 15  
Warren Creek  
Menslick  
Holmes  
Lucas & Burch  
Butler No 22  
Knowles Co  
Knowles Co Branch No 1  
Allen  
County No 2  
Messenger & Bush  
County No 33  
Bowen Creek

*California*

Calif. No 67  
Calif. No 67 Branch 1  
Pidgeon & Warner  
Cass  
Tallahassee Creek  
Calif. No 2  
Hall  
Calif. No 66  
Townline  
Calif. No 88  
Calif. No 63  
Withington Lake

*Coldwater*

County No 33  
Joint No 3  
State School  
Benton Pond  
Branch No 2 of Co No 15  
Coldwater No 1  
County No 15  
Branch No 1 of Co No 15  
South Branch of Co No 15  
County No 1  
Dickey  
County No 22  
County No 40  
Alden No 26  
William No 20  
County No 63

Table 20.—Continued.

**Branch County** (continued)*Coldwater (continued)*

County No 65  
Coldwater No 76

*Gilead*

County No 23  
Gilead No 2  
Weaver Br 1  
Weaver Br 2  
Ritter  
Hog Creek  
Gilead No 5  
Lanes  
Gilead No 6  
County No 54  
Gilead No 3  
Gilead No 9  
County No 39  
County No 59  
Gilead No 7  
Gilead No 10

*Girard*

Tekonsha Creek  
Sherman  
Girard No 9  
County No 57  
Girard No 3  
Girard No 8  
Girard No 15  
Girard No 4  
Girard No 5  
Warren Brook  
Girard No 6  
Girard No 25  
Girard No 20 & 34  
Girard & Butler No 90  
Girard No 2  
County No 4  
Girard No 49  
County No 6  
Girard Extension  
Girard No 23  
County No 33

*Kinderhook*

Withington Lake  
Kinderhook No 1  
County No 53  
Hilton  
Gilead No 2  
County No 39

*Kinderhook (continued)*

Kinderhook No 4  
Kinderhook No 2  
Kinderhook No 8  
Kinderhook No 3

*Matteson*

County No 16  
County No 5  
Strong  
County No 17  
Branch No 1 of Co No 17  
Tilton  
McCarty  
Ames  
Matteson No 70  
Yeatter  
Little Sand Creek  
Case  
Rich  
Batavia No 16  
County No 21

*Noble*

County No 25  
Sutter & Pinney  
Blosser  
Noble No 3  
Noble No 1  
Nobel No 4 & 5  
Burr Oak  
Himebaugh  
Honey Lake

*Ovid*

County No 40  
Ovid No 69  
Branch No 31  
Branch No 32  
Rappaleye  
Ovid No 80  
County No 24  
Ovid No 7  
Betts  
County No 52  
County No 62  
Tallahassee Creek

*Quincy*

Quincy No 68  
Quincy No 8  
County No 8

*Quincy (continued)*

Noble  
Sparks  
County No 33  
Burton  
Quincy No 15  
Quincy No 37  
County No 64  
Quincy No 10  
County No 60  
Quincy No 1  
Quincy No 2  
Bowen  
Quincy No 18  
County No 22  
County No 23  
Quincy No 9

*Sherwood*

Summit  
Stanton  
Kindig  
Sherwood No 60  
County No 18  
Billings  
Sargent  
Fimple  
Cline  
Buell  
Kilbourn  
Hill  
Specer  
Sherwood No 89  
Blackwell

*Union*

Union & Tekonsha  
Union No 11  
Speaker  
Allen  
Union & Girard No 15  
County No 18  
Lee  
Lincoln  
Ford  
County No 46  
Buell No 10  
County No 58  
Union No 12  
Morse No 20  
Union No 13  
County No 14

Table 20.—Continued.

**Branch County** (continued)

*Union (continued)*

Union & Batavia No 10  
 Union No 8  
 Joint No 3

**Berrien County**

*Watervliet*

Schoorover  
 Branch & Derby  
 Sherwood  
 Wilson  
 Watervliet  
 Knapp  
 Morelock & Allen  
 Morelock & Schearer  
 Holle & BuJack  
 Bucher  
 Hupp  
 Red Arrow

*Lincoln*

Hickory Creek  
 Halliday  
 Glenlord Road  
 Lawrence  
 Keeler  
 Davis  
 Sullivan  
 Williamson  
 Parker  
 Morrow

*Baroda*

Hickory Creek  
 Big Feather  
 Town Corners  
 Hausei & Hendrix  
 Starr & Wellington  
 Miller  
 Singer Lake Outlet  
 Phiscator & Wetzel  
 Fowler  
 Beebe  
 Hyatt  
 Little Hickory Creek

*Lake*

Keeler Creek  
 John & Emlong

*Buchanan*

Weaver Lake Drain  
 Clear Lake

*Bertrand*

Pike Lake Drain  
 Dixon & Dye  
 McCoy Creek

*Niles*

Spring Valley  
 Franz  
 Norton  
 Ely Creek  
 Metzger & Thompson

*Oronoko*

Moatz  
 Hall & French  
 Edison, Williams, & College  
 Singer Lake  
 Beaver Dam  
 Bihlmire & Martin  
 Bihlmire & Nelson  
 Stearns  
 Hollenbeck & Ryan  
 Grays Run  
 Lutz  
 Billy Graham  
 Lemon Creek  
 Lemon Creek Ext.  
 Yellow Creek

*Royalton*

Yellow Creek  
 Greenbook Estates  
 Palisades  
 Elm Flat  
 Boswell & Briney  
 Bartz & Bender  
 Weed & Fogle  
 Smith & Metzger  
 Tobias  
 Buckhorn  
 Brunke  
 Buckhorn Outlet  
 Sinn & Burkett

*Saint Joseph*

Hickory Creek  
 Cleavland  
 Nelson

*Saint Joseph (continued)*

Anderson & Smith  
 Royalton Heights  
 Dozer

*Sodus*

Howard & Sink  
 Strome  
 Sink & Stewart  
 Jerue  
 Akright  
 Dana & Rector  
 Bauske & Simper  
 Bittner & Rector  
 Benke  
 Winters  
 Allen & Taylor

*Pipestone*

Pipestone Creek  
 Jenning  
 Kerstetter  
 Lewis & Thompkins  
 Pipestone Lake Drain  
 Moss Lake  
 Langlan  
 Aumack & Kelly  
 Mud Lake  
 Zech  
 Easton  
 Greenfield & Smallage  
 Vladic  
 Clark  
 Crooked Brook

*Bainbridge*

BuJack  
 Sonnenberg  
 Geisler & Kneibes  
 Potes  
 Kammerer  
 Kitron  
 Molter  
 Breit  
 Yund & Ellis  
 Brant & Dix  
 Yore & Stoeffler  
 Porter Brant  
 Russell  
 Hill  
 Slinker  
 Pipestone Lake

Table 20.—Continued.

<b>Berrien County</b> (continued)	<b>INDIANA</b>	
<i>Bainbridge (continued)</i>	<b>Elkhart County</b>	<i>Clinton (continued)</i>
Wooten & Bishop	<i>Baugo</i>	Fryberger & Lutz
Reese & Merrill	Manning Osborne	Horn
<i>Benton</i>	Cobus Creek	Horn-Berkey
Twelve Corners	Crawford	Horn-Rockinbaugh
Barnes & Hamilton	Baugo Creek	Horn-Scrannage
George & Johnston	Rogers	Horn-Hess
Wright & Woodley	<i>Benton</i>	Horn-Green
Stewart & Hess	Ben Blue	Horn-Elliot
Flood	Bollinger	Horn-Price
Ox Creek	Damey	Horn-J.C. Stroup
Lempke & Long	Dry Run	Horn-Garver
Yore & Stoeffler	Hinderer	Horn-Cripe-Metz
McCrome & Zimmerman	Hire	Horn-Cripe
Kelley & Miller	Horn	Horn-Chiddister
Sink & Stewart	Juday	Lehman
Knapp, Stewart, & Kent	Long	Lorhi-Cripe-Lehman
<i>Hagar</i>	McNutt	Marty
Rogers Creek	Meyer	McCallister
Morgan	Millersburg	Philps
Riverside	Stetler	Rink
Curtis	Stiver	Rock Run
Granger	Stoney	Rohrer
Fiehler	Worley	Stoney Creek
Defields	Zollinger	Vance Swilhart
Thompson	<i>Cleveland</i>	<i>Elkhart</i>
Russel & Havens	Cobus	Boyer
Bauske & Brado	Manning Osborne	Elkhart River
<i>Coloma</i>	Thorton	Horn
Becht & Peck	<i>Concord</i>	Horn-Kauffman
Dedrick-Johnson	Bechtel	Horn-Collins
Dedrick	Bock Ditch North	Horn-Yoder
Cutler & Schmidt	Cline	Hydraulic Canal
Beryman	Christiana Creek	John M. Hoover
Hudson	Fulmer	Leedy
Howe, Ryno, & Worden	Howard	Rock Run
Defield & Crumb	New Miller - Stutzman	Swoveland
Little Paw Paw Lake	Pine Creek	Turkey Creek
<i>Berrien</i>	Riggle	<i>Harrison</i>
Eau Claire	Sailor	Adam B. Miller
Dwan & Kerstetter	Shaffer	Anglemeier-Loucks
Eau Claire Ext.	Stauffer	Bock Ditch South
Berrien Centers Ext.	Yellow Creek	Fetters Martin
Berrien Centers	<i>Clinton</i>	Fetters Pletcher
Major & Michael	Anan	Fulmer
Groat & Wyant	Berkey	Hoke
Spring Valley Ext.	Boyer	Huber Powles
	Farmwalt	Kehr
		Landis
		Leedy

Table 20.—Continued.

**Elkhart County** (continued)

*Harrison (continued)*

Little Yellow Creek  
 New Miller-Stutzman  
 Nunemaker  
 Owl  
 Shaffer  
 Swoveland  
 Werntz  
 Wise  
 Yellow Creek

*Jackson*

Berkey  
 Darr  
 Dausman  
 Elkhart River  
 Hydraulic Canal  
 Josiah Neff  
 Kiefer  
 Kitson  
 Preston Miles  
 Schriver  
 Swoveland  
 Turkey Creek  
 Twaits  
 Whetten  
 Worley  
 Zollinger

*Jefferson*

Barthol  
 Comstock  
 Hildreth  
 Indian  
 John Hoover  
 Karn  
 Kessler  
 Menges  
 Osborne  
 Pine Creek  
 Rowell  
 Sailor  
 Snively

*Locke*

Wisler  
 Holderman  
 Doering-Davidhizer-Christoph.  
 Adam B. Miller  
 Weldy

*Middlebury*

Boyer  
 Karch  
 Little Elkhart River  
 Mather  
 Pine Creek-North  
 Pine Creek-South  
 Pfeiffer  
 Rowe-Eden  
 Stutz

*Olive*

Barkley  
 Baugo Creek  
 Billman  
 Grimes  
 Harrington  
 Nunamaker  
 Olive  
 Pletcher  
 Weldy  
 Werntz  
 Wisler

*Osolo*

Bishop  
 Christiana Creek  
 Coe Meyer  
 Kindig  
 Kellog  
 Mather  
 Osolo  
 Pine Creek  
 Pratt  
 Puterbaugh Cr.-Jacob Meyers  
 Rhinehart

*Union*

Berlin Court  
 Dausman  
 Doering-Davidhizer-Christophe  
 Havestick Darkwood  
 Jerome D. Smith  
 Kauffman  
 Louis Mishler  
 Mishler  
 Stuckman  
 Swoveland  
 Wagner  
 Wagner-John Drake  
 Weaver  
 Wisler

*Washington*

Corpe  
 Kellog  
 Little Elkhart River  
 Menges  
 Sheep Creek  
 Washington Township  
 York Township

*York*

Corpe  
 East Lake  
 Little Elkhart River  
 Lovejoy  
 Mather  
 York Township  
 York-Middlebury Twp South  
 York-Middlebury Twp North

**Kosciusko County**

*Jefferson*

Omar-Neff  
 Davison

*Van Buren*

Preston  
 Davison  
 Coppes  
 Hammond  
 Hoopingarner  
 Perry Mathews

*Turkey Creek*

Baker Arm  
 Hoopingarner  
 Skinner  
 West Lake  
 Meyer

*Steuben County*

*Fremont*

Gleason  
 Kinsey-Dygert  
 Deller  
 Albright  
 Weaver-Grove  
 Griffin  
 Painter-Dally  
 Ryan-Reppard

Table 20.—Continued.

**Steuben County** (continued)

*Jackson*

Munger  
Hammond-Greeno  
Mundy  
Stout

*Jamestown*

Ayres  
Lucas

*Millgrove*

Webb  
Merill-Sanders-Barber  
Roberts-Giles-Swiger  
Lucas

*Otsego*

Dole  
Zabst  
Johnson

*Pleasant*

Carpenter  
Croxtton  
DeLancey  
Cole  
Wood

*Salem*

Walters  
Clay-Deller  
Deller-Mortorff  
Munger  
Hammond-Greeno  
Deetz  
Slick  
Conrad  
DeWitt-Weicht-Sparks  
Hovarter  
Teal  
Nelson  
Nelson Lateral 6  
Schweitzer  
Miller  
Krehl  
Wagner  
Kirlin Lateral  
Hughes  
Lower Turkey Creek  
Camp  
Middle Turkey Creek  
Monroe-Wright 2

*Salem (continued)*

Chasey  
Allen  
Town of Hudson  
Town of Hudson Storm  
Upper Turkey Creek

*Scott*

Kinsey-Dygert  
Dole  
Berlien  
Sanders  
Cole  
Eatinger 2  
Metz-Balding-Goodale  
Ryan-Reppard  
Jack

*Steuben*

Walters  
Hoyer  
Clay-Deller  
Deller-Mortorff  
DeLancey  
Crampton  
Carver  
Wood  
Malone 2  
Malone Lateral 10  
Teal

*York*

Ryan-Reppard

**Dekalb County**

*Fairfield*

Bickel  
Albert  
Hovarter  
Barkley  
Smith  
Carter  
Deetz  
Nelson  
Fifer  
Higgea  
Reinoehl  
Wilsey

**Noble County**

*Allen*

Bixler  
Kraft  
Lash  
Lane  
Aungst  
Aungst-Shaffe  
Aungst-Holsinger  
Gretzinger  
Penn  
McKee  
Crothers  
Varner  
Dolan  
Roush  
Moree  
Yeiser  
Yarian-Wolf

*Clay*

Sec. 29  
Laurel Rd  
Pipeline Rd  
Clay  
Sec. 18  
Sec. 21

*German*

Sec. 10  
Sec. 15-1  
Sec. 15-2

*Portage*

Bowman Creek  
Ironwood

*Center*

Eberly  
Center  
Sec. 35-1  
Sec. 35-2  
Sec. 35-3  
Sec. 2  
Sec. 12  
Sec. 18-1  
Sec. 18-2  
Sec. 18-3

*Greene*

Eberly

Table 20.—Continued.

