

X. Appendices

**Appendix A:
Acronyms**

AMD	Acid Mine Drainage
AML	Abandoned Mine Land
BMP	Best Management Practice
CIV	Commutative Index Value
CRP	Conservation Reserve Program
CWA	Clean Water Act
CWH	Coldwater Habitat
CWMP	Comprehensive Watershed Management Plan
DSWC	Division of Soil and Water Conservation
EOLP	Erie/Ontario Lake Plain Ecoregion
EPA	Environmental Protection Agency
EQUIP	Environmental Quality Incentive Program
EWH	Exceptional Warmwater Habitat
FPA	Facilities Planning Area
GPD	Gallons Per Day
HSTS	Home Sewage Treatment System
HUC	Hydrologic Unit Code
IBI	Index of Biological Integrity
ICI	Invertebrate Community Index
LRW	Limited Resource Water
Mlwb	Modified Index of Well Being
MWCD	Muskingum Watershed Conservancy District
MWH	Modified Warmwater Habitat
NEFCO	Northeast Ohio Four County Regional Planning and Development Organization
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
MGD	Million Gallons per Day
NPS	Nonpoint Source Pollution
NSF	National Sanitation Foundation
ODNR	Ohio Department of Natural Resources
OEEF	Ohio Environmental Education Fund
O&M	Operation and Maintenance
PCBs	Polychlorinated Biphenyls
QHEI	Qualitative Habitat Evaluation Index
RC&D	Resource Conservation and Development
RM	River Mile
SCHD	Stark County Health Department

SWCD	Soil and Water Conservation Districts
SWP3	Storm Water Pollution Prevention Plan
TN	Total Nitrogen
TSS	Total Suspended Solids
TP	Total Phosphorus
USGS	United States Geological Survey
WAP	Western Allegheny Plateau Ecoregion
WPCLF	Water Pollution Control Loan Fund
WRP	Wetland Reserve Program
WRRSP	Water Resource Restoration Sponsor Program
WWH	Warmwater Habitat

**Appendix B:
Nimishillen Creek Watershed Partners' By-Laws**

1.01 PURPOSE

The mission of the Nimishillen Creek Watershed Partners is to promote the restoration of the Creek's water quality to fishable, swimmable standards and the protection of the Creek corridor.

2.0 MEMBERSHIP

- 2.1 Membership is open to any individual, family, or organization that subscribes to the purposes of the Watershed Partners.
- 2.2 The Watershed Partners will be directed by the Nimishillen Creek Core Committee consisting of voting representatives from the following:
- At least 5 members who are residents of the watershed.
 - 5 to 10 members from any of the following sectors: jurisdictional units of government in the watershed, educational, recreational, commercial, and agriculture.
 - The Core Committee shall consist of no more than 15 members.
- 2.3 Each participating state or federal agency may be represented by one (1) ex-officio, non-voting member of the Core Committee.
- 2.4 Core Committee membership shall be selected as follows:
- A list of candidates from an open invitation for nominations to represent the units of government, educational, recreational, commercial, and agriculture (non-residential) sectors shall be maintained; an election by written, secret ballot of all members present shall be conducted to elect Core Committee members.
 - A list of candidates from an open invitation for nominations to represent residents of the watershed shall be maintained; an election by written, secret ballot of all members present shall be conducted to elect Core Committee members.
 - The five (5) residential and the five (5) non-residential candidates with the most votes will be elected to the Core Committee.
 - The last five (5) Core Committee members shall be the remaining five (5) candidates from both the residential and non-residential sectors with the most votes.
- 2.5 Core Committee vacancies shall be filled following the process in Section 2.4, except in the case of the Chair, which vacancy shall be filled pursuant to Section 3.3.
- 2.6 Except for the initial election, all Core Committee members shall be elected to a four-year term. For the initial election, the four (4) residential and four (4) non-residential candidates receiving the most votes will be elected to a four-year term. The remaining elected members will serve a two-year term. Re-election to the Core Committee is permitted.

3.0 ORGANIZATION AND OFFICERS

- 3.1 The officers of the Watershed Partners are the Chair, Vice-Chair, and Secretary. The Chair shall be one of watershed residents on the Core Committee.
- 3.2 The duties of the Chair include, but are not limited to:
- Developing meeting agendas;
 - Presiding over all meetings of the Watershed Partners; and
 - Serving as Chair of the Core Committee and as an ad-hoc member of other committees.
- 3.3 The Vice-Chair may be any member of the Core Committee. The Vice-Chair shall assume the duties of the Chair for the remainder of that term should that office become vacant, and shall preside at meetings of the Watershed Partners and Core Committee when the Chair is unable to attend.
- 3.4 The Secretary may be any member of the Core Committee. The duties of the Secretary include, but are not limited to:
- Maintaining the official records of the Watershed Partners;
 - Recording and distributing the summaries of the Watershed Partners meetings;
 - Maintaining a current record of the names and addresses of Watershed Partners members; and
 - Sending out notices of meetings and any supporting meeting materials at least two (2) weeks prior to scheduled meetings.
- 3.5 Election of the Chair, Vice-Chair, and Secretary shall be by written, secret ballot by the Nimishillen Creek Watershed Partners members. For each vacant position, the candidate with the most votes wins the election. For the initial election, nomination shall be made by the Organizational Committee (refer to Section 4.2); in subsequent elections, nominations shall be made by the Core Committee. Additional nominations may be made by any Watershed Partners member from the floor or in writing to any member of the Organizational Committee (the Core Committee after the first election). It is incumbent upon the nominator to determine willingness of the nominee to serve.
- 3.6 The Chair shall be elected for a two-year term. The initial Vice-Chair shall be elected for a one-year term; thereafter, the Vice-Chair shall be elected for a two-year term. The Secretary shall be elected for a two-year term. Re-election of these offices is permitted.
- 3.7 If a Treasurer or Fiscal Agent becomes necessary, the Core Committee shall appoint a Treasurer or Fiscal Agent for the Watershed Partners. If it becomes legally necessary that a Treasurer be elected, the election procedures in Section 3.5 shall be followed.

4.0 COMMITTEES

4.1 Standing Committees:

The following standing committees shall be established by the Core Committee to address concerns of the Watershed Partners:

- Creek LEAP
- Education Committee

4.2 Organizational Committee

The Organizational Committee was previously established on 4/10/02. When the bylaws are adopted by the Watershed Partners, the Officers elected, and the Core Committee selected, the Organizational Committee will cease to exist.

4.3 Other Committees

The Core Committee may appoint such other Standing or Ad-Hoc Committees as deemed necessary to support the efforts of the Watershed Partners.

4.4 Core Committee

The Core Committee shall be composed of residential and non-residential sector members elected by the Watershed Partners as outlined in Section 2.4. The duties of the Core Committee shall include, but not limited to:

- A. Directing the business activities of the Task Force;
- B. Nominating members for elected positions;
- C. Creating or disbanding Standing or Ad -Hoc Committees;
- D. Calling emergency meetings without two weeks' notice; and
- E. Recommending projects to Committees.

4.5 Each Committee shall elect a Committee Chair by the end of its second meeting, except the Chair of the Core Committee which will follow the election procedure in Sections 3.2 - 3.5.

5.0 MEETINGS

5.1 The Watershed Partners shall meet as determined by the Core Committee.

5.2 Notice shall be sent (mail or email) to all members at least two (2) weeks in advance of all Watershed Partners meetings. Notice shall include an agenda and business material that may be considered or acted upon.

5.3 The Core Committee can meet as often as needed, but must meet at least 4 times during the calendar year.

6.0 DECISION MAKING

6.1 The Watershed Partners and its Core Committee shall strive to operate by consensus.

6.2 In the event consensus cannot be reached, any Watershed Partners Core Committee member may call for a vote on any issue during the course of any meeting. However, at least seven (7) Core Committee members must be present to call for a vote.

- 6.3 Decisions made by vote shall require a majority of the Core Committee members present for passage.
- 6.4 Core Committee members may be represented by designated alternates. Alternates must be designated by letter to the Chair or Vice Chair in advance of the meeting. The alternate shall have all the rights and duties of a voting member during the meeting(s) for which they are a designated alternate.
- 6.5 Any officer or Core Committee member may be removed, with or without cause, by the Core Committee. A written notice of a removal vote must be sent to all Core Committee members at least two (2) weeks in advance of the meeting where the vote will occur. Any such removal shall require a two-thirds (2/3) vote by the Core Committee members who are present. In accordance with Section 6.2, at least seven (7) Core Committee members must be present in order to call for a removal vote.
- 6.6 Any officer or Core Committee member may resign by giving written notice to the Core Committee. The acceptance of such resignation shall not be necessary to make it effective.

