Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Goal 1: Reduce nutrient and bacteria loads, from fecal contamination, in lakes and streams					
Objective 1.1: Decrease potential nutrient and bacteria loads from **discharging off-lot**, i.e., point source, home/semi-public sewage disposal systems (HSDSs) and (SPSDSs**)**					
Priority Areas:					
a. Establish a permit system to facilitate HSDS and SPSDS inspection and maintenance	• State and Local Health Departments • OEPA	• Local Property/Home Owner Operation & Maintenance Fee	3 years	Lower number of malfunctioning/failing HSDSs and SPSDs	Number of systems inspected, pumped, and/or repaired
b. Seek funding assistance and repair or replace faulty HSDSs and SPSDSs	• Local Health Departments	• NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 NPS (OEPA)	3 years	Lower number of malfunctioning/failing HSDSs and SPSDSs	Number of systems repaired or replaced
c. Provide support to research cost effective and environmentally-sound alternatives to control water pollution from HSDSs and SPSDSs, e.g., constructed wetlands	• Local Health Departments • NEFCO	• WPCLF • WPCLF (Linked Deposit) • PL-566 • R&D Grant	3 years	Viable alternatives to control water pollution from HSDSs and SPSDSs, especially where current technology is limited, e.g. poor soils	Types of research conducted, data collected, and results

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
d. Establish education efforts to increase public awareness on faulty HSDSs and SPSDSs 1) Door-to-door survey 2) Distribute information materials where needed, e.g., video "Dollars Down the Drain", soil pipe sticker to remind homeowners when to pump septic tanks 3) Hold public meetings 4) Set up information booths at county/local fairs	• Local Health Departments • NEFCO	• NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Increased awareness of water quality impacts associated with malfunctioning/failing HSDSs and SPSDSs	1) Number surveys completed 2) Number of information materials distributed 3) Number of public meetings held 4) Number of fairs with information booths
e. Promote the extension of sewers in the watershed, especially where high concentrations of HSDSs and SPSDSs are located on poor soils for septic systems	• State and Local Governments • County Sanitary Engineer • State and Local Health Departments	• WPCLF • Local Property/Home Owners (through assessments) • County/Local Government	3 years	Lower number of Malfunctioning/failing HSDSs and SPSDSs	Level of interest in extending existing sewered areas and future plans/projects
Objective 1.2: Decrease potential nutrient and bacteria loads from **failing on-lot (non-discharging)** home/semi-public sewage disposal systems (HSDSs) and (SPSDSs)					
Priority Areas:					
a. Establish a permit system to facilitate HSDS and SPSDS inspection and maintenance	• State and Local Health Departments • OEPA	• Local Property/Home Owner Operation & Maintenance Fee	Once every 3 years	Lower number of malfunctioning/failing HSDSs and SPSDs	Number of systems inspected, pumped, and/or repaired
b. Seek funding assistance and repair or replace faulty HSDSs and SPSDSs	• Local Health Departments	• NPSProgram (319 Grants) • WPCLF • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 NPS	3 years	Lower number of malfunctioning/failing HSDSs and SPSDSs	Number of systems repaired or replaced

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
c. Provide support to research cost effective and environmentally-sound alternatives to control water pollution from HSDSs and SPSDSs, e.g., constructed wetlands	• Local Health Departments • NEFCO	• NatureWorks • NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • PL-566 • R&D Grant • CWA Section 319 NPS (OEPA)	3 years	Viable alternatives to control water pollution from HSDSs and SPSDSs, especially where current technology is limited, e.g. poor soils	Types of research conducted, data collected, and results
d. Establish education efforts to increase public awareness on faulty HSDSs and SPSDSs 1) Door-to-door surveys 2) Distribute information materials where needed, e.g., video "Dollars Down the Drain", soil pipe sticker to remind homeowners when to pump septic tanks 3) Hold public meetings 4) Set up information booths at county/local fairs	• Local Health Departments • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Increased awareness of water quality impacts associated with malfunctioning/failing HSDSs and SPSDSs	1) Number of surveys completed 2) Number of information materials distributed 3) Number of public meetings held 4) Number of fairs with information booths
e. Promote the extension of sewers in the watershed, especially where high concentrations of HSDSs and SPSDSs are located on poor soils for septic systems	• State and Local Governments • County Sanitary Engineer • State and Local Health Departments	• WPCLF • Local Property/Home Owners (through assessments) • County/Local Government	3 years	Lower number of Malfunctioning/failing HSDSs and SPSDSs	Level of interest in extending existing sewered areas and future plans/projects