**Noble County** (continued)

*Penn*

Woodward  
 Woodward Ext. 1  
 Woodward Ext. 2  
 Woodward Ext. 3  
 Woodward Ext. 4  
 Woodward Ext. 5  
 Eller  
 Eller Ext. 1  
 Eller Ext. 2  
 Blackberry Rd  
 Eller Ext. 3  
 Harrison Rd

*Elkhart*

Gonser  
 Eddy  
 Shull-Rowe  
 Marshall  
 Frick  
 Pancake-Remmell  
 Stewart  
 Remmell  
 Boyd  
 Harrison-Boyd  
 Hunter  
 Mawhorter  
 Huston  
 Kessler-Ramer  
 Palmer  
 Jacobs  
 Smalley  
 Brill  
 Schwab  
 Kinnison  
 Cook  
 Rink  
 Peffer  
 Yant

*Green*

Varian  
 Hanlon  
 Engle  
 Thomas  
 Forker  
 Hoffman  
 Sherwood  
 Easterday  
 Parker

*Jefferson*

Gretzinger  
 Boughey  
 Stillinger  
 Huston  
 Knox  
 Hardendorff  
 Croft  
 Weimer  
 Rimmell  
 Halferty  
 McFarland  
 Moree  
 Clapp  
 Melvin  
 Black  
 Stanley  
 Neal  
 Lewis  
 Summers  
 Hines  
 Brumbaugh  
 Steffey  
 Easterday  
 Roush  
 Yarian

*Noble*

Thumma  
 Roscoe  
 Oliver  
 Forker  
 Phillips  
 Braden  
 Parker  
 Depew  
 Stewart  
 Winebrenner  
 Galloway  
 Thomas Ott  
 Wildcat  
 Mayfield  
 Seymour  
 Crandall  
 Clark  
 Prickett  
 Wolf Lake  
 Surfus  
 Marker  
 Sherwood  
 Smalley  
 Prichard

*Noble (continued)*

Sinkhole  
 Rockey  
 Line  
 Beal  
 Davis-Nobles

*Orange*

Strayer  
 Raber  
 Holsinger  
 Gonser  
 Shultz  
 Blanchard  
 Oviatt  
 Rimmell  
 Swogger  
 Gretzinger  
 Strater  
 Boughey  
 Weaver  
 Frick  
 Stillinger  
 Ramer  
 Singery

*Perry*

Damey  
 Slabaugh  
 Simpson  
 Miller  
 Chiddister  
 Green  
 Kadleck  
 Sparta Lake  
 Smith  
 Stuff  
 Leslie  
 Kimmell

*Sparta*

Sparta Lake  
 Kalbeck  
 Kimmell  
 Swager  
 Earnhart  
 Feldheiser  
 Gorsuch  
 Kirkland  
 Gloyd  
 Iden  
 Buckles



Table 20.—Continued.

**Noble County** (continued)*Sparta (continued)*

Cromwell  
Norris  
Lancer  
Clingerman  
Galloway

*Swan*

Yarian

*Washington*

Buckles  
Piper  
Galloway  
Ritter

*Wayne*

Hutchins  
Uhl  
Strayer  
JW Uhl  
Auman  
Kimmell  
Devoe  
Oviatt  
Frey  
Hill  
Waterhouse  
Kendallville  
Ivey  
Henderson  
Bixler  
Sherman  
Aungst

*York*

Huston  
Palmer  
Peffer  
Willetts  
Pollock  
Chas. Bender  
Crothers  
Norris  
Black  
Starmer  
McLallen  
Kirkpatrick  
Earnhart  
Pleasant  
Long  
Knox

*York (continued)*

Weeks  
Thumma  
Roscoe  
Sparrow  
Hursey

**Saint Joseph County***Harris*

Judy Creek  
R3E/R4E  
Sec. 25  
Sec. 26  
Bittersweet Rd  
Buckeye Rd  
Willow Creek  
Gast Ditch

**LaGrange County***Bloomfield*

Appleman  
Cohler  
Debow  
Fly Creek  
Gilhams  
Kilpatrick  
Mc Coy  
Mc Nutt  
Pigeon  
Powers  
Richards  
Rowe  
Royer  
Sisson  
Stoner  
Wade

*Clay*

Bontrager  
Chrystler  
Gilhams  
Hostetler  
Kauffman  
Long  
Mc Mannus  
Metzger  
Rowe  
Van Natta  
Vaughn

*Clearspring*

Blough  
Buchanan  
Buck Creek  
Charles  
Colwell  
Dunten  
Gonser  
Hostetler  
Kime  
Long  
Miller  
Miller  
Ramer  
Schermerhorn  
Sigler

*Eden*

Bobeck  
Eden  
Fox  
Hostetler  
Elkhart Ditch  
Miller  
Phillips  
Prough  
Schrock  
Yoder  
Zook

*Greenfield*

Bradford  
Graves  
Knight

*Johnson*

Affolder  
Appleman  
Baugher  
Broughton  
Buck Creek  
Case  
Colwell  
Fly Creek  
Hart  
Hogue  
Logan  
Royer  
Stoner

Table 20.—Continued.

**La Grange County** (continued)

<i>Lima</i>	<i>Springfield</i>
Fly Creek	Alleshouse
Hawkins	Danner
Hoerl	Debow
Mc Mannus	Fair
Ontario	Huss
Pigeon	Kurrle
Rowe	Pigeon
Sexauer	Powers
	Reichard
<i>Milford</i>	Sanderson
Cochran	Spangle
Deal	Turkey Creek
Debow	Wade
Fly Creek	
Francis	<i>Van Buren</i>
Hassell	Pigeon
Hutchens	Schrock
Lieberenz	Snyder
Long	Truesdale
Lovett	Vannepps
Maumee	Wenger
Newman	Wolf
Powers	Fetch
Randol	Huff
Reinhart	Page
S. Milford	
Spaulding	
Strayer	
Turkey Creek	
<i>Newbury</i>	
Bontrager	
Brandberry	
Dalman	
Davis	
Eash	
Eden	
Farver	
Haarer	
Hostetler	
Elkhart Ditch	
Mather	
Miller	
Page	
Prough	
Stahley	

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Table 21.—List of fishes historically found in the St. Joseph River watershed. Compiled by G.R Smith, University of Michigan, Museum of Zoology, E.M. Hay-Chmielewski and J.K. Wesley, Michigan Department of Natural Resources, Fisheries Division.

Common name	Scientific name
<b>Lampreys</b>	
Chestnut lamprey	<i>Ichthyomyzon castaneus</i>
Northern brook lamprey	<i>Ichthyomyzon fossor</i>
Silver lamprey	<i>Ichthyomyzon unicuspis</i>
American brook lamprey	<i>Lampetra appendix</i>
<b>Sturgeons</b>	
Lake sturgeon	<i>Acipenser fulvescens</i>
<b>Gars</b>	
Spotted gar	<i>Lepisosteus oculatus</i>
Longnose gar	<i>Lepisosteus osseus</i>
<b>Bowfins</b>	
Bowfin	<i>Amia calva</i>
<b>Freshwater eels</b>	
American eel	<i>Anguilla rostrata</i>
<b>Herrings</b>	
Gizzard shad	<i>Dorosoma cepedianum</i>
<b>Minnows</b>	
Central stoneroller	<i>Campostoma anomalum</i>
Satinfin shiner	<i>Cyprinella analostana</i>
Spotfin shiner	<i>Cyprinella spiloptera</i>
Steelcolor shiner	<i>Cyprinella whipplei</i>
Brassy minnow	<i>Hybognathus hankinsoni</i>
Striped shiner	<i>Luxilus chrysocephalus</i>
Common shiner	<i>Luxilus cornutus</i>
Pearl dace	<i>Margariscus margarita</i>
Hornyhead chub	<i>Nocomis biguttatus</i>
River chub	<i>Nocomis micropogon</i>
Golden shiner	<i>Notemigonus crysoleucas</i>
Emerald shiner	<i>Notropis atherinoides</i>
Silverjaw minnow	<i>Notropis buccatus</i>
Blackchin shiner	<i>Notropis heterodon</i>
Blacknose shiner	<i>Notropis heterolepis</i>
Spottail shiner	<i>Notropis hudsonius</i>
Rosyface shiner	<i>Notropis rubellus</i>
Sand shiner	<i>Notropis stramineus</i>
Mimic shiner	<i>Notropis volucellus</i>
Pugnose shiner	<i>Notropis anogenus</i>
Northern redbelly dace	<i>Phoxinus eos</i>
Bluntnose minnow	<i>Pimephales notatus</i>

Table 21.–Continued.

Common name	Scientific name
Minnows continued	
Fathead minnow	<i>Pimephales promelas</i>
Blacknose dace	<i>Rhinichthys atratulus</i>
Longnose dace	<i>Rhinichthys cataractae</i>
Creek chub	<i>Semotilus atromaculatus</i>
Suckers	
Quillback carpsucker	<i>Carpionodes cyprinus</i>
Longnose sucker	<i>Catostomus catostomus</i>
White sucker	<i>Catostomus commersoni</i>
Creek chubsucker	<i>Erimyzon oblongus</i>
Lake chubsucker	<i>Erimyzon sucetta</i>
Northern hog sucker	<i>Hypentelium nigricans</i>
Black buffalo	<i>Ictiobus niger</i>
Spotted sucker	<i>Minytrema melanops</i>
Silver redhorse	<i>Moxostoma anisurum</i>
Golden redhorse	<i>Moxostoma erythrurum</i>
Shorthead redhorse	<i>Moxostoma macrolepidotum</i>
Greater redhorse	<i>Moxostoma valenciennesi</i>
Catfishes	
Black bullhead	<i>Ameiurus melas</i>
Yellow bullhead	<i>Ameiurus natalis</i>
Brown bullhead	<i>Ameiurus nebulosus</i>
Channel catfish	<i>Ictalurus punctatus</i>
Stonecat	<i>Noturus flavus</i>
Tadpole madtom	<i>Noturus gyrinus</i>
Brindled madtom	<i>Noturus miurus</i>
Flathead catfish	<i>Pylodictis olivaris</i>
Pikes	
Grass pickerel	<i>Esox americanus vermiculatus</i>
Northern pike	<i>Esox lucius</i>
Muskellunge	<i>Esox masquinongy</i>
Mudminnows	
Central mudminnow	<i>Umbra limi</i>
Trouts	
Lake herring	<i>Coregonus artedi</i>
Lake whitefish	<i>Coregonus clupeaformis</i>
Round whitefish	<i>Prosopium cylindraceum</i>
Lake trout	<i>Salvelinus namaycush</i>
Trout-perches	
Trout-perch	<i>Percopsis omiscomaycus</i>
Pirate perches	
Pirate perch	<i>Aphredoderus sayanus</i>

Table 21.–Continued.

Common name	Scientific name
Codfishes	
Burbot	<i>Lota lota</i>
Killifishes	
Banded killifish	<i>Fundulus diaphanus</i>
Starhead topminnow	<i>Fundulus dispar</i>
Blackstripe topminnow	<i>Fundulus notatus</i>
Silversides	
Brook silverside	<i>Labidesthes sicculus</i>
Sticklebacks	
Brook stickleback	<i>Culaea inconstans</i>
Ninespine stickleback	<i>Pungitius pungitius</i>
Sculpins	
Mottled sculpin	<i>Cottus bairdi</i>
Slimy sculpin	<i>Cottus cognatus</i>
Sunfishes	
Rock bass	<i>Ambloplites rupestris</i>
Green sunfish	<i>Lepomis cyanellus</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Warmouth	<i>Lepomis gulosus</i>
Bluegill	<i>Lepomis macrochirus</i>
Longear sunfish	<i>Lepomis megalotis</i>
Smallmouth bass	<i>Micropterus dolomieu</i>
Largemouth bass	<i>Micropterus salmoides</i>
White crappie	<i>Pomoxis annularis</i>
Black crappie	<i>Pomoxis nigromaculatus</i>
Perches	
Greenside darter	<i>Etheostoma blennioides</i>
Rainbow darter	<i>Etheostoma caeruleum</i>
Iowa darter	<i>Etheostoma exile</i>
Barred fantail darter	<i>Etheostoma flabellare flabellare</i>
Least darter	<i>Etheostoma microperca</i>
Johnny darter	<i>Etheostoma nigrum</i>
Yellow perch	<i>Perca flavescens</i>
Logperch	<i>Percina caprodes</i>
Blackside darter	<i>Percina maculata</i>
Walleye	<i>Stizostedion vitreum</i>
Drums	
Freshwater drum	<i>Aplodinotus grunniens</i>

Table 22.—Non-indigenous fish species in the St. Joseph River watershed (Michigan Department of Natural Resources, Fisheries Division, unpublished data).

Common name	Scientific name
Sea lamprey	<i>Petromyzon marinus</i>
Alewife	<i>Alosa pseudoharengus</i>
Goldfish	<i>Carassius auratus</i>
Common carp	<i>Cyprinus carpio</i>
Rainbow smelt	<i>Osmerus mordax</i>
Rainbow trout	<i>Oncorhynchus mykiss</i>
Coho salmon	<i>Oncorhynchus kisutch</i>
Chinook salmon	<i>Oncorhynchus tshawytscha</i>
Brook trout	<i>Salvelinus fontinalis</i>
Brown trout	<i>Salvelinus trutta</i>
Striped bass x white bass hybrid	<i>Morone saxatilis</i> x <i>Morone chrysops</i>
Redear sunfish	<i>Lepomis microlophus</i>

Table 23.–Fish stocking in the St. Joseph River watershed, 1986-1996. Data from Michigan Department of Natural Resources, Fisheries Division and Indiana Department of Natural Resources, Division of Fish and Wildlife. Non-indigenous species are in bold, and strains of species are in italics. Age codes: SF = spring fingerling, FF = fall fingerling, YR = yearling, and AD = adult.