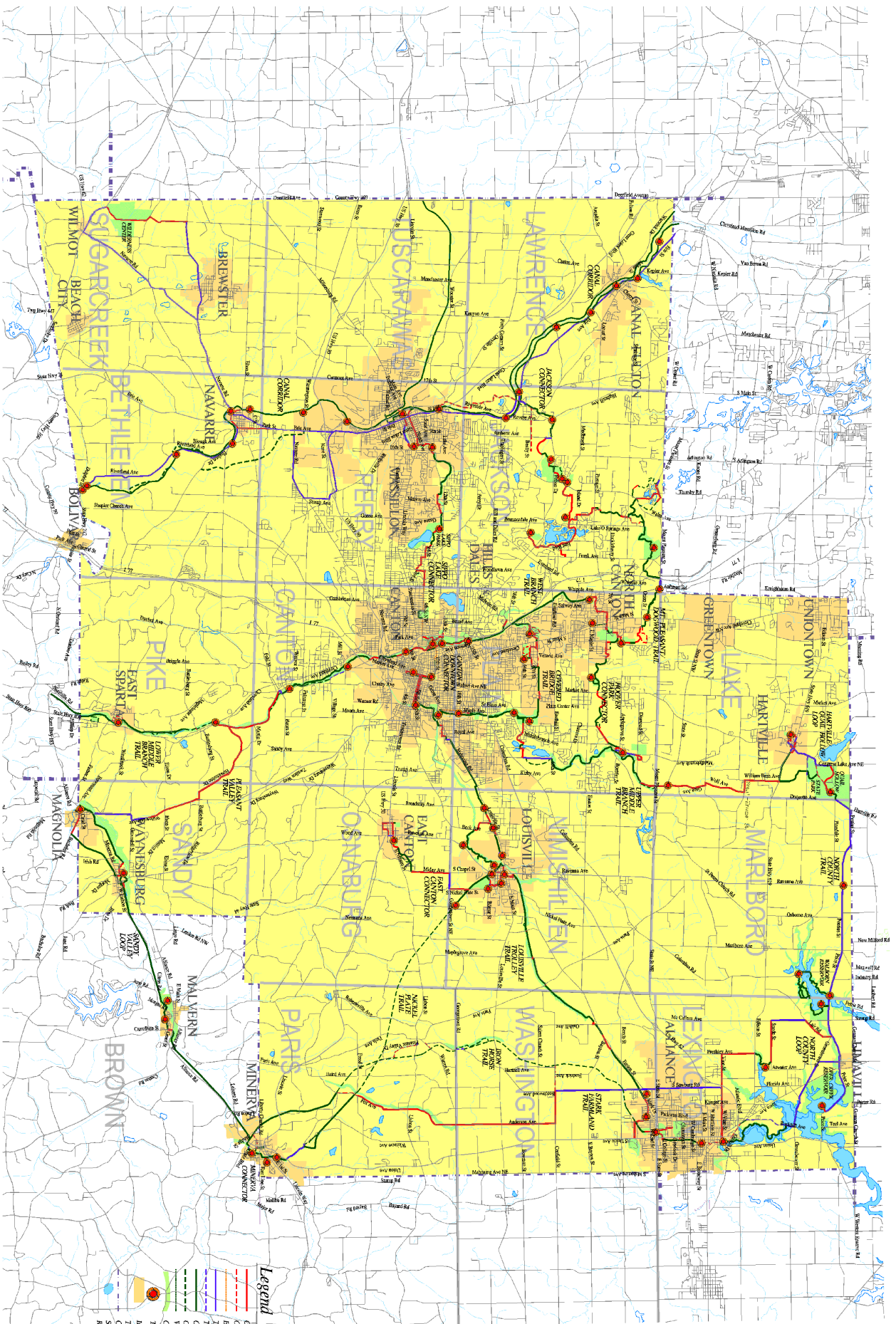
7.0 MISCELLANEOUS PROVISIONS

8.0 ADOPTION AND AMENDMENTS

- 8.1 These bylaws and any amendments shall be adopted by a simple majority vote of the Watershed Partners. Amendments to the bylaws shall be summarized in the notice of the Watershed Partners meeting at which the proposed amendments are to be voted on.

Adopted: 6/29/04

**Appendix C:
Stark County Trail and Greenway Master Plan**



Stark County Trail and Greenway Master Plan

Prepared By:



In Association with:
Stark County Parkers Stevenson
 1230 West Star Street The Brady Building Cleveland, Ohio 44113



Appendix D:
2000-2001 Ohio Natural Heritage Database for Rare Plant Species in Stark County

Endangered (E):

- 1998 *Glyceria Acutiflora* - Sharp-Glumed Manna-Grass
- 1994 *Agalinis Purpurea* Var. *Parviflora* - Small Purple Foxglove
- 1993 *Galium Labradoricum* - Bog Bedstraw
- 1993 *Sphagnum Riparium* - Shore-Growing Peat Moss
- 1991 *Salix Pedicellaris* - Bog Willow
- 1960 *Juncus Platyphyllus* - Flat-Leaved Rush

Threatened (T):

- 1998 *Lechea Pulchella* - Leggett's Pinweed
- 1998 *Hypericum Boreale* - Northern St. John's-Wart
- 1998 *Tofieldia Glutinosa* - False Asphodel
- 1996 *Vaccinium Oxycoccos* - Small Cranberry
- 1995 *Carex Oligosperma* - Few-Seeded Sedge
- 1995 *Sagittaria Rigida* - Deer's-Tongue Arrowhead
- 1995 *Viburnum Opulus* Var. *Americanum* - Highbush-Cranberry
- 1995 *Zizania Aquatica* - Wild Rice
- 1994 *Aster Drummondii* - Drummond's Aster
- 1994 *Spiranthes Romanzoffiana* - Hooded Ladies'-Tresses
- 1994 *Utricularia Intermedia* - Flat-Leaved Bladderwort
- 1971 *Myriophyllum Sibiricum* - American Water-Milfoil
- 1972 *Lechea Intermedia* - Round-Fruited Pinweed
- 1960 *Epilobium Strictum* - Simple Willow-Herb
- 1960 *Equisetum Variegatum* - Variegated Scouring-Rush
- 1960 *Panicum Philadelphicum* - Philadelphia Panic-Grass

Potentially Threatened (P):

- 1998 *Calla Palustris* - Wild Calla
- 1998 *Eriophorum Viridicarinatum* - Green Cottongrass
- 1996 *Eriophorum Virginicum* - Tawny Cottongrass
- 1996 *Rhexia Virginica* - Virginia Meadow-Beauty
- 1996 *Sarracenia Purpurea* - Pitcher-Plan
- 1995 *Castanea Dentata* - American Chestnut
- 1995 *Chamaedaphne Calyculata* - Leather-Leaf
- 1995 *Corallorhiza Maculata* - Spotted Coral-Root

- 1995 *Glyceria Grandis* - Tall Manna-Grass
- 1995 *Hydrocotyle Americana* - American Water-Pennywort
- 1995 *Juglans Cinerea* - Butternut
- 1995 *Larix Laricina* - Tamerack
- 1995 *Potentilla Palustris* - Marsh Fivefinger
- 1994 *Carex Lasiocarpa* - Slender Sedge
- 1994 *Cladium Mariscoides* - Twip-Rush
- 1994 *Juncus Balticus* - Baltic Rush
- 1994 *Rhynchospora Alba* - White Beak-Rush
- 1994 *Triglochin Palustre* - Marsh Arrow-Grass
- 1993 *Carex Crawei* - Crawe's Sedge
- 1993 *Carex Flava* - Yellow Sedge
- 1993 *Deschampsia Caespitosa* - Tufted Hairgrass
- 1993 *Drosera Rotundifolia* - Round-Leaved Sundew
- 1993 *Gentianopsis Procera* - Small Fringed Gentian
- 1993 *Salix Serissima* - Autumn Willow
- 1993 *Solidago Ohioensis* - Ohio Goldenrod
- 1990 *Vaccinium Macrocarpon* - Large Cranberry
- 1984 *Carex Atlantica* Var. *Capillacea* - Howe's Sedge
- 1982 *Poa Languida* - Weak Spear-Grass
- 1981 *Potamogeton Zosteriformis* - Flat-Stem Pondweed
- 1979 *Platanthera Flava* - Tubercled Rein-Orchid
- 1976 *Lechea Villosa* - Hairy Pinweed
- 1961 *Zigadenus Elegans* Var. *Glaucus* - Wand-Lily

**Appendix E:
Lakes Greater Than Five Acres in the Nimishillen Creek Watershed**

Appendix E: Lakes Greater Than Five Acres in the Nimishillen Creek Watershed.

Lake Name or Owner	Size (acres)	Lake Type	Subwatershed	Township or Municipality	Public or Private
Alpine Village Development	70	Dug Out Impoundment	Middle Branch	Plain Twp.	Private
Central Allied Lake	Not Given	Natural Lake and Dug Out Impoundment	Middle Branch	Plain Twp.	Private
H. Fry	5	Dam and Permanent Impoundment	Mainstem	Pike Twp.	Private
Mack Lake	9	Not Given	West Branch	Jackson Twp.	Private
Meyers Lake	134	Natural Lake	West Branch	Meyers Lake	Private
Lake O'Pines	16	Natural Lake	Middle Branch	Lake Twp.	Private
Petros Lake	12	Not Given	Hurford Run	Perry Twp.	Public
Unknown	6	Dug Out Impoundment	Middle Branch	Lake Twp.	Private
Unknown	10	Not Given	Middle Branch	Marlboro Twp.	Private
Unknown	6	Dam and Permanent Impoundment	East Branch	Nimishillen Twp.	Private
Unknown	5	Dug Out Impoundment	Sherrick Run	Osnaburg Twp.	Private
Unknown	10	Upground	Hurford Run	Perry Twp.	Private
Unknown	7	Upground	Hurford Run	Perry Twp.	Private
Unknown	18	Upground	Hurford Run	Canton	Private
Unknown	6	Dug Out Impoundment	Mainstem	Pike Twp.	Private
Zellers Lake	9	Dam and Permanent Impoundment	Middle Branch	Marlboro Twp.	Private

Sources: *Inventory of Ohio Lakes*, Ohio Department of Natural Resources - Division of Water, 1980. Stark Parks, 2006.
 Northeast Ohio Four County Regional Planning and Development Organization (NEFCO), 2006.