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Objective 1.3: Reduce nutrient and bacteria loads from livestock					
Priority Areas:					
a. Identify and assess all livestock operations in the watershed and map target areas	• USDA/NRCS • ODA • OSU Extension • NEFCO • County SWCDs	• NatureWorks • CWA Section 319 NPS (OEPA)	3 months	Stronger understanding of where potential sources of pollution are located and their severity	Map and list of all livestock operations in the watershed with target areas
b. Plan and implement manure management plans on agricultural operations	• USDA/NRCS • ODNR/DSWC • County SWCDs	• EQIP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit) • PL-566 • R&D Grant	1 year	Reduced levels of nutrient and bacteria contamination	Number of manure management plans implemented and degree of success
c. Establish settling, grass filtration or soil infiltration systems around animal feeding and containment areas, e.g., buffer strips	• USDA/NRCS • ODNR/DSWC • County SWCDs	• EQIP • CRP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 Grant (OEPA)	1 year	Reduced agricultural runoff into lakes and streams	Number of buffer strips established and maintained
d. Implement fencing and development of off-stream watering facilities to limit or exclude livestock from stream areas	• ODNR/DSWC • County SWCDs	• EQIP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 Grant (OEPA) • SIP	1 year	Reduce point source pollution by livestock	Number of off-stream watering facilities developed and length of fencing around lakes and streams

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
e. Fund alternative technology for farm waste treatment, e.g., constructed wetlands	• ODA • ODNR/DSWC • County SWCDs	• EQIP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit) • PL-566 • R&D Grant • CWA Section 319 Grant (OEPA)	3 years	Viable alternatives to treat manure effectively	Types of research conducted, data collected, and results
Objective 1.4: Reduce excess (those over MCLs and MCL goals) nutrient and bacteria loads from wastewater treatment plants (WWTPs)					
Priority Areas:					
a. Require stricter final effluent self-monitoring requirements for WWTPs under 0.25 mgd 1) Add monitoring of nitrate and nitrites to the list of parameters to be tested for WWTPs under NPDES permits with design flows <0.25 mgd 2) Add monitoring of phosphorus to the list of parameters to be tested for WWTPs under NPDES permits with design flows <0.1 mgd b. Support Ohio EPA's statewide general permit to regulate treated wastewater discharges from small systems (≤0.025 mgd)	• OEPA/DSW • Local Health Departments • NEFCO		1 year	Better understanding and control of pollutants from WWTPs with design flows less than .25 mgd	Additional nutrient parameters added and statewide general permit recognized by local government and residents

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Objective 1.5: Reduce excess nutrients and bacteria from natural sources					
Priority Area:					
a. Educate shoreline and riparian landowners on ways to deter waterfowl from grazing on their property 1) Distribute information pamphlets	• OEPA • ODNR/Div. of Wildlife • County SWCDs • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Reduced nutrients and bacteria from waterfowl	1) Number of information pamphlets distributed
b. Educate pet owners about proper disposal of pet wastes 1) Distribute information pamphlets	• County SWCDs • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Reduced nonpoint source pollution from domestic animal waste	1) Number of information pamphlets distributed
Goal 2: Decrease levels of toxic substances (heavy metals, oil and petroleum products, etc.) entering surface and/or ground water					
Objective 2.1: Decrease levels of toxic substances from industrial land use areas					
Priority Areas:					
a. Identify by-products of industrial processes taking place in the watershed and educate owners/operators about the hazards of negligent management of such substances	• OEPA • State and Local Health Departments • Private Sector	• NatureWorks • NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Lower releases of toxic substances from industrial operations	A listing of identified by-products from industrial processes and names and numbers of owners/operators educated about the hazards of negligent management
b. Educate owners/operators of industrial facilities about the benefits of implementing preventive and control measures (BMPs) to reduce pollutants	• Local Governments • OEPA • NEFCO	• NatureWorks • NPS Education Grant • NPS Program (ODNR) • OEEF • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 NPS (OEPA)	6 months to 1 year	Increased awareness about the benefits of BMPs and reduced levels of pollutants from industrial land use areas	List of contacts and number of operations that have implemented BMPs to reduce pollutants