Segment and stocking location	Species and strain	Years	Total number
<b>Headwaters</b>			
Baw Beese Lake	<b>Redear sunfish</b>	91, 93, 95	171,850
	Walleye SF	86	17,248
	Walleye FF	86	500
Sand Creek	<b>Brown trout - <i>Plymouth Rock</i></b>	88, 91	4,785
	<b>Brown trout - <i>Soda Lake</i></b> FF	87	12,500
	<b>Brown trout - <i>Soda Lake</i></b> YR	87, 89, 90	5,238
	<b>Brown trout - <i>Wild Rose</i></b>	86	1,500
<b>Upper</b>			
St. Joseph River	Channel catfish FF	88	10,000
	Channel catfish YR	89, 91, 95	15,300
	Walleye - <i>Muskegon</i> SF	91	32,160
	Yellow perch	88	10,000
Hemlock Lake	<b>Redear sunfish</b>	90, 91, 92	35,308
	Walleye SF	86	2,000
	Walleye FF	86	1,335
Carpenter Lake	Walleye SF	86	1,000
Long Lake	Walleye SF	86	1,000
Union Lake	Bluegill	90, 93	135,100
	Channel catfish YR	87, 89, 90-92, 95	55,021
	Channel catfish AD	88	10,000
	Largemouth bass	86	3,000
	Northern pike	87-91	77,911
	<b>Redear sunfish</b>	89, 90	13,278
	Walleye SF	86	1,000
	Walleye - <i>Muskegon</i> FRY	94	175,000
	Walleye - <i>Muskegon</i> SF	87, 88, 94, 95	136,200
	Walleye - <i>Muskegon</i> FF	87, 93	19,500
	Oliverda Lake	<b>Redear sunfish</b>	90
Coldwater Lake	Tiger muskellunge	86, 89, 91	16,000
	Walleye SF	86	54,438
	Walleye - <i>Muskegon</i> SF	92, 93, 94	499,984
	Walleye - <i>Muskegon</i> FF	88, 89, 92	89,604
Huyck Lake	Walleye FF	91	1,000
Marble Lake	Walleye - <i>Muskegon</i>	87	18,800
Little Rose Lake	Hybrid sunfish	90	1,450
	Walleye SF	90	500
Lake Lavine	<b>Rainbow trout - <i>Arlee</i></b>	90, 91	8,747
	<b>Rainbow trout - <i>Gerrard</i></b> <i>Kamloop</i>	96	4,298
	<b>Rainbow trout - <i>Shasta</i></b>	87-89, 92-94	29,897

Table 23.–Continued.

Segment and stocking location	Species and strain	Years	Total number	
Lake of the Woods	<b>Rainbow trout - Arlee</b>	90, 91	8,874	
	<b>Rainbow trout - Shasta</b>	86-90	79,625	
	<b>Redear sunfish</b>	89, 91, 92	114,467	
	Walleye SF	88, 90	6,800	
	Walleye FF	87	7,100	
Little Swan Creek	Walleye - <i>Muskegon</i> SF	96	14,500	
	<b>Brown trout - Soda Lake</b>	87	3,400	
	<b>Brown trout - Wild Rose</b>	86	3,330	
	Matteson Lake	Bluegill	86	356
Channel catfish FF		88	4,000	
Channel catfish YR		90, 91, 95	18,535	
Fathead minnow		86	280,500	
Largemouth bass FF		86	7,015	
Largemouth bass AD		86	128	
Northern pike		86, 88-91	19,000	
<b>Rainbow trout - Shasta</b>		86	2,908	
<b>Redear sunfish</b> FF		86	9,000	
Redear sunfish AD		86	100	
Walleye SF		86	22,800	
Walleye FF		94, 95	2,025	
Walleye - <i>Muskegon</i> SF		95, 96	54,700	
Long Lake - Colon Twp		Channel catfish AD	92	1,000
		Walleye - <i>Muskegon</i> SF	93-95	31,494
Palmer Lake		Channel catfish AD	92	2,000
		Walleye - <i>Muskegon</i> SF	93, 94, 96	48,435
	Walleye - <i>Muskegon</i> FF	94	2,400	
Sturgeon Lake	Walleye - <i>Muskegon</i> SF	87, 89, 93, 96	198,044	
Nottawa River	<b>Brown trout</b>	86, 89	6,250	
	<b>Brown trout - Plymouth Rock</b>	88, 91-93	20,906	
	<b>Brown trout - Saint Croix</b>	94	6,500	
	<b>Brown trout - Soda Lake</b>	86, 87, 89-91	25,988	
	<b>Brown trout - Wild Rose</b>	95	12,222	
Nottawa Lake	Channel catfish FF	90	1,000	
	Channel catfish YR	89	1,000	
	Hybrid sunfish	96	2,500	
Middle				
St. Joseph River	Channel catfish FF	88, 90	6,000	
	Channel catfish YR	89, 91	5,500	
	Walleye - SF	86, 88, 91	44,026	
	Walleye - <i>Muskegon</i> SF	87, 89, 92-94, 96	198,044	
St. Joseph River	Walleye - <i>Muskegon</i> FF	94	620	



Table 23.–Continued.

Segment and stocking location	Species and strain	Years	Total number
Rocky River	<b>Brown trout</b> - <i>Plymouth Rock</i>	87, 88, 89, 91-93	44,370
	<b>Brown trout</b> - <i>Soda Lake</i>	86, 90	19,186
	<b>Brown trout</b> - <i>Wild Rose</i>	86, 96	5,790
	<b>Brown trout</b> - <i>Saint Croix</i>	94	2,060
	<b>Brown trout</b> - <i>Seeforellen</i>	95	1,799
Prairie River	<b>Brown trout</b>	86, 87	6,230
	<b>Brown trout</b> - <i>Plymouth Rock</i>	87-89, 91, 92	37,219
	<b>Brown trout</b> - <i>Soda Lake</i>	86, 87, 89-91	34,805
Spring Creek	<b>Brown trout</b> - <i>Wild Rose</i>	86	4,650
	<b>Brown trout</b>	87	1,200
	<b>Brown trout</b> - <i>Plymouth Rock</i>	88, 89	3,060
Fawn River	<b>Brown trout</b> - <i>Soda Lake</i>	86, 90, 91	4,051
	<b>Rainbow trout</b> - <i>Steelhead</i>	86-96	6,000
Shermen Mills Creek	<b>Brown trout</b>	87	680
	<b>Brown trout</b> - <i>Plymouth Rock</i>	88, 89, 92	2,440
	<b>Brown trout</b> - <i>Soda Lake</i>	86, 90, 91	2,228
Big Pleasant Lake	<b>Rainbow trout</b> - <i>Arlee</i> YR	90, 91, 95	19,098
	<b>Rainbow trout</b> - <i>Shasta</i> FF	86-89	29,100
	Walleye - SF	86, 91	9,642
	Walleye - <i>Muskegon</i> SF	87, 89, 93, 95	32,935
Klinger Lake	Walleye - SF	86, 88	25,092
	Walleye - <i>Muskegon</i> SF	87, 90, 92, 94, 96	194,617
	<b>Rainbow trout</b> - <i>Arlee</i>	90, 91	14,045
Birch Lake	<b>Rainbow trout</b> - <i>Shasta</i> FF	95	500
	<b>Rainbow trout</b> - <i>Shasta</i> YR	86-89, 92-95	67,793
	<b>Rainbow trout</b> - <i>Arlee</i>	91	10,600
Shavehead Lake	<b>Rainbow trout</b> - <i>Eagle Lake</i>	96	5,836
	<b>Rainbow trout</b> - <i>Shasta</i>	86-90, 92-96	127,876
	Tiger muskellunge	86-91	2,450
Garver Lake	Tiger muskellunge	86-91	2,450
Pigeon River	<b>Rainbow trout</b>	86-97	66,600
Rowe-Eden Ditch	<b>Rainbow trout</b>	86-96	8,000
Turkey Creek	<b>Rainbow trout</b>	86-96	6,851
Curtis Creek	<b>Rainbow trout</b>	86-96	1,800
Little Elkhart River	<b>Rainbow trout</b>	86-96	10,000
Little Elkhart River	<b>Rainbow trout</b>	86-96	25,500
Solomon Creek	<b>Rainbow trout</b>	86-97	10,000
St. Joseph River	Tiger muskellunge	86-87	10,000
	Walleye	95-96	117,750
Cobus Creek	<b>Rainbow trout</b>	86-96	2,500
Elkhart River	<b>Rainbow trout</b>	94	61,428
Diamond Lake	Walleye - SF	86, 88	37,389
	Walleye - <i>Muskegon</i> SF	90, 93, 95	157,949
	Walleye - <i>Muskegon</i> FF	92	3,321
	Walleye - <i>Muskegon</i> YR	94	1,819

Table 23.–Continued.

Segment and stocking location	Species and strain	Years	Total number
Lower			
Baugo Park	Bluegill	87	6,035
	Fathead minnows	87	31,537
	Largemouth bass	89	1,000
Pinhook	<b>Channel catfish</b>	89	1,000
St. Joseph River	<b>Coho salmon</b>	96	151,960
	<b>Chinook salmon</b>	86-96	1,971,494
	<b>Rainbow trout - Steelhead</b>	86-96	2,135,662
Brandywine Creek	<b>Brown trout</b>	87, 89	1,740
	<b>Brown trout - Plymouth Rock</b>	88, 91-93	7,232
	<b>Brown trout - Soda Lake</b>	87, 89, 90	3,540
	<b>Brown trout - Wild Rose</b>	86, 95, 96	5,198
	<b>Brown trout - Saint Croix</b>	94	1,880
Magician Lake	Walleye - SF	86, 91	30,256
	Walleye - <i>Muskegon</i> SF	87, 89, 93, 96	65,712
Fish Lake	Northern pike FF	88	134
	Tiger muskellunge FF	88	16
Lake of the Woods	Walleye - SF	86, 88, 91	16,878
	Walleye - <i>Muskegon</i> SF	87, 89, 90	77,469
Dowagiac Creek	<b>Brown trout</b>	86, 87	16,770
	<b>Brown trout - Plymouth Rock</b>	88, 91-93	47,446
	<b>Brown trout - Saint Croix</b>	94	7,540
	<b>Brown trout - Seeforellen</b>	95, 96	15,320
	<b>Brown trout - Soda Lake</b>	86, 87, 89, 90	26,700
Peavine Creek	<b>Brown trout</b>	87, 89	3,420
	<b>Brown trout - Plymouth Rock</b>	88, 91, 92	5,439
	<b>Brown trout - Soda Lake</b>	90	1,798
	<b>Brown trout - Wild Rose</b>	86	1,590
Pokagon Creek	<b>Brown trout</b>	87, 89	8,400
	<b>Brown trout - Plymouth Rock</b>	88, 91, 92	13,474
	<b>Brown trout - Soda Lake</b>	90	4,498
	<b>Brown trout - Wild Rose</b>	86	3,770
McKenzie Creek	<b>Brown trout</b>	87	1,260
	<b>Brown trout - Plymouth Rock</b>	88, 91-93	6,018
	<b>Brown trout - Soda Lake</b>	89, 90	3,000
	<b>Brown trout - Wild Rose</b>	86	1,200
Dowagiac River	<b>Brown trout</b>	86, 87, 89	17,980
	<b>Brown trout - Plymouth Rock</b>	88, 91-93	33,644
	<b>Brown trout - Saint Croix</b>	94	8,710
	<b>Brown trout - Seeforellen</b>	96	8,500
	<b>Brown trout - Soda Lake</b>	90	6,994
	<b>Brown trout - Wild Rose</b>	86, 95	11,058

Table 23.–Continued.

Segment and stocking location	Species and strain	Years	Total number
McCoy Creek	<b>Brown trout</b>	87	3,340
	<b>Brown trout - Plymouth Rock</b>	88, 91, 92, 93	16,327
	<b>Brown trout - Soda Lake</b>	89, 90	8,596
	<b>Brown trout - Wild Rose</b>	86, 95, 96	9,531
	<b>Brown trout - Saint Croix</b>	94	3,470
Love Creek	Brook trout - <i>Assinica/Maine</i>	88, 90, 93, 94	4,520
	Brook trout - <i>Assinica</i>	96	900
	Brook trout - <i>Assinica/Rome</i>	86	817
	Brook trout - <i>Maine</i>	89	1,110
	Brook trout - <i>Owhi</i>	87, 91, 92	2,800
	<b>Brown trout - Saint Croix</b>	95	900
Pipestone Creek	<b>Brown trout</b>	86, 87,	14,580
	<b>Brown trout - Plymouth Rock</b>	88, 91, 92, 93	36,993
	<b>Brown trout - Wild Rose</b>	95, 96	17,542
	<b>Brown trout - Soda Lake</b>	86, 89, 90	19,196
	<b>Brown trout - Saint Croix</b>	94	9,480
Mouth			
Big Meadow Creek	Brook trout - <i>Assinica/Maine</i>	88, 90	5,610
	Brook trout - <i>Assinica/Rome</i>	86, 87	5,091
	Brook trout - <i>Maine</i>	89	2,430
	<b>Brown trout - Plymouth Rock</b>	91, 92, 93	3,466
	<b>Brown trout - Saint Croix</b>	94	1,590
	<b>Brown trout - Wild Rose</b>	95, 96	2,908
Campbell Creek	Brook trout - <i>Assinica/Maine</i>	88, 90, 93	4,000
	Brook trout - <i>Assinica/Rome</i>	86	1,062
	Brook trout - <i>Maine</i>	87, 89	2,410
	Brook trout - <i>Owhi</i>	91, 92	2,710
	<b>Brown trout - Wild Rose YR</b>	94-96	1,497
Wolf Lake Pond 12	<b>Brown trout - Plymouth Rock</b>	91	1,000
	<b>Rainbow trout - Arlee</b>	91	200
Wolf Lake	Northern pike FF	88	84
	Northern pike YR	92	127
	Tiger muskellunge	88	31
	Largemouth bass	92	256
Hayden Creek	<b>Brown trout - Plymouth Rock</b>	91-93	2,125
	<b>Brown trout - Saint Croix</b>	94	700
	<b>Brown trout - Seeforellen</b>	95	570
Paw Paw E. Branch	<b>Brown trout</b>	87	2,740
	<b>Brown trout - Plymouth Rock</b>	89	3,100
	<b>Brown trout - Soda Lake</b>	86, 88, 90, 91	12,264
	<b>Brown trout - Wild Rose</b>	96	3,100

Table 23.–Continued.