**Appendix F:
Stark County “Dedicated” Ditches in the Nimishillen Creek Watershed**

Ditch Name	Subwatershed	Stark Co. Eng. Map Number	Map Coordinate	Date Petitioned	Stark Co. Eng. File Number
Graber	East Branch	35	H-19	9/10/1908	133
Domer	Hurford Run	11	M-10	4/21/1915	137
Kocher	Hurford Run	51	L-11	3/3/1898	126
Sweeny	Hurford Run	50	L-9	3/4/1921	130
Taylor	Hurford Run	156	M-9		124
Turner	Hurford Run	148	L-9	8/1/1948	133
Wentworth	Hurford Run	147	N-10	7/1/1948	137
Cunningham	Mainstem	149	L-11		128
Heinbuch	Mainstem	31	P-13	9/8/1937	123
Steinmetz	Mainstem	32	O-13	9/15/1937	130
A. J. Smith	Middle Branch	124	E-12	8/5/1912	
Adams	Middle Branch	134	C-16	4/8/1890	
Bixler	Middle Branch	110	H-14	1941	
Conrad	Middle Branch	53	H-14		
Duquette	Middle Branch	5	B-15	11/16/1938	123
Ebie	Middle Branch	78	C-14	1/13/1906	137
Elmer Smith	Middle Branch	57	C-15	1/15/1894	137
Etter	Middle Branch	80	C-15	6/13/1899	
F. N. Swartz	Middle Branch	37	C-14	8/16/1905	
Firestone	Middle Branch	63	G-13	4/28/1924	127-124
Frederick	Middle Branch	131	E-17	9/24/1887	
Guiley	Middle Branch	15	D-13	4/7/1909	
Immel	Middle Branch	126	E-14	11/11/1880	
Keener	Middle Branch	4	B-14	4/6/1911	126
Kinsley	Middle Branch	3	C-13	1/18/1938	126
Krammer-Glass	Middle Branch	88	C-13	4/21/1906	
Kurtz	Middle Branch	38	C-13	4/22/1912	126
Machmer	Middle Branch	16	C-12	7/7/1917	127
Monarch Rubber	Middle Branch	39	C-13	4/25/1928	130
Reed	Middle Branch	23	E-16	8/26/1929	129
Royer	Middle Branch	43	D-13	8/16/2005	
Snyder	Middle Branch	128	E-15	5/2/1883	
Steiner	Middle Branch	118	G-13	10/11/1935	130
Swartz, Big	Middle Branch	24	D-14	8/6/1900	
Sweitzer	Middle Branch	56	C-16	4/30/1903	
Uriah Brumbaugh	Middle Branch	62	C-15	6/28/1902	
Vaughn	Middle Branch	55	D-15	2/18/1907	

Ditch Name	Subwatershed	Stark Co. Eng. Map Number	Map Coordinate	Date Petitioned	Stark Co. Eng. File Number
Wales	Middle Branch	116	C-13	1/3/1930	
Wearstler	Middle Branch	125	E-13	1/30/1915	124
Werner, B. W.	Middle Branch	127	D-15	4/27/1882	
Werner, David	Middle Branch	136	D-15	8/29/1891	
Wiley	Middle Branch	113	C-14	5/2/1911	
Wymer	Middle Branch	129	C-15	7/25/1884	
Deckard	Sherrick Run	76	L-14	9/7/1931	123
Hayden	Sherrick Run	12	M-13	6/21/1913	
Neisz	Sherrick Run	60	L-13	6/7/1933	127
Osnaburg	Sherrick Run	27	L-15	12/12/1913	137
Rudnicka	Sherrick Run	155	L-12		129
Baker	West Branch	150	I-9		123
Correll	West Branch	114	H-12	1/11/1867	
Dockus	West Branch	75	D-10	5/6/1932	123-137-127
Eckroate	West Branch	81	I-9	11/22/1913	123
Edgefield	West Branch	79	I-11	5/25/1922	124
F.J. Hinkle	West Branch	119	F-9	5/17/1922	
Fair	West Branch	85	I-11	5/1/1937	124
Fry	West Branch	86	F-12	9/1/1921	124
Fulton Road	West Branch	83	I-10	11/22/1929	129
Grubb	West Branch	41	B-11	10/1/1926	133
Hoover	West Branch	33	G-11	6/23/1906	133
Marchand	West Branch	13	G-9	5/26/1911	127
McDowell	West Branch	45	G-9	9/18/1878	127
Mohler	West Branch	151	G-9		118
Patton	West Branch	1	J-10	2/11/1925	128
Phillips	West Branch	158	I-11		124
Pontius	West Branch	97	J-9	9/18/1912	124
Price	West Branch	98	C-10	8/31/1914	
Reemsnyder	West Branch	111	H-10	4/6/1905	129
Rettig	West Branch	14	F-9	10/7/1935	129
Schrantz-Slusser	West Branch	54	E-10	8/7/1925	130
Sichat	West Branch	104	H-9	7/26/1913	
Stickler	West Branch	17	D-11	8/17/1910	130
Stripe	West Branch	42	E-10	8/6/1918	128
Swanson	West Branch	157	G-9		130
Thomas	West Branch	101	H-9	10/18/1906	
Troyer	West Branch	99	E-11	6/11/1913	
Wackerly	West Branch	84	I-10	4/8/1922	
Zimber	West Branch	47	F-10	8/8/1908	131

Source: Stark County Engineer's Office, 2006

**Appendix G:
Point Source Dischargers in the Nimishillen Creek Watershed**

Map Symbol	Discharging Operation	Design Flow (GPD)	Classification
1	A&R Machine Co. Inc. 11882 Sandyville Rd. East Sparta, OH 44626	Not Given	Industrial Discharger
2	AGA Gas Incorporated 2505 Shepler Church S.W. Canton, OH 44706	Not Given	Industrial Discharger
3	Akron Canton Regional Airport 5400 Lauby Rd. North Canton, OH 44720	100,000	Commercial Discharger
4	Akron Canton Truck Plaza Inc. 4450 Portage Rd. North Canton, OH 44720	Not Given	Private Discharging Semi-Public Sewage Treatment System
5	Biery Cheese Company 66544 Paris Ave. NE Paris, OH 44669	Not Given	Private Discharging Semi-Public Sewage Treatment System
6	BR Exploration & Oil Inc. 807 Hartford Ave. Canton, OH 44707	Not Given	Industrial Discharger
7	Canton NE Water Plant 2664 Harrisburg Road NE Canton, OH 44705	Not Given	Municipal Water Treatment Plant
8	Canton NW Water Plant 44044 Guilford NW Canton, OH 44709	Not Given	Municipal Water Treatment Plant
9	City of Canton WPC 3550 Central Ave. Canton, OH 44707	33.0 M	Municipal Wastewater Treatment Plant
10	City of Louisville WWTP 3101 Ravenna Ave. NE Louisville, OH 44266	2,000,000	Municipal Wastewater Treatment Plant
11	Cornerstone Church of God Elementary, Junior, and Senior Schools 511 Trump Ave. NE Canton, OH 44730	Not Given	Private Discharging Semi-Public Sewage Treatment System

DRAFT UPDATE - September 30, 2011

Map Symbol	Discharging Operation	Design Flow (GPD)	Classification
12	East Sparta Water Treatment Plant 8930 Maplehurst Dr. East Sparta, OH 44626	Not Given	Municipal Water Treatment System
13	Gullivers 77 Travel Center Inc. 2320 Faircrest St. SW Canton, OH 44706	Not Given	Private Discharging Semi-Public Sewage Treatment System
14	Village of Hartville WWTP 565 Wales Drive Hartville, OH 44632	450,000	Municipal Wastewater Treatment Plant
15	The Hoover Company Plant 1 101 East Maple St. North Canton, OH 44720	600,000	Industrial Discharger
16	Hoover Co. Industrial Park 8200 Freedom Ave. North Canton, OH 44720	300,000	Industrial Discharger
17	Hot Laps Sports Bar 536 S. Canal St. Louisville, OH 44641	Not Given	Private Discharging Semi-Public Sewage Treatment System
18*	Allegheny Ludlum 1500 West Main St. Canton, OH 44641	Not Given	Industrial Discharger
19	Koch Engineering 5385 Orchard Drive East Canton, OH 44730	Not Given	Industrial Discharger
20^	Marathon Ashland Petroleum LLC 8930 Maplehurst Ave. SE East Sparta, OH 44626	Not Given	Industrial Discharger
21#	Marathon Ashland Petroleum LLC - Ohio Refining Div. 2408 Gambrinus Rd. SW Canton, OH 44706	Not Given	Industrial Discharger
22	McCann Plastics Inc. 5600 Mayfair Rd. North Canton, OH 44720	Not Given	Industrial Discharger

DRAFT UPDATE - September 30, 2011

Map Symbol	Discharging Operation	Design Flow (GPD)	Classification
23	Nazarene Camp Center 820 Nazarene Ave. Louisville, OH 44641-9720	Not Given	Private Discharging Semi-Public Sewage Treatment System
24	North Canton Water Plant 7300 Freedom Ave. NW North Canton, OH 44720	Not Given	Municipal Water Treatment Plant
25	North Nimishillen School 7337 Easton St. NE Louisville, OH 44641	>10,000	Private Discharging Semi-Public Sewage Treatment System
26	Praxair (Liquid Carbonic Corp.) 2225 Bolivar Rd. S.W. Canton, OH 44706	Not Given	Industrial Discharger
27^	Republic Engineered Steels 2633 8 th St. NW Canton, OH 44708	Not Given	Industrial Discharger
28	Republic Engineered Steel Inc. Special Metals Division 2201 Harrison Ave. S.W. Canton, OH 44706	Not Given	Industrial Discharger
29	Republic Storage Systems Co. 1038 Belden Ave. NE Canton, OH 44705	Not Given	Industrial Discharger
30	Shady Knoll MHP 4689 Kirby Ave. N.E. Canton, OH 44705	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
31	Stark County 320 Columbus Rd. Louisville, OH 44641	Not Given	Municipal Wastewater Treatment System
32	Stark County - Bob-O-Link 2000 Mohler Dr. North Canton, OH 44720	Not Given	Private Discharging Semi-Public Sewage Treatment System
33	Thakar Aluminum Corp. 4420 Louisville St. NE Canton, OH 44705	Not Given	Industrial Discharger
34	The Timken Company - Faircrest Steel Plant Canton, OH 44706	Not Given	Industrial Discharger