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Objective 2.2: Decrease levels of toxic substances from storm water runoff					
Priority Areas:					
a. Implement a regional/ watershed-based storm water management plan	• ODNR/DSWC • County SWCDs • County Engineer • NEFCO	• EQIP • NatureWorks • NPS Program (ODNR) • WPCLF • PL-566 • CWA Section 319 NPS (OEPA) • Storm water utility	3 years	Improved water quality and moderated peak storm water flows	Completion of the plan and level of participation
b. Implement NPDES Phase II Storm Water Program	• Local Governments	• WPCLF • Storm water utility		Improved water quality and moderated peak storm water flows	Implementation of program
c. Implement preventative measures to reduce storm water runoff 1) Educate homeowners on proper use and disposal of household hazardous waste and the importance of proper operation and maintenance of stormwater control devices, e.g., debris and sediment removal from channels, pipes and pumps 2) Begin a storm drain stenciling program 3) Limit the amount of impervious areas for commercial establishments 4) Organize hazardous waste drop-off facilities; where needed, for local communities and/or hazardous waste pick-up days	1) • Local Health Departments • County SWCDs • NEFCO • Solid Waste Districts • Private Sector 2) • County SWCDs • NEFCO 3) • Local and County Planning and Zoning Boards 4) • Solid Waste Districts • State and Local Health Departments • Private Sector	• NatureWorks • NPS Education Grant • NPS Program (ODNR) • OEEF • WPCLF • CWA Section 319 NPS (OEPA) • Private Sector	2 years	Lower levels of toxic substances entering the environment from storm water runoff	1) Education efforts conducted 2) Development of and participation in a storm drain stenciling program 3) Permits or ordinances in effect 4) Number of drop-off facilities or pick-up days organized

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
d. Implement control measures to reduce storm water runoff and/or improve water quality 1) Research first flush or end-of-pipe treatment requirements, e.g., stormceptor vortex 2) Require catch basins for parking lots over a specified size 3) Install detention and/or retention ponds and treatment systems for water quality improvement 4) Route drainage from impervious surfaces to pervious areas (as soils allow) 5) Routine/scheduled street sweeping	1) • OEPA/DWPC • County Engineer • Private Sector 2) • Local and County Planning and Zoning Boards • County Engineer 3) • ODNR/DSWC • County SWCDs • County Engineer • Private Sector 4) • ODNR/DSWC • County SWCDs • County Engineer • Private Sector 5) • ODOT	• EQIP • NatureWorks • NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • PL-566 • R&D Grant • CWA Section 319 NPS (OEPA) • Private Sector	2 years	Lower levels of toxic substances entering the environment from storm water runoff	1) Requirements established and enacted 2) Requirements established and enacted 3) Number of ponds and treatment systems installed 4) Number of drainage areas diverted from impervious surfaces to pervious areas 5) Number of communities participating in routine/scheduled street sweeping
e. Locate historical spills and accidental release sites in the watershed	• OEPA/DERR • NEFCO	• NatureWorks • CWA Section 319 NPS (OEPA)	3 months	Insight regarding locations where there is a higher risk for polluted storm water runoff	Up-to-date list and map of spills and accidental releases in the watershed

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Objective 2.3: Increase awareness regarding the location and pollution potential of oil and gas pipelines in relation to drinking water wells					
Priority Areas:					
a. Identify all drinking water wells located within a prescribed distance of oil and gas transmission lines 1) Sample a percentage of all drinking water wells for the presence or absence of petroleum hydrocarbons representative of oil and gas and/or their byproducts 2) Provide pipeline and drinking water well location information to community planning and zoning officials and planning commissions 3) Recommend disclosure of pipeline locations to any person(s) purchasing property located within a prescribed distance of the known pipeline(s) 4) Recommend the use of treated public water supply to service residences within a prescribed distance of a known pipeline	• ODNR/Div. of Oil and Gas • Community Planning and Zoning Officials • Planning Commission • NEFCO	• NatureWorks • NPS Program (ODNR) • PL-566 • CWA Section 319 NPS (OEPA)	3 years	More precise locations of oil and gas pipelines, detection of leaks or ruptures in pipelines, increased knowledge regarding pipeline location and potential to pollute drinking water wells, and availability of other water resources	Detailed maps of oil and gas pipeline locations in relation to drinking water wells, number of wells monitored each year and results, and information regarding pipeline locations and proximity to wells available