Segment and stocking location	Species and strain	Years	Total number
Paw Paw N. Branch	<b>Brown trout</b>	87	6,640
	<b>Brown trout</b> - <i>Plymouth Rock</i>	89, 91-93	13,227
	<b>Brown trout</b> - <i>Saint Croix</i>	94	1,540
	<b>Brown trout</b> - <i>Seeforellen</i>	95, 96	2,830
	<b>Brown trout</b> - <i>Soda Lake</i>	86, 88, 90	23,606
Paw Paw W. Branch	<b>Brown trout</b> - <i>Plymouth Rock</i>	87-93	19,124
	<b>Brown trout</b> - <i>Saint Croix</i>	94	3,460
	<b>Brown trout</b> - <i>Seeforellen</i>	95, 96	6,166
	<b>Brown trout</b> - <i>Soda Lake</i>	86, 90	5,480
Brush Creek	<b>Brown trout</b> - <i>Plymouth Rock</i>	88, 89, 92, 93	13,460
	<b>Brown trout</b> - <i>Saint Croix</i>	94	3,620
	<b>Brown trout</b> - <i>Seeforellen</i>	95	3,210
	<b>Brown trout</b> - <i>Soda Lake</i>	86-88, 90, 91	17,974
	<b>Brown trout</b> - <i>Wild Rose</i>	96	3,483
Mill Creek	Brook trout - <i>Assinica/Maine</i>	88, 90, 93	4,690
	Brook trout - <i>Assinica/Rome</i>	86, 87	3,637
	Brook trout - <i>Maine</i>	89	1,800
	Brook trout - <i>Owhi</i>	91, 92	2,500
	<b>Brown trout</b>	86, 87, 89	8,210
	<b>Brown trout</b> - <i>Plymouth Rock</i>	88, 91, 92	9,110
	<b>Brown trout</b> - <i>Soda Lake</i>	90	3,300
	<b>Brown trout</b> - <i>Wild Rose</i>	93, 94, 95, 96	12,009
Maple Lake	Largemouth bass	91	309
	Walleye - SF	86, 88, 91	16,521
	Walleye AD	87	75
Van Auken Lake	Northern pike FRY	88	175,000
	Northern pike SF	89, 91, 93	8,500
	Northern pike YR	94	745
School Section Lake	Northern pike SF	86, 88, 90, 93-95	4,488
Blue Creek	<b>Brown trout</b>	86, 87, 89	6,230
	<b>Brown trout</b> - <i>Plymouth Rock</i>	88, 91, 92	7,880
	<b>Brown trout</b> - <i>Soda Lake</i>	90	2,600
	<b>Brown trout</b> - <i>Wild Rose</i>	93, 95, 96	7,669
	<b>Brown trout</b> - <i>Saint Croix</i>	94	2,746
Paw Paw River	<b>Rainbow trout</b> - <i>MI Winter</i>	86-96	84,392
St. Joseph River	<b>Brown trout</b>	87	14,900
	<b>Brown trout</b> - <i>Plymouth Rock</i>	88, 91, 92, 93	49,285
	<b>Brown trout</b> - <i>Wild Rose</i>	86	15,000
	<b>Brown trout</b> - <i>Soda Lake</i>	89, 90	30,000
	<b>Brown trout</b> - <i>Saint Croix</i>	94	29,257
	<b>Brown trout</b> - <i>Seeforellen</i>	95, 96	32,289
	<b>Chinook salmon</b>	86-96	3,744,261
	<b>Coho salmon</b>	90, 92, 93, 95, 96,	824,585
	Lake trout	86, 88	174,800
	<b>Rainbow trout</b> - <i>MI Winter</i>	86-91, 96	276,670

Table 23.–Continued.

Segment and stocking location	Species and strain	Years	Total number
St. Joseph R.continued	<b>Rainbow trout - <i>Skamania</i></b>	88, 89, 90	39,763
	Walleye - FRY	87	1,000,000
	Walleye - Bay de Noc	86	737,500
	Walleye - <i>Muskegon</i>	88, 91	7,528,000
	Walleye - <i>Ohio</i>	87	315,000
	Walleye - SF	86, 88, 91	429,436
	Walleye - <i>Muskegon</i>	87, 89,	173,527
	Walleye - FF <i>Muskegon</i>	91	5,500

Table 24.—Fish species currently found in the St. Joseph River watershed. Bolded designations in parenthesis are species status as determined by Michigan’s Endangered Species Act (Part 365, Endangered Species Protection, of the Natural Resource and Environmental Protection Act, Act 451 of the Public Acts of 1994) and Indiana Endangered Species Act of 1973 (Indiana Code 14-2-8.5). Data from Michigan Department of Natural Resources, Fisheries Division and Indiana Department of Natural Resources, Division of Fish and Wildlife.

Common name	Scientific name
<b>Lampreys</b>	
Chestnut lamprey	<i>Ichthyomyzon castaneus</i>
Northern brook lamprey	<i>Ichthyomyzon fossor</i>
Silver lamprey	<i>Ichthyomyzon unicuspis</i>
American brook lamprey	<i>Lampetra appendix</i>
Sea lamprey	<i>Petromyzon marinus</i>
<b>Sturgeons</b>	
Lake sturgeon ( <b>threatened</b> )	<i>Acipenser fulvescens</i>
<b>Gars</b>	
Spotted gar	<i>Lepisosteus oculatus</i>
Longnose gar	<i>Lepisosteus osseus</i>
<b>Bowfins</b>	
Bowfin	<i>Amia calva</i>
<b>Freshwater eels</b>	
American eel	<i>Anguilla rostrata</i>
<b>Herrings</b>	
Alewife	<i>Alosa pseudoharengus</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
<b>Minnnows</b>	
Central stoneroller	<i>Campostoma anomalum</i>
Goldfish	<i>Carassius auratus</i>
Satinfin shiner	<i>Cyprinella analostana</i>
Spotfin shiner	<i>Cyprinella spiloptera</i>
Steelcolor shiner	<i>Cyprinella whipplei</i>
Common carp	<i>Cyprinus carpio</i>
Brassy minnow	<i>Hybognathus hankinsoni</i>
Striped shiner	<i>Luxilus chrysocephalus</i>
Common shiner	<i>Luxilus cornutus</i>
Pearl dace	<i>Margariscus margarita</i>
hornyhead chub	<i>Nocomis biguttatus</i>
River chub	<i>Nocomis micropogon</i>
Golden shiner	<i>Notemigonus crysoleucas</i>
Pugnose shiner ( <b>rare</b> )	<i>Notropis anogenus</i>
Emerald shiner	<i>Notropis atherinoides</i>
Silverjaw minnow	<i>Notropis buccatus</i>
Blackchin shiner	<i>Notropis heterodon</i>

Table 24.–Continued.

Common name	Scientific name
Minnows continued	
Blacknose shiner	<i>Notropis heterolepis</i>
Spottail shiner	<i>Notropis hudsonius</i>
Rosyface shiner	<i>Notropis rubellus</i>
Sand shiner	<i>Notropis stramineus</i>
Mimic shiner	<i>Notropis volucellus</i>
Suckermouth minnow	<i>Phenacobius mirabilis</i>
Northern redbelly dace	<i>Phoxinus eos</i>
Bluntnose minnow	<i>Pimephales notatus</i>
Fathead minnow	<i>Pimephales promelas</i>
Blacknose dace	<i>Rhinichthys atratulus</i>
Longnose dace	<i>Rhinichthys cataractae</i>
Creek chub	<i>Semotilus atromaculatus</i>
Suckers	
Quillback	<i>Carpiodes cyprinus</i>
Longnose sucker	<i>Catostomus catostomus</i>
White sucker	<i>Catostomus commersoni</i>
Creek chubsucker ( <b>threatened</b> )	<i>Erimyzon oblongus</i>
Lake chubsucker	<i>Erimyzon sucetta</i>
Northern hog sucker	<i>Hypentelium nigricans</i>
Black buffalo (rare)	<i>Ictiobus niger</i>
Spotted sucker	<i>Minytrema melanops</i>
Silver redhorse	<i>Moxostoma anisurum</i>
River redhorse ( <b>threatened</b> )	<i>Moxostoma carinatum</i>
Black redhorse	<i>Moxostoma duquesnei</i>
Golden redhorse	<i>Moxostoma erythrurum</i>
Shorthead redhorse	<i>Moxostoma macrolepidotum</i>
Greater redhorse	<i>Moxostoma valenciennesi</i>
Catfishes	
Black bullhead	<i>Ameiurus melas</i>
Yellow bullhead	<i>Ameiurus natalis</i>
Brown bullhead	<i>Ameiurus nebulosus</i>
Channel catfish	<i>Ictalurus punctatus</i>
Stonecat	<i>Noturus flavus</i>
Tadpole madtom	<i>Noturus gyrinus</i>
Brindled madtom	<i>Noturus miurus</i>
Flathead catfish	<i>Pylodictis olivaris</i>
Pikes	
Grass pickerel	<i>Esox americanus vermiculatus</i>
Northern pike	<i>Esox lucius</i>
Muskellunge	<i>Esox masquinongy</i>
Tiger muskellunge	<i>Esox lucius x masquinongy</i>
Mudminnows	
Central mudminnow	<i>Umbra limi</i>

Table 24.–Continued.

Common name	Scientific name
Smelts	
Rainbow smelt	<i>Osmerus mordax</i>
Trouts	
Lake herring ( <b>threatened</b> )	<i>Coregonus artedi</i>
Lake whitefish	<i>Coregonus clupeaformis</i>
Pink salmon	<i>Oncorhynchus gorbuscha</i>
Coho salmon	<i>Oncorhynchus kisutch</i>
Rainbow trout	<i>Oncorhynchus mykiss</i>
Chinook salmon	<i>Oncorhynchus tshawytscha</i>
Round whitefish	<i>Prosopium cylindraceum</i>
Atlantic salmon	<i>Salmo salar</i>
Brown trout	<i>Salmo trutta</i>
Brook trout	<i>Salvelinus fontinalis</i>
Lake trout	<i>Salvelinus namaycush</i>
Trout-perches	
Trout-perch	<i>Percopsis omiscomaycus</i>
Pirate perches	
Pirate perch	<i>Aphredoderus sayanus</i>
Codfishes	
Burbot	<i>Lota lota</i>
Killifishes	
Banded killifish	<i>Fundulus diaphanus</i>
Starhead topminnow ( <b>rare</b> )	<i>Fundulus dispar</i>
Blackstripe topminnow	<i>Fundulus notatus</i>
Silversides	
Brook silverside	<i>Labidesthes sicculus</i>
Sticklebacks	
Brook stickleback	<i>Culaea inconstans</i>
Ninespine stickleback	<i>Pungitius pungitius</i>
Sculpins	
Mottled sculpin	<i>Cottus bairdi</i>
Slimy sculpin	<i>Cottus cognatus</i>
Sunfishes	
Rock bass	<i>Ambloplites rupestris</i>
Green sunfish	<i>Lepomis cyanellus</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Warmouth	<i>Lepomis gulosus</i>
Bluegill	<i>Lepomis macrochirus</i>
Longear sunfish	<i>Lepomis megalotis</i>
Redear sunfish	<i>Lepomis microlophus</i>
Smallmouth bass	<i>Micropterus dolomieu</i>
Largemouth bass	<i>Micropterus salmoides</i>



Table 24.—Continued.

Common name	Scientific name
Sunfishes continued	
White crappie	<i>Pomoxis annularis</i>
Black crappie	<i>Pomoxis nigromaculatus</i>
Perches	
Greenside darter	<i>Etheostoma blennioides</i>
Rainbow darter	<i>Etheostoma caeruleum</i>
Iowa darter	<i>Etheostoma exile</i>
Barred fantail darter	<i>Etheostoma flabellare flabellare</i>
Johnny darter	<i>Etheostoma nigrum</i>
Orangethroat darter	<i>Etheostoma spectabile</i>
Least darter ( <b>rare</b> )	<i>Etheostoma microperca</i>
Yellow perch	<i>Perca flavescens</i>
Logperch	<i>Percina caprodes</i>
Blackside darter	<i>Percina maculata</i>
Walleye	<i>Stizostedion vitreum</i>
Drums	
Freshwater drum	<i>Aplodinotus grunniens</i>

Table 25.—Natural features of St. Joseph River watershed by valley segment. Data from Michigan Department of Natural Resources, Wildlife Division, Natural Features Inventory, September 26, 1996 and Indiana Department of Natural Resources, Division of Fish and Wildlife, March 11, 1997. State status codes: WL=watch list, SG=significant natural community, E=endangered, T=threatened, SC=special concern (rare, may become E or T in the future), P=proposed, SX=extirpated, SRE=reintroduced. Federal status codes: LE=listed endangered, PT=proposed threatened, LT=listed threatened. Blanks indicate that none of the categories are applicable. Valley segment codes: H=Headwaters, U=Upper, M=Middle, L=Lower, and Mo=Mouth.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Vertebrate								
Cooper's hawk	<i>Accipiter cooperii</i>	WL			X	X		
Sharp-shinned hawk	<i>Accipiter striatus</i>	SC			X			
Lake sturgeon	<i>Acipenser fulvescens</i>	T			X	X	X	
Blanchard's cricket frog	<i>Acris crepitans blanchardi</i>	SC			X	X	X	X
Blue-spotted salamander	<i>Ambystoma laterale</i>	SC			X			
Marbled salamander	<i>Ambystoma opacum</i>	T				X	X	
Henslow's sparrow	<i>Ammodramus henslowii</i>	T			X			
Great egret	<i>Ardea alba</i>	E			X			
Great blue heron	<i>Ardea Herodias</i>	SC			X			
Long-eared owl	<i>Asio otus</i>	WL			X			
Ring-necked duck	<i>Aythya collaris</i>				X			
Upland sandpiper	<i>Bartramia longicauda</i>	E			X	X		
American bittern	<i>Botaurus Lentiginosus</i>	E			X			
Red-shouldered hawk	<i>Buteo lineatus</i>	SC			X			
Broad-winged hawk	<i>Buteo platypterus</i>	SC			X			
Spotted turtle	<i>Chemmys guttata</i>	SC			X			
Black tern	<i>Chilidonias niger</i>	E			X			
Northern harrier	<i>Circus cyaneus</i>	E			X			
Marsh wren	<i>Cistothorus palustris</i>	E			X			
Sedge wren	<i>Cistothorus platensis</i>	T			X	X		
Spotted turtle	<i>Clemmys guttata</i>	SC			X	X	X	
Kirtland's snake	<i>Clonophis kirtlandii</i>	E			X	X	X	
Star-nosed mole	<i>Condylura cristata</i>	SC			X			
Cisco	<i>Coregonus artedi</i>	SC			X			
Least shrew	<i>Cryptotis parva</i>	T			X			
Cerulean warbler	<i>Dendroica cerulea</i>	SC			X			
Black rat snake	<i>Elaphe obsoleta obsoleta</i>	SC			X	X	X	
Least flycatcher	<i>Empidonax minimus</i>	WL			X			
Blanding's turtle	<i>Emydoidea blandingii</i>	E			X			
Creek chubsucker	<i>Erimyzon oblongus</i>	T			X	X	X	X
Peregrine falcon	<i>Falco peregrinus</i>	E	LE		X			
Starhead topminnow	<i>Fundulus notti</i>	SC			X			
Starhead minnow	<i>Galearis spectabilis</i>	SC			X			
Sandhill crane	<i>Grus canadensis</i>	T			X			