DRAFT UPDATE - September 30, 2011

Map Symbol	Discharging Operation	Design Flow (GPD)	Classification
35	Timken Co. Research Center 500 Mt. Pleasant Rd. North Canton, OH 44720	Not Given	Industrial Discharger
36	Walker Elementary School 3525 Sandy Ave. SE Canton, OH 44707	Not Given	Private Discharging Semi-Public Sewage Treatment System
37	Anheuser Busch Sales of Canton 1611 Marietta Ave. S.E. Canton, OH 44707	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
38	Prairie College School 3021 Prairie College Ave. S.W. Canton, OH 44706	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System
39	Sable Creek Golf 5942 Edison St. Hartsville, OH 44632	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
40	Akron Dist. Church of Nazarene 8020 Nazarene St. Canton, OH 44641	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System
41	Altercare of Louisville 7121 St. Francis St. NE Louisville, OH 44641	<10,000	Private Discharging Semi-Public Sewage Treatment System
42	Bud's Corner Tavern 5750 Columbus Rd. Louisville, OH 44641	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
43	Carriage House East 9033 Columbus Rd. NE Louisville, OH 44641	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System
44	Elm's Inn 6786 Meese Rd. NE Alliance, OH 44601	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System
45	Hammco Industries 9040 Columbus Rd. NE Canton, OH 44705	1 to <1,500	Private Discharging Semi-Public Sewage Treatment System
46	Hot Laps Sports Bar 7512 Columbus Rd. NE Louisville, OH 44641	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System

DRAFT UPDATE - September 30, 2011

Map Symbol	Discharging Operation	Design Flow (GPD)	Classification
47	Spee-D-Foods #29 5874 Easton St. NE Louisville, OH 44641	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
48	Robert Rogers Apt. 6901 Atlantic Blvd. NE Louisville, OH 44641	1,500 to <10,000	Private Discharging Semi-Public Sewage Treatment System
49	Phil's Place 6509 Columbus Rd. NE Louisville, OH 44641	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System
50	Thompson Dairy land 7519 Columbus Rd. NE Louisville, OH 44641	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System
51	VFW 7459 Columbus Rd. NE Louisville, OH 44641	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
52	WOLI-TV 17 Trinity 6600 Atlantic Blvd. Louisville, OH 44641	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
53	Windy Hill Motel 6404 Columbus Rd. Louisville, OH 44641	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
54	Apartment Building 7336 Middlebranch Ave. N.E. Canton, OH 44721	1 to <1,500	Private Discharging Semi-Public Sewage Treatment System
55	Avondale Professional Building 3996 Fulton Rd. N.W. Canton, OH 44718	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
56	Axion Concrete Technology 8282 Middlebranch Ave. N.E. Canton, OH 44721	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
57	Doug's Auto Service 8437 Middlebranch Ave. N.E. Canton, OH 44721	1 to <1,500	Private Discharging Semi-Public Sewage Treatment System
58	Glen Oak High School 2300 Schneider Rd. N.E. North Canton, OH 44721	>10,000	Private Discharging Semi-Public Sewage Treatment System

DRAFT UPDATE - September 30, 2011

Map Symbol	Discharging Operation	Design Flow (GPD)	Classification
59	Leno's Restaurant 2494 Easton St. N.E. North Canton, OH 44720	5,000 to >10,000	Private Discharging Semi-Public Sewage Treatment System
60	Little Flower Church and School 2040 Diamond St. N.E. North Canton, OH 44721	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
61	Master Touch Cleaners 2605 Easton St. N.E. North Canton, OH 44721	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
62	North Market Home Sales 8139 Kent Ave. N.E. Louisville, OH 44646	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
63	Steiner Apartments 7330 Middlebranch Ave. N.E. North Canton, OH 44721	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
64	Whipple Center Building 2922 Whipple Ave. N.W. Canton, OH 44708	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
65	The WG Fairfield Co. 4255 Kropf Ave. S.W. Canton, OH 44706	1 to <1,500	Private Discharging Semi-Public Sewage Treatment System
66	Adams Fabricating Inc. 10125 Sandyville Rd. SE East Sparta, OH 44626	Not Given	Private Discharging Semi-Public Sewage Treatment System
67	Barb Huff Apartments 5477 Cleveland Ave. SE East Sparta, OH 44626	2,500	Private Discharging Semi-Public Sewage Treatment System
68	*U.S. Ceramic Tile Co. 10233 Sandyville Rd. SE East Sparta, OH 44626	Not Given	Private Discharging Semi-Public Sewage Treatment System
69	Thunderbird Terrace 1581 Pekin Dr. S.E. East Canton, OH 44730	5,000 to <10,000	Private Discharging Semi-Public Sewage Treatment System
70	Maize Valley Farm Market 6163 Edison St. Hartsville, OH 44632	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System

DRAFT UPDATE - September 30, 2011

Map Symbol	Discharging Operation	Design Flow (GPD)	Classification
71	Northmark Inc. 7349 Ravenna Ave. SE Louisville, OH 44641	1,500 to <5,000	Private Discharging Semi-Public Sewage Treatment System
72	Arvilla oil Field Service Co. 1821 Moore Ave. SE Canton, OH 44707	Not Given	Private Discharging Semi-Public Sewage Treatment System
73	Roadside Tavern 2521 Waynesburg Dr. SE Canton, OH 44707	Not Given	Private Discharging Semi-Public Sewage Treatment System
74	Vine Ministries 3206 Lincoln St. E Canton, OH 44707	Not Given	Private Discharging Semi-Public Sewage Treatment System
75	Stanley Miller Construction 2250 Howenstine Dr. East Sparta, OH 44626	Not Given	Private Discharging Semi-Public Sewage Treatment System
<p>* Permit Expired in 2000; ^ = Permits Expired in 2005; # = Permit Expired in 2004; GPD = Gallons Per Day Sources: Ohio EPA, 2005; Stark County Health Department, 2006</p>			

Appendix H: Spills in the Nimishillen Creek Watershed Responded to by Ohio EPA Division of Emergency and Remedial Response Since 1990.

Entity	Location	Material Spilled - Cause	Amount Spilled (Report Date)	Subwatershed - Township/City	Map Number	Ohio EPA Spill Number
Republic Engineered Steels Inc.	2633 8 th St. NE	Diesel Fuel - Leak	100 gallons (11/02/90)	East Branch - Canton	1	9077-76-5942
Unknown	Mill St. at Nimishillen Creek Near Allenford	Paint Waste & Sand - Unknown	Unknown (9/4/90)	Mainstem - Canton Twp.	2	9009-76-4292
Unknown	West of Harrisburg Road	Petroleum - Unknown	Unknown (8/25/90)	West Branch - Plain Twp.	3	9008-76-4155
Unknown	Thurman Munson Stadium	Fish Kill - Discharge/By pass Treatment System	Unknown (6/26/91)	Mainstem - Canton	4	9106-76-2572
Unknown	Near 2714 Tulip St. NE	Oil - Dumping/Disposal	Unknown (1/10/91)	Middle Branch - Plain Twp.	5	9101-46-0098
Mr. Larry Krebs	5250 Ridge Ave. SE	Oil - Dumping/Disposal	Unknown (10/9/92)	Mainstem - Canton Twp.	6	9210-76-4364
Liquid Carbonic	SR 153 & Broadway	Material Unknown - Dumping/Disposal	Unknown (5/27/92)	East Branch - Nimishillen Twp.	7	9206-76-2171
Unknown	8120 Garnet Ave. NE	Diesel Fuel - Unknown	Unknown (4/29/92)	Middle Branch - Plain Twp.	8	9204-76-1630
US Ceramic Tile Company	10233 Sandyville Rd. SE	Oil - Dumping/Disposal	Unknown (4/18/92)	Mainstem - Pike Twp.	9	9204-76-1442
Unknown	SR 800 & Sparta Ave.	Material Black - Discharge/By pass Treatment System	Unknown (4/10/92)	Mainstem - East Sparta	10	9204-76-1332

Unknown	Georgetown Rd. & SR 153	Flammable Stuff - Dumping/Disposal	Unknown (3/29/92)	East Branch - Louisville	12	9203-76-1133
Unknown	3800 Block of I-77 in South Bound Land	Diesel Fuel - Leak	30 Gallons (12/2/93)	West Branch - Canton	13	9312-76-4925
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Discharge/By pass Treatment System	Unknown (11/15/93)	Mainstem - Pile Twp.	14	9311-76-7690
J M W Trucking	512 45 th St. SW	Diesel Fuel - Equipment Failure	250 Gallons (11/2/93)	Mainstem - Canton Twp.	15	9311-76-4495
US Ceramic Steel	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (11/1/93)	Mainstem - East Sparta	16	9311-76-4482
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (10/13/93)	Mainstem - East Sparta	17	9310-76-4247
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (9/28/93)	Mainstem - East Sparta	18	9309-76-4038
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (9/9/93)	Mainstem - East Sparta	19	9309-76-3796
H&H Auto Parts	Cleveland Ave. S & 15 th St. SW	Oil - Unknown	50 Gallons (8/30/93)	West Branch - Canton	20	9308-76-3636
Unknown	Spangler Rd. & 35 th St. NE	Oil - Unknown	Unknown (8/26/93)	Middle Branch - Canton	21	9308-76-3561
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (8/13/93)	Mainstem - East Sparta	22	9308-76-3398
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (8/2/93)	Mainstem - East Sparta	23	9308-76-3215
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (7/27/93)	Mainstem - East Sparta	24	9307-76-3129