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Objective: 2.4: Decrease ground water contamination from improperly constructed and/or abandoned drinking water wells					
Priority Areas:					
a. Identify wells abandoned prior to sealing requirements 1) Determine if wells were sealed properly 2) Properly abandon wells if needed	• OEPA/DDAGW • ODNR/DOW • NEFCO • State and Local Health Departments	• NatureWorks • NPS Program (ODNR) • PL-566 • CWA Section 319 NPS (OEPA)	3 years	Decrease ground water contamination from abandoned wells	List and map of all abandoned wells prior to sealing requirements 1) Number of these wells inspected for proper abandonment 2) Number of wells properly abandoned
b. Seek proactive and consistent enforcement of well construction, maintenance and abandonment standards	• OEPA/DDAGW • ODNR/DOW • State and Local Health Departments • Private Sector		1 year	Decrease ground water contamination from wells	Level of enforcement and effectiveness of present standards
c. Educate public and private well owners the hazards of ground water contamination and preventative measures 1) Distribute information pamphlets	• OEPA/DDAGW • ODNR/DOW • State and Local Health Departments • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Increased awareness of ground water contamination associated with active or abandoned wells	1) Number of pamphlets distributed
d. Identify critical NPS pollution areas in close proximity to abandoned wells and implement BMPs to reduce contamination risks	• OEPA/DDAGW • ODNR/DOW • State and Local Health Departments • NEFCO • Private Sector	• EQIP • CRP • NatureWorks • NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • CWA Section 319 NPS (OEPA)	1 year	Decrease ground water contamination from abandoned wells	Critical areas identified and number and location of BMPs implemented to reduce contamination risks

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Goal 3: Reduce impacts from sedimentation/siltation in lakes and streams					
Objective 3.1: Reduce soil erosion, transport, and deposition of sediment associated with construction sites					
Priority Areas:					
a. Support preventative measures to reduce impacts from construction sites 1) Encourage phasing of construction sites over a specified size 2) Develop and enforce zoning ordinances that restrict or require additional protective measures for development in sensitive areas, e.g., slopes >6%, wetlands, and slopes with high sediment yield 3) Initiate vegetative stabilization (seeding) of disturbed areas over a certain size and/or exposed for a specified length of time 4) Work with local communities to promote development that minimizes the percentage of impervious surfaces, such as open space zoning and cluster development 5) Assist communities with the development of township or municipal ordinances requiring construction sites to leave easements of a specified distance near shorelines of targeted wetlands and lakes and flood plains of targeted streams	1) • County SWCDs • Building Inspectors • HBA 2) • OEPA • Local and County Planning and Zoning Boards • Building Inspectors • County Engineer • Local Unit of Government 3) • County SWCDs • USDA/NRCS • Building Inspectors 4) • Local Planning and Zoning Boards • County Engineer • USDA/NRCS 5) • Local Planning and Zoning Boards • USDA/NRCS	• State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit)	3 years	Reduce potential for sediment erosion, transport and deposition from construction sites	1) Number of construction sites phasing development 2) Zoning ordinances established and enacted 3) Locations with vegetative stabilization initiated 4) List of communities participating in promoting such development 5) List of townships or municipalities with ordinances established and enforced