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Vertebrate								
Four-toed salamander	<i>Hemidactylium scutatum</i>	T				X		
Black buffalo	<i>Ictiobus niger</i>	SC					X	X
Least bittern	<i>Ixobrychus exilis</i>	E				X		
Loggerhead shrike	<i>Lanius ludovicianus</i>	E				X		
Spotted gar	<i>Lepisosteus oculatus</i>	SC			X		X	X
Northern river otter	<i>Lutra canadensis</i>	E				X		
Bobcat	<i>Lynx rufus</i>	E				X		
Prairie vole	<i>Microtus ochrogaster</i>	T				X	X	X
Black-and-white warbler	<i>Mniotilta varia</i>	SC					X	
Black redhorse	<i>Moxostoma duquesnei</i>	SC					X	X
Greater redhorse	<i>Moxostoma valenciennesi</i>	SC					X	
Least weasel	<i>Mustela nivalis</i>	SC					X	
Indiana bat	<i>Myotis sodalis</i>	E	PT	X	X	X		
Mudpuppy	<i>Necturus maculosus</i>	SC					X	
Copperbelly water snake	<i>Nerodia erythrogaster neglecta</i>	E			X	X	X	X
Pugnose shiner	<i>Notropis anagenus</i>	SC		X	X			
Ironcolor shiner	<i>Notropis chalybaeus</i>	E			X	X	X	
Black shiner	<i>Notropis heterolepis</i>	WL					X	
Black crowned night heron	<i>Nycticorax nycticorax</i>	E					X	
King rail	<i>Rallus elegans</i>	E			X	X	X	X
Virginia rail	<i>Rallus limicola</i>	SC					X	
Northern leopard frog	<i>Rana pipiens</i>	SC					X	
Eastern massasauga	<i>Sistrurus catenatus catenatus</i>	T			X	X	X	X
Western meadowlark	<i>Sturnella neglecta</i>	SC					X	
American badger	<i>Taxidea taxus</i>	T					X	X
Eastern box turtle	<i>Terrapene carolina carolina</i>	SC			X		X	X
Butler's garter snake	<i>Thamnophis butleri</i>	T					X	
Barn owl	<i>Tyto alba</i>	E					X	
Golden-winged warbler	<i>Vermivora chrysoptera</i>	E					X	
Canada warbler	<i>Wilsonia canadensis</i>	SC					X	
Hooded warbler	<i>Wilsonia citrina</i>	SC					X	
Invertebrate								
Veined white	<i>Artogeia napi oleracea</i>	E					X	
Pine vine swallowtail	<i>Battus philenor</i>	T					X	
Silver-bordered fritillary	<i>Boloria selene myrina</i>						X	
Swamp metalmark	<i>Calephelis mutica</i>	SC					X	X
Pointed campeloma	<i>Campeloma decisum</i>	SC					X	X
Quiet underwing	<i>Catocala dulciola</i>	SC					X	
Purple wartyback	<i>Cyclonaias tuberculata</i>	SC					X	X
Snuffbox	<i>Dysnomia triquetra</i>	E					X	X

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Invertebrate								
Baltimore	<i>Euphydryas phaeton</i>						X	
Two-spotted skipper	<i>Euphyes bimacula</i>	SC					X	
Scarce swamp skipper	<i>Euphyes dukesi</i>	SC					X	
Silvery blue	<i>Glaucopsyche lygdamus couperi</i>	E					X	
Liver elimia	<i>Goniobasis livescens</i>							X
Midwestern fen buckmoth	<i>Hemileuca SP 3</i>						X	
Ottoo skipper	<i>Hesperia ottoe</i>	T					X	
Karner blue butterfly	<i>Lycaeides melissa samuelis</i>	E	LE				X	
Dorcas copper	<i>Lycaena dorcas dorcas</i>						X	
Purplish copper	<i>Lycaena helloides</i>						X	
Swamp lymnaea	<i>Lymnaea stagnalis</i>	SC						X
Green adder's moth	<i>Malaxis unifolia</i>	E					X	
Newman's brocade	<i>Meropleon ambifusca</i>	SC						X
Proud globe	<i>Mesodon elevatus</i>	SC					X	X
Dwarf skimmer	<i>Nannothemis bella</i>						X	
Longhorned caddisfly	<i>Nectopsyche pavidia</i>	SC					X	
Sphagnum sprite	<i>Nehalennia gracilis</i>						X	
Mitchell's satyr	<i>Neonympha mitchelii mitchelii</i>	E	PT				X	X
American burying beetle	<i>Nicrophorus americanus</i>	E	LE				X	X
Golden borer	<i>Papaipema cerina</i>	SC					X	
Maritime sunflower borer	<i>Papaipema maritima</i>	SC					X	X
Culvers root borer	<i>Papaipema sciata</i>	SC					X	X
Silphium borer moth	<i>Papaipema silphii</i>	T					X	X
Regal fern borer	<i>Papaipema speciosissima</i>	SC					X	
Broad-winged skipper	<i>Poanes viator viator</i>						X	
Brown walker	<i>Pomatiopsis cincinnatiensis</i>	SC					X	X
Red-legged spittlebug	<i>Prosapia ignipectus</i>	SC					X	X
Appalachian eyed brown	<i>Satyrodes Appalachia Leeuwi</i>						X	
Leadplant flower moth	<i>Schinia lucens</i>	E					X	
Spartina moth	<i>Spartiniphaga inops</i>	SC						X
Regal fritillary	<i>Speyeria idalia</i>	E					X	X
Douglas stenelmis riffle beetle	<i>Stenelmis douglasensis</i>	SC					X	
Greyback	<i>Tachopteryx thoreyi</i>	T						X
Plant								
Red baneberry	<i>Actaea rubra</i>	SC					X	X
Gattinger's gerardia	<i>Agalinis gattingeri</i>	T					X	
Beaked agrimony	<i>Agrimonia rostellata</i>	SC						X
Running serviceberry	<i>Amelanchier humilis</i>	E					X	
Leadplant	<i>Amorpha canescens</i>	SC					X	X

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
Bog rosemary	<i>Andromeda glaucophylla</i>	SC				X		
Drummon rockcress	<i>Arabis Drummandii</i>	E				X	X	
Tower-mustard	<i>Arabis glabra</i>	T					X	
Missouri rockcress	<i>Arabis missouriensis var deamii</i>	SC				X	X	X
Michaux's stithwort	<i>Arenaria stricta</i>	SC				X	X	
Swamp-pink	<i>Arethusa bulbosa</i>	SX				X		
Slim-spike three-awn grass	<i>Aristida intermedia</i>	SC				X		
Beach three-awned grass	<i>Aristida tuberculosa</i>	SC						X
Virginia snakeroot	<i>Aristolochia serpentaria</i>	T				X	X	X
Bristly sarsaparilla	<i>Arlia hispida</i>	E				X		
Tall green milkweed	<i>Asclepias hirtella</i>	T				X		
Rushlike aster	<i>Aster junciformis</i>	SC				X		
Western silvery aster	<i>Aster sericeus</i>	T				X		
Canadian milk-vetch	<i>Astragalus canadensis</i>	T				X	X	X
Cooper's milk-vetch	<i>Astragalus neglectus</i>	SC				X		
White or prairie false indigo	<i>Baptisia lactea</i>	T				X	X	X
Cream wild indigo	<i>Baptisia leucophaea</i>	E				X	X	
Yellow wild-indigo	<i>Baptisia tinctoria</i>	WL				X	X	
Cut-leaved water-parsnip	<i>Berula erecta</i>	T				X	X	X
Kitten-tails	<i>Besseyia bullii</i>	T				X		X
Beck water-marigold	<i>Bidens beckii</i>	E				X		
Chamomile grape-fern	<i>Botrychium matricarifolium</i>	T				X		
Blunt-lobe grape-fern	<i>Botrychium oneidense</i>	WL				X		
Side-oats grama grass	<i>Bouteloua curtipendula</i>	T				X		
Prairie indian-plantain	<i>Cacalia plantaginea</i>	T				X	X	X
Narrow-leaved reedgrass	<i>Calamagrostis stricta</i>	T				X		
Wild calla	<i>Calla palustris</i>	E				X		
Wild-hyacinth	<i>Camassia scilloides</i>	T					X	X
Broadwing sedge	<i>Carex alata</i>	WL				X		
Greenish-white sedge	<i>Carex albolutescens</i>	SC				X		
Foxtail sedge	<i>Carex alopecoidea</i>	E				X	X	
Golden-fruited sedge	<i>Carex aurea</i>	SC				X		
Bebb's sedge	<i>Carex bebbii</i>	T				X		
Brownish sedge	<i>Carex brunnescens</i>	E				X		
Crawe sedge	<i>Carex crawei</i>	T						X
White-edge sedge	<i>Carex debilis var rudgei</i>	T				X		
Softleaf sedge	<i>Carex disperma</i>	E				X		
Little prickly sedge	<i>Carex echinata</i>	E				X		
Fescue sedge	<i>Carex festucacea</i>	SC				X		
Yellow sedge	<i>Carex flava</i>	T				X		
Frank's sedge	<i>Carex frankii</i>	SC				X		
Sedge	<i>Carex grvida</i>	SC					X	X

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
Jame's sedge	<i>Carex jamesii</i>	SC				X		X
Mud sedge	<i>Carex limosa</i>	E				X		
False hop sedge	<i>Carex lupuliformis</i>	SC					X	
Eastern few-fruited sedge	<i>Carex oligocarpa</i>	SC				X	X	X
Longstalk sedge	<i>Carex pedunculata</i>	SC				X		
Retrorse sedge	<i>Carex retrorsa</i>	E				X	X	
Rough sedge	<i>Carex scabrata</i>	E					X	
Weak stellate sedge	<i>Carex seorsa</i>	SC				X	X	X
Thinleaf sedge	<i>Carex sparaniodes var</i> <i>Cephaloidea</i>	T				X		
Straw sedge	<i>Carex Straminea</i>	T				X	X	
Hairy-fruited sedge	<i>Carex trichocarpa</i>	SC				X	X	X
Three-seed sedge	<i>Carex trisperma</i>	WL				X		
Pretty sedge	<i>Carex woodii</i>	WL				X		
Bitternut hickory	<i>Carya cordiformis</i>							X
Shellbark or kingnut hickory	<i>Carya laciniosa</i>	SC				X	X	
American chestnut	<i>Castanea dentata</i>	E					X	X
Red bud	<i>Cercis canadensis</i>						X	X
Pipsissewa	<i>Chimaphila umbellata</i> <i>cisatlantica</i>	T				X		
America golden-saxifrage	<i>Chrysosplenium</i> <i>americanum</i>	T						X
Small enchanter's nightshade	<i>Cirsium alpina</i>	X					X	
Hill's thistle	<i>Cirsium hilli</i>	SC				X	X	X
Clinton lily	<i>Clintonia borealis</i>	E				X		
Long-bract green orchis	<i>Coeloglossum viride var</i> <i>virescens</i>	T				X		
Slender day-flower	<i>Commelina erecta</i>	X					X	X
Hemlock parsley	<i>Conioselinum chinense</i>	E					X	
Prairie coreopsis	<i>Coreopsis palmata</i>	T				X	X	X
Bunchberry	<i>Cornus canadensis</i>	E				X		
Roundleaf dogwood	<i>Cornus rugosa</i>	R				X		
Yellow fumewort	<i>Corydalis flavula</i>	T				X	X	X
Illinois hawthorn	<i>Crataegus prona</i>	E				X		
Field dodder	<i>Cuscuta glomerata</i>	SC				X	X	X
Knotweed dodder	<i>Cuscuta polygonorum</i>	SC				X		
Yellow nut-grass	<i>Cyperus flavescens</i>	SC				X	X	X
Pink lady's slipper	<i>Cypripedium acaule</i>	WL				X		
Small yellow lady's slipper	<i>Cypripedium calceolus var</i> <i>parviflorum</i>	SC				X		
Small white lady's slipper	<i>Cypripedium candidum</i>	SC				X		
White lady-slipper	<i>Cypripedium candidum</i>	T				X	X	X
Showy lady's slipper	<i>Cypripedium reginae</i>	WL				X		