US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (7/15/93)	Mainstem - East Sparta	25	9307-76-2938
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (6/23/93)	Mainstem - East Sparta	26	9306-76-2523
US Ceramic Tile Company	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (6/15/93)	Mainstem - East Sparta	27	9306-76-2392
Quaker State Refinery Corp.	Walters St. NE	Oil -Leak	3 Gallons (6/9/93)	East Branch - Osnaburg	28	9306-76-2258
Old Dominion Trucking	I-77 Median @ Mile Marker 108	Diesel Fuel - Human Error	75 Gallons (6/8/93)	West Branch - Canton	29	9306-76-2223
Canton STP	Westbrook Park Pond (3530 Central Ave. SE)	Sewage - Discharge/By pass Treatment System	Unknown (6/6/93)	Mainstem - Canton	30	9306-76-2200
J&L Specialty Prod	1600 W. Main St.	Oil & Water - Permit Violation	2,042 Gallons (4/9/93)	East Branch - Louisville	31	9304-76-1324
Ryder Truck Rental	5353 N. Circle Ct.	Diesel Fuel - Human Error	100 Gallons (3/16/93)	West Branch - North Canton	32	9309-76-0954
Romany Ceramics	10233 Sandyville Rd. SE	Waste Water - Permit Violation	Unknown (3/10/93)	Mainstem - East Sparta	33	9303-76-0888
Republic Storage Systems	1038 Belden Ave. NE	Paint - Leak	300 Gallons (2/23/93)	East Branch - Canton	34	9302-76-0666
Unknown	820 Lynbrook SE	Fish Kill - No Spill/ Natural Occurrence	Unknown (12/5/94)	West Branch - North Canton	35	9412-76-5150
J&L Speciality Steel Inc.	1500 W. Main St.	Waste Water - Permit Violation	Unknown (10/28/94)	East Branch - Louisville	36	9410-76-4680
Unknown	2715 Tulip St. NE	Orphan Drum - Dumping/Disposal	8.0 DMS (3/14/94)	Middle Branch - Canton	37	9403-76-1039

Stark Ceramics Inc.	600 W. Church St. SE	30% Ammonium Hydroxide Solution - Tank Rupture	8,100 Gallons (8/25/95)	Sherrick Run - East Canton	38	9508-76-3656
Bison Painting & Sheeting	Baum & Central Bridge	Lead Paint - Improper Handling	7,000 CFT (8/25/95)	Mainstem - Canton Twp.	39	9507-76-2895
Timken Company	1835 Duber Ave. SW	Soluble Oil - Overflow	500 Gallons (6/11/95)	Hurford Run - Canton	40	9506-76-2389
Canton WWTP	Monument Rd. & Park Dr.	Sewage - Discharge/By pass Treatment System	Unknown (10/27/97)	West Branch - Canton	41	9710-76-4286
Conrail	4000 Division Rd. NE	Waste Water - Permit Violation	Unknown (6/28/97)	East Branch - Canton	42	9706-76-3551
Canton WWTP	3530 Central Ave. SE	Sewage - Discharge/By pass Treatment System	Unknown (5/5/97)	Mainstem - Canton	43	9705-76-1738
Canton WWTP	3530 Central Ave. SE	Sewage - Human Error	Unknown (4/8/97)	Mainstem - Canton	44	9704-76-1335
Chris Hauling Company	1500 Rte. 30 East Bound	Residential Solid Waste - DA/Cut or Break	16,000 Pounds (12/1/98)	Mainstem - Canton	45	9812-76-4761
Chris Hauling Company	1500 Rte. 30 East Bound	Petroleum - DA/Cut or Break	40 Gallons (12/1/98)	Mainstem - Canton	46	9812-76-4761
Unknown	10233 Sandyville Rd. SE	Petroleum - Unknown	25 Gallons (10/15/98)	Mainstem - East Sparta	47	9810-76-4248
Unknown	4 th St. NE & Riverside St.	Sewage - Discharge/By pass Treatment System	Unknown (11/20/99)	Mainstem - Canton	48	9911-76-4100
Central Allied Enterprises	2905 Columbus Rd.	Transformer Oil - Facility Fire	5 Gallons (11/19/99)	Middle Branch - Canton	49	9911-76-4089
Unknown	Ira Turpin Way	Fish Kill - Unknown	Unknown (6/1/99)	Mainstem - Canton	50	9906-76-1979

Conrail	4000 Division Rd.	Waste Water - Permit Violation	Unknown (4/12/99)	East Branch - Canton	51	9904-76-1294
Canton City	Mt. Vernon Blvd. & Overbrook	Sewage - Discharge/By pass Treatment System	Unknown (2/12/99)	West Branch - Canton	52	9902-76-0590
Unknown	4731 Corporate St. SW	Unidentified Petroleum - Unknown	Unknown (2/5/99)	Hurford Run - Perry Twp.	53	9902-76-0462
Unknown	5200 Peach St.	Material Green - Unknown	Unknown (11/13/00)	East Branch - Nimishillen Twp.	54	0011-76-4244
Alpha Plating & Polishing Co.	601 Second St. NE	Fire Stream Runoff - Facility Fire	100,000 Gallons (3/15/00)	Mainstem - Canton	55	0003-76-0874
Nature	2660 46 th St. NE	Blue Green Algae - Natural Phenomena	Unknown (12/12/01)	Middle Branch - Plain Twp.	56	0112-76-4685
Superior Dairy	4719 Navarre Rd. SW	Milk Production Waste - Discharge/By pass Treatment System	Unknown (12/7/01)	Hurford Run - Perry Twp.	57	0112-76-4646
Louisville WWTP	Pennsylvania Ave. & Howard Ave.	Sewage - Discharge/By pass Treatment System	Unknown (10/24/01)	East Branch - Louisville	58	0101-76-4046
Unknown	Guilford Ave. North of 38 th St.	Oil - Unknown	Unknown (7/26/01)	West Branch - Plain Twp.	59	0107-76-2781
Greystone Trucking	3334 Bruening Circle	Diesel Fuel - Leak	100 Gallons (2/26/01)	Hurford Run - Canton Twp.	60	0102-76-0659
Republic Technologies International	2633 8 th Street NE	Waste Water - Permit Violation	Unknown (1/19/01)	East Branch - Canton	61	0101-76-0178
North Canton WWTP	Briar Ave.	Sewage - Discharge/By pass Treatment System	Unknown (10/28/03)	West Branch - North Canton	62	0310-76-4154

Republic Storage Systems	1038 Beldn Ave. NE	Xylene - Discharge/By pass Treatment Systems	Unknown (7/28/03)	East Branch - Canton	63	0307-76-2880
South Haven Mobile Home Park	2812 Cleveland Ave. SW	Sheen/Fuel Oil - Natural Phenomena	Unknown (7/28/03)	Mainstem - Canton	64	0307-76-2867
South Haven Mobile Home Park	2812 Cleveland Ave. SW	Fuel Oil - Weather Related Damage (Flood)	25 Gallons (7/28/03)	Mainstem - Canton	65	0307-76-2861
Unknown	Baum Rd. @ Sinn Property	Garbage & Paint Cans - Unknown	Unknown (5/1/03)	Mainstem - Canton Twp.	66	0305-76-1445
AJ Diana Inc.	1704 W. Main St.	Diesel Fuel - Soil Contamination	5 Gallons (4/8/03)	East Branch - Louisville	67	0304-76-1166
Stanley Miller Construction, Inc.	2250 Howenstein Dr. SE	Oil - Dumping/Disposal	Unknown (4/4/03)	Mainstem - Pike Twp.	68	0304-76-1086
North Canton WWTP	Lindy Lane Manhole 17B	Sewage - Discharge/By pass Treatment System	Unknown (1/31/03)	West Branch - North Canton	69	0301-76-0287
Cassandra Bey	3226 Allenford Dr. SE	Fuel Oil - Leak	Unknown (6/15/04)	Mainstem - Canton Twp.	70	0406-76-2634
Canton WWTP	3530 Central Ave. SE	Sewage - Discharge/By pass Treatment System	Unknown (6/15/04)	Mainstem - Canton	71	0406-76-2617
North Canton WWTP	Marquardt Lift Station	Sewage - Discharge/By pass Treatment System	Unknown (4/28/05)	West Branch - North Canton	72	0504-76-1979
North Canton WWTP	Lindy Lane Manholes 17B & 1341	Sewage - Discharge/By pass Treatment System	Unknown (7/11/06)	West Branch - North Canton	73	0607-76-2457
North Canton WWTP	Lindy Lane Manholes 17B & 520	Sewage - Discharge/By pass Treatment System	Unknown (6/23/06)	West Branch - North Canton	74	0606-76-2198

Canton WWTP	Guilford Rd.	Waste Water - Permit Violation	Unknown (6/5/06)	West Branch - Canton	75	0606-76-1905
Royer Farms	11617 SR 44 Ravenna Rd.	Manure/Fish Kill - Discharge/By pass Treatment System	3,000 Gallons (6/30/99)	Middle Branch - Marlboro Twp.	77	9906-77-2373
Akron Canton Airport	5400 Lauby Rd.	Sewage - Discharge/By pass Treatment System	Unknown (8/12/04)	West Branch - Green	78	0408-77-3439

Source: Ohio EPA RRS - 2000: Short Report, 2006

**Appendix I:
Nimishillen Creek Comprehensive Watershed Management Plan Comments
June 26, 2006
Eric Akin's Response**

I. Introduction, Defining the Watershed

- A)** This plan needs to indicate park districts, school districts, regional planning and RC&D agencies. Plan does not show Phase II stormwater communities.

Response: All comments have been added to the new plan.

- B)** More specific detail needed on watershed population, ages, education levels, income levels, locations of growth and economic patterns.

Response: This information has been added to the new plan.

- C)** Show the six 14 digit HUC's in this plan, however, can work in the four subwatersheds already established.