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
b. Implement control measures to reduce impacts from construction sites 1) Conduct frequent inspection of construction site erosion and sediment control BMPs and approved plans, i.e., SWPPPs 2) Require building controls for individual lots 3) Maintain vegetated buffer strips and riparian zones near construction sites 4) Promote the design of post-construction BMPs at construction sites, i.e., water quantity/water quality basins, constructed wetlands, planting and preserving trees, etc.	1) • County SWCDs • County Engineer 2) • Local and County Planning and Zoning Boards • County SWCDs • County Engineer 3) • County SWCDs • Local Government • Private Sector 4) • County SWCDs, • County Engineer • USDA/NRCS	• EQIP • CRP • NatureWorks • NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • CWA Section 319 NPS (OEPA) • SIP	3 years	Reduce potential for sediment erosion, transport and deposition from construction sites	1) How often control plans are inspected 2) Requirements established and enacted 3) Number of buffer strips and riparian zones maintained 4) Number of post-construction BMPs implemented
c. Work with SWCDs and building associations to identify pilot demonstration that utilize innovative erosion control and management practices	• County SWCDs • HBA • County Engineer • USDA/NRCS	• EQIP • CRP • NatureWorks • NPS Program (ODNR) • WPCLF • R&D Grant • CWA Section 319 NPS (OEPA)	3 years	Viable alternatives to control water pollution from construction site	Number of pilot demonstrations tested and results
d. Offer additional education for builders, developers, and contractors, i.e., new techniques, post-construction BMPs, etc. 1) Hold seminars/ workshops 2) Distribute information packets	• County SWCDs • ODNR/DSWC • USDA/NRCS	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA) • Private Sector	1 year	Increased awareness of present and future practices to reduce construction site water quality impacts	1) Number of seminars/workshops held 2) Number of information packets distributed

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Objective 3.2: Reduce soil erosion transport, and deposition of sediment associated with agricultural areas					
Priority Areas:					
a. Educate farmers about the benefits of implementing appropriate vegetative and tillage BMPs, especially with fields adjacent to headwater streams, to reduce the impacts associated with sediment, e.g., conservation tillage, conservation cropping sequence, contour strip cropping, and contour farming	• ODNR/DSWC • County SWCDs • ODA • USDA/NRCS	• EQIP • CRP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • OEEF • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 NPS (OEPA)	6 months to 1 year	Reduced sediment loads entering waterways from agricultural areas	Level of participation in vegetative and tillage BMPs
b. Implement appropriate structural BMPs to alleviate soil-related pollution 1) fencing and development of off-stream watering facilities to exclude livestock from lakes and streams 2) Establish grassed and forested buffer strips on farm croplands, especially adjacent to streams 3) Construct water and sediment control basins equipped with treatment systems for water quality improvement	• ODNR/DSWC • County SWCDs • ODA • USDA/NRCS	• EQIP • CRP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit) • PL-566 • R&D Grant • CWA Section 319 NPS (OEPA) • SIP	3 years	Lower soil-related pollution from agricultural areas	1) Number of off-stream watering facilities fenced and developed 2) Number of feet with grassed and forested buffer strips established 3) Number of water and sediment control basins, with treatment systems, constructed

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Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Goal 4: Protect and/or restore shorelines and riparian corridors in selected wetlands, lakes and streams					
Objective 4.1: Protect shoreline and riparian corridor in selected wetlands, lakes and streams					
Priority Areas:					
a. Encourage city and county park districts to purchase selected areas to protect and/or increase intact shoreline and riparian corridor	• City and County Park Districts • ODNR/ Div. of Wildlife and Div. of Parks and Recreation	• WPCLF • PL-566 • CWA Section 319 NPS (OEPA) • WRP	1 year	Increased shoreline and riparian corridor in selected areas	Number of selected areas purchased
b. Provide incentives for landowners to protect shoreline or riparian corridor with long-term protection or permanent conservation easements	• Local and County Planning and Zoning Boards	• NatureWorks • PL-566 • CWA Section 319 NPS (OEPA) • WRP	3 years	Increased shoreline and riparian corridor	Number of feet set aside for long-term protection or permanent conservation easements
c. Assist communities with the development of township or municipal ordinances requiring new construction sites to leave easements, of a specified distance, near shorelines of targeted wetlands and lakes and flood plains of targeted streams	• Local and County Planning and Zoning Boards	• NPS Education Grant • NPS Program (ODNR) • OEEF	3 years	Protection of shoreline and riparian corridor	Townships or municipal ordinances established and enforced
d. Identify shoreline and riparian landowners and educate them about shoreline or riparian zone protection and importance 1) Distribute information pamphlets	• NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • WPCLF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Increased protection of shoreline and riparian corridor	List of riparian landowners 1) Number of information pamphlets distributed