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
Two-leaf toothwort	<i>Dentaria diphylla</i>	WL					X	
Tufted hairgrass	<i>Deschampsia cespitosa</i>	SC					X	
Northern bush-honeysuckle	<i>Diervilla lonicera</i>	SC					X	
Slender finger-grass	<i>Digitaria filiformis</i>	X						X
Shooting-star	<i>Dodecatheon meadia</i>	T					X	X
Spoon-leaved sundew	<i>Drosera intermedia</i>	SC					X	
Log fern	<i>Dryopteris celsa</i>	T					X	X X
Clinton woodfern	<i>Dryopteris clintoniana</i>	SX					X	
Dwarf burhead	<i>Echinodorus tenellus</i>	E					X	X
Flattened spikerush	<i>Eleocharis compressa</i>	T					X	
Engelmann's spikerush	<i>Eleocharis engelmannii</i>	SC					X	
Black-fruited spikerush	<i>Eleocharis equisetoides</i>	SC					X	X X
Fewflower spikerush	<i>Eleocharis pauciflora</i>	E					X	
Robbins spikerush	<i>Eleocharis robbinsii</i>	SC					X	
Trailing arbutus	<i>Epigaea repens</i>	WL					X	
Narrow-leaved cotton-grass	<i>Eriocaulon angustifolium</i>	SC					X	
Pipewort	<i>Eriocaulon septangulare</i>	E					X	
Slender cotton-grass	<i>Eriophorum gracile</i>	T					X	
Green-keeled cotton-grass	<i>Eriophorum viridicarinatum</i>	SC					X	
Rattlesnake-master	<i>Eryngium yuccifolium</i>	T					X	X X
Upland boneset	<i>Eupatorium sessilifolium</i>	T					X	
Tinted spurge	<i>Euphorbia commutata</i>	T					X	X
Queen-of-the-prairie	<i>Filipendula rubra</i>	T					X	X
Chestnut sedge	<i>Fimbristylis puberula</i>	X					X	
Red ash	<i>Fraxinus pennsylvanica</i>						X	
Dwarf umbrella-sedge	<i>Fuirena pumila</i>	T					X	
Umbrella-grass	<i>Fuirena squarrosa</i>	T					X	X X
Showy orchis	<i>Galearis spectabilis</i>	SC					X	X X
Yellow gentian	<i>Gentiana alba</i>	SC					X	
White gentian	<i>Gentiana flavida</i>	E					X	X
Soapwort gentian	<i>Gentiana saponaria</i>	X					X	X
Stiff gentian	<i>Gentianella quinquefolia</i>	T					X	X
Becknell northern crane's-bill	<i>Geranium bicknellii</i>	E					X	
Herb-robert	<i>Geranium robertianum</i>	T					X	X
Purple avens	<i>Geum rivale</i>	E					X	
Pale avens	<i>Geum virginianum</i>	SC					X	
Bowman's root	<i>Gillenia trifoliata</i>	T					X	
Manna grass	<i>Glyceria acutiflora</i>	X					X	
Small floating manna-grass	<i>Glyceria borealis</i>	E					X	
American manna-grass	<i>Glyceria grandis</i>	SX					X	
Winged cudweed	<i>Gnaphalium macounii</i>	SX					X	
Kentucky coffee-tree	<i>Gymnocladus dioicus</i>	SC					X	X X
Whiskered sunflower	<i>Helianthus hirsutus</i>	SC					X	X X

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
Downy sunflower	<i>Helianthus mollis</i>	T			X	X		
Dwarf-bulrush	<i>Hemicarpha micrantha</i>	SC			X	X	X	
Swamp rose-mallow	<i>Hibiscus moscheutos</i>	SC				X	X	
Panicled hawkweed	<i>Hieracium paniculatum</i>	SC				X	X	
Green violet	<i>Hybanthus concolor</i>	SC		X		X	X	
Goldenseal	<i>Hydrastis canadensis</i>	T	LE	X	X	X	X	X
American water-pennywort	<i>Hydrocotyle americana</i>	E				X		
Gentian-leaved st. John's-wort	<i>Hypericum gentianoides</i>	SC				X	X	X
Kalm st. John's-wort	<i>Hypericum kalmianum</i>	WL				X		
Great st. John's-wort	<i>Hypericum pyramidatum</i>	E				X		
Kankakee globe-mallow	<i>Iliamna remota</i>	E				X		
Large whorled pogonia	<i>Isotria verticillata</i>	WL				X		
Whorled pogonia	<i>Isotria verticillata</i>	T				X	X	X
Twinleaf	<i>Jeffersonia diphylla</i>	SC					X	X
Butternut	<i>Juglans cinerea</i>	WL				X		
Two-flowered rush	<i>Juncus biflorus</i>	SC				X	X	X
Scirpus-like rush	<i>Juncus scirpoides</i>	T						X
Ground juniper	<i>Juniperus communis</i>	SC				X		
False boneset	<i>Kuhnia eupatorioides</i>	SC				X	X	X
Pale vetchling peavine	<i>Lathyrus ochroleucus</i>	E				X		
Smooth veiny pea	<i>Lathyrus venosus</i>	T				X		
Least pinweed	<i>Lechea minor</i>	SC			X	X		X
Minute duckweed	<i>Lemna perpusilla</i>	SX				X		
Trailing bush-clover	<i>Lespedeza procumbens</i>	SC					X	
Dotted blazing-star	<i>Liatris punctata</i>	X				X		
False pimpernel	<i>Lindernia anagallidea</i>	SC				X		
Twinflower	<i>Linnaea borealis</i>	SX				X		
Ridged yellow flax	<i>Linum striatum</i>	T				X		
Grooved yellow flax	<i>Linum Sulcatum</i>	SC				X	X	
Virginia flax	<i>Linum virginianum</i>	T				X	X	X
Loesel's twayblade	<i>Liparis loeselii</i>	WL				X		
Tulip-tree	<i>Liriodenrodn tulipifera</i>							X
American fly-honeysuckle	<i>Lonicera canadensis</i>	SX				X		
Seedbox	<i>Ludwigia alternifolia</i>	T				X	X	X
Hairy woodrush	<i>Luzulia acuminata</i>	E				X		
Northern bog clubmoss	<i>Lycopodiella inundata</i>	E				X		
Running pine	<i>Lycopodium clavatum</i>	WL				X		
Hickey's clubmoss	<i>Lycopodium hickeyi</i>	SC				X		
Shining clubmoss	<i>Lycopodium lucidulum</i>	WL				X		
Tree clubmoss	<i>Lycopodium obscurum</i>	SC				X	X	
Climbing fern	<i>Lygodium palmatum</i>	E				X		
Ostrich fern	<i>Matteuccia struthiopteris</i>	SC				X		
American cow-wheat	<i>Melampyrum lineare</i>	SC				X		



Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
Tall millet-grass	<i>Milium effusum</i>	SC				X		
Oswego tea, beebalm	<i>Monarda didyma</i>	X				X		
Red mulberry	<i>Morus rubra</i>	SC				X	X	X
Whorled water-milfoil	<i>Myriophyllum verticillatum</i>	T				X		
American lotus	<i>Nelumbo lutea</i>	T	LE			X		
Mountain holly	<i>Nemopanthus mucronatus</i>	WL				X		
Black-gum, tupelo	<i>Nyssa sylvatica</i>							X
Black-fruit mountain-ricegrass	<i>Oryzopsis racemosa</i>	T				X	X	
Violet wood-sorrel	<i>Oxalis violacea</i>	T					X	X
Ginseng	<i>Panax quinquefolius</i>	T				X	X	X
Dwarf ginseng	<i>Panax trifolius</i>	WL				X		
Northern witchgrass	<i>Panicum boreale</i>	SC				X		
Leiberg's panic-grass	<i>Panicum leibergii</i>	T				x	X	X
Small-fruited panic-grass	<i>Panicum microcarpon</i>	SC				X		
A panic-grass	<i>Panicum subvillosum</i>	SX				X		
Warty panic-grass	<i>Panicum verrucosum</i>	T					X	X
Cleft phlox	<i>Phlox bifida</i>	T				X		
Spotted phlox	<i>Phlox maculata</i>	T				X	X	X
Eastern white pine	<i>Pinus strobus</i>	SC				X		
Prairie fringed orchid	<i>Platanthera leucophaea</i>	E				X	X	X
Orange or yellow fringed orchid	<i>Platanthera ciliaris</i>	T				X	X	X
Small green woodland orchis	<i>Platanthera clavellata</i>	E				X		
Pale green orchis	<i>Platanthera flava var herbiola</i>	WL				X		
Leafy northern green orchis	<i>Platanthera hyperborea</i>	T				X		
Prairie white-fringed orchid	<i>Platanthera leucophaea</i>	SX				X		
Large roundleaf orchid	<i>Platanthera orbiculata</i>	SX				X		
Small purple-fringe orchis	<i>Platanthera psycodes</i>	SC				X		
Grove meadow grass	<i>Poa alsodes</i>	SC				X		
Bog bluegrass	<i>Poa paludigena</i>	T				X	X	
Rose pogonia	<i>Pogonia ophioglossoides</i>	WL				X		
Jacob's ladder or greek-valerian	<i>Polemonium reptans</i>	T					X	X
Cross-leaved milkwort	<i>Polygala cruciata</i>	SC				X	X	X
Carey's smartweed	<i>Polygonum careyi</i>	T					X	
Large-flowered leafcup	<i>Polymnia uvedalia</i>	T					X	X
Prairie-parsley	<i>Polytaenia nuttallii</i>	X				X		
Swamp or black cottonwood	<i>Populus heterophylla</i>	E				X		X
Waterthread pondweed	<i>Potamogeton bicupulatus</i>	T						X
Nuttall pondweed	<i>Potamogeton epihydrus</i>	E				X		
Fries' pondweed	<i>Potamogeton friesii</i>	E				X		
Oakes pondweed	<i>Potamogeton oakesianus</i>	E				X		

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
White-stem pondweed	<i>Potamogeton praelongus</i>	E		X				
Spotted pondweed	<i>Potamogeton pulcher</i>	T			X		X	
Slender pondweed	<i>Potamogeton pusillus</i>	SC		X				
Redheadgrass	<i>Potamogeton richardsonii</i>	T		X				
Flatleaf pondweed	<i>Potamogeton robbinsii</i>	T		X				
Straight-leaf pondweed	<i>Potamogeton strictifolius</i>	E		X				
Fire cherry	<i>Prunus pensylvanica</i>	SC		X				
Bald-rush	<i>Psilocarya scirpoides</i>	T			X		X	
Long-beaked baldrush	<i>Psilocarya scirpoides</i>	T		X				
Hairy mountain-mint	<i>Pycnanthemum pilosum</i>	SC			X		X	
Whorled mountain-mint	<i>Pycnanthemum verticillatum</i>	SC			X		X	
Pink wintergreen	<i>Pyrola asarifolia</i>	E		X				
Elliptical-leaf wintergreen	<i>Pyrola elliptica</i>	WL		X	X			
American wintergreen	<i>Pyrola rotundifolia</i> var <i>americana</i>	SC		X				
Greenish-flowered wintergreen	<i>Pyrola virens</i>	SX				X		
Bur oak	<i>Quercus macrocarpa</i>				X		X	
Dwarf chinquapin oak	<i>Quercus prinoides</i>	E		X				
Meadow-beauty	<i>Rhexia virginica</i>	SC			X		X	
Globe beak-rush	<i>Rhynchospora globularis</i>	X		X				
Tall beak-rush	<i>Rhynchospora</i> <i>macrostachya</i>	SC		X	X		X	
Smooth gooseberry	<i>Ribes hirtellum</i>	WL		X				
Prairie rose	<i>Rosa setigera</i>	SC		X	X		X	
Tooth-cup	<i>Rotala ramosior</i>	SC		X	X		X	
Orange coneflower	<i>Rudbeckia fulgida</i> var <i>fulgida</i>	SC		X				
Showy coneflower	<i>Rudbeckia fulgida</i> var <i>sullivanti</i>	SC		X	X	X	X	
Hairy ruellia	<i>Ruellia humilis</i>	T		X	X			
Rose-pink	<i>Sabatia angularis</i>	T		X	X		X	
Autumn willow	<i>Salix serissima</i>	T		X	X			
Northern pitcher-plant	<i>Sarracenia purpurea</i>	WL		X				
American scheuchzeria	<i>Scheuchzeria palustris</i> sp <i>americana</i>	E		X				
Weakstalk bulrush	<i>Scirpus purshianus</i>	E		X				
Water bulrush	<i>Scirpus subterminalis</i>	R		X				
Fewflower nutrush	<i>Scleria pauciflora</i>	WL		X			X	
Tall nut-rush	<i>Scleria triglomerata</i>	SC		X			X	
Hairy skullcap	<i>Scutellaria elliptica</i>	SC		X	X		X	
Meadow spike-moss	<i>Selaginella apoda</i>	E		X				
Ledge spike-moss	<i>Selaginella Rupestris</i>	T		X				
Starry campion	<i>Silene stellata</i>	T		X	X	X	X	

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
Rosinweed	<i>Silphium integrifolium</i>	T		X	X	X		
Compass-plant	<i>Silphium laciniatum</i>	T			X			
Cup-plant	<i>Silphium perfoliatum</i>	T		X	X	X		
Blue-eyed-grass	<i>Sisyrinchium strictum</i>	SC		X				
Smooth carrion-flower	<i>Smilax herbacea</i>	SC			X			
Hairy goldenrod	<i>Solidago hispida</i>	WL			X			
Northern mountain-ash	<i>Sorbus decora</i>	SX			X			
Branching bur-reed	<i>Sparganium androcladum</i>	T				X		
Shining ladies'-tresses	<i>Spiranthes lucida</i>	SC			X			
Great plains ladies'-tresses	<i>Spiranthes magnicamporum</i>	E			X			
Yellow ladies'-tresses	<i>Spiranthes ochroleuca</i>	SC				X	X	
Hooded ladies'-tresses	<i>Spiranthes romanzoffiana</i>	E			X			
Prairie dropseed	<i>Sporobolus heterolepis</i>	T						X
Fleshy stitchwort	<i>Stellaria crassifolia</i>	T			X			
Blackseed needlegrass	<i>Stipa avenacea</i>	T			X	X		
Sewing needlegrass	<i>Stipa comata</i>	SX			X			
Trailing wild bean	<i>Strophostyles helvula</i>	SC				X	X	
Waxy meadow-rue	<i>Thalictrum revolutum</i>	T				X		
Crane-fly orchid	<i>Tipularia discolor</i>	T				X	X	
False asphodel	<i>Tofieldia glutinosa</i>	SC			X			
Eared false foxglove	<i>Tomanthera auriculata</i>	X			X			
Virginia spiderwort	<i>Tradescantia virginiana</i>	SC			X			
Bastard pennyroyal	<i>Trichostema dichotomum</i>	T			X		X	
Marsh arrow-grass	<i>Triglochin palustre</i>	T			X			
Prairie trillium	<i>Trillium recurvatum</i>	T				X	X	
Toadshade	<i>Trillium sessile</i>	T			X	X	X	
Painted trillium	<i>Trillium undulatum</i>	E				X	X	
Three-birds orchid	<i>Triphora trianthophora</i>	T				X	X	
Sand grass	<i>Triplasis purpurea</i>	SC						X
Horned bladderwort	<i>Utricularia cornuta</i>	T			X			
Lesser bladderwort	<i>Utricularia minor</i>	E			X			
Purple bladderwort	<i>Utricularia purpurea</i>	SC			X			
Northern bladderwort	<i>Utricularia resupinata</i>	SX			X			
Small cranberry	<i>Vaccinium oxycoccos</i>	T			X			
Large cranberry	<i>Vaccinium macrocarpon</i>	WL			X			
Edible valerian	<i>Valeriana ciliata</i>	T				X	X	
Marsh valerian	<i>Valeriana uliginosa</i>	E			X			
Goosefoot corn-salad	<i>Valerianella chenopodiifolia</i>	T				X	X	
Northern wild-raisin	<i>Viburnum cassinoides</i>	E			X			
Highbush-cranberry	<i>Viburnum opulus var americanum</i>	E			X			
Black haw	<i>Viburnum prunifolium</i>	SC		X	X	X	X	
Prairie birdfoot violet	<i>Viola pedatifida</i>	T			X	X		

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant								
Primrose-leaf violet	<i>Viola primulifolia</i>	SC					X	
Frost grape	<i>Vitis vulpina</i>	SC			X	X		
Wisteria	<i>Wisteria frutescens</i>	T					X	
Water-meal	<i>Wolffia papulifera</i>	T					X	X
Carolina yellow-eyed grass	<i>Xyris difformis</i>	T			X			
Horned pondweed	<i>Zannichellia palustris</i>	E					X	
White camas	<i>Zigadenus ellegans var glaucus</i>	SC					X	
Wild-rice	<i>Zizania aquatica var aquatica</i>	T			X	X	X	
Plant Community								
Acid bog		SG			X	X	X	X
Circumneutral bog		SG					X	
Coastal plain marsh					X	X		X
Dry upland forest		SG					X	
Dry-mesic sand prairie		SG					X	
Dry-mesic sand savanna		SG					X	
Dry-mesic Southern Forest					X		X	
Dry-mesic upland forest		SG					X	X
Emergent marsh					X		X	
Fen		SG					X	
Forested fen		SG					X	
Forested swamp		SG					X	
Great Lakes marsh								X
Hardwood-conifer swamp								X
Intermittent wetland								X
Marsh		SG					X	
Mesic prairie							X	
Mesic sand prairie								X
Mesic upland forest		SG					X	
Muck flat		SG					X	X
Oak barrens					X		X	
Prairie fen					X	X	X	X
Relict conifer swamp							X	X
Sand flat		SG					X	
Sedge meadow		SG					X	
Shrub swamp		SG					X	X
Southern floodplain forest								X
Southern swamp					X		X	X
Southern wet meadow					X	X	X	
Submergent marsh					X			
Wet-mesic Floodplain Forest		SG					X	X

Table 25.—Continued.