Response: The watershed was broken into six subwatershed instead of four in the new plan. Specifically, subwatershed 1 was broken into 3 different subwatersheds to address unique water quality problems.

- D)** Summarize all watershed protection activities over the past 10 years.

Response: A list of watershed activities and reports completed over the last 10 years has been added.

II. Watershed Plan Development

- A)** The plan has listed the watershed partners, they will add an electronic list of contacts.

Response: An electronic list of the Watershed Partners can be provided upon request.

- B)** NEFCO has developed a mission statement, recommended the watershed group develop one. Add a section/chapter on the structure of the decision-making body, decision-making processes, organizational set-up, by-laws, etc.

Response: Information has been added in Appendix B with regards to the Nimishillen Creek Watershed Partners that include the group's structure, decision making process, and by-laws.

- C)** Have an established watershed group, however, do not have documented partner roles/responsibilities, procedures, bylaws, group decision-making processes and have not yet decided if they want to file for 501 (c) 3 status since Earth Action Partnership is a nonprofit partner.

Response: By-laws, procedures, and group decision-making processes are all

outlined in Appendix B of the Action Plan. Roles and responsibilities for various current or future actions are identified in the various Action Tables found in Section VII.

- D)** The Plan does not have an endorsement page to be signed by key partners. Also need to refine an informational/educational component for public understanding that encourages early and continued participation.

Responses:

- The Action Plan has been endorsed by NEFCO's General Policy Board which includes elected officials from the areas within and outside of the watershed. The General Policy Board resolution is found after the title page.
- Educational components can be found in each of the subwatershed action plans. It is believed that the plan reflects the need for great public understanding and encourages participation. The Watershed Partners annual stream clean-up is a reflection of this.

III. Watershed Inventory

- A)** Plan does not contain topographic maps of the watershed. Need to investigate existence of studies on fish, mussels, mammals, birds, reptiles, amphibians, plants invasive nonnative species and potential impacts. Need climate and precipitation info. Tributary information should include CFS, 10 year low flows, floodplain areas, sinuosity and entrenchment indices. Lakes & reservoirs have been identified, however, need sizes, uses, watersheds and detention times. Need to specify the location of aquifers, recharge rates, uses, flow regimes. Advised Eric to check with Kelvin Rogers from Ohio EPANEDO about potential SWAP info and our groundwater section about DRASTIC. Land uses are discussed. Lacking specific breakdown info on agricultural uses such as tillage, rotations, livestock inventory, grazing chemical use patterns, and irrigation. Also need non-forested wetlands and protected lands indicated. Beneficial to have status and trends of land uses projected.

Responses:

- Relief is represented in the slope figures found in Sections II and IV. In addition, stream gradients for each of the major tributaries can be found in Table II-12. A topographic map was considered, but the size of the watershed limited the usefulness of an 8.5" x 11" topo map in the plan.
- Local experts were contacted with regards to plants and wildlife found within the watershed. The information is included in the Action Plan.
- Climate and precipitation information has been added.
- USGS gauging information from the two stations located in the watershed has been added.
- A 100-year FEMA floodplain map has been added.
- Lake and reservoir information outlined above is not currently available. It will

be added in the future when available.

- SWAP information has been included into the plan.
- Information on tillage, rotations, livestock, and chemical use patterns have been added based on information provided by Wayne SWCD, Ohio Dept. of Agriculture, and the Farm Bureau.
- Wetland map was added that represents the best information available for the watershed basin (Ohio Wetland Inventory). Information on protected lands outside what is already provided in the plan (parks) was not found. Efforts were made to attain Conservation Reserve Program (CRP) and other agricultural program information from the Farm Service Agency, but the information was not provide in time for inclusion into this Action Plan.
- Land usage trends provided by Stark County Regional Planning have been added.

B) Need to discuss sites of historical, cultural and recreational significance.

Response: This information has been included that addresses the historical, cultural, and recreational significance of Nimishillen Creek.

C) Needs a listing of all current efforts helping improve water quality in the watershed.

Response: This information is provided in the new Action Plan.

D) The watershed plan has a very detailed riparian corridor assessment. Need discussion on early settlement conditions, channel and floodplain condition, miles of forested riparian buffer, miles permanently protected, miles of natural channel, miles and location of modified channels, location of dams, streams with unrestricted livestock access, locations of eroding embankments, floodplain connectivity, riparian levees, entrenchment, expected residential/commercial development and expected road/highway/bridge construction.

Responses:

- Information on historical watershed conditions is limited, so limited information was included in the Action Plan.
- Ditch/channeled portions of Nimishillen Creek have been added, including length and location. Appendix E contains all the “dedicated” ditches in the watershed that are on record with the Stark County Engineers office.
- The location of known low head dams have been added to the Action Plan.
- Information on expected residential and commercial development has been added based on information provided by the Stark County Regional Planning Commission.
- Miles of permanently protected riparian habitat are addressed in Section II of the Action Plan.
- The type of riparian cover, including forested riparian habitat, was taken into consideration in developing the scoring for the Riparian Corridor Study found in Section II. Areas with “high” riparian quality will almost certainly contain a

forested buffer. The overall goal of the plan is to protect high quality, forested buffers and restore the degraded riparian habitat to a similar “high” quality condition.

- The following recommendations have very limited information available: channel and floodplain condition, floodplain connectivity, entrenchment, miles of natural channel, streams with unrestricted livestock access, riparian levees, and locations of eroding embankments. Sections within the Action were added for future inclusion of this information when or if it become available.

E) The locations of point sources have been mapped and discussion on HSTS is present in this plan. Need to indicate use designations with use attainment, partial attainment or non-attainment. Incorporate causes and sources info from 305 (b) & 303(d) reports. Also include info on spills and illicit discharges, number of new homes being built, animal feeding operations, highly erodible lands, culverted streams, channelized streams, effluent volumes, stream miles impounded, petition ditches and areas susceptible to water quality degradation if conditions don't change.

Responses:

- All available water quality information has been added to the Action Plan, including designations for aquatic life uses, water supply, and recreation.
- The watershed has no traditional petitioned ditches. However, Appendix E contains a list of “dedicated” ditches created from the 1860s through 1940s.
- Land use and development trends were incorporated into the Action Plan's Land Use inventory found in Section II.
- There was insufficient information found on spills, illicit dischargers, and animal feeding operations to be included in this report.
- Again, limited information was available regarding culverted streams, effluent volume, and stream miles impounded. This information can be easily added to the Watershed Inventory section once collected.

F) The inventory needs to include water quality use attainment maps, with an analysis linking causes of water quality impairment to sources.

Responses:

- Currently there is not enough information available to link water quality impairments to sources of impairments. The TMDL, which will greatly assist in this area, has been delayed due to flooding in 2003. The scheduled TMDL completion date has been pushed back to 2007.
- Available water quality attainment information can be found in Section III, titled Water Resource Quality, which contains an aquatic life use attainment map.
- The Load Reduction section (V) will contain an analysis linking the causes to the sources of water quality impairments once the TMDL is completed. Until that time, load reductions will be determined on a project by project basis.

IV. Watershed Impairments

A) The TMDL for this basin has been postponed and is not developed yet. Eric will need to request assistance from OEPA and ODNR to develop pollutant load calculations, once the inventory details exact locations and sources of impairments. Need to develop problem statements linking cause and sources with impairments and estimated loads.

Responses:

- Until the TMDL is completed, all the Nimishillen Creek Watershed Partners and NEFCO can do is prioritize watershed activities based on existing water quality data and “best professional judgments” by watershed stakeholders.
- Problem statements have been replaced by “Issues” in the Action Plan. The general watershed-wide issues can be found in Section IV. Also for each of the six subwatershed action plan, a prioritized list of issues was developed (Section VII). For each issue there is a goal, objectives, and specific actions. Where known, these objectives and actions are directed to “Focus Areas” which are known sources of impairment.
- Issues, goals, objectives, and actions will be updated, if needed, to address impairments identified in the future Nimishillen Creek TMDL.

V. Watershed Restoration and Protection Goals

A) Streamline the document by organizing it according to Appendix 8 instead of each chapter as a Phase in the planning process. This should minimize the repeated information and make the document easier to work with into the future. For example, use 8 chapters according to the sections in Appendix 8, listed as such; Introduction, Watershed Plan Development, Watershed Inventory, Watershed Impairments, Watershed Restoration and Protection Goals, Implementation, Evaluation, and Plan Revision Strategy. Use Appendix 8 to guide the content of each.

Responses:

- The new Action Plan has been reformatted and streamlined to closely follow the Appendix 8 format. Some of the sections or chapters names have been changed and/or reordered from the Appendix 8 format to remain consistent with previous NEFCO reports.
- As part of the Action Plan update, repetitive information was removed by combining the four phases of the previous report into a single, stand-alone document.

B) Do not bury the goals/objectives in an appendix table. This should be the most important section to reference for implementation. Make it a major section of the Plan, preferably its own chapter.

Response: The goals and objectives are now found in the Subwatershed Action Plan Section (VII). Each of the six subwatershed has prioritized goals, objectives,

and actions.

- C) Define the goals and objectives in specific terms. Remove “suggested responsible parties” and identify the actual person/entity that has agreed to perform the action and when they intend to complete the task. Suggestions or recommendations tend not to get implemented. A workplan is needed to actually move things forward.

Responses:

- Comment noted. Responsible parties have been identified for several on-going and future actions (Section VII). However, NEFCO and the Nimishillen Creek Watershed Partners feel that the plan would be less useful and robust if we only put in actions that entities committed to doing at this time.
- The contributors to the plan prioritized watershed problems as best as possible (lacking needed TMDL-type data), but they do not believe it is appropriate to try and “force” an entity to fix a NPS pollution when a) there is no data to back up sources of impairments; and b) there is no regulatory backing in fixing NPS pollution problems.
- These comments seem to be more in-line with a grant application/agreement rather than a voluntary NPS reduction program/plan. To this end, a workplan will be developed by the responsible parties on a project by project basis.
- NEFCO and the Nimishillen Creek Watershed Partners intend to utilize this plan to work with watershed stakeholders to implement needed actions. The Action Plan will be updated accordingly as projects are identified, responsible parties take ownership, and actions are completed.