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Objective 4.2: Restore shoreline and riparian corridor in selected wetlands, lakes and streams					
Priority Areas: Low Quality Riparian Corridors and former wetland areas which would aid in improving water quality					
a. Assist shoreline and riparian landowners to replant shoreline and riparian corridor in selected wetlands, lakes and streams using appropriate BMPs	• OEPA • ODNR/DSWC • County SWCDs • NEFCO • USDA/NRCS • Grassroots/Citizen-Based Groups • ODNR/Div. of Wildlife	• EQIP • CRP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 NPS (OEPA) • SIP	3 years	Restoration of shoreline and riparian corridor	Number of feet replanted
b. Assist shoreline and riparian landowners to restabilize shoreline and riparian corridor in selected wetlands, lakes and streams using appropriate BMPs	• ODNR/DSWC • USDA/NRCS • County SWCDs • NEFCO • ODNR/Div. of Wildlife	• EQIP • CRP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 NPS (OEPA) • SIP	3 years	Restabilization of shoreline and riparian corridor	Number of feet restabilized
c. Assist riparian landowners to restore in-stream habitat using appropriate BMPs	• ODNR/DSWC • USDA/NRCS • County SWCDs • NEFCO • ODNR/Div. of Wildlife	• EQIP • CRP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF • WPCLF (Linked Deposit) • PL-566 • CWA Section 319 NPS (OEPA) • SIP	3 years	Restoration of in-stream habitat	Number of feet restored

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Goal 5: Reduce fertilizer, herbicide and pesticide runoff into the watershed					
Objective 5.1: Reduce fertilizer, herbicide and pesticide runoff from agricultural areas					
Priority Areas:					
a. Identify all agricultural areas within the watershed	• ODA • OSU Extension • County SWCDs • NEFCO • USDA/NRCS	• EQIP • State Cost Share Program • NatureWorks • NPS Education Grant • NPS Program (ODNR) • OEEF • WPCLF (Linked Deposit) • CWA Section 319 NPS (OEPA)	1 year	Knowledge of number and type of current agricultural operations in the watershed	Watershed map containing different types of agricultural operations
b. Inform local farmers about the benefits and principles of integrated pesticide management (IPM) and precision farming 1) Distribute information packets 2) Hold seminars/ workshops 3) Develop nutrient management plans for local farms	• ODA • OSU Extension • County SWCDs • NEFCO • USDA/NRCS	• EQIP • State Cost Share Program • NatureWorks • NPS Education Grant • NPS Program (ODNR) • OEEF • WPCLF (Linked Deposit) • CWA Section 319 NPS (OEPA)	1 year	Greater awareness and involvement regarding IPM and precision farming	1) Number of packets distributed 2) Number of seminars/ workshops held and level of participation 3) Level of participation in nutrient management plans
c. Provide assistance to farms willing to participate in IPM and precision farming	• ODA • OSU Extension • County SWCDs • NEFCO	• EQIP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit) • R&D Grant • CWA Section 319 NPS (OEPA)	1 year	Reduced contribution of fertilizer, herbicide and pesticide from agricultural areas	Assistance available and number of farms participating in IPM and precision farming

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
d. Ensure farmers are implementing BMPs, e.g., chemical management and disposal and calibration and maintenance of spray equipment through education	• ODA • OSU Extension • County SWCDs • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Reduced levels of fertilizers, pesticides and herbicides from agricultural areas	Number of farmers using such BMPs on a regular basis
e. Provide assistance to farms willing to implement appropriate BMPs to reduce agricultural runoff into lakes and streams	• ODA • OSU Extension • County SWCDs • USDA/NRCS	• EQIP • CRP • State Cost Share Program • NatureWorks • NPS Program (ODNR) • WPCLF (Linked Deposit) • CWA Section 319 NPS (OEPA)	1 year	Reduced levels of fertilizers, pesticides and herbicides from agricultural areas	Number of farms given assistance to implement BMPs
Objective 5.2: Reduce fertilizer, herbicide and pesticide runoff from lawns					
Priority Area:					
a. Educate property/home owners about the importance of lawn fertilizer and herbicide management 1) Distribute information pamphlets 2) Hold backyard stream stewardship programs which introduce alternative lawn and garden care	1) • OEPA/DSW • County SWCDs • NEFCO 2) • OEPA/DSW • County SWCDs • OSU Extension • ODNR/Div. of Wildlife • NEFCO	• NatureWorks • NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA) • Private Sector	6 months to 1 year	Increased awareness concerning the importance of lawn fertilizer and herbicide management	1) Number of information pamphlets distributed 2) Number of backyard stream stewardship programs held and list of participants