Common name or feature	Scientific name	State status	Federal status	Valley Code				
				H	U	M	L	Mo
Plant Community								
Wet-mesic Prairie							X	X
Woodland prairie				X	X	X		
Other Feature								
Great blue heron rookery				X	X	X	X	X
Marl beach		SG					X	
Mississippian earth feature			LE	X				
Drumlin							X	

Table 26.–Distribution of aquatic invertebrates (except mussels) in the St. Joseph River watershed, by valley segments and major tributaries. Data from Michigan Department of Natural Resources, Fisheries Division and Michigan Department of Environmental Quality, Surface Water Quality Division. “x” represents locations where invertebrate groups are found; blanks indicate that a group was not found in that segment in any studies. Invertebrate groups (in bold) are the most sensitive. Station codes: CR=Country road; SR=State road.

Location	Taxa																			
	<b>Ephemeroptera</b>	<b>Trichoptera (caddisflies)</b>	<b>Plecoptera (stoneflies)</b>	Diptera (flies, midges)	<b>Simuliidae (black flies)</b>	Chironomidae (midges)	Culicidae (mosquitoes)	Tipulidae (crane flies)	Anisoptera (dragonflies)	Zygoptera (damselflies)	Hemiptera (true bugs)	Coleoptera (beetles)	Megaloptera (alderflies)	Turbellana (flatworms)	Hirudinea (leeches)	Oligochaeta (worms)	Amphipoda (scuds)	Decapoda (crayfish)	Hydracanna (mites)	Ponifera (sponges)
Headwaters																				
St. Joseph River near Hillsdale	x	x		x	x	x		x	x	x	x				x		x	x		
St. Joseph River 22 mile Rd	x	x	x			x				x	x						x	x		
St. Joseph River 9 mile Rd	x	x	x			x			x		x	x		x	x	x	x	x	x	
Upper																				
St. Joseph River near Union City	x	x	x		x			x	x	x	x						x	x		
Coldwater River Central Rd	x	x	x		x	x			x		x	x	x	x			x	x		
Coldwater River Coldwater Rd	x	x	x			x					x						x	x		
Coldwater River Lockwood Rd	x	x			x	x			x	x	x	x					x	x		
Coldwater River Garfield Rd	x	x	x		x	x			x	x		x					x	x		
Coldwater River Steffey Rd	x	x			x	x			x	x	x	x					x	x		
Coldwater River Fox Rd	x	x			x	x		x	x			x					x	x		
Nottawa Creek 19 mile	x	x			x	x		x	x		x	x		x			x	x		
Nottawa Creek 17 mile	x	x			x	x			x		x	x		x			x	x		
Nottawa Creek I69	x	x				x		x	x		x	x	x	x			x	x		
Nottawa Creek 9 mile	x	x			x	x				x	x	x			x	x	x	x		
Nottawa Creek 4 mile	x	x	x		x	x		x	x		x	x					x	x		
Little Portage Creek near Mendon	x	x			x	x			x	x	x	x	x					x		
Middle																				
Rocky River Savage Rd	x	x															x	x		
Rocky River Lovers Lane	x	x	x														x	x		
Rocky River US 131	x	x			x	x			x		x	x			x		x	x		
Prairie River McKale Rd	x	x	x			x	x		x	x		x	x				x			
Fawn River Balk Rd	x	x	x		x	x			x	x	x	x	x		x		x	x	x	
Fawn River Stubey Rd	x	x	x		x				x	x	x	x	x		x		x	x		
Fawn River near Scott, IN	x	x			x	x						x				x			x	
Pigeon Creek SR 327	x	x			x	x						x		x		x	x			
Pigeon River SR 27	x	x				x						x				x				
Pigeon River Ontario Lake Dam	x	x				x						x	x			x		x		
Pigeon River near Scott, IN	x	x			x	x			x			x								
Little Elkhart CR 1000W	x	x			x	x										x	x			
Little Elkhart near Middlebury, IN	x	x		x		x		x				x				x				

Table 26.–Continued.

Location	Taxa																			
	Ephemeroptera	Trichoptera (caddisflies)	Plecoptera (stoneflies)	Diptera (flies, midges)	Simuliidae (black flies)	Chironomidae (midges)	Culicidae (mosquitoes)	Tipulidae (crane flies)	Anisoptera (dragonflies)	Zygoptera (damselflies)	Hemiptera (true bugs)	Coleoptera (beetles)	Megaloptera (alderflies)	Turbellana (flatworms)	Hirudinea (leeches)	Oligochaeta (worms)	Amphipoda (scuds)	Decapoda (crayfish)	Hydracanna (mites)	Porifera (sponges)
Middle (continued)																				
Elkhart River CR 450W	x	x		x		x				x		x						x		
Solomon Creek CR 48	x	x		x	x	x						x						x		
Elkhart River SR 13	x	x			x	x						x						x		
Christiana Creek Crooked Cr. Rd	x	x	x		x	x		x		x	x	x	x		x	x	x	x		x
Christiana Creek near Vandalia	x	x	x	x	x	x			x	x	x	x				x	x	x		
Christiana Creek Heaton Lake Rd	x	x			x	x		x				x		x		x	x			
Lower																				
Baugo Creek Roosevelt Rd	x	x		x	x	x				x		x				x				
Dowagiac River Middle Crossing	x	x	x		x	x				x	x	x	x				x	x		
Dowagiac Creek Goodnaugh Rd	x	x		x	x				x	x	x	x	x			x	x	x		
Dowagiac Creek Mckenzie	x	x	x		x	x		x	x	x	x	x				x	x	x		
Dowagiac Creek near Dowagiac	x	x		x	x	x			x	x	x	x	x		x		x	x		
Dowagiac River Pucker St.	x	x	x		x	x	x	x	x	x	x	x		x		x	x	x	x	
Pipestone Creek River Rd	x				x	x						x				x	x	x		
Mouth																				
Paw Paw River near Paw Paw	x	x	x	x	x			x				x		x		x	x		x	
South Branch Paw Paw River	x			x	x			x				x	x		x	x	x			
Paw Paw River near Watervliet	x	x	x		x	x		x		x	x	x		x		x	x	x		

Table 27.—Synoptic table showing the distribution of mussels and snails, by collecting station, in the St. Joseph River watershed. Mussel data from Van der Schalie (1930), Horvath et al. (1994), Sherman (1997), and Fisher (1998). Snail data from various Michigan Department of Environmental Quality, Surface Water Quality Division biological reports. x=locations where species are found; blanks indicate that a species was not at that location or was not reported.

Location	Pelecypoda (Mussels)	<i>Cyclonaias tuberculata</i>	<i>Elliptio dilatatus</i>	<i>Strophitus rugosus</i>	<i>Anodonta grandis</i>	<i>Anodontoides ferrussaciana</i>	<i>Lasmigona compressa</i>	<i>Lasmigona costata</i>	<i>Alasmidonta calceolus</i>	<i>Alasmidonta marginata</i>	<i>Actinonaias carinata</i>	<i>Actinonaias ellipsiformis</i>	<i>Micromya iris</i>	<i>Lampsilis siliquoidea</i>	<i>Lampsilis ventricosa</i>	<i>Fusconaia flava</i>	<i>Pleurobema cordatum</i>	Gastropoda (snails, limpets)	Ancylidae (limpet)	Lymnaeidae	Physidae	Planorbidae
Headwaters																						
St. Joseph River near Hillsdale																			x		x	
Sand Creek																x	x					
St. Joseph River near Litchfield			x	x	x		x	x								x						
St. Joseph River NE of Tekonsha			x	x			x	x	x	x	x	x	x		x	x						
St. Joseph River at Tekonsha			x	x		x	x	x	x	x	x	x			x	x						
St. Joseph River at Burlington			x							x												
Upper																						
Hog Creek near Union City			x								x	x	x			x						
St. Joseph River near Leonidas			x	x			x		x	x	x	x	x	x	x	x	x					
Swan Creek Townline Road			x													x						
Nottawa Creek near Leonidas				x							x	x		x	x							
Nottawa Creek 19 mile																					x	
Nottawa Creek 17 mile																		x				
Nottawa Creek I69																		x	x			
Nottawa Creek 9 mile																		x				
St. Joseph River Stowell Road																x						
Middle																						
St. Joseph River by Three Rivers			x	x	x					x		x				x						
Portage River near Three Rivers			x									x	x	x	x	x	x					
Rocky River Bent Road							x	x		x						x	x					
Rocky River US 131																				x	x	
Prairie River at mouth			x	x						x	x	x	x			x	x					
Fawn River Balk Rd																			x	x	x	
Fawn River near Orland			x				x	x		x						x	x					
Pigeon River at White Pigeon			x								x		x		x	x						
St. Joseph River at Mottville		x	x	x		x		x		x	x	x	x		x	x	x					
Spring Run 3 mi W of Mottville			x				x						x									
Christiana Creek at N. Shore Dr.																			x	x		
Christiana Creek at M60																			x	x	x	



Table 27.–Continued.

Location	Pelecypoda (Mussels)	<i>Cyclonaias tuberculata</i>	<i>Elliptio dilatatus</i>	<i>Strophitus rugosus</i>	<i>Anodonta grandis</i>	<i>Anodontoides ferrussaciana</i>	<i>Lasmigona compressa</i>	<i>Lasmigona costata</i>	<i>Alasmidonta calceolus</i>	<i>Alasmidonta marginata</i>	<i>Actinonaias carinata</i>	<i>Actionaias ellipsiformis</i>	<i>Micromya iris</i>	<i>Lampsilis siliquoides</i>	<i>Lampsilis ventricosa</i>	<i>Fusconaia flava</i>	<i>Pleurobema cordatum</i>	Gastropoda (snails, limpets)	Ancylidae (limpet)	Lymnaeidae	Physidae	Planorbidae
Lower																						
Dowagiac River Middle Crossing																			x			
Dowagiac Creek Mckenzie																				x	x	x
Dowagiac Creek near Dowagiac																			x		x	
Dowagiac River Pucker St.																				x	x	x
Dowagiac River at Niles			x			x	x			x		x										
St. Joseph River at Berrien Springs		x	x												x	x	x					
Pipestone Creek at Naomi Rd			x																			
Mouth																						
Paw Paw River near Paw Paw																			x		x	
Paw Paw River near Watervliet			x				x	x		x				x	x	x	x					
South Branch Paw Paw River																					x	
St. Joseph River at St. Joseph					x																	

Table 28.–List of amphibians and reptiles in the St. Joseph River watershed that require an aquatic environment. Data from Best (1985).

Common name	Scientific name
<b>Turtles</b>	
Snapping turtle	<i>Chelydra serpentina</i>
Eastern box turtle	<i>Terrapene carolina caroliniana</i>
Map turtle	<i>Graptemys geographica</i>
Midland painted turtle	<i>Chrysemys picta marginata</i>
Blandings turtle	<i>Emydoides blandingi</i>
Eastern spiny softshell	<i>Apalone spinifera</i>
Common musk turtle	<i>Sternotherus odoratus</i>
Spotted turtle	<i>Clemmys guttata</i>
<b>Snakes</b>	
Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>
Eastern hognose snake	<i>Heterodon platyrhinos</i>
Blue racer	<i>Coluber constrictor foxi</i>
Smooth green snake	<i>Opheodrys vernalis</i>
Black rat snake	<i>Elaphe obsoleta obsoleta</i>
Eastern milk snake	<i>Lampropeltis triangulum triangulum</i>
Kirtland's snake	<i>Clonophis kirtlandii</i>
Copperbelly water snake	<i>Nerodia erythrogaster neglecta</i>
Northern water snake	<i>Nerodia sipedon sipedon</i>
Queen snake	<i>Regina septemvittata</i>
Brown snake	<i>Storeria dekayi</i>
Northern ribbon snake	<i>Thamnophis sauritus septentrionalis</i>
Massasauga	<i>Sistrurus catenatus</i>
<b>Salamanders</b>	
Mudpuppy	<i>Necturus maculosus maculosus</i>
Blue-spotted salamander	<i>Ambystoma laterale</i>
Spotted salamander	<i>Ambystoma maculatum</i>
Eastern tiger salamander	<i>Ambystoma tigrinum tigrinum</i>
Marbled salamander	<i>Ambystoma opacum</i>
Central newt	<i>Notophthalmus viridescens louisianensis</i>
Red-backed salamander	<i>Plethodon cinereus</i>
Four-toed salamander	<i>Hemidactylium scutatum</i>
Five-lined skink	<i>Eumeces fasciatus</i>
<b>Frogs</b>	
American toad	<i>Bufo americanus</i>
Fowler's toad	<i>Bufo woodhousei fowleri</i>
Blanchard's cricket frog	<i>Acris crepitans blanchardi</i>
Spring peeper	<i>Pseudacris crucifer</i>
Gray treefrog	<i>Hyla versicolor</i>
Western chorus frog	<i>Pseudacris triseriata triseriata</i>
Bullfrog	<i>Rana catesbeiana</i>
Green frog	<i>Rana clamitans melanota</i>

Table 28.—Continued.

Common name	Scientific name
Wood frog	<i>Rana sylvatica</i>
Northern leopard frog	<i>Rana pipiens</i>
Pickerel frog	<i>Rana palustris</i>

Table 29.—Birds in the St. Joseph River watershed that require aquatic or wetland environments. Data from Michigan Department of Natural Resources, Wildlife Division.

Common name	Scientific name
Common loon	<i>Gavia immer</i>
Mallard	<i>Anas platyrhynchos</i>
Black duck	<i>Anas rubripes</i>
Blue-winged teal	<i>Anas discors</i>
Canada goose	<i>Branta canadensis</i>
Wood duck	<i>Aix sponsa</i>
Pied-billed grebe	<i>Podilymbus podiceps</i>
Common goldeneye	<i>Bucephala clangula</i>
Hooded merganser	<i>Lophodytes cucullatus</i>
Common merganser	<i>Mergus merganser</i>
Cormorant	<i>Phalacrocorax auritus</i>
Trumpeter swan	<i>Cygnus buccinator</i>
Mute swan	<i>Cygnus olor</i>
Turkey vulture	<i>Cathartes aura</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Northern goshawk	<i>Accipiter gentilis</i>
Copper's hawk	<i>Accipiter cooperii</i>
Sharp-shinned hawk	<i>Accipiter striatus</i>
Northern harrier	<i>Circus cyaneus</i>
Broad-winged hawk	<i>Buteo platypterus</i>
Red-shouldered hawk	<i>Buteo lineatus</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Golden eagle	<i>Aquila chrysaetos</i>
Osprey	<i>Pandion haliaetus</i>
Short eared owl	<i>Asio flammeus</i>
Eastern screech owl	<i>Otus asio</i>
Long-eared owl	<i>Asio otus</i>
Barn owl	<i>Tyto alba</i>
Great horned owl	<i>Bubo virginianus</i>
Barred owl	<i>Strix varia</i>
Northern saw-whet owl	<i>Aegolius acadicus</i>
Common nighthawk	<i>Chordeiles minor</i>
American kestrel	<i>Falco sparverius</i>
Ruffed grouse	<i>Bonasa umbellus</i>
Wild turkey	<i>Meleagris gallopardo</i>
Northern bobwhite	<i>Colinus virginianus</i>
Ring-necked pheasant	<i>Phasianus colchicus</i>
Great blue heron	<i>Ardea herodias</i>
Great egret	<i>Casmerodius albus</i>
Green heron	<i>Butorides virescens</i>
Sandhill crane	<i>Grus canadensis</i>
Least bittern	<i>Ixobrychus exilis</i>
Virginia rail	<i>Rallus limicola</i>

Table 29.–Continued.

Common name	Scientific name
American bittern	<i>Botaurus lentiginosus</i>
King rail	<i>Rallus elagans</i>
Sora	<i>Porzana carolina</i>
Common moorhen	<i>Gallinula chloropus</i>
American coot	<i>Fulica americana</i>
Killdeer	<i>Charadrius vociferus</i>
Upland sandpiper	<i>Bartramis longicauda</i>
Spotted sandpiper	<i>Actitis macularia</i>
Herring gull	<i>Larus argentatus</i>
Black tern	<i>Chlidonias niger</i>
American woodcock	<i>Scolopax minor</i>
Rock dove	<i>Columba livia</i>
Mourning dove	<i>Zenaida macroura</i>
Yellow-billed cuckoo	<i>Coccyzus americanus</i>
Black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>
Chimney swift	<i>Chaetura pelagica</i>
Ruby-throated hummingbird	<i>Archilochus colubris</i>
Belted kingfisher	<i>Ceryle alcyon</i>
Common flicker	<i>Colaptes auratus</i>
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>
Hairy woodpecker	<i>Picoides villosus</i>
Red-bellied woodpecker	<i>Melanerpes carolinus</i>
Downy woodpecker	<i>Picoides pubescens</i>
Pileated woodpecker	<i>Dryocopus pileatus</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>
Eastern phoebe	<i>Sayornis phoebe</i>
Acadian flycatcher	<i>Empidonax virescens</i>
Willow flycatcher	<i>Empidonax traillii</i>
Least flycatcher	<i>Empidonax minimus</i>
Eastern wood-pewee	<i>Contopus sordidulus</i>
Barn swallow	<i>Hirundo rustica</i>
Cliff swallow	<i>Hirundo pyrrhonota</i>
Tree swallow	<i>Iridoprocne bicolor</i>
Bank swallow	<i>Riparia riparia</i>
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Purple martin	<i>Progne subis</i>
Blue jay	<i>Cyanocitta cristata</i>
Horned lark	<i>Ermophila alpestris</i>
Common crow	<i>Corvus brachyrhynchos</i>
Black-capped chickadee	<i>Parus atricapillus</i>
Tufted titmouse	<i>Parus bicolor</i>
White-breasted nuthatch	<i>Sitta carolinensis</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
House wren	<i>Troglodytes aedon</i>
Sedge wren	<i>Cistothorus platensis</i>
Carolina wren	<i>Thryothorus ludovicianus</i>

Table 29.–Continued.

Common name	Scientific name
Marsh wren	<i>Cistothorus palustris</i>
Catbird	<i>Dumetella carolinensis</i>
Brown thrasher	<i>Toxostoma rufum</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Robin	<i>Turdus migratorius</i>
Swainson's thrush	<i>Catharus ustulatus</i>
Wood thrush	<i>Hylocichla mustelina</i>
Veery	<i>Catharus fuscescens</i>
Eastern bluebird	<i>Sialia sialis</i>
Golden-crowned kinglet	<i>Regulus satrapa</i>
Blue-gray gnatcatcher	<i>Poliophtila caerulea</i>
Cedar waxwing	<i>Bombucilla cedrorum</i>
Starling	<i>Sturnus vulgaris</i>
Solitary vireo	<i>Vireo solitarius</i>
White-eyed vireo	<i>Vireo griseus</i>
Yellow-throated vireo	<i>Vireo flavifrons</i>
Red-eyed vireo	<i>Vireo olivaceus</i>
Warbling vireo	<i>Vireo gilvus</i>
Black-and-white warbler	<i>Mniotilta varia</i>
Prothonotary warbler	<i>Protonotaria citea</i>
Blue-winged warbler	<i>Vermivora pinus</i>
Black-throated green warbler	<i>Dendroica virens</i>
Cerulean warbler	<i>Dendroica cerulea</i>
Yellow throated warbler	<i>Dendroica dominica</i>
Blackburnian warbler	<i>Dendroica fusca</i>
Chestnut-sided warbler	<i>Dendroica pensylvanica</i>
Yellow warbler	<i>Dendroica petechia</i>
Oven bird	<i>Seiurus aurocapillus</i>
Louisiana waterthrush	<i>Seiurus motacilla</i>
Yellow-breasted chat	<i>Icteria virens</i>
Hooded warbler	<i>Wilsonia citrina</i>
Canada warbler	<i>Wilsonia canadensis</i>
American redstart	<i>Setophaga ruticilla</i>
Yellowthroat	<i>Geothlypis trichas</i>
House sparrow	<i>Passer domesticus</i>
Eastern meadowlark	<i>Sturnella magna</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Western meadowlark	<i>Sturnella neglecta</i>
Red-winged blackbird	<i>Aselaius phoeniceus</i>
Common grackle	<i>Quiscalus quiscula</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Orchard oriole	<i>Icterus spurius</i>
Northern oriole	<i>Icterus galbula</i>
Scarlet tanager	<i>Piranga olivacea</i>
Cardinal	<i>Richmondia cardinalis</i>
Rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>

Table 29.–Continued.

Common name	Scientific name
Evening grosbeak	<i>Coccothraustes vespertinus</i>
Indigo bunting	<i>Passerina cyanea</i>
House finch	<i>Carpodacus cassinii</i>
Purple finch	<i>Carpodacus purpureus</i>
Pine siskin	<i>Carduelis pinus</i>
American goldfinch	<i>Spinus tristis</i>
Dickcissel	<i>Spiza americana</i>
Rufous-sided towhee	<i>Pipilo erythrophthalmus</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Henslow's sparrow	<i>Ammodramus henslowii</i>
Vesper sparrow	<i>Poocetes gramineus</i>
Grasshopper sparrow	<i>Ammodramus savannarum</i>
Chipping sparrow	<i>Spizella passerina</i>
Field sparrow	<i>Spizella pusilla</i>
White-crowned sparrow	<i>Zonotrichia leucopheys</i>
Swamp sparrow	<i>Melospiza georgina</i>
Song sparrow	<i>Melospiza melodia</i>

Table 30.—Mammals in the St. Joseph River watershed that use aquatic, wetland, or riparian habitats. Data from Michigan Department of Natural Resources, Wildlife Division.

Common name	Scientific name
Opossum	<i>Didelphus marsupialis</i>
Shorttail shrew	<i>Blarina brevicauda</i>
Masked shrew	<i>Sorex cinereus</i>
Least shrew	<i>Cryptotis parva</i>
Eastern mole	<i>Scalopus aquaticus</i>
Star-nosed mole	<i>Condylura cristata</i>
Big brown bat	<i>Eptesicus fuscus</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Red bat	<i>Lasiurus borealis</i>
Hoary bat	<i>Lasiurus cinereus</i>
Little brown myotis	<i>Myotis lucifugus</i>
Indiana bat	<i>Myotis sodalis</i>
Eastern cottontail	<i>Sylvilagus floridanus</i>
Eastern chipmunk	<i>Sylvilagus floridanus</i>
Woodchuck	<i>Marmota monax</i>
Thirteen-lined ground squirrel	<i>Citellus tridecemlineatus</i>
Eastern fox squirrel	<i>Sciurus niger</i>
Red squirrel	<i>Tamiasciurus hudsonicus</i>
Southern flying squirrel	<i>Glaucomys volans</i>
Beaver	<i>Castor canadensis</i>
White-footed mouse	<i>Peromyscus leucopus</i>
Deer mouse	<i>Peromyscus maniculatus</i>
Prairie vole	<i>Microtus ochrogaster</i>
Meadow vole	<i>Microtus pennsylvanicus</i>
Pine vole	<i>Pitymys pinetorum</i>
Muskrat	<i>Ondatra zibethicus</i>
Southern bog lemming	<i>Synaptomys cooperi</i>
Norway rat	<i>Rattus norvegicus</i>
House mouse	<i>Mus musculus</i>
Meadow jumping mouse	<i>Zapus hudsonius</i>
Coyote	<i>Canis latrans</i>
Red fox	<i>Vulpes fulva</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Raccoon	<i>Procyon lotor</i>
Longtail weasel	<i>Mustela frenata</i>
Mink	<i>Mustela vison</i>
Badger	<i>Taxidea taxus</i>
Striped skunk	<i>Mephitis mephitis</i>
River otter	<i>Lutra canadensis</i>
White-tailed deer	<i>Odocoileus virginianus</i>



Table 31. Lakes in the St. Joseph River watershed with known populations of zebra mussels as of 1998. Data from Michigan Sea Grant Extension and Horvath (1994).

Segment and Lake	County
Headwaters	
Baw Beese Lake	Hillsdale
Upper	
Marble Lake	Branch
Middle	
Union Lake	Branch
Corey Lake	St. Joseph
Klinger Lake	St. Joseph
Baldwin Lake	Cass
Lake Wawasee	Kosciusko (IN)
Donnell Lake	Cass
Diamond Lake	Cass
Christianna Lake	Cass
Eagle Lake	Cass
Juno Lake	Cass
Julian Lake	Cass
Lower	
Bankson Lake	Van Buren
Gravel Lake	Van Buren
Lake of the Woods	Van Buren
Dewey Lake	Cass
Magician Lake	Cass
North Twin Lake	Cass
South Twin Lake	Cass
Indian Lake	Cass
Mouth	
Paw Paw Lake	Berrien

Table 32.—Number of aquatic vegetation control permits issued by Michigan Department of Environmental Quality, Land and Water Management Division, for excessive aquatic vegetation growth in Michigan counties of the St. Joseph River watershed.

Segment and county	Year								
	1988	1989	1990	1991	1992	1993	1994	1995	1996
Headwaters									
Hillsdale	7	2	4	6	3	3	3	3	4
Upper									
Branch	11	12	8	8	10	13	15	15	15
Calhoun	2	1	2	1	1	0	0	0	0
Middle									
St. Joseph	1	10	9	13	9	12	12	12	14
Kalamazoo	7	7	14	8	4	5	2	2	3
Lower									
Cass	24	20	21	26	26	26	20	20	23
Berrien	4	3	2	3	3	5	4	4	4
Mouth									
Van Buren	7	7	13	14	13	13	9	12	11
TOTAL	63	62	73	79	69	77	65	68	74

Table 33.—Organizations with interests in the St. Joseph River watershed.

Organization name
Citizens for Environmental Concern
Colon Angler Association
Ducks Unlimited
Elkhart Environmental Center
Elkhart River Restoration Association
Friends of McCoy Creek
Friends of the St. Joe River Association
Michiana Area Council of Governments
Michiana Watershed Council
Michigan Chapter of American Fisheries Society
Michigan Duck Hunters Association
Michigan Lake and Stream Association
Michigan Nature Association
Michigan Riparian
Michigan Salmon and Steelhead Fishing Association
Michigan Trappers Assoc.
Michigan United Conservation Club District # 3
Michigan United Conservation Club District # 4
Nature Conservancy
Partnership for MEANDRS
Paw Paw Lake Association
Sauk Trails RC&D
South Bend Fly Fishers
Southwest Michigan Land Conservancy
Southwest Michigan Planning Commission
St. Joseph River Basin Commission
St. Joseph River Valley Fly Fishers
St. Joseph Valley Greens (South Bend)
Trout Unlimited
Water Watchers of Indiana
Wawasee Area Conservancy Foundation
Wetlands Conservation Association