- D) Likewise, priorities will need to be established. In no way can NEFCO or the “suggested responsible parties” complete all the actions recommended. A target of where to start is necessary and then the stakeholders must agree to do them, with a deadline to make them accountable.

Responses:

- Comment noted. The contributors to the new Action Plan prioritized the issues for each of the six subwatersheds (Section VII). Under each of the issues are a goal, objectives, and prioritized (specific) actions. Also added to each of the objectives is “Focus Areas” to indicate specific locations to direct actions, and a “Target” as a way to evaluate the success of a watershed improvement effort.
- In each of the Action Tables found in Section VII, a “Time Frame” is included. The term “deadline” seems more appropriate for a grant (Section 319) or regulatory (NPDES Phase II) program than a voluntary watershed NPS reduction plan.
- Lastly, the Watershed Partners are uncomfortable with using the language “must” and “make them” in associations with the Action Plan. Outside of NPDES Storm Water Phase II requirement, stakeholders are rarely obligated to implement any NPS pollution reduction practices. Attaching such language to

this plan would hurt its acceptance among many of the needed stakeholders. Again, this comment seems more in line with a grant (Section 319) application/agreement or a regulatory program than a voluntary watershed action plan.

E) Once the actions are prioritized and responsible parties determined, consider using Memorandums of Understanding to manage all the many agreements that result with the stakeholders.

Response: Comment noted. Please provide examples of Memorandums of Understanding from other action plans. Again, this seems somewhat out of place for a voluntary watershed plan and more in-line with a grant requirement.

VI. Implementation

A) Objectives will need to be prioritized and an education/information/marketing strategy documented. Plan should clearly document in which subwatershed you will work first on what water quality issues. Include a rationale on why the Partners decided to start there first.

Responses:

- The Action Plan contributors prioritized the issues for each of the six subwatersheds (Section VII). Under each of the issues are a goal, objectives, and prioritized (specific) actions. Also added to each of the objectives is “Focus Areas” to indicate specific locations to direct actions, and a “Target” as a way to evaluate the success of a watershed improvement effort.
- The Action Plan does not prioritize which subwatershed to work in first. The report is designed to act like six “mini” watershed plans for each of the subbasins. Therefore, any stakeholder, not just NEFCO or the Nimishillen Creek Watershed Partners can pursue any watershed project outlined in this plan.
- Watershed Partners and NEFCO will prioritize their future watershed activities, but was not included in the update.
- A detailed marketing strategy was not completed for this plan. Suggestions or examples of such a strategy would be welcomed.

B) NEFCO’s effort on this Plan is to be commended. There is a wealth of information presented. The Plan just needs to go one step further by taking the recommended actions and putting them into a workplan, whereby people become accountable to make sure the actions happen.

Response: Please see the comments above regarding workplans and accountability.

VII. Evaluation

A) Specific load calculations will be necessary before setting criteria for determining progress. Criteria for determining when revising of the plan will be necessary must be documented. This part of the plan must specify who will monitor the plan's progress and how. Specify how progress of the plan will be publicized to the public and officials. Who will track and monitor water quality progress? What will trigger a revision of the implementation plan? Highlight successful activities and avoid activities that were unsuccessful. Macroinvertebrate monitoring is discussed, chemical monitoring should be documented as well.

Responses:

- Although important, the Watershed Partners do not entirely agree that load calculations are necessary for determining progress. Activities like public education and the protection of existing high quality natural areas aren't likely to be proven successful by specific load reduction calculations, but both actions would be considered progress in the watershed.
- For activities that can be directly tied to the reduction of specific pollutants, load reduction estimates have been provided when possible in the Action Tables found in Section VII.
- The action tables in Section VII have an evaluation method to monitor progress. In addition, the objectives in this section have a "Target" in order to help evaluate progress.
- Without a completed TMDL by Ohio EPA, it was not possible set criteria for reaching State water quality standards.
- The logical trigger for the next revision of the Action Plan will be the completion of the Nimishillen Creek TMDL.
- Resources currently are not in place for prolong, watershed-wide chemical monitoring program. Information regarding a cost effective implementation of such a watershed-wide monitoring program would be appreciated.

VIII. Plan Update/Revision

A) Need to have a title page with contact names, phone numbers and e-mail addresses. Need to publish a calendar of past and planned events. Also a table of acronyms used in this plan. Need one sentence that states that NEFCO will be the keeper of the records and documents.

Responses:

- A statement was added that Watershed Coordinator and/or NEFCO is responsible for maintenance and revisions to the Action Plan (Section I).
- Contact information is now on the title page.
- After the Action Plan is submitted for endorsement a calendar or spreadsheet of past and future watershed events and activity due dates will be completed. This action was identified as a need during this year's Functional Review with

- the AAT.
- A list of acronyms used in the plan is found in Appendix A.

IX. Other items for consideration

- A)** The public meetings focused on getting input only, not involvement. Please reconvene some work groups to define exactly “who is going to do what by when and with what resources”. While stakeholder involvement was mentioned several times as necessary, participatory decision making on priorities and responsible parties has not occurred.

Response:

- The Nimishillen Creek Watershed Partners were convened several times to identify issues, determine goals, set objectives, and decide on needed actions. The Partners determined the priority of the issues in each subwatershed and determined responsible parties where appropriate.
- Please see my comments above regarding deadlines and responsible parties.
- In general, the obstacles for improving water quality in the Nimishillen Creek Watershed have not been due to a lack of involvement or participation by local stakeholder, but rather the lack of resources (money) available to complete needed best management practices.

- B)** The Plan needs to be updated to include a prioritization on the many recommended actions.

Response: Please see my comments above regarding prioritization.

- C)** Information is repeated in each of the sections i.e. “introductions” to the chapters are very similar which might discourage readership.

Response: The *Nimishillen Creek Watershed – State Action Plan* is an updated and new stand-alone report replacing the four phases of the *Nimishillen Creek Comprehensive Watershed Management Plan (CWMP)* previously submitted for endorsement. The new report eliminates the repetitive text of the previous plan.

- D)** The geographic area covered needs to be subdivided into smaller HUCs. The Plan is too big and complex, and the goals & objectives are not specific enough (according to research done by the Center for Watershed Protection, these are all reasons that watershed plans fail to be implemented).

Responses:

- The new Action Plan has increased the number of subwatershed from four to six and each subwatershed has its own “mini” action plan specifically for that subbasin. In other words this report contains six individualized action plans for each of the primary Nimishillen Creek tributaries and the mainstem.
- Goals and objectives were completed with as much specificity as possible given the limit data available to the stakeholders. These goals and objectives

will be reevaluated and almost certainly updated once Ohio EPA has completed the TMDL for the watershed.

- E)** We recommend that the plan highlight subwatersheds and implementation be detailed at the subwatershed scale in priority order of which implementation should occur first. Recommend reorganizing this plan with the Appendix 8 Update.
Response: Please see my responses above regarding prioritization, subwatershed action plans, and reorganization of this plan based on Appendix 8.
- F)** If NEFCO would prefer to take some low hanging fruit initially to learn and get some quick success, please tackle the big problem areas. We also agree with your project that preservation and restoration should have equal priority.
Responses:
- NEFCO feels picking “low hanging” fruit is vital to build momentum to tackle the bigger water quality problems. Tackling the “big problems” has been the result of lacking the financial resources to complete needed projects.
 - If preservation and restoration are to have equal priority, then we would suggest modifying the “Guide to Developing Local Watershed Action Plans in Ohio” and specifically Appendix 8 so it reflects this view.

Specific Comments on Text:

Response: As already mentioned, the *Nimishillen Creek Watershed – State Action Plan* is a completely new and independent document produced by the Upper Tuscarawas River Watershed Coordinator, the Nimishillen Creek Watershed Partners, and NEFCO. As such, most of the comments below are regarding to text that was not included in the new Action Plan. However, comments from the previous plan were reviewed and given due consideration while completing the new Action Plan.

- A)** Place the “play-by-play” from the public meetings (i.e. Phase I, pgs. 84-85) into an appendix instead of in the body of the text, or remove it entirely. This is cumbersome, not necessary, and draws attention away from the important aspects of the plan ie. “who is going to do what” matrix.
Response: This text does not appear in the new Action Plan.

Phase I

- A)** Page 11: Potential Pollution Sources: Rather than examine potential sources based on what is in the watershed that could affect water quality, as the plan does now, consider following “A Guide to Developing Local Watershed Action Plans in Ohio” and look first at where the water quality is not in attainment with water quality standards (or threatened). Attempt to quantify the sources that are leading to the cause of this impairment and plan implementation that will address these

sources.

Responses:

- Comments noted and have been incorporated into the new plan. However, the plan these comments are directed to was completed using the “Guide” and regular “Semi-Annual Evaluation Reports” were submitted to Ohio EPA from 1998 through 2001 for review. Please refer to these reports and point out where NEFCO and the Watershed Partners failed to follow the “Guide” when developing the watershed plan.
- Nearly 80% of the Nimishillen Creek and its tributaries are not in attainment and 40% of the stream miles have not been assessed. The assessments that have been conducted have primarily focused on point sources of pollution with little information on NPS pollution. Therefore, quantifying the sources that are causing impairments is not possible at this time. The TMDL is currently scheduled for completion in 2007 and should greatly help in this area.

- B)** Under this section, insert a water quality attainment table and map to document which segments are failing to meet designated uses. As it stands today, this plan focuses on potential sources of impairment instead of actual water quality impacts as documented by Ohio EPA’s existing water quality data.