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Goal 6: Reduce levels of salinity impacting surface and/or ground water quality, which will decrease levels of dissolved solids					
Objective 6.1: Decrease runoff from salt storage sites and seasonal spreading of salt					
Priority Area:					
a. Ensure that proper application, covered storage, cleanup of spills, and cleaning of sewers and ditches is implemented when using deicing materials	• County SWCDS • Local Government • NEFCO • Private Sector	• NPS Education Grant • NPS Program (ODNR) • OEEF • WPCLF • CWA Section 319 NPS (OEPA)	3 years	Lower levels of water contamination from de-icing salts	Number of individuals or facilities contacted and level of management regarding de-icing materials
b. Introduce BMPs to absorb runoff from impervious areas such as porous pavement and installing grass swales rather than storm sewers	• County SWCDs • County Engineer • USDA/NRCS • NEFCO	• CRP • NatureWorks • NPS Program (ODNR) • WPCLF • CWA Section 319 NPS (OEPA)	3 years	Decrease runoff, which may contain dissolved solids, from impervious surfaces	Number of BMPs introduced and installed
c. Explore the use of environmentally-friendly de-icing materials	• County Engineer • Private Sector	• NatureWorks • NPS Program (ODNR) • WPCLF • R&D Grant • CWA Section 319 NPS (OEPA) • Private Sector	3 years	Feasible alternatives to current de-icing materials	Results of alternative de-icing material research
Objective 6.2: Decrease releases of brine from oil exploration and drilling activity					
Priority Area:					
a. Distribute flyers informing watershed residents on how to identify suspicious activities related to illegal dumping of brine and phone numbers of proper authorities to contact	• OEPA/DERR • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	6 months to 1 year	Decreased illegal dumping of brine	Number of flyers distributed

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
Goal 7: Acquire stronger understanding, cooperation and participation regarding water quality issues					
Objective 7.1: Strengthen awareness of and involvement in watershed issues					
Priority Area: Entire watershed					
a. Create stronger partnerships between all stakeholders in the watershed, including government agencies, private businesses and property owners	• NEFCO	• NatureWorks • PL-566 • CWA Section 319 NPS (OEPA)	3 years	Greater cooperation and participation to protect/improve water quality	Level of interest and feedback at events pertaining to the watershed
b. Educate residents about watershed issues, through regularly scheduled events/activities that are recognized by the public 1) Distribute surveys 2) Present information at local organizations, e.g., Kiwanis, Audubon Society, and Nature Conservancy 3) Set up information booths at County/Local Fairs 4) Distribute information pamphlets 5) Organize field days 6) Hold public meetings	• County SWCDs • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	1 year	Greater awareness regarding watershed issues	1) Number of surveys distributed and returned 2) Number of presentations given 3) Number of fairs with information booths 4) Number of information pamphlets distributed 5) Number of field days held 6) Number of public meetings held
c. Organize volunteer action groups to address water quality concerns	• County SWCDs • NEFCO	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA) • Citizen Action Mini-Grant	6 months to 1 year	Increased local involvement to improve water quality	Number of volunteers action groups formed

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
d. Implement a watershed protection and awareness program in local schools	• OEPA/DSW • County SWCDs • Local Boards of Education • Local Schools • Career Centers	• NPS Education Grant • NPS Program (ODNR) • OEEF • CWA Section 319 NPS (OEPA)	1 year	Stronger knowledge of future generations regarding the importance of watershed protection	Number of local schools implementing program
Objective 7.2: Monitor and evaluate water quality of lakes and streams					
Priority Area: Entire watershed					
a. Continue the NEFCO Volunteer Lake Monitoring Program (VLMP)	• NEFCO	• NPS Education Grant • CWA Section 319 NPS (OEPA) • Citizen Action Mini-Grant	3 years	Increased database to draw more accurate conclusions regarding water quality of lakes in the watershed	Data collected and results
b. Monitor and establish baseline levels for macroinvertebrates, bacteria and water chemistry through volunteer monitoring programs 1) Identify representative monitoring locations 2) Organize volunteer monitoring programs 3) Summarize monitoring results into written reports	• ODNR/DSWC • County SWCDs • OEPA/DSW • NEFCO • Izzak Walton League • Rivers Unlimited	• CWA Section 319 NPS (OEPA) • Citizen Action Mini-Grant	3 years	Greater involvement and knowledge regarding water quality of streams and lakes, and additional data to monitor future results of remedial efforts	1) Number of critical monitoring locations identified 2) Number of volunteers and programs established 3) Written reports with results
Objective 7.3: Conduct further research regarding point and nonpoint source pollution					
Priority Area: Entire watershed					
a. Locate historical spills and accidental release sites in the watershed	• OEPA/DERR • NEFCO	• R&D Grant • CWA Section 319 NPS (OEPA) • Citizen Action Mini-Grant	3 months	Insight regarding locations where there is a higher risk of pollutants from spills and accidental releases	List and map of spills and accidental release sites in the watershed

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
b. Generate a map with present soil survey information available, e.g., slopes and potential soil loss	• County SWCDs • NEFCO	• NatureWorks • CWA Section 319 NPS (OEPA)	3 months	Insight regarding areas with increased pollutant runoff and erosion	Map with slopes and potential soil loss
c. Identify types and locations of agricultural operations in the watershed	• ODA • OSU Extension • NEFCO	• NatureWorks • CWA Section 319 NPS (OEPA)	3 months	Insight regarding potential pollution sources in the watershed	List of agricultural operation in watershed
d. Produce a map with the locations of registered underground storage tanks (RUSTs)	• OEPA/DERR • NEFCO	• NatureWorks • CWA Section 319 NPS (OEPA)	1 month	Insight regarding potential pollution sources in the watershed	Map with the locations of RUSTs in the watershed
e. Identify and map future extensions of central water facilities	• NEFCO • County Sanitary Engineer • Environmental Services Department	• NatureWorks • CWA Section 319 NPS (OEPA)	1 month	Insight regarding where ground water contamination is more likely to occur	Map with future extensions for central water facilities
f. Plot locations of abandoned water wells	• OEPA/DDAGW • NEFCO	• NatureWorks • CWA Section 319 NPS (OEPA)	3 month	Insight regarding where ground water contamination is more likely to occur	Map with abandoned water wells in the watershed
g. Produce a map with the locations of Leaking Underground Storage Tanks (LUSTs)	• OEPA/DERR • NEFCO	• NatureWorks • CWA Section 319 NPS (OEPA)	1 month	Insight regarding potential pollution sources in the watershed	Map with the locations of LUSTs in the watershed
h. Locate and map locations of landfills and maps	• OEPA/DERR • Local Health Depts.	• WPCLF • CWA Section 319 NPS (OEPA) • NPS Education Grant • NPS Program (ODNR)	3 month	Insight regarding potential pollution sources in the watershed	Map with locations of landfills and dumps in the watershed

Goals, Objectives, Priority Areas and Actions in Addition to Suggested Responsible Parties, Possible Funding Sources, Estimated Time Frames, Expected Improvements, and Evaluations of the Nimishillen Creek Watershed Action Plan					
Action	**Suggested Responsible Party(ies)**	***Possible Funding Source(s)**	****Est. Time Frame**	**Expected Improvement(s)**	**Evaluation**
i. Locate and map sand and gravel mining activity sites	• County SWCDs • OEPA	• NPS Program (ODNR)	3 month	Insight regarding potential pollution sources in the watershed	Map with locations of sand and gravel mining activity sites
j. Locate and map locations of golf courses, nurseries, greenhouses, landscaping operations and sod-farms	• ODA • County SWCDs • NEFCO	• NPS Education Grant • NPS Program (ODNR • OEEF • CWA Section 319 NPS (OEPA)	3 month	Insight regarding areas with increased pollutant runoff and erosion	Map with locations of golf courses, nurseries, greenhouses, landscaping operations and sod-farms
**Refer to Appendix R for a complete list of funding sources in Ohio. **Estimated time frame refers to amount of time required once funding is obtained.					