Response: All available water quality information from Ohio EPA is presented in Section III of the new Action Plan. It includes attainment tables for aquatic life uses, recreation, and water supply.

- C)** Page 22: Why are soils with “extremely high porosity and permeability” singled out as unsuitable soils, where household sewage treatment systems (HSTS) are likely to fail? The *Soil Survey of Stark County, Ohio* identifies a variety of soil properties that are associated with failed HSTS: subject to flooding, slope, seasonal high water table, depth to bedrock, and moderately slow to very slow permeability. In fact, soils with extremely high porosity and permeability in the underlying horizons or layers are generally rated in the soil survey as having slight limitations for HSTS, because they commonly have subsoil horizons that are ideal for treatment of household sewage. A footnote does recognize the hazard of “environment pollution” in the more porous soils, because the porous soils do present a greater hazard for groundwater pollution, where the moderately permeable subsoil horizons are too thin to allow complete treatment. On the other hand, soils with a seasonally high water table or a moderately slow to very slow permeability are unsuitable for uses as treatment because of saturation or slow movement of the effluent. If soils with extremely high porosity and permeability are considered unsuited, then soils that are unsuited are so common in the Nimishillen watershed that “unsuitable soils” need not be identified as one of the three elements in the identification of critical areas on Figure 6. HSTS are likely to fail in nearly all unsewered, urban areas in the watershed. Section II.2. in the Phase IV Ohio EPA Home Sewage Treatment System Plan, and particularly Figure

3 in the section, portrays the distribution of unsuitable soils much more accurately than this section in the Phase I part of the plan.

Response: This text is not included in the new Action Plan.

- D)** Page 25: It would be helpful if the text defined “steep sloped soils.” Judging from Figure 10, it appears to be defined as soils with more than 6 percent slope. A map showing the distribution of soils with 6 to 12 percent slopes, 12 to 18 percent slopes, and more than 18 percent slopes would have been helpful. It would have demonstrated that Subwatershed 1 has the highest concentration of soils in the two steeper classes of slope. (See Figure 2 in Section II.2. in the Phase IV Ohio EPA Home Sewage Treatment System Plan.)

Response: This text is not included in the new Action Plan.

Phase III (June 2001)

- A)** Tables: Any objectives and action listing 319 as a possible funding source need to be measurable to achieve the numerical goals.

Response: These tables do not appear in the new action plan. However, the new action tables in Section VII include measurable goals with numerical achievement, when possible.

- B)** Table 4, Goal 2, Objective 2.1, Action 2.1b The “Cost Estimate” may be conservative for replacing failing systems with systems that are designed on the basis of soil characteristics observed and described on-site.

Response: Cost estimates for on-site HSTs were reviewed by the Stark County Health Department for the new Action Plan.

- C)** Table 4, Goal 2, Objective 2.2, Action 2.2b
The “Cost Estimate” may be conservative for replacing failing systems with systems that are designed on the basis of soil characteristics observed and described on-site.

Response: Cost estimates for on-site HSTs were reviewed by the Stark County Health Department for the new Action Plan.

- D)** Table 4, Objective 7.3 “Conduct Further Research regarding point and nonpoint source pollution. Each of these action items should already have been collected and included in the plan inventory.

Response: This objective is not included in the new Action Plan.

- E)** Table 5, Part D3, Local Health Departments and Ohio EPA: The average costs estimated by the local health departments may be conservative for replacing failing systems with systems that are designed on the basis of soil characteristics observed and described on-site.

Response: Cost estimates for on-site HSTs were reviewed by the Stark County

Health Department for the new Action Plan.

Phase IV (April 2003)

A) This report draft probably incorporates soils information better than any watershed management plan Tim Gerber has reviewed so far.

Response: Phase IV is included in almost its entirety in Section VI in the new Action Plan.

B) Figures 2, 3 and 5 are excellent, and the analysis on page 4, under II.2 accurately describes the distribution of common soils with greater limitations. The plan includes a strategy to target the most critical areas to maximize water quality improvements with public funding that is limited. Page 14 and 15: The statement below should be added in the text somewhere, perhaps in association with Table 4, Goal 2, Objectives 2.1 and 2.2, Action b and Table 5, Part D3, Local Health Departments and Ohio EPA: "To assure that the on-lot systems constructed with public funds are designed to treat household sewage adequately, a site evaluation that includes a detailed soil description should be conducted by a qualified individual. A professional soil scientist certified by the Association of Ohio Pedologists, the American Society of Agronomy's ARCPACS certification program, or other professional site evaluator certification may be designated by the local health district to meet such a requirement. The design of proposed systems should be compared with documented soil characteristics to assure that public funds are used for properly designed systems."

Response: This statement may no longer be needed with the new State HSTS rules being developed. The statement can be added if these new rules do not address this issues.

Endorsement

A) Most of this watershed plan was developed prior to the Appendix 8 Update. Eric Akin realizes that the plan needed to be updated accordingly. The TMDL for this watershed has been pushed back because of sampling difficulties in the summer of 2003. It is much more challenging to calculate necessary load reductions without the benefit of a TMDL. This watershed action plan is very strong at identifying good and poor riparian corridor areas. I would be in favor of partial endorsement, so the Nimishillen would be eligible for a 2005 /319 grant. The grant would have to focus primarily on areas needing riparian corridor improvements and conservation easements. If the Stark County Health Department develops an HSTS plan for Stark County that meets Ohio EPA approval, then we could consider approving an HSTS component in the 319 application.

Response: Many improvements have been made to the new Action Plan based on these comments from the original plan that was submitted. I appreciate your endorsement consideration for this new report.

**Appendix J:
References Cited**

- Allan, J.D. 1995. Stream Ecology: Structure and Function of Running Waters. Chapman and Hill. New York, NY.
- Antosch, Larry. 2006. Personal Communication. Ohio Farm Bureau Federation. Director of Environmental Research.
- Brown, L. C. and R. P. Fynn. 1991. Irrigation in Ohio: Eight Major Factors. Fact Sheet AEX-370-91. Ohio State University Extension. Columbus, OH.
- Bayham, Andy. 2006. Personal Communication. U.S. Department of Agriculture - Natural Resources and Conservation Service (NRCS). District Conservationist.
- Dahl, T.E. 1990. Wetlands Losses in the United States 1780s to 1980s. U.S. Department of Interior. Fish and Wildlife Service, Washington, D.C.
- Eynon, J. 2005. Pollutant Removal Efficiencies of a Constructed Storm Water Wetland in Canton, Ohio. Youngstown State University.
- Karr, J.L., P.L. Angermeier, I.J. Schlosser. 1983. Habitat structure and Fish Communities of Warmwater Streams. U.S. Environmental Protection Agency, Covallis, OR.
- Loomis, Linn. 1994. Here and Now - Ohio's Canals: The Sandy and Beaver Canal. Schlabach Printers. Sugarcreek, OH.
- Lukens, Jan. 2006. Personal Communication. K. W. Zellers & Sons, Inc., Maintenance Manager.
- Mecklenburg, D. and A. Ward. 2006. Sediment Equations - A Stream Module: Spreadsheet Tools for River Evaluation, Assessment, and Monitoring. Version 4.0. Ohio Department of Natural Resources.
- Miller, G. 1988. Environmental Science an Introduction. Belmont: Wadsworth Publishing Company.
- Mitsch, W.J. and J.G. Gosselink. 1993. Wetlands. 2nd ed. Van Nostrand Reinhold. New York.
- Oelker, E.F., K.M. Boone and L.C. Brown. 2005. Stark County Water Resources. Fact Sheet AEX-480.76. Ohio State University Extension. Columbus, OH.

- Ohio Department of Natural Resources (ODNR). 2004. 2004 Report on Ohio Mineral Industries. Columbus, OH.
- Ohio Department of Natural Resources (ODNR) - Division of Natural Areas and Preserves (DNAP). 2001. The Natural Heritage Database. Columbus, OH.
- Ohio Environmental Protection Agency (Ohio EPA). 2001. Biological and Aquatic Life Use Assessment Study: Lower Middle Branch Nimishillen Creek. Site Evaluation Report EAS/2001-10-4. Columbus, OH.
- Ohio Environmental Protection Agency (Ohio EPA). 1997. Guide to Developing Local Watershed Action Plans in Ohio.
- Ohio Environmental Protection Agency (Ohio EPA). 1995. The Ohio Comparative Risk Project (OCRCP): Comparing the Risks of Ohio's Environmental Conditions.
- Rankin, E.T. 1989. The Qualitative Habitat Evaluation Index (QHEI): Rationale, methods and application. Ohio Environmental Protection Agency - Division of Water Quality Planning and Assessment. Columbus, OH.
- Sherwood, J.M., and Huitger, C.A. 2005. Bankfull Characteristics of Ohio Streams and Their Relation to Peak Stream-Flows. U.S. Geological Survey Investigations Report 2005-5153.
- Stark County Building Industry Association (BIA). September 2006. The Splinter Newsletter. North Canton, OH.
- Stark County Regional Planning Commission (RPC). 2005. SCRPC/SCATS 2030 Comprehensive/Transportation Plan. Canton, OH.
- Williams, S. 1991. Ground Water Pollution Potential of Stark County, Ohio. Ohio Department of Natural Resources - Division of Water - Ground Water Resource Section. Columbus, OH.
- Windus, J. 2003. Invasive Species: Aliens Among Us. Ohio Department of Natural Resources (ODNR) - Division of Wildlife. Columbus, OH.
- Yoder, C.O. and G.D. Davis. 1996. The Ohio EPA Bioassessment Comparability Project: A Preliminary Analysis. Technical Bulletin MAS/1996-12-4. Ohio Environmental Protection Agency (Ohio EPA). Columbus, OH